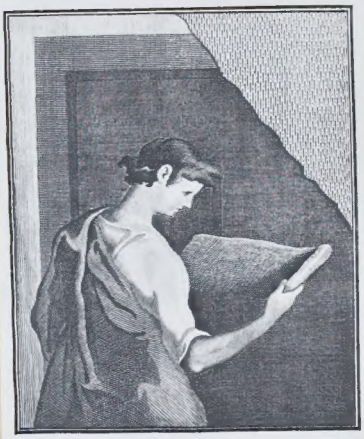
The Builder



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The Builder.

AN

ILLUSTRATED WEEKLY MAGAZINE,

FOR THE

Architect, Engineer, Archæologist, Constructor, & Artist,

CONDUCTED BY

GEORGE GODWIN, F.R.S.

Fellow of the Royal Institute of Architects, and Honorary Member of several Societies.

"Every man's proper mansion-house, and home, being the theater of his hospitality, the seate of selfe-fruition, the comfortablest part of his own life, the noblest of his sonne's inheritance, a kinde of private princedome, nay, to the possessors thereof, an epitome of the whole world, may well deserve, by these attributes, according to the degree of the master, to be decently and delightfully adorned."

"Architecture can want no commendation, where there are noble men, or noble mindes."—— Sir Henry Wotton.

"Our English word To Build is the Anglo-Saxon Ẏlban, to confirm, to establish, to make firm and sure and fast, to consolidate, to strengthen; and is applicable to all other things as well as to dwelling-places."—— Diversions of Purley.

"Art shows us man as he can by no other means be made known. Art gives us 'nobler loves and nobler cares,'—furnishing objects by the contemplation of which we are taught and exalted,—and so are ultimately led to seek beauty in its highest form, which is Goodness."

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ILLUSTRATION.

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ARCHITECTURAL ASSOCIATION.—At the next Ordinary Meeting, JANUARY 11, Mr. J. H. CHAMBERLAIN, of Birmingham, will read a paper on "Chapel Architecture."

The Class of Design will meet January 4. Subject for sketch: a Bookcase.

T. W. GOODMAN, } Hon. Secs.
J. A. BUNKER, }

Lyon's Inn Hall, Strand.

ARCHITECTURAL EXHIBITION and COLLECTION of PATENTS and MANUFACTURES connected with BUILDING, NOW OPEN at the Galleries 64, Suffolk-street, Pall-mall East, from Nine till dusk. Admission, One Shilling; or at all times to the Galleries, and to all the Lectures by season-tickets, Half-a-crown each.

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Lists of Lectures, tickets, and all particulars, to be had at the Galleries.

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COMPETITIONS.

THE LUTON LOCAL BOARD of HEALTH, in the County of BEDS, are desirous of receiving PLANS, PARTICULARS, and ESTIMATES, for INTERCEPTING from the Town LEA, and for DEODORIZING, FILTERING, or otherwise DISPOSING OF the SEWERAGE of the TOWNSHIP, and hereby offer a premium of 30l. for the most approved set of plans, &c., for such purpose, and a further sum of 10l. for the second best, all plans to be delivered, free of expense, addressed to the Chairman, on or before FRIDAY, the 1st day of FEBRUARY next, with a motto accompanied by a sealed envelope, containing the name and address of the author. All plans not approved will be returned. Printed particulars and information, with a plan, showing the course of the river and adjoining land, may be had on application to the Surveyor, but each party will have to take their own section, as the Board leave the site for the works to the judgment of the competitors.

By order,
T. L. EVANS, Surveyor.

Luton, December 26th, 1855.

COMPETITIONS.

COMPAGNIE GENERALE DES OMNIBUS DE LONDRES.—The London General Omnibus Company). 100l premium.—The management being desirous of introducing an improved system of omnibuses through London, hereby offer a PREMIUM of 100l. for the best DESIGN and SPECIFICATION for an OMNIBUS, that with the same weight as at present, will afford increased space, accommodation, and comfort to the public. Each design and specification to be delivered at the Company's Offices, not later than SATURDAY, the 2nd of FEBRUARY next.

MACNAMARA, F. CARTERET, WILLING, and CO.
47, Old Broad-street. January 1, 1856.

TO ARCHITECTS AND OTHERS.

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The plans, &c. to be sent under a private mark, with a sealed letter to correspond.

Dated Wells, January 1, 1856

RUGBY TOWN-HALL COMPANY.—EXTENSION of TIME.—Notice is hereby given, that the time for sending in the Designs and estimates for the Town-hall and Public Buildings at Rugby, has been extended to the 29th day of FEBRUARY next.

Rugby, January 1, 1856. RICHARD OVER, Secretary.

NEWARK-UPON-TRENT BURIAL BOARD, WANTED, immediately a CLERK of the WORKS, to superintend the erection of the chapels and buildings, and the completion of the several works connected with the cemetery for the parish of Newark-upon-Trent. He must be active, thoroughly competent, and with good references. All applications must be addressed to me on or before TWO o'clock in the afternoon of THURSDAY next, the 10th day of JANUARY instant, at which time the Board will take into consideration the several applications. Personal attendance not necessary. Salary 2l. per week. By order,

WILLIAM NEWTON, Clerk to the said Board.
Kirk-gate, 2nd January, 1856.

CONTRACTS.

TO BUILDERS and Parties willing to CONTRACT for REPAIRING and FINISHING NINETEEN fourth-rate HOUSES, situate St. Thomas's road and St. Ann's-road, Rhodeswell, Stepney. Specifications may be seen at the Office of Messrs. CHAMBERS and PORDEN, Surveyors, 7, Great Tower street, City, on and after TUESDAY, 8th instant. Tenders to be sent in on or before TWO o'clock on SATURDAY, 12th instant. The lowest Tender will not necessarily be accepted.

TO ROAD-MAKERS.—The Making of the Roads on the Gravesend Estate of the Southwark Metropolitan and Provincial Freehold Land and House Society, TO BE LET by TENDER. Specifications and sections may be seen at the Society's Office, 4, Wellington-chambers, Borough, Southwark.—Tenders to be sent in on or before the 16th day of JANUARY, 1856.

THE NETHERLANDS LAND ENCLOSURE COMPANY.—CONTRACT for ENCLOSURE WORKS. The Directors are prepared to receive TENDERS for the CONSTRUCTION of a POLDER DAM, situate at BATH ZEELAND. Plans and specifications may be seen on and after the 24th day of DECEMBER instant, at the Company's Offices, at Bath, and at the Engineer's Office, 24, Great George-street, Westminster, where all necessary information may be obtained, from Messrs. BIDDER and GEORGE ROBERT STEPHENSON.—Tenders to be addressed, under seal, to the undersigned, at No. 2, Moorgate-street, London, on or before the 16th JANUARY, 1856. The Directors do not pledge themselves to accept the lowest or any Tender.

By order of the Board,
GEORGE PASSON, Secretary.
2, Moorgate street, London, December 11, 1855.

N B.—The plans for the canal are now completed, and when approved by Government, the contract will be offered to public Tender.

THE TOTTENHAM LOCAL BOARD of HEALTH are prepared to receive TENDERS from persons willing to execute either of the following CONTRACTS, Tottenham, where also further particulars may be had, and drawings inspected. Sealed tenders, properly endorsed, must be sent in on or before FRIDAY next, the 11th of JANUARY next, addressed to the Local Board of Health, Tottenham.

CONTRACT No. 22.—For CAST-IRON PIPES and CASTINGS.
CONTRACT No. 23.—For WELL-BORING, &c.
CONTRACT No. 24.—For LAYING the IRON PIPES, CONSTRUCTING a BRICK CULVERT, &c.

Specifications and conditions of contract can be obtained on payment of 2s. each, by application to J. PILDROW, Esq. C.E. Engineer to the Board, at the Board of Health offices, Tottenham, where also further particulars may be had, and drawings inspected. Sealed tenders, properly endorsed, must be sent in on or before FRIDAY next, the 11th of JANUARY next, addressed to the Local Board of Health, Tottenham.

By order of the Board,
WM. HEATH, Clerk.
Tottenham, Dec. 21, 1855.

CONTRACTS.

TO BUILDERS and OTHERS. — Sealed TENDERS for the following SERVICES on the coast of Cornwall, viz.:—

No. 1. At Fowey.—Construction of a 2-gun Battery and Side-arm Shed, as well as an extension of the present Magazine, &c.
No. 2. At Padstow.—Construction of a 2-gun Battery, Magazine, Side-arm Shed, &c.
No. 3. At Penzance.—Ditto, ditto, ditto.
No. 4. At St. Ives.—Construction of a 3-gun Battery and Side-arm Shed, as well as Repairs and Alterations of the old Magazine, &c.

for specific sums, will be received by the War Department, Pall-mall, London, on or before 12th JANUARY, 1856, at noon. Detailed specifications of services Nos. 1 and 2, may be seen at Oliver's Hotel, Bodmin, on the 27th instant; and Nos. 3 and 4, at Crouch's Hotel, Hayle, on the 29th, between the hours of TEN and FOUR at each place. An officer will attend on the day preceding each of the above dates, to deliver specifications to such persons as may appear to be competent, and to leave the whole of the two days specified for inquiry and explanation.

Royal Engineer Office, Devonport, 14th December, 1855.

TO BUILDERS.

SEALED TENDERS for BUILDING BARRACKS, at Bull Point, near Devonport, for a SPECIFIC SUM, will be received by the Director-General of Contracts, War Department, Pall-Mall, London, on or before the 25th JANUARY, 1856, at Noon. Detailed drawings and specifications of the above, with every requisite information, may be obtained at the Royal Engineer Office, Bull Point, daily (Sundays excepted), between the hours of TEN and FOUR o'clock, from the 10th to the 24th JANUARY, 1856, both days inclusive.

Royal Engineer Office, Devonport, 27th Dec. 1855.

ORDNANCE CONTRACT.—NOTICE to BUILDERS and CONTRACTORS.—TENDERS, sealed and addressed to the Director-General of Contracts, War Department, Pall-mall, London, will be received on or before TUESDAY, 29th instant, from parties willing to CONTRACT for REBUILDING FIVE WOODEN HUTS for OFFICERS' QUARTERS, on the South Camp, Aldershot. Plans of the same may be seen, and specifications and forms of Tender obtained, on application at the Royal Engineer's Office Aldershot, on and after MONDAY, the 7th inst. The Tenders to be marked "Barracks," and endorsed, "Tender for Rebuilding Five Huts at Aldershot."

Royal Engineer's Office, War Department, Aldershot, January 2, 1856

TO BUILDERS. — The ERECTION of a NEW UNION WORKHOUSE. — Persons desirous of CONTRACTING with the Guardians of the Poor, of the West Bromwich Union, in the counties of Stafford and Worcester, for the ERECTION of a NEW UNION WORKHOUSE, capable of affording accommodation for 600 inmates, together with the several buildings and offices, proposed to be connected therewith, at Lyndon, in the parish of West Bromwich, may inspect the drawings and specifications thereof, at the Offices of Messrs. BRIGGS and EVERAL, Architects, No. 320, Bradford-street, Birmingham, on and after the 24th day of DECEMBER inst. until the 31st day of JANUARY next, where full particulars connected therewith may be obtained. Sealed Tenders, endorsed "Tender for Workhouse Building Contract," must be sent in, and addressed to me through the post-office, on or before the 1st day of FEBRUARY next. The contractor or contractors will be required to give such security as the Board may require for the due performance of the works agreeably to the plans, and the general conditions and specifications, such security to be prepared at his or their expense. The Guardians will not pledge themselves to accept any or the lowest Tender.

By order of the Board,
CHARLES STRINGER, Clerk.
West Bromwich, December 10, 1855.

TO SCAVENGERS, DUSTMEN, &c.—The Crown Estate Paving Commissioners hereby give Notice, that they will be ready to receive TENDERS from persons willing to enter into a CONTRACT for the REMOVAL of DUST, DIRT, ASHES, CINDERS, &c. from the several houses, &c. within the district under their jurisdiction for a period of one year, from the 16th day of JANUARY next. Specifications and forms of Tender can be obtained upon application to me here, where the Tenders, sealed and addressed to the Commissioners, are to be delivered at TWO o'clock precisely, on WEDNESDAY, the 9th day of JANUARY, 1856.

FRANCIS ADAMS, Clerk to the Commissioners.
1, Whitehall-place, Dec. 22, 1855.

TYNEMOUTH BURIAL-GROUND.—To BUILDERS and CONTRACTORS.—The Burial Board for the Parish of Tynemouth are prepared to receive TENDERS for the following WORKS connected with the New Burial-ground at Preston viz.—

CONTRACT No. 5.—Two Chapels.
CONTRACT No. 6.—Superintendent's House and Office, and Gardener's Cottage.
CONTRACT No. 7.—Front Entrance and Side Entrance, Iron Gateways, and Masonry connected therewith.

The plans and specification of the works may be seen on and after the 31st instant, between the hours of TEN a.m. and FOUR p.m. until the 18th of JANUARY next, at the Office of the Architect, 13, Clayton-street West, Newcastle-upon-Tyne; or at the Borough Surveyor's Office, North Shields. The Burial Board will not object to receive Tenders for the execution of the whole of the works in one Contract. They do not bind themselves to accept the lowest or any other Tender. The Tenders are to be sent in to the Town Clerk's Office, Howard-street, North Shields, on or before FOUR p.m. of the 18th JANUARY next, endorsed "Tender for Tynemouth Burial Ground," Nos. 5, 6, and 7, as the case may be. The Contractor will be required to give security for the due performance of the works.—By order,

THOMAS CARR, LL.D., Clerk to the Burial Board.
Borough of Tynemouth, 5th December, 1855.

[*For remainder of Contracts see next page.*

CONTRACTS.

BOARD of WORKS for the STRAND DISTRICT.—The Board having determined to appoint the following Officers, under the "Metropolis Local Management Act," Candidates are invited to send in their testimonials to me before WEDNESDAY, the 9th day of JANUARY, 1856, after each of which the Board, of whom the duties to be performed may be ascertained.

A Medical Officer of Health at a salary of 150l. per annum.

A Surveyor and Chief Inspector of Nuisances, who will be restricted from carrying on any private business within the district, at a salary of 250l. per annum.

An Assistant Clerk, competent to act as an Accountant, at a salary of 80l. per annum.

By order,
JAMES H. F. LEWIS, Clerk to the Board.

Temporary Offices, 28, Essex street, Strand.

TO BUILDERS.

LUDBOROUGH STATION, EAST LINCOLNSHIRE, GRIMSBY.—To strangers and consideration of works for a GRANARY, intended to be built at the above Station, and consisting of brick and timber, from the plans and specifications prepared by Robert TENDERS for the ERECTION of the same.—Tenders to be delivered to us on or before the 22nd instant; the lowest of which will not necessarily be accepted.

MAUGHAN and FOWLER, Architects.

Louth, 2nd January, 1856.

THE STAMFORD and ESSENDINE RAILWAY COMPANY.—CONTRACT for SLEEPERS.—The Directors of this Company are prepared to receive TENDERS for FOURTEEN THOUSAND FIVE HUNDRED SLEEPERS. Parties disposed to Tender, may obtain the specification and form of Tender on which same only Tenders will be received on application at the office of Mr. WILLIAM HURST, the Company's Engineer, 3, Bedford-row, London, on TUESDAY, the 15th instant, between the hours of TWELVE and FOUR o'clock. Tenders must be sent to this office before TWELVE o'clock at noon, on SATURDAY, the 19th day of FEBRUARY next. N B The Directors do not bind themselves to accept the lowest or any Tender.

By order, P. C. MAGUIRE, Secretary.

Railway Office, Stamford, January 3, 1856.

THE STAMFORD and ESSENDINE RAILWAY COMPANY.—CONTRACT for RAILS.—The Directors of this Company are prepared to receive TENDERS for ONE THOUSAND TONS of RAILS.—Parties disposed to Tender may obtain the specification and form of Tender on which form only Tenders will be received, on application at the office of Mr. WILLIAM HURST, the Company's Engineer, 3, Bedford-row, London, on TUESDAY, the 15th; FRIDAY, the 18th, and SATURDAY, the 19th instant, between the hours of TWELVE and FOUR o'clock.—Tenders must be sent to this office before TWELVE o'clock at noon, on SATURDAY, the 19th day of FEBRUARY next.

N B.—The Directors do not bind themselves to accept the lowest or any Tender.

By order, P. C. MAGUIRE, Secretary.

Railway Office, Stamford, 3rd January, 1856.

CONTRACT for BUILDINGS for LOCOMOTIVE DEPOT.—MONMOUTHSHIRE RAILWAY and CANAL COMPANY.—To Contractors.—The Company invite TENDERS for the ERECTION, on the town of Newport, of STABLES, FITTING SHOPS, OFFICES, SMITHY, COKE-SHED, TANK, and other BUILDINGS required for a Locomotive Branches and specification may be seen at the Engineer's Office, No. 5, Old Jewry, London. Sealed and DECEMBER instant, addressed to the undersigned at the Company's Offices, Newport, Monmouthshire. Plans, &c., may be seen at the Engineer's Office, 5, Old Jewry, London. Tenders properly addressed, and addressed to the Secretary, must be sent to the undersigned not later than the 19th day of FEBRUARY next, and the parties tendering are to be in attendance at ONE o'clock in the afternoon of the following day, when the Tenders will be opened. The Directors do not bind themselves to accept the lowest or any Tender.

GEORGE HARRISON, Secretary.

Newport, Monmouthshire, December 21, 1855.

AMBER GATE, NOTTINGHAM, and BOSTON and EASTERN JUNCTION RAILWAY and CANAL COMPANIES.—CONTRACTS for WORKS.—Notice is hereby given, that [illegible] appointed month for opening the PAINT LATES at Nottingham on TUESDAY, the 15th day of JANUARY next, at ONE o'clock in the afternoon, to receive TENDERS for the ERECTION of a BRIDGE, from the Nottingham Goods Depôt, Station Street, over the Nottingham Canal, into the Eastcroft Meadow, with a retaining Wall on the side of such Canal. Also for the Earthworks and other Works required in the formation of the New Station on part of the said Eastcroft Meadow, with Approach Roads to the Station, and to the Nottingham Canal at Sneinton.—Plans and specifications may be seen, and further particulars obtained, with forms of Tender, on application to Mr. CUTHBERT BRERETON, Engineer, at the Offices of the said Company, on and after the 8th day of January next. All Tenders must be sent, duly addressed to the Secretary. No Tender will be received after TWELVE o'clock at noon on the 24th day of January next.

By order, JNO. GOUGH, Secretary.

Company's Offices, Nottingham, 27th Dec. 1855.

FOR SALE, about 2,000 TEMPORARY RAILWAY SLEEPERS, and 200 PAIRS of FIR RAILS; cheap. Also a few Lengths of the Brighton and South Coast Railway.—For prices and particulars, apply to Mr. F. HOLLEDGE, Leslie park, Croydon-common.

TO BE SOLD for CASH, about 300 loads of fresh DANTZIC TIMBER, 300 loads of full-sized, at 5d. per cubic foot, and 100 loads of undersized, at 6d.—Apply to ALFRED JONES, No. 9, Southwark-bridge Wharf, Bankside.

TO CARPENTERS, BUILDERS, AND OTHERS.

FOR SALE, about 3,300 2½-inch 7-inch, and 3 inch 7-inch, prime GOTHENBERG YELLOW BATTENS from 7 to 12 feet long, and 3 per cent. 6 inch in quantities of not less than [illegible]. Apply to Mr. E. HOPKINSON, Tool-maker, 16, Church-street, Shoreditch, near the Eastern Counties Railway.—By letter, inclose postage stamp.

AT the LOWEST PRICES.—SAMUEL PETNEY has much pleasure in informing the Trade, that in consequence of the recent advances, he is still enabled to quote the following low prices:—

Yellow Deals, from	£24	0 per 120
Second ditto	16	0 "
Yellow Battens "	12	10 "
Pine Plank, 12 ft. 3 in. by 11	24	0 "

Prepared Flooring, &c. at equally low prices. A list forwarded on application.—3, Cooper's-rd, Southwark, and Fenwick-street, Grays-inn-lane.

TO BUILDERS AND OTHERS.

AT the LOWEST PRICES.—TIMBER, DEALS, MAHOGANY, and WAINSCOT. A large assortment of seasoned prepared FLOORING and MATCH BOARDING always on hand. Also a large stock of Dry White, Yellow, and Pine Cut Stuff, Slating, Battens, Pantile Laths, Oak Sills, &c. The [illegible] Saws, Planing, Moulding, Sash-bar Making, and Turning Machinery [illegible] and warranted. Estimates given for the supply of any quantity, and delivered to any part of the kingdom.—MARK JACKSON, Saw and Planing Mill, Commercial-road, Pimlico, London.

MOULDINGS by MACHINERY, of any Design, carefully picked and sent to all parts of the country.

Address, E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
King's-road, Chelsea, and Wharf, Battersea.

SEASONED FLOORING.—GEO. NOKES and CO. (late Archbutt and Atkinson), beg to acquaint their friends and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING prepared by machinery, for sale, at the following reduced prices, for cash:—

1 inch White, 7 and 8 inch	7 inch Yellow	18s. per square
ditto 1¼ ditto	ditto	18s. 6d. "
ditto 1¾ ditto	ditto	20s. "

Laths, 3s. per load.

Also Timber, Deals, Planks, &c. Mouldings by machinery on very great variety.

ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of his kind ever established, a large assortment of PREPARED FLOORINGS and MATCH BOARDING, seasoned and ready for use, from 1 inch to 1¼ inches thick, of White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses. Slating Battens. Pantile Laths. Oak Sills. Plank, and Scantlings. Mouldings in clean Fir, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

A CORN TIMBER WHARF.—At RICHARD MAY'S extensive Waterside Premises and Saw-mill Canal Bridge, Old Kent-road (unlike and others can be supplied with all kinds of FOREIGN TIMBER, planks, deals, and battens on sale, direct from the importers; prepared floorboards, moulding, pine and oak deals, slating battens, laths, English oak plank, and scantling. Yards and prices for cash. The Monthly Price Current forwarded on application.

NOTICE.—IMPROVED WOOD MOULDING MILLS and MARBLE WORKS.—J. SIMMONS begs to acquaint his customers and friends in the town and parts of the increased trade and patronage he is continually receiving, he has found it necessary to have large premises for the manufacture of his IMPROVED WOOD MOULDINGS, which are acknowledged by the principal large firms, architects, and others, who have used them to be the best ever produced by machinery. J. S. in returning thanks for the liberal patronage already bestowed upon him, begs to call attention to his large stock of mouldings now on hand. Marble chimney-pieces, monuments to tombs, and every description of marble and stone work also manufactured at present at No. 1, NEW WORKS, No. 26, BRIDGE TERRACE, HARROW-ROAD, PADDINGTON, [illegible] yards from the Great Western Railway Bridge. New Price Lists will shortly be ready to be had on application, or if forwarded, by enclosing six postage stamps. Please note the address, 26, BRIDGE TERRACE, HARROW-ROAD, Paddington, near the Great Western Railway Bridge.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country, an extensive assortment of specimens and prices commencing at 4s per foot superficial, together with every particular of its cost and adaptation, can be obtained of Mr. BURT, 1, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 36, New Bond-street.

MACHINE CARVING, JOINERY, and MOULDING WORKS, Belvidere-road, Lambeth.—The proprietor of the above works begs respectfully to apprise the nobility, clergy, architects, builders, cabinet-makers, and trades generally requiring Carved and Moulded Works, that he is now enabled to execute any orders that may be entrusted to him with the utmost promptitude. Every description of Carved Work and Tracery, roughed out by the machines for the trade only. Pulpits, Lecterns, Reading-Desks, Screens, Altar-Rails, Tables, Chairs, &c. executed at the shortest notice. Specimens of Carved Work, suitable for various purposes, can be seen at the Works, and Estimates form shed upon application.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.

STEPHENS' DYES or STAINS for WOOD. The following extract from a letter the Proprietor has obtained leave to make public:—"Northgate, Colchester, Feb. 5, 1855.—Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant,

"SAMUEL GRIMES, Builder.

"To Mr. Henry Stephens, 54, Stamford street, London."

Samples and prospectuses free to any part of the kingdom.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the India-rubber hose. Manufactured only by WAITHMAN & CO. Rentham, Lancaster

No. 1 quality, inches diameter, and price per yard.

½	¾	1	1¼	1½	2	2½	3 in.
9d.	11d.	1s 1d.	1s 3d.	1s 5d.	1s 7d.	1s 9d.	2s 3d.	2s 8d.	3s 9d.

Super extra stout quality.

2	2½	3	3½	4 inches.
2s.	2s 3d.	2s 6d.	2s 9d.	3s. per yard.

No. 2. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

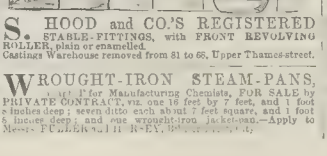
½	¾	1	1¼	1½ inches.
6d.	7½d.	9d.	1s. 3d.	1s. 6d. per yard.

The hose is Burnettized at an extra charge of 3d per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, White friars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Bricks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

THOMAS EDINGTON, PUBCHASER and INSPECTOR OF CASTINGS on COMMISSION, 17, GORDON-STREET, Glasgow.

PATRONISED BY H. R. H. PRINCE ALBERT.



S. HOOD and CO.'S REGISTERED STABLE-FITTINGS, with FRONT REVOLVING ROLLER, plain or enamelled.

Castings Warehouse removed from 81 to 86, Upper Thames-street.

WROUGHT-IRON STEAM-PANS, [illegible] for Manufacturing Chemists, FOR SALE by PRIVATE CONTRACT, viz. one 16 feet by 7 feet, and 1 foot 6 inches deep; seven ditto each about 7 feet square, and 1 foot 6 inches deep; and one wrought-iron jacketed.—Apply to Messrs. PULLEN and [illegible], [illegible]

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LANTERNS, &c. &c. A large assortment of the newest designs always on show—every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern book and price list, 1s. 8s. 59 and 56, High Holborn.

IRONMONGERY.

PFEIL AND STEDALL.

THE LARGEST STOCK AT

THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and evaporising) with all the improvements, under their Quadruple Patents of 1854-55, and their unrivalled Gunpowder Proof Solid Lock and Door (without which no safe is secure) THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.

MILNER'S PHŒNIX 212° SAFE WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depôt, 47A, Moorgate-street, City.—Circulars free by post.

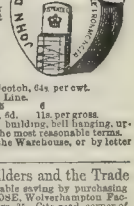
TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire. Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Service-poles, Rings and Lacquered Case Tube for Picture Rods, Desk Rails, &c. &c.

Superior Relief Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at

RICHARD EVERED'S Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs, 8d. per inch, and upwards.

Register Stoves, 6d. 7d. 8d. and 9d. per inch,

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings—

3 ft., 2l. 18s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15.

3-feet Cottage Ranges, with ovens and back boilers, 23s. each.

3-feet self-acting ditto, ditto, 34s. each

Air Bricks, 4s. per doz.

Best Town Glue, 5s. Ditto, Scotch, 64s. per cwt.

Best Patent Sash Line.

1	2	3	4	5	6
4s. 6d.	5s.	6s.	7s. 6d.	8s. 6d.	10s. per gross.

And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

IRONMONGERY.—Builders and the Trade generally will effect a considerable saving by purchasing IRON MONGERY of WILLIAM JESSE, Wholesale Manufacturer Factors and Stove and Range Manufacturers 35, City-road, corner of Tabernacle-row. A large stock kept of every description of Builders' Ironmongery, Chains, and ebony lock furniture and finger-plates; bells and all bell-hanging materials. Lists of prices forwarded by post on application.

LOSH, WILSON, and BELL, NEWCASTLE-ON TYNE.

Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast Iron Goods, Chain Cables, &c.

STEWART'S PATENT CAST-IRON GAS and WATER PIPES. Office, No. 7, Size-lane, London.

IRON FOUNDRY, HARROW-STREET, LANT-STREET, SOUTHWARK.

W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel and Railing Bars, Panels, Iron Coping, Hot Plates, Tank Plates, Area Gratings, Sash Weights, Plumbers' and other Wheels, Riggers, Pinions, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

TO BUILDERS, CARPENTERS, UPHOLSTERERS, &c.

THE following are the PRESENT PRICES of PATENT SASH LINE:—

No. 3	4	5	6
4s.	5s.	6s. 3d.	7s. 6d. per gross,

At JOHN YOUNG'S, Birmingham and Wolverhampton, Agent, Factor, and General Ironmonger, 18, Blandford-street, Manchester-square, running out of Baker-street, Portman-square. Every other article equally reasonable.

THE PATENT DRAUGHT and DUST EXCLUDER (BOURRELET'S COMPRESSIBLE) not apparent when fixed in the angles of doors, windows, and glasscases, the cheapest and most effectual invention for the purpose. At 21, HELD-STREET, Soho-square, 265, Regent-street, near the Circus, Oxford street. Depôt at BURGESS and KEY'S, 103, Newgate-street, City.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK,

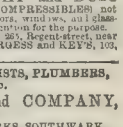
Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

JOHN PARKIN and CO. late BLAKE and PARKIN, NEW MEADOW STEEL WORKS, SHEFFIELD, MANUFACTURERS OF CIRCULAR and MILL SAWS IMPROVED CAST STEEL FILES, for the use of engineers and mechanics, PUNCH and SHEAR KNIVES and CUTTERS, manufactured for planing and [illegible] &c. and every description of [illegible] will [illegible] and [illegible] to work with a harder and finer edge [illegible] Hooper



INVENTORS of CORE-ANNEALED CAST-STEEL for taps, piston-rods, &c. MANUFACTURERS of RAILWAY SPRINGS, BLISTER, SHEAR, and CAST-STEEL, &c.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND, LONDON.

First-class Prize Medal Paris Exhibition, 1855.

Specimens from Paris Exhibition to be seen at the Architectural Exhibition, Pall-mall. Illustrated Price Catalogue to be had on application.

SKAIFE'S GALVANIZING WORKS,

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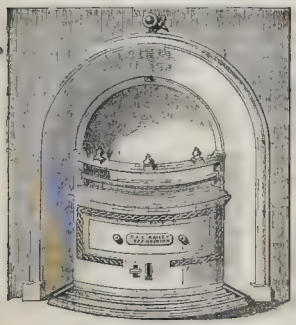
Skaife's process is the most effectual preventive against rust, and is extensively used, for all purposes where Iron not liable to rust is required.

Patent Galvanized Iron supplied in every form.—Sheets plain and corrugated.—Roofs fixed complete.

J. SKAIFE is also Agent for Morewood and Rogers's Patent Galvanized, Tinned Iron, Plumbic Zinc, and Tiles.

AN ALLOWANCE TO THE TRADE.

DR. ARNOTT'S SMOKELESS GRATES,



For the manufacture of which D. and E. BAILEY obtained the SILVER MEDAL at the PARIS EXHIBITION. The above excellent invention has been carefully modelled and manufactured by D. and E. BAILEY, 272, Holborn, who having experienced great difficulty in keeping pace with the increased demand for the above Stoves, have now made such arrangements as will enable them to supply their customers with the Smokeless Grates, of ordinary dimensions, from their stock on hand, which consists of various designs in black, bright, and polished steel, richly decorated with ormolu ornaments.

The great advantages of these Stoves over all others are—

1st. The entire absence of smoke.
2nd. An immense saving in fuel.
3rd. A cheerful fire, with simple means for regulating the heat.
4th. Will burn night and day, requiring only to be supplied with fuel twice in twenty-four hours.

For invalids' bed-rooms, these stoves will be found invaluable.

Prices and Prospectuses may be obtained on application, where the Smokeless Grates may be seen in daily use.

D. & E. BAILEY, IRONMONGERS,

272, HOLBORN, LONDON.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

PARIS EXHIBITION AWARD TO

COTTAM and HALLEN, of Winsley-street,

The Original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, and to which they have made important additions, the main features of the same being explained in the following description and Engraving.

A represents the Patent Halter-guide and Collar-rein, the ball of which is taken to the back of the manger-works with freedom and I care up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable.

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety covers; Sanitary Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Preserving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

An extensive Assortment of Patterns for both Plain and Ornamental Castings, and every description of Wrought and Cast-iron Work for building and other purposes.

Agricultural and Horticultural Implements, Iron Gates, both plain and ornamental; Hurdles, Strain Fencing, &c.

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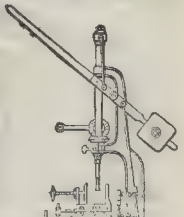
COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

NEW PATENT MACHINE for

MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongers' Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and, as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

SAWING, PLANING, and MOULDING

MACHINERY.—SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished companies and constructors in the world with their Machines for home and foreign use.

A PRIZE MEDAL for SUPERIOR LOCKS

was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, so much admired, &c. 6s. 6d. each.

J. H. BOOBBYER (late STURGH and BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

CHUBB'S LOCKS, with all the recent

improvements; STRONG FIRE-PROOF SAFES, CASH and DEED BOXES.—Complete lists of sizes and prices may be had on application

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FIRE-PROOF CONSTRUCTION.—

FOX and BARRETT'S PATENT.

This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

Further information may be obtained of the Proprietor of the patent.—Mr. BARRETT, 13, York-buildings, Adelphi.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED

TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 65, High Holborn.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

LIGHTNING CONDUCTORS.—

R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the nobility, clergy, &c. that they supply Lightning Conductors, with the points and all staples complete for fixing, at 5d., shilling the foot.

R. S. NEWALL and CO.'s Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world

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67, Hyde-park-street, Glasgow.
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from BIRMINGHAM direct.

Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the

LOWEST BIRMINGHAM PRICES

a complete LIST of which
will be forwarded upon application.
FREDERICK BLYTH,
Nail Manufacturer and General Factor,
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or at 16, Gresham-street, LONDON.

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Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

P. O'CONNOR'S PATENT LEVER

HINGE.—The most perfect and simple INVENTION for CLOSING SWING DOORS and GATES yet produced. The motive power being a weighted lever, it may be easily adapted to any size door, and is not liable to get out of repair as spring hinges generally are. May be had from all Ironmongers and Factors; J. CARTLAND and SON, Manufacturers, Birmingham; or from the Patentee, P. O'CONNOR, Ironmonger, Waverton, Liverpool.

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Buyers of the above are requested, before finally deciding, to visit WILLIAM S. BURTON'S SHOW-ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, FIRE-IRONS, and GENERAL IRONMONGERY, as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with bronzed ornaments and two sets of bars, 2l. 14s. to 8l. 10s.; ditto, with ormolu ornaments and two sets of bars, 1l. 10s. to 12l. 12s.; bronzed fenders, complete, with standards, from 7s. to 3l.; steel fenders, from 2l. 15s. to 6l.; ditto, with rich ormolu ornaments, from 2l. 16s. to 7l. 7s.; fire-irons, from 1s. 6d. the set to 4l. 4s. Sylvester and all other patent stoves, with radiating hearth-plates. All which he is enabled to sell at these very reduced charges.

Firstly.—From the frequency and extent of his purchases; and

Secondly.—From those purchases being made exclusively for cash.

GAS CHANDELIERS and BRACKETS.

The increased and increasing use of gas in private houses has induced WILLIAM S. BURTON to collect from the various manufacturers, in Metal and Glass, all that is new and choice in Brackets, Pendants, and Chandeliers, adapted to offices, passages, and dwelling-rooms, as well as to have some designed expressly for him; these are ON SHOW over his SIXTEEN LARGE ROOMS, and present, for novelty, variety, and purity of taste, an unequalled assortment. They are displayed in plain figures, at prices proportionate with those which have tended to make his ironmongery establishment the largest and most remarkable in the kingdom, viz. from 18s. 6d. (two-light) to 16l. 16s.

THE BEST SHOW of IRON BEDSTEADS

in the KINGDOM is WILLIAM S. BURTON'S. He has FOUR LARGE ROOMS devoted to the EXCLUSIVE SHOW of Iron and Brass Bedsteads and Children's Cots, with appropriate Bedding and Mattresses. Common Iron Bedsteads, from 16s.; Portable Folding Bedsteads, from 12s. 6d.; Patent Iron Bedsteads, fitted with dovetail joints and patent sacking, from 17s. 6d.; and Cots, from 20s. each. Handsome ornamental Iron and Brass Bedsteads, in great variety, from 2l. 7s. 6d. to 15l. 15s.

The alterations and additions to these very extensive premises (already by far the largest in Europe), which have occupied the whole year, are now nearly completed; they are of such a character that the entire of EIGHT HOUSES is now devoted to the display of the most magnificent Stock of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel Silver, Plated and Japanned Wares, Iron and Brass Bedsteads and Bedding), arranged in Sixteen Large Show-rooms, so as to afford to parties furnishing facilities in the selection of goods that cannot be hoped for elsewhere.

Catalogues, with engravings, sent (per post) free.
39, OXFORD-STREET; 1, 1a, 2, and 3, NEWMAN-STREET; and 4, 5, and 6, PERRY'S-PLACE. Established A.D. 1820.

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RAIN PIPES, &c.—F. A. TIDDEMAN

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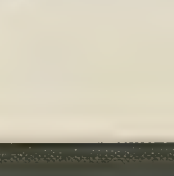
JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.



J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, or weight, singly or in peals.

TUNED BY MACHINERY.

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS

tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system, which gives superior tone and facility for ringing.

TO ARCHITECTS, BUILDERS, AND THE TRADE.

PATENT PLUMBIC ZINC.

GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 16 oz. per foot super.

12	"	20	"
13	"	23	"
14	"	26	"

Full particulars and the reduced price sent by post on application to

A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

SAMUEL HEMMING'S PATENT much

approved PORTABLE BUILDING and ROOFING MANUFACTORY, REMOVED from BRISTOL to BOW, near London, close to the Bow Railway Station.—A large variety of buildings always on view, churches, chapels, shooting lodges, lodges, bazaars, ornamental villas, dwelling-houses, farm buildings, and fire-proof stores. Also, railway stations, trucks, and carriages made to any plan on the shortest notice.

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WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.

GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

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FOR
ENGINEERS, BUILDERS, and CONTRACTORS,
Supplied on reasonable terms by
DODDS and CO.
WINDSOR WORKS, CITY-ROAD, LONDON.
N.B. The execution of all orders promptly attended to.

WILLIAM DODDS and CO.

MANUFACTURE and CONTRACT for
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Works—Mill-wall, Poplar.
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GALVANIZED IRON MERCHANT, &c.—The trade supplied. Corrugating by steam power capable of doing 100 tons per day, at the lowest remunerative prices for bulk.

IRON-FOUNDER, &c.

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IRON-FOUNDER AND ENGINEER.
Orders to any extent can be executed at his Works, Mill-wall, Poplar.—Apply at the Works.

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Having his own Saw-mills, is enabled to CONTRACT
BUILDERS' WORK,
At low prices, consistent with good work.
Apply at his Offices, Arthur-street West, London-bridge.

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PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
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Manufacturers of all sorts of
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PLAIN, CORRUGATED, PAINTED, or GALVANIZED.
Estimates and Drawings furnished on application.
Experienced Workmen sent to all parts of the Country.
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TUPPER and CARR'S (Craufurd's)

PATENT GALVANIZED IRON,
For Roofs, Flats, Cisterns, Gas Tubing, Gutters, Pipes, Fencing, &c.
To be obtained only at
TUPPER and CARR'S WAREHOUSES, REGENT'S CANAL DOCK, LIMEHOUSE, LONDON; or
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Sheets, Bars, Rods, Hoops, Nails, Rivets, Screws, Wire, and Manufactured Articles, Pails, Coal-scoops, Buckets, Pumps, &c. always in Stock.

N.B. An allowance to the trade.
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STOVE, and METAL WAREHOUSE, 139, Shoreditch.
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler.

30	32	34	36-inch.
26s.	30s.	32s.	34s.

Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—

34	36	38	42-inch.
54s.	56s.	58s.	60s.

Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 4d

Register Stoves, with Solid Bars, per inch, 5d.
Improved New Pattern Circular Work Register, with strong Bars and Trivits, 5d. per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Flues, 40s. to 100s. each.

Cast Rain-water Pipe {	2	2½	3 inch.
	11d.	1s. 3d.	1s. 4d. per yard.
Cast Gutters—4 inch, 9d. per yard.			
O G Gutters ..... {			4½ inch.
	1s. 1d.		1s. 3d. per yard.

Patent Line {	2	3	4	5	6
	4d.	5d.	7d.	9d.	1s. per knot.

6-inch Rd. Ward Mortise, with best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s. per cwt.

Dr. Arnott's Ventilators, 4s. 6d. each.
An extensive stock of bar, rod, hoop, and sheet iron
Brick Moulds kept in stock. Any size made to order.

ESTABLISHED 1817

WILLIAM HARMER'S Smiths' Works,

Stove and Range Manufactory, and Ironmongery, Metal, and Zinc Warehouse, 19, Horseferry-road, and 1, New Peter-street, Westminster.—Contractors, Builders, &c. supplied with General Ironmongery at the lowest wholesale prices.

Cottage Ranges, with oven or boiler, complete, 29s. each.
Self-acting ditto, with ditto, from 25s.
Self-acting Oven and Boiler Ranges, with wrought fittings, 4c. complete, from 45s. each.
Register Stoves, from 5d. per inch.
Elliptic ditto, with double backs, from 9d. per inch.

Cast-iron Rain-pipe {	2	2½	3 inch.
	11d.	1s. 2d.	1s. 4d. per yard.

4-inch Eaves Gutters, 9d. per yard.

O G Gutters {	3	4	5	6 inch.
	1s.	1s. 1d.	1s. 3d.	1s. 6d. per yard.
Best Cut Clasp {	¾	2	2½	3 inch and larger.
and Rose.....	16s. 6d.	15s. 6d.	15s.	14s. 6d.

1-inch Best Cut Lath, 16s. per cwt.
Sheet Floor Brads, 14s. per cwt.
Hoop Floor Brads, 13s. 6d. per cwt.

Sash Weights, 7s. 6d. per cwt.; 9-inch Air Bricks, 3s. 6d. per doz.; 6-inch Sink Traps, 2s. 6d. per doz.; strong Coal Plates, with hooks, 20s. per doz. Sheet Zinc, Perforated Zinc and Tubing. Estimates given for Iron Railing, Gates, Balconies, and Ironwork of every description.

ROYAL POLYTECHNIC GAS FIRE.

BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation.—To be seen in action at DEFRIES'S Office, 149, Regent-street, London.

BUILDINGS HEATED by HOT WATER.

G. B. COOPER, IRONWORKS, 121, DRURY-LANE.
Ranges, Hot Plates, Gas Cooking Apparatus, Baths, &c.
Ornamental and Constructive Ironwork.

ECONOMIC COOKING-STOVE.—

DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and CO. (opening to the Monument), London Bridge. Established A.D. 1700.

DR. ARNOTT'S SMOKE-CONSUMING

FIRE-GRATE is manufactured by F. EDWARDS, SON, and CO. 42, Poland-street, Oxford-street, where one may be seen in daily use. The advantages of this grate consist in the smoke being perfectly consumed, no chimney sweeping being required, and a saving of from 40 to 50 per cent. being effected on the cost of fuel.—Prospectuses, with testimonials, sent on application.

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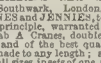
HEATING BY  HOT WATER.

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VOLUME FOR 1856.

IN our last volume, we were led to make some strong observations on the indiscriminate praise which was being lavished on everything French in disparagement of everything English. We are amongst the warmest admirers of the glories of the French capital, and the cleverness in many respects of our brave allies: and we are by no means blind to the defects of honest, stolid John Bull, and the want of improvement in many of his roads. "Still justice is justice; and we feel assured that our protest was needed, and, moreover, that it may be usefully repeated.

When we find one of the most popular and admirable of our weekly periodicals setting forth, after eloquent descriptions of the new Rue de Rivoli, the Hôtel du Louvre, and other improvements in its neighbourhood, such nonsense as the following, we need not be surprised at anything in less intelligent organs: —"The architectural and structural achievements of Paris are on a much larger scale than those of our Houses of Parliament, for instance [all Paris against one building!], yet have taken not a *hundredth*—perhaps (for we do not yet see the end of Westminster Palace looming in the distance) not a thousandth part of the time!" It is difficult to guess how the writer could explain his statement, seeing that the first stone of the Westminster Palace was not laid till April, 1840, and that the rapidity with which this enormous pile of buildings has been erected is marvellous. Apart from the question of time, our skilful and tasteful contemporaries on the other side of the water have erected no building which for extent, completeness, and importance, can be named as its parallel: nor, turning to another style of art, can they show any building to compete with St. George's Hall, Liverpool. As respects the time occupied in architectural operations, Paris has wisely never sought to make her public edifices instances of rapid building: all her most important structures have been the growth of years. The extension of the Rue de Rivoli, and the connection of the Louvre and the Tuileries,—commenced under extraordinary circumstances, when it was found desirable, apart from other motives, to provide work for the artizans, to clear away a very revolutionary part of the city, and to facilitate the passage through it, especially about the Hôtel de Ville,—are exceptions; and here, it is unquestionable, an enormous amount of work has been done in a very short time.

Never let it be supposed that we underrate the devotion of the French to the Beautiful, the means they give the rising generation to become artistical, and the opportunities they afford men of talent to cultivate and exhibit their powers. The Louvre is a wonderful storehouse of art, ranging as an architectural production from Francis I. to Napoleon III. and enshrining the sculpture of the antique time and the painting of the modern world. Pierre Lescot, with Jean Goujon for sculptor, Bernini, the Perraults, Percier, Fontaine, and Visconti are the architects who have worked here.

The ceilings display the works of many of the nation's best painters; while, for the exterior, as well as the interior, the sculptor's aid has been liberally employed. The new works include a whole population of statues, in the production of which a number of sculptors are engaged. Every statue made is submitted before erection to an Examining Committee, whose decision is final. It appears that this step was resorted to in consequence of the carelessness of some of the artists, who, in haste to complete the execution of the commission entrusted to them, had not shown sufficient regard for their own reputation. When we were last in Paris, we heard of the rejection of no fewer than three statues and four groups, showing the care exercised by the committee.

The opportunities afforded to English sculptors are sadly few as compared with those given in France. Throughout the Louvre, let us add, too, honour is paid to art and artists in a wise and grateful spirit, even to the dedication to them of the noblest of the halls.

In one of the rooms are deposited, in a glass case, the implements used in laying the first stone for the completion of the Louvre, on the 25th of July, 1852,—such as the square, the level, and the mallet.

Some of the memorials, by the way, deposited in the *Salles des Empereurs*, less known than the contents of other parts of this wondrous storehouse, are particularly interesting,—the metal throne of Dagobert; the crown of Hundde, attributed to the eighth century; the sword of Charlemagne, spoilt by the embroidery with which it was ornamented for the coronation of Charles X.; some very early MSS. and books, and one apartment fitted with relics of all sorts, of Napoleon Bonaparte,—portions of his dress worn at particular events when on the throne and in exile. They serve touchingly to illustrate the life of this extraordinary man. However, our object is not to write a "Guide." Great pains are taken with the grounds around the Louvre: the paths are bordered with a thick edging of *trained ivy*, —not often so employed in England. The large use made of trees in Paris materially improves the effect of their buildings. A paper recently published in Paris gives the number of trees planted there, from which we learn that there are on the exterior boulevards, 11,441; interior boulevards, 91,137; quays, 4,706; avenues, 6,872; places, 3,659; streets, 1,864; Champs Elysées and Promenoir de Chaillot, 9,555; Esplanades des Invalides, 2,040; slaughter-houses, 1,510; Grenier de Réserve, 120; Entre, pots des Boissons and Marché aux Chevaux, 874; cemeteries, 3,826; and communal schools, 1,130. The length of ground occupied by these trees is 78,515 metres (19¾ French leagues). In addition, there are 57,134 trees, of from one to upwards of 100 years of age, in the different public gardens!

The new portion of the Louvre in the Rue de Rivoli, which fronts the Palais Royal, and has been erected from the designs of Visconti, presents an immense amount of carving, rich, but not always satisfactory in design. The existing building, however, provided the key note. Caryatides support a pediment on the third story of the centre: the attic above this is most elaborately sculptured, and terminates with heads and scrolls along the top of the cornice. In our volume for 1854 (Vol. XII. p. 131), a bird's-eye view of the two buildings as proposed to be united, will be found; and in an earlier volume a plan (Vol. X. p. 443). With the former, is given a long historical account of the Louvre and the Tuileries, and of the numerous designs for uniting them, running over a long period of time, which were made by all the leading architects of France,—who certainly seem to have exercised themselves by imagining difficulties where they did not exist. In our present number, p. 7, we give a view of the Renaissance Court of the Louvre, built during the reign of Louis XIV. with its wonderful amount of sculpture, and showing the equestrian statue of François I. which is now about to be erected. We hope this engraving will be taken as an evidence that there will be no falling off in this department of the journal: on the contrary, our efforts will be uniformly directed to its improvement, in this respect as in all others.

ON COLOUR AND ITS USE IN ARCHITECTURAL ART.*

"THERE is no better education for the eye than the study of fine prints — their colour is so fine." Such was the remark made to me by an intelligent collector of engravings some time ago. At the moment it struck me as a most appropriate exemplification of the value of the lower or neutral tones of colour, in all fine combinations. Now, if any one will give himself the trouble to examine with the most ordinary care an etching by Rembrandt, in its ordinary state, and in one of its later stages, when the plate has been weakened by the numerous impressions taken from it, he will find that the chief difference between a really valuable and a comparatively worthless engraving, consists mainly in the fact, that in one case all the various gradations between light and dark, sharp and dull, are given with precision and accuracy, whereas in the inferior and worn-out plate, they are characterized by a dull, heavy uniformity.

Observe that in each case the general arrangement must be the same. The disposition of light and shadow remains unchanged, but it is by those slight indications of character which perfect execution conveys, that we are enabled to judge of the true merit of a print. Even in a matter which is so purely black and white as a line engraving, colour is one of the first things which attract the eye of the artist.

What is the lesson we are to learn from this? I reply, the extreme delicacy of all matters relating to colour. In a former lecture I showed that the primitive colours red, yellow, and blue, were the first to attract the eye. It is, however, as I shall now try to show, upon the neutrals the nice discrimination and tender care with which these latter are distributed, that beauty of colour depends.

Allow me for a few moments on this subject, to call to your notice a work, having the form of a scientific treatise, lately published by a Frenchman, Mons. Chevreul (director, I believe, of the Royal Manufactory of Gobelins Tapestry, at Paris).

He observes:—

1. That a ray of solar light may be divided into seven groups of colour—red, yellow, orange, and green; blue, violet, and indigo. To which is added this most pertinent remark:—It must not be supposed that all the rays comprised in

* The following paper by Sir Walter C. James, bart. was read at the Architectural Museum, Canon-row.

the same group, red, for instance, are identical in colour: on the contrary, they are generally considered as differing among themselves, although we recognise the impression they severally produce as *red*.

One more short extract:—

1. When light is reflected by an opaque white body, if this body be not polished, each point of its surface must be considered as dispersing in every direction through the surrounding space the white light which falls upon it, so that the point becomes visible to an eye placed in the direction of one of these rays.

2. When the body is polished like the surface of a mirror, for instance, one portion of the light is reflected irregularly, as in the preceding case: at the same time another portion is regularly or specularly reflected, giving to the mirror the property of presenting to the eye, properly situated, the image of the body which sends its light to the reflector.

3. Let us observe this:—It is obvious that if we reunited the total quantity of the coloured light absorbed by a coloured body, to the total quantity of coloured light reflected by it, we should produce white light; for it is this relation that two differently coloured lights, taken in given proportions, have of reproducing white light, that we express, by the following terms, coloured lights, complementary to each other, or complementary colours. It is in this sense we say,—

That red is complementary to green, and *vice versâ*;

That orange is complementary to blue, and *vice versâ*;

That greenish yellow is complementary to violet, and *vice versâ*;

That indigo is complementary to orange yellow, and *vice versâ*.

It must not be supposed that a red or yellow body reflects only red or yellow rays besides white light. They each reflect all kinds of coloured rays; only, those rays which lead us to judge the bodies to be red or yellow, being more numerous than the other rays reflected, produce a greater effect. Nevertheless, those other rays have a certain influence in modifying the action of the red and yellow rays upon the organ of sight. (In proportion to their number do we speak of a colour being dull or brilliant.) This, too, will explain the different varieties of hue which may be remarked among red and yellow substances. It is also difficult not to acknowledge that among the differently coloured rays reflected by bodies there is a certain number of them which, being complementary to each other, go to reform white light on reaching the eye.

Hence I apprehend it is that one painting is said to be more luminous than another, viz. because the complementaries are nicely balanced. Thus a larger number of colourless rays are brought to bear on the retina. Thus it is that a cloudy landscape may be thrown into sunshine by a few touches of gay and positive colour in the foreground; and the sombre tints of a Raffaelle or a Rembrandt be illuminated by the skill shown in painting a lace ruff, or the careful handling of the flesh tints upon the countenance.

Let me here risk a remark, though perhaps to some of my audience it may seem hardly within the fair limits of my subject. The value of a truth must ever be in proportion to the degree in which it imparts self-knowledge,—a knowledge of our own moral nature. Creation itself is but a glass or mirror to give us an insight into the attributes of the Creator.

In this respect, the truth I have alluded to respecting colour has some importance. The primitive colours, seldom seen in their purity, and always, when seen, in very minute quantities, may perhaps fairly be compared to those periods of life when we are called upon to perform some great exploit, or make any unusual effort; while the neutral tones, covering, as they do in nature, and as they ought to do in art, the larger spaces, are like the monotony of our every-day life, not brilliant, but useful, well worthy of attention and study, as being the background upon which the fair picture depends,—the foundation on which the superstructure stands.

Next to a careful outline in any work of art, we proceed to the laying in, as it is technically called in painting, or the disposition of the lights and shadows.

Light and shadow hardly belong to the province of colour—hardly to that of form. It stands really midway between both. In one sense it appears to partake of the nature of colour, for it unquestionably admits of those variations of warmth and coldness which impart at least one of its main attractions to the art of colouring. It appears, therefore, appropriate to remark, that whether the study of light and shadow belong to colour or to form, or be allowed, as is perhaps the most philosophical arrangement, to have a province of its own, it is well that it should form the study of all artists and art-workmen, and ought scarcely to be overlooked in any lecture which professes to give an account of neutral colour.

No round object can be faithfully represented without shadows. It is probably on this account that "light and shadow" form a more prominent object in the painter's course of study than in that of the architect or sculptor. While the student of painting is working from the "round," the architect is occupied, perhaps, with a section—the sculptor with his modelling instruments and clay. This is to be lamented. The sculptor and the architect ought, if possible, to be as accomplished draughtsmen as any painter. Sculpture and architecture, each in their own province, are as dependent upon a judicious distribution of light and shadow as painting is. Sculpture and architecture, indeed, admit of the application of colour.

It is seldom, however, in this country and climate, that either statues or buildings can admit of colour being applied to them specially if in the open air. Painting, of course, relies upon colour and bright colour. The former are in most cases reduced to light and shadow, and form, as their only means of attracting attention. Any one, indeed, who has had the good fortune to visit the Vatican by torch-light, will appreciate the importance of light and shadow in sculpture; and as to architecture, who is there that ever gazed upon the majestic outlines of an old cathedral, dark against the setting sun,—or, again, in its very different aspect, coming forth in the brilliancy of reflected light against a dark thunder cloud,—but will admit how variously it is possible to contemplate the same object, when seen in shadow or in light? It was a remark, I fancy, of the great painter Turner, that none could attain great eminence in his own art (landscape painting), who was not an early riser. Surely the early hours of the day are those which have upon the mind the most invigorating effect; but to the artist the hint is invaluable; for then is it that we can best study those grand forms, which, rising above the mist, display beauty of outline veiled in the tenderest colours:—

> "Hues of the rich unfolding morn,
> Which ere the glorious sun be born,
> By some soft touch invisible,
> Around his path are taught to swell."

At no time are the lights and shadows better worthy of our attention. Has any one ever studied at such times, either any lofty cathedral, or scarcely less beautiful temple of the Greeks? Nay, has any even observed his own parish church, or the gable of some ancient cottage? He will then, doubtless, have marked, how sharply and beautifully the sculptured niche, and deep-cut moulding, caught by some wandering ray of sunlight, display themselves; and how they are all the more brilliant on account of the dim veil of obscurity, in which the great features of the building may, haply, be shrouded. The prominent parts of such a building are like the loftiest peaks of some grand mountain form, tipped with golden light, and clear above the clouded base, giving, perhaps, a more stupendous notion of its whole than would have been afforded by the visible and actual.

Nature in such aspects and under such a point of view has an interest greater in kind, though very like that which we attach to an unfinished work of art. Here and there are striking beauties, but many parts of the scene lie hid in that mystery which, while it is full of uncertainty, is fuller still of hope.

And now let me ask is there any principle—or are there more than one—by which we may discover to what all this beauty is due? To put the question in a clearer shape: are the neutral tints of a beautiful scene in nature arranged upon any definite plan or according to any known law?

We venture to think that they are. 1st. It will be found in nature that the masses of light and shadow are unequal in their form, though even and equable in their general tone. 2nd. Although the lights and shadows are even in their tone, that evenness does not imply absolute monotony; far from it. Cold colours and warm are generally mixed up with each other, in the same way as a warm and luminous character is seen to prevail in the mists of the morning. The evenness of tone to which we allude is not attained by absolute oneness or unity in all its parts, but by the counter balance of various colours, and the very slight degree in which each little square inch, or (to speak more in the language of science) each molecule differs from its neighbour. 3rd. As I mentioned in my last lecture, the brightest bits of light, and the darkest of shadow, are always small; they are frequently brilliant in colour as well as highly luminous, and in close juxtaposition. They are thus more striking by force of contrast, and upon them the eye delights to dwell. On this account they are well worthy of any amount of trouble or skill which the artist may expend in their faithful representation.

Such are some of the laws of light and shadow laid down, imperfectly I fear; but I trust, as far as they go, intelligibly. Nothing is more common than to hear a certain jargon or phraseology adopted with regard to these few simple laws, without their being really understood. Breadth of light and shadow, breadth of colour, breadth of effect, are common and forcible expressions. I must doubt whether they are distinctly apprehended by all who use them. They appear to me often applied as if they meant a sort of slap-dash style,—a courageous dealing with matters of high art, quite inconsistent with so-called vulgar attention to matters of detail. This is a great, though common error. In all the arts it is quite possible to treat a subject in the broadest, nay, even in the boldest way, and yet give the most scrupulous attention to finish. Let me add, that boldness and finish, each in their proper sphere, so far from counteracting, have a tendency to draw forth and exhibit their mutual and relative dependence. The discoveries of the telescope, and a knowledge of astronomy, give almost a tenfold value to the truths, equally important and equally interesting, which the microscope unfolds.

Art, then, let us remember, is a unity, and a grand unity. It combines attention to details in every part with a perfect whole. It is really puerile to set up one part of it above another, in the way we often hear of,—to say colour is everything, light and shadow form everything, or to exalt painting above architecture, sculpture above painting, architecture, in its restricted sense, above both. Form, light and shadow, and colour; painting, sculpture, and architecture,—all these go to the formation of one grand idea,—the realisation by material aids of the impressions we derive from the external universe.

Hence the difficulty of speaking of one province of art,—that, for example, which I have chosen,—without diverging into others. Beauty of colour is dependent, as we have seen, not merely on the hues, but actually on the forms which the patches of colour assume, and above all, on the disposition of the neutral masses. How poor, comparatively speaking, would the rainbow be if it did not combine with its hues the magnificent form of the arch.

The most delicate complexion would not conceal or neutralise bad features, while on the other hand, it is readily admitted that good features are improved by a good complexion. The forms of the clouds on a summer evening increase their brilliancy. The same principle holds good in art. We admire the colouring of Titian, but we feel to want something more. When we look at the drawing of Michelangelo we feel we want something more. The light and shade of Rembrandt do not thoroughly satisfy us. Why is this? Because art being a unity, and aiming, therefore, at perfection,

wants more than man can give. He, then, who takes up art in earnest, would do well to remember that she is jealous, and demands the energies of the whole man. Art asks more than we have it in our power to give. Much we may give: all we cannot. Still, art has full right to ask for all. It is her office, like that of every great pursuit, whether science or literature, or any other, to show that our best efforts here are imperfect. The nature which surrounds us, though in most, if not quite in all, respects superior to any imitation that man can produce, partakes of an inherent imperfection. Her noblest works,—the longest lived among the animals; the oak-tree, which lives a thousand years; nay, the so-called everlasting hills, are transitory. Our aim, then, is to look through Nature and beyond her. The office of art, as of everything great or good here, is to remind us of immortality.*

THE POSITION OF THE ORGAN IN CHURCHES.

WE resume our notice of the work of Dr. Rimbault and Mr. Hopkins,† and will treat more especially upon that portion of it which relates to the position of the organ in churches. This part of the subject is of importance to the architect, involving, as it does, several considerations of consequence both acoustical and symmetrical in the designing of ecclesiastical edifices.

The exact period of the introduction of the organ into the service of the church is involved in obscurity, or rendered doubtful by the conflicting testimony of old writers, but it was probably about the third or fourth century of the Christian era. The earliest account of an organ supplied with wind by bellows, but not furnished with keys, is certainly that ascribed to the Emperor Julian, although, as we said before, the description might apply to the bagpipe, when clothed in the lofty imagery of poetry. But the period—the middle of the fourth century—would agree with that ascribed by some authors for the introduction of the real organ. An engraving, from Didron's "Annales Archéologiques," of a sculptured representation of a pneumatic organ on the obelisk at Constantinople, erected by Theodosius, who died A.D. 395, gives weight to the period ascribed. A century later, Cassiodorus, in his commentary on the 156th Psalm, speaks unmistakably of the state of the instrument, where he says, "Organum itaque est quasi turris quædam, diversis fistulis fabricata, quibus *flatu follium* vox copiosissima destinatur," &c.

The Greeks can lay no claim to the origin of the organ, beyond the merest *precognita*, or simplest improvements upon nature's first flute, the whistling reed, moved to music by the zephyrs:—

> "Et zephyris cava per calámorum sibila primum,
> Agresteis docuere cavas inflare cicutas"
> LUCRET. lib. 5.

Their instrumental music was but of two kinds, *αὐλησις και κιθάρισις*. The Romans derived their arts as much from the Etruscans as the Greeks, for every instrument found on Greek works of art is found also on Etruscan. The flute was their instrument most loved, and their flutists the musicians most honoured:—

> "Temporibus veterum tibicinis usus avorum
> Magnus, et in magno semper honore fuit,
> Cantabat fanis, cantabat tibia ludis,
> Cantabat mœstis tibia funeribus."—OVID.

Kircher, in his ponderous Latin work upon music, in the chapter, "De Instrumentis Hebræorum," shows two or three engravings of the Jewish organ in different stages of advancement, but without decided dates, copies of which are shown in the doctor's essay. But so much mystery envelopes the ancient Jewish musical instruments in general, that, in regard to the much-disputed psaltery, he says, "Psalterium Davidicum quale fuerit nemo recte adhuc definivit; credunt aliqui, non tam fuisse instrumentum quam certa quædam harmoniæ genera denotare, et vocis sonique modulationem," &c.

In 450, says Julianus, the organ was in common use in the Spanish churches. Other instruments were used still earlier, and we are told that their introduction by St. Ambrose, in the Duomo of Milan, set the fashion, and Justin Martyr, who flourished 150, relates the use of them even then.

In 313, Constantine built several sumptuous churches, and during his reign the Ambrosian Chant was established at Milan. The venerable Bede, who died 735, when minutely describing psalm-singing, singularly does not allude to the organ. According to Mabillon and Muratori, organs became common in Italy, Germany, and England during the tenth century. In the mediæval ages, the instrument was placed on one side of the choir, a position which seems to have been almost universal throughout Europe.

In our former notice of this work, when speaking of the term "pair of organs," we attributed a certain passage, explanatory of the instrument called the "positive," to Dr. Rimbault himself, whereas it should have been marked as a *quotation* only of the ordinary explanation of that term in the musical dictionaries. However, to what we then said we may add, that Nicholls, the historian of Leicestershire, says—"A 'pair of organs' was the term at that time, when there were two kinds of organs used, the one fixed and the other portable, &c." The "portative," then, was the early movable instrument known as the "regal," and the "positive" was the larger organ, known as the "small," or "choir;" afterwards, from its position, corrupted into "chair," which, being appended to the "great" organ in churches, was the probable origin of the term so much discussed.

In Canterbury Cathedral, as restored by Lanfranc, the organ, according to the monk Gervase, was placed above the arch in the south transept; and after the fire of 1174,—"when the whole choir," says Britton, "from the angel steeple to the east end, together with the Chapel of the Virgin, &c. were destroyed,—after the rebuilding of same, the organ was placed upon a large stone corbel, over the arch of St. Michael's Chapel, in same transept." The corbel is shown in the section of Britton, pl. 4, but has since been removed. In the time of Dr. Burney the organ stood on the north side of the choir, between the third and fourth pillars, and at present, as we know, it crowns the magnificent screen at the entrance of the choir.

In the old cathedral of St. Paul, the great organ stood under one of the north pier arches of the choir, above the stalls, with the choir organ in front. It was destroyed in the great fire. The organ of Westminster Abbey, upon which Purcell played, stood on north side of the choir, and was a small instrument, with diapered pipes: it was removed in 1830—the date of the present instrument,—but its destination is a matter of uncertainty.

At York, the organ built by Dallam in 1632, was, by command of Charles I., placed on the "north side of the choir," in order not to impede the view of the church; but in 1690, Archbishop Lamplugh reversed the decision, and removed it to the stone screen. The same monarch gratified his taste by removing the organ of Winchester Cathedral from the screen to the north side of the choir. "At Chester," says Burney, "the small primitive organ is still standing on left side of the choir, though that now used is at the west end." In Durham, the organ was on the north side of the choir; and a cut from Dugdale shows that of Lincoln in the same position, and illustrates at the same time the much discussed "pair of organs."

Our college chapels also followed the general practice of placing the organ at the side of the choir, whether north or south.

As regards parish churches, the common situation for the organ, both before and after the Reformation, was in the chancel: of course there were exceptions to this. In the Oxford "Glossary," we read:—"The large instruments now in use, were not put up in their present conspicuous situation, in the place of the ancient rood-loft, until after the Reformation. On the Continent, they were also introduced in the course of the seventeenth and eighteenth centuries, but were usually placed at the west end of the choir. In this country, prior to the Reformation, the organ was frequently placed on the north side of the choir, or in the north transept." Thus it will be seen, that in England the present usual position of the organ, over the choir screen, does not appear to have been *general* until the Restoration. On the Continent, the large organs are invariably placed in "lofts;" some at the west end, some over the doors, and some against a pier. A particular instance of the latter, is that magnificent one by Silbermann, at Strasburg, where the organist sits suspended in the air, some 40 or 50 feet from the pavement, occasioning, at first sight, rather an unpleasant feeling of insecurity. In using the term "large," we particularize the principal organ, as it is a rare thing to find a church of pretension on the Continent, without its two, three, four, and sometimes even six organs. For instance, the Duomo of Milan, that of Verona, and the Church of Saint John, at Bologna, have each two large organs, one on each side of the choir. Also the Cathedral of Florence, on the north-east and south-east of octagon.

San Antonio, at Padua, has four organs, and St. Mark, at Venice, six—two large and four portable. At Ratisbon, the organ is placed behind the high altar, an arrangement totally unworthy of this magnificent structure; and that of the Frauen Kirche, at Dresden, one of Silbermann's finest, is placed over the communion table. A list of other instances of importance concludes that portion of Dr. Rimbault's prefatory essay. As we before observed, Mr. Hopkins's work is eminently practical and valuable as a manual of organ construction. His chapters upon each leading feature of the fabric, the case, the bellows, the wind-chest, the claviers, the pedals, the pipes, the stops, &c. with all their complex and elaborate constructive subdivisions, are well and particularly described. The portion of the work of more particular interest to architects generally, is comprised in chapters 32 and 33, namely, the situation of the organ and its size.

Some preliminary observations upon acoustical data and theories, are not misplaced in introducing this *vexata questio*. Air suddenly displaced by the expansion or vibration of a body, displaces in its turn the air adjacent to it, which in like manner communicates its disturbance to the atmosphere around it, the effect varying in intensity according to the power of the prime cause, continuing with its duration, and ceasing with its cessation. The effect of continuous waves upon the surface of a smooth lake into which a stone is dropped, well illustrates the effect, with the exception that the disturbance of the lake is horizontal whilst that of air is spherical, or radiating from the disturbing cause in every direction. "Sound then," says the author, "travelling as it does in all directions, it is easy to discover the cause of the excellent musical effect produced by organs occupying a *central* position in a building; as, for instance, the choir screen of a cathedral or other large cruciform church." A staccato chord from a cathedral organ in a central position will be heard retiring to the remotest parts of the building, and ultimately dying away. A continuous sound, on the contrary, dies not away, because fresh sound-waves follow each other until the building is filled,—but when the hand is raised from the keys it recedes and dies away as before. Sound, being more reflexible than light, penetrates into recesses where light would fail to enter, but, like light, loses in intensity what it gains in extent. Thus, a sound that has travelled twice a certain distance will only be heard with a fourth its original strength, the loudness not diminishing inversely as the distance increases, but inversely to the square of that distance. This is the rule for the open air, but in a building the sound is retained, and the reflection causes echo, which, if the original sound still exist, mingles with it,—if it cease, is audible afterwards. The reciprocation of neighbouring bodies augments the sound and forms *resonance*: for instance, a vibrating tuning-fork will, on the handle being placed on the table, acquire an accession of strength; so with a violin, if only the strings vibrated, an insignificant sound would be produced, but, when the body of the instrument is set vibrating, sounds are produced of considerable power. Resonance is, therefore, an essential condition in musical instruments: thus, a wooden floor, and that a

* To be continued.

† The Organ: its History and Construction. London. Cooks and Co.

raised one, beneath an organ, greatly increases its effect and power, the whole of the surrounding woodwork being thrown into strong vibration.

"The most common impediments," says Mr. Hopkins, "to the equal dispersion of the tones of an organ occupying a west gallery, are the lateral galleries. These catch the sound as it spreads, and prevent its descending into and pervading the aisles beneath so effectually as it would otherwise do," therefore their exclusion in modern churches, together with that of high closed pews, &c. are favourable steps towards acoustical excellence. Instances, however, have occurred in which the echo and reverberation were so great as to require the application of artificial absorbents, &c. in the shape of drapery, to remedy the confusing effect

One more peculiarity of sound may be alluded to—its penetration. Whereas a wall, or other opaque body, will exclude light, it cannot prevent the spread of sound; and the swell of an organ is heard in a subdued form through the thick woodwork that encloses it, when the shutters are perfectly closed.

The most usual position assigned to the organ for the last 300 years has been the west end. In selecting the west end of a church for the situation of the organ, the architects and ecclesiastics doubtless were actuated by the same motives that induce the choice of a similar situation in a concert-room for the erection of the orchestra, namely, that the entire area of the chamber might have the benefit of the whole united body of sound thrown forward without impediment. By choosing the west end, opportunity was afforded of raising the organ on a platform or gallery, above the level of the congregation; thus increasing resonance, and imparting freedom to the tone, and diffusing it in a more even manner among the audience. Had the organ been placed too near the roof, its tone would have been smothered, and its mechanism injured, from the excessive heat of summer, and cold and damp of winter, occasioning some of that long list of technical ills that the organ is heir to. Greater space, too, was afforded at the west end for mechanism and pipe work. One other advantage might be cited; that being *behind* the congregation, the eye might not be induced by its attractions to wander from its proper object of concentration —the altar; at the same time that it might have filled a high position in the church generally, as an architectural embellishment.

One objection there was, however, to the use of the west end for the position of the organ, and that was the blocking out the great west window when it occurred. To obviate this very serious drawback, they hit upon the plan of either dividing the organ into two parts, one on each side the window, or of piercing with a window the organ itself. Dr. Burney, in his musical tour through France and Italy, cites several instances in those countries.

Smith and Harris, on settling in England, followed the continental custom of placing their organs at the west end of churches, not cruciform, whether with a window or not, but in no case built a divided organ. That at New College, Oxford, was probably the first made here; and that at the Church of the Immaculate Conception, Farm-street-mews, one of the most successful. The cathedral organs of Smith and Harris were usually placed upon the choir-screen, and were scarcely larger than those built for parish churches. The contest between Sir Christopher Wren and the Dean and Chapter of St. Paul's Cathedral we related in our former notice: the latter obtained their point, and the example has been uniformly followed in cathedral and other churches to within the last few years. In recent times the west end has been much objected to,—especially where there is a choir, on account of the distance between it and the voices; and in that case the next position in merit is certainly the *side* of the church.

In some instances, where sufficient space could not conveniently be had in the church, an organ-chamber has been built out from the side. An old example of such exists in the Chapel of Christ's College, Cambridge. Tone, in such a case, is much weakened, but a raised hollow flooring, and plenty of space between the top of the organ and the arch, will much obviate the defect, as at the Temple Church and elsewhere. A most unfavourable plan for tone is that of putting the instrument in a recess, the front of the organ being flush with the face of the arch, and completely filling up the opening. Tone, in such case, can only escape through the interstices of the pipes, like water through the fissures of a flood-gate. At St. Mark's, Old Street-road, this arrangement occurs, and the calculation of the organ-builder is, that a *fourth* only of the tone of the instrument finds its way into the body of the church. But a worse arrangement still is that of putting the *organist*, as well as the organ, into a chamber at the side, with the pipes forming a screen between him and his audience, the noise of the instrument being as oppressive in that small space as the bells in a belfry. The frequent custom of placing the organ at the east end of one of the aisles in an organ-chapel on one side of the chancel, is much preferable to the last-noticed arrangement. In such situation, the floor should be of wood, and hollow, and the sound-boards as high as possible.

If the organ be placed in a chancel-chapel, there should be an arch opening into the aisle as well as one towards the chancel. The object of this is to allow the tone of the organ to pass down the aisle as well as across the chancel.

Another, and more rare arrangement, is that of *dividing* the organ, and placing a portion of it on each side of the chancel, where there is room, as at St. Margaret's, Leicester (see Mr. Sparke's pamphlet on "Choirs and Organs," page 19, where this arrangement is illustrated with a wood-cut). "This plan," says Mr. Hopkins, "is in every respect a most excellent one, scarcely, if at all inferior, even in a musical point of view, to that of a divided west-end organ; while, under its working, the organ is accommodated without being sacrificed to other arrangements that are now considered essential in most churches." A list of the advantages obtained by this mode is appended.

As regards cathedral and minster organs.—At the time the alterations in Westminster Abbey were in contemplation, the Rev. Sir W. Cope proposed to erect the organ at the west end, and at the same time to strengthen its tone as much as possible. The choir screen was proposed to be placed at the west end, so to extend across between the first pair of pillars of the nave, with its face to the east, so as to disclose at one view the whole expanse of the minster; an arrangement, musically, as well as architecturally, considered. As subsequently carried out, the choir screen was retained in its former position; the organ was divided into four portions,—the great organ being placed within an arch on the north side of the church, the swell under the corresponding arch, on the south side: the 32 feet pedal pipes, were laid horizontally along the west side of the screen, while the choir organ hung over the east side, in the usual way. Though so much broken up, the tone of the organ tells well; which may partly arise from the two main portions not being too much under the side-arches, but partly projecting from under them. At Ely, the organ, reconstructed under the direction of the architect, is a *hanging one*: the keys are behind, on the aisle side, so that a portion of the instrument is between the organist and singers: the effect is nevertheless good, and the appearance very grand. Mr. Hopkins concludes this important chapter of his work by a recommendation for placing the player at the *side* of the instrument, an arrangement certainly presenting many advantages. The organist could then see his choir and be seen by them, and, if placed over the choir-screen, would see either end of the building by turning his head, and could thus receive communications and be independent of the prompting so requisite in the present system,—besides this great advantage, that the space of the organ loft could be taken into the Great organ-case by moving the front forwards to the back of the Choir organ,—thus admitting the introduction of many large pipes now wanting. The above arrangement is seen in Snetzler's organ, Beverley Minster; which instrument, standing on the choir-screen, has the keys on the north side.

In chapter 31, certain rules for the regulation of size and power of organs, so as to render them proportionate to the size of the church in which they are to be placed, and the congregation whose voices they are meant to sustain, are submitted for consideration. In this the acoustical properties of the building in question have to be considered, in order to calculate the number of stops requisite. This calculation, it is obvious, can be but approximate, owing to the various causes influencing the acoustical effects, and which can never be wholly ascertained until too late; that is, after the organ is erected in position, and proved.

The calculation of Seidel, apportioning the relative numbers of stops and congregation, does not exactly apply to modern English organs, half-stops and couplers not being taken into the account: with these exceptions it is good enough. Various other theoretical points of considerable interest to the constructors of organs, as well as of churches, displaying much ingenuity on the part of the writer, will be found in the work of Mr. Hopkins; which, if it has not occupied him the fifth part of the time employed by Dr. Burney, in his splendid history of music—namely, thirty years to meditate, and twenty to write and print,—must, nevertheless, have cost him much time and great research.

A copious Appendix, containing an account of foreign and native organs, concludes this history of an instrument, whose progress to excellence from trifling beginnings once more recalls the words of Cicero:—

"Omnium rerum principia parvum sunt, sed suis progressionibus usu augentur."

WORKS AT THE ARCHITECTURAL EXHIBITION.*

Your enthusiast after "the northern energy," and your lover of Italian grace, each sees but the half of what is just now on the walls of the Suffolk-street Galleries. *We*, happily, are not demanded:—"Under which king, Bezonian? speak or die,"—but, instigated both by public duty, and private feeling and conviction, can essay to gather at every hand. Assuredly, not from one seed, but from many, will the architecture of our day shortly grow to vigorous life. Whoever "narrows his mind" to observations in either direction restrictedly, is, to some extent, retarding what all desire. Nay; could we concede that the architecture of the future would be "Gothic," or could we concede that it would be "Italian," we should say that that architect would be unfitted for the development of his own style who confined his studies solely to *it*. Moreover, be it observed, architectural beauty is not *necessarily* produced by "constructive truth,"—any more than is the former possible with the *neglect* of the latter. Architecture becomes the grand and living art, only whilst it withdraws itself from the easy application of old names, and when it ceases to illustrate old dogmas and old styles. Unity of existing practice to the extent of what becomes style, we have indeed heretofore urged was much to be desired, for the sake of the opinions on art—amongst the public.

Hopeful as the position of the art is, its advancement is retarded by individual prejudice and professional *clique*. These things have a sort of relationship to something scarcely worse, —in short, to ignorance:—We are giving more space to this head than we usually afford to exhibitions; but the object deserves it. Whatever be the inferiority of the display of works,—having regard to talent existing in the profession,—the collection is full of matter of instruction to those who will make a study of it. The failing light of these wintry days, in what is surely the most ill-constructed gallery in London, is one difficulty which we feel in doing justice to the drawings. Some of the most important works we have still to mention.

Amongst the exhibitors of designs for buildings for important public purposes, Mr. E. M. Barry deserves praise for the number of contributions which he sent. Some of his designs are not so favourably circumstanced as they would have been, had the space permitted the whole of the drawings to be shown. No. 4 is an exterior view of Mr. Barry's "Competition Design for the Taunton Assize Courts and Judges' Lodgings,"—No. 471 being the plan of the principal floor, and an interior view of the

* See p. 630, vol. xiii.

Criminal Court. The drawing first mentioned shows a Gothic hall, flanked by the courts, public offices, and judges' lodgings. These portions are in a somewhat later style of architecture, with oriel windows, and chimney-shafts clustered at the angles, the materials being red brick and stone. Are all the chimney-shafts for use in their actual positions? It seems to us that the design has too much of the character of a college or residence, for the main object of the building. The ogee-capped turrets are beautifully designed. The interior of the Criminal Court is less satisfactory, as in the treatment of the apertures for ventilation.

Mr. E. B. Lamb's "Design for the Law Courts, Taunton" (37), deserves attention, though in parts it may be not free from what are eccentricities, rather than beauties of detail. In general arrangement it consists of a colonnade terminated by square blocks of building with coins; the front being further extended by low wings. Few windows are introduced, and these have the peculiar but effective rustic dressings which Mr. Lamb uses in some of his other designs. The whole is crowned by a low dome. The chief innovation is in the treatment of the order, which, generally, is the Italian Ionic. In place of the architrave stones, segmental rusticated arches are used, springing from column to column: the columns themselves are placed on lofty block plinths, with the angles chamfered; and at the lower part of the shaft, the flutes terminate in a peculiar kind of panelling, or elongated honey-comb work. In front of some of the columns are statues on lofty pedestals. The plan of the portico has much merit.

Mr. Barry exhibits several designs for the Oxford University Museum. To a nearly similar plan, there are two designs, one in the Italian style and the other Gothic. The view of the former (31), shows a quadrangular edifice, with structural masses at the angles, where salient Corinthian columns support sedent statues, these portions being terminated by an attic, crowned by vases. The order is continued by pilasters, and in these intermediate parts, the attic is exchanged for a blocking course, and vases of different character. At the principal front of the building, however, there is a colonnade, with a hexastyle portico and pediment projecting from it. It is, perhaps, to be regretted that there are windows at the back of the portico, as such arrangement is always liable to give the impression of discordance between structural utility and decorative appliances: but, nevertheless, the whole design is admirably well managed. The adjuncts of balustrades and steps would contribute to the effect. The Gothic design (32), has also merit. It has oriels, Burgundian arches to the window openings, an open battlement and pinnacles, and a porch divided into three bays. The ground plan and sections of another design, or one having the colonnade without the hexastyle portico, are also shown (382 and 381), as are other drawings of the several designs (404); and No. 498 gives elevations and sections, showing a lofty dome of glass in the centre. The design, which gained the second premium, was shown in the last exhibition of the Royal Academy, as noticed by us at the time.——Messrs. J. W. and W. Papworth's design for the same structure (50), displays an extended group of buildings, with Italian window dressings and pilasters (having chiefly, one story of windows, the upper story being lighted from above), joined by intermediate portions of two stories.——Mr. E. Ellis's design (51), has merely an order of three-quarter columns, and a hexastyle portico,—the glass roof of the centre quadrangle appearing. At the angles of the latter, are four lofty turrets, and the angles of the main building are formed by circular projections.——Mr. H. B. Garling's design (95), was one of the six selected in the same competition. It is Gothic, with traceried windows, square headed and pointed, with pinnacles, and open parapet, and high-pitched roofs. The details are marked by care in design and drawing.——The design of Messrs. W. Young and G. Morgan (108) has a low front with arched windows, and an entrance-way of three arches, beneath a pediment, beyond which rises a tower with four semi-domes, and a cupola from the centre.

The successful design for the Birmingham and Midland Institute, recently given in our journal, is not exhibited; but there are several of the other designs. Mr. P'Anson's elevation of his design (81) evinces both high merit and originality. There are four lines of windows; the two upper stories being united under a range of piers and arches. In the plan, we should say, the quadrant-corners continue to the height of two stories only. The basement has two-light windows, with a simple moulding as pediment, in segmental form, and piers with "*bossages*," and rusticated work. The next story has plain windows, and piers with capitals or impost mouldings. These support a string course, of plain members, and a broad *facia* with the names of eminent individuals: and over this is an iron railing between the piers of the arcade. These piers have ornamental capitals, and the spandrils are filled in with ornament in circles. The cornice has a peculiar character, and may be described as cut into a range of arches, over a deep frieze, and has its upper part formed by broad flat members. Throughout the design, the common forms of mouldings seem to have been avoided; and a similar tendency is to be noticed in many other designs which are amongst the best in the exhibition. The ornament is chiefly in minute coloured patterns; and contributes all the more to the success of the general effect, from its being sparingly introduced. Indeed, the design exemplifies the extent to which polychromatic decoration may aid in effect; but beyond which it should rarely travel. Over the centre of the front is an attic-like termination, with a long panel filled with sculpture. It is finished with a railing, and groups of sculpture at the angles. There are three doorways;—that in the centre having a pediment supported by Persian figures on tall pedestals. One slight drawback to the effect of this excellent design, arises from the ascent of the ground at one end, which is allowed to cut off part of the basement.——Mr. James's design (85) is more commonplace in treatment. The upper part of the quadrant corners is formed as a screen of coupled Corinthian columns, backed by a wall for part of the height. Near the angles are salient columns coupled, supporting a crowd of figures in advance of an attic. The attics are crowned by groups from the chariot-race—with what reference to the object of the building, is not very apparent. The centre of the front displays a plain porch and some ordinary window-dressings; and there is a lofty inclosing-wall to the area, and pedestals with equestrian figures of Wellington and Raglan, and a monument to Watt. Elevations of the same design are in another room (401-402).——Messrs. Lockyer and Martineau exhibit their design in No. 403.

None of the architects connected with the Royal Academy have ventured to contravene an understood regulation against exhibiting elsewhere, except Mr. Smirke. He gives a view of the Carlton Club-house (156).——Professor Cockerell is represented by Mr. Goodchild, in an excellent drawing, notwithstanding its exaggeration (53), of one bay of "The Interior of St. George's Hall, Liverpool."——Mr. P'Anson's design for the proposed ceiling to Merchant Tailors' Hall is shown in No. 78. It is a flat boarded ceiling in panels, with coloured enrichment, and main supporting girders.——The same architect's "Screen," lately placed in one of the entrance corridors of the same hall (103), has a range of arches rising from columns, with much novelty in the enrichments, which partly consist of coloured marbles, arranged in square and circular panels.——Mr. C. J. Richardson, besides an Elizabethan "Design for a Blind School" (148), contributes a "Sketch of a Design for a London Club-house" (256), which we believe was amongst the drawings noticed by us some years since, amongst those sent in competition for the Army and Navy Club; as also Mr. Brakspear's design for that building (369).

THE NEW CONVICT PRISON.—It is stated that the new convict prison in the course of erection at Chatham has already cost about 200,000*l.*; and, it is supposed, will accommodate 1,000 prisoners.

PROVINCIAL NEWS.

Banbury.—At a late meeting of the local Board of Health, it was determined to proceed with the plan for the erection of gas-works to supply the public lamps of this town with gas, according to a plan suggested by Mr. Atkins, of Oxford, engineer. The old gas company, however, whose present charge per lamp is 3*l.* 17*s.* 6*d.* were anxious for arbitration; and it is said that an arrangement has since been arrived at, by which the old gas company submits to a reduction of one-sixth of the present high price for lighting the town.

Brighton.—A large and influential meeting of noblemen and gentlemen connected with the county of Sussex was held here on Friday in last week, for the purpose of taking preliminary steps for the establishment in the county of Sussex of a Reformatory School for juvenile criminals. The Duke of Richmond was named president of the institution The cost of the buildings is not to exceed 800*l.*

Dowlais.—The gas-works scheme at this place is now fairly launched, and will very shortly be carried out.

Manchester.—The new Public Hall in advanced progress in Peter-street is to retain its old name of "Free Trade Hall." The design is most nearly allied to the Venetian form of Italian Cinque-cento architecture. It is composed of two main divisions, both arcaded, and is surmounted by a frieze, decorated with festoons and circular panels (which will probably be carved in relief), and by a cornice with dentils and modillions: above the whole is a balustrade. A contrast results from the comparative plainness of the lower story, together with the broad undecorated angles of the building, and the architectural accessories of the upper arcade. The lower arcade (which will afford shelter for visitors to the hall) is formed by broad piers with moulded bases, and ornamented imposts of ears of corn in the form of a *fleur-de-lis*, from which spring moulded archivolts. There are nine of these arches, extending the length of the front (156 feet). The upper story is formed by coupled attached columns of the Italian order, on pedestals, each pair of columns supporting an entablature. From the pier thus formed, to each adjoining, runs a moulded archivolt and ornamented key-stone, which enclose a semicircular space, to be enriched with allegorical subjects in alto-relievo. Beneath the sculpture a fret is introduced; and the spandril spaces here are also enriched with foliage, musical instruments, and wreaths, each of the latter circumscribing a spot of red granite. Each space between the pairs of columns has a window, with architrave, trusses, and pediment.

Keswick.—A company has been formed to supply the little town of Keswick with pure water from the breast of Skiddaw. A capital of 3,000*l.* in shares at 5*l.* each is to be raised (the greater part was subscribed for at the first meeting), and it is expected that the town will be supplied with this water next summer. Baths and washhouses are to be erected, and it is believed that a good system of sewerage will speedily follow the introduction of the water.

CHURCH-BUILDING NEWS.

Peterborough.—Improvements are still being carried on by the Dean and Chapter of Peterborough. Mr. Thompson's workmen are employed in scraping off the whitewash from the pillars of the apse at the east end of the cathedral, which was lighted with gas on Christmas-day for the first time, under the superintendence of Mr. Skidmore, of Coventry.

Portsea.—The new cemetery for the parish of Portsea was consecrated on Thursday before last, by the Bishop of Winchester. Mr. C. B. Smith was the surveyor; Mr. G. Rake, the architect; and Messrs. Backhurst and White, the builders employed.

Worcester.—A small lancet window in the church of St. Michael's, in this city, has been recently filled in with stained glass to the memory of a late relative of the rector. The subject of the window is a figure of St. John the Evangelist in the centre, with the Agnus Dei above; and below, the emblem of the Saint, an Eagle, with the Saint's name on a scroll; the whole surrounded with a bordering. The

design was furnished by Messrs. Rogers, of this city.

Trowbridge.—The consecration of the new cemetery was solemnised on Thursday before last by the Bishop of Salisbury. The cemetery is situate on the road to Staverton, about half a mile from the old church. It is 10 acres in extent, divided into equal portions by a road, planted with a line of yew and other shrubs to the extremity. There is an entrance-lodge for the warder's residence, built in the Decorated style of Edward I. The chapel on the Dissenters' ground is cruciform, the tower surmounted by a spire springing from an octagonal lantern, resting on a substructure of two stories, with traceried windows, open archways, and central columns. The interior is lighted by four triplet windows. The roof is boarded oak, the floor paved with variegated encaustic tiles. The consecrated chapel altogether differs from the other, although both are of the Early English style. These mortuary chapels, the lodge, and the general plans of the cemetery, were entrusted to Mr. C. E. Davis, of Bath. The contractor was Mr. William Smith, of Trowbridge.

Bristol.—A new church or chapel has been erected in the city gaol, at the expense of the governor, Mr. Gardner, by whose public spirit, it appears, not only has a much needed building been provided, which, with free labour to be paid for, would have cost the city a large sum of money, but additional store accommodation and additional cells for fifteen or sixteen prisoners thus obtained, so as to obviate the contemplated erection of a new wing to the gaol, which, it is said, would probably have cost 5,000*l*. The chapel is oblong, lighted by pointed windows, in the east front and on either side. Fitted up in the ordinary way, it would seat 700 or 800 persons; and arranged as it now is, so as to have a separate distinct box for each prisoner, there are places for about 170 of the latter. At the east end is a gallery and organ-loft. The gallery, which extends the whole width of the chapel, and half way along either side, is for the officers of the prison; while the whole width of the building on the west end is occupied by the stalls, extending tier upon tier, from the floor (one row of boxes overlooking the other), from the centre of the chapel to about midway up the west wall. These boxes, which are each pews for single persons, are so constructed that, while the inmate can see out in front, and be seen by the chaplain, governor, and officers in the gallery, he cannot see or be seen by his neighbour in the next box. The centre of the ceiling is painted and decorated in somewhat of a Romanesque fashion, sloping down on either side in panels, which, as well as a large compartment against the west wall, are left open for any subjects in fresco painting that private or public liberality may be disposed to pay for. The front of the gallery is carved, some coloured glass introduced into the windows, and a good organ has been erected. The chapel will be opened some time in the present month, with a full musical service.——A correspondent of the *Bristol Mirror*, who takes an interest in the completion of St. Mary Redcliff Church, suggests that if the various professions and trades were to do their part in getting up separate subscriptions, with which different or distinct portions or compartments of the requisite works could be accomplished, much progress might be made, and an emulative spirit excited, which would lead to still further endeavours. Being himself a commercial man, he proposes the organization of a society, to be called, "The Commercial Society to aid in the Restoration of St. Mary Redcliff Church." It would be premature, he thinks, to fix a limit to the operation, and, perhaps, too much to think of undertaking the tower; but a part—say, the north transept window, or the south porch, might be aimed at, and either would be desirable. He suggests that the work should be called "The Colston Memorial."

Wolverhampton.—The porch and south aisle and west front of the collegiate church of this town have been so far completed as to enable the contractors, Messrs. G. and F. Higham, to remove the barricading at the western door. A temporary iron railing has been erected, and a temporary door put in. The reason why this part of the restoration has not been completed is, that funds are required to finish it according to the design of the architect, Mr. Ewan Christian, of London. It is proposed to put in new jambs and arch to the doorway of the south porch, and to substitute a new door in the place of the temporary one. The arch will be filled in with tracery in character with the other part of the structure, and with glass. The restoration of the church, up to the present time, comprises,—new parapet and pinnacles to tower, new clerestory and roof over nave, restoration of west front, new oak roof to south aisle, and restoration of stonework to south aisle and porch. The church has been drained throughout. It is proposed not to go further till spring. The only part of the work which now remains to be done is the restoration of the north aisle and south transepts.

Newcastle-upon-Tyne.—Long Benton Church has undergone considerable repairs. The roof has been raised, unsightly pews in the chancel removed, and stalls substituted. Four of the side lancets, as well as the eastern window of the chancel, have been filled with stained glass. The subjects are;—In the centre light of the triplet, the Lifting up of the Brazen Serpent in the Wilderness, surmounted by the Crucifixion, "Type and Antitype," John iii. 14. On the right is a representation of our Lord's Baptism, by John; and, on the left, His Last Supper, emblematic of the two sacraments. The four side windows contain figures of the Four Evangelists, distinguished by their symbols. The artist was Mr. John Hardman, of Birmingham. The space within the altar-rails has been laid with Minton's encaustic tiles.

GEOMETRICAL PROPERTIES OF CONIC SECTIONS.

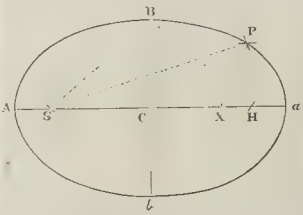
ARTICLE I.—THE ELLIPSE.

IN the following articles it is proposed to examine (without attempting mathematical demonstration) the leading properties of the curves called the conic sections, for the benefit of those who have not acquired sufficient elementary knowledge of mathematics to enable them to study and comprehend the various treatises written upon this subject; referring those who require further demonstration to those numerous works.

The term "conic sections" has been applied to certain important curves, which were originally obtained from a cone having a circular base, by cutting it with planes varying in their directions.

The first and most important of these curves is called the *ellipse*, and is obtained from the cone by a plane passing across it in any way, provided that it cuts completely through the cone from side to side: the outline of this section will then be an *ellipse*.

The following is one of the commonest methods of drawing an ellipse, of which the length and breadth are given:—



Let the lines A *a* and B *b* represent the length and breadth of the ellipse, drawn at right angles to each other: with B as a centre and the half-length C A as a radius, draw arcs cutting the axis A *a* in S and H: then take a string tied at each end to a pin, the length of string between the pins being equal to the length A *a* of the ellipse: fix one pin at S and the other at H: then, by moving a pencil, so as to keep the string always stretched, the curve will be drawn.

This method of drawing the curve shows us one of its important properties, namely, that if P is any point on the curve, *the distance* S P *added to the distance* P H *is always equal to the length* A *a*.

The length, A *a*, is called the *major axis*, and the breadth, B *b*, the *minor axis*: the points S and H are called the *foci*, for reasons hereafter to be explained. The point C, where the *axes* intersect at right angles, is called the *centre* of the ellipse. Any line, as S P or H P, drawn from one *focus*, S or H, to the curve, is called a *radius vector*. By making use of the before-mentioned property, we can find any number of points on the curve, which will enable us to draw in the ellipse by hand, thus:—

Take as a radius the length A X, X being any point between C and H: then with S as a centre, describe an arc of a circle, and with X *a* as radius, and H for a centre, draw another arc, cutting the former in P, which will then be a point on the ellipse, since S P + H P = A X + X *a* = A *a*.

This method is called drawing an ellipse "by points," since the curve is obtained by finding a succession of points in the same manner in which P was found. Two or three points will generally be found sufficient to enable a person tolerably apt with the pencil to sketch in the quarter of an ellipse; and is practically more correct than the former method of continuous motion, which, although theoretically exact, is liable to error, from the stretching of the string and other mechanical causes. There are other means of drawing an ellipse "by points," which will be explained hereafter.

If we examine the figure, we shall see that as we move the point S towards C, the point B will move upwards, since S B is always equal to C A. If, therefore, we suppose S to move quite up to C; then the distance S B becomes the same as C B, or C B becomes equal to C A, in which case the ellipse becomes a circle. Again, as S moves away from C towards A, the curve becomes more flat, or is said to have a greater *eccentricity*. The measure, therefore, of the *eccentricity* of an ellipse is the ratio or proportion of C S: C A, the value of which must always lie between nothing and unity. In the orbit of the earth round the sun, the *focus* S is very near to C, or the ellipse is nearly a circle, the *eccentricity* being very small; whilst in the orbits of the comets, the focus S is very near to A, and the *eccentricity* is nearly equal to unity.

E. W. TARN, M.A.

THAMES ESPLANADE AND RAILWAY.

A COMPANY has just been registered under the title of the "River Thames Esplanade, Railway, and Sewage Company." The promoter, Mr. Wieland, of Glasgow, proposes to construct river walls on both banks of the Thames, extending from London-bridge to Westminster-bridge, with the view of improving the channel and navigation, while increased wharfage accommodation would be given by means of quays and archways extending inwards from the river a depth of 120 feet. On the north side of the river the quay is to be 40 feet wide, and 80 feet in depth from the quay is to be covered by a double row of groined arches, 35 feet span, and about 35 feet in height. It is proposed to raise a road or esplanade on the top of these arches 80 feet wide, running parallel to the river on the level of the various bridges from London-bridge to Hungerford-market. On the river side of the esplanade is to be a parapet and balustrades, and on the land side a row of handsome shops, warehouses, or offices. Underneath would be a series of warehouses communicating with the quays. On the south side of the river it is proposed to adopt the same plan, with the exception that the esplanade would only be 40 feet wide, and on the greater portion of it the warehouses above the shops would give way to private dwellings, built in flats, on the Scotch and Parisian plans. The esplanade on either side of the river is to form junctions with the bridges and leading streets. It is also proposed to form an additional railway under the arches of the railway on the Middlesex side of the river from London-bridge to Hungerford-market. Another feature of the scheme is to prevent the pollution of the river Thames by conveying the sewage from the mouths of the present sewers to convenient spots, where it may be deodorized and converted into manure for agricultural purposes. The importance of the object is admitted on all hands: what is wanted is a practicable mode of effecting it, and this the company will have to show by details. The Thames ought to be embanked, and it will be, we have no doubt: it is simply a question of time and the right man.

THE RENAISSANCE COURT OF THE LOUVRE, PARIS.

[See p. 1 in present number.

A REMNANT OF THE BLACK FRIARS IN THE *TIMES* OFFICE.

In our last volume we gave illustrations of those parts of the ancient wall of London which then existed, and some historical particulars.* One of these masses was situated beneath the *Times* Printing-office, which stands where the wall was, up to about the time of Edward II. Urgent want of space has led to the removal of the old wall since our notice appeared, and now we have to mention the discovery of a portion of the building which succeeded the more ancient wall.

The Black Friars came to this site (from Holborn) in 1276, Rokesby, mayor of London, having procured it for them. Robert Kilwarby, Archbishop of Canterbury, built the church for them in the early part of the reign of Edward I. In 1282 they obtained license to break down the city wall, and remove it westward, for the enlargement of their church, which was then made very spacious. Fig. 2, on p. 223 of our last volume (XIII.), shows how the position of the wall was altered. After the dissolution of the monastery, the church was pulled down: and here we now have the plinth and foundation of one of the buttresses brought to light, after being buried 300 years; to turn up in such a position, too,—in the midst of the printing-house of the *Times* newspaper. The plinth stands on a mass of ragstone and chalk, 6 feet high. The plinth itself projects from what was the face of the wall, 4 feet 5 inches from east to west; is 2 feet 6½ inches wide, and 2 feet 4 inches high, including a chamfer, 2 inches high, which runs round it. Close to the buttress, on the south side of it, is what would seem to have been the jamb of a doorway. It is interesting to reflect on this remnant of the mediæval church, grown round and pressed out of sight by the most wonderful and momentous result of intelligence, organization, and capital, in the world. The conjunction is a fit subject for a poem.

Want of room will necessitate the removal of the old remnant, and we have thought it right therefore to note its discovery and nature.

* See pp. 221 and 269.

THEATRES AND SCENERY.

Christmas pantomime and extravganza have of course produced much new scenery, and various mechanical devices of the old Lyceum character,—some of the latter, as, for example, the transformation scenes at *Drury-lane* and at *Covent-garden*, very clever, costly, and brilliant. Nevertheless, we are disposed to complain of our scene-painters generally on the present occasion, as not exhibiting any advance, indeed scarcely maintaining their position. Mr. Beverley, at the two theatres already named—excepting the mechanical scenes—has done nothing worth mentioning.

We do not mean to say there is no pretty scenery: the opening scene in "The Maid and the Magpie," at the *Princess's* (a capital pantomime, by the way, full of fun and bustle), is very elegant, and so, too, is the transformation scene. Again, Mr. Callcott's landscape scenery for the introduction to Mr. Buckstone's very good pantomime at the *Haymarket*, "The Butterfly's Ball," is highly meritorious, (the insect performers, by the way, are capitally dressed); but, remembering what they do in Paris, we must still urge our artists to advance. We find little solid, honest, first-class painting: and yet we know very well we have men who could do it if they would. We see no such scenes as the "*Fête de L' Ane*," and "The Entry of Charles VII. to Paris," in the piece called "Paris," which has been played for some time at the theatre of the *Porte St. Martin*,—fine pictures, most artist-like, and real. At some of the minor houses the scenery is simply false and disgusting: the managers ought to be prosecuted for injuring the public taste.

Mr. Webster is about to rebuild *The Adelphi* on an enlarged scale, and intends to raise money for this object by debentures. We have not yet seen his Christmas piece, but shall make an opportunity to do so.

At the neat little *Olympic*, pleasantly redecorated, Mr. Planché has provided Mr. Wigan with an extravaganza, called, "The Discreet Princess," wherein Mr. Robson displays great variety and marvellous power. Some of the scenery is very good,—very creditable to Messrs. Gray and Craven; but if we were they, we would set to work and repaint the interior of the round tower in good perspective. The piece, as a dramatic invention, is one of the best Mr. Planché ever wrote, and that is saying much: it is full of point, and will be played 100 years hence.

Queen's Theatre and Opera House, Edinburgh.—This new theatre, built on the site of the Adelphi Theatre, destroyed by fire in 1853, is now completed. It has been designed by Mr. David Bryce. The house will hold 1,800 persons, seated—the stalls and stall-boxes affording accommodation for about 150, the pit for about 350, the boxes for about 300, and the upper boxes and gallery for about 1,000. The first or grand tier of boxes is nearly on a level with the stage. Immediately over these are the second or upper boxes; and above these again, the gallery, with a few seats fitted as boxes on each side of it. The house is lighted, under the dome, by a central light of colored glass, by Messrs. Ballantine and Allan, and by a number of crystal lustres furnished by Mr. Sim, of Princes'-street. The stage, which is 58 feet long by 62 feet broad, having a width of 32 feet at the proscenium, has been fitted with the newest appliances of stage mechanism. The drop-scene is a view of the royal residence at Balmoral.

The Lyceum Theatre, Sunderland.—This theatre has been burnt to the ground. It appears that workmen had been engaged until a late hour making preparations for the Christmas pantomime, but the origin of the fire has not yet been accounted for.

SURREY COUNTY GAOL, HORSEMONGER-LANE.

In July last a building committee appointed by the Surrey magistrates in quarter sessions, for the purpose of obtaining plans for the alteration and conversion of Horsemonger-lane gaol from the "associated" to the "separate" system of imprisonment, invited designs in competition from the following three gentlemen,—Mr. Lapidge, the county surveyor; Mr. Hill, the architect of the Wandsworth gaol; and Messrs. Banks and Barry, of Sackville-street, London; on the understanding that the plan approved by the committee was to be carried out on the usual terms by the successful competitor, and that if Quarter Sessions should not confirm the decision of the committee, then that 100*l.* was to be paid to the author of the plan which was declared by the committee to be the best. The committee met early in September to receive these plans. Two sets only were however submitted, by Mr. Lapidge and by Messrs. Banks and Barry. Mr. Hill sent a report, declaring that the present gaol was incapable of conversion; and that nothing would do but to build an entirely new one. Such a proposal the committee were not in a position to consider, and they ultimately came to a resolution, "That the plan by Messrs. Banks and Barry was the better of the two submitted to them, but that they did not feel justified in recommending the court to carry it out, on account of the large difference in expense between that and Mr. Lapidge's plan, and recommended, under the circumstances, that Mr. Lapidge's plan, with such modifications as might be decided on by committee, be ordered to be carried out by the court, at a cost not exceeding 10,000*l.*"

On learning this, Messrs. Banks and Barry addressed the committee, pointing out that they had in their instructions given no limit of cost, nor had even recommended economy, simply specifying their requirements. That, consequently, these requirements, with several others not asked for, were proposed by Messrs. Banks and Barry without stint of cost, and in the most complete way that could be done, and that the committee having allowed this, as also that their plan was more ample and complete than that of Mr. Lapidge, it seemed inconsistent with the promise in the original instructions to resolve that Messrs. Banks and Barry's plan was the best, and yet to recommend the court to adopt one less good, without giving those gentlemen the opportunity of modifying their plan to meet an expenditure then determined on by the committee for the first time. They further expressed their full ability to make reductions sufficient to meet such stipulated outlay, without sacrificing any of the principles of the design which had gained for them the approval of the committee. This letter, with the report of committee, was read in Quarter Sessions, held at Kingston on 16th October, and a unanimous resolution was the consequence, "That the plans be referred back again to the committee for review and reconsideration, with orders to report again."

On the 7th November, the committee again met, and resolved, "That Mr. Lapidge and Messrs. Banks and Barry be informed that the committee wish to have the best plan which can be made of which the cost does not exceed 10,000*l.*; and that the best plan complying with the above conditions, if approved by the committee and the Government inspector, will be recommended to the Quarter Sessions for adoption."

Mr. Lapidge and Messrs. Banks and Barry submitted; therefore, amended plans to the committee on the 11th December, when the committee came to the unanimous resolution that those by the latter architects were again the best; and as they were accompanied not only by the architects' estimate for 10,000*l.* but by a tender from a London builder of eminence for their execution at that sum, that "the plans of Messrs. Banks and Barry be approved." It is expected that these plans will therefore be adopted by the Court of Quarter Sessions, and ordered to be carried into immediate execution, when the evils which have so long been the result of the associated system will be removed from this gaol, as they have already been by so many counties from their respective prisons with encouraging success.

COMPETITIONS.

Hastings Cemetery.—From ten designs of different competitors, one marked "Spes," was chosen; and on opening the enclosure accompanying it, the author was found to be Mr. H. Carpenter, of Hastings, to whom the premium of 10*l.* offered for the best design for laying out the ground, was therefore voted by the Council. On the plan selected, the Episcopal and Dissenters' chapels, with waiting-rooms and vestries attached, will form one block of buildings. The plan also contemplates the construction of catacombs at the end of the principal avenue, surmounted by a terrace consisting of a series of Gothic arches in the Decorated style.

Rugby Town-hall.—Having applied for particulars regarding an intended Town-hall, to be competed for, as per advertisement in your periodical, I am requested to send 2*s.* 6*d.* in postage-stamps first. It seems "the Board" are anxious to procure designs from architects, and subscription at the same time to pay expenses for advertisements. I hope the profession will set their faces against such a scheme.

Architect.

OPENING OF BOLTON NEW MARKET-HALL.

On Wednesday, 19th ult. the new Market-hall at Bolton was opened, with masonic and other ceremonial.

The plans for a new market-house were advertised for end of the year 1850; for the best design 50*l.* and for the second 30*l.* being offered, the cost of the building not to exceed 17,000*l.* and the area to be 7,500 yards. Twenty-four plans were sent in from architects in different parts of the kingdom; and the markets committee ultimately fixed upon that of Mr. G. T. Robinson, architect, now of Leamington; the second premium being awarded to Mr. Leigh Hall, of Bolton, architect. In May, 1851, Mr. Robinson was appointed architect, with 720*l.* for his services. The first estimate of Mr. Robinson was 18,000*l.* but this was subsequently increased to 26,700*l.* by additions. After this the erection of the Market-hall was contracted for by Mr. W. Tomkinson, of Liverpool; and the construction of the Knowsley-street Viaduct, across the Croal, by Mr. John Evans, of Darwen. The work connected with the Market-hall was commenced on 5th April, 1852.

Early in 1853 a sub-committee reported that the purchase of property for the site and approaches would, with the cost of completing the building, amount to at least 70,000*l.*; part of the property, however, being afterwards available. In April, 1853, and thereafter, it was found that the construction of the foundations of the basement-story arches was defective, some of the arches having fallen; and, after various procedure, the foundations were secured, and the whole of the sixty-six piers rebuilt. The error was attributed to neglect on the part of a clerk of works. After this the work proceeded safely towards completion, although, even still, it is not quite finished.

The building itself is a rectangular parallelogram, 294 feet 5 inches long, by 219 feet 9 inches wide, giving an area of about 7,188 square yards, or nearly 1½ statute acre, and is surrounded by four broad and spacious streets. The four fronts of the building are similar in design and character, though they differ somewhat in detail. That to Knowsley-street consists of a centre portico of the Corinthian order, and is upwards of 50 feet in height. The accommodation afforded by the market will be for upwards of 600 salesmen. The whole of the area is covered by rough plate-glass roofs, of 50 and 25 feet wide, the apex of the main one being nearly 54 feet from the ground

floor; and the glass consumed for that purpose weighs 80 tons, and measures 30,000 feet.

The glazing has been done by Mr. Hugh Makinson, of Bolton; the painting by Mr. William Peat; and the gas fittings have been erected by Messrs. Taylor and Galloway. The clerk of works during all but the earlier part of the construction was Mr. Matthew Jepson. The cost of the building, exclusive of the site, is estimated at 45,000*l.* The net income, it is estimated, will be 3,000*l.* a year, besides 1,000*l.* for property to sell or let.

In the construction there were 35,409 cubic yards of excavation; 12,028 cubic yards rubble walling; 13,645 superficial yards brickwork; 6,664 superficial yards flagging; 1,500 superficial yards gallery landings; 59,924 cubic feet of ashlar; 30,000 superficial feet of glass; 823 tons of wrought and cast ironwork.

The whole cost of the improvement, including bridge in Knowsley-street, approaches, paving, property purchased, and market-hall itself, has been estimated at 90,000*l.*

ARCHITECTS' AND ENGINEERS' CHARGES.

A CASE, the general heads of which I give you below, was tried in the Penrith County Court, on the 13th ult. As it may give a caution to some, I have thought it a proper subject for insertion in your widely-circulated paper, which I invariably find protects the profession when in the right, and exposes shabbiness on the part of employers.

Mr. Solomon Atkinson, barrister, in opening the case, said it was an action to recover the sum of 28*l.* 13*s.* owing to Mr. David Browne, engineer, for making drawings for the Penrith Baths and Washhouses. The defendants were Mr. William Bailey and Mr. Thomas Altham, two of the Provisional Committee.

Mr. Bailey, a man much respected in the town of Penrith, had died since the issuing of the summons and the hearing, which was most unfortunate for Mr. Browne, as he could have proved Mr. Bailey present at all the meetings, and thus have saddled the Provisional Committee with all the items of his bill. This he could not do as far as regarded Mr. Altham, who was not present at all the preliminary meetings.

The judge, in the course of the trial, said there could be no doubt that Mr. Browne had been employed to make the plans by somebody, and that the plans ought to be paid for; but as a question of law, Mr. Browne had failed in establishing Mr. Altham as a party throughout. He would therefore recommend that the parties settle it. This was ultimately done; the defendants (or Provisional Committee) paying over to Mr. Browne 25*l.*, which, with 5*l.* previously received on account, made a total of 30*l.*, the whole amount of his bill being 33*l.* 13*s.*, each party paying their own costs.

What I wish to show from the foregoing is this;—that engineers and architects ought to be very careful in taking minutes of all preliminary proceedings. In the first broaching of a project of this kind all is hurry; but when the pay-day comes, any legal quibble is taken advantage of to evade a just payment.

MACHINATOR.

THE CROW'S NEST ON ST. PAUL'S.

A RECENTLY published "History of the Corps of Royal Sappers and Miners" (Longman and Co.) gives the following particulars of the crow's nest erected on St. Paul's, during the ordnance survey of the metropolitan district:—"That above the cross of St. Paul's, from the dexterity with which the construction of the cradle at that dizzy height was pursued, supported only by the architectural ornaments of the structure, excited much curiosity and wonder. The scaffolding was of rough poles: the stage, 10 feet square, formed of planks which supported the observatory, rested on the golden galley on the top of the great cone. The four lower posts, 29 feet long, stood upon short planks, bedded on the stone footway; and the top supported the angles of four horizontal planks, each 23 feet long, bolted together at the angles. From these planks a screen of boards was erected to prevent materials, &c. from falling. The base of the four upper posts, 53 feet long, rested on the angles of the above planks; and the scaffold, in addition to these posts, consisted of four sets of horizontal and four sets of transverse braces, on each of the four sides, the whole being fastened together by spikes and ropes. Fifty-six of the uprights were double poles, placed base and point, and bound together with hoop iron and wedges, and with bolts and hoop iron at the splices. The height from base to floor was 82 feet, and to the extreme top of the observatory, 92 feet. A railing, roughly but securely put up, surrounded the 'crow's nest.' The ascent was by the inside of the tower or lantern to the circular opening, then to the outside of the foot ladders set at the north-east corner, parallel to the north-east principal post inside the scaffold. The whole of the materials were drawn up from the floor by a permanent windlass erected in the tower, to the golden gallery, and then passed to the outside, horizontally, through an aperture 32 inches wide, and finally were drawn up and put into position by purchase erected for the purpose. The whole construction weighed about 5 tons, and though designed by Sergeant James Steel, was erected by Sergeant James Beaton, the most successful builder of these aërial fabrics, assisted by privates Richard Pemble and John Porteous, and some civil labourers, under the direction of Captain Yolland. The time occupied in going up the ladder was about seven minutes, but the descent required only four or five. On the 2nd November, the last piece of scaffolding was removed and carted away. In the hazardous and intricate operation of building and dismantling it, not the slightest accident to human life or limb — not even the breaking of a single pane of glass—occurred.

THE METROPOLITAN BOARD OF WORKS AND THE VESTRIES.

AT the first meeting of the Board under the Act, on Tuesday, the 1st, Mr. Thwaites took his seat as chairman. It was resolved that the temporary charge of the sewers should be confided to Mr. Bazalgette. A committee was appointed to consider and report as to the appointment of officers. Mr. G. S. Hatton, the accountant of the late Sewers' Commission, is a candidate for re-appointment, and on public grounds we hope he will succeed.

Some of the vestries burdened with debt, already find themselves in considerable difficulty: many officers will have to be appointed. In Paddington the committee recommended that the salary of the surveyor be 300*l.* per annum. Mr. Charles Hill thought this insufficient for a proper man, and moved in the vestry, that it be 400*l.*; but the motion was lost by a small majority.

GENERAL MEETING OF THE INSTITUTION OF CIVIL ENGINEERS.

THE general meeting was held on the 18th ult. Mr. James Simpson, president, in the chair. In the report of the council, the Great International Exhibition of Products of Industry, held at Paris, was commented upon at some length, and was admitted to have been in some respects more interesting than that of London in 1851: there were better displays from the colonies: the machinery and wrought metals of the Continent generally, and the agricultural implements and machinery of France in particular, exhibited great progress, and the foreign machines for textile fabrics showed more attention to accuracy of fitting, and considerable advance in mechanical skill. These features were more apparent, in consequence of the inadequate manner in which many important branches of British industry were represented: for instance, there were only two English locomotives among the twenty railway engines exhibited,—fourteen of which, however, bordered on the system introduced by Mr. Crampton. The models of the great works of civil engineering were, with few exceptions, exhibited only by the Ministry of Public Works of France, and by members of the Institution of Civil Engineers, and a well-merited tribute was paid to the excellent and liberal spirit which animated the Fourteenth Class, composed almost entirely of French engineers, by whom the only two Grand Prizes of Honour were recommended to be awarded to Mr. Stephenson and Mr. Rendel, while the decoration of the Legion of Honour had been requested for Mr. Stephenson and Mr. Brunel, and a large number of Prizes of Honour, and of Medals of the First and Second Classes, and Honourable Mention, had been awarded to other Members and Associates of the Institution.

Feeling the importance of the occasion, the Council had not hesitated to deprive the Institution, even for an inconveniently long period, of the services of Mr. Manby, the secretary, in order to his proceeding to Paris to fill the post of vice-president of the Fourteenth Class (Civil Constructions), as soon as it was found that other members, who had been appointed to the jury, could not attend, and the manner in which the duties had been performed was noticed approvingly.

The statement of the receipts and expenditure of the past year showed, that the funds had, at last, reached the point to which it had been the object of the Council to bring them;—that there was an available balance sufficient for the annual publication of a volume containing the minutes of proceedings of the current session, and with any other funds that might be furnished, it was proposed to bring up the arrears of publication. The first part of volume XIV. for the session 1854-55, had been issued, and with it a statement of the subscription to the Publication Fund, in the hope that by thus directing attention to the subject, those members who had not hitherto contributed would be induced to do so.

It was also stated, that in order to facilitate the publication, the president had taken upon himself the entire expenses of the annual *conversazione*.

Notices of Books.

On the Advantages of an Act of Parliament to enable Owners of Settled and Encumbered Estates to borrow Money for their Improvement. By CHAS. F. HUMBERT. London: Piper, Stephenson, and Co.

THE subject of this pamphlet by Mr. Humbert, who is the agent of Lord Essex, is not altogether foreign to the views which have been habitually brought before the public in our pages. The author advocates either a general Act of Parliament, or an extension of certain existing Acts, to enable the owners of settled and encumbered estates to borrow money for their improvement, by the erection of farm-houses, farm-buildings, drainage, road-making, embanking, clearing, warping, irrigating, &c. &c. There are many landowners, having only a life interest in their estates, who cannot afford to lay out capital in the improvement of them, seeing that they could obtain no adequate return for it during their own lifetime; and yet the advantages of capital so laid out would be very great to those who succeed them in the property. It seems that money has been for some years advanced for drainage purposes only through the agency of the Inclosure Commissioners, and that many for other purposes can also be obtained through the various land companies. Mr. Humbert, however, wishes to have an Act passed which would enable landowners, by a very simple machinery, to borrow money for all kinds of improvement, the loan being secured by a rent-charge on the estate, of such an amount that principal and interest would all be extinguished in thirty years. The principle has acted beneficially as far as it has been applied hitherto in the Drainage Act, and in the Health of Towns Act; and it seems it would add much to the prosperity of landed property, and give a great impetus to improvement, if it could be extended in the manner proposed by Mr. Humbert.

VARIORUM.

"THE Business Man's Note-book for the year 1856," edited by Mr. James Hogg, jun. (a descendant of the celebrated "Etterick Shepherd," if we mistake not), has just been published at Edinburgh by Mr. James Hogg, and in London by Messrs. Groombridge and Sons The aim of this handy volume is to produce at once a Calendar, Diary, and Commercial Directory, specially adapted to the wants of men of business. Much of the routine matter of many other Diaries and Pocket-books has been wisely cast out, and much more valuable matter substituted. The contents are, indeed, as various as useful, and the special convenience of the building trades has not been overlooked. Besides a large quantity of both foreign and national statistics, &c. of importance to business men generally, the volume contains several useful and novel maps, and a metallic calendar fixed inside one of the boards, and which, by its rotary movement, forms a complete ready-reckoner of dates and days of week for many years to come. The same work nearly is issued in a form, and on paper, suitable as "The Desk Directory." Both contain writing-paper, with alphabetical letters, and the weeks and months printed on it for lists and notes.——For the special purposes of education, in country districts where the young may be likely to enter on life in agricultural pursuits, a "Catechism of Practical Agriculture," by Mr. H. Stephens, F.R.S.E. author of "The Book of the Farm," has been published by Messrs. Blackwood, of Edinburgh and London. The idea is an excellent one, and is well carried out. The Catechism is fully illustrated with engravings of various tools, processes, utensils, &c.—more readily described in this way than by mere words,—and on the whole, this little Catechism is destined, we doubt not, to do much good in agricultural education, and it might be

imitated with advantage in other pursuits besides agriculture.——"The Factory Controversy,—a Warning against meddling Legislation," is a vigorous pamphlet by Harriet Martineau, who seems to be renewing her politico-economical youth. We refer to the intellectual energy of the celebrated writer however, and not specially to the merits of the question itself. The author takes up the cudgels on behalf of the factory occupiers, and against those philanthropists who have been exerting themselves to compel these occupiers to fence their machinery for the prevention of those cruel accidents of which one every now and then hears. No one is more capable of taking a cool, disinterested, and enlarged view of such a question than Harriet Martineau, and she does this on general grounds, and not as a mere sworn defender of factory owners. The pamphlet was offered, in shape of an article, to the *Westminster Review*, but the editor "started back" when he read the MS. and refused to publish it. It is now "issued by the National Association of Factory Occupiers" at Manchester.

Miscellanea.

LATEST NEWS FROM ADELAIDE, AUSTRALIA.—By last advices, the colony was busy with elections of representatives, to the exclusion of almost everything else. A little church-building news is all that has been forwarded to us. The first stone of the new church of St. Luke, Whitmore-square, Adelaide, was laid on 11th September last, in due Masonic form, by the Governor-in-Chief of South Australia, Sir R. G. Macdonnell, who is a member of the Freemasonic Order. From 1,500 to 2,000 persons were present, and afterwards a grand banquet was held at the Napoleon Bonaparte, the new entrance-hall and staircase of which were opened on the occasion. At a previous meeting of the church subscribers, it was announced that the iron church sent out was so damaged by salt water, that it had been surveyed and condemned as unfit to be erected. It was therefore to be sold by auction, and the stone church proceeded with forthwith. Two comfortable iron cottages were already up for the parsonage.——The Free Presbyterian Church at Smithfield, Gawler Town, was opened on 26th August. The building is described in the "Adelaide Observer," as a very neat structure, in the early English style. It has four lance-shaped windows on each side, and a triple window at the east end over the door. It is well fitted up with open seats, and is capable of holding about 200 persons. The cost of erection was rather more than 1,400*l.* ——The Wesleyan Chapel, at Nairne, was re-opened on 26th August. The new building, 45 feet by 25 feet in the clear, had cost 787*l.* odd. The pulpit and seats are of cedar.

NEW CHURCH IN SMITHFIELD.—It is proposed to build in Smithfield, for the destitute parish of St. Sepulchre Without, a church capable of accommodating 1,000 persons, in memory of the martyrs of 1555-1558.

THE VICTORIA DOCKS. — These newly-opened docks (of which, when in progress, a view was given in our pages) comprise about 100 acres of water. The printed reports of the company give the following comparative estimates, without pretending, however, to extreme accuracy:—Liverpool Docks, about 200 acres of water, cost 6,000,000*l.* or 30,000*l.* per acre; St. Katherine, London, East and West India Docks, about 155 acres of water, including works now in progress, cost about 8,500,000*l.* or 55,000*l.* per acre; Victoria Docks, probable minimum extent 200 acres, with the Steelyard Estate, and intended warehouses thereon, cost 1,200,000*l.* or 6,000*l.* per acre.

PROGRESS OF IRON IN NAVAL ARCHITECTURE.—The relative advantages of iron and wood masts for a ship of 1,000 tons, are stated in the *Birmingham Journal* as follows:—

	Iron Masts.		Wood Masts.
Cost	1·00	—	0·75
Duration	1·00	—	0·25
Strength	1·00	—	0·66
Weight	1·00	—	1·40

Taking cost and duration together, iron masts are about one-third the price of wood, while they are one-third lighter and one-third stronger. This has now been demonstrated, it appears, in the case of the *Aerolite*, built by Mr. Lamport, of Workington, the patentee of iron masts. This vessel was furnished not only with masts but bowsprit of iron. After a voyage to Australia and China, in which she experienced severe weather, her masts and bowsprit were examined, and found to be in as good condition as the day she started.

FILTERED WATER.—From Monday last two provisions in the Metropolis Water Act will take effect. Water is not to be brought within the metropolis in open aqueducts, and every company is effectually to filter all water supplied by them within the metropolis for domestic use, before it passes into the pipes for distribution, excepting water pumped from wells into covered reservoirs or aqueducts, and not afterwards mixed with unfiltered water.

PLACES OF RECREATION FOR THE WORKING CLASSES OF BIRMINGHAM.—A public meeting was held at the Temperance Hall, Ann-street, Birmingham, on Wednesday in week before last, in furtherance of this scheme, the Hon. and Rev. G. M. Yorke presiding, when it was resolved that the recreations be open to young men of eighteen and upwards; that they consist of literary and newspaper reading, lectures, vocal and instrumental music, chess, draughts, bagatelle, backgammon, bowls, quoits, skittles, tennis, singlestick, fives, and gymnastics generally; that no gambling be allowed; that no smoking be permitted, unless in a room for the purpose; that the charge of admission be one penny; that refreshments be provided, but intoxicating liquors excluded. It was ultimately agreed that females be admissible to concerts, &c., by payment made at the door, on occasions sanctioned by the Committee, provided that such entertainment be separate from other recreations. A Managing Committee of fifty members was appointed, including ten working men.

ELECTRIC POWER.—The Emperor of the French, some time ago, offered a prize to him who should discover an electric motive power which should be capable of competing successfully with steam. It is said it may be looked upon as a *fait accompli*, and that M. Dubosc is the fortunate individual whom science and wealth will overwhelm with their honours and gifts. It is said that the model will work, for twenty-four hours, at a cost of thirty centimes, a wheel that is capable of overcoming a resistance of fifty pounds.

PROPERTY SALES AT GLASGOW.—Of five sales of properties to have taken place in the Exchange Sales-rooms, Glasgow, on Wednesday week, two properties only appear to have obtained purchasers, viz.—100 yards ground, 148, 150, Stirling-road, sold at the upset price of 80*l.* Dwelling-house flat, 17, Monteith-row, sold at 465*l.*, being an advance of 15*l.* above the upset price.

THE FOUNTAIN FOR BATH.—A member of the committee states that seven designs were tendered instead of "twenty-eight," five of which were by the *profession* (three of them being from the most eminent architects of this city), and two by amateurs." He further says,—"There were no reasons, on account of ability, for preferring an architect to carry out the erection of the design by the 'cabinet-maker,' but other peculiar reasons which need not be related here." Here the matter may stop at present.

THE IRON TRADE OF THIS AND OTHER COUNTRIES.—In a paper read at the Society of Arts, on 19th ult. by Mr. J. K. Blackwell, F.G.S. it was stated that the annual production of pig-iron in this and other countries appears, from a careful comparison of various authorities, to be at the present period nearly as follows:—

	Tons.
Great Britain	3,000,000
France	750,000
United States of America	750,000
Prussia	360,000
Austria	250,000
Belgium	200,000
Russia	200,000
Sweden	150,000
Various German States	100,000
Other countries	300,000
	6,000,000

About four-fifths of the iron produced is made in nearly equal proportions in the three great districts of South Wales, South Staffordshire, and Scotland. Northumberland and Durham follow next, and then Yorkshire, Derbyshire, Shropshire, North Staffordshire, North Wales, Cumberland, and Gloucestershire, complete the list. The only blast furnaces now existing in which iron is smelted with charcoal are those of the Newland Iron Company, near Ulverstone, and at Lorn, in Argylshire, supplied by the hematites of Ulverstone, and producing about 2,000 tons of iron annually from one furnace in blast in each district. There exist in Ireland immense deposits of clay carbonates, and it becomes a question of vast importance, adds Mr. Blackwell, whether the great resources of vegetable fuel, in the shape of peat, in which that country abounds, might not be advantageously employed in the production of iron of first-rate quality from it.——At the preliminary quarterly meeting of Masters, held on Thursday in last week, at Dudley, no further attempt to raise prices was made, so that the nominal prices of 9*l.* for bars, 10*l.* for hoops, and 11*l.* for sheets, were left unaltered.

DESTRUCTION OF PROPERTY BY BURSTING OF WATER-PIPES. — The late severe frost, followed by sudden thaw, was attended with great damage to property, from the flooding of warehouses and shops, at Manchester, consequent upon the bursting of water-pipes. About fifty warehouses were more or less flooded. In one case at a private dwelling, the breastwork of a chimney, the chimneypiece, and the fire-place were blown down, the contents of the room and the fire that was in the grate scattered in all directions, strong boxes and portmanteaus broken, and a bed set on fire.

WOODHOUSE'S PATENT CROSSING FOR RAILWAYS. —This patent consists, as described, in so constructing the rails of crossings that when one part of the wing rail is injured by wear it may be reversed, to bring another portion of the same rail in the place that had been worn; also in substituting the check rails for the wing rails, and using them in the same way. The ends of the wing rails and check rails are of the same length and bent to the same angle; consequently, the wing rails may be used as check rails, and *vice versâ*. By reversing the positions of the rails when partly worn each wing rail can be used four times, and when they are unfit for use as wing rails they can be put in the places of the check rails, and the check rails may then be used as wing rails, thereby enabling the wing and check rails of a crossing to be employed sixteen times before they are completely worn. The improvements are said to be particularly beneficial when the double-headed rails are used, but useful in all other descriptions of rails. The advantages claimed for this crossing are, simplicity of construction and great saving in maintenance, both as regards labour and materials.

LIPTON-PARK, DEVON.—This property, together with some other farms contiguous, has been purchased through Messrs. Meredith and Co. of Lincoln's-inn, for Mr. Henry Blagrove, who takes possession of the property on Tuesday, the 8th inst. The principal part of the mansion was taken down about Midsummer, 1854, and has since been rebuilt and completed, with considerable additions and repairs to the stables, coach-houses, and offices, under the direction of Mr. R. S. Cornish, architect. Mr. G. H. Julian was clerk of the works, and Messrs. Gill and Ede, of Launceston, were the contractors. In addition to four complete sets of buildings erected and extensive repairs on different farms, a commodious dwelling-house, with complete set of farm buildings, has been erected on each of eleven different farms belonging to this property, by contractors, varying from 1,500*l.* to 2,000*l.* each, under the same architect. Mr. John Laskey and Mr. Edwin Luscombe superintended the various works, which are now completed. In draining and other improvements of the land, considerable sums of money have been expended, under the direction of Mr. Jonathan Kittow.

GAS.—I was glad to find in a recent number, attention again called to the importance of increasing the consumption of gas, and think the suggestions of "Another Englishman" of great value. I would add another, viz. that the builders of new houses should insert the necessary pipes before plastering, &c. as the work could then be better done, and no injury would arise from introducing gas afterwards, as the fittings and meter would merely have to be attached to the pipes. I have no doubt this provision would be appreciated by the tenants. I know of eight houses in which such provision was made by the builder: they all let readily, and seven of them are already supplied with gas, and the eighth doubtless soon will be.—GASLIGHT.

SWING DOORS.—Mr. R. Watson Savage has specified his patent for "Improvements in Single and Double Action Swing Doors." Close to the edge of the door, nearest to its turning point, and secured underneath the same, so as to allow the door to travel on it, says the inventor, I have an incline plane, or wedge-piece, the surface whereof must be such as to compass the course taken by the opening, shutting, or swinging of the door, and which incline plane, or wedge-piece, must be secured in such position underneath the door that the curve might be described thereon, and so that the door on being opened shall press first upon the lower part of the thin end of the inclined plane, or wedge, and then travel to the highest, or thick part thereof. In all cases the door should be provided with rollers to travel over the surface of the incline.

SANITARY REFORM.—As an old subscriber as well as an old sanitary reformer, I trust you will continue your efforts in showing up the old rotten system. The sanitary reformer is as much required in public establishments as in private,—in the villages as well as in cities and towns. Why not every union in the country have an inspector of nuisances? I could name two important towns where I have, with your assistance, helped to upset the old cesspool plan, but not without some little trouble and loss of caste.

L. V.

LIVERPOOL ARCHITECTURAL SOCIETY.—On December 26th, the society held a sessional meeting in the Royal Institution. The secretary read a letter addressed to the president by the operative bricklayers of Liverpool, who complained that at the last meeting the president charged them with uniting for the purpose of opposing the masters, and pointing out that their union was not for any such object, but rather for purposes of a benevolent nature. The chairman, Mr. Hay, said that he never thought of charging the Liverpool operatives with such an object. What he did say was, that the Manchester hodmen had struck, but that he had to congratulate this society that such a state of things did not exist in Liverpool. The secretary read a letter from Mr. Goodman, the secretary to the London Architectural Society, urging upon this society the consideration of the propriety of memorializing the president and council of the Royal Institute of British Architects to organize an examination, or to grant a diploma, so that the real qualifications of the architects should be brought before the public. The chairman said he should be very happy, along with the other members of this society, to memorialize the Institute of British Architects for the purpose of bringing out some scheme that would be satisfactory to all parties. The subject was postponed until the next meeting of the society. Mr. Horner exhibited a small portion of Roman concrete found at the head of Windermere. Mr. Howard then read a paper "On the Application of Colour to Classical Architecture."

WEIGHTMAN AND CO. *v.* LEWIS. — We have received a communication from Mr. T. H. Wyatt, with respect to the part he played in the above matter; but inasmuch as not the slightest imputation was thrown on Mr. Wyatt at the trial, or conveyed in our notice, we do not think it necessary to insert it. The whole blame rests with the committee. Mr. Wyatt acted as any other honourable architect would have acted in his place. In the notice, instead of the plans were "returned," we should have said the plans were *retained*.

LECTURE ON CROMLECHS.—At the Bristol Philosophical Institution, on Monday evening before last, a local antiquary, Mr. G. Pryce, delivered a lecture on "Cromlechs." The lecturer made the stones at Druid's Stoke, near Bristol (which he regarded as Cromlech remains), the groundwork of his observations, and remarked that such structures might be regarded as partaking of the characteristics of an altar, a sepulchre, and a memorial. He also instanced such of these erections as, from their peculiar positions and other circumstances, seemed to render it impossible they could ever have been covered with mounds of earth.

WALSALL SCHOOL OF ART.—A public exhibition of the elementary drawings of the students of this institution was held on Thursday and Friday of last week. A good number of persons attended. On the Thursday evening the master of the school, Mr. Smith, delivered a lecture on "the Utility of Practical Art," the mayor in the chair. The lecture was well attended. Mr. Smith divided his lecture into two parts—the means by which a knowledge of drawing may be obtained, and the results to be derived from its possession. The chairman, after the lecture, presented the rewards. The mayor said he would give a prize next year.

ARCHITECTURAL SOCIETY OF THE ARCHDEACONRY OF NORTHAMPTON.—A committee meeting was held on Monday, December 10. The plans for Winwick Church were re-discussed, and the raising the walls of the nave much deprecated. In conformity with a request from the Northamptonshire Educational Society, a sub-committee was appointed to co-operate with the sub-committee of that society, in respect to the site and plans for the training-school to be established at Peterborough. A sub-committee was also formed to communicate with the London and Diocesan Church Building Societies, on the expediency of giving their grants to new churches with respect to the amount of area rather than to the number of sittings.

BELLS.—In "Seymour's Survey of London," 1735, I find the following peals given. Can you or any of your readers tell what has become of them?—St. James's, Westminster, six; St. Peter le Poor, Broad-street, five; All Hallows, London-wall, five; St. Martin Outwich, five; St. Katharine, four; St. Alphage, six; St. Mary's, Newington-butts, six; St. Thomas's, in the Borough, five. From the same book it appears that most of our present peals of eight were then peals of six: the addition has, I believe, been almost universally made by the increase of trebles, which accounts for the lightness of so many tenors in modern peals of eight. A peal of five has lately been placed in St. Paul's Church, Brighton, with a tenor of 42 cwt. What a contrast to the peal of six iron-sounding bells just hung in St. Luke's Church, Nutford-place, Edgeware-road; tenor, 8½ cwt.!

JOHN H. SPERLING.

BRICK MACHINE-MAKING UNDER DIFFICULTIES.—There is an amusing account of a difficulty as to the formation of bricks in Java under the Dutch Government, in Watson's *East Indian Archipelago*. The official in perplexity on this account was a grandson of Marshal Daendels, a general so savage and destructive, that Napoleon declared, that if he had two Daendels, he must unavoidably hang one of them, not reflecting, doubtless, that even one Daendel might be one too many, and had better be hung. Old Daendel's mode of making a brick-machine would have been to order it to be done, with the proviso, harder than Pharaoh's on the Jews, that if it wern't, the guilty official who failed to do so should be forthwith shot. Daendel's grandson, however, seems to have had neither the will nor the power to act like his great ancestor. He caught a hint of the existence of a scientific American in prison on the island; and having heard that the Americans, somehow, made no end of bricks by "turning a crank," as they made pigs into sausages, Young Daendel got himself introduced to the "scientific American," who really did think he had seen some such article as that indicated, and perhaps he could make one,—he didn't know till he tried, like Paddy, when asked if he played the fiddle. He "could not but try." So he set to work. He knew that the clay went in somehow in the lump, and came out a never-ending series of bricks. Necessity is the mother of invention. The American had great promises made him, and had high hopes, although he feared the bricks, when made, might only go to strengthen the walls of his prison. For a time he strove in vain, but at length it appears, he actually re-invented (if we may say so) a complete and practicable brick-machine, with copper, endless chain of moulds, and every thing complete; and although it was long ere the promises held out to him were fulfilled, the brick-machine did at length good service to the prisoner of Weltevredin.

VALUE OF HOUSE PROPERTY IN LONDON.—The lease, for an unexpired term of seventeen and a half years, at a nominal rent of 1d. a year, free from rates, taxes, or insurance, of a small one-floor warehouse and counting-house, in the rear of 36, King William-street, Upper Thames-street, estimated to produce a rental of 30*l.* per annum, and determinable, at the option of the lessor, at the expiration of the term of fourteen years, was sold by Mr. T. S. Smith, at the Mart, on December 20, for 430*l.*

THE THAMES TUNNEL.—In the week ending 29th December, 25,436 passengers passed through, and paid in tolls 105*l.* 19s. 8d.

NEW TUNNEL ON BIRMINGHAM CANAL NAVIGATIONS.—The turning of the first sod of the proposed Netherton tunnel was effected on Friday in last week, at Oakham, near Dudley. The tunnel is to run under the Rowley Hills. It is proposed to branch a new canal from the Birmingham level at Dudley Port; its termination being at Windmill-End or Darby Hand. Its length will be two miles and a half, and the length of the tunnel will be 2,567 yards. The dimensions will be sufficiently large to allow of the passage at one time of two boats, one in either direction, and the old practice of "legging" will be obviated by a towing-path on each side. The total cost of the undertaking is estimated at 180,000*l.*

LIGHTING CALCUTTA BY GAS.—We understand that the works of the Oriental Gas Company, in Calcutta, are making good progress, and the loss of materials, occasioned by the wreck of the *Dream*, has been promptly made up by consignments in other vessels.

SHOCKING ACCIDENT AT SMELTING WORKS.—At a pig-iron smelting manufactory, on Monday week, while the furnaces were in full operation, and in one of them were about five tons of fused material, without the slightest previous warning, the red-hot contents of the furnace were ejected about the place to a distance of some thirty yards, with a report as of a small cannon. Four men were fearfully burnt, and shortly after died, and the engineer only saved his life by plunging into a tank of water before his clothes were burnt off him. The accident is said to have arisen from a sudden escape of water into the furnace from the "tweer," a hollow iron vessel by which the blast-pipe is protected from the burning influence of the furnace.

METROPOLITAN CHURCH-BUILDING.—A new and grand church-building effort is announced as having been taken in hand mainly by Lord Robert Grosvenor, as the chief promoter of the subscriptions, which have already made the following splendid commencement:—The Crown, 10,000*l.*; the Duke of Bedford, 10,000*l.*; the Marquis of Westminster, 10,000*l.* It is proposed to realize no less a sum than 500,000*l.* in this way; and in pursuance of the plan it is anticipated that many other large proprietors, such as Lords Portman, Caltborpe, Camden, Radnor, Harewood, Fitzhardinge, Exeter, and almost innumerable wealthy commoners, will follow the munificent example thus set before them.

NEW MURAL MONUMENT IN YORK CATHEDRAL.—A mural monument, of classical design, has been placed in the south aisle of the choir, in memory of the officers and privates of the 51st Foot, who fell a Burmah during the war of 1852-3. The monument consists of a full-length figure of an officer of the regiment. At the feet is laid a full-dress cap of an officer of the 51st. In the background is a representation of a broken column entwined with evergreens, an Indian pagoda and palm-trees, and at the side of the figure is inscribed a motto. At the base of the monument is a tablet recording names. The whole is of Parian marble, executed by Mr. Richardson, of London.

ARMY WORKS CORPS.—On Wednesday 500 artisans, handicraftsmen, and navvies embarked with their officers on board the *Jura* steam transport, in order to proceed at an early hour yesterday direct to the Crimea. They form a portion of Sir Joseph Paxton's Army Works Corps, and have been organized by him as a special body always available for the service of the Commissariat, hitherto very expensively and ineffectually performed by Croats and other labourers hired in the East.

"EXAMPLES OF ANCIENT DOMESTIC ARCHITECTURE."—Under this title Mr. F. T. Dollman is preparing a work, illustrating the hospitals, bede houses, schools, and alms-houses, of the Middle Ages in England. It is intended to be an accurate record of a class of mediæval buildings fast hastening to decay, remarkable for their beauty, interest, and suitableness. The publication will consist of forty plates, embracing plans, elevations, sections, details and perspective views of interesting examples remaining, from drawings and measurements taken on the spot, and drawn as nearly as possible to one uniform scale.

THE SUBSTITUTION OF A PATENT HAMMER FOR HAND-LABOUR AT BIRMINGHAM.—In allusion to an advertisement in its columns as to a new patent hammer, the *Birmingham Journal* gives an account of the circumstances under which it was introduced into Birmingham. Soon after the present war commenced, great complaints were made of the backwardness of the Birmingham small-arm makers. The workmen were very unruly, and Mr. Lawrence, one of the advertising firm, acting on a hint from Sir Thomas Hastings, of the Board of Ordnance, the Birmingham was very slow in introducing improvements, or bringing machinery into use in place of hand-labour, visited Bolton and Manchester, to endeavour to find some machine to supersede the necessity of hand-labour in forging bayonets. He found several (Ryder's patent amongst others) that would forge the bayonet out of the rough steel, but not one that would put the grooves or flutings into the bayonet simultaneously. He returned home, and a friend happening to know his want, showed him a notice of the new hammer, then just patented. Mr. Lawrence went to Heeley, and the inventor undertook to make him a hammer that would do the work. The hammer is now working, and Mr. Lawrence has not a single hand-forger on his premises.

LICENSED TO COPY. — The architects of this country are, we perceive by the *Builder*, agitating the question of a diploma, in order that the public may recognise the "regular-bred" men from the interloper. We have noticed the discussion with much interest, but it appears to us the notion arises more from the self-idea of extra-gentility attached to the thing, than from any real call for it from "my masters" the public. If the official stamp is only wanted to the license to copy to which English architecture mostly aspires, then we say withhold it, and let the title of architect be open to all; for certain it is, we have more to thank the general public than the regular-bred architects, for any progressive movements of improvement in architecture during the past century. The servile spirit of copy and the incongruous admixture of styles, are detected and deplored by the public, and any man who departs from this copyism, and really constructs a building fit for the purpose for which it is wanted, and with an external expression in accordance with its use, is sure to receive the best diploma, viz. the public approval.—*Bridgewater Times.*

DIMENSIONS OF PUBLIC ROOMS IN MANCHESTER.—The following are the dimensions of the principal public rooms, &c. in Manchester, and the numbers of persons they will seat: where standing room only is required about twice the number of people may be accommodated:—

Name.	Length. Feet.	Brdth Feet.	Area in Sqre.yds.	Persons
Royal Exchange	185	92	1,628	3,000
New Free Trade Hall	134	78	1,161	2,300
Assembly Room	75	37	308	500
Theatre Royal	120	55	800	3,000
Corn Exchange	—	—	600	1,200
New Mechanics' Institution	76½	40	340	600
Manchester Town Hall	85½	32½	260	600
Salford Town Hall	—	—	242	500
Hayward's Hotel Room	64	28	184	350
Chorlton Town Hall	60	23	127	250

—*Manchester Courier.*

LECTURES ON GREEK ART.—Professor Overbeck, says the Dresden correspondent of the *Literary Gazette*, has commenced at Leipzig a course of most interesting lectures on Greek plastic art. He tried in his opening lecture to impress upon his hearers, that the art of sculpture was the earliest and truest expression of the Greek mind, and at the same time a language the most universal and most easy of comprehension: he urged upon his audience the necessity of the study and frequent contemplation of Greek works of art, in order to develope and cultivate the sense of the beautiful. In the historical part of his lecture, he maintained that Grecian art had not been transplanted from any other soil, but had sprung up in the country itself; and that its golden age had lasted only from the time of Phidias to that of Alexander, and that under the Macedonian rule it degenerated into the mere flattery of princes and manufacture of images; Athens alone having erected no less than 300 monuments in honour of one ruler.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *vid* France, must be prepaid: the stamped copy of the paper is of no avail.

TO CORRESPONDENTS.

"D. W. R."—"N. L."—"M. H. F."—"W. F."—"R. R."—"T. H."—"Subscriber," Cornwall (the sum named, 25*l.* would be a very moderate charge).—"H. B. K."—"Mr. H."—"J. M."—"W. S." (our journal is scarcely the right medium of communication).—"W. C."—"Fair Play."—"H. C."—"T. G. K."—"S. H."—"T. P."—"J. B."—"E. W. T."—"J. L."—"B. A. C. H."—"W. S."—"Brother Archæologist."—"Lady B."—"T. H."—"J. G. G."—"M. E. H."

"Books and Addresses."—We are forced to decline pointing out books or finding addresses.

NOTICE TO SUBSCRIBERS.—A title-page in colours for the last volume may be obtained *gratis*, on personal application at the Office, by those who prefer it to that which accompanied the index in the closing number. Covers for the volume may be obtained: at the Office, price 2*s.* 6*d.* or the publisher will bind it for 3*s.* 6*d.* The complete volume may be obtained, price 21*s.*

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

TO GAS COMPANIES and OTHERS.—R. LAIDLAW and SON, Gas Engineers and Founders, Edinburgh and Glasgow, respectfully intimate that on and after the 1st January they will be REPRESENTED in LONDON by Mr. ROBERT DAVISON, Member of the Institution of Civil Engineers, who will be happy to attend to all local and foreign business.—R. L. and Son manufacture, on a very extensive scale, Gas Apparatus of every description, viz. Cast-iron Retorts, Hydraulic Mains, Condensers, Scrubbers, Purifiers, Hydraulic and Improved Slide-Valves, Station Meters (of superior designs), from the smallest size to 12-feet square, Governors, Governors, Pressure Indicators, Cast-iron Pipes, Wrought-iron and Block-tin Tubes, Lamp-posts in great variety, Consumers' Meters, and every other article required in the manufacture and distribution of gas. Country mansions fitted up with gas apparatus in a superior manner.—Offices, 8, London-street, City.

TO ARCHITECTS, SURVEYORS, AND BUILDERS.
A GENTLEMAN, aged 33, is desirous for an ENGAGEMENT. Has had considerable experience in preparing working and finished drawings, estimating, measuring, superintending, and valuing works, and the routine generally.—Apply by letter, A. Z. Mr. Hyatt's, 6, Hand-court, Holborn.

TO TRADESMEN.
A BOOKKEEPER, having two days a week unoccupied, wishes for EMPLOYMENT.—Address J. N. Mr. Wm. Tate's, 5, Warnford-court, City.

TO ARCHITECTS.
A NEAT and expeditious DRAUGHTSMAN desires a RE-ENGAGEMENT in town; accustomed to the getting out of perspective, finished, working, and detail drawings, &c. and the general routine of an Office. Salary moderate.—Address, A. B. No. 9, Elizabeth-street South, Pimlico.

TO BUILDERS.
AS SHOP or GENERAL FOREMAN.—An experienced practical Man is open to a RE-ENGAGEMENT, either in town or country. Satisfactory testimonials as to ability, sobriety, &c. can be given.—Address, Y. Z 4, Cat non-street, New North-road, Islington.

TO ARCHITECTS.
A SURVEYOR, of extensive practical experience in taking off quantities and measuring up works, would be glad to enter into an arrangement with an architect for the same. References given to architects for whom the advertiser has done business.—Address, R. H. Office of "The Builder."

TO CIVIL ENGINEERS, SURVEYORS, &c. &c.
A YOUNG PERSON of education, and first-class abilities in Engineering, Surveying, Levelling, &c. &c especially in Railway Engineering, is desirous of a RE-ENGAGEMENT in London, or any provincial town (he would not object to proceed on the Continent or to the Colonies). The advertiser being a practical person, he could render efficient active assistance to any gentleman requiring such. Terms strictly moderate. The best references given.—Address, C. Engineer, 14, Windmill-street, Finsbury-square.
N.B.—A good draughtsman and accountant.

TO CONTRACTORS, BUILDERS, AND OTHERS.
A PERSON, experienced in estimating, keeping books, and who writes a good and expeditious hand, is desirous of entering into an arrangement for the whole or part of the week. Is conversant with railway works.—Address (prepaid), T. W. to the care of Mr. Goddard, 13, Hemming's-row, Charing-cross.

A YOUNG GENTLEMAN, 22 years of age, who has been Drawing Master in a Public School, writes a good hand, and can make mechanical drawings or tracings, is anxious to get EMPLOYMENT in the Office of an Architect or Builder. As his object is to learn the profession, he requires no remuneration besides board and lodging.—References and specimens sent on application to W. L. B. 3, Union-street, New-road, Chatham.

TO MASTER PAINTERS AND BUILDERS.
A YOUNG MAN wants EMPLOYMENT as GRAINER, to fill up time with Painting and Paper-hanging. No objection to the country.—Address, R. MAY, 18, Newnham street, Edgeware road.

TO BUILDERS AND PLUMBERS.
A YOUNG MAN wants a PLACE as PLUMBER. No objection to assist in the painting and glazing, if required.—Apply to C. C. 16, Hanover-place, Oxford-street.

A YOUNG MAN is desirous of a RE-ENGAGEMENT in a Builder's Office, who has filled a similar situation with London Builders for seven years. References unexceptionable.—Address, R. R. 47, Essex street, Strand.

TO BUILDERS AND OTHERS.
A PRACTICAL SURVEYOR offers his ASSISTANCE in measuring, estimating, or the making up of builders' accounts. Terms moderate and per agreement.—Address, X. Y. Office of "The Builder."

TO ARCHITECTS, SURVEYORS, &c.
AN Architectural Draughtsman, accustomed to prepare finished, working, and detail drawings, measure artificers' work, and take out quantities, &c. is desirous of a RE-ENGAGEMENT. Salary moderate. Good testimonials.—Address, A. B. 3, Harvey square, Folkestone.

TO WINDOW-GLASS AND LEAD MERCHANTS.
A FIRST-RATE CUTTER is in want of a RE-ENGAGEMENT, to superintend a Glass and Lead Warehouse; one who thoroughly understands the business, and all the office routine. Can have satisfactory testimonials as to character and ability.—Address, S. C. 4, Brook's-gardens, Bagnigge-wells-road, London.

AN ARCHITECT'S ASSISTANT is desirous of a RE-ENGAGEMENT. Terms moderate.—Address, T. Q. London Advertisement Hall, Hungerford-market.

A THOROUGH Practical Carpenter and Joiner, well versed in Gothic details, is a good draught man, and having completed an engagement on a public building, wishes for an ENGAGEMENT as CLERK of WORKS, or general or shop Foreman, in town or country.—Address, ZETA, 41, Robert-street, Hoxton.
N.B.—Unexceptionable testimonials from late employers.

A FIRST-RATE ARCHITECTURAL DRAUGHTSMAN, DESIGNER, and SURVEYOR, would be glad to meet with a gentleman requiring efficient professional assistance; the advertiser is thoroughly conversant in all matters of construction and detail, either in wood, iron, or stone; is a clever artist, and decorator in ornament and colour; an expert leveller, and surveyor of land and buildings; has also a considerable knowledge of engineering, drainage, road-making, &c. and taking off quantities.—Address, LENNOX, Office of "The Builder."

TO SURVEYORS AND BUILDERS' CLERKS.
AN experienced CLERK is required in the office of a Builder in London. None need apply who are not well acquainted with accounts, and accustomed to take out quantities, make estimates, and measure up extra works.—Address, Z. Y. Office of "The Builder."

TO BUILDERS.
A YOUNG MAN, who has served his time to an Architect in the City, and had some practice in other offices, is desirous of an ENGAGEMENT in a first-rate Builder's office. Salary moderate.—Address, A. D. 7, Guildford-road, Greenwich.

TO BUILDERS.
A YOUNG MAN, aged 20, wishes to article himself for two years as IMPROVER at the BENCH.—Address, J. B. D. No. 19, Wilson-street, Gray's-inn-road.

TO CONTRACTORS, BUILDERS, &c.
A PRACTICAL MASON, well acquainted with the principle and detail of the best style of building, and a good draughtsman, will shortly be at LIBERTY. Age, 29.—Address, R. RADIUS, Post-office, Brentwood, near London.

TO SURVEYORS AND ARCHITECTS.
WANTED, a SITUATION for a Youth, aged 15. His abilities for drawing, tracing, and working out dimensions would render him an acquisition as junior clerk or assistant to either of the above professions, or in a merchant's counting-house; writes a good hand, quick at accounts, and knows town well.—Address, post paid, E. G. C. at Burnett's Library, Camberwell-gate.

WANTED, by an experienced Joiner, a SITUATION as WORKING, SHOP, or OUT-DOOR FOREMAN, having filled similar situations for London builders for the past ten years, and can produce satisfactory testimonials as to ability, &c.—Address, J. U. 12, Douglas-street, Deptford.

TO BUILDERS.
WANTED, by a Practical Surveyor and Draughtsman, of considerable experience in measuring, estimating, pricing bills, quantities (having a thorough knowledge of prime cost prices), drawing, &c. Would be glad to undertake any business for builders, upon strictly moderate terms. Being a first-rate accountant, would undertake the adjustment of books and make out accounts.—Address, F. R. S. Post-office, Mount-street, Lambeth.

TO BUILDERS, &c.
WANTED, by a Young Man, aged 24, a SITUATION as CLERK, being thoroughly acquainted with the routine of the office and yard, a good draughtsman, accustomed to measure work from the bench, &c.; superintend work (if necessary) and bookkeeping. Good references.—Address, T. B. 24, Praed-street, Paddington.

TO BUILDERS, &c.
WANTED, a SITUATION, as CLERK or TIMEKEEPER, by a Young Man aged 22, who has been three years in his last situation. Is well acquainted with the Glass Trade.—Apply to W. A. C. Library, Upper Norwood.

TO BUILDERS' FOREMEN AND BUILDERS.
WANTED, a SITUATION, by a respectable Young Man of 20, where he would have good opportunities of IMPROVING himself as a Carpenter, or in his knowledge of the trade generally. Is acquainted with the routine of an office, and has assisted in superintending works. Country preferred. This will be made "to the advantage" of any foreman.—Address, BETA, Post-office, Edmonton.

TO ARCHITECTS, ENGINEERS, SURVEYORS, BUILDERS, &c.
WANTED, by the Advertiser, aged 24, an ENGAGEMENT in either of the above offices; has been accustomed to superintend works, can make fair and working drawings, prepare specifications, and is practically acquainted with construction generally. Is by trade a joiner. No objection to act as clerk of works, if required.—Address, J. S. L. care of Mr. GEORGE GREEN, Cumberland-place, Newington-butts.

TO ENGINEERS.
WANTED, by the Advertiser, aged 21, a Situation as Improver. Can be well recommended by his last employer.—Address, J. Y. Z. 165, Aldersgate-street.

TO PAINTERS AND OTHERS.
WANTED, by the Advertiser, a SITUATION as JOURNEYMAN. Understands house-painting, glazing, and paper-hanging, and is a thorough good grainer. Specimens of every wood on hand. Wages little consideration where the engagement is permanent. Address, R. W. S. 26, Raven-street, Whitechapel.

TO ARCHITECTS AND BUILDERS.
WANTED, a SITUATION as CLERK of WORKS, SHOP or GENERAL FOREMAN, by a Man aged 40. Having fulfilled the above some years, can be well recommended by the gentlemen he has served.—Address, G. H. 16, William-street, Waterloo-road.

TO BUILDERS AND MASONS.
WANTED, by the Advertiser, a RE-ENGAGEMENT as CLERK, in either of the above businesses. Is thoroughly acquainted with all the office routine, a first-rate practical draughtsman, and can have satisfactory testimonials.—Address, A. B. care of Mr. Chance, 3, Lower Queen-street, Lower-road, Islington.

TO CARPENTERS AND BUILDERS.
WANTED, to APPRENTICE, a strong, active Youth, aged 16, to the above trade. He has served two years, and only left in consequence of the bankruptcy of his master. Respectable references given and required.—Address, W. T. at Mr Pratt's, 10 Smithfield-bars

TO BUILDERS, SURVEYORS, AND CIVIL ENGINEERS.
WANTED, by the Advertiser, aged 22, an ENGAGEMENT as JUNIOR ASSISTANT. Is a good draughtsman, and can assist in taking out quantities, preparing working and finished drawings, and the usual routine of an office, and has a knowledge of surveying and levelling. Six years' reference to late employer.—Address, ALPHA, care of Mr. Hill, stationer, Gray's-inn-road.

WANTED, by a Middle-aged Man, a SITUATION as COLLECTOR, TIME-KEEPER, or FOREMAN; is acquainted generally with smiths' work, and can give good references.—Address, W. M. L. Office of "The Builder."

TO PLUMBERS AND BUILDERS.
WANTED, by the Advertiser, a SITUATION as PLUMBER, and would not object to fill up his time painting and glazing, if the place would be permanent. References, if required.—Direct to A. B. at Mr Burnham's, 22, Ashford-street, Pitfield-street, Hoxton.

WANTED, a SITUATION, by a Young Man, aged 23, who served his apprenticeship to a glazier, writer, grainer, &c. in-doors or out. Salary expected, 18*l.* per annum.—Apply to W. P. 17, St. Andrew's-hill, Blackfriars.

SEWERAGE and DRAINAGE WORKS.—The Advertiser, having been engaged for the last three years as Clerk of Works in a large town, and which is now nearly completed, would be glad of a RE-ENGAGEMENT on similar works. Unexceptional testimonials; any references can be given.—Address, G. J. Office of "The Builder."

TO BUILDERS.
THE Advertiser wishes to join an established BUILDER, either at a salary or to take a share of the profits. He has had considerable experience in the erection of buildings of all classes, as well as railway works; has been engaged in architects' and engineers' offices; can make designs and estimate, and understands levelling and surveying; has some knowledge of machinery, and has had the management of extensive works. He would be competent to take an active part in the management of the business, and, having a large connection, would also be able to increase it. The highest references can be given.—Address, C. E. S. at Howe's, Stationer, Cheapside.

TO ARCHITECTS.
THE Advertiser, who has been six years in the profession, is desirous of an ENGAGEMENT in an ARCHITECT'S OFFICE.—Salary nominal.—Address, J. H. 34, Mornington-road, near Regent's-park.

TO ARCHITECTS.—An ASSISTANT who has been nine years in the Profession, and has lately been engaged upon several first rate Buildings, is OPEN to an ENGAGEMENT. He is an excellent Draughtsman, and thoroughly understands detail and construction.—Address, G. G. 39, Michael's-place, Brompton.

TO ARCHITECTS AND SURVEYORS.
THE Advertiser, aged 22, wishes for a SITUATION. He speaks French and a little German. Salary 12 per week.—Address, A. B. 8, Pond-street, Hampstead.

TO ARCHITECTS, &c.
THE Advertiser, who has been four years in an Architect's office, and can produce satisfactory testimonials as to character and ability, is desirous of an ENGAGEMENT.—Address, A. B. 8, Thornhill-crescent, Islington

TOWN-TRAVELLER.—WANTED, an active Person, well acquainted with Builders, &c. to represent an established house.—Applications, stating last employment and salary expected, may be addressed to A. B. Office of "The Builder."

HACKNEY DISTRICT BOARD of WORKS.—A SPECIAL MEETING of this Board will be held at the Town-hall on THURSDAY morning, the 10th JANUARY, inst. at TEN o'clock, for the Election of TWO CLERKS of WORKS to this Board, the salary to be 2*l.* per week each. Applications to be addressed to the Chairman of the Hackney District Board of Works, at the Town-hall, Hackney, and to be delivered on or before TUESDAY evening, the 8th inst. at SEVEN o'clock.—Particulars as to duties, &c. may be obtained at the Town-hall, Hackney.

HACKNEY DISTRICT BOARD of WORKS.—A SPECIAL MEETING of this Board will be held at the Town-hall, on THURSDAY morning, the 10th JANUARY inst. at TEN o'clock, for the ELECTION of a SURVEYOR to the Board. The salary to be 230 per annum. Applications to be addressed to the Chairman of the Hackney District Board of Works, at the Town-hall, Hackney, and to be delivered on or before TUESDAY evening, the 8th inst. at SEVEN o'clock.—Particulars as to duties, &c. may be obtained at the Town-hall, Hackney.

TO JOINERS.
WANTED immediately, good WORKMEN, for working in GOTHIC TRACERY. None but good hands need apply.—Address by letter, pre-paid, to A. B. Post-office, Southampton, stating wages required, and where last employed.

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WANTED, by a London Firm, a respectable Young Man, who is an experienced draughtsman, in the above capacity. Address, stating age, particulars, and salary required, to Z. Z. Office of "The Builder."

WANTED, in a Timber-yard, an active business Man, as WORKING FOREMAN. Must be acquainted with the trade.—Apply, by letter only, to ROBERT WARD and SON, Mahogany and Timber Merchants, 8, Oxford-street.

TO MASONS.

WANTED, an active, clever, and competent MAN, to set out from drawings, execute and fix all kinds of work required in building operations, and who understands cemetery work, cutting letters, &c. and who could occasionally act as Working Foreman. A permanent engagement in the country may be secured on application, by letter, addressed to O.M. care of Mr. A. Goslett, Plate and Crown Glass Warehouse, 26, Soho-square, London.

TO LEAD-LIGHT GLAZIERS.

WANTED, a first-rate WORKMAN, who thoroughly understands tracery and fixing.—Apply to J. LANG, Plumber, 10, Tavistock-place, Tavistock-square.—References required.

PARTNERSHIP.—PREMIUM, 500*l*.—To take an active part in an Auctioneer's Office, long established at the west of London. Those confidentially and fully communicating, will receive a prompt reply.—Address, J. WOODHOUSE, Esq. 7, Bayswater-hill.

PARTNERSHIP.—To Young MEN, of moderate capital and active business habits. A PARTNERSHIP is now OPEN in an old-established first-class London manufacturing business, in which the principal is desirous of some assistance in its duties. Such an opportunity seldom occurs, as the connections are of the very highest class. The goods manufactured are special to the present proprietor and are highly approved, in all cases leading to increase of business, and continuing an established reputation of between twenty and thirty years. To any energetic, persevering young man, having at command capital sufficient to take a third share (for which from 2,000*l.* to 3,000*l.* are required), it would prove most advantageous. It is desirable that any one answering this advertisement should have some practical knowledge of the metal trades, engineering, or mechanical business. Previous to any information being given, the advertiser will require to be satisfied of the respectability and business habits of the party applying. Also that he has the necessary funds at command, when the fullest investigation will be allowed.—Address, W. Z. care of Mr. J. B. Watson, Architect, 9, Nottingham-place, New-road.

TO CARVERS and GILDERS.—TO BE DISPOSED OF, in a fashionable Seaport Town, an old-established BUSINESS in the above Line, owing to the death of the Proprietor.—Apply to Mrs. BARRITT, Lowestoft, Suffolk.

PLUMBERS' MATERIAL, WINDOW-GLASS, and PAPER-HANGING BUSINESS, TO BE SOLD, with or without plumbing and painting business, an established concern, in a leading thoroughfare. May be entered on highly advantageous terms.—Apply to R. C. 164, St. John's-street-road.

ROYAL POLYTECHNIC.—CHRISTMAS HOLIDAYS.—The Second Part of the Voyages of Sin'bad the Sailor, with new and beautiful Dissolving Pictures, and description, with Songs, by Lenox Horne, esq. (Lauchal): Phantasmaroria Effects, by Messrs. Carpenter and Westley.—Series of astonishing Conjuring Tricks and Delusions by Mr. Burnaby.—Brilliant Popular Lectures on Flame, Fire, and Combustion, by J. H. Pepper, esq.—Third Gratuitous Distribution of the Ornaments of the Giant Christmas Tree, on Wednesday, January 9th, at 1 and 7, being the Special Juvenile Morning and Evening of the week, for which great amusements will be provided.

SMOKY CHIMNEYS CURED EFFECTUALLY for TEN SHILLINGS, by SEPTIMUS PATENT WIND-GUARD.—This Guard allows free egress to the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

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The Chimney Contractor, with Horizontal Register made of Iron, to be used for the formation at the commencement of Chimney. Made for Flues 9 inches by 9 inches, 14 inches by 9 ditcher, and 14 inches by 14 inches.

The UNIQUE CHIMNEY-POT Multum in Parvo, a Remedy against Smoky Chimneys, unsightly and dangerous Contrivances is inclosed at the top, has a division and double outlet, preserves the flue dry, and will not clog with the soot.

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By Her Majesty's Royal Letters Patent.

DUPREE and CO.'S DEFIANCE WINDGUARD and VENTILATORS, &c. for the perfect cure of Down-draft Smoky Chimneys, suitable for Public and Private Buildings requiring a constant change of air.

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VENTILATING ROOFLIGHTS, for Slate or Tile Roofing, without Paint or Putty.

Prospectuses sent on application.

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HANDS'S PATENT ECONOMISING KILN is the only simple and effectual mode to use the heat, for drying moulded clays, sound at any season, in time of burning and cooling the kiln, with perfect ventilation.—Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TO THE COMMISSIONERS OF THE BOARD OF HEALTH, AND TO ALL PERSONS INTERESTED IN THE SMOKE QUESTION.

HANDS'S PATENT is the only simple and certain remedy for the SMOKE NUISANCE; it has combined, where necessary, the advantage of a drying process and perfect ventilation, without a particle of complicated machinery. Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TO BUILDERS, MASONS, AND OTHERS.

THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Bardilla, dove, black, black and gold, Sienna, St. Ann's, statuary, serpentine, red antique, &c. Portland, Harehill, Park spring, and other stone, in blocks, slabs, landings, and headstones. Yorkshire paving, granite curb, &c. All goods carefully packed and forwarded to any part of England.—THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

Lloyd's Marble Wharf, Thames-bank, Pimlico, Adjoining Vauxhall bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

WARM and COLD MARBLE BATHS for SALE. To NOBLEMEN, GENTLEMEN, BUILDERS, and PROPRIETORS of LARGE PUBLIC ESTABLISHMENTS.—TO BE SOLD, by Private Contract, a decided bargain, the WARM and COLD MARBLE BATHS, erected eight years since, adjoining the Tennis-court, Oriel street, Oxford, at an expense of 600*l.* They consist of two baths, of the interior dimensions of 5 feet 8 inches in length, 2 feet 1 inch in width, by 2 feet 4 inches in depth. A third, with steps, is 6 feet in length, with similar width and depth. They are composed of the finest white marble; were erected with every requirement for comfort and convenience; are of the first-rate character, and would form a desirable adjunct to the establishment of any nobleman, gentleman, or proprietor of a first class establishment. The tanks, made by Corfe and Bell, Leicester, contain 1,100 gallons. The force-pump is of the best description, and a considerable quantity of lead piping is attached. The hot water apparatus was furnished by Messrs. Easton and Amos, of London, and is complete in every respect. The baths and apparatus of every description can be removed without the slightest detriment. The baths are to be sold only in consequence of the expiration of the lease of the premises on which they were erected. Application to be made at the Tennis-court, 12, Oriel-street; or to Mr. PHILIP HURCOMB, Accountant, 4, Worcester-terrace, Oxford.

THE LIZARD SERPENTINE COMPANY manufacture and sell in block and slab, the beautiful Stone now raised from the lower beds of their Quarries. Chimney-pieces, Columns, Fonts, and ornamental works on view, at 30, Surrey-street, Strand.

HENRY COX, Manager at the Lizard.
F. W. RUFFLE, Agent in London.

TO SCULPTORS, BUILDERS, MASONS, &c.

B. FABBRICOTTI respectfully invites the Gentlemen connected with the Marble Trade to inspect his fresh STOCK, composed of statuary, vein, Sicilian, black and gold, dove, Bardilla, Sienna, and Breccia, in blocks, and particularly calls their attention to a large quantity of his best statuary, sixty blocks, of all sizes, just landed.

Monuments, vases, and statues, finely executed in Italy.
Carrara Wharf, Thames-bank, Pimlico.

MARBLE.—The Italian Marble Company, Importers of the produce of their many quarries in the province of Massa Carrara, Italy, beg to inform the general marble trade in the United Kingdom that they are prepared to undertake Contracts for any quantity of Statuary, Veined, Sicilian, Bardilla, Dove, and other Marbles, in blocks of all dimensions, delivered on shipboard at Leghorn, or in dock, London. A constant stock is always kept at the London Depôt. Orders for Paving Slabs, Garden and Hall Statues, Vases, Terms, Consoles, &c. executed and delivered at reasonable rates. For further particulars apply at the Offices of the Company, 19, Cannon-street, City.
WILLIAM W. BONNIN, London Secretary.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Blocks and Slabs, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

THOMAS TILNEY, YORKSHIRE STONE MERCHANT, Tanfield-place, Leeds.—To Builders and Buyers of the Best Quality.—Direct from the Quarries in truck-loads of five tons. Paylings, Landings got out to sizes, Steps, Copings, &c. &c. supplied on most advantageous terms by railway, and with despatch. Prices sent on application.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab, Marble mortars, &c.

ARCHITECTURAL EXHIBITION, SUFFOLK-STREET, PALL-MALL EAST.—Architects and Builders are respectfully requested to examine the specimens of BATH and CAEN STONE, inserted by BARRETT'S PATENT PROCESS, now open, No. 47, in the Department for Materials at the above Exhibition.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 345, High-street, Southwark, near the Townhall.

CAEN and AUBIGNY STONE.—GATES and GEORGE (late Luard, Beckham, and Co.), Caen-wharf, Rotherhithe, London, General Stone Merchants and Quarrymen, continue to supply from their Wharf, as above, CAEN, AUBIGNY, PORTLAND, and YORKSHIRE STONE.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.

List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Batt Stone Office, Corsham, Wilts.

PIMLICO MARBLE WORKS,
BELGRAVE-WHARF,
LOWER BELGRAVE-PLACE.
SAMUEL CUNDY.

THE STOCK OF LOW PRICED CHIMNEY-PIECES ARE WELL AND CAREFULLY MANUFACTURED OF THE BEST MATERIAL.
PRIZE MEDAL IN 1851 FOR A MONUMENTAL WORK.

ORIGINAL
ANCASTER STONE.
TO QUARRYMEN.
THE ANCASTER STONE MERCHANT,
MR. JOHN WILSON,
HAS A VACANCY FOR A FOREMAN.

BANGOR WHARF, King's-road-bridge, Camden-town.—STRINGFIELD and COOPER, late W. W. Rawlins, beg to call the attention of Builders and others to their Stock of Bangor slates, laths, Plaster, Roman, Portland, and Keene's cement, blue lias, Dorking, and chalk lime, plasterers' hair, Yorkshire plain, pan, and ridge tiles, glazed sewer pipes, closet-pans, and traps, Welsh fire-bricks, gravel and sheels for garden paths, ballast, sand, &c. Materials landed, wharfed, and carted.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—TREGELLES and TAYLOR, 3, Pinner's-court, Old Broad-street. Manager, JAS. J. TRATHAN, Liskeard.
This Granite is selected for the New Westminster-bridge.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. COLES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

SCAGLIOLA done on an IMPROVED PRINCIPLE.—I refer to the Gothic Arch by D. Dolon in the Great Exhibition of 1851, which gained the only Prize Medal awarded for the manufacture of the above work.—Specimens to be seen at 192, Drury-lane, two doors from Holborn, superior to any yet offered to the public, with a choice Collection of Ornaments for building purposes, Trusses for Shop-fronts, &c. &c.

PARIS EXHIBITION.—ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1852. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the top of loo-tables, chiffoniers, consoles, &c.; baths, baptistries, altar-tablets, pilasters, columns, vases, pedestals, and brackets; wash-stands, hall-tables, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 38, and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, Royal Asylums, Pauper Lunatic Asylums, Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

AUSTIN'S ARTIFICIAL STONE.—This material, frequently confounded with Portland Cement) has now been in extensive use among the highest class of residences for about twenty five years. During that time a collection of Ornamental Work, such as Vases, Figures, and Fountains, has been accumulating, of which the public have scarcely any idea. Suffice it to say, that a single copy of each work would collectively amount to between 4,000*l.* and 5,000*l.* In contradistinction from Terra-cotta, and all other kind of Pottery, there is no discoloration of form by the process of baking, and, instead of the glazed surface of Terra-cotta, it has the closest resemblance to Portland Stone, having also the advantage of being waterproof.—AUSTIN and SEELEY, Nos. 1 to 4, Keppel-row, New-road, Regent's-park.
*** A large Stock of Ornamental Chimney-tops.

GROUND FLINT AND CORNISH STONE, UNADULTERATED.
WILCOX & CO.
FLINT MILLS, MILLWALL, POPLAR.

BARRETT'S PATENT INJECTED STONE COMPANY.—PAVINGS, BLACK and WHITE Plain and Ornamental Pavings may now be had in this material, which is hard as marble and impervious to moisture, as cheap as Portland stone. Specimens at the price to be found so suitable for halls, basements, terraces, &c.—Full particulars on application, by letter or otherwise, to the Manager, Mr. CHAMBERLAIN, at the Works, 80, Bridge-place, Harrow-road, Paddington.

CROGGON and COMPANY, Manufacturers of PATENT ASPHALTE ROOFING, BOILER, RAILWAY, SHEATHING and INODOROUS FELT, For Damp Walls, and Lining Iron Houses, 2, DOWGATE-HILL, LONDON.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.

W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf.
Contractors supplied to any extent.

BRICKS.—200,000 STOCK BRICKS, delivered into trucks at Wimbledon Railway Station, at 22*s.* per thousand. Place Bricks, at 30*s.*—Apply to J. D. 9, Townwall street, Dover.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plain description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

PANTILES, PAVINGS, &c.—J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 52*s.* 6*d.* per 1,000; floor bricks and 6 inch pavings, at 30*s.* 6*d.* per 1,000; 8-inch pavings, at 57*s.* 6*d.* per 1,000; plain tiles, at 35*s.* per 1,000, delivered. Cash prices. Delivered on trucks in London on Eastern Counties Railway.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield street North, City-road Basin. Secondly, that the term Terro-Metallic, is the exclusive right of the Proprietor; and, thirdly, that the "REPORT OF THE JURIES," page 581, of the Great Exhibition, rank the Manufactories known as the "Tile Pilleries," in Tamworth, Staffordshire as the first of the kind in the world.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability. Slabs and Tiles for Fireplaces and Hearths, Copings for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

DAMP WALLS.

STENT'S COMPOSITION FOR PREPARING NEWLY-PLASTERED OR DAMP WALLS FOR PAPERING,

Is the result of practical experiments and long experience; it is unfailing in its application. Entire houses have been papered a few days after plastering. In repairs of old plastering it is invaluable. A moderate room can be papered for 2s. 6d.

Prepared only by W. J. STENT, Warminster.

London Agents: Messrs. GEO. and THOS. WALLIS, 64, Long-acre. Agent for Ireland: Mr. S. BOYD, 46, Mary-street, Dublin.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painter's colic, will be entirely avoided. The Powdered White Zinc may be had for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Paint-dealers in Original Packages, each cask stamped—HUBBUCK—LONDON—PATENT. And if not so marked, the quality is not guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—FULLWOOD THOMPSON and CO. beg to request the attention of Contractors, Merchants, and others, to the quality of their Roman, Portland, and Bath Cement, which they are manufacturing at their works, situate on the Bristol and Exeter Railway, two miles north of Bridgewater, and adjoining the Dunball Wharf, on the river Parrett.

These Cements are, they believe, the best for any purpose now in the market; they will set under water in a few minutes, and are insensible to extremes of heat or cold. The material used is such as will produce a certain and unvarying cementitious power, and a consequent regularity, the want of which is so obvious in Cements manufactured in the ordinary method.

FULLWOOD THOMPSON and CO. will be happy to forward prices by post on application, and can offer favourable terms to large purchasers and exporters.

Dated St. Mary-street, Bridgewater, July 26th, 1854.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements (read at the Institute of Civil Engineers), to be obtained from the Makers, JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied or shipment, on advantageous terms.

PARIAN CEMENT, for Internal Use, to be painted in a few hours, and papered within a couple of days. FRANCIS, BROTHERS, Manufacturers of Roman, Parian (under patent), and all other Cements in use for building purposes, Nine Elms, London.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL,—Light and Dark, equal to any made Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Firebricks, Grindstones, Cement Chimney-pots, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Porzolano.

NOTICE.—M. H. BLANCHARD, 74, Blackfriars-road, London, Manufacturer of PLASTER of PARIS of a superior quality, suitable for Sculpture, Architectural Embellishments, &c.—will not twist, warp, or give after set, but will retain its hardness and strength.

Superfine, per ton	£7 0 0
Fine	3 0 0
Coarse	2 10 0

Delivered for Cash to any of the Metropolitan Railway Stations, or within the Metropolis.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester.—T. H. BOORMAN, WILD, and CO. beg to inform the public and trade generally, that they have completed their works for the manufacture of PORTLAND CEMENT, and from their contiguity to the river Medway, as well as the branch line of the South-Eastern Railway from Strood to Maidstone, a siding from which will be carried into their works, enabling them thereby to transmit any orders they may receive to any station on the before-mentioned line, and confidently hope they shall be able to supply the public with a first-rate article, in both cement and lime, on moderate terms. Persons sending orders for cement, are respectfully requested to say for what purpose it is required, and printed instructions will be affixed to the head of each cask.—Orders to be addressed to MR. THOMAS WEEKES, Agent at the Works.

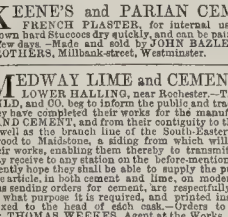
Agents in London:—Messrs. GEORGE POTTER and CO. Lime Merchants, Purfleet Wharf, Blackfriars; and 19, North Wharf-road, Paddington.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.

G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.

DAVIES and NORMAN, Agents.

Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.



GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.

IN EVERY VARIETY.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Mill-wall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Plastic Cements, English and French Plaster, &c.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME

The LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements, at reduced prices, the material being exavated in its pure and unadulterated state, from quarries on their own property. The company particularly recommend a trial of their XXXX Bath Cement, as far superior to any article now in the market. These cements can be sent by rail or shipped from their wharf, direct to all parts.—Agents required, and a liberal discount allowed. Orders received by Mr. RIALLMARK, 80, Old Broad-street, City.

PORTLAND and ROMAN CEMENT, TERRA-COTTA POTS, &c.—J. M. BLASHFIELD begs to acquaint the Public that he has entirely CLOSED his Establishment on the Surrey side of the Thames, and that Articles of his manufacture can only be obtained at his Works, Mill-wall, Poplar, or at his Warehouse, Praed-street, Paddington.

REID, HEINEKEY, AND CO.

PORTLAND AND ROMAN CEMENT MANUFACTURERS,

EAST GREENWICH,

KENT.

SHIPPING ORDERS PROMPTLY EXECUTED.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool

NOTICE.—BLUE LIAS LIME.—L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.

L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to ensure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's-cross.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.

Small ditto, ditto, 4d. per ton.

Barges loaded in a few minutes.

Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester, March 31, 1855.

NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 20, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.

GIBBS, CANNING, and CO.'s BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.

ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.

SECONDS, PAVIORS', STOCKS, and other BRICKS.

PORTLAND CEMENT.

CHARLES RICHARDSON,

6, SOUTH WHARF, PADDINGTON.

GREAVES'S BLUE LIAS LIME.

CHARLES RICHARDSON,

6, SOUTH WHARF, PADDINGTON.

BATH CEMENT.

CHARLES RICHARDSON,

6, SOUTH WHARF, PADDINGTON.

TATHAM & CO.—No. 14, SOUTH WHARF, PADDINGTON,

BRICK, LIME, and CEMENT MERCHANTS.

SOUTHAM BLUE LIAS LIME DEPOT.

Bath, Portland, Lias, and Roman Cements; Parian and Keene's Cements, Plaster of Paris, Glazed Stoneware Sewage Pipes, Fire Goods, Vitrified Blue Bricks, White Building Bricks, White Enamelled Pans and Traps, and every description of Building Materials.

N.B. Lump and Ground BLUE LIAS LIME delivered in boat-loads direct from the Works in Warwickshire, to any part of the river or canal

SOUTHAM BLUE LIAS LIME DEPOT, No. 14, SOUTH WHARF, PADDINGTON.

TATHAM & CO. have arranged for a constant supply of the above very superior BLUE LIAS LIME, which, for the last two years has been extensively used at most of the large works constructed during that period or known Lump and Ground Lime can be delivered direct from the Works in WARWICKSHIRE to any part of the Rivers Thames or Lee, alongside any wharf on canal, or by boat or rail to any part of the kingdom.

PORTLAND CEMENT.—TATHAM & CO. are enabled to offer a very superior quality of this valuable Cement at a moderate price, and all orders addressed to No. 14, SOUTH WHARF, PADDINGTON, will receive the best and most prompt attention.

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS, ISLE of SHEPPEY, Kent.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH perfectly NON-ABSORBENT (no quantity of rain having any effect upon it), and will not VEGETATE or RUB OFF. Stucco Cement and Stucco Paint. CLARK and BENOUGH, Manufacturers.—Office, 4, George-yard, Lombard-street. Works, Grand Surrey Canal Bridge, Old Kent-road.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the EREC-TION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, C. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

TO BUILDERS and OTHERS.—BRICKS delivered at any part of the River up to Battersea-bridge, at the following prices, viz.:—Grey Stocks, 25s. per thousand; Grizzles, 20s. per thousand; Rough Stocks, 20s.; Place, 16s.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

THE BEST HERTFORDSHIRE MALM SECONDS;

THE BEST WHITE SUFFOLK and RED FACINGS:

DEEP-RED RUBBING BRICKS

Also COWLEY and KENT STOCKS, in any quantity.

J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY

(Within a short distance of the five bridges).

THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.

Also, STOCKS, of FIRST QUALITY.

J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.

COWLEY, KENT, and ESSEX BRICKS.

Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.

KENTISH RAG-STONE of the FINEST QUALITY.

MILLS and PRICE, 5, ADELAIDE-PLACE, London-bridge.

THE KINSON CLAY-WORKS, POTTERIES, and FIRE-BRICK ESTABLISHMENT, near Pooke, Dorset, Manufacturers of every description of Sanitary Glazed Sewage-pipes, Closet-pans, Furnace-blocks, Fire-bricks, Flue-pots, Crucibles, &c. &c.—The completion of the Kinson Pottery places the Proprietors in a position to supply Builders and the Trade generally with any quantities of the above description of Articles, at moderate prices. The pottery is situate about a mile and a half from the town and port of Poole. It is worked by steam power, and the pipes are made by the most approved patent machinery, and will bear favourable comparison with any manufactured in the kingdom. The fire-bricks have been tested, and are found fully equal in all respects to those manufactured at Stourbridge and Newcastle. All articles are made from the clays and materials found on the estate. There is an inexhaustible quantity of all descriptions of Dorsetshire Clay, used for pottery purposes, which can be supplied to the Staffordshire, North Country, and London markets, upon favourable terms.

Lists of prices and all other information will be furnished, upon application to Mr. T. W. GREEN, at the Works.

London Agent: J. COX, 2 and 3, High street, Lambeth.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants Builders, contractors, and others supplied with every description of building material at the lowest market prices.

AN established BRICKFIELD TO LET, at Shepherd's Bush.—Apply on the Spot, to Mr. ROBINSON, No 1, Oakland Villa.

Depôt, Agar Wharf, King's-road, St. Pancras.

VITRIFIED STAFFORDSHIRE BLUE BRICKS, Paving, Roofing, and Ridge Tiles, Sanitary Pipes, &c. Stourbridge Fire Goods, &c. of all descriptions, and of best quality.—WOOD and SON, Manufacturers, Portway, Oldbury, near Birmingham. Agent—Mr. J. UNWIN, Private Residence, 59, Nelson-square, Blackfriars-road.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and flare, bricks, fire-goods, &c. can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

STEAM PRESSURE GUAGES.

The most approved and suitable Instrument for Colliery, Railway, and other Boilers, is

WEBSTER'S PATENT,

MANUFACTURED ONLY BY GRAY AND BAILEY,

BIRMINGHAM,

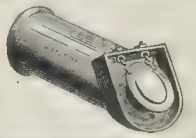
From whom the fullest information may be obtained.

Orders from Collieries should be given without delay, as the new law in respect to Coal-mines comes into operation the 31st December instant.

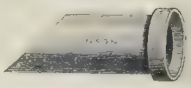
KINSON POTTERY AND CLAY WORKS, POOLE, DORSET,

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.



WHOLE SOCKET.



Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly seven years, and having largely supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks Deptford Dock-yard, Her Majesty's Commissioners of Works, &c. and to all persons or parties so supplied, expressing themselves satisfied therewith, offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS,

TRAPS, &c. at the

NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to

THE AGENTS:—

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;

Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;

Where a large stock is always kept on hand.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

HENRY MILLICHAMP,

MANUFACTURER OF

GLAZED STONE-WARE DRAIN-PIPES, BENDS, JUNCTIONS, TRAPS, &c.

65, PRINCES-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD EAST.

Watercloset Pan with Syphon-Trap, 5s. 6d. each.

A LARGE ASSORTMENT OF STRAIGHT TUBES IN 9-FEET LENGTHS.

Bends, Elbows, Urinals, Gully-Traps, Flap-Traps, Syphon-Traps, &c. always kept in Stock.

Watercloset Pan with Syphon-Trap complete, price 5s. 6d. each.

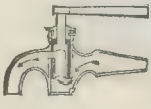
DRAWING AND LIST OF PRICES FORWARDED FREE ON APPLICATION

"Terra-cotta" Chimney-pots of various patterns and sizes, also Red Earthenware Drain pipes, at greatly reduced prices. (1179)

TO WATER COMPANIES AND PLUMBERS.

BURDEN'S PATENT HIGH-PRESSURE

COCKS.—These cocks are remarkably simple in their construction, very durable, especially liable to get out of repair, and have been most severely tried, and for a period of three years, under a continuous head pressure, varying from 300 to 400 feet.



SAMUEL SHEPPARD, Sole Manufacturer.

JAMES STREET, ST. PAUL'S, BIRMINGHAM.

STEAM PUMPING ENGINES.—

PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile driving, grinding materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,

Engineers and Contractors,

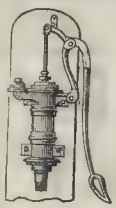
John's-place, Holland-street, Southwark, London.

ENGINES.—For SALE, THREE 12-horse

high-pressure horizontal ENGINES, admirably suited for winding; 12-inch cylinders, metallic pistons, either with or without boiler. Also two powerful double-purchase CRABS, capable of lifting 30 tons each. Also a wrought-iron TANK, 20 feet by 4 feet, by 4 feet, 8 plates.—Apply, by letter, to No. 20, BOX, Post-office, Derby.

PUMPING MACHINERY. — Lifting and

Forcing Pumps, Patent Centrifugal and Double-acting Hydraulic Pumps, deep Well Pumps, Steam-Engines portable and fixed, Hydraulic Rams, Water-Wheels, and every description of machinery, of the most improved construction, manufactured and supplied by GWYNNE and CO. Hydraulic and Mechanical Engineers, Essex-wharf, Strand, London.



TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,

which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and pulleys are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Deep and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS,

8, Crescent, Jewin-street, London,

Manufacturers and Patentees.

PORTABLE STEAM-ENGINE. — A new

8-horse PORTABLE STEAM-ENGINE, with tubular boiler, for SALE. Can be seen at work at Mr. GOODWIN'S, 67, Great Guildford-street, Southwark, of whom particulars may be obtained.

PUMPING and WINDING ENGINE.—

TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10 horse power, by Medwin and Hall, with a pair of 9-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 99, Blackfriars-road.

PORTABLE STEAM-ENGINES and

PUMPS kept in Stock for Hire at reduced Prices. M. A. RICHARDS and SON, Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

M. A. RICHARDS and SON, PUMP MANUFACTURERS and ENGINEERS

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON WIRE.

Pumps of any size, single or double barrel, up to double 12 in diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels,

Plain or Sliding Telescope Suction,

ON HIRE.

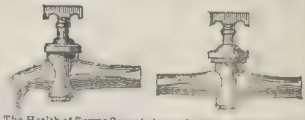
SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS,



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in towns, WARNER'S HIGH-PRESSURE COCK is recommended as a cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basons with screw valve for flushing direct to main pipes without a cistern, box or wire.

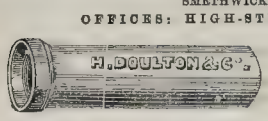
LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

HENRY DOULTON AND CO. MANUFACTURERS OF GLAZED STONE-WARE DRAIN-PIPES.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; AND SMETHWICK, NEAR BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.



TWENTY-ONE LARGE AND IMPORTANT TOWNS HAVE BEEN DRAINED WITH DOULTON'S GLAZED STONE-WARE PIPES, *and in no case has the slightest failure occurred.*

Messrs. D. and Co. do not publish Testimonials, but references can be given to any of the Engineers and Surveyors under whom they have executed works. DRAWINGS, WITH PRICES, MAY BE HAD ON APPLICATION AS ABOVE.

JOHN DOULTON, BROTHERS, AND CO.
LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF
DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

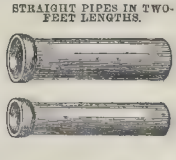
JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

IMPROVED WATER-CLOSET PANS AND TRAPS, WHITE INSIDE.

Pan, 3s. 6d. Trap, 2s.

STRAIGHT PIPES IN TWO-FEET LENGTHS.



IMPROVED YARD-SINK.

HALF-SOCKET PIPES, in 2 feet lengths, at usual prices, by the rise of which. Drains may be readily examined, and Junctions inserted, in the event of requiring further connections.

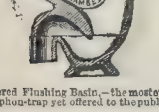
May be had also at Messrs. GLADDISH'S LIME WHARFS, Pedlar's-acre, Westminster-bridge, City-road Wharf, City Basin; Dock-head, Bermondsey; Danvers Wharf, foot of Battersea-bridge, Chelsea; Kraft Wharf, King's-road, Camden New Town; J. TURNER, 2, South Wharf, Praed-street, Paddington; COLWILL, Brothers, 32, Brydges-street, Covent Garden; and at EDWARD COOK'S 94, Wardour-street, Oxford-street. Drawings and List of Prices will be forwarded free on application.

Superior Glazed Stoneware Pipes, Bends, Junctions, Traps, &c. Hopper and other Pans, with best White Glaze inside.

Pan, 3s. 6d.

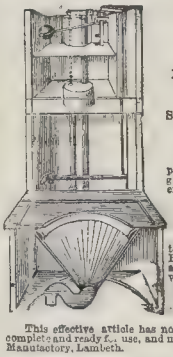
Trap, 2s.

Syphon Pan, with or without STEPHEN GREEN'S Patent Air-tight Valve.



Registered Flushing Basin,—the most effective Syphon-trap yet offered to the public.

STEPHEN GREEN, IMPERIAL POTTERIES, LAMBETH.



IMPORTANT TESTIMONIALS
TO THE EFFICIENT WORKING OF
STEPHEN GREEN'S
PATENT SYPHON FLUSHING BASIN,
AND
SELF-ACTING CLOSET CONNECTIONS.

Oxford, November, 1849.

GENTLEMEN,—Sixteen of your Closets having been put into operation at Christ Church College, I have great pleasure in giving you my testimony as to their efficiency and simplicity.
HENRY J. UNDERWOOD, Architect.
R. S. HOGGAR, Engineer.

Royal Arsenal, Woolwich, June 24, 1853.

GENTLEMEN,—I have much pleasure in giving my testimony in favour of your Patent Syphon Flushing Basin, with Self-acting Closet Connections. There are several fixed here, which have been in use for upwards of twelve months, giving perfect satisfaction.
I am, Gentlemen,
Your obedient Servant,
WILLIAM CARTWRIGHT.

This effective article has not any Crank or Wire to get out of order, and is all complete and ready for use, and may be seen in operation at STEPHEN GREEN'S Manufactory, Lambeth.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,
LAMBETH POTTERY, HIGH-STREET, LAMBETH,
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to
5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pans.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE, powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 29, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.
N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.—This ware, allowed by all to be of the best manufacture, by the unparalleled quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES

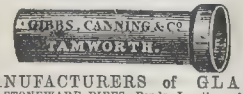
FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

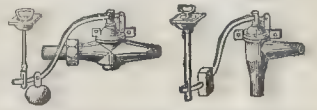
3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 6d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture. And it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.



MANUFACTURERS of GLAZED STONEWARE PIPES, Bends, Junctions, &c.; also FIRE BRICKS, Vitrified Blue Bricks (as used by her Majesty's Commissioners of Sewers), White Fire Clay, Facing Bricks, &c., &c. Agents,—CHARLES RICHARDSON, No. 6, South Wharf, Paddington, London.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE No. 7.



Is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 120 to 200 feet; they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,
THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Cut, Lambeth.
N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price, complete, 1os. 6d. each.

VICTORIA POTTERY, LEIGH, NEAR SOUTHEND, ESSEX.

DAVID MOUNTAGUE,
MANUFACTURER of superior GLAZED STONEWARE PIPES (in accordance with the rules established by the Commissioners of Sewers), Bends, Traps, Closet-pans, Jars, Bottles, and every article in Stone Ware on advantageous terms. Also MANUFACTURER of superior Roman Cement and Plaster of Paris at Orchard House, Blackwall. Orders executed from the above places, from Falcon-wharf, 83, Bankside, Blackfriars, and from Harrow-bridge-wharf, Stratford, Essex.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of TWINE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

SALES BY AUCTION.

ARTIFICIAL STONE GOODS, BOROUGH-ROAD.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, the ARTIFICIAL STONE WORKS, 74, BOROUGH-ROAD, SOUTHWARK, on WEDNESDAY, JANUARY 9, at TEN for ELEVEN, without reserve, the whole of the extensive STOCK, consisting of fountains, figures, vases, centre flowers, tracery, &c.

May be viewed one week previous, and catalogues had of the proprietor, Mr. J. Sarre, on the Premises, post-free on application; and of the Auctioneers, 40, Parliament-street and Coal Exchange.

THAMES BANK.—To SCULPTORS, MASONS, BUILDERS, and Others.

MESSRS. EVERSFIELD and HORNE have received instructions from the consignees to SELL by AUCTION, at CUBITT'S WHARF, Thames-bank, Pimlico, on FRIDAY, JANUARY 11, at TWELVE for ONE TWENTY-FIVE BLOCKS of STATUARY MARBLE, of very pure quality, and large dimensions, suitable for sculptors, recently imported, ex "Seawell," and ex "Tandfield;" and FORTY BLOCKS of VEIN and SICILIAN MARBLE, of excellent quality.—May be viewed, and catalogues had on the Premises; and of the Auctioneers, 40, Parliament-street, or Coal Exchange. Approved bills at six months will be taken.

NEW-ROAD.—Extensive Sale of Marble Chimney-pieces

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, 17 and 18, South-row, New-road, near St. Pancras Church, on TUESDAY, JANUARY 15, at TWELVE for ONE precisely, a MARBLE CHIMNEY-PIECES of superior workmanship, and in every variety of style, comprising several handsomely sculptured in statuary and coloured marbles, and an assortment of black and gold, vein, and Bardilla.—May be viewed two days previous, and Catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

THAMES-BANK.—30,000 Feet of Marble Slab.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, Lloyd's Wharf, Thames-bank, Pimlico, on FRIDAY, JANUARY 11, at TWELVE for ONE, by order of the Consignees, about 30,000 feet of ITALIAN MARBLE SLAB, of various thicknesses and dimensions, principally vein and Sicilian.—May be viewed two days previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

N.B. Approved bills will be taken.

RE W. TAVERNER.—BUILDER'S PREMISES, WITH RESIDENCE AND STABLING, ST. JOHN'S WOOD

MESSRS. EVERSFIELD and HORNE are instructed by the Assignees to SELL by AUCTION, in FEBRUARY, the LEASEHOLD PREMISES recently erected in Clifton-road, St. John's Wood, comprising a substantially-built dwelling-house, with workshops, yard, and stabling in the rear, held for a long term at a low ground-rent.—May be viewed and particulars had, ten days before the sale, at the Office of JOHN CHAPPLE, Esq. Solicitor, 19, Great Carter-lane, Doctors'-commons, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

GROWING TIMBER AT HACKNEY.

MESSRS. EVERSFIELD and HORNE are instructed by the Directors of the Conservative Land Society, to SELL by AUCTION, on WEDNESDAY, JANUARY 23 (after the sale of the materials of the manaop), about 2 TREES, growing upon the estate, comprising elm, lime, plane, sycamore, and a variety of fruit-trees and shrubs.

N.B. Parliament street

MILFORD-LANE, STRAND, TO CONTRACTORS AND OTHERS.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, Milford-lane, Strand, on TUESDAY, JANUARY 8th, at TWELVE for ONE, by order of the proprietors, being the SURPLUS STOCK of two firms entering into partnership, Eight valuable Cart Horses taken from constant work, Six 4-inch Waggons (one on springs), and One 3½-inch Wagson; Weighing machines; 300 Coal Sacks; nearly new Chaff-cutting Machines, and a variety of other effects. May be viewed day previous, and catalogues had on the Premises; and of the Auctioneers, 40 Parliament-street, or Coal Exchange.

Building Materials on the Hackney Estate of the Conservative Land Society.

MESSRS. EVERSFIELD and HORNE have received instructions from the Directors to SELL by AUCTION, on the PREMISES, Lower Clapton, near Hackney Church, on WEDNESDAY, JANUARY 9, at TEN for ELEVEN, the excellent MATERIALS and FITTINGS of the MANSION and OFFICES, comprising several tons of lead and copper, slated and tiled roofs, sound timber, joists and quartering, floor-boards, Spanish mahogany doors, plate-glass sashes, statuary marble and other chimney-pieces, polished grates, kitchen ranges, coppers, and other fittings; also the materials about the grounds, including two very excellent rustic summer-houses, erection of a temple with Portland stone columns, large cast of the "Laocoon," several hundred feet of stout park fencing, erection of greenhouses with heating apparatus, growing timber, range of stabling and coach-house, sound Yorkshire flag paving, iron balconies, and ornamental ra ings.—May be viewed, and catalogues had on the Premises; also of GEORGE MORGAN, Esq. Surveyor, 3, Chancery-lane; Messrs. HARRIS and LEWIS, 14, New Boswell-court; at the Offices of the Society, Norfolk-street, Strand; and of the Auctioneers, 40, Parliament-street, Westminster; or Coal Exchange.

THE VALUABLE MANUFACTURED STOCK OF THE LONDON AND PENZANCE SERPENTINE COMPANY.

MESSRS. EVERSFIELD and HORNE have received instructions from the Directors to SELL by AUCTION, at the SHOW ROOMS, No. 18, Mount-street, North, City-road, on TUESDAY, JANUARY 29, at TWELVE for ONE, the valuable STOCK of CHIMNEY-PIECES, Brackets, Table-tops, Tazzas, Fonts, Pedestals, and Ornamental items, manufactured in the best manner of the beautiful and durable marbles also, North and Chimney pieces in Yorkshire stone and Nar b. May be viewed one week previous, and catalogues had, on the Premises; and of the Auctioneers, 40, Parliament street, or Coal Exchange.

Truly Valuable and Extensive Sale of large Navy Oak, Coppice Timber, Elm, Ash, Beech, Cherry, Lime, Chestnut, and Spanish Chestnut Hop Poles, and Bark, standing in the Highclere Estates.

MR. ALEX. DAVIS is honoured with instructions from the Right Hon. rable the Earl of Carnarvon, to SELL by AUCTION, at the CARNARVON ARMS INN, Widmoor, Burghclere, Hants, near Newbury, on FRIDAY, the 25th day of JANUARY, 1856, at TWO o'clock in the afternoon, 854 fine large NAVY OAK TREES, 83 Ash, 37 Elm, 19 Beech, a few Cherry, Lime Chestnut, and Sycamore Trees, with Hop Tops, and Bark, standing in coppices at Burghclere; field near Earlstone Farm; Gosling's Coppice, Shrimes Coppice, near White Oak; also in coppice at Great and Little Pennwood. The above timber is adjacent to good roads, being about five miles from the Newbury Station on the Berks and Hants Railway, and the Kennet and Avon Canal, Newbury, Berks. The Auctioneer begs most respectfully to call the attention of Government Contractors, Ship Builders, and Timber Merchants, to the above Sale; the Timber being of large size, measure, of superior quality, and admirably adapted for shipping purposes. Sold with full particulars, reservations, and conditions of sale, may be had fourteen days previous to Sale, of Mr. JONES, of Highclere who will appoint a person to show the lots; at the White Hart Hotel, Newbury; Crown Inn, Highclere; Garraway's, 3, Change-alley, Cornhill, London; Christopher Hotel, Eton, George Hotel, Reading; of the Auctioneer, Valuer and Estate Agent, Market-place, Newbury, Berks

SALES BY AUCTION.

The valuable Materials of the Borough Compter, Tooley-street.

PULLEN and SON respectfully announce that they will SELL by AUCTION, on the PREMISES, on WEDNESDAY, JANUARY 9, at TWELVE, in lots, the whole of the capital BUILDING MATERIALS and FITTINGS-UP of the BOROUGH COMPTER, in Mill-lane and Counter-street, Tooley-street; comprising about 500,000 excellent stock bricks, slates, and slating boards, prime oak and fir timber in stout roofs and floors, 3,300 feet of York paving, stone staircases, sills and window dressings, and 350 feet run of coping, glazed sashes, doors, and fittings of the Governor's house, capital oak floor-boards, massive iron gates, spiked guards, fences, and railings, strong doors with locks and fastenings, 100 bedsteads, and all the fittings of cells and dormitories, several tons of lead in gutters and pipes, water-tanks, coppers, baths, stoves, and numerous useful fittings-up. May be viewed the day previous. Catalogues had at the Architect's Office, Guildhall; and of PULLEN and SON, 26, Fore-street, Cripplegate.

FARRINGDON-STREET EXTENSION.—BUILDING MATERIALS OF TWENTY HOUSES

PULLEN and SON have the honour to announce that they will SELL by AUCTION, on the PREMISES, on MONDAY, JANUARY 14, at TWELVE, in Lots, by order of the Improvement Committee of the Corporation of the city of London, all the valuable BUILDING MATERIALS of about twenty houses in Bowling-street and Turrimill-street, Clerkenwell, including the Horse and Groom public house, built within a few years; comprising about 400,000 good, sound bricks, plain and pan tiles and slates, capital oak and fir timber in roofs and floors, sashes, doors, partitions, floor-boards, shop-fronts, lead gutters and pipes, stone-paving, stoves, coppers, and useful fixtures and fittings to the above.—May be viewed on SATURDAY, and catalogues had at the Architect's Office, Guildhall; and of PULLEN and SON, 26, Fore-street, Cripplegate.

BUILDING MATERIALS, OLD-CHANGE, ST. PAUL'S.

PULLEN and SON are directed to SELL by AUCTION, on the PREMISES, on THURSDAY, JANUARY 17, at TWELVE, in Lots, all the valuable BUILDING MATERIALS of the dwelling houses, stabling, cart-sheds, and extensive premises, Nos. 9 and 10, Old-change, St. Paul's, comprising good sound brickwork, lead gutters and pipes, plain and pan tiles, stout boarded and timber floors and roofs, sashes, doors, and interior fittings, shop front, large entrance-gates, pebble and clinker paving, and stable fittings, and useful fittings-up. May be viewed the day previous.—Catalogues had at the Architect's Office, Guildhall; and of PULLEN and SON, 26, Fore-street, Cripplegate.

TO BE SOLD, by PUBLIC AUCTION, on the 2nd FEBRUARY next, a large assortment of ITALIAN and other MARBLE SLABS, of large sizes, and English sawing. Approved bills will be taken in payment. Further particulars will be advertised.

42, UNION-STREET, SOMERS-TOWN.

MR. LEREW will SELL by AUCTION, on the PREMISES, as above, on MONDAY, the 14th of JANUARY, at TWELVE for ONE o'clock, 1,500 YELLOW, WHITE, and PINE PLANKS, DEALS, and BATTENS, 300 squares of yellow and white batten flooring, 3,000 feet quartering, 4,000 feet wide pine board, dry cut stuff, 70 four-panel and sash doors, and 20 new deal cased frames, with sashes, linings, ironmongery, jib-crane and windlass, scaffolding, ladders, barrows, &c. May be viewed the Saturday prior and morning of Sale; and catalogues had, on the Premises; and at the Auction Offices, Cardington-street, Hampstead-road.

IN CHANCERY.—"Gough *v.* Hunting," "Hunting *v.* Gough."

To Pianoforte and Cabinetmakers, Proprietors of Saw-mills, and Others.—The valuable Patent Right for Cutting in lieu of sawing Veneers, whereby fully double the number of Veneers of an equal thickness are obtained from the Log than are obtained from the use of the Saw; together with all the Patent Machinery, Steam engine, Boiler, &c. for making the same, as also the Lease of the Premises &c

MESSRS. PRICE and CLARK will SELL by AUCTION, on the PREMISES, known as the Canalbridge Wharf, in the Kingsland-road, London, on THURSDAY, FEBRUARY 7, at TWELVE for ONE, by order of the Right Hon. the Master of the Rolls, the QUEEN'S ROYAL LETTERS PATENT, granted to William Gough, Engineer and Draftsman, for "IMPROVEMENTS in the MANUFACTURE of VENEERS and in Machinery and Apparatus connected therewith," dated 26th October, 1853, being one of the most ingenious and important inventions of modern times, alike valuable for its vast economy of material and production as for the facility and rapidity of its operation, whereby, varying at choice, from eighteen to thirty-two veneers of any length and of any description of wood can be produced from the inch thickness of log, instead of only one-half the number as now produced by any saw-mills, in less than one-fourth of the time, and at considerably less cost: together with the patent cutting machine, recently erected at a very large expense, and an 18-horse power steam-engine and boiler, with all the gear for working same and connected therewith; also the lease of the very commanding premises, comprising a timber-yard, engine-room, engine-house and warehouses, counting-house, and a capital dwelling-house, which is held for a long term at a moderate rental. At the same time will be sold a valuable quantity of knife-cut veneers, a dog-cart and harness, and sundry effects.—The whole may be viewed fourteen days prior to the sale, and particulars had of Mr. SIDNEY D. HAMILTON, Solicitor, 30, King's road, Bedford-row; of Messrs. THINDEN and EVRE, Solicitors, 1, John-street, Bedford-row; of Messrs. KNIGHT and DUNN, Solicitors, Newcastle-under-Lyne; at the Place of Sale; and of Messrs. PRICE and CLARK, Auctioneers, 48, Chancery-lane, London

BUILDING LAND TO BE LET, in the Hich-street, Peckham; Belmont-grove).—Ground for fourteen houses, 16 feet frontages; brick walls all round, and all the drains and roads made. Direct from the freeholder.—Apply on the premises; or to H. W. RAWLINS, Queen's-road, Peckham.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to respectable parties. Freehold Land to be sold for building purposes.—Apply to Messrs. ——, at the Offices of Mr GEORGE MORGAN, Architect, 3, Chancery-lane

BUILDING LAND TO BE LET, at HALLSVILLE.....Term 1,000 years, for small cottages.
CANNING TOWN ..... " 1,000 " for cottages
NORWOOD..... " 1,000 " for villa residences
STRATFORD ..... " 100 " for small cottages
POPLAR..... " 98 " for fourth-rate houses.
Advances 7d. to 10d. at 5 per cent. on each cottage
Apply to Mr. Wm. ELLIS, Architect, Stansby-road. Limehouse.

FREEHOLD LAND.—Wanted, at Hampstead, Norwood, Hampton, Windsor, or some healthy spot within about 30 miles of London, from twenty to One Hundred Acres.—Particulars and price to be sent to Messrs. NELSON and INNES, Architects, No. 6, Whitehall.

FREEHOLD LAND TO BE LET, on BUILDING LEASES.—The Rev William Ford and Mr. Henry Wetton, the Rector, Rachor, Bartholomew, Tollington-park, have to offer TWO valuable PLOTS of FREEHOLD LAND for BUILDING LEASES, for a term of ninety years, in Barford street, Liverpool-road, Islington. The land-tax is redeemed, and the ground is ready. For particulars, apply to Mr. HENRY WEBBER, 31, Old-street, St. Luke's.

NATIONAL FREEHOLD LAND SOCIETY, 51, Moorgate-street, London.—Parties wishing to Let, Purchase, Manage, or Co-operate in the Formation of Estates, are requested to call at the Office, or address letters to the Secretary, who will give every information.

January 1, 1856. W. E. WHITTINGHAM, Secretary.

FREEHOLD GROUND, CHANCERY-LANE and FETTER-LANE.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 26th of FEBRUARY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking, on Building Lease for Eighty Years, certain PLOTS of GROUND, situate at the southwest end of Chancery-lane, and the south-east end of Fetter lane.—Further particulars may be had, and plans seen, on application to Mr. HAYWARD, Engineer to the Commission, at these Offices, in the Guildhall. The Commissioners will require a plan and elevation of the premises proposed to be built, to be submitted to them for approval; and do not bind themselves to accept any proposal, unless deemed advantageous.

JOSEPH DAW, Principal Clerk.

Sewers' Office, Guildhall, January 2, 1856.

WANTED, on LEASE, in or near the City, PREMISES, suitable for a Builder, with sufficient working room for twelve or fourteen joiners.—Address to A. B. 27, Weymouth-terrace, Hackney-road, stating terms, &c.

TO TIMBER MERCHANTS and OTHERS. The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of English Timber, &c. Spacious Dry and Drawing Docks, 30 and 15 ton Cranes. Sawpits for converting Timber, &c. Freights paid on delivery.—Apply to G. NOKES and Co. as above.

ELIGIBLE MANUFACTURING PREMISES TO BE LET, with Boiler, Shaft, and Engine.—Apply at No. 7, St. Mary-street, Whitechapel.

P. HOOKER, ENGINEER, having larger Premises than he requires, is desirous of LETTING a Part, consisting of a six-roomed Dwelling-house, with Two spacious Workshops in the rear, 42 feet by 18 feet, with gateway entrance. May be let together or separately, with or without steam power. Also, the Use of some First-class Machinery.—Apply at 12 and 13, Pump-row, Old street-road.

HOUSES WANTED, Freehold or Leasehold, having from fifty years and upwards to run, in Camden-town. Amount of purchase, 500*l.* and under. Particulars, free, to be sent to Mr. WYATT PAPWORTH, Architect, 14a, Great Marlborough-street.

WANTED, in the Neighbourhood of Paddington, a small PLOT of GROUND, for about Ten or Twelve Second or Third-rate Dwelling houses, eligible for letting. Address to Mr. W. FORSTER, Conduit-place, Paddington.

TO BUILDERS.—PUTNEY.—Unfinished Villa Residences, within five minutes' walk of the station. A FEW PAIRS of TEN-ROOMED VILLAS (with good gardens laid out and planted) TO BE LEASED, separately or otherwise, for 100 years, at moderate ground-rents. These houses are in the course of being completed in a very superior manner, and a great proportion of the purchase-money may remain on mortgage, and advances will be made for finishing. Apply to Mr. A. C. HOOK, Land Agent and Surveyor, 14a, Great George-street, Westminster

TO ARCHITECTS, SURVEYORS, &c.—Buckingham-street, Strand.—TO BE LET, the whole or a portion of the Upper Part of an excellent FAMILY HOUSE, adapted either for Offices or Private Residence, consisting of a large front room on the first floor, three on the second, three on the third, with excellent kitchens in the basement.—Apply at 13, Buckingham street, Strand.

TO BUILDERS and OTHERS.—Freehold Land at Old Ford, near Bow.—TO BE SOLD, a Bargain,—10 only, SEVEN EARLS-TERRACE, Old-ford, on the London and Suburban Freehold Land Society's Estate, at Old Ford, which will be offered to the members for a few days, the roads being all completed. The Cash wanted within the week.—Address H. R. care of Mr. Taylor, 70, Frenchurch-street City.

THE VIEILLE MONTAGNE ZINC MINING COMPANY'S PURE PATENT WHITE ZINC PAINT is recommended for its extreme whiteness and brilliancy of surface; it is unaffected by sulphureous or any other vapours or emanations. Being completely innocuous and free from the pernicious effects of white lead, it may be employed in all apartments whilst in use without any inconvenience to the inmates.

The greatest caution is recommended to avoid any spurious compounds that might be sold at cheap rates as Pure Oxide of Zinc. Any adulteration has taken place in the oxide, either in consequence of impurity in the material primarily made use of to produce it, an imperfect mode of production, or by mixing with the oxide a certain proportion of sulphate of barytes, increased weight, it then produces a very inferior instead of a very superior paint, and the economy realised by the purchasers of such oxides becomes a very expensive result to the owner of the many houses painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the VM mark on the casks by Messrs. BLAKEDELL, SPENCE, and CO.; when ground and dry, by Messrs. R. B. MORLEY and SON, and by the Company's Grinding Agents in London, Messrs. CHARLES DE VAUX and CO. Wholesale Agents, 63, King William-street, City; and by the Manufacturing and Painting Agent, Mr. PRICE BRADY, Pimlico Works, Pavement-road. In Manchester and Liverpool by R. CLAY, 8, Mersey-street, who is the acknowledged Painter to the Company for Zinc Paints, and undertakes painting ships, mansions, dwelling-houses, &c. In Leith, by Messrs. R. ANDERSON and CO. Timber-brick; and in Southampton, by Mr. H. J. BUCHAN. Dry OXIDES and PAINTS, in kegs of 14, 28, and 56 lbs. each upwards, to be had of the Company's Agents in Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and the Isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with Zinc Paint by contract.

For further particulars, apply to the Company's General Agency in London, 12, Manchester-buildings, Westminster.

TERRA-COTTA WORKS, Blackfriars-road, London.—The PRIZE MEDAL for MATERIAL and WORKMANSHIP in TERRA-COTTA to Mr. H. H. RICHARD, late of Coade's Original Works, and successor to them in the manufacture of the invaluable material, that has been so successfully adopted for nearly a century in this country, by our eminent architects and others, in the adornment of our best buildings, and is the only material that is capable to stand the ravages of time unimpaired. Groups, Statues, Vases, Fountains, and Architectural Embellishments, at prices and quality that will defy competition. All kinds of Ornamental and Designed Chimney Shafts and Pots to suit the various styles of buildings, at very low prices, and worthy of notice.

BLASHFIELD'S PATENT TERRA-CRETA, Manufactured at Millbank-road, Pimlico. Capitals, Cornices, Tracery for Parapets, Balusters, String Courses, Friezes, Bas-relievi, Vases, Statues, Chimney-shafts, and all other Architectural Ornaments, to scale. Sold, fixed, and delivered in the country, and warranted to stand Heat and Frost, either in Buff or Red coloured Terra-cotta.—A great variety and large stock may be seen at Messrs. GRISSELL'S Warehouse and Show rooms, No. 1, Broad-street, Paddington.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX, SAVAGE, & WYMAN, Nos. 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at No. 13, Hunter-street aforesaid, in the Parish of St. Pancras, in the County of Middlesex.—Saturday, January 5, 1856.

The Builder.

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THE METROPOLITAN BUILDING ACT,

1855 (Sec. 33).—The Institute of British Architects hereby give Notice, that an EXAMINATION of persons desirous of obtaining a Certificate of competency to perform the duties of DISTRICT SURVEYOR, will take place at the Rooms of the Institute, No. 16, Grosvenor-street, Grosvenor-square, on TUESDAY, the 29th day of JANUARY instant, at TWO o'clock p.m. Persons desirous to be examined must, on or before FRIDAY, the 25th of JANUARY instant, send an application, which must be accompanied by a statement, according to a Form to be previously obtained at the Rooms of the Institute.

J. J. SCOLES, } Hon. Secs.
C. C. NELSON, }

Jan. 9, 1856.

THE BUILDERS' BALL, in AID of the

FUNDS of the BUILDERS' BENEVOLENT INSTITUTION, will take place at WILLIS'S ROOMS, St. James's, on the 14th FEBRUARY next.

COMMITTEE OF MANAGEMENT.

Mr. Geo. Bird, Treasurer	Mr. William Norris
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" Thomas Cozens	" Thomas Stirling
" William Ellis	" John Thorn
" William Hutchons	" William Todd, jun.
" John Newson, jun.	" R. Watts, jun.

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	Messrs. Lee & Laver.	" W. West
	Thos. C. Lucas, esq.	James Wagstaff, esq.
	Chas. Mayhew, esq.	

From whom Tickets may be obtained; also of the Honorary Secretary, Mr. JOSEPH BIRD, 10, Hanover-terrace, Regent's park; and at the Office of the Institution, 19, Southampton-street, Bloomsbury.

Double ticket, 31s. ; lady's ticket, 8s. ; gentleman's ticket, 14s. ; including refreshments.

Gentlemen desirous of promoting the interests of the Institution, by becoming stewards, will be pleased to forward their names and address to the Honorary Secretary.

NOTICE is hereby given, that a General

Quarterly Meeting of Members of the Institution of BUILDERS' FOREMEN and CLERKS of WORKS, will take place on WEDNESDAY evening next, at the BAY-TREE TAVERN, St. Swithin's-lane, for the purpose of transacting the usual quarterly business.

W. ALLARD, Secretary.

ARCHITECTS' BENEVOLENT SOCIETY.

PATRONS.

Sir Robert Smirke, R.A. | George Stanley Repton, Esq.
PRESIDENT—Sydney Smirke, A.R.A.
TRUSTEES

Sir Charles Barry, R.A. | Charles Robert Cockerell, Esq.
Philip Hardwick, Esq. R.A. | R.A.
TREASURER—William Tite, Esq. F.R.S.

The List of Subscribers and Annual Report may be obtained of the Hon. Secretary. Subscriptions will be received by WILLIAM TITE, Esq. St. Helen's-place, the Treasurer ; or by Mr. GOULD, the Collector, 8, Craig's-court, Charing-cross.

J. TURNER, Hon. Secretary, 15, Wilton-street.

ARCHITECTURAL EXHIBITION,

Suffolk-street, Pall-mall East.—The Committee exceedingly regret that illness will prevent Mr. Billings delivering his lecture on "Ancient Scottish Architecture," on the 9th, but they have the satisfaction to announce instead a lecture "On the Application of Painted Glass in Architecture," by Charles Winston, Esq. Season tickets, half-a-crown ; single admission to lectures or exhibition, one shilling. Subscribers have the privilege of introducing a friend to the lectures.

ARCHITECTURAL EXHIBITION, and

COLLECTION of PATENTS and MANUFACTURES connected with Building, at the GALLERIES, 53, SUFFOLK-STREET, Pall-mall East, NOW OPEN, from NINE till dusk. Admission, One Shilling ; or at all times to the Galleries, and to all the lectures, by season tickets, Half-a-Crown each. Lecture for TUESDAY EVENING, JANUARY 15, at EIGHT o'clock, "Early Christian Art as illustrated in Mosaic Paintings," by GEORGE SCHARF, Jun. Esq.—Lists of lectures, Tickets, and all particulars to be had at the Galleries.

BOARD of TRADE DEPARTMENT of

SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.
Head-Master—R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify School-masters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects :—Free-hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still-life, &c, the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of China and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE ; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendents, Mrs. Wyon. Fees per session.—Advanced Class, 2l. and 4l. ; Elementary Class, 1l. ; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall-mall, London.

CONTRACTS.

TO BUILDERS. — The ERECTION of a NEW UNION WORKHOUSE. — Persons desirous of CONTRACTING with the Guardians of the Poor, of the West Bromwich Union, in the counties of Stafford and Worcester, for the ERECTION of a NEW UNION WORKHOUSE, capable of affording accommodation for 600 inmates, together with the several buildings and offices, proposed to be connected therewith, at Lyndon, in the parish of West Bromwich, may inspect the drawings and specifications thereof, at the Offices of Messrs. BRIGGS and EVEAL, Architects, No. 239, Bradford-street, Birmingham, on and after the 24th day of DECEMBER inst. until the 31st day of JANUARY next, where full particulars connected therewith may be obtained. Sealed Tenders, endorsed "Tender for Workhouse Building Contract," must be sent in, and addressed to me through the post-office, on or before the 1st day of FEBRUARY next. The contractor or contractors will be required to give such security as the Board may require for the due performance of the works agreeable to the plans, and the general conditions and specifications, such security to be prepared at his or their expense. The Guardians will not pledge themselves to accept any or the lowest Tender.

By order of the Board,
CHARLES STRINGER, Clerk.

West Bromwich, December 10, 1855.

CAMBRIDGESHIRE, ISLE of ELY, and

Borough of CAMBRIDGE PAUPER LUNATIC ASYLUM. TO BUILDERS. TENDERS are required for the ERECTION of a PAUPER LUNATIC ASYLUM, with Lodge and Farm Buildings, at Fulbourn, about three miles from Cambridge. Builders who may be desirous of Tendering, may inspect the drawings and specifications of Works, at the Office of the Clerk to the Committee of Visitors, at Cambridge, on and after the 14th day of JANUARY inst. between the hours of TEN and FOUR. Lithographed bills of quantities and forms of Tender, and of schedule of prices, may be had on application to Mr. GEORGE FOWLER JONES, Architect, York, on payment of three guineas. The Tenders must specify the cost of the main building, and that of the lodge and farm-buildings separately. Sealed Tenders are to be sent, under cover, addressed to the Clerk to the Committee of Visitors, not later than 12th FEBRUARY next, and any Tender not in accordance with the form supplied by the architect, will be rejected. The party whose Tender may be accepted will be required to enter into a bond, with two responsible sureties, jointly and severally in the sum of 10,000l. for the due performance of the contract. The Committee of Visitors do not bind themselves to accept the lowest or any Tender.

By order of the Committee of Visitors.
Cambridge, January, 1856. DAVID KING, Clerk.

SHIPLEY SEWERAGE WORKS. — The

Shipley Local Board of Health hereby give Notice, that they are prepared to receive TENDERS from competent persons for PROVIDING, LAYING DOWN, and COMPLETING CERTAIN BRICK and EARTHENWARE SEWERS and DRAINS, MANHOLES, GULLIES, and other WORKS, required for the sewerage and drainage of their district. Plans, sections, detail drawings, and specification as may be inspected, and printed forms of Tender obtained, at the Offices of Mr. J. McLANDSBOROUGH, Civil Engineer, 34, Queensgate, Bradford. Sealed Tenders must be delivered to the undersigned, on or before FRIDAY, the 8th day of FEBRUARY, 1856.—The Local Board do not bind themselves to accept the lowest or any Tender.

JO. THOMPSON, Clerk to the said Local Board.

Bradford, January 10, 1856.

CONTRACTS.

TO BUILDERS.

SEALED TENDERS for BUILDING

BARRACKS, at Bull Point, near Devonport, for a SPECIFIC SUM, will be received by the Director-General of Contracts, War Department, Pall Mall, London, on or before the 24th JANUARY, 1856, at Noon. Detailed drawings and specifications of the above, with every requisite information, may be obtained at the Royal Engineer Office, Bull Point, daily (Sundays excepted), between the hours of TEN and FOUR o'clock, from the 10th to the 24th JANUARY, 1856, both days included.

Royal Engineer Office, Devonport, 27th Dec. 1855.

TYNEMOUTH BURIAL-GROUND.—To

BUILDERS and CONTRACTORS.—The Burial Board for the Parish of Tynemouth are prepared to receive TENDERS for the following WORKS connected with the New Burial-ground at Preston, viz.:—

CONTRACT No. 5.—Two Chapels.
CONTRACT No. 6.—Superintendent's House and Office, and Gardener's Cottage.
CONTRACT No. 7.—Front Entrance and Side Entrance, Iron Gateways, and Masonry connected therewith.

The plans and specification of the works may be seen on and after the 31st instant, between the hours of TEN a.m. and FOUR p.m. until the 18th of JANUARY next, at the Office of the Architect, 12, Clayton-street West, Newcastle-upon-Tyne ; or at the Borough Surveyor's Office, Norfolk-street, North Shields. The Burial Board will not object to receive Tenders for the execution of the whole of the works in one Contract. They do not bind themselves to accept the lowest or any other Tender. The Tenders are to be sent in to the Town Clerk's Office, Howard-street, North Shields, on or before FOUR p.m. of the 28th JANUARY next endorsed "Tender for Tynemouth Burial Ground." Nos. 5, 6, and 7, as the case may be. The Contractor will be required to give security for the due performance of the works.—By order,

THOMAS CARR LIETCH, Clerk to the Burial Board.

Borough of Tynemouth, 26th December, 1855.

TO STONEMASONS.

PERSONS desirous of CONTRACTING

for the external MASONS' WORK of EIGHTEEN first-class HOUSES, now in course of erection near Hyde-park-corner, being chiefly of Portland and Caen stone, may see the drawings and specification on application to Mr. WELCHMAN, 83, Rutland-gate, Hyde-park, Middlesex. Money will be advanced to the amount of 75 per cent. as the works proceed, and no one will be allowed to Tender who cannot give proof of being able to execute the work in the most prompt and satisfactory manner.

THE NETHERLANDS LAND

ENCLOSURE COMPANY.—CONTRACT for ENCLOSURE WORKS. — The DIRECTORS are prepared to receive TENDERS for the CONSTRUCTION of a FOLDER BANK, situate at BATH ZEELAND. Plans and specifications may be seen on and after the 24th day of DECEMBER instant, at the Company's Offices, at Bath, and at the Engineer's Office, 34, Great George-street, Westminster, where all necessary information may be obtained, from Messrs. RIDDER and GEORGE ROBERT STEPHENSON.—Tenders to be addressed, under seal, to the undersigned, at No. 2, Moorgate-street, London, on or before the 15th JANUARY, 1856. The Directors do not pledge themselves to accept the lowest or any Tender.

By order of the Board,
GEORGE FASSON, Secretary.

2, Moorgate street, London, December 11, 1855.

N.B.—The plans for the canal are now completed, and when approved by Government, the contract will be offered to public Tender.

TO BUILDERS.

LUDBOROUGH STATION, EAST LIN-

COLNSHIRE RAILWAY.—The drawings and specification of works for a GRANARY, intended to be built at the above station, may be seen at our Offices in Louth, on and after the 14th to the 19th inst. by builders willing to submit TENDERS for the ERECTION of the same.—Tenders to be delivered to us on or before the 22nd instant ; the lowest of which will not necessarily be accepted.

MAUGHAN and FOWLER, Architects.

Louth, 2nd January, 1856.

CONTRACT for BUILDINGS for LOCO-

MOTIVE DEPOT.—MONMOUTHSHIRE RAILWAY and CANAL COMPANY.—The Directors of the above Company invite TENDERS for the ERECTION, in the town of Newport, of STABLES, FITTING SHOPS, OFFICES, SMITHY, COKESHED, WATER-TANK, &c. &c. adapted for twenty-two engines. Drawings and specifications may be seen at the Engineer's Office, Dock-street, Newport, on and after the 31st DECEMBER instant. The quantities will have to be taken out by the parties Tendering. Sealed Tenders, properly endorsed, and addressed to the Directors, are to be sent to the undersigned not later than the 19th day of FEBRUARY next ; and the parties tendering are to be in attendance at NINE o'clock in the afternoon of the following day, when the Tenders will be opened. The Directors do not bind themselves to accept the lowest or any Tender.—By order,

GEORGE HARRISON, Secretary.

Newport, Monmouth, December 21, 1855.

CONTRACT for DREDGING.—The

Directors of the Commercial Dock Company are willing to receive TENDERS for DREDGING a PORTION of their DOCKS at Rotherhithe, the plan and specification for which may be seen at the Dock Office, 105, Fenchurch-street, on and after the 12th inst. The Tenders to be delivered, addressed to the Secretary, at the Office as above, on or before FRIDAY, the 25th inst.

By order of the Board,
H. K. SMITHERS, Jun. Secretary.

Commercial Dock Office, 105, Fenchurch-street, London, 7th January, 1856.

Lloyd's Marble Wharf, Thames-bank, Pimlico,
Adjoining Vauxhall-bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

THE LONDON and PENZANCE SERPENTINE COMPANY having just opened an extensive SHOW-ROOM, at No. 18 Wharf, Maiden-field-street, North, City-road, for the sale of POLISHED [illegible] and other articles useful, architectural, and ornamental, invite Architects, Builders, and the trade generally, to inspect the same. A large assortment of fancy articles are also always on sale at the Company's Stall in the Mineral Manufactures Court, in the Crystal Palace, Sydenham. Terms most liberal.
July 25, 1855. C. ADENEY, Secretary.

THE LIZARD SERPENTINE COMPANY have the honour to solicit the attention of Architects and Builders to the beautiful Stone now raised from the lower beds of their Quarries. Chimney-pieces, Tombs, Slabs, and ornamental works of all kinds, at 2, Surrey-st., Strand.
HENRY COX, Manager at the Lizard.
F. W. TIPPLE, Agent in London.

TO SCULPTORS, BUILDERS, MASONS, &c.

B. FABBRICOTTI respectfully invites the Gentlemen connected with the Marble Trade to inspect his fresh STOCK, composed of statuary, vein, Sicilian, black and gold, dove, Sienna, Serravezza, Brocatello, and particularly calls their attention to a large quantity of his best statuary, sixty blocks, of all sizes, just landed.
Monuments, vases, and statues, finely executed in Italy.
Carrara Wharf, Thames-bank, Pimlico.

MARBLE.—The Italian Marble Company, Importers of the produce of their many quarries in the province of Massa Carrara, Italy, beg to inform commercial marble traders, Builders, and the trade generally, that they are prepared to undertake Contracts for the supply of Statuary, Veined, Sicilian, Red-Jaune, Dove, and all other Marbles, at short notice, and on reasonable terms, delivered in shipboard at Leghorn, or in dock, London. A constant stock is also supplied at their London depôt, 3, Bridge-road, Lambeth, of Chimney and Hall Statues, Vases, Tazzas, Consoles, &c. executed and delivered at reasonable rates.—For further particulars apply at the Offices of the Company, 18, Cannon-street, City.
WILLIAM W. BONNIN, London Secretary.

MILLWALL POTTERY
WILCOX and CO. Manufacturers of every description of white and printed CLOSET-PANS, URINALS, TABLES, PLUG BASINS, and many other sanitary articles.
Depôt—Arthur-street, New Oxford street.
Where specimens can be had free of any part of Town.
FLINT MILLS, MILWALL, POPLAR.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, Kingscross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Sicilian and Black and Gold Marbles.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab. Marble mantels &c.

MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.
THOMAS JACKSON begs to draw the attention of the public to the most extensive stock of Marble Chimney-Pieces in the Metropolis; consisting of a selection of upwards of two hundred, and manufactured by steam power from the finest Italian and other marble, and with that careful attention to the details and finish so necessary in good marble work. The Stock consists of elegant Drawing-Room Chimney-Pieces in Statuary Marble: bold, massive Chimney-Pieces, in Black, Black and Gold, Sardilla, Sienna, Verd Antique, Brocatella, Red, and Serpentine Marble, suitable for Dining-Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Imperial, Lumber Marble, &c., suitable for Breakfast Rooms, best and secondary Bed-Rooms, &c.; also, Monuments, Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the best classical designs, and in all the varieties of the finest Italian and British Marble, at the lowest remunerative prices

LANCASTER STONE, so remarkable for its free working quality, combined with ease and durability. Price and cost of transit to any part, may be obtained, upon application at Mr. W. THOMPSON'S Office, Elmer-street, Grantham.

YORKSHIRE STONE.—THOMAS TILNEY, Stone Merchant, Taufield-place, Leeds, begs to inform Builders, Surveyors, and Local Boards, that he can supply direct from the Quarries, Water or Rail, Paving, Landings, Steps, &c. got out to sizes, on the most advantageous terms. Prices sent on application.

ARCHITECTURAL EXHIBITION, SUFFOLK-STREET, PALL-MALL EAST.—Architects and Builders are respectfully requested to examine the specimens of BATH and CAEN STONE, injected by BARRETT'S PATENT PROCESS, now to be seen, No 47, in the Department for Materials at the above Exhibition.

CAEN and AUBIGNY STONE.—P. POTCARD, Stone Merchant and Quarryman, Caen, shipped to order from the Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 346, High-street, Southwark, near the Townhall.

CAEN and AUBIGNY STONE.—GATES and GEORGE, late Lund, Beckham, and Co's, Caen wharf, Rotherhithe, London, General Stone Merchants and Quarriers, continue to supply from their Wharf, as above, CAEN, AUBIGNY, PORTLAND, and YORKSHIRE STONE

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in the beautiful and indestructible Stone, at prices not exceeding the ordinary sorts. Lists of prices may be had on application to Mr. FRED. RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

BATH STONE OF BEST QUALITY
RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

BARRETT'S PATENT INJECTED STONE COMPANY. PAVINGS, BLACK and WHITE. Plain and Ornamental Pavings may now be had in this material, which is hard as marble and impervious to moisture, as cheap as the Portland stone. Nothing at the price will be found so suitable for halls, basements, terraces, &c. Full particulars on application, by letter or otherwise, to the Manager Mr. CHAMBERLAIN, at the Works, Bridge-road, wharf wood, Paddington.

PIMLICO MARBLE WORKS,
BELGRAVE-WHARF,
LOWER BELGRAVE-PLACE.
SAMUEL CUNDY.
THE STOCK OF LOW-PRICED CHIMNEY-PIECES ARE WELL AND CAREFULLY MANUFACTURED OF THE BEST MATERIAL.
PRIZE MEDAL IN 1851 FOR A MONUMENTAL WORK.

STEVENS AND SON,
ENGINEERS,
IRON AND BRASS FOUNDERS AND MANUFACTURERS;
CONTRACTORS
FOR THE
ERECTION OR ALTERATION OF GAS-WORKS FROM TWENTY LIGHTS UPWARDS,
With Buildings, Mains, Meters, Service-Pipes, Lamp-Posts, Lamps, and Gasfittings.
WATERWORKS FOR THE SUPPLY OF TOWNS,
WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.

Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds, these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c.
Gas Cooking Stoves and Ranges on the most improved principles.
GAS-FITTING IN ALL ITS BRANCHES.
GAS CHANDELIERS OF ALL SIZES IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS.
DEVICES FOR GAS ILLUMINATION.
IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.
These Turnstiles have been selected for the Entrances of the Great Exhibition, New York.
PATENTEES OF THE SEMAPHORE RAILWAY SIGNAL.
Signals for communication between Guard and Engine Driver. Railway Stores and Lamps of every description.
DARLINGTON WORKS, 16 to 19, SOUTHWARK-BRIDGE ROAD, LONDON.

TO BUILDERS and OTHERS.—TO BE SOLD, a few Lots of OLD PORTLAND and BRAMLEY FALL STONE. Also, a Quantity of SCREENED SAND.—Apply by letter, pre-paid, or personally, to Mr. HENRY ROBERTS, 21, Stangate, Lambeth.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terrace at the Crystal Palace, supplied by the Hunter Penrhyn under Royal Charter.—For terms, apply to Mr. C. HOAR, Hafor Granite Office, 4, Millbank-row, Westminster

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—TREGELLES and TAYLOR, 3, Pinner's court, Old Broad-street. Manager—JAS. J. TRATHAN, Liskeard
This Granite is selected for the New Westminster-bridge.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Pire Goods. SCOLES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

PARIS EXHIBITION.—ENAMELLED SLATE. TWO FIRST-CLASS MEDALS.—Mr. MAGNUS is the only exhibitor whose productions received this distinguished honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1845. This beautiful material, Enamelled Slate, which for its [illegible] marble, is [illegible] into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The price is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of lobe tables, chiffoniers, consoles, &c.; baths in stories, altar-tablets, pilasters, columns, tazze, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and larries. Price lists can be had on application to Mr. MAGNUS, 60, Old, Upper Belgrave-place, Pimlico
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

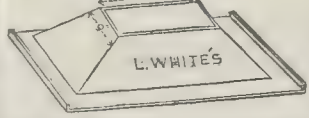
VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prisons, Penitentiaries, and other Institutions, for Paving Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand as Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

SCAGLIOLA done on an IMPROVED PRINCIPLE.—I refer to the Gothic Arch by D. Dolon in the Great Exhibition of 1851, which gained the only Prize Medal awarded for the manufacture of the above work.—Specimens to be seen at 199, Drury-lane, two doors from Holborn, superior to any yet offered to the public, with a choice Collection of Ornaments for building purposes, Trusses for Shop-fronts, &c. &c.

ASPHALTE.—For SALE, 250 Tons, in one lot, or small quantities.—For samples and particulars, apply to Mr. BLACKWELL, Surgical Instrument Maker, 3, Bedford-court, Covent-garden.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.
W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 31 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale, good Garden and Screened Gravel. For terms, &c. apply at the Wharf.
Contractors supplied to any extent.

IMPORTANT TO BUILDERS.



REGISTERED CAST-IRON CHIMNEY-HOPPER and CHIMNEY-BAR COMBINED, ensuring a perfect formation of the Flue, and rendering smoky chimneys impossible. One trial will cause their adoption in every building
Price from 6d. each, according to size.
IRON GIRDERS and COLUMNS to MODEL or DRAWING.
IRON PIPES and connections for gas, water, and liquid manure.
RAIN-WATER PIPE and EAVE GUTTERS, at wholesale prices. Also, O-G Gutters, Sash-weights, STABLE FITTINGS, pumps, tomb railing, cattle and pig troughs, and COLUMNS with caps and bases, and every kind of builders' castings, in stock, at LYNCH WHITE'S Iron Wharf, Upper Ground-street, London, near Blackfriars-bridge.

STEAM-ENGINE and BOILER for SALE, to make room for larger ones.—TO BE SOLD, a ten-horse nom.-pressure TABLE ENGINE and BOILER, large enough for a fifteen-horse both nearly new.—Can be seen at work at 130, Great Suffolk-street, Southwark.

FENDERS, STOVES, and FIRE-IRONS. Buyers of the above are requested before finally deciding, to visit WILLIAM S. BURTON'S SHOW-ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, FIRE-IRONS and GENERAL IRONMONGERY, as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship Bright stoves, with bronzed ornaments and two sets of bars, 2l. 14s. to 5l. 10s.; ditto, with ormolu ornaments and two sets of bars, 5l. 10s. to 12l. 12s.; bronzed fenders, complete, with standards, from 7s. to 3l.; steel fenders, from 2l. 15s. to 6l.; ditto, with rich ormolu ornaments, from 2l. 15s. to 7l. 7s.; fire-irons, from 1s. 9d. the set to 4l. 4s. Sylvester and all other patent stoves, with radiating hearth-plates. All sizes, he is enabled to sell at these very reduced charges
Firstly—From the frequency and extent of his purchases; and
Secondly—From those purchases being made exclusively for cash.

GAS CHANDELIERS and BRACKETS. The increased and increasing use of gas in private houses has induced WILLIAM S. BURTON to collect from the various manufacturers, in Metal and Glass, all that is new and choice in Brackets, Pendants, and Chandeliers, adapted to offices, passages, and dwelling-houses. The collection, which has been arranged expressly for this, these are ON SHOW in the SIXTEEN LARGE ROOMS, and present, for novelty, variety, and purity of taste, an unequalled assortment. They are marked in plain figures, at prices proportionate with those which have tended to make his ironmongery establishment the most remarkable in the kingdom, viz. from 12s. 6d. (two-light) to 16l. 16s.

THE BEST SHOW of IRON BEDSTEADS in the KINGDOM is WILLIAM S. BURTON'S. He has FOUR LARGE ROOMS solely for the EXCLUSIVE SHOW of Iron and Brass Bedsteads and Children's Cots, with appropriate Bedding and Mattresses, fitted complete. Bedsteads, from 10s.; Portable Folding Bedsteads, from 12s. 6d.; Patent Iron Bedsteads, fitted with dovetail joints and patent sacking, from 17s. 6d. to 3l. 3s.; Cots, from 30s. each. Handsome ornamental Iron and Brass Bedsteads, in great variety, from 2l. 7s. 6d. to 15l. 15s.
The alterations and additions to these extensive premises already by far the largest in Europe), which occupied the whole of last year, are now completed; they are of such a character that the entire Stock of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel Silver Goods, Plated and Japanned Wares, Brass and Iron Fenders, Lamps and Gaseliers, Iron and Brass Bedsteads and Bedding) is arranged in Sixteen Large Show-rooms, all on one floor, thus affording facility in the selection of goods the examination of which is at once complete.
Illustrated Catalogues sent (per post) free.
39, OXFORD-STREET; 1, 1a, 2, and 3, NEWMAN-STREET; and 14, 15, and 16, PERRY'S-PLACE. Established A.D. 1820.

TO BE SOLD, a BARGAIN, 20,000 ELM RAILWAY KEYS.—For price, apply to J. KING, Saw Mills, Emsworth.

JOHN WALKER, Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor
IRON MERCHANT, &c.
Offices, Arthur-street West, London-bridge;
Works, Mill wall, Poplar.

WANTED, a small quantity of RAILS, CHAIRS, SLEEPERS, and EARTH WAGGONS.—Apply, by letter only, stating full particulars and price, to MR. THOMPSON, 1, John's-terrace, Camberwell-gate.

NAILS and IRONMONGERY, from BIRMINGHAM direct.
Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the
LOWEST BIRMINGHAM PRICES
a complete LIST of which will be forwarded upon application.
FREDERICK BITTELL,
Nail Manufacturer and General Factor,
Broad-paradise, BIRMINGHAM;
or at 16, Gresham-street, LONDON.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.
J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of a superior tone, in form, and at less cost than has heretofore been accomplished.
Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, or weight, singly or in peals.
TUNED BY MACHINERY.
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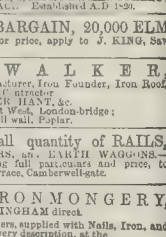

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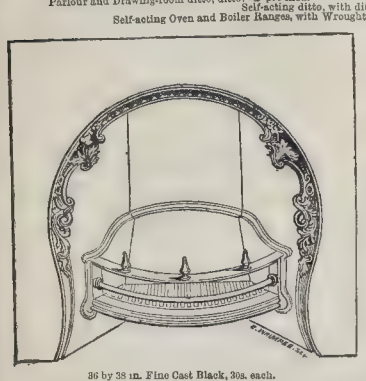

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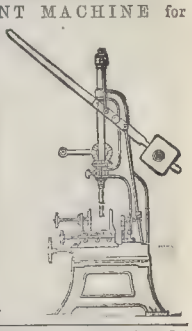

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The Builder.

VOL. XIV.—No. 675.

ON the 3rd inst. Professor Cockerell commenced his course of lectures on Architecture, at the Royal Academy, to a smaller audience than we would have seen there, mainly owing, as we believe, to the want of proper notice to the public. The now veteran Professor apologised for his re-appearance for the third time since his announcement of a successor who would give to the students his new lights and a fresher activity, suited to our times, especially, after a fifteen years' prosecution of these lectures, through the same hands and enunciation; but his appointment had not yet been concluded in the slow process of academic changes. With respect to academical provisions, he must say that the comparison of our own architecture with those of France showed us to be wofully deficient,—that paternal government contrasted with our orphan government most advantageously for our instruction. It might be called the comparison of the system of protection and the voluntary and free-trade system, which might do much that was good, as the Institute and others, but there must be much that perished in the wearing. Concentration and a systematic order and administration, as in France, of all education—of this, as of other departments—was most desirable. We had learnt, by fatal experience, what the neglect of such administration was in war: it could not be doubted that it might be so in peaceful occupations, if put to the test, no less to our disadvantage; and it was the deliberate opinion of the scientific English members of juries in France that the French protective system of culture, encouragement, and honours, was fast leaving our own orphan and desultory system in the rear. The architectural drawings of the *monuments historiques*, and of the *grands prix de Rome*, greatly surpassed our national productions in diligence, style, and beauty, and were examples to follow. The French members of the jury on architecture had shown the utmost courtesy and indulgence towards the English school, and had distributed their honours with the greatest generosity. The Professor was happy to announce reforms in our own academic school of architecture, from which he hoped very great benefits. There had been much chattering lately about diplomas. On the other hand, he lamented to say, that the silver medal in the Royal Academy was not even tried for by a single candidate, and the gold medal very inefficiently by one only. He asked what better diploma a student could obtain than a gold or silver medal, and a testimony that he had gone through the customary discipline and apprenticeship under an able master. There was no distribution of diplomas in France; but the country and parentage of every gold or silver recipient was recorded in the archives of the Institute, and the name of the master under whom he had been educated.

After this preface, he proceeded to the question now often asked, what is architecture? The Academy answered the question, by the law respecting lectures, which he quoted. Mr. Fergusson, who had lately published an admirable handbook of architecture, asking the same question, had answered it by 800 engravings of the most remarkable buildings in the world, on the same scale, by which, in our latitudinarian times, we could impartially institute those comparisons which a candid mind could not fail to profit by. Amongst the many answers to this question, he would suggest one which he thought very applicable to those wondrous novelties, which the almost new material of iron, as a building material, was presenting to us.

The progress of architecture depended as much on discovery of new materials and new methods of building as on taste. Iron was used by Tubal Cain as a subsidiary material. It had been employed in building ever since; but never in solid and in the gross as a constituent part of the substance of building before Mr. Rennie employed it as voussoirs in the Southwark-bridge. Sir Robert Smirke had nobly followed in applying iron in trabeation, and so had Mr. S. Smirke in the new reading-room of the Museum, and others; but the engineers had kept ahead of the architects, from Mr. Rennie to Messrs. Stephenson, in displaying the powers of iron. The architects had slowly followed: engineers are the pioneers of the architect: but recent experiments since 1851, in England and France, showed plainly that iron would revolutionize architecture, and would give to the art in the nineteenth century that characteristic style which we had long been whining about, as the desideratum and the deficiency of our age.

Iron had been cited in Deuteronomy as the essential and last fruit of the promised land: that fruit we have at length come to enjoy in all its plenitude. Our interiors, as halls and churches, would assume new development and grandeur by iron, since we have seen 200 feet span at Birmingham without abutment, and 150 feet at Paris in still more enduring structure. The Pantheon of Rome, Sta. Sophia, St. Peter's, the Baths, and the great Riding-house at Moscow, would hide their glories, and iron would thenceforward dispense with pillars and clerestory, flying buttresses and abutments, and roof our churches in bold and single spans. Architecture might be likened to the Janus of old—the one face was that of an aged pedant proceeding only on retrospective experience and authority from old example: it was this that the ecclesiologists adhered to fanatically. The other head was young, looking only forward: enterprising, prospective, he was ever for taking advantage of the discoveries and appliances of the day, and for incorporating them in his work. It was the latter who would now prevail, and the Professor considered that with all due reverence for antiquity and precedent, we ought to open our eyes to the reconciliation of this new material and its peculiar faculties with the laws of proportion and taste; and this was a problem worthy of the best spirits, both as to the form of roofs or ceilings, and the form of supports, which, in iron, with 1-40th part of the substance of stone, would give equal strength of support. These pillars would be sought at Alhambra, in the paintings of Herculaneum and Pompeii, and even in Gothic structures.

Iron might be termed the osteology of building. Hitherto the architectural system had proceeded on statics and equipoise of molecules, as if the human frame had been built without bones. Now our buildings would have bones, giving unity and strength which never before existed. The nervures of the Gothic would now be in uniform and single arcs, erected at once. The library at St. Geneviève, by Mons. Arbruste, exhibited an experiment in this way. Iron in floors was used to admiration in Paris, and had attracted our best constructors.

Concrete was a novelty characteristic of the nineteenth century, or rather a resuscitation of ancient practice, as he had long ago shown by quoting Philibert de l'Orme; but in the bridge of Alma, raised within these eight months at Paris, concrete had taken a new and admirable development, where three arches of about 140 feet span had been cast on the centreing, forming one vast stone from pier to pier. The only voussoirs used were in the face of the arches. A peculiar cement and hard fragmented stone had effected this with vast economy of cost and time, and promised well. The so-called Temple of Peace at Rome was ceiled and vaulted with a similar concrete. The coffering was previously moulded in all their detail upon the centreing, and then covered with grosser concrete, so that on removal of centreing all was finished. A vast fragment now lies in the middle of the Temple, and at Tivoli we find that Adrian had employed the same simple process.

Another novelty characteristic of the nineteenth century was glass. Never before had it attained such magnitude, strength, and clearness. How greatly had it contributed to the elegance of our buildings. For perspective and for endless uses it had justified all the eulogies pronounced by Sir Robert Peel, when he relieved this material of its heavy duties.

The polish, the ease, and cheapness we now give to granite have made it another acquisition of our times of great value; and so the serpentine of Cornwall gives us great beauty and colour.

To turn all these novel materials to the best account should now employ our ingenuity. A revolution is inevitable in interiors, and modifications in exteriors. Let us look to the daily evidences of transition, and help them with those forms and laws of taste which the architect of the beautiful is best qualified to recommend; and there need be no fear but that the builders of the nineteenth century will, in their structure, at all events, exhibit abundant originality. If we labour at a competent exhibition of these novelties with all the accompaniments and law of taste, it need never be doubted that the year 1900 will display in architecture that which never before was dreamt of, characterising the century in a manner worthy of its extraordinary progress in civilization.

THE METROPOLITAN BUILDING ACT.

THE METROPOLITAN BOARD OF WORKS.

THE new Building Act has come into operation, and we would point out to the metropolitan builders the necessity of giving two days' notice to the District Surveyor before commencing a building, or any work to, in, or upon any building, before re-commencing works stopped for a period exceeding three months, and before a new builder enters on any work in progress. The notice must state "the situation, area, and height, and intended use of the building." If this be not done, a penalty not exceeding 20*l.* is summarily recoverable before a Justice of the Peace. Apart from this, it will be to the builder's interest carefully to give the proper notice. The new Act is far from clear on many points, and will not be carried out satisfactorily to all parties without harmonious action on the part of the builders generally and the District Surveyors. We speak advisedly when we say that the District Surveyors as a whole are a most intelligent, able, pains-taking, and upright body of public officers. We have reason to know that they are labouring hard at this time to arrive at such an understanding of the Act as shall enable them properly to discharge their duty without entailing unnecessary hardship on individuals, and we ask for them the liberal co-operation of all builders and house-owners.

There are several structural requirements in the new Act which will press hardly; for example, the restriction, by sec. 13, of "recesses and openings" in external walls to an extent equal to one-half the area of the wall in which they are made. In the case of workshops and manufactories, where light is required, this will interpose a difficulty. The requirement, too, by sec. 24, that "the eaves or cornices to any overhanging roof, except the cornices and dressings to the window fronts of shops, and except the eaves and cornices to detached and semi-detached dwelling-houses, distant at least 15 feet from any other building, and from the ground of any adjoining owner, shall, unless the

Metropolitan Board otherwise permit, be of brick, tile, stone, artificial stone, cement, or fire-proof material," will put a difficulty in the way of the most natural sort of roof, and should have the consideration of the Metropolitan Board at once.

Such of our readers as are interested will doubtless have observed that the width of streets and alleys is not regulated by the new Act as it was by the last Buildings Act. We have avoided allusion to this until now for very obvious reasons, although pressed to do so by two or three correspondents. The Metropolitan Board of Works have power (by sec. 202 of the Metropolis Management Act), as we have before now pointed out, to make, alter, and repeal bye-laws for regulating the plans, level, *width*, surface inclination, and the material of the pavement and roadway of new streets and roads, and will doubtless take the necessary steps in this matter forthwith. At the last meeting of the Board, the point was brought before them by Major Lyon, who had given notice of a motion to the following effect:—"That it be at once resolved by the Board, that no new street should be permitted to be constructed of a less width than 40 feet, and no alley or court of less than 20 feet in width." He said he had been induced to persevere with this motion from information he had received, that persons taking advantage of the present unsettled state of affairs, were about to press forward building speculations which might hereafter be productive of great injury to the health of the metropolis.

Mr. Doulton thought it better to leave this subject to the committee upon the bye-laws; and Mr. Collinson was of the same opinion as Mr. Doulton, and moved as an amendment, "That the motion of Major Lyon be referred to the committee on the bye-laws," and this was carried. Mr. Dixon then said, as this would go forth to the public, it might induce certain parties to suppose that during the interregnum they might play all sorts of tricks; but he hoped the press would disabuse such persons' minds upon the point, and let the public know that that Board had enormous powers, and could put down nuisances in a summary manner.

It may be well to note, that after a bye-law to the desired effect has been passed by the Board of Works, it will rest with the Vestry, or District Board, to take steps against any who may act contrary to it.

So, with respect to buildings erected without the consent, in writing, of the Board of Works, beyond the regular line of buildings in the street in which the same are situate, within a certain distance from the highway, it is the Vestry, or District Board, who may cause the same to be demolished, or set back, as the case may require.

By the Metropolis Management Act, one duty is imposed on district surveyors, which ought, certainly, to be placed in other hands,—and that is as relates to the occupation of underground dwellings. Section 103 says, every district surveyor "shall, without any fee or reward, report periodically, and otherwise, as the said Metropolitan Board may order, to such Board, all cases in which rooms or cellars are occupied contrary to this enactment in the district of such surveyor; and also to the respective Vestries and District Boards, all such cases, occurring within such parts of his district, as may be within their respective parishes and districts." The same section sets forth that "Every room or cellar in which any person passes the night shall be deemed to be occupied as a dwelling within the meaning of this Act;" so that to carry out the requirement, the inspection should be constant. This it is manifestly impossible the district surveyor could effect consistently with his proper duties: moreover, it is altogether out of his province, which is to superintend and see that *structural* requirements are complied with. It would more properly form part of the duty of inspectors of nuisances, or the police; and it is to be hoped that the Board of Works and the vestries will take this same view of it, and relieve the district surveyors from a duty which it is quite impossible they can efficiently perform.

In concluding these jottings, let us mention that Mr. F. W. Laxton has issued an edition of the Act, "with notes of cases explanatory of its law and practice;"* and that Mr. William Young, architect, has published "A Key to the Metropolitan Building Act,"† on the model of the alphabetical epitome of the old Act published in our pages, and afterwards in a separate form. It is to be regretted that the schedules of the Act, which are set forth on one sheet "with their constructive clauses newly arranged," are not lithographed more clearly.

ON SOME FRENCH CHATEAUX OF THE AGE OF FRANCIS I.‡

THE subject on which I am about to address you is one which has no recommendation of novelty. The buildings to which I shall refer are, I doubt not, perfectly well known to you, either from having actually visited them, or from pictorial representations; but it is on the very fact of the popular appreciation of these buildings, and on the pleasant memory of sunny hours which may have been passed by you within their precincts, and which may now be in some degree recalled to your mind, that I rely for whatever interest may attach to the subject I have the honour to bring before you.

I do not purpose to give any detailed chronological account of the dates of these buildings, or of the history of the times in which they were built. It is now, I find, ten years ago since I had the honour of reading in this room some account of the history of Renaissance art and its professors in France; but the subject appears to demand that I should as a preliminary refer to that connection which arose between France and Italy consequent on the wars of Charles VIII. in 1494; of Louis XII. who, five years later, invaded Italy, and of Francis I. who, crossing the Alps in 1515, there gained the battle of Marignan.

At that time, after ages of change and struggle, Europe had assumed nearly its present political division of kingdoms and states. Italy had reached a state of high cultivation: ancient literature, which had there never been wholly lost sight of, was revived: printing had just been discovered: religious inquiry had commenced, and the Reformation was about to take place: material riches had accumulated: society had become formed; and intellectual activity characterised the age.

In architecture the Alps divided two very different styles. On the north side, the colossal transepts of Beauvais were being built, and the lofty spire of that cathedral, which has long since fallen; whilst its cotemporaries, the spire of Antwerp and the unfinished tower of Mechlin, remain amongst the greatest works of any time or country. On the other side of the Alps, the great dome of Florence had been built, and the mighty fabric of Saint Peter's was progressing.

Irrespective of foreign influence, it is certain that Gothic art had outgrown itself: it had grown as a stately plant on the ruins of debased Roman or Byzantine art; at first slightly decorated by curling leaves, narrow, nervous, and sparse, as in our early English of Lincoln; developing itself little by little, growing more pulpy and full, as at St. Alban's nave or Beauvais choir; breaking out into more luxuriant branches, with the buds abundant, as in our early Decorated, and the flower expanding itself as in the days of our Edwards; until at last, in the full luxuriance of the French Flamboyant and the late German styles, both more beautiful and picturesque than our late Gothic, the flower had expanded sometimes to an unnatural size and bursting luxuriance, shedding its ripened seed; but whilst the flower grew, the original stem in French architecture had lost its form and significence; its roots had become crystallized into the most complex forms; in Germany the stem had been lopped and pruned, wreathed, intertwisted, and twined, until its early upward tendency was lost, and the style in both countries had grown into a still luxuriant but feeble condition. In this state it was ready to receive the impress of any new thought, and accordingly we find that no sooner had the French become acquainted, through their intercourse with Italy, with the revived classic architecture which flourished there, than they at once adopted it. Not that it had at first any perceptible effect on the structural character of their works, being only introduced as decoration; of which we have very excellent examples in the screen surrounding the Lady Chapel at Chartres, a Flamboyant work most elaborately and exquisitely wrought, with a profusion of ornament of the Italian Renaissance; and the arcade next the courtyard of that part of the palace at Blois, which is of the period of Louis XII.; the whole of which is one of the most perfect and characteristic specimens which exist of the late Gothic of that monarch's reign, and to which I shall again have occasion to refer.

The new style once having taken root was not, however, long in fully developing itself, and under the fostering patronage of Francis I. who ascended the throne of France in 1515, at the early age of twenty-one, it rapidly rose into great importance, and several remarkable works were produced which will always remain as models of true and original art.

Amongst the most important in point of size, and for its historical associations, may be noticed Fontainebleau, a spot not less known from its magnificent palace than from the natural beauties of the great forest which surrounds it. Fontainebleau, like most of the châteaux, is of old origin; an ancient feudal house, added to or destroyed, and new buildings raised in its stead. It was the favourite residence of Francis I. who made it the cradle of the arts and the chief seat of his court. From his day to the present it has been connected with the history of the French kings, particularly so with the first Napoleon; and it owes much of its present splendour to the care of the lately deceased monarch, Louis Philippe. By his munificent patronage Francis I. here maintained and founded a school, called after him the School of Francis I.; and by his liberality have become associated with this palace the illustrious names of Leonardo da Vinci and Benevenuto Cellini, Andrea del Sarto, Sebastian Serlio, Primaticcio, and le Rosso. Primaticcio was the artist engaged for the greatest length of time: he had a fixed salary of 1,200 livres a year, besides many marks of royal favour; and was assisted by Gio. Battista Bagnacavallo, Rugieri da Bologua, Prospero Fontana, Damiano del Barbieri, and Nicolo dell'Abate da Modena, which names I cite to show how much was done to introduce the revived Italian art. Fontainebleau continued to be the residence of the king, who here not only encouraged the arts but also greatly increased the library. All the buildings round the Cour Ovale are of the time of Francis I. also great part of the Cour du Cheval Blanc, which was either entirely rebuilt by him or very much altered. He here sumptuously entertained Charles V. and on the occasion of the birth of his grandson, afterwards Francis II. born of Catherine of Medicis in 1543, he gave a great fête; and two years later, at a similar fête in honour of the birth of a princess, Henry VIII. of England was represented by Admiral Lord Dudley. Francis died in 1547; and to the last so great was his love of Fontainebleau, that in going there he was accustomed to say, "*Je vais chez moi.*" Henry II. and Diane de Poitiers his mistress, rather than his Queen Catherine of Medicis, reigned at Fontainebleau, and continued the work which Francis had begun. Catherine de Medicis, during her long regency, enriched Fontainebleau with statues, bronzes, and pictures: she made additions to the Cour du Cheval Blanc, and built a staircase in the place occupied by the present staircase du Fer à Cheval, which is a much later work.

The names of Henry IV. and Gabriel d'Estrées are next connected with the progress of Fontainebleau. Henry, besides other minor works, built the large court bearing his name, for the more convenient accommodation of his retinue: it is a distinct building, and wants much of the interest of the older buildings of the time of Francis. The other buildings of the palace are all of later date, and of a style on which our attention is not now engaged. Henry IV.'s eldest son, afterwards Louis XIII. was born at Fontainebleau, in 1601.

* Butterworth, Fleet-street.
† Sweet, Chancery-lane. 1856.
‡ Read at a meeting of the Royal Institute of British Architects, on the 17th December, by Mr. Edward P'Anson, Fellow.

The château of Blois, the next to which I shall allude, is placed in the middle of the town. The most important part is of the time of Francis I. but it is highly interesting as a work of art of many ages, as well as from its historical associations. It is a considerable pile of building surrounding an open court, and referable to three very distinct periods; one of or antecedent to Louis XII.; the second that of Francis I.; and the third a later date. Of the older buildings, are the Salle des Etats, a very fine room of the twelfth century, and the Tour des Oubliettes, part of the old castle, which is now masked by the works of Francis I.

Louis XII. was the first royal resident of Blois, but it had already undergone considerable alterations and improvement under his father, Charles Duke of Orleans, who was long a prisoner in England. Louis XII. was born at the château of Blois, and it was his favourite residence in after years. The exterior façade of the portion built by him was finished in the month of December, 1501. The whole of this building is a very remarkable work: it is of brick, with stone dressings, and shows distinctly the incipient traces of the Italian and Renaissance to which I have before referred: it is considered by the French the most perfect specimen of Late Gothic. As an example of domestic architecture, I know of nothing finer, and it has been very well given in a work published by Mr. Henry Clutton, in 1853. Louis XII. died in the year 1515, and the wing, known as the wing of Francis I. commenced by Louis, was carried on and finished, it is said, in three years. Next the court-yard, its principal feature is its beautiful staircase, and the façade next the town, rising from a rocky elevated base, and owing much of its dignity to the commanding site on which it stands, is a most graceful and dignified composition. The massive natural base on which it stands supports a range of building consisting of three stories, surmounted by an open colonnade. The windows are, for the most part, deeply recessed, and divided by flat pilasters, whilst three projecting windows, and one projecting balcony, diversify the general breadth of design in the happiest manner. The more modern portions of the palace were chiefly added by Gaston of Orleans, brother of Louis XIII.

Blois, which was in a very dilapidated state, has been nobly restored as to that part which is of the time of Francis I. This work is due to the care of the king, Louis Philippe, and has been most ably carried out by M. Duban, at a cost of 400,000 francs (16,000*l.*). All the external sculpture has been carefully and successfully renewed,—the glazing entirely replaced,—the floor paved with tiles (the best rooms with encaustic tiles),—the walls lined and decorated,—the wooden ceilings redecorated,—and the panelling to various rooms, and some magnificent chimney-pieces restored,—the whole interior coloured, and in some rooms richly gilt,—some part of the exterior coloured and gilt; forming altogether the most perfect and pleasing example of the age of Francis I. which is in existence.

This building is now used partly as a museum and partly for occasional festive meetings of the townsfolk, and at the period of my last visit, a few months since, its chambers, once the abode of royalty, and long the favourite residence of the House of Orleans, had served as an elegant series of ball-rooms for the inhabitants of Blois. The great feature is the noble staircase. On each floor, one half the building next the court-yard is occupied by the Salles des Gardes, and the other half by a series of rooms of various sizes, generally with no communication except through each other and into the Salle des Gardes.

The next building to which I would refer, is Chambord, built in the year 1523, by Francis I. Henry II. continued the works, and it is said that these two kings had 1,800 workmen employed upon them for thirty years. It was altered by Louis XIV. and disfigured by his architect Mansard, who divided the noble internal galleries into two stories, by wooden floors, and also materially altered the low building at the back, in order that it might accommodate the numerous retinue of the Grand Monarque. The building measures in front 80 toises, and is 60 toises deep: the four corners are flanked by four great towers: those at the back are now low; but in Ducerceau's view they are as lofty as the principal elevation, and thus materially add to the beauty and effect of the whole design. In 1749 they were low as they now are. The outer buildings enclosed an inner building, also flanked by four towers: the centre building is called the donjon. Each of these towers is 60 French feet in diameter. The central staircase is 30 feet in diameter, and from it radiate in the form of a Greek cross, four Salles de Garde, each 50 feet long, and 30 feet wide. These Salles de Garde are vaulted in stone, and have flat roofs. The panelling of the vaulting is ornamented with an alternate F, and the Salamander: the roofs are ornamented by "quantité de cheminées très ornées, quantité de tourelles et croisées qui semblent récréer la vue de ceaux qui se promènent sur ces terrasses." The central tower, about 100 feet high, is very much praised. The writer from whom I quote, an author of about a century ago, says it produces "le plus gracieux effet du monde." There are thirteen staircases, and 440 rooms in the château. The design is attributed to Primaticcio, but that it is really his appears very doubtful.

At present, this noble building is by no means in a satisfactory condition. It belongs to the Comte de Chambord, by some known and hopefully looked up to as Henry V. of France. His portrait hangs up in the little but excellent inn adjoining the palace, the only habitation, except a religious house, which obtrudes on its desolation. On my pointing it out to the hostess, she referred to it with an evident expression of hope, and looking forward to better days to come, and only answered my doubting remarks by saying;—"Ah, Monsieur, au bon Dieu, toutes les choses sont possibles."

In 1793 it was despoiled internally, and greatly defaced externally; and the domain being about to be sold, and the castle broken up in 1821, it was purchased by the people during the reign of Charles X. and presented to its present owner. Its situation is the very reverse of picturesque. It stands in a flat country, three or four miles from the banks of the Loire, and in just such a monotonous position as Wolsey, at about the same epoch, chose for his palace of Hampton Court. The fossés which anciently surrounded it are now filled up, but can be easily traced. Its last resident was King Stanislaus, of Poland,* whose apartments are still preserved in a habitable state; but all the rest of the building is utterly stripped of all internal fittings, and presents a scene of perfect desolation and departed grandeur, to which may almost literally be applied the touching verses of Hood:—

> "No dog was on the threshold, great or small,
> No pigeon on the roof, no household creature,
> No cat demurely dozing on the wall,
> Not one domestic feature.
> No human figure stirred to go or come:
> No face looked forth from shut or open casement:
> No chimney smoked; there was no sign of home
> From parapet or basement."

Ducerceau, who wrote as an old man, about 1560, thirty years after the building was erected, speaks of it thus:—

"La commodité du dedans a esté ordonnée avec raison et sçavoir. Car au milieu et centre est un escallier à deux montées percé à jour et entour iceluy quatre salles, desquelles l'on va de l'une à l'autre en le circuissant; aux quatre encoigneures d'entre chaque salle y a un pavillon, garny de chambre, garderobbe, cabinet et montée. Plus ès quatre coings de la masse de tout le bastimët se voyent quatre grosses tours garnies à chascun estage de toutes commoditéz, come chambre, garderobbe, privéz cabinets et montée."

Notwithstanding what Ducerceau says about the commodité of Chambord, it is extremely difficult to understand how any comfort could have been found in it; all the large rooms being given up to the guards, and the remainder are very small, scattered, ill-contrived, and reached by long galleries or open staircases.

Blois is much the same, but the principal rooms are of greater dimensions, and certainly better arranged. Chambord was a very favourite residence of Francis I. When the works executed during his reign were well advanced, it was visited in 1539, by Charles V. of Spain, when he traversed France; and in the declining days of Francis, it was much resorted to by his sister, the Queen of Navarre, whom Francis called his Marguerite des Marguerites. It continued to be occasionally resorted to by the French monarchs, and particularly by Louis XIV. who first came here that he might conceal his royal amours from his mother the austere Queen of Austria. The grand monarque visited the château for the last time in 1684.

Alfred de Vigny, in his novel of Cinq Mars, describing this building, says:—"On conçoit à peine comment les plans en furent tracés, et dans quels termes les ordres furent expliqués aux ouvriers; cela semble une pensée fugitive, une idée brillante qui aura pris tout à coup un corps durable, un songe realizé." And another more recent writer, not less enthusiastic, says:—"Quelle qu'ait été la pensée qui a enfanté Chambord, elle a sans contredit créé la Merveille de la Renaissance, cette époque qui a fait surgir du sol Européene tant de prodiges n'a rien inventé, rien laissé de plus beau et de plus saisissant." And another old writer says, the Palace of Chambord, "est bien le plus merveilleux en toutes pièces rares qu'il y ait en Europe, et comme abrégé de toute l'industrie humaine de son temps."

On a smaller scale than either of the preceding, is Chenonceaux. It was built by one Thomas Boyer, chamberlain of Louis XII. who following the example set by Francis I. some time after 1496, when he bought the estate built the present château, or rather commenced it, for he died in 1523, leaving it unfinished; after which it became a royal palace, and the property of Francis I. who frequented it often with Catherine of Medicis. By Henry II. it was given to Diana of Poitiers, who rebuilt the principal façade, and constructed the elegant gallery over the river. This gallery is called the Salle des Gardes, but is said to have been built by Diana of Poitiers to communicate with the left bank of the river, "où se trouvait un Sylvestre et plantureux bocage arrosé de fontaines et verdoyant comme un pré d'Avril." On the sudden death, however, of Henry II. and the advent to power of Catherine de Medicis, Diana of Poitiers was obliged in 1560, to exchange the château for that of Chaumont, near the Loire. This same year, our Mary Stuart visited Chenonceaux. Catherine retained this château until her death, in 1589, when she bequeathed it to Louise of Lorraine, wife of Henry III. Chenonceaux is a simple building in its form, as indeed all the buildings of this time are. It is a parallelogram on plan, with a chapel annexed on one side, and the great wing extending over the river at the back. The chapel, like that at Ecouen, is built in what appears to have been the conventional ecclesiastical style of the day, very similar to the church of Saint Eustache, at Paris. The principal façade is rather more massive in its treatment, the cornice more strongly marked than at Fontainebleau or Blois. There is a round tower at some little distance in front of the château, but unconnected with it: it is of the same date, but its use as part of the building is quite problematical, unless it were, as at present, a lodge to the main building. This château is now private property, but may be seen even when the family is in residence.

I may cite also the château of Anet, now demolished, which was the work of Philibert de l'Orme. In this building every resource of art was used to produce a perfect work. And the small portions which remain attest a great refinement, a marked advance on the works of Francis I.'s reign, and much elegance of design. The interior of the apartments were covered with panelling, executed with extreme care and richness, under Jean Goujon, and the painted windows were the work of Jean Cousin.

Before Philibert de l'Orme had completed Anet, Jean Bullant was employed by the Constable of Montmorency to build the château of Ecouen: this is a fine work, but the architect in some portions has been too anxious to copy the antique servilely, not accommodating it, as had been done so well in some of the other buildings I have referred to, to the feudal form of building to which it is applied, and the steep roofs which surmount it. On this work,

* 1723.

amongst other distinguished artists, Bernard of Palissy is said to have been employed. Ecouen is about six miles from Saint Denis: it is now used as a seminary for the daughters of the members of the Legion of Honour, and is not accessible to the public.

I may also here refer to the old façade of the Hôtel de Ville, at Paris, a well-known example of the era of Francis I. Ducerceau, who wrote during the regency of Catherine de Medicis, towards the latter end of the sixteenth century, enumerates and gives plates of no less than eighteen royal châteaux,—"Blois, Amboise, Villiers Costerets, Chadeval, Les Thuilleries, Sainct Maur, Chenonceaux, Le Louvre, Vincennes, Chambourg, Boulongne dit Madrit, Creil, Coussy, Folembray, Montargis, Sainct Germain, and La Muette." Writing after the wars of Francis I. and his successor the very wars which appear to have imbued the French monarchs of that time with their love of splendour, he says, "Jay pensé ne pouvoir mieulx à propos mettre en lumiere ce premier Livre des Bastimens exquis ce ce Royaume: esperans que nos pauvres Francois prendront, peult estre, en resputant, quelque plaisir et contentement, à contempler icy une partie des plus beaux et excellez edifices dont la France est enrichies pour le iourd'huy en chacune." Of these some are of early date, and several are now gone—swept away chiefly by the ruthless hands of the destroyers during the anarchy of the French revolution. The château of Madrit, built for Francis I. by Pierre Lescot, 1540 to 1550, must have been a very noble example. some of them, as the château of Chantilly, have still an enduring name—some, as the château of Gaillon, built for the Cardinal d'Amboise by Fra Giocondo, a Venetian architect, and the château of Anet, to which I have already alluded, fragments are preserved in the court-yard of the Ecole des Beaux Arts at Paris; and of some I have this evening offered you a more full account.

In considering these fine monumental palaces, perhaps one of the most striking features is the staircase. It was a feature which had received considerable attention from the later mediæval architects. All of them are constructed on the principle, no doubt derived from the earlier turret staircases, of a central newel. There is a well-known instance in the Flamboyant style of a beautiful wooden staircase leading to the organ gallery at the church of Saint Maclou, at Rouen, and another, not perhaps quite so well known, but which is a most elegant and elaborate effort both of taste and construction, a stone staircase in a house situated very near to the cathedral of Strasburg, the design of which, with very excusable gallantry, is attributed to the daughter of the architect of the mighty cathedral: it is a work indeed requiring the utmost precision and nicety of constructive skill, whilst it is exuberant in fancy and decoration. We have also the two staircases of the Cours de Louis of Louis XII. and several other examples might be cited. The staircases of the châteaux we have been considering are, however, generally of larger proportion than the earlier works referred to, and at Chambord the architect has indulged his taste by building no less than thirteen staircases. One of the noblest external staircases with which I am acquainted, I believe the very noblest, is that at Blois: the spiral turn of the stairs is adopted as the leading feature of the design, to which all the rest is subservient; and whilst there is considerable massiveness and solidity of construction, the octangular form of the building and the inclined lines of the staircase intersecting give a remarkable playfulness to the design, and the great beauty of the sculptured decoration adds that prevailing grace which is one of the chief characteristics of the architecture of this epoch. The central internal staircase at Chambord, circular on plan, is also a very fine work: it is of considerable size, being 30 feet in diameter, and there is a double flight, one under the other. The central newel is not absolutely solid, there being a hollow core, which extends from the ground level up to the upper part of the beautiful central turret of the château. The double flight ceases at the level of the terrace, and a single flight continues to the upper part of the central turret. The decoration of the staircase is admirably carried out, the various capitals of the flat pilasters, adapting themselves to the horizontal and inclined lines of the entablature which they support, are all beautifully wrought. The angle staircases in the court-yard, of a somewhat later date than the central staircase, surrounded with open colonnades and crowned with dome-shaped roofs, surmounted by the fleur de lis, are also elegant compositions.

Certainly, however, the great feature of all these buildings is the roof. Ruskin has remarked, that the first and most characteristic feature in a building is the roof—that the first ingredient of a habitable building is the roof—and it has long been observed how distinctive a feature it is—and how, as a general rule, its inclination may be taken as a proof, if I may so express it, of its original geographical position. Now, in this country and in France, in the later times of mediæval architecture, the roof took a very different growth: with us it grew flat, in France and Germany it grew high and steep. Rickman observes, in his "Styles of Architecture," that in our Late Gothic, one of the distinguishing features is the embattled parapet. The roof had at that time so generally become flat, that some relief and finish to the wall, and, indeed, some breast work or protection to those using it were required; and they coped the parapets of our castles, retaining by tradition, and probably for more richness of effect and diversity of outline, the battlement also, which became so indispensable a feature with our late mediæval architects, that they introduced it as a decoration even on the transoms of the windows. Together with the four centred flat arches they used the flat roofs, and with the flat roofs embattled parapets, and the church towers were built without spires, and finished also by parapets.

Now, in French Flamboyant, that latest and, to my mind, very beautiful school of French art, the proportion became more elongated: the flaming of the tracery influenced the upward growth of the building: the lofty narrow window also caused it to grow in height, and the roof grew with the rest of the building; and particularly on the tower, when spires had also fallen into disuse, the roof assumed almost the inclination, if not the place of the spire, and the conical roofs to the circular angle turrets were in fact true spires, but being somewhat less elongated in form, retained the character of roof. The roof, with its over-hanging eaves, and the cornice which supported it, rendered the parapet unnecessary as a matter of ornament; and as the roofs were inaccessible except by means of ladders attached to the projecting hooks which we so commonly see on the steep roofs of French buildings, the parapets were also unnecessary as a matter of use, and thus in French Late Mediæval work, the parapet is of very rare occurrence: indeed I do not remember any example of it. I allude rather, however, to these features of French architecture, because it seems to explain the tendency to high roofs, which to this day prevails in French architecture; and although they are incongruous when applied to strictly classical architecture, yet they are not so in connection with the particular style of these châteaux, and the extreme picturesqueness which they give wherever they are applied is quite a sufficient reason for their being maintained, and an inducement to harmonize the lower part of the building with the lofty roof, an effort to accomplish which is readily to be observed in many modern French buildings; and, indeed, all that appears necessary to attain this is to develope the predominance of the upward lines of the decorations, and to suppress the importance of the cornice, which in buildings where the roof forms the crowning ornament is not of the same importance as in classical buildings, where the roof is a very subordinate feature, and recurring to Ruskin's observation that the roof is the great feature of any habitable building, the architects of the French Renaissance would appear to have been fully imbued with this principle. I may, before leaving this part of the subject, observe that, although the Italian architects employed at Fontainebleau had introduced and practised a correct proportion in drawing the human figure in the mural and other decorations in this school of design [for such Fontainebleau then actually was] the French artists, influenced by the traditional feeling of the Flamboyant school, actually elongated their human figures, and allowed this tendency to give a marked character to all their works.

Although in the buildings of the time of Francis I. there is a very evident reference to the revived schools of classical architecture, still there is no servile copy: indeed, there is no part of the decoration in particular which does not, more or less, bear a very distinct and separate character from its type. The proportions of all the mouldings of the cornices and string courses at Blois, Fontainebleau, and Chambord, are very much exaggerated, as in Prout's drawings: they are all coarse, and but rude copies of the best Italian work: there is, however, a great vigour gained by this treatment, and the peculiar cornices of Chambord and Blois, although not to be compared in elegance with Italian work of the same time, yet have a rude and massive character which gives considerable dignity to the work. The projection of the pilasters is small: the arch mouldings and architrave mouldings are generally delicate and of better profile than the main cornices and string courses, and the decoration of the capitals and carved panels is of a character often of extreme delicacy, and always of great and peculiar beauty, and there is an exuberant fancy in their varied design. The representation of foliage is perfect, and the best adapted for architectural decoration of any school of art. Cyphers and emblems, figures and animals, are sometimes introduced, but the animal carving does not equal the flowing racy vegetable form of the foliage, and at Chambord it certainly is very inferior.

The buildings of this age are very much ornamented with the emblems and cyphers of their owners; a practice, indeed, which, as to the cyphers, has been continued in France to our day to an extent much beyond what prevails amongst us. The F for Francis, surrounded by the Cord of Anne of Britany, and the Salamander his emblem, and sometimes his motto, "Nutrisco et Extinguo," are common on all the works of his period, whether they are Renaissance, as at Blois, or Flamboyant, as in the transepts at Beauvais. H for Henry, and his emblem the Crescent, also the emblem of his mistress, which he did not scruple constantly to use on the buildings of his reign: at Chambord, indeed, no opportunity seems to have been lost of displaying the royal H and the Crescent interlaced; also the two **G-D** connected, forming H and D; and at Fontainebleau they are even used in the chapel. The Porcupine was the emblem of the ancient house of Orleans; the Ermine of the house of Britany; une Cordelière, of Queen Anne of Britany; and the S, with a Dart through it, was the emblem used for the name of the mistress of Henry IV. Gabriel d'Estrées.

I might allude to other points of interest, and draw some comparison with our own palaces of somewhat similar character but of later date, and remark on the number, great extent, and magnificence of the royal domains I have so inadequately referred to; the use of which, even in imagination, never seems with us to have been contemplated, except in the one instance of Whitehall, of which we possess so noble a fragment. But I now conclude, having accomplished the object I had in view of briefly calling to mind the memory of a well-defined and highly interesting class of buildings.

In the course of the conversation which followed, Mr. Parris, visitor, called attention to the decorations of Fontainebleau, and especially to the frescoes by Primaticcio. When the restorations were commenced there, it was stated by French artists that these works would not resist the action of damp, and he, Mr. Parris, went over on purpose to ascertain the fact. He found that the roof had been completely off, and the wet had penetrated and burst the plastering off the walls, which was lying down split in all directions. He picked up several pieces, and found that the colouring was as perfect as when it was first executed, the plaster having merely been thrown from the wall, but the paint not detached from the plaster. Several experiments had been made with a view to the restoration of the paintings, and the result was that they had been restored with a wax medium, none of the fresco being left. It appeared clearly that it was

not the fresco but the plaster which had failed, by the damp getting behind it; and, with regard to the general question of the permanence of fresco painting, it was satisfactory to know that our plaster was as good as any of that of ancient Rome, and certainly superior to that employed at Fontainebleau. Wherever the walls of a building imbibed moisture from the air, or from the ground, the plaster was liable to be thrown off. This had taken place in ancient Roman buildings, where the lower parts of the frescoes were damaged.

Mr. J. G. Crace, visitor, observed, with reference to Chambord, that he had always thought it could only have been constructed as a place for conviviality, and for the assembly of a large number of persons in the hunting season in one large hall; the other apartments being all of small dimensions, and adapted only for bed-chambers. Mr. Crace adverted to the peculiarly curious arrangement of the double spiral staircase in the centre of this château. With regard to fresco, he had known instances where the action of damp in the atmosphere had affected the colouring and quality of the plaster. In London, he imagined, the lime would attract the smoke, and in forty or fifty years the pictures would become blackened, by absorbing the carbon of the atmosphere, and certainly would not present so good an appearance as those painted in oil, encaustic, or any other vehicle, whilst the dead appearance of fresco might be obtained, if desired, by adopting a proper medium. He considered that polychromy had been very successfully applied to the exterior façade of one part of the château of Blois.

Mr. I'Anson, called attention to a number of black lozenge-shaped ornaments on the exterior of the chimney shafts at Blois. These were singularly effective, though very simple, being merely pieces of slate fastened to the stone work, and not, as they appeared to be, marble inlaid.

Mr. Foggo, visitor, said that Mr. Parris in using the term *plaster*, had adopted the expression which had led the French artists astray. Sulphate of lime was not the proper vehicle for fresco, nor would it endure at all. With regard to the vast expenditure of the French monarchs, it should be remembered that Francis I. lost a battle and his liberty because he was unable to pay his army; and that Louis XIV. brought France to the brink of bankruptcy. A little more discretion, judgment, and good taste, might have enabled these sovereigns to do as much good to architecture, and to benefit the nation still more.

The Chairman (Mr. Godwin, fellow), in proposing the thanks of the meeting to Mr. I'Anson, said it was pleasant to see that gentleman returning, after a lapse of ten years, to his first-love,—to a subject he had already illustrated, and with as much ardour and vigour as before. He (the chairman) would venture to caution the meeting against adopting literally the enthusiastic phrases of the French authors quoted by Mr. I'Anson; for, although Fontainebleau and Blois were exceedingly picturesque and interesting when seen at a distance, they would be found weak in detail upon close examination, and not to be compared with the Gothic edifices upon which their outline was evidently founded. The subject of external polychromy was always interesting, and the recent applications of it in Regent-street by Mr. Owen Jones, and in Tottenham-court-road, by Mr. Lockyer, together with other instances, proved that a strong disposition existed to apply it to modern architecture.

CHURCH-BUILDING NEWS.

Cold Norton.—The new church of Cold Norton was consecrated on 18th ult. It has been entirely rebuilt on the old foundations extended, by the rector, the Rev. W. Holland. The architect was Mr. Pritchett, of Bishops Stortford. The style is decorated Gothic. The plan comprises a nave and chancel, with vestry. There is an oak porch on the south side of nave, characteristic of the county. The church is fitted up with open seats, having sloping backs and close-boarded, to preclude draughts. The chancel has open seats, arranged longitudinally, so as to give a stall-like appearance. The roofs are of open timber-framing, the arched ribs on principals springing from shafts on carved stone corbels. The interior dimensions of the church are—nave 42 feet by 20; chancel, 26 by 13; height from pavement to ridge, 33 feet; height to top of turret, 55 feet. The walls are of Kentish ragstone, with dressings, &c. of Caen stone. The roofs are covered with green slates. The windows are glazed with light green glass, having a border of white at the edges. The west gable is surmounted with a double bell-turret, containing bells, cast by Messrs. Taylor, of Loughborough, from the metal of the former bells, which were not of ancient date, and one of the two was cracked and useless. The turret is terminated with a plain cross, and a lightning conductor of copper cord, with platinum termination, is conducted down into the ground from its summit. Under the floor of the vestry is an arched crypt, approached from the exterior, containing the furnace in connection with the heating apparatus, the whole church being warmed by a simple self-acting apparatus. Mr. W. Brown, of Lynn, was the contractor. The cost of the church is about 1,600*l.*; and it contains sittings for at least 160 persons. The churchyard has been levelled and improved, and the parish have built a boundary-wall next the road.

Bourn.—Improvements have recently been made in the Abbey Church of Bourn. The chancel has been re-pewed and repaired, and the reading-desk and pulpit removed from the middle aisle, the former to the south, and the latter to the north side of the chancel entrance. The pulpit was found to be of carved oak, with numerous coats of paint put on from time to time during two or three centuries, and it is now restored to nearly its original state. The font has been cleared of an accumulation of whitewash, and restored.

Lincoln.—The Above-hill cemetery for the parishes of St. Nicholas and St. John, Lincoln, was consecrated on Monday before last by the Bishop of Lincoln. The ground occupies an acre of land at the east end of St. Nicholas' church, and its cost is estimated at 400*l.* The population of the two parishes is about 1,800.

Westcote Barton.—The church of St. Edward, Westcote Barton, according to the *Oxford Journal*, was re-opened on 2nd inst. This church had long been in a sad condition inside, and has now undergone a complete restoration, under the direction of Mr. Street, the diocesan architect. The building has been entirely new roofed. The old walls have been repaired, and where necessary rebuilt, leaving the Norman piers and arches, part of the original church. The old pulpit and chancel screens have been retained and repaired, the latter painted and decorated. The windows have been furnished with new mullions in many instances, and all newly glazed; one entirely new window added in the south aisle. The east window has been filled with stained glass, by Mr. Hardman, of Birmingham. The subjects are—in the centre light, The Crucifixion; on the left side, The Bearing the Cross; on the right, The Deposition. The four smaller chancel windows are also filled with stained glass, consisting of flowered quarries, with badges, sacred monograms, &c. These four windows, as well as the painting of the screen and reredos, are the work of a clergyman in the diocese of Gloucester. The reredos (which, as well as the screen, is at present unfinished) will be of wainscot, painted. The chancel is laid with glazed encaustic tiles, mixed with glazed green and black, and plain red and black. The passages of the nave, aisle, the tower and porch, are all laid with plain red, black, and buff tiles. All these are from Messrs. Minton's. The works have been carried out by Messrs. Franklin, builders, of Deddington. The whole outlay will amount to about 900*l.*

Ruthin.—The Collegiate Church at Ruthin was opened on the Sunday before Christmas-day, after having been closed two months, for restoration. The east window of four lights, with stained glass by Mr. Wailes, is the gift of Mr. John Jesse, of Llanbedr-hall. The lights contain twelve group figures (three groups on each light), which represent various scenes in the life of the Saviour. In the tracery the highest compartment bears a figure of our Lord ascending into heaven, accompanied by Cherubim and Seraphim. The descent of the Holy Spirit is typified by the Dove of Peace. On the sides of the tracery below the figure of the Saviour, are Moses and Aaron, as representatives of the old covenant. The south front of the church has received five new windows of three lights, the masonry being the gift of Mr. F. R. West, M.P.; the glass (by Mr. Powell), of a number of subscribers. On the north wall the stone of an ancient window has been restored, and fitted with stained glass (by the same artist), at the expense of Mr. James Maurice. This is a memorial window of two lights, bearing the figures of Noah and St. John the Baptist. Ruthin Church belongs to the Decorated period of ecclesiastical architecture, in which style the works of restoration have been designed by Mr. R. K. Penson. It is said to be in contemplation to proceed as speedily as possible with the complete restoration of this church.

Sutton.—This church has been undergoing a restoration during the last four months, under the superintendence of Mr. A. Wilson, of Peterborough, architect. Mr. Lee, of East Retford, is the contractor. The amount already contracted for is 1,000*l.* and upwards, exclusive of pulpit, font, &c. There was formerly, at the east end, a flambeauyant window, which had been mutilated by cutting off the whole of the tracery to insert a low-pitched roof: this has been restored to its original features, together with a new window in same style on south side of chancel. The chancel has been restored to its original state by the Duke of Portland. The tomb of the supposed founder of the church was in such a deplorable state that a new one was produced from the old design, and fixed in the north wall where the other formerly stood. The whole of the battlements were once ornamented with pinnacles similar to those now restored at St. Swithin's Church, East Retford; and there was only one of the pinnacles left on Sutton Church to enable the architect to follow out his plan of restoration.

Treswell.—The rectory at Treswell, near Retford, was covered in during week before last, and is in the Gothic style of architecture. The plan was by the architect last named, and carried out by Messrs. Butler and Roberts, of Retford, builders. Mr. Lee, of Retford, executed the stonework.

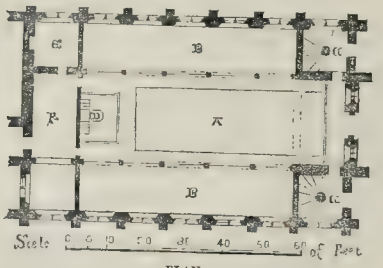
Manchester.—The new church of St. John, Miles Platting, erected by Sir Benjamin Heywood, at a cost of 3,500*l.* was consecrated on Thursday in the week before last, by the Bishop of Manchester. The church was designed by the late Mr. John E. Gregan, architect, and some progress was made with the building before his death, in April last. Mr. W. R. Corson, architect, completed the work, and supplied some unfinished designs. The church is in the Italian style, and constructed mainly of red brick, with stone string courses, &c. and black brick decorations. In plan it consists of vestibule, tower with staircase, north porch, nave of six bays, north aisle of five bays, chancel of one bay, semicircular apse, and vestry. The chancel bay is recessed on the north side to receive the organ. At the west end is a gallery for children, to seat 200. The extreme length of nave, chancel, and apse is 120 feet 3 inches; width of nave and aisle together, 38 feet 6 inches; and of nave and chancel (which are equal), 24 feet 4 inches; height of nave in centre, 44 feet; height of tower to top of cornice, 81 feet 5 inches. The four nave pillars and four responds in nave and chancel are each in one stone, 2 feet diameter by 11 feet 9 inches high: from their caps spring semicircular arches. The windows and doors, with one exception, are round-headed or round. The west window is a wheel of eight arched compartments, radiating from a central ring. The apse has five windows. At present there is no stained glass, but all the openings are filled with leaded lights of six-sided panes. The chancel and apse are vaulted, in panelled plaster work. In the nave and aisle the roof principals are visible, with plain raking ceiling between. The seats are low and broad, and have low and leaning backs, and no doors. All in south side of nave are free. The church contains sittings for 507 adults, and 200 children. The general contractors were Messrs. Hay, M'Nish, and Co. of Manchester. Messrs. Hollins (mason), Anderson (bricklayer), Heyworth (plumber), and Kerr (plasterer and painter), were the sub-contractors; and Mr. Pedley supplied the heating apparatus.

Coverham (in Coverdale).—The chancel of the parish church of Coverham, in Yorkshire, having recently been rebuilt, the stonework of the several windows was replaced, and it was resolved to fill them with painted glass. Mr. Wailes was selected to execute the four windows, which have now been placed in the new chancel.

WICKER CONGREGATIONAL CHURCH, SHEFFIELD.—MESSRS. WEIGHTMAN, HADFIELD, AND GOLDIE, ARCHITECTS.

The cost of the east window has been defrayed by subscriptions. The window is divided into three lights. The middle one alludes to the labours of Myles Coverdale, Bishop of Exeter, who, in 1535, published an English translation of the Bible. In the centre of the window is a representation of Coverdale's Bible, with the title-page: immediately over the Bible is the passage—"Search the Scriptures." Other parts of the window are ornamented with shields, foliage, &c. Of the three windows on the south side of the chancel, one, which is divided into two lights, is a mother's memorial for an only son. In one light our Lord is represented folding a lamb in his bosom: in the other light our Lord is depicted holding a child in his arms: in a division in the upper part of the window the Holy Dove is represented descending, while beneath the figures there is a broken lily. The other windows are lancets.

A. Nave.
B. Aisles.
C. Stairs to galleries.
D. Platform and pulpit.
E. Vestry.
F. Lecture-room.



PLAN.

WICKER CONGREGATIONAL CHURCH, SHEFFIELD.

THIS church, recently completed from the designs and under the superintendence of Messrs. Weightman, Hadfield, and Goldie, puts in a claim for notice, as an example of consistent application of Gothic architecture to the requirements of a dissenting branch of religious worship.

The building, as will be seen from the engravings, is a parallelogram, 82 feet long by 51 feet wide, divided into a central portion or nave, and side aisles. The aisles are defined by arcades of low Pointed arches, carried on circular shafts, with moulded cap and base; and immediately above the apex of these arches commences a species of triforium, or, in plain English, a gallery, avoiding some of the ordinary objections to such a feature in a Gothic edifice.

This gallery, which circulates entirely round the church, is reached by wide and convenient stairs, occupying the position of the last bay of either aisle at its western extremity, and opens into the body of the building, by means of arches carried by coupled cast-iron columns, with foliage capitals and a single abacus, the mouldings and foliage being treated as metal-work.

A lofty clerestory lights the upper portion of the nave, which has a roof of partly open timbers, with arched principals, giving a total height to the nave of 48 feet. The galleries are lighted by windows which break into dormers, and so avoid the monotony of the unbroken horizontal lines which the exterior would otherwise present, as no tower, or any portion, merely for architectural effect, was permitted. The aisles likewise are lighted by a series of windows entirely devoted to that object; and a large six-light window is in the western gable. The pulpit occupies a raised platform at the eastern end of the nave; and an open gallery behind it is arranged for the organ and choir, whilst a large room, for purposes of meeting, and a vestry, for the convenience of the minister, is obtained.

The whole of the church is seated with open benches, and accommodates from 1,100 to 1,200 persons. The metal columns of the triforium are painted a rich red, the capitals green and gold, with red, blue, and gold on the mouldings. The space betwixt the columns is filled to a certain height with a parapet of wood and metal-work, decorated in colour and gilding.

The total cost of the building, including fittings, architects' commission, and all expenses, was 4,200*l.* of which sum 400*l.* was necessitated by the difficulty of the site, an old stone quarry requiring an average of 16 feet of walling to reach the level of the surrounding roads.

Large schools, to be attached to the church, are designed, and the foundations are already built. Messrs. Ash and Clayton, of Sheffield, were the contractors, and have performed their work in a very satisfactory manner.

WICKER CONGREGATIONAL CHURCH, SHEFFIELD.

TERRA COTTA.*

ABOUT seventy years ago two maiden ladies of the name of Coade, from Lyme Regis, who had devoted their time to the pursuit of scientific knowledge, started a small manufactory of terra cotta at Lambeth, and by dint of perseverance their establishment obtained a sufficient celebrity. This manufactory greatly improved the composition of the materials, so that the modern terra cotta is a very different material from the burnt clay of the ancients, being greatly superior in texture, hardness, and colour. The principal ingredients are white potters' clay, fragments of the best stoneware pottery ground to a powder, pulverized flint, and glass. These ingredients are well incorporated together by means of a pug-mill, and moistened to a consistency stiff enough for modelling and moulding into the shapes required. There is an anecdote extant of the origin of the use of flint in pottery, which perhaps all may not have heard. A potter of the name of Astbury, travelling to London, perceived something amiss with one of his horse's eyes. A hostler at Dunstable said he could soon cure him, and for that purpose put a common black flint stone in the fire. The potter observing it when taken out to be of a fine white, immediately conceived the idea of improving his ware by the addition of this material to the clay. The moulding or statue being formed out of the moist material, considerable care is necessary to allow the process of drying to take place slowly and regularly, the time required depending greatly upon the state of the atmosphere. The same care must likewise regulate the burning, which should gradually increase from a slow heat to an intense white heat: sufficient time must then be allowed for cooling, and your statue, vase, or moulded cornice is complete. It is not necessary to form a statue or anything of a similar nature in a mould, as it can be built up and fashioned by the modeller at his will; but for mouldings and enrichments, of which there is a repeat, a mould is always made out of plaster of Paris.

Let us now consider an important question. Is terra cotta a suitable material to use for architectural purposes? In my humble opinion, it is. We see that ancient examples have stood well; indeed, by the remains of pottery, the limits of the possessions of ancient nations may be accurately traced: if, then, the ancient terra cotta of inferior make to our modern material has braved the destroying hand of time, surely we cannot question its durability. The modern terra cotta has stood a test of seventy years, side by side with stone in the same buildings, and you know the result: the finest arrises and the most delicate ornaments in the terra cotta are as well defined as they were on the day when they came out of the kiln, whilst the stone begins in many places to exhibit uncomfortable symptoms. The following few instances of its successful adaptation may be selected,—the caryatides and mouldings at St. Pancras Church; the rood-screen at St. George's Chapel, Windsor; the figures in the Pediment of Greenwich Hospital, representing the Death of Nelson, designed by West; the vases on the river front of Somerset House; the vases and capitals at Cliefden House; and the statue of Britannia on the Nelson Monument, at Yarmouth. This last-named instance affords a very striking example of the hardy nature of terra cotta, for the stone is giving way rapidly from the effects of its exposure, whilst the terra cotta seems to laugh defiance at the elements. The Phœnix Fire Office testified their approbation of terra cotta, by building escutcheons formed of it into the walls of insured property, but finding it inconvenient to remove the slabs upon the cessation of an insurance, they gave up the practice: you may still see a few about the streets of London.

But let me not here forget to name one remarkable example of the modern adaptation of terra cotta, in Berlin: I allude to the Bau Schule, by Schinkel. Here moulded bricks and terra cotta are used with great success. In Italy, capital examples of the use of terra cotta are to be found in many of the palaces, churches, and houses at Rome, Venice, Sienna, Forli, Milan, Bologna, Ferrara, and Pisa.

The strength of terra cotta is very great. I believe its strength has been tested by the hydraulic machine, that raised the tubes of the Britannia-bridge and that a cubic foot of terra cotta stood a pressure of 464 tons.

Besides the advantage of durability and strength, the use of terra cotta effects a saving in time and expense. Had the bas relief of the pediment of Greenwich Hospital been executed in marble, it would have required somewhere about ten years to have completed it, but this work in terra cotta only required two years. Enriched and moulded work, averaged with plain work, executed in terra cotta, costs from 20 to 30 per cent. less than Bath stone, which is about the cheapest stone in use.

There is an objection often raised by some persons, that you cannot produce a continuous straight line in terra cotta. This may be the case with regard to manufacturers who do not pay sufficient attention to those essentials I have before mentioned, viz. the drying, burning, and cooling, but where these are properly attended to, the difficulty is obviated.

Perhaps some may raise an objection to terra cotta, and say that it is a sham, a mere imitation of stone. I cannot see that it is: the only score upon which you can found this charge is its colour, which assimilates somewhat to Portland stone; but, for the same reason, perhaps, you will discard the use of brass, its similarity in appearance to gold being great. Because two materials have the same appearance it is no reason why you should use the one and reject the other: the reason for its rejection must be of a stronger nature. I think, then, that terra cotta is a legitimate material for building purposes,—legitimate, I say, because I think many materials are not. Stone that easily yields to the weather, and which in London and manufacturing towns, from sundry causes, decays still more quickly than in the country, can hardly be called a legitimate material; for, in the course of a few years, the building in which it is used requires repair: look at St. George's Roman Catholic Church, in the Westminster-road. *Cement* for external decorative purposes, I would banish.

In conclusion—as example is sometimes better than precept, I may name Sir Charles Barry amongst the architects who use terra cotta: he frequently uses it for vases, capitals, &c. and I have been informed that he intended to have executed the crocketted pinnacles of the Westminster Palace in terra cotta, but the original works of the Coades were at that time in not very good hands, although I am happy to state that they are now under good management.

* From a paper read at the Architectural Association by Mr. B. A. C. Herring.

THOUGHTS ON THE RESTORATION OF OLD BUILDINGS.

IT has been urged recently, that the splendid buildings of past ages, when giving signs of the all-destroying power of Time, should not be repaired. With deference to those holding this opinion, it may surely be argued, that if the grand object of all ornamental building be to cherish a love in the human race of the True and the Beautiful; if its chief aim be to *secure* to successive generations of mankind examples of rare excellence in that art whose productions are rationally desired to live longest, there can be no reasonable objection to the supplying to the decaying church or mansion those portions which have been injured or destroyed by age or neglect. For what are such efforts likely to produce but a second harvest of the noble ideas whose seed would otherwise perish? To contemplate, with befitting emotion, greatness in art or in virtue, is noble; but to imitate it is still nobler. To endeavour the exact reproduction of the form of dignity or beauty, which has been the object of admiration, in order that other generations besides our own, or those which have preceded us, may rejoice in its charms, or be instructed by its science, is surely neither insolent presumption nor degrading mimicry.

It must of course be understood that the eyes and hands employed to execute important and delicate tasks are prepared, by sufficient study and careful practice, for their duty; that taste has been manifested for the production of good copies of stonework; that original powers have also been to some extent manifested by the intended history; and these conditions, we venture to think, may very probably be found in the rising race of architects and workers in stone. Suppose a gentleman of England to inherit a mansion, in which the pure and elegant taste of a long line of illustrious ancestry has been displayed, and this, in combination with the labour and skill of the workman and architect of their day: suppose that for any length of time he has been deprived of this inheritance, and decay has in consequence gnawed at the marble mantelpiece and the tesselated pavement; that the noble oak roof exhibits the effects of rains and wintry blasts, and the oriel window has parted with its delicate tracery;—surely no one will lecture him upon the folly or presumption of restoring, according to the clearest views he can obtain from the portions still in existence, the parts that have suffered injury. None will counsel him, rather to build another dwelling for himself, on the same model if he likes, but still *another*, lest he should not succeed in producing complete harmony in the structure by his repairs. The same views may be urged with regard to the ancient churches of England. Many of them may for a long period have been unkindly neglected, while diversities of church discipline and manifold dissenting communities have risen up in consequence of that spirit of inquiry, which no ecclesiastical or political system can ever silence or restrain. The edifices which were consecrated to the Episcopal forms have been regarded with coldness or disdain. They seemed no doubt to many eyes to be allied to superstition, to bigotry, or to formalism. They were unvisited by the greater number in their respective parishes: they were, in short, deserted for those places of religious instruction where it was believed a fuller Gospel was preached, a holier man presided, or a more generous zeal was manifested. We cannot blame such wanderings of the popular mind in search of the way to life eternal, for often it was not the *diseased* love of change, but the healthy thirst of the soul after the satisfying waters of truth that caused them. Nevertheless, we may be permitted to regret that the solemn temples dedicated to the worship of the Christ of God suffered from such defections. A reaction comes: a spirit of holy emulation is infused into the Episcopal body: bishops and beneficed clergy are awakened to their high responsibility. They look around the churches long deserted, and find again a congregation waiting eagerly to hear the tidings of salvation. They observe it with delight,—a delight, however, not unmixed with grief: the decaying walls, the defaced corbels, remind them of the times of desolation. "We will restore," say they, "in the spirit of our founders. We will repair the font, and infancy shall again receive beneath the hallowed roof the seal of baptismal admission into the family of God."

And they forthwith enter on the work of repairing the parish church, and restoring themselves at the same time. They are not *new* men: they are men who, having allowed neglect and other evil influences to produce decay in their spirituality, come back lamenting their deficiencies, and supplying them from the *same* principles that formed the strength, grace, and dignity of the ministerial character in all ages.

But it may be objected that while the parish church is being repaired, a new one might be built more agreeable to the taste of modern times. I doubt exceedingly whether the interest in the *new* would equal that in the *old*. As Uncle Toby, from professional sympathy, *liked subordination*, so do the generality of mankind, from far nobler influences, venerate antiquity. A church or cathedral many hundreds of years old, seems to carry on its venerable front an impress of divine protection. Its tower or spire has been guarded from the lightnings and blasts of the storms of ages. If it exhibits here and there symptoms of decay, it also shows how tenderly it has been cared for.

Be it acknowledged that to restore an ancient building, and preserve its unity of appearance, is not amongst the *easiest* of architectural labours: it is one, nevertheless, which must greatly improve the mind and exercise the taste.

Nor does it by any means exclude original conception from its due employment, but would tend, I should think, in the way of *study*, greatly to advance its development. It cannot, I think, be admitted that the dilapidated and defaced portions of an edifice are in this respect to be compared with the deficient parts of a poem. It may or may not be possible to conceive what has been *written*, so as to produce unity and congruity in the old and the new, and to accomplish the completion of a satisfactory whole; but it *is* possible, quite possible, to imagine what was built, and, if the restored parts be not like in every slab and mullion, to produce such probable resemblances as to establish a general harmony of the fabric. S. E. MILES.

PROVINCIAL NEWS.

Cheshunt.—A range of buildings, including schools for children of both sexes, and dwelling-house for a master and mistress, is about to be erected in this parish in connection with the British and Foreign School Society. Mr. George Ralph has granted a piece of land, known as Love-acre, as a site for the school premises, and this, with the state of the subscription-list, has led the promoters to decide upon commencing the erection of the buildings as soon as the season will permit. Plans have been submitted by Messrs. Habershon, which are approved by the committee. The schools will provide for the accommodation of 180 children. The probable cost of the school-buildings will be 1,000*l.*

Tewkesbury.—The town council have resolved that the resolution passed at a former meeting, that a Corn Exchange be erected by the corporation, be rescinded. It has been resolved to grant a long lease to any company that would undertake to build it.

Worcester.—The new Parochial Schools in St. Clement's parish have been opened. The new building has cost about 900*l.* all raised except 80*l.* or 90*l.* Mr. H. Day, of this city, was the architect employed. The builder was Mr. J. Heming, of Lowesmoor. The material of the walls is brick, with stone windows and dressings. The building is in two stories, the lower for girls and infants of both sexes, and the upper for boys. Each floor has a large school-room and class-room. The ceiling in the boys' school is partially open, and the beams are dressed and stained. According to the Diocesan Society's estimate of space requisite for each pupil, namely, 6 square feet of floor, the schools will accommodate about 300 pupils.

Cardiff.—The Cardiff Sailors' Home was opened last week, according to the local *Guardian*. The building is in the Elizabethan style, from a design furnished by Mr. Roos, of London, architect. The material is stone, faced with jointed stucco. There is a central part, with an east and west wing. The dimensions of the two wings are 60 feet by 38 feet 6 inches, and the central portion of the edifice 83 feet by 34 feet 6 inches. The central portion of the building is surrounded by a turret. The internal height of the building from the basement to the centre of the roof is 50 feet. There are three distinct tiers or galleries ranged one above the other in the central portion of the building, so as to form a parallelogram. These galleries or corridors extend on all sides, being reached by a flight of twelve steps in a winding form. The cabins for the seamen, together with several washing-rooms and store-rooms, are ranged in lines opposite each other on the north and south sides of the central building, with railings or balustrades 3 feet in height in front. The whole is lighted by means of six large skylight windows. The upper portion of the east wing is set apart for the accommodation of the superintendent, and for spare sitting-rooms; while the opposite wing comprises galleries only, and is supplied with cabins. Each tier contains about thirty cabins, and including those in the west wing, there are 109 cabins, averaging 9 feet by 5 feet 8 inches, and 7 feet 6 inches in height. The building contains a large dining-room, working-room, kitchen, baths, and various other conveniences, such as skittle-alley, shed, &c. Mr. Griffiths, of Cardiff, was the builder.

Barnsley.—New schools have been erected at Thurlstone, in the parish of Peniston, for fifty boys and fifty girls, and also one for 100 infants, with a house for the master. The cost will be upwards of 650*l.* The site has been given by Mr. J. C. Milner. The plans, &c. were furnished gratuitously by Mr. George Leather; and the work was performed under the superintendence of Mr. Hugh Tomason.

Carlisle.—The new schools at Hall-bank Gate, erected for the children of colliers and lime-workers, in the neighbourhood, at the joint expense of Lord Carlisle, and the Messrs. M. Thompson and Sons, Kirkhouse (his lordship's lessees), were opened on 31st ult. The building comprises a master and mistress's house, and a school-room, 66 feet long by 16 feet broad, designed by Mr. Beaty, architect.

Edinburgh.—It is intended forthwith to complete the pathway on the east side of the National Gallery, and remove the paling along the west side. The ground inside the railings will be laid out in terraces, and on the east side there will be a pathway 12 feet wide, leading up to Bank-street, by flights of stairs. East of the footpath, the ground will slope downwards to Princes'-street-gardens, and the town council will be asked to give up a small portion of these gardens required for this slope. It is proposed to place gates on the footpath, a course to which the *Scotsman* anticipates some objections.

Glasgow.—In respect to new buildings in prospect, the *Glasgow Gazette* says;—besides the new Free College Church, there is to be a new one at the west end in connection with the establishment. The preparation or competition plans for the west-end-park church have been confided to Mr. Rochead, of this city, and the Messrs. Hay, of Liverpool. The expense, we understand, is to be restricted to 8,000*l.* A new United Presbyterian Church is also on the *tapis*. The site is the head of Hospital-street, and we have heard the estimated expense given at 6,000*l.* There is immediately to be a Free Church Mission church in Finnieston. The Renfield-street church congregation are on the look-out for a site for a new church. The warehouses which are to be erected where the Renfield-street Free Church at present stands will be on the scale of magnificence which has of late been adopted by our great commercial establishments. Another range of palatial warehouses is projected at the corner of St. Vincent-street and West Nile-street; another at the corner of West George-street and Buchanan-street, as a *vis-à-vis* to the range where M. Pippett holds his daily ordinaries. A fourth block of buildings is in contemplation in Argyll-street, opposite Queen-street.

Craignoon (Fife).—It is proposed to erect a new harbour at Craignoon. The estimate of one plan is above 14,000*l.*; and allowing the Board of Fisheries to approve of the undertaking, and give their usual grant, it would still leave a large sum to be raised by the community. The Cellardyke fishermen, however, have resolved, according to the *Fife Herald*, to take steps for the erection by an endeavour, during 1857, to raise 1,000*l.*—each boat's crew paying so much per week.

Jersey.—The contractors for the Le Sueur monument, have fixed the crowning stone of the monument, according to the *Jersey Times*.

LECTURES AT THE ARCHITECTURAL EXHIBITION.

ON Tuesday evening last Mr. James Fergusson inaugurated the lectures to be given in the Suffolk-street Galleries by a lucid and agreeable discourse on Ancient Assyrian Architecture. There were probably from four to five hundred persons present, and we were glad to hear that nearly 600 season tickets have been purchased. In opening the course the lecturer said the great object the committee had in view was to bring the public and architects into nearer acquaintance with each other: the architect differed from the painter in this one point—that the painter had only to buy a few materials, at slight expense, and exhibit his work finished for purchase, whereas the architect could do nothing without a patron who had a large capital with which to carry out a design that would otherwise rest useless in the designer's portfolio. The committee considered that the most obvious way of instructing the public in architecture was by an exhibition; and, as the great mass of technical drawings did not tell any story to the public, the committee thought, by making lectures part of their plan, by adding oral to pictorial details, they might aid in obtaining a public able to discriminate in architecture.

Our readers are already in possession of Mr. Fergusson's views on Assyrian architecture, and of the greater part of the information which he placed ably before the meeting on this occasion: we, therefore, need not recapitulate.

We are forced to postpone the continuation of our notice of the works exhibited, but shall return to it shortly.

PRESERVATION OF WOOD CARVINGS.

AT the last meeting of the Institute of Architects, Mr. W. G. Rogers exhibited some specimens of Gibbon's carving, from Belton House, Lincolnshire, and gave the following explanation of his method of strengthening and preserving the parts remaining, after the lime-tree wood of the interior had been reduced by the worm to a mass of honeycomb fibre.

Photographs of the carvings were taken before the ornament was removed from its place: the wood was well saturated with a strong solution of corrosive sublimate to destroy the worm (the natural colour was afterwards restored by a further chemical process), and strength was then given by injecting vegetable gum and gelatine: the separate pieces were afterwards put together according to the original design preserved in the photograph, restoration with new work being as much as possible avoided.

Mr. Rogers stated that similar carvings at Burleigh, Chatsworth, Petworth, Cashiobury, Hampton Court, Windsor, Trinity College Cambridge, and other places, are in the same state of decay, the surface or skin being covered with a deceptive white vegetable bloom, which assists in completing the work of destruction. It is desirable that these should be examined forthwith.*

PREMIUMS FOR CARVING AT THE ARCHITECTURAL MUSEUM.

IT will be remembered that the committee of the Architectural Museum, in June last, offered a premium of five guineas for the best specimen of wood carving which should be forwarded to the museum by a certain date; that Mr. Ruskin offered a prize of the same amount for the most successful specimen of stone carving, in the shape of a Gothic capital, exhibited there at the same time; and that Mr. Godwin offered a small supplementary premium for the second best in each class. In reply, five specimens of stone carving, by four art-workmen, and six specimens of wood carving, by six art-workmen, were forwarded. One of the first-named specimens, a large capital of Venetian Gothic character, came from Ireland without any name or address. The other competitors were George Galpin, whose capital exhibited between conventional foliage on four sides that number of groups illustrating the parable of the Prodigal Son; W. Sandilands, a smaller work, wherein palm-trees form the foliage, and a scriptural allegory is set forth by groups between the stems (ruder and less learned than the last, but more original), and W. Farmer, who sent two specimens, formed, one of the vine, the other of the rose, ivy, maple, and vine conjoined. The wood carvers were W. Forsyth, whose panel was made up of birds and vine-leaves, arranged according to rule, and very beautifully cut; John Baldwin, a rough study of holly from the plant, arranged by himself, and cut with great vigour and power; J. B. Wallace, a study from the thistle; S. Chadaway, a renaissance design, including a boar-hunt as a centre,—meritorious in several respects; Burgess Reeve, of Edinburgh, a more finished furniture piece, representing a hound; and H. Wilcock, who sent a Puginesque panel in low relief.

The decision was come to on Monday last, when the first prize for stone capital was awarded to W. Sandilands, the second to George

* At the next meeting of the Institute, to be held on Monday evening, the 17th instant, a paper will be read "on the Formation Methods of casting, and ringing of large Bells; with some Suggestions on the Subject;" by Mr. C. H. Smith.

Galpin; the first prize for wood carving to John Baldwin, and the second to W. Forsyth. There were present Lord A. Compton, Sir Francis Scott, Messrs. Ruskin, Scott, Penrose, Christian, Cocks, Pearson, Chantrell, Clarke, the Rev. C. Bowtell, Clutton, honorary secretary, and Allen.

The prizes will be given in the middle of April, at the opening meeting of the session.

Some prizes of larger amount will be offered hereafter.

CORK SCHOOL OF DESIGN.

THIS institution was to reopen on the 8th instant; or rather, a new School of Design, raised upon the foundation of the late school, was to open on that day. The late school was closed in December, 1854; the head master having thrown up his appointment, and the second having been transferred to Marlborough House, while the committee, after maintaining a somewhat angry correspondence with the Board of Trade, gradually ceased to perform their functions. Things were in this state when the passing of the Irish Museums Act empowered the levying of a rate for the support of Schools of Design; and a public meeting having in October last unanimously agreed to carry out the provisions of the Act, a committee was nominated by the town council, comprising a few of the members of the old committee. Mr. Raimbach, late master of the Limerick school, was appointed head master, and Mr. Edward Shid assistant. The school opens with the announcement that a scholarship of 10*l* and two of 5*l*. each, are to be given by the mayor, Wm. Fitzgibbons, esq. and one of 10*l*. by the committee; and a prize of 5*l*. is offered by a member of the committee for the best design for the Cork School of Design Prize Medal.

Local scholarships and prizes are a new feature in the Cork School of Design, in which hitherto they have not been given; but it is to be expected that the emulation thus incited will call forth increased exertions from the students.

THE STATE OF LONDON STREETS.

I REMEMBER a few years since the editor of an Edinburgh journal publishing some severe strictures on the filthy condition of the streets in the metropolis. Many who knew the failings of famous "Auld Reekie" were surprised and rather indignant at complaints coming from that quarter. Such things, however, ought to cause those authorities in whose hands the credit for the cleanliness of London and its miles of suburbs is left, to exert themselves in such a manner that some may not one of these days compare this capital city—the wonder of the world—with Rouen, Naples, or some of those Asiatic towns, respecting the condition of the streets of which we have been lately enlightened by travellers.

I would not willingly acknowledge that we are nearly so bad as a large part of "Edinburgh toun," and yet am obliged to confess that in this dim, muggy weather, we are in a shameful pickle. They talk of doing away with the crossing-sweepers, but what in the world should we do without them, unless the *boards*, who ought to see after the pavement, do something more than at present. It is a grand thing that the old cry of "Clean your honour's shoes," which was so familiar in those days when sedan-chairs, broken pavements, water-spouts, and other drips, rendered them one of the necessaries of London life, has been revived by the boys in red and other colours who so vigorously ply their brushes.

The greasy state of the pavement, and the deep mud of the centre parts, scraped to the kerbs in heaps to trap the unwary, stop my progress, irritate my temper, and spoil my clothes. Bad as is the condition of the lords of the creation in this weather, it is infinitely worse for the ladies. I scarcely wonder, under the circumstances, at an attempt having been made to introduce Bloomerism. Only yesterday, in walking up Gray's-inn-lane, I was fortunate enough to be the means of preventing two respectable females from slipping down. This I did at some risk to myself, for the footpath was nearly as slippery as a skating-place on the Serpentine.

In the evening, the mud on the foot pavement assumes a more inconvenient consistency, and many hundreds who have attempted to walk home from friendly parties or the theatres at this New Year's time, will agree with me as to the difficulty of getting along. It is, perhaps, invidious to mention places, but take as a specimen the road from New St. Pancras church to King's-cross, along the side of the church railings. Good people in this slippery time scrape and sweep the fronts of their houses and shops daily, but what is the advantage if a great majority neglect?

In conclusion, I submit that in order to prevent the shameful comparison which I have hinted at, we must set vigorously to work to cleanse the London streets. If the authorities neglect the roads, the inhabitants must see after them; and if housekeepers neglect their duty to the public, they ought to be looked up by the police.

A COCKNEY.

RESULT OF THE COMPETITION FOR THE DUDLEY WORKHOUSE.

IN the Birmingham papers of April last appeared an advertisement for plans, &c. for a workhouse at Dudley, to accommodate 600 inmates, at an outlay not exceeding 12,000*l*. Some fifteen designs were sent in, but in consequence of another advertisement limiting the commission to 4 per cent. a meeting was held in Birmingham, when it was resolved to lay the matter before the Birmingham Architectural Society. This, however, took place too late for any energetic step to be taken; but the competing architects present resolved not to undertake the erection under the usual commission. Among the competitors was an architect and auctioneer of West Bromwich, who, finding all the respectable men withdraw, unless at a remunerative price, undertook to carry out the work. Having offered a premium for the *second* best set of plans, the guardians, after consideration, gave the same to a Wolverhampton firm, Messrs. Bidlake and Lovatt. The design of the West Bromwich auctioneer was forwarded to the Poor-law Board, returned with upwards of forty folio pages of suggestions for alterations and amendments, and finally, to test the feelings of the builders, the matter was thrown open for public competition. Our architect, having priced the quantities, found they came out—at least so we must presume—somewhere near the advertised amount. But, either Messrs. the builders tendering, or the licensed appraiser of West Bromwich knew but little of the value of materials and labour, for, behold! the tenders turn out: No. 1, 23,022*l*. 14s. 8d.; No. 2, 30,700*l*.; No. 3, 28,702*l*.; No. 4, 22,690*l*.; No. 5, 24,938*l*.; No. 6, 24,477*l*. 3s. 8d.; No. 7, 29,868*l*.; No. 8, 27,499*l*. 4s. 9d.; No. 9, 33,270*l*.; and No. 10, 30,484*l*. The average of the ten is 27,565*l*. 2s. 3½d. The difference between the *highest* tender and estimated cost, is 21,270*l*. and between estimated cost and *lowest*, 10,690*l*."

Mr. Griffiths, who, on the part of the Building Committee, read the report, added, that the architect who attended the committee could not account for the difference, and left the committee with an understanding that he would again go through his estimate. This he does, and states that he can make a difference of 3,000*l*. or 4,000*l*. without *materially* altering the plans. That, however, brings the cost to 18,690*l*. or more than 50 per cent. above the amount originally set forth; and it would appear that this gross outrage on the rights of the architectural profession, is to be allowed, for hints are thrown out, and the clerk, in reply to a question, states that the Poor-law Commissioners did not bind them to 15,000*l*." The guardians can borrow *any amount*, the commissioners' sanction being first obtained.

This result, I should imagine, after the many letters you have received on the subject of this competition, will open the eyes not only of the profession, but of the public at large; and I trust it will have a tendency to bring about the much-to-be-desired arrangement of the choice of referee of competition plans by the competitors themselves.

ARCHITECTUS.

CHAMBERLAIN'S BRICK-MACHINE.

In this machine the clay is fed into a horizontal pug-mill, which carries it through a cylinder working the clay, and forcing it out in one continuous stream through an oblong aperture, somewhat the shape of a brick with round corners, it being a fact known to those connected with brick machinery, that so large a body of clay as 50 inches cannot be expressed through an aperture with sharp corners to make the edge of the brick, the angles causing so much more friction than any other part: it has therefore been the practice with this class of machinery to perforate the aperture, or make hollow bricks, that the tongues to form the perforations may cause such friction or resistance in the centre of the escaping aperture as to force the clay into the corners, and thereby in some measure meet the difficulty; but this is again balanced by the extra expense required in the preparation of the clay, as, if not of the finest quality, it will not pass the sharp corners smooth. To obviate these difficulties in this machine, the aperture delivers the clay with round corners, which is then received between four rollers, covered with porous fabric, which compress the block of clay into an oblong mass, the size and shape of a brick edgeways, with sharp arrises. The stream of clay is then carried on an endless web to the self-acting cutting-frame, which, as the clay moves, is put in motion from connection with the four rollers which form the block of clay, the rollers being driven by a belt from the gearing of the pug-mill. If the rollers have the slightest motion given them from the machine being fed with clay, the wire is put in action and traverses at an angle in the same direction in which the clay is travelling, thereby making a square cut while in motion. As soon as the wire has cut off one brick, it changes its action and cuts off the next at the opposite angle to which it before traversed. The bricks pass on to the end of the machine, and are received on pallet-boards by the boys in attendance. The advantages of this machine, according to the patentee, are as follow:—1. That the clay is thoroughly amalgamated in the pug-mill with some clays requiring scarcely any previous preparation. 2. That the bricks are made of such a stiffness as to bear walling six high at once, which effects a saving of 50 per cent. in floor room. 3. That bricks of greater density are obtained through the great pressure the clay receives during manufacture. 4. From the stiffness of the clay used, less water has to be evaporated in drying, saving one-half the time required for hand-made bricks, and the risk of loss from bad weather, &c. 5. The machine is on one frame and portable, of the most simple construction, very strong, and not likely to break or get out of order. 6. By this machine 2,000 bricks can be made per hour with from two to four-horse power, depending on the stiffness and quality of the clay.

OUR NATIONAL ANTIQUITIES.

WE are informed that Mr. A. C. Kirkmann (well known to all who knew the late Sir S. R. Meyrick), has *revoked* his resolution to give his fine collection of Celtic, Roman, and other antiquities (found chiefly in the Thames), to the Mayor and Corporation of London, on account of their declining to take Mr. Roach Smith's Museum; and he has now provided for it elsewhere. Those who know the collection, say that it is in some respects the best in England. He has some objects which, if put up to sale, would fetch almost fabulous prices. It will be remembered that the trustees of the British Museum lost Mr. Wylie's collection of Saxon remains, from declining to take the Faussett collection. The hitherto unpublished manuscript account of this now celebrated Faussett collection of antiquities discovered in upwards of 500 Anglo-Saxon tumuli in Kent, from 1757 to 1773, is about to be published under the editorship of Mr. Charles Roach Smith. It is to be fully illustrated with twenty engravings and 200 woodcuts, made expressly for the work, under the direction of Mr. Fairholt, from the originals, now forming part of the museum of Mr. Joseph Mayer, of Liverpool. Subscribers are to have the volume for two guineas, a price, it is said, much more moderate than any similar work has ever been printed for. The public are indebted ("over the left") to the British Museum authorities for the opportunity of thus acquiring, as it were, duplicate copies of this curious collection: for had these authorities purchased it, as they ought to have done, the "unpublished manuscript" never would have reached the public in the form about to be realized. Her Majesty has become a subscriber, and the subscription list is now swelling out into considerable dimensions.

CHIMNEY-SHAFT, &c. AT COLTNESS.

SEEING our notice of the chimney-shaft built at Woolwich Arsenal, a correspondent sends us the following particulars of a chimney-shaft built by Mr. Thomas Dean, at the Coltness Ironworks, for Mr. Henry Houldsworth, Manchester:—

At the ground level it is 18 feet 6 in. square; at top of shaft, 10 feet 6 in. square. The first 25 feet are 3 feet 4 in. in thickness; the second 40 feet, 2 feet 11 in.; the third 50 feet, 2 feet 1 in.; the fourth 50 feet, 1 foot 8 in.; the fifth 45 feet, 1 foot 3 in. It has also a fire-brick lining 10 in. in thickness 25 feet high. The number of bricks used was 270,000.

Four bricklayers built it in thirty-eight days in the months of October and November. It was built, like all the chimneys in that part, from the inside. The usual day's work there of a bricklayer in building a chimney is, say 8 feet square at the bottom, 5 feet on the top, and the price paid them for labour only 2s. 6d. per foot rise.

The same builder is putting in an engine-seat of bricks for the same company, which will take 750,000 bricks. The engine is about 400-horse power. Both Mr. Houldsworth and Lord Belhaven have been boring there, and have found on both their estates an extensive quantity of ironstone of great thickness and of superior quality; and Wishaw is becoming, from a small weaving village, to be one of the most populous towns in Lanarkshire, and is now made a parliamentary borough. Mr. Houldsworth is also building a large number of convenient cottages, to see if he can alter the condition of the mining population, and also a large school to hold 600 boys and girls. His liberality, we are told, is very great.

Notices of Books.

Handbook of the Arts of the Middle Ages and Renaissance, as applied to the Decoration of Furniture, Arms, Jewels, &c. Translated from the French of M. JULES LABARTE; with Notes, &c. London: Murray, 1855.

ART is exhibited, as M. Labarte remarks, not only in architecture, statuary, and monumental painting, but in jewels, arms, furniture, and ecclesiastical utensils; and even objects of common use bear testimony with these to the artistic talent of ancient times, and to the character of the epoch of their construction.

It is of art, as applied to the objects of domestic life, that this very interesting volume treats. It gives a history, more or less complete, of the origin and development of the decorative arts during the Mediæval and Renaissance periods; and this apparently very fair and faithful translation of M. Labarte's valuable work by a lady forms an acceptable new year's gift to the public. It comes to us stamped with the approbation of French antiquaries and artists; and M. Labarte himself has in a manner homologated the present translation, by giving the translator the use of the woodcuts belonging to his work: to these have been added many other interesting illustrations, for which thanks are accorded to Lord Londesborough and other proprietors of valuable antiquities.

The volume opens with an extended notice of the sculptures of the Middle Ages and the Renaissance, to which we will again refer. The second chapter is on their Painting and Calligraphy; the third on Engraving; the fourth on Enamels (a long and elaborate account of them). Chapter fifth is on Damascene work; the sixth on the Lapidary's Art. The Keramic Art, in the ensuing chapter, forms a pretty long section of the work, and is followed by one on Ancient Glass. Chapter tenth is on the Armourer's Art; eleventh (a very brief one), on the Locksmith's Art. Next follow some remarks on clockwork, and an account of ecclesiastical and domestic furniture. This closes the first, and, indeed, by far the largest "Part," or nearly the whole of the volume. The second Part is merely indicated, comprising, as it does, a single chapter on Oriental Art, in which attention is specially drawn to this interesting subject more as a desideratum than with any pretence of giving an account of either ancient or modern art in the East.

Sculpture, as we have already noted, constitutes the first and one of the more extended subjects of M. Labarte's very pleasant volume, —sculpture in ivory, metal, wood, stone, wax, &c.; but, it comprises little or nothing as to the greater works of sculpture, which, indeed, could scarcely with propriety be included in a treatise devoted to art as applied to the decoration of furniture, arms, jewels, &c. Nevertheless, in treating of the fine arts as applied to domestic use, the first place is with propriety conceded to sculpture. "In all ages," remarks M. Labarte, "the custom has prevailed of adorning, with chiselled or carved figures and devices, both household and sacred vessels, domestic furniture and weapons." But why exclude from a prefatorial remark such as this, as well as, indeed, from more special consideration in a work of this kind, those more strictly architectural sculptures with which every race of men, civilized or semi-civilized, and even savage, have delighted to adorn both their domestic establishments, and the temples or churches devoted to their gods?

Previous to entering into detail on the subject of the sculptures of the Middle Ages and the Renaissance, the author gives a rapid sketch of their progress throughout, of which we shall endeavour in turn to give a brief outline. Though the earlier centuries of the Middle Ages have bequeathed to us scanty relics of monumental sculpture, they afford us numerous specimens of the art in its application to mobilia. These consist chiefly of the tablets of ivory obtained from diptychs, or the covers of rich manuscripts. The tenth century furnishes us with no specimens of articles of domestic use. No sooner, however, had the year 1000 closed in safety, and the dawn of a new century restored confidence to men's minds, than a wonderful activity was manifested by all classes. It was more especially in sculpture that the transformation displayed itself. To the regular conceptions of the ancients succeeded all the fancy of a new school emancipated from rules, and knowing no other bounds than those of the artist's imagination. This independence involved the artist in all the errors of inexperience. He began to practise upon mouldings, the archivolts of arches, and the corbels of capitals, on which the human face was often represented in the most grotesque and incorrect manner.

It was hardly till the commencement of the twelfth century that bas-reliefs and statues of large proportions were executed in a style which, without being free from faults, was at least restored to some measure of correctness. The Byzantine influence is here very perceptible. Long attenuated figures, a total absence of life, a severe and solemn expression, draperies arranged in small and close parallel folds, and an overloading of Oriental ornament in rich stuffs fringed with pearls and enriched with precious stones,—these form the chief characters of the statuary of the twelfth century.

The adoption of a contemporaneous costume is also a distinctive feature of the new school of art, which had its rise in the eleventh century. The figures of Christ, of the Virgin, of the Angels and Apostles, still retained the flowing robe and ample mantle of the ancients, but all the others were clothed in the dress which the artist had daily before his eyes: the arms, utensils, and furniture of his own times were introduced into his compositions, whatever might be the age or country to which his subject belonged.

From the close of the twelfth century, great progress was made in statuary. Up to that period the similarity of the faces leaves no room to doubt that the artists had some received model from which they uniformly copied, but they now began to lay aside this servile imitation, and gradually adopted a more natural style: their ornaments were borrowed from native plants: the design was improved without the style of sculpture losing its originality.

We remark, from the beginning of the thirteenth century, more of ease and movement in the attitudes, and expression in the faces, while more ample draperies were arranged with taste and elegance. At the end of this century, France possessed an original style of art, in nowise indebted to that of the ancients or to that of the Byzantine school: the cathedrals of Chartres, Reims, and Amiens, contained thousands of statues and bas-reliefs, real masterpieces in point of form as well as of religious expression. The end of the thirteenth century may perhaps be regarded as the finest epoch of mediæval art.

In the fourteenth century, the design is often less pure, more attention is given to detail than is paid to general effect, the draperies are somewhat tortured, the faces of satyrs and grotesque animals re-appear in the ornaments.

To these general characteristics of monumental sculpture in France, Germany, England, and Flanders throughout the Middle Ages, must be added one observation, which is, that during all this period architecture was looked upon as the art *par excellence*, to which all others were kept subordinate. The architect, chief of the artists, not only regulated the plan of the work, but selected the subjects for execution: his alone were the ideas, to which painters and sculptors were to give a tangible form.

The aspects depicted in two of the illustrations of tenth or eleventh century sculpture, associated with these historical remarks, and which are scriptural subjects, now in Chichester Cathedral, suggest, decidedly, a family connexion with the curled and plaited aspects of the ancient Assyrian sculptures. Here is a small thread of connexion which appears to afford us a hint of the possible influence of ancient Assyrian art, even on Western Middle Age sculpture, probably through Byzantine routes. Hitherto a gulph of disconnection has appeared to exist between these extremes, and the sculptures of the ancient Assyrians have seemed to belong to an order of things with which Western or even Byzantine art had no connection. Yet when we reflect on even the geographical relationship of ancient Nineveh, or Assyria, with ancient Byzantium, and even with ancient Judea and Jerusalem, the fountain of scriptural subjects, this can hardly be; and, on the contrary, one would naturally expect that some few traces at least of a species of ancestral influence should be found to exist between art in ancient Assyria on the one hand, and the kindred art, on the other, as it came afterwards to display itself in the less ancient Byzantine or the farther West.

The English version of M. Labarte's volume under notice contains, besides a large number of graphic illustrations, a detailed descriptive list of these, and a numerous list of artists mentioned throughout the work.

Miscellanea.

HORSEMONGER-LANE GAOL.—At the quarter sessions held at Newington, on the 1st January, the justices ordered Messrs. Banks and Barry's plans to be carried out, with some additions, if tenders can be obtained, so that including architects' commission, and all other charges, the sum expended shall not exceed 12,000*l.*

LOST PEALS OF BELLS.—In answer to your correspondent's inquiries about the lost bells of London, I can give some reasons for their removal, though I cannot say what has become of them.—1. St. James's, Westminster. These bells (if they ever existed) were very wisely removed, for the steeple (as viewed from Swallow-street) leans alarmingly to the west. 2. The five at St. Peter-le-Poor may be heard chiming at 10·30 any Sunday morning; at least, I heard them nine years ago; but peals of five they seldom condescend to ring in a peal in London. 3. All Hallows, London Wall, has been rebuilt since 1735, and the five bells either cast into two, or sold for building expenses, a by no means uncommon thing in those days. 4. When St. Martin's was rebuilt, the street was widened so as to allow no room for a tower capable of holding a peal. 5. Which St. Catherine? 6. St. Alphage. Probably disposed of in the same manner as All Hallows, London Wall. 7. Newington Butts has been rebuilt since 1735, and is surmounted by a turret containing three bells, the utmost it will hold. 8. St. Thomas's bells I am at a loss to account for, unless the rats have eaten them as they did at Dunwich, in Suffolk (according to the churchwardens' account); but those rats were accustomed to the cheese of that county, so the story had some appearance of probability. Apropos of bells, their tone depends greatly on their height from the ground, which should never be less than 50 feet: 100 feet is not too much even for the smallest. There is a musical little peal in this town (Colchester), at St. Nicholas, which sounds well from the basements of neighbouring houses, but harsh from the street: they are very old, and one is inscribed "Beata Campana Johannis," the tenor 12 cwt. The little bell at St. Paul's (25 cwt.) sounds to advantage compared with Christ's, Newgate, same weight and note, but hung lower. The famous little bells at Lavenham owe a great deal to their height from the ground, 100 feet; tenor 25 cwt. only. I will send some notes on campaniles on some future occasion.—W. SCARGILL.

COMPARATIVE PRICES OF TIMBER.—The following is given in the *Engineer*:—

	1855. £.	s.	£.	s.		1854. £.	s.	£.	s.
Quebec, red pine, per load	4	10	0	0	...	3	15	5	0
,, yellow pine	3	15	4	0	...	3	0	4	0
Miramichi, yellow	0	0	0	0	...	0	0	0	0
St. John's, N.B. red	0	0	0	0	...	0	0	0	0
,, yellow	0	0	0	0	...	0	0	0	0
Quebec, oak, white	7	0	7	10	...	6	0	7	10
,, birch	6	0	0	0	...	6	10	0	0
,, elm	6	10	7	0	...	5	0	6	0
Dantsic, oak	7	0	8	0	...	4	0	4	10
Memel, fir	3	10	4	10	...	4	0	5	10
Riga	0	0	0	0	...	4	5	4	10
Swedish	2	15	3	0	..	3	10	0	0
Masts, Quebec red pine	6	0	9	0	...	12	10	0	0
,, yellow pine	5	0	8	0	...	12	0	0	0
Lathwood, Dantsic fm.	12	0	0	0	...	9	0	9	10
,, Memel	9	0	9	10	...	9	0	9	10
,, St. Petersburg	0	0	0	0	...	13	0	14	0
,, Quebec	5	0	6	0	...	5	10	6	10
Deals, per C. 12 ft. by 9 inches—									
Quebec, white spruce	16	0	20	0	...	16	0	18	0
,, red pine	17	0	26	0	...	19	0	23	0
St. John, white spruce	17	0	18	0	...	15	10	17	10
Yellow pine, per reduced C.—									
Canada, 1st quality	17	0	20	0	...	16	0	17	10
,, 2nd ditto	12	0	13	0	...	11	0	12	10
Archangel, yellow	21	0	23	0	...	22	0	0	0
St. Petersburgh, yellow	15	10	19	0	...	0	0	0	0
Memel	15	10	19	0	...	17	0	20	0
Gefle, yellow, 14 feet	24	0	29	0	...	28	0	0	0
Gothenburg, yellow	14	0	16	0	...	24	0	29	0
,, white	11	0	13	0	...	21	0	23	0
Christiania, per C. 12 feet by 3 inches—									
,, yellow	26	0	30	0	...	22	0	32	0
,, white	22	0	26	0	...	20	0	30	0
Deck Plank, Dantsic, per 40 feet 3 inches	1	0	1	10	...	1	5	1	10
Staves, per standard 1,000—									
Quebec, pipe	80	0	90	0	...	60	0	70	0
,, puncheon	19	0	25	0	...	18	0	21	0
Baltic, crown pipe	130	0	140	0	...	120	0	150	0

NEWCASTLE-UPON-TYNE SOCIETY OF ANTIQUARIES.—The January meeting of this society was held on Wednesday before last, when various donations were presented, and Dr. Bruce read a paper on "The History of Northumberland," and made some remarks on the ancient music and song of the county, in which the Duke of Northumberland had expressed an interest. Dr. Charlton read a paper "On the Runic Inscription on the Cross at Newcastle;" and Dr. Bruce one by Mr. William Dickson, on "Malcolm's Well, Alnwick," of both of which papers the *Gateshead Observer* gives some account. In course of the meeting Dr. Bruce stated that the society having taken considerable interest in the London antiquities of Mr. Roach Smith, which had been offered by that gentleman to the British Museum for 3,000*l.* he might now state that, the owner having consented to a valuation, a valuer had been appointed on each side. The valuer of the Museum had valued the collection, object by object, and without reference to the value of the collection as a whole; and yet, when his figures were cast up, the result was a total sum of 3,500*l.* or 500*l.* more than the price named by Mr. Roach Smith, which was said to be excessive.

INAUGURATION OF THE UNDERWOOD ART-STUDIO AT BIRMINGHAM.—The art-studio to which we have more than once alluded as being established for behoof of students at Birmingham, was inaugurated on Wednesday in last week, by a lecture delivered by Mr. W. C. Aitken, in presence of Mr. Underwood, and a numerous assemblage. At the close Mr. Aitken said that the object of his address had been rather to excite the mind of the student to inquire, than to satisfy it; and after giving some practical advice to intending students, he stated that in the library attached to the Art-Studio will be found many works which might be perused with great profit. The artist, to be a true artist, should be educated in every perception and feeling. Doubtless there had been artists uneducated whose works were admirable; but how much more so would they have been had the mind which produced them been educated up to its capabilities. The claims of the Art-Studio, with its collection of paintings, water-colour, and pencil drawings, its books of ornament, its casts, and library, brought together and dedicated by Mr. Underwood to the extension of art-education, was now before them. The interests of the students of fine and ornamental art had each been duly considered and cared for. In their hands was placed the success and prosperity of the Art-Studio, and shame would it be if, for lack of interest on the part of those for whose benefit it was projected, an institution fraught with so much good, alike to fine-art and art-industry, should fail for want of that support which it so well merited.

STATE OF THE EASTERN COUNTIES RAILWAY.—The public will be concerned to learn, that in consequence of a memorial to the Privy Council from the Norwich corporation, alleging that the line of railway between London, Cambridge, and Norwich, is in a dangerous condition, their lordships have caused the line to be inspected by Lieutenant-colonel Wynne, and that he confirms the truth of the allegations in the memorial alluded to. "The result of my examination of the permanent way," says the reporter, "was to show that, while vast numbers of old sleepers have been removed and replaced by new ones, evidenced by the great piles of old sleepers lying along the line in different places, and which were in a state of decay such as I have rarely met with, numbers yet remain in the line quite as much gone. Although this is a matter of serious moment, it is not so bad as that of the bridges; for the sleepers, though much decayed, have some soundness at the core, and the danger could be met for the time by maintaining a greatly reduced speed over the line. Should the permanent way not be renewed till after the reparation of the bridges is completed, it will be necessary, for the public safety, to prescribe limits to the speed of the trains." The attention of the directors has been drawn to this report by the railway department of the Board of Trade, who urge them to lose no time in giving it their careful consideration.

NEW CHURCH IN WESTMINSTER-ROAD.—It is intended to proceed shortly with the erection of a new church of St. Paul, in Westminster-road, at its junction with Waterloo-bridge-road. The site has been cleared.

APPARATUS FOR PURIFYING AND CARBONISING GAS.—Mr. Samuel Rowlands, of Birmingham, has taken out a patent for a mode of treating gas, consisting of a vessel through which gas is made to pass, in contact with a large surface of the liquid, to the action of which it is to be subjected. In this chamber is a float having a spiral channel, which gives it a slow rotary motion. When it is wished to impregnate coal gas with the vapour of naphtha, the vessel is partly filled with the liquid, which is kept in agitation by the rotation of the float as it sinks. Other carbonaceous fluids may be employed with like effect.

LABOURERS' COTTAGES.—On Friday week, at a dinner given by the Earl of Dartmouth, at Pattingham, to upwards of 120 of his cottagers and labourers, on the safe return of his lordship's brother, Captain the Hon. G. Legge, from the Crimea, the earl, in acknowledging a toast relating to himself, said he did not look on the labourers as mere machines to do set work, but as men possessed of minds, having the same feelings as himself, and immortal souls. It was for that reason that he was building new and improved cottages, that they might learn that self-respect the loss of which was the loss of their independence and the ruin of their morality. No self-respect could exist in the crowded cottage, where there was no division of sexes, no separation of parents from children, but a promiscuous herding together of old and young, male and female. They would now, he hoped, understand and appreciate his motives in making it a positive rule that no such indecent crowding should be allowed in his cottages.

KILKENNY ARCHÆOLOGICAL SOCIETY.—The annual meeting of the Kilkenny and South-East of Ireland Archæological Society was held in the Assembly-room, Kilkenny, on Wednesday week. The hon. secretary stated that the lord lieutenant had done them the honour of consenting to become a member and patron of the society. Other sixteen new members were also elected, exclusive of the Wexford Mechanics' Institute. The annual report was then read. It stated that 128 new members had been added in course of the year, and that otherwise the society was in a most flourishing condition. Some other official business was transacted, and various presentations made and papers contributed.

THE SCOTCH IRON TRADE IN 1855.—Mr. Thomas Thorburn, of Glasgow, in his "Annual Report of the Scotch Iron Trade," says;—"The year about to close, though a year of oscillations, adds another epoch of prosperity to the iron trade. Under the agency and stimulus of war, combined with the extension of railways, gas, and water-works abroad, the exports and home consumption of pig-iron amount to the large quantity of 847,060 tons—exceeding the production by fully 20,000 tons—and are almost equal to the highest of any preceding year. The stocks have consequently undergone a further reduction, and are now only 98,000 tons against 450,000 tons three years ago. Extensive transactions were made during the year in pig-iron, at from 55s. to 82s. 6d.; in rails, 7*l.* 10s. to 8*l.* 15s.; in bars, 7*l.* 15s. to 9*l.* 10s.; in cast-iron pipes, 5*l.* to 6*l.* 15s.; railway chairs, 4*l.* 15s. to 5*l.* 7s. 6d. per ton." Mr. W. Colvin's *Annual Circular*, issued at Glasgow, says;—"During the twelve months we have experienced considerable fluctuations in the value of pig-iron, the price having varied from 54s. to 83s. 6d. per ton; the average for that period being 70s. 9d. for mixed numbers, cash."

NEWCASTLE ENGINEERS' SOCIETY.—The members of this society, says last week's *Gateshead Observer*, held their anniversary dinner at the Wheatsheaf Inn, Cloth-market, on Monday. A large number were in attendance. The chair was filled by Mr. Thomas Wardle. Mr. George Davy assisted as vice-chairman.

"THE GRAMMAR OF ORNAMENT."—Under this title we observe Mr. Owen Jones is about to issue a series of 3,000 examples, from various styles, exhibiting the fundamental principles which appear to reign in the composition of ornament of every period. These will be set forth in 100 imperial folio plates, drawn on stone by F. Bedford, and printed in colours by Day and Son. The intention of the author is to define the apparent origin and trace the development of the several styles of ornament. He will proceed to ascertain the laws which govern their composition; both those which are general to all styles, and those which are peculiar to each. He will further attempt in the 20th chapter to show how, bearing in mind those general laws which he finds also to pervade the works of nature, and returning to her for fresh inspiration, we may yet go forward; and, whilst availing ourselves of the experience of all time, may be enabled to produce works in harmony with our own times, instead of blindly following in the footsteps of the past.

CONSECRATION OF WOOLWICH CEMETERY.—The new cemetery for Woolwich parish, situated about one mile from the town, was consecrated last week by the Bishop of Oxford.

PERMANENT LIQUID GLUE.—A good fluid glue, ready at all times for instant use without any preliminary preparation, is one of the most useful articles of stock with which the workshop can be furnished. To make such a glue, all that is necessary is to melt three pounds of glue in a quart of water, and then drop in gradually a small quantity of nitric acid. When this ingredient is added, the mixture is to be removed from the fire and allowed to cool. Glue so prepared has been kept in an open bottle for two years, still ready for use on the instant.—*Practical Mechanics' Journal.*

PARIS PRIZE MEDALS.—In a paragraph on this subject in the closing number of our last volume, Mr. Hamilton, of Glasgow, was mentioned as having received the Paris gold medal of the second class: we ought to have said Mr. Thomas Hamilton, architect, of Edinburgh.

BIRMINGHAM ART-UNION BALLOT.—The annual meeting of the Birmingham and Midland Counties Art-Union was held at the rooms of the Society of Artists, Birmingham, on Thursday before last. The report announced that this year the Art-Union has been supported to a greater extent than in any similar period since the Institution was re-organised. Lord Ward has consented to accept the office of president for the year 1856. The subscriptions during the year had realised the sum of 409*l.* 10s. The following were the prizes:—One of 50*l.*; one of 30*l.*; two of 25*l.*; two of 20*l.*; four of 15*l.*; ten of 10*l.*; and nine of 5*l.* The report and statement of accounts were adopted.

THE GLASGOW PEEL STATUE.—The committee met lately in Mr. Mossman's studio, and expressed themselves satisfied with the model which had been prepared, and agreed to adopt it, with a view to having it cast in bronze. It is understood that the casting will be executed in London.

FALL OF TWO DWELLING-HOUSES.—At Tetbury, two dwelling-houses in the centre of the town, opposite the White Hart hotel, fell down on Wednesday week. In a few hours the ruins were removed, when it was found that, fortunately, no one had been injured. The houses had been unoccupied for many years, and were in a very dilapidated condition.

THE ARTISTS AND AMATEURS' CONVERSAZIONE.—The meetings for the present year will be held at Willis's Rooms, St. James's, on Thursday, January 24th, February 21st, March 13th, and April 17th. Application as to membership may be addressed to Mr. Henry Ellis, the honorary secretary.

HUTS.—There are now in the course of erection at the Bradford Moor barracks, four huts, the design of Lieutenant-Colonel Stehelin, commanding royal engineer at York. They are of brickwork, 31 feet long by 20 feet wide, with slate roof. The entrance in the end is protected by a porch. Each hut will accommodate one serjeant and eighteen men, with cook-houses, wash-houses, &c. The work has been executed in twenty-one days, by Mr. Samuel Atack Musgrave, of Leeds, under the superintendence of Mr. E. Duley, of the Royal Engineer Department.

PRESERVATION OF WOOD AND IRON.—Messrs. Rey and Guibert, of Marseilles, have invented a composition to preserve wood and iron, called a submarine and preserving coating. This composition is formed of ten parts of sulphuret of copper, two of sulphuret of antimony, and from five to thirty of the best varnish. These matters are ground together like paints, and applied like them to wood or iron.

TENDERS

For building a chapel at Camberwell, for the Rev. W. P. Tiddy. Messrs. Habershon, architects. Rough quantities supplied by Messrs. Habershon:—

	With Benches Circular on Plan.	Ditto Straight.
Parkiss	£3,200 0 0	
Higgs and Cullenford	2,992 0 0	£2,925 0 0
Roberts	2,870 0 0	2,820 0 0
Bottomley	2,780 0 0	2,647 0 0
Marsland	2,757 0 0	2,698 0 0
Higgs	2,777 0 0	2,680 0 0
Avis	2,731 0 0	2,661 0 0
Thompson	2,730 0 0	2,645 0 0
Super	2,642 0 0	2,556 0 0
Wilson	2,580 0 0	2,540 0 0
Smith	2,580 0 0	2,530 0 0
Rudkin	2,560 0 0	2,514 0 0
Keast and Moon	2,545 0 0	2,445 0 0
Cooper	2,520 0 0	2,475 0 0
Rolfe	2,492 0 0	2,372 0 0
Fisher	2,468 0 0	
Colls and Co.	2,392 0 0	2,342 0 0
Constable	2,388 0 0	2,312 0 0
Downes	2,360 0 0	2,310 0 0
Tarrant	2,270 0 0	2,248 0 0

TO CORRESPONDENTS.

"M. H. F."—"C. and Co."—"T. G."—"J. E."—"H. E. K. jun."—"J. T. B."—"Mr. C."—"F. R. H."—"O. J."—"J. F. F."—"W. M."—"H. H. C."—"R. R." (the Society of Arts have not discontinued giving prizes. As to the Soane Museum, it is quite some change was made in the management of it).—"H. H. B."—"S. N."—"Rotherham."—"P. F. W." shall be glad to have a description).—"T. T. W. L."—"T. S. B." (shall be made use of).—"G. G."—"W. H. J." (application must be made to Sir Joseph Paxton.—"J. L."—"C. B. A." (not worth preserving away from the site).—"E. W. T."—"J. T."—"J. L."—"J. R." (we have no certain information).—"E. L. G." (next week).

"Books and Addresses."—We are forced to decline pointing out books or trades addresses.

NOTICE TO SUBSCRIBERS.—A title-page in colours for the last volume may be obtained *gratis*, on personal application at the Office, by those who prefer it to that which accompanied the index in the closing number. Covers for the volume may be obtained at the Office, price 2s. 6d. or the publisher will bind it for 3s. 6d. The complete volume may be obtained, price 21s.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *ded* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

ASSISTANT CLERK, BOOK-KEEPER, and COLLECTOR of PRIVATE IMPROVEMENT RATES. WOOLWICH, KENT. The Woolwich Local Board of Health will meet at the Town-hall, William-street, on TUESDAY Evening, the 29th JANUARY instant, at SEVEN o'clock, to elect a person (whose whole time will be required) to fill the above office. The remuneration to be Two Pounds per week. Security in two sums of 200l each. Applications to be made in the handwriting of the respective candidates, and sent under cover to me at this Office on or before TWELVE o'clock on SATURDAY, the 26th instant. The nature of the duties may be ascertained on personal application daily between TEN a.m. and TWO p.m.

By order of the Board, EDWARD SARGENT, Clerk.
Office of the Woolwich Local Board of Health,
William-street, 9th January, 1856.

BOARD of WORKS, FULHAM DISTRICT.—WANTED, a SURVEYOR.—The duties of the office will be all those contemplated by the Local Management Act, together with such other duties as may be requisite for carrying out the bye-laws of the Board. Salary, 200l per annum, and the gentleman elected will be required to reside in the district. Applications, stating age, accompanied with testimonials to character and ability, must be sent on or before TEN o'clock on MONDAY, the 21st inst. addressed to Mr. LOVELY, Clerk, Board of Works, Fulham District, 3, Albion-place, Hammersmith. Candidates will be informed of the time when their presence will be required by the Board.

MILE-END OLD TOWN.—The Vestry of this District will meet at the Town-house, on WEDNESDAY EVENING, the 16th of JANUARY instant, at SEVEN o'clock, to appoint a SURVEYOR at a salary of 200l per annum, and an INSPECTOR of NUISANCES, at 23s. per week, who will have to perform the duties generally required of them under the Metropolis Management Act.—Applications with testimonials, directed to the "Chairman of the Vestry," must be forwarded to this office, before TWO o'clock, on WEDNESDAY, the 16 th instant. Any further information may be obtained by applying to

E. J. SOUTHWELL, Vestry Clerk.

Town-house, near Stepney-green, January 8, 1856.

ORIGINAL ANCASTER STONE.—To QUARRYMEN.—The Ancaster Stone Merchant, Mr. JOHN WILSON, has a VACANCY for a FOREMAN

WANTED, as WHARF CLERK to a Lime, Cement, and Tile Wharf, a respectable Young Man, whose references as to character, ability, and integrity will bear strict Inquiry. An applicant possessing some knowledge of building materials will be preferred.—Address, M. W. care of Mr. Selby, Oilman, 38, Blackfriars-road, London.

WANTED, a well-experienced SHOP FOREMAN, of middle age and steady habits.—Apply by letter, stating where last employed, to A. B. Office of "The Builder."

WANTED, in a Builder's Office, a CLERK, who is capable of, and has been accustomed to, measuring, estimating, and making up accounts. A first-rate man is required, and a good salary will be given.—Apply by letter to R. S. Office of "The Builder."

WANTED, an ARTICLED PUPIL in the OFFICE of an ARCHITECT and SURVEYOR, at the west-end of London, of extensive general practice, and in doing two public appointments. Apply by letter to A. Z. Messrs. Dawson and Knibbs, 47, Mortimer-street, Cavendish-square.

TO PLUMBERS, &c.

WANTED, for a CONSTANT SITUATION, a THREE-BRANCH HAND. One who can undertake gasfitting preferred.—Address, K. D. care of Mr. Canburn, 4, Eastern-place, Camberwell.

TO BUILDERS AND OTHERS

WANTED, by a respectable Person, a SITUATION as CLERK in an Office, and is fully acquainted with bookkeeping, measuring up work, estimating, &c. being competent for the same. Satisfactory references will be given by the late employer for integrity and sobriety. Terms moderate. Would have no objection to partial employment, or otherwise. Address by letter, prepaid, to FIDELIS, at Mr. Miller's, Stationer, Bridge-road, Lambeth.

TO BUILDERS, CABINET-MAKERS, AND OTHERS.

WANTED, by a respectable Person, a practical Man, EVENING EMPLOYMENT, from SIX to NINE; on SATURDAYS, from TEN to NINE, to make up and keep books. The present Advertiser is collector of several house properties. Terms moderate. Apply to T. H. 5, Duke-street, Bloomsbury.

TO BUILDERS.

WANTED by an experienced Man, a SITUATION as SHOP or OUT-DOOR FOREMAN. Good testimonials can be had from one of the largest firms in town.—Address, O. P. Office of "The Builder."

TO SAW MILL PROPRIETORS

WANTED, a SITUATION, as a PLANING or MOULDING MACHINE WORKER, BENCH MAN, or SAW SHARPENER. Reference can be given for several years standing. Address, ALPHA, No 10, Sidney-street, near Mile-end-gate, London.

TO THE TIMBER TRADE

WANTED, by a Young Man, a SITUATION as WHARF CLERK, or SALESMAN, in a Mahogany, Timber, and Deal Yard, or to take the management of Saw Mills. Can be highly recommended. No objection to the country. Address, A. B Howland's Library, Willington-terrace, Harrow-Road.

TO BUILDERS AND PLUMBERS.

WANTED, by a Young Man, aged 29, a SITUATION as PLUMBER, PAINTER, and GLAZIER. Has been in the trade fifteen years.—Address, A. B Mr. Parks, Bridge-court, Westminster-bridge.

WANTED, a Situation as PLUMBER. Can do painting &c. if required. No objection to a good country job; and can give twelve months' reference from the last country job.—Direct A. B 85. New Compton-street, Soho.

TO ARCHITECTS AND SURVEYORS, OR BUILDERS

WANTED, by a young Man, aged 24, a SITUATION as CLERK, in either of the above Offices, being well acquainted with the general routine of both. A good draughtsman; understands measuring up work, and superintending same; drawing up specifications, taking dilapidations, keeping accounts, &c.; and has a good knowledge of building materials. Good references can be given. Address, M. B. S. Mr. Marcus, Stationer, No. 8, Oxford-street.

WANTED, by a Person of considerable experience, a SITUATION as FOREMAN of PLASTERERS. Has been accustomed to extensive buildings, &c. Can model, if required. Good reference as to ability, integrity, &c. can be given. No objection to the country.—Address, A. B. 116, York-road, Lambeth, Surrey.

TO PLUMBERS AND BUILDERS.

WANTED, by a Young Man, a constant SITUATION as PLUMBER. No objection to fill his time up with painting and glazing.—Address, C. M. 30, Boupel-street, Cornwall-road, Lambeth.

WANTED, by a Practical Man, a RE-ENGAGEMENT as BUILDER'S FOREMAN. The highest reference can be given.—Apply to J. S. 2, Millman-street, Guildford-street.

WANTED, by a Young Man, of good education and practical experience, a SITUATION as CLERK in the Office of a Builder.—Address, O. B. 71, Westmoreland-place, City-road.

IRON TRADE.

WANTED, by the Advertiser, aged 29 years, a SITUATION as BOOKKEEPER. He has been engaged in a large General Iron Manufacturing Firm, is perfectly acquainted with bookkeeping, both by single and double entry, all kinds of accounts, the making out and measurement of wares, and understands the different branches of the Iron Trade generally. Unexceptionable references will be given. Nine years' character from late employers.—Address, A. B. No. 1, Elizabeth-cottages Avenue-road, Bow.

TO MASONS, DIRECTORS OF CEMETERIES, &c.

WANTED, by the Advertiser, a SITUATION as LETTER-CUTTER, ORNAMENTAL WRITER, &c and MONUMENTAL MASON, and to make himself generally useful. Is a good artistic draughtsman and colourist.—Address, M. S 6, Evans-street, Upper North-street, Poplar, London.

TO ARCHITECTS

WANTED, a SITUATION in an Architect's Office (town or country), by an ARCHITECT'S ASSISTANT. Is a good draughtsman, accustomed to design, and well acquainted with the routine of the profession, both in and out of the office. Good testimonials. Salary moderate.—Address, E. C. office of "The Builder."

TO BUILDERS, CONTRACTORS &c.

WANTED, a SITUATION as CLERK, by a Young Man, aged 25, who has been similarly employed in a Builder's establishment the last two years (previously with an Architect); is well acquainted with book-keeping; a good plain draughtsman; accustomed to measure up work and superintend workmen, and the general routine of the office and yard. Good references.—Address, A. P. L. Post-office, 116, Edgware-road, Paddington.

WANTED, by a Gentleman of many years' experience, BUILDERS' ACCOUNTS to make up or quantities to price. Terms moderate.—Address, Mr. HARPER, Office of "The Builder."

WANTED, a SITUATION as FOREMAN of BRICKLAYERS, who has been ten years with his last employer. Can have good reference for character and ability. Age, 39.—Address, J. H. 14, Victoria-road, Starck-green, Hammersmith.

TO ARCHITECTS, OR ANY IN A SIMILAR PROFESSION.

THE Advertiser, aged 23, wishes for an ENGAGEMENT as DRAUGHTSMAN, &c. Can make fair and working drawings, and is a good penman. Highly respectable reference, &c. given, and a moderate salary required.—Address, Y. A. L. care of Mr. S. H. Cowell, Butter Market, Ipswich, Suffolk.

TO ARCHITECTS.—An ASSISTANT who has been nine years in the Profession, and has lately been engaged upon several first rate Buildings, is OPEN to an ENGAGEMENT. He is an excellent Draughtsman, and thoroughly understands detail and construction.—Address, G. G. 39, Michael's-place, Brompton

TO HOUSE CARPENTERS, IN TOWN OR COUNTRY.

TWO YOUTHS, aged 16 and 18, wish to be ARTICLED for three or more years to the bench, indoors. Small premium given.—Address, A. B 18, Victoria-cotta. e, Archway-road, Highga'e.

TO ARCHITECTS, &c.

THE Advertiser, who is a neat Draughtsman, thoroughly conversant with the duties of an Architectural Office, and can produce satisfactory testimonials as to character and ability, is desirous of an ENGAGEMENT.—Address, R. R 8, Thornhill-crescent, Islington.

TO ARCHITECTS, SURVEYORS, &c.

THE Advertiser is desirous of knowing upon what terms he can enter for further IMPROVEMENT with an ARCHITECT and SURVEYOR of good practice. He has considerable practical knowledge in building, can give the highest references, and would be glad to treat with a gentleman holding appointments, or of good practice.—Address to H. B. 6, Great Woodstock-street, Marylebone

TO BUILDERS.

THE Advertiser wishes for an ENGAGEMENT, as SHOP FOREMAN. He has had good experience in first-class joiners' work, and is capable of superintending it in all its branches. Good references given.—Address, F. J. 19, Warner place, Hackey-road.

TO ARCHITECTS, ENGINEERS, &c.

THE Advertiser, 19 years of age, has been nearly five years in the above profession, wishes for an ENGAGEMENT.—Address, W. H. L. Cook's Post-office, Nottinghill

OCCASIONAL or PERMANENT EMPLOYMENT WANTED, by a thorough practical SURVEYOR'S, BUILDER'S, or HOUSE-AGENT'S CLERK Address Z, 11a Heathcote-street, Gray's Inn-road.

A bound copy of the Contracts, Specifications, and Prices of Works for the Houses of Parliament for disposal

CLERK of WORKS wants a RE-ENGAGEMENT, which has had years' practical experience in Gothic detail, and other church building, as well as infirmaries and prisons. Is thoroughly competent to survey, level, and set out bridges, railways, cemeteries, &c. Good testimonials.—Direct, M. A. S. 14, Ranelagh-grove, Pimlico, London.

TO ARCHITECTS, &c.

AN Assistant, accustomed to prepare finished working and detail drawings and superintending works, wishes for an ENGAGEMENT, either temporary or permanent. Is thoroughly acquainted with building, and capable of preparing all drawings for, and superintending the erection of a large job.—Address, A. B 34. Aldersgate-street.

AN ARCHITECTURAL DRAUGHTSMAN is desirous of a RE-ENGAGEMENT in Town. Understands the getting out of perspective, finished, working, and detail drawings, &c. and the general routine of an office. Salary moderate.—Address, C. D. 9. Elizabeth-street South, Pimlico.

TO ARCHITECTS AND SURVEYORS.

AN ARCHITECT'S ASSISTANT (aged 23) is desirous of a RE-ENGAGEMENT. Has had considerable experience in preparing working and finished drawings, &c. Has no objection to town or country.—Apply by letter to A. Z. No. 8, Albion-terrace, Albion-road, Queen's-road, Dalston.

TO ARCHITECTS, SURVEYORS, &c

AN ARCHITECTURAL DRAUGHTSMAN, accustomed to prepare finished, working, and detail drawings, measure artificers' work, take out quantities, &c is desirous of a RE-ENGAGEMENT. Salary moderate; good testimonials.—Address, A. B. 3, Harvey-square, Folkestone.

A PRACTICAL CLERK of WORKS, accustomed to the charge of extensive works, is open to an ENGAGEMENT. First-rate testimonials of ability and integrity.—Address, B. B. Hope Coffee-house, Bell-alley, Moorgate-street.

TO BUILDERS AND OTHERS.

A YOUNG JOINER, from the country, wishes for IMPROVEMENT at the BENCH for one or two years. He has been six years at the trade. Moderate wages.—Address, R. D Post-office, Exmouth.

TO ARCHITECTS AND SURVEYORS.

A YOUTH, aged 18, with two and a half years' experience, is OPEN to ENGAGE in town or country. Can copy and prepare drawings, neatly; writes a good hand; and is quick at accounts. Good references from previous employers.—Address, K. Post-office, Worcester.

TO BUILDERS, AUCTIONEERS, AND SURVEYORS.

A RESPECTABLE YOUNG MAN requires a SITUATION as CLERK, in one of the above Offices. He has been for the last two years clerk to a builder in town, and previous to that served his time at the bench and in the office with a builder and surveyor. Aged 23 years. Salary required, 33s. per week.—Address, A. B. C. 217, Shoreditch.

TO ARCHITECTS AND BUILDERS.

AN experienced Practical Man is in WANT of a SITUATION as CLERK of WORKS, or SHOP or GENERAL FOREMAN. Can be well recommended by the gentlemen he has served in those capacities.—Address, G. H. 16, William-street, Waterloo-road, Lambeth.

TO SURVEYORS, BUILDERS, HOUSE AND ESTATE AGENTS, &c

A PERSON, thoroughly qualified, desires an ENGAGEMENT.—Z. 11a, Heathcote-street, Gray's Inn-road

A bound copy of the Contracts, Specifications, and Prices of Works for the Houses of Parliament for disposal.

TO BUILDERS AND OTHERS.

A PRACTICAL SURVEYOR offers his ASSISTANCE in measuring, estimating, or the making up of builders' accounts. Terms moderate and per agreement.—Address, X. Y. Office of "The Builder."

A GOOD practical Carpenter and Joiner, well versed in construction, a good draughtsman, can take out quantities, measure, &c. having completed an engagement, wishes for a SITUATION as GENERAL or SHOP FOREMAN, or CLERK of WORKS, or to take charge of a job in town or country.—Address, ALPHA, 27, Murray-street, New North-road, Hoxton.

TO CIVIL ENGINEERS AND SURVEYORS.

A THOROUGH PRACTICAL LAND SURVEYOR, of thirty years' experience in the field and the office, would be happy to meet with an ENGAGEMENT.—Letters addressed to L. S. 23, Lambeth-road, Southwark.

TO BUILDERS IN THE COUNTRY.

A YOUTH, aged 18, wishes to obtain a SITUATION in a Builder's Office, where he would also gain a practical knowledge of the business, his services for the first year being deemed an equivalent for his board and lodging. Has been three years in the business, and can produce good recommendations.—Apply by letter, prepaid, to B. C. 40, Amwell-street, Pentonville, London.

TO PARENTS AND GUARDIANS.

A CIVIL ENGINEER, with lucrative appointments at his disposal, is OPEN to receive a gentleman as well-educated YOUTH, as out-door PUPIL. Ample references offered, and a liberal premium expected.—Apply in the first instance, to Mr MEYRICK, 8, Bucklersbury.

A YOUNG MAN is desirous of a RE-ENGAGEMENT in a Builder's Office, who has filled a similar situation with London Builders for seven years. References unexceptionable.—Address, R. R. 47, Essex-street, Strand.

TO ARCHITECTS

A RESPECTABLE competent Person wishes to meet with a short ENGAGEMENT to SUPERINTEND WORKS in or near Town. The advertiser understands surveying, and making fair and working drawings. Salary not so much an object as occupation.—Address, Y. Z. A. Office of "The Builder."

A PERSON of experience is OPEN to an ENGAGEMENT. He is thoroughly conversant with every branch of the building trade. Can prepare designs, details, specifications; take out quantities; measure up and value works. Has also a good knowledge of House and Estate Agency, and valuations.—Address, Z. 11a. Heathcote-street, Gray's inn-road, N.B. For disposal, a Copy of the Contracts, Specifications, and Prices, for the New Houses of Parliament.

AN ARCHITECT'S ASSISTANT, of fifteen years' experience in the profession, is also an artist, possesses a thorough knowledge of construction, details, and perspective, accustomed to assist in competitions, designing ornamental details, and having the highest testimonials, is desirous of a RE-ENGAGEMENT, permanent or otherwise remunerative.—Address, A. Architect, Office of "The Builder."

TO BUILDERS.

A SURVEYOR, of great practical experience, offers temporary ASSISTANCE to BUILDERS, in Measuring up Works, Estimating, Pricing Bills, Quantities, Drawing, &c.; also is a first-rate Builder's Bookkeeper and Accountant, &c. Good References to Builders, &c. Terms strictly moderate.—Address, Mr. WILLIAMS, 30, Canterbury-place, Lambeth.

PARTNERTHIP.—A Gentleman is desirous of entering into PARTNERSHIP with an ARCHITECT of established practice. The advertiser is fully qualified to take an active part, having been some time in business on his own account; or would not object to entering an office for a short period on salary, previous to partnership. References given and required.—Address, J. A. H. care of Mr. Wheeler, Royal Exchange-arcade, Manchester.

PAVING, 2s. 9d. per SQUARE YARD.—Basements, Foot-walks, Malt-houses, Corn Stores, Floors of Warehouses, and every description of Pavement laid down at the above low prices, and the work guaranteed.

Apply to JOHN PILKINGTON, POLONCEAU'S BITUMEN PAVEMENT OFFICE, MONUMENT CHAMBERS, 14, FISH-STREET-HILL.

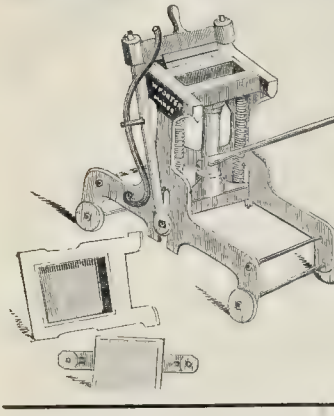
N.B. Country Agents, and Railway Engineers and Contractors, supplied with the best Bitumen for covering Bridges and Arches.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be entirely avoided. The Powdered White Zinc may be had for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Paint-dealers in Original Packages, each cask stamped—HUBBUCK—LONDON PATENT. And if not so marked, the quality is not guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.



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Made by WILLIAM PORTER,

ENGINEER, &c.

EAST BOND-STREET,

LEICESTER.

W. P. begs to inform Architects, Builders, Brickmakers, and Others, that he is now engaged in making very superior Portable Brick-pressing Machines, at considerably reduced prices.

The Boxes are lined with Brass.

TO BUILDERS and OTHERS.—BRICKS delivered at any part of the River up to Battersea-bridge, at the following prices, viz.:—Grey Stocks, 25s. per thousand; Grizzies, 30s. per thousand; Rough Stocks, 20s.; Place, 16s.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent

THE BEST HERTFORDSHIRE MALM SECONDS:
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY
MILLS and PRICE, 5, ADELAIDE-PLACE, London bridge.

THE KINSON CLAY-WORKS, POTTERIES, and FIRE-BRICK ESTABLISHMENT, near Poole, Dorset, for the every description of Sanitary Glazed Sewage-pipes, Closet pans, Furnace blocks, Fire-bricks, Gas-retorts, Crucibles, &c. &c.—The completion of the Kinson Pottery places the Proprietors in a position to supply Builders and the Trade generally with any quantities of the above description of Articles at moderate prices. The pottery is situate about a mile and a half from the town and port of Poole. It is worked by steam-power, and the pipes are made by the most approved patent machinery, and will bear favourable comparison with any manufactured in the kingdom. The brick-kilns have been tested, and are found fully equal in all respects to those manufactured at Stourbridge and Newcastle. All articles are made from the clays and materials found on the estate. There is an inexhaustible quantity of all descriptions of Dorset-shire Clays, used for pottery purposes, which can be supplied to the Staffordshire, North Country, and London markets, upon favourable terms
Lists of price and all other information will be furnished, upon application to Mr. T. W. GREEN, at the Works
London Agent: J. COX, 2 and 3, High-street, Lambeth.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—J. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants, Builders, contractors, and others supplied with every description of building material at the lowest market prices.

Depôt, Agar Wharf, King's-road, St. Pancras.

VITRIFIED STAFFORDSHIRE BLUE BRICKS, Paving, Roofing, and Ridge Tiles, Sanitary Pipes, &c Stourbridge Fire Goods, &c. of all descriptions, and of best quality.—WOOD and SON, Manufacturers, Portway, Old-bury, near Birmingham. Agent — Mr. J. UNWIN, Private Residence, 59, Nelson-square, Blackfriars-road.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.
Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and fluze, bricks, fire-goods, &c. can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

BRICKS.—200,000 STOCK BRICKS, delivered into trucks at Wimbledon Railway Station, at 25s. per thousand. Place Bricks, at 22s. Apply to J. D. 9, Town-wall street, Dover.

BRICKS.—TO BE SOLD, 300,000 very superior kiln-burnt FACING BRICKS, within a quarter of a mile of he railway station, price 28s. per thousand.—Apply to Mr. CORDEN, Fricter, Brentwood, Essex

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, for the machines sent at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

AN established BRICKFIELD TO LET, at Shepherd's Bush.—Apply on the Spot, to Mr. ROBINSON, No. 1, Oakland Villa.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7½ per foot; above 10o feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by FOUR years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.
Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PANTILES, PAVINGS, &c.—J. H. ANDREWS, Wisbeach, Cambridgshire, begs to offer pantiles at 32s. 6d. per 1,000; floor bricks and 4 inch pavings, at 35s. 6d. per 1,000; 8 inch pavings, at 37s. 6d. per 1,000; plain tiles, at 35s. per 1,000, delivered. Cash prices. Delivered on trucks in London or Eastern Counties Railway

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 681, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

ELMLEY CEMENT WORKS, ISLE of SHEPPEY, Kent.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME.
The LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements, at reduced prices, the material being excavated in its pure and unadulterated state, from quarries on their own property. The Company particularly recommend a trial of their XXXX Bath Cement, as far superior to any article now in the market. These cements can be sent by rail or shipp d from their wharf, direct to all parts.—Agents required, and a liberal discount allowed. Orders received by Mr. KIALLMARK, 80, Old Broad-street, City.

PORTLAND CEMENT WORKS NORTHFLEET, KENT.—Messrs. ROBINS and CO. with much pleasure announce to their Friends and the Public, that they have completed the enlargement of their works, in order to meet the great increasing demand for their Cement; and are now prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes Cement is applicable.—Orders received at Great Scotland-yard, and at the Works.

NOTICE.—Portland Street Lime, Limestone, Coal, Timber, and Sand Works, Walsall.—JOHN BREWER, senior, begs to inform his customers and the public generally, that he has retired from business, and transferred the same to his son, Mr. JOHN BREWER, junior, by whom the works will in future be carried on, and tenders his warmest thanks for the very liberal support he has so long received.
JOHN BREWER, junior, in soliciting a continuance of that support accorded to his father, begs to state that all commands will be promptly attended to, and goods sent to any part of the kingdom, either by rail, canal, or land carriage.
Orders received as usual by his traveller, Mr. WILLIAM ROBINSON, who will attend all the Corn-Markets; or at J. E.'s Lime and Coal Works, Vauxhall, Birmingham; and at the General Works, Walsall; to which latter place it is requested that all communications may be addressed.
A large quantity of spar for ornamental rockery work, &c. constantly on hand.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON and CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks, at their works, or free on board in the Port of Bridgewater.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured by these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 5, Upper Thames street, London; as I also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

PARIAN CEMENT, for Internal Use, to be painted in a few hours, and papered within a couple of days. FRANCIS, BROTHERS, Manufacturers of Roman Parian (under patent), and all other Cements in use for building purposes, Nine Elms, London

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light and Dark, equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

NOTICE.—M. H. BLANCHARD, 74, Blackfriars-road, London, Manufacturer of PLASTER of PARIS of a superior quality, suitable for Sculpturing, Architectural Embellishments, &c.—will not twist, warp, or give after set, but will retain its hardness and strength.

Superfine, per ton	£7 0 0
Fine	3 0 0
Coarse	2 10 0

Delivered for Cash to any of the Metropolitan Railway Stations, or within the Metropolis.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccos dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank street, Westminster.

TATHAM & CO.—No. 14, SOUTH WHARF, PADDINGTON.
BRICK, LIME, and CEMENT MERCHANTS,
SOUTHAM BLUE LIAS LIME DEPOT.
Bath, Portland, Lias, and Roman Cements; Parian and Keene's Cements, Plaster of Paris, Glazed Stoneware Sewage Pipes, Fire Goods, Vitrified Blue Bricks, White Building Bricks, White Enamelled Pans and Traps, and every description of Building Material.
N.B. Lump and Ground BLUE LIAS LIME delivered in boat-loads direct from the Works in Warwickshire, to any part of the river or canal

SOUTHAM BLUE LIAS LIME DEPOT, No. 14, SOUTH WHARF, PADDINGTON.
TATHAM & CO. have arranged for a constant supply of the above very superior BLUE LIAS LIME, which for the last two years has been extensively used at most of the large works constructed during that period on the new line, and any orders they are favoured with will command their best attention.
Boatloads of either Lump or Ground Lime can be delivered direct from the Works in WARWICKSHIRE to any part of the Rivers Thames or Lee, alongside any wharf on canal, or by boat or rail to any part of the kingdom.

PORTLAND CEMENT.—TATHAM & CO. are enabled to offer a very superior quality of this valuable Cement at a moderate price, and all orders addressed to No. 14, SOUTH WHARF, PADDINGTON, will receive the best and most prompt attention.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c

PORTLAND CEMENT.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

PORTLAND and ROMAN CEMENT, TERRA-COTTA POTS, &c.—J. M. BLASHFIELD begs to acquaint the Public that he has entirely CLOSED his Establishment on the Surrey side of the Thames, and that articles of his manufacture can only be obtained at his Works, Mill-wall, Poplar, or at his Warehouse, Pread-street, Paddington.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.

JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale Business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of best quality upon advantageous terms.—Application either at Harwich or to his Agent, GEORGE MORRIS, 20, New Ormond street, Queen-square, London.

MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester.—T. H. BOORMAN, WILD, and CO. beg to inform the public and trade generally, that they have completed their works for the manufacture of PORTLAND CEMENT, and from their contiguity to the river Medway, as well as the branch line of the South-Eastern Railway from Strood to Maidstone, a siding from which will be carried into their works, enabling them thereby to transmit any orders they may receive to any station on the before-mentioned line, and confidently hope they shall be able to supply the public with a first-rate article, in both cement and lime, on moderate terms. Persons sending orders for cement, are respectfully requested to say for what purpose it is required, and printed instructions will be affixed to the head of each cask.—Orders to be addressed to Mr. THOMAS WEEKES, Agent at the Works.

Agents in London:—Messrs. GEORGE POTTER and CO. Lime Merchants, Purfleet Wharf, Blackfriars; and 19, North Wharf-road, Paddington.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.

G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.

DAVIES and NORMAN, Agents.

Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.

GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c. IN EVERY VARIETY.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel street, Liverpool.

NOTICE.—BLUE LIAS LIME.—L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.

L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to insure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's-cross.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the quarry.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 20, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.

GIBBS, CANNING, and CO.'S BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.

ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.

SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

BATH CEMENT.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

FOR SALE, by PRIVATE CONTRACT, the unexpired term of Seventeen Years of valuable BRICK-FIELDS, in the parish of Little Thurrock, near Grays Essex, and known as the "Old Brick-fields," within a stone's throw of the railway, and close to the river. Ten acres are at present worked, and eleven more remain untouched. The rent payable for the ten acres worked is 2l. per acre, and the remaining to be taken acre by acre, as required, at the same rent. There is a royalty of 1s. 6d. per 1,000. Permission can be obtained to lay a tramway to the railway, the erection of which would not cost more than 150l. This is acknowledged by the highest authorities to be the finest brick-field in Essex, the brick-earth being 17 to 18 feet in depth.—Apply to F. W. 2, Willow-brook-grove, Trafalgar-road, Old Kent-road; or LUCKING and BURTON, Auctioneers, 4a, Orchard-street, Portman-square.

MATHEMATICAL DRAWING INSTRUMENTS.—JOHN ARCHBUTT, 20, Westminster-Bridge-road, Lambeth (near Astley's Theatre), begs to call attention to his Stock of Instruments manufactured by superior workmen. The prices will be found considerably lower than ever charged for articles of similar quality and workmanship. Rules, scales, tapes, &c. at equally low prices. An illustrated price-list will be immediately forwarded, free, on application.

N.B. A few New and Second-hand Levels and Theodolites always for Sale.

TO ARCHITECTS.

COMPETITION and other DRAWINGS.—Mr. THOMAS S. BOYS, Member of the New Society of Painters in Water Colours, and author of "The Picturesque Architecture of Paris, Ghent, Rouen," &c. and of "London as it is," offers his services in Tinting Backgrounds, Landscapes, Perspective Views, Interiors, &c. From the long experience he has had in such subjects, he is fully aware of the points essentially necessary to be attended to. Drawings and designs lithographed in a superior manner.—Address, Mr. BOYS, 32, Albany-street, Regent's-park.

DRAWING CLASSES.—The Architects, Builders, Civil Engineers, and Machinists' Drawing Classes, conducted by THOMAS J. HILL, Architect. Offices, 18, Old street, City-road. Subjects taught—Architectural, Mechanical, Ornamental, and Perspective Drawing; Taking out Quantities, Abstracting and Valuing the same, Preparing Finished Drawings in Water Colour, &c. &c. Detail prospectuses to be had at the Offices

DRAWING CLASSES.—24, Guildford-street, Russell square.—At this establishment Pupils are thoroughly instructed in Architectural, Civil Engineering, and Mechanical Drawing; Ornamental, Perspective, and Water-colour Drawing; taking out Quantities, Measuring, Estimating, &c. &c.—Terms, One Guinea per Quarter Prospectuses and full particulars may be had at the Offices.

ARCHITECTURE, CIVIL ENGINEERING, and SURVEYING CLASSES. Established by Messrs. HYDE, SMITH, and LEWIS, Architects, Civil Engineers, Surveyors, &c. For Preparing Gentlemen for Architects, Builders, Engineers, Surveyors, Draughtsmen, Measurers, &c. and for giving EVENING INSTRUCTION in Architectural, Civil Engineering, and Mechanical Drawing, Colouring, Shading and Tinting, Ornamental and Water-Colour Drawing, Perspective, Isometrical, and Geometrical Drawing, Making Finished and Working Drawings, Preparing Specifications, Taking out Quantities, Estimating, Measuring and Valuing Builders' Work, &c. &c. Terms:—Day Pupils, Three Guineas per Quarter; Evening Pupils, One Guinea per Quarter. There are no extras, the terms include the whole of the above, with the use of Drawing Boards, T Squares, Plans, Drawings, Models, &c. Prospectuses and full particulars may be had at the Offices, 24, Guildford-street, Russell-square.

MATHEMATICAL and COMMERCIAL SCHOOL, GODALMING, SURREY, Conducted by Mr. WM. MASON.—The course of study embraces—Religious instruction; English taught grammatically; writing; arithmetic and commercial accounts; history and geography; natural philosophy, or the science of common things; mathematics, including Algebra, Euclid, mensuration, and trigonometry; and elementary Latin. French and artistic drawing, by masters, are charged extra. Instruction in any of the following subjects, at a small extra charge, is given to those whose intended vocations render it desirable:—Mensuration applied to the measurement of timber, artificers' work, land surveying, and gauging; mechanics and mechanism; Book-keeping; perspective and plain drawing. Terms, thirty guineas.—References, prospectuses, and particulars, on application to the Head Master, at the School.

THE PHOTOGRAPHIC SOCIETY'S THIRD ANNUAL EXHIBITION will OPEN to the public on MONDAY next, JANUARY 7th, at the Gallery of the Society of Painters in Water Colours, 5, Pall-mall East. Open at Ten. Admission One Shilling.

TO LEAD MERCHANTS, PLUMBERS, and GLASS-CUTTERS.—TO BE DISPOSED OF, with immediate possession, the goodwill and fixtures of an old-established LEAD MERCHANT, PLUMBER'S, and GLASS-CUTTING BUSINESS, desirably situate in one of the leading thoroughfares in London, midway between the South-Eastern and South-Western Railways, now doing an extensive town and country trade. Capital house, with private entrance; shop and warehouses in rear. Rent, 55l.—Satisfactory answers will be given to persons applying to F. INDERMAUR, Auctioneer, 71, Union-street, Borough.

TO UPHOLSTERERS, CABINET-MAKERS, and DECORATORS.—TO BE DISPOSED OF, by the assignees, on advantageous terms, by PRIVATE CONTRACT, the GOODWILL of the TRADE, as carried on by Thomas Henry Taylor, at 4, Bank-terrace, Broad-street, Birmingham, together with the whole of the finished and unfinished STOCK, consisting of first-class goods, of the best design and latest patterns. The establishment has obtained an extensive local celebrity by the superior style and finish of its productions.—Apply by letter, to Messrs. CHAPLIN, RICHARDS, and STUBBIN, Solicitors, or to Mr. GEORGE JABET, Solicitor, all of Birmingham.

TO ARCHITECTS.—TO BE DISPOSED OF, an ARCHITECT'S PRACTICE, which has been established four years, in a large and rapidly improving market town, in the West Riding of Yorkshire.—For particulars, application may be made to Mr. J. W. BLAKELEY, Solicitor, Dewsbury.

TO ENGINEERS, BRASSFOUNDERS, and OTHERS.—A good BUSINESS in the above line, established many years, and in full work, for IMMEDIATE DISPOSAL. The connection is large and safe, and the business capable of increase, and would suit any one or two persons having 5,000l. or 6,000l. A precious knowledge of the business is not indispensably necessary. Most satisfactory reasons will be given for the sale.—For further particulars, apply to Messrs. EDWARDS and SMITH, 19, Great Carter-lane, Doctors' Commons.

BUILDER'S BUSINESS, in Westminster, TO BE DISPOSED OF, with extensive premises, comprising suitable erections, workshops, sheds, store-rooms, and offices, for carrying on a large trade. The connection is an old-established one, and will be parted with for a moderate premium to any one taking a lease of the premises, and the stock and plant at a valuation.—For particulars and terms, apply to Messrs. EVERSFIELD and HORNE, Auctioneers and Estate Agents, 80, Parliament-street.

TO ENGINEERS, MACHINE MAKERS, and OTHERS.

CHARLES MACINTOSH and CO. Patentees and Manufacturers of the VULCANIZED INDIA-RUBBER in all degrees of elasticity, recommend this material as capable of sustaining the action of hot or cold water, gas, steam, acids, and grease. It is used extensively for valves in marine and land engines, railway buffers and springs, washers for pipe-joints, hose and tubing; also for gas-holders, sand pumps, alkali cisterns, &c. &c. Articles, moulded or otherwise, made to any size or figure.—Address, 3, Cannon-street West, London; and Cambridge-street, Manchester.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Dying-dresses of superior make, and improved Vulcanized Rubber Supplejacket for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT. —"Second Testimonial.—" March 9th, 1852. In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

TO BUILDERS, CARPENTERS, &c.—Mahogany, 6d. per foot.; F. Walnut, 7d.; Yellow Deals, 4s.; 2l. Yellow Battens, 12l. 10s. per 120; Spruce, 3s.; 12 feet 3 inch by 11 Pine Plank, 4s.—Cartage free to any part of town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth-walk.

TO BE SOLD for CASH, about 300 loads of fresh DANTZIC TIMBER. 300 loads of full-sized, at 70s. per load; and 100 loads of undersized, at 60s.—Apply to ALFRED ROSLING, Southwark-bridge Wharf, Bankside.

AT the LOWEST PRICES.—SAMUEL PUTNEY has much pleasure in informing the Trade, that notwithstanding the recent advances, he is still enabled to quote the following low prices:—

Yellow Deals, from	£24	0 per 120
Spruce ditto "	18	0 "
Yellow Battens "	12	10 "
Pine Plank, 12 ft. 3 in. by 11	24	0 "
Honduras Mahogany, in logs, 5d. per foot.		

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a postage-stamp.—Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

MOULDINGS by MACHINERY, to any Design, carefully packed and sent to all parts of the country.

Address, E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
King's-road, Chelsea, and Wilton-road, Pimlico.

SEASONED FLOORING.—GEO. NOKES and CO. (late Archbutt and Atkinson), beg to acquaint builders and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash:—

½ inch White, 13s. 6d. per square.		½ inch Yellow, 15s. per square.	
¾ ditto	16s.	"	¾ ditto	16s. 6d.	"
1 ditto	18s.	"	1 ditto	20s.	"

Laths, 36s. per load.

Also Timber, Deals, Planks, &c. Mouldings by machinery in the following low prices:—very great variety.

ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned, and ready for use, from ½-inch to 1½-inches thick, in Wainscot, Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Cills, Plauk, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

A CORN TIMBER WHARF.—At RICHARD MAY'S extensive Waterside Premises and Saw-mill, Canal Bridge, Old Kent-road, builders and others can be supplied with all kinds of FOREIGN TIMBER; planks, deals, and battens on sale, direct from the importers; prepared floorboards, mouldings, pine and cut deals, slating battens, laths, English oak plank, and sash-sills, at reduced prices for cash. The Monthly Price Current forwarded on application.

NOTICE.—IMPROVED WOOD MOULDING MILLS and MARBLE WORKS.—J. SIMMONS begs to acquaint his customers and friends that in consequence of the increased trade and patronage he is continually receiving, he has found it necessary to have larger premises for the manufacture of his IMPROVED WOOD MOULDINGS, which are acknowledged by the principal large firms, architects, and others, who have used them, to be the best ever produced by machinery. J. S. in returning thanks for the liberal patronage already bestowed upon him, begs to call attention to his large stock of mouldings now on hand. Marble chimney-pieces, monuments, tombs, and every description of marble and stone work also manufactured by patent machinery. NEW WORKS, No. 30, BRIDGE-TERRACE, HARROW-ROAD, PADDINGTON, about 100 yards from the Great Western Railway Bridge. New Price Lists will shortly be ready; to be had on application, or if forwarded, by enclosing six postage-stamps.—Please note the address:—J. SIMMONS, BRIDGE-TERRACE, HARROW-ROAD, Paddington, near the Great Western Railway Bridge.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s. per foot super., together with every particular of its cost and adaptation, may be obtained of Mr. BURT, 2, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

MACHINE CARVING, JOINERY, and MOULDING WORKS, Belvidere-road, Lambeth.—The Proprietor of the above works begs respectfully to apprise the nobility, clergy, architects, builders, cabinet-makers, and trades generally requiring Carved and Moulded Works, that he is now enabled to execute any orders that may be entrusted to him with the utmost promptitude. Every description of Carved Work and Tracery, touched out by the machine for the trade only. Pulpits, Lecterns, Reading-Desks, Screens, Altar-Rails, Tables, Chairs, &c. executed at the shortest notice. Specimens of Carved Work, suitable for various purposes, can be seen at the Works, and Estimates furnished upon application.

FRENCH POLISH and SPIRIT VARNISHES made from Methylated Spirit, 62 over proof.

Best French Polish	6s. 6d. per gallon.
Spirit Varnish	6s. 6d. "
White French Polish	10s. 0d. "
Methylated Finish	4s. 6d. "

By JAMES SLIPPER, 97, Leather lane, and 14 and 15, Dorrington-street, Holborn, London.

STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NO SKILL, and will stand the exposure to the weather. Price 6s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 44, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

ROYAL POLYTECHNIC.—CHRISTMAS HOLIDAYS.—INEXHAUSTIBLE NOVELTIES. The Second Part of the Voyages of Sindbad the Sailor, with new and beautiful Dissolving Pictures, designed and painted by H. G. HINE, esq. and description, with Songs, by Lenox Horne, esq.—Series of astonishing Conjuring Tricks and Delusions by Mr. Burnside.—Brilliant Popular Lectures on Flame, Fire, and Combustion, by J. H. Pepper, esq.—Fifth Gratuitous Distribution of the Ornaments of the Giant Christmas Tree, on Wednesday, Jan. 16th, at 1 and 7, being the Special Juvenile Morning and Evening of the week, for which great amusements will be provided.—Also, a Grand Extra Juvenile Morning, Saturday, the 19th, at 12.

DRAUGHTS ROUND DOORS and WINDOWS.—GREENWOOD'S PATENT INDIA-RUBBER STOPS, to supersede list or leather, for the purpose of keeping out draught round doors, windows, closets, show-cases, &c. making the same air-tight. Price 4d. per foot. Spring Slides for bottoms of doors, 4s. each.

JOHN GREENWOOD, Carpenter, 10, Arthur-street West, London-bridge.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET,

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly seven years, and having largely supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.—The New Vestry Hall, Wellington-street, Strand; Barracks, Regent's Park-yard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established in Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices. NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERY ASSOCIATION.

TO WATER COMPANIES AND PLUMBERS

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cock, or wire.

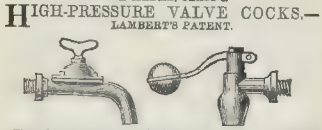
LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

PRIZE MEDAL, CLASS 3.

HIGH-PRESSURE VALVE COCKS.—

LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, baths, stages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

ENGINES.—For SALE, THREE 12-horse

high-pressure horizontal ENGINES, admirably suited for winding; 13-inch cylinders, metallic pistons, either with or without boiler. Also two powerful double-purchase CRABS, capable of lifting 30 tons each. Also a wrought-iron TANK, 30 feet by 4 feet, by 4 feet, ¾ plates.—Apply, by letter, to No. 20, BOX, Postoffice, Derby.

PUMPING MACHINERY. — Lifting and

Forcing Pumps, Patent Centrifugal and Double-acting Pumps, deep Well Pumps, Steam-Engines (portable and fixed), Hydraulic Rams, Water Wheels, and every description of machinery, of the most improved construction, manufactured and supplied by GWYNNE and CO. Hydraulic and Mechanical Engineers, Essex-wharf, Strand, London.

PORTABLE STEAM-ENGINE. — A new

8-horse PORTABLE STEAM-ENGINE, with tubular boiler, for SALE.—Can be seen at work at Mr. GOODWIN'S, 67, Great Guildford-street, Southwark, of whom particulars may be obtained.

PUMPING and WINDING ENGINE.—

TO BE LET ON HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 99, Blackfriars-road.

WARNER'S PATENT

VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	and 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 6	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron	2 8 0
3½ „	ditto 3 6	flanged pipe,	2 13 0
4 „	ditto 3 6	as required	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of copper and sinks in washhouses with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

R. RICHARDS and CO.

PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

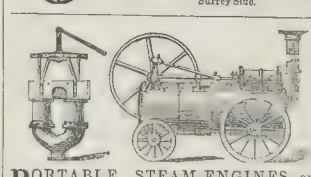
PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

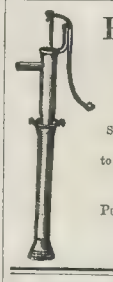
Iron Pails 2s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.



PORTABLE STEAM-ENGINES and

PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).



B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels.

Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes,

to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

WANTED to PURCHASE, a good, strong

HORSE, CART, and HARNESS, complete, suitable for a builder.—Apply by letter, to A. B. 43, Wilmington-square, N. dealer need apply

TO MANUFACTURERS, BREWERS, or Persons employing any description of Furnaces; and Potters, China, Brick, and Tile-makers, interested in the "Smoke Question."

HANDS'S PATENT, for the economy of

fuel, consumption of smoke, and ventilation, will be in full work on WEDNESDAY, the 23rd JANUARY instant. Any person interested, desirous of seeing the same in action, may apply, if by letter prepaid, to Mr. JOHNSON HANDS, Epsom, where the above can be seen by appointment only.

On the 21st of December last, HANDS'S PATENT ECONOMISING KILN was at work in the drying-chamber that contains 55,500 cubic feet space; thermometer stood at 70 degrees; out of doors 15 degrees below Zero.

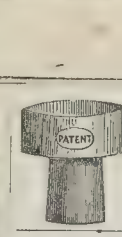
HANDS'S PATENT ECONOMISING

KILN is the only simple and effectual mode to use the heat, for drying moist moulded clays, equal at any season, in time of burning and cooling the kiln, with perfect ventilation.—Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TO THE COMMISSIONERS OF THE BOARD OF HEALTH AND TO ALL PERSONS INTERESTED IN THE SMOKE QUESTION

HANDS'S PATENT is the only simple and

certain remedy for the SMOKE NUISANCE: it has combined, where necessary, the advantages of a drying process and perfect ventilation, without a particle of complicated machinery. Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.



SMOKY CHIMNEYS

CURED EFFECTUALLY for TEN SHILLINGS, by SUTERS' PATENT WIND-GUARD.—This Guard allows free egress to the smoke, prevents the wind from driving it down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

To be had of Ironmongers and Builders; and of the Patentee, at his Office, 55, Fenchurch-street, London.

By Her Majesty's Royal Letters Patent.

DUPREE and CO.'S

DEFIANCE WINDGUARD and VENTILATORS, &c. for the perfect cure of Down-draft Smoky Chimneys, suitable for Public and Private Buildings requiring a constant change of air.

Also

SHIP VENTILATORS, requiring no attention, imparting about six times the quantity of fresh air than any other in use.

Also

VENTILATING ROOF LIGHTS, for Slate or Tile Roofing, without Paint or Putty.

Prospectuses sent on application.

London Depôt: ESNOUT and MANGER, 11, Mincing-lane, City.

LESS FUEL, MORE STEAM, and NO

SMOKE.—GARDNER'S PATENT SMOKE CONSUMER is self-acting, easily fixed, improves the draught, and saves fuel. It is applicable to all kinds of furnace boilers, as, manufactories, locomotives, and open fires, and entirely removes the smoke nuisance.—Apply at the Patentee's, 34, Norfolk-street, Middlesex Hospital, or to BURRIDGE and HEALY, 118, Dorset-street Fleet-street.

H. DOULTON & CO.'S TERRA-COTTA CHIMNEY-TOPS

Well withstand the action of the Weather and the Breeze, and are

QUITE IMPERISHABLE.

Prices not much higher than Cement.

DOULTON & CO.'S TERRA-COTTA POTS, &c.

Erected in London upwards of 20 years since, are now as sharp and perfect as when first manufactured.

Drawings supplied as to

H. DOULTON & CO. High-street, Lambeth.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an

EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 8s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BRUTHERS, sole Manufacturers, 196, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

THE VIEILLE MONTAGNE ZINC

MINING COMPANY'S PURE PATENT WHITE ZINC PAINT is unequalled for permanency of colour, hardness, and brilliancy of surface, it is unaffected by sulphurous or any other vapours or emanations. Being completely innocuous and free from the pernicious effects of white lead, it may be employed in all apartments whilst in use without any inconvenience to the inmates.

The greatest caution is recommended to avoid any spurious compounds that might be sold at cheap rates as Pure Oxide of Zinc. If any adulteration has taken place in the oxide, either in consequence of impurity in the material primarily made use of to produce it, an imperfect mode of production, or by mixing with the oxide certain substances calculated to give it increased weight, it then produces a very inferior instead of a very superior paint, and the economy realised by the purchasers of such oxides becomes a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the VM mark—in Hull by Messrs. BLUNDELL, SPENCE, and CO.; when ground and dry, by Messrs. T. B. MORLEY and CO. and by the Company's Grinding Agents in London, Messrs. CHARLES DEVAUX and CO. Wholesale Agents, 66, King William-street, City; and by the Manufacturing and Painting Agent, Mr. FREDK. BEARY, Pitsroy Works, Newroad. In Manchester and Liverpool, by R. CLAY, 8, Mersey-street, who is the acknowledged Painter to the Company for Zinc Paints, and undertakes painting ships, warehouses, dwelling-houses, &c. in Leith, by Messrs. R. ANDERSON and CO. Timber-bush; and in Southampton, by Mr. H. J. BUCHAN. Dry OXIDES and PAINTS, in kegs of 14, 21, and 28 lbs. and upwards, to be had of the Company's Agents in Birmingham, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and the Isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with Zinc Paint by contract.

For further particulars, apply to the Company's General Agency in London, 13, Manchester-buildings, Westminster.

TERRA-COTTA WORKS, Blackfriars-road,

London.—The PRIZE MEDAL for MATERIAL and WORKMANSHIP in TERRA-COTTA to M. H. BLANCHARD, late of Coades' Original Works, and successor to them in the manufacture of this invaluable material, that has been so successfully adopted for nearly a century in this country, by our eminent architects and others, in the decoration of our public buildings, and is the only tried material that is capable to stand the ravages of time unimpaired. Groups, Statues, Vases, Fountains, and Architectural Embellishments, at prices and a quality that will defy competition. A large Stock of newly-designed Chimney Shafts and Pots, to suit the various styles of buildings, at very low prices, and worthy of notice.

BLASHFIELD'S PATENT TERRA-

COTTA, Manufactured at Mill-wall, Isle of Dogs.—Capitals, Consoles, Tracery for Parapets, Balusters, String Courses, Friezes, Bas-relievi, Vases, Statues, Chimney-shafts, and all other Architectural Ornaments modelled, finished, and burnt, in the best manner, and warranted to stand heat and frost, either in Buff or Red-coloured Terra-cotta.—A great variety and large stock may be seen at BLASHFIELD'S Warehouse and Show-rooms, No. 1, Praed-street, Paddington.

STEPHEN GREEN, IMPERIAL POTTERIES, LAMBETH.

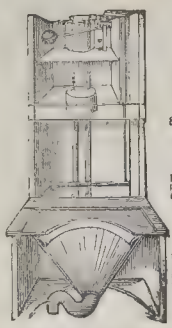
Superior Glazed Stoneware Pipes, Bends, Junctions, Traps, &c. Hopper and other Pans, with best White Glaze inside.

Pan, 3s. 6d.

Trap, 2s.

Syphon Pan, with or without STEPHEN GREEN'S Patent Air-tight Valve.

Registered Flushing Basin,—the most effective Syphon-trap yet offered to the public.



IMPORTANT TESTIMONIALS

TO THE EFFICIENT WORKING OF

STEPHEN GREEN'S

PATENT SYPHON FLUSHING BASIN,

AND

SELF-ACTING CLOSET CONNECTIONS.

Oxford, November, 1849.

GENTLEMEN,—Sixteen of your Closets having been put into operation at Christ Church College, I have great pleasure in giving you my testimony as to their efficiency and simplicity.

HENRY J. UNDERWOOD, Architect.
R. S. HOGGAR, Engineer.

Royal Arsenal, Woolwich, June 24, 1852.

GENTLEMEN,—I have much pleasure in giving my testimony in favour of your Patent Syphon Flushing Basin, with Self-acting Closet Connections. There are several fixed here, which have been in use for upwards of twelve months, giving perfect satisfaction.

I am, Gentlemen,
Your obedient Servant,
WILLIAM CARTWRIGHT.

This effective article has not any Crank or Wire to get out of order, and is all complete and ready for use, and may be seen in operation at STEPHEN GREEN'S Manufactory, Lambeth.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

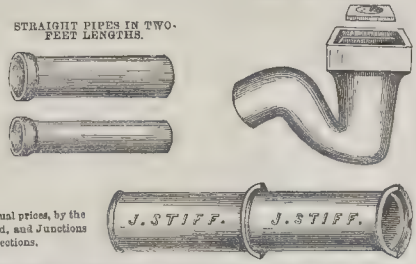
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

IMPROVED WATER-CLOSET PANS AND TRAPS, WHITE INSIDE.

Pan, 3s. 6d. Trap, 2s.

IMPROVED YARD-SINK.

STRAIGHT PIPES IN TWO-FEET LENGTHS.



HALF-SOCKET PIPES, in 2 feet lengths, at usual prices, by the use of which, Drains may be readily examined, and Junctions inserted, in the event of requiring further connections.

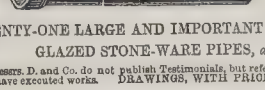
May be had also at Messrs. GLADDISH'S LIME WHARFS, Pedlar's-acre, Westminster-bridge, City-road Wharf, City Basin; Dock-head, Bermondsey; Danver's Wharf, foot of Battersea-bridge, Chelsea; Pratt Wharf, King's-road, Camden New Town; J. TURNER, 9, South Wharf, Praed-street, Paddington; COLWILL, Brothers, 92, Brydges-street, Covent Garden; and at EDWARD COCK'S 91, Wardour-street, Oxford-street. Drawings and List of Prices will be forwarded free on application.

HENRY DOULTON AND CO. MANUFACTURERS OF GLAZED STONE-WARE DRAIN-PIPES.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; AND SMETHWICK, NEAR BIRMINGHAM,

OFFICES: HIGH-STREET, LAMBETH, LONDON.

SOCKET.



HALF-SOCKET.

TWENTY-ONE LARGE AND IMPORTANT TOWNS HAVE BEEN DRAINED WITH DOULTON'S GLAZED STONE-WARE PIPES, *and in no case has the slightest failure occurred.*

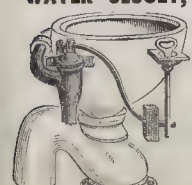
Messrs. D. and Co. do not publish Testimonials, but references can be given to any of the Engineers and Surveyors under whom they have executed works. DRAWINGS, WITH PRICES, MAY BE HAD ON APPLICATION AS ABOVE.

JOHN DOULTON, BROTHERS, AND CO.
LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF
DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

WATER-CLOSET, WITH APPARATUS COMPLETE, FOR 13s. 6d.



DOULTON & WATTS,
LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

SUPERIOR GLAZED STONEWARE DRAIN PIPES, invented and manufactured by WILLIAM NORTHEN, UNION POTTERY, No. 14, VAUXHALL-WALK, LAMBETH.

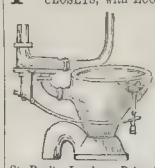
W. NORTHEN begs to inform surveyors, contractors, builders, water companies, &c. that he has completed "Spencer's" new patent machinery for making GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, ELBOWS, SYPHON-TRAPS, &c. &c. Amongst the many advantages of pipes made by this machinery over all others may be mentioned, that it insures perfect uniformity in form and size, both of pipes and sockets, the dies being of a different and better construction than any others now in use; and the pipes and sockets being made by one process are secure from separation.

W. N. invites particular attention to the superior quality of the glaze used in his manufacture, which is equal to glass, and rendering stoppages in the drains impossible.

W. NORTHEN'S PIPES MAY BE INSPECTED AT THE FOLLOWING PLACES, WHERE ORDERS ARE RECEIVED:—

Martin and Wood's Market Wharf, Regent's-park Basin.—J. C. Hilton's, Crown and Horse-shoe Wharf, No. 6, Upper Thames-street.—Millwood and Co.'s Wharfs, Kennington Basin, and Creek Wharf, Hammersmith.—J. Corbet's Depôt, Britten-street, Chelsea; and at the Pottery.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE POWERFUL FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 32, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.



SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Slabs, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.—This ware, allowed by all to be of the best manufacture, by the unparalleled quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES

3 inch bore, in 2 ft. 6 in. lengths, at				3d	per foot.
4	"	"	"	4d.	"
6	"	"	"	6d.	"
9	"	"	"	9d.	"
12	"	"	"	1s. 3d.	"
15	"	"	"	2s. 6d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture. And it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

THE STAFFORDSHIRE SANITARY POTTERY COMPANY.—Proprietors, E. F. WINSTONE and Co.—Manufacturers of glazed water-closets and urinals (buff stone outside, and white enamelled inside), and every description of pan basins; also vitrified and glazed sewer pipes, &c. Great College-street, Camden-town, London, late of Pickard-street, City-road.

VICTORIA POTTERY, LEIGH, NEAR SOUTHEND, ESSEX.

DAVID MOUNTAGUE,
MANUFACTURER of superior GLAZED STONEWARE PIPES (in accordance with the rules established by the Commissioners of Sewers), Bends, Traps, Closet-pans, Jars, Bottles, and every article in Stone Ware on advantageous terms. Also MANUFACTURER of superior Roman Cement and Plaster of Paris at Orchard House, Blackwall. Orders executed from the above places, from Falcon-wharf, 80, Bankside, Blackfriars, and from Harrow-bridge-wharf, Stratford, Essex.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

SALES BY AUCTION.

IN BANKRUPTCY, SOUTHWARK.—WATERSIDE PREMISES. TO BUILDERS AND OTHERS

MR. T. S. SMITH has received instructions from the Assignees of Mr. W. H. Burgess, to SELL by AUCTION, at the MART, on THURSDAY, JANUARY 24th, at TWELVE (unless previously disposed of by private contract), the LEASE, for an unexpired term of about nineteen years, at a moderate rental, of a WATERSIDE THREE FLOOR WAREHOUSE, distinguished as "British Wharf," Glink-street, Southwark. May be viewed, and particulars, with conditions of sale obtained on the Premises; at the Mart; of Messrs. LAWRANCE, PEAKES, and HOPER, Old Jewry Chambers; and of the Auctioneer, 44, Lombard-street, and Upton, Essex.

SURREY CANAL BANK, near the Commercial Docks, Rotherhithe.

MR. J. ASHFORD will SELL by AUCTION, on MONDAY, JANUARY 14, 1856, at TWELVE o'clock, about 1,000 loads of Mr. Mould's TIMBER, capitally seasoned, in a variety of scantlings, stoves, ranges, &c.; several excellent columns and pilasters, quantity of fencing, a large quantity of fir firewood, and miscellaneous items.—On view the morning of sale. Catalogues may be had on the Premises, and of the Auctioneer, &c. High-street, Deptford.

Eligible Freehold Building Ground, Croydon and Peckham; Land say, Reference.

VENTOM and SON have received instructions from the Trustees and Executors under the will of the late Mr. William Davis, to SELL by AUCTION, at the MART, near the Bank of England, on THURSDAY, 24th of JANUARY, 1856, at TWELVE o'clock, in two lots: lot 1, 3a. 1r. 8p. of FREEHOLD LAND, having a frontage next the high road from Selsdon to Croydon of 248 feet, on which are two cottages, stable and yard, and a piece of ground on the road, 1¼ mile from the station at East Croydon, and 2 miles from the West Croydon station, having good building materials. The property abounds with malm earth to the depth of 15 feet, and also with chalk, admirably adapted for making bricks and lime, for which purpose it has been used by the late Mr. Davis and his Son up to the last few months. There is also a large supply of gravel. Lot 2, 9a acres of Freehold Land, particularly adapted for building purposes, and containing earth well adapted for brick-making, for which it has been used by the late Mr William Davis for the last ten years; and in situate in Crabtree Shot-road, leading from Hill-street, Peckham, to the Lordship-lane, in the parish Kent-road.—May be viewed, and printed particulars, with plans, had of Joseph Taylor, on the Ground, at Croydon; of Mr. Peters, Crown Inn, Croydon; Red Cow, Peckham; Marlborough Arms, South street, Camberwell; Elephant and Castle, Newington Butts; of Messrs. Gregson and Son, Solicitors, and of Messrs VENTOM and SON, Auctioneers, Angel court, Throgmorton-street; and at the Auction Mart.

42 UNION STREET, SOMERS TOWN.

MR. LEREW will SELL by AUCTION, on the PREMISES, as above, on MONDAY, the 14th of JANUARY, at PLETN for TWELVE o'clock precisely, 2,000 YELLOW, WHITE, and PINE PLANKS, DEALS, and BATTENS, 180 squares of yellow and white batten flooring, 12,000 feet quartering, 8,000 feet wide pine boards, large quantity of fir cut stuff, 70 four-panel and sash doors, 30 new deal cased frames, with sashe lines, iron weights, brass pulleys, screws and 3 weights, fence with bellows, anvil, sawbenches, ladders, barrows, four workbenches, factory clock, truck, old materials, ironwork glass, &c.—May be viewed and catalogues had on the Premises; and at the Auction Offices, Cardington-street, Hampstead-road.

FRENCH AND ENGLISH.

MR. EDWIN WHITE will SELL by AUCTION, without reserve, at 17, BISHOPSGATE STREET WITHOUT, on WEDNESDAY, JANUARY 16th, 1856, at ONE precisely, about 500 PIECES of the most fashionable PAPERHANGINGS, in numerous elegant patterns; a consignment (just from Paris) of several hundred pieces of superb French hangings and decorations, including rich corners, borders, centres, and fillings, in new and chaste designs, for the forthcoming season; about Twenty Marble Chimneypieces, and upwards of Three Gross of Painters' and Plasterers' Brushes.—On view the day prior and morning of Sale, when catalogues may be had.

CROYDON, SURREY.—Builder's Stock and Trade Utensils.

MESSRS. BLAKE will SELL by AUCTION, at the PREMISES, High-street, on WEDNESDAY, JANUARY 23, and following day, at ELEVEN o'clock each day (by direction of Mr. Alfred Cripps), the capital STOCK in TRADE, comprising 100 squares of prepared floor boards, 350 dry deals, planks, and battens; a large quantity of rods and laths; 10 tons of iron, pegtiles, 2,000 bricks, six and a four panelled doors, sashes and frames, oak sash-sill, scantling and plank, elm boards, foreign fir, in logs and scantling; sawn fence and gate posts and rails, 2,000 coils of Lambe's saddle-boards, poles, ladders, wheelbarrow planks and barrows, stone blocks, worked copings and sills, York and Portland paving, sinks and chimney pieces, plain and plain tiles, quarry tiles, light and brasswork, iron repository, benches, timber wheels, jacks, handtrucks, iron pump, four builders' carts and harness, capital light spring cart, sets of harness, six full second-hand bedsteads, and numerous effects.—May be viewed the day before the sale, and catalogues had on the premises; at the Inns in the neighbourhood; at Garraway's Coffee-house, Change-alley; the Artichoke Inn, Newington-causeway; and of Messrs BLAKE, Croydon

N CHANCERY.—"Gough v. Hunting," "Hunting v. Gough." To Planofortes Desiring Improved Properties of Saw mills, and Others.—The valuable Patent Right for Cutting Thin Veneering) Veneers, whereby fully double the number of Veneers of an equal thickness are obtained from the log than are obtained from the use of the Saw; together with all the Patent Machinery, Steam-engine, Boiler and Gear for making the same, as also the Lease of the Premises, &c.

MESSRS. PRICE and CLARK will SELL by AUCTION, on the PREMISES, known as Battersea Bridge Wharf, on the Kingsland Road, London, on THURSDAY, FEBRUARY 7, at TWELVE for ONE o'clock, by order of the High Court of Chancery of the Rolls, the QUEEN'S ROAD LIMITED PATENT, granted to William Keogh and another for "IMPROVEMENTS in the MANUFACTURE of VENEERS and in Machinery and Apparatus connected therewith," dated 26th October, 1853, being one of the most ingenious and important inventions of modern times, alike valuable for its economy in labour, and for the production as to the beauty and superiority of its veneers, whereby a saving of one-third, from cold cut to thirty-two veneers of any thickness, and from a section of 1 inch to half an inch as well as the most delicate veneers, can be produced by the same machine, at a speed of 300 cuts per minute, and that by one man, and at considerably less cost: together with the patent cutting machine as now in use at a very large expense, and in twelve power steam engines and boilers, and the gear for working same and connected therewith; also the lease of the very commanding premises, comprising a timber-yard, machine-room, engine-house and warehouses, counting-house, and a capital dwelling-house, which is held for a long term at a moderate rental. At the same time will be sold several thousand feet of knife-cut veneers of rosewood and mahogany, and many effects. The whole may be viewed fourteen days prior to the sale, and particulars had of Mr. Sydney Hamilton, Solicitor, 30, Kingsroad, Bedford-row; of Messrs. TRIPPER and EVRE, Solicitors, 1, John-street, Bedford-row; of Messrs. KNIGHT and UPJOHN, Solicitors, Newcastle-under-Lyne; at the Place of Sale; and of Messrs. PRICE and CLARK, Auctioneers, Chancery lane, London.

TO TIMBER-MERCHANTS, SHIP BUILDERS, AND OTHERS Dunn Green, near Sevenoaks, Kent.

MR. WILLIAM HODSOLL has received instructions from John Wreford, esq. to SELL by AUCTION, at the OLD BROWN INN, Dunn-green, on FRIDAY, JANUARY 18th, 1856, at THREE o'clock, 150 excellent ELM TIMBER TREES, including many of very large dimensions, standing upon the Broughton Estate, in the parish of Offord, Kent. N.B. The whole of these superb Timber trees are situated to good roads, and may be easily removed.—May be viewed; application to Jesse Brooks, at Broughton House, near Riverhead, and catalogues had (a week previously), at the Inns in the neighbourhood, at the Place of Sale, and of Mr. WILLIAM HODSOLL, Auctioneer, &c. Farningham, Kent.

SALES BY AUCTION.

ARTIFICIAL STONE GOODS, BOROUGH-ROAD.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, the ARTIFICIAL STONE WORKS, 74, BOROUGH-ROAD, SOUTHWARK, on WEDNESDAY, JANUARY 30, at TEN for ELEVEN, without reserve, the whole of the extensive STOCK, consisting of fountains, figures, vases, centre flowers, tracery, &c.—May be viewed one week previous, and catalogues had of the proprietor, Mr. J. Sarrs, on the Premises, 74, Borough-road; and of the Auctioneers, 44, Parliament-street and Coal Exchange.

THAMES BANK.—To SCULPTORS, MASONS, BUILDERS, and Others.

MESSRS. EVERSFIELD and HORNE have received instructions from the consignee to SELL by AUCTION, at CHELSEA WHARF, Chelsea-bank, on FRIDAY, JANUARY 18, at TWELVE for ONE, TWENTY-FIVE BLOCKS of STATUARY MARBLE, of very pure quality, and large dimensions, suitable for sculptors, and recently imported, and FORTY BLOCKS of VEIN and SICILIAN MARBLE, of excellent quality. Approved bills at six months will be taken in payment.—May be viewed one day previous, and catalogues had at the Place of Sale; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

NEW ROAD, Extensive Sale of Marble Chimneypieces.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, 17 and 18, Sandlie-street, New-road, near St. Pancras Church, on THURSDAY, JANUARY 17, at TWELVE for ONE, 16 MARBLE CHIMNEY-PIECES of the newest workmanship, and in every variety of style, comprising several handsomely sculptured in statuary and coloured marbles, and an assortment of black, black and gilt, and white slabs. May be viewed two days previous, and Catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, Westminster, or Coal Exchange.

Building Materials on the Hackney Estate of the Conservative Land Society.

MESSRS. EVERSFIELD and HORNE have received instructions to SELL by AUCTION, on the PREMISES, Lower Clapton, near Hackney Church, on WEDNESDAY, JANUARY 23, at TEN for ELEVEN, the excellent MATERIALS and FITTINGS of the MANSION and OFFICES, comprising several tons of lead and copper, slate and tiles, doors, sashes, sashes, joists and quarterings, floorboards, Spanish mahogany and other plate glass sashes, statuary marble and other chimney-pieces, polished grates, range, coppers, and other fittings; also two excellent rustic summer-houses, erection of a temple with stone columns, large cast of the "Laocoon," stone pack fountain, erection of greenhouses, growing timber, small brickwork, paving, balconies, and other effects.—May be viewed, and catalogues had at the Offices of the Society, 33, Norfolk-street, Strand; of Messrs. Hannen's and Lewis, 14 New Boswell court, Lincoln's-inn; of GEORGE MORGAN, Esq. Surveyor, 5, Chancery-lane; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

CITY ROAD.—Valuable Manufactured Stock of Serpentine Marble.

MESSRS. EVERSFIELD and HORNE have received instructions from the Directors of the London and Penzance Serpentine Company to SELL by AUCTION, at CHISWELL-STREET, Finsbury, Moorfields, City-road, on TUESDAY, JANUARY 22, at TWELVE for ONE, SEVENTY HANDSOME CHIMNEY-PIECES, of various designs, and an assortment of Ornamental Articles, including Brackets, Table Tops, Tazzas, Fonts, Obelisks, &c. highly polished and unpolished, in the best manner of the above beautiful material, WAVY VEIN CHIMNEY-PIECES, in Statuary and Vein Marble.

N.B.—The Gold Medal was awarded to the Company at the Exhibition of 1851, and they are the only Manufacturers in England in serpentine Marble, which is beginning to receive its due appreciation. May be viewed one week previous, and catalogues had on the Premises; and of the Auctioneers, 40, Parliament-street, Westminster, and Coal Exchange.

TO CONTRACTORS, LIGHTERMEN, AND OTHERS VALUABLE SAILING BARGE AND OTHER CRAFT.

MESSRS. EVERSFIELD and HORNE are instructed to SELL by AUCTION, at Carne's Wave, Rotherhithe, Southwark, on TUESDAY, JANUARY 22, at TWELVE for ONE, the "Endeavor" DECKED SAILING BARGE, 54 tons, with rigging and sails nearly new, well found in stores, and will go into the canals; also an excellent open Barge, varying from 65 to 80 tons; suitable for river or canal use; a thirty-ton sailing Punt, forming part of the genuine stock of a well-known Lighterman and Coal Merchant. May be viewed a few days previous, and catalogues had at the Place of Sale, and of the Auctioneers, 40, Parliament-street, or Coal Exchange

FARRINGDON-STREET EXTENSION, BUILDING MATERIALS, and TWENTY HORSES

PULLEN and SON have the honour to announce that they will SELL by AUCTION, on the PREMISES, on MONDAY, JANUARY 14, at TWELVE, in Lots, by order of the Commissioners of Sewers for the Corporation of the city of London, all the valuable BUILDING MATERIALS of about twenty houses, in Bayllie-street and Turnmill-street, Clerkenwell, and called the Horse and Groom, public house (built within a few years), comprising about 400,000 good, sound bricks, plain and pan tiles and slates, capital oak and fir timber in roofs and floors, sashes, doors, partitions, door-cases, shop-fronts, lead gutters and pipes, stone-paving, stoves, coppers, and useful fixtures and fittings. May be viewed on SATURDAY, and Catalogues had at the Architect's Office, Guildhall; and of PULLEN and SON, 39, Fore-street, City, London.

BUILDING MATERIALS, OLD CHANGE, ST. PAUL'S.

PULLEN and SON are directed to SELL by AUCTION, on the PREMISES, on THURSDAY, JANUARY 17, at TWELVE, all the valuable BUILDING MATERIALS of the two houses, Nos. 2 and 3, Old Change, with extensive premises, Nos. 1 and 16, Old-change, St. Paul's, comprising good sound brickwork, lead gutters and pipes, plain and pan tiles, stout boarded and timber floors and roofs, sashes, doors, and interior fittings, shop front, large entrance-gates, granite and clinker paving, stone and iron-framed counting-house, set of hydraulic pumps, stoves, and various useful fittings. May be viewed the day previous. Catalogues had at the Architect's Office, Guildhall, and of PULLEN and SON, 39, Fore-street, City, London.

HINCKLEY, LEICESTERSHIRE.—Extensive Sale of 95 valuable TIMBER TREES, growing upon the estate of R. Bonner, in the parishes of Hinckley and Barwell, which will be sold by MESSRS. BLAKESLEY and HOLLIER, at the GEORGE HOTEL, Hinckley, a WEDNESDAY, the 16th day of JANUARY, 1856, at 5 o'clock precisely, in the large room, 169 excellent Ash, 33 capital willows, and 8 other trees. The above timber is of first-rate quality, and fit for immediate use, and will, by the attention of all tradesmen in the neighbourhood, be found worthy their notice. Mr. Bonner, Barwell-grange, Hinckley, who will appoint a person to show the same. The usual credit will be given upon approved joint security. Dinner on the table at Two o'clock precisely, and the sale to commence immediately after

Final Sale of Building Materials, at the Surrey Zoological Gardens, preparatory to the grand alterations for the Surrey Gardens Company.

MESSRS. W. and C. PUGH are instructed by W. Tyler, esq. to SELL by AUCTION, on the PREMISES, on TUESDAY, JANUARY 15, 1856, at TWELVE o'clock, the entire RESIDUE of the MATERIALS of the celebrated EXHIBITION, comprising the well-known Remington's Bridge, Chinese bridge, picturesque lodges, Gothic bird-room, tiger-house, aquarium, enclosed and other aviaries, lamp-posts, cloisters, sheds, cast and wrought iron, brick and timber erections, spring vans and carts, and various items of utility and interest. May be viewed the day preceding, or previously by cards, which, with catalogues, may be had of the Auctioneers, W. and C. PUGH, 6, Bucklersbury, Southwark.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in a desirable situation. Apply at the Offices of Mr. GEORGE MORGAN, Architect, 5, Chancery-lane.

FREEHOLD GROUND, CHANCERY-LANE and FETTER-LANE.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 29th of FEBRUARY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking, on Building Lease for Eighty Years, certain PLOTS of GROUND, situate at the south-west end of Chancery-lane, and the south-east end of Fetter-lane.—Further particulars may be had, and plans seen, on application to Mr. HAYWARD, Engineer to the Commission, at these Offices, in the Guildhall. The Commissioners will require a plan and elevation of the premises proposed to be built, to be submitted to them for approval, and they bind themselves to accept any proposal, unless there be a fraudulence.

JOSEPH DAW, Principal Clerk.

Sewers' Office, Guildhall, January 2, 1856.

NATIONAL FREEHOLD LAND SOCIETY, 15, Moorgate-street, London. Portions of the Woolford, Knaresborough, Manor, and Grinsted Estates, will be offered for SALE on MONDAY, the 28th instant. Plans of the estates, with particulars of sale, may be had on application.

W. E. WHITTINGHAM, Secretary.

January 7, 1856.

WANTED, on LEASE, in or near the City, PREMISES, suitable for a Builder, with sufficient workshop room for twelve or fourteen joiners. Address to A B 27, Wells-street, Hackney-road, stating terms, &c.

WANTED, a good FAMILY RESIDENCE, to RENT or PURCHASE: the west end preferred. The reception and principal bedrooms must be large, and the situation healthy and respectable; rent not to exceed £120 per annum. If with stabling it will be preferred.—Full particulars, stating position and terms, to be addressed to H. P. G. care of Mr. Hammond, 37, Lombard-street.

TO TIMBER MERCHANTS and OTHERS.

The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the same, conveyed by barge, for landing all sorts of English Timber, &c. Spacious Dry and Wet Docking Docks, 30 and 16 ft. Cranes, Sawpits for converting Timber, &c. Freights paid on delivery.—Apply to G. NORES and Co as above.

SITE for a CHURCH.—WANTED, a SPACE of GROUND for the erection of a church, situated within or near the following boundaries: Finsbury square on the south, Pavement on the north, Kingsland-road on the east, and the City-road on the west.—Application in writing only to be addressed to F. C. Auld and Woods, 18, Hart street, Mark-lane.

SEVERAL CARCASSES TO BE SOLD, of EIGHT ROOMED HOUSES, well situated.—Apply to Mr. BRIGGS, No. 25, Stanley-street, Eccleston square, Pimlico.

IMPORTANT to SOAPMAKERS, CAPITALISTS, and OTHERS.—TO BE LET, all those excellent and compact SOAP WORKS, situate at Bloomfield, in the parish of Tipton, in the county of Stafford, comprising cutting and framing rooms, stove-room, packing-room, boiling-room, with four coppers; soap and cutting room adjoining, counting-house and office, store-room and boiler's office, cutting cellar, and two packing-rooms attached; melting and bleaching boiler, carpenters' shop, machine and house, office, warehouse, lofty and capital black ash furnace, with sheds attached; smiths' shop, stable, and gig-house, large yard and reservoir, with a good supply of water. The Premises are lighted with gas, and surrounded by a substantial wall and entrance-doors; are particularly adapted for the business, as fitted up with every convenience, and now in full operation. They are situated in a very populous district, and within short distances of extensive collieries, ironworks, canals, and the goods stations on the Stour Valley and Oxford, Worcester, and Wolverhampton Railways. The proprietors are giving up the premises in consequence of other engagements.—To treat, application (if by letter, post paid) to CHARLES JAMES and GEORGE HIPKINS, the Premises; or to Mr. SOLOMON POWELL, Surveyor, &c. Tipton, Staffordshire.

WANTED, TO PURCHASE, a FREEHOLD COTTAGE, or a small PLOT of FREEHOLD LAND, in lots less than a perch frontage, either in London or within an easy distance.—Send all particulars and lowest price to Mr. CURTIS, Enfield, Middlesex.

DOUBLE-STREET, SPALDING.—To BUILDERS and OTHERS.—TO BE SOLD or LET, with immediate possession, all those desirable PREMISES, situate in Double-street, consisting of capital workshops, sawpit, deal sheds, and large yard, with a capital RESIDENCE, half of which may be let, as the same is now in the occupation of Mr. William East, or his under tenant. For further particulars apply to agent, apply to Mr. ROBERT ELLIS, Builder, Fleet, near Holbeach

NEW METROPOLITAN CATTLE-MARKET.—TAVERNS TO BE LET.—The Markets Improvement Committee will meet at Guildhall, on FRIDAY, JANUARY 25, at ONE precisely, to receive TENDERS for the TWO TAVERNS in the New Market, viz "The Queen's Arms," and the "City Arms." The particular Taverns required must be specified in the Tender. Tenders must be sealed and enclosed "Tenders for Taverns." The Committee do not bind themselves to accept the highest or any Tender. Plans may be seen and particulars obtained at the Architect's Office, Guildhall, any day (Sundays excepted) between the hours of TEN and FOUR.

Guildhall, Jan. 7, 1856. MEREWETHER.

MANUFACTURING PREMISES, ten miles from London, on the Eastern Counties Railway.—TO BE LET, at a moderate rent, with immediate possession, SPACIOUS PREMISES, with an unfailing supply of most excellent water, lately used as a brewery.—For particulars, apply to Messrs. REED, LANGFORD, and MARRIOTT, Solicitors, Fulham, Chesterfield, or to Messrs. FISDELL and ASHCOMBE, Surveyors and Land Agents, Enfield, Middlesex.

TO BUILDERS AND OTHERS.

R. NASH is desirous of CONTRACTING for PAPER-HANGING, more or less, which for quality and cleanness will give general satisfaction. Paper-hanging in or for the trade. Estimates and measure made on reasonable terms. Eight years' good experience.—Address, R. NASH, Junr, 10, Nuttall-street, Nottingham.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSS'S WHOLESALE WAREHOUSE 22 GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, January 12, 1856.

The Builder.

Architect, Engineer, Operative & Artist.

VOL. XIV.—No. 676 **JANUARY 19, 1856.** PRICE FOURPENCE *Stamped 5d.*

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THE METROPOLITAN BUILDING ACT, 1855 (Sec. 33).—The Institute of British Architects hereby give Notice, that an EXAMINATION of persons desirous of obtaining a certificate of competency to perform the duties of DISTRICT SURVEYOR, will take place at the Rooms of the Institute, No. 16, Grosvenor-street, Grosvenor-square, on TUESDAY, the 29th day of JANUARY instant, at TWO o'clock p.m. Persons desirous to be examined must, on or before FRIDAY, the 25th of JANUARY instant, send an application, which must be accompanied by a statement according to a form to be previously obtained at the Rooms of the Institute.

J. J. SCOLES,
C. C. NELSON, } Hon Secs.

Jan. 3, 1856.

MASONS' PROVIDENT INSTITUTION, established 1845, for granting Pensions, and the erection of an Asylum for aged and decayed Masons, their Widows and Orphans. President—WILLIAM TITE, Esq. M.P. F.R.S. The Managing Committee respectfully beg to announce that the TENTH ANNUAL GENERAL MEETING of the Donors and Subscribers of the above institution, will be held on WEDNESDAY, JANUARY the 23rd, 1856, at the SAINT PANCRAS ATHENÆUM, George-street, Euston-square, for the purpose of receiving the Report of the Committee and Auditors for the past year; to elect the Committee for the ensuing year; also to elect a Sub-Treasurer in the room of Mr. E. Farrow, resigned; and to transact other important business of the Institution.

P.S. As the Meetings of the Institution are not confined to its Donors and Subscribers, it is the earnest hope of the Committee that the trade will cheerfully come forward to support an Institution calculated to render a large benefit to the operative bricklayers of the trade, therefore earnestly invite their attendance. Reserved seats for ladies. The Chair will be taken at EIGHT o'clock precisely. By Order, WILLIAM DIX, Secretary.

14, William-street, Hampstead-road.

BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.
Head-Master—R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify School-masters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Free-hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, Objects of Still life, &c. the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of China and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 2l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Modelling and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. M'Ian. Fees per session.—Advanced Class, 2l. and 4l.; Elementary Class, 1l.; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall-mall, London.

GEOLOGY, KING'S COLLEGE, LONDON.—Professor TENNANT, F.G.S. will give a COURSE of LECTURES on GEOLOGY, to commence on FRIDAY MORNING, JANUARY 25, at NINE o'clock, and to be continued on each succeeding WEDNESDAY and FRIDAY, at the same hour.

R. W. JELF, D.D. Principal.

ARCHITECTURAL EXHIBITION and COLLECTION of PATENTS and MANUFACTURES connected with building, at the GALLERIES, 9, SUFFOLK-STREET, Pall-mall East, is NOW OPEN, from Nine till dusk. Admission, One Shilling; or at all times to the Galleries, and to all the lectures, by season tickets. Half-a-Crown each. Lecture for TUESDAY EVENING, JANUARY 22, at EIGHT o'clock, "Utilitarianism in Architecture," by the Rev. J. L. PETIT.—Lists of Lectures, Tickets, and all particulars to be had at the Galleries.

ARCHITECTURAL ASSOCIATION.—At the next Ordinary Meeting, JANUARY 22, Mr. G. J. WIGLEY will resume his notes on "Archæological Studies in Jerusalem."

The Class of Design will meet February 1. Subject for sketch: "The Capital of a Pilaster of which the upper Diameter is 18 inches."

T. W. GOODMAN,
J. A. BUNKER, } Hon Secs.

Lyon's Inn Hall.

LECTURES to WORKING MEN.—The following COURSES of LECTURES will be delivered on the Evenings during the present Session, in the Theatre of the Museum of Practical Geology, Jermyn-street:—

1. On Natural Philosophy. By G. G. Stokes, M.A. F.R.S.
2. On the First Principles of Chemistry. By A. W. Hofman, Ph.D. F.R.S.
3. On Metals. By John Percy, M.D. F.R.S.
4. On Mining. By W. W. Smyth, M.A.

The first course of Six Lectures on Natural Philosophy will be commenced at EIGHT o'clock p.m. on TUESDAY, JANUARY 29th, 1856. Tickets may be obtained by working men only, on and after Monday, the 21st instant, from Ten or Four o'clock, upon payment of a registration fee of Sixpence.

TRENHAM REEKS, Registrar.

ST. SAVIOUR'S DISTRICT BOARD of WORKS.—SURVEYOR, INSPECTOR of NUISANCES, and MESSENGER.—Notice is hereby given, that the St. Saviour's District Board of Works will meet at their Board-room, in Union-street, Bankside, Southwark, on WEDNESDAY, 16th of JANUARY inst. at TEN o'clock in the forenoon precisely to ELECT a SURVEYOR, an INSPECTOR of NUISANCES, and a MESSENGER for the district. The salary of the Surveyor will be 300l. per annum; that of Inspector of Nuisances 80l. per annum; and that of Messenger, 1l. 1s. per week. The appointments to be for one year only. The particulars of the respective duties can be seen and ascertained upon application at the Clerk's Offices, as under. All applications to be in writing sealed up, and directed to the Board, and to be sent in with testimonials to the Board, at their Offices, in Emerson-street, on or before SATURDAY, the 26th inst.—By order of the Board,

HERBERT STURMY, Clerk.

8, Wellington-street, London-bridge,
Southwark, Jan. 17th, 1856.

TO SURVEYORS of SEWERS and PAVEMENTS.—PARISH of CLERKENWELL.—The Vestry will, at their meeting on THURSDAY, the 24th inst. at HALF-PAST SIX o'clock in the evening precisely, at their Hall, 2, Upper Rosoman-street, receive testimonials from persons presenting themselves as candidates for the Office of a SURVEYOR, who, besides a competent knowledge of the duties of a Surveyor of Pavements and Public Ways, must be qualified to take levels, form reports, make plans and estimates, superintend the construction and measurement of sewers, take levels for house-drains, and see to their proper inclination and efficient connection with the sewers, &c. He will be called upon to give his duty may be inspected daily at the Vestry-hall, from TEN till FOUR o'clock. The salary will be 200l. for the first year; after which it will be increased 50l. annually, if the officer appointed continue in his employment, until the expiration of five years; but the office will be held only during the Vestry's pleasure.—By order of the Vestry.

Jan. 11, 1856. THOS. CROMWELL, Clerk, pro tem.

COMPETITIONS.

CEMETERY, MANSFIELD, NOTTINGHAMSHIRE.—To ARCHITECTS, SURVEYORS, LANDSCAPE GARDENERS, and OTHERS.—Plans, Designs, and Drawings are required for building Two CEMETERY CHAPELS (adjoining each other), two Sets with Lodges and Entrance Gates, for the Mansfield Cemetery. The expense of the Chapels is not to exceed the sum of 1,000l. and of the Entrance Gates, with Lodges, the sum of 300l. Plans to comprise elevation and ground plans, accompanied by approximating estimate of expense. The sum of 7l. is offered for the plan considered to be the best, for the second best 5l., and 3l. for the third best. Plans and Drawings to be sent in for LEVELLING, PLANTING, and FENCING the said proposed cemetery, and laying out the walks therein. The sum of 10l. is offered for the plan considered to be the best, and 7l. for the second best. Persons sending plans are referred by way of reference to the Architect, Civil Engineer, and Land Agent to undertake the execution of the building, at the usual commission per cent. upon the outlay. No contractor to be paid for plans, and no plans to be paid for, except the three best for the buildings, and the two best for laying out the ground. The plans to be sent to the undersigned, end up, and endorsed "Plans for Mansfield Cemetery," on or before the 30th day of FEBRUARY next. By order of the Burial Board,

Mansfield, 16th January, 1856.

R. J. PARSONS, Clerk.

TO ARTISTS.—Five Guineas will be paid for the best DESIGN for the COMPANY'S SEAL, illustrative of the business of a fire and general assurance and advantages of LIFE ASSURANCE PROPERTY. Drawings not exceeding 3 inches in diameter must be delivered on or before the 25th inst. Further information may be had at the Offices of the Treasury, No. 1, Cannon-street West, City.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall-mall, London, on or before WEDNESDAY, the 20th day of FEBRUARY, 1856, from persons desirous of contracting for the above ALTERATIONS and ADDITIONS to the WESTERN HEIGHTS BARRACKS, at Dover. Drawings and specifications of the works to be executed may be seen by persons fully competent to undertake the work only, (where and when applied), and forms of Tender obtained at the Royal Engineer Office, Archcliff Fort, Dover, between the hours of TEN and FOUR o'clock, from FRIDAY, the 1st of FEBRUARY, to TUESDAY, the 19th of FEBRUARY, 1856. Sundays excepted. Any person belonging to the Royal Engineer Department will attend each day at the Western Heights Barracks, from TEN to TWELVE o'clock, to point out the work and explain the drawings. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 3,000l. for the due performance of the contract. Tenders for the above work to be addressed to the Director General of Contracts, Pall-mall, London, and endorsed "Tender for work at Dover."—N.B. The War Department reserves to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, January 14th, 1856.

TO BUILDERS.—Any person willing to enter into CONTRACT with the Justices of the Peace of the county of Hereford for BUILDING MILITIA STORE ROOMS, upon the land purchased for such purpose, as part of the Bectonsham Estate, in the parish of Saint Owen, Hereford, may see a scaled TENDER to that effect at the Shire Hall, Hereford on or before the 6th day of FEBRUARY next, between the hours of TEN and TWO. Plans and Specifications of the work may be seen at my said Office each day, between such hours, and further particulars may be obtained of Mr. GRAHAM, Clerk of the Works, King's Acre, near Hereford. Parties sending Tenders not to be present on the above named day, but they will be communicated with prior to the day on which such Tenders will be submitted for approval.

JOHN CLEAVE, Clerk of the Peace.

Hereford, 11th January, 1856.

STAINES UNION.—To BUILDERS, &c.—Notice is hereby given that the Guardians of the above Union propose to ERECT a HOSPITAL in accordance with the plan and specification deposited for inspection at the Staines Union Workhouse. All persons desirous of CONTRACTING with the Guardians for the same, are desired to send sealed TENDERS, addressed "To the Chairman of the Board of Guardians, Staines Union Workhouse, Stanwell," on or before the hour of TEN o'clock of TUESDAY, the 5th FEBRUARY next. The Guardians will not necessarily accept the Lowest or any Tender.

By order of the Board,

RANDOLPH HENRY HORNE, Clerk.

Staines, January 16, 1856.

WEST BROMWICH UNION.—The ERECTION of a NEW UNION WORKHOUSE.

EXTENSION of TIME.—Persons desirous of CONTRACTING with the Guardians of the Poor of the West Bromwich Union, in the counties of Stafford and Worcester, for the erection of a New Union Workhouse, are hereby informed that the time for sending in Tenders for the same is EXTENDED to the 22nd day of FEBRUARY next, at which day they must be sent in, pursuant to the terms of the former advertisement. Full particulars may be obtained at the Offices of Messrs. BRIDGES and EVERAT, Architects, No. 1, Bradford-street, Birmingham, where the drawings and specifications may be seen until the 4th day of FEBRUARY next. By order of the Board.

CHAS. STRINGER, Clerk.

West Bromwich, 14th January, 1856.

ST. NICHOLAS' CEMETERY, NEWCASTLE-UPON-TYNE.—To BUILDERS, IRONFOUNDERS, ORNAMENTAL GARDENERS, &c. The Burial Board of the parish of St. Nicholas are now receiving sealed TENDERS for the following WORKS, contained in their Burial ground, viz.:—

1st. For erecting Two Chapels and Superintendent's House, with Lodge Houses and Corridors, &c. attached, and at the Boundary Wall on the Entrance Gateway.

2nd. For forming about 5,300 yards from Dressing Railing and Ornamental Posts and Chains for the division of the ground, &c.

3rd. For Laying out the Walks and Footpaths and Planting the Ground.

The plans and specifications of the works may be seen at the office of the Architects, Messrs. ALDIN and LAMB, No. 7, Grey-street, Newcastle, between the hours of TEN and FOUR, after the 5th JANUARY inst. The Tenders (sealed) are to be forwarded by post or delivered at the Office, No. 7, Grey-street, before FOUR o'clock in the Afternoon of the 14th day of FEBRUARY next, addressed "Tender for St. Nicholas' Cemetery, No. 1, 2, or 3." The Burial Board do not bind themselves to accept the lowest or any Tender, but the contractors will be required to enter into bonds for the due performance of their contracts.

GEORGE THIRKELD GIBSON, Clerk to the Board.

St. Nicholas' Vestry, 9th January, 1856.

SHIPLEY SEWERAGE WORKS.—The Shipley Local Board of Health hereby give Notice, that they are prepared to receive TENDERS from competent persons for PROVIDING, LAYING DOWN, and COMPLETING CERTAIN BRICK and EARTHENWARE SEWERS, DRAINS, MANHOLES, GULLIES, &c. in the Township of Shipley, for the sewerage and drainage of their districts. Plans, sections, detail drawings, and specifications, may be seen, and printed forms of Tender obtained, at the Office of Mr. ISAAC HOLDSWORTH, Civil Engineer, &c. Bradford, where sealed Tenders are to be delivered to the Chairman of the Local Board at the Office aforesaid, on or before the hour of TWELVE o'clock at noon of the 31st day of JANUARY, 1856, addressed to the Clerk to the Local Board, and that the Board do not bind themselves to accept the lowest or any Tender.

JO. THOMPSON, Clerk to the said Local Board.

Bradford, January 16, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

BRAINTREE LOCAL BOARD of HEALTH.—The Local Board of Health for the District of Braintree, in the county of Essex, hereby give notice that they [illegible] TENDERS [illegible] CONTRACTS:—

CONTRACT No. 1. For the supply and Delivery of Stoneware Pipes [illegible] Junctions.

CONTRACT No. 2. For the Supply and Delivery of about [illegible] tons of Cast Iron Pipes, Junctions, and [illegible].

CONTRACT No. 3. For the Labour in Excavating for and Laying Iron and Stoneware Pipes, and for the Supply of all Materials required except Pipes.

CONTRACT No. 4. For the Excavation, Labour, and Materials required in the Construction of about 1,000 Yards of Brick Sewers.

CONTRACT No. 5. For the Labour and Materials required in Sinking and Lining with Brickwork a [illegible] feet deep [illegible] diameter.

CONTRACT No. 6. For the [illegible] Fixing Two High-Pressure [illegible] Steam Engines with [illegible] power to raise [illegible] gallons per minute [illegible] feet high, and each [illegible] capable of doing this duty [illegible] per cent power for other work [illegible].

[illegible] at the office of JAMES FENTON, Esq., [illegible] drawing and [illegible] on or after the 1st JANUARY. Sealed Tenders [illegible] on or before the 3rd of FEBRUARY [illegible] the Board do not bind themselves to accept the lowest or any Tender. By order of the Board,

A. CUNNINGTON, Clerk.

Braintree, Jan. [illegible]

BRAINTREE LOCAL BOARD of HEALTH.—The Local Board of Health for the district of Braintree, in the county of Essex, do hereby give notice, that they [illegible] TENDERS [illegible] willing to under[take] the [illegible] CONTRACTS:—

CONTRACT No. [illegible] For [illegible] for Reservoir or High Service Tank.

CONTRACT No. 8. For a High Service Iron Water Tank or Reservoir.

CONTRACT No. [illegible] For the Erection of a Cottage, Engine house, Boiler house, Chimney shaft and Shed.

CONTRACT No. [illegible] For Hydrants.

CONTRACT No. 11.—For Sluice Valves.

CONTRACT No. 12. For Artesian Well, Borehole, and Iron Pipes.

[illegible] and forms of Tender may be [illegible] JAMES FENTON, Esq. [illegible] the drawings and [illegible] 2nd JANUARY. [illegible] on or before the 9th [of] FEBRUARY, 1856. The Board do not bind themselves to [accept the lowest or any] Tender. By order of the Board

A. CUNNINGTON, Clerk.

Braintree, Jan. [illegible]

CAMBRIDGESHIRE, ISLE of ELY, and [illegible] CAMBRIDGE PAUPER LUNATIC ASYLUM. [TO] BUILDERS.—TENDERS are [illegible] ERECTION of a PAUPER LUNATIC ASYLUM, with Lodge and Farm Buildings [illegible] about three miles from Cambridge. Builders who may be desirous of Tendering, can inspect the drawings and specifications of Works, at the Office [illegible] Committee of Visitors at Cambridge, [on] and after the 14th day of JANUARY [illegible] the hours of TEN and FOUR. [illegible] quantities and forms of Tender and [illegible] schedule of prices may be had on application [to] Mr. GEORGE FOWLER JONES, Architect, York, on payment of three guineas. The Tenders must specify the cost of the [illegible] and that of the lodge and farm buildings separately. Sealed Tenders are to be sent, under cover, addressed to the Clerk to the Committee of Visitors, not later than 19th FEBRUARY next, and any Tender not in accordance with the form [illegible] by the architect, will be rejected. The party whose Tender may be accepted will be [required] to enter into a bond, with two responsible sureties, jointly and severally in the sum of [illegible] the performance of the contract. The Committee of Visitors do not bind themselves to accept the lowest or any Tender.

By order of the Committee of Visitors,

DAVID KING, Clerk.

Cambridge, January, 1856.

TO DUST CONTRACTORS

THE VESTRY of the Parish of ST. LUKE, CHELSEA, will meet in the VESTRY ROOM, St. Luke's [illegible], on TUESDAY, the 2[illegible] instant, to receive TENDERS from Persons willing to CONTRACT, for a period [illegible] from the [illegible] the terms of [illegible] contract, now lying at my office, for COLLECTING and REMOVING the DUST, ASHES, and RUBBISH which are to [illegible] Contractor [illegible] Houses [illegible] that part of the Parish [illegible] known as the District [illegible] paid at the time of signing the contract, and the other half on the 24th of JUNE next. Sealed Tenders signed by the proposed Contractor, [illegible] are to be left at [illegible] but the Vestry do not bind themselves to accept the lowest or any Tender. Printed forms of [illegible].

By order of the Vestry,

CHARLES LAHEE, Clerk.

Vestry House, King's-road, Chelsea, January [illegible], 1856.

[TO] BUILDERS, IRONFOUNDERS, AND ENGINEERS.

PUBLIC BATHS and WASH-HOUSES, [and] OFFICES of the LOCAL BOARD [of] HEALTH at DERBY.—Parties [illegible] TENDERS for the EXECUTION of the WORKS required for the ERECTION of [illegible] BATHS and [illegible] Works, on [illegible] Corporation in Full-street. [illegible] the plans and [illegible] and obtain further information at the offices of Mr. HENRY I. STEVENS, Architect, Post-office Chambers, on [illegible] FRIDAY, the 1st day of FEBRUARY next. Tenders [illegible] addressed to Mr. CHAS. PRATT, [illegible] Town [illegible] TEN [illegible] on MONDAY, the 11th of FEBRUARY. [illegible] will be taken out by Mr. S. B. WILSON, [illegible] London, copies of [illegible] together with forms of Tender, will be ready for delivery [illegible] on FRIDAY, the 1st of FEBRUARY, upon the payment of one guinea per copy for the [illegible] and [illegible] for the engineer's and iron[founder's] work.

[illegible], Derby, January 14th, 1856.

TO BUILDERS

RAINE'S CHARITIES.—The Trustees of these Charities will at a Special Meeting to be held at the [illegible] JANUARY [illegible] TWELVE [illegible] TENDERS for PERFORMANCE of [illegible] BUILDING and other WORKS, [illegible] performed [illegible] New Gravel-lane, [illegible] Specifications of which may be seen at the Office of Mr. ANDREW WILSON, Architect, [illegible] of JANUARY [illegible] TEN [illegible] [illegible]

CONTRACTS.

MIDLAND RAILWAY.—The Directors of the Midland Railway Company are desirous of receiving TENDERS for the supply of [illegible] TWO [illegible] SLEEPERS of [illegible] Yellow Pine, Dantzic or Memel Timber. The specification and conditions may be seen at the Office, Derby Station, on and after MONDAY, the 21st instant. Tenders, in sealed covers, addressed to the Secretary of the Stores Committee at the Stores Office, Derby Station, must be delivered not later than TEN o'clock on the morning of SATURDAY, the 2nd proximo. By order,

JOSEPH SANDERS, Secretary.

Derby Station, 12th January, 1856.

TO BUILDERS

THE GUARDIANS of the POOR of the WEST HAM UNION are desirous of receiving TENDERS for the ERECTION of certain ADDITIONS to and for making ALTERATIONS at the WORKHOUSE of the said Union, situate at [illegible], in the county of Essex. Plans, specifications, and [illegible] may be seen at the office of Mr. WILLIAM A. MASON, Architect, [illegible] St. Helen's, London, on and after THURSDAY the 17th day of JANUARY instant, between the hours of TEN and FOUR. [illegible] endorsed, "Tender for Works, West Ham Union Workhouse," are to be sent to the Clerk of the said Union, at the Board-room at the Workhouse, [before] TEN o'clock on THURSDAY morning, the 14th day of FEBRUARY next, after which no Tender will be received. Bills of quantities [illegible] Mr. MASON [illegible] will be returned to the parties paying [illegible] Tender. The contractor will be required to give security, and also execute the contract accompanying the plans and specification for the due performance of the works according to the terms and conditions [illegible]. The Guardians do not bind themselves to accept the lowest or any Tender. By order of the Board of Guardians,

W. J. BARSHAM, Clerk.

Board-room, Leytonstone, January 10, 1856.

COPROLITES.—The Mayor, Aldermen, and Burgesses of the Borough of Cambridge are willing to GRANT LICENCES to search for, dig, and take COPROLITES, on and from Coldham's common, in the said borough, for two years, from Lady-day, 1856, subject to certain stipulations and conditions, a printed copy whereof may be obtained, on application (personally or by post), at my Office. Tenders are to be sent to my Office, on or before MONDAY, the 4th day of FEBRUARY next.—By order,

C. H. COOPER, Town Clerk.

Guildhall, Cambridge, January 11, 1856.

CONTRACTS.

CONTRACT for BUILDINGS for LOCO-MOTIVE DEPOT, MONMOUTHSHIRE RAILWAY and CANAL COMPANY.—The Directors of the above Company invite TENDERS for the ERECTION, in the town of Newport, of STABLES, FITTING SHOPS, OFFICES, SMITHY, COKE-SHED, WATER-TANK, &c. &c. adapted for twenty-two engines. Drawings and specifications may be seen at the Engineer's Office, Dock-street, Newport, on and after the 31st DECEMBER instant. The quantities will have to be taken out by the parties Tendering. Sealed Tenders properly endorsed, and addressed to the Directors, are to be sent to the undersigned not later than the 19th day of FEBRUARY next: and the parties tendering are to be in attendance at ONE o'clock in the afternoon of the following day, when the Tenders will be opened. The Directors do not bind themselves to accept the lowest or any Tender.—By order,

GEORGE HARRISON, Secretary.

Newport, Monmouth, December 21, 1855.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the nobility, clergy, &c. that they supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.

R. S. NEWALL and CO.'s Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world.

OFFICES.—Gateshead-on-Tyne.
130, Strand, London.
67, Hyde-park-street, Glasgow.
27, Dale-street, Manchester.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 55, High Holborn.

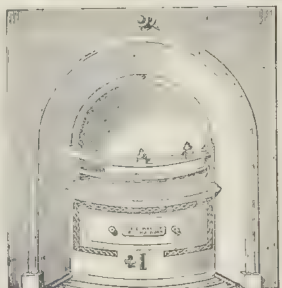
TO BUILDERS, CARPENTERS, UPHOLSTERERS, &c.

THE following are the PRESENT PRICES of PATENT SASH LINE:—

No. 3	4	5	6
4s.	5s.	6s. 3d.	7s. 6d. per gross,

At JOHN YOUNG'S, Birmingham and Wolverhampton, Agent, Factor, and General Ironmonger, 18, Blandford-street, Manchester-square, running out of Baker-street, Portman-square. Every other article equally reasonable.

DR. ARNOTT'S SMOKELESS GRATES,



For the manufacture of which D. and E. BAILEY obtained the SILVER MEDAL at the PARIS EXHIBITION. The above excellent invention has been carefully modelled and manufactured by D. and E. BAILEY, 272, Holborn, who having experienced great difficulty in keeping pace with the increased demand for the above Stoves, have now made such arrangements as will enable them to supply their customers with the Smokeless Grates, of ordinary dimensions, from their stock on hand, which consists of various designs in black, bright, and polished steel, richly decorated with ormolu ornaments.

The great advantages of these Stoves over all others are—

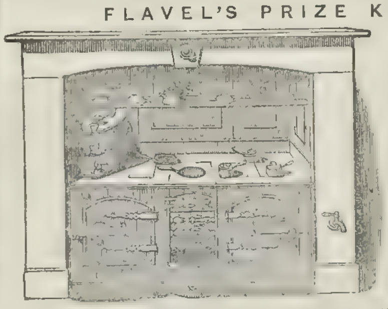
1st. The entire absence of smoke.
2nd. An immense saving in fuel.
3rd. A cheerful fire, with simple means for regulating the heat.
4th. Will burn night and day, requiring only to be supplied with fuel twice in twenty-four hours.

For invalids' bed-rooms, these stoves will be found invaluable.

Prices and Prospectuses may be obtained on application where the Smokeless Grates may be seen in daily use.

D. & E. BAILEY, IRONMONGERS,
272, HOLBORN, LONDON.

FLAVEL'S PRIZE KITCHENER.



The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

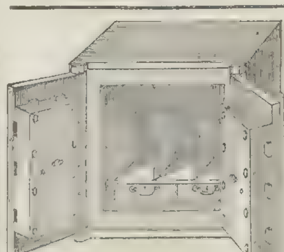
These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

SOLE AGENTS:
BENHAM AND SONS,
19, WIGMORE-STREET, LONDON;
and at the Crystal Palace, Sydenham.



ROBBERIES PREVENTED. FIRE RESISTED.

GEORGE PRICE'S

PATENT FIRE-RESISTING AND THIEF-PROOF SAFES AND CHESTS

Are allowed by all Scientific and Practical Judges to be the strongest, best constructed, and cheapest Safeguards in the world against Fire and Thieves.

Fitted with Gibbons and Price's, Tucker and Reeves's, or Cottrill's Patent Unpickable and Powder-proof Locks.

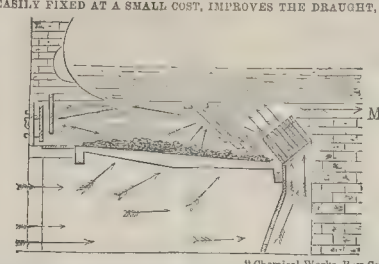
See Mr. PRICE'S Challenge and Letters to Mr. Milner, which, with Illustrated Descriptive Lists of Prices, may be had gratis from the Patentee and Manufacturer, Cleveland Safe Works, Wolverhampton; at the London Depôt, 181, Fleet-street; or from

HIS AGENTS THROUGHOUT THE KINGDOM.

LESS FUEL, MORE STEAM, NO SMOKE.
GARDNER'S PATENT SMOKE CONSUMER

IS SELF ACTING, EASILY FIXED AT A SMALL COST, IMPROVES THE DRAUGHT, AND SAVES FUEL.

APPLICABLE TO ALL FURNACES, BOILERS, OVENS,



LOCOMOTIVES, MARINE ENGINES, AND OPEN FIRES.

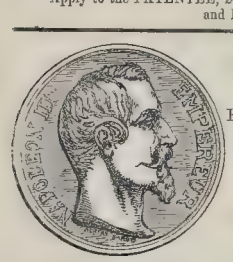
"Chemical Works, Bow Common, November 9, 1855.

"DEAR SIR,—In answer to your further inquiry concerning the saving of fuel in connection with the use of your patented apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I beg now to state that we are enabled, without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.

"To E. V. GARDNER, Esq." "I remain, dear Sir, yours truly, "FREDK. ALLEN.

Apply to the PATENTEE, 24, Norfolk-street, Middlesex-Hospital; or to Messrs. BURBIDGE and HEALY, 118, Dorset-street, Fleet-street.

A



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WAS AWARDED TO

F. EDWANDS, SON, and CO.

AT THE

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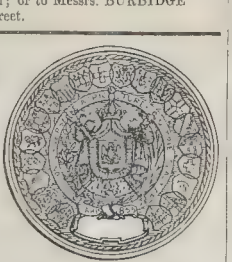
For the SPECIMENS they exhibited of

DR. ARNOTT'S

SMOKE-CONSUMING GRATE,

AND SMOKE-CONSUMING

COOKING APPARATUS.



F. EDWARDS, SON, and CO. beg to inform the public that their STOCK of GRATES is ENTIRELY REFORMED, and consists SOLELY of GRATES on the SMOKE-CONSUMING PRINCIPLE. A large variety in real Bronze, Ormolu, Steel, and Berlin Black, suitable for Drawing-rooms, Dining-rooms, and Libraries, from 7l. to 30l.

The following are the prices of those for ordinary use:—

For Bed-rooms, Offices, &c.		For Sitting-rooms, Parlours, Bed-rooms, Offices, &c.	
1 foot 7 inches wide, 12-inch fire	£2 10 0	2 feet wide and under	£4 0 0
1 foot 9 inches wide, 14-inch fire	2 12 6	Above 2 feet wide, and not exceeding 2 feet 6 inches..	4 10 0
The above Grates can be increased in width to that of any fire-place by iron or slate slips; iron slips supplied at 6d. per inch.		" 2 feet 6 inches " 3 feet	5 0 0
		" 3 feet " 3 feet 6 inches..	5 10 0

By the Grates on this principle, as properly constructed by F. Edwards, Son, and Co smoky chimneys are avoided, an agreeable fire is maintained, with one-half the trouble attending the ordinary grate, and a saving of from forty to fifty per cent. is effected in the consumption of fuel.

PROSPECTUSES, WITH FULL PARTICULARS AND TESTIMONIALS, SENT ON APPLICATION.

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GENERAL MERCHANTS, AND MANUFACTURERS OF

TABLE CUTLERY, PEN and POCKET KNIVES, SCISSORS, RAZORS, ELECTRO PLATED WARES, FILES, SAWS, EDGE and JOINERS' TOOLS, AUGERS, STEEL, &c. &c.

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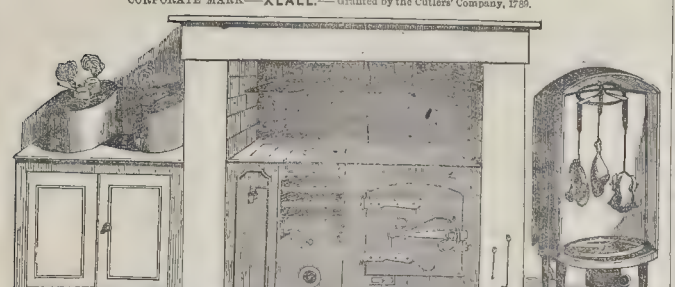

Messrs. PARKIN and MARSHALL have also pleasure in stating that they are appointed Sole Wholesale Agents for the Sale of the undernamed Articles, manufactured by Mr. ENOCH OLDFIELD TINDALL, Iron Works, Scarborough, viz.: TINDALL'S PATENT PORTABLE MANGLES, WASHING AND WRINGING MACHINES, SAMSON PATENT, COOK-SO RANGES, LAUNDRY STOVES, SANATORY MILLS, TURNIP CUTTERS, &c.

THE PATENT COOKING RANGES AND ROASTERS are now amongst the most complete and inexpensive before the Public, and are rapidly superseding the antiquated Ranges of our country.

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THE OAT BRUISERS AND CHAFF CUTTERS, like the above, combine cheapness with the greatest simplicity of construction, and only need to be tried to be appreciated. They are kept in stock, and should be in every stable.

Drawings of Mangles, &c with Testimonials, can be had on application at Telegraph Works, Sheffield, or of the Retail Agents, who are appointed in almost every principal Town in the United Kingdom.

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ROYAL POLYTECHNIC GAS FIRE. BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation. To be seen in action at DEFRIES'S Office, 145, Regent-street, London.

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This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

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The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

Further information may be obtained of the Proprietor of the patent,—Mr. BARRETT, 13, York-buildings, Adelphi.

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No 11 gauge weighs about	18 oz.	per foot super.	
12	"	20	"
13	"	24	"
14	"	26	"

Full particulars and the reduced price sent by post on application to A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

PATENT GALVANIZING and CORRUGATING IRONWORKS Improved Process. WORKS GLASS HOUSE YARD, opposite the Entrance to the London Docks. GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c. A Discount allowed to the Trade.

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ANDREW CLARK and COMPANY, PLUMBERS, THE BEAR GARDEN LEAD WORKS, SOUTHWARK. Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of UNITING LEAD TO LEAD WITHOUT SOLDER. Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal. PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

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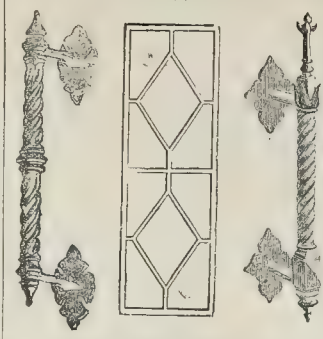

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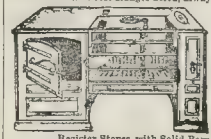

Improved Self acting Cottage Ranges, with Large Oven and Boiler, 30 33 34 36-inch. 28s. 30s. 32s 34s. Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars— 34 36 38 42-inch 54s. 56s. 58s. 60s. Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 2½d. Register Stoves, with Solid Bars, per inch, 5d. Improved New Pattern Circular Check Register, with strong Bars and Trivits, 5d. per inch. Best Solar ditto, with Fire Brick Back, per inch, 10d. Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe { 2 2½ 3 inch. 11d. 1s. 2d. 1s. 4d. per yard.
Cast Gutters—4 inch, 9d. per yard.
O G Gutters { 4 4½ inch. 1s. 1d. 1s. 3d. per yard.
Patent Line { 2 3 4 5 6 4½d. 5d. 7d. 9d. 1s. per knot.

6-inch Rd. Ward Mortice, with best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each. An extensive stock of bar, rod, hoop, and sheet iron. Brick Moulds kept in stock. Any size made to order.

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STEAM BOILERS for Marine, Locomotive and Land Engines, Wrought Iron Girders and Bridges, Gas Holders and Gas Apparatus, Columns, Girders and General Castings, Cables and Contractors' Iron Work, manufactured by MILLBORNE and HUSSEY, Phœnix Works, Tividale, near Dudley. London office, 76, Hatton Garden

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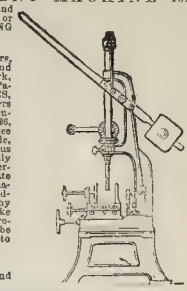
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

ESTABLISHED 1817.

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Elliptic Stoves, with inside Backs, from 24 in. per inch. Parlour and Drawing-room ditto, ditto, 8d per inch. Bedroom Register Stoves, from 8d. per inch. Cottage Ranges, with Oven or Boiler, 32s. each. Self-acting ditto, with ditto, from 52s. Self-acting Oven and Boiler Ranges, with Wrought Fittings, &c. complete, from 45s. each.

Best Cut Clasp and Rose Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.	
16s. 6d.	16s. 6d.	15s. 6d.	15s.	14s. 6d.	per cwt.
Best Sheet Cut Floor Brads				14s.	per cwt.
" Hoop ditto				13s. 6d.	"
" Cut Lath Nails				10s.	"
" Zinc Slate ditto				40s.	"
" Copper ditto				1s. 6d.	per lb.
Very superior Glue				47s.	per cwt.
Best ditto, suitable for any purpose				33s.	"

RAIN WATER CASTINGS, per yard.

Sizes—2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Rain Pipes	1s. 1s. 2d.	1s. 4d.	1s. 6d.	2s. 1d.		
Half-round Gutters	8d.	8½d.	9d.	1s.	1s. 2d.	
O G Gutters	1s.	1s. 1d.	1s. 2d.	1s. 3d.	1s. 5d.	
Ditto, with plain clips cast on		1s. 3d.	1s. 4d.	1s. 6d.	1s. 8d.	
Ditto, ditto, with Lion ditto		1s. 3d.	1s. 5d.	1s. 7d.		
Ditto, ditto, deep pattern, 6 inches						

Heads, Shoes, and all the usual Connections to Pipes and Gutters at similar rates.

Sash Weights	7s. 6d. per cwt.
Furnace Pans	12s. "
Galvanized ditto	20s. "
Washing Coppers	1s. 6d. per lb.
9-inch Air Bricks	3s. 6d. per doz.

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VOL. XIV.—No. 676.

PERHAPS we may have assisted in drawing to the ARCHITECTURAL EXHIBITION some portion of that increased attention which it is receiving; and by which, we are happy to think, results will be realized, most important to the profession and to the advancement of our art. The connection of such an exhibition with the latter object, is no new point dwelt upon in these pages; and we are content still to displace other interesting matter, for the sake of furnishing to our readers an adequate notice of the works exhibited. It is, indeed, only through patient examination that one can gain proper evidence of the fact, which has long been sufficiently plain out of doors, to qualified observers—that a reserve of strength was existing in the architectural talent of the country, which lacked only proper direction and public appreciation. And, although much is required in the way of extension and improvement, we do not hesitate to say that the collection as it is, if visited for study, is one of the most valuable opportunities afforded during the year to the professional architect.

In our last notice,* we named some designs for the Taunton Assize Courts. There is a complete set of drawings of Messrs. Prichard and Seddon's design for this building, in a portfolio (580). The two courts are placed in line, on opposite sides of the plan, with judges' and magistrates' private rooms intermediate, and are reached through an octagonal entrance-hall. The latter has a pyramidal stone roof and louvre turret; and has in advance of it, an open carriage porch. The style is of late Gothic character, the materials being red brick and stone. In addition to the designs mentioned, for the Oxford Museum, Messrs. Travis and Mangnall's design, which gained one of the premiums, is shown in a set of drawings in a folio (581). The design differs from others, inasmuch as the museum roof is neither visible externally, nor is it wholly constructed of iron and glass. Square columns are placed on piers—the latter ranging with the glass cases—and support entablatures—thus dividing the space into large areas, which are lighted from the top. The style of the early Revival in Italy—or that distinctively termed Renaissance—is kept up throughout.

In Mr. T. H. Wyatt's "Design for the Extension of the Banqueting-hall, Whitehall" (435), by erecting a similar building for public offices, on the site of Gwydyr House, the entrance, with steps, is in a central recess joining the two buildings; and here, two portions of the plan are carried up as towers, and terminated by square ogee-profiled cappings, adapted from an old example.——Mr. S. C. Fripp exhibits three elevations (424 to 426) of his design for the new Town-hall, Hamburgh, which he has treated in a plain version of Italian, with arch-headed windows, modified by a high-pitched roof.

Mr. H. Horeau has, what he calls, a "Frontispiece of several Schemes and Sketches for rendering London and its Environs more salubrious and more agreeable" (372). The full title, which is too long to quote, mentions a submarine railway; a fixed balloon announcing the Universal Exhibition; fountains for Sydenham, with colossal figure of England holding the torch of civilization (the electric light); a bridge over the Thames in one span; his design for the Exhibition Building in Hyde-park; and a multitude of other projects, too clever and original to be passed by as valueless, yet marked by too much of eccentricity to be successful in point of art. The washy drawing exhibited is, however, not advantageous to the explanatory object.——The same architect also exhibits a view of a Museum and Schools for the site of Gore House (374), and an interior of the Hall of Antiquities and Exhibition Gallery of the same project (373). Iron construction is here used, the roof being arranged as a line of low domical lights,—the pendentives, and some other soffit spaces being enriched with paintings.

Mr. W. Papworth's "Design for Curator's Residence and official Apartments, connected with such a Municipal Library and Museum as might be erected in Smithfield for the City of London" (155), is an elevation of a two-storied façade with superimposed orders, and large Venetian windows, and with dormers in the roof.——The several designs for the Sheffield School of Art, deserve careful examination, illustrating as they do the growth of novel versions of styles—in contrast with the approved Italian, held to by some of the competitors. Amongst this latter number, Mr. G F. Jones (92) adopts the form of rusticated basement, and over it Corinthian pilasters and three Venetian windows, with figures on their arches; the building being terminated by a balustrade and statues.——In Mr. Nicholls's Design (252), also in the Italian style, a long panel is introduced, to be filled with a bas-relief, illustrative of the Arts of Sculpture, Architecture, and Painting: three brackets being designed for busts of Flaxman, Wren, and Reynolds. The sculpture was proposed to be competed for, as the prize subjects, by pupils of the school.——Mr. P. E. Massey's Design (342) seems to be for the same building, and has little in the way of modification of the ordinary type,—though a good central feature is designed to the upper story, where the pilasters are clustered on each side, and carry a segmental pediment.—The other designs, however, depart in a very marked degree from known types, and with some obvious gain, though whether an unmixed one we are hardly prepared to decide. The designs by Messrs. Weightman, Hadfield, and Goldie (343 and 377), and Mr. G. Corson (420), agree in their exaltation of *novelty*, as an object. Thus with them, the usual combination of mouldings in a cornice,—the cyma, corona, and enriched bed mouldings, with a carefully adjusted height of frieze, is exchanged for a form of section in which square members (too massive to be called *fillets*) hold chief places. Some features of the designs would almost seem reproductions from timber buildings. Mr. Corson chamfers the lower edge of a crowning member of the sort referred to. He supports it by coupled cantilevers. His principal, or one-pair story, has five arch-headed windows, set quite close, with shafts. The walling above is enriched with four circles of coloured marble, and a string-course of ornamental tiles. The ground-story has arched entrance-way at the side—with enriched spandrils and columns—and two arch-headed windows, between two smaller windows, square-headed. At the three piers of this group of lights, in each case, is placed a statue under a canopy, and on pedestal.

In the pursuit of novelty—as exhibited in designs of this class—the precedent of the Cinque-cento school should not be treated with indifference, for it presents carefully-matured proportions and harmonious combinations, elaborated by those who, it may be conceded, have devoted perhaps more consideration to such matters of detail than any architects who have lived. It is not necessary to qualify the favourable opinion which we intended to convey, of the excellent designs mentioned; but, occasionally, we observe that the desire of novelty is allowed to have undue preponderance, where beauty and good taste might demand a form very different from that adopted, and perhaps one that had been long familiar. Our art is in a hopeful, and yet a critical position; and architects (and those of active fancy not the least) must take care that in cultivating one element of *art* long neglected, they do not re-illustrate the position which we have so often met with in the history of architecture,—where, in the endeavour to escape one description of influence (that is to say, predominant novelty, or predominant "precedent-rule"), the excess of one necessary element has been exchanged for the excess of another. We believe, however, that we see the commencement of a period of progress which will reach a measure of success far beyond what has been achieved by the principal architects of the Anglo-Italian school. The great errors in the works of these, arose from not prominently regarding the uses of the structure. The study of Gothic architecture has since worked the correction. In many celebrated buildings, the very persistence in the forms for which there was precedent, has destroyed the beauty of these altogether,—since instead of being designed *pari passu* with the structure, they are rather used—pieced out, or cut to it. Wren was not free from some of these defects in his works. They are to be observed even in the interior of St. Paul's Cathedral, about the arches which support the dome. To go no further,—we may allude to one defect,—the mitering of the outer members of the archivolts. Structural principle, the foundation of architectural *art*, would have required that these chief members should be in some way supported. The advancing school of architecture would now do at least differently from Wren, and very justly. Supposing that the impost or capital did not allow space for the descent on it, of the principal members of the archivolt, they would simply adopt *different mouldings*. A bold roll moulding, for example, might be placed near the inner curve of the arch; and outer members of the archivolt, rendered secondary, might then be allowed to mitre without fear of ill-effect. But this would not have been to the Cinque-Cento precedent. Nevertheless, such practical solutions of difficulties may be essential to the result in point of *art*; but they require that the designer should be ready with the pencil, and qualified otherwise in what even Wren perhaps did not possess.——The remainder of the designs for the Sheffield School are marked by an extensive use of polychromy. Indeed, in Mr. A. Billing's design (143), it may be regarded as the principal aim, "marbles of various colours, either real, or imitation on glass,"—being proposed for the shafts of the columns, the panels, and the floriated ornament. The design has superimposed orders, large segmental-headed windows, and a curved pediment in the centre, and is by no means without merit.——One of the designs to which the second premium was awarded (343, before mentioned), has a basement story, with three wide arch-headed apertures, and broad pilasters to the piers. In the next story there are pilasters of lesser diameter—panelled, with painted ornament—and the inter-pilasters have long arch-headed windows coupled, with a head over each central pier. The top story is lit at the back from the roof, and the space which it occupies in the elevation forms a deep frieze supported by plain corbels, which has six panels, to be painted in fresco. In the plain block cornice, colour is again introduced. The design, No. 377, by the same architects, provides for the use of red, black, and other bricks; green, blue, red, and yellow tiles, and stone for shafts, labels, and strings. The lower story has three large openings, each semicircular arched in three orders, the windows having mullions, and circles in the head. Over each

* See p. 4, ante.

arch is a circular panel, filled with an ornamental pattern in colour. The windows of the one-pair story form a range of small arches, with stone shafts: above this are segmental arches corbelled out; and the building is finished by broad faciæ and cornice,—the coloured tiles being there freely introduced.——Mr. F. T. Gompertz's design (436) makes use of semi-circular-headed dormers in a curb roof, with hip-knobs of excessive length.——Mr. J. L. Pedley's design (437), has semicircular pediments to the windows.——These designs for the Sheffield School of Art are, however, as we said, all valuable, as illustrative of the tendencies of existing taste.

In schools and educational institutions of the ordinary kind, we again meet with the Gothic style as an exclusive one. It is impossible for us to notice all the works which are exhibited. Mr. H. Clutton, in "Buildings for the new Schools to be erected at Ashford, Middlesex," for the Society of Ancient Britons (116), and in "Buildings formerly intended for the National Society's Training College" (117); Mr. Edmeston in the "Schools and Residence at Stockingford, near Nuneaton" 106); Mr. G. R. Clarke in similar buildings at Coln, Great Aldwyn, Gloucestershire (139); Messrs. Habershon, in schools at Erith; Brighton; Lilford, Northamptonshire; Walworth; Idsworth, Hants; Boughton Monchelsea, Kent; and Hampstead (168); Messrs. Gabriel and Hirst, at Keynsham, Somerset (188 and 224); Mr. W. White, at Wantage (245 and 246); Mr. C. Baily, at Hawksworth, Notts. (255); Mr. F. Barnes, in New School Buildings and Library at Harrow (380 and 397), where the dressings appear to be all in red brick; and the same architect at Hadleigh (387); and Mr. E. Nash, in the South Metropolitan District Schools at Sutton, Kent (534), are amongst the chief exhibitors.——Mr. Murray gives a Design for the Belfast Presbyterian College (42), with oriels, and a square-capped tower. A design by the same architect, is entitled "Schools intended to be erected at Leamington;" whilst Messrs. G. R. Clarke and W. J. Worthington exhibit (14) "National Schools and Residences at Leamington, as contracted for." Which is to be considered the successful design, even had we heard both sides of the question, it would, perhaps, puzzle us to say. We believe both architects claim payment for their work. The resemblance which there is in the designs, may be easily accounted for: there is slight variety in many buildings we might mention.—— Mr. R. Hesketh and Mr. G. O. Lane are almost the only architects whose schools are not Gothic. The former gentleman exhibits (419) the Golden-lane School, of St. Thomas's Charter-house. Mr. Lane shows (59) his Design for the Central London District Schools at Hanwell, in which he had a long range of Venetian windows, grouped together in the several stories, and rising above the eaves with segmental pediments. There is a dome to the centre of the building; and square blocks of building at the ends, are surmounted by low lanterns domed over.

The predominance of perpendicular lines which characterizes the design last-named, is carried to excess in another of the same architect's competition designs. This last (66), submitted for the Jews' Hospital, Mile-end, has windows of character similar to the others, and a portico formed of square columns, coupled.——Mr. Lamb's "Consumption Hospital now erecting at Funchal, Madeira" (76), deserves attention for the excellent grouping of its main divisions, and of its roofs.——There is also a view of the same architect's Sanatorium for Consumption now erecting at Bournmouth (192).

The principal drawings of buildings for business purposes illustrate the class of warehouses. Messrs. Devas, Minchener, and Routledge's warehouse, in Cannon-street West, is exhibited (22), by Messrs. J. Griffith and H. Dawson. As we have heretofore observed, it is one of those buildings which display a marked advance in the architecture of our time. But in invention, and in every quality of art, it is greatly inferior to the works which have given a new character to the town of Manchester, some of which are shown in a beautiful drawing (107), by the architect, Mr. E. Walters,—"Commercial Buildings lately erected," &c. The principal building of the three shown, has been illustrated in the "Companion to the Almanack." What is perhaps the best of the works is seen only in part. The warehouse in brick and stone, is effectively treated in the novel doorway, and the windows of the lower stories grouped under the arcade; and the canted angle is especially well managed. This drawing was originally prepared for the French exhibition. The architect's application to the appointed office in London, for space, was, however, met with a blunt refusal. We believe that no blame attaches to the committee of architects; but as the same thing is said to have occurred in other cases, the circumstance is annoying,—considering also that there did not seem to be much want of space at the exhibition itself.——The warehouse erecting at Manchester, for Messrs. S. and J. Watts (55)—Messrs. Travis and Mangnall, architects —has a length of no less than 300 feet, a depth of 90 feet, and an extreme height of 115 feet: it will be wholly faced with stone, and is to cost, exclusive of land and fixtures, 45,000*l*. The general style is that of the Renaissance. The sixth story is lighted from the roof; and portions of the building are carried up an additional story, for the sake of effect. The design is not very satisfactory The drawing, it is true, is an unfortunate one; for the bricks of Lancashire can hardly be so red, and the Yorkshire stone of the warehouse itself, can hardly be so yellow as they are shown. But, the details seem to us weak in design; the heavy and blind top story, over a range of large windows, is questionable; and the range of gables which crowns the structure, even ugly. The entrances are in good taste, and portions of the rusticated work display care. We may be under the influence of the drawing—for that will go a long way—but are very apprehensive.

Mr. Brakspear's warehouse erecting in John Dalton-street, in the same town (194), has Italian details of more familiar character, but well studied and designed. The lower story is treated as an arcade, and the doorway has much merit.—— In the same town, Mr. A. Waterhouse is erecting offices and stores for Messrs. Binyon and Fryer (63). The upper half of the front is built of red and white bricks, in chequers. The offices are on the first-floor, with a range of windows, with iron shafts coupled in the thickness of the wall.

The buildings which have been erected recently for public companies, and similar purposes of business, are so important, that the exhibition does not present a proper reflex of the architecture of the day without them. In our own pages, the building at the end of Chancery-lane, and the insurance-office in Fleet-street, are to be found; but the only work of the class which is represented in the Suffolk-street collection is Mr. J. J. Cole's "Offices" in Throgmorton-street (447),—which we have also given.

There are fewer drawings of banking-houses than last year. Mr. Truefitt has erected a new room in the yard at the "Old Bank," Blackburn (195), where there is a "lean-to" roof, in the trussing of which a perforated leaf-work pattern is introduced. This room is, we believe, the work for which Mr. Ruskin was said to have been applied to for designs; but the completion without his assistance seems to show that the original arrangement was not carried out.

There is an equally marked deficiency in the number of designs for railway stations. Various portions of the Paddington and Windsor stations of the Great Western Railway—some of the former having been illustrated by us—are shown by Mr. M. D. Wyatt (79). The end of the transept, which we engraved, requires the decoration in colour for its due effect. Other decorations of an elaborate character have been designed for the private rooms of her Majesty: and designs for a standard lamp, and for pavements, are shown in No. 337.

We have also engraved in our journal the view of Walls' Court Farm, erected for Thomas Proctor, Esq. on the estate of the Duke of Beaufort, which, with a sketch of Mr. Proctor's residence, and that of the bailiff, is exhibited by Mr. Godwin (118). No. 23 is a view of a covered homestead in course of erection at Haines-hill, Berkshire, under the superintendence of Messrs. Beadel, Son, and Chancellor. In this department, as in others, there are fewer designs than should be found.

We allude to these deficiencies, because—just as was the case last year—some of our contemporaries have put forth very erroneous, if not pernicious, views, with reference to the works in the gallery, and their relation to existing taste.

THE LIMERICK PROTESTANT ORPHAN SOCIETY.

THE Limerick Protestant Orphan Society was founded in the year 1833, mainly through the exertions of the late Rev. J. C. Fitzgerald, and has for its objects the maintenance, education, and apprenticeship of destitute Protestant orphans. The society has made steady progress since its formation, and numbers amongst its supporters the majority of the Protestant gentry and clergy of the diocese. The late Rev. Godfrey Massy, vicar of Bruff, was especially distinguished for his labours on its behalf. The number of orphans at present under its care amounts to about 250, and the annual income is upwards of 2,000*l*. One of its principal sources of revenue is an annual bazaar, and the difficulty of obtaining suitable rooms for that purpose, as well as for the several public meetings, &c. has led to a proposal for the erection of a building, to be called the Limerick Protestant Orphan Hall, to be also available for other religious purposes. A considerable sum having been subscribed, the design of Mr. W. Fogerty, of Limerick, was selected in June last, since which time the works have been commenced, and the walls of the basement story completed.

The design (a view of which we give) includes a great hall, 81 feet by 44, with two entrances from the street. The principal doorway gives access through a porch to the hall and to the staircase, carried up in a square tower at the angle, which communicates with light galleries on three sides of the building. The other entrance has also a porch, the upper part of which is formed into an oriel window. The hall is lighted at the sides by ten large three-light windows above the level of the galleries, and by a traceried window of five lights in the end.

The basement contains two large school-rooms, committee-room, and apartments for the caretaker, and is lighted by means of areas in front and rear.

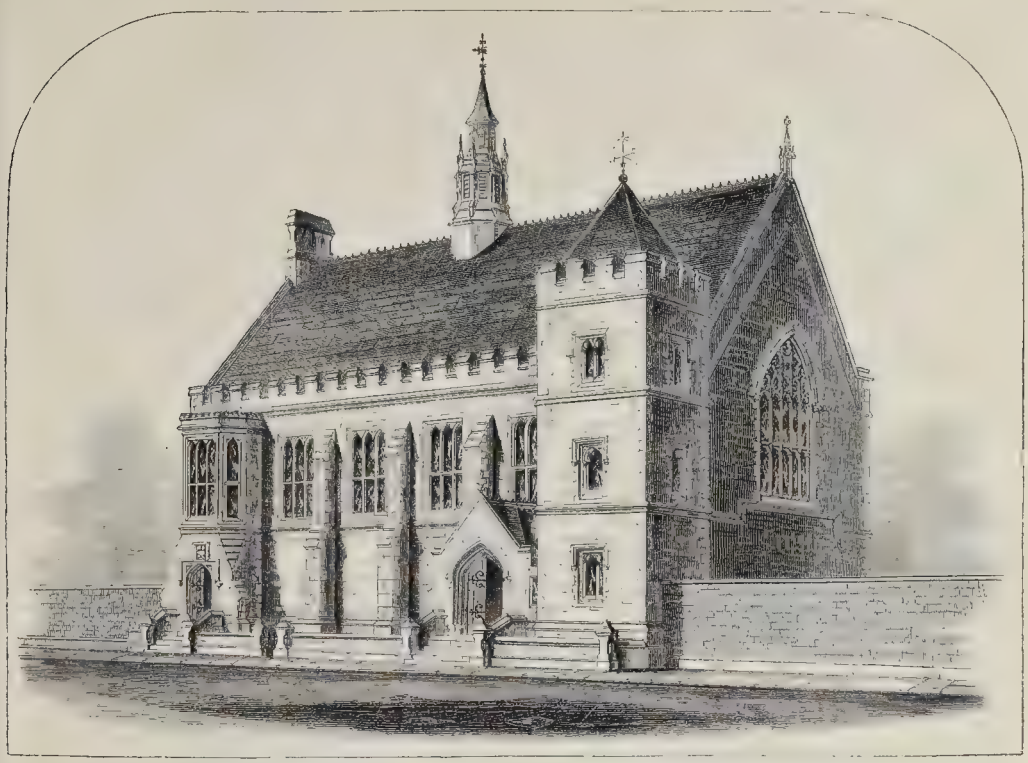
The walls are being built of the local light-coloured limestone in uncoursed rubble work, neatly hammered on the face. The dressings, quoins, &c. are being executed of the same stone, chiselled or punched. The roof is to be open, and, as well as the rest of the woodwork, of stained deal. A large louvre is provided in the roof for ventilation.

A sum of 900*l*. has been already expended in the purchase of site and carrying on of the basement story, and a further sum of upwards of 2,000*l*. will be required for the entire completion of the building.

THE FINAL BUILDING ACT.

As the miserable remnant of structure concealed under our counterfeit architecture has begun to draw remark even in the daily press, and we have French engineers and builders asking, in the *Times*, with courteously concealed sneers, why English builders, with less timber at hand than any others, are the only ones who cannot build without entire dependance on deal sticks (or, I may add, English engineers, without the still more puerile and inconceivably uninventive expedient of casting the unlimited iron their dupes allow them into *artificial sticks*), it seems, at length, time to draw up the curtain and expose the root of all this degradation. Though, like many another lesson, learnt too late, alas! to benefit ourselves, in this "wilderness" (as Kingsley says) "of man's making, not God's," it may be not altogether thrown away on our neighbours, upon either side the Atlantic; or they have more dust in their eyes, and are far nearer our own state of supercivilization than I imagined.

Let any one, then, who marvels at the mighty



LIMERICK PROTESTANT ORPHAN HALL.——MR. W. FOGERTY, ARCHITECT.

nineteenth-century English nation possessing no permanent or even fire-proof buildings, for the noblest purposes—churches, libraries, museums, galleries, town-halls,—while the "barbarous" Arab, Hindoo, and even African, have for ages raised, not only public edifices, but whole cities of dwellings, that spurn all the elements, and depend on no repair;—let him know that the immediate reason is simply this. Though England as a nation be interested to the extent of many a round million of her dearly-beloved £. (to say nothing of other interests not expressible in that denomination) in having as many fire-proof and decay-proof buildings, and dwellings too, as France, Russia, or Asiatic countries; yet it has ceased to be the interest of any man in England either to build or invent them; by which I mean, that no money, thought, or time spent on their contrivance or erection, however valuable to the nation or neighbourhood, ever will or can, in the present state of our laws, be worth one penny to the erectors or contrivers themselves.

That sounds strange, doubtless; and some will say, surely it is natural, or they may even say, "necessary," that what is anywhere decidedly profitable to society, should also be profitable enough to some members or member of it, to be worth his devising. Yes, sir, it is *natural* that it should be so, but not *necessary*. It has been so everywhere,—it is still so in most countries,—naturally, but not by any necessity;—only by the operation of certain laws, contrived for this and other good purposes, I cannot tell you how long ago, by a certain ancient Ruler (very eminent, too, as an Architect), which are still in force over great part of the civilized world; and whose effect, on this matter of building, was once defined by a writer of Jewish extraction, in these terms:—"If any man's work be burned, he [not society observe,—not mankind, nor the nation, but *he*] shall suffer loss."

Now this, sir, is still the exact effect of those old laws, wherever they continue in force and are not evaded; and another curious effect is found to be, that in all those places, men's buildings have constantly improved in stability and true economy, and fires and repairs in them as constantly decreased, till, in many Asiatic places, the former became, and even continue to this day, unknown; the very dwelling-houses being fire-proof and so independent of repair, that their erection is actually, like that of good public works (such ones as no English city has seen since the Middle Ages), a gain national, and not merely individual. On the other hand, wherever these laws, or the above first-mentioned effect of them, may have been superseded, you will find the whole system of structure, in private buildings immediately, and in public ones too, very rapidly, plunged into a state which I will not describe, because to your English readers I need not, and to foreign ones I do not choose;—a state from which, suffice it to say, that while the sentimentalism of a Pugin or Ruskin may rescue a few works of pomp or romance among the mere *dilettante* excrescences of our civilization,—the Cheops-Pyramids of it,—the monuments of its "pride, fulness of bread, and abundance of idleness,"—the proud-flesh of its wounds;—yet there can be, for its muscle, its *realities*, no such galvanic resurrection; cities remaining, under their still-growing and more and more tawdry disguises, no better in reality than camps (as the *Times* article said) of wigwams; buildings tumbling down during erection; fires ever on the increase; Building Acts upon Building Acts, in ponderous array, trying to limit precisely how bad all the work shall be; and lawyers and surveyors haggling over new ones, themselves more ephemeral even than the crazy piles they are to regulate.

But, it will be asked, are the laws then which that Ruler so architecturally contrived, anywhere repealed? No, not by the Authority that passed them: but their effect as regards this matter of building, sir, is most effectually superseded by a collusion of this kind.—Let A. B. and C. be three parties, of whom A. has a house, B. is in command of a long purse, and C. of an army of 100,000 men. A. and B. lay a wager on the contingency of A.'s house being burnt down within a year; that is to say, they engage that in the event of such a fire, B. shall forfeit to A. a certain sum; and in the more probable event of the house escaping fire for a year, he shall receive a certain sum, which being far smaller is at once deposited by A. in B.'s own hands. But, then, who is to insure him the fulfilment of B.'s part of the wager, should B. lose it? No party but C. has power to do that; and as the continuance of this power depends entirely on C.'s character for good faith, A. finds it worth while to purchase of C. a promise that B.'s payment of the wager shall be enforced if necessary; and C. in consideration of a sum paid down by A. proportioned to the amount of the wager (and somewhat greater than A.'s stake in it), sells him this promise. Thus there are three parties to this singular covenant,—the name or seal of each appears on the document witnessing it,—and with less than three I believe it was never yet thought worth drawing up.

So far all is fair: each has a right to do what he will with his own, and if all the things he deals with really *are* his own, their right must be unquestionable, each to make the best bargain he can. The value of a thing is just what it will fetch,—the laws of supply and demand are, &c. &c.—and all we can say is, that the more they enable C. to obtain for his promise the better for C. and (as we shall presently see) the better also for the public. The more expensive the whole business can be made to A. the better.

But now suppose C. to have previously en-

gaged, by the most solemn oaths, to prefer, for no consideration whatever, the interests of any one sooner, to the interests of the nation whereto A. and B. belong, or rather wherein they dwell. This would surely alter the whole case: for it is plainly against the interest of the nation that wagers or gaming of any kind should be encouraged in it, but especially such a wager as this. It is utterly against the common weal that A. should thus be able to *insure* to himself the *worth* of his house, without insuring *the house itself*. It is manifestly the interest of society that no man should have any means of insuring the value a thing bears to him, *except by insuring the existence of the thing itself* in the world. It is the public interest that every loss by fire, or other *preventible* disaster,—every accident that is not in the strictest sense of the expression, "by act of God," but only by act (or neglect) of man,—should fall solely on some one who *might have prevented* it,—and not as an *imperceptible* loss on *many*, but a *ruinous* loss on *one*; as Divine Love has, by all the laws of nature, ordained and provided. It happens so naturally, but not necessarily; not because two and two are four, but because some Person will have fewer accidents and more thought, and fewer selfish rascals in the world; and because lime and sand, and stone and iron, and wood and brick-earth, are His handiwork, and by their properties and relations praise Him and magnify Him for ever.

Well, then, if C. had taken any such oaths as we have supposed, it seems plain that C. would be quite misadvised in becoming a party to any bargain of this kind. For as often as the umpireship and defence of such a wager is undertaken, by the affixing of C.'s name or seal to the document witnessing it, so often is there in *fact* (whatever there might be in intention) a bargain and sale to A. and B. of the interests of the rest of the nation, which (by our supposition) C. had sworn not to sell to anybody.

Now, in modern English, the wager and document here described are called an Insurance Policy: the three parties to it are called, A. the Insured; B. the Insurer; and C. the Crown. The signature of the last is called the Stamp. The stake of A. which is deposited with B. is called Premium; and his other payment to C. for engaging to be umpire, that is to say, the bribe required by the latter for making this sacrifice of the national interest to that of A. and B. is called, most incorrectly, Insurance *Tax*, for it ought, according to all the analogies of our language, to be spelt Insurance *Bribe*.

Towards the end of the late peace, there was some agitation among the most deluded classes for what would be called a repeal of this insurance duty; that is to say, that their interests should be sold for nothing, instead of about 1,200,000*l.* a year,—Government relinquishing the bribe, *while continuing the injustice* that the bribe is paid to purchase;—a reform, thoroughly in accordance with the course of British law-changing in greater matters, from the Tudor days downward. The wrong has gone through its term of naturalization, doubtless,—the years that suffice to make wrong right,—a "vested right,"—a matter of property,—property like that of the Cadarenes in their swine; of which Voltaire says it was an Englishman that taught him to ask (for truly none but a Saxon would have thought of the question), "Did Christ give any compensation to the owners for destroying their property?" Wouldn't we have made Him pay for them—lawful beasts or unlawful? There should have been damages, and law expenses to boot, or we would have known the reason why.

Well, to return to our Insurance 'Duty,' there was some 'ventilation' of the matter, but, happily, war and a war-budget came in time to prevent this further confusion of bitter for sweet and sweet for bitter; and, thanks to the Czar Nicolas, our laws still recognise a difference between a commercial contract and a wager; still deny any obligation upon her Majesty to act as an umpire of bets; and still leave a gaming agreement, that has not received her stamp, to be binding only in honour, not in law.

What is required then to stop the downward course of our building, and restore this art to its normal and *natural* state of progress, instead of degradation, is simply a law to this effect, that 'Whereas it is highly inexpedient and contrary to the common weal that her Majesty's courts should undertake, for any consideration, the enforcement of any gaming or betting contract, but especially of any that is made contingent on the event of a conflagration, or other preventible accident; and whereas it has, nevertheless, been customary, for and in consideration of a payment called Insurance Duty, to place a stamp on certain agreements of this kind, and undertake the enforcement of them; be it therefore enacted, that after the —— day of ——, no such stamp shall be affixed, and no such agreement, except those already bearing a stamp, shall be of any legal force.'

That, sir, is the only "Building Act" for us. With that once passed,—and it *will* be passed, or a still shorter one, another day, by the then rulers of the island now called Great Britain,—with that passed, all the rotten lath and plaster will be seen beginning to transmute itself into as sound materials as the shade of Pugin himself could wish;—without it, never, though Building Acts be multiplied till we cannot produce paper for all that are required. Now, as this *must* come sooner or later, it would save time, and might be found to help save something else, if it were done this very year 1856. We have no right to assume it will *not* be so. What right has any man to assume that those who are shown right will straightway do wrong?

But the revenue! the revenue! I hear it exclaimed. Do you think a Chancellor of the Exchequer is going to throw away a million and a quarter in war-time on a point of abstract justice? Certainly not, most practical reader. But we have a short way of settling that, and so we will see whether it is the revenue question that stands in the way. The Chancellor of the Exchequer shall hear of a substitute fully capable of making up the 1,200,000*l.* and more too, and satisfying, at the same time, the most critical sense of justice. When it was imagined that coal-smoke had destroyed St. Paul's, coal was made to rebuild it; and the same idea has, I believe, been carried out in other cases with more reason. Now, if shallow men will insist that the change above suggested would be a boon only to 'architectural or building interests,' it is fair to answer them according to their folly, by telling them (in their own superficial sense) that we are going to propose these 'interests' alone should pay for it. But for those who look a little deeper, and acknowledge that whatever this matter costs, or shall cost us, is only the just penalty for our fathers' and our neglect and selfish indolence, in admitting the fallacy above pointed out, let us observe that to this *one* fallacy we owe bad building; to bad building, bad architecture; to bad architecture, *architectural disguises*,—the most costly and mischievous of all our luxuries, with the sole exception, perhaps, of gin,—the most utterly useless and unornamental of any, without even that exception; and the *only one untaxed*.

Now, an 'Architectural-Disguises-Tax' is as easily assessed and levied as an Armorial Bearings-Duty (which it most resembles in principle), or rather a Window-Tax, which it would most resemble in productiveness. Let us see.

Schedule A.—Plain Disguise, in Towns only.—For every plastered external surface of wall, within the limits of any city or borough, —s. —d.

If the horizontal dimension of the surface exceed a yard, double the above; if two yards, treble it; and add an equal tax for every yard exceeded.

If it include two stories in height, double the amounts above found; and make an equal addition for every additional story.

Schedule B.—Figured Disguises, in Towns or Country.—For every mass of plastic material, or covered with plastic material, projecting from a wall, whether the wall be plastered or not, —s. —d.

If the greatest dimension of the mass exceed a yard, double the above; if two yards, treble it; and so on.

If the seat or outline of the mass upon the wall have more than one re-entering angle, imagine it divided into the fewest possible pieces, with no re-entering angles, and charge them as distinct masses.

That this Pomp-and-vanity Tax could be made to raise, from existing buildings, as much as the old Air-and-light Tax, is not pretended; but little more than half that amount is all we need for the above purpose, of ascertaining whether it is the Czar or some nearer foe or foes, that stop the way to good building.

Of course, such a tax, were it ever so small, would have the collateral effect of instantly suppressing all future disguise of this kind, as completely as Pitt's Hair-powder-Duty put an end to that elegant refinement. This is only what all real architects desire, and all payers for building would have insisted upon, years and decades of years ago, were it only possible to bring these things before their mental vision. It is simply the difficulty of getting their owners to *look at* them, that perpetuates these absurdities. Now, for drawing attention to a thing, there is no writer like the tax-gatherer. A most powerful prompter of thought is every new line from his pen. *He* will get a thing looked at.

And truly, sir, apart from the justice, above suggested, of making these follies pay for their own funeral, and that of Sham Insurance their mother, we may challenge any one to produce a vanity from which it seems so unquestionably the duty of a Chancellor of the Exchequer to raise every farthing of revenue obtainable. In all the late attacks on it, I have nowhere seen observed this peculiar fact about counterfeit architecture, that it is the only luxury for which no single palliation has been alleged, but only evil continually; harm physical, harm æsthetic, and harm moral. All others have either some microscopic particle of good in their origin or in some remote accidental effect; or, at least, some class to whom, in some one point of view, in mind, body, or estate, they are harmless. Alcohol and tobacco are gifts of God, and for man's good, doubtless, blaspheme about them as he may. In hair-powder it would puzzle one to find any moral, or in armorial bearings any physical evil. Both hurt their owners, but no one else, that I can see. But here we have a wholly untaxed article of pomp, absorbing millions a year more than those or any others; utterly unmotived unless by the most vulgar and ridiculous ostentation; and with no conceivable effect to any class but mischief—mischief to those who have, and mischief to those who want these things; mischief to those who make, and mischief to those who pay for them; mischief to those who like, and mischief to those who despise men for liking them.

E. L. G.

PROFESSOR COCKERELL'S SECOND LECTURE ON ARCHITECTURE.

In his second lecture at the Royal Academy, on the 10th, the Professor said, on the annual recurrence of the present season, when he had to prepare himself for the performance of that evening's very agreeable duty,—when he was relieved, for a short time, from the turmoil and bustle of this vulgar world, and was enabled leisurely to contemplate the noble and important art which they had in hand; to view its deeply-interesting history and expand the wings of imagination upon its delights, and dwell upon its openings up of the sublime and the beautiful, he felt himself almost overwhelmed by the conviction of his incompetency to represent the dignity of so noble a science. When he looked at the ingenuity of mind required; the mathematical attainments, the natural endowment of sensibility, the taste, the invention, the poetical imagination, the genius which were essential, he was really appalled; and he took courage only in the grand principles asserted by the masters of the art; and in reliance upon the candour of his hearers, and in the admission that all were bound to make, that while descanting on so glorious a subject, they were by no means required to be masters of all its departments. So entirely did the Academy of France appreciate the extent of the difficulty of the art, that to carry out instruction in all its parts, they had established three special professors of three departments of architecture. The first was a professor of The Theory of Architecture; the second, of The History of

Architecture; the third, of the Statics of Architecture; and during the season they had many lectures, as well as direct teaching. Many of the scholars were sent to Rome and Germany for five years, at the expense of the Government, the Government having a claim upon their talents at all times. Thus the French Government never lost its hold upon those who had derived advantage from its patronage.

They ought, in directing their minds to this great art, to approach it with all the respect, humility, and circumspection which a subject so grave required. Proficiency in it was in a great measure to be attained by study and by genius, —by disinterested, long, and faithful pursuit of books in the first place. They should study the works of Blondell and many others which would at once occur to their minds. Again, this art was to be cultivated by careful travels; by observations in travels at home as well as abroad; by seeing monuments in their proper sites; by emancipation, as far as possible, from the ordinary business of life; and by that leisure which enabled the mind to expand into those speculations and day-dreams which constituted the delight of the architect. But then, from the art itself, to go to the great practitioners of the art,—to their interesting biography, and the benefits which their genius had conferred upon society; creating, originating, promoting the arts of industry and civilization, the union of a vast variety of knowledge, and the benevolence which it had brought to bear upon their creations; so that they might feel all the force of the language of an ancient writer who had no higher epithet to apply to the Maker of all things than "The Great Architect." There was, indeed, one individual to whom they might apply the title "architect" as the architect of his own fortune—Sir Christopher Wren. He was a scholar from his childhood; a great mathematician at thirteen; professor of astronomy at Gresham College at twenty-one; at thirty-seven, surveyor-general to this country and kingdom; and after the Fire of London, at forty-three, appointed to St. Paul's; the principal founder of the Royal Society, and the largest contributor to it; the founder of the Commission of Sewers; the sustainer of schools of art in the Society of Freemasons,—then acting in their original and proper character as builders; the friend and counsellor of the king, and of the wisest in the State; and the chief benefactor of his country. It was wonderful to contemplate such a character, and to consider that he had left, for special study, structures which could not fail to delight and instruct those who were familiar with his works. Many of Wren's works were without parallel in foreign parts, and were cited by the French as constituting our best title to the possession of taste in architecture. His works were more or less published, and his friend, Mr. Clayton, whom he had the happiness to assist, had added a great deal to what was before known. There were many works still unpublished, and he would recommend to them, as conferring a benefit on the profession, that they should, when opportunity offered, so prepare them as to give them to the public. The age of Sir Christopher Wren was one of peculiar magnanimity in all that affected art and science, while every succeeding age had brought us to that commonplace and plebeian mediocrity with which so many at the present time were content; so that we were now beginning to be considered, in all that belonged to the fine arts, as inferior to other countries. In his (the lecturer's) late visit to Paris, he had had the advantage of a critical view of the architectural monuments of that famous city, in company with one of the first architects of the day. Putting aside the advantages of clime, and of material exemption from smoke, which conferred so great a lustre on the works of that city; and waiving all that distinctive talent for ornamental design, in which the Italians themselves confess the French to excel, he would challenge their pretensions to the graver merits of architecture, and would discuss deliberately with them the beauties of St. Paul's, Greenwich, and other works of Sir Christopher Wren and Inigo Jones, in comparison with their own, as far superior in harmony, unity, variety, invention, and taste. In his first visit to St. Paul's, after returning from Paris, he was especially struck with the dome and towers of that building, which, seen from Fleet-street or Ludgate-hill, at about eleven o'clock on a summer morning, presented one of the most striking views in Europe. St. Paul's was without a rival in its beauty, unity, and variety.

The position of the consistory and morning chapels, the mode in which the aisles were finished with hemispherical domes, and, in particular, the novelty of the contrivance of the windows within the apse, by which the light penetrated into the building after the Gothic mode, was peculiarly striking. There was all the strength of a pier, all the grace which such an apse must give, and a lightness which he believed was unique,—for he had found such a combination nowhere else. It was commonplace to point out to them the absolute novelty of making a dome equal to the width of the whole church, instead of the usual mode of making it equal with the nave. It gave him great pleasure to find in the work of the Rev. Mr. Petit, great commendation of the first model of St. Paul's. When they proceeded further to consider the economy of the structure, its contrivance throughout for sanitary and meteorological purposes, its grace and ornament, a judicious mind could not but rejoice in so marvellous a building in our country as conferring a lasting renown upon us. The building was remarkable for its adherence to rule and the masonic laws. With regard to character and taste, St. Paul's was a remarkable instance of combination. Sometimes the elements of the sublime and just were handled with a strangeness of proportion and physiognomy, or with some extraordinary audacity, as in Boronini, Michelangelo, the chief of the Italians, and a great many among the French. One man surprised and alarmed—created terror and astonishment—by a sort of clumsy power; but Wren was an artist following Nature, in whom they found no extravagances or excesses of power: all was correct and harmonious.

In the Gothic an unearthly attitude was frequently attempted, and in much of the French architecture they found an overstepping of all masonic rule. Such extravagances might transport with their novelty, but they violated the correct spirit of masonic architecture. Wren always trusted to the natural character of his contrivances, and the perfection of his equipoise.

No architect of Europe in his day understood better, or more highly appreciated, the merits of Gothic structure. Witness his surveys of Westminster and Salisbury churches; his restorations of St. Michael's, Cornhill; and many others. St. Paul's is, in fact, a Gothic structure, clothed in classic garb.

In comparing the quality of taste in Wren's productions with that of other masters of his period, the Professor illustrated the modesty of his character. The sublime displayed itself rather to the understanding than to the eye in his forms and combinations. Inigo Jones exhibited more pomp and passion, he was more of a painter than Wren; but he never dreamt of the structural combinations which the mathematician delighted in. Wren overstepped not the modesty of Nature, while Hawksmoor, his pupil, more striking to the eye, discarded all logic. Hogarth has ridiculed his Lion and Unicorn on the spire of St. George's, Bloomsbury, by placing it in the background of his drunken scene at St. Giles's,—as if Hawksmoor was scarcely sober when he designed it: his squinting columns in the niches of St. Mary Woolnoth, are equally indefensible.

Vanbrugh had much of the same taste, and improvised in stone such works as were admissible for theatrical scenery on canvass only. He affected force and magnitude of parts, but he stood on the dangerous limits between the sublime and the ridiculous.

He went on to compare Raffaelle and Michelangelo in the same strain, illustrating his position by the advice of Hamlet to the players; and he recommended that the student should set his mind to distinguish between real greatness and swagger, between daring and balderdash, the massive and the coarse, grace and affectation, intricacy and confusion, elegance and effeminacy. These were the essential distinctions which we should well consider in the formation of our taste.

Very few indeed were those who were enabled to carry out works, but they might design them. They might put them on paper, and thus become useful to their country. The Palace at Whitehall was estimated on the continent as one of the finest works of that day.

In the Vitruvian element "*Dispositio*," the architects of that day were conspicuous. Both Inigo Jones in Whitehall, and Wren in the examples cited, reminded us of military disposition and battle array, with all the order and discipline of warfare in the sixteenth and seventeenth centuries, which had reversed the desultory system of the previous centuries under the feudal warriors. The disposition of buildings had participated in the reform, as these arrangements had been always determined by the accidents of site, and generally by ecclesiastical requirements, and had all that picturesque (so contrary to architectural principles of Wren's day) which sketching ladies and gentlemen adored in the present.

Inigo Jones and Wren had earned for us the good opinion of Milizia, amongst other foreign writers, who had said, that architecture, banished by the license and caprice of other countries of Europe, had taken refuge in England.

He would particularly invite the attention of the younger members of the profession to that magnificent palace projected by his Royal Highness Prince Albert at Kensington-gore, which, at some time or other, he hoped they would see rising, a splendid national monument. The site was equal to the site of any of the great buildings of Europe. That palace would really be a subject of useful study to those before him, in comparing the great monuments of Europe, and so exercising their own genius as to produce something which should do honour to their country. They might, of course, have competition in which one would be successful, and others not thanked for their pains. That was one of the degradations at which their art had arrived, and which it behoved them to try and relieve it from, namely, the discreditable manner in which such efforts were received. He presumed the only way of so doing was to make their efforts really worthy of respect; and to teach, if possible, all supercilious observers and judges that there was something due to those even who were not successful. It was a great gratification to him to find that a late friend of his had left a legacy of 40*l.* a year, to be given to the unsuccessful candidate for the gold medal. The first candidate, the donor said, had his reward; but the second, who had made all possible effort, and who probably might be very near the first, had failed, had lost his time, and his means, perhaps; and now there were 40*l.* to prevent this. Finally, while we were bound to acquaint ourselves with foreign examples, to respect and to borrow from our illustrious neighbours, who were ever intent on the advancement of every noble art and science, we were not to overlook our own, or to depreciate those masters who had conferred such lustre on our country, and he recommended the remark of Pliny, that "we often make expensive journeys to visit objects, which, when under our noses, are neglected. I know not," says he, "whether it is an order of nature that we are incurious about everything we are not obliged to seek, or that the desire languishes when an object is easily obtained, or that we defer always that which we can visit any day."

From whatever cause, certain it is that our own country possesses many objects which, at a distance, in Greece or in Egypt, we should regard as miracles; and we should visit and illustrate them in the most complete manner.

"BEAUTIFUL VENICE."—At the Colchester Literary Institution, last week, Mr. Charles F. Hayward, Associate of the Institute of Architects, delivered a lecture on "Beautiful Venice." The subject was illustrated by about 100 photographs, engravings, and sketches made by the lecturer during his visit. It was enterprise, said the lecturer, by which Venice rose, and if the same were applied to Colchester, and private sacrifice were made for public good, what, he asked, might not be done for their ancient town?

THE DIPLOMA QUESTION.

AT a meeting of the Liverpool Architectural Society, held on the 9th instant, to discuss the desirability of co-operating "with the London Architectural Association in endeavouring to obtain the issue of a diploma," it was resolved by a majority of five to three,—

"That in the opinion of this meeting it is desirable that a course of architectural study should be authoritatively prescribed, and that those who pass the examination by which that study should be closed should receive a certificate; and that the president be requested to forward the foregoing declaration to the Royal Institute of British Architects, and state that the members of this society will be ready to co-operate in any measures that may be required to give it effect, leaving the details of study and examination for further consideration."

In all that has been written and said upon the diploma question, the cause which has led to the present unsuccessful position which many architects occupy seems to have been overlooked.

The cry for a diploma evidently comes from a body of young architects, who find it difficult to get employment sufficient to sustain them in respectable circumstances, without mentioning the high position which some of them should occupy.

It appears to me that in consequence of the abuse of the present system of architectural pupilage, the number who have entered the profession is much greater than the demand for their services would justly warrant, and among this number are many young men, who have, no doubt, average abilities, but who are not possessed of the peculiar talent necessary for the profession. Architects are in general too ready to take young men into their offices as pupils, when perhaps the little practice they have is scarcely sufficient fully to employ even their own time. When a premium is offered it is irresistible. Whether the youth has ability or not, he can be so far trained as to be useful in copying plans; and thus the architect is enabled to work his business, with the least possible trouble to himself, and perhaps a hundred pounds in his pocket besides. The evil naturally multiplies itself; for those who possess least practice are precisely those who are most anxious to get pupils; also, in the inverse ratio to the number engaged, is the average practical experience. Diminish the number of practitioners, and I warrant the profession will rise in public estimation and general ability. There will then be scope for those who possess a knowledge of art and structural beauty, which, instead of bringing with it drudgery and penury, will gain them easy circumstances and the respect of society.

With this view of the state of the profession before our eyes, let us examine the manner in which a diploma system would work itself out. It must either be a compulsory or voluntary system. The latter is the plan proposed by the Architectural Association, and the only one which I think we need trouble ourselves to consider; for, in these days of free trade, it would be next to impossible to obtain a parliamentary enactment, which as the proposition emanates from the profession, would be considered to be demanded for the protection of architects, and not for that of the public.

I understand that the diploma sought for is to be a certificate that the person to whom it has been granted is possessed of a certain amount of knowledge, which those who grant it consider sufficient to justify him in practising as an architect.

The most sensible course of examination, and the one most likely to lead to a just conclusion, would be for those wishing to pass for a diploma to be made to prepare plans, specifications, and estimates, in the presence of competent persons appointed for that purpose. This, together with questions of a practical nature, is all that could with justice be asked for, in the present state of architectural education. A knowledge of science is possessed by but few; and, if it were demanded, it would throw out many men, who, inferior in scientific attainments to others perhaps possessed of a diploma, are yet far their superiors in architectural ability. Would it be a wise policy to demand educated mediocrity, at the expense of uneducated talent, and instead of permitting and encouraging untaught genius to develope itself, to trammel it with the compulsory demand of scientific knowledge? Most of the great inventions which have conferred undying benefits upon the world have emanated from working and uneducated men. Would you have said to George Stephenson, when planning the Liverpool and Manchester Railway, "We will not allow you to practise as an engineer: you have no knowledge of algebra, and consequently are unfitted for the post?" Such policy would be suicidal.

Let us examine what benefits would accrue to architects and the public from the introduction of a system similar to the one previously stated as being the most sensible, presuming that through public opinion it has become a moral necessity.

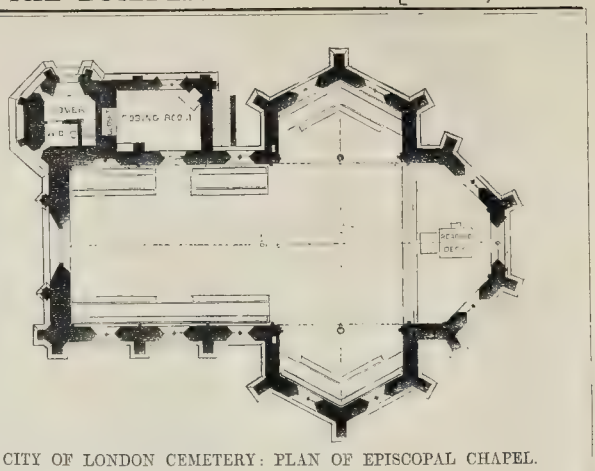
As it would rest with the examiners to say whether the examined possessed the requisite amount of ability to fit them for practising, and as ability varies very much in different persons, the power of drawing a line between competency and incompetency would be a very arbitrary one, and liable to be much abused. A set form of questions to be asked and answered would in a measure prevent this; but what advantage would result when design and arrangement are unconsidered? It would, however, be impossible to frame any set mode of examination which did not leave a great deal to be decided by the taste and prejudice of the examiners.

There are, I think, but few architects who would not be able to pass an examination of this description, if conducted with tolerable fairness and honesty. It would, indeed, be but a poor compliment to the talent of the profession to think differently. If there exist fools enough in the world to give work to those who do not possess even elementary knowledge, a diploma system would not prevent them from obtaining it. It might, perhaps, induce those to study who have not yet practised, in order that they might pass the examination with honour. It would, perhaps, ensure a certain amount of practical knowledge in the coming generation, but would it increase talent by offering it a more enticing remuneration? In my opinion it would not, by reason of its proving no check upon the influx of new members into the profession. Some would say, establish a system of collegiate education, and raise the qualifications to a higher standard; but there are evils inseparable to the system. You compel young men to go through a course of training which is as likely to be bad as it is to be good, and is certain to be expensive. The management may also, through interest or routine, fall into the hands of incompetent persons, and thus become a repetition, on a small scale, of Government imbecility and incapacity. It is a principle becoming day by day more significant, that every institute should stand on its own merits as a basis, and be self-sustaining. Let architectural education be no exception to the rule. Establish colleges, but let them depend upon the support of the profession. If they are required, they will answer: if not, they will soon be numbered with the things that were.

After considering the question of voluntary examination in all its bearings, the only conclusion I can come to is, that it will be impossible for it to become a moral necessity, that the feeling of the profession will be against it, from the extra trouble and expense incurred, and the dislike of many to let the decision of the great question of their lives, "whether they shall practise or not," rest with any but themselves; that the public, finding many able men among those who have no diploma, will encourage them in preference even to those possessed of one—for the English people, above all things, hold in abhorrence any attempt at monopoly, which the movement would undoubtedly be considered to portend.

I repeat that there are too many in the profession, and that it is useless to hope for amendment before the numbers are diminished. "How do you propose to effect this?" will be inquired. Architects must unite. Let them agree among themselves to take only a certain number of pupils each year; and, in preference to new hands, employ those who have already obtained a knowledge of their profession. A determination on their part such as this, steadfastly adhered to, would, I think, prove a legitimate and effectual remedy for the evils which the advocates of the diploma contemplate removing.

PHILALETHES.



CITY OF LONDON CEMETERY: PLAN OF EPISCOPAL CHAPEL.

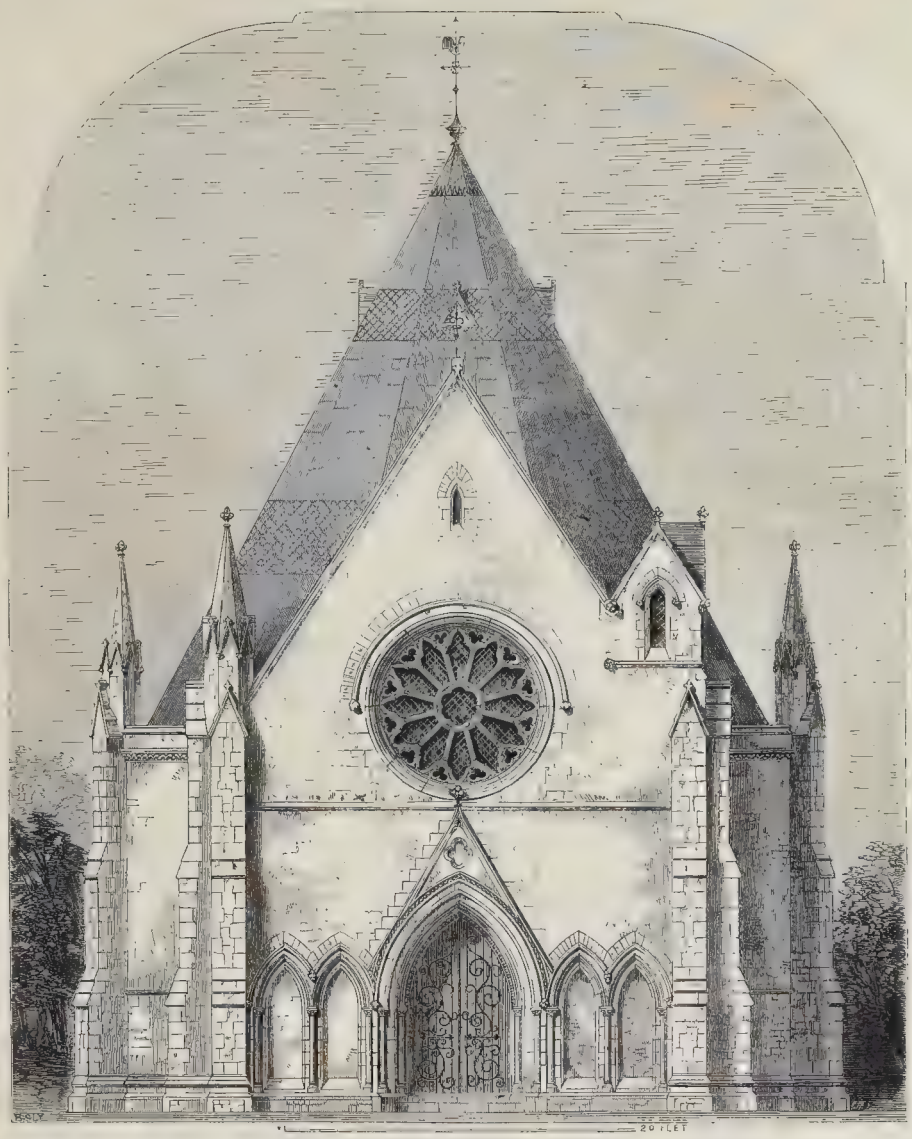
THE CITY OF LONDON CEMETERY, AT ILFORD.

DIFFICULTIES still retard the opening of the City of London Cemetery. It will be seen one day on whom the blame rests. We add to our former illustrations (pp. 578, 579, vol. xiii.) the elevation of the Chapel for Dissenters, and the plan of the Episcopal Chapel. Hereafter we shall give a view of the Entrance and Lodge. It will be seen that the length of the episcopal chapel inside is 61 feet 6 inches, and that the width is 49 feet. The extreme length of the chapel for Dissenters is 45 feet 6 inches, and it is 34 feet across in the widest part. Two reports by Mr. William Haywood, the architect of the cemetery, have been recently printed; one "in relation to the areas to be allotted for graves and vaults at the City of London Cemetery;" the other, "in relation to Fees, Charges, and Regulations to be observed" there: the latter, in particular, contains a large amount of information as to the charges, &c. in other cemeteries. We are glad to find that Mr. Haywood, when speaking of the use of brick graves and vaults, arrives at the conclusion that "this mode of interment is fundamentally an error; and that it is most difficult, while it exists, to remedy its consequent evils." Public opinion should be loudly expressed against the maintenance of this unwholesome and unnatural practice.

Mr. Haywood's office, as engineer and surveyor to the London Commissioners of Sewers, is evidently not a sinecure, and he appears to do his duty well.

CHURCH-BUILDING NEWS.

Portsea.—The Portsea burial-ground, recently consecrated, is situated on the west side of the London, Brighton, and South Coast Railway, and about a hundred yards from the Portsea Island Union. It was purchased, according to the *Portsmouth Times*, for about 4,000*l.* and encloses about fourteen acres of ground, divided into two equal portions by a main road. The buildings consist of two mortuary chapels, a porter's lodge, dead-house, and entrance gateway, and are constructed with black-faced flints, ganetted in the joints, with Caen stone dressings. The chapels are similar in general design, of same dimensions, and have attached to each an octagonal vestry and waiting-room on either



CITY OF LONDON CEMETERY: DISSENTERS' CHAPEL.—MR. WILLIAM HAYWOOD, ARCHITECT.

side of the entrance porch. The length of each chapel is 30 feet, and the width 22 feet; and they have on each side three two-light windows with traceried heads, glazed with cathedral tinted glass, with coloured borders. The end window is a three-light, filled with ornamental stained quarries and coloured borders. The whole of the interior woodwork is of deal, stained and varnished, and picked out with blue and red. The roof is open, and covered with boarding laid crosswise, and chamfered at the joints. The chapels contain a reading-desk and two rows of open seats on each side, which have sunk panelled bench ends with *fleur-de-lis* tops. The aisle is paved with fancy sexagon (red, blue, and yellow) tiles. Over the porch, which is groined, is carried an octagon spire to the height of 60 feet to the top of the vane. In the lodge, besides accommodation for porter, is a board-room, 18 feet long, with recessed bay at the end, and an office, with strong room and closet for the registrar. The dead-house is divided by a tool-house in the centre, and is covered with Staffordshire blue tiles inlaid with red tiles. The entrance gateway consists of a carriage entrance, 12 feet wide and 20 feet high to the underside of the arch, with two side entrances, 4 feet wide and 11 feet high, with light wrought-iron gates to each, ornamented with vine-leaves. The cemetery is bounded on three sides by a panelled brick wall, and on the front by a dwarf flint wall, coped with stone, and surmounted with iron railing, bar, and cast standards between the piers. The total cost of the erection of the buildings and boundary wall is under 3,500*l*. The ground has been laid out under the directions of Mr. C. B. Smith. The draining has also been done under the same direction, to a depth of 7 feet at the lowest point. The chapels, lodge, &c. have been designed by Mr. Rake, and erected under his superintendence.

Retford.—The middle compartment of the window at the west end of the north aisle of Retford Church has just been filled in with a light of stained glass, executed by Messrs. O'Connor. The subject is from Luke, xviii. 35, and following verses, and represents our Saviour giving sight to the blind. In the middle of the picture stands the Redeemer, surrounded by other figures, and, kneeling at his feet, the blind man—his face turned upwards—the hands of the Saviour being placed over his eyes. The work has been purchased by means of small subscriptions. Contributions have been offered towards filling up some other compartments in the same window.

Birmingham.—It has been resolved to erect a monument to the late Lieutenant-Colonel Unett, of the 19th Foot, who fell at the storming of the Redan, at Sebastopol. The monument is proposed to be of marble. It will be placed in St. Philip's churchyard, Temple-street. A committee has been appointed, with power to select a design and superintend the erection.

Ilkeston.—On 23rd ult. the new Wesleyan chapel here was opened. It is a small Gothic edifice in one of the new streets, laid out on the south side of the town. The gable faces the street, the elevation presenting a quintuplet of lights, the centre one about 19 feet high, and those on either side gradually decreasing in height. Externally, the materials employed are brick, with stone dressings, &c. Internally, the roof is composed of spars, with every fifth framed by knees into a principal: it is open only as high as the collar. The plaster of the ceiling between the spars, and of the walls, is stained to a red-pink colour, which gives the chapel a comfortable and warm tone. There are sittings for nearly 200 persons. The heating is provided for by the employment of Walker's self-feeding stove. The gas fittings were supplied by Messrs. Skidmore and Son, of Coventry. The architect was Mr. F. R. H. Haswell, of Nottingham.

Ely.—The coldness of Ely Trinity Church having been much complained of, and gas stoves found ineffectual, a hot-air stove has been built in the vestry-room, fired from the outside of the church, with a flue connecting the church and furnace, by which the cold air is withdrawn from the church, and fresh hot air injected, by a compartment in one of the windows. It has been put up under the direction of Mr. William Burns, the engineer to the Local Board of Health, by Mr. John Elliott, of Ely, at the cost of 83*l.* 10s. It is said to be successful. The church is 100 feet long, and has a large glass surface.

Liverpool.—A new Independent chapel for the Rev. Mr. Dewsnap, in place of that which was burnt down in May last, is to be erected at the corner of Berkeley-street and Hill-street. The design of Messrs. Smith and Grundy, of Manchester, has been accepted. The style will be decorated Gothic, and the building will accommodate eight hundred persons.

Lillieleaf.—A monument, says the *Border Advertiser*, has just been erected in the parish church, here, as a public tribute to the memory of the late Mr. C. R. Currie. The monument is a bas-relief, executed in black and white marble, by Mr. A. H. Ritchie, of Edinburgh. It consists of a full-length figure, representing "Grief," in a kneeling posture, leaning mournfully over, and exhibiting an oval tablet, on which is the inscription.

PROVINCIAL NEWS.

Rochester.—The temporary bridge over the new canal cutting at Rochester is in a very dangerous state, and perceptibly sinking more and more every day, in consequence of the subsiding of the foundation on which the structure was laid. The side walls are cracking and splitting in all directions, and the bridge is considered so unsafe, that a new structure is being erected on the side where that part of the old one which is pulled down formerly stood. By order of the bridgewardens the new iron bridge now erecting is to be opened on 29th May next, and a large number of workmen are engaged on it to have it completed by that date. Of its three large arches, that on the Rochester side is fast approaching completion, nearly the whole of the heaviest portions of the ironwork having been fixed in their places, and the balustrades erected. After the scaffolding has been removed to admit of the traffic beneath it, the centre arch will be commenced.

Lyncombe.—The new schools at Widcombe, erected under the arches of the Great Western Railway, in a locality intersecting the most populous part of the parish of Lyncombe and Widcombe, were formally opened on Monday before last.

Worcester.—The Master of the Rolls has recently decided that the late Earl of Beauchamp's bequest of 60,000*l.* for the erection and endowment of almshouses in Worcestershire, is "void," under the statute of "Mortmain," and that the gift over to St. George's Hospital (as being contingent upon the other) is void also. Subsequently, however, the Attorney-General for the Crown has thought it his duty, as the protector of all charities, to file an "information," the effect of which is to over-ride the decision of the Master of the Rolls, and to resuscitate the cause of the almshouses, so that it will eventually have a full hearing in the House of Lords. Meantime, the Countess of Beauchamp has executed a deed binding herself to devote the whole of the portion of the 60,000*l.* to which she might be held entitled, to the erection and endowment of almshouses in Worcestershire.

Bolton.—It has been resolved by a majority of the local Poor-law Guardians, of 23 to 18, to erect a new workhouse. The number of inmates at present in Bolton workhouse is 353. The space devoted to each pauper averages scarcely more than 100 cubic feet, instead of 300, according to the requirement of the General Board. The mover of the resolution seemed to contemplate the erection of a building for 750 inmates, at 20*l.* per head, which would amount to 15,000*l.*; and that sum he proposed to borrow from Government, at ¼ per cent.

Preston.—The local guardians of the Preston Union also have resolved to erect a new workhouse; and, according to the local *Guardian*, they have already memoralized the General Board, and got their concurrence.

Kexborough (Leeds). — The opening of Kexborough Town School took place last week, according to the *Leeds Intelligencer*. Mr. Beaumont, M.P. of Bretton Hall, who owns the greater part of Kexborough, gave the site, about half an acre, and pays the cost of the erection, from 200*l.* to 300*l.* except about 50*l.* raised by the other inhabitants. The school, which is situated in Ball-lane, is a light Gothic structure.

Durham. — The erection of a new County Lunatic Asylum, at Sedgefield, will be proceeded with in the spring. To meet the expenditure, the county magistrates have appointed a committee to make a new special county rate for the purpose.

ARCHITECTURAL INSTITUTE OF SCOTLAND.

AT a meeting on the 7th of January, in George-street Hall, Edinburgh, Mr. James Brown, architect, in the chair, Mr. G. Burnett, advocate, read an interesting paper "On the Architecture of Nuremberg."

Replete as is Nuremberg with the domestic architecture of the Middle Ages, comparatively few dwelling-houses are extant older than the fifteenth century. This probably arises from the limited use of stone in private houses; but we have one noble example of a fourteenth-century dwelling in the so-called Nassau House. It has four lofty stories, undivided by string-cornices: the windows are placed with tolerable regularity: those in the upper story were originally pointed. A beautiful semi-octagonal oriel occupies the central part of one of the walls, and to each of the upper angles of the building is attached a hexagonal or octagonal turret, pierced with trifoliated apertures. The walls are crowned with an embattled parapet, and on a tablet below the merlins are carved armorial bearings. The ornament is almost exclusively confined to the turrets, parapet, and oriel, the rest of the wall being studiously plain. In point of size and pretensions this house was exceptional. The contemporary dwellings, even of the principal citizens, were homely and unambitious, and built of a framework of timber filled up with brick.

The architecture of Nuremberg was the true offspring of uncontrolled thought and feeling, which could never be contented to repeat itself.

In concluding, he said the late and still living King Lewis of Bavaria had done much to preserve the ancient buildings of Nuremberg. Regulations have been made to enforce the keeping of old houses in repair, and there has, at least, been an attempt in planning the new to readopt the old Nuremberg style. The earlier specimens of revived Nuremberg Gothic contain much that is formal and inappropriate; but recently there has been less of servile copyism, and more of the spirit of the ancient builders displayed.

PARIS.

The Statue of Francis I. in the Court of the Louvre.—Since the publication of our view of the Court of the Louvre (p. 7), wherein M. Clésinger's equestrian statue of Francis I. drawn from the original, was shown, the model of the statue has been erected, and has elicited some strong objections from the French critics. The statue is now made to face the opposite way to that shown in our print, and the massive pedestal serves not merely to lessen the apparent size of the building it is intended to adorn, but blocks up vistas on all sides. The horse, too, is of the drayhorse tribe, and its energetic action and bustle, and exaggerated anatomy, contrast unpleasantly with the quiet aspect, if not tameness, of the figure of the king. The statue, nevertheless, has many fine points; but the situation is undeniably unfortunate.

The Hemicycle at the Ecole des Beaux Arts.—Twenty figures alone remain uninjured in M. Delaroche's fine work, out of the 75 which compose it. The restoration has been entrusted to M. Mercier, and is already commenced. M. Delaroche will himself have to paint again thirty of the figures. M. Robert Fleury is the president of the School of the Fine Arts for the year, and M. Jay, Professor of Construction, is the vice-president: the latter gentleman has also been named president of the Section of Architecture for the same period.

Aids to Literature.—The Préfet of the Seine has been authorised to purchase, on account of the city, 144 copies of the second edition of MM. Lazare's Dictionary of the Streets and Monuments of Paris, in consideration of its usefulness, and for which purpose the sum of 2,592 francs has been voted!

M. David (d'Anger), the celebrated sculptor, died recently in Paris, at the age of 65, and was buried at Père la Chaise. He was no relation to the famous painter of his name, although he was very generally supposed to be one.

M. Horace Vernet has promised to paint gratuitously in fresco the walls of a new church now in course of construction at Bagnères-de-Bigorre (Hautes Pyrénées).

HOW TO IMPROVE OUR ARCHITECTURE.

IT seems much the fashion of the present day for architects to complain of the little patronage and attention bestowed on architecture, and to agitate to bring about some change that may place them and their art in a better position; but the reasons they assign for this unfortunate state of things, such as the use of stucco, &c. seem anything but satisfactory.

Now I take it that architecture is in no worse a condition than any other unmarketable article or science, and that its being at a discount must be attributed to its not being offered to the public in a form calculated to identify itself with its interests.

Now, sir, let it be more the custom for men of capital to build on their own freeholds instead of letting their ground on short building leases to parties of respectability, with tempting offers of assistance; and let them, like the Parisian builders, obviate the necessity of insurance and frequent repairs, by a fire-proof and more careful construction; let, in short, the speculators be those who have the means to speculate, and the circumstances under which buildings are erected like those of almost any other country; let there be an efficient school, in which students of architecture may learn their art and its application without prejudice to common sense, and I feel assured that the demands of the public would be more successfully answered, and competent architects have less cause to complain of want of patronage.

H. H. B.

LECTURES AT THE ARCHITECTURAL EXHIBITION.—On the 15th inst. Mr. George Scharf delivered an able lecture "On Early Christian Art, as illustrated in Mosaic Paintings," which was well received by a large audience.

BRIGHTON WORKHOUSE COMPETITION.

WITH reference to a paragraph on this subject in the last number of our last volume, p. 637, Mr. Collins has written to deny the statement quoted from the local *Herald*. The writer says:—I was *unfortunately* the successful competitor for the "Brighton Industrial Schools." The design (together with the late Mr. Carpenter's for the "workhouse") was not considered by the Poor-law Board to contain sufficient accommodation with regard to superficial area, and was required to be enlarged by more than one-third. By direction of the guardians new designs were made, founded on the requirements of the Poor-law Board, and many alterations of an expensive character were introduced. By the dissensions distracting the Board, the time frittered away by jobbery, &c. the unwarrantable interference of their surveyor, the natural consequence ensued—the buildings could not be carried out for anything like the sum contemplated, and they were abandoned (both workhouse and schools), and I then submitted the surveyor's and my account.

All the accounts were disputed, — not on the ground that they were not indebted, nor that the charges were exorbitant, but that legal technicalities protected them from paying. They took the opinion of the four judges in "a special case" on behalf of the surveyor's claim, who were unanimously against them: by this decision they had to pay the full demand, viz. 204*l.*; the taxed costs, 56*l.*; the lithographer's account of over 50*l.* and his costs.

My charge for the preparation of the working drawings (for a building to accommodate 300) was 309*l.* *All* the requisite drawings, specifications, &c. had been prepared (and are now in my possession), over twenty visits made to Brighton, and many incidental expenses incurred. To my professional brethren (used to the manœuvres of public boards) these facts will be sufficient, but it may be as well to mention that the bill has been submitted to many gentlemen high in the profession, who all expressed an opinion that it was undercharged instead of the reverse: the names of Prof. Donaldson, Messrs. Stephens, Hammon, &c. will be guarantee for this statement. That the guardians did not dispute this claim for the reason stated I have the authority of their own solicitor, for, said he, "If the guardians were entitled to pay you anything, it should have been the whole amount." But the best refutation can be seen by their own pleadings,—that I had no right of action; and very little doubt exists on my mind that these respectable guardians intended to again avail themselves of a technicality (of which the law of England is unhappily too full), to deprive me of my rights, the effect of which would have been to have mulcted me in the payment of some hundreds for costs. On the other hand, confiding in the sound legal knowledge of my counsel, Sergeant Byles and Mr. Lush, I left the whole conduct of the case in their hands, and being out of court with my solicitor when the cause was called on, was as much *really surprised* on my return at the offer made by the guardians, and accepted by my counsel, as they (the guardians) *pretended to be*: the consequence of this arrangement to these honourable guardians (and, unfortunately, to the parish also), has been, that they have had to pay 50*l.* the verdict, and 127*l.* 17*s.* 6*d.* taxed costs to my attorney. Add about 200*l.* to their own attorney, and the adage is fulfilled in this as in most instances, that "Honesty is the best policy."

H. H. COLLINS.

ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND.

WESTMINSTER-HALL ROOF.

AT a meeting of this Institute, on the 12th inst. Mr. T. Symes in the chair, after some discussion relative to a communication received from the Architectural Association of London, inviting the opinions of this Institute on the *diploma question*, and which was ultimately referred to the council, for final decision, a description of Dr. Gray's flushing apparatus was delivered by the inventor in person, and the members expressed their approval of its efficacy and simplicity. The invention has been extensively adopted in some of the public and private buildings in Dublin and elsewhere, with considerable success; and the fact of the apparatus being self-acting enhances its merits. Mr. M'Curdy brought under the notice of the Institute a copy of a record in St. Michan's Church, and verified by "Hauner's Chronicle," in the Library of Trinity College, Dublin, which states that the roof over Westminster-hall was constructed with timber procured from the site of this church; and he further said that clumps of trees were found during recent excavations. The following is a copy:—

"Stainhurst findeth that, anno 1095, there came certaine Easterlings to the north side of Dublin, adjoining to the Liffie, and seated themselves there, so that of them to this day the place is called Ostomontowne, and corruptly, Oxmonton, and the parish Saint Michans, of one Michanus, a Dane and a bisbop, which founded the church, unto whom Murchard or Morogh, King of Leynster, gave that parcell of land to that use. The faire greene or commune, now called Ostomontowne-greene, was all wood, and hee that diggeth at this day to any depth shall finde the grounde full of great rootes. From thence, anno 1098, King William Rufus, by license of Murchard, had that frame which made up the roofes of Westminster Hall, where no English spider *webbeth or breedeth to this day*."

THE NEW BUILDING ACT.

THE following question appears important in the construction of the 18th section of the New Building Act, which provides that "the area of such recesses and openings" (in external walls) "shall not, taken together, exceed one half of the whole area of the wall in which they are made."* Does this apply to shop-fronts? My impression, on first reading it, was that, if there were no brickwork in the shop-front, the area of the wall should be taken from the commencement of the wall over the same. It will readily be seen that, if this view be not correct, the shop-front, as ordinarily built, will, in low front walls, monopolise nearly all the space allowed for openings, especially where there is no basement story.

My doubt is whether the first part of the first schedule will not militate against this view. "Every building shall be enclosed with walls constructed of brick, stone, or other hard and incombustible substances, *and the foundations shall rest on the solid ground, or upon concrete, or upon other solid substructure*." I suppose a bressummer, supported by columns, would be hardly a "solid substructure," and the courses immediately over the bressummer could hardly be called "foundations." I do not see the word "foundations" used elsewhere in the Act. The discussion of this question may be the means of setting it at rest. As it is, I fear we have all the disadvantages of a window-tax without its benefit to the state.†

Again, in the case of a gateway under a house leading (for instance) to a builder's yard, would the opening for said gateway be taken as part of the wall, and form one of the openings whose area is to be so calculated, or would the area of the wall be taken without such opening?‡

SURVEYOR.

WORKS PRODUCED IN THE SCHOOLS OF ART, GORE HOUSE.

THE Autumn exhibition of the students' works, both metropolitan and provincial, has been open during the past fortnight. Some of the works show creditable proficiency so far as they go, but are not sufficiently attractive to allure many visitors to the Kensington-road. A student writes to us, objecting to the "repetition and monotony of the works exhibited." He continues:—"This practice of covering the walls of Gore House with numerous drawings of the same subject may afford an admirable opportunity for the comparison of various styles, and the merit of the works of different schools, to the masters whose pupils are competing for the medals; but to the public it is a source of disgust. What possible object can the Department of Science and Art have in view by this proceeding, the sameness and monotony of which renders the exhibition most wearisome?"

BRITISH RAILWAYS.

INSTITUTION OF CIVIL ENGINEERS.

AT the meeting on January 8th, an address by Mr. Robert Stephenson, M.P. on taking the chair for the first time since his election, was read. It had especial reference to the great question of British railways, which were described as spreading, like a network, over Great Britain and Ireland, to the extent of 8,054 miles completed: thus, in length, they exceeded the ten chief rivers of Europe united, and more than enough of single rails were laid to make a belt of iron around the globe.

The cost of these lines had been 286,000,000*l.*—equal to one-third of the amount of the national debt. Already, in two short years, there had been spent more than one-fourth of 286 millions in the war in which England was engaged; yet how small were the material advantages obtained by the war, in comparison with the results secured by railways.

The extent of the railway works was remarkable: they had penetrated the earth with tunnels to the extent of more than fifty miles. There were eleven miles of viaduct in the vicinity of the metropolis alone. The earth-works measured 550,000,000 of cubic yards: St. Paul's, in comparison with the mountain this earth would rear, would be but as a pigmy beside a giant, for it would form a pyramid a mile and a half in height, with a base larger than St. James's-park.

Eighty millions of train miles were run annually on the railways, 5,000 engines, and 150,000 vehicles composed the working stock. The engines, in a straight line, would extend from London to Chatham; the vehicles from London to Aberdeen; and the companies employed 90,400 officers and servants; whilst the engines consumed annually 2,000,000 tons of coals, so that in every minute of time four tons of coal flashed into steam twenty tons of water, an amount sufficient for the supply of the domestic and other wants of the town of Liverpool.

In 1854, 111 millions of passengers were conveyed on railways; each passenger travelling an average of twelve miles.

The receipts of the railways in 1854 amounted to 20,215,000*l.* and there was no instance on record, in which the receipts of a railway had not been of continuous growth, even where portions of its traffic had been abstracted by competition, or new lines.

The wear and tear was great: 20,000 tons of iron required to be replaced annually; and twenty-six millions of sleepers annually perished: 300,000 trees were annually felled to make good the loss of sleepers; and 300,000 trees could be grown on little less than 5,000 acres of forest land.

Nothing was so profitable as passenger traffic, as it cost less, in every way, than goods, and an average train would carry 200 passengers. The cost of running a train was overstated at 15*d.* per mile, and 200 passengers at five-eighths of a penny per mile produced 5*s.* 2½*d.* But this argument did not imply that, in all cases, fares should be fixed at a minimum.

The postal facilities afforded by railways were very great. But for their existence, Mr. Rowland Hill's plan never could have been effectually carried out. Railways afforded the means of carrying bulk which would have been fatal to the old mail coaches. Every Friday night, at present, when the weekly papers were transmitted, eight or ten vans were now required for post-office bags on the North-Western Railway, and this use of eight or ten railway vans implied, at the least, the employment of fourteen or fifteen mail coaches; and the expenses of fourteen or fifteen mail coaches, to Birmingham, could never have been sustained by a penny postage. For this great blessing, therefore, the nation had to thank the railways.

Parliamentary legislation for railways was full of incongruities and absurdities, which were graphically described and illustrated. The Acts of Parliament which railways had been forced to obtain had cost the public fourteen millions sterling. But this was shown to be the exclusive fault of Parliament itself, and of the system it enforced. The legislation of Parliament had made railways pay seventy millions of money to landowners for land and property; yet almost every estate, traversed by a railway, had been greatly improved in value. Parliament had taxed the companies in favour of the landowners, for what was called "severance." Claims for compensation for "severance" were based on theories which were wholly ideal and imaginary. No one had ever been able to show a practical loss by "severance," and the claim was often made as "customary," where it was even admitted that no ground for it existed. The remedy which suggested itself, for this state of things, was one which Parliament was not likely to grant. A competent tribunal was wanted; and Parliament was incompetent.

Railway management was next considered, and shown to be completely anomalous. Parliament had legislated for railways as toll-taking companies; but every direction was obliged to embark in enterprises foreign to the parliamentary objects of the railway itself. This produced serious dilemmas.

The Electric Telegraph—that offspring and indispensable companion of railways—was next considered. 7,200 miles of telegraph, or 36,000 miles of wires, were laid down at least. 3,000 people were continually employed, and more than a million of public messages were annually flashed along this "silent highway." To the working of railways the telegraph had become essential.

The results of railways were astounding: 90,000 men were employed directly, and upwards of 40,000 collaterally: 130,000 men, with their wives and families represented a population of 500,000 souls; so that one in fifty of the entire population of the kingdom might be said to be dependent upon railways! The annual receipt of railways now reached twenty millions; or nearly half the amount of the ordinary revenue of the State. The moral results of railways were equally remarkable: railways were equalizing the value of land throughout the kingdom, by bringing distant properties practically nearer to the centre of consumption, and by facilitating the

* We have already alluded to the restrictive effect of this clause.
† The Act distinctly recognizes an opening the whole width of the front covered by a bressummer (Sec. XV.).
‡ Clearly, without such opening.

transit of manures; thus enabling poor lands to compete with superior soils. The stimulus afforded to national industry was exemplified by the progress of the boiler-plate manufacture; and the increased comforts afforded to the people were illustrated by the extraordinary progress of the fish trade, and the development of the inland coal traffic.

The address concluded with some words of practical application. The duty devolved on civil engineers of improving and perfecting this vast system. Every farthing saved on the train mileage of the kingdom was 80,000*l.* a-year gained to railway companies. There was therefore ample field for economical appliances, and therefore no economical arrangement, however trifling, was to be neglected.

RAILWAYS AND TRAFFIC RETURNS.

THE total receipts on railways in the United Kingdom for last year, appear from the usual returns to have been 21,123,315*l.* on 8,240 miles of railway, being at the rate of 2,567*l.* per mile. The cost on construction, working stock, and so forth, amounted to 291,903,000*l.* being at the rate of 35,425*l.* per mile. The total receipts on railways in 1854 amounted to 20,000,525*l.* on 8,023 miles of railway, showing an increase of 1,122,790*l.* or 5·61 per cent. in the receipts, and 2·64 per cent. in the mileage. The increase of traffic in 1854 over 1853 was 2,080,000*l.* or about 11 per cent. "Nothing," remarks the *Times*, "can be more satisfactory than the increase of traffic on railways, and were it not for the unwarrantable increase of expenditure on capital account, the railways, on the whole, would now be paying about 6 per cent. per annum, instead of about 3½ per cent. as at present; which is in fact an increase upon the average of former years of at least half per cent."——The traffic returns of railways in the United Kingdom for the week ending January 5, amounted to 350,740*l.* and for the corresponding week of 1855 to 328,560*l.*; showing an increase of 22,180*l.* The gross receipts of the eight railways having their termini in the metropolis amounted for the week ending as above to 153,655*l.* and for the corresponding week of last year to 142,318*l.*; showing an increase of 11,337*l.*——It appears from the official returns to Parliament, made up to the end of 1853, of the "law and parliamentary" expenses incurred by railway companies (*vide* "Nash's Railway Management"), that the London and North-Western Company has expended 1,051,436*l.* in that profitable luxury—law, independent of the sums paid by other companies, with which it is allied or affiliated. The Chester and Holyhead Company expended 56,971*l.*; the Caledonian Company, 320,880*l.*; the Midland Company, 1,031,657*l.*; the Lancashire and Yorkshire Company, 721,452*l.*; the East Lancashire Company, 158,717*l.*; the Birkenhead and Cheshire Junction Company, 127,919*l.*; the Manchester, Sheffield, and Lincoln Company, 632,458*l.*; the South-Eastern Company, 727,125*l.*; the Great-Western Company (besides its allies), 752,837*l.*; all expended in litigation and wars productive of no adequate benefit to the shareholders.

THE IRON INDUSTRY OF THIS AND OTHER COUNTRIES.

AT the Society of Arts, on the 9th instant, the paper read was on "The Present Position of the Iron Industry of Great Britain with reference to that of other Countries," the second and concluding part, by Mr. J. K. Blackwell, F.G.S.

The author first entered into a minute examination of the chemical principles involved in the manufacture, pointing out several things which appeared capable of improvement, and throwing out some suggestions for inquiry. He then criticised the specimens of the manufacture exhibited at the Paris Exhibition, and thus concluded:—

Great Britain does not possess the valuable resources of vegetable fuel, the use of which in some processes of the iron manufacture produces such valuable results in the quality of the metal so treated; and, when its partial employment can be combined with that of mineral fuel, in those other processes in which the latter can be most advantageously applied, enables the best quality of this metal to be obtained coincidently with cheap production; but Great Britain possesses almost inexhaustible supplies of mineral fuel and of iron ore (for the most part of good quality) in immediate contiguity to each other, and these advantages are less generally possessed by other countries engaged in this industry. Perhaps the very abundance of the mineral resources which support the iron industry of Great Britain has contributed to produce somewhat extensively a slovenly system of manufacture. It is, at least, certain that in this country an inferior quality of iron, badly smelted, wastefully converted, and carelessly manufactured, is often produced, when a superior quality might be obtained at no higher cost. It appears desirable, therefore, in reference to our future success in this department of industry, to recognise clearly that we have no exclusive monopoly of the means of production, that the progress of material civilisation is facilitating the means of transport and removing the natural difficulties interposed to this manufacture in other countries, while their industrial energies are receiving constantly rapid development. It is highly important that we should prepare ourselves by every means for the industrial rivalry that awaits us; and the question arises whether in this country we can neglect any available means for this purpose? There can be no doubt that the industrial energies of foreign countries are directed generally by very accurate scientific knowledge, and in no department in a higher degree than in the manufacture of iron. It can only be by the diffusion of this scientific knowledge more completely than has hitherto been the case among our industrial population, and by its combination with the energy and practical knowledge which have hitherto directed them, that we can expect to maintain our present position as the chief manufacturing country in the world.

A discussion took place when the paper had been read, in which Mr. Bird, Mr. Kennard, Mr. Anderson, of Woolwich Arsenal, Colonel Wilmot, R.A. and others took part. Mr. Bird warmly combatted the correctness of the view which Mr. Blakewell had taken of the manner in which the British iron trade was represented at Paris, and insisted that the enormous development which that branch of industry had assumed in the United Kingdom of late years, as compared with any other country, was a practical and decisive refutation of his views as to its unsatisfactory position. Mr. Anderson lamented the effect which the straining after cheapness had upon the quality of the iron produced, and Mr. Kennard did not see how the ironmasters could take a different view of their position than they took at present. The lateness of the hour precluded the discussion being carried further, and the proceedings terminated with a vote of thanks to Mr. Blackwell for his able paper.

LECTURES ON ORNAMENTAL ART AT LEEDS.

MR. SWALLOW, the master of the Leeds School of Art, gave, on Monday and Wednesday before last, lectures on ancient ornamental art as practised by the Egyptians, Greeks, and Romans, illustrated by diagrams. In his introduction he remarked, that to a manufacturing nation like England, a knowledge of ornamental art must be a subject of vital importance. It had for its object the improvement and adornment of manufactures; and as a superior and improved article will always be preferred, a knowledge of ornamental art must tend to extend and increase the demand. This knowledge, therefore, becomes a question for the consideration of all classes. Ornamental art could not be confined to a class. It operated with the patron or purchaser, with the producer or manufacturer, and with the workman. The first inquires, according to his knowledge, for the most beautiful thing for his money. The second finds that he meets with a readier sale, and can obtain a higher value for extra beauty. The architect, as a producer, finds ornamental beauty a great addition and recommendation in his profession. In fact, whatever may be the thing produced or manufactured, ornamental art adds greatly to its value. The workman, too, could obtain higher wages and better employment by his knowledge of the ornamental. The claim of nations to high civilization is based upon their knowledge of, and progress in, ornamental art. We must judge of them by their buildings, their decorations, and the improvement and beauty of their manufactures. Mr. Swallow, in his third lecture, said the Saracens did not build mosques, but they left several palaces, and one in particular at Palermo, which takes its name from the last word of an inscription, *à la ziza*, and was called by the Italians, *La Ziza*, or the Zig-zag. And there we get, he said, the origin of the word "zig-zag;" and the importation of the peculiar zig-zag form is a characteristic of Norman in this country and in France.

PADDY ON "VINTILASHIN."—An Irish navvy, "neat as imported," the other day, was hastily set to work in drainage excavation at Edinburgh, and a few hours thereafter he was caught in the act of playing sad havoc with the gas-pipes, into the smashed end of one of which an overseer found him peeping. He was rated soundly, of course, for his reckless conduct. "Arrah, my jewel!" said Pat, who was rather hard of hearing,—"what's the matter wid ye? Is it them poipes yer consarn'd about? Be aisy, mister: it'd be well to vintilit mores of 'im, for feint a thing's in them ould black chaps but stink!"

THE BARRACKS COMPETITION.

A HEAP of letters now before us shows the interest with which parties are watching the result of this competition. We received, more than a week ago, the names of gentlemen *supposed* to be the successful candidates. In truth, however, as we have authority to state, the decision has not even yet been come to.

ARCHITECTURAL PUBLICATION SOCIETY.

ILLUSTRATIONS TO DICTIONARY.

PART II. OF VOL. 1854-5.

THIS Part contains illustrations of Bell Towers, the elegant Barrière du Trône, Paris, Belvederes, Bed-room, Agricultural Buildings, Bent Timber Roofs, Bell Gables, Arabesques, the Basilica at Vicenza, &c. contributed by Messrs. E. H. Martineau, Garling, O. Hansard, G. R. Burnell, Mocatta, S. Smirke, T. J. Willson, T. H. Lewis, H. Jones, Walton, G. R. Clarke, &c.

The committee say that the quantity of matter to be delivered annually to the subscribers will be increased in proportion to the extension of the society; and they urge members, therefore, to obtain as many new subscribers as possible. So do we. There ought to be many more than there are.

Notices of Books.

VARIORUM.

THE November part of Harper's "New Monthly Magazine" (New York), contains a paper, by Mr. Calvert Vaux, "Hints for Country House Builders," illustrated by no fewer than twenty-three views of designs, and as many plans, very creditable to the author, and likely to be of much use in the country of his adoption. Some of our London readers will remember Mr. Vaux, especially in connection with the Vanbrugh Club.*——The second volume of the new edition of "Lardner's Handbook of Natural Philosophy" has been issued by Walton and Maberly, of Paternoster-row. The subjects are Hydrostatics, Pneumatics, and Heat, and the volume contains many new and instructive illustrations. A notice of the issue of such a volume is all that is needed for its recommendation.——A second edition of Galloway's "First Step in Chemistry; or, New Method for Teaching the Elements of the Science," has just been published by Churchill, of New Burlington-street. The present edition is rewritten and enlarged.——The fifteenth yearly issue of the "Post Magazine Almanac and Insurance Directory" has been issued for 1856, by Pateman, of Wine-office-court, Fleet-street. Besides the other features of a general almanac, with the ages of peers, &c. it contains a list of projected assurance offices, and of office changes, along with its full insurance directory, and numerous advertisements of the different insurance companies, in town and country, all for sixpence.——As useful to advertisers as that just mentioned is to intending assurers, is "The Newspaper Press Directory and Advertiser's Guide," fifth edition, corrected for 1856, Mitchell, Red Lion-court, Fleet-street. It also contains a good deal of information of use to literary men, and others, such as names of proprietors, publishers, and editors of papers, and their tenets or political and literary principles.——"The Micrographic Dictionary," published by Van Voorst, of Paternoster-row, is now completed, and will form a very interesting and valuable volume.——"The Practical Stenographer," by E. Soper, Darton and Co. 58, Holborn-hill, is a practical treatise by a practical short-hand writer of many years' experience. Stenography, in these "fast" times, might become an art of very general utility. The author's object is to help to bring his important art into more general use among all classes, by rendering it sufficiently simple, intelligible, and comprehensive, to interest the young and the public generally; and to this end

* Messrs. Vaux and Withers we see put up upon their business card the terms on which they transact business in the States viz.:—

"2½ per cent. for plans and specifications.
1 " detail drawings.
1½ " superintendence.
5 " usual commission of architects."

he has adapted it, as far as possible, to use in schools and for self-instruction. He calls it an entirely new system, but every practical stenographer has a system, to some extent, peculiar to himself, and this we suspect will constitute one of the greatest hindrances to the universal use of stenography. Indeed, until the venerable scratches are entirely and radically remodelled, and made to combine beauty with utility, we greatly suspect it will continue to be more or less limited and confined to the use of reporters and for secret notes and correspondence. Could not some practical stenographer endeavour, for instance, so to anatomize and simplify the ordinary characters in penmanship, as to form a "current hand" of sufficient rapidity, and which would combine elegance of form with facility and utility in stenographic practice? We do not speak at haphazard: many years since we became convinced, by an occasional study of the subject, that this was quite possible. The purpose was combined with a due consideration of the correlationships of sound in accordance with equivalent correlations in form.——"The Newspaper and General Readers' Pocket Companion," by the author of "Live and Learn" (Shaw, publisher) is a little shilling compendium of the classical and foreign words with which our good old Saxon is becoming more and more interlarded, often without much improvement as well as without much necessity. As an instructor, for the use or adoption of such phrases or words, we are by no means inclined to recommend any book; but as an index and exponent, by reference to which a reader not familiar with them may make out their meaning, the little pamphlet just named may be useful, although its explanation or translation is not always strictly correct. Thus:—"His *prestige* is gone: that is to say, His *importance*, &c.;" or again—"The *programme* of the Birmingham Festival is issued: that is to say, the *concert-bill*, &c." Although the English language is doubtless very much indebted to its eclectic and heterogeneous origin for its force and significance, it is very much to be regretted, we think, that there should be such an itching amongst popular writers and speakers to haul in foreign words and phrases, merely for the smart look of the thing.——The last number of Longman's "Travellers' Library,"—"Brazil viewed through a Naval Glass," by Edward Wilberforce, leads us to say, what we have had once or twice in our mind before in respect of this series, namely, that the works selected are not always those we should think best adapted for the object. The tone of "Brazil" is not pleasant, and the amount of information contained very, very small.

Miscellanea.

FALL OF LISMORE BRIDGE, IRELAND.—On Wednesday, in week before last, this structure, recently erected at a cost of 2,000*l.* suddenly gave way, the five new arches having simultaneously fallen. Late rains are blamed: no water was running under the arches demolished. The contractor, Mr. Williams, it appears, had already received the usual certificate from the county surveyor as to the bridge being fit for traffic, and also four-fifths of the 2,000*l.*; but the contractor, it is said, was to keep the bridge in order for twelve months.

ORGANS.—In the interesting article on the organ in your number for January 5th (p. 3), there is, I think, a slight mistake regarding the position of the organ in Canterbury Cathedral. When I was there last (a year or two ago), it was *not* over the screens, but altogether out of sight in the triforium over the south aisle of the choir, and the organist played it, sitting among the choir. Not having heard of its removal, I suppose it to be still in the same position.* I may add, that this organ was originally built for the Handel commemoration, held in Westminster Abbey, in 1791, and was afterwards purchased for the cathedral at Canterbury. It is stated by Mr. Hopkins, that the organ in Westminster Abbey contains a 32-feet pipe (CCCC). I believe this is not the case. The organ at Exeter-hall, and the one at the Panopticon, in Leicester-square, are the only London organs embracing so large a compass. The organs in St. George's-hall, Liverpool, the Town-hall, Birmingham, York Minster, and Winchester Cathedral, are the others in England containing 32-feet pipes.

W. MARSHALL.

* We have no doubt our correspondent is correct: the organ was not at fault.

PERIL OF THE WALLASEY EMBANKMENT, LIVERPOOL.—At a recent meeting of the town council, Mr. Samuel Holme called attention to the great damage which the Wallasey embankment had of late sustained from severe gales, accompanied by high tides. The damage resulting from this cause last quarter it would take upwards of 8,000*l.* to repair. Under the circumstances, and considering the rapid decay of the foreshore from incursions of the sea, he urged that the dock committee should unite with the corporation in the erection of a sea wall, beginning at Seacombe, and ending at Hoylake, a distance of about eight miles, which would cost about 400,000*l.* or 500,000*l.* Mr. Holme was at same meeting elected as a commissioner of the Wallasey embankment, together with the Mayor and another gentleman.

DESTRUCTION OF AN OFFICER'S HUT AT BELFAST BY FIRE.—The *Belfast Newsletter* states that a fire broke out last week in a wooden hut at the barracks, in consequence, as was believed, of the stove having set some articles of clothing on fire. The huts are on the north side of the barrack square. Fortunately the fire was confined to the one hut, which, however, was entirely destroyed, with all its contents, officer's money, &c.

METROPLITAN BOARD OF WORKS. — A meeting of this Board was held on Monday last, when it was resolved, that the salary of the engineer to the Board, should be 1,000*l.* a-year, including travelling and incidental expenses; and that of the accountant, 450*l.* with the same conditions. The salary of the superintendant of works was not decided on. The chairman stated, that he had received thirty-four applications for the office of Clerk to the Board. It was resolved that no member of the Board would be eligible, and the election was postponed.

THE METROPOLITAN SEWAGE QUESTION.—Mr. J. G. Samouelle revives the suggestion of running the main sewer along the centre of the bed of the Thames, but with this modification, that the sewer be made of half-circular iron pipes, flat side uppermost, sunk so as to be level with the bed of the river.

METROPOLITAN MANAGEMENT.—As a vestryman of Lee, and a subscriber to the *Builder* from its first number, allow me to say I am happy to find so many builders members of the several boards and vestries; and presuming all good builders to be readers of your journal, I trust by their knowledge, and your assistance, they may secure good service to their constituents, and arouse in their fellow-vestrymen a desire to become acquainted with the duties of the office which they are elected to fulfil. I would enlist the co-operation of such builders as belong to the different boards, or vestries, to send to your office a notice of such proceedings as may interest the general inhabitants. Pray, stir up in the vestries a desire for a thorough sanitary reform, not only in name, but in deed.—S.

ERECTION OF A WORKING MEN'S READING-ROOM AT BRIGHTON.—Some time since it was determined to erect a building in the All Souls' Church district for a working men's reading-room, and the Countess de Noailles purchased a site in Essex-street, Lavender-street. On this site a building has now been erected, embracing a library capable of accommodating between 500 and 600 persons. The main purpose of the building is the accommodation of the working men; but portions of it, according to the *Brighton Herald*, will also be devoted to a Ragged School, Sunday Schools, and Adult Evening Schools. The building was formally opened on Tuesday before last.

THE IRON TRADE. - The result of the quarterly meetings is, that no attempt has been made to raise prices. The state of the trade is declared to be good, and there seems to be a growing inclination to "let well alone." Lord Ward is said to have issued a circular, in which he fixes the price of his best cold blast pigs at 5*l.* 12s. 6d.; and his hot, at 4*l.* 15s. It is expected that other makers will follow his example. The demand for bar iron and nail rods has greatly increased since the meetings. An iron master, says the Birmingham correspondent of the *Times*, states that he has known times when prices were much lower and profits much greater. The price of pigs, however, is considered to be in the way of any reduction.

IMPROVED DWELLINGS FOR THE LABOURING-CLASSES.—At Norwich Guildhall, on Friday in last week, a meeting was held for the purpose of forming a company, under the limited liability Act, for providing improved dwellings for the labouring-classes. It is proposed to raise a capital of 1,200*l.* in shares of 10*l.* each, to be applied in building sixteen dwellings upon land which has been taken in Silver-street, Pockthorpe, and for which plans have been prepared. It is estimated that the rentals of the cottages will (after a deduction of 25 per cent. for outgoings) produce about 6 per cent. on the outlay; but it is intended to limit the profits to be taken to 4 per cent. and the surplus to be applied in such manner as may hereafter be determined on.

SURVEYORSHIPS.—Mr. E. N. Clifton has been appointed surveyor to the Globe Fire Office: and Mr. Digby Wyatt, we are told, has been elected architect to the East-India Company. Both these appointments became vacant by the death of the late Mr. Arthur Green.

THE PHOTOGRAPHIC SOCIETY.—The Exhibition of the Photographic Society, now open at the Gallery of Painters in Water Colours, Pall-mall East, contains a number of very interesting works. The composition of pictures, by grouping individuals, properly costumed, is more general than it was.

CHURCH FLUES: SINGULAR SCENE AT AMBLESIDE.—The new church at Ambleside has recently been warmed, by means of flues leading from a coke fire. Owing to some imperfection in the flues, the deleterious carbonic acid gas issued from them into the body of the church during the morning service on Sunday before last. Young children, who breathed nearest the floor, were first affected, and about twenty of them followed one another out before adults took the alarm. At about the middle of the sermon the congregation rose in a body and went out, to the apparent astonishment of the preacher, who, in his elevated pulpit, was unconscious of the mischief. He was left entirely alone in the church; and if the congregation had remained a quarter of an hour longer, no one would have been able to help himself or his neighbour, and many, or all, must have perished. The scene in the churchyard was singular and alarming: numbers of persons were laid on the grass, fainting and convulsed: none altogether escaped injury: many dropped as if dead on their way home, and a terrible commotion must have been excited in the little village. Fortunately, none of the cases have terminated fatally.

THE BATH FINE-ART EXHIBITION.—The Bath Society for the Promotion of the Fine Arts, held its first meeting this season on Tuesday in last week, at the Assembly-rooms. The octagon and card rooms were those occupied. There were numerous works of art exhibited, including various known works by Turner, Etty, Roberts, Sant, Herring, and other masters. The display, according to the local *Chronicle*, rivalled that of any of the preceding exhibitions of the society. Complaints of want of room and crowded meetings promise well for the established popularity of these exhibitions.

HORSEMONGER-LANE GAOL.—We have received some letters impugning the fairness of the Surrey magistrate's decision in this matter, but do not find evidence of this in the papers before us. The magistrates had an absolute tender before them from Messrs. Lucas to carry out the selected design for the sum they had named—10,000*l.* As respects the non-inclusion in this amount of the architect's commission, it does not seem to have formed part of the original stipulation.

EXHIBITION OF WORKS OF ART AND INDUSTRY AT STRETFORD. — On Friday in last week, an exhibition of works of art and practical industry was opened in the Public-hall, Stretford, under the patronage of the Bishop of Manchester. The exhibition originated with a committee for raising funds for the support of infant and adult schools established in the townships of Flixton and Urmston, near Stretford. The contributions were numerous. The space occupied consists of the large hall and three or four smaller rooms. The exhibition, according to the *Manchester Courier*, will remain open for three or four weeks, provided it be well supported. On each day this week there were to be the additional attractions of dissolving views, musical performances, lectures, &c.

THE SURREY GARDENS COMPANY AND MUSIC HALL.—A prospectus has been issued of a company under the Limited Liability Act, with a capital of 40,000*l.* in 10*l.* shares, to be called the Surrey Gardens Company, for leasing the Surrey Zoological Gardens, and building a music-hall capable of accommodating 10,000 persons, and at a cost of 40,000*l.*; the usual open-air entertainments likewise to be continued, and M. Jullien to be engaged. Shareholders are to be offered the privilege of a personal ticket in lieu of participating in the annual profits. It is contemplated that the music-hall shall be available for public meetings, floricultural and horticultural exhibitions, and other general purposes. At a meeting recently held in the vicinity of the Gardens, a vote of confidence in any scheme to which Mr. Tyler, the proprietor, might give his concurrence, was unanimously passed, and it was hinted that Mr. Tyler should be engaged as the manager of the new scheme.

BARRACKS FOR THE CITY OF LONDON MILITIA.—We have received a strong statement from one of the Commissioners of Lieutenancy for the City of London, complaining of being gradually committed to the adoption of certain plans for a proposed barracks, to cost some thousands of pounds, when he thought the matter would have been thrown open for the competition of a number of architects.

ELECTION OF SURVEYOR, &c. FOR HACKNEY DISTRICT OF THE METROPOLITAN MANAGEMENT.—At a meeting of the Hackney Board of Management, held on the 11th instant, it was announced that twenty-eight candidates for the surveyorship had sent in applications and testimonials; and a discussion arose as to the reading of the testimonials and the proper mode of election, the result of which was, that a surveyor was elected without the reading of any one of the documents, which the Board by their advertisements had put so many gentlemen to the trouble of procuring and forwarding. The Board at the meeting resolved, before electing the surveyor, that he must devote his whole time to the duties of the office, a clause which had no place in the advertisement. Those candidates amongst the twenty-eight who might happen to be then in attendance were ordered to be called in and asked if they agreed to this resolution. Only six of the number were in attendance, and all signified their willingness to submit to the new requirement. It was then resolved that only those candidates who had interest enough to be supported by a mover and a seconder at the meeting then being held, should be recognised as applicants for the office. This being done, only six were proposed, namely, — Messrs. Wright, Kerr, Gleddon, Crook, Lovegrove, and Hanniford. Messrs. Lovegrove and Crook having the largest number of votes of the six, were put up for the choice of the board, when there voted—for Mr. Lovegrove, 30; for Mr. Crook, 14. Mr. Lovegrove was, therefore, declared duly elected. The board next proceeded to the election of clerks of works. There were two to be elected, and sixty-two candidates for the office. Messrs. Banks and Lloyd were declared the successful candidates. Mr. Ballintyne was then elected inspector of nuisances.

REPORT ON SANITARY STATE OF NOTTINGHAM.—The annual report of the proceedings of the sanitary committee of the town of Nottingham, as presented to the council of the town, has been printed and issued. This is an interesting document, full of hope for the future. The number of deaths registered for the year is 1,574, being 278 less than the preceding year. The decrease has been greatest in zymotic diseases, or those most influenced by the condition of the atmosphere. Last year there were fifty-six deaths from small-pox; this year none. Measles were fifty-one, and scarlatina thirty-five last year, but this year only one and two respectively. The decrease of deaths among children is remarkable. The deaths of those under three years of age have diminished from 810 to 518. The committee acknowledge some difficulty in accounting for the diminution of deaths, but are firmly of opinion that sanitary improvements and the diffusion of sanitary intelligence have much to do with it. Mr. Hawkesley's report on the difficulty as to a proper outfall for the town sewage is appended to the report.

A NEW STEAM HAMMER.—Mr. Naylor, of the locomotive department of the Eastern Counties Railway, has just succeeded in completing a steam hammer, which he believes to be in many respects superior to any other that has yet been constructed. Its peculiar qualities consist in its adaptation to all descriptions of work brought under it, according to the *Norfolk News*. It can deal with a small piece of iron with the greatest precision, be it ever so small, or it can efficiently operate upon a piece of iron 6 or 7 inches thick. Such is the command over it, that it can be made to strike a light or heavy blow at will, and, if necessary, the light and heavy blows can be given alternately, while it is dealing 200 blows a minute. The rate of working may, moreover, if desired, be reduced to less than 100 blows per minute. The principle of this hammer has been patented by Mr. Naylor, who considers it equally applicable as a riveting machine for boiler-making, and iron shipbuilding, as well as for iron making, smith's forging, stamping ore, and, indeed, for all purposes requiring the process of hammering; and, to meet every end, it can be worked by elastic gas, compressed air, steam, or vacuum,

STRIKE OF SHIPBUILDERS AT DUMBARTON.—The strike among the joiners in the yard of Messrs. William Denny Brothers, says a local paper, has now extended to nearly every yard in the burgh, and includes within its compass all departments connected with shipbuilding in which unionists were employed. Some hundreds of labourers, too, who had no connection with unions have been thrown out of employment in consequence.

IRON CHAPEL IN MILE-END-ROAD.—Near Bancroft's Alms-houses, in the Mile-end-road, an iron chapel, similar to those exported to Australia and other English colonies, has been erected. It has been taken by the Independents. The cost of the building was 600*l.* but it has been taken for two years at a rental of 80*l.* per annum, with the option of purchasing at the end of that period. It has been boarded throughout. There is no spire.

GLASGOW.—There is a difficulty it appears in the settlement of the M'Lellan Gallery of Pictures as the public property of the city, as intended by the will of the late proprietor. Some house property which he also left must first be sold, and a sum of 44,000*l.* got for it, otherwise the pictures, if we rightly understand the matter, must be sold to make up this sum. The buildings are those named the Victoria-buildings, and comprise the three large galleries containing the collection itself, besides various rentable premises, part not yet completed or let. The whole is said to be well worth the sum required, but in the present state of matters not likely to be given, unless the City Corporation themselves make the purchase. They would thus, it is estimated, if borrowing the money, pay 1,760*l.* a year, and draw from the premises 2,720*l.* It is to be hoped the valuable M'Lellan collection will not be scattered or lost to the city for which it was intended.——The annual general meeting of the members of the City of Glasgow Fine Art Association, and distribution of prizes, took place on Saturday before last, in Glasgow—the Lord Provost in the chair. The council reported that the subscribers for 1854 numbered 687; for 1855, about 1,400; that in 1854, thirty-five paintings were acquired by the subscribers; and that for 1855, the number to be distributed is forty-seven. The drawing of the lots was then proceeded with. ——The tenders for what is termed the "Blairhulachan Contract" of the Loch Katrine Water-work Scheme, were opened by the Water Committee on Friday before last, and one of them accepted. The offer of the successful competitor is said to be considerably within the estimate of Mr. Bateman, the engineer. This is the most extensive and difficult contract upon the line. It extends from Loch Katrine to the valley of the Duchray Water, being a length of about eight miles, including 2,325 yards of tunnelling, besides masonry, cast and wrought-iron aqueduct, &c.

NEW COURT-HOUSE, DOWNPATRICK.—At a present sentinent sessions, lately held for the county of Down, an application for the sum of 9,000*l.* was approved, for the purpose of building a new court-house in Downpatrick. The design is by Mr. Henry Smyth, M.R.I.A. county surveyor for Downshire. The application has to go before the grand jury, at the ensuing Spring Assizes, for final approval; and tenders for the contract are to be advertised for in the newspapers.

"THE IRISH REPORTER."—Under this title a monthly journal, chiefly devoted to insurance, railway, and commercial matters, house, land, and building pursuits, has been commenced at Dublin. Mr. J. Lyons, architect, is the editor. Scotland has already an organ for the same interests.

BIRMINGHAM ARCHITECTURAL SOCIETY.—On Thursday evening, the 10th, the usual monthly meeting of the above society was held at the Philosophical Institution, Cannon-street, Mr. S. Hemming in the chair, when Mr. Alfred Davidson read a paper on "St. Martin's Church from the Restoration to the close of the last Century."

CONTRACT FOR GRANITE.—A contract has been entered into by the Government for the supply of 20,000*l.* worth of granite from the Gunnislake quarries for the service of the breakwater. These quarries are situate at the head of the river Tamar.

THE QUESTION OF "RESTORATION."—The difference which exists between the restorers and those who have been termed "anti-restorationists," appears to be a very simple and not unnatural difference. The latter are jealous over *everything* which may be regarded as a help to history, however small, and apparently unimportant; while the former view the same features in an artistic light, valuing them *chiefly* as specimens in a great museum of art. The one finds a value in them *per se*, the other deduces a value from them. There is no fear that the *beauty* of form in our old buildings will not be handed down to future generations in the shape of modern "design," but there is a fear that, if the landmarks of our history be renewed, their individuality may be lost. There is a form of beauty, and there is an expression of beauty. It is possible to copy the one, but it is impossible to reproduce the other. Does not the spirit of the designer and the carver infuse itself into the work? Can the modeller produce an expression of a feeling to which he is a stranger? The old proverb of "a stitch in time saves nine" may well be applied to the case of many an old building; for if we take care of them, and remove the accumulated earth, and clean out the choked-up gutters, they will stand for many a long year yet, and architect and archæologist will be friends again. But if you will leave them till they totter upon their old foundations, and strew the ground with their fragments, then blame not the architect who restores, but rather let us condemn the authors of the evil,—the men to whom are entrusted the care of these monuments, and who, by their negligence, are oftentimes the sole cause for the necessity of restoration.—E. W. G.

TENDERS

For buildings at Millwall. Mr. F. E. H. Fowler, architect. Quantities supplied by Morris Evans, surveyor:—

Wood and Sons	£1,183	0	0
Hyatt	1,135	0	0
Richardson	1,077	0	0
Bland	997	0	0
Edwards	995	0	0
Tarrant	950	0	0
Gosling and White	945	0	0
Robinson	917	0	0
Fleming	895	0	0
Williams and Co.	785	0	0
Riley (accepted)	785	0	0

For alterations and additions to Hampstead Workhouse. Messrs. W. G. and E. Habershon, architects. Quantities supplied:—

Harmer	£4,400	0	0
Bottomly	3,858	0	0
Wilson	3,738	0	0
Taylor	3,636	0	0
Cooper	3,500	0	0
Batterbury	3,387	0	0
Higgs	3,333	0	0
Keast and Co.	3,254	0	0
Rudkin	3,170	0	0
Stone	2,983	0	0
Purkiss (accepted)	2,890	0	0

For building public-house at East Jarrow, South Shields, for Wood and Maxwell, brewers. Mr. Matthew Thompson, architect. Quantities supplied:—

Curry and Gibson	£1,795	0	0
Dunlop	1,688	0	0
Pearson (accepted)	1,687	0	0
Angus	1,400	0	0

TO CORRESPONDENTS.

"J. A. P."—"W. D. T." (the question is not one of cost).—"Bewildered Surveyor" (the old Act did not prevent the erection of wood fences.)—"S. S. S." (sulphuric acid would be useless for the purpose. The prevention of damp has been treated of at various times in our pages, but we are unable to refer. Get rid of the cesspool as soon as possible.)—"J. B." (thanks.)—"Anti-flumlag."—"W. T. C."—"J. C."—"X. Y. Z." (we are unable to advise. The Duchy of Cornwall has proper officers attached, who would doubtless consider any feasible proposition submitted to them.)—"Enquirer."—"S. C. F." (thanks.)—"A. B."—"M."—"G. W. S."—"Mr. B."—"J. McL."—"W. B."—"H. H. C."—"R. S. T."—"C. P. R."—"W. H."—"C. B."—"A Subscriber" (the fact that he was "a tailor and draper," is not of itself sufficient to disprove his qualification. We have yet to see.)—"M. H. F."—"C and W."—"B. S."—"J. G. S."

NOTE.—We are compelled to postpone the remainder of Sir Walter James's Essay on Colour.

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July 2, 1855.

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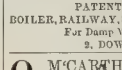

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A large quantity of spar for ornamental rockery work, &c. constantly on hand.

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SOUTHAM BLUE LIAS LIME DEPOT.
Bath, Portland, Lias, and Roman Cements; Parian and Keene's Cements, Plaster of Paris, Glazed Stoneware Sewage Pipes, Fire Goods, Vitrified Blue Bricks, White Building Bricks, White Enamelled Pans and Traps, and every description of Building Material.
N.B. Lump and Ground BLUE LIAS LIME delivered in bond on is direct from the Works in Warwickshire, to any part of the river or canal.

SOUTHAM BLUE LIAS LIME DEPOT, No. 14, SOUTH WHARF, PADDINGTON.
TATHAM & CO. have arranged for a constant supply of the above very superior BLUE LIAS LIME, which for the last two years has been extensively used at most of the large works constructed during that period or now in hand, and any orders they are favoured with will command their best attention.
Boatloads of either Lump or Ground Lime can be delivered direct from the Works in WARWICKSHIRE to any part of the Rivers Thames or Lea, alongside any wharf on canal, or by boat or rail to any part of the kingdom.

11, George-yard, Lombard-street, City.
ELMLEY CEMENT WORKS, ISLE of SHEPPEY, Kent.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

PORTLAND CEMENT.—TATHAM & CO. are enabled to offer a very superior quality of this valuable Cement at a moderate price, and all orders addressed to No. 14, SOUTH WHARF, PADDINGTON, will receive the best and most prompt attention.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that it can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND CEMENT.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

PORTLAND and ROMAN CEMENT, TERRA-COTTA POTS, &c.—J. M. BLASHFIELD begs to acquaint the Public that he has entirely CLOSED his Establishment on the Surrey side of the Thames, and that articles of his manufacture can only be obtained at his Works, Mill wall, Poplar, or at his Warehouse, Fread-street, Paddington.

HUBBUCK'S PATENT WHITE ZINC PAINT,
The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be entirely avoided. The Powdered White Zinc may be had for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Paint-dealers in Original Packages, each cask stamped—HUBBUCK—LONDON—PATENT. And if not so marked, the quality is not guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

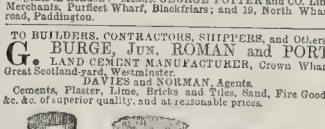
DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.
JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale business, and begs to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of best quality upon advantageous terms. Application either at Harwich or to his Agent, GEORGE MORRIS, 20, New Ormond street Queen-square, London

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME.
The LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements at reduced prices, the material being excavated in its pure and unadulterated state, from quarries on their own property. The Company particularly recommend a trial of their XXXX Bath Cement, as far superior to any article now in the market. These cements can be sent by rail or shipped from their wharf, direct to all parts.—Agents required, and a liberal discount allowed. Orders received by Mr. KIALLMARK, 80, Old Broad-street, City.

MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester.—T. H. BOORMAN, WILD, and CO. beg to inform the public and trade generally, that they have completed their works for the manufacture of PORTLAND CEMENT, and from their contiguity to the river Medway, as well as the branch line of the South-Eastern Railway from Strood to Maidstone, a siding from which will be carried into their works, enabling them thereby to transmit any orders they may receive to any station on the before mentioned line, and confidently hope they shall be able to supply the public with a first-rate article, in both cement and lime, on moderate terms. Persons sending orders for cement, are respectfully requested to pay for what purposes it is required, and print instructions will be affixed to the head of each cask.—Orders to be addressed to Mr. THOMAS WEEKES, Agent at the Works.
Agents in London.—Messrs. GEORGE POTTER and CO. Lime Merchants, Purfleet Wharf, Blackfriars; and 19, North Wharf-road, Paddington.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.
G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.
DAVIES and NORMAN, Agents.
Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.



GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no coloring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

NOTICE.—BLUE LIAS LIME.—L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.
L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to insure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, Kingscross.

GREY STONE LIME WHARFS, 19, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.
GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 1st, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for exports, or alongside rivers, canals, or railway stations, should be given a few days before required.
GIBBS, CANNING, and CO.'S BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.
ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.
SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

BATH CEMENT.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants Builders, Contractors, and others supplied with every description of building material at the lowest market prices.

BRICKS.—200,000 STOCK BRICKS, delivered into trucks at Wimbledon Railway Station, at 23s. per thousand. Place Bricks, at 20s.—Apply to J. D. J. Townwall-street, Dover.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3 horse power; one man to feed the machine with clay, and boys to remove the bricks. For plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, for the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED HEADING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors,
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 8, ADELAIDE-PLACE, London bridge.

Depôt, Agar Wharf, King's-road, St. Pancras.
VITRIFIED STAFFORDSHIRE BLUE BRICKS, Paving, Roofing, and Ridge Tiles, Sanitary Pipes, &c Stourbridge Fire Goods, &c. of all descriptions, and of best quality.—WOOD and SON, Manufacturers, Portway, Oldbury, near Birmingham. Agent—Mr. J. UNWIN. Private Residence, 59, Nelson-square, Blackfriars-road.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.
Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail from the station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and flare, bricks, fire-goods, &c. can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

TO BRICKMAKERS, BUILDERS, and CONTRACTORS.—HOO, near ROCHESTER, KENT.—TO LET, a BRICK FIELD, working three stools, near the river Medway. Royalty one shilling per thousand. Earth of good quality, produces very sound bricks, and can be dug. Apply to Mr. JOHN JEFFERY, Milton-terrace, New Road, Chatham.

AN established BRICKFIELD TO LET, at Shepherd's Bush.—Apply on the Spot, to Mr. ROBINSON, No. 1, Oakland Villa.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect mode of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.
Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietary, and, thirdly, that the "Reviewers on THE JURIES," page 681, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

TO BUILDERS and OTHERS.—CANAL BOAT for SALE, constructed to carry thirty tons. Now working on the canal. Price £5. For particulars, address, M. S. 20, Duke's-terrace, Haverstock-hill, Hampstead-road.

WANTED, 4,000 feet 1¼ inch ELM BOARD, 4,000 feet 1-inch ELM BOARD, 300 feet 1-inch ELM BOARD. Also thirty ELM TAIL BOARDS, 6 feet long by 20 inches wide and 12 inches thick. Also five OAK TREES, containing about one load [illegible] with Pieces of the above may be at the [illegible] Apply to Messrs. MEESON and CO. Lime Works, Grays, Essex. The oak is wanted directly, and a portion of each sort of board. The remainder within three months.

TO BUILDERS AND OTHERS.

AT the LOWEST PRICES.—TIMBER, DEALS, MAHOGANY, and WAINSCOT. A large assortment of seasoned prepared FLOORING and MATCH BOARDING of all descriptions. Also an extensive stock of Dry White, Yellow, and Pine Cut Stuff, Slating, Battens, Pantile Laths, Oak Plank, Sash Cills, &c. Timber of all kinds, Planks, Deals, and Battens, fetched from the docks, sawn by patent machinery on the most moderate terms, and delivered at the shortest notice.—THOMAS JACKSON, Sawing and Planing Mills, Commercial road, Pimlico, London.

TO BUILDERS, CARPENTERS, &c.—Mahogany, 6d. per foot; F. Walnut, 7d.; Yellow Deals, 4s.; 9/4 Yellow Battens, 12l 10s. per 120; Spruce, 3s.; 12 feet 3 inch Pine Planks, 1s.—Carriage free to any part of town.—T. FORMAN, 1, Walnut-tree walk, Lambeth-walk.

AT the LOWEST PRICES.—SAMUEL PUTNEY has much pleasure in informing the Trade, that notwithstanding the recent advances, he is still enabled to quote the following low prices:—

Yellow Deals, from	£24	0	per 120
Spruce ditto	18	0	"
Yellow Battens	12	10	"
Pine Planks, 12ft. 3 in. by 11	24	0	"
Honduras Mahogany, in logs, 5d. per foot.			

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a postage-stamp. Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

MOULDINGS by MACHINERY, to any Design, carefully packed and sent to all parts of the country.

Address, E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
King's-road, Chelsea, and Wilton-road, Pimlico.

SEASONED FLOORING.—GEO. NOKES and CO. (late Archbutt and Atkinson), beg to acquaint builders and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash:—

½ inch White, 13s. 6d. per square.		½ inch Yellow, 15s. per square.	
¾ ditto	18s.	¾ ditto	16s. 6d. "
1 ditto	18s.	1 ditto	20s. "

Laths, 30s. per load.

Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.

ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road.

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No. 18, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Saw-mills. Goods in Bond for Exportation.

N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORING and MATCH BOARDING, seasoned, and ready for use, from 9-inch to 14 inches thick. Also five OAK Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Sash Cills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

A CORN TIMBER WHARF.—At RICHARD MAY'S extensive Waterside Premises and Saw mill, Canal Bridge, Old Kent-road, builders and others can be supplied with all kinds of FOREIGN TIMBER, planks, deals, and battens on sale, direct from the importers; prepared floorboards, moulding, pine and cut deals, slating battens, laths, English oak plank, and sashes, at reduced prices for cash. The Monthly Price Current forwarded on application.

NOTICE.—IMPROVED WOOD MOULDING MILLS and MARBLE WORKS. J. SIMMONS begs to acquaint his customers and friends that in consequence of the increasing trade and patronage he is continually receiving, he has found it necessary to have larger premises for the manufacture of his IMPROVED WOOD MOULDINGS, which are acknowledged by the principal large firms, architects, and others, who have used them, to be the best ever produced by machinery. J. S. in returning thanks for the liberal patronage already bestowed upon him, begs to call attention to his large stock of mouldings now on hand. Marble chimney-pieces, monuments tombs, and every description of marble and stone work also manufactured on patent principles. Old Wood Mouldings re-cut. DEVONSHIRE-TERRACE, HARROW-ROAD, PADDINGTON. Specimens from the street. Price Lists will be forwarded shortly be ready; to be had on application, or if forwarded, by enclosing a post-office stamps. Please not to mistake No. BRIDGE-TERRACE, HARROW-ROAD, Paddington, near the Great Western Railway Bridge.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, extensively used in Paris and other Continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 2s. per foot super. together with every particular of its cost and adaptation, can be obtained of Mr. BURT, 2, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

MACHINE CARVING, JOINERY, and MOULDING WORKS, Belvidere-road, Lambeth.—The Proprietor of the above works begs respectfully to apprise the nobility, clergy, architects, builders, cabinet-makers, and trades generally requiring Carved and Moulding Works, that he is now enabled to execute any orders that may be entrusted to him with the utmost promptitude. Every description of Carved Work and Tracery, roughed out by the machines for the trade only. Pulpits, Lecterns, Reading-Desks, Screens, Altar-Rails, Tables, Chairs, &c. executed at the shortest notice. Specimens of Carved Work, suitable for various purposes, can be seen at the Works, and Estimates furnished upon application.

FRENCH POLISH and SPIRIT VARNISHES made from Methylated Spirit, 60 over proof.

Best French Polish	6s.	per gallon
Pale Varnish	6s.	"
White French Polish	10s.	"
Mediums for Finish	6s.	"

By JAMES SLIPPER, Leather-hose and Tap and Tap and Screw Manufacturer, 11 and 13, Dorset-street, Fleet-street, London.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.

STEPHENS' DYES or STAINS for WOOD. The following extract from a letter the Proprietor has obtained leave to make public:—"Northgate, Colchester, Feb. 5, 1855.—Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant, "SAMUEL GRIMES, Builder.

"To Mr. Henry Stephens, 54, Stamford street, London."

Samples and prospectuses free to any part of the kingdom.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

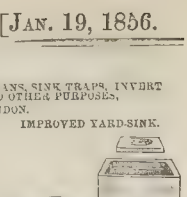
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

IMPROVED WATER-CLOSET PANS AND TRAPS, WHITE INSIDE.

Pan, 3s. 6d. Trap, 2s.

STRAIGHT PIPES IN TWO-FEET LENGTHS.

IMPROVED YARD-SINK.



HALF-SOCKET PIPES, in 2 feet lengths, at usual prices, by the use of which, Drains may be readily examined, and Junctions inserted, in the event of requiring further connections.

May be had also at Messrs. GLADDISH'S LIME WHARFS, Pedlar's-acre Westminster-br.; 160, City-road Wharf, Gt. Basin; Dock-head, Bermondsey; Danvers Wharf, East of Battersea-bridge, Chelsea; Pratt Wharf, Kingsland, Camden Town; J. TURNER, 3, South Wharf, Praed-street, Paddington; COLWILL, Brothers, 32, Brydges-street, Covent Garden; and at EDWARD COCK'S 94, Wardour-street, Oxford-street. Drawings and List of Prices will be forwarded free on application.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

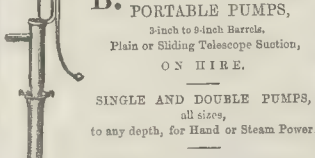
Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12 in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge Surrey Side.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers. Upper Ground-street, Blackfriars-bridge (Surrey Side).

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels,

Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP, which is recommended for the simplicity of its construction, and the ease with which it works.

In the old-fashioned Pump Standard, the cumbrous carriage and expensive brickwork is unnecessary, rendering the price considerably less than Pumps made on the old plan.

Deep and Water Basins for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same plan.

JOHN WARNER & SONS, 8, Crescent, Jewin-street, London. Manufacturers and Patentees.

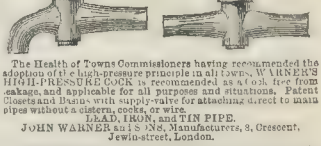
PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 92, Blackfriars-road.

STEAM-ENGINES and MACHINERY for SALE.—TEN STEAM-ENGINES, from One to Twelve-horse Power, with or without Boilers. A set of Three 3-inch gun-metal Pumps, with crank, shaft, connecting-rods, and rising main, suitable for a deep well. A quantity of plummer blocks, couplings, shafting, and riggers; screw presses; a 30-inch paper cutting machine, lathes, and drilling-machines; a waggon boiler, suitable for a tar or water tank; a wrought iron cistern, and a large boiler truck.—Apply to D. W. ASH, 157, Southwark-bridge-road, Newington Causeway, where the above can be seen.

TO BE DISPOSED OF, SIX PILE-ENGINES, complete and in good condition.—May be seen at the Imperial Gas Works, Fulham.—For price, apply to Mr. PATMAN, 68, Theobald's-road, Bloomsbury.

TO WATER COMPANIES AND PLUMBERS.

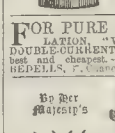
HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.



SMOKY CHIMNEYS CURED EFFECTUALLY for TEN SHILLINGS, by SUTER'S PATENT WIND-GUARD.—This Guard allows a free egress to the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

To be had of Ironmongers and Builders; and of the Patentee, at the Office, 65, Fenchurch-street, London.

FOR PURE AIR and PERFECT VENTILATION, "WATSON'S PATENT SELF-ACTING DOUBLE-CURRENT VENTILATORS" are undoubtedly the best and cheapest.—Sole London Agents: LANDER and REPELLS, 7, Cloisters-lane.

By Her Majesty's Royal Letters Patent.

DUPREE and CO.'S DEFIANCE WINDGUARD and VENTILATORS, &c. for the perfect cure of Down-draft Smoky Chimneys, suitable for Private and Public Buildings, giving a constant change of air.

SHIP VENTILATORS, requiring no attention, imparting about six times the quantity of fresh air than any other in use. Also,

VENTILATING ROOF LIGHTS, for Slate or Tile Roofs, Water Paint or Putty.

Prospectuses sent on application.

London Depôt—DEACON and MANGER, 141, Minories, City.

STEPHEN GREEN, IMPERIAL POTTERIES, LAMBETH.

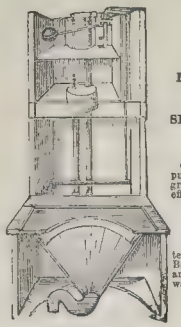
Superior Glazed Stoneware Pipes, Bends, Junctions, Traps, &c. Hopper and other Pans, with best White Glaze inside.

Pan, 3s. 6d.

Trap, 2s.

Syphon Pan, with or without STEPHEN GREEN'S Patent Air-tight Valve.

Registered Flushing Basin,—the most effective Syphon-trap yet offered to the public.



This effective article has not any Crank or Wire to get out of order, and is all complete and ready for use, and may be seen in operation at STEPHEN GREEN'S Manufactory, Lambeth.

IMPORTANT TESTIMONIALS

TO THE EFFICIENT WORKING OF

STEPHEN GREEN'S

PATENT SYPHON FLUSHING BASIN,

AND

SELF-ACTING CLOSET CONNECTIONS.

Oxford, November, 1849.

GENTLEMEN,—Sixteen of your Closets having been put into operation at Christ Church College, I have great pleasure in giving you my testimony as to their efficiency and simplicity.

HENRY J. UNDERWOOD, Architect.
R. S. HOGGAR, Engineer.

Royal Arsenal, Woolwich, June 24, 1852.

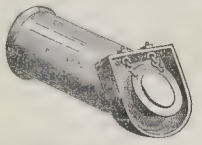
GENTLEMEN,—I have much pleasure in giving my testimony in favour of your Patent Syphon Flushing Basin, with Self-acting Closet Connections. There are several fixed here, which have been in use for upwards of twelve months, giving perfect satisfaction.

I am, Gentlemen,
Your obedient Servant,
WILLIAM CARTWRIGHT.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET,

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.



WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,
LAMBETH POTTERY, HIGH-STREET, LAMBETH,
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to
5s. 6d.

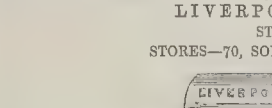
These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pans.

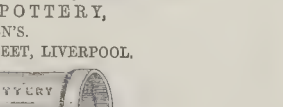
HENRY DOULTON AND CO. MANUFACTURERS OF GLAZED STONE-WARE DRAIN-PIPES.

MANUFACTORIES; HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; AND SMETHWICK, NEAR BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

SOCKET.



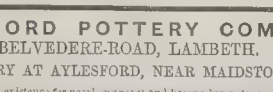


SPIGOT.

TWENTY-ONE LARGE AND IMPORTANT TOWNS HAVE BEEN DRAINED WITH DOULTON'S GLAZED STONE-WARE PIPES, *and in no case has the slightest failure occurred.*

Messrs. D. and Co. do not publish Testimonials, but references can be given to any of the Engineers and Surveyors under whom they have executed works. DRAWINGS, WITH PRICES, MAY BE HAD ON APPLICATION AS ABOVE.

JOHN DOULTON, BROTHERS, AND CO.
LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.



MANUFACTURERS OF
DOULTON'S STONE-WARE PIPES, DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

AYLESFORD POTTERY COMPANY,
BELVEDERE-ROAD, LAMBETH.
MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during that period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.: The New Public Markets, Wellington and Chelsea Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; also by the low rate themselves established as Potters, beg to offer their services to Contractors, the Trade, &c. of a superior quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

MILLWALL POTTERY.

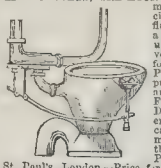
WILCOX and CO. Manufacturers of every description of white and printed CLOSET-PANS, URINALS, TABLES, PLUG BASINS, &c.
DEPOT ARTHUR-STREET, NEW OXFORD-STREET.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE
No. 7.

is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet; they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,
THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price, complete, 13s. 6d. each.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS,



manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE POWERFUL FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

SUPERIOR LAND DRAINAGE.—

AGRICULTURAL DRAIN PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

SUPERIOR STONEWARE GLAZED

PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered. October 1, 1855.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.

—This ware, allowed by all to be of the best manufacture, by the unparalleled quality, combined with its cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES,

acknowledged to be the best in use; hydrants or fire-plugs; well sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

WILLIAM GILBERT, Tividale Pottery

and Blue Tile Works, near Tipton, Staffordshire.—The BLUE WARE SANITARY PIPES made by W. GILBERT are of the only GLAZED pipes of the kind manufactured in England. They are well vitrified, smoothly glazed, and very durable, being subjected to intense heat in the kilns. Being moulded by machinery, they are as smooth and straight as stoneware pipes; will bear a greater pressure, and endure in the drains a longer term than any other material. The sockets are deep, and made much stronger than the body of the pipe, so as to resist all unequal pressure under ground. These pipes are cheaper than stoneware, and may be had in 2 feet lengths, of 2 in. 3 in. 4 in. 6 in. 9 in. 12 in. 15 in. and 18 in. bore,—with all kinds of syphons, junctions, bends, gullies, and sink grates to match. Price and descriptive list of the patterns. Glazed stoneware sewerage pipes, &c. &c. Terra cotta clay brackets, trusses, vases, fountains, busts, statues pedestals, &c.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO., Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	1s. 6d.	"
15	"	"	"	2s. 0d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. Their great resistance to wet is overcome by this manufacture. And it is well known, that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

VICTORIA POTTERY, LEIGH,
NEAR SOUTHEND, ESSEX.

DAVID MOUNTAGUE,

MANUFACTURER of superior GLAZED STONEWARE PIPES in accordance with the rules established by the Commissioners of Sewers, Bends, Traps, Closet-pans, Jars, Butts, and other articles in Stone Ware on advantageous terms. Also MANUFACTURER of superior Roman Cement and Plaster of Paris at Orchard House, Blackwall. Orders executed from the above places, from Falcon-wharf, 80, Bankside, Blackfriars, and from Hair-bridge-wharf, Stratford, Essex.

SALES BY AUCTION.

Building Materials on the Hackney Estate of the Conveyancer Lane Streets

MESSRS. EVERSFIELD and HORNE have received instructions to SELL by AUCTION, on the PREMISES, Lower Clapton, near Hackney Church, on WEDNESDAY JANUARY 23rd, at TEN for ELEVEN o'clock, the excellent MATERIALS and FITTINGS of the MANSION and OFFICES, comprising seven lots of Timber, Deals, Joists and Scantling, tiled roofs, sound timber, girders, joists and quartering, floor-boards, Spanish mahogany doors, plate-glass sashes, statuary marble and other chimney-pieces, bells and grates, range, coppers, and other fittings; also two excellent rustic summer-houses, erection of a temple with stone columns, large cast of the "Laocoon," stone park railing, erection of greenhouses, growing timber, sound lead, slates, paving, balconies and other effects. May be viewed, and catalogues had at the offices of the Auctioneers, 38, Norfolk-street, Strand; of Messrs. HARRISON and LEWIS, 14, New Boswell court, Lincoln's-inn; of GEORGE MORGAN, Esq. Surveyor, 8, Chancery-lane; and of the Auctioneers, 40, Parliament-street, Cornhill Exchange.

CITY ROAD.—Valuable Manufactured Stock of Serpentine Marble

MESSRS. EVERSFIELD and HORNE have received instructions from the Directors of the London and Devonian Serpentine Company to SELL by AUCTION, at the SHOW-ROOMS, No. 1, City-road, North Corner, on TUESDAY JANUARY 22nd, at TWELVE for ONE, SEVENTY HANDSOME CHIMNEY PIECES of various designs, and an assortment of ornamental Articles, including Brackets, Table Tops, Tazzas, Fonts, Obelisks &c. highly polished and manufactured from the finest specimens of the celebrated material, TWENTY FIVE CHIMNEY PIECES in Statuary and Vein Marble.

NOTE.—The Gold Medal was awarded to this Company at the Exhibition of 1851 and to the Paris Exhibition of 1855 for their manufacture unsurpassed, as Marble which is ground to receive its true appearance. May be viewed one week prior, and catalogues had at the Premises and of the Auctioneers, 40, Parliament-street, Westminster and 62 Cornhill Exchange

TO BUILDERS AND OTHERS.—Valuable Stock of Marble and Timber, under a distress for rent.

MR. MARSH will SELL by AUCTION, upon the PREMISES the large and valuable Marble, Mantle-piece, on TUESDAY JANUARY 22nd, at TWELVE o'clock, a valuable STOCK of MARBLE, comprising large and elegant chimney-pieces, forty-three large slabs, in black and gold, statuary, and vein and other marbles, about [illegible] planks and deals, York paving, marble table-tops, office furniture, and other effects.—May be viewed the day prior and morning of Sale, and Catalogues obtained on the Premises; and at Mr. MARSH'S Offices, 2, Charlotte-row, Mansion-house.

Eligible Freehold Building Ground, Croydon and Peckham; Leasehold Reversion.

VENTOM and SON have received instructions from the Trustees and Executors under the will of the late Mr. William Davis, to SELL by AUCTION, at the MART, near the Bank of England, on THURSDAY, 24th of JANUARY, 1856, at TWELVE o'clock, in two lots, Lot 1, 3a. 1r. 5p. of FREEHOLD LAND, having a frontage next the high road from Selsdon to Croydon of 245 feet, on which are two cottages, viable rent £20 per annum, situate on the high road, ½ mile from the station at East Croydon, and 2 miles from the West Croydon station, in a healthy and improving locality, and let by parol and with the right of shooting over 1,000 acres of land also with chalk, admirably adapted for making bricks and lime, for which large contracts are now being let. Mr. Davis and his Son up to the last few months. There is also a large supply of gravel. Lot 2. 8a acres of Freehold Land, particularly adapted for building purposes, and containing excellent materials for brick-making, for which it has been used by the late Mr. William Davis for the last ten years; and it is situate in Crabtree Shot-road, leading from Hill-street, Peckham, to the Lord Nelson, in the Old Kent-road. May be viewed, and particulars, with plans, had of JOSEPH TAYLOR, on the Ground, at Croydon; of Mr. GREEN, Crown Inn, Croydon; Red Deer, Peckham; Kentish Arms, South-street, Camberwell; Elephant and Castle, Newington Butts; of Messrs. GREGSON and SON, Solicitors; and of Messrs. VENTOM and SON, Auctioneers, Angel court, Throgmorton-street; and at the Auction Mart.

CROYDON, SURREY.—Builder's Stock and Trade Utensils

MESSRS. BLAKE will SELL by AUCTION, upon the PREMISES, High-street, on WEDNESDAY, JANUARY 23rd and three following days, at ELEVEN o'clock each day, the whole of the valuable and well-selected STOCK in TRADE; comprising 100 squares of prepared floor boards, 350 dry deals, planks, and battens; a large quantity of seasoned deal, in thicknesses from 1 inch to 4 inches; also four panel doors, sashes and frames, mahogany and deal plank, oak and deal bends, elm boards and scantling, sawn fence and ash-posts and rails, eighteen sheds of various sizes, wood-standing, deal boards, deal sighting and battens, planed deal, worked copings and sills, York and Portland paving, sinks and chimney-pieces, plain and pan tiles, joiners' ironmongery and brasswork, iron repository, benches, timber wheels, jacks, hand-trucks, scaffolding, ladders, and various other effects, valuable spring cart, horse, harness, and other plant, and numerous effects. May be viewed the day before the sale, and catalogues had on the premises; at the Inns and in the neighbourhood; at Garraway's Coffee-house, Change-alley; the Artichoke Inn, Newington-causeway; and of Messrs BLAKE, Croydon.

CROYDON, SURREY.—To BUILDERS and OTHERS.

MESSRS. BLAKE will SELL by AUCTION, upon the PREMISES, High-street, on WEDNESDAY, JANUARY 23rd, at ELEVEN o'clock, by direction of the Trustee (for the benefit of creditors), the GOODWILL of the extensive BUILDING BUSINESS, for many years carried on by the late Mr. Henry Bance; together with possession of the commodious Premises which are situate in the heart of the town, and comprise a two-story joiner's shop, counting-house, deal and store sheds, saw-pits, stabling, yard, and convenient dwelling, held on a yearly tenancy. [illegible] the sale, and particulars had at GARRAWAY'S Coffee-house, Change-alley; and of Messrs BLAKE, Croydon.

IN CHANCERY.—"Gough *v.* Hunting," "Hunting *v.* Gough."

To Pianoforte and Cabinet-makers, Proprietors of Saw-mills, and others.

[illegible] Veneers, whereby fully double the number of Veneers of an [illegible] from the use of the Saw; together with all the Patent Machinery, [illegible]

MESSRS. PRICE and CLARK will SELL [illegible] 1858, being one of the most ingenious and important inventions of modern times, alike valuable for its vast economy of material and [illegible] time, and at considerably less cost: together with the patent cutting-machine, as recently erected at a very large expense, and an 18-horse power steam-engine and boiler, with all the gear for working same and connected therewith; also the lease of the very commanding premises, consisting of a timber-yard, machine-room engine-house and warehouses, counting-house, and a capital dwelling-house, which is held for a long term at a moderate rental. At the same time will be sold several thousand feet of knife-cut veneers, a dog-cart and harness, and sundry effects.—The whole may be viewed fourteen days prior to the sale, and particulars had of Mr. SIDNEY D. HAMILTON, Solicitor, 26, King's-road, Bedford-row; of Messrs. TRINDER and EYRE, Solicitors, 1, John-street, Bedford-row; of Messrs. KNIGHT and UNDY, Solicitors, Newcastle-under-Lyne; at the Place of Sale; and of Messrs. [illegible] Auctioneers, Chancery-lane, London.

SALES BY AUCTION.

NOTICE to Timber and Mahogany Merchants, Cabinet Makers, and Others.—The next Liverpool periodical SALE by AUCTION, of MAHOGANY and other FURNITURE WOODS, BALTIC and AMERICAN WHITE-WOODS, will take place on WEDNESDAY and THURSDAY, 6th and 7th of FEBRUARY, commencing on the first day at TWELVE o'clock at noon, at the rooms of TEN on a block on the morning of the second day, in the BROOKES'S SHEDS, BRUNSWICK and TOXTETH DOCKS, Liverpool, and yards adjoining Catalogues, containing full descriptive particulars, are now ready, and may be seen at the Office of this paper; or had on application to EDWARD CHALONER, Timber Broker and Measurer, 6, East Side, Queen's Dock, Liverpool.

COMMERCIAL DOCKS, ROTHERHITHE Materials of a large Dwelling-house and Warehouse, to be taken down by the purchaser.

MR. ROGERS has received Instructions from the Directors of the Commercial Dock Company to SELL by AUCTION, on TUESDAY, JANUARY 22nd, at TWELVE for ONE o'clock, on the Premises, round the Mould Wharf, on the south side of the New Dock, the MATERIALS of a large dwelling-house and warehouse, comprising sound brickwork, fore-square of Suffolk bricks, several rafters, joists, and battens, and batten doors, modern glazed sashes, well made six-panel and other doors, marble and stone chimney-pieces, stone cornice and stringing, York landing and paving, fine sound lead, lead in gutters, tubes, pipes &c. return staircase, with mahogany hand-rail, register and other stoves, &c. May be viewed the day previous. Catalogues may be had of the neighbouring Inns, and of Mr. ROGERS, Auctioneer, &c. Lewisham, Kent.

NEAR ORD-ROAD-STREET and REGENT-STREET. Freehold Estates—Extensive tiers of Workshops, Stabling, and Dwelling, within a very spacious enclosed Yard, with carriage entrance; also Four Houses: together producing a rental of £[illegible] per annum.

MR. ROBERT REID will SELL (by order of the Trustees), at GARRAWAY'S, on THURSDAY, JANUARY 31st, at TWELVE for ONE precisely, in Four Lots, an important and valuable FREEHOLD ESTATE, comprising the very extensive Premises No. 93, Hero of Okehill-street, Oxford-street, within a short distance of the Regent-circus: consisting of a dwelling-house and numerous and extensive workshops, and stabling, with folding entrance gates, inclosing a spacious yard in which a large stock of timber may be turned; and the excellent dwelling-house, No. 92, Percy-street, which requires repairs: let for £[illegible] per annum; the whole producing an annual rental of £[illegible] 7,200 square feet; also a valuable dwelling-house, 63, Berwick-street, let to Mr. Charman, at £74. 15s. per annum; and Nos 12 and 13, Noel-street, leased at a ground-rent of £6 per annum, until Lady-day, 1865, when the purchaser will be entitled to the rack rentals, estimated at 100l per annum. The property may be viewed by permission of the tenants. Particulars may be had of Messrs. MAY, MAY, and DYSON, Solicitors, 2, Raymond-buildings, Gray's Inn; at Garraway's; and of Mr. ROBERT REID, 48, Great Marlborough-street.

SOUTHWARK Stanton's Wharf, Stoney lane, Tooley-street Building Materials

MR. PEAKE is favoured with instructions from Messrs Scrutton, to SELL by AUCTION, in the PREMISES, on TUESDAY, JANUARY 22nd, 1856, at TWELVE o'clock, all the useful MATERIALS, comprising a capacious modern dwelling house and counting house, to clear the site for enlarging their premises, consisting of excellent stock brick-work, slated roofing timber, sheeting, and flooring, lead flats, tops of dormers, gutters, cistern and service pipes, marble chimney-pieces, flooring boards, capital internal fittings, mahogany hook-cases, fittings-up of bath-room, &c. &c.—May be viewed the day preceding and morning of sale. Catalogues had at Mr. PEAKE'S Offices, 44, Tooley-street, Southwark.

LITTLE GRAY'S, THURROCK, ESSEX.—NEW BRICKS.—TO BUILDERS and OTHERS.—[illegible] capital New Bricks. TO BE SOLD by AUCTION, by

MR. F. HALL, on the PREMISES, near the Ship, Little Thurrock, Gray's, Essex, on THURSDAY, JANUARY 24, 1856, at TWELVE for ONE o'clock, by order of the proprietor, about 400,000 excellent NEW STOCKS, FACINGS, GREENINGS, GRIZZLES, and PICKINGS, in PLACE, in lots from 10,000 to 20,000 in a lot, the whole for unreserved sale, and within a short distance of either rail or river.—May be viewed the day previous and morning of sale, and catalogues had on the Premises; at the Ship, Little Thurrock; the Terrace-pier, Gravesend; Angel, Stratford, and other principal Inns; and of Mr. F. HALL, Builders' and Building Material Auctioneer, Chester-street, Kennington.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building upon, in Wilmot-street, Mile-end-road. Apply at the Offices of MORGAN and PHILPSON, Architects, 5, Chancery-lane

FREEHOLD GROUND, CHANCERY-LANE and FETTER-LANE. The Commissioners of Sewers of the City of London hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 29th of FEBRUARY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking on Building Lease for Eighty Years, certain PLOTS of FREEHOLD GROUND, situate at the south-west end of Chancery-lane, and the south-east end of Fetter-lane.—Further particulars may be had, and plans seen, on application at the HAY-HILL, Engineer's Office, Guildhall, where tenders are to be delivered. The Commissioners will not be bound to accept the highest or any tender, but will take such time as they may deem necessary for consideration before they proceed to accept any proposal, and they reserve to themselves the right to treat with any person for any advantageous terms.

JOSEPH DAW, Principal Clerk.

Sewers' Office, Guildhall, January 7, 1856.

TO TIMBER MERCHANTS and OTHERS. The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the most convenient site for landing all sorts of English Timber, &c. Spacious Dry and Drawing Docks, and 10-ton Cranes. Sawpits for converting Timber, &c. Freights paid and [illegible] Apply to G. NICHOLAY, on the premises.

IMPORTANT to SOAPMAKERS, CAPITALISTS, and OTHERS.—TO BE LET, all those excellent and complete SOAP WORKS, Stabling, Dwelling-house, and Premises, situate in the Parish of Tipton, in the county of Stafford, comprising cutting and framing rooms, stove-room, packing-room, boiling-room, with four [illegible] office, store-room and boiler's office, cutting cellar, and two packing rooms attached; melting and bleaching boiler, carpenter's shop, machine and house, boiling teapan, 14 feet by 8 feet, with furnace, with sheds attached; smiths' shop, and [illegible] large yard and reservoir, with a good supply of water [illegible] The Premises are [illegible] and are situate at short distances of extensive collieries, ironworks, canals, [illegible] and Wolverhampton Railways. The proprietors are giving up the premises in consequence of other engagements. To treat, apply [illegible] HIPKISS, Land Surveyor, Auctioneer, and Valuer, Surveyor, &c. Tipton, Staffordshire

NATIONAL FREEHOLD LAND SOCIETY, 14, MOORGATE STREET. — The ESTATES at WOODFORD, BIRMINGHAM, MINCHER, and [illegible] may be taken on payment of the price of the lots, or by purchasing [illegible] after MIDSUMMER next, the Society will receive the payment of a deposit of 10l per cent, and the balance, with interest, in nine annual instalments.—Plans, and conditions of sale, [illegible] application.

January 1, 1856. W. E. WHITTINGHAM, Secretary.

NEW METROPOLITAN CATTLE-MARKET.—TAVERNS TO BE LET.—The Markets Improvement Committee will meet at Guildhall on FRIDAY, JANUARY 25th, at ONE precisely, to receive TENDERS for the TWO TAVERNS at the Metropolitan Market, viz. "The Graziers Arms" and the "City Arms." The particular Tavern required must be specified in the Tender. Tenders must be sealed, and endorsed "Tender for Tavern." The Committee do not bind themselves to accept the highest or any Tender. Plans may be seen and particulars obtained at the Architect's Office, Guildhall, any day (Sundays excepted), between the hours of TEN and FIVE.

MEREWETHER.

Guildhall Jan. 7, 1856.

PREMISES TO LET, near the Elephant and Castle, 300 feet deep, suitable for a Timber-yard, Sawmills, livery stables, or any manufactory requiring space. Inquire of Mr. JAMES LEMON, Upwell-place, Camberwell New-road, Kennington.

CHARING-CROSS, LONDON.—To BANKERS, MERCHANTS, and OTHERS.—TO BE LET or SOLD, with or without the Furniture and Fittings, a most convenient HOUSE in this favoured locality. The premises have hitherto been occupied as a Life Assurance Office, but are available for a Branch Bank, Railway, Mining, Parliamentary, Gas, or other Public Office, the Board-room, Secretary's, and other offices being fitted for immediate occupation.—Particulars of Mr PALMER, Upholsterer, 24, Great James-street, Bedford-row, London.

TO BUILDERS.—TO BE LET, on a Rebuilding Lease for 80 years, THREE FREEHOLD HOUSES, in Jacob-street, Bermondsey. They form a frontage of 41 feet 6 inches, with a new sewer, recently built, and near the Thames. For particulars apply to Mr. MARSH, Estate Agent, 2, Charlotte-row, Mansion-house.

FREEHOLD BUILDING SITES, near the STRAND.—TO BE SOLD, or LET, in one or more lease, BUILDING GROUND, situate between Clement's-inn and King's College Hospital. The area is large, and suitable for a Model Lodging House, Stocks of Offices, or Warehouses, or several small Houses.—Apply to Mr. GEO. TOUSSAINT, No. 17, Grace-church street.

TO BE LET, SEMI-DETACHED VILLAS, in immediate neighbourhood of Victoria New Docks, and in parish of Plaistow. Each house contains two parlors and breakfast-room, three bedrooms, kitchen, scullery, pantries, and W.C. They are completely fitted up with every convenience,—coppers, water, stoves, and blinds. They are partially grained oak throughout, and all are papered with newest patterns. They are ready for immediate occupation, and, in consequence of the failure of the builder, they will be let for the low rent of 28l per annum. Taxes are very moderate, and railroad and omnibus conveyance within easy distance.—Apply to Messrs. WM. G. and E. HARRISON, Architects, 28, Bloomsbury square, London; at whose offices plans and drawings may be seen.

CANNON-STREET. — TO BE LET, a HOUSE, 87, Cannon-street, City, on a LEASE for Twenty-one Years. To Tender, addressed to Mr EDWARD SAXTON, solicitor, 54, Cornhill.

UPPER THAMES-STREET. — TO BE LET, by Tender, by the Worshipful Company of Joiners, on lease from Midsummer, 1856, the extensive property known as JOINERS'-HALL, consisting of warehouses and other rooms, dwelling-house, the plot of ground in Pudding-alley, and the PREMISES, Nos. 81 and 82, Upper Thames-street, adjoining the said hall. The aforesaid property may be TENDERED for in separate lots, or for the whole or any part. The Tenders to be delivered at the Clerk's Office, No. 5, Size-lane, on or before the 31st MARCH next. The company do not bind themselves to accept the highest Tender. Particulars may be obtained from Mr. F. POUGET, Architect, 30, Great St. Helen's, or from B. GRANGER, Clerk to the Company.

BELGRAVIA, SOUTH. — DESIRABLE RESIDENCES TO BE LET or SOLD, in Gloucester terrace, Stanley, Winchester, Cumberland, and Gloucester Streets, and Bacon-street, Bethnal-green.—Apply to Messrs. CHAPMAN and PARSONS, Builders, St. Katherine's Wharf, Pimlico; or to Mr. T. S. SMITH, Auctioneer and Estate Agent, 44, Lombard-street.

TO BRICKMAKERS, BUILDERS, and Others.—BUILDING GROUND, abounding in brick earth, situated in North-End, Fulham (next to the Hermitage). The [illegible] is now prepared to LET this ground, containing upwards of Two Acres, for brickmaking and building purposes.—For particulars, apply to Mr. REBEKEY PRICKETT, Surveyor, &c. 17, Chancery-lane, and 23, Fulham-green

SITE for a CHURCH.—WANTED, a SPACE of GROUND for the erection of a church, situated within or near the following boundaries: Finsbury-square on the south, Pentonville-road to the north, Kingsland-road to the east, and Goswell-road to the west. Address to an intending purchaser, F. C., Ashtead Woods, Ashtead, Surrey, Mark-lane

WANTED, on LEASE, in or near the City, PREMISES, suitable for a Builder, with sufficient working room for twelve or fourteen joiners. Address to A. B. 87, Weymouth-terrace, Hackney-road, stating terms, &c.

WANTED to PURCHASE, within Two Miles of Charing-cross, the neighbourhood of Camden Town or Somers Town preferred, a Plot of FREEHOLD LAND, about [illegible] feet, suitable for the erection of manufactory premises.—Address, with particulars, to Messrs. WIGG, SON, and OLIVER, Architects, Bedford-row.

MANUFACTURING WATERSIDE PREMISES, with STEAM POWER, TO BE LET, in LIMEHOUSE, MARSH, Poplar.—Suitable for a Distillery, Manufacturing Chemist, or Colour Manufacturer, [illegible] Regent's Canal, and a few minutes' walk of the Brunswick Basin of the Blackwall Railway. The premises comprise a [illegible] and a half House, a commodious family residence, with garden, a wharf, with [illegible] and a capital [illegible] to a large iron tank, capable of holding 10,000 gallons of water; also a large filtering-pond or reservoir for fresh water.—Apply to Messrs. FULLER and HORSEY, Billiter-street, City

TO ARCHITECTS.—TO BE DISPOSED of, a BUILDING PRACTICE which has been established four years, in a large and rapidly improving market town, in the West Riding of York-shire.—For particulars, application to Mr. W. HEARLEY, Solicitor, Tewkesbury.

TO BE DISPOSED OF, the BUSINESS of a MANUFACTURER and TRADESMAN in an important provincial town. The business has been established, and is of first respectability and connections. It is not a shop and counter trade. Every information will be given to an [illegible] person possessing a knowledge of the colour trade, and having [illegible] worth attention. Apply to Mr. SIDNEY SMITH, 4, Charlotte-row, Mansion-house, City, London.

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The Builder,

A JOURNAL FOR THE

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BOARD of WORKS.—Whitechapel District.—Required for this district a SURVEYOR, to perform all the duties required by the Metropolis Local Management Act, and such others connected with his office as may be required by the Board. His whole time to be at the disposal of the Board. Salary 300l. per annum.—Applications for the situation to be in writing, and sent in to me, with written testimonials, on or before the 2nd of FEBRUARY next.

H. S. MITCHELL,
Vestry Clerk of the Parish of St. Mary, Whitechapel.
Vestry Clerk's Office, 5, Great Prescot-street, Whitechapel.

TO ENGINEERS AND SURVEYORS.

THE LOCAL BOARD of HEALTH of HASTINGS require a SURVEYOR able to undertake the duties of that Office, under the Public Health Act, 1848. He must be competent to prepare plans, sections, drawings, and estimates, and to be conversant with the practice of engineering generally, and able to superintend and carry out the execution of all necessary works of drainage and others, which will fall within his duties. He will be required to devote the whole of his time to the duties of the office. Salary, 200l. per annum. He will also have to act as Surveyor to the Corporation, with an additional salary of 50l. per annum.—Applications, with age, testimonials of qualification and competency, to be addressed to "The Local Board of Health," indorsed "Application for Office of Surveyor," are to be forwarded, under cover, to the Town Clerk, Hastings, on or before the 21st day of FEBRUARY next.

JOHN G. SHORTER, Town Clerk.

Hastings, January 19, 1856.

SURVEYOR WANTED.—The Local Board of Health and the Council of Great Yarmouth, are desirous of ENGAGING a qualified PERSON to perform the duties of Surveyor and Inspector of Nuisances to the Board of Health, and Surveyor to the Town Council. The surveyor will be allowed to carry on his private practice except in matters affecting the interests of the Council and local Board. Total salary, 150l.—Applications, stating age, with testimonials, are to be addressed to the Town Clerk, not later than the 30th day of FEBRUARY next, endorsed, "Application for Surveyorship."

Great Yarmouth, January 18, 1856.

BOARD of WORKS for the HOLBORN DISTRICT.—The Board will meet at the Workhouse, in Little Gray's-Inn-lane, on MONDAY, the 4th day of FEBRUARY next, at SEVEN o'clock in the afternoon, to ELECT the following OFFICERS under the Metropolis Local Management Act, viz. a MEDICAL OFFICER of HEALTH, at a salary of 200l. per annum; a SURVEYOR, at a salary of 200l. per annum; an INSPECTOR of NUISANCES, at a salary of 105l. per annum; and a MESSENGER, at a salary of 25l. per annum. The Surveyor and Inspector of Nuisances will be required to reside in the district, and to devote the whole of their time to the service of the Board. Candidates are requested to attend on the day of election, and to send in their testimonials on or before the first instant, under cover, to the Clerk to the Board, of whom full particulars of the duties to be performed may be obtained.

S. W. HOPWOOD, Clerk.

Office, 47, Chancery-lane, January, 1856.

ARCHITECTURAL EXHIBITION and COLLECTION of PATENTS and MANUFACTURES not nected with Building, at the GALLERIES, 54, SUFFOLK STREET, Pall-mall East, NOW OPEN, from NINE till dusk. Admission, One Shilling; or at all times to the Galleries, and to all the Lectures, by season tickets. Half-a-Crown each. Lecture for TUESDAY EVENING, JANUARY 29, at EIGHT o'clock, "On the Application of Painted Glass in Architecture," by CHARLES WINSTON, Esq.—Lists of Lectures, Tickets, and all particulars to be had at the Galleries.

GEOLOGY, KING'S COLLEGE, LONDON.—Professor PENNANT, F.G.S. will give a COURSE of LECTURES on GEOLOGY, to commence on FRIDAY MORNING, JANUARY 25, at NINE o'clock, and to be continued on each succeeding WEDNESDAY and FRIDAY, at the same hour.

R. W. JELF, D.D. Principal.

BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.
Head-Master—R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the principles of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify Schoolmasters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Free-hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still-life, &c., the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of Chlon and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. M'Ian. Fees per session,—Advanced Class, 3l. and 4l.; Elementary Class, 1l.; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall-mall, London.

COMPETITIONS.

CEMETERY, MANSFIELD, NOTTINGHAMSHIRE.—To ARCHITECTS, SURVEYORS, LANDSCAPE GARDENERS, and OTHERS. Plans, Designs, and Drawings are required for building Two CEMETERY CHAPELS (adjoining each other), together with Lodges and Entrance Gates, for the above proposed Cemetery. The expense of the Chapels is not to exceed the sum of 500l. and of the Entrance gates, with a Lodge on each side, the sum of 400l. Plans to comprise elevation and ground plans, accompanied by approximative estimate of expense. The sum of 7l. is offered for the plan considered to be the best; 5l. for the second best, and 3l. for the third best. Plans and drawings are also required for LEVELLING, PLANTING, and FENCING the said proposed cemetery, and laying out the walks therein. The sum of 10l. is offered for the plan considered to be the best, and 5l. for the second best. The above amounts are offered by way of premium, and the Architect whose plans are accepted, will be engaged to overlook the erection of the buildings, at the usual commission of five per cent. upon the outlay. No contractor to be paid for plans, and no plans to be paid for, except the three best for the buildings, and the two best for laying out the grounds. The plans to be sent to the Clerk, sealed up, and endorsed "Plans for Mansfield Cemetery," on or before the 4th day of MARCH next. By order of the Burial Board,

Mansfield, 15th January, 1856. R. J. PARSONS, Clerk.

TO ARCHITECTS and OTHERS.—DESIGNS are required for ERECTING a TESTIMONIAL COLUMN, of stone, of about 100 feet in height, on some conspicuous spot, in the County of Dorset. The person whose design is selected, will receive a premium of 10l. Such design to be accompanied with an estimate of the probable cost of such column, with and without a staircase.—The plans or designs to be sent (prepaid), to the undersigned (from whom further particulars may be obtained), on or before the 7th day of FEBRUARY next. FRANCIS T. JOHNS.

Blandford, Dorset, January 19, 1856.

CONTRACTS.

TO BUILDERS.—Any person willing to enter into CONTRACT with the Justices of the Peace of the county of Hereford to BUILD MILITIA STORE-ROOMS, with land recently purchased by such county, being part of the Bartonsham Estate, in the parish of Saint Owen, Hereford, are desired a sealed TENDER to my Office at the Shire Hall, Hereford, on or before the 6th day of FEBRUARY next, between the hours of TEN and TWO. Plans and Specifications of the work may be seen at my said office each day, between such hours, and further particulars may be obtained of Mr. O'GRADY, County Surveyor, King's Acre, near Hereford. Parties sending Tenders need not be present at the above named day, but they will be communicated with prior to the day on which such Tenders will be submitted for approval. JOHN CLEAVE, Clerk of the Peace.

Hereford, 19th January, 1856.

PERSONS wishing to TENDER for REBUILDING STABLES at Brixton, &c. can see the drawings at Mr. FOWLER'S Offices, 4, Garden-court, Temple. Lowest Tender not necessarily accepted.

STAINES UNION.—To BUILDERS, &c. Notice is hereby given, that the Guardians of the above Union propose to ERECT a HOSPITAL in accordance with a plan and specification deposited for inspection at the Staines Union Workhouse. All persons desirous of CONTRACTING with the Guardians for the same, are desired to send sealed TENDERS, addressed "To the Building Committee Staines Union Workhouse, Staines," on or before the hour of TEN o'clock of TUESDAY, the 5th FEBRUARY next. The Guardians will not necessarily accept the lowest or any Tender.

By order of the Board,
RANDOLPH HENRY HORNE, Clerk.

Staines, January 16, 1856.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall-mall, London, on or before WEDNESDAY, the 20th day of FEBRUARY, 1856, from persons desirous of contracting for extensive ADDITIONS and ALTERATIONS to the WESTERN HEIGHTS BARRACKS, at Dover. Drawings and specifications of the works to be executed, may be seen by persons fully competent to undertake the work none others need apply), and forms of Tender obtained at the Royal Engineer Office, Archcliff Fort, Dover, between the hours of TEN and FOUR o'clock, from FRIDAY, the 1st of FEBRUARY, to TUESDAY, the 19th of FEBRUARY, 1856, Sundays excepted. A person belonging to the Royal Engineer Department will attend each day at the Western Heights Barracks, from TEN to TWELVE o'clock, to point out the work and explain the drawings. The party whose Tender may be accepted for the work will be required to enter into a bond with two eligible securities, jointly and separately, to be bound under a penalty of 2,000l. for the due performance of the contract. Tenders for the above work to be addressed to the Director General of Contracts, Pall-mall, London, and endorsed "Tender for work at Dover."—N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, January 16th, 1856.

BRAINTREE LOCAL BOARD of HEALTH.—The Local Board of Health for the district of Braintree, in the county of Essex, do hereby give notice, that they are prepared to receive TENDERS from parties willing to undertake either of the following CONTRACTS:—

CONTRACT No. 7.—For Brickwork and covering for Reservoir or High Service Iron Water-Tank or Reservoir.

CONTRACT No. 8.—For a High-Service Iron Water-Tank or Reservoir.

CONTRACT No. 9.—For the Erection of a Cottage, Engine-house, Boiler-house, Chimney-shaft and Shed.

CONTRACT No. 10.—For Hydrants.

CONTRACT No. 11.—For Sluice Valves.

CONTRACT No. 12.—For Artesian Well, Bore-hole, and Iron Pipes.

Specifications (prices to be stated) and forms of Tender may be obtained at my Office, or at the Office of JAMES FENTON, Esq. Engineer, Chelmsford; at either of which places the drawings and plans of contracts may be seen, on or after the 22nd JANUARY, 1856. Sealed Tenders to be delivered to me on or before the 9th day of FEBRUARY, 1856. The Board do not bind themselves to accept the lowest or any Tender.—By order of the Board.

Braintree, Jan. 16, 1856. A. CUNNINGTON, Clerk.

CAMBRIDGESHIRE, ISLE of ELY, and Borough of CAMBRIDGE PAUPER LUNATIC ASYLUM. TO BUILDERS.—TENDERS are required for the ERECTION of a PAUPER LUNATIC ASYLUM, with Lodge and Farm Buildings, at Fulbourn, about three miles from Cambridge, for such Builders who may be desirous of Tendering, may inspect the drawings and specifications of Works, at the Office of the Clerk to the Committee of Visitors, at Cambridge, on and after the 14th day of JANUARY inst. between the hours of TEN and FOUR. Lithographed bills of quantities and forms of Tender, and of schedule of prices, may be had on application to Mr. GEORGE FOWLER JONES, Architect, York, on payment of three guineas. The Tenders must specify the cost of the main building, and that of the lodge and farm-buildings separately. Sealed Tenders are to be sent, under cover, addressed to the Clerk to the Committee of Visitors, not later than 12th FEBRUARY next; and any Tender not in accordance with the form supplied by the architect, will be rejected. The party whose Tender may be accepted will be required to enter into a bond, with two responsible sureties, jointly and severally in the sum of 10,000l. for the due performance of the contract. The Committee of Visitors do not bind themselves to accept the lowest or any Tender.

By order of the Committee of Visitors,
Cambridge, January, 1856. DAVID KING, Clerk.

SWANSEA LOCAL BOARD of HEALTH.—WATERWORKS.—To IRONFOUNDERS, PIPELAYERS, and OTHERS.—The Swansea Local Board will meet on the 5th day of FEBRUARY next, to receive Tenders from Parties who may be willing to undertake either of the following Contracts:—

CONTRACT No. 2.—For the Supply of a Quantity of Sluice Valves, Hydrants, &c.

CONTRACT No. 3.—For the Supply of about 175 tons of Cast-Iron Pipes and other Castings.

CONTRACT No. 4.—For Excavating the Ground, and Laying and Jointing about 7,500 lineal yards of Cast-Iron Mains, together with the laying of a quantity of Hydrants, Sluice Valves, &c.

The Drawings and Specifications may be seen on and after the 22nd instant, and any further information had on application at the Offices of the Board, Guildhall, Swansea; or at the Office of ROBERT RAWLINSON, C.E. 71, Parliament-street, Westminster. Duplicate forms of Tender, &c. may be obtained upon payment of 2s. 6d. per set.—Sealed Tenders to be sent in to the Clerk to the Local Board, on or before the 4th day of FEBRUARY next. C. B. MANSFIELD, Town Clerk.

Swansea, January 8, 1856.

TO BUILDERS.

PERSONS desirous of TENDERING for the ERECTION of a new CHURCH at Gravelly-hill, near Birmingham, may obtain orders to see the drawings, specification, &c. on application to the Rev. HENRY HAGGARD, Perpetual Curate, Great Barr, near Birmingham; or to the Architect, Mr. GEORGE GILBERT SCOTT, 25, Spring gardens, London. Tenders to be sent in on or before the 26th day of FEBRUARY next, directed to Mr. FRANCIS E. SCOTT, Bart. Great Barr Hall, near Birmingham. The lowest Tender will not necessarily be accepted. The drawings, specification, &c. will be at Great Barr for the inspection of builders having order on and after MONDAY, the 28th inst.

January 21st, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

SAINT LUKE, MIDDLESEX.—Notice is hereby given, that on TUESDAY, the 29th of FEBRUARY next, the Vestry will meet at the Vestry room of the Church, Saint Luke's, Old-street, at THREE p.m. to ELECT a SURVEYOR to carry out the provisions of the Metropolis Local Management Act. Persons willing to undertake the office may be known and obtain any information they may require, at the Workhouse in Golden-lane, on application to the Clerk, who will be forwarded to me on or before the 30th instant; and the applicants must be prepared, on a day of which they will be informed, to wait on a committee of the vestry, who will meet in the interim, to see them and, if needful, to reduce the number for the consideration of the vestry to six.

JOHN PARSON, Vestry Clerk.

Board Room, Workhouse, Saint Luke, Middlesex, 21st January, 1856.

MIDLAND RAILWAY.—The Directors of the Midland Railway Company are desirous of receiving TENDERS for the following WORKS of the DERBY and Chesterfield Extension, viz.:—

1. Two Viaducts, the one over Derwent Valley Road, and the other over Derwent River.
2. Two Bridges, one over Derwent River, and the other over Derwent Valley Road.
3. Two Bridges over Derwent Valley Road.
4. Two Bridges over Derwent River.
5. Two Bridges over Derwent River.
6. Two Bridges over Derwent River.
7. Two Bridges over Derwent River.
8. Two Bridges over Derwent River.
9. Two Bridges over Derwent River.

STUART AND SMITH'S
PATENT GILL AIR WARMER.

TESTIMONIALS.

RICHARD REDGRAVE, Esq. R.A.

"16, Hyde-park Gate, Kensington, February 24, 1854.

"My dear Sir,—The Air Warmer continues to work very satisfactorily in fact, with regard to the main body of the house, and during this weather is charming, even in the painting-room. Mrs. Redgrave is extremely pleased with it in her domain, and says that she never enjoyed a winter before as she has done this, since the apparatus was fixed.—I remain, my dear Sir, yours sincerely,

"Mr. J. Jobson Smith." "RICHARD REDGRAVE.

JAMES SILK BUCKINGHAM, Esq. late M.P. for Sheffield.

"Stanhope-lodge, St John's-wood, London, January 27th, 1855.

"Dear Sirs,—I am happy to be able to report to you most favourably as to the operation of your Patent Gill Air Warmer, which has exceeded the expectations I had formed of it. From a residence of many years in tropical climates, I have always been peculiarly susceptible of cold since my residence in England, and this has increased with increasing years and decreasing strength; I have, therefore, had recourse, from time to time, to various stoves and other modes of warming the hall and passages of my house; but I have never succeeded till now in producing an equal temperature over every part, and having that temperature completely under control, which your Air Warmer so effectually gives me. By its use we are really insensible to those changes of temperature and chills which are ordinarily produced in passing from warm rooms to cold halls and passages, and have the climate of May within doors in the months of December and January. The servants learnt its proper management in a few days without difficulty, and its economy in fuel is as remarkable as the many other good qualities it possesses. Indeed, I cannot speak too highly of it, and shall lose no opportunity of heartily advising its adoption to all who desire to protect themselves against the changes of temperature in their dwellings.—I am, dear Sirs, yours faithfully,

"JAMES SILK BUCKINGHAM.

"To Messrs. Stuart and Smith, Roscoe-place, Sheffield."

M. E. HADFIELD, Esq Fellow of the Institute of British Architects.

"Sheffield, March 6, 1855.

"My dear Sir,—We have kept the Gill Stove in full operation during the past severe weather, and I have much pleasure in saying the result has been most satisfactory. The temperature of the house has been pleasant and equable, and the atmosphere perfectly free from the disagreeable oppressive odour produced usually by Hot Air Stoves. I can conscientiously recommend the principle to my friends as cheap and effective.—I am, my dear Sir, yours faithfully,

"Mr. J. Jobson Smith, Roscoe-place." "M. E. HADFIELD.

WILLIAM RUTSON, Esq.

"Newby Wiske, Thirsk, 15th February, 1855.

"Sirs,—I wish to tell you what promise of comfort as well as of economy I have in the Gill Stove placed in the staircase of my house recently built. In spite of the [illegible] evident to an unoccupied and unfurnished house, with all the doors open into the staircase, it is keeping up a very genial influence over the temperature, even during this severe weather. The manner in which the air is admitted gives perfect control over the combustion; and I find, with coke at 18s. 6d per ton, the rate at which it has been fired for the last two or three months, is 1d. per hour.

"I am, Sirs, yours truly, "WILLIAM RUTSON.

"Messrs. Stuart and Smith.

"P.S.—Mr. Rutson, on looking again, sees the cost of coke for his Gill Stove, burning nine hours per diem, from 31st October to 9th February, for six days each week, was 3s. 6d. for coke—say about 3d. per day."

EDWARD MARTIN, Esq. M.R.C.S.

"Sheffield, Glossop-road, February 27th 1855.

"My dear Sir,—I have now had the Patent Gill Air Warmer in operation during two winters, and the result has been extremely satisfactory. During the late severe frost, the comfort has been so great that I scarcely know how we could have done without it. Instead of the hall, staircase, and passages, being a reservoir of cold air, a genial warmth has been everywhere diffused; and when recovering from colds, my children have had the general run of the house with out the fear of a relapse. To many invalids the invention will prove invaluable, giving them the freedom of their habitations instead of confining them prisoners to one apartment. Believe me, my dear Sir, very truly yours,

"Mr. Jobson Smith." "EDWARD MARTIN.

E. F. SANDERSON, Esq.

"West-street, Sheffield, 27th March, 1855.

"Gentlemen,—The Gill Air Warmer you put up for me last year at Endcliffe, and which I regarded with some distrust and doubt, has been thoroughly tested during the past unusually cold winter. Having been accustomed to a dry climate, my family has been painfully sensitive of the damp and chilly air of this country; but by the happy effects of your Air Warmer the house has been kept at a most agreeable temperature by a continued ventilation of pure, warm, fresh air. This excellent apparatus must be invaluable to invalids and delicate persons. I most cordially offer my testimony in approbation of your effective plan of rendering dwelling-houses most equably comfortable in point of temperature.—I am, yours very truly,

"Messrs. Stuart and Smith, Roscoe-place." "E. F. ANDERSON.

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As erected for and approved of by Government.

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This Patent is as Strong, as Durable, and much Cheaper, than
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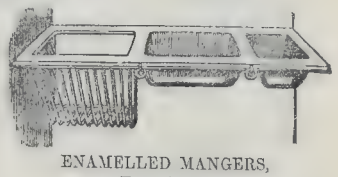

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A represents the Patent Halter-guide and Collar-rein, the ball of which is taken to the back of the manger-work with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the bag. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The New Hook for the Rack, made of galvanized sheet-iron, light and durable.

D. The Patent Saddle and Harness Bracket, combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM and HALLEN'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and imperishable to infection. Manufactured plain, galvanized, and enamelled.

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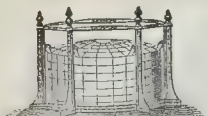

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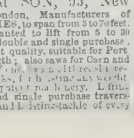

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Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings.—

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I am, Gentlemen, yours respectfully,

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BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation. To be seen in action at DEFRIES'S Office, 145, Regent-street, London.

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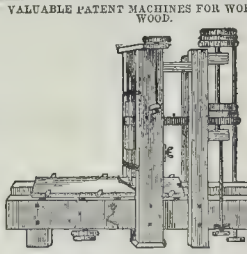

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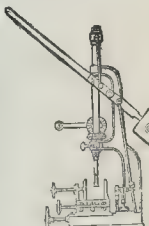
PRIZE MEDALS have been awarded to these celebrated machines, both by the Great Exhibition in London, and many scientific institutions. They are extensively used throughout the United Kingdom, by joiners, contractors, coach and cal net makers, railway carriage and waggon builders, machinists, agricultural implement makers, shipbuilders; and also by the British and French Governments, for planing and squaring up, moulding, tenoning, mortising, grooving, rebating, sawing, and boring. Their operations are in every respect perfect, either in hard or soft wood, and will perform all the ordinary descriptions of work required in the above trades in a very rapid and superior manner, and at a greatly reduced cost.—Sold only by WILLIAM FURNESS, Patentee, 20, Lawton-street, Liverpool, from whom full particulars may be obtained.

NEW PATENT MACHINE for MORTISING and TENONING HARD and SOFT WOOD and BORING WOOD or IRON.



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The Builder.

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UTILITARIANISM in Architecture was the subject of the paper read by the Rev. J. L. Petit, on the 22nd instant, at the Architectural Exhibition in Suffolk-street. The object the lecturer had in view was to inculcate, almost as if in denial of a doctrine put prominently forward by Mr. Fergusson, in his ably-written and profusely illustrated "Handbook" (of which we shall speak more at length shortly), the necessity on the part of architects of acquiring knowledge, and making the most, of the materials obtainable, of attending to the purposes of the building they had to design, and of acquiring and carrying out sound principles of construction, by which means they would ensure a certain degree of excellence, and ultimately attain much more. Explaining why to some extent the amateur had advantages and facilities in meddling with established rules or popular opinions over the practitioner, who might thereby jeopardize his position, he would seek indulgence by avoiding dogmatism.

Architecture has, beyond the mere object of providing us with shelter and personal comforts, a further and higher purpose,—the development and exercise of certain noble faculties of the mind, both in the spectator and designer,—and much which would otherwise have been considered superfluous, becomes essential, and its uses must be recognised by us, even if we should regard usefulness as the only test of merit. In short, he maintained, attention to appearances was no more superfluous in the structures built for our use than in the clothes we wear, or in the habits and actions of our lives. To what extent we might with propriety bestow cost and thought upon the appearance of a building, beyond what was necessary to fit it for its professed and primary purposes, he thought it would be hard to say: he believed, indeed, that there was no limit. He said this, and gave some instances, that he might not be misunderstood in what would follow. But his real business on the present occasion was rather with architects than with their employers: and we will now allow the lecturer to speak in his own words, with only such omissions as our limits enforce.

It appears to me, he said, that architects must be, and that good architects always have been, guided by utilitarian views. They have no right to overlook, or compromise in the smallest degree, the original purposes of the buildings they have undertaken, for the sake of ornament, be it of the highest order. You will observe we have been talking of superfluities, not substitutions; of something beyond what was strictly necessary, not of something offered instead of it. In the noble churches to which we have referred, the parts necessary for the performance of religious rites were always the first care of the architect: the choir was generally first completed and consecrated, then the remainder of the body of the church, and last of all the towers and the enrichment of the fronts. These were added, not substituted for anything: nobody would have thought of designing an inconvenient plan for the sake of the grandeur or richness of which it was capable.

There are good reasons why we should rather make the best of our old churches, than materially alter them, or destroy them, to build others in their room: the impression they are calculated to produce more than compensates for some inconvenience in their form or arrangement; but there seems no reason why we should ever plan or build a new church of an inconvenient form, or in any way unsuited to our own manner of worship. If, for instance, it is desirable that all the congregation should be within sight and hearing of the minister, why should a church ever be built in which a part of the congregation is hidden from him when he performs any part of the service in the usual place? And this must be the case in every church having aisles which terminate at the division between the nave and chancel. If we find that galleries are useful and convenient, why should we build churches that will not bear galleries, or to which they are a disfigurement? If we professedly adopt high-pitched roofs as suitable to our climate, why should we ever combine them in such a manner as to leave a lodgment for snow or rain? There may be difference of opinion as to the advantage of an unbroken area, or the expediency of galleries; still they serve my purpose in illustrating the proposition I would advance, which is, that an architect ought not to abandon a convenient arrangement on account of its ugliness, but rather try to get rid of the ugliness without giving up the convenience.

If, then, a feeling that his first object is to make his building fully answer its primary purpose, and a determination that nothing shall be allowed to interfere with this object, be referable to a spirit of utilitarianism, I conceive that so far, at least, an architect ought to be a utilitarian. It is far from the highest element of his art, but still it is a very important and indispensable one.

But I will go farther, and express my conviction that utilitarianism, even in its very lowest sense, that which leads us to study how to satisfy the conditions required at the least possible cost, is not to be altogether discarded by the architect. I do not mean that a parsimonious spirit should be encouraged in his employers, far from it; nor that he should pander to such a spirit (as I have occasionally been accused of doing when I have made remarks similar to those I am now offering, and which ought not to have been so misunderstood); but that he should learn how best to meet the exigencies of persons who, whether from their limited circumstances, or from a feeling as to the right apportionment of their expenses, cannot afford to lay out anything on superfluities. We know that a great number of churches, schools, hospitals, and other buildings for pious and benevolent purposes, have been, and are still being erected by the voluntary contributions of private individuals; and it is but fair to suppose that many of the contributors give fully as much as can reasonably be claimed from them; as much as they are justified in giving, and some whose resources are seriously injured by it. Who has not seen applications, the formula of which might be stereotyped, to the effect that in such or such a parish it has been found necessary to meet the wants of the increased population by erecting a new church or school; that on, or perhaps before its completion, a heavy debt was found to have been incurred, for which some individual of limited means, generally the clergyman, was responsible, and that therefore an appeal was made to the liberality of the public. Now surely, in some instances, much of this embarrassment might have been obviated by an architect who had studied economy, both in his designs, and his manner of carrying them out. By doing this, he is not countenancing those who have given less than they ought, and who, whatever be the ultimate cost, have risked nothing beyond their contribution; but he is showing his consideration for those who have given amply according to their means, and risked more than they have given; and therefore I still hold that the problem, how to build a cheap church, is one that ought to be mastered; and I verily believe its solution would tend to raise, instead of lowering, the standard of church-building. For the problem is not to be solved by bad work, base ornament, insufficient construction, or perishable material. The building must have dignity, durability, convenience, and an appearance suitable to its high destination. The architect who devotes his thought to the production of this at the least possible expense, will, I conceive, advance and ennoble, instead of debasing his art; for, to go no further, his being cut off from expensive ornament will throw him more directly upon the resources of form, composition, proportion, and arrangement. All that is said in "The Lamp of Sacrifice," on the use of costly material and elaborate workmanship, is excellent; but it is applicable rather to the employer who pays for the building, than to the architect, who designs and constructs it. The offering of the latter is his thought, his time, and his care. And this may be a sacrifice of great value, and one that costs him much. For he may have to give up much popular applause; to work under much discouragement; to be content with the approbation, and that not unmixed, of the few who can appreciate real excellence; and to give up the admiration of the many who are attracted by show. He may have to work in brick, when he sees his competitors working in marble; still he may ultimately find that he has laid the groundwork of a reputation independent of the costliness of the materials of which he has the disposal.

We are now prepared for the consideration, whether usefulness and economy may not only be consistent with artistic excellence, but actually tend to the development of much that is grand and beautiful. If picturesqueness is a merit, I can answer for it that the most picturesque objects I have seen are buildings of the most strictly utilitarian character, without a speck of ornament, and you may be sure erected at no more cost than was deemed necessary, without the slightest attention whatever to appearance. I speak of the furnaces in the neighbourhood of Wolverhampton. Some of these, taken as buildings, independently of their accompaniments of fire and smoke, are absolutely grand. There is something, too, very impressive, to my mind, in the lines of modern fortification; but I suspect their designers never thought of producing any impression, except through the medium of shot and shell.

Should you, however, dispute the grandeur and picturesqueness of the objects I have instanced, you will hardly deny these qualities to the mediæval castles of Europe. Part of the charm may be owing to their state of decay, and yet those that are most perfect are not the most devoid of grandeur and picturesqueness: they are neither the least impressive to the spectator nor the least attractive subjects to the artist.

I will not attempt to enter into a definition of picturesqueness, or to criticise any that has been offered; but it is certain that a studied picturesqueness, if not wholly valueless, is incomparably of less value than that which is inartificial; unless, indeed, the art is too subtle and refined to make itself prominent, which can only be when the picturesque outline or arrangement appears to come naturally, or to rest upon utilitarian grounds. We are not equally bound to conceal the art by which beauty, sublimity, and solemnity are attained: on the contrary, any evidence that care and thought have been bestowed upon their attainment increases the charm; and this is more displayed by a connection and adaptation of the means of producing effect to the primary purpose of the building than by keeping the latter out of sight. If, for the sake of making a church beautiful, we make it inconvenient, or unsuitable to its purpose, what is it but to confess that we cannot make such a church as we want beautiful,—a confession which an architect ought to be ashamed of making.

I have never entered at all into the arithmetical and geometrical rules which have been asserted to govern architectural proportions;—not that I think the investigation is a loss of time; for it is very probable, I may say certain, that such rules have been laid down, with a view of securing a pleasing proportion, and of preserving something like uniformity among buildings of the same class: but I can see no clear data on which they could have been founded. If, upon the strength or stress of materials (the most legitimate basis), the actual size is a most important element, for strength does not increase in the same ratio as size: a beam of 40 feet length and 6 feet square, is not so strong (in supporting its own weight either where projecting from a wall, or resting upon a column at each end) as one 20 feet long and 3 feet square; simply because the weight increases according to the third power, and strength according to the second. Of course

I assume the material to be uniform throughout, and the same in both cases.

But if we take the human form as a basis, the result may prove different. I will try and explain my meaning by considering the aperture of a door. Now, if this be so formed that, in passing through it, the crown of the head is at the same distance from the lintel that the shoulders are from each of the posts, the proportion, under certain limits of size, cannot be very wrong. You will find that a doorway in the form of a double square, to admit an ordinary person in such manner, namely, that he shall be at an equal distance from the lintel and the side posts, ought to be about 6 feet 8 inches in height, and the half of that in width; and a door of that size and proportion will not, I think, look amiss. If the door is smaller, it must be narrower in proportion to its height; if larger, it must be wider; but in this direction it is clear we soon come to a limit, since too wide a door is both ugly and inconvenient. I am not laying down a rule for the size and shape of doorways, but merely suggesting how certain proportions may be deduced from the human figure, and how materially they are influenced by actual scale.

I much question whether there are any actual proportions, say, for instance, between the sides of a rectangular figure, positively and abstractedly more pleasing to the eye than others. I suspect any preference is traceable to some association, whether of habit or propriety in certain conditions. We require them to be different in different positions, or, as we have seen, where there is a change of scale. The same shaped archway will not serve for door, window, pier arch, and vaulting arch: the form that pleases in one offends us in the other. From which I infer that positive usefulness is very likely to prove the true groundwork of fine proportion. We have seen that actual scale is a very important element in proportion; and therefore the architectural draughtsman will find the advantage of being able so to sketch a building as to give a fair idea of its actual size. I know very well, that drawing for effect is discountenanced by some, as having nothing to do with architecture, and it is used unfairly by others. Yet it is as necessary to know the effect of a building, as the means by which the effect is produced. Plans and geometrical drawings give the means: a sketch shows the result. If I can look at St. Paul's every day, I do not want a sketch of it: plans, sections, and elevations will serve my purpose: I am well familiar with the result, and know how I am impressed with it: what I want to study is, how that effect is obtained. But if I have never seen St. Peter's, I must have something more: I want not only to see how the architect worked, but how he succeeded in his task; whether the impressiveness of the result was worth the pains and cost bestowed upon it; and this I cannot get without sketches or pictures that give the form to the eye as presented by perspective, and convey a true notion of the size; I mean, as accurate a notion as the sight of the building itself, from the point of view chosen, would give. Photography may possibly be brought to do this; and if it be, the value of architectural photographs, already so considerable, will be much increased.

None but a great man could have designed the dome of St. Peter's; and an architectural student cannot employ his time better than by carefully examining the proportions of fine buildings; and if there is any principle by which they are fixed, endeavouring to investigate and apply it.

The Cathedral of Worms has always struck me as being remarkably fine in its proportions. And here the towers and cupolas, though grand in themselves, are no more than sufficient to give life and variety to the outline: they do not predominate, like the towers and steeples of an English cathedral. The general effect is that of a large oblong building, with a turret at each angle. * * * The height of the vaulting, if I do not mistake, differs little from the interior width of the nave and aisles inclusive: this, you know, is a common proportion in cathedrals. The large Romanesque churches in Germany are generally, I think, of better proportion than those of later date, which are apt to be very short in the nave. Limburgh Cathedral has a nave of only two squares, independent of its aisles and western towers; and its whole proportions are so lofty, that it has the character almost of a huge tower, built for defence: this, however, well suits its position, on the summit of a precipitous rock. Our large English churches of the Norman style, are of very good proportion, where the plan is undisturbed. Tewkesbury is an example. The same may be said of Normandy, and, indeed, most of France. The general outline of St. George, Bocherville, is most satisfactory. The Early Pointed Abbey Church of Fecamp does not differ very materially in proportion from the older churches. I have elsewhere mentioned the churches of Anjou, and among them the ruined church of Doué, near Saumur, the plan of which strikes me as peculiarly fine. The nave has three squares, the tower, chancel, and transepts, each one square, the chancel and transepts having eastern apses or chapels. There are no aisles. The cathedral at Poitiers has a very simple, unbroken outline: it is well worth studying. And I need not remind you of Salisbury as a specimen of the most exquisite proportion in our Early English.

In pointing out these examples as worthy of admiration and study, I am not recommending the indiscriminate adoption of their plans for our own use. They were excellent for the purposes for which they were designed; but others may be more suitable for our services. There is hardly a church by Sir Christopher Wren that does not exhibit a true feeling for proportion, as well as a strict attention to all the requisite conditions of a church. St. James's, the church on Ludgate-hill, St. Benet's, Paul's-wharf (which has lately been pointed out to me as a masterpiece in its way), furnish us with models of undoubted excellence, and they all owe their merit to composition rather than ornament.

Construction will often furnish us with good principles of composition. A building that appears to be well constructed, to have all its masses properly supported, with enough preponderance of strength to ensure perfect stability, and the different supports proportioned to the work they have to do,—such a building must require a great amount of bad ornament to make it look ugly and unpleasing. There must of course be some superfluities in the supports, but these should be well proportioned to each other. For instance, each pier in the nave of a cathedral should be more than sufficient for the weight which depends on it, but not so large as those under the central tower. There are some cases where the central piers are scarcely, if at all, more massive than the others, as in the Cathedral of Autun, but this arrangement is not pleasing, for if the piers which bear the greatest weight or strain appear perfectly secure, there cannot but seem to be a waste of strength and material in the others. Yet the central piers ought not to be so large and heavy as to suggest the idea that the tower is supported by them without the aid of abutment. A church with a central tower or dome is pleasing, because it manifestly carries out that system of construction by which large spaces are roofed or arched over. The building itself forms its own abutments, and does not require an additional expense of material for the support of the great weight which rests upon it. A large central tower is sustained by the actual walls of the nave, choir, and transepts. It wants no further piers or buttresses (of course I speak of a church without aisles). If the cross form is in itself convenient, which it is in many respects, then the central tower over the intersection, if properly treated, need not render it otherwise. It pleases us both by the mechanical skill it displays and by the actual beauty of outline which it gives the structure.

But if the tower rests upon a substructure which is sufficient for its support independently of abutments, as though the tower itself were first built and rendered secure, and afterwards the limbs of the building added to it; then, in the first place, we lose the charm produced by a contemplation of mechanical skill, and next, we choke up our area at the very point where convenience demands that it should be most open and unbroken. This was often done in old churches, in which the form of service did not require wide unbroken areas; but it should never be done in modern churches intended for the English Established service. Where there are aisles there must of course be tower piers, but these may be made to project but little into the principal area. In some of our abbey-churches they do not project beyond the other piers into the central passage of the church, though by contracting the arches from the aisle into the transept, and also of the transept itself, they are made to preserve their proper preponderance: shafts resting on corbels, or brackets, support the inner orders of the transverse arch.

A display of mechanical skill gives us pleasure, if exerted on a worthy object; but we are not, or ought not to be, pleased by an unnecessary exhibition of ingenuity or contrivance. The architect who has surmounted a real difficulty that he could not avoid, or that lay in the way of some grand result worth obtaining, as the bridging or roofing over a vast space, or the construction of a lofty tower, has a right to make the most of it; to show or to conceal his construction according to the impression he wishes to produce on the spectator, provided always he takes care to satisfy him that his work is well and securely done. He may indulge either in excessive intricacy and apparent confusion, as in the rich steeples of Belgium, or affect a severe simplicity, as in the beautiful campaniles of Italy: he may hide or expose his means of dealing with the difficulty, whichever course he may think best calculated to enhance the triumph of his art.

But he must not exercise needlessly his power of contrivance: he must not create difficulties for the purpose of showing how he can surmount them. I am not clear that I think the roof of Henry the Seventh's Chapel quite worth all the mechanical ingenuity and contrivance bestowed upon it. Possibly a roof of a more ordinary construction would have given equal solemnity, beauty, and richness. But I will notice an example which is the more curious, as belonging to an age little given to architectural tricks (the twelfth century).

Among the abbey buildings at Fontevrault is a small chapel (if it be one, for I don't know whether its purpose has been ascertained), having eight sides, and a corresponding number of apsidal projections. Now you would naturally suppose that these projections would be attached to the sides; each side having its own arch and apse. Such a form would be simple in construction, elegant, calculated for stability, and, apparently, would fulfil any conditions of convenience likely to be required. Instead, however, of this, the apses correspond with the angles, and you may conceive that not a little contrivance and intricacy of arrangement is necessary to carry out the plan. The effect of the interior is remarkable, and not altogether unpleasing; yet when I saw it, I could not for the life of me make out what was the object of all this ingenuity.*

We will now take an instance of ingenious contrivance, for which we can find out a reason, and therefore we may admire it honestly. I mean the steeple of Antwerp Cathedral. The principal peculiarity in its construction is, that an octagonal stage stands upon a square base, not in the usual manner, having four of its sides corresponding with the sides, and the other four with the angles, so as to rest upon ordinary pendentives, but having an angle corresponding with the centre of each face, and with each angle, of the square tower. It will be necessary, when you go up the steeple, to ask for the key of the room in which the junction between the square tower and its octagonal superstructure is shown; and the construction is well worth notice. The chief feature is a system of four arches thrown across between the centres of the adjacent sides, thus forming a square compartment, set diagonally within the tower; their depth being sufficient to carry a considerable part of the face of the octagon placed upon it obliquely.

Now this is not a mere caprice. The lower

* This chapel is not often shown to visitors, the abbey being used as a prison: even the nave of the church is divided by floors, and converted into dormitories (the principle of utilitarianism is here, I admit, carried rather too far), and a written permission is required to enable you merely to see the choir and transepts, which are left open, and contain the tombs of the English kings, Henry II. and Richard I.

portion of the tower is in each face divided in two equal parts by a buttress, each having its window; and by the arrangement of the octagon its windows correspond with those below, the front presenting the two tower windows in the upper stage of the square portion, and two of the octagon windows almost immediately above them; thus carrying up the vertical lines, and giving a great effect of height.

In Strasburg the octagon is set in the usual manner; so that in looking at the steeple from a cardinal point, we have one window in its full width, and two (one on each side) narrowed by perspective. And this character is carried down into the square part of the tower by making a large central window, flanked by two actually smaller ones—an ingenious contrivance, which shows how much the architect studied the effect of his design. But a tower so divided seldom has the grandeur of one divided into equal compartments by vertical lines, and having windows or openings equal in width, in the same face and the same stage. This is usually the case with large towers: there are exceptions, like this of Strasburg, but they are comparatively few in number. The unequal division is apt to give a certain apparent weakness, or a partial and arbitrary distribution of strength, inconsistent with that perfect stability which ought to characterise such a fabric as a large tower.

It is not absolutely necessary that ornament should be either costly in material, or elaborate in workmanship. The use of brick, for architectural works of the highest order, is now generally recognised. Since our architects have made themselves well acquainted with the noble specimens of brickwork on the Continent, as throughout Holland, in many parts of France, in Lombardy, and much of Italy, they have ceased to regard brick as merely a poor substitute for stone. It has two great merits which do not belong to many other factitious materials. One is, that it is no imitation; it does not profess to be stone, or anything else but what it really is; and the other is, its durability, which has now borne the test of many ages. If we are building in brick, we may freely avail ourselves of all the modes of decoration which can be adopted in brickwork, whether plain or moulded. Considerable grandeur and even richness may be produced by deep and bold cornices, and a judicious use of string courses; and so long as they are executed in solid durable material, and there is no attempt to make them appear different from what they really are, no reasonable objection can be urged against them; nor need any unnecessary amount of manual labour be bestowed upon them.

By the way I would venture a passing remark upon string courses: a broad flat band with square edges, such as is most frequently used in plain domestic architecture, hardly ever has a satisfactory look. Now, neither breadth nor squareness is a fault in a building. It strikes me that the real defect is, the similarity of the upper and under surfaces. These surfaces perform different functions, and therefore ought to be differently treated.

I noticed the other day one of these bands, the upper surface of which was covered with a piece of lead, projecting sufficiently to throw off the rain. This, altogether, corrected the fault.

The lecturer then proceeded to speak of the treatment of sculpture in architectural works, and at this point we will return to his discourse in a future number.

SHARPENED EDGE TOOLS. — We take the following from a German scientific journal for the benefit of our mechanics and agricultural labourers: "It has long been known that the simplest method of sharpening a razor is to put it for half an hour in water to which has been added one-twentieth of its weight of muriatic or sulphuric acid, then lightly wipe it off, and after a few hours set it on a hone. The acid here supplies the place of a whetstone, by corroding the whole surface uniformly, so that nothing further but a smooth polish is necessary. The process never injures good blades, while badly hardened ones are frequently improved by it, although the cause of such improvement remains unexplained."

ON COLOUR AND ITS USE IN ARCHITECTURAL ART.*

LET me return more within the scope of the subject I have chosen. Depend upon it, the philosophy of art will not deteriorate the workman. Be it our aim to combine practice with theory. In speaking but now of the neutral tones of colour, the special note of which appeared to me to be a "variable monotony," an evenness of tone composed of two or more elements, I instanced the morning and evening mists, which, though cold and dull in their first aspect, are in truth possessed of very luminous qualities. They are not unlike in that respect the nebulous matter of which astronomers speak. They are seldom represented in painting by purely cold colours: they require that intermixture which commonly goes by the name of warm grey, frequently employed by Claude, &c.

Let me now show how this same principle may be applied to architectural works. Not only do we perceive in these the close connection of colour with light and shade, and of both with form, but the intermixture of one kind of tone or hue with another may be fairly exemplified.

Pugin, in one of his most popular works on the Pointed, or, as he termed it, Christian style of architecture, thus speaks of an important point in structure:—"Another most important, but now neglected part of masonry, is," he observes, "the jointing of the stones. All bond and solidity is frequently sacrificed to what is called a neat joint, by setting one stone on end to form a jam, when the same space in good old constructions would have been occupied by five or six stones tailing into the wall, and lying in their natural bed, a point which should be much attended to. Or, if the jambs are built in courses, they are made as uniform as possible, like rustics: by this means the effect of the window is spoiled, the eye, owing to the regularity of the work, is carried from the jamb to them; while in the good old masonry the irregular outline of the stones does not interfere with the mouldings of the windows. Another point to be remarked in the old masonry is the smallness of the stones employed. Now, independently of this being the strongest mode of construction, it adds considerably to the effect of the building, by increasing its apparent scale. Large stones destroy proportion, and to illustrate this I have given two representations of the same piece of architecture differently jointed. Not only are the stones used in ancient buildings exceedingly small, but they are also very irregular in size, and for the same reason I have before mentioned, that the jointing might not appear a regular feature, and by its lines destroy those of the building."

All this is very true, but it appears to me strange, I own, that in addition to these arguments, the distinguished author from whom I have quoted did not also make some allusion to the colour of ancient buildings as one prime source of their beauty. An old edifice composed of numerous small stones offers to the rays of light a rugged surface upon which the lichens and fern gather, presenting to the eye the most agreeable and harmonious tints. A modern building, on the contrary (especially if the Greek or Classic style be adopted), with its large square blocks of stone, gives us nothing but a flat surface with a colour (comparatively speaking) dull and monotonous. I was much struck with these truths lately on a visit to Rochester Cathedral where the tower and the eastern transept (Rochester has a double transept) were "restored," as I suppose we must call it, under Cottingham, in the year 1825. This happened but a few years before what we may fairly call the revival of religious art in this country began. Now the bulk of the cathedral of Rochester is in flint-work of Norman date, but the architect, I presume, convinced that he knew better than our ancestors, determined not to be behind with them in practical skill. Therefore he determined to build in stone squared, and with a highly-worked surface. The effect, as might be expected, is the worst possible, and the rude grandeur of the old Norman work is lost. Instead of that beautiful grey which old Norman work offers to the eye, we have a flat drab surface of smooth stones with neat jointings,—a surface which, instead of reminding us of York or Lincoln Minster, brings back to our minds the painted surfaces of Buckingham Palace and Belgravia.

Of all hideous surfaces to buildings (and there are many degrees of hideousness), none, I think, is worse than a cemented house painted drab. The fashion, I am sorry to add, is becoming more and more in vogue. It is a sad business that while our neighbours, the French, are building a city of cut stone palaces on the banks of the Seine, we are building a city of stucco houses (in most cases, I fear, very badly constructed) on the banks of the Thames. A few attempts at better things are to be seen; but alas! the long lines of suburban residences, manufactured rather than built, and the two vast towns of Tyburnia and Belgravia, prove how difficult, if not vain is the task of those noble-hearted few, the real architects of the day, who, by recalling to us ancient models, would stem if possible the tide of corrupt taste which has infected our commercial and utilitarian age.

Again, let me ask, why does old brickwork look better than new, in point of colour? Is it not in great measure because the pointing is worn out, and the surfaces of the bricks are unequal? Nothing can be finer in colour than the old Roman brickwork about the Forum, as seen in the baths of Dioclesian, and other places: the lichens collected on the rugged surface exhibit in perfection the variable tints it affords. Further to illustrate the same principle, some, perhaps, will remember that almost all the early masters who painted on canvas used a very rough surface, the granulation of which presents an agreeable effect to the eye. The same thing may be remarked of fresco, the beautiful tones of which are in a great measure due to the plastering on which it is executed being rough cast. Again, our water-colour masters use a rough cartridge paper for the same purpose, with excellent effect. All who remember the exquisitely natural sketches of Dewint, or the masterly works of Cattermole, can testify to this. Not, indeed, that a rough surface has anything magical about itself. It may rather be considered as a mechanical contrivance to save labour. Real beauty of colour consists not in roughness or smoothness of surface, but in that variety and changefulness of hue (not incompatible, indeed, with an even tone), which is characteristic of natural objects. Now, this may be obtained (in colouring), by the use of a material presenting sundry small inequalities, but in a higher degree, by the use of the brush in painting, and of the chisel in sculpture. The laborious process called "stippling," so well known to the painter of miniatures, has this object in view. Each touch thus put upon the paper or the canvass, has an individuality about it, which adds much to the total result obtained. All these contrivances, therefore, of rough paper, or rough canvass, are really inferior to what has been well called *durus linæ* labour, the hard toil of the finishing touches. This is that persevering, earnest love of the work for the work's sake, which gave such refinement and value to the works of our predecessors. Observe, then the bounty of Providence. It is the human hand and eye alone which can gain this exquisite perfection. In these days, when marvels are performed by machinery, in how many cases is it our lot to regret the real superiority of the old fashioned hand-made article. Above all, in point of colour, is this superiority noticeable? In it each touch has its peculiar value and significance. Why is a Cashmere shawl superior to an imitation? because, I apprehend, mechanical contrivance enters more largely into the latter than the former. The same principle, I believe, will account for the great superiority of the Oriental colouring, so much remarked upon both in the French and English Exhibitions. There is no machine so delicate as human fingers.

I hope I am not misunderstood. I do not undervalue the blessings of machinery, but I wish to point out the bounty of the Divine Governor of all things, who appears to have intended, that exactly in proportion as machinery comes into general use,—as we find ourselves

* Read by Sir Walter James, at Architectural Mus um See *ante*, p. 1.

obliged to resort to mechanical contrivance to satisfy our multiplying wants,—ought the value of human skilled labour to be better appreciated. While society continues in a healthy state it will be so. There are subordinate parts even in works of art, which may well be performed by machinery. The highest offices will always be performed by the hand, because it alone of all machines is at all moments under the presiding influence of an intelligent soul.

May I be permitted to illustrate my meaning? No mechanical contrivance was ever of more real and lasting benefit to mankind than the art of the printer and engraver, by which we are able to multiply the productions of the greatest minds. A fine engraver is second only to a first-rate artist. Many a man may say,—I cannot be the possessor of a work by Rembrandt, but I may have one of his etchings. A Raffaelle, few private persons may hope to purchase, but a fine engraving is within the reach of many. Thus it is that copper-plate engraving gives an admirable transcript of the works of the great masters—at least it does so in their light and shadow and outline. Colour alone is of that exquisite nature which appears to be beyond the reach of mechanism. Who ever beheld a coloured print that was other than a lamentable failure? And that, I apprehend, simply because of those exquisite and subtle variations which constitute fine colour. Why does the pictured mosaic or rich tapestry please the eye? Simply because, being the result of manual skill, they afford those infinite gradations of tone which mere mechanism cannot reach. It is a curious thing, that while a coloured print is almost always quite worthless, the tone of a valuable old engraving is precisely that part of it which the accomplished connoisseur most prizes. Our best photographers say that they can imitate any part of a valuable print except its tone of colour.

I shall be excused if I mention that these remarks appear to me satisfactorily to explain the immense superiority of old line engravings to those dishonest and flimsy methods of imitation which are so much in vogue. Line engraving may be numbered, I fear, amongst arts almost extinct in this country. I commend the subject to public care and sympathy, and trust that in that revival of the arts which it is the duty of the true architect to promote, the service which the engraver has in former times rendered to the architect will never be forgotten.

Next, perhaps, to the sedulous labour of the human head and hand, there is no finer colourist than old Time,—"Time's effacing fingers where the power of beauty lingers." Let me ask my present readers whether they are not conscious of something extremely grand in the elevation even of a London building darkened by the smoke of centuries. It is a practical question I would wish to put to them,—whether we really gain much by scraping the stonework of former times. Happily, St. Paul's, the greatest work of Wren, has escaped. Will any unprejudiced man assert that if we could scrape St. Paul's, and give it that peculiar air of freshness which always accompanies a stone building when new, we should improve its beauty. A few years would destroy, as far as cleanliness goes, all we had done, but would a few years restore that venerable look which greets us from those darkened arcades which surround the glorious dome.

An instance presents itself to my mind in the fine old Norman doorway of the Temple Church, which had an imposing appearance from an accumulation of dust and weather stains upon it: these are now lost. Another example is that of the doorway of the western front of Rochester Cathedral. The stonework here has not, I apprehend, been touched since it was first put up. Let us be thankful that in spite of the zeal of hostile fanatics and false friends we have still many such examples.

In the beginning of the seventeenth century, which may perhaps be considered the period when a debased classical style was most prevalent in Europe, the old Gothic carvings were cut away, a barbarous classic architecture was substituted (and patronized, let me observe, by no class more extensively than by the Jesuit order), and men did not hesitate to talk and speak of modernizing and adapting Gothic. Even Wren, great man as he was, caught the general infection; for while he did not hesitate frequently to apply the spire, a decided feature of our northern Gothic, to Italian buildings, he made it often columnar in its outlines, as in the singular design, lately restored after a fire, of the church of St. John, in the parish of Limehouse. Alter Gothic architecture, and modernize or adapt it, was then the watchword. A century almost passed away before men grew wiser. Great as Wren was, Englishmen felt that they might be excused for thinking that William of Wykeham was in his way quite as great, and Frenchmen for believing that the Sainte Chapelle of St. Louis was a specimen of constructive ability not surpassed by the Madeleine. With a revival of religion, and of "peace amongst men," grew up a love of those old cathedrals in which our forefathers had worshipped. Modernize them! Oh, no! That was no longer the cry. Let us rather restore. And then, in the excess of our honest zeal we had the times when one of the best specimens of Norman architecture—the western tower of Canterbury, was destroyed and built up again at vast expense, in order to make way for a mere copy of its right-hand neighbour. A notion gained ground that we must make all things neat and uniform, even at the expense of historical truth, right feeling, and picturesque effect. We have come to the third, let us hope the wisest of our courses. We no longer talk of modernising or altering, and of restoration only in a whisper, for we should approach those venerable shrines with all those feelings we have for the weaknesses of a parent, with the strong conviction that the mediæval architects, with many roughnesses and failings, were on the whole far stronger and better builders than we are. Our watchword is, neither modernize nor restore, but preserve them. Take them as they are, with many faults of original construction, with many damages inflicted by the ruthless hand of time, and still more ruthless spirit of destructiveness. Still they have their pristine beauty of form, still their noble varieties of light and shadow, still those harmonious tints of colour are upon them, which are unto them as the hoary head is to the sage, one of the surest means of attracting public respect and admiration.

Let me endeavour to make a summary of the principles enunciated in this lecture,—

1st. To produce full beauty of colour, we must have large neutral masses varying in size and form, and arranged according to the principles of light and shade as understood by the painter.

2ndly. By a broad neutral mass of colour, it is not meant that it should be absolutely even in tone; but that while uniform in its general aspect, it should admit within certain limits of gradations and varieties. Such are weather-stains on buildings and old brickwork, which add to their effect exactly upon the same principle as fine chiselled work or delicate stippling improves the work of the sculptor or painter.

Here the proper subject of my lecture is at an end. A recent visit to the Exposition at Paris has induced me to put down, but in the same rough way I have hitherto adopted, the extent to which I think these principles may be exemplified by what is there seen. The building itself does not present the same magnificent *coup d'œil*, as our own Crystal Palace. As a construction it is infinitely more solid, and I must confess that its merits bear the test of long and frequent inspection better than the fairy structure which was reared like the airy fabric of some splendid vision four years ago, in our own Hyde-park. It is a fact, which I hope may prove to be one symptom of our national amalgamation with the French, that strength and solidity, which were thought to be the special characteristic of the English, are well represented in the Palace of Industry, while brilliancy and lightness, the usual notes of our lively neighbours, are still unequalled in the Crystal Palace. These remarks apply to the colour of the two buildings as much as to any part of them. The impartial critic will admit, that the colouring of the French building is superior, if not in brilliancy, at least in harmony, to our own.

There is a repose and harmony about it which is most remarkable. Almost all the light being admitted from the top, this affords room in the lower part of the building for those large masses of neutral background which, I have tried to point out, are essential to beauty of colour. The system has, indeed, been rather overdone, and it may perhaps be said that the neutral grey of the ironwork is deficient in relief.

The theory of Mr. Owen Jones was to employ principally the primitive colours. The blue used by him contrasts very well, I think, with the tender yellow on which it is introduced. It is more difficult to defend the brickdust red of the columns, which want relief and ornament. Had they been diapered with a rich crimson,—a process not very expensive in these days,—an excellent addition to their effect would have been produced. One great merit in the Crystal Palace is, that the atmospheric colouring of the fairy-like vault is preserved. How nobly, beneath its covering, did those ancient elm-trees stand out in strange contrast with palm-trees and tropical plants. Emblems they were, indeed, of civilization, combined with (what is its best part) a sturdy Saxon liberty. In the Paris Exhibition there is nothing like this,—there is nothing like fairy-land. The system pursued there is, in some sense, the reverse of ours: while with us each work of art was made subservient to the general whole; in France, on the contrary, much has been sacrificed (in general effect), in order to put the objects exhibited in the best light, and show them off to the best advantage. Instead, therefore, of having the primitive colours employed in every part, they are hardly used at all,—at least, in the framework of the edifice. There is at each end a splendidly coloured glass painting (though very indifferent both in design and drawing), representing allegorically France inviting the nations of the earth to the Universal Exposition. There is, moreover, goodly store of banners and flags, which add much to the general effect. In the Crystal Palace our first feeling partook of surprise, which afterwards diminished to a rational admiration. In the "Palais d'Industrie," on the contrary, we are studiously kept back from perceiving the vastness of the design; but our wonder is ever on the increase, and we are at each survey better able to appreciate the fidelity with which the objects of the promoters are worked out, even in the minutest details. Thus, at the entrance, and in the passages, which with us were totally neglected, there are hangings of great value, and tapestries of the choicest hues. Nothing is done in the temporary and slight manner which was in vogue with us. The Crystal Palace, or world's fair, as it is called, presented to the mind a great idea, in a consistent and intelligible shape; but there is nearly as great a difference between a beautiful sketch and a finished picture, as between the English Exhibition of '51, and that of the present year in Paris. The sketch was superior in ideal excellence, but the finished picture is more to be noted for the perfection of its parts than the simplicity of its design.

The colouring of the Palais des Beaux Arts deserves a few words of remark. The walls are of a dull and neutral grey, exactly of the same colour as the iron framework of the Palais d'Industrie. The effect appears to me decidedly bad. There are two good principles on which pictures may be hung. Consider them as exhibiting delicacy and beauty of tone, as in the sky of a landscape or the complexion of a fair face, and contrast them with a dull, heavy red. This is a very usual plan in England, and was much recommended by Sir T. Lawrence. View them, on the other hand, as brilliant representations of Nature, and place them on a field of light colour, a pale buff or a delicate grey. Thus it is we mount our water-colours with excellent success; but a dull, heavy grey, approaching green, answers neither one end nor the other. Landscapes especially, in which we have usually large quantities of a neutral green, suffer from this treatment. As connected with this branch of the subject, I cannot help stating that I consider the mixture of statues with pictures as a decided improvement. I wish that it could be more generally adopted in England. It has the glorious precedent of the Tribune at Florence in its favour, where the Venus de Medici is in the

same apartment with the *chef-d'œuvres* of Raffaelle. Why should our Academicians in Trafalgar-square be timid in following so bright an example.

There is another point, only one, on which I will touch, ere I conclude this somewhat lengthy paper. The French are naturally proud of having brought into more public notice, than was possible with us, the great subject of ecclesiastical art. This is delicate ground, but I hesitate not to say that in no country can any great art flourish, when debarred, as it hitherto has been with us, to too great an extent, of its highest privilege—that of doing honour to the Almighty in his sanctuary. Equally, or even more to be condemned than this total neglect, is the substitution of what I do not hesitate to call gaudy for genuine and sterling magnificence. Let us not forget that there are beautiful and highly-expressive colours and forms characteristic of the pure faith of primitive times. In this spirit, if undertaken at all, is to be approached the subject of the application of colour to our churches. Of the two extremes, we should ever remember that it is far better to be too sober in tone than approach either gaudiness,—too much positive colour, or garishness—too much positive light. What we should above all aim at is that solemnity of colour which befits both the subject and the place, the dignity of the holy religion we profess, and the great God whom we delight to serve.

ON THE FORMS, METHODS OF CASTING, AND RINGING OF LARGE BELLS,

WITH SOME SUGGESTIONS ON THE SUBJECT.*

I AM aware of the old saying, that "it is much easier to find fault than to suggest a remedy." This is perfectly true in the present instance. I feel assured that the long established system connected with the manufacture and use of large bells is attended with many serious inconveniences, and that a vast opening for improvement exists, whether we regard the form, the mode of casting, or the usual method of ringing them; and although I can confidently point out difficulties and objections, I candidly admit that I am not prepared to offer positive improvements or remedies. There is scarcely a bell-tower in the kingdom which is not shaken to a certain extent, and the masonry disturbed. In some cases fissures of a dangerous character are formed from top to bottom: in others the ringing is altogether discontinued for fear of the oscillations bringing down tower, bells, and ringers, to the ground in one common ruin. If any one will seriously consider the operation of raising a body weighing ten or fifteen tons (a weight greater than any stone used in the erection of the British Museum, the Post-office, or the Royal Exchange) to the elevation of 150 or 200 feet from the ground, and, when so raised, whirling it in the air until the arc of oscillation becomes a complete circle; then, in addition to the simple gravitating weight, make a calculation of the centrifugal force in ringing, he will only be surprised that the towers, and the buildings adjoining them, are not more frequently destroyed by such violent proceedings.

Mr. Ferrey, who has had frequent opportunities of becoming acquainted with the subject, has written to me as follows:—

"You wish me to state what I have observed in the towers which have come under my professional notice, as to the effect of the mode of bell-hanging hitherto adopted. My remarks apply rather to the bad consequences arising from neglect or ignorance, than to the principle upon which bells are generally hung in towers and campaniles, in the frames technically called cages. Still, if some plan of bell-hanging could be adopted less liable to derangement than the framework commonly used, much mischief to church towers might be avoided.

"In the course of my examination of many ancient churches, I have frequently had to deplore the serious injuries caused to the towers by the action of the bells. However judiciously they may be arranged within the framework, there will naturally be some unequal strain upon parts of it: no sooner do the ringers find a difficulty in raising the bells, owing to the want of a proper bearing on the gudgeons, than they immediately begin wedging up the framework of the bells from the walls, window mullions, or any masonry nearest to the point where the bell which works heavily is placed: no attempt is made to brace the woodwork and so remedy the defect; but in order to prevent further spreading, struts and wedges are placed between the framing and the walls of the tower. With a heavy peal of bells the disastrous effects of this slovenly system must be obvious: the great vibration arising from the revolution of the bells is at once thrown upon the walls, and the damage resulting from it becomes very soon apparent. Our ancestors meant to avoid danger from this cause, and I do not know an instance of any importance where the tower walls are not provided with ample set-offs and brackets on which the old bell framing was placed perfectly free from the surrounding walls, and generally with a space sufficiently wide for a person to pass round the bells; the whole framework resting upon these set-offs as a dead weight only, no timber of any kind being inserted in the walls. If this plan was properly respected, and the framework carefully kept free from the walls, much structural injury might be prevented; but even then the oscillation which occurs must eventually damage the building. I have been in old towers while the bells were in full peal, which have *rocked* to such a degree as to cause me alarm; and the quivering vane and tremulous motion of other parts have given full proof of the extent of the vibration. In some central towers, I have observed much injury to the supporting arches and piers; as in the case of the tower of Othery Church near Bridgewater, the structure was rendered dangerous by the manner in which the tower piers were split and crushed by the action of the bells. In many instances, the belfry chambers are closed against the ringers, and the bells are only permitted to be *tolled*, owing to the dangerous condition of the towers. Very recently steps have been taken to rebuild the upper part of the spire of Bellbroughton Church near Stourbridge, the masonry of which was so loosened by the vibration of the bells as to become quite dangerous. I could mention many other instances which have come under my notice of the serious results arising from bad bell-hanging, and ignorant attempts to remedy the evil; but I have no doubt that other professional men will supply you with examples. I hear that you are proposing some new form of bell, by which the same musical tones can be produced without the necessity of their being put in such violent motion. If you succeed in this, and can give us the same joyful effect without the necessity for cumbrous wooden framework and risk to the buildings, you will have effected a very desirable object."

That the process of throwing bells up and down is inconvenient as well as dangerous, is proved by the fact that nearly all large bells are struck on the outside with a hammer, instead of being whirled round, either because the tower is in a dilapidated state, or that too many men are required to raise the bell, if it is to be rung according to the original intention of the machinery.

The most sonorous material for bells is found to be a mixture of copper and tin in certain proportions, generally four parts copper to one of tin. It is an error to suppose that silver enters largely into the composition of some bells, though the recently discovered metal, aluminium, is said to be very sonorous. The greatest care is requisite during fusion, not to heat the materials more than absolutely necessary, and when melted and sufficiently hot, to commence casting them with as little delay as possible; for metals in a fluid state may be distilled or sublimed by heat like other liquids; consequently, the tin being melted at a much lower temperature than the copper, will be driven off in a sort of aeriform or vaporous state; therefore, in order to be certain that, when the bell is finished, it shall contain the proper quantities of each metal, great importance must be placed on putting in the tin at a proper time; or, when the cast is completed, its composition will be different in its proportions from what was intended: this will of course alter the sound, and very likely render such a bell less sonorous. If the bell is to be a large one, the metal must be fused at several furnaces, varying in intensity of heat, and some ready for the mould before the others; but wherever two or more currents of fluid metal meet, the rudiment of a fracture may be formed, as the chances are, that portions of oxide, or earthy matter floating on the surfaces, may prevent the perfect junction and incorporation of the two streams.

It is a common practice to pour hot metal into a cold mould, or into a mould that has been warmed on the surface by pouring a small quantity of the fluid metal into it, and then, by some contrivance, letting this metal run out again before it has had time to become solid. This plan will give a momentary warmth to the surface of the mould, or perhaps may warm it to the depth of half an inch; but it will not prevent the hot fluid metal when poured in from becoming solid wherever it touches the mould, while the interior of the mass will still remain in a liquid state. Under such circumstances the cast will be tolerably fine-grained, solid, and compact, where the metal has first cooled,—that is, wherever it has come in contact with the mould; but inside, where the fluid metal has not been so immediately cooled, but has remained longest in a melted state, the texture will be open, coarse-grained, porous, and highly crystalline.

If it is the general opinion that no better form for bells can be introduced than that which has been in use for ages, namely, the various modifications of a hollow cup-shape, we must endeavour to find some mode of improving the contour, and process of manufacture, so that cracks in the bells, and destruction of the towers, together with many other vexatious incidents, may be much less frequent than heretofore. Whatever the general external and internal form of a bell may be, the plainer the surfaces the better will be the sound. All mouldings, inscriptions, dates, and every kind of ornament, whether projecting or indented, should be avoided, as they interrupt the free vibration of sound, in proportion as the relief is high or low, and are therefore worse than useless on an object that is intended to please the organ of hearing infinitely more than that of seeing. A small bell finished in a lathe will sound better than one rough from the mould.

To produce a sound, bells are usually struck by a clapper within, or by a hammer on the outside. Such continued battering upon a cast or crystalline substance must, sooner or later, crack the metal. This may happen when the bell is quite new, soon after it is placed in the belfry, or not for several centuries. A number of comparatively insignificant hammerings or concussions will produce a very surprising effect if continued for a long period. The fracture may at first be so trifling as to be almost inappreciable by the most refined ear; but every stroke of the clapper will increase the evil, until the vibrations of the metal are so interrupted that, instead of a long-continued harmonious sound, an unpleasant jarring noise is produced, and the bell becomes useless. Mr. W. L. Baker's plan, proposed in his paper on Bells,* of gradually turning the bell round, is a great improvement.

The loudness of a bell will depend upon many circumstances in addition to its magnitude, weight, or the violence with which it may be struck. A calm and frosty atmosphere is favourable to the transmission of sound: violent winds and other aerial agitations interrupt its progress. When a strong wind blows from the hearer towards the sounding body, a sound often ceases to be heard, which would be distinctly audible in a calm.

Various circumstances have led me to consider whether a totally different form from that usually given to bells might not be introduced with advantage. Large blocks of stone are sometimes accidentally placed so that they balance on a small lump, immediately under their centre of gravity. While in this position, if they are struck with a heavy piece of wood, a deep sonorous tone is produced. On the same principle, a number of long strips of hard stone, of different sizes, are hung on two tapes, forming a rude instrument called the "Rock Harmonicon," which, when struck with a soft hammer, produces very harmonious sounds. Clappers and hammers are generally too hard: vibration is required, not harsh collision.

Solid masses of metal, formed in a particular shape, and suspended in a certain way, when struck with a hammer, will give very melodious sounds. For example, suppose a perfectly sound lump of soft steel be forged in the shape of a spindle, or of two cones of the same diameter but of unequal heights, and united at their bases,—each cone bearing a relative proportion

* By Mr. C. H. Smith, honorary member. Read at the Ordinary Meeting of the Royal Institute of British Architects, Jan. 14th.

* See page 19, Vol. XIII.

to the other, either in its cubical contents or superficial area,—the larger one to be three, four, or five times the size of the smaller: suspend this at the largest diameter or nodal part, by two pins or trunnions, and strike it with a hammer near the centre of gravity of the whole mass,—it will vibrate freely, and give a long-continued musical sound. Or take two pieces of metal, formed precisely of the same shape and dimensions as the last, one of soft steel, the other of bell-metal, and suspend them in a similar manner. If these two be struck at the same instant, either with a hammer or against each other,—care being taken that the striking point is near the centre of gravity of each,—the sound will be a loud musical chord, of a very harmonious kind.

Different experiments lead to the inference that coarse-grained, crystalline substances, are not so sonorous, and fit for the transmission of loud musical sounds, as those which are of a closer and more compact texture. Glass is extremely sonorous, and the sweetest tones may be produced from it. For this reason it is probable that if, instead of fusing and casting them, bells could be manufactured by hammering the metal into the requisite form, the same intensity of sound might be obtained from a much smaller quantity of it. Of course the manual labour of beating a ton of metal into the required shape would be very considerable; but if one ton of beaten metal be made to answer the purpose of four tons melted and cast in a mould, there would be a saving of at least 300*l.* in the cost of the material, which sum would be more than sufficient to pay for the hammering; and a bell so formed could not easily be cracked, nor would the tower be so heavily laden. The well-known Chinese gong is, generally, an instrument remarkable for its rudeness of manufacture and thinness of hammered metal; but when struck with a soft hammer it gives a deep bass tone, louder than can be obtained by any other means from the same quantity of metal.

I am prepared to hear it stated, that some of the sounds which may be very satisfactory on a small scale, and suitable for the interior of moderate-sized buildings, for high towers in cities, or open countries, would be almost useless. I have my doubts as to the correctness of these objections, especially to such as have not been fairly verified by experiments on a large scale, and thereby proved to be failures. The sound of some musical instruments, as the harp, for instance, is not over-powerful in a good sized-room, and not louder than a pianoforte, or violin, when in concert; yet, during a quiet evening, or early in the morning, its melody may be distinctly heard at a much greater distance, and long after other instruments have ceased to be audible. The same remarks are applicable to the beat of a common military drum, which is distinctly heard at an immense distance. Two pieces of metal, of a sonorous kind, one, probably, only half the weight of the other, but of the same form and proportions, will give the same, or very nearly the same sound. Taking this latter, and many other circumstances into consideration, it must be evident that the entire subject should be thoroughly investigated, especially at the present time, when we have a grand building at Westminster nearly completed, with a clock-tower waiting for its bells, one of which is to weigh 14 or 15 tons, and the prime cost of the metal only, for this one bell, cannot be estimated at less than 1,700*l.* When I hear of a work of this kind progressing in the middle of the nineteenth century without any improvement on the old system, I feel that the credit and character of scientific men is involved in the transaction. For, if they would turn their attention to the subject, it is not only possible,but extremely probable, that some plan might be discovered to answer the purpose of these ponderous bells, with perhaps half, or one-third of the quantity of metal, much less risk and difficulty of ringing, much less weight in the tower, and much more credit to all parties concerned in the great work.

Were I to present a peal of six or eight large spindles, or double cones, such I have described, to be suspended in the bell tower of the new church at Hanwell, I might expect to be sent after them, to the neighbouring asylum, for supposing that the churchwardens or bell-ringers were clever enough to ring the congregation to church with what might be mistaken for the clappers only. But surely, in these days of invention, when we live, as it were, in an atmosphere of steam-power, — when our words are sent, almost as quick as we can utter them, to the further end of a wire hundreds of miles in length, — when the portraits of living creatures, topographical views, or other complicated objects, can be produced in an instant by a flash of light, with such truthfulness and minute accuracy as to defy microscopic criticism,—it cannot be too presumptive to expect that, after a lapse of many hundred years, with the help of philosophic investigation, and mechanical science, we should be able to suggest some modification between the old ponderous bell, and the thin, loud-sounding gong, between the sweet notes produced by a musical snuff-box and the spindle-shaped steel which I have exhibited this evening. I will, therefore, conclude with the hope that some hints may be taken from my remarks, and that the discussion, which I trust will now follow, may lead to such experimental investigation as may ultimately change the present inconvenient, dangerous, and expensive system of bell-ringing.

In the course of the discussion which followed,

Mr. Cornelius Varley, visitor, said, the subject of bells divided itself into two parts: one, how to obtain a good bell and the fullest sound with the least weight of metal; and the other, how to support the bells and obtain the most of their sound with the least injury to the building: this was the architectural part. With respect to swinging of bells, Mr. Smith was right: whilst swung in open space there was no increase of sound, but it varied as the mouth was swung to or from the auditory. This opened the architectural question; for, whilst the bell hung quiet, it presented its best sound to the rough floor of the belfry, and spread it round into the corners, all serving as dampers, and a portion rushed out of the openings, where it was again cut up by the weather-boards. A bell so smothered by the inclosure needed to be much heavier, because we obtained but a portion of its sound; but if the bell were swung (though there was no increase of sound), it alternately presented its mouth to the two opposite openings, at which moment a larger proportion of sound was thrown out, and the discordant effect of its inclosure was lessened; and thus, by swinging, we only lost less of the sound; but this swinging was communicated to the tower, and were it not for the discordant proportions of all the parts, a spire would be seen to vibrate, yet all the parts trembled. The late Mr. W. Hardy contrived an inverted pendulum to show whether chronometer supports were firm enough, and it showed that many swung right and left with the pendulum, and so prevented any very accurate adjustment. Bells, being so much heavier than pendulums, will rock their tower, and Mr. Hardy's instrument could be adapted to show it, and probably would prove it to be more than any important building ought to be subjected to. An architect having produced a handsome building to endure the roughest weather, ought not to be required to spoil its proportions by any increased bulk to make way for and support a hidden agent, whose action is so inimical to durability. If bells were hung in the open air, over the conical roof of a tower or support suitably constructed for moving such weight, the cone below would spread their sound right and left; and if the cover were a large sounding-board, we should obtain the most effect from a given weight of metal. In cast bells, there was not only the rough surface, but inequality of thickness, a cause of discord inimical to the sound, and lessening its duration. This, in large bells, was very difficult to avoid; and, in thick castings, the two surfaces cooling first, often left a division within: this is a still greater cause for bad sound. The difficulty of ensuring sound metal in bell-casting was very great, as it was generally sound on the outside only, but crystalline within. In his own experience, he had found that metal cast in a hot mould cooled with a crystalline interior. Lord Rosse, by casting on a cold face, had succeeded in getting a sound mass all through. This question, however, concerned the bell-founder rather than the architect.

Mr. C. Barry begged to inquire of Mr. Warner, who was present, whether there was any mechanical difficulty in the way of counteracting, by some kind of equipoise, the effect of moving violently so large a mass of material as a church bell. This method was applied to some of the heavy machinery in the Cornish engines with success. Of course, the effect upon the masonry of a bell tower by the mere vibration of sound, was a different thing, and the amount of dislocation so produced was inevitable.

Mr. Warner said, there was no mechanical difficulty in the adoption of a mode of equipoise, which was indeed frequently done with small bells; but it would interfere with the ringing of changes.

The Rev. W. Taylor, visitor, referred to his statement last year, that the great bell of York had never been rung to set. That statement had been contradicted by Messrs. Mears, who wrote, that it had been *rung up to set* by sixteen men. He (Mr. Taylor), had, however, sent to York for an official report on the subject, and the report was, that the bell had never been rung up to set. He was himself at York in October last, and found that, in fact, although thirty-six men had tried it, the bell had never been rung to set; as indeed with the present hanging it never would be. At York, there was ample strength in the tower for any bell to swing, whatever might be its weight. At Erfurt, the tower was very thin, but there the bell, which weighed 275 centner (each 110 lbs.), was rung up to *set* by twenty-eight men. The latter bell was not cut into the stock as at York: the latter method took from the centrifugal force, and made it impossible to get up the bell. The bell at Erfurt was 5 ells in height, and 15 ells in circumference, the ell being 2 $\frac{3}{10}$ feet English, and it was cast in 1497. The different sounds of different metals was an interesting question, and on that point he would remind the meeting, that at St. Nicholas, Hamburgh, very large tuning forks of cast iron were struck instead of bells. Mr. Smith had shown that a common mason's chisel would produce a pleasing tone, but that the note of two such chisels was the same, although one was only half the weight of the other. How then was a deep tone (such as that of St. Paul's bell) to be produced, if increasing the quantity of metal would not effect it? The note of the Erfurt bell was F, but he believed Mr. Denison expected to pitch the Westminster Palace bell in E. The continuance of the sound, and the power to be heard at a great distance, were the principal tests of a good bell; and the latter object would be promoted by hanging bells, as in Italy, on the outside of the tower, instead of enclosing them with louvre boards, &c. This point appeared to have been overlooked at the Palace of Westminster, where the outlet for the sound was exceedingly small as compared with the size of the bell.

Mr. B. Denison, visitor, having been invited to state his views on the subject, expressed the interest he felt in it, as having been obliged to give directions for casting the large bells for the Westminster clock. He considered himself, however, only a learner at present, and was anxious to gain all the information he could by this discussion. The subject would afford ample scope for another discussion, and, whilst expressing his obligation to Mr. Smith for his remarks, he could not concur in the whole of his deductions. He should be glad to state how far he agreed with Mr. Smith, and how far and why he disagreed with him; but there would probably be hardly time for him to do so on the present occasion. The further discussion was accordingly adjourned to the 28th inst.

THE POTTERIES AT KENSINGTON.

THIS singular and neglected locality has at various times during the last few years been brought under public notice. As, however, it is still to the multitude one of the unknown skirts of the town, we will wend our way in that direction, towards what was not long since the "pleasant village of Kensington, about two miles west of London." Passing the church, a building containing many interesting memorials, but not remarkable for beauty (the bells, however, ringing merrily), the road up the hill brings us to the Notting-hill road. On reaching this, long streets of stuccoed houses run in all directions from Kensington-gardens, leading to squares, crescents, and terraces, respectably inhabited. A great number of houses are still in progress, and before half-a-dozen years have passed, the monster London will have established a great branch in this direction.

Wandering in search of the district surgeon through the locality to which we have referred, we were recommended by a clergyman to take the second turning down the Drayton-road, where, this gentleman said, "You will find a place which, both in a moral and sanitary point of view, is as bad as anything you will meet with in the *Potteries*." Proceeding in this direction, we overtook a policeman going home, after a long turn of duty. He said truly enough, "The houses in the Potteries, and in other parts of London for the poor, are very bad, but they are not all bad people who are driven into such places. I have seen a good deal of these things, having been sixteen years

PLEASANT PLACES.

The Water's Side at the "Potteries."

"Just dropt in."

in the force, and never, to my certain knowledge, has there been such a difficulty in getting a shelter for a family as now: for my little house I have for some time past paid 6s. 6d. a week. The married men in the police, in consequence of the present rate of provisions, have a struggling time of it: we can hardly live but in the sort of crib I have here."

It was a small house, containing two rooms of a fair size, and some closets: although it had not been long built, the materials were so bad that the plastering had fallen off a large portion of the walls and ceiling: they were obliged to put tubs and basins in all directions to catch the water which fell through when it rained. Our sketch shows the aspect the room presented during a storm.

Inquiring on the way to the *Potteries* in the Notting-hill district, we heard many complaints of the drainage. A builder engaged in rearing a number of houses, was of opinion that the whole drainage had been done without sufficient plan. When he was at work the rain was about level with the floors of the kitchens. During storms of rain many of the houses were overflowed with water. This is the case in the Royal-crescent, where the houses have cost large sums. The cellar of a beershop in this neighbourhood was so deeply flooded by the sewer, that the empty casks floated and lifted up the floor of the rooms above. We were told, that in some instances the drains had been altered in their levels more than once, entailing expense on the house-owners.

Hemmed in on two sides by buildings such as we have described, the traveller this way will find the *Potteries*, as it is called, planted on a portion of a large extent of flat pasture-land, on which the operations of the builder are here and there indicated. Those who are acquainted with the old well-earned reputation of the Vauxhall Potteries over the water, naturally from the name of the place expect to find it occupied by a colony of those useful workmen. It is not, however, so; for, with the exception of the works of Mr. Adams, who is chiefly engaged in the manufacture of draining-pipes, tiles, and flower-pots, there seems to be no other manufactory of the kind in the neighbourhood. The sight of draining-pipes is always pleasant, and when looking at them stacked in quantities, we feel a strong desire to set a thousand little spirits to work to lay them in certain places which we too well remember. Here, however, are some of the inhabitants of the Potteries, one of them a decent-looking costermonger, who, in answer to our inquiry respecting the health of the place, says: "I think the place is very wholesome. I have lived here more than twenty years. It does not agree so well with strangers. The district doctor lives a long distance from here. We have sometimes fever, but I don't think that is the air. People are rather short of food. It is true that a short time since three children died in one house of fever, and there was an inquest held; but, sir, people just now are short of work, and the supply of victuals is scant. I don't consider it an unwholesome place. Pigs, sir! What harm can they do?" Such, generally, we find to be the opinion that dwellers in the worst sanitary positions state, in spite of their own convictions: it must, however, to a certain extent, be admitted that those who have been born in unfavourable localities do occasionally, if they escape the dangers of early years, live with impunity in atmospheres which would destroy strangers.

In a part of the Essex marshes which during

a considerable portion of the year is to a great extent hidden by fogs and moisture, we have seen families—one in particular—reared in the fens, consisting of nearly a dozen strong young men and women: strangers coming to the same locality would be stricken with ague and fever: in the cases alluded to, the parties have been in the possession of all the comforts and necessaries of life, a circumstance which has to a certain extent kept off the effects of the dangerous atmosphere by which they are surrounded.

The most striking feature of the Potteries district is an excavation of great extent, made by the removal of clay for the manufacture of tiles, &c. At the time of our visit the water in the pool was considerably below the level of the road and streets adjoining: at times, however, this great hollow is full of water, and so extensive does it then appear that it is familiarly known amongst the inhabitants by the name of "The ocean:" this pool has no drain, and is, therefore, as a matter of course, a collection of stagnant water, settling into the adjoining earth or passing by absorption into the atmosphere. This foul lake is bordered to a considerable extent by the streets and houses called "The Potteries," which in a degree resemble the hovels which have been so extensively planted in Agar-town: the former have, however, an advantage over the latter in a sound road, which has been formed through the place by the parish.

It is difficult to convey by words an idea of the dilapidated and filthy appearance of some of the houses on the north bank of what, for want of a better name, we are obliged, like the inhabitants, to call "the ocean." Some of the dwellings are not houses at all, but caravans which had become too old for service at the country fairs, and were here placed in a line with the ill-shaped erections of bricks and mortar: adjoining these, in fact surrounding them, were the thickly-populated piggeries, and their unwholesome accompaniments.

Leaving the foul banks of "the ocean," the streets which compose the Potteries stretch towards the north. Many of the houses are in tolerable condition, and the roadway, although not good, infinitely superior to the deep and almost impassable mire of the roads in Agar-town.* It is easy, however, to observe the dangerous accumulation of water and filth, the overflow of cesspools and such like matters, standing in pools against the walls of the houses. Some of the houses present a most dilapidated appearance. One in particular, surrounded by a mud fence, equals many of those sheds which, in parts of Ireland, so much pain the eye. On the outskirts, under the shelter of a wall, several gipsies were comfortably encamped. The gipsies seem to have the best of it: they have no pigs: they are at a distance from the putrid gutters and other refuse, and ready at an hour's notice to tramp off to a more favourable site, if the health of the neighbourhood becomes affected. In the course of a few years, the houses which form the neighbourhood called the Potteries will have vanished, and perhaps the name be altogether unused; and those living in the handsome dwellings which may then occupy the site, will not be able to form an idea of the scene now presented by "the ocean,"—piggeries, cavernous dwellings, ruined cottages, and gipsy encampments.

* The [illegible] worth while to make a short expedition to the [illegible] witness [illegible] neglected [illegible] fares.

THE BARRACK BOARD.

THE formation of a Civil Architectural Barrack Board has been talked of, the public may like to know there is now in existence a staff for the construction and repair of barracks, we believe, consisting of about 300 military engineer officers, at an annual cost of nearly £100,000, attached to which, according to the estimates for 1856, there is a professional civil branch, costing the country annually about 70,000*l.*; and the Government are no doubt in a quandary as to what ought to be done with this large and costly permanent engineering staff. Most likely the military branch will be employed on military duties in the field, leaving casualties to gradually reduce its numbers, whilst the civil branch will be left on hand, to puzzle the Right Hon. the Secretary for War as to the easiest, simplest, and least expensive mode of providing for their future employment or superannuation.

This professional civil branch consists of about 127 clerks of works, and 154 foremen of works, with a surveyor and two deputy-surveyors, and a teacher of practical architecture at their head.

The foremen of works have charge of the outdoor superintendence, and are generally superior in education and practical experience to clerks of works in civil architectural practice; whilst the clerks of works (who pass a stringent architectural examination) are for the most part employed in the office, and invariably perform the daily duties of a civil engineer and architect, together with the whole of the estimating, measuring, and financial affairs of the department, acting, of course, under the orders of the military engineer officer in command, the latter acting and controlling the office duties so as to afford a check on any malversation of finance.

The future disposal of this civil branch seems now to be a somewhat difficult and expensive matter; and, although the war minister may be able to put the "right man in the right place," it is well known that he has quite mistaken the position and duties of the civil branch of the royal engineer department.

THE ISTHMUS OF SUEZ MARITIME CANAL.

THE object of this extraordinary engineering work, now again occupying public attention, is to effect a direct communication between the Red Sea and the Mediterranean, by the shortest route across the narrow Isthmus of Suez. It is intended to be a ship canal of the largest size, to allow vessels of 1,500 tons burthen to pass direct from one sea to the other, without the necessity of discharging cargo. For the mere conveyance of passengers, the railway now in course of construction, from Alexandria by Cairo to Suez, would be ample accommodation; but for the transport of merchandize, the unshipping at Suez, transport across the Desert, and re-shipping at Alexandria, is rather too slow work for the rapid exigencies of the present time. It must also be borne in mind that the traffic to the East is continuously increasing, and in process of time will demand greater facility of transit than the Desert Railway will be able to afford: for light goods and passenger traffic, the railway will be of infinite use: but how much more so a ship canal to admit at once the passage of a vessel with all its goods and passengers on board.

It will shorten the distance of the northern parts of Europe by 3,000 leagues; and for the Mediterranean ports by at least 3,400 leagues. It will be far the most direct route to British India;—not only the shortest, but the safest, notwithstanding doubts expressed to the contrary by interested parties.

The idea of this grand canal is not by any means a new one. It is, in fact, only the revival of what has been once already achieved on a smaller scale, in what is called the Dark Ages. When Great Britain was a wilderness, and its painted inhabitants as wild and uncivilized as the aborigines of Australia, the idea of this canal had attracted the attention of the then civilized world.

All the great men who have swayed the sceptre of Egypt have recognized its practicability, and wished for its execution. It has been done, neglected, forgotten, disused, and finally choked up, so that at present its trace scarce remains. History has preserved its name on her page, and that is all that remains of its former glory and utility.

Sesostris, Alexander the Great, Julius Cæsar, Amrou, the Arab conqueror, Napoleon, and lastly Mehemet Ali, have, more or less considered the question. Julius Cæsar little dreamt in his day that Gauls and Britons would tread in his footsteps, and league together to investigate and endeavour to carry into effect the bold ideas that once occupied the serious attention of his imperial mind. The site is scriptural as well as historical. The once highly fertile vale of Goshen touches on the very line of route now proposed, and may again be fertilized if this noble scheme be carried out. In ancient times, as above stated, the Nile and Red Sea were connected by means of a canal; and at the present time a fresh-water canal flows along the valley of Tornilat, or the vale of Goshen, fed from the Nile.

It was in existence for about a hundred years, to nearly the middle of the ninth century before the Hegira,—then for a further period of 445 years, commencing with the first Ptolemies, the immediate successors of Alexander the Great; and lastly, for a third period of 130 years after the Arabian conquest, as stated by Monsieur Ferdinand de Lesseps, in his memorial to Mohammed Said, the present Viceroy of Egypt.

Monsieur Lebeau, in his "Histoire du Bas Empire," quoting Albufeda, Prince of Syria, historian and geographer, living in the 753rd year of the Hegira, states as follows:—

"The coast of Farma (a town a little to the east of Pelusium, on the Mediterranean) was only seventy miles (106,000 metres) distant from the Red Sea. This space was a very smooth plain, slightly elevated above the level of the two seas.

Amrou formed the design of uniting them by a canal which he would have filled with the waters of the Nile; but Omar having opposed it, for fear of opening an entrance into Arabia for the ships of the Christians, Amrou turned his thoughts in another direction. There was one ancient canal called Trajanus Amnis, which Adrian caused to be brought from the Nile near Babylon, in Egypt, as far as Parboëtus, now Belbis. He met at this place with another canal, commenced by Nechos, and continued by Darius Hystaspes, and the two together discharged themselves into a lagoon of salt water, at the outlet of which Ptolemy Philadelpheus caused a large trench to be made, which conducted the waters as far as the town of Arsinoë or Cleopatris, at part of the gulf where Suez now is.

The whole of this canal being filled up with sand, had become useless at the time of the famous Cleopatra. Amrou was not deterred by the ancient prejudice which, supposing the waters of the Red Sea to be higher than the soil of Egypt, created a fear of opening a passage for them, and he made it navigable for the transport of the corn of Egypt into Arabia. It is that which is now called Khalig, which passes through Cairo, but only goes as far as the lagoon called the Lake of Sheib. The remainder, as far as the Red Sea, is entirely filled up, although some traces of it are still distinguishable."

After the enterprising Amrou came Sultan Mustapha III. who intended to execute a canal direct across the Isthmus of Suez, when peace offered him the necessary leisure.

From this brief sketch it will be seen, that in remote times the execution of this canal has occupied the attention of the various masters of Egypt. Great historic names are associated with this narrow strip of land: ancient engineers have passed away: their works and records have followed: it now remains to see what newer nations and a different race of men can do: if they can carry out the bold ideas of engineers of ancient times.

During the occupation of Egypt by the French, under Napoleon, the site of the old canal was traced by the academicians and engineers attached to the expedition, including Monge, Berthollet, Lepère, and others equally eminent. Napoleon himself appears to have taken great interest in the matter, for he more than once alludes to it in conversation with Las Casas, O'Meara, and others of his memorialists at St. Helena.

Napoleon states in one conversation—"The ruins of the canal between the two seas are well defined. The two banks are about twenty-five toises apart. A man on horseback would be hidden from view in the middle of the canal." Berthier also found traces of the canal traversing the Oasis, which formerly carried water from the Damietta branch of the Nile to Bubastes, on the Pelusian branch. The re-

mains of this canal have the same dimensions as that near Suez. O'Meara records the Emperor's description of his own plan.

So far we have had the opinions and ideas of Napoleon, a man essentially practical. He believed in the easy completion of this work: he examined the ground himself, with his staff; and all concurred, both in its utility and facility of execution,—and this, notwithstanding the strange error committed in the levels.

The French engineers, after taking a series of levels, arrived at the conclusion that there was a considerable difference between the respective levels of the Red Sea and the Mediterranean, and for awhile this error was received as a great fact in geography, and became a great puzzle to writers in physics.

The difference of level between high water at Suez and low water at Tineh was reported to be 9 metres 90 centimetres. This reported difference of level gave rise to great discussion among the engineers and geographers of Europe: it was explained on physical and geographical principles, became altogether doubted, carefully tested, and finally proved to be the result of instrumental or clerical errors in the process of taking the levels. The errors are not surprising when we bear in mind the circumstances under which the levels had to be taken,—amid the stirring scenes of war, through hostile tribes of Arabs always on the look out to catch a stray infidel or two, amid the bustle and excitement of marches, countermarches, and skirmishes. As the engineers had to run the gauntlet of a whole host of dangers in taking their levels, it is easy to suppose they had but little opportunity of taking check levels for verification. Many of the observations were taken by the water-level.

It would scarcely have been worth while to allude to these errors had it not been for the discussions, doubts, theories, and mystifying explanations they gave rise to, in the grave, but busy world of science.

Many travellers interested in this important question visited the Isthmus to investigate this phenomenon: amongst others some English officers arrived on the spot and commenced a series of observations with the barometer, and afterwards by the boiling-water process, and, as a result of their interesting labours, reported that they had not been able to find any appreciable difference between the level of the two seas.

It now became necessary to settle this important point, and re-open the whole question, test the various conflicting statements, and put an end to all doubts on the subject.

In the year 1847, a society, "established for the investigation of the Suez canal," at the head of which were MM. Négrelli, Robert Stephenson, and Talabot, caused a new survey of the whole country to be made by experienced French engineers, under the superintendence of M. Bourdaloue, a gentleman well known for his acquirements and practical knowledge in these kinds of investigations.

The surveyors were provided with the best instruments in use, with all the most recent improvements. Thus equipped for the campaign, they commenced operations under the best auspices. In addition to this, they were assisted by a brigade of engineers furnished by the viceroy of Egypt, and also by a company of artillerymen, who assisted in the various operations.

The surveying party was divided into several separate divisions, each working independently of the other, thus affording facilities for separate verification of the work of each division, where necessary. The results of these operations were reduced, and published in a report in 1847, by M. Talabot, which clearly established the errors committed by the engineers in the expedition under Napoleon; yet so high was the opinion entertained of the *savans* who accompanied Napoleon, that many still remained incredulous, and doubted the existence of any such difference between the two series of operations.

To extinguish these contradictions, a second verification was undertaken in 1853 through the active instrumentality of M. Sabatier, consul-general of France in Egypt, the operations in this case being conducted under the direction of Linant Bey and Mougel Bey, the viceroy's engineers. The result confirmed the operations of 1847, and satisfactorily proved the error of the surveys made in 1799.

The new series of levels only differ o. met. 1814 from that taken in 1847, and give as the difference of level between the "station on the quay of the hotel at Suez and low water in the Mediterranean, 2 met. 4286, instead of 2 met. 6100, found by the operations of 1847," giving a difference of only o. met. 1814, a little more than a centimetre and a half, being less than three-fourths of an inch in a distance of 90 miles.

Thus the question of levels is terminated after having rested in doubt and obscurity for nearly fifty years.

The level nature of the ground in the track of the proposed canal will be seen from the following figures, being four of the *highest points* in the whole line above the datum level of low water in the Mediterranean at Tineh, viz. 16 met. 5950, 7 met. 8210, 3 met. 8280, 11 met. 6300, these being literally the only elevations met with in a distance of ninety English miles.

On this subject, the memorial of M. Linant Bey and Mougel Bey, by way of precursory scheme, is very precise:—

"The levelling also shows, that by adopting 6 met. 50 for the bed of the canal, there will be a length of 18 kilometres in the Bitter Lakes, where there will not be a shovelful to remove, and for another 18 kilometres will be very little to do; and as these lakes are dry at a depth of 8 met. 39 below low water, all the earthworks for the whole length of them could be performed in the dry, if found advantageous to do so."

In my next I will endeavour to discuss the practicabilities and peculiarities of the line of canal as now marked out from Suez to Pelusium, with such other information on this great question as may prove interesting to the professional and non-professional readers of the *Builder*.

JOSEPH LOCKWOOD.

CHURCH-BUILDING NEWS.

Lincoln. — Some improvements have been effected in the church of St. Mary-le-Wigford, in this city, and the church, says the local *Chronicle*, is now well worthy a visit by the lovers of Gothic architecture. It is true, the ugly old pens of pews still remain, and so does the painted flat ceiling; but the oak roof will, before long, be exposed, and the old pews are to be displaced in due course, to give room to seats with doors.

Ely.—Steps are being taken to raise a fund for a painted window to be placed in Ely Cathedral, to be called "The Old Choir Boys' Window." The Dean and the Rev. E. B. Sparke have been consulted on the subject, and have signified their acceptance of a proposal to that effect. Many of the old choir-boys who have been applied to, have at once given their names as subscribers.

Wisbech. — The Church Restoration Committee here have accepted a tender from Mr. H. Ringham, of Ipswich, for the execution of the most necessary works in the parish church. The internal fittings are to be of the best wainscot oak, and the cost of the works to be included in the first contract will be 2,728*l.* 14s. There are other works which the committee would be glad to undertake, but which their now available funds do not justify them in attempting. These works include ornamental iron gates for the tower gateway and the south porch, an elaborate restored font cover, an ornamental and enriched ceiling for the chancel, a new staircase to the parolse, a ceiling for the vestry, &c. The estimate for these works is 713*l.* The following tenders for the execution of the *whole* of the works in wainscot oak were received:—

	With doors to the pews.	Without doors.
Mr. Henry Ringham, Ipswich ...	£3,511 0	£3,344 14
Mrs. Rattee, Cambridge	3,755 1	3,630 11
Mr. J. Whiting, Northampton ...	3,910 0	3,801 0
Mr. F. Ruddle, Peterborough ...	3,953 0	3,853 0

Blisworth.—The church of St. John the Baptist, Blisworth, was re-opened on Thursday before last, after being closed for about seven months, during which it has undergone considerable restoration. The roofs of the nave, north aisle and chancel, have been renewed: those of nave and chancel are high pitched, and covered with Westmoreland slates, graduated in size from eaves to ridge. In the chancel roof, the opening above the collar beam and the spaces between the arch ribs and principal rafters are filled with tracery of decorated character, and the arch ribs are finished on the under side with mouldings. The roofs are boarded, and the whole stained with Stephen's stain. A gallery at the west end of the church has been removed, and the tower arch thrown open and restored. On the west side of the tower, that which was formerly a decorated window has for many years been robbed of its tracery and mullions, and used as a doorway to a kind of ringing loft, with coal place underneath, and a wretched wooden staircase on the outside of the tower to ascend to the loft. The ringing-loft and staircase have been cleared away, the window and its tracery restored, and this, with the tower arches now thrown open, according to the *Northampton Herald*, presents a pleasing feature in the interior. The pews or seats have been remodelled, made low and open, and finished with seat-ends of uniform character throughout the church. The arches and piers of the nave and chancel have been cleared of many coats of whitewash, and the whole restored with stone corresponding with the original. The walls have been re-stuccoed, but not jointed. The woodwork is yellow foreign deal, stained of oak tint. The whole outlay, including architect's commission, is about 850*l.* The Rev. Wm. Barry contributed about 400*l.*: the parish subscribed 350*l.* leaving a deficiency of 100*l.* towards which 44*l.* 4s. 2d. have been collected. The works have been carried out under the superintendence of Mr. E. F. Law, of Northampton, architect.

Wheatley.—It was intended, according to an Oxford paper, to lay the first stone of the Wheatley new church on Tuesday last. The new and larger building which it is intended to erect after a design by Mr. Street, will be of great benefit to a large and poor population.

Leigh. — The ancient church in this small village having for a long time been dilapidated, it was determined to erect a new one, not a very easy task in a small agricultural locality. In addition to many contributions the parish made a rate to collect 300*l.*: 50*l.* were granted by the Incorporated Church Building Society, and a like amount was given by the Diocesan. The new structure is built of stone from the quarries of Sir B. Brodie, Bart. at Betchworth, with Bath stone facings, and has been erected under the superintendence of Mr. G. Larmer, of Reigate, architect. The interior woodwork is of oak, with panelling over the chancel, and carved bosses. The pavement is of Staffordshire tiles. At the east end is a stained glass window, presented by Mr. J. W. Freshfield, M.P. The designs have been carried out by Mr. Shearburn, of Dorking, builder.

Tewkesbury.—The plans for the burial ground and buildings for the new cemetery of this town and parish having been prepared by Messrs. Medland and Maberley, of Gloucester, the Board advertised for tenders for carrying out the work. Three only were sent in, the lowest of which was 300*l.* above the amount specified by the architects as the maximum sum to be spent. Mr. Medland accounted for this by additions to the plans. The architects were requested to reduce the cost of the works by omitting several parts of the building, and then to confer with those who had sent in tenders.

Devonport.—The local *Independent* records an untoward occurrence in reference to the new church of St. Stephen, in George-street, on St. Stephen's day. The spire had just been completed and the scaffolding nearly cleared away, when, in the midst of a heavy gale of wind, the top of the spire was observed to rock to and fro, threatening to topple over, much to the fear of the occupants of the houses in the immediate locality, who quitted their habitations in consequence. The gale, however, subsided, and the fears were not realized, though the apex of the tower, formed, it is said, of one piece of stone, several feet in height, and surmounted with a point of iron, was removed two or three inches from its position on the eastern side, where it now remains. A difficulty, it is said, has arisen as to who shall bear the costs of repair.

Nottingham. — On Tuesday before last the newly-erected church of St. Matthew, in Upper Talbot-street, which is visible as the terminal point of a great many views in the neighbourhood, was consecrated by the bishop of the district, in presence of a numerous body of his clergy.

Brighouse. — The Bradford *Observer* states that the new Independent chapel at Brighouse, in that vicinity, has been opened for divine worship. The chapel will hold 900 people, and has school-rooms attached. The cost of the buildings is 3,000*l.* of which only 200*l.* have to be raised.

Knockbreda (*Ireland*).—On Sunday before last, according to the *Belfast Newsletter*, the parish church of Knockbreda was re-opened for divine service, having been closed for upwards of sixteen weeks while undergoing repairs and alterations under the direction of Mr. Fullerton, the diocesan architect of the Ecclesiastical Commissioners for Ireland. The church has been newly pewed, also a new pulpit and reading-desk provided, and the chancel and communion-table newly modelled and arranged. The interior walls are stone-finished, and the church heated with warm water apparatus furnished by Messrs. Musgrave, of Belfast.

ST. SAVIOUR'S, SOUTHWARK.

THERE are many interesting things in *Sudvercha*, the South-work of London, but none so much so as St. Saviour's, the church of the priory of St. Mary Overy, notwithstanding the treatment it has received. It has a nave, transept, choir, and Lady Chapel, with a lofty tower at the intersection of the transept. The Lady Chapel, choir, transept, and tower, were restored some years ago, partly under Mr. George Gwilt, and partly under Mr. Wallace; but the nave, left for a time without a roof, was taken down and rebuilt in most incongruous and ugly fashion. The church, of which portions remain, was commenced in 1208, and these show how fine a specimen of the Early English style it was. The proportions of the original nave were pleasant to look at, and some of the sculptures were of much interest. With care, and some expenditure, the ancient nave might have been restored; and this church, which is only surpassed in the metropolis by Westminster Abbey and St. Paul's, might have been preserved intact for future generations. However, the old nave was removed, the present structure erected on its site, and certain liberties taken with the transept of the church; — the subject of our engraving, looking north. These unpleasant additions consist of large ladder-like, unsightly staircases, large galleries, and wooden partitions, which so clog up and disfigure the fine proportions of the transept, destroy the view from the choir, and are so contrary to good taste, that we feel inclined to state that nothing so bad is to be met with in London, and that is saying a great deal. We have in the view left out these erections, and hope that by some fortunate circumstance they may be one day removed.

The traditionary history of St. Mary Overy's and the ferryman's daughter, is too well known to need here particular mention: we may, however, note that a priory was originally established on this site, which was afterwards converted into a college of priests, but that, like the former institution, proving of no long duration, it was, in the year 1106, refounded by Norman knights and the Bishop of Winchester, for canons regular, and from its dedication to the Virgin Mary and its situation, was called St. Mary Overie, that is, St. Mary over the River.

This edifice was destroyed by fire about the year 1207: on this occasion, a great loss of life, estimated at from 2,000 to 3,000 persons, took place on London-bridge. In the ruined nave were a semicircular-headed door and some other portions of the old church, and a few years ago, after the present structure was again endangered by a great fire, another part, consisting of a semicircular apse at the north-east corner of the vestry, formerly St. John's Chapel, was brought to light. These fragments, together with some other circumstances, would seem to show that the church of the date of 1106 was situated on the north side of the present choir.

After the fire of 1207, a considerable portion of the edifice was rebuilt. Peter de Rupibus, Bishop of Winchester, added to the priory "a spacious chapel," which he dedicated to St. Mary Magdalene, and this being afterwards appointed for the use of the inhabitants, eventually became a parish church. The monastery, &c. was surrendered to Henry VIII. in the year 1539, when the revenues amounted to 624*l.* 6s. 6d. per annum, whereupon the inhabitants of the parishes of St. Mary Magdalene and St. Margaret, by the assistance of Stephen, Bishop of Winchester, purchased of King Henry the stately conventual church. These parishes in the year following were united by Act of Parliament, by the new appellation of St. Saviour's, and the churchwardens constitute a body politic and corporate, and the churches of St. Mary Magdalene and St. Margaret being laid aside, St. Saviour's has ever since been used as the parish church.

In the year 1611, King James I. for a valuable consideration, granted, by letters patent, to the churchwardens and parishioners in "free soccage," the rectory and parish church of St. Saviour, together with all the glebe lands, tythes, tenths, &c. in consideration of which the said churchwardens and parishioners are obliged to provide a fit house for a grammar-school, and to keep a good master to teach the children of the parish, paying to the said master, 20*l.* per annum, and to an usher 10*l.* per annum; and also to provide two able chaplains to preach in the church, and to pay them 30*l.* per annum each. These conditions were performed until 1672, when the said sums were found insufficient to maintain the officers mentioned: whereupon the stipends of the chaplains were raised to 100*l.* each, and the schoolmasters' to 30*l.* each. These provisions for religion and education have since been very considerably increased, and rendered more adequate to the exigencies of the times. We have mentioned this circumstance as one of many hundreds of examples, both in London and provincial towns, during the times of James I. Queen Elizabeth, and some of the succeeding reigns, of parishioners and corporations recognizing the necessity of promoting public education, and, considering the comparative numbers of the population then and at present, it is maintained by some, that proportionable effort has scarcely been made for the education of the poorer classes, although it must be admitted that St. Saviour's Grammar School is an excellent institution.

A few hours may be well spent in this church, either by the architectural student, or by those curious in old-world matters. There is an interesting monument to the poet Gower, consisting of a canopied tomb, effigy, and inscription. The figure of the poet is very fine, and was awhile ago painted and gilt (we believe under the superintendence of the late Mr. Etty, R.A.). According to Mr. Timbs, Gower was married in this church in 1397, by William of Wykeham! The burial register records, under the date 1607, the burial of "Edmond Shakspeare, player, in the church:"—he was the great dramatist's brother. John Fletcher (of Beaumont and Fletcher memory), was also buried at St. Saviour's, in 1625. There are in different parts of the church several quaint and curious monuments.

An ambitious monument in the north transept is to note the resting-place of a worthy whose

——"Virtues and his pills are so well known,"

that it seemed almost useless to hand his fame to posterity. It is, however, well for the fame of the pill-vendor, that it was just thought worth while to cut on the pedestal on which lies the effigy of the *doctor*, in flowing robe and wig, in most uncomfortable-looking attitude, an inscription and his name.

There are several monuments of about Queen Elizabeth's time, and a cross-legged figure of a Templar, without any inscription. Massinger, the dramatist, was buried here with some pomp, but no stone marks the place. In the Lady Chapel, one of the finest in the country, is a large tomb to the memory of Bishop Andrews, with some other matters worthy of note.

Some stained-glass windows, in memory of Protestant martyrs, have been put up recently in the Lady Chapel, and are effective as seen from the choir.

Chamberlain says that in his day, 1771, the remarkable places and things near the church were the Town-hall, the Clink Prison, the Dock, a good market, and the Lord Montague's house, in Montague-close; where was also the Lord Mounteagle's house, now or late of the estate of —— Overman, esq. In this close it is said the Gunpowder Plot was discovered by the miscarriage of a letter.

Near St. Saviour's Church, fronting the Thames, was formerly situated Winchester House. A building was first placed here by William Gifford, bishop of that see, about 1107, for his town mansion, and that of his successors. In Cook's "Views of London," a part of the palace, in which was a marygold-window, is shown; and it is only eight or nine years since a very picturesque fragment of this ancient dwelling was removed.

Nearly adjoining to Winchester House was the residence of the bishops of Rochester, which has been entirely removed. Close to the house of the bishop were the notorious Stews, established in the reign of Henry II. A.D. 1162, plundered by Wat Tyler in 1381; and suppressed in 1546, in the reign of Henry VIII. by proclamation of that king.

All vestiges of times as old as Shakspeare and the playhouses there seem to have vanished, except a house which some think may be part of the original Falcon Tavern. This is situated not far from the Falcon Glass-works. It is evidently of considerable antiquity. The preaching-place of John Bunyan near here is not now to be recognised. There are, amongst several good institutions near here, the almshouses founded by Alleyn, the player, and some other things worth hunting up.

COMPETITIONS.

Rugby Town-hall Competition.—We continue to receive complaints as to exaction of 2s. 6d. for particulars; and, more especially, as to the largeness of the accommodation required compared with the amount proposed to be spent. Writers ask, "If the cost is exceeded in the end (as it surely must be), who should have most blame, the penny-wise promoters of the scheme, or the architects who fraudulently furnish designs that they know cannot be executed for anything like the stipulated cost."

Middlesbro'-on-Tees.—The design of Mr. Oliver, jun. has been selected in competition for the new Congregational Church in Middlesbro', Yorkshire.

The Barracks Competition.—You have already suggested that the designs sent in for barracks in competition should be publicly exhibited. Pray, sir, raise your voice again in favour of the public having an opportunity of seeing the plans, and expressing, through the press, their opinion, as in the case of the Nelson monument. A fairer decision may then be arrived at, and the *people* have their *rights*, for surely they should see what they pay for, and each competitor may then see that the best design is chosen.—J. T. W.

Free Church, Glasgow College.—We learn that the Free Church General Assembly's Committee on the Glasgow College have selected the plan of Mr. Charles Wilson, architect, as the most eligible for the new Free Church College to be erected in this city on the site purchased in Lynedoch-street. Plans were obtained in competition, three of them from architects in this city, and one from Liverpool. The building will be in the Modern Italian style.

New Independent Chapel, Tozteth-park.—Out of several designs sent in for the new building, that of Messrs. Smith and Grundy, of Manchester, has been accepted. The style is that of the Decorated Gothic, the front view presenting a semi-octagon. Spacious school-rooms will be built on the ground-floor, together with a lecture-room and four class-rooms, all of which can be thrown open for public meetings. Behind the edifice a vestry will be erected in continuation of the building, and in conformity with the style of the chapel.

GLASGOW ENGINEERS IN PORTUGAL.—It having been determined to introduce water by gravitation into some towns in Portugal, says the *Glasgow Gazette*, Mr. D. Mackain, C.E. has been consulted as engineer, and has just returned from Portugal after a preliminary inspection. Mr. William Kyle proceeds immediately to take the requisite surveys and sections.

ST. SAVIOUR'S, SOUTHWARK: THE TRANSEPT, LOOKING NORTH.

HISTORY OF KEYS.

AT a meeting of the British Archæological Association, held on the 9th instant, Mr. H. Syer Cuming read a paper on the History of Keys. He pointed to a strip of bark and a thong of leather, as the first means by which property was secured, prior to the advanced stage of social refinement when permanent houses were constructed, and the door and the coffer fastened with bolts, latches, and bars. Homer was cited as the earliest writer who mentions anything like a key, and special reference was made to the primitive locks and keys of wood of the ancient and modern Egyptians. The iron keys of Egypt were described, and illustrated by examples from Thebes, and the curious fact pointed out that nearly similar specimens are met with in Western Africa. After a brief notice of Greek keys, attention was directed to the Roman era, and a minute description given of the fixed and movable locks, the dentated, piped, and broached keys, and of the variously-formed bows surmounting the stems. Mention was made of the small keys attached to finger-rings, and of the *clavis adultera*, the false or skeleton key of the Roman housebreaker. The Anglo-Saxon and Norman keys were then dwelt upon, and the various forms and fashions of the key-bows from the thirteenth century down to a later period were described. The superstitious belief in the magical powers of the key, of its employment as a heraldic bearing, and its frequent adoption as a sign in former times, were next alluded to; and Mr. Cuming concluded his paper (which was profusely illustrated with examples of keys of all ages, from the days of the Egyptians to those of George IV. as shown in the key of the late Carlton House) by enumerating the different modes by which keys have been held together, showing that a ring was among the earliest as well as latest contrivances for the purpose. It was remarked, that two objects were frequently found appended to the keys of the doors of stables and cow-houses, namely, a perforated flint and a horn; the former of which was declared to be an amulet to guard the creatures from the attacks of nightmare, and the latter, an emblem of the good Pan, the protector of cattle, and hence regarded as a charm, and both of which have been used from the most remote antiquity.

PROVINCIAL NEWS.

Cambridge.—The spire of the new Conduit, according to the local *Chronicle*, is now completely finished, and in celebration of the event, the Union Jack floated from its summit on Friday in last week. A very few days were to complete the entire structure, which had been retarded in consequence of the non-arrival of the slate basin.

Woolwich.—A new ship-building slip, contracted for by Messrs. Rigby, at the east end of the dockyard, and which has been twelve months in construction, is now completed. This new slip is sufficiently large for building men-of-war of the largest tonnage. It is 280 feet in length, and of proportionate breadth. The foundation and flooring of the shipway have been sunk to a considerable depth, a bed of concrete from 10 to 12 feet in thickness forming the lower stratum, which rests on the chalk rock. This is covered with brickwork. The floor consists of large blocks of masonry, 15 inches in thickness. The masonry and brickwork are set in cement. A portion of the river wall, in connection with the slip, is also completed. This important addition to the dockyard at Woolwich has been carried out under the general superintendence of Mr. Bourneys, clerk of the works.

Canterbury.—The new chapel school for the garrison is approaching completion. The addition of a gallery over the main entrance, not embraced in the original design, has caused some delay; but the whole will be finished in a few weeks.

Tunbridge-wells.—Towards the erection of the proposed schools in connection with Christ Church, the sum of 800*l.* has been already realised: this is half the estimated cost of the land, school-room, teacher's house, fittings, offices, &c. The committee have come to the determination to build the school-room only at present, tenders for which will be shortly submitted. Mr. W. E. Stevens is the architect, and the site is in Vale-road, adjoining the railway station.

Plymouth.—The committees appointed by the corporation and guardians of the poor have recommended the purchase of the old workhouse, with the view of erecting on the site a new guildhall, the present building not only being inconvenient, but inadequate in size to the requirements of the town.

Birmingham.—The sub-committee appointed at the recent committee-meeting of the Public Recreation Society here have taken the building known as the Midland Bakery, in Lichfield-street, at a cost of 50*l.* per annum. About 100*l.* will be required to fit it up, and its maintenance as a place of recreation will involve an annual expenditure of 150*l.* the whole of which must be provided by donations and subscriptions. Mr. W. Scholefield, M.P. and Mr. C. B. Adderley, M.P. have signified their desire to aid the movement by serving on the committee.

Liverpool.—The Liverpool and London Fire and Life Insurance Company intend erecting a handsome suite of offices, in High-street, uniform with the Townhall and the Exchange buildings, and designed by Professor Cockerell.

Manchester.—The contractors for the new Victoria Market, in Tommy-field, are rapidly proceeding with their work. The pillars and most of the girders have been got up, the woodwork of the roof is far advanced, and a good portion of the flagging and sewering of the area has been completed. It is confidently anticipated, says the local *Courier*, that the market will be ready for opening by Easter.

Alnmouth.—The funds for forming a road from Bilton Station to Alnmouth, and erecting a new bridge over the Alne at Alnmouth being inadequate, application has been made to the Duke of Northumberland, who has agreed to make up the deficiency, besides granting 3½ acres of land exclusive of the public road, if the committee will undertake to carry out and complete the road and bridge, as projected and estimated. The committee have been authorised to communicate with Mr. F. Charlton, as engineer, to endeavour to carry out the project, and to prepare plans and specifications.

ORGANS OF LARGE COMPASS.

IN the short notice of organs, printed in your number for Saturday last, there are a few mistakes which the writer,—Mr. W. Marshall,—will, I feel sure, forgive me for correcting. He says, "It is stated by Mr. Hopkins, that the organ in Westminster Abbey contains a 32 feet pipe (C C C C). I believe this is not the case. The organ at Exeter Hall, and the one at the Panopticon, in Leicester-square, are the only London organs embracing so large a compass." In reference to the above extract I would beg to assure Mr. Marshall, through the favour of your columns, that the Westminster Abbey organ *does* contain a pipe of the size in question (32 feet), and that the fact can be ascertained with more than the usual facility, inasmuch as the great pipe, duly labelled C C C C, lies on the choir screen, with its "long dimensions" entirely exposed to view. Moreover, the Exeter Hall organ does *not* contain a 32 feet pipe; its deepest sound being the F F F F note, produced from a pipe of 24 feet length, of which pitch and length of pipe other examples occur at St. George's Chapel, Windsor, and Chichester Cathedral. Mr. Marshall is quite right, however, in quoting Hill's magnificent organ at the Panopticon, as containing a pipe of the extreme dimensions mentioned above.

With regard to the Canterbury Cathedral organ, and the statement that "it was originally built for the Handel Commemoration, held in Westminster Abbey in 1791 (1784), and was afterwards purchased for the cathedral at Canterbury;"—the account written by Dr. Burney, and published in the year 1785, places the matter exactly the other way. The words of the learned musical historian are as follow:—"The excellent organ erected at the west end of the Abbey for the commemoration performances, was fabricated for the cathedral of Canterbury; but before its departure for the place of its destination, it was permitted to be opened in the capitol on this memorable occasion."

I hope you can spare room for these "facts and dates."

EDW. J. HOPKINS.

Having noticed in the *Builder* of last week an observation as to the organ in Westminster Abbey (p. 35), I beg to state the compass of the above instrument is—great organ C. C. C. 16 feet, pedal organ C. C. C. C. open diapason, 32 feet. These pipes were made by Mr. Hill, when he reconstructed and enlarged the organ in 1848. The position of the organ in Canterbury Cathedral is in the triforium, as stated by Mr. Marshall. The compass of the organ in Exeter Hall, is F. F. F. 13 feet, pedal organ C. C. C. 16 feet, the double diapason not extending below F. F. F. F. 26 feet. The organ in the Panoptican extends to C. C. C. C. 32 feet, and is by far the largest instrument in London, and, I believe, for balance of tone, and beauty of mechanism, not surpassed in the world. There are other organs in England of 32 feet compass besides those mentioned by Mr. Marshall.—T. C. LEWIS.

WIDTH OF STREETS AND ALLEYS IN THE METROPOLIS.

THE Metropolitan Board of Works, at a meeting on the 18th, passed the following resolution:—

"That every street, excepting any mews, must be of the width of 40 feet at the least; but if the buildings fronting any street be more than 40 feet high from the level of the street, then such street must be of a width equal at least to the height of the buildings above such level. That every alley and every mews must be of the width of 20 feet at the least, but if the buildings fronting any alley or to any mews be more than 20 feet high from the level of the alley or mews, then such alley or mews must be of a width equal at the least to the height of the buildings above such level. And with regard to every such alley in reference to the entrance thereof, every alley must have two entrances thereto, each being at the least the full width of the alley, and one of the two at the least open from the ground upwards. And with regard to both such streets and alleys, the aforesaid width is to be ascertained by measuring (at right angles to the course thereof) from front to front of the buildings on each side of such street or alley. The word 'street' to include every square, circus, crescent, street, road, place, row, mews, lane, or place along which carriages can pass, or are intended to pass; and that whether there be or be not, in addition to the carriage-way, a footway paved or otherwise. The word 'alley' to include any court, alley, passage, or other public place which can be used as a footway only. If any person offend in respect of the conditions, regulations, and directions contained in this bye-law, he shall be liable for all the penalties and forfeitures imposed by the Metropolis Building Act, 1855, 18th and 19th of Victoria, chap. 122, in respect of any buildings either built contrary to the provisions of the said Act, or without due notice to the surveyor appointed in pursuance of that Act to inspect such buildings."

It was ordered that this resolution be communicated to all the district surveyors, with the view to give it as much efficacy as possible.

THE NEW BUILDING ACT IN THE CITY.

RUINOUS BUILDINGS.—VAULTS BENEATH PUBLIC WAYS.

THE attention of the City Commissioners of Sewers, at a meeting on the 22nd inst. was drawn to a report from Mr. G. Smith, one of the district surveyors, respecting the premises, No. 3, Queen's Head-passage, Newgate-street, in a dangerous state, the commissioners being empowered, under the Metropolitan Building Act, to act in such matters. The question arose whether the commissioners should appoint their own surveyor, or, as had heretofore been the custom, direct the district surveyors to attend to business of that character. After some discussion, it was rightly agreed that the matter *should be referred to the district surveyor*, the commissioners deciding in accordance, as they conceived, with the terms of the 79th section of the Act, which is as follows:—

"Whenever it is made known to the commissioners, hereinafter named, that any structure (including, in such expression, any building, wall, or other structure, and anything affixed to, or projecting from any building, wall, or other structure) is in a dangerous state, such commissioners shall require a survey of such a

structure to be made by the district surveyor, or by some other competent surveyor; and it shall also be the duty of the district surveyor to make known to the said commissioners any information he may receive with respect to any structure being in such state as aforesaid."

At the same meeting, a report on the construction of vaults beneath public ways, by Mr. Haywood, was read, wherein the surveyor recommended,—

"That the walls and arches be built of good hard stock bricks set in mortar or cement, and that the walls and arches be at least one brick and a half in thickness.

That the springing walls be at right angles with, and the ends of the springing walls parallel with, the line of the frontage of the house.

That the top of each arch be at least 2 feet below the surface of the pavement.

That 10 feet measuring from the front line of the house to the extreme outer point of the brickwork of the end wall be the greatest projection granted in any street; but that in streets where the footway has not so great a projection as 10 feet, that the external face of the brickwork be only allowed to the line of curb of such footways.

That, where ovens are constructed with vaults, they be built entirely independent of the walls and arches, and the surface of the crown of the oven be at least 12 inches beneath the under side of the arches of the vault.

That the openings for coals be as near the house as possible, and be covered with chequered iron plates, not less than three-quarters of an inch thick, and not more than 12 inches diameter.

The principal alteration herein proposed is making the crown of the vaults 2 feet beneath the surface, instead of 12 inches, as by the existing regulations, and this amendment may prevent the formation of any additional serious obstacles to laying the mains of the gas, water, and other companies beneath the footways."

The consideration of this report was postponed till the next day of sitting.

DISTRICT BOARDS AND THEIR SURVEYORS.

HACKNEY.

SEEING in your last number strictures upon the conduct of the Hackney District Board, in the election of their surveyor, I beg to state that the information you have received is not correct.

A considerable number of the testimonials had been sent round to the members of the board, who had perused them at their own houses: the rest were not read publicly at the board, but two members had devoted a day and till eleven o'clock at night to peruse and arrange them. And one reason why they were not read publicly, was the simple impossibility of getting through them all without sitting all day and all night, and a part of the next day too, and when No. 28 had been read, no one would have remembered the relative merits of Nos. 1, 2, or 3.

But it was less necessary, because the names or merits of the applicants were generally more or less known. Most of them were architects of classic education, which the board did not require. Had Sir Charles Barry been a candidate, he would certainly have been rejected. There is scarcely anything but the sewers and the roads which would come under the surveyor's notice, and a practical man was required, who would go down into the sewers and see for himself, if required. Such a one, far before all the rest, is Mr. Lovegrove, who was elected, who has been 13 years an officer of the Commissioners of Sewers in the Tower Hamlets, and is perfectly conversant with every part of them. I may add that he has constructed an ingenious model in gutta percha of the whole, with their different levels through which the water flows as in the sewers themselves. He is a stranger to me, but I voted for him from a sense of duty.

The only point in which I think the Board erred, was to require that their surveyor should not do any other business. This I opposed unsuccessfully.

JAMES EDMESTON.

*** The report in question is nevertheless quite correct as respects the meeting of which it gives an account. We know nothing to the prejudice of the gentleman elected, but we must, for the sake of other boards who have not yet appointed their officers, object most strongly to the principle adopted by the Hackney Board, which, according to Mr. Edmeston's own statement, put aside some who were willing to undertake the duties of the office at the salary fixed, because they were "Architects of classic education," and would have led them to reject Sir Charles Barry, if he had been a candidate, in favour of some mere rule-of-thumb man willing to go down into the sewers! It is this erroneous and mischievous notion which is placing England in the rear of other countries.

THE DECORATION OF CARLISLE CATHEDRAL.

THERE has been a difference of opinion amongst the authorities as to the amount of coloured decorations to be bestowed on the restored roof of Carlisle Cathedral. The architect, Mr. Christian, proposed an exact restoration of the ancient painting; covering the entire ceiling with colour, emblazoning the shields, &c. and continuing the decoration to a certain extent upon the walls. The authorities, excepting one, wished for partial painting only, some more, some less; and to have the greater part of the oak stained only, but emblazoning the shields and gilding the foliated enrichments. Not being able to agree, it was arranged that Mr. Owen Jones should be called in. He was accordingly consulted, and the result is that the work will be *completely* done. The whole ceiling will be painted, and the suggestion made as to the decoration of the walls will be carried out. A few alterations in respect of colours and gilding, and the decoration of the panels, were suggested by Mr. Jones, in all of which the architect concurred, and the work is now in progress towards the full extent of desired enrichment. Mr. Wm. Brougham, who has taken much interest in the restoration, has furnished the exact emblazonments for all the shields from an old record in his possession. It is hoped the work when completed will be as nearly as possible a perfect restoration of the ancient ceiling.

THE STATUE OF CHARLES I. AT CHARING-CROSS.

MANY of our London readers have doubtless observed that the hoarding which for some time surrounded the equestrian statue of Charles I. has been taken down, and that the group now looks more upright and stable.

The great object of what was done to King Charles' statue was security. It had originally been fixed to a slab of black marble, which had become fractured, and been pieced with Portland stone. Sir Francis Chantrey had some measures taken a few years back for its greater security, but it was thought advisable recently to do something more decided. Accordingly, under the direction of Mr. Scott, the shattered slab has been taken out, and one of granite, a trifle thicker, inserted, first securing the stones which form the cornice by the insertion of a copper chain bound all round it below the granite slab. The slab itself is secured to the pedestal by copper bolts running into the stonework below, and the feet of the horse similarly are secured to the slab. As one foot is raised, the centre of gravity is very much on one side of the supports, so that there is a decided strain upon one of the feet, which were found to be very insecurely fastened. This has now been effectually remedied.

The work has been carried out by Mr. Thomas, with the help of Messrs. Baker and Mr. Potter. The improvement in appearance is very considerable.

PROPOSED ARCHITECTURAL COLLEGE.

I AM glad to find that some of your correspondents are in favour of an architectural college, the subject of which I brought before your readers at page 478 of the last volume. The main feature of such a college would be, the course of study necessary to prepare a pupil for the office. A diploma would not come within its reach. After the preliminary training at the college, and the due completion of the articles in an office, the candidate for a diploma would be qualified to go before the tribunal appointed for its issue, which should be "the Council of the Institute," to undergo the necessary examination, and upon the result of that ordeal alone should he be declared entitled or not to the coveted document.

A college would never cramp genius: no course of study could put out the fire of the intellect. A man may be a "*born genius*," but, unlike "*murder*," it will not always "*out*." To foster the latent talent for the fine arts, to bring out the constructive ability of the student, is, I think, the means whereby a college can answer its end. Should the student prove entirely unfit for the profession of architecture, then would he be debarred from entering upon its duties, inasmuch as a proper certificate of merit would be required, ere the "parents or guardians" could be in a position to *seek* for articles, much less sign them.

A *compulsory* examination, at the present day, would be an absurdity, a *voluntary* one, but very partially adopted. We must begin with this matter—say with our present pupils, whose "term" may be five years hence, and with those who may be now training for the same, with a mere A B C knowledge of the rudiments of geometry, &c.

The present "rule of thumb" principle is loudly objected to. A *new style of architecture* is said to be a consummation most devoutly to be desired. But the opponents of the one and the advocates of the other may depend upon this, that unless they put their shoulders to the wheel, the gods will not condescend to help them! They are the very parties whose duty it is (if they are *convinced* of its necessity) to arouse the profession from its slumbers, and to set in motion the Juggernaut car which shall crush beneath its wheels the spectres of *routine and red tape*. If architectural Reformers won't work, the Protectionists must quietly hold their own.

In the establishment of a college, we can only ensure one thing—a certain quantity or amount of knowledge which *may become* a store of thought. This even is all we can accomplish by office training. But this is much! If the regularly qualified student loses the gift of self-application,—if he thinks that mental labour has ceased when the parchment is transferred to his pocket, and that he knows all he is required to know—then will his preceding and preparatory training be like the food he has already physically consumed,—sufficient for his wants up to that period, but incompetent to support life when once the "supplies are stopped." Self-culture is required even to the hour of one's death. All we can do is simply to provide the *vehicle* whereby study may be pursued, teach the necessity of that pursuit, and, if possible, give a zest to it. Having done this, we have accomplished our task: the rank and name of an "Inigo," "Sir Christopher," "Wykeham," &c. are open to all, if they will but use the means, that the desired end may be attained.

It will, I hope, become evident, that a College, such as I have described, can but supply these means of advancement, the proper *use* of which can *alone* gain its possessor "respectability." W. W.

GAS.

THE half-yearly meeting of the City of London Gas Company, was held on Wednesday, in last week, when a dividend at the rate of two per cent. per annum, clear of income tax, was declared.——The town of Malvern has just been lighted up. The commissioners, under the Local Improvement Act, applied to Mr. J. H. Jones, of London, and, acting under his instructions, public tenders were called for, and the construction of the gas-works plant, mains, &c. was entrusted to Messrs. C. Walker and Sons, of Tipton. The buildings and dwelling-house were undertaken by Mr. G. M'Cann, of Malvern, sublet from Mr. Kerby, of Nottingham. The gas-holder is 48 feet in diameter, 22 feet 6 in. deep, and contains 40,000 cubic feet of gas. The total length of mains is nearly seven miles, which extend to North Malvern. The works are capable of supplying 56,000 feet of gas per day. The elevation of the town being so much greater than the site of the works, the gas is checked in its flow by valves in the roads. There are to be 100 public lamps. The buildings are of Elizabethan construction. On lighting the town for the first time, a dinner was given to the workmen by the contractors, inhabitants, and visitors.——At a numerous meeting held at Handsworth Woodhouse, according to the *Sheffield Independent*, to consider the question of lighting this populous village with gas, Mr. Hedley, gas engineer (introduced by Mr. Stainforth, architect), laid before the meeting plans and estimates of the entire cost of works, 1,500*l.* which it was resolved to raise in shares of 5*l.* each. ——If we rightly understand the resolutions which were passed by the Town Council, at their last meeting, says the *Liverpool Albion*, authority has been given to the gas committee of the council to propose to the gas company that their share property shall be converted into bonds, bearing a fair and equitable rate of interest, and that the undertaking shall henceforward be managed by a board of nine directors, three of whom shall be appointed by the council, three by the consumers of gas, and three by the bondholders; also, to propose to the gas company that immediate reduction be made in the price of gas; that the borough engineer shall have authority to test the gas and ascertain the pressure at which it is supplied; that the company consent to the appointment of meter-testers; and that the powers of the auditor be extended.——The Cleckheaton Gas Company have made a reduction to consumers in the price of gas, which, as now fixed, is 5*s.* per 1,000 feet.——At Bishop Auckland, a public meeting was held on Wednesday before last, when a resolution for the formation of a company, to consist

of gas consumers, was unanimously agreed to. It is intended to supply the consumers with gas at the rate of 4s. per 1,000 feet: 480 shares of 3*l.* each were subscribed for by those present.——Tenders for lighting with gas the New Union Workhouse, at Chester-le-Street, having been called for, nine tenders were given in, ranging from (Spence) 130*l.* to (Bailey) 83*l.* 8s. The quantities were supplied by Mr. M. Thompson, architect.——The South Shields Gas Company find it necessary to materially extend their works, and for that purpose they have advertised the issue of new shares.——There is talk of a new gas company at Lincoln, the gas at present supplied being considered bad in quality, and insufficient in quantity. The local *Chronicle*, however, says that as to quantity, it is not deficient, the company having just completed works which will enable them to supply a city twice the size of Lincoln; but as to quality, the badness is admitted. It is explained, however, as arising from the fact that the company have not yet increased the purifying power to the requirements of the new manufacturing power, although they intend to do so. The price of gas at Lincoln is 5s. per 1,000 cubic feet, and so soon as the new works are paid for, a reduction is to be made to 4s.

Position of Gas Pipes.—A correspondent, in your number of the 5th inst. recommends that gas pipes should be imbedded in the plaster-work of new houses while the work is being proceeded with. My own experience points to quite an opposite practice, and I recommend gas pipes to be laid so that they can be seen and examined at any time. If concealed in the plaster-work of a wall, what is to prevent the workmen who follow, or the future occupant, *driving a nail* right through the pipe? as I know to have been done. In the house occupied by myself I had the pipes almost entirely laid as above recommended, viz. under floors, behind skirtings, or *visible* alongside an architrave, &c.; yet, where, in one instance, a pipe was buried in a cornice (for 8 or 9 inches only) there was an escape of gas whereof the source could not be found for a twelvemonth, and when found the cornice had, of course, to be cut away to allow of the hole being stopped, and then made good again at some cost and annoyance. Were it more common to exhibit the pipes, it would probably be found not so very difficult to make them decorative as well as useful.

L. L.

Gas Stoves.—Our attention, says the *Bath Chronicle*, has been called to two cases in which gas stoves have ignited the wooden floors on which they were placed: in one case, the conflagration of the whole premises must have ensued if the mischief had not been discovered in time. We do not mention these facts for the purpose of discouraging the use of gas stoves: on the contrary, we consider them to be, when properly fixed, an admirable and very safe mode of warming houses. They ought, however, to be placed so as to render impossible the ignition of neighbouring wood, and this, we believe, may be best effected by fixing them on sufficiently thick slabs of stone. Iron plates, liable to be heated, and coming in contact with boards, always involve risk.

THE MASTERS IN TRAINING AT MARLBOROUGH HOUSE.

IT is, I believe, very generally known that all provincial schools of art are now supplied with masters from a training class established at the head school of science and art, Marlborough House. The success or failure of the present system of *universal art education* must, therefore, in a great part, depend upon the members of that institution.

An acquaintance with the character and government of the class must, then, be of importance to all interested in the establishment of local schools of art.

The following is the subject matter of an address delivered by the head master to the "masters in training" of the abovenamed school, on the 23rd of November last:—

"I have hitherto endeavoured to govern you on *high gentlemen principles*; but the ill success attending my efforts obliges me to institute what is less honourable to yourselves—the *factory system. Nor can you complain of this, as by your own conduct you have forfeited every claim to my consideration as gentlemen or men of honour.*"

Lest there should be any doubt as to the literal meaning of this animadversion, I beg to state that one member of the class, for presuming to question it, was, without being allowed any opportunity of appeal, summarily expelled.

Thus, having devoted both time and money to the acquirement of, not actual knowledge of art, but a particular application of it; having successfully passed his "stringent examinations" and obtained his certificates; having, in fact, done all that was required of him as a master, he is found unfit for that office because he will not conform to the *factory system*, or submit to be treated as a disorderly factory operative.

I leave it to others to decide what may be expected from an institution where artists are not gentlemen, and where men without honour may yet be intrusted with the entire government of our provincial schools of design.* * * *

PROPORTIONS OF IRON GIRDERS.

INSTITUTION OF CIVIL ENGINEERS.

ON the 15th inst. Mr. Robert Stephenson, M.P. president, in the chair, the paper read was "On the relative proportions of the top, bottom, and middle webs of Iron Girders and Tubes," by Mr. J. M. Heppel.

The object of the paper was the investigation of the forces to be resisted by the middle webs of girders.

The first part of the inquiry had reference to the case of a plate of metal, subjected to the action of various direct forces, some compressive and others tensile,—simultaneously applied to it, in different directions; and it was shown, that these might always be resolved into two principal resultants, which were invariably at right angles to each other, and by which the applied forces, however numerous, might be conceived to be replaced,—the condition of the plate being absolutely the same, whether considered as subject to the forces originally applied, or to their two principal resultants.

The next point was the consideration of the condition of a rectangular plate, held in equilibrium by lateral forces, applied in couples, uniformly distributed along its sides; and it was shown, that in this case, also, there were two principal resultants,—one tensile and the other compressile; that these two were of equal intensity, at right angles to each other, and at angles of 45° with the applied forces; moreover, that their intensity was exactly equal to that of the applied lateral forces.

It was next shown, that the middle web of a girder exposed to a load, at a given point, was exactly in the condition of the plate last considered, and a rule for the computation of its thickness was arrived at.

Other cases of the distribution of loads, both fixed and movable, were then considered, and rules for the corresponding thickness deduced.

The effect of the horizontal strains to which the middle web was subject was then considered, and an investigation was made of the magnitude and direction of the resultants, arising from their composition with the diagonal forces before considered.

Finally the increase to be made in the thickness of the middle web, beyond that already arrived at, in order to enable it to deal with these horizontal and diagonal strains, together, was investigated, and a rule was deduced for its definite determination.

The results arrived it were briefly these:—

Four different cases of distribution of the load being considered, and in the first instance the horizontal forces being left out of consideration, and the thicknesses determined with reference to the diagonal forces only.

These four cases were—

1. That in which the load was fixed and central.
2. That in which a load concentrated on a point, moved along from one end of the beam to the other, as the case of a concentrated rolling load.
3. That in which the load was fixed and uniformly distributed.
4. That in which a load uniformly distributed was drawn on from one end, or that of a distributed rolling load.

It was then shown, that in order to enable the middle web to deal with the diagonal strains, its thickness should be determined by the following methods:—

In the first case,—the fixed central load,—by making it of uniform thickness, and such that its horizontal section was equal in area to the central vertical sections.

In the other three cases, the thickness of the middle web, at the extremities, was twice that determined as above. In all of them it diminished towards the centre, but in each case according to a different law.

In the second case,—the concentrated rolling load,—the thickness varied as the distance from the more remote extremity.

In the third case,—the distributed fixed load,—the thickness varied as the distance from the centre.

In the fourth case,—the distributed rolling load,—the thickness varied as the square of the distance from the more remote extremity.

* The writer has forwarded his name: the responsibility of the statement must rest with him.

The cases of combinations of these kinds of loads was then considered, and it was shown, that by dividing the central vertical section into portions, proportional to the amount of each kind, and thence determining the thicknesses from the middle web for each kind, according to its own law,—the sums of the thicknesses, so determined, would give those necessary for dealing with the compound load.

The effect of the horizontal forces was next considered, and two cases were taken—first, that in which the section of the beam diminished from the centre towards the extremities, in the ratio of the rectangle of the segments of the length; in which case the horizontal forces were constant, or nearly so, throughout.

In this case it was shown, that the thicknesses, as before determined, with reference to the diagonal forces alone, should be trebled, in order to fit them to resist the resultants arising from their composition with the horizontal forces; and, as in all beams, where any variation whatever was made in the vertical section, it did, or should approximate to the above law. It was considered, that this rule should be taken as applicable to beams of variable section.

For beams of uniform section, it was shown, that the thickness of the middle web should be such that the horizontal section should be three times the vertical area.

The stiffening of the sides was then considered. It was argued, that as the efficiency of stiffening must, in some way, depend on the amount of area, compared with the amount of support applied to it, it might reasonably be supposed to be proportionate to a line which would form a web to the rectified periphery,—a rectangle equal to the area to be supported,—which line (borrowing a phrase from hydraulics) might be called "its mean radius." Reasons were then adduced for believing that stiffening pieces might, with safety, be so distributed as to leave the mean radius of the included spaces equal to seventy times the thickness of the plate, although, in most early structures, it would be found to be much less than what would result from such a calculation.

IMPROVEMENT AT ROTHERHAM.

THERE have just been completed on the Eastwood estate, Rotherham, Yorkshire, five new roads, of an aggregate length of nearly three miles, one 45 feet wide, and nearly a mile-and-a-half long; the others 40 feet wide, and walled on both sides. Sewering has also been put in. When the Earl of Effingham, who is the owner of a small piece of land, lying between the Eastwood estate and the town of Rotherham, makes the street already laid out to connect Bridge-gate and College-street, Rotherham, with the western terminus of Fitzwilliam-road, a new road to Doncaster will be opened, which will relieve the transit from two steep hills, nearly two miles in length.

The works we have mentioned have been done under the direction of Mr. Charles Rawson, surveyor. Mr. William Ellis was the contractor, and the cost was between 6,000*l.* and 7,000*l.*

On the Eastwood estate, within the last year, there have been erected, on 800 years, building leases, from the freeholder (Mr. T. S. Badger, Lincoln's-inn), ninety houses of different classes, from the designs of Mr. William Blackmoor, architect. A square of artisans' dwellings has been laid out. The size of the square (called Shaftesbury-square), is 375 feet by 95 feet, and its eastern and western sides have been already filled up by the erection of artisans' dwellings. The third side of the square has been let on building terms, and will be covered this year with houses. Near and on the north-western boundary of the Eastwood estate, there have been completed and brought into operation, the new works of "The Rotherham Patent Tire and Axle Company," who, at the outset, employ upwards of 200 fresh hands. The last-named works have been erected under the superintendence of Mr. Bramwell, civil engineer.

Further, there are now being erected by Messrs. Yates, Haywood, and Co. of the Effingham Works, Rotherham, from designs by Mr. Blackmoor, a set of additional buildings, about 550 feet in length, adjoining the old works. The cost of these will exceed 8,000*l.* It is also intended that the Rotherham Grammar School and master's residence shall be rebuilt, and designs have been advertised for in the *Builder*. The day for sending in plans is the 21st of February next.

IRON CHAPEL IN THE MILE-END ROAD.—Mr. John Walker, the builder of this chapel, wishes us to mention that it is now an absolute purchase, and that a large portion of the purchase money has been paid, but he has given twelve months' credit to the trustees for payment of the balance by instalments of £80 each every three months.

Notices of Books.

Analytical View of Newton's Principia. By Henry, Lord Brougham, F.R.S. and E. J. Routh, B.A. Longmans. 1855.

The great advance which has been made of late years in analytical geometry, and the ease with which problems in dynamics, formerly considered of great difficulty, can now be solved by aid of the "Differential Calculus," has caused the "Principia" to be thrown into the shade, and to be looked upon rather as a work to be read as a scientific curiosity than to be studied as a text-book by the aspirant after mathematical knowledge. Those, however, who are acquainted with the "Principia" are well aware that nearly all modern treatises on the higher branches of dynamics are indebted to that inimitable work for the basis of a large proportion of their investigations. Although the method of demonstration employed by Newton is similar to that used in Euclid's "Elements," and requires but a moderate knowledge of algebra, yet he is so concise in his reasoning that it requires careful and painful study to enable the student fully to enter into his arguments.

The work before us will prove a great help to those who desire fully to comprehend the beauty of Newton's theorems; and it also brings before the reader an account of the progress that has been made in the vast science of dynamics since the time of Newton. Lagrange, Laplace, the Bernouillis, Taylor, and many other great mathematicians have devoted their energies to extend the discoveries of Newton; and whilst many of their investigations have only tended to establish more firmly the great laws which he laid down, especially that of gravitation; yet, by aid of a more powerful analysis than Newton possessed, many problems have been solved which he attempted in vain. Among these we may mention the important problem in gunnery of finding the equation to the curve described by a projectile moving in a medium whose resistance varies as the square of the velocity, which can now, by aid of the "Calculus," be approximated to as nearly as we please. The motion of bodies in fluids generally has been taken up by Poisson, Challis, and others, and our knowledge thereon greatly extended of late years.

The "Analytical View" elucidates the great truths contained in the "Principia," shows the connection of its various parts, and simplifies many of the demonstrations, by making free use of algebra in place of the more abstruse synthetical form employed by Newton. The book possesses also much literary value, containing, as it does, a concise history of the principal discoveries which have been made since Newton's time respecting the laws which govern the motions of bodies, either in vacuo or in a resisting medium. Although the greater portion of the work requires a knowledge of the "Calculus" in any one who would thoroughly understand it, yet there is much information that the mere tyro in mathematics may gather respecting the great dynamical laws which prevail in the universe, and the nature of the proofs on which rest our knowledge of those laws.

VARIORUM.

Three very elegant "Addresses delivered at Manchester, Leeds, and Birmingham," by Earl Stanhope, have been published by Mr. Murray, of Albemarle-street. The first is on the Progress of Literature and Science; the second, on the Study of History; and the third, on the Antiquities and Works of Art at Rome. The first was delivered at the Manchester Athenæum, the second at the Leeds Mechanics' Institute, and the third at the Midland Institute, Birmingham. Science, history, and art are the respective subjects of these excellent discourses. In the lecture on art at Rome, Lord Stanhope urges the advantages to art students and to our manufacturing designs of having an English Academy at Rome; and so soon as peace is re-established, his lordship proposes to bring the question before the House of Lords. He was assured, he says, at Rome, that every European nation, with one exception, has now an academy of art there, or some equivalent or substitute for an academy,—that one exception being England. In respect to our artists at Rome, it is his opinion that Gibson bears the palm; yet he deprecates the colouring of his statues, and he hopes that, notwithstanding Gibson's example, "colouring in figures may be left to the doll-shops."——Amongst "Quarterlies," we may here point attention to the new issues of the *Edinburgh Review* and the *Quarterly Review*. In the latter is an interesting article on Landscape Gardening and the Picturesque, based on a review of Sir Uvedale Price's work "On the Picturesque," with Sir T. D. Lauder's essay "On the Origin of Taste," &c. "It is singular," says the reviewer, "that at the present time, when the taste for gardening is so widely diffused, few or no attempts have been made to illustrate the theory of the art which all are practising. Yet it cannot be said that the subject is exhausted. Our predecessors assuredly have left us no immutable standard for imitation; for, recent as is the revolution which they cried up as the triumph of refinement, we are now far advanced in a counter-revolution. The modern improver is replanting the avenue and replacing the mullions which his grandfather removed with universal applause; or in digging out his new *parterre* he excavates the foundations of his ancestor's terrace,—that very terrace which his predecessor levelled to make way for the curves and the sweeps which he was told would 'bring nature to the parlour windows;' and so far are the controversies of the last age from supplying us with any fixed principles for our future guidance, that, though many of the works to which they gave rise contain tasteful remarks and useful suggestions, their reasonings, for the most part, are grounded on a false hypothesis of the nature and character of the picturesque—an error which still survives to perplex our judgment and vitiate our practice." We may return to this article at greater length. In the *Edinburgh* we observe an article on the Isthmus of Suez question, which might be profitably read in connection with the article in our present impression on the same subject. The reviewer, however, does not look very favourably on the canal project. "The proposals for a canal," he says, "have not been entertained in this country, simply because it is known that the difficulties of execution are far beyond the estimates, and that it would neither shorten the passage to India nor materially facilitate the intercourse between the mother country and its dependencies. At the same time," he adds, "the English people are intensely interested in the completion of the railroad through Egypt. They know that a line of steam communication between the East and Europe is almost indispensable in the present day for the accommodation of passengers and the conveyance of mails and light goods; and they feel that no exertions should be spared to make the line as perfect as possible." So far as regards the canal project, the reviewer thinks that a Commercial Commission ought to have been the first to investigate the subject in association with others capable of judging of the difficulties of navigating the seas between Cape Gardafui and Gibraltar. "When they decide," he remarks, "that this route is easier and safer than that round the Cape, and consequently that, when the barrier of the isthmus is removed, the greater portion of the Indian trade will come this way; it will then be time enough to ask the engineers to give their opinion as to the feasibility of the project." Yet surely that passage which the reviewer points out as of so much importance as a steam line for passengers and mail traffic might, even by flat-bottoms or otherwise, be made quite as safe and easy for the general trade.——Under present circumstances, there are few who will not read with interest the Rev. T. Milner's new volume on "Russia; its Rise and Progress, Tragedies, and Revolutions" (Longman and Co.). It contains but the salient points in Russian history; but a condensed compilation such as this, made up of brief and popular sketches of the most prominent or leading subjects of interest in that history, strung together so as to preserve the thread of the whole, while dropping all its heavier or less interesting items, is just the sort of book for the general reader of the present busy time.

Miscellanea.

Lectures at Cardiff Art Exhibition.—Three lectures delivered in the Town Hall at Cardiff, during the art exhibition there, have been published by Mr. H. Bird, of Cardiff. The first is the inaugural lecture by Mr. H. A. Bruce, M.P; the second on poetry, by J. W. N. Crave, D.C.L; and the third on mechanical science, by Mr. H. Mackworth, C.E. government inspector of mines. The last contains some interesting statistics. "The rapid growth and prodigious magnitude of the cotton trade" is referred to as, "beyond question, the most extraordinary phenomenon of the age." In the year 1600, the finest wools were manufactured into what were called 'cottons.' Afterwards linen threads were used for the warp of a species of cloth, while the weft was of cotton. The spinning of cotton was a domestic manufacture in the last century; and in 1760, the value of the total production of cotton goods in Great Britain during the year amounted to 200,000*l*. In 1767, James Hargreaves, a carpenter of Blackburn, invented the spinning-jenny, by which at first 8 threads and afterwards 120 could be spun at the same time. The jenny could, however, only spin the weft. To supply the deficiencies of this machine, Sir Richard Arkwright invented his spinning-frame in 1785. A little later, Crompton brought out his mule jenny, a combination of Arkwright's water frame and the moveable jenny. "By way of comparison," says Mr. Mackworth, "we may take the amount of manual labour in producing the beautiful cotton fabrics of India, where it is considered an extraordinary effort for a man to spin one hank of thread per day. Now what are the results attained by machinery? One man in America can 'mind' a machine with 1,088 spindles, each producing 3 hanks per day, and giving 3,264 hanks as his day's work. The power loom was invented by the Rev. Mr. Cartwright. One girl in the cotton mills of Holyoke, in the United States, can weave, on four of these looms, 100 yards of yarn per day. The straps of some of the wheels used at these mills run at a speed of more than a mile a minute. In English factories the progress has been nearly as rapid, and on a still larger scale. In 1835, 350,000 persons were employed in them to work 115,000 looms, while in 1850 there were 600,000 persons to 298,000 looms, many of them capable of doing double work." A catalogue of the works of art, models, natural curiosities, and manufactures, &c. in the exhibition, has been also published, uniform with the lectures, which are copyright.

The Metropolitan Board of Works. — The Board met on the 18th inst. at Burlington House, to elect their secretary,—or clerk, as they seem resolved to call him, — one cannot well see why, unless to diminish his status, as well as his authority, as their representative and exponent. After a good deal of discussion as to how the thirty-one candidates ought to be disposed of, the number was reduced to six; and at length Mr. Woolrych, the late secretary to the Metropolitan Sewers Commissioners, was elected by 23 against 19 in favour of Mr. Josiah Wilkinson. On a subsequent formal motion, that Mr. Woolrych be appointed to the office, 34 of the members out of 45 voted in his favour. Mr. Hall afterwards intimated an intention to move before the Bye-law Committee, "That no member be eligible for any office of emolument in the gift of the Board." Major Lyon moved the adoption of regulations as to the width of streets and alleys, which we elsewhere speak of in our present impression.

The Road through St. James's Park.—On Saturday, 19th, several of the residents in the immediate vicinity of St. James's Park, had an interview by appointment with Sir George Grey at the Home Office, relative to the contemplated road across the inclosure of St. James's Park. Mr. Keating stated in detail, on the part of the gentlemen present, the strong objections entertained by the inhabitants in the neighbourhood and the public generally to any encroachment upon the inclosure of the park, the source of so much enjoyment to so many of their families and the public at large, and asked to be informed whether the interference apprehended had been resolved upon by her Majesty's Government, or whether it was still open to those interested in the public convenience to remonstrate against it? Sir George Grey said, in answer, that the necessity for increased accommodation to the public, caused by the present inconvenient approach to the park through the Stable-yard, had engaged the attention of the Government; that several plans had been suggested at different times, including that to which reference had been made, in order to obviate the inconvenience complained of, but that up to the present time no plan had been decided on; that there would be full opportunity given for the discussion of those plans, and ample time for objecting to any of them; and that the preparation of the plans did not imply any foregone conclusion on the part of the Government.

SUFFOLK INSTITUTE OF ARCHÆOLOGY.—The quarterly general meeting of members and friends of this institution was held on the 10th instant, at the Athenæum, Bury, and was numerously attended. The Rev. Lord Arthur Hervey, the President, having taken the chair, invited the company, among whom were Lady Arthur Hervey and many other ladies, to visit the several objects of interest set forth in the programme. At the house of Mr. Kilner, in Guildhall-street, the party inspected a Norman doorway, circular-headed light, and pointed arch in the west wall of the house, and other objects of interest. The company then proceeded to the butter market, where, in the house occupied by the bank of Messrs. Harveys and Hudson, they were permitted to examine an enriched panelled ceiling, in good preservation, of the time of Henry VIII. At the house of Mr. Ridley, in Eastgate-street, some carved oak beams, resembling those in the aisle roofs of St. James's Church, and an original external window in a perfect state, of the period of the fifteenth century, were seen. A specimen of external decoration of the same period, preserved in the shoe-shop of Mr. Goodwin at the end of Mustow-street, was also inspected. On the return to the Athenæum, several communications were read, and it was announced that in the course of the works going on in the restoration of Rougham Church, a representation of the Day of Judgment had been brought to light, painted on the walls in the accustomed place above and on the sides of the chancel arch. It is in good preservation. Mr. G. R. Corner, F.S.A. communicated a list of manors and places in the county of Suffolk, fifty-four in all, in which the customary descent is to the youngest son. Various other communications were made, and documents, coins, and other objects of archæological interest, exhibited.

SARCOPHAGI.—At a meeting of the Syro-Egyptian Society, held on the 8th instant, according to the *Literary Gazette*, the Rev. Dr. Hewlett read a memoir on Egyptian Sarcophagi. The rev. gentleman described the various modes of interment in Egypt, the different kinds of sarcophagi, and the different descriptions of rock out of which they have been hewn. The frequent occurrence of the oval ring, the emblem of royalty, he argued, would tend to show that the stone sarcophagi were destined exclusively for kings. He then entered into details concerning the history of certain well-known sarcophagi, more especially the one in which Alexander's body was supposed to have been laid. Many of the existing sarcophagi, he thought, might have been removed from recesses in tombs and pyramids where travellers have deplored not finding any. He concluded by suggesting that the sarcophagi already discovered, and now distributed among the museums of Europe, might be made to furnish a clue to the history of the kings of Egypt. The venerable Archdeacon Raymond, Mr. W. H. Black, and other gentlemen, made some remarks upon the origin of the word sarcophagus—a Roman word, with Greek derivatives—which conveys an erroneous idea of the nature of the stone chests, or coffins, in which bodies were formerly deposited.

THAMES ESPLANADE AND RAILWAY.—The plans and model of this scheme, which, as already mentioned, includes the embankment of the Thames—the clearage of the sewage of London—a direct road for carriages and pedestrians on the north side of the river between London-bridge and Westminster—a railway throughout the same route—and a communication on the south side between the South-Western and the South-Eastern Railways, have been submitted to Prince Albert.

THE NEW STREET FROM THE LONDON DOCKS TO SHOREDITCH.—Notices of removal have been served upon the occupiers of the few remaining buildings that stand in the line of the new street, which has been completed, the gas and water laid on, the main sewer and side drains constructed, and the carriage-road and side-ways paved from Whitechapel to Fleur-de-lis-street, Shoreditch, and there now remain a few houses to pull down in order to throw the thoroughfare open for public traffic.

SINKING OF A PORTION OF THE DUNDALK AND ENNISKILLEN LINE OF RAILWAY.—Near Castleblaney a portion of this line—about 30 yards—has sunk, says the *Newry Examiner*, and, in a manner, disappeared. Sir John M'Neill is the engineer.

HALIFAX BOROUGH ENGINEERSHIP.—On the 14th instant, this appointment, together with the surveyorship of the local board of health, was conferred upon Mr. G. W. Stevenson, lately of the firm of Lee and Stevenson, of London. There were fifty-six candidates for the appointment, three only, however, being presented to the council for their selection of one of the number. These gentleman were Mr. Laing, town surveyor of Great Yarmouth; Mr. Tebbutt, town surveyor of Loughborough, and Mr. Stevenson. No personal canvas had been allowed.

YARMOUTH TOWN SURVEYORSHIP.—The vacant surveyorship of this town has been the source of severe labour to the sub-committee appointed to examine the applications for the office. Although the salary offered is only 150*l.* inclusive of everything, there were no less than sixty-seven applications, from which the committee at first selected thirteen, and subsequently, after examining the testimonials, they still further reduced this number to the following, in the order of preference: A. Mr. Herepath, B. Mr. Colbran, C. Mr. Dalton, D. Mr. Angell. The council, it appears, will have to decide amongst these gentlemen, as the sub-committee cannot agree to recommend any one of them in particular.

IRON ROADWAYS IN LONDON.—The City Sewers Commissioners last year resolved, on the recommendation of their surveyor, Mr. Haywood, to give a trial to an iron roadway, on a plan patented by General Knapp, an American. The road-laying was commenced in Leadenhall-street on Wednesday, in last week, by the contractors, Messrs. Crook and Son; Messrs. Ransomes and Sims, of Ipswich, being the founders. The pavement will consist of circular cast-iron rings, about 12 inches in diameter, and 6 inches deep, divided into seven compartments, one in the centre, and six surrounding it, rendering these apertures sufficiently small to prevent the catching of the hoof of a horse. The upper edge of the ring, and all the partitions, are thickly indented with semicircular depressions, about an inch in depth. A projecting hub on one side the ring, and a corresponding depression on the other, fit together, and thus lock the whole roadway into one solid framework. The indentations, with the gravel filling the whole to the surface, secure a foot-hold for the horse.

CROWNS OF OVENS.—The great inconvenience to public traffic arising from their defective construction, and constant renewal, might, it appears to me, be altogether obviated by the thickness of the arch being increased, and Stourbridge bricks and loam used in place of, as at present, any rubbish—place bricks, commonly, and mortar which perishes on the application of heat.—A SURVEYOR.

METROPOLITAN MANAGEMENT: ST. GEORGE'S, HANOVER-SQUARE.—At the first general meeting of this parish, convened under the Metropolitan Local Management Act, the attendance of vestrymen was somewhat numerous. At this meeting a discussion took place upon a notice of motion given by Mr. John Leslie, to the effect that the powers and duties vested in the vestry in relation to the sewage and drainage of the parish be transferred to the Metropolitan Board of Works. To this an amendment was proposed by Mr. Ryde and seconded by Mr. Westerton, that it was not expedient to consider such a proposition until they should have had further experience of the manner in which the Metropolitan Board of Works discharged its duties. This amendment was ultimately carried. A motion was passed to the effect that a committee be appointed to take the temporary management of the sewers, and to report to the vestry as to the staff of officers that would be necessary.

DWELLINGS OF THE LABOURING CLASSES.—The report of the inspector of dwellings, presented at the last committee meeting of the Society for Improving the Condition of the Labouring Classes, says:—"The lodging-houses are in a satisfactory state. The health and conduct of the inmates still continue all that could be desired. The average number of inmates in each establishment is as follows:—In the George-street house, ninety-seven; and in the Hattongarden chambers, fifty-three weekly. The Charles-street and King-street houses, respectively, eighty-one and twenty-three nightly lodgers. The family houses in Streatham-street, Model-buildings, and Portpool-lane, are quite full. In the single women's rooms, at Portpool-lane, there are six empty out of sixty-four; and at Wild-court there are ten empty rooms out of 108. At Portpool-lane there are sixty-six females occupying fifty-eight rooms, fifty-eight single and eight double. The health of all the tenants in the society's family houses has been most satisfactory."

BAHIA.—At the Brazilian port of Bahia, or S. Salvador, a patent slip is about to be formed, on a plan by Mr. H. Law, C.E. and of such magnitude and power as will take up the largest transatlantic steamer, without discharging either coals or cargo, and with a number of other facilities, which will render it a complete dockyard, where building and repairing ships and machinery will be carried out on a large scale. The length of the slip will be 900 feet, 500 feet of which will be dry at low water. At the extreme end of the slip there will be 21 feet of water. Jetties, running out 1,000 feet, will be erected, and so constructed as to afford facilities for many vessels to discharge cargoes, and embark and disembark passengers, receive coal, &c. This enterprise, by last news, was to be forthwith commenced, and it is to be finished in eighteen months' time at furthest. When this project is completed, Bahia will become a port of great importance.

ROBBERY AT THE NEW WESTMINSTER-BRIDGE WORKS.—On 15th inst. a labourer, Samuel Sartain, was sentenced at Southwark Police-court to six months' hard labour at the House of Correction, for stealing rope, sacking, canvas, and tools, from the Westminster-bridge works, where he had been employed.

PUBLIC PARK AND MUSEUM, AT SALTLEY.—Some months since, Mr. C. B. Adderley, M.P. offered to set aside ten acres of land on his estate at Saltley, for the purpose of a park and recreation-ground, open to the public. Active steps are about to be taken to render the offer available. It has been decided to form a Working-man's Park Association, the members of which are to elect a committee and take the management of the park into their own hands. Besides the ten acres there is a large quantity of land reserved all round for building purposes, but until built upon it will form the play-ground. Mr. Adderley intends to erect at the principal entrance a museum and reading-room, at a cost of 1,800*l.* The admission to the park will be free, but a small charge will be made to visitors to the museum.

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"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

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THE Advertiser, a middle-aged Man, and a first-rate bench hand, wishes for an ENGAGEMENT as SHOP FOREMAN; well understands setting out drawing-boards, and has had good experience in all first-class joiners' work. Good references given as to ability and character. No objection to the country.—Address to F. J. 19, Warner-place, Hackney-road.

TO ARCHITECTS, SURVEYORS, AND BUILDERS.

THE Advertiser, aged 34, is desirous for an ENGAGEMENT. Has had considerable experience in preparing drawings, writing out specifications, estimating, measuring, and valuing work, and the routine generally. Terms moderate.—Address, X. Z 64, Long-lane, Smithfield, London.

TO ARCHITECTS, ENGINEERS &c

THE Advertiser, aged 19, has been in the above profession five years, and wishes for an ENGAGEMENT. Salary no object.—Address, H. L. Cook's Place, Notting-hill

TO ARCHITECTS, SURVEYORS, AND BUILDERS.

TEMPORARY ASSISTANCE afforded to the above in making out or copying Plans, Specifications, Estimates, &c. Terms exceed 30s. moderate. Address, G. S. S., 6, Exmouth-street, Clerkenwell

LEAD-WORKER in GLASS.—A first-class Lead-worker and Designer wishes for an ENGAGEMENT in Ancient or Modern Style of Glazing.—Apply, post-paid, to T. STURT, Post office, Surbiton, Kingston, Surrey.
N.B. Decorative Painter as well.

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AN experienced CLERK of WORKS is OPEN to an ENGAGEMENT.—Address, A. B. Mr. Burgess's, 5, Wansford-place, Oakley-square.

TO CONTRACTORS AND OTHERS.

A YOUNG MAN, with fifteen years' practical experience in taking out quantities, measuring up work, making finished and working drawings, together with superintending, is OPEN to an ENGAGEMENT as Clerk of Works, or to take the Management of a Business, which office he is now fulfilling in one of the leading firms. Testimonials as to ability, &c. present and former employers.—Address, A. S. 14, Thornhill-place, Caledonian-road, Islington.—Country not objected to.

TO BUILDERS AND CONTRACTORS.

AN efficient Measurer, Estimator, and Builder's Accountant, of twenty years' practical experience, in all works connected with building operations, is desirous of a RE-ENGAGEMENT, upon reasonable terms. Testimonials from builders and architects.—Address, H. L. Office of "The Builder."

TO BUILDERS AND OTHERS.

A PRACTICAL SURVEYOR offers his ASSISTANCE in measuring, estimating, or the making up of builders' accounts. Terms moderate and per agreement.—Address, X. Y. Office of "The Builder"

TO BUILDERS AND OTHERS.

AS FOREMAN of CARPENTERS and JOINERS, or MANAGER of GENERAL WORKS. Satisfactory references can be given.—Address, prepaid, J. L. 18, Bridge-avenue, Hammersmith.

TO CARPENTERS AND BUILDERS.

A RESPECTABLE YOUNG MAN, lately engaged as out-door under-foreman on a Government contract, wants a SITUATION as UNDER-FOREMAN, or otherwise. He is acquainted with the routine of an office, measuring, &c. and can work at the bench. Moderate wages accepted, if good opportunities for improvement. Can be recommended by last employer. Town or country.—Address, T. C. Post-office, Edmonton

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A YOUNG MAN, a SURVEYOR and BUILDER, solicits an ENGAGEMENT as AGENT, to superintend erections and general repairs, collect rents, &c. Security given. Satisfactory testimonials and references may be relied on.—Address, A. B. 5, George-terrace, West-street, Croydon

A GOOD PLUMBER, and one who can turn his hand to painting and glazing, can find CONSTANT EMPLOYMENT by applying to Mr. G. BAKER, Great Bookham, Surrey.

TO BUILDERS.

AS MANAGER of a large JOBBING BUSINESS, or PRINCIPAL CLERK, the Advertiser OFFERS his SERVICES, being thoroughly conversant with the duties of either office. The most satisfactory references will be given and testimonials produced, and security if required.—Address, A. B. Retreat Cottage, Dorking, Surrey.

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A GENTLEMAN, who is now disengaged, would be glad to meet with an Architect who requires an ASSISTANT, to undertake the management of his Office. Is well acquainted with the Gothic and Italian styles of architecture, can design well, and is a good draughtsman. An engagement where he would be able influentially to join the principal would be preferred.—Address, Q. E. D. 51, Sydney-street, Brompton

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A YOUNG MAN is desirous of a RE-ENGAGEMENT in a Builder's Office, who has filled a similar situation with London Builders for seven years. References unexceptionable.—Address, A. B. Brown's-lodge, Woodvale, Forrest-hill.

TO ARCHITECTS AND BUILDERS.

A SURVEYOR of much experience is desirous of EMPLOYMENT in the office, to make finished or working plans, take out quantities, make estimates, or attend on the works. Has a practical knowledge of the business. Satisfactory references given. Age 43.—Address, A. P. 3, Claremont-place, Hornsey-road, Holloway

TO SURVEYORS AND BUILDERS.

A YOUNG MAN, aged 26, wishes for an ENGAGEMENT as FOREMAN of BRICKLAYERS. Thoroughly understands his trade. Can measure any description of work, and make working drawings. Good references can be given.—Address, J. R. S. Achilles Insurance Office, Cannon-street, City.

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AS PLUMBERS' LABOURER, a steady, sober, Young Man. Amount of wages not an object.—Address, H. G. Punch's Dining-rooms, 1, Pemberton-row, Gough-square, Fleet-street.

TO ARCHITECTS.

AN experienced, practical Clerk of Works, is OPEN to a RE-ENGAGEMENT. Fully qualified to superintend a church, or extensive works.—Address J. T. Office of "The Builder."

TO ARCHITECTS.

A YOUNG MAN, who is desirous of improving himself in the profession, wishes for an ENGAGEMENT with an ARCHITECT of good practice, at a moderate salary.—Address, DELTA, Office of "The Builder"

TO CARPENTERS AND BUILDERS.

A APPRENTICE.—WANTED, by the Guardians of a Youth, aged about 16, a SITUATION, in which he would have opportunities of learning the above trades efficiently, and where his morals would be looked after. A premium would be given. Apply, if by letter, to W. B. Post-office, Wellingborough.

A FIRST-RATE DRAUGHTSMAN, WRITER, and COLOURIST is now open to an ENGAGEMENT to execute plans of railways, estates, towns, drainages, docks, mines, collieries, and projects of every kind.—For specimens, &c. apply by letter to CYRUS, 15, Charing-cross.

AN ARCHITECT'S ASSISTANT desires a RE-ENGAGEMENT. Has had much practice in some of the best London Offices in preparing Gothic details, general drawings, and specifications for churches, houses, and fire-proof buildings of various kinds; and has also been in the habit of inspecting the execution of these works.—Address, A. B. 119, High Holborn.

TO LAND SURVEYORS.

A YOUNG MAN, aged 22, who has been three years in an architect's office, wishes for IMPROVEMENT with a Land Surveyor. Salary no consideration.—Address, A. B. 8, Pond-street, Hampstead.

PARTNERSHIP.—A Gentleman is desirous of entering into PARTNERSHIP with an ARCHITECT of established practice. The advertiser is fully qualified to take an active part, having been some time in business on his own account; or would not object to entering an office for a short period on salary, previous to partnership. References given and required.—Address, J. A. H. care of Mr. Wheeler, Royal Exchange-arcade, Manchester.

NORWICH UNION FIRE INSURANCE SOCIETY. (Established 1797.) Total Amount Insured £3,000,000.

Insurances may be effected with this Company upon more favourable terms than with other Offices.

For prospectuses apply at the Society's Offices, Surrey-street, Norwich; and 6, Crescent, New Bridge-street, Blackfriars, London.

THE SURREY GARDENS COMPANY (LIMITED). PROVISIONALLY REGISTERED.

Offices, 25, Golden-square. Capital, £100,000, in 4,000 Shares of 20l. each. Deposit, 2l. per Share. Further calls not to exceed 2l. at one time, with two months' notice.

Committee of Management until the choice of Directors:—

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S. Arthur Chappell, esq. 214, Regent-street.
T. K. Holmes, esq. 18, Pludyer-street.
George Bain, esq. 18, Parliament-street.
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The object of this Company is to supply a place of amusement of first-class character, at moderate prices, and easy of access.

It is proposed to erect a Music-hall for the performance of Vocal and Instrumental Music, capable of accommodating 10,000 people, and available for Public Meetings, Fancy Fairs, Horticultural and Horticultural Exhibitions, Winter and Summer Fêtes of every kind.

Application for Shares may be made to the Secretary, at No. 25, Golden-square; or at the Royal Surrey Gardens; and a large portion of the capital being already subscribed for, immediate application is desirable. The responsibility of each Shareholder is limited by Act of Parliament to the extent of his Shares.

W. ELLIS, Sec. pro. tem.

THE SURREY GARDENS COMPANY (LIMITED). PROVISIONALLY REGISTERED.

Offices, 25, Golden-square.

No application for Shares will be received after the 31st instant.

By order of the Committee.

W. ELLIS, Sec. pro. tem.

SPECIAL NOTICE.

KENT MUTUAL ASSURANCE SOCIETIES.

CHIEF OFFICES:

QUEEN-STREET-PLACE, NEW CANNON-STREET, LONDON.

The united annual incomes exceed £7,000l; and all Profits belong to the Assured.

LIFE

The next division of Profits will include parties assuring before the 24th March next.

The new business of the last eight months exceeds 5,000l. in Annual Premiums.

FIRE.

The Guarantee Fund is being increased to Half-a-Million.

The annual income, since last annual meeting, has increased beyond 5,000l.

GEORGE CUMMING, Manager.

N.B.—Agents are still wanted for some vacant localities.

SPECIAL NOTICE.

The Books of the Society close on 1st of March, and Proposals lodged at the Head Office, or at any of the Agencies, on or before that date, will secure the advantage of the present year's entry, and of One Year's Additional Bonus over later Proposals.

MUTUAL LIFE ASSURANCE.

The Whole Profits divided amongst the Assured.

THE SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY. Instituted 1831. Incorporated by Special Act of Parliament.

The fund accumulated from the contributions of members, exceeds NINE HUNDRED THOUSAND POUNDS.

The annual revenue exceeds ONE HUNDRED and SIXTY-THREE THOUSAND POUNDS.

The amount of existing assurances exceeds FOUR MILLIONS and a QUARTER STERLING.

The amount paid to the representatives of deceased members is upwards of SIX HUNDRED and FIFTY THOUSAND POUNDS, of which SEVENTY-EIGHT THOUSAND POUNDS are Bonus additions.

The NEXT DIVISION of PROFITS TAKES PLACE at the 1st of MARCH, 1856, and policies effected before that date receive one year's additional bonus over those effected after that date.

ROBERT CHRISTIE, Manager.
WILLIAM FINLAY, Secretary.

Head Office—26, St. Andrew-square, Edinburgh. London Office—126, Bishopsgate-street, corner of Cornhill.

WILLIAM COOK, Agent.

GREAT BRITAIN MUTUAL LIFE ASSURANCE SOCIETY,
14, Waterloo-place, London, and 20, Brown-street, Manchester.

DIRECTORS.

THE CHISHOLM, Chairman.
RICHARD HARTLEY KENNEDY, Esq. Alderman,
Deputy-Chairman.

This Society is established on the tried and approved principle of Mutual Assurance. The funds are accumulated for the exclusive benefit of the Policy-holders, under their own immediate superintendence and control. The profits are divided annually, and applied in reduction of the current premiums. Policy-holders participate in profits after payment of five annual premiums.

The Annual General Meeting of this Society was held on the 30th of May, 1855, when a Report of the business for the last year was presented, exhibiting a statement of most satisfactory progress. It appeared that during the two last years, 1853 and 1854, between 800 and 900 new Assurances had been effected, producing an increase of premium income amounting to 14,000l. per annum. It also appeared that, notwithstanding the extraordinary mortality which prevailed during the last year in consequence of the visitation of the cholera, it had not been found necessary to reduce, in the slightest, the allowance of 3½ per cent previously awarded to the Policy-holders.

Credit is allowed for half the Annual Premiums for the first five years.

A. R. IRVINE, Managing Director.

14, Waterloo-place, London.

TO TELEGRAPH COMPANIES, CONTRACTORS, AND OTHERS.—TO BE SOLD, a large quantity of LARCH POLES, straight, sound, and of good quality, well suited for telegraph-posts, and for railway or other fencing. The owner would deliver the larch either as poles or made up into posts and rails of any dimensions, at the post of Hull or elsewhere if required.—For further particulars apply to Mr. JOHN USHER, Appleby, near Brigg, Lincolnshire; or to Mr. THOMAS BELTON, Nostell, near Wakefield, Yorkshire.

OAK SASH-CILLS, QUARTERING, &c. ready cut out to sizes and lengths required, at the lowest price.

Address, E. SIMMS,

SAWING, PLANING, AND MOULDING MILLS, KING'S-ROAD, CHELSEA, AND WILTON-ROAD, PIMLICO.

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shop-fitters to his carefully selected MAHOGANY, suitable for Counter Tops, and to his seasoned Materials for builders, cabinet and blind makers, &c. Delivered, cartage free, to any of the London railway stations, or within three miles from Kennington Church.

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SAMUEL CROWHURST, Jun. begs to call the attention of Builders Cabinetmakers, &c. to his Stock of seasoned and well-assorted Timber Goods, Deals, and Mahogany in Logs, Planks, Boards, &c. at prices which will be found equal if not less than any advertised. Country Builders supplied on the most liberal terms.—Timber-yard, Hanover-street, Walworth; and Prancle-street, Newington, near the Church

AT the LOWEST PRICES.—SAMUEL PUTNEY has much pleasure in informing the Trade, that notwithstanding the recent advances, he is still enabled to quote the following low prices:—

Yellow Deals, from	£24	0 per 120
Spruce ditto "	18	0 "
Yellow Battens "	12	10 "
Fine Planks, 12 ft. 3 In. by 11	24	0 "
Honduras Mahogany, in logs, 5d. per foot.		

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a penny stamp.—Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

SEASONED FLOORING.—GEO. NOKES and CO. (late Archbutt and Atkinson), beg to acquaint builders and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash:—

½ inch White, 13s. 6d. per square.			½ inch Yellow, 15s. per square.		
ditto	15s.	"	ditto	16s. 6d.	"
1 ditto	18s.	"	ditto	20s.	"

Laths, 3s. per load.

Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.

ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 10 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No. 16, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Saw-mills. Goods in Bond for Exportation.

N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned, and ready for use, from ¼-inch to 1¼-inches thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Sialing Battens, Pantile Laths, Oak Cills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

ACORN TIMBER WHARF.—At RICHARD MAY'S extensive Waterside Premises and Saw-mill, Canal Bridge, Old Kent-road, builders and others are supplied with all kinds of FOREIGN TIMBER; planks, deals, and battens on sale, direct from the importers; prepared floor-boards, mouldings, pine and cut deals, slating battens, laths, English oak plank, and sash-sills, at reduced prices for cash. The Monthly Price Current forwarded on application.

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PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s. per foot super together with every particular of its cost and adaptation, can be obtained of Mr. BURT, 3, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

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FRENCH POLISH and SPIRIT VARNISHES made from Methylated Spirit, 63 over proof.

Best French Polish	8s. 6d.	per gallon.
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By JAMES SLIPPER, 87, Leather-lane, and 14 and 15, Dorrington-street, Holborn, London.

STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NO SIZING, and will stand the exposure to the weather. Price 6s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 4a, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

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IMITATION of WOODS and MARBLES.—A grainer of established name is willing to TEACH the above art, or portions of it, to a few adult pupils, by a course of tuition by means of evening lessons, to be entered on immediately. The advertiser having a little time to spare before the summer trade commences, is ready to devote it to the above purpose.—For particulars, &c. address A. B. 91, John-street, Fitzroy-square.

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The greatest caution is recommended to avoid any spurious compounds that might be sold at cheap rates as Pure Oxide of Zinc. If any adulteration has taken place in the oxide, either in the presence of impurity in the material primarily made use of to produce it, an imperfect mode of production, or by mixing with the oxide certain substances calculated to give it increased weight, it then produces a very inferior instead of a very superior paint, and the economy realised by the purchasers of such oxides becomes a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the VM mark—in Hull by Messrs. BLUNDELL, SPENCE, and CO.; when ground and dry, by Messrs. T. B. MORLEY and CO. and by the Company's Grinding Agents in London, Messrs. CHARLES DEVAUX and CO. Wholesale Agents, 82, King William-street, City; and by the Manufacturing and Painting Agent, Mr FREDK. BRABY, Fitzroy Works, New-road. In Manchester and Liverpool, by R. CLAY, 8, Mersey-street, who is the acknowledged Painter to the Company for Zinc Paints, and undertakes painting ships, warehouses, dwelling-houses, &c. In Leith, by Messrs. R. ANDERSON and CO. Timber-bush; and in Southampton, by Mr. H. J. BUCHAN. Dry OXIDES and PAINTS, in Kegs of 14, 21, and 28 lbs. and upwards, to be had of the Company's Agents in Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and the Isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with Zinc Paint by contract.

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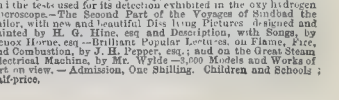
TERRA-COTTA WORKS, Blackfriars-road, London.—The PRIZE MEDAL for MATERIAL and WORKMANSHIP in TERRA-COTTA to M. H. BLANCHARD, late of Coade's Original Works, and at present Sole Agent in the manufacture of this invaluable material, that has been so successfully adopted for nearly a century in this country, by our eminent architects and others, in the adornment of our noblest buildings, and is the only tried material that is capable to stand the ravages of time unimpaired. Groups, Statues, Vases, Fountains, and Architectural Embellishments, at prices and qualities that will defy competition. A large Stock of newly-designed Chimney Shafts and Pots, to suit the various styles of buildings, at very low prices, and worthy of notice.

BLASHFIELD'S PATENT TERRA-COTTA, Manufactured at Mill-wall, Isle of Dogs.—Capitals, Consoles, Tracery for Parapets, Balusters, String Courses, Friezes, Bas-relievi, Vases, Statues, Chimney-shafts, and all other Architectural Ornaments modelled, finished, and burnt, in the best manner, and warranted to stand heat and frost, either in Buff or Red-coloured Terra-cotta.—A great variety and large stock may be seen at BLASHFIELD'S Warehouse and Show-rooms, No. 1, Praed-street, Paddington.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is ORMES'S WHOLESALE WAREHOUSE, 22, GREAT PORTLAND-STREET, Oxford-street, where parties can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.



BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES either old or new, whether of thatch, slate, or tile, and other pictures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect mode of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered from the wharf or canal, at the works, Yelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street, City. Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

ROYAL POLYTECHNIC.—INEXHAUSTIBLE NOVELTIES!—Lecture on the Poison STRYCHNINE, by J. H. Pepper, esq. daily, at Four and Nine. The poison and the tests used for its detection exhibited in the oxy hydrogen microscope.—The Second Part of the Voyages of Sindbad the Sailor, with new and beautiful Dissolving Pictures designed and painted by H. G. Hine, esq. and Description, with Songs, by Lenox Horne, esq.—Brilliant Popular Lectures, on Flame, Fire, and Combustion, by J. H. Pepper, esq.; and on the Great Steam Electrical Machine, by Mr. Wylde.—3,000 Models and Works of Art on view.—Admission, One Shilling. Children and Schools; half-price.

PORTLAND CEMENT WORKS NORTHFLEET, KENT. Messrs ROBINS and CO with much pleasure announce to their Friends and the Public, that they have completed the enlargement of their works, in order to meet the great increasing demand for their Cement; and are now prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes Cement is applicable.—Orders received at Great Scotland yard, and at the Works.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extremes of heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

PORTLAND CEMENT WORKS, NORTH-FLEET, Kent. KNIGHT, BEVAN, and STURGE Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brick-work, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank street, Westminster, who prepare one quality only of Portland Cement.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames street, London, and also at the manufactory, Faversham, Kent. N.B. These Cements supplied for shipment, on advantageous terms.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL. Light and Dark, equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

NOTICE.—M. H. BLANCHARD, 74, Blackfriars-road, London, Manufacturer of PLASTER of PARIS of a superior quality, suitable for Sculpture, Architectural Embellishments, &c.—will not twist, warp, or give after set, but will retain its hardness and strength.

Superfine, per ton	£7 0 0
Fine	3 0 0
Coarse	2 10 0

Delivered for Cash to any of the Metropolitan Railway Stations, or within the Metropolis.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank street, Westminster.

TATHAM & CO.—No. 14, SOUTH WHARF, PADDINGTON,
BRICK, LIME, and CEMENT MERCHANTS,
SOUTHAM BLUE LIAS LIME DEPOT.

Bath, Portland, Lias, and Roman Cements; Parian and Keene's Cements, Plaster of Paris, Glazed Stoneware Sewage Pipes, Fire Goods, Vitrified Blue Bricks, White Building Bricks, White Enamelled Pans and Traps, and every description of Building Material.

N.B. Lump and Ground BLUE LIAS LIME delivered in boat-loads direct from the Works in Warwickshire, to any part of the river or canal.

SOUTHAM BLUE LIAS LIME DEPOT, No. 14, SOUTH WHARF, PADDINGTON.

TATHAM & CO. have arranged for a constant supply of the above very superior BLUE LIAS LIME, which for the last two years has been extensively used at most of the large works constructed during that period, or now in hand, and any orders they are favoured with will command their best attention.

Boatloads of either Lump or Ground Lime can be delivered direct from the Works in WARWICKSHIRE to any part of the River Thames or Lea, alongside any wharf on canal, or by boat or rail to any part of the kingdom.

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS, ISLE of SHEPPEY, Kent.—ROMAN and PORTLAND CEMENT of the first quality manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise. Apply to G. BOOTH, Agent, as above.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

PORTLAND CEMENT.—TATHAM & CO. are enabled to offer a very superior quality of this valuable Cement at a moderate price, and all orders addressed to

No. 14, SOUTH WHARF, PADDINGTON,

will receive the best and most prompt attention.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, Lime, and French Plaster, &c.

PORTLAND CEMENT.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

PORTLAND and ROMAN CEMENT, TERRA-COTTA POTS, &c. J. M. BLASHFIELD begs to acquaint the Public that he has entirely CLOSED his Establishment on the Surrey side of the Thames, and that articles of his manufacture can only be obtained at his Works, Mill-wall, Poplar, and at his Warehouse, Praed street, Paddington.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME.

The LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements, at reduced prices, the material being excavated in its pure and unadulterated state, from quarries on their own property. The Company particularly recommend a trial of their XXXX Bath Cement, as far superior to any article now in the market. These cements can be sent by rail or shipped from their wharf, direct to all parts.—Agents required, and a liberal discount allowed. Orders received by Mr. KIALLMARK, 80, Old Broad-street, City.

DAMP WALLS.

STENT'S COMPOSITION FOR PREPARING NEWLY-PLASTERED OR DAMP WALLS FOR PAPERING,

Is the result of practical experiments and long experience; it is unfailing in its application. Entire houses have been papered a few days after plastering. In repairs of old plastering it is invaluable. A moderate room can be papered for 2s. 6d.

Prepared only by W. J. STENT, Warminster.

London Agents: Messrs. GEO. and THOS. WALLIS, 64, Long-acre. Agent for Ireland: Mr. S. BOYD, 46, Mary-street, Dublin.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those baneful maladies, paralysis and [illegible] colic, will be altogether avoided. [illegible] Powdered White Zinc may be had for grinding in oil, also for Plaster Decoration, and where it is used with size, Varnish, &c. Sold by the Wholesale Paint dealers in Original Packages, each cask stamped "HUBBUCK LONDON—PATENT." And when so marked the quality is guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. T. H. BOORMAN, WILD, and CO. beg to inform the public and trade generally, that they have completed their works for the manufacture of PORTLAND CEMENT, and from their contiguity to the river Medway, as well as the branch line of the South-Eastern Railway from Strood to Maidstone, a siding from which will be carried into their works, enabling them thereby to transmit any orders they may receive to any station on the before mentioned line, and confidently hope they shall be able to supply the public with a first-rate article, in both cement and lime, on moderate terms. Persons sending orders for cement, are respectfully requested to say for what purpose it is required, and printed instructions will be affixed to the head of each cask. Orders to be addressed to Mr. THOMAS WEEKES, Agent at the Works.

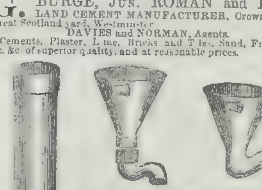
Agents in London:—Messrs. GEORGE POTTER and CO. Lime Merchants, Purfleet Wharf, Blackfriars, and 10, North Wharf-road, Paddington.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.

G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland yard, Westminster.

DAVIES and NORMAN, Agents.

Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.



GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster, and Seel street, Liverpool.

NOTICE.—BLUE LIAS LIME.— L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.

L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to insure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's cross.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 6d. per ton.

Small ditto, ditto, 4d. per ton.

Barges loaded in a few minutes.

Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 20, 1855. CHARLES RICHARDSON hereby informs his friends he has taken on their Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or along the rivers, canals, or railway stations, should be given a few days before required.

GIBBS, CANNING, and CO.'s BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.

ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.

SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

BATH CEMENT.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants. Builders, contractors, and others supplied with every description of building material at the lowest market prices.

TO CEMENT and PLASTER MANUFACTURERS and OTHERS.—TO BE DISPOSED OF, a CEMENT STEAM-MILL, with wharf, two kilns, plaster oven, and extensive cellaring and warerooms, situated in an increasing town, on the South Coast Railway. The premises are held under a lease, with power of purchase. As a knowledge of the business is not needful, the concern is well worthy the attention of an active man, with small capital, who would devote the whole of his time to its extension. Apply at 32, Cranbourn street, Leicester-square.

PRIZE BRICK-MAKING MACHINE.— Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, [or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BRICKS.—200,000 STOCK BRICKS, delivered into trucks at Wimbledon Railway Station, at 25s. per thousand. Place Bricks, at 2[illegible]s. Apply to J. D[illegible], Town-wall street, Dover.

WHITE SUFFOLK PERFORATED BRICKS.—Messrs. J. EASTWOOD and SONS take this opportunity of informing their customers and the trade, that they have made arrangements for the Manufacture of White Suffolk Perforated Bricks. In carrying out this improvement on bricks of this description, great pains have been bestowed, in order to produce them of a true and perfect shape, of an even and beautiful surface, and free from fire flaws.—J. EASTWOOD and SONS, Belvedere-road, Lambeth.

THE BEST HERTFORDSHIRE MALM SECONDS,
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvedere-road, Lambeth, and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges.)
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvedere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 5, ADELAIDE PLACE, London bridge.

Depôt, Agar Wharf, King's-road, St. Pancras.

VITRIFIED STAFFORDSHIRE BLUE BRICKS, Paving, Ridge, and Roofing Tiles, Sanitary Pipes, &c. Stourbridge Fire Goods, & of all descriptions, and of best quality. WOOD and SON, Manufacturers, Portway, Oldbury, near Birmingham. Agent — Mr. J. UNWIN, Private Residence, 59, Nelson-square, Blackfriars-road.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm, Place, half washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply at HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, or by rail to any station on the Eastern Counties line. [illegible] Also, [illegible] which one-third of the expense may be saved. Also, lime chalk, chalk rubbish, gravel, [illegible] whiting of the best quality [illegible] at Messrs. MEESON'S Wharf, [illegible] bridge, Stratford, Essex, or from the Works [illegible]. Orders, by letter, to Messrs. MEESON and CO. [illegible] with despatch.

BRICKS! BRICKS! BRICKS!—100,000 [illegible] good, and PLACE Bricks [illegible]. Apply to [illegible], Walham road, [illegible], Kensington.

TO BUILDERS and OTHERS.—BRICKS delivered at any part of the River [illegible] the following prices, [illegible] per thousand, Rough Stocks, [illegible], Place, [illegible] terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

TO BRICKMAKERS, BUILDERS, and CONTRACTORS.—HOO, near ROCHESTER, KENT. TO LET a BRICKFIELD, working three stools, near the river Medway. Rent [illegible] one shilling per thousand. Earth of good quality [illegible] very sound bricks [illegible]. Apply to Mr. JOHN JEFFERY, Milton-terrace, New Road, Chatham.

AN established BRICKFIELD TO LET, at Shepherd's Bush.—Apply on the Spot, to Mr. ROBINSON, No. 1, Oakland Villa.

BEADON'S EAVES GUTTER TILES.— Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs [illegible] in the [illegible] London, at [illegible] per foot, [illegible] feet, &c.—Office, [illegible], Adelaide place, London-bridge.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability. Slabs and Tiles for Fire-places and Hearths, Cornices for Grates, Door Furniture, Window [illegible] Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, [illegible] in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to NORTH WHARF, Macclesfield street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 581, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that **FOUR-FIFTHS** of the **ROUGH PLATE**, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

January 1, 1855.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

ARCHITECTURAL AND ORNAMENTAL DECORATIONS.

Architects and the Trade are respectfully invited to inspect specimens of the

PATENT VITREOUS MARBLES AND CONSOLIDATED GLASS,

Applicable for Piers, Pilasters, Chimney-pieces, Shop Facias, Table-tops, Panels, &c. &c.

Show-rooms, 40, Broad-street-buildings, City; 4, Russell-place, Fitzroy-square; 112, New-street, Birmingham, &c. &c.

CHARLES WM. WATERLOW AND CO.

MANUFACTURING JOINERS,

121, BUNHILL-ROW, FINSBURY, AND BOW, MIDDLESEX.

N.B.—ORDERS RECEIVED AT THE COUNTING-HOUSE, 121, BUNHILL-ROW, ONLY.

THE NEW PATENT

INTERLOCKING CURVILINEAR REVOLVING IRON SHUTTER

IS GREATLY SUPERIOR TO ALL OTHERS FOR

LIGHTNESS, STRENGTH, SECURITY, DURABILITY, AND EASE,

AND ALSO MUCH CHEAPER.

MANUFACTURED BY

BUNNETT AND CO. ENGINEERS, FOUNDERS, &c.

ORIGINAL PATENTEES OF REVOLVING IRON SHUTTERS, No. 26, LOMBARD-STREET, LONDON; and DEPTFORD, KENT.

The edges of each lath are accurately turned by powerful PATENTED MACHINERY, and slide endways into each other, FORMING A COMPLETE HINGE THROUGHOUT, interlocking so effectually that no force can separate them; and if made of the best galvanized iron, are almost indestructible.

A CHEAPER MODIFICATION FOR WAREHOUSES, COTTAGES, PORTABLE BUILDINGS, &c. ALSO FOR EXPORTATION.

PATENTEES OF METAL SASH-BARS AND MOULDINGS.

Descriptive Illustrated Prospectuses and all necessary information forwarded on application.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage. 3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 42 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non-conductor

INODOROUS FELT, for damp walls and for damp floors, under carpets and floor cloths. Price ONE PENNY per Square Foot.

CROGGON and CO.'S PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing the radiation of Heat, saving 25 per cent. of Fuel and deadening Sound.

Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

PATENT METALLIC LAVA.

A printed List of the important Works for Flooring, Roofing, Covering of Arches, &c. &c. executed from 1848 to 1862, with this Material, may be obtained at the Office of

ORSI AND ARMANI.

THEIR PATENT METALLIC LAVA IS FIFTEEN PER CENT. CHEAPER THAN THE GENUINE SEYSSEL ASPHALTE OF MESSRS. O. AND A.

OR THIRTY PER CENT. LOWER THAN ANY OTHER MATERIAL CALLED BITUMEN OR ASPHALT

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

GENUINE SEYSSEL ASPHALTE.

ORSI AND ARMANI.

THE EXCLUSIVE SUPPLY OF SEYSSEL ASPHALTE (FRANGY)

DIRECT FROM THE MINES.

REDUCTION IN THE PRICE FOR VARIOUS WORKS FIFTEEN PER CENT.

AND THE

WORK GUARANTEED FOR THREE YEARS.

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

ANCIENT HOUSE FURNITURE

In order to supply the deficiency which has hitherto existed in Furniture suitable for the many Mansions that have been erected or restored in the MEDIÆVAL STYLES, Messrs CRACE have directed their particular attention to this subject, in addition to their other works, and have prepared appropriate specimens in the various branches of Furnishing.

STUFFS for HANGINGS, in simple Worsted Damask, in Silk; also in Tapestry of Bauderkin.

CARPETS, plain or rich Velvet pile, with appropriate Borders.

PAPER HANGINGS of various kinds.

OAK CABINETS, Buffets, Octagon Library and Occasional Tables, Benches, Chairs, and other useful and appropriate Furniture

The whole of the above-mentioned Furniture, &c. is designed by the late Mr. A. W. PUGIN, Architect.

To render this Furniture generally available, a considerable portion has been arranged in the simplest manner, consistent with its ancient character.

14, Wigmore-street, January, 1853.

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 268, Oxford-street.

REDUCED TARIFF.

CCC CROWN, 18 Tables, per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, is 6d per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3d. ENAMELLED, 8d. per foot. Sashes primed and glazed, 3d. per foot.

Catalogues free, on application to the Managers, as above.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 315, OXFORD-STREET.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Pipe, White lead, Lead, Iron and Brass Pumps Water-closet Cocks and Plumbers' Brasswork. Paints, Colours, Oil, and Turpentines of the finest quality, at wholesale prices. Lists on application at THOS. MILLINGTON'S Warehouse, 87, Bishopsgate-street, London. Established more than 100 years.

BIRMINGHAM GLASS WORKS.—WHOLESALE BRITISH and FOREIGN WINDOW GLASS.—DALTON and Co. beg to call the attention of Builders and the Trade in general to their prices of British Patent Plate, Rough Plate, Crown, Sheet, and Ornamental Window Glass of every description. Good 15 oz. Sheet Glass, in crates, from 2d. per foot. C C C Crown Glass, 18 tables, from 30s. per crate. Foreign Sheet Glass, in cases of 200 feet each, large sizes, at 22s. 36s. and 40s. per case: Ground ditto, 2½d. per foot.—Estimates and Price Lists forwarded post free, on application at their Warehouse, 54, Grand Junction terrace, Edgeware-road.

JAMES PHILLIPS and CO. beg to call the attention of Builders and the Trade to their present LOW PRICES of GLASS for cash.—C C C per crate of 18 tables, 30s.; 16 oz. sheet glass, 2d. per foot; crown and sheet squares, in 100 feet boxes, from 11½ to 22½ 2d. per foot; enamelled glass, in cases, 6d. per foot; ground, ditto, 3½d. per foot; foreign sheet, in cases of 200 feet, 36s. 38s. 40s. and 42s.; ½ patent rough plate tiles, 10s. per doz. Cathedral and ornamental glass, and all the neutral tints.—116, BISHOPSGATE-STREET WITHOUT.

SUPERIOR BRITISH PLATE-GLASS AT VERY LOW RATES.

THE UNION PLATE-GLASS COMPANY having recently completed very considerable improvements and additions to their works, take the opportunity of informing their friends that they will now be able to supply orders without delay; and respectfully invite the attention of the trade generally to the low rates at which their now much-esteemed manufacture is sold.

Lists of prices may be obtained on application at

The Works, Pocket Nook, St. Helen's, Lancashire.

The Warehouse, 26, Hatton-garden, London.

" 45, Piccadilly, Manchester.

Messrs. C. and J. Malloch, 30, Turner's-court, Glasgow.

" John Dix and Co. Bath street, Bristol.

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ROUGH PLATE-GLASS from ¼ to ½ in. thick, suitable for the windows and roofs of mills, mechanics' shops, market halls, railway stations, &c.

Beautiful and highly finished POLISHED PLATE-GLASS, for shop-fronts and all superior glazing purposes, and for silvering.

Superior silvered Plate-glass Mirrors of all sizes.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned. Workshops, 116, Broad-wall.

J. FISHER, 70, YORK-ROAD, LAMBETH, formerly shop foreman to Messrs. Lawrence. Shop-front Builder and Manufacturing Joiner. 1¼ and 1½ four-panel doors from 8s. each; 1¼ sashes and frames from 7d. per foot; 2 inch ditto from 8d. Windows fitted with Gribbon's Patent Hinges for cleaning, painting, &c. All kinds of joiners' work estimated for according to design.—A List of Prices sent on application.

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MESSRS. FRANCIS, RICKABY, and DUNN beg to call the attention of the above to their IMPROVED REVOLVING WOOD and IRON SHUTTERS; also, to their extensive assortment of BRASS and other METAL SASH BARS, STALL-BOARD PLATES, &c. P. R. and D. having erected new and powerful machinery for the sole manufacture of the above, are enabled to offer them at a considerable reduction of price.—Prospectuses can be had or forwarded, on application to 84A, Gray's-inn-place, Holborn.

PROVISIONAL PATENT. — A SCHOOL FORM, with folding desk, which combines in one article, a seat with back and locked book cupboards, a writing or reading desk, and a tea-table, adapted for schools, hospitals, barracks, literary institutions, ragged churches, emigrant ships, and wherever economy of space, furniture, and expense is important.—On view in use, at the British School, Craven-hill, Westbourne-terrace. Trade licenses on most liberal terms.—Address, Mr. B. 5, Craven place, Paddington.

THE PERMANENT WAY COMPANY, 26, Great George street, Westminster, have now published a Second Edition of their CIRCULAR, which may be had post-free upon application. Among other recent important Inventions, the Company beg to call particular attention to Prince's Patent for Casting Railway Chairs, Pole's Patent Improved Fish Joint, and Dr. Boucherie's Improved Process for Preserving Sleepers, Fencing, Telegraph Posts, &c from decay.—Every information may be had upon application to CHARLES MAY, F.R.S. the Manager; or to WILLIAM HOWDEN, Secretary.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 „	gutta percha	1 14 0
3 „	ditto 3 „ 6 „	or cast iron	2 8 0
3½ „	ditto 3 „ 6 „	flanged pipe,	2 12 0
4 „	ditto 3 „ 6 „	as required,	3 3 0
4½ „	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
4½ in.	long ditto ditto		2 18 0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from under-ground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage. May be cleaned of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c. Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

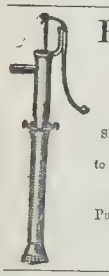
PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge Surrey Side.



B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9 inch Barrels.

Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS STREET, Fleet-street.

PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medway and Hall, with a pair of 10-in pumps and all the driving gear complete. The Contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire. Apply to Messrs. MUDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-road, Surrey side.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to [illegible] power, always in stock, [illegible] the week or month, for mining, sinking, pile-driving, raising materials, &c. Circulars sent on application.

JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, [illegible]

SIX-HORSE POWER STEAM-ENGINE. A new, and very superior high-pressure 6-horse power table ENGINE, made [illegible] Mr. ELIAS WHITE'S [illegible] Without.

TO MANAGERS of DOCKS, HARBOURS, and NAVIGABLE RIVERS. — FLOATING FIRE-ENGINE TO BE SOLD.— The Committee for Managing the London Fire-engine Establishment having adopted steam vessels [illegible] Fire-engines, [illegible] Thames, [illegible] Apply to Mr. BRAIDWOOD, Watling street, City.

SMOKY CHIMNEYS CURED EFFECTUALLY for TEN SHILLINGS, by SUTER'S PATENT WIND-GUARD.—This Guard allows free egress for the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

To be had of Ironmongers and Builders, and of the Patentee, at his Office, 65, Fenchurch-street, London.

FOR PURE AIR and PERFECT VENTILATION, "WATSON'S PATENT SELF-ACTING DOUBLE-CURRENT VENTILATORS" are undoubtedly the best and cheapest.—Sole London Agents LANDER and BEDELLS, 67, Chancery-lane.

By Her Majesty's Royal Letters Patent.

DUPREE and CO.'S DEFIANCE WINDGUARD and VENTILATORS, &c. for the perfect cure of Down-draft Smoky Chimneys, suitable for Public and Private Buildings requiring a constant change of air.

Also,

SHIP VENTILATORS, requiring no attention, imparting about six times the quantity of fresh air than any other in use.

Also,

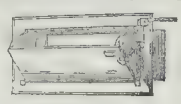
VENTILATING ROOFLIGHTS, for Slate or Tile Roofing, without Paint or Putty

Prospectuses sent on application.

London Depôt—ESNOUF and MANGER, 141, Minories, City.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the



admission of pure air through an EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 6s. 6d. These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required. HAYWARD, BROTHERS, sole Manufacturers, 195, Blackfriars road, and 17, Union-street, Borough; and of all respectable ironmongers, builders, &c.

DRAUGHTS ROUND DOORS and WINDOWS.—GREENWOOD'S PATENT INDIA-RUBBER STOPS, to supersede list or leather, for the purpose of keeping out dust and draught round doors, windows, sash lights, screens, &c. making the same air-tight. Price 4d. per foot. Spring Slides for bottoms of doors, 4s. each.

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LESS FUEL, MORE STEAM, NO SMOKE.

GARDNER'S PATENT SMOKE CONSUMER is SELF-ACTING, EASILY FIXED at a SMALL COST, IMPROVES the DRAUGHT, and SAVES FUEL. Applicable to all Furnaces, Boilers, Ovens, Locomotives, Marine Engines, and Open Fires.

"Chemical Works, Bow Common, November 9, 1855.

"DEAR SIR,—In answer to your further inquiry concerning the saving of fuel in connexion with the use of your patented apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I beg now to state that we are enabled, without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.

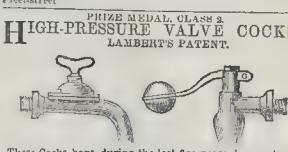
"I remain, dear Sir, yours truly,

"To E. V. GARDNER, Esq." "FREDK. ALLEN.

Apply to the PATENTEE, 34, Norfolk-street, Middlesex Hospital; or to Messrs. BURRIDGE and HEALY, 138, Dorset-street, Fleet-street

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 300 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

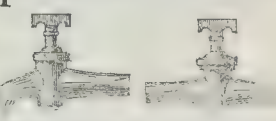
Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO WATER COMPANIES AND PLUMBERS

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WATSON'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

THE STAFFORDSHIRE SANITARY POTTERY COMPANY.

Proprietors, E. F. WINSTONE and CO.—Manufacturers of glazed water closets and urinals, half stone glazing, and white enamelled inside, and every description of pan basins; also vitrified and glazed sewer pipes, 150, Great College-street, Camden-town, London, late of Pickard-street, City-road.

CHEAP AND DURABLE ROOFING.

By Her Majesty's Royal Letters Patent.

F. McNEILL and CO. of LAMB'S-BUILDINGS, BUNHILL-ROW, LONDON, Manufacturers, and ONLY Patentees of

THE PATENT ASPHALTED FELT, FOR ROOFING HOUSES, VERANDAHS, SHEDS, &c.

Patronized by

HER MAJESTY'S WOODS AND FORESTS,
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HONOURABLE EAST-INDIA COMPANY,
HONOURABLE BOARD OF ORDNANCE,
HER MAJESTY'S ESTATE, ISLE OF WIGHT,
ROYAL BRITISH SOLDIERS, REGENT'S PARK,

And by the most eminent men of the Royal Agricultural Societies of England, Scotland, and Ireland; at which great national shows it has been exhibited, and OBTAINED THE PRIZE, for being the best and cheapest article for under slates at the Royal Agricultural Society's House, in Hanover-square. Its advantages are lightness, warmth, durability, and economy. It is impervious to rain, snow, and frost, and a non conductor of heat and sound. The Felt can be cut to any length, by 33 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples, with full directions as to its uses and the manner of applying it, with TESTIMONIALS, some of them of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 25 per cent in fuel is effected. The TRADE are respectfully enjoined to send their orders DIRECT to the FACTORY, as the surest means of being supplied with the genuine article, and in lengths best suited to their roofs. There is a license and BONA FIDE AGAINST MISREPRESENTATION, as the only works in Great Britain where the above roofing is made are F. McNEILL and CO.'s Manufactories, 3, LAMB'S-BUILDINGS, BUNHILL-ROW. Roofs covered with the Felt to be seen at the Factory, also at the New Courts of Justice, the Treasury, and others leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

AYLESFORD POTTERY COMPANY,
BELVEDERE ROAD, LAMBETH.
MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The [illegible] Company having [illegible] to supply [illegible] DRAIN PIPES, &c. to connect the Sewers [illegible] Tract, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves entirely satisfied [illegible] a fair test of the quality of the articles supplied by them; and [illegible] Pipes [illegible] IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION. [illegible]

HENRY MILLICHAMP,
MANUFACTURER OF
GLAZED STONE-WARE DRAIN-PIPES, BENDS, JUNCTIONS, TRAPS, &c.
65, PRINCES-STREET, LAMBETH, and BRINTON'S WHARF, POTTERIES,
COMMERCIAL-ROAD EAST.

Watercloset Pan [illegible]

Watercloset Lavatory Syphon-Trap, complete, [illegible] each.

A LARGE ASSORTMENT OF STRAIGHT TUBES IN 2-FEET LENGTHS.

Bend Socket

Bend Spigot and Socket

DRAWING AND LIST OF PRICES FORWARDED FREE ON APPLICATION.

"Terra-cotta" Chimney-pots of various patterns and sizes, and Red Earthenware Drain Pipes, at greatly reduced prices. (1179)

THE FARNLEY IRON COMPANY, WORTLEY, NEAR LEEDS,

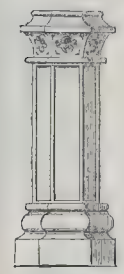
MANUFACTURERS OF

FIRE-BRICKS, PATENT GLAZED STONEWARE DRAIN PIPES, CLOSET PANS, ORNAMENTAL TRUSSES, BRACKETS, MODILLIONS, PEDESTALS, VASES, &c.;

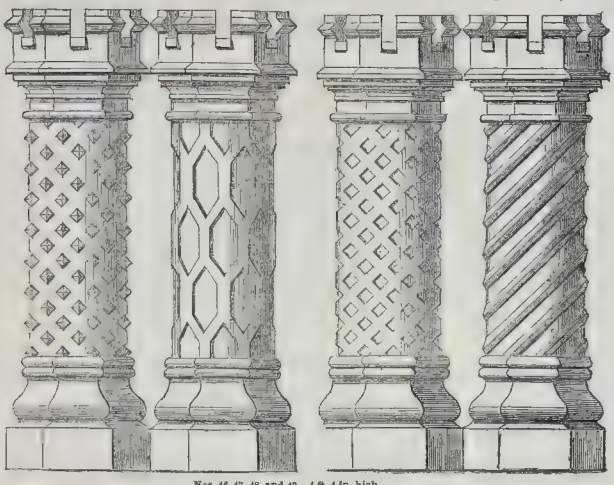
ALSO OF

TERRA COTTA CHIMNEY-TOPS,

In upwards of One Hundred Patterns, of various dimensions and of first-rate design, a few of which are given below,—scale half an inch to a foot.

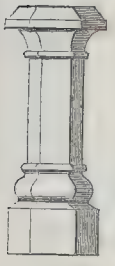


No. 67.—Wind-guard. 3 ft. 6 in.

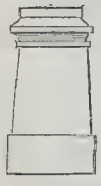


Nos. 46, 47, 48, and 49.—4 ft. 4 in. high. " " 6 ft. 0 in. " " " 9 ft. 0 in. "

No. 65.—3 ft. 6 in.



No. 38.—3 ft. 6 in. 4 ft. 2 in.



No. 18.—Oblong or Square. 2 ft. 2 in. 2 ft. 6 in. 2 ft. 9 in.

No. 34.—Wind-guard. 3 ft. 6 in.

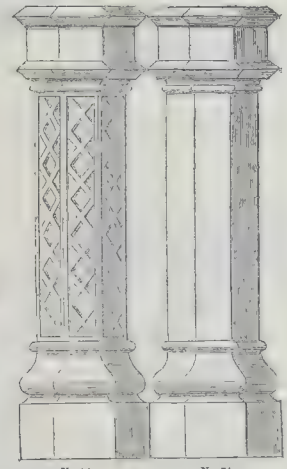
No. 3.—2 ft. 0 in. 2 ft. 6 in.

No. 14.—2 ft. 6 in. 2 ft. 10 in. 3 ft. 8 in.

No. 13.—3 ft. 1 in.

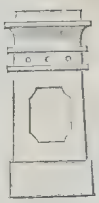
No. 66.—Plain or Wind-guard. 2 ft. 10 in. 4 ft. 2 in. 4 ft. 8 in.

No. 76 (round).—1 ft. 10 in. high.



No. 75 (square).—1 ft. 10 in.

No. 50.—4 ft. 3 in. 6 ft. 6 in.



No. 34. 2 ft. 9 in.

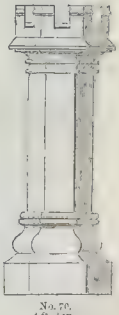
No. 12. 2 ft. 9 in.

No. 73. 6 ft.

No. 74. 6 ft.

No 21. Oblong or Square. 2 ft. 6 in. 3 ft. 1 in. 3 ft. 6 in.

No. 4. 2 ft. 8 in.



No. 70. 4 ft. 3 in.

ARCHITECTS' DESIGNS CAREFULLY EXECUTED, AND WITH QUICK DESPATCH.

Prices quoted are delivered free in Leeds, on Boat or Rail, for any part of the Kingdom.

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NEWCASTLE.... W. B. Wilkinson and Co. Prudhoe-street.
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TO ENGINEERS, MACHINE MAKERS, AND OTHERS.

CHARLES MACINTOSH and CO.

Patentees and Manufacturers of the VULCANIZED INDIA-RUBBER in all degrees of elasticity, recommend this material as capable of sustaining the action of hot or cold water, gas, steam, acids and grease. It is used extensively for valves in marine and land engines, railway buffers and springs, washers for pipe-joints, hose and tubing; also for gas-holders, acid pumps, alkali cisterns, &c. &c. Articles, moulded or otherwise, made to any size or figure.—Address, 3, Cannon street West, London; and Cambridge-street, Manchester.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water pipes. Vulcanized Rubber D or springs, and Solid Round Rubber Cord of all sizes of any length. Bill and Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Sup. lr pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 50 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & Co., Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.								
¾	1	1¼	1½	1¾	2	2½	2½	3 in.
5d.	7½d.	10d.	1s. 2½d.	1s. 7½d.	2s. 0d.	2s. 5d.	2s. 9d.	3s. 5d. per yard.

Super-extra stout quality.

2	2½	2½	3 inches.	
2s. 2d.	2s. 7d.	3s. 6d.	4s. 3d.	5s. per yard.

No. 0. A cheaper hose, to bear a low price, are for gardens and agricultural purposes, at greatly reduced prices.

1	1½	2	2½ inches.
6d.	10d.	11d.	1s. 3d. 1s. 6d per yard.

The hose is Burnettized at an extra charge of 4d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following Testimonial:—FROM SIR RAYMOND JARVIS, Bart., YENTN. R. ISLE of WIGHT.—Second Testimonial.—"March 16th, 1852. In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is t dopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

TO ENGINEERS

N. Woolwich Elastic Steam-packing (Canvas and India-rubber), at 1s. 4½ per lb.

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H. M.'s Dockyards), having considerably extended their manufacture in order to meet the daily increasing demand upon them for this effective and durable article, are enabled to offer the very best material at the reduced price of 1s. 4½d. per lb.

Testimonials may be seen at S. W. SILVER and CO.'s Warehouses, Nos. 3 and 4, Bishopsgate-street (opposite London Tavern), where orders for Steam Packing, also Buffer Springs, Pump Clacks, and the various India-rubber appliances, will meet with prompt attention.

CAUTION.—S. W. S. and Co. have found it necessary to stamp all their manufacture, thus—"S. W. Silver and Co. Works, North Woolwich."

TO DRAUGHTSMEN AND CIVIL ENGINEERS.

H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 149, Fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

H H H H for drawing on wood.	F F light and shading.
H H H for architectural use.	F for general use.
H H for engineering.	B black for shading.
H for sketching.	B B ditto ditto.
H B hard and black for drawing.	B B B ditto ditto.
	B B B B ditto ditto.
M medium.	

Sold by all the principal Stationers in town or country.

SUPERIOR LAND DRAINAGE.— AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS. This ware, valued by all to be of the best manufacture, by the unparalleled quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern-wharf, York road, King's-cross.

BY HER MAJESTY'S ROYAL LETTERS PATENT, APRIL 27, 1855.

JAS. LEWIS'S PATENT STENCH-TRAP FOR STREET USE.

Price, with Gutter Plate, 12 inches by 12 inches, each 22s.; weigh about 2 cwt. Larger sizes made, if required.

FOR AREAS, &c.

Price, with Back Plate, 6 inches by 7 inches, each 6s.

FOR COURTS, YARDS, &c.

10 inches by 8 inches, each 10s.

The above articles are protected for the Patentee by the British Government, on account of the construction, for the advantages they possess, being a perfect trap for preventing smell proceeding from itself or the drain, should there be water or not in the pan. When stench-traps are put down, general speaking no attention is ever paid to them afterwards: this remarks them useless. The above, therefore, are a desideratum, as they require no attention. It is well known when cholera has visited this country, it commences and leaves first those places where the air is vitiated by obnoxious gases proceeding from drains, &c.

Any inhabitant suffering any inconvenience, is entitled, by the Sanitary Act, to lay complaint before the parish or private authorities of the property, to lay down stench-traps where they are required. Any persons interested in this advertisement will be kind enough to write to the patentee for drawings and if wished, testimonials. Please order from any respectable ironmonger, contractor, or the Patentee, JAMES LEWIS, Ironfounder, Aberdeen. Specimens to be seen in the Court of Inventions, Crystal Palace, Sydenham.

HENRY DOULTON AND CO.

HIGH-STREET, LAMBETH, LONDON.

MANUFACTORIES—HIGH-STREET, LAMBETH; ROWLEY REGIS, STAFFORDSHIRE; AND SMETHWICK, NEAR BIRMINGHAM.

Pipes laid with ordinary care do not need examination. Not ONE in a THOUSAND of all the Pipe-drains laid throughout the Kingdom during the last Six or Seven Years has required to be looked at.

DOULTON'S

PATENT JUNCTION BLOCKS,

BY WHICH THE CONNECTION BETWEEN

PIPE-DRAINS AND SEWERS AND BRICK SEWERS,

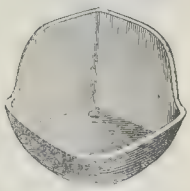
Is made perfect and secure.

DOULTON'S

SINKS AND URINALS

Are manufactured in a NEW KIND OF STONEWARE, of High Glaze and Uniform Colour.

They will withstand the action of the most powerful Acids, and are made very strong to bear rough usage.



DOULTON'S

TERRA-COTTA CHIMNEY-TOPS,

Will withstand the action of Frost or Sea Breezes, and are absolutely imperishable.

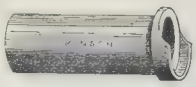
From 2s. 3d. each.

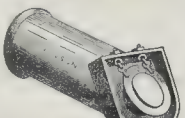
FULL PARTICULARS, WITH DRAWINGS AND PRICES, MAY BE HAD ON APPLICATION AS ABOVE.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET,

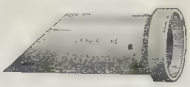
DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.





WHOLE SOCKET.



Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

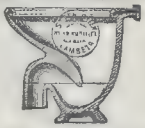
DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

Superior Glazed Stoneware Pipes, Bends, Junctions, Traps, &c. Hopper and other Pans, with best White Glaze inside.

Pan, 3s. 6d.

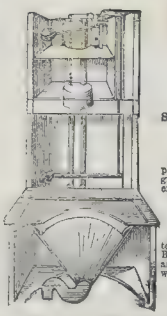
Trap, 3s.

Syphon Pan, with or without STEPHEN GREEN'S Patent Air-tight Valve.



Registered Flushing Basin,—the most effective Syphon-trap yet offered to the public.

STEPHEN GREEN, IMPERIAL POTTERIES, LAMBETH.



This effective article has not any Crank or Wire to get out of order, and is all complete and ready for use, and may be seen in operation at STEPHEN GREEN'S Manufactory, Lambeth.

IMPORTANT TESTIMONIALS

TO THE EFFICIENT WORKING OF

STEPHEN GREEN'S

PATENT SYPHON FLUSHING BASIN,

AND

SELF-ACTING CLOSET CONNECTIONS.

Oxford, November, 1849.

GENTLEMEN,—Sixteen of Closets having been put into operation at Christ Church College, I have great pleasure in giving you my testimony as to their efficiency and simplicity.

HENRY J. UNDERWOOD, Architect.
B. S. HOGGAR, Engineer.

Royal Arsenal, Woolwich, June 24, 1852.

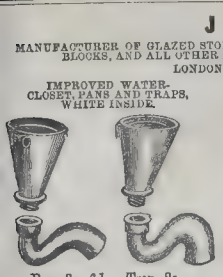
GENTLEMEN,—I have much pleasure in giving my testimony in favour of your Closets having Syphon Flushing Basin, with Self-acting Closet Connections. There are several fixed here, which have been in use for upwards of twelve months, giving perfect satisfaction.

I am, Gentlemen,
Your obedient Servant,
WILLIAM CARTWRIGHT.

JAMES STIFF,

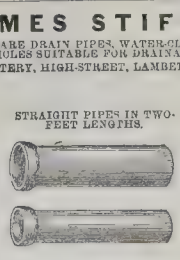
MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

IMPROVED WATER-CLOSET PANS AND TRAPS, WHITE INSIDE.



Pan, 3s. 6d. Trap, 2s.

STRAIGHT PIPES IN TWO-FEET LENGTHS.

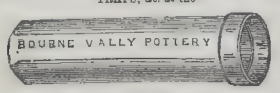


IMPROVED YARD-SINK.

HALF-SOCKET PIPES, in 2 feet lengths, at usual prices, by the use of which, Drains may be readily examined, and Junctions inserted, in the event of requiring further connections.

May be had also at Messrs. GLADDISH'S LIME WHARFS, Pedlar's-acre, Westminster-bridge, City-road Wharf, City Basin; Dock-head, Bermondsey; Danver's Wharf, foot of Battersea-bridge, Chelsea; Pratt Wharf, Kingsland, Camden New Town; J. TURNER, 9, South Wharf, Praed-street, Paddington; COLWILL, Brothers, 32, Brydges-street, Covent Garden; and at EDWARD COCK'S 94, Wardour-street, Oxford-st. ect. Drawings and List of Prices will be forwarded free on application.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c. at the



NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;
Where a large stock is always kept on hand.

THE FARNLEY IRON COMPANY, WORTLEY, near LEEDS.

Manufacturers of FIRE BRICKS, TILES, QUARRIES, &c., White Building Bricks, Fire-clay CHIMNEY-TOPS, in Norman Egyptian, Saxon, Tudor, Grecian, Gothic, and Elizabethan styles.

TERRA COTTA

Fountains, Vases, Pedestals, Capitals, Trusses, Brackets, &c., in great variety, which for beauty and elegance of design are unequalled
The designs of Architects modelled with the greatest exactness.

Also of PATENT GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, &c., well adapted for pressure, being made extra pressed under "Spencer's Patent." Superior White Glazed CLOSET PANS, TRAPS, &c.

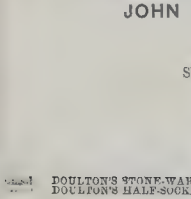
The Works of the Company are situated in the immediate vicinity of the well-known bed of WORTLEY FIRE-CLAY, and their manufacture of BRICKS, for the use of Forges, Gas Companies, Foundries, Potteries, and Glassworks, is confidently recommended for all purposes where extreme heat is required. Their GROUND CLAY is also particularly adapted for the manufacture of CRUCIBLES, MELTING POTS, &c.

OFFICES AND STORES:

LONDON .....No. 14 York-chambers, York-buildings, Adelphi; No 16, Bath-place, New-road; St. Ann's-wharf, Limehouse.	MANCHESTER..No. 46, Travis-street, and 23, 24, and 28, Birmingham-street, London-road.
BIRMINGHAM..No 7, Ensy-row; also 23, Cambridge-street, and Lawley-street.	HULL.....No. 66, Queen-street, and Wellington-street.
BRISTOL .....No. 14, Nelson-street.	BRADFORD ....Horton-road
LIVERPOOL....No. 9, Russell-street, 83, Renshaw-street, and Shipping-wharf Leeds-street.	LEEDS .....Wellington-street, adjoining the Midland Station; and Shipping-wharf, Victoria-wharf, Hunslet;
NEWCASTLE. ..W. B. Wilkinson and Co, Prudhoe-street.	SUNDERLAND..W. B Wilkinson and Co. Queen-street.
GRIMSBY.....P. G. Skipworth.	WARE.....G. E. Kins, Stone Merchant.

Where Drawings, with Prices, &c. may be obtained.

WATER-CLOSET, WITH APPARATUS COMPLETE, FOR 13s. 6d.



DOULTON & WATTS,
LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,
AND
LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,
With Handle, Lever, and Weight, ready for fixing,
Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

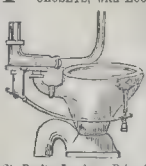
JOHN DOULTON, BROTHERS, AND CO.
LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF
DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.
TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

MILLWALL POTTERY.

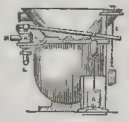
WILCOX and CO. Manufacturers of every description of white and printed CLOSET-PANS, URINALS, TABLES, PLUG-BASINS, &c.
DEPOT—ARTHUR-STREET, NEW OXFORD-STREET.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS,



manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORK HOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

UNDERHAY'S PATENT REGULATOR CLOSETS for

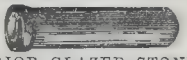


constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in fixing, and a better flush of water obtained in use.

Pan, Valve, Self-acting, and Servants' Closets, on this principle, may be seen at the Works. They are very cheap, their efficiency is guaranteed. 2,000 of them have been sold, and no instance of failure has occurred.

These Stool-valves are cheaper, stronger, and more ornamental, than any other Many thousands are in use, and greatly approved of.

Manufactured by
CHARLES BOTTEN and SON,
Brass Founders, Crawford-passage, Clerkenwell, London.



SUPERIOR GLAZED STONEWARE

DRAIN PIPES, invented and manufactured by
WILLIAM NORTHEN, UNION POTTERY, No. 14, VAUXHALL-WALK, LAMBETH.

W. NORTHEN begs to inform surveyors, contractors, builders, water companies, &c. that he has completed "Spencer's" new patent machinery for making GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, ELBOWS, SYPHON-TRAPS, &c. &c. Amongst the many advantages of pipes made by this machinery over all others may be mentioned, that it insures perfect uniformity in form and size, both of pipes and sockets, the dies being of a different and better construction than any others now in use; and the pipes and sockets being made by one process are secure from separation.

W. N. invites particular attention to the superior quality of the glaze used in his manufacture, which is equal to glass, and rendering stoppage in the drains impossible.

W. NORTHEN'S PIPES MAY BE INSPECTED AT THE FOLLOWING PLACES, WHERE ORDERS ARE RECEIVED:—

Martin and Wood's Market Wharf, Regent's-park Basin.—J. C. Hilton's, Crown and Horse-shoe Wharf, No. 6, Upper Thames-street.—Millwood and Co.'s Wharfs, Kensington Basin, and Creek Wharf, Hammersmith.—J. Corbet's Depôt, Britten-street, Chelsea; and at the Pottery.

MANUFACTURERS of GLAZED STONEWARE PIPES, Bends, Junctions, &c.; also

FIRE BRICKS, Vitrified Blue Bricks as used by her Majesty's Commissioners of Sewers, White Fire Clay, Facing Bricks, &c. &c. Agents, CHARLES RICHARDSON, No. 6, South Wharf, Paddington, London.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES,

acknowledged to be the best in use; hydrants or fire plugs; wells sunk and bored; chalk drains; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 79, Strand, London.

PATENT DRAIN-PIPES, UNGLAZED,

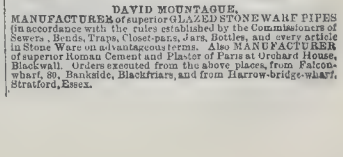
manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at				3d. per foot.
4	"	"	"	4d. "
6	"	"	"	6d. "
9	"	"	"	9d. "
12	"	"	"	1s. "
15	"	"	"	1s. 6d. "
18	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture. And it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c &c.

VICTORIA POTTERY, LEIGH, NEAR SOUTHEND, ESSEX.



DAVID MOUNTAGUE,
MANUFACTURER of superior GLAZED STONEWARE PIPES (in accordance with the rules established by the Commissioners of Sewers), Bends, Traps, Closet-pans, Jars, Bottles, and every article in Stone Ware on advantageous terms. Also MANUFACTURER of superior Roman Cement and Plaster of Paris at Orchard House, Blackwall. Orders executed from the above places, from Falcon-wharf, 29, Bankside, Blackfriars, and from Harrow-bridge-wharf, Stratford, Essex.

SALES BY AUCTION.

TO CONTRACTORS, BARGE OWNERS, and OTHERS.
Peremptory Sale of Barges by order of the Mortgagee

MESSRS. EVERSFIELD and HORNE are instructed by the Mortgagee, to SELL by AUCTION at CANNON WAYS, 85, Bankside, Southwark, on TUESDAY, JANUARY 29th, at TWELVE for ONE, the excellent decked Canal SAILING BARGE *Amelia*, 80 tons; also, the *Endeavour*, sailing CANAL BARGE, of 80 tons, in thorough repair; and THREE CANAL BARGES of 50 tons each, viz. the *Industry*, *Sutton*, and *Canada*, the whole of which are registered at the Custom House. May be viewed, and catalogues had on the Premises, and of the Auctioneers, Old Exchange; or, 40, Parliament-street, Westminster.

ARTIFICIAL STONE GOODS, BOROUGH-ROAD.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, 74, Borough-road, Southwark, on WEDNESDAY, JANUARY 30 at TEN for ELEVEN, without reserve, the whole of the extensive STOCK, consisting of Fountains, Figures, Vases, Centre Flowers, &c. May be viewed, and catalogues had, on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

TO ENGINEERS, MILLWRIGHTS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY, FEBRUARY 4, at ELEVEN, on the PREMISES, No. 93, Tooley-street, Southwark, the valuable, and first reserve, ENGINEERS' TOOLS MACHINERY, and STOCK; 30-inch self-acting lathe, by Shanks, bed 14 feet; self-acting planing-machine to take in 28 inches wide by 4 feet 9 inches in length; fine self-acting vertical drilling-machines (one very powerful); screwing-machine to screw up to 9 inches; four steam engines of 3 and 5 horse power; Cornish boiler, shafting, punching machine, forges, vices, and benches, stocks, taps and dies, and steel tools, small gas-apparatus for twenty-lights, eight new portable hand corn-mills, smith's forge, bellows, anvils, tools, and fixtures, collection of wood patterns, a few lots of household furniture, and other effects. Also the letters patent for the improvements in the manufacture of portable hand flour-mills for a term of fourteen years—To be viewed on Saturday previous to the sale, when catalogues may be had on the Premises, and of Messrs. FULLER and HORSEY, Billiter-street, City.

JUNCTION-ROAD, KENTISH-TOWN—To CARPENTERS, BUILDERS, and OTHERS.—Well-built Carcases of Five Houses.

MESSRS. KENNEDY and BONNY will SELL by AUCTION, in separate lots at the RED CAP, Camden-town, on THURSDAY, FEBRUARY 14, at TWELVE for ONE, FIVE CARCASES of NINE-ROOMED HOUSES, slate roofs, lead gutters, masons' and plumbers' work complete and well done, in an excellent situation for letting, being Nos. 1, 2, 3, 4, and 5, Fortess-terrace West, Junction-road, Kentish-town. Separate leases will be granted direct from the freeholder.—For further particulars and conditions of sale apply at the Auctioneers' offices, 1, Bayham-terrace, and 1, Cornwall-crescent, Camden-town. Messrs. KENNEDY and BONNY will at the same time offer for sale, TWO well-built leasehold DWELLING HOUSES, being Nos. 7 and 8, Portess-terrace West, Kentish-town.

WARWICK—TIMBER MERCHANTS, BUILDERS, CARPENTERS, and OTHERS.—TO BE SOLD by AUCTION by JOHN MARGETTS, upon the TIMBER YARD, WHARF, and PREMISES adjoining, situate in the Saltisford Warwick, on TUESDAY and WEDNESDAY next, the 29th and 30th days of JANUARY, 1856, a quantity of foreign BALKS, RED PINE, DEAL BATTENS, and BOARDS, about 10,000 feet of oak, and 1,100 of very fine larch, in the pound, 6-inch and other planking, oak scantlings, elm plank-ing, coffin boards, and other sawn timber, two 6-inch and 4-inch new timber carriages, pair of large timber wheels, strong broad-wheeled railway waggon, one hundred new earth barrows, twenty-five new oak gates, quantity of gate and mounding posts and rails, about one ton of assorted nails, laths, spokes, ledders, timber jacks, bunches of rods, about 35 quarters of charcoal, and other effects, the property of Mr David Miles, who is declining his profitable business. Sale will commence each morning precisely at HALF-PAST TEN o'Clock. The oak timber is of large dimensions, very sound, and heavy, all butted and trimmed ready for removal, and has the bark on the edge. The whole of the stock and working plant is of first-class quality. The greater part of the latter has been purchased within the last two years. Upon the sale a powerful Crane 30 feet in height and every accommodation will be afforded to purchasers—The whole will be sold without reserve.—Catalogues may be had at the Place of Sale, and Offices of the Auctioneer, High-street, Warwick

NEAR OXFORD-STREET and REGENT-STREET.—Freehold Estates.—Extensive tiers of Workshops, Stabling, and Dwelling, within a very spacious enclosed Yard, with carriage entrance; also Four Houses: together producing a rental of 314*l.* 3*s.* 9*d.* per annum

MR. ROBERT REID will SELL (by order of the Trustees), at GARRAWAY'S, on THURSDAY, JANUARY 31st, at TWELVE for ONE precisely, in Four Lots, an important and valuable FREEHOLD ESTATE, comprising the very extensive Premises No. 62a, Berwick-street, Oxford-street, within a short distance of the Regent-circus, consisting of a dwelling-house and numerous and extensive workshops, and stabling, with folding entrance gates, inclosing a spacious yard (in which a large stock of timber may be inspected), and the excellent dwelling-house, No. 62, Berwick-street, now let at rents amounting to 237*l.* 8*s.* 0*d* per annum. the whole occupying an area of about 7,500 square feet; also a private dwelling-house, 63, Berwick-street, let to Mr. Charman, at 57*l.* 15*s.* per annum; and Nos. 12 and 13, Noel street, leased, at a ground-rent of 8*l.* per annum, until Lady-day, 1865, when the purchaser will be entitled to the rack rents, estimated at 140 per annum. The property may be viewed by permission of the tenants. Particulars may be had of Messrs. MARSHAM and LOCK, Solicitors, 4, Raymond-buildings, Gray's Inn; at Garraway's; and of Mr. ROBERT REID, 48, Great Marlborough-street.

SOUTHALL, MIDDLESEX.—350,000 Stock Bricks, without the least reserve.

MR. MURRELL will SELL by AUCTION, at the NORTH HYDE FIELD, SOUTHALL, Middlesex, on FRIDAY, FEBRUARY 1, at TWELVE, 350,000 best STOCK BRICKS, standing in about 50 ONE PLACE and other BRICKS, and various effects. The field is situate handy to the canal, affording great facility for conveyance to town.—May be viewed. Catalogues had of Mr FITZPATRICK, adjoining the Field; at the White Horse, Uxbridge; and of Mr. MURRELL, Auctioneer, &c. 1, Walbrook, City.

Important unreserved sale of FRENCH and ENGLISH PAPER-HANGINGS, being a consignment from an eminent Parisian house, of the most elegant and elaborately designed patterns now and nearly all the remaining portion of Messrs. ERWOOD and CO'S STOCK of PAPER-HANGINGS, which, in consequence of the dissolution of partnership, has been removed from their warehouse, No. 66, Watling-street, to be SOLD by public AUCTION by

MR. EDWIN WHITE, at his spacious rooms, 170, Bishopsgate-street-Without, on TUESDAY, FEBRUARY 5, at TWELVE for ONE o'clock, precisely. The papers include scenes of elegant and rich Rocks, satins and damasks next entires, marbles, granites, oaks, and others in a multitude of designs, about twenty marble chimney-pieces, and a quantity of painters' and plasterers' brushes, will be sold and included in the sale. The whole may be viewed, and catalogues had the day prior and morning of sale

CLEARANCE SALE OF BRICKS.—TO BUILDERS AND OTHERS.

MR. EDWIN WHITE will SELL by AUCTION, without reserve, at the BRICKFIELDS (late in the occupation of Mr. Geo. Frasi, a bankrupt), situate on the west side of the Archway-road, Highgate, on THURSDAY, FEBRUARY 7, at ONE for TWO o'clock punctually, the remaining portion of the excellent BRICKS, consisting of 280,000 stocks, grizzles and place, which must be cleared away within a month, as the builder's term of possession will cease. May be viewed the day before and morning of sale, when catalogues may be had on the Premises, and at the Auctioneer's, 170, Bishopsgate-street Without.

SALES BY AUCTION.

IN CHANCERY.—"Gough v. Hunting," "Hunting v. Gough."
The Pantechnicon and Cabinet-makers' Proprietors of Saw-mills, and Others. The valuable Patent Right for Cutting in lieu of sawing Veneers, whereby fully double the number of Veneers of equal thickness are obtained from the Log than are obtained from the use of the Saw; together with all the Patent Machinery, Steam-engine, Boiler, and Gear for making the same, as also the Lease of the Premises, &c.

MESSRS. PRICE and CLARK will SELL by AUCTION, on the PREMISES known as the Canal-bridge Wharf, in the Kingsland-road London, on THURSDAY, FEBRUARY 7, at TWELVE for ONE, by order of the Right Hon. the Master of the Rolls the QUEEN'S ROYAL LETTERS PATENT, granted to William Gough and another for "IMPROVEMENTS in the MANUFACTURE of VENEERS and in Machinery and Apparatus connected therewith," dated 28th October 1853 being one of the most ingenious and important inventions of modern times, which is held for a long term at a moderate rental. At the same time will be sold several thousand feet of well-seasoned mahogany, a dog-cart and harness, and sundry effects—The whole may be viewed two days prior to the sale and particulars had of Mr SAMUEL D. HAMILTON Solicitor, 20, King's-road, Bedford-row, of Messrs. TRENDER and ESSE, Solicitors, 1, John-street, Bedford-row; of Messrs. KNIGHT and DAVIS, Solicitors, Newcastle-under-Lyne; at the Place of Sale; and of Messrs. PRICE and CLARK, Auctioneers 48, Chancery-lane, London.

TO SPECULATORS, BUILDERS, LEAD MERCHANTS, and GENERAL DEALERS &c.—HER MAJESTY'S OLD STATIONERY OFFICES JAMES-STREET, BUCKINGHAM-GATE, WESTMINSTER.

MESSRS. J. and B. DALES, Contractors, beg to offer for SALE, the whole of the very valuable MATERIALS, comprised in the above buildings which consist of lead slates, timber, iron-work, and other doors marble and other chimney-pieces, stoves, ranges, mahogany and other staircases, water-closets, cesspits, sewage, large Doric four-column portico, &c. For particulars apply on the Premises.

FREEHOLD LAND TO BE LET, on Building Lease for ninety nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations. Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Chancery-lane.

FREEHOLD GROUND, CHANCERY-LANE and FETTER-LANE The Commissioners of Sewers of the City of London hereby give Notice that they will meet in the GUILDHALL of the said City, on TUESDAY, the 26th of FEBRUARY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking on Building Lease for Eighty Years, certain PLOTS of GROUND, situate at the south-west end of Chancery-lane, and the south-west end of Fetter-lane—Further particulars may be had and plans seen, on application to Mr. HAYWARD Engineer and Surveyor to the Commission, at the Guildhall. The Commissioners will require a plan and elevation of the premises proposed to be built to be submitted to them for approval, and do not bind themselves to accept any proposal, unless deemed advantageous

JOSEPH DAW, Principal Clerk.
Sewers' Office, Guildhall, January 2, 1856.

TO BUILDERS and OTHERS.—SITE for a TAVERN adjoining a new cemetery, just opened. To be LET, on build ing lease, a capital Site for a Tavern, with Four-fronted houses, which are in great demand in the neighbourhood.—Apply to Mr JOHN COLLIER, Surveyor, 7, Clement's-lane, Lombard-street, City

HARROW.—FREEHOLD LAND.—TO BE SOLD, 100 feet of ground in a ring fence, and several other eligible plots of FREEHOLD LAND, at a moderate price, contiguous to the Harrow Railway Station, surrounded and intersected by capital roads. Purchasers are entitled to the privileges of the Harrow School, and the Lessees of North-western Railway Company offer to persons in fee the use of upper class station, worth 5*l.* per year each, a free first-class pass between Harrow station and Euston-square, for electric grass. There is an excellent supply of excellent water, and very superior brick earth on the land. Apply to WILLIAM B COOPER, Esq. Solicitor, 3, Verulam-buildings, Gray's-inn.

BUILDING-GROUND, Clerkenwell, in the direct line of the new street from Farringdon-street to Islington GROUND to be LET for thirty years, houses, with or without workshops and back entrances in capital situation for public-house. To see plans, particulars inquire at the Office of N. T. RANDALL, Esq. Architect, 28, Great Winchester-street, City, between the hours of TEN and FOUR o'clock.

WANTED to PURCHASE, from ONE to TWO ACRES of FREEHOLD LAND, suitable for the erection of manufacturing premises within 4 miles of Charing-cross; the neighbourhood of Camden-town or Somers-town preferred. Address full particulars to Messrs WIGG, SON, and OLIVER, Architects, 7, Bedford-row.

BUILDING LAND WANTED, within two miles of Charing cross.—To a advertiser requires about one or more acres for the purpose of building shops, for drying timber, &c. Leasehold property or freehold would be preferred. An early and liberal answer is required, sufficient to pass a season, to which situation would answer, and a fair moderate price would be given, according to situation and facility of access, &c.—Address, F. M., Hungerford-hall Letter-office.

TO BUILDERS, CAPITALISTS, and OTHERS.—To BE LET, on building leases, direct from the freeholder, for the term of 80 years, several eligible ground-rents a PLOT of GROUND, comprising in extent nearly three acres, situate on the GREEN LANES, PRIOR'S ROAD, and within three miles of the General Post-office, Lincoln's-inn-fields. Plans prepared, showing the mode in which it is proposed to lay out the ground for the second and third class houses; and which lessees can be seen, and every particular obtained, at the Offices of Mr HERBERT PRICKETT, Surveyor, 13, Chancery-lane, and 23, Paddington-green

WANTED, on LEASE, within Ten Miles of the City, adjacent to either the North, Kent or Brighton Railways, a DETACHED or SEMI-DETACHED RESIDENCE, with Garden, &c. Rent about 70*l.* per annum.—Address to Mr W. P. GRIFFITH, Architect, 9, St John's-square, Clerkenwell

TO BE LET, SEMI-DETACHED VILLAS, in immediate neighbourhood of Victoria New Docks, and in parish of Plaistow. Each house contains entrance hall, breakfast-room, three bed-rooms, kitchen, scullery, pantries, and W.C. They are completely fitted up with every convenience,—copers, water, stoves, and bells. They are partially grained oak and varnished, and all are papered with newest patterns. They are ready for immediate occupation, and, in consequence of the failure of the builder, they will be let for the low rent of 25*l.* per annum. Taxes are very moderate, and railroad and omnibus conveyance within easy distance—Apply to Messrs. WM. G. and E. HABERSHON, Architects, 39, Bloomsbury-square, London; at whose Office views and drawings may be seen.

MANUFACTURING WATERSIDE PREMISES, with STEAM POWER.—TO BE LET on LEASE, spacious MANUFACTURING PREMISES, well adapted for a Distillery, Manufacturing Chemist, or Colour Manufacturer; situate on the banks of the River Lea Canal, within a few minutes' walk of the Station of the Blackwall Railway. The site occupies a total area of about one acre and a half. There is a commodious family residence with garden, a wharf, with frontage of 300 feet, an extensive well, condensing steam engine of 14-horse power, with boiler and pumps, with pipes to a large iron tank, capable of holding 10,000 gallons of water; also a large filtering pond or reservoir for water.—Apply to Messrs FULLER and HORSEY, Billiter-street, City

TO TIMBER MERCHANTS and OTHERS.—The Proprietors of Letts's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of English Timber, &c. Spacious Dry and Drawing Docks, 30 and 40 feet Cranes Sawpits for converting Timber, &c. Freights paid on delivery.—Apply to G. NOKES and Co. as above.

IMPORTANT to SOAPMAKERS, CAPITALISTS, and OTHERS TO BE LET, all those excellent and complete SOAP WORKS, situate at Bloomfield, in the parish of Tipton, in the county of Stafford, comprising cutting and framing rooms, store-room, packing room, boiling-room, with four coppers, soap and cutting room adjoining, pan frame, boiling teapan, black ash furnace, with sheds attached; smiths' shop, stable and cart house, frame yard and reservoir, with a good supply of water. The Premises are fitted with every convenience, and are in a substantial state, and capable of working to a very extensive trade. Also a substantial and commodious DWELLING-HOUSE for the Manager, with every necessary convenience, and in a most complete and perfect state of repair, adjoining the Works, and within short distances of extensive coal mines, iron works, canals, and the goods stations on the Stour Valley and Oxford, Worcester, and Wolverhampton Railways. The property is being up the premises in consequence of other engagements. To treat, application is requested to be made to Messrs JAMES and JOSEPH HIPKINS on the Premises; or to Mr. SOLOMON POWELL, Surveyor, &c. Tipton, Staffordshire

BUILDER'S BUSINESS in Westminster, TO BE DISPOSED OF, with extensive Premises, comprising suitable erections, workshops, sheds, store-rooms, and offices for carrying on a large trade. The connexion is an old established one, and will be found worthy the attention of any one taking a lease of the Premises and the Stock and Plant at a valuation.—For particulars and terms, apply to Messrs. EVERSFIELD and HORNE, Auctioneers and Estate Agents, 40, Parliament-street.

LOANS from 25*l.* to 1,000*l.* upon approved personal or other security, repayable by easy instalments, extending over any period not exceeding five months, or credit. OBTAINABLE from the BRITISH MUTUAL SUBSCRIPTION LOAN ASSURANCE CLASSES Prospectuses, reports, and every information may be obtained on application at the Stock and Share Office, 17, New Bridge-street, Blackfriars. Rules 6*d* each copy, post free.

CHARLES JAMES THICKE, Resident Secretary

MONEY on LOAN, at 3*l.* per Cent. per Annum.—ARNEWAYS CHARITY NOTICE is HEREBY GIVEN, that the Trustees of the Charity are enabled to lend out the Trust Funds belonging to poor freemen residing within the City and Liberty of Westminster, that is to say, St. Margaret and St. John the Evangelist, St. Anne, Soho, St. Clement Danes, St. Giles-in-the-Fields, St. James, St. Martin-in-the-Fields, St. Mary-le-Strand, and St. Paul, Covent-garden. The amount of each loan is not to exceed 10*l.* is to clear interest after the rate of 3*l.* per cent. per annum, and is to be secured by the bond of the borrower, with two sureties. Printed Forms of Application, and all necessary information, may be obtained by applying personally, between the hours of Ten and Three o'clock in the day, at the office of the Clerk and Solicitor to the Trustees, No. 4, Great Marlborough-street, St. James's Park.

By order, EDWARD S. STEPHENSON,
Clerk and Solicitor to the Trustees.

NOTE.—The Trustees meet on the first Wednesday in every month, to consider such applications for loans as have been sent in to their clerk at least before the first day of the month.—The sureties must be unexceptionable.

METROPOLITAN LOAN COMPANY, Established 1850.
1, CRAVEN-STREET, STRAND, LONDON
Loans are advanced in amounts from 10*l.* to 100*l.* to be repayable weekly or otherwise, as may be agreed upon, at a discount of 5*l.* per cent. for twenty five weeks, and for 50 weeks at 8 per cent. Forms may be had, post paid, on receipt of three penny stamps to be enclosed.

ROBERT NORTON, Secretary

HANDS'S PATENT ECONOMISING KILN is the only simple and effectual mode to use the heat, for drying most moulded clays, sound at any season, in time of burning and cooling the kiln, with perfect ventilation.—Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TO THE COMMISSIONERS OF THE BOARD OF HEALTH, AND TO ALL PERSONS INTERESTED IN THE SMOKE QUESTION.
HANDS'S PATENT is the only simple and certain remedy for the SMOKE NUISANCE: it has combined, where necessary, the advantages of a drying process and perfect ventilation, without a particle of complicated machinery Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom

TO CARVERS and GILDERS, and OTHERS desirous of entering the Connection and Premises for the Business recently carried on by JOHN MOULDS and other requisites quite new TO BE SOLD a bargain Single, and opportunity rarely offers.—Apply at No. 1, New street, Bishopsgate street

IMPORTANT to ARCHITECTS, SURVEYORS ENGINEERS, BUILDERS, and DRAUGHTSMEN in general.—Messrs. BERKELEY and CO. respectfully inform those connected with the above Professions, and others, that they have invented a new description of SELLING PLATE for the better and more easy and expeditious production of their impression, and enable any person to print off in small numbers, in a manner almost elaborate style, equal to, or excelling lithography, with a facility unequalled and at a very moderate cost. Specimens sent to any part, by a letter addressed to Messrs. BERKELEY and CO. No. 9, Alfred-road, Harrow-road, London, prepaid, and enclosing stamp for answer.

BOGHEAD CHARCOAL.—TO BE SOLD, by Private Contract, about Forty Tons of BOGHEAD CHARCOAL for deodorising purposes, now lying in London.—For particulars apply to Mr. JONES, Wood-block, Southampton. A sample of the above may be seen at the Office of Mr. H. KNIGHT, 14, Chatham-place, Blackfriars; or at the Office of Mr. JONES, as above.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75 Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, January 26, 1856.

The Builder,

AN ILLUSTRATED WEEKLY MAGAZINE FOR

Architect, Engineer, Operative & Artist.

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BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.

Head-Master—R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufactures, and its application to the common uses of life. Special courses are arranged in order to qualify School-masters of Parochial and other Schools to teach Elementary Drawing as part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Free-hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera, Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still-life, &c., the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of China and Enamel Painting, Drawing on Wood, Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students at present, morning, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. M'Ian. Fees per session,—Advanced Class, 2l. and 4l.; Elementary Class, 1l.; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall-mall, London.

METROPOLITAN BOARD of WORKS.

SUPERINTENDING ARCHITECT. — Metropolitan Building Act, 1855.—The Metropolitan Board of Works hereby give notice, that they will meet in the COUNCIL CHAMBER, GUILDHALL, on MONDAY, the 4th of FEBRUARY next, at TWELVE o'clock at noon, to appoint a SUPERINTENDING ARCHITECT. The gentleman appointed to this Office will be required to perform the duties defined by, or which may be requisite for enabling the Board to carry out the provisions of the Metropolitan Building Act, and Metropolis Local Management Act. He must act as the professional adviser of the Board, on all matters relating to the office of District Surveyor, and on questions of fees and compensation connected therewith, and generally on all matters which the Board may desire to refer to him, and to perform all such other duties in point to the office of Superintending Architect, as he may be required to perform. He must devote the whole of his time and attention to the duties of his office, as directed by the Act of Parliament. The salary, inclusive of travelling expenses, will be 800l. per annum.—Applications in writing, from gentlemen de sirous of becoming candidates, addressed to JOHN THWAITES, Esq. Chairman of the Board, will be received at this Office till SATURDAY, the 2nd of FEBRUARY, at TWELVE o'clock at noon.

E. H. WOOLRYCH, Clerk to the Board.

Office of the Metropolitan Board of Works,
1, Greek-street, Soho-square, January 26, 1856.

TO ENGINEERS AND SURVEYORS.

THE LOCAL BOARD of HEALTH of HASTINGS require a SURVEYOR able to undertake the duties of that Office, under the Public Health Act, 1848. He must be competent to prepare plans, sections, drawings, and estimates, and to be conversant with the practice of engineering generally, and able to superintend and carry out the execution of all necessary works of drainage and others, which will fall within his duties. He will be required to devote the whole of his time to the duties of the office. salary, 200l. per annum. He will also have to act as Surveyor to the Corporation, with an additional salary of 20l. per annum.—Applications, with age, testimonials of qualification and competency, to be addressed to "The Local Board of Health," indorsed "Application for Office of Surveyor," are to be forwarded, under cover, to the Town Clerk, Hastings, on or before the 21st day of FEBRUARY next.

JOHN G. SHORTER, Town Clerk.

Hastings, January 19, 1856.

ARCHITECTURAL EXHIBITION and COLLECTION of PATENTS and MANUFACTURES connected with Building, NOW OPEN at the GALLERIES, 9, SUFFOLK-STREET, Pall-mall East. Admission, One Shilling; or to the Galleries at all times, and to all the Lectures, by season tickets, Half-a-Crown each. Lecture for TUESDAY EVENING, FEBRUARY 12, at EIGHT o'clock, "The Influence of Light and Shadow on Architectural Composition," by THOS ALLOM, Esq. All particulars at the Galleries. No lecture on February 5th.

CONTRACTS.

SWANSEA LOCAL BOARD of HEALTH.—WATERWORKS To IRONFOUNDERS, PIPE LAYERS, and OTHERS.—The Swansea Local Board will meet on the 5th day of FEBRUARY next, to receive Tenders from Parties who may be willing to undertake either of the following Contracts:

CONTRACT No. 2 For the Supply of a Quantity of Sluice Valves, Hydrants, &c.

CONTRACT No. 3.—For the Supply of about 175 tons of Cast-Iron Pipes and other Castings.

CONTRACT No. 4.—For Excavating the Ground, and Laying and Jointing about 7,500 lineal yards of Cast-Iron Mains, together with the fixing of a quantity of Hydrants, Sluice Valves, &c.

The Drawings and Specifications may be seen on and after the 23rd instant, and any further information had on application at the Offices of the Board, Guildhall, Swansea; or at the Office of ROBERT RAWLINSON, C.E. 74, Parliament-street, Westminster. Duplicate forms of Tender, &c. may be obtained upon payment of 2s. 6d. per set.—Sealed Tenders to be sent in to the Clerk to the Local Board, on or before the 4th day of FEBRUARY next. C. B. MANSFIELD, Town Clerk.

Swansea, January 8, 1856.

BOROUGH of SOUTHAMPTON.—NAMES of STREETS.—Notice is hereby given that the Southampton Local Board of Health are desirous of receiving TENDERS from any Person or Persons willing to furnish DESIGNS or LABELS for naming the several Streets in the Town. The Streets and places to be named amount to 200 or thereabouts. Further particulars may be obtained of Mr. J. G. POOLE, Surveyor to the Board. Endorsed Tenders, with specimens of the work, must be delivered (by me at my Office, or before that hour) on FRIDAY next, in lieu of the 28th instant, as before advertised. No pledge is given to accept the lowest or any other Tender.—By order,

Public Health Office, Southampton, 23rd January, 1856.

SOUTH-EASTERN RAILWAY COMPANY.—TENDERS for the SUPPLY of TWENTY NEW FIRST-CLASS CARRIAGES.—The Directors of this Company are prepared to receive TENDERS for the supply of TWENTY new FIRST-CLASS CARRIAGES. Drawings, specifications, and patterns for the same may be seen on and after WEDNESDAY, the 30th instant, at the Engineer's Office, London Terminus; and any further information that may be required can be obtained on application, by letter or otherwise, at the Office of the Company's Carriage and Waggon Superintendent, Ashford, Kent. Sealed Tenders, endorsed "Tender for new First-class Carriages," to be delivered to the undersigned on or before TUESDAY, the 19th proximo.

S. SMILES, Secretary.

London-bridge Terminus, 23th Jan. 1856.

TENDERS. — CAMBRIDGE LUNATIC ASYLUM.—Builders and Others contracting for these Works are requested by one of the competitors to add to sums to the amount of their estimate, in order to pay the unsuccessful their cost in obtaining the copy of quantities, the architect declining to return the fees paid him for the same. Why should builders submit to be taxed?

N.B. The quantities supplied by the architect are not guaranteed, although 2 per cent. an unusually good price, is charged for them.

TO BUILDERS.

NEW FARMSTEAD.—Persons desirous of TENDERING for FARM BUILDINGS, to be erected at Walton Grounds, Aynho, near Banbury, Oxfordshire, on the estate of Col. North, M.P. may see the plans and specification of the works at the Office of Messrs. DANBY and CALES, Auctioneers and Estate Agents, Banbury. The Tenders are to be delivered at the Office of Mr. J. F. CLARK, Architect, Newmarket, on or before SATURDAY, the 9th of FEBRUARY. The lowest or any Tender will not necessarily be accepted. Quantities can be obtained on application to Mr CLARK.

TO BUILDERS AND OTHERS.

ALL PERSONS willing to CONTRACT with the Magistrates of the County of Nottingham, for the ERECTION of STOREHOUSE, ARMOURY, GUARDHOUSE, GAOLS, and other BUILDINGS, and for WORKING WALLS and undraining the same, to be built at Newark upon-Trent, for the Royal Sherwood Foresters, or Nottinghamshire Militia, may see the drawings and specification, and obtain all further particulars on application at the Offices of Mr CHARLES FAILY, the architect at Newark, on and after MONDAY the 4th day of FEBRUARY next. Tenders to be sent in to the undersigned upon Trent on or before MONDAY the 11th day of FEBRUARY, by TWELVE o'clock at noon. The Magistrates will not bind themselves to accept the lowest or any of the Tenders sent in.

J. F. A. BROMLEY, Deputy Clerk of the Peace.

Newark, January 23rd, 1856.

TO BUILDERS.

PERSONS desirous of CONTRACTING for FARM BUILDINGS, to be erected at Kirtling and Ashley, near Newmarket, on the Estate of the Hon. W. H. J. North, may see the plans and specifications at the Office of Mr. J. F. CLARK, Architect, Newmarket. The Tenders are to be delivered on or before the 9th of FEBRUARY, and will be opened in the presence of parties Tendering. The lowest or any Tender will not necessarily be accepted. Quantities can be obtained on application.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall-mall, London, on or before WEDNESDAY, the 20th day of FEBRUARY, 1856, from persons desirous of contracting for extensive ADDITIONS and ALTERATIONS to the WESTERN HEIGHTS BARRACKS, at Dover. Drawings and specifications of the works to be executed, may be seen by persons fully competent to undertake the work (none others need apply), and Forms of Tender obtained at the Royal Engineer Office, Archcliff Fort, Dover, between the hours of TEN and FOUR o'clock, from FRIDAY, the 1st of FEBRUARY, to TUESDAY, the 19th of FEBRUARY, 1856, Sundays excepted. A person belonging to the Royal Engineer Department will attend each day at the Western Heights Barracks, from TEN to TWELVE o'clock, to point out the work and explain the drawings. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 2,000l. for the due performance of the contract. Tenders for the above work to be addressed to the Director General of Contracts, Pall-mall, London, and endorsed "Tender for work at Dover."—N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, January 16th, 1856.

NOTICE to BUILDERS and CONTRACTORS—ORDNANCE WORKS.—Sealed TENDERS for EXCAVATING and LEVELLING the GROUND, and the EXECUTION of MASONRY, &c. &c. at Mount Tourville, Alderney, will be received by the Director General of Contracts, War Department, Pall-mall, London, on or before SATURDAY, the 16th FEBRUARY next, after which date no Tenders will be received. Detailed drawings may be seen, and every requisite information obtained, at the Royal Engineer's Office, Alderney; and also at the Office of the Inspector General of Fortifications, War Department, Pall-mall. Forms of the Contract, Specification for the work, and forms of Tender, can be procured at the Office of the Director General of Contracts, War Department, Pall-mall; and at the Royal Engineer's Office at Guernsey and Alderney. Each Tender forwarded must be attached to a copy of terms of Contract and specification. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.—Tenders for the above work to be addressed to the Director General of Contracts, War Department, Pall-mall, London, and endorsed "Tender for Excavating and Levelling Ground, and the Execution of Masonry, &c. &c. Mount Tourville, Alderney."

War Department, Pall-mall, London,
24th January, 1856.

CONTRACTS. — Royal Engineer's Office, Chatham, 24th January, 1856.—Notice is hereby given, that TENDERS will be received at the War Department, Pall-mall, London, on or before MONDAY, the 18th day of FEBRUARY, 1856, for the performance of the following branches of ARTIFICERS' WORK, for the War Department, at the under-mentioned Stations, for a period of two years, from the 1st of APRIL, 1856, determinable at any period after one year, on either party giving to the other three months' notice in writing, viz:—

At CHATHAM.—Plumbers' Work.

At GRAVESEND and its Environs, comprising Tilbury Fort, Shorne Mead, and Coal House Batteries.—Painters', Glaziers', and Paperhangers' Works.

Plumbers' Work.

Separate Tenders to be made for these two Stations, as well as for the different Contracts; nevertheless, Tenders for Gravesend and Environs may be submitted for the several trades together, in one Contract. Printed forms and schedules of Contract may be obtained on application at the Royal Engineer's Office, at Chatham, and at Gravesend, from the 4th to the 16th of FEBRUARY, on Sunday excepted, on and no Tender can be admitted after the said 18th day of FEBRUARY, 1856. The War Department reserve to themselves the right of rejecting any or all Tenders that may be presented.

NOTICE to BUILDERS.—Royal Engineer Office, Portsmouth, 30th January, 1856.—TENDERS for the CONSTRUCTION of a COFFER-DAM, at FORT MONCKTON, in front of the left face of the South-west Bastion, and the Retaining Wall adjoining; and for REBUILDING a PORTION of the SOUTH-WEST FACE, about 36 feet in length, will be received by the Director General of Contracts, War Department, Pall-mall, on or before NOON of MONDAY, 11th FEBRUARY next. Plans, specifications, and any other necessary information, may be obtained, on application at the Royal Engineer Office, Portsmouth, between the hours of TEN and FOUR o'clock, up to 9th FEBRUARY. Tenders to be endorsed, "Tenders for Coffer-Dam, and rebuilding Masonry Wall, &c. at Fort Monckton, Gosport, Hants."

TO BUILDERS.—The New Asylum for Fatherless Children.—TENDERS are required for the ERECTION of an ASYLUM at Coulsdon, three miles from Croydon, on the Brighton Line of the Brighton and South Eastern Railway. Builders who may be desirous of Tendering, may inspect the drawings and specifications of works at the Office of the Architect, W. H. MOFFATT, Esq. 2, Adelaide-place, London-bridge. Lithographed bills of quantities and forms of Tender, and of schedule of prices, may be had on application to Messrs. BALMAN and LEE, 10, Buckingham-street, Strand, on payment of two guineas. Sealed Tenders are to be sent to the Office of the Charity, at Poultry, under cover, addressed to the Secretary, on or before THURSDAY, the 21st inst., and any Tender not in accordance with the form supplied will be rejected. The party whose Tender may be accepted will require to enter into a bond, with two responsible sureties, jointly and severally in the sum of 5,000l. for the due performance of the contract. The Board of Managers do not bind themselves to accept the lowest Tender.

DAVID W. WIRE, } Hon.
THOMAS W. AVELING, } Secs.

Office, 32, Poultry, 1st February, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

TO BUILDERS.

THE GUARDIANS of the POOR of the WEST HAM UNION are desirous of receiving TENDERS for the ERECTION of certain ADDITIONS to and for making ALTERATIONS at the WORKHOUSE of the said union, situate at Leytonstone, in the county of Essex. Plans, specifications, and conditions may be seen at the office of Mr. WILLIAM A. MASON, Architect, No. 9, Great St. Helen's, London, on and after THURSDAY, the 17th day of JANUARY instant, between the hours of TEN and FOUR. Sealed Tenders, endorsed, "Tender for Works, West Ham Union Workhouse," are to be sent to the Clerk of the said Union, at the Board-room at the Workhouse before TEN o'clock on THURSDAY morning, the 14th day of FEBRUARY next, after which time no Tender will be received. Bills of quantities may be obtained of Mr. MASON on payment of 1l. 1s. which will be returned if the party paying the same duly deliver in a Tender. The contractor will be required to give security, and also execute the contract accompanying the plans and specification for the due performance of the works according to the terms and conditions therein set forth. The Guardians do not bind themselves to accept the lowest or any Tender.—By order of the Board of Guardians,

W. J. BARSHAM, Clerk.

Board-room, Leytonstone, January 1[illegible], 1856.

WEST BROMWICH UNION.—The ERECTION of a NEW UNION WORKHOUSE. EXTENSION of TIME. Persons desirous of CONTRACTING with the Guardians of the Poor of the West Bromwich Union, in the counties of Stafford and Worcester, for the erection of the New Union Workhouse, are hereby informed that the time for sending in Tenders for the same is EXTENDED to the 22nd day of FEBRUARY next, on which day they must be sent to me in pursuance of the terms of the former advertisement.—Full particulars may be obtained at the Offices of Messrs. BRIGGS and EVERALL, Architects, No. [illegible], Bradford-street, Birmingham, where the drawings and specifications may be seen until the 21st day of FEBRUARY next.—By order of the Board,

CHAS. STRINGER, Clerk.

West Bromwich, 14th January, 18[illegible].

TO BUILDERS.

THE GUARDIANS of the POOR of the RISBRIDGE UNION are desirous of receiving TENDERS for the ERECTION of a new UNION WORKHOUSE, for the accommodation of [illegible] inmates, with Boardroom, Committee Rooms, Master and Matron's Offices, Infirmary, and other buildings, at Redington, near Haverhill, Suffolk. Plans, specifications, and conditions may be seen at the office of the Clerk to the Guardians, at Haverhill, and at the office of Mr. JOHN FRANCIS CLARK, Architect, Newmarket, where full particulars can be obtained. Tenders to be delivered at the Office of the Clerk to the Guardians, before NINE o'clock on FRIDAY morning, the 29th day of FEBRUARY next, after which time no Tenders will be received. The contractor will be required to give security to one-fourth the amount of his contract, for the due performance of the work: to be completed by the 1st day of JANUARY, 1857. The Guardians do not bind themselves to accept the lowest or any Tender. Dated 25th January, 1856.—By order of the Board of Guardians,

JOHN H. JARDINE.

Haverhill, near Newmarket, Suffolk.

SHIPLEY SEWERAGE WORKS.—The Shipley Local Board of Health hereby give Notice, that they are prepared to receive TENDERS from competent persons for PROVIDING, LAYING DOWN, and COMPLETING CERTAIN BRICK and EARTHENWARE SEWERS and DRAINS, MANHOLES, GULLIES, and other WORKS, required for the sewerage and drainage of their districts. Plans, sections, detail drawings, and specifications may be inspected, and printed forms of Tender obtained, at the Offices of Mr. J. McLANDSBOROUGH, Civil Engineer, 24, Queensgate, Bradford. Sealed Tenders must be delivered to the undersigned, on or before FRIDAY, the 8th day of FEBRUARY, 18[illegible]. The Local Board do not bind themselves to accept the lowest or any Tender.

JO. THOMPSON, Clerk to the said Local Board.

Bradford, January 10, 1856.

TO IRONFOUNDERS AND GAS-WORK CONTRACTORS.

THE DIRECTORS of the HASTINGS and ST. LEONARD'S GAS COMPANY will meet at their Office in Hastings, on FRIDAY the [illegible]th of FEBRUARY next, to receive TENDERS for the SUPPLY and ERECTION upon their works in Hastings, of a CAST-IRON GAS-HOLDER TANK, 91 feet internal diameter, and 24 feet deep, with inlet and outlet pipes complete. The plans and specification may be seen at the office of Mr. G. BARLOW, 3, Parliament-street, Westminster, the Company's Consulting Engineer, on and after the 28th instant, until the [illegible] of FEBRUARY, and the Tenders must be sent to the Secretary at the Office of W. B. YOUNG, Esq. the Clerk of the Company, [illegible] Hastings, on or before FOUR o'clock on THURSDAY, the [illegible] day of FEBRUARY next, endorsed, "Tender for Gas-holder Tank." The Directors do not bind themselves to accept the lowest or any Tender.

Hastings, Jan. 1[illegible], 185[illegible].

IRONMONGERY.—Builders and the Trade generally will effect a considerable saving by purchasing of CLUSE and BOSE, Wolverhampton Factors and Stove and Range Manufacturers, 75, City-road, corner of Tabernacle-row.

Present prices for cash:—

BEST CUT CLASP.

16s. 6d.	15s. 9d.	15s.	14s. per cwt.
1½ in.	2 in.	2½ in.	3 in. and larger.

PATENT SASH LINE

[illegible]	[illegible]	[illegible]	[illegible]	7s. [illegible]	9s. per gross.
No. 1	2	3	4	5	6

5 in. Mortise Locks, best Brass Furniture Shifting Spindles, 2s. 6d. each; 6 in. ditto, 3s. each.

Strong Elliptic Stoves, double backs, 2½d. per inch.

Strong Register ditto ditto 5d. „

36 in. Self-acting Oven and Boiler Cottage Ranges, complete, 34s. each; 3[illegible] in. Self-acting Oven and Boiler Ranges, best wrought bars, wrought fittings, complete, [illegible] each.

A large Stock kept of every description of builders' ironmongery; china, glass and ebony lock furniture and finger-plates. List of prices forwarded by post on application.

ESTABLISHED 18[illegible].

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSE, 19, Horseferry-road, and 1, New Peter-street, Westminster. Contractors, Builders, &c. supplied with general Ironmongery at prices equal to all competition.

REDUCED LIST OF PRICES.

Best Cut Clasp and Rose Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 to 6 inch.
[illegible]	16s.	15s.	14s. 6d.	14s. per cwt.

Best cut Floor Brads	13s. 6d. and 14s.	per cwt.
Best Cut Lath Nails	16s.	„
[illegible] Zinc Slating Nails	4[illegible]s.	„
Best Glues	47s. to 53s.	„

RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	11d.	1s. 2d.	1s. 4d.	1s. 8d.	2s. 1d.		
Half-round Gutters			8d.	8½d.	9d.	1s.	1s. 2d.
O G Gutters				1s.	1s. 1d.	1s. 2d.	1s. 5d.
Ditto, with plain clips cast on			1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.	
Ditto, with iron ditto			1s. 2d.	1s. 3d.	1s. 5d.	1s. 7d.	

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges at the lowest wholesale prices.

TERMS—NETT CASH.

Estimates given for any description of Wrought or Cast Iron Work.

IRONMONGERY.

PFEIL AND STEDALL.

THE LARGEST STOCK AT THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

TARIFF OF PRICES

Beyond the current Price of Hoop-iron.

The undermentioned Gauges are kept in stock; but any Gauge or width will be supplied within a few days, at a small advance on the following prices:—

Gauge	In. wide.	Per 1,000 ft.
No. 16	1¼	7s. 0d.
15	1½	7s. 6d.
15	1¾	8s. 0d.
15	2	8s. 6d.
15	2½	9s. 0d.

PATENT HOOP-IRON BOND FOR BUILDING PURPOSES.

Plan and Elevation of Bond, showing Position and Form of the Claws.

The Patent Bond is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1½ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent, that a direct end grain of the iron is presented longitudinally, offering resistance to the extent of many tons, and which become when built into the brickwork embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

London Depôt—463, OXFORD-STREET.

STEVENS AND SON,

ENGINEERS,

IRON AND BRASS FOUNDERS AND MANUFACTURERS;

CONTRACTORS

FOR THE

ERECTION OR ALTERATION OF GAS-WORKS FROM TWENTY LIGHTS UPWARDS,

With Buildings, Mains, Meters, Service-Pipes, Lamp-Posts, Lamps, and Gasfittings.

WATERWORKS FOR THE SUPPLY OF TOWNS, WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.

Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds; these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c. Gas Cooking Stoves and Ranges on the most improved principles.

GAS-FITTING IN ALL ITS BRANCHES.

GAS CHANDELIERS OF ALL SIZES, IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS. DEVICES FOR GAS ILLUMINATION.

IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.

These Turnstiles have been selected for the Entrances of the Great Exhibition, New York.

PATENTEES OF THE SEMAPHORE RAILWAY SIGNAL.

Signals for communication between Guard and Engine Driver. Railway Stores and Lamps of every description.

DARLINGTON WORKS, 16 to 19, SOUTHWARK-BRIDGE ROAD, LONDON.

FLAVEL'S PRIZE KITCHENER.

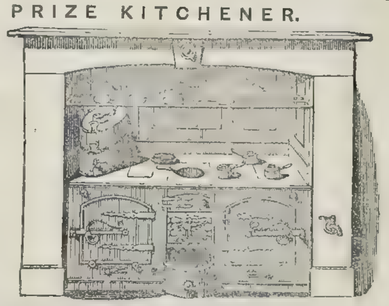
The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.



SOLE AGENTS:

BENHAM AND SONS,

19, WIGMORE-STREET, LONDON;

and at the Crystal Palace, Sydenham.

212' MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and vaporizing) with all the improvements, under their Quadruple patents of 1840-51-54 and 1855, including their Gunpowder Proof Solid Lock and Door (without which no safe is secure).

THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.

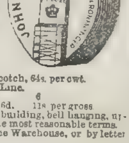
MILNER'S PHŒNIX (212) SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depot, 47A, Moorgate-street, City. —Circulars free by post.

CAST-IRON PIPES, IRON-WORK FOR OVENS, &c.

RAIN PIPES, &c.—F. A. TIDDEMAN and CO. St. Ann's Wharf, Earl-street, City, near Blackfriars-bridge, keep a large stock of Rain Pipes, Heads, Shoes, Elbows, &c. Half-round and O-G Gutters, Socket Pipes for Water or Gas, Flange Pipes, Hot Water Pipes and Connections, Sash Weights, and other castings, Iron-work for Bakers' Ovens of every description, fitted complete, to be had in sets or in parts.—Prices equal to all competition. Contracts taken to any extent. Goods landed. A powerful crane.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs, 2½d. per inch, and upwards.

Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 2l. 16s., 3 ft. 6 in., 3l.; 4 ft., 3l. 5s.

3-feet Cottage Ranges, with ovens and back boilers, 32s. each.

3-feet self-acting ditto, ditto, 34s. each.

Air Bricks, 4s. per doz.

Best Town Glue, 50s. Ditto, Scotch, 64s. per cwt.

Best Patent Sash Line.

1	2	3	4	5	6
4s. 6d.	5s.	6s.	7s. 6d.	8s. 6d.	11s. per gross.

And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

STEAM BOILERS for Marine, Locomotive and Land-Engines, Wrought-Iron Girders and Bridges, Gas Holders and Gas Apparatus, Columns, Girders and General Castings, Chains, Cables, and Contractors' Iron Work, manufactured by MELROSE and HUSSEY, Phœnix Works, Tividale, near Dudley; London Office, 78, Hatton Garden.

IRON FOUNDRY, HARROW-STREET, LANT-STREET, SOUTHWARK. W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel and Railing Bars, Panels, Iron Coping, Hot Plates, Tank Plates, Area Gratings, Sash Weights, Fly and other Wheels, Riggers, Pinions, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

IMPORTANT to ARCHITECTS, SURVEYORS, ENGINEERS, BUILDERS, and DRAUGHTSMEN in general.—Messrs. BERKELEY and CO. respectfully inform those connected with the above Professions, that they have invented a new description of STENCILLING PLATE (on the bevil-edged principle), which prevents any inaccuracy in the impression, and enables any person to print every word, design, or title on drawings in a most elaborate style, equal to, or excelling lithography, with a facility unequalled, and at a very moderate cost. Specimens sent to any part, by a letter addressed to Messrs. BERKELEY and CO. No. 51, Alfred-road, Harrow-road, London, prepaid, and enclosing stamp for answer.

THE PERMANENT WAY COMPANY, 26, Great George-street, Westminster, have now published a Second Edition of their CIRCULAR, which may be had post-free upon application. Among other recent important Inventions, the Company beg to call particular attention to Prince's Patent for Casting Railway Chairs, Pole's Patent Improved Fish Joint, and Dr. Boucherie's improved Process for Preserving Sleepers, Fencing, Telegraph Posts, &c. from decay.—Every information may be had upon application to CHARLES MAY, F.R.S. the Manager; or to WILLIAM HOWDEN, Secretary.

HANDS'S PATENT ECONOMISING KILN is the only simple and effectual mode to use the heat, for drying moist moulded clays, sound at any season, in time of burning and cooling the kiln, with perfect ventilation.—Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TO THE COMMISSIONERS OF THE BOARD OF HEALTH, AND TO ALL PERSONS INTERESTED IN THE SMOKE QUESTION.

HANDS'S PATENT is the only simple and certain remedy for the SMOKE NUISANCE: it has combined, where necessary, the advantages of a drying process and perfect ventilation, without a particle of complicated machinery. Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

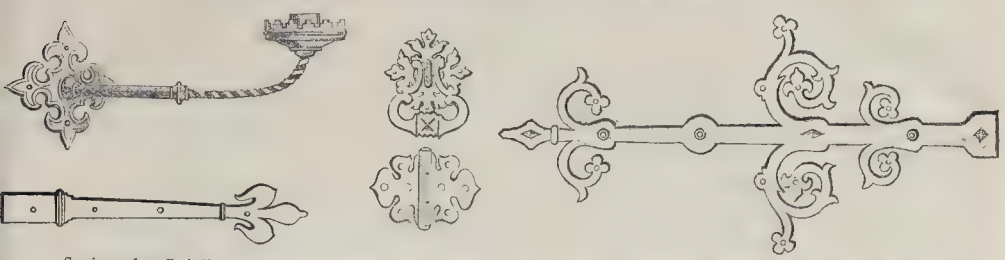
TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, DRURY-LANE, STRAND, LONDON.

Prize Medal Great Exhibition, 1851. First-class Prize Medal Paris Exhibition, 1855.



Specimens from Paris Exposition at the Architectural Gallery, Suffolk-street, Pall-mall. Illustrated Price Catalogue post-free on application.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

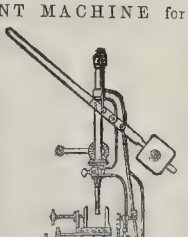
THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



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Vol. XIV.—No. 678.

MR. FERGUSSON'S "Illustrated Handbook of Architecture"* having been already commended, as we have reported, from the Chair of the Royal Academy, favoured with a column and a half of praise in the *Times*, and flatteringly mentioned by leading literary journals, is in need of little more to make it known to the public, and ensure for the ability and labours of the author, and the enterprise of the publisher, the reward justly their due. A reactionary and not uncommon feeling might indeed suggest that all we had now to do was to point out its weaknesses, combat its theories, and speak rather of what the author had omitted to do than of what he had done. What would be easier, and what more agreeable to the majority of readers? Nothing. Nevertheless, we have no intention of taking this course. We have already given the Handbook a general expression of praise, and are fully prepared to confirm that expression in detail.

Objections we have, some of them strong ones, and to these we shall allude; but it must not therefore be inferred, even though they should occupy the greater part of our notice, that we do not warmly admire and thankfully receive the very valuable book which Mr. Fergusson has produced. First, let us tell our country readers, who are often unable to see previously the book they would buy, that the two volumes contain together 991 pages of letter-press with 837 engravings on wood interspersed. The first part (and volume) consists of nine books:—Buddhist and Jaina Architecture; Hindu Architecture; Architecture in China and America; Architecture in Western Asia; Egyptian Architecture; Grecian Architecture; Roman Architecture; Sassanian Architecture; and Saracenic Architecture; the whole preceded by an introduction, thirty-three pages in length. In the second part (and volume) we have ten books:—Romanesque style; Lombard and Rhenish Architecture; Gothic Architecture in France; in Germany; in Belgium; in Italy; in Spain and Portugal; in Great Britain; in Northern Europe; and the Byzantine style. Some of the pith of other books by the author, "The Principles of Beauty in Art," and "The Palaces of Nineveh and Persepolis Restored," is here incorporated, together with cuts from the same works. And we may say of the latter generally, namely, the cuts, that all available sources have been laid under contribution to supply them, and that thus brought together, they afford most excellent means for comparison. The plans are drawn to one scale (100 feet to 1 inch), and thus enable the reader to judge of the relative size of two buildings, without seeing them. As a general rule, the sections or elevations of buildings, throughout the book, are drawn to a scale double that of the plans, or 50 feet to 1 inch; but, owing to the great size of many of these, it was found impossible to carry out this in all instances: where it has not been effected, the departure from the rule is noted, either below the woodcut or in the text.

The author's travels and previous researches have led him to give an undue preponderance to his accounts of some styles as compared with those of others: for example, the two books devoted to Buddhist and Hindu architecture occupy 132 pages, while Grecian architecture, to which the ruins that remain, confined though they are to temples and monumental erections, assign "the rank of the purest and most intellectual of all the styles which have yet been invented in any part of the world," occupies but thirty. In this chapter on Greek art, speaking of the Doric, he thus expresses his opinion on the subject of *polychromy*:—

"Another essential part of the order, too often overlooked, is the colour, which was as integral a part of it as its form. Till very lately, it was denied that Greek temples were, or could be, painted: the unmistakeable remains of it, however, that have been discovered in almost all temples, and the greater knowledge of the value and use of colour which now prevails, have altered the public opinion very much on the matter, and most people admit that some colour was used, though few are agreed as to the extent to which it was carried.

It cannot now be questioned that colour was used everywhere internally, and on every object. Externally, too, it is generally admitted that the sculpture was painted and relieved by strongly coloured backgrounds: the lacunaria, or recesses of the roof, were also certainly painted, and all the architectural mouldings, which at a later period were carved in relief, have been found to retain traces of their painted ornaments.

It is disputed whether the echinus or curved moulding of the capital was so ornamented. I think it undoubtedly was; and the walls of the cells were also coloured throughout, and covered with paintings illustrative of the legends and attributes of the divinity to whom the temple was dedicated, or of the purposes for which it was erected. The plane face of the architrave, I believe, was left white, or merely ornamented with metal shields or inscriptions, and the shafts of the columns seem also to have been left plain, or merely slightly stained to tone down the crudeness of the white marble. Generally speaking, all those parts which from their form or position were in any degree protected from the rain or atmospheric influences seem to have been coloured; those particularly exposed, to have been left plain. To whatever extent, however, it may have been carried, these coloured ornaments were as essentially a part of the Doric order as the carved ornaments were of the Corinthian, and made it, when perfect, a richer and more ornamental, as it was a more solid and stable, order than the latter. The colour nowhere interfered with the beauty of its forms, but gave it that richness and amount of ornamentation which is indispensable in all except the most colossal buildings, and a most valuable adjunct even to them."

The arrangement of the chapters on the different styles does not seem to us that best adapted to leave a clear notion of the relative dates in the mind of the student; and there is, as it seems to us, a want of accentuation, so to speak, throughout the book, by means of which the chief resting-places and starting-points in the journey might have been made clearer to those desiring to remember them. The arrangement made was not adopted without consideration, as the author points out in the preface. He deliberated between the strictly chronological and the purely topographical, and ultimately adopted a combination of the two methods; but when we find this places Indian and Chinese architecture at the commencement of the work, before the Egyptian and Assyrian; and the account of Byzantine architecture after all others, at the end of the second volume,—the propriety of the decision is made to appear doubtful For another edition it should be reconsidered. We would also suggest, though in no captious spirit, that a clear statement of the characteristics of the various styles, and their differences, would render the work more valuable; nor must we omit to say, that the omission of all account of the architects of the Revival, and their works, in a book professing to describe "the different styles of architecture prevailing, in all ages and countries," is scarcely defensible. The style is not ignored, because in the Introduction, Mr. Fergusson says, it has been practised for more than three centuries, and that "from the building of St. Peter's, at Rome, to that of our own Parliament Houses (?), not one building has been produced that is admitted to be entirely satisfactory, or which permanently retains a hold on general admiration;" but beyond this we do not find any mention whatever made either of the men or of their works.

In our notice of Mr. Petit's lecture last week, we said that the object he had in view was to inculcate the necessity for the acquirement of knowledge by architects of the materials obtainable, that they should attend to the purposes of the building they had to design, and strive above all things to act on sound principles of construction as the means of arriving at excellence; and we remarked that it was urged "almost as if in denial of a doctrine put prominently forward by Mr. Fergusson in his ably-written and profusely-illustrated Handbook." "Architects," said Mr. Petit, "must be guided by utilitarian views: they have no right to overlook or compromise in the smallest degree, the original purposes of the buildings they have undertaken, for the sake of ornament, be it of the highest order."

On this Mr. Fergusson has addressed to us the following communication:—

"I regret to perceive from the commencement of your leading article of last week, that I should have been so far misunderstood as to be represented as antagonistic in my views to those expressed by Mr. Petit in his lecture on Tuesday last. So far from this being really the case, I can honestly assert that it has never been my good fortune to listen to a lecture on an architectural subject, with every sentiment of which I so cordially agree, as I did with those expressed in the lecture in question. There was not one expression used by Mr. Petit from which I differed, or one opinion uttered by him that I could have hesitated in adopting in the Essay referred to.

I take the liberty of addressing this letter to you, as I am anxious that the idea of our disagreeing should not go abroad uncontradicted, inasmuch as it is a source of great gratification to me to find a gentleman of Mr. Petit's position and abilities arriving at the same conclusion as I have done, though hitherto an entire stranger to me personally, because the fact of two independent inquirers agreeing in everything as we do in all essential parts of our subject, may give to others confidence in the conclusions we have arrived at. Jas. Fergusson."

The observations to which we alluded are these, and occur in the Introduction.

"The art of the civil or military engineer [says our author] consists in selecting the best and most appropriate materials for the object he has in view, and using these in the most scientific manner, so as to ensure an economical but satisfactory result. Where the engineer leaves off, the art of the architect begins. His object is to arrange the materials of the engineer, not so much with regard to economical as to artistic effects, and by light and shade, and outline, to produce a form that in itself shall be permanently beautiful."

And afterwards, although it is said that it is indispensably necessary that the architect should understand construction, Mr. Fergusson thinks it would be well if "he could delegate the mechanical part of his task to the engineer, and so restrict himself entirely to the artistic arrangement and the ornamentation of his design." Again, "This division of labour is essential to success," he says, and "a building may be said to be architectural in the proportion in which the artistic or ornamental purposes are allowed to prevail over the mechanical."

Now surely the teaching is not the same in both these instances, but would rather lead to opposite results, in the case of Mr. Petit rendering the architect chief workman, as he should be, and as the title imports, and in the other case the ornamentist only. To this separation of the constructor and deviser from the ornamentist, we have the greatest objection, as we have long ago and often expressed, and we shall be glad if Mr. Fergusson be led to show that his views are more in unison with our own in this respect than the paragraph we have quoted would seem to show.

Let us now give two or three disjointed opinions from the book. As to the *Stone Roofs* of the Middle Ages, Mr. Fergusson says, when speaking of the Roman Basilicas:—

"The roofs of these halls [the basilicas] had one

* "Being a concise and popular Account of the different Styles of Architecture prevailing in all Ages and Countries." In 2 vols. London: Murray. 1855.

tic point of view, than any which can be attributed to the Gothic, but they are not so intimately inwoven in the system. If by their removal the style would cease to be Italian, it would still remain a very good style, and one of great promise, though as yet far from complete. I am not urging the invention of a new style, but the development of one whose elements have existed, and that not in a state of inactivity, ever since the first use of the arch. The railway sheds I have mentioned, the Cornhall at Lille, the front of St. Luke's Hospital, the chapel of the Foundling, the church of St. Benet, abundantly prove to me the possibility of such a development. For plain buildings we have already all we want: the selection and application of ornament require the mind of a master.

I will now conclude by repeating briefly what it has been my object to inculcate. That a strict attention to the purposes of the building you design, a sound principle of construction skilfully carried out, and the knowledge how to make the most of the material entrusted to you, with the resolution to do so, will ensure a certain degree of excellence, and probably be the foundation of much more. By themselves they may not raise your work to the rank of an architectural composition, but they will be a sure groundwork for rules which may enable you to place it in the very highest order. If you value picturesqueness, depend upon it that what results from these elements, without your aiming at it, or thinking of it at all, is the only picturesqueness worth anything. Of real beauty and sublimity the only sure basis is truth, and that is the very thing I am recommending. This will teach you to give propriety and meaning to your purely architectural ornaments, and to dispose in the best manner, both for themselves and for your own work, those which you borrow from a sister art; and whatever style you may adopt, it will urge you to purify it of its errors in the best way you can, rather than to rest quietly and contentedly under the consciousness of their existence.

J. L. Petit.

"BREADTH" IN ARCHITECTURE.

Will you afford space in your periodical for a few observations from a non-professional, induced by the excellent article on "Nash, Schinkel, and Modern English Architecture," which I read with some interest in your journal not long ago.*

I am not about to venture on any purely architectural remarks, nor yet to attempt any defence of Mr. Nash's claims to talent or genius in his art, although I *do* think that professional rivalry, and also some degree of soreness, at his having enjoyed so large a share of royal and other patronage, may in some degree have led to his faults being exaggerated, and his merits ignored or depreciated beyond what in justice he deserved. Taste he most certainly had; and although it might have been more favourably displayed *within* than *without*, yet I am far from being convinced that the present external appearance of Buckingham Palace is a very great improvement. But what I am about to advert to in respect to the article in question will be the observations therein contained upon Breadth —that quality "so difficult to define in words," but so valuable, so almost indispensable an element in any work of art, be it painting, sculpture, or architecture (and I would add poetry and music also), that its absence, to one who has learned to relish and appreciate it, can hardly be atoned for by any other excellence, be it ever so great. But how rare is it—how seldom do we meet with it in either of these arts—more especially of modern days? The ancients, and in particular those marvellous old Greeks, are still immeasurably ahead of all who have succeeded them—at least, in those remains of architecture and sculpture which have escaped the ravages of time. How are we to account for this? Was the cause in the artists themselves, or had external influences their effect in producing, or at least in aiding, the development of this quality? And might not their habit of being so much in the open air, and of course viewing objects much under the "skyey influences," have so acted upon the organ of vision as to make it more than ordinarily capable of feeling this quality,—in fact, of rendering it a normal and as it were natural state, "operating itself unseen," so that they did that unconsciously, as it were, which we often strive to obtain intentionally, but often without realizing? I sometimes think so; and my opinion would seem to be countenanced by the remarks in the article in question, on the advantage to be derived from the study of landscape-painting, as forming part of an architect's education. Did not Gainsborough's practice as a landscape-painter contribute to give that great degree of breadth we see and admire in his portraits? And many of Reynolds's best works are those in which landscape forms a considerable portion; executed, too, in a style which proves that he must have devoted no small share of attention to the study; and, indeed, there is nothing so well calculated to train the eye to perceive objects in a broad, harmonious unity of effect.

An architectural design should, in my humble opinion, carry breadth on the face of it, even in outline; and I would have committees or other parties inviting designs to be sent in for any proposed building, insist on such being executed in one colour alone—*sepia* or *bistre*—or at the utmost with a sparing use of indigo, just sufficient to create a slight opposition of warm and cool tints.

G. J. R.

* Vol. xiii p 585.

SIR JOHN VANBRUGH.

I have been greatly pleased with the information to be found from time to time in *Notes and Queries* respecting Sir John Vanbrugh, of whom I have something new to tell, and about whom I am still desirous to know more.

Sir John was buried in that masterpiece of Protestant church architecture, St. Stephen's, Walbrook, in London, as appears by the parish register:—

"1726. March 31. Was buried Sr John Vanbrough in ye North Isle."

Why was he buried in Walbrook? The inference is that his family was in some way connected with the parish; and this inference is confirmed by the parish register, for the following extracts from which I am indebted to Mr. Crosby:—

"1628. Sept. 25. Was bapt^d^ William ye sonn of Gillis Van Brugh and Mary his Wyff.
1631. Aprill 27. Gyles, the sonn of Gyles Vanbrugh, Marchaunt, and Margarett his Wyfe, was baptysed.
1656. Nov. 13. Was borne a still borne child of Mr. William Vanbruggs.
1657. Jan. 1. William, the sonn of Mr. William Van Brugg, Marchant, and Mary his wife, was baptised.
1659. July 6. Was born Dudley, the sonne of Mr. William Vanbrugge, Marchant, and Mary his wife, and was baptised the 13th July."

These, I am informed, are the whole of the entries in the register of St. Stephen's, Walbrook, relating to the Vanbrugh family.

These extracts are important. Of Giles Vanbrugh, the son of a merchant in Walbrook, we are told that he married Elizabeth, daughter of Sir Dudley Carleton, of Imber Court, in Surrey; hence doubtless the Christian name of *Dudley* mentioned in the above extracts.

Mr. T. Hughes, of Chester, tells us (*N. and Q.* 1st S. viii. 232) that Giles Vanbrugh died at Chester, and was buried in Trinity Church, in that city, July 19, 1689.

Was this the father of the dramatist and architect? I suspect he was. Has his will been looked into?

I have examined Sir John Vanbrugh's will in Doctors' Commons. In his will he mentions two brothers, Charles and Philip (Captain Philip Vanbrugh is a subscriber, with Sir John, to Tickell's "Addison," 4 vols. 4to. 1721), and three sisters, Mary, Robina, and Victoria. Two of these names are unusual. They should serve as a clue to the discovery of the father of the dramatist. Will Mr. T. Hughes, of Chester, kindly inform me if Robina and Victoria are among the names of the daughters of Giles Vanbrugh, baptised in Trinity Church, Chester?

Let me add, that the extract from the "Life and Death of Matthew Henry" (1716), printed in *N. and Q.* (1st S. viii. 480), confirms the supposition that the father of the dramatist was connected with the city of Chester.

Sir John wrote his name in *three* different ways: Vanbrook, Vanbrug, and Vanbrugh. I have seen instances of all three.

There were yet other ways of spelling the name. I have seen it as Vanbergh, Vanbright, Van Beringbrooke, and Van Berenbrocke.

Philip Van Berenbrocke was made one of his Majesty's falconers by warrant under the signet, dated April 22, 14 Charles II. and was paid as such by the Treasurer of his Majesty's Chamber. Giles Vanbrugh (we are told by the biographers of the dramatist) was Comptroller of the Treasury Chamber. But this I doubt. Was there such an officer?

I will ask leave to add another note about the Vanbrugh family, hitherto unnoticed:—

Register of Requests, 1660—1670, *Add. MS. Brit. Mus.* 5759.

"5 May, 1663.

"John and James Vanbergh.

"That y^r^ Pet^rs^ are both twinnes, and borne in London, and for some yeares past have employed a stock left them by their grandfather in a course of merchandizing. Yet some, out of spight, go about to hinder their trading, in regard their father was an alien, though their mother an English woman, and themselves have not attained ye full age of xxj yeares. Prayes y^r^ Ma^tyes^ dispensacon wth their innocent disability, and that they be permitted to trade, &c. His Ma^ty^ having beene moved in this Peticon, his pleasure is, that Mr. Attor^y^, or Mr. Sol. Gen^ll^, doe prepare a Bill for his Ma^tyes^ royal signature, conti^g^ a grant and liberty to ye Pet^rs^ to traffiq, as by them is humbly desired."

Peter Cunningham.*

* From *Notes and Queries*.

THE ABBEY KITCHEN AT FONTEVRAULT.

I am surprised that so accurate an observer as Mr. Petit, and one so intimately acquainted with French antiquities, should mistake the kitchen of the Abbey at Fontevrault for a chapel, particularly as it is so well known a specimen of the abbey kitchen, and so closely allied in form to that at Glastonbury. It will be found carefully figured in Mr. Hudson Turner's volume on "Domestic Architecture," as well as in several French antiquarian works. Its construction scarcely answers to M. Petit's description, inasmuch as the apses, or fireplaces, are attached to the *sides* of the octagon, each side having its own arch and apse. The appearance of their attachment to the *angles*, is only external, and arises from the peculiar manner in which the diameter of the octagonal spire is reduced at its base, from that of the primary octagon, first by reducing it to a square by four arches springing from alternate angles (much as those described by Mr. Petit in the tower, at Antwerp), and then by small arches, or "squinches," across the angles of the square as usual in ordinary spires. This has the effect of changing the direction of the sides of the octagon, and making the fireplaces appear externally to be placed against its angles instead of its sides. Mr. Turner says of this part,—"Between the top of the apsidal vaults and the springing of the spire, there is an interval of modern masonry, and it is here that the shafts of the chimneys have been cut off. It would appear that they were originally carried up in straight shafts, resembling pinnacles round the base of the spire, but there is no positive evidence of this. The flues cannot be traced more than a few feet from the lower opening, but two artists who have furnished sections of the building have both drawn the flues straight up as far as the base of the spire, where they appear to be cut off." The arrangement of these flues probably influenced the design, and should be taken into account in estimating its merits.

I only trouble you with this notice of an accidental error, which you will no doubt have observed, from the feeling that in utilitarian criticism a knowledge of the uses of the building is essential; and because in this case the external appearance has led to a misapprehension of the actual construction. I have no

doubt that the object of this somewhat intricate contrivance was to add strength to a pyramidal stone roof of upwards of 40 feet in diameter, and to bring down its bearing to a level only half way up the walls, instead of their top, which would have been in all probability incapable of sustaining it. G. G. SCOTT.

I presume I cannot have mistaken the building alluded to, though on second thoughts I can scarcely fancy its being taken for a chapel, particularly as no allusion is made to the pyramidal roof, its most striking feature. I must plead guilty of the frailty of finding one's thoughts, towards the close of an archæological day, insensibly turning from the subject in hand towards a modern and strictly utilitarian *cuisine*, and possibly such may have been the case in the present instance.

HOW TO MAKE A FIRE IN A COMMON GRATE WHICH SHALL SAVE HALF THE COAL AND BURN THE SMOKE.

CLEAN out your grate: cover the bottom with a sheet of paper, cut or folded to fit: place your coals in the grate to the level of the top bar, keeping the larger ones to the front to prevent waste. Light your fire on the top, and allow it to burn downwards undisturbed. An ordinary fire, prepared and lighted in this way, will, according to the size and form of the grate, burn six, eight, or ten hours without any renewal of coal, burning brighter and warmer than if lighted from below, as fires are ordinarily made.

The coal should be tolerably equal in size, something like Macadam stone: place the large to the front, the small to the back. The paper is put in the grate to prevent any air rising through the bottom bars. The fire is lighted on the top, and made to burn downwards, to prevent rapid combustion, and to keep the heat at the surface,—the coals, "cinder," or "coke;" and, if undisturbed, the combustion will be so complete, that there will be no waste ashes.

The grate must be cleaned each morning, and the paper must be renewed on the bottom of the grate as it is burned when the fire reaches the lower stratum of coal. The writer and his friends have made their fires, as described, for some weeks, and can vouch for the "saving of coal," the cheerfulness and warmth, and freedom from smoke. In principle, this mode of fire-making resembles that in Dr. Arnott's patent grate, which is fed from below: any smoke must ascend through the fire; and, in doing so, is burned. Some grates may present more difficulties than others, and servants object to the innovation. It is "*beggarly*:" it is "*mean*," &c. My servants, now they have learned how to make such fires, approve of the plan, as "*the grates are not so dirty nor so difficult to clean as formerly*." Think of saving half the coal and most of the smoke from the 300,000 house fires in the metropolis! This is a smoke-consuming feat worth advocating, and, with individual attention and care, may be accomplished. Kitchen fires must, I fear, be exceptional.

ASSISTANCE TO THE EYE IN THE PERCEPTION OF COLOUR IN PICTURES.

EVERY one knows that owing to the peculiar relation that colours have to each other, it is difficult, in arranging a collection of pictures, to prevent them injuring one another: but the fact is not "so generally familiar, that *the impression produced by a colour upon the eye does not cease immediately the eye is removed from the colour*."

Mr. Sydney Smirke, A.R.A. has recently addressed a letter to Sir Charles L. Eastlake, P.R.A. directing attention to this circumstance, and suggesting a remedy. "Let any one," says Mr. Smirke, "who wishes to receive a full measure of enjoyment in a picture gallery hold in his hand a *tablet painted of a neutral tint*, on which to rest his eyes as he passes from one picture to another. Has his eye become inebriated by some florid colorist? A draught of the neutral tint on his tablet will sober it down, and bring it to the full use of its senses. Has he been contemplating a glowing Italian sunset, or 'A Masquerade at Naples?' a glance at his tablet will prepare him for the next picture, perhaps 'A Mist in the Highlands.' By means of his tablet his eye becomes, on each occasion, a tabula rasa,—a cleansed pallet, prepared to receive a fresh assortment of colours. Its discriminating powers are restored; its bias corrected; and thus each picture will stand on its own merits, unimpaired by the disturbing effects produced by the impression left behind by the subject of the spectator's previous examination. A late eminent medical writer on cookery recommended that a saline, or other appropriate draught should be administered to the cook on the eve of a banquet, so that his, or her, taste might be purified and rendered so sensitive as to secure to each *entrée* and condiment the exact flavour that shall best recommend it to the fastidious gastronomer. Very analogous to this would be the operation of the proposed tablet upon the powers of the eye: it would 'purge the visual ray,' and so fit it to discern and appreciate the niceties of the colorist."

In the case of landscapes, where it is desired that the eye should appreciate tints of green, the writer suggests that the reverse of the tablet, a blank page in the catalogue for example, where there is one, should be coloured with a deep, pure, but not bright, *red*. Let the eye absorb a dose from this side before it contemplates a landscape, and it will be at once found to have been brought into a right condition for duly appreciating the artist's labour.

CHURCH-BUILDING AND PROVINCIAL NEWS.

Ely.—The cemetery works for the two parishes in this city are now ready for use. The whole works have been finished, including fencing and laying out of grounds, by Mr. R. Freeman, in about nine months.

Rougham.—The church here, which has long been in a sadly dilapidated condition, is now in progress of being restored. The arch of the tower in the interior was till lately blocked up by a cumbrous and unsightly gallery; but this has now been removed, so as to increase the area of the church and add the western arch and window to the view. The lower floor of the tower will now be converted into a baptistery. The nave roof, which has long been in a mutilated and dangerous condition, has been repaired. The roofs of the aisles have also been made secure. The stonework of the arches, pillars, windows, &c. is being divested of numerous coats of whitewash, the accumulation of ages, prior to being cleaned and restored. This preliminary process has brought to light a representation of the "Doom," or "Day of Judgment," over the nave arch, treated in the mode so generally adopted in the fifteenth century. The floor of the church is to be cleared of close high pews, to make way for oak seats, to correspond in style with the many old open seats that remain in the nave. A new carved oak pulpit, with desk attached, is also to be supplied. The centre floor is to be laid with red and black terro-metallic tiles; but the old monumental slabs will be relaid, and that bearing the brasses of Sir Roger Drury 1418, and Margery, his wife, 1405, will, by the re-arrangement of the sittings, be rendered more easy of access to the ecclesiologist. The works are being carried out under the direction of Mr. J. Johnson, of Bury, architect, by Mr. J. Rednall, jun. of Woolpit, contractor, at a cost of about 750*l.* to be raised by a rate extending over a period of six years.

Portsmouth.—A painted window has been placed in St. Jude's Church at Miss Selby's expense, in memory of a brother. The central compartment has the figure of the Saviour. The side bays are filled with figures of the four evangelists. The figures are somewhat larger than life, and stand in canopies of Gothic work. The remaining part of the window is arranged in architectural devices, interspersed with angelic figures. The window was designed and executed by Mr. Wailes, of Newcastle.

Titchfield.—A new Infant School here was opened on 17th ult. The vicar, during the past year, raised 300*l.* leaving 20*l.* to defray the cost of building the master's house and infant school.

Winchester.—Mr. Myers, the builder of St. Thomas's Church, having agreed to complete the tower and spire of it for the sum of 1,456*l.* his offer has been accepted by the committee for carrying out the work, which, it is expected, will be commenced in March.

Bristol. — Thrissell-street Baptist Chapel, which was destroyed by fire last winter, having been rebuilt, was opened on Wednesday before last. The walls have been raised, and the whole of the front wall above the entrance-portico, and which formerly stood back some feet, has now been brought out over and in a line with the front of the portico. This gives space for a deep front gallery. There are no side galleries as in the old chapel. This leaves the interior open. The pews in the body of the chapel, as also in the gallery, are low and wide; the whole made of deal, stained and varnished, with oak cuppings. The pulpit is large, and more like an enclosed platform than an ordinary pulpit. The roof of the chapel is partly open, being ceiled in a line with the collar pieces of the principals, the timber of which shows, and is stained. The body of the chapel is 48 feet long, and 38 feet 3 inches wide, and will seat 310: the gallery will seat 140. The elevation is simple: it partakes of the plain Italian style. In addition to, and against one side of the chapel, a school-room and class-room have been built, the school-room opening into the chapel, but having a separate external entrance. The original estimate for the chapel was 622*l.* to which have to be added the cost of the new school-room, and extra work, making a whole calculated at 870*l.* The architect was Mr. Henry Crisp, of Bristol; and the builder, Mr. John Neale, of Bedminster.

Liverpool.—On Monday before last, a certificate, acknowledging the completion of the last contract for the Liverpool Corporation Water Works, was given to Messrs. Miller and Lawton, the contractors, by Mr. T. Hawksley, the engineer. The contractors made their total account to be 51,288*l.* 11s. 1d. of which they received 33,000*l.* The remaining balance of 18,288*l.* 11s. 1d. contained some items which were disputed by Mr. Hughes, the deputy town-clerk of Liverpool, with whom there was also Mr. Statham, the resident engineer. It was expected, says the local *Times*, that the items would be investigated by the examination of witnesses who could speak to the various measurements, &c.; but on its being known that Mr. Hawksley had an independent record of all that had been done, both parties agreed to refer the accounts to his decision. The certificate of absolute completion is to be given when the reservoir is full, which is expected to be the case in a week or two.

Cockermouth.—A clock and chimes are to be put up in the tower of Cockermouth Church, at a cost of between 200*l.* and 300*l.* provided by Mr. Steel, M.P. and Mr. Wilson. The order has been given to Mr. Blaylock.

Wigan.—The local Poor-law Guardians have resolved, on the recommendation of the new workhouse building committee, that the works in connection with the new workhouse be let to one contractor, with a proviso that the sub-contractors named by him are satisfactory to the guardians or building committee; and that the tender of Mr. James Fairclough, builder, Wigan, to execute the various works in conformity with the specifications and contract, for the sum of 13,810*l.* be accepted, it being the lowest general tender offered. The tender of Mr. Fairclough in detail, omitting shillings and pence, is as follows: — For general trades, 13,810*l.*; including brickwork, 3,266*l.*; masonry, 3,437*l.*; carpenters and joiners, 4,434*l.*; slating, 827*l.*; plumbing and glazing, 1,022*l.*; plastering and painting, 821*l.* No time will now be lost in commencing the works.

Sunderland. — The extensive workshops belonging to Messrs. Lumsden and Sons, iron-founders, Strand, Monkwearmouth, are now in the process of being removed, and the buildings are being erected of iron. The sides, says the *Gateshead Observer*, are constructed of rows of flat iron pillars, the spaces between which are filled by stout iron wire. The roof is formed of an arch of corrugated galvanized iron.

Elgin.—Elgin, says the *Forres Gazette*, has begun again, after a short pause, to start in the

building line with vigour once more. On the 14th January contracts were entered into for a house in the Elizabethan style, designed by Messrs. A. and W. Reid, architects, and to be the property of Mr. James Watson, Lhanbryde, of the firm of Messrs. Urquhart and Watson, who have done much in the erection of new buildings to decorate the south side of the town. This house is to be erected at the east end. It consists of 10 and 11 feet flats, with four oriel windows in front, with an ornamented door-piece. The contractors for the work are,—mason and slater, Mr. F. W. G. Urquhart; carpenter, Mr. James Macbeth; plasterer, Mr. Jos. Stuart; plumber, Mr. John Gordon. Another building in connection with the North of Scotland Bank is to be raised on the site of the old Trades' Hall. Plans having been drawn by the Messrs. Reid, and approved of, it will be proceeded with. It will tend to improve the central part of the town.

LECTURE ON LABOUR, BY DR. WARREN.

The hall of the Hull Mechanics' Institute was filled, on the 3rd January, to overflowing, by a very attentive audience of all classes, who came to listen to an eloquent lecture by their Recorder, Mr. S. Warren, Q.C. on "Labour,—its Rights, Difficulties, Dignity, and Consolations." The lecture, at full length, has appeared in the *Hull Packet*, and Mr. Warren handed the MS. to the Mechanics' Institute authorities, at their request, for publication in a separate and cheap form.

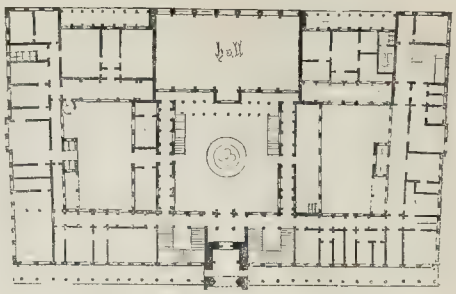
After some reflections on the general subject, in which the lecturer claimed for those engaged in mental labour a distinguished place among the working classes, he proceeded to treat of the rights of labour: these he summed all up in these words, "Labour in England, and in all her dominions all over the world, is free." In respect to our West Indian colonies, Dr. Channing, the American, was quoted on the conduct of this country in not only abolishing West India slavery, but doing it at a prodigious pecuniary sacrifice:—"Great Britain, loaded with an unprecedented debt, and with a grinding taxation, contracted a new debt of a hundred millions of dollars to give freedom, not to Englishmen, but the degraded African. I know not that history records an act so disinterested,—so sublime. In the progress of ages England's naval triumphs will necessarily shrink into a more and more narrow space in the records of our race, but this moral triumph will fill a broader, brighter page." But what, continued the lecturer, is really signified by the expression that labour is free in England? Simply this: that subject to two or three exceptions founded on reason, justice, and humanity, every British subject may work at any kind of labour for any person, anywhere, for any recompense, and for any space of time, that may be agreed upon between him and another. It is no longer ago than 1825 that all Acts were repealed which, under very heavy penalties, prohibited a British artisan from going abroad! He is free now, therefore, to compete with the artisans of the whole world in ingenuity and industry. And when I say that a man may agree to serve for any length of time, I mean that he may, if he choose, contract to work for his whole life, according to the law of England, which, in this respect, differs from that of France, where such a length of service is deemed inconsistent with personal freedom.

The man who sells his labour to another must perform his contract in every respect with as punctual good faith as is required from the party purchasing it; or not only lose all advantage from it, but subject himself to liability, either by a civil action or criminally, under the provisions of various statutes passed for the protection of persons carrying on great manufactures, who might be quickly ruined but for a summary remedy being afforded.

Some strictures were then passed on the practice of truck, and some remarks made on the restriction of the hours of labour, and the work of women and children. The evils resulting from trade combinations, were dwelt on at some length, and the past and present state of the law on the subject pointed out. The lecturer could suggest no specific for the malignant disorders connected with this culminating point in the freedom of labour, except that true Christian feeling which as effectually prevents as cures them.

Having taken a comprehensive, and he hoped a correct view, of the rights of labour, all really resolvable into its freedom, the lecturer proceeded to remark, that it had already been seen that the exercise of these rights of itself suggests many of the difficulties with which labour has to contend, and these often of a serious and severe character. Besides these, however, it had others to arm against. Ignorance and unwholesome dwellings were then dwelt upon at some length, in connection with their proper correctives and antitheses: so with improvidence and intemperance, on which latter subject the lecturer also expatiated.

The difficulties of labour were finally taken leave of, by a short quotation from Edmund Burke, as consolatory in hours of fatigue and depression:—"Difficulty is a severe instructor, set over by the supreme ordinance of a parental guardian and legislator, who knows us better than we know ourselves, as he loves us better, too!" With this healthy tone communicated to our feelings, continued the lecturer, let us approach the last department of the subject, and see whether labour, though it have its serious difficulties, has not also its dignity and consolations—aye, real dignity, and rich consolations. It was then boldly laid down, that with free and virtuous man there is no kind of labour that cannot be invested with dignity—a dignity depending on the spirit in which labour is undergone, the objects for which it is undertaken. Even compulsory labour, and designed to be degrading — the labour of the felon—might be performed with dignity, if the unfortunate labourer were conscious that he was the victim of injustice. In considering the consolations of labour, the speaker, in conclusion, gradually ascended from all other and more earthly consolations, to those higher and more secret sources of strength which brace the nerves, strengthen the arms, and support the heart of the virtuous workman; so that even should he lose the favour of an earthly master, he serves a heavenly one, whom he shall, by-and-by hear, when he has rested from his labours, saying—"Well done! thou good and faithful servant!"



PLAN OF HOTEL DE VILLE, HAMBURGH.

THE HOTEL DE VILLE, AT HAMBURGH.

The selected design for the proposed Rathhaus, or Hôtel de Ville, at Hamburgh, has many and great beauties, in spite of an objection to a portion of it, which occurred to us on first seeing the drawing in the Exhibition at the Royal Academy; and, when carried into execution, will increase the already sufficient fame of the author of it, Mr. G. G. Scott. Our engraving represents the principal front (the top of the spire being cut off, to prevent too great reduction of the view), and we add a small plan, to show the internal arrangement. The building will be a complete Government house, embracing all the various offices required for the different departments of the Government of an independent state and a great commercial city. The leading departments are as follow:—

1. That for the senate; comprising a large hall and several committee-rooms, offices, waiting-rooms, rooms for archives, &c.

2. That of the representatives of the citizens; consisting of a hall of great size, in which the senate and citizens meet every month for the discussion of matters of state; committee-rooms, and rooms for the representatives of the several parishes into which the city is divided.

3. The financial department; embracing that of direct taxes, those of indirect taxes, customs, excise, and stamps; offices for the regulation of trusteeships, the property-tax department, &c.

4. Law courts, both civil and criminal.

5. Miscellaneous public offices, such as offices for the regulation of partnerships, bankruptcy courts, the public archives, offices for matters relating to mortgages; those of the board of works; those for the registration of marriages, &c. and several other matters.

The Great Court, or "Gehege," would be used by merchants and others, who have business of a public as well as of a commercial nature; an off-shoot, in fact, of the Exchange, in the midst of the public offices.

THE NEW PRACTICE-RANGE, WOOLWICH.

The military authorities having found the present practice-range inconvenient and dangerous, from the fact of the firing being at nearly right angles to the Thames, it was decided some time since to purchase land to the eastward, and running more parallel to the river, by which means the fire of the artillery would not endanger the shipping, &c. as their range would be entirely within their own premises. The particulars of the contemplated works are briefly these:—

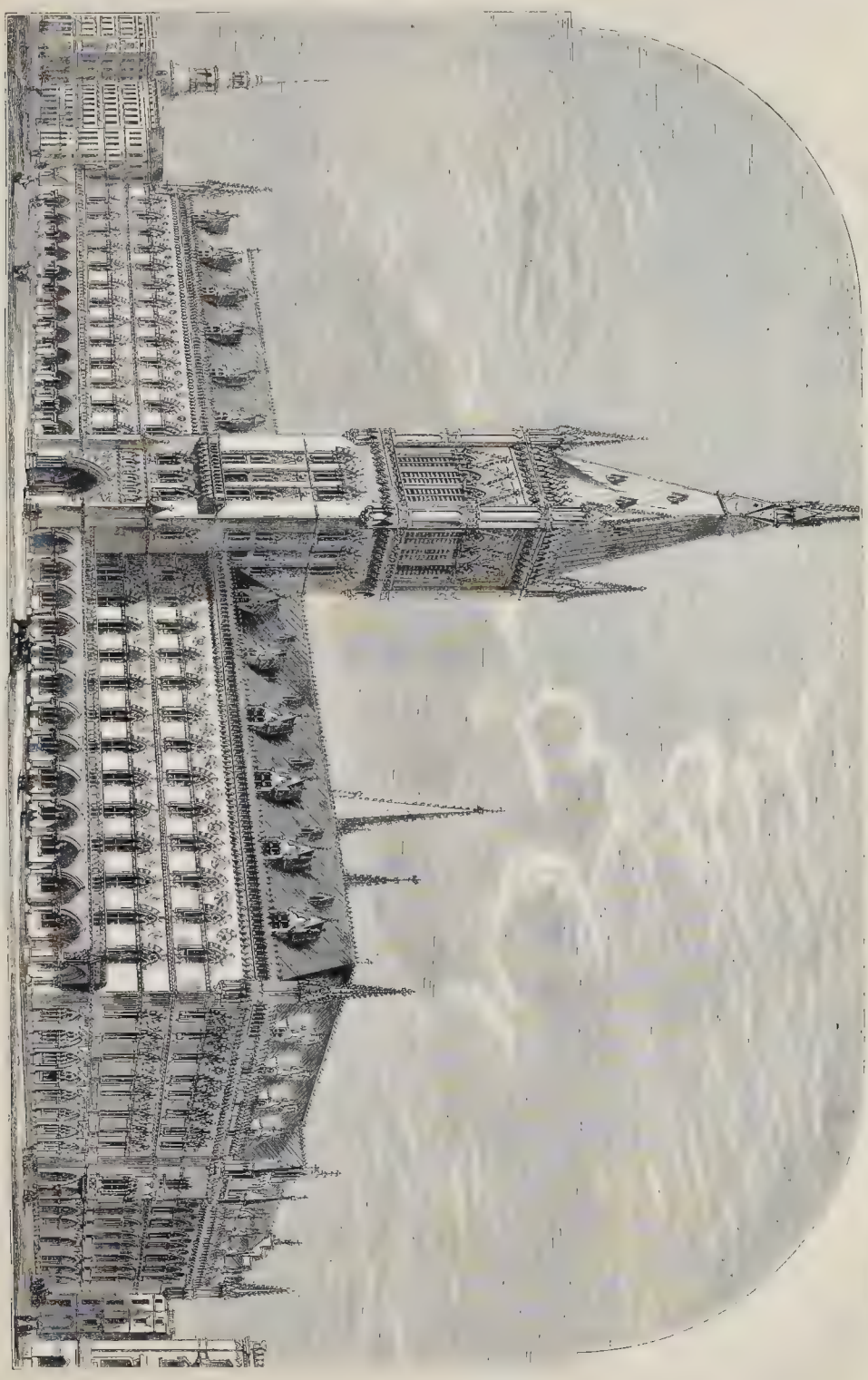
The new range will run in a direct line to the east of the existing artillery road, and will have at the western end a plain building, called the "Lobby," in which will be accommodation for a non-commissioned officer and gunners, also a guard-room, and room for the meeting of any committee that may be in attendance to report on experiments. Near to this are two batteries, one of which is for ten guns, the other for mortars. There are also two wooden batteries, representing the sides of a ship, pierced with port-holes, for the practice of naval gunnery. A martello tower will also be erected in the immediate vicinity of the foregoing. Two magazines and sheltered coverings, called "splinter-proofs," for the protection of the men engaged during the firing, are also provided.

One of the principal features of this large work is the Great "Butt," or mound, against which the practice of the artillery is directed, which is to contain nearly 46,000 cubic yards, and is to be constructed on a foundation of consolidated gravel and fascines. There is a bomb-proof range-room at the back, approached by "ramps."

To maintain the existing drainage of these marshes (a difficult thing to contend with), the trenches or ditches have been filled with old bricks, broken stones, &c. so that while a level surface is secured (which of course is necessary for military evolutions), the percolation of the surface water freely takes place through this rubbish drain.

The whole of the new range is surrounded by a wide boundary ditch, and bridges cross the intermediate fleets that intersect the range. The designs have been prepared by Mr. Stent, the newly-appointed chief clerk of works to the War Department, and will be carried out by Mr. E. Smith, the contractor. The service is under the military supervision of the Royal Engineers' Department.

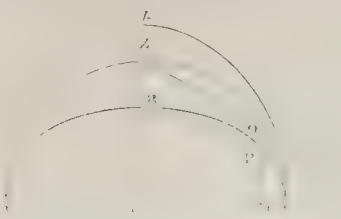
Value of Property in Pall-mall.—Messrs. Farebrother and Co. recently sold a leasehold estate in Pall-mall East, comprising the premises occupied by the Society of Painters in Water-colours, the entrance adjoining, with private residence, warehouse, and cellars, occupied by a wine merchant, private residence adjoining (No. 6, Pall-mall East), and ground-rents amounting to 58*l.* 5s. 6d. issuing out of chemist's shop and house adjoining, Dorset-place, the whole producing 940*l.* per annum, and held under three leases, expiring in 1919, at ground-rents amounting to 196*l.* 10s. 6d. per annum. It was knocked down at 10,800*l.*



RATHHAUS, OR HOTEL DE VILLE, HAMBURGH.—Mr. G. G. Scott, A.R.A. Architect.

GEOMETRICAL PROPERTIES OF CONIC SECTIONS.

THE ELLIPSE.*



MANY of the properties of the ellipse may be advantageously considered in connection with the circle drawn upon the *major axis*, the centre of the ellipse being that of the circle; this circle is called the "circumscribed circle."

If we draw any line M P Q perpendicular to the major axis, M Q is called an *ordinate* of the circle, and M P an *ordinate* of the ellipse. There is an important connection between the two curves, namely, that *the ellipse is the circle with all its ordinates reduced in one and the same proportion*, which is that of C B to C Z or C A, or, *in the ratio of the minor axis to the major axis*. Hence it follows that M P : M Q = C B : C A. Therefore, if we have given the lengths of the axes, and we draw the circumscribed circle, we may find points on the ellipse, provided we can discover a means of reducing the ordinates in the ratio of the axes. By aid of the sixth book of Euclid this can readily be done.

Produce the axis A *a*, and draw from any point O on the axis produced O Z and O B, and from the point Q, where O Z cuts the circle, let fall a perpendicular on A *a*; then the point P, where Q M meets O B will be a point on the ellipse. So also any number of points may be readily found with the ruler only; for by the sixth book of Euclid, M P : M Q = C B : C Z.

This method of drawing an ellipse will be found more practical by draughtsmen than any other method.

If instead of cutting down the ordinates of the circle in one proportion we lengthen them in the proportion of C Z or C A to C *b*, then we shall have another ellipse, whose *minor axis* is the diameter of the circle, and the curve will be entirely outside the circle. Hence it follows that if we project a circle by means of parallel lines upon a plane oblique to its own plane, we shall always obtain an ellipse, since all the ordinates will be altered in one proportion.

It will be evident from what has been stated that if two circular vaults of equal radius intersect at right angles, they will form an elliptic groin at their intersection. It will also follow that if two cylindrical vaults of equal height, but of different span, of which the lesser is semicircular, intersect at right angles, the vault of wider span must be elliptic, in order that the intersection may be in one plane.

The perspective representation of a circle must always be an ellipse, or of a *portion* of a circle the corresponding *portion* of an ellipse; for the rays of light from a circle to the eye form a conical surface, of which the eye is the vertex and the circle is the base, and any plane intersecting this surface forms an ellipse at the line of intersection. This is an important rule to be remembered by architectural draughtsmen, if they would avoid distorting their arches in perspective views. E. W. T.

* See p. 6, *ante*.

CANDLE-MAKING.—GLYCERINE.

AT the Society of Arts on January 23rd, a paper "On the Manufactures of Price's Patent Candle Company," by Mr. G. F. Wilson, F.R.S. was read, wherein the writer said candles might be divided into four classes. 1. Beeswax, called wax candles. 2. Neutral fat, including spermaceti, tallow, and cocoa-nut candles. 3. Fat acid, known as stearic candles; and, 4. Composite candles, being a mixture of stearic acid and neutral fat. He explained that the reason why a tallow candle requires more than three times the size of wick to give the same amount of light as a stearic candle, was owing to the glycerine being present in the one case, and having been separated in the other; and he demonstrated, experimentally, that glycerine has the effect of reducing the illuminating power of candle material. To get rid of this was the necessity which first called in the aid of science to candle-making. Chevreul, the great chemist, may fairly be called the father of this application of science. His labours, begun in 1811, were collected and published in his "Récherches Chimiques sur les Corps Gras," in 1823. Two years later, he, in conjunction with Gay Lussac, sketched out the idea of the distillation of fatty bodies, and even touched lightly on the introduction of steam into the distillatory apparatus; but he did not succeed practically. Messrs. Motard and Milly, in 1833, first made fat acid or stearic candles commercially successful. Their process was called lime saponification, and was adopted by the English candle-makers, including E. Price and Co. It was, however, expensive; as, to each cwt. of tallow, 14 to 16 lbs. of lime, and 28 to 32 lbs. of sulphuric acid were employed. Subsequently, in 1840, Mr. G. Gwynne proposed the exclusion of the air by means of an air pump, from the apparatus while distillation was going on. Mr. Wilson then described the nature of the patents taken out by the company in 1842-3-4, for distilling cocoa-nut oil and its acids, for the distillation of fats previously acted on by sulphuric acid, or by nitrous gases, and for the use of diluted acid in direct acidification of fats. The author alluded to the important purposes which glycerine would subserve in the arts and medicine. For photographic purposes, the experiments made by Mr. Maskelyne and Mr. Llewellyn were most promising. In the Hospital for Diseases of the Skin, it had been long introduced by Mr. Startin. In Edinburgh it was being prescribed regularly. To show the extent of this company's operations, it may be mentioned that in the month of October last, employment was given to 1,098 men and 1,191 boys and girls, and that of stearic and composite candles, and night-lights, about 707 tons were manufactured, value 79,500*l.* in the month.

ON THE PAST AND PRESENT CONDITION OF THE THAMES.

INSTITUTION OF CIVIL ENGINEERS.

AT a meeting on the 22nd of January, Mr. Robert Stephenson, M.P. president, in the chair, the paper read was "On the Past and Present Condition of the River Thames," by Mr. H. Robinson.

Some of the principal statistical facts connected with the river having been enumerated, the writer said, the numerous shoals now exposed at low tide, the mud-banks covered with putrifying matter and animalculæ, the disgusting state of the water itself, the numerous crazy wood-propped wharfs, and the ricketty barges still serving for steam-boat piers, were referred to, as justifying the opinion, that were it not for the noble bridges spanning it, the Thames, within the limits of the metropolis, would be a disgrace at home and a reproach abroad, and it was remarked that in no town in the world was there a noble river so neglected and deformed.

The various schemes for embanking the shores were then alluded to, and the partial good already effected, was noted. Among the larger designs were those of Sir Christopher Wren, Mr. Martin, Messrs. Walker and Burgess, and others. The removal of the obstruction of Old London-bridge had seriously altered the condition of the river at or near low tide, not only by exposing shoals, which impeded the navigation, and, by leaving a very large surface of mud, giving off exhalations dangerous to health, but also, by so quickening the current, as to enable it to scour away the bottom, near to the foundations of structures built in the channel, and thus seriously endangering several of the bridges and wharfs.

The various causes which had induced the present polluted condition of the Thames were described to be, first, the demand made upon it to serve as a town sewer as well as a land drain. This would, however, have been of little moment, if London had been beyond the influence of the tide, so that the stream could have run always in the same downward direction; but, exposed as the river was to the ebb and flow of the tide, the impurities and sewage, which had been discharged into the ebbing tide, were again brought back by the flood. Nor was this all: in consequence of the low level of a considerable part of the London sewers, the sewage was necessarily stopped back for many hours, and egress could not be afforded, until the water had fallen considerably: the consequence of this was, that it was only during a portion of the ebbing tide, that the sewage was enabled to travel down the river, but it was returning upwards during the whole period of the flood-tide; so that the impurities not only returned to the place whence they started, but were even carried higher up; and it was asserted that some of the putrefying matter, exhaling pestilential odours on the mud-banks in Westminster, was actually discharged from sewers at Bermondsey or Southwark. A short history was then given of the steps taken by the late Commissioners of Sewers to remedy this putrid condition of the river. Mr. Frank Forster had arranged a system of intercepting sewers, by which the sewage of London was intended to be conveyed below Greenwich, and there discharged into the river, at an expense of one million and a quarter sterling. Nothing was, however, done, for want of funds: subsequently Mr. Bazalgette, under the orders of the commissioners, extended and completed the plans, and at an expense of three millions, laid out a system of intercepting sewers. The increased amount of the estimates rendered still more difficult the execution of the works, and nothing was done till the commencement of the past year, when public feeling loudly demanding some amelioration in the condition of the Thames, it was resolved to make at least a commencement; but all progress was stopped, the board disunited, and some of its most efficient members lost to it, by a controversy which arose regarding the size of the sewers. This controversy still continued, and involving, as it did, the question of economy, would probably still divide the new Metropolitan Board. These differences were, however, of the less importance, the writer thought, as there was little chance of such an enormous sum being raised at present for the purpose, particularly as the mere stopping the entrance of any fresh sewage would not cleanse the Thames, under many years, if at all, nor remove the acknowledged principal source of malaria, —the mud banks exposed at low tide. There was, therefore, every reason to fear that the salutary agitation which had been excited on this important subject would again die away, and leave the sewage undiverted and the Thames uncleansed, until a fresh visitation of malignant cholera again roused the public feeling.

The author's proposal to construct a chain of locks across the river, at, or near London-bridge, where the traffic was now divided, already mentioned in our pages, was described.

On the 29th ult. the preceding paper was discussed; and will be again considered on the 5th.

EPISCOPAL PALACE, BISHOP'S WALTHAM.

ABOUT ten miles from Winchester is the little town of Bishop's Waltham, founded, as its name declares, by the Saxons [*i.e.* wood town], unknown, perhaps, to the greater part of your readers, and yet containing many interesting memorials of the past, which would well repay an architectural visit.

The manor having been added to the see of Winchester by William the Conqueror, it gained the prefix of *Bishop's*. We find the first mention of it in the Doomsday Book:—"Ipse episcopus tenet Waltham in dominio. Semper fuit de Episcopatu." Leland speaks of it as a "praty townlet," where "the Bishop of Winchester hath a right ample and goodly manor place, moted about, and a praty brook running hard by."

At a short distance from the town stands the ruin of what was then the "goodly manor" or episcopal palace, founded about the year 1138, by Henry de Blois, brother of King Stephen, and then Bishop of Winchester, who, about the same time, founded and built the castles at Wolversly, Farnham, Merdon, and Taunton. It was here, "at the Bishop of Winchester's, Waltham," that Henry II. convened his nobles, and held a council of the realm; and it was here, at that council, that supplies were granted for carrying on the war in which he was engaged; nay, more, it was here, at that very time, that he made his will previous to joining his brother Crusaders of France. Here, also, our Lion-hearted monarch rested, on a similar occasion, on his way to Portsmouth, where he embarked, never to return.

We see it now inhabited by pigs, and approachable only through dung and filth; parts of it changed into stables and pigsties, the rest uncared for and dilapidated—the hand of time the least of its destroyers. Was it for such an end that William of Wykeham expended so much love and labour upon it? Could he have discovered that future bishops would

have looked upon it as it is, or that the mind's eye alone could trace his hand, in this 19th century of ours, what would have been his thoughts! As its dismantled walls look mournfully down, and memory holds us by the mental button, we almost wish the old days back again. No doubt, ignorance would be pleaded as an excuse, if any were questioned as to its condition. Might not the bishop, who has followed in the wake of so many distinguished by the glory of their lives, be prevailed upon to sacrifice a little of his worldly goods to rescue it,—if not for his own sake, at least for the shadows of the past?

But, still more disgusting than the condition of the palace, and not to be passed over on the plea of ignorance, are the modern improvements (!) to the church. Beautiful in itself, as all Gothic buildings in England are, with any claim to age, it is disfigured by the most monstrous architectural blunders I remember to have seen. A number of Gothic arches have been removed, to make room for a gallery supported on Tuscan columns, with the usual cornice, &c. I know not if an architect were employed: let us hope not.—X.

THREE HOUSES DESTROYED IN THE NEW-ROAD.

On Thursday in last week, while the gale of wind and storm were at their height, three houses were entirely crushed, and their inmates buried in the ruins, by the falling upon them of the immense mass of brickwork comprising the eastern and south-eastern walls of Messrs. Hopkinson's pianoforte manufactory, destroyed by fire on the night of Saturday and morning of Sunday, in the week before last. This manufactory was an extensive building six stories high, situate in the rear of Messrs. Gray and Davidson's, the organ-builders, in the New-road. The houses crushed stood immediately under the wall of the manufactory, to shore up which, it is said in the daily papers, that no steps whatever had been taken since the fire. Labourers being procured, several persons were speedily rescued who had received but slight injuries, whilst seven or eight were got out in an insensible state. The most serious case was that of a young woman, whose jaw was broken, and skull frightfully fractured, and who is since dead. It is remarkable, as well as fortunate, that of the seven taken to the hospital six were sufficiently recovered to leave in the course of the day. Several poor families have lost all their furniture by the occurrence.

At the inquest which has been opened by Mr. Wakley, the coroner, the question was raised whether (with reference to the New Building Act) the Commissioners of Police and other parties had acted rightly in permitting the walls to remain without being shored. It was ultimately decided that an architect should be appointed on the part of the jury to make a survey of the premises and report, and the inquiry was accordingly adjourned.

ON LARGE BELLS—UNISON.

The subject now occupying the attention of the Royal Institute of British Architects is "On the Forms, Methods of Casting, and Ringing of large Bells." This must, to a considerable extent, depend on matters of opinion, for if we suppose a long series of experiments are being investigated, under the direction of the most competent parties, to ascertain whether some totally different instrument for producing the sound of a bell might not be introduced, which would be much lighter, much less costly, and less likely to be cracked, the quality and fitness of such substitute must, after all their researches, principally depend upon the ear. Gentlemen who have successfully studied music all their lives will, of course, think they have a very sensitive ear, and that their acoustic organs are correct enough for all musical or practical purposes: this may be admitted, and also that the sound of bells may be correct enough for all practical purposes. But suppose a large bell be made to ring a certain note, and a mass of metal, of a totally different form from that of the bell, be made intentionally to give precisely the same note, some persons might say they were in perfect unison, while others might entertain a totally different opinion; and it could only be a matter of opinion with either party, for I am not aware of any method of proving which would be right.

It is almost impossible to determine quantities by the eye; but if two squares, or two circles, were represented near each other, and it should be doubted whether they were of the same dimensions, the matter in dispute could be easily proved by measuring them; but there is no mode of proving so accurately by the ear. A very ingenious instrument, called "the syreae," has been invented to determine certain matters connected with sound; by the use of which, the exact number of beats, or vibrations in a given time, may be calculated, and certain musical notes produced. Simple, complete, and correct in itself, as this machine appears to be, its application to determine the corresponding note of a bell, or other musical instrument, must rest entirely on the ear and the opinion of the hearer, whether he considers the two sounds to be precisely the same, and in perfect unison; that is, do they beat a like number of vibrations in a given time, which is a question more easily asked than answered to a certainty. The number of beats per second of the "syrene" may be calculated correctly, but who can count the vibrations of a bell or a harp-string? Such nicety of observation must rest with the expression, "I think the two sounds are alike, but I am not certain." No doubt any one with a highly-cultivated musical talent will do much towards determining such a difficult question; but up to the present time, practical proof appears to be involved in impenetrable obscurity. C. H. Smith.

GAS.

In consequence of the threatened formation of a Gas Consumers' Company at Willenhall, the shareholders of the existing company have authorized their directors, at the request of a deputation of gas consumers, to give such reduction in price as may seem fit. The directors, however, seem to entertain the idea that the limited consumption renders the granting of such a reduction as that desired unadvisable.——The lessee of the *Lincolnshire Chronicle*, who is a shareholder in the Lincoln Gas Company to a small extent, endeavours, in last week's *Chronicle*, to show the undesirableness of forming the threatened gas consumers' company, and holds out a prospect of a reduction in price from 5s. to 4s. or perhaps 3s. when the enlargement of their works is paid for.——It is proposed that the highest charge by the Gainsborough company, for gas supplied by meter, shall not exceed the rate of 5s. 6d. per 1,000 cubic feet, unless the cost of the best Silkstone coals at the Gainsborough Gasworks shall exceed 15s. per ton, in which case the price for gas shall be increased 6d. per 1,000 feet, and shall be further increased 6d. for every additional 5s. cost per ton of the said coals, or for any fractional part thereof.——Notice has been given of an advance from 5s. by the Southampton company, on the ground of a rise in the price of coals, the advance to take place on 1st January. An agitation is going on here, too, in favour of a consumers' company.——Mr. G. Flintoff gave lately a lecture at Hereford, on the gas question. In course of his lecture he stated that from a ton of coal 10,000 feet of gas are made, and after that has been extracted, 13 cwt. of coke remain, besides 10 gallons of tar, and 10 gallons of ammoniacal liquor. In Hereford, where gas was at 6s. he would estimate the ton of coal to cost 16s.; the 13 cwt. of coke would be worth 14s.; the 10 gallons of tar would sell for 1s. 3d.; while the ammoniacal liquor would run to waste: this would reduce the actual cost of raw material to 9d. for 10,000 feet of gas, being not quite 1d. per 1,000! The cost of coals had little to do with the cost of gas, because wherever coal is dear, an increased proportionate price is obtained for the coke. In London the cost of raw material for 10,000 feet of gas was 4½d.; in Burnley, 3d.; and in Liverpool, 5½d. In Boston, a place very similar to Hereford, the coal was 18s. per ton, and 16s. 6d. was got back for coke, tar, &c.; which reduced the cost of material to 2d. per 1,000 feet. Taking, then, these facts as they stood, there was no reason why Hereford should not have gas at 3s. per 1,000, because the cost of labour was in all places nearly the same. In some places the system of having gasworks under the management of corporations had been most successful. In Manchester there was a profit of 50,000*l.* per annum from this source, which was expended in paving the streets and improving the town; and they had also extended their light to the out-districts, finding that gas-lamps very effectively do the work of policemen.—A discussion followed the lecture, and a vote of thanks was passed to Mr. Flintoff.

The Colchester Encampment.—The new barracks in the Ordnance-field, Colchester, are now almost completed. A wooden church, to accommodate 800 to 1,000 men, is being erected in the old military burial-ground, near the camp. A building has been raised for a library. The camp is to be lighted with about forty oil-lamps till gas-lamps are got ready. Several fire-engines have been temporarily placed in the engine-house, till others of a more powerful description are supplied. The camp will partly be enclosed with a wall 12 feet high, and by a fence of oak paling of same height. The Government Inspector has examined the works, and expressed satisfaction with the execution of the contract by Messrs. Lucas, Brothers. It is thought probable, from the size of the camp, that more hospital huts will be required.

FAILURE OF BUILDINGS.

Four newly-erected houses have recently fallen in Paddington, in consequence, it is stated, of the flooding of the basement by the escape of water laid on to an adjoining tank.

Other falls have lately occurred in the suburbs of the metropolis; and we would earnestly reiterate our caution often before given at this period of the year. Unless better *mortar* be used, and more care taken in quarters to which we could point, we shall have some serious accidents to record before long.

BUILDING PATENTS.

The following are selected from lists in the *Mechanics' Magazine*, and other sources. All except the last are specifications of patents recently filed:—

Lee, Henry, jun. of Lambeth, contractor, and John Gilbert, of Hackney-road, engineer. "Certain machinery for mixing the substances used in the formation of concrete and other like substances." Patent dated May 2, 1855 (No. 986). This invention consists in mounting a cylinder or case upon a shaft, and in providing such cylinder or case with an aperture and cover which forms both the feed and exit passages for the materials. Rotary motion is communicated to the cylinder, and after having been continued a sufficient time, the cylinder is stopped with the aperture downwards, the cover is removed, and the concrete runs out.

Hamilton, John, jun. of James-street, Liverpool. "Improvements in the construction of iron girders." Patent dated May 4, 1855 (No. 999). In this invention a series of corrugated sheets of iron are used in constructing the upper part of a girder, fastened together, and kept at a distance apart, and parallel to each other, by transverse partitions of wood or iron, with undulations to correspond with and fit the corrugations of the sheets.

Newton, A. V. of Chancery-lane. "Improved machinery for manufacturing bolts," &c. (a communication). Patent dated April 20, 1855 (No. 888). Iron of a size corresponding to that of the head of the finished bolt, or slightly smaller, is heated and submitted to the action of certain dies, after which it is carried to other dies, and the shank is drawn down. The form of the shank is then perfected by a cylindrical die, and the bolt is severed from the bar by other dies. The head is then perfected by a heading die.

Bowron, James, of Tyne and Tees Glass-works, South Shields. "An improvement in the manufacture of glass tiles." Patent dated May 8, 1855 (No. 1,031). *Claim.*—The manufacture of glass tiles by pressing them from fluid glass, instead of first making the glass into sheets and then shaping it.

Muller, Emile, civil engineer, Joseph Gilardoni, and Xavier Gilardoni, of Rue de Provence, Paris. "A grooving and clamping hooked tile, by means of which the entire covering of a roof is tied together. A machine, for the fabrication of such tile, by which it is continuously delivered from the mould through a peculiar system of delivery, applicable to any matter that may be moulded, and a continuous succession of furnaces for its burning. Patent dated April 27, 1855 (No. 952). The inventors describe certain improved tiles, so shaped that a recess in one falls over a projection on the other, the whole being afterwards clamped together by means of metallic wires, &c.

Sanders, F. G. of the Patent Architectural Pottery, Poole, Dorset. "Improvements in brick, pipe, and tile machines." Patent dated May 12, 1855 (No. 1,069). *Claims.*—1. The construction of brick, pipe, and tile machines, wherein screws are fitted at either end, for the purpose of forcing the plastic materials in opposite directions. 2. The application of knives, either to double or single shafts, for mixing and forcing clay through the die or lateral openings, or for pugging.

The following is from a list of provisional specifications not proceeded with:—

Wright, L. W. of Birmingham, engineer. "Certain improvements in locks." Application dated May 1, 1855 (No. 978). This invention consisted in constructing a form of lock in which the key had to pass one or a series of slotted plates or wards, at every half-turn. A screw-pin, being an exact counterpart of the screw-key, is fitted to the lock-plate, and receives the key, on the lower end of which may be a bit to catch one or more tumblers. A cam piece is attached to the stem of the screw-pin at its lower end, and under the bolt, and when in a state of rest, is in a line almost parallel with and against a portion of the bolt. The tumblers are applied to side of bolt, working by means of a spring in a slot or notch, which tumblers are raised by the key in locking only, and not in unlocking: the screw-key both in locking and unlocking turns in same direction.

Notices of Books.

Treatise on Conic Sections. By the Rev. G. SALMON, M.A. Third edition. Longman and Co. 1855.

THERE is scarcely any scientific subject upon which so many treatises have been written as the conic sections. Since the time of Archimedes they have formed subjects for investigation to every eminent mathematician, each finding some new beauty or peculiarity in these remarkable curves. But it is from the time of Des Cartes (A.D. 1637) that we date the most important development of the properties of conic sections: it was he who by first bringing the powerful aid of algebra to bear upon geometry, laid the foundation of our extended knowledge and application of these curves. The method which he introduced was the laying down the position of any point on a curve with respect to a fixed point called the origin. This is done by drawing two straight lines, intersecting at right angles in the origin, and measuring the distance of the point from each line. To take a familiar illustration of this, let us suppose a small object laid on the floor of a room, and we require to know exactly its position with respect to one corner of the room, so as to be able to place it at the same spot again: if we measure its distance from the two walls which meet at the given corner, this will enable us to restore it to its place.

This is the principle introduced by Des Cartes in applying algebra to geometry; and the two measurements above described are called the *co-ordinates* of the point. His method is now universally adopted in all works on the higher branches of mathematics or natural philosophy, and according to it a curve is said to be given when its *equation* is given, *i.e.* the relation which exists between its co-ordinates, which are generally called x and y. In algebra, an equation is said to be of the *first degree* if x or y enter it with no higher powers than the first, and of the *second degree* if x^2 or y^2 enter into it, but no higher powers. Thus, the conic sections are called curves of the *second degree*, since their general equation is,—

$$Ax^2 + Bxy + Cy^2 + Dx + Ey + F = 0;$$

and this equation stands for ellipse, parabola, hyperbola, or straight line, according to the values given to the co-efficients, A, B, &c. Hence this branch of mathematics is now called "Algebraic Geometry;" but the term belongs to every application of algebra to geometry, which now extends far beyond the limits of the conics.

The work before us is one which we should have great confidence in placing in the hands of students desirous of an intimate acquaintance with the higher mathematics, since it will introduce them to all the most approved modern methods of treating the subject, and also will carry them far beyond what most works of the kind will do; as, for example, the "harmonic properties" of conics, and the interesting theorems connected therewith, of which a full account is given, but which have hitherto been generally avoided or merely glanced at in elementary treatises. There is one point in the arrangement which may cause difficulty to the elementary student, viz. discussing the ellipse and hyperbola together in the same chapter as "central equations," which has the advantage of showing their intimate connection, but is likely to prove very embarrassing to the student, for whom it is necessary to treat the peculiarities of each curve separately. To make this treatise complete, there should be a separate chapter on each of these curves previously to that above mentioned.

The fact of this work having arrived at its third edition in five years, proves that it is one for which there was a want, and that it has filled up the lacuna. The edition before us contains much new matter in the way of examples and applications of the various theorems.

VARIORUM.

"Health and Comfort; their Attainment and Preservation," by George Wyld, M.D. is a little threepenny tract intended for distribution among the working classes, for which purpose it is to be sold (in quantities, and at a reduced rate) at Exeter Hall, by the Society for Improving the Condition of the Working Classes, as well as by the trade publishers, Shaw, of Paternoster-row, and others. In his brief introductory remarks, the author says, "At our hospitals and dispensaries in London there are probably not fewer than 500,000 prescriptions written in a year for ailments, a very large proportion of which might have been avoided by attention to the most common rules of health. There is, however, at our hospitals, no opportunity for explaining fully to the patients these very simple though much neglected rules; and it is with the hope of in some small degree supplying this want that I now publish this little work. We have hundreds of thousands of religious tracts annually distributed among the working classes; but though sin, disease, and misery, ever go hand in hand, we have few tracts bearing upon the moral and physical condition of the people. I earnestly desire to supply in some degree this crying want." The limits being very circumscribed in a tract for extensive distribution, likely to be at all saleable, the various subjects treated of are unavoidably handled in a curt and axiomatic way, but with those multitudes amongst the working classes who require such tracts, this is precisely the way best adapted to give force and effect to sanitary and other rules of moral and physical conduct. Such tracts are much needed, and might very advantageously be combined with, and distributed amongst, religious tracts themselves, harmonizing as they mutually do in the promotion of the moral and general elevation of the lower orders.

Miscellanea.

THE PAVILION AT BRIGHTON.—A paper on this once "Royal property" has been printed by order of the Pavilion Committee,—namely, the report of a sub-committee, "for appropriation of the Pavilion Property." It is dated 14th January, 1856, and occupies nine closely-printed pages of foolscap. From an abstract of it in the *Brighton Herald*, it appears that the scheme is a colossal one, which will require a large sum to carry it out; but the purpose is to make the Pavilion a paying concern, while devoting it to public purposes, and to recreation and amusement. The palace proper is proposed to be divided and mainly rented for public or social purposes, weekly or nightly; the north property to be converted into a winter garden (to occupy the great dome), a museum, picture gallery, public library, and riding-house; and the grounds and precincts to be arranged and altered in detail, as suggested.

THE WESTMINSTER IMPROVEMENT COMMISSION.—Some extraordinary revelations have come forth with respect to this corporate body, which was created by Act of Parliament ten years ago for the purpose of building Victoria-street, Westminster. The body had almost the character of a Government corporation, for it was endowed with an unrestricted power of borrowing money, coupled with grants out of the London Bridge Approaches Fund, and the improved rates of the parishes in Westminster. The accounts were to be examined by the Commissioners of Woods and Forests. The corporation at length became involved: bonds were issued to builders, who advertised them for sale upon the lowest terms; and in January, 1855, the commission became totally insolvent. A meeting of the bondholders was called: a committee of investigation was appointed; and a petition has been presented to the House of Lords, and a bill of complaint filed in Chancery. It is asserted that the commissioners have incurred a deficiency of 100,082*l*. They have since, as far as can be ascertained, put forth bonds to the amount of 1,030,570*l*. of which they say 89,700*l*. have been cancelled, leaving 977,050*l*. as the amount in circulation on the 31st of December, 1854, when they stopped payment. Besides the means thus raised, the commissioners are alleged to have mortgaged the freehold property of the undertaking for 271,500*l*. The present value is only 167,200*l*.; but it is thought that about 140,000*l*. worth of the mortgages would be ignored by the Court of Equity, and it is calculated that the value of the street will be greater when it is completed. The commissioners are also accused of issuing bonds to a large amount without proper security; of issuing 58,000*l*. worth within a few days of their insolvency; of making an undue charge for interest; and of executing preferential mortgages almost at the very moment of the stoppage. They are now selling bonds at the rate of about eight per cent.—a proceeding which will ruin many of the present holders; but it does not seem that the commissioners are amenable to any punishment.—*Leader.*

*** Very long ago we drew attention to the peculiar proceedings of these commissioners.

LONDON AND MIDDLESEX ARCHÆOLOGICAL SOCIETY.—The first general meeting of this society was held on Monday evening last, under the presidency of Lord Londesborough, in the appropriate locality, old Crosby-hall, Bishopsgate-street. The papers read were:—"A general Introduction to the Antiquities of London and Middlesex, and to the Objects of the Society," by the Rev. T. Hugo; "Notes on Roman London," by Mr. Charles Roach Smith, in which the writer suggested many new features of interest; among the most important was the conjecture that a Roman amphitheatre had existed on the site of Seacoal-lane, Farringdon-street; "Facts and Documents connected with the Church of St. Helen's, Bishopsgate," by Mr. Thomas Lott; "The History and Architectural Remains of Crosby-hall," by the Rev. Thomas Hugo; and on a "Monumental Brass in Enfield Church," by the Rev. C. Boutell.

SHIPBUILDERS' STRIKES.—The dockyard shipwrights at Portsmouth have struck work for an increased rate of pay. The Admiral Superintendent was to communicate with the Admiralty on the subject. The cause of dissatisfaction is the amount of money they are enabled to earn—6s. a day on the average, working at task-work two or three hours overtime daily. This they contrast with the 7s., 8s. or more, earning daily by men in the private yards. On the other hand, it is urged that the engagement in the dockyard is a permanent one, while the men in private yards are liable to be suddenly thrown out of work. The superannuation enjoyed by the shipwrights in the royal yards is also urged as another advantage enjoyed by them. The Dumbarton shipbuilders' hands are still on strike, and there is little prospect of a good understanding being re-established between the masters and men. Many of the latter are leaving the town, and a large number of boilermakers, brought from Liverpool, refused to work so soon as they arrived and understood that they were wanted to replace others on strike. They therefore returned in a body to Liverpool, their passage being paid by the unionists. On Saturday before last fifty-one men and boys employed on engines in one yard had to be paid off, in consequence of the contract for certain vessels being given up. A further number were to be discharged in another week.

WALKING OFF WITH A WALL.—On Wednesday, the River (Tyne) Commissioners resolved to put in force their Act of Parliament against Thomas Thackeray, a wherryman, charged with having carried off a portion of the river wall opposite the Muck House; and it was stated that an iron manufacturer, in want of chalk, had swept away some 20 yards of wall, his excuse being, that owing to the detention of vessels, he was in such a predicament, that he must either take the chalk, or his furnaces must blow up! From the temper evinced by the commissioners, we venture to say that any future offender who may be caught will "go *Ad Muram*" with a vengeance!—*Gateshead Observer.*

DESTRUCTION OF A CHURCH BY FIRE.—St. Fagan's Church, Aberdale, has been entirely destroyed by fire, according to a Carmarthen paper. It was erected by the Hon. Mr. Clive, the owner of considerable estates in the neighbourhood, and was only opened in 1854. It afforded accommodation for about 700 persons. The "church flue" of course was the source of the mischief. It appears that a woman engaged in cleaning the church had made a fire in the stove, for the purpose of heating some water. She used for the fire a quantity of holly, with which the church had been decorated at Christmas. It is supposed that this fuel being very dry sent a flame through the piping beneath the floor, thence through the flue, which was cut off short at the roof, probably because such an appendage was considered unsightly. This roof was composed of an inch deal in the interior; there was a layer of felt between the wood and the slates. This felt probably became first ignited. The amount of damage done is estimated at upwards of 2,000*l*. The edifice, it seems, is not insured. The entire wood-work is consumed, the walls remain standing; but it is expected they will have to be rebuilt: the bell fell to the ground, but fortunately is uninjured.

EDUCATIONAL SOIREE AT GORTON LOCOMOTIVE WORKS.—The opening of a literary and educational institution, in connection with the extensive locomotive works of the Manchester, Sheffield, and Lincolnshire Railway Company, at Gorton, was celebrated by a *soirée* at that place, on Saturday evening before last. A large building, ordinarily devoted to the manufacture of waggon-sheets, was for this occasion transformed into a gaily-decorated hall. A very large number of the workmen employed by the company were present, with their wives and families, the latter being represented by individuals of all ages, infants in arms not excepted. Altogether about 700 persons were assembled. Mr. Edward Watkin, the general manager, presided.

State of the Roads at Kennington. — Will you kindly oblige me, in common with the inhabitants generally of the locality, by calling public attention to the disgraceful state of the footpaths of the Kennington and Clapham roads. Commencing this side of Kennington-park, the footways remain unpaved, notwithstanding that the majority of the houses have stood nearly half a century. The consequence is, that after a shower of rain, the footpaths become ancle deep in mud. Why should this be? Why should all the small bye-streets be paved as soon as the houses are erected, whilst the main roads, having of course the greater traffic (and, therefore, of course the more requiring paving), are neglected. The authorities are sharp enough after the paving rates, and it would be interesting to know what becomes of the large amount they must receive. The revenue derived from Kennington-gate, too, must be a long way from a trifling sum. Is it not, sir, a disgrace to the nineteenth century, that so little attention is given to cleanliness in the streets of London, and its suburbs?—J. J.

Oxford Architectural Society.—A course of Elementary Lectures on Architecture is being delivered at the Society's-room, Holywell, during the present term, in the following order: — January 30, Hon. H. C. Forbes, M.A. Oriel College; February 7, Rev. E. Miller, M.A. New College; February 13, Mr. Parker; February 20, Mr. James Parker; February 27, Rev. H. B. Walton, Merton College; March 5, Mr. Hingston, B.A. Exeter College.

New English Church at Cannes (South of France).—This agreeable winter resort, on the shores of the Mediterranean, now enjoys the advantage of a Church of England. The new edifice lately erected at Cannes, is in the Gothic style of architecture, from a design by Mr. Thomas Smith, of Hertford. Through Lord Brougham, and our Ambassador in Paris, permission has been accorded by the French Government, to open and use it for service in the English language, in accordance with the forms of the Established Church of England. The dedication took place on 27th December last, and was conducted by Bishop Spencer, late of Madras.

Plymouth School of Art.—This institution was opened on Monday before last, and, according to the local *Times*, bids fair to be a successful undertaking. The mechanics of Plymouth, it appears, have availed themselves of this opportunity for improvement. Mr. Offord, the teacher, delivered a suitable address at the opening, and during the evening fifty-one tickets of admission were taken up, and a special class of twenty members formed. A ladies' and a gentlemen's class have also been commenced.

"Halting Places."—It is presumed this matter will speedily come before the public in a practical shape. In many prominent and desirable places, the difficulty may be got over by excavating a space of about 8 feet square and 6 deep, partially covered over, with step on two sides, keeping clear of the gas and water pipes.—L.

Metropolitan Board of Works.—At a meeting of this board, held on the 25th ult. the election of engineer was proceeded with, when Mr. Bazalgette, Mr. Rawlinson, and Mr. Henry were called upon to urge their respective claims to the office, after which Mr. Bazalgette was elected. We have received several letters on the subject, mostly personal. Afterwards the board proceeded to the choice of an accountant, when Mr. Hatton was elected by a large majority. As to the Superintending Architect, our advertising columns will show the required qualifications and duties. The salary is not large enough.

New Digging Machine. — The Rev. H. G. Bailey, of Swindon, has patented a digging machine, to be worked either by steam or horse power. A row of spades or forks, working to a much greater depth than by manual labour, produces, according to the *Staffordshire Advertiser*, a perfect inversion of the soil in a manner hitherto attained only by hand.

Coating Iron.—Messrs. Morewood and Rogers have invented a method of coating sheets of wrought-iron. The sheets are to be first cleansed by dilute acid in the ordinary manner, then covered over with some one or more of the following substances in a solved or melted state, viz., turpentine, resins, lac, gums, oil, grease, gelatinous or bituminous matter. Sheets so prepared will be ready to be soldered without being first coated with tin.——In the electro-coating of iron, Mr. F. Puls has patented the regulation or modulating of the intensity or quantity of the electric current from the battery proportionately to the surfaces of the iron to be coated, thus causing the zinc to be deposited upon the iron in the smallest possible particles or atoms, thereby securing a perfect adhesion of the zinc to the iron.—2. The employment of sulphate or hydrochlorate of zinc, or double or treble salts of same, with potash, soda, and ammonia, for the purpose described.—3. The rinsing of the exhausted fluid from the bath in the battery, and that from the battery in the bath.

West's Safety Coal-hole Plate. — Having reference to the numerous accidents caused by the slipperiness of the ordinary iron coal-plates, a substitute has been devised by Mr. West. It consists of a flat thin iron cup, so to speak, 12 inches in diameter, the rim about 1½ inch deep, and 1-10th of an inch thick. Into this a piece of stone corresponding with that of the pavement is cemented. A simple iron rim, with a lip at the bottom to hold a piece of hard, stone or slate, might even answer the purpose.

Proposed College of Mining Engineers, at Newcastle-upon-Tyne. — For some time the members of the Mining Institute of this town have had in contemplation the establishment of a Mining College, upon a scale commensurate with its importance. Recently the committee of management have issued prospectuses concerning the college, in which they solicit subscriptions, and the Duke of Northumberland has promised, that should the committee raise 15,000*l.* he will contribute 5,000*l.* towards that sum; and should they raise 30,000*l.* he will subscribe 10,000*l.* It is also expected that the Marchioness of Londonderry, Earl of Durham, Lord Ravensworth, and others interested in the coal produce of the district generally, will contribute largely to the project. The manufacturing interests are to be combined with the mining in the projected institution.

Conversazione of Norwich School of Art.—During the last year the number of students in this school has steadily increased, and to the extent of one-third more than in former years in the special and intermediate classes. The scholarships given by Sir S. Bignold, M.P., E. Warner, esq. M.P., and J. H. Gurney, esq. M.P., according to the *Norfolk Chronicle*, have elicited a remarkable degree of emulation among the students. These scholarships are privileges which only this and one or two other schools in the country possess. On Thursday evening in last week, the rooms in St. Andrew's-street were filled by a fashionable assembly. The committee of the school held a *conversazione*, with a view of promoting a taste for art among the citizens. This meeting was not intended for business but for pleasure, and the intention was fully realised. The class-rooms and gallery were filled with works of art, numbers of photographs, and engravings, sent by the Board of Trade Department of Science and Art, besides a selection of designs for manufactured articles, and illustrated works. For about an hour the company inspected the works of art in the different rooms, and then, by request, reassembled in the large room, to hear several addresses delivered.

Gas Stoves.—Gas stoves require to be securely fixed. A short time since I was called upon to assess a fire loss which occurred in the manager's room of a gas-works, and was caused by the gas-stove used therein, and but for a timely discovery would have occasioned a very serious loss. The stove was supplied with gas by means of a pewter pipe, and there being no provision for fixing the stove to the floor, the smallest motion given to the stove would cause a rupture of the supply pipe,—and to this cause I attributed the accident. The stove was manufactured by an extensive manufacturer of the article, who has made no provision for fixing the stoves, although when I called at the establishment and pointed out the apparent cause of the accident, they admitted the necessity of it. There is some danger too, I apprehend in the unsoldering of the joints.—A. B.

Organs: the Effect of Vibration. — As you have lately given space in the *Builder*, to some interesting remarks on the king of musical instruments, the organ, perhaps I may be allowed, in continuation of the subject, to ask for information, through the medium of your valuable journal, on a question of some importance to architects. Supposing the actual weight of an organ to be 10 or 12 tons, what extra strength of floor, or other supporting power, should be provided to guard against the effect of vibration? An experiment (not very carefully made, it is true), gave me a curious and apparently contradictory result with regard to stopped and open wood pipes. A C C C (stopped) Bourdon pipe, 8 feet long, gave more vibration to a piece of wood, 5 feet in length, fixed at one end, in the ratio of 3 to 2, than did an open pipe 16 feet long, giving the same note. Wood open pipes also seem to give more vibration to surrounding objects than metal pipes of the same dimensions. Is this correct?—T. W. H.

"New Black Paint."—Mr. M. Staite, says a contemporary, crushes carbon by means of hammers and rollers, and grinds it by means of stones, and then takes the dust and passes it through sieves (of about 3,000 holes to an inch), or subjects it to successive washings in large tubs. When a sufficiently fine dust or sediment is procured, he mixes it with linseed oil, in the proportion of about six gallons to a ton, and re-grinds it to a fine soluble paste." Such a paint may do very well for iron or other incombustible surfaces, but its liability to give rise to spontaneous combustion suggests the necessity of care in its use.

Building Operations in Liverpool. — The annual report of Mr. Rishton, the building surveyor, was read before the Health Committee of the Corporation recently. The principal facts contained in it are as follow:—Dwelling-houses and warehouses erected, or in course of erection, within the municipal borough during 1855,—under 12*l.* per annum, 63; from 12*l.* to 25*l.* 1,144; from 25*l.* to 35*l.* 99; from 35*l.* upwards, 49: total, 1,355. Warehouses, 9. Comparative statement of the number of dwelling-houses erected since 1838,—1838, 1,052; 1839, 997; 1840, 1,576; 1841, 1,761; 1842, 2,027; 1843, 1,390; 1844, 2,450; 1845, 3,728; 1846, 3,460; 1847, 1,220; 1848, 656; 1849, 446; 1850, 420; 1851, 837; 1852, 1,136; 1853, 924; 1854, 829; 1855, 1355: total, 26,264. Buildings (not dwelling-houses) erected, alterations made, and dangerous dwellings taken down or secured, during 1855,—buildings: such as stables, smithies, &c. 77; such as manufactories, offices, &c. 73. Alterations and additions: of extensive character, 60; of inferior character, 303. Dangerous buildings taken down or secured, 97. The dwelling-house erections last year have been in excess of those in 1854. In 1854 there were only 829 dwelling-houses erected, whereas, last year, as will be seen, there have been 1,355 erected. Of this number 63 will let at about 10*l.* or 12*l.* per annum each; 1,000 at about 15*l.* or 16*l.*; the remainder at much higher rents.

A Crooked Railroad.— The *Potsville Journal* says that one dark night last week, an engineer of a lengthy freight train on the Catawissa Railroad, to his horror, perceived a light rapidly approaching, as he thought, upon the track. He sounded the alarm, and the brakes were at once applied, when he discovered that it was the signal upon the rear car of his own train, which, from the great curvature of the road, shone full upon him! It is related of a railroad somewhere in Virginia, that the engineers give themselves no uneasiness when they run off the track, confident that they will come upon it again before they go a dozen rods. Perhaps this is the same road.

Monument to Alfieri.—The committee, formed many years ago at Asti, for the purpose of gathering subscriptions towards a monument to Alfieri, having now collected a sufficient sum, have issued a notification to all those sculptors who had sent models at different periods, informing them that they alone will be admitted to the competition for the erection of the monument, on condition of their sending to the committee, within three months, a model of the height of 1½ metre, the names of the competitors to be concealed in the usual manner. The size of the statue of Alfieri, when executed, is to be 4.30 metres.—*Galignani.*

Arches under Public Ways.—It may not be amiss to remind builders and others interested, that in putting in these works without the proper notice, they incur a penalty of 20*l.* with a probability of the works being abated. It is quite time they were made the subject of regulation as to the thickness of their crowns, &c. &c.: see sec. 25 of the Metropolitan Building Act. As regards the constant removal of the crowns of ovens, as named in your paper, this is rendered necessary only by their faulty construction.—Nemo.

TENDERS

For a shop warehouse for Messrs. Hanyman and White. Mr. Henry Currey, architect. The quantities taken out by Mr. Richard Roberts

Haward and Nixon	£3,647	0	0
Lee and Son	3,640	0	0
Lucas	3,405	0	0
Rider	3,370	0	0
Wilson	3,295	0	0
Higgs	3,131	0	0
Ashby and Horner	3,090	0	0
Downs	2,833	0	0

For schools and residence to be erected at Horsington, near Wincanton. Mr. Henry Hall, architect:

Davis	£1,050	0	0
Green	963	0	0
Wellspring	910	0	0
Down	860	0	0
Harris	858	10	0

TO CORRESPONDENTS.

"W. A."—"J. W."—"J. L."—"W. W."—"C. L. N."—"J. M." "J. E."—"J. B."—"J. L."—"H. E. K."—"E. C. L."—"H. S." (if neither story be more than 10 feet high, the wall may be wholly of 9 in. work.—"C. H. W."—"Sir A. A."—"T. S. W."—"J. S."—"L" (special circumstances would of course regulate charges: the recognised commission is 5 per cent.)—"T. J. P."—"W. P. G."—"E. H."—"Mr. B."—"H. W."—"C and A. G."—"Kent Mutual."—"J. B. G."—"J. F."—"H. H."—"C. W."—"E. C."—"G. H."—"E. W. L."—"J. A. M."—"St. James's Park" (writer's name not given). "W. G. E."—"Wandering Willie."—"Subscriber to the Art-Union."—"B. W. J."—"Fair-play."—"C. V."—"C. H. S."—"Anglo-Catholicus."—"E W."—"H. D."—"M. E. H."—"J. G. B."—"T. W."—"Barlaston."—"Old Subscriber."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE. — All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the Editor, and not to the Publisher.

ADVERTISEMENTS.

CIVIL ENGINEERING and SURVEYING. —UNIVERSITY COLLEGE, LONDON.—Professor HARMAN H. LEWIS, A.M., will commence his course on MONDAY, FEBRUARY 4th, at SIX p.m. The subsequent lectures will be delivered during the months of FEBRUARY, MARCH, APRIL, and MAY, as follows:—

Civil Engineering on Mondays, Wednesdays, and Thursdays. First division from 6 to 7 p.m.; second division from a quarter past 7 to a quarter past 8, p.m.

Surveying, at times to be fixed at a meeting of the class, on TUESDAY, FEBRUARY 5th, at ELEVEN o'clock

Fees, for the class of Engineering, each division, £1; for both divisions in one payment, £1. Surveying: students of the class of Engineering, £1: others, £2. College fee for students not entered to other classes, £5.

ALEX. W. WILLIAMSON, F.R.S.
Dean of the Faculty of Arts and Laws.
CHAS. C. ATKINSON, Secre'ary.
January 26th, 1856.

A VACANCY for a PUPIL in the Offices of a firm of ARCHITECTS in the country, holding public appointments.—Apply to A. L. Z. Post office, Cheltenham

TO CARPENTERS AND BUILDERS.

APPRENTICE.—WANTED, by the Guardians of a Youth, aged about 16, a SITUATION, in which he would have opportunities of learning the above trades efficiently, and where his morals would be looked after. A premium would be given.—Apply, if by letter, to W. B. Post-office, Wellingborough.

TO PARENTS AND GUARDIANS.

AN opportunity now occurs for a well-educated Youth to be admitted as an ARTICLED PUPIL into the Office of Mr. JOHN BROWN, Architect, Surveyor to the County of Norfolk, and Architect and Surveyor to the Dean and Chapter of Norwich Cathedral.
Upper King-street, Norwich, Jan. 1856.

TO WORKING FOREMEN OF JOINERS.

WANTED, an energetic Man of good character, to SUPERINTEND TWENTY JOINERS. References will be required as to character and ability.—Address to R. L. care of Mr. Dorkin, Brook-street, Ipswich.

TO ASSISTANT ENGINEERS.

WANTED, a PERSON well qualified to superintend the erection of machinery, and the construction of wharf walls, pile foundations, and warehouses, abroad. Apply by letter (pre aid), enclosing terms and references, addressed to Messrs. LAW and BLOUNT, Civil Engineers, 15, Essex-street, Strand.

WANTED, an AGENT, on Commission, for the SALE of SAW-MILL MACHINERY, DERRICK CRANES, &c. for a Scotch engineering house.—Applicants may address to S. T. Post-office, Glasgow.—References required.

WANTED, a BUILDER'S CLERK, who is capable of, and has been accustomed to, measuring, estimating, drawing, and making up accounts, and who thoroughly understands the general routine of the office. A first-rate man is wanted, and a good salary will be given. Apply by letter, to A. Z. Office of "The Builder."

WANTED, an active, steady Youth, about 14 years of age, as APPRENTICE to a GILDER, MODELLER, &c. with whom he will have the opportunity of learning a thorough practical knowledge of gilding, mounting, with compo-modelling, and the various branches of the trade. A premium required.—Apply by letter only, C. W. 101, Dean-street, Oxford-street.

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WANTED, forthwith, an ASSISTANT, to assist in a town survey, &c. He must be a practical surveyor, a first-rate draughtsman and colourist, and acquainted with theoretic and practical architecture.—Applications, stating age and amount of salary required, and enclosing testimonials as to character and ability, to be made by letter addressed A. B. Post-office, Leek, Staffordshire.

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WANTED, a SITUATION in an Architect's Office, as ASSISTANT, by a gentleman who has just left a similar engagement in a London office. He is a good and expeditious draughtsman, understands details to some extent, is acquainted with design in both styles, and has been in the habit of directing works. He has also had some experience in specifications and quantities. Good testimonials.—Address, B. C. Office of "The Builder."

TO BUILDERS.

WANTED, a SITUATION, as SHOP or GENERAL FOREMAN, by an experienced Man. Satisfactory references and testimonials.—Address, J. D. 81, Lower-marsh, Lambeth.

TO BUILDERS AND HOUSE PAINTERS AND PAPER-HANGERS.

WANTED, by a respectable Young Man, a SITUATION as PAPERHANGER; is willing to fill up his time in painting or glazing if required.—Apply, by letter, to A. B. No. 7, South street, Camberwell, Surrey.

TO BUILDERS AND PLASTERERS.

WANTED, by an experienced Man, EMPLOYMENT in an OFFICE, or in a Plasterer's Shop. The Advertiser is also competent to make out accounts. Unexceptionable references given.—Address, A. B. 14, Grafton-street East, London University.

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TO BUILDERS, MASTER BRICKMAKERS, AND OTHERS

WANTED, a SITUATION, by a respectable Man, as FOREMAN of a BRICKFIELD, who has had practice in all the branches of malm bricks, common stocks, white and red close kiln bricks and tiles, such as Suffolk and Norfolk. Upwards of thirty years' practice in London and Suffolk. Unexceptionable references if required.—Address, A. B. at J. Boston's, 79, Hackney-road, Shoreditch.

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WANTED, a RE-ENGAGEMENT, by the Advertiser, who is well acquainted with office duties, and has a good knowledge of taking, and is also desirous of assisting in attending to out-door work. Unexceptionable references. Terms moderate.—Address ,prepaid), A. B. Post-office Richmond, Surrey.

WANTED, a RE-ENGAGEMENT as SHOP FOREMAN, by an active man who has been used to church work. A two years' reference from last place of engagement.—Address, F. E. D. 17, Ryder's-court, Leicester-square.
N.B.—No objection to the country.

TO ARCHITECTS, LANDED PROPRIETORS, &c.

WANTED, by a practical Mason, aged 38, from a town on the east coast of Scotland, a SITUATION of ASSISTANT to an Architect, or CLERK of WORKS, or to carry out the Improvements on an Estate. Is a good draughtsman, and has been accustomed to superintend works. Can have the highest testimonials, and security for intromissions, if required, will be given.—Address, to A. B. care of Mr. Andrew Gibson, Little Warley, Essex.

TO ENGINEERS, CONTRACTORS, AND OTHERS.

WANTED, an ENGAGEMENT, as STOREKEEPER, TIMEKEEPER, CLERK, or any situation where the services of an honest, sober, industrious young Man are required. Can produce five years' unexceptionable character from the situation he has recently left.—Address, G. W. R. Mr. F. Edward, Bookseller, No. 2, Great Quebec-street, Montagne-square

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WANTED, by a Young Man, who has been engaged seven years in a similar position, a SITUATION. Is a good draughtsman and fair colourist. Salary moderate.—For further particulars, address A. Z. care of Mr. Hill, Architect, 15, Old-street, St. Luke's.

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WANTED, a SITUATION as FOREMAN of PAINTERS, DECORATORS, &c. (or otherwise), by a person who has been so employed for several years in a large establishment. He is competent to execute every description of painting, glazing, decorating, paper-hanging, &c.; is a good writer, &c. and would make himself generally useful to his employer. If necessary, could measure, estimate, keep books, &c. Can have the highest testimonials.—Address, J. E. at Mr. S. Grimsdell's, Builder, Bell-lane, Spitalfields.

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WANTED, a MASTER for a Youth, aged 16, as IN-DOOR APPRENTICE. A premium will be given. Letters, stating particulars, address, J. C. 57, Paul-street, Finsbury.

TO BUILDERS AND OTHERS.

WANTED, a SITUATION, by a respectable Young Man, who has been two years in the office of one of the largest builders in London, and has had two years at the carpentering. Can be strongly recommended. Country not objected to.—Address to A. B. at the Gibraltar, Bethnal-green-road.

WANTED EMPLOYMENT (in town or country), by a respectable Man, aged 39. Is a skilful surveyor; understands levelling and superintending drainage works, buildings, &c. and is well acquainted with the Regulations of the Board of Health Act.—Address, W. D. B. 74, Strand, London

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January, 856.

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Address, E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
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¼ inch White, 13s. 6d. per square.		¼ inch Yellow, 15s. per square.	
⅜ ditto	15s.	⅜ ditto	16s. 6d. "
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Laths, 3s. per load.

Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.

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TO TIMBER MERCHANTS.—For SALE, SIXTEEN LOADS of capital ASH TIMBER, lying adjoining good roads, and within a mile and a half of the Erith Station, North Kent line, for SALE by PRIVATE CONTRACT.—For particulars apply to Mr. T. DANN, Estate Agent, Bexley

TO FIREWOOD MERCHANTS, CHARCOAL BURNERS, and TURNERS.—Hainault, Essex.—FOR SALE, a large quantity of HORNBEAM, in stacks and piles, with liberty to convert the same into charcoal or firewood. Also, a quantity of THORN BUTTS, suitable for Turning purposes. Hainault is within twelve miles of London, and is only three miles from Ilford and Romford Stations, on the Eastern Counties Railway; and three miles from the Ilford Wharf. — For particulars apply to Mr. JOHN CRUTTON, 9, Whitehall place, Westminster; and to Mr. GEORGE MOODIE, Padnall-grove, Ilford.

TO CARPENTERS and BUILDERS.—Yellow Deals, 4d. to 6d. per foot; Yellow Battens, 2½d. to 3d.; White Dram Battens, 3½d.; Spruce Deals, 3½d.; Pine Planks, 4d. to 5d. Sent free within two miles.—EDWARD SHEFFIELD, Timber Merchant, Colchester-street, Whitechapel Church.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s. per foot super together with every particular of its cost and adaptation, can be obtained of Mr. BURT, 3, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

MACHINE CARVING, JOINERY, and MOULDING WORKS, Belvidere-road, Lambeth.—The Proprietor of the above works begs respectfully to apprise the nobility, clergy, architects, builders, cabinet-makers, and trades generally requiring Carved and Moulded Works, that he is now enabled to execute any order they may be entrusted to him with the utmost promptitude. Every description of Carved Work and Tracery, roughed out by the machines for the trade only. Pulpits, Lecterns, Reading-Desks, Screens, Altar-Rails, Tables, Chairs, &c. executed at the shortest notice. Specimens of Carved Work, suitable for various purposes, can be seen at the Works, and Estimates furnished upon application.

TO BUILDERS, &c.

OAK GRAINING done in OIL at 4d. per yard; Maple, Satin, or Mahogany, 3d per yard; not less than thirty yards. Church Writing done. Painting at low prices. Contracts taken. Good reference given.—Apply to C. PETTET, 5, Princes-street, Edgware-road.

FRENCH POLISH and SPIRIT VARNISHES made from Methylated Spirit, 60 over proof.

Best French Polish	6s. 6d. per gallon.
Spirit Varnish	6s. 6d. "
White French Polish	10s. 6d. "
Methylated Polish	6s. 6d. "

By JAMES SLIPPER, 87, Leather-lane, and 14 and 15, Dorrington-street, Holborn, London.

TO CARPENTERS, PAINTERS, AND OTHERS.

TO BE REPAIRED, No. 1, Little Pulteney-street, Wardour-street, according to a specification to be seen on the Premises on the 4th and 5th inst.; tenders to be sent to the owner, Mr. FLETCHER, No. 29, Upper Phillimore-place, Kensington, on or before the 7th inst.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 8s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 3s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application, post free.

SPECIAL NOTICE.

KENT MUTUAL ASSURANCE SOCIETIES.

CHIEF OFFICES:
QUEEN-STREET-PLACE, NEW CANNON-STREET, LONDON.

The united annual incomes exceed 27,000l.; and all Profits belong to the Assured.

LIFE.

The next division of Profits will include parties assuring before the 24th March next.

The new business of the last eight months exceeds 5,000l. in Annual Premiums.

FIRE.

The Guarantee Fund is being increased to Half-a-Million.

The annual income, since last annual meeting, has increased beyond 3,000l.

GEORGE CUMMING, Manager.

N.B.—Agents are still wanted for some vacant localities.

SPECIAL NOTICE.

The Books of the Society close on 1st of March, and Proposals lodged at the Head Office, or at any of the Agencies, on or before that date, will secure the advantage of the present year's entry, and of One Year's Additional Bonus over later Proposals.

MUTUAL LIFE ASSURANCE.

The Whole Profits divided amongst the Assured.

THE SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY, Instituted 1831. Incorporated by Special Act of Parliament.

The fund accumulated from the contributions of members, exceeds NINE HUNDRED THOUSAND POUNDS.

The annual revenue exceeds ONE HUNDRED and SIXTY-THREE THOUSAND POUNDS.

The amount of existing assurances exceeds FOUR MILLIONS and a QUARTER STERLING.

The amount paid to the representatives of deceased members is upwards of SIX HUNDRED and FIFTY THOUSAND POUNDS, of which SEVENTY-EIGHT THOUSAND POUNDS are Bonus additions.

The NEXT DIVISION of PROFITS TAKES PLACE at the 1st of MARCH, 1856, and policies effected before that date receive one year's additional bonus over those effected after that date.

ROBERT CHRISTIE, Manager
WILLIAM FINLAY, Secretary.

Head Office—26, St. Andrew-square, Edinburgh. London Office—126, Bishopsgate-street, corner of Cornhill.

WILLIAM COOK, Agent.

PELICAN LIFE INSURANCE COMPANY, established in 1797.

70, Lombard-street, City, and 57, Charing cross, Westminster.

DIRECTORS.

Robert Gurney Barclay, esq.	Kirkman D. Hodgson, esq.
William Cotton, esq, F.R.S.	Thomas Hodgson, esq.
John Davis, esq.	Henry Lancelot Holland, esq.
William Walter Fuller, esq.	C. Hampden Turner, esq. F.R.S.
Jas A. Gordon, M.D. F.R.S.	Matthew Whiting, esq.
Henry Grace, esq.	M. Wyvill, jun. esq. M.P.

The Company offers—

Complete Security—

Moderate Rates of Premium with Participation in Profits—

Low Rates without Profits.

BONUS.—Four-fifths or Eighty per Cent. of the Profits are divided amongst the Policy-holders.

LOANS in connection with Life Assurance on approved security.

ANNUAL PREMIUM required for the Assurance of 100l. for the whole term of life:—

Age.	Without Profits.	With Profits.	Age.	Without Profits.	With Profits.
	£1 11 0	£1 15 0	40	£2 18 10	£3 6 8
20	1 13 10	1 19 3	50	4 0 9	4 10 7
30	2 4 0	2 10 4	60	6 1 6	6 7 4

For Prospectuses and Forms of Proposal, apply at the Offices as above, or to any of the Company's Agents.

ROBERT TUCKER, Secretary.

TO TIMBER MERCHANTS and OTHERS. The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of English Timber, &c. Steam Power and Docks 30 and 16-ton Cranes. Sawpits for converting Timber, &c. Freights paid on delivery. Apply to G. NOKES and Co. as above.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.

STEPHENS' DYES or STAINS for WOOD. The following extract from a letter the Proprietor has obtained leave to make public:—"Northgate, Colchester, Feb. 5, 1855. Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant,

"SAMUEL GRIMES, Builder.

"To Mr Henry Stephens, 54, Stamford street, London."

Samples and prospectuses free to any part of the kingdom.

SMOKY CHIMNEYS CURED EFFECUALLY for TEN SHILLINGS, by SUTERS'S PATENT WIND-GUARD.—This Guard allows free egress to the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

To be had of Ironmongers and Builders; and of the Patentee, at his Office, 65, Fenchurch-street, London.

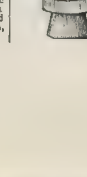
NEW PATENT SMOKE PREVENTER. The Rev. James Burrow, of Ashford Parsonage, Sakewell, has appointed WILLIAMS, BURTON, & CO. Soho-square, sole Metropolitan Agent for the sale of his SMOKE PREVENTERS. They have been used under many varied circumstances with great and uniform success. They are very simple, and not liable to get out of order. Price 10s. 6d. 12s. 6d. and 16s. each.

The alterations and additions to these extensive premises (already by far the largest in Europe), which occupied the whole of last year, are of such a character that the entire of EIGHT HOUSES is devoted to the display of the most magnificent stock of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel Silver, Plated Goods, Baths, Brushes, and Turnery, Lamps and Gaseliers, Iron and Brass Bedsteads and Bedding), so arranged in Sixteen Large Show Rooms as to afford to parties furnishing facilities in the selection of goods that cannot be hoped for elsewhere.

Illustrated Catalogues sent (per post) free.

39, OXFORD-STREET; 1, 1a, 2, and 3, NEWMAN-STREET; and 4, 5, and 6, PERRY'S-PLACE. Established 1820

By Her Majesty's Royal Letters Patent.



DUPREE and CO.'S DEFIANCE WINDGUARD and VENTILATORS, &c. for the perfect cure of Down Draft, Smoky Chimneys, and for Public and Private Buildings requiring a constant change of air.

Also,

SHIP VENTILATORS, requiring no attention, imparting about six times the quantity of fresh air than any other in use.

Also,

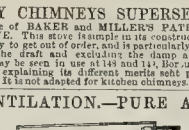
VENTILATING ROOFLIGHTS, for Slate or Tile Roofing, without Paint or Putty.

Prospectuses sent on application.

London Depôt—ESNOUF and MANGER, 141, Minories, City.

SMOKY CHIMNEYS SUPERSEDED by the use of BAKER and MILLER'S PATENT DEFIANCE STOVE. This stove is simple in its construction, having no machinery to get out of order, and is particularly adapted for sharpening the draft and excluding the damp air from the chimney.—May be seen in use at 148 and 149, Borough, London. Prospectuses explaining its different merits sent post free on applications. It is not adapted for kitchen chimneys.

VENTILATION.—PURE AIR.



Sheringham's Ventilator for the admission of pure air through an EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 6s. 6d. These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt, by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

ROYAL POLYTECHNIC.—INEXHAUSTIBLE NOVELTIES! Lecture on the Poison STRYCHNINE, by J. H. Pepper, esq. daily, at Four and Nine. The poison and the tests used for its detection exhibited in the oxy-hydrogen microscope.—The Second Part of the Voyages of Sindbad the Sailor, with new and beautiful Dissolving Pictures designed and painted by H. G. Hine esq. and Description, with Songs, by Lenox Horne, esq.—Brilliant Popular Lectures, on Flame, Fire, and Combustion, by J. H. Pepper, esq.; and on the Great Steam Electrical Machine, by Mr. Wylde.—3,000 Models and Works of Art on view.—Admission, One Shilling. Children and Schools, half-price.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, road, bricklayers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

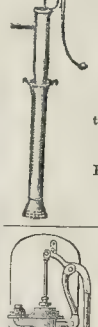
PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 19-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted. Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.



B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels,

Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

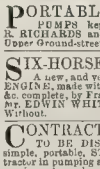
TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP, which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive levers and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 33 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS, 8, Crescent, Jewin-street, London, Manufacturers and Patentees.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

SIX-HORSE POWER STEAM-ENGINE. A new, and very superior high-pressure 6-horse power table ENGINE, made with all the latest improvements, and fly-wheel, &c. complete, by Frost, TO BE SOLD a bargain.—May be seen at Mr. EDWIN WHITE'S Auction Rooms, 177, Bishopsgate street Without.

CONTRACTORS' PUMPING-ENGINES. TO BE DISPOSED OF second-hand THREE strong, simple, portable, STEAM-ENGINES, recently used by a contractor in pumping and sawing, &c.; have been put into perfect repair, and may be purchased separately, with or without one or two sets of pumps and driving gear; also circular-saw tables, &c.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 92, Blackfriars-road, where the above may be seen.

PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. with much pleasure announce to their Friends and the Public, that they have completed the enlargement of their works, in order to meet the great increasing demand for their Cement; and are now prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes Cement is applicable.—Orders received at Great Scotland-yard, and at the Works.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Accounts of COMPARATIVE EXPERIMENTS on the strength of this and other Cements (read at the Institute of Civil Engineers), to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL,—Light and Dark, equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Firebricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

NOTICE.—M. H. BLANCHARD, 74, Blackfriars-road, London, Manufacturer of PLASTER of PARIS of a superior quality, suitable for Sculpture, Architectural Embellishments, &c.—will not twist, warp, or give after set, but will retain its hardness and strength.

Superfine, per ton	£7 0 0
Fine	3 0 0
Coarse	2 10 0

Delivered for Cash to any of the Metropolitan Railway Stations, or within the Metropolis.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and may be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

TATHAM & CO.—No. 14, SOUTH WHARF, PADDINGTON,
BRICK, LIME, and CEMENT MERCHANTS,
SOUTHAM BLUE LIAS LIME DEPOT.

Bath, Portland, Lias, and Roman Cements; Parian and Keene's Cements, Plaster of Paris, Glazed Stoneware Sewage Pipes, Fire Goods, Vitrified Blue Bricks, White Building Bricks, White Enamelled Pans and Traps, and every description of Building Material.

N.B. Lump and Ground BLUE LIAS LIME delivered in boat-loads direct from the Works in Warwickshire, to any part of the river or canal.

SOUTHAM BLUE LIAS LIME DEPOT, No. 14, SOUTH WHARF, PADDINGTON.

TATHAM & CO. have arranged for a constant supply of the above very superior BLUE LIAS LIME, which for the last two years has been extensively used at most of the large works constructed during that period or now in hand, and any orders they are favoured with will command their best attention.

Boatloads of either Lump or Ground Lime can be delivered direct from the Works in WARWICKSHIRE to any part of the Rivers Thames or Lee, alongside any wharf on canal, or by boat or rail to any part of the kingdom.

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS, ISLE of SHEPPEY, Kent.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

PORTLAND CEMENT.—TATHAM & CO. are enabled to offer a very superior quality of this valuable Cement at a moderate price, and all orders addressed to No. 14, SOUTH WHARF, PADDINGTON, will receive the best and most prompt attention.

PORTLAND CEMENT.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

PORTLAND and ROMAN CEMENT, TERRA-COTTA POTS, &c.—J. M. BLASHFIELD begs to acquaint the Public that he has entirely CLOSED his Establishment on the Surrey side of the Thames, and that articles of his manufacture can only be obtained at his Works, Mill-wall, Poplar, or at his Warehouse, Praed-street, Paddington.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME.

The LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements, at reduced prices, the material being procured in its natural unadulterated state, from quarries on their own property. The Company particularly recommend a trial of their XXXX Bath Cement, as far superior to any article now in the market. These cements can be sent by rail or shipped from their wharf, direct to all parts.—Agents required, and a liberal discount allowed. Orders received by Mr. RIALLMARK, 80, Old Broad-street, City, or by RICHARD WINTER, Cement Works, Dunball, Bridgewater.

BATH CEMENT.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Paint-dealers in Original Packages, each cask stamped—HUBBUCK—LONDON—PATENT. And when so marked, the quality is guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester.—T. H BOORMAN, WILD, and CO. beg to inform the public and trade generally, that they have completed their works for the manufacture of PORTLAND CEMENT, and from their contiguity to the river Medway, as well as the branch line of the South-Eastern Railway from Strood to Maid-tone, a siding from which will be carried into their works, enabling them thereby to transmit any orders they may receive to any station on the before-mentioned line, and confidently hope they shall be able to supply the public with a first-rate article, in both cement and lime, on moderate terms. Persons sending orders for cement, are respectfully requested to say for what purpose it is required, and printed instructions will be affixed to the head of each cask.—Orders to be addressed to Mr. THOMAS WEEKES, Agent at the Works.

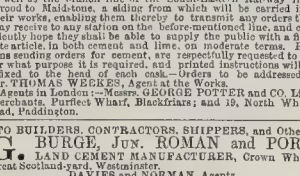
Agents in London:—Messrs. GEORGE POTTER and CO. Lime Merchants, Purfleet Wharf, Blackfriars; and 19, North Wharf-road, Paddington.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.

G. BURGE, Jun. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.

DAVIES and NORMAN, Agents.

Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.



GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

NOTICE.—BLUE LIAS LIME.—L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.

L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to insure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's-cross.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.

Small ditto, ditto, 4d. per ton.

Barges loaded in a few minutes.

Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 20, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.

GIBBS, CANNING, and CO.'s BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.

ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.

SEconds, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

TO LIME, CEMENT, or STONE MERCHANTS.—PART of a WHARF TO BE LET, at Queen-street, Hammersmith, close to the Suspension-bridge, with frontage to the Thames.—For particulars apply on the Premises, Chancellor's Wharf, Queen-street, Hammersmith.

LIME.—Gray Stone, 9s. 6d.; Chalk, 8s. per yard; at THOMAS J. COLE'S Depôt, Peckham Canal. Sand, Cement, Slates, Tiles, and Drain Pipes, supplied at equally low rates. Terms, cash. Builders' material landed, wharfed, and carted.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants Builders, contractors, and others supplied with every description of building material at the lowest market prices.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and fine, bricks, fire-goods, &c. can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Faviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 5, ADELAIDE-PLACE, London-bridge.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent. This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

THE PATENT BRICK-MACHINE COMPANY invite orders for their IMPROVED MACHINES, the only ones that manufacture solid bricks equal to hand-made, will shortly be at work in a field near London, accessible by railway, where it may now be seen with bricks of that season. H. C. MOUNT, Secretary.

37, King William-street, City, February, 1856.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed the PATENTEE'S SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REVIEWS OF THE JURIES," page 281, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

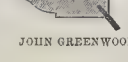
TO WATER COMPANIES AND PLUMBERS.
HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

DRAUGHTS ROUND DOORS and WINDOWS.—GREENWOOD'S PATENT INDIA-RUBBER STOPS, to supersede list or leather, for the purpose of keeping out dust and draught round doors, windows, closets, shop-cases, &c. making the same air-tight. Price 4d. per foot. Spring Slides for bottoms of doors, as cash.



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THE CHEAPEST HOUSE in the Kingdom for PAPER-HANGINGS is J. STRETT and CO's. 11 and 12, Back-road, St. George's East. The attention of the public is especially solicited to view the large and well-assorted stock, at the following low scale of charges, viz.:—

Bed-room Papers, 4d. per piece, upwards.
Dining and Drawing room ditto from 1d per yard.
Satin ditto, from 1d. per yard.
Flock ditto, from 1½d. per yard.
Metal ditto, from 2d. per yard.
Marbles, Sienna, from 3d. per yard.
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PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 23, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSS'S WHOLESALE WAREHOUSE, 22 GREAT PORTLAND STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PROVISIONAL PATENT.—A SCHOOL DESK, with folding desk, which combines in one article, a seat with back and locked book cupboards, a writing or reading desk, and a tea-table, adapted for schools, hospitals, barracks, literary institutions, ragged churches, emigrant ships, and wherever economy of space, furniture, and expense are important.—On view in use, at the British School, Craven-hill, Westbourne-terrace. Trade licenses on most liberal terms.—Address, Mr. B. 5, Craven-place, Paddington.

TO BUILDING MATERIAL DEALERS and OTHERS.—WANTED, TWO DOORS or WINDOWS (corresponding), suitable for recesses, about 7 feet 9 inches by 3 feet 9 inches, with either stained, plate, ribbed, or embossed glazing. Also, a Conservatory (without sides), about 12 feet long, 12 feet wide, and 12 feet high. And a superior Statuary Marble, 3 feet 6 inch Chimney-piece.—Address, stating lowest cash prices, and where may be seen, to L. K. No. 20, Gresham-street, City.

TO ARCHITECTS, BUILDERS, AND OTHERS.
MESSRS. FRANCIS, RICKABY, and DUNN beg to call the attention of the above to their IMPROVED REVOLVING WOOD and IRON SHUTTERS, also, to their extensive assortment of BRASS and other METAL SASH BARS, STALL-BOARD PLATES, &c. F. R. and D. having erected new and powerful machinery for the sole manufacture of the above, are enabled to offer them at a considerable reduction of price. Prospectuses can be had or Forwarded, on application to 84a, Gray's-inn-lane, Holborn.

TO BUILDERS and HOUSE PROPRIETORS.—GEORGE ENDICOTT, 5 Alfred-terrace, Cambridge-road, Bethnal-green, is prepared to execute all kinds of JOINERS' WORK, at the lowest cash prices. 1¼ inch four-panel doors, 6s 3d. each; 1¼ inch sashes and frame, 7½d. per foot, and all other joinery at the same ratio. Materials and workmanship of the best description. The entire management of house property undertaken, and the rents collected at a very small per-centage.—Security for the same given to any amount.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Well seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned. Workshops, 110, Broad-wall.

J. FISHER, 70, YORK-ROAD, LAMBETH, formerly shop foreman to Messrs. Lawrence, Shop-front Builder and Manufacturing Joiner. 1¼ and 1½ four-panel doors from 6s. each; 1¼ sashes and frames from 7d. per foot; 1¼ inch ditto from 8d. Windows fitted with Gribbon's Patent Hinges for cleaning, ventilating, &c. All kinds of joiners' work estimated for according to design.—A List of Prices sent on application.

REES and BAKER, PAINTED and STAINED GLASS MANUFACTURERS, for Cathedral, Church, and other Windows, 26, Hatton-garden, Holborn, London. G. REES and J. BAKER, having recently entered their engagements at Messrs. Powell and Sons' Glass Works, Whitefriars, City, most respectfully beg to inform the nobility, clergy, architects, surveyors, contractors, and the public, that after nearly twelve years' occupation at Messrs. Powell's, in the working and carrying out the most intricate and chaste windows, they have commenced business, and earnestly solicit their patronage, with the assurance of promptness, accuracy, and elegance of style and material. In calling the attention of some of our best architects, they frequently suggest to put the work in the hands of practical men to carry out with care and due regard to the subject of which they treat. G. R. and J. B. being the original operators of the Patent Press and Medieval Glass, will accept such cartoons, drawn by, &c. from architects, amateurs, or the public, however rude the sketch or design may be, they having received in many signal instances the highest approval in Grecian and Italian works of magnitude, where criticism cannot be doubted. Specimens in all forms can be seen between the hours of seven a.m. to Seven p.m. where all orders can be taken and punctually attended to. Arms found and memorial windows carefully painted. Designs and estimates given.

Figures and Subjects from 12s. per foot.
Geometrical Patterns, from 9s. per foot.
Ornamental Quarries, from 2s. 9d. per foot.

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 226, Oxford street.
REDUCED TARIFF.

CCC CROWN, 18 Tables, per crate 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 21. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6½ and PERFORATED VENTILATING GLASS, 1s 6d per foot; CRYSTAL SHEET GLASS 1½, 2½, and 3d per foot; FLASHED RUBY, 1s. GROUND SHEET, 4½d. ENAMELLED, 2½ per foot. Sashes primed and glazed, 3d. per foot.
Catalogues free, on application to the Managers, as above.

PATENT and BRITISH PLATE GLASS.—JAMES HETLEY and CO beg to inform Architects, Builders, and the Trade generally, that their new Tariff of Prices for the above will be sent on application; they will also on receipt of particulars, furnish estimates for any description of Glass now manufactured.—Patent Plate, Sheet, Crown, and Ornamental Window Glass Warehouse, 35, Soho-square, London.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Pipe, Wrought-lead, Lead, Iron and Brass Pumps Water-closet Cocks and Plumbers' Brasswork, Paints, Colours, Oil, and Turpentines of the finest quality, at wholesale prices. Lists on application at THOS. MILLINGTON'S Warehouse, 87, Bishopsgate-street, London. Established more than 100 years.

JAMES PHILLIPS and CO. beg to call the attention of Builders and the Trade to their present LOW PRICES of GLASS for cash.—C C C per crate of 18 tables, 28s.; 16 oz. sheet glass, 2d. per foot: crown and sheet squares, in 100 feet boxes, from 14½ to 22½d. 3d. per foot, enamelled glass, in crates, 6d. per foot: ground, ditto, 3½d. per foot; foreign sheet in cases of 200 feet, 36s. 38s. 40s. and 42s.; ¼ patent rough plate tiles, 10s. per doz. Cathedral and stained glass, and all the neutral tints.—116, BISHOPSGATE-STREET WITHOUT.

SUPERIOR BRITISH PLATE-GLASS AT VERY LOW RATES.

THE UNION PLATE-GLASS COMPANY having recently completed very considerable improvements and additions to their works, take the opportunity of informing their friends that they will now be able to supply orders without delay; and respectfully invite the attention of the trade generally to the low rates at which their now much-esteemed manufacture is sold.

Lists of prices may be obtained on application at
The Works, Pocket Nook, St. Helen's, Lancashire.
The Warehouse, 99, Hatton-garden, London.
" 45, Piccadilly, Manchester.
Messrs. C. and J. Malloch, 30, Turner's-court, Glasgow.
" John Dix and Co. Bath-street, Bristol.
" H. Sidthorpe and Son, Cork-hill, Dublin.

ROUGH PLATE-GLASS from ¾ to 1 in. thick, suitable for the wind-ows and roofs of mills, mechanics' shops, market halls, rail way stations, &c.

Beautiful and highly-finished POLISHED PLATE-GLASS, for shop-fronts and all superior architectural purposes, and for silvering.

Superior silvered Plate-glass Mirrors of all sizes.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 315, OXFORD-STREET.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.—This ware, allowed by all to be of the best manufacture, by the unparalleled quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

WHITE and BLUE CLOSET BASINS, URINALS, &c.
MILLWALL POTTERY.
DEPOT:
ARTHUR-STREET, NEW OXFORD-STREET.

TO the new DISTRICTS BOARD of WORKS.—TO BE SOLD complete, superior CESSPOOL CLEANSING APPARATUS and GULLY TOOLS.—Apply at 11, Palace New Road, Westminster-bridge.

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Architects and the Trade are respectfully invited to inspect specimens of the
PATENT VITREOUS MARBLES AND CONSOLIDATED GLASS,
Applicable for Piers, Pilasters, Chimney-pieces, Shop Facias, Table-tops, Panels, &c. &c
Show-rooms, 40, Broad-street-buildings, City; 4, Russell-place, Fitzroy-square; 112, New-street, Birmingham, &c. &c.

THE SEVRES GLASS COMPANY.
LEGENDRE, TURPIN, AND CLARK'S
Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality, Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at
131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

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Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

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Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.
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W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

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MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; AND SMETHWICK, NEAR BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

TWENTY-ONE LARGE AND IMPORTANT TOWNS HAVE BEEN DRAINED WITH DOULTON'S GLAZED STONE-WARE PIPES, *and in no case has the slightest failure occurred.*

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MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
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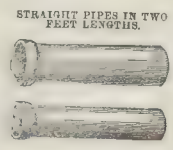
IMPROVED WATER-CLOSET PANS AND TRAPS, WHITE INSIDE.

Pan, 3s. 6d. Trap, 2s.

STRAIGHT PIPES IN TWO FEET LENGTHS.



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HALF-SOCKET PIPES, in 2 feet lengths, at usual prices, by the use of which, Drains may be readily examined, and Junctions inserted, in the event of requiring further connections.

May be had also at Messrs. GLADDISH'S LIME WHARFS, Pedlar's-acre, Westminster-bridge, City-road Wharf, City Basin; Dock-head, Bermondsey; Danvers Wharf, foot of Battersea-bridge, Chelsea; Pratt Wharf, King's-road, Camden New Town; J. TURNER, 3, South Wharf, Praed-street, Paddington; COLWILL, Brothers, 32, Hydres-street, Covent Garden; and at EDWARD COOK'S 94, Wardour-street, Oxford-street. Drawings and List of Prices will be forwarded free on application.

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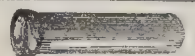
Is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Cut, Lambeth.

N.B No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price, complete, 13s. 6d. each.

THE STAFFORDSHIRE SANITARY POTTERY COMPANY.

Proprietors, E. F. WINSTONE and CO. — Manufacturers of glazed water-closets and urinals (buff stone outside, and white enamelled inside, and every description of pan basins, also vitrified and glazed sewer-pipes, 100, Great College-street, Camden-town, London, late of Pickard-street, City-road.



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DRAIN PIPES, invented and manufactured by WILLIAM NORTHEN, UNION POTTERY, No. 14, VAUXHALL-WALK, LAMBETH.

W. NORTHEN begs to inform surveyors, contractors, builders, water companies, &c. that he has completed "Spencer's" new patent machinery for making GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, ELBOWS, SYPHON-TRAPS, &c. &c. Amongst the many advantages of pipes made by this machinery over all others may be mentioned, that it insures perfect uniformity in form and size, both of pipes and sockets, the dies being of a different and better construction than any others now in use; and the pipes and sockets being made by one process are secure from separation.

W. N. invites particular attention to the superior quality of the glaze used in his manufacture, which is equal to glass, and rendering stoppage in the drains impossible.

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SUPERIOR LAND DRAINAGE.—

AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

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WILCOX and CO. Manufacturers of every

description of white and printed CLOSET-PANS, URINALS, TABLES, PLUG-BASINS, &c.

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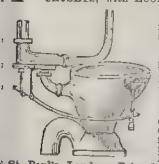
PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS,



manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE Powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 23, Old Fish-street, near St. Paul's, London. Price for Closet and Apparatus complete, from 35s. and perfect action guaranteed.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES,

acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT DRAIN-PIPES, UNGLAZED,

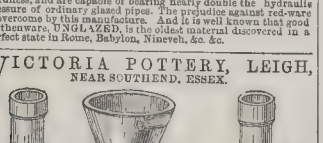
manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at				3d. per foot.
4	"	"	"	4d. "
6	"	"	"	6d. "
9	"	"	"	9d. "
12	"	"	"	1s. "
15	"	"	"	1s. 6d. "
18	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture. And it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

VICTORIA POTTERY, LEIGH, NEAR SOUTHEND, ESSEX.



DAVID MOUNTAGUE,

MANUFACTURER of superior GLAZED STONEWARE PIPES (in accordance with the rules established by the Commissioners of Sewers), Bends, Traps, Closet-pans, Jars, Bottles, and every article in Stone Ware on advantageous terms. Also MANUFACTURER of superior Roman Cement and Plaster of Paris at Orchard House, Blackwall. Orders executed from the above places, from Falcon-wharf, 80, Bankside, Blackfriars, and from Harrow-bridge-wharf, Stratford, Essex.

AYLESFORD POTTERY COMPANY, BELVEDERE-ROAD, LAMBETH.

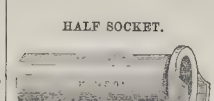
MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

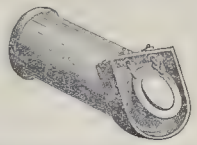
The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dock-yard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET,

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.





WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

Superior Glazed Stoneware Pipes, Bends, Junctions, Traps, &c. Hopper and other Pans, with best White Glaze inside.

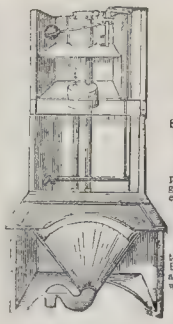
Pan, 3s. 6d.

Trap, 2s.

Syphon Pan, with or without STEPHEN GREEN'S Patent Air-tight Valve.

Registered Flushing Basin,—the most effective Syphon-trap yet offered to the public.

STEPHEN GREEN, IMPERIAL POTTERIES, LAMBETH.



IMPORTANT TESTIMONIALS

TO THE EFFICIENT WORKING OF

STEPHEN GREEN'S

PATENT SYPHON FLUSHING BASIN,

AND

SELF-ACTING CLOSET CONNECTIONS.

Oxford, November, 1849.

GENTLEMEN,—Sixteen of your Closets having been put into operation at Christ Church College, I have great pleasure in giving you my testimony as to their efficiency and simplicity.

HENRY J. UNDERWOOD, Architect.
R. S. HODGAK, Engineer.

Royal Arsenal, Woolwich, June 24, 1852.

GENTLEMEN,—I have much pleasure in giving my testimony in favour of your Patent Syphon Flushing Basin, with Self-acting Closet Connections. There are several fixed here, which have been in use for upwards of twelve months, giving perfect satisfaction.

I am, Gentlemen,
Your obedient Servant,
WILLIAM CARTWRIGHT.

This effective article has not any Crank or Wire to get out of order, and is all complete and ready for use, and may be seen in operation at STEPHEN GREEN'S Manufactory, Lambeth.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

WILLIAM NORTHEN'S WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,
LAMBETH POTTERY, HIGH-STREET, LAMBETH,
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to
5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pans.

SALES BY AUCTION.

SOUTHAL, Middlesex.—TO BUILDERS, CONTRACTORS, and Others. Three Millions of capital Bricks, lying close to the Grand Junction canal, a branch of which surrounds the field.

BAKER and SON will SELL by AUCTION, on THURSDAY, the 7th of FEBRUARY, at ONE, on the PREMISES, Ordnance Brick-field, near the Southall Station, on the Great Western Railway, about THREE MILLIONS of excellent STOCK, GRIZZEL, and PLACE BRICKS, lying immediately adjoining a branch of the Grand Junction Canal, by which they may be landed and delivered, either at Paddington or to the River Thames, at about 3s. per thousand.—May be viewed the day prior. Catalogues had on the Premises, and of the Auctioneer, Kilburn.

Important unreserved sale of FRENCH and ENGLISH PAPER-HANGINGS, being a consignment from an eminent Parisian house, of the most elegant and elaborate designed decorations, and nearly all the remaining portion of Messrs. ERWOOD and CO.'S immense STOCK of HANGINGS, which, in consequence of the dissolution of partnership, has been removed from their warehouse, No. 66, Watling-street, to be SOLD by public AUCTION by

MR. EDWIN WHITE, at his spacious Auction Rooms, 175, Bishopsgate-street-Without, on TUESDAY, FEBRUARY 5, at TWELVE for ONE o'clock, precisely. The paper hangings consist of elegant golds, rich flocks, satins and damasks neat chintzes, marbles, granites oaks, and others in a multitude of designs, with suitable borders, friezes, and ceilings, and a quantity of painters' and decorators' brushes, will be included in the sale.—The whole may be viewed, and catalogues had the day prior and morning of sale.

CLEARANCE SALE OF BRICKS, TO BUILDERS AND OTHERS.

MR. EDWIN WHITE will SELL by AUCTION, without reserve, at the BRICKFIELDS (late in the occupation of Mr. Geo Frasi, a bankrupt), situate on the west side of the Hackney-road, Hackney, on THURSDAY, FEBRUARY 7, at ONE for TWO o'clock punctually, the remaining portion of the excellent BRICKS, consisting of 380,000 stocks, grizzles and place, which must be cleared away within a month, as the holder's term of possession will cease.—May be viewed the day before and morning of sale, when catalogues may be had on the Premises, and of the Auctioneers, 175, Bishopsgate street Without.

READING, BERKS.—To Railway Contractors, Builders, Brewers, Coal Merchants, Carriers, and Others.

MR. WILLIAM BROWN will SELL by AUCTION, on MONDAY, the 11th day of FEBRUARY, 1856, at ONE o'clock precisely, at the HORSE-TABLES, near the Great Western Railway, and Reading and Reigate Railway Stations at Reading, FORTY first-rate powerful Eight-inch CART-HORSES, in good working condition, the property of Mr. H. Brotherhood, now offered to the public in consequence of the New Line west of the Reading Station being nearly completed. The Auctioneer begs to draw the particular attention of his friends and the public to this superior Stock, which has been selected with great care and at high prices by Mr. Brotherhood, whose well-known judgement has given such general satisfaction at previous sales. Amongst the Stock will be found Fifteen very promising well-bred Cart Colts, rising three years old, which have never been worked. The Horses may be seen at work on the Line near the Reading Station, daily (Sundays excepted), and on the morning of sale at Mr. Hope's Stables, Great Western Tap, close to the Station. Of the Two Days' Sale.—Catalogues may be had four days before the time of sale (or sent by post), on application to Mr. Brotherhood, Railway Works, Chippenham; or at the Offices of the Auctioneer, 154, Friar-street, Reading. Conditions of Sale as usual.

TO COACHBUILDERS, COACH SMITHS, IRONMONGERS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, FEBRUARY 12, at ELEVEN, on the PREMISES, Gc.-green-street, Oxford-street, by order of the Mortgagees, SEVENTY TONS IRON and STEEL and IRONMONGERY, including about thirty tons 3/8 bars assorted, twenty tons Staffordshire bars, eight tons coach-spring steel (oval and flat), five tons best cast and double shear steel, two tons bolts and nuts, 20 grs. coach bolts, assorted, one dozen and a half cart-boxes complete, eight tons iron and best Derby town chain, one ton snap-head rivets, 500 gross wood screws, five tons screw coil and wheel-rights' chain, two tons barrs, washers, and hammer irons, eight pairs coach and gig patent axles, coach-springs, coach trimmers', dubbing and case grabs, builders' ironmongery, and a general assortment of ironmongery. To be viewed on Monday previous to the sale, and Catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO ENGINEERS, MILLWRIGHTS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY, FEBRUARY 4, at ELEVEN, on the PREMISES, No. 93, Tooley-street, Southwark, in lots, without reserve, ENGINEERS' TOOLS, MACHINERY, and STOCK, 14-inch self-acting lathe, by Shanks, bed 14 feet; self-acting planing-machine, to take in 22 inches wide by 4 feet 6 inches in length; three self-acting vertical drilling-machines (one very powerful); screwing-machine, to screw up to 2 inches; four steam-engines of 2, 3, and 4 horse power; Cornish boiler, slotting machine, air builder's mortising and drilling machine, double vice and benches, stocks, taps and dies, and tools, small gas apparatus for twenty lights, eight new portable hand corn-mills, smith's forge, bellows, anvils, tools, blocks and falls, collection of wood patterns, a few lots of household furniture, and other effects. Also the letters patent for improvement in the manufacture of portable hand flour-mills for a term of fourteen years.—To be viewed on Saturday previous to the sale, when catalogues may be had on the Premises, and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO RETAIL TIMBER MERCHANTS, CONTRACTORS, BUILDERS, SAW MILL PROPRIETORS, AND OTHERS.

MESSRS. DAVIES and VIGERS are instructed by Mr. Samuel Grimshell, upon his retirement from business, to SELL by AUCTION, on the PREMISES, Bellane, Spitalfields, at 1, Queen-street, Church-street, Wednesbury, on MONDAY, MARCH 3rd, and several following days, at TWELVE for ONE o'clock each day without reserve, his extensive, well-seasoned, and valuable STOCK and PLANT, comprising 60 first quality yellow, white and Baltic deals, 150 white deals and battens, 500 yellow Sweden battens, 20 000 feet of Spanish and Honduras mahogany, cut from two to five years, Dutch crown Riga timber, oak and elm plank, thoroughly seasoned, prepared floor battens, and a large and useful assortment of dry-cut stuff, 1,200 scaffold poles, 2,000 scaffold boards, 1,500 pallets, 1000 yards of sawdust, circular planing and moulding machine, five wrought-iron box girders, cast-iron sumps, tie fittings and tools of smiths' shop, lime, cement, and other glass, leading portable power corn mill, wood and iron pulleys, planks, partners, and glue pots; ropes, boy, apprentices' trades, crampe, travelling cranes, screw jacks, and 1 ton 5 cwt. patent screw jacks, 40 ladders, two pug mills and a lime mill, 10,000 stock bricks, blocks of Portland and other stone, Yorkshire paving, landings, &c.; masons' sawing tackle and stone saws, timber carriages, three stone trucks, two spring vans, eight carts, six timber-bodies on trucks, two powerful horses, and two light van horses, with numerous items of valuable and useful property, forming the entire stock, trade, and requisites of a large and well-regulated builder's establishment. To be viewed two days before and on the morning of sale. Catalogues will be forwarded by post, or may be had on the Premises; of Messrs. WARRINGTON and BEARSON, New City Chambers, Bishopsgate; and at the Auctioneers' Offices, 3, Frederick's-place, Old Jewry.

N.B.—The lease of the extensive premises in Bell-lane to be sold, with immediate possession to the purchaser.

AT GARRAWAY'S COFFEE-HOUSE, Cornhill, on FRIDAY, 8th FEBRUARY, 1856, at FOUR o'clock, TIMBER, 500 loads, foreign and colonial; deals and battens, 50,000 pieces; with other wood goods.—H. FREEMAN, Broker, 3, Crooked-lane, London-bridge.

SALES BY AUCTION.

TO BUILDERS, CONTRACTORS, AND OTHERS

MR. HARDING will SELL by AUCTION, on the BRICKFIELD, closely adjacent to the Grand Junction Canal, near the Southall Railway Station, North Hyde, Middlesex, on WEDNESDAY, February 6, 1856, at ONE for TWO o'clock precisely, about 1,000,000 STOCK BRICKS, of an excellent description. May be viewed. Catalogues had of Mr. Fleetwood, adjoining the field; and of the Auctioneer, 25, New Broad-street, London.

JUNCTION-ROAD, KENTISH-TOWN.—To CARPENTERS, BUILDERS, and OTHERS.—Well built CARCASES of Five Houses.

MESSRS. KENNEDY and BONNY will SELL by AUCTION, in separate lots at the RED CAP, Camden-town on THURSDAY, FEBRUARY 7, at TWELVE for ONE, FIVE CARCASES of NINE-ROOMED HOUSES, slate roofs, lead gutters, masons' and plumbers' work complete in 1 well done, in an excellent situation for letting, being Nos. 1, 2, 3, 4, and 5, Fortes-terrace West, Junction-road, Kentish-town. Separate leases will be granted direct from the freeholder.—For further particulars and conditions of sale apply at the Auctioneers' Offices, 1, Bolton's-place, and 5, Cornwall-crescent, Camden-town. Messrs. KENNEDY and BONNY will at the same time offer for sale, TWO well built leasehold DWELLING HOUSES, being Nos. 7 and 8, Fortes-terrace West, Kentish-town.

WESTMINSTER BUILDERS' STOCK AND EFFECTS.

MESSRS. EVERSFIELD and HORNE are instructed by the proprietor, retiring from business, to SELL by AUCTION, on the PREMISES, Regency-st. Westminster, on THURSDAY, FEBRUARY 14, at TWELVE for ONE, the STOCK-IN-TRADE, comprising a large quantity of dry deals, planks, and battens, prepared floor battens, dry pine pila &c. sea-one 1 wainscot, useful boards and quartering, old doors, sashes and framing, Portland stone, a copper skylight, &c. Also the valuable PLANT, comprising two young powerful draught horses, three carts, stone truck, blocks and falls, scaffold poles, boards, cords and pulleys, trestles, work benches, barrows, and mortar-boards, a very excellent mahogany desk, with ten drawers, and other effects. May be viewed on day previous, and catalogues had on the Premises, and of the Auctioneers, 46, Parliament-street, or Coal Exchange.

TO BUILDERS, CABINET AND PIANOFORTE MAKERS, AND OTHERS.

MR. LEREW is instructed to prepare for SALE by AUCTION, on the PREMISES, Nos. 41 and 43, Union-street, Somers-town, on the 18th of FEBRUARY, at ELEVEN for TWELVE, on account of the number of lots, about 4,000 feet of MAHOGANY, 1,500 planks, deals, and battens, 100 squares of prepared flooring, 5,000 feet of moulding, dry cut stuff, 4,000 feet of wide pine board, 80 four-panel and sash doors, and other prepared work; nails, ironmongery, ranges, stoves, workbenches, anvil, scaffolding, ladders, barrows, &c.—May be viewed on Saturday prior and morning of Sale, and catalogues had, on the Premises, and of the Auctioneer, Cardington-street, Hampstead road near the Euston station.

TO BRICKMAKERS AND BUILDERS.

MR. LEREW is instructed to procure a Purchaser, by PRIVATE CONTRACT, for 300,000 STOCK BRICKS, and the PLANT for TWO STOOLS. The field is about four minutes distant from the Euston-station.—For further particulars and orders to view, apply at the Offices of Mr. LEREW, Auctioneer, Cardington-street, Hampstead road.

WORKSHOPS or PREMISES.—TO BE LET, in the neighbourhood of Oxford-terrace, Edgware-road, TWO spacious WORKSHOPS, in thorough repair, suitable for any business, and possessing every capability. They are each 43 feet long, 21 feet wide, and respectively 10 feet and 16 feet in height. They have a range of fifty windows along the side, and the upper one has five large skylights. There are two fire-places and ventilating-shafts. The floors are wood, and underneath the lower one is a space for stowage.—For further particulars and terms, apply to Mr. BOLAND, House Agent, Cumberland-place, Hyde-park, in the immediate neighbourhood; or at 38, Bloomsbury-square.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations. Apply at the Offices of Messrs MORGAN and PHIPSON, Architects, 8, Chancery-lane.

FREEHOLD GROUND, CHANCERY-LANE and FETTER-LANE.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 26th of FEBRUARY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking, on Building Lease for Eighty Years, certain PLOTS of GROUND, situate at the south-west end of Chancery-lane, and the south-east end of Fetter-lane.—Further particulars may be had, and plans seen, on application to Mr. HAYWARD, Engineer to the Commissioners, at the Offices of the Guildhall. The Commissioners will require a plan and elevation of the proposed building to be built, to accompany the offer for approval; and do not bind themselves to accept any proposal, unless deemed advantageous.

JOSEPH DAW, Principal Clerk.
Sewers' Office, Guildhall, January 2, 1856.

HARROW.—FREEHOLD LAND.—TO BE SOLD, 103 ACRES, in a ring fence, and several other eligible plots of FREEHOLD LAND, at a moderate price, contiguous to the Harrow Railway Station, sure undesired and interested by capital rents. Residents are entitled to the services of the Harrow School, and the London and North Western Railway Company offer to persons building houses of approved elevation, worth 50l. per year each, a free first-class pass ticket to Harrow station and Euston square, for eleven years. There is an abundant supply of excellent water, and very superior brick-earth on the land.—Apply to WILLIAM B. COOPER, Esq. Solicitor, 7, Verulam-buildings, Gray's-inn.

BUILDING-GROUND, Clerkenwell, in the direct line of the new street from Farringdon-street to Islington.—GROUND TO BE LET for third-rate houses, with or without workshops and back entrances in capital site for a public-house.—Apply to Messrs. ROBERTS and HANCOCK, 3, Serjeants'-inn; or to Mr. RANDALL, Esq. Architect, 25, Great Winchester-street, City, between the hours of TEN and FOUR o'clock.

TO BE LET, SEMI-DETACHED VILLAS, in immediate neighbourhood of Victoria New Docks, and in parish of Plaistow. Each house contains lofty parlours and drawing-room, with folding doors, kitchen, cellarage, and W.C. They are completely fitted up with every convenience.—Apply to Mr. Arundell, Builder, Plaistow. Externally stained oak and varnished, and all are papered with newest patterns. They are ready for immediate occupation, and, in consequence of the failure of the builder, they will be let for the low rent of 22l. per annum. Taxes are very moderate, and railroad and omnibus convey one within easy distance.—Apply to Messrs. WM. G. and E. HARRISON, Accountants, 28, Bloomsbury-square, London; at whose Office views and drawings may be seen.

MANUFACTURING WATERSIDE PREMISES, with STEAM POWER.—TO BE LET on LEASE, spacious MANUFACTURING PREMISES, well adapted for a Distillery, Manufacturing Chemist, or Colour Manufacturer; situate on the banks of the River Lea Canal, within five minutes' walk of the Bow Station of the Black-wall Railway. The site occupies a total area of about one acre and a half. There is a commodious family residence, with garden, a wharf, with frontage of 50 feet, an extensive well-constructed steam-engine of 14-horse power, with boiler and pumps, with pipes to a large iron tank, capable of holding 10,000 gallons of water; also a large filtering-pond or reservoir for water.—Apply to Messrs. FULLER and HORSEY, Billiter-street, City.

WESTON-SUPER-MARE, SOMERSET. The WEST COTTAGE ESTATE.—FREEHOLD LAND for the ERECTION of 100 HOUSES, in the centre of the town, and overlooking the sea, TO BE SOLD, in one or more lots, on very reasonable terms.—Further particulars of B. G. PHILLIPS, Esq. Weston-super-Mare.

TO CAPITALISTS, BUILDERS, and SPECULATORS.—The valuable BUILDING ESTATE of "Oak Bank," surrounded on all sides by good roads, having extensive frontages to the river Itchen, and fine views of the river as it is TO BE LET on Building Leases for 1,000 years from the present proprietor. This valuable building property is within a few minutes' walk of the docks and town of Southampton, and being without the municipal boundary, the rates and taxes are almost nominal. Its peculiar formation permits it to be made available for dwellings suitable to every class. Further particulars will appear in a future advertisement, and in the mean time may be viewed and full information obtained on application to Mr. ALFRED G. LOCK, Architect, Surveyor, and Land Agent, offices, Onslow-road, Southampton; on and after the 26th day of February.

TO BUILDERS and OTHERS.—TO BE LET, on a Repairing Lease for thirty-eight years, at 120 guineas a year, very capital PREMISES, near Middlesex Hospital, comprising a large house, and in the rear, with separate entrance, a tier of capital workshops. The lease would be a beneficial one, as the present rental of the premises is 212l a year, and capable of great improvement. Apply to Mr. SALMON, 23, Bucklersbury, City.

TO BUILDERS.—TO LET, on a re-building lease for ninety-nine years, FIVE HOUSES, Melbourne-street, Weston-street, Pentonville. They form one corner of the street, with two frontages about 100 feet each. Land-tax redeemed; with a new sewer within ten years. The ground-rent 40l. per annum.—Apply to Mr. BUCKLEY, No. 5, Guildford-street East, Wilmington-square.

WHARF and STEAM SAW-MILLS TO BE LET.—The extensive premises, known as the "ABBEY WHARF," Kingston, Surrey, having frontage towards the Kennet; and powerful CRANES, on which a large timber trade has for many years been carried on. Also, the powerful, newly-erected STEAM SAW-MILLS, now in full work; with counting-house, large warehouses, stabling, &c. The trade is capable of being greatly increased; and the Premises and Steam-Mill equal to carrying on business to any extent. For particulars and terms, apply to Mr. WILLIAM BROWN, Surveyor and Estate Agent, 154, Friar street, Reading. N.B. Immediate possession may be had.

TO BUILDERS and OTHERS.—TO BE LET, at Castlenau, Barnes, TWO desirable PLOTS of LAND, suitable for the erection of detached or semi-detached villas for private occupation. For particulars, apply to GORDON STANHAM, Esq. Architect, St. Alban's Cottage, North-End, Hammersmith.

KINSON, DORSETSHIRE.—SALE of VALUABLE FREEHOLD PROPERTY. To BREWERS, CLAY-MERCHANTS, POTTERS, and Others.—TO BE SOLD, by PRIVATE CONTRACT, the POTTERY HOTEL, near the Kinson Clay-Works, with one and a half from Poole, on the Ringwood road. Also to be Sold, Four Acres of Clay Land, suitable for all kinds of pottery and brick purposes, with a good supply of sand and water.—For particulars, apply at the Pottery Hotel; and of Mr. T. RICKMAN, Maltster, &c. Poole.

TO SURVEYORS, AUCTIONEERS, &c.—The Advertiser has LAND TO LET, eligibly situate near the Regent's Palace, and is open to treat for letting the same. No party need apply but those who have a connection for letting, and their premises in a good public situation.—Address, A. B. 75, Belsize-road, St. John's-wood.

FREEHOLD GROUND for BUILDING ON.—TO BE LET, upon BUILDING LEASES, PLOTS of GROUND, in that healthy locality, Holloway, two or three minutes from the Archway Tavern. Omnibuses every four or five minutes to all parts of London. Corner of St. John's-road, where houses let as fast as built. For particulars, apply to Mr. H. FETHERS, 9, Poultry. The leases direct from the freeholder. Money advanced.

IMPORTANT to SOAPMAKERS, CAPITALISTS, and OTHERS.—TO BE LET, all those excellent and complete SOAP WORKS, situate at Bloomfield, in the parish of Tipton, in the county of Stafford, Public Office, cutting and framing rooms, store-room, pressing-room, boiling room, with four copper's soap and lye boiling rooms adjoining, counting-house and office, store room and boiler's office, cutting cellar, and two packing-rooms attached; melting and bleaching boiler, carpenters' shop, machine and house, office, warehouse, sailing lespan, block ash furnace, with sheds attached; smiths' shop, stables, and gig-house, large yard and reservoir, with a good supply of water. The premises are lighted with gas, and surrounded by a substantial wall and entrance-doors; are particularly adapted for the business, and LET for all it every necessary convenience, and now in full operation. They are situate in the centre of the district, and within short distances of extensive collieries, ironworks, canals, and the populous districts of the Stour Valley, at Oxford, Worcester, and Wolverhampton Railways. The proprietors are giving up the premises in consequence of other engagements.—To treat, applications are requested to the Leader Messrs. JAMES and JOSEPH HIPKINS, on the Premises; or to Mr. SOLOMON POWELL, Surveyor, &c. Tipton, Staffordshire.

TO ARCHITECTS.—TO BE DISPOSED OF, an ARCHITECT'S PRACTICE, which has been established four years, in a large and rapidly-improving market-town, in the West Riding of Yorkshire. For particulars, application may be made to Mr. J. W. BLAKELEY, Solicitor, Dewsbury.

TO DECORATORS, BUILDERS, and OTHERS.—OLD-ESTABLISHED BUSINESS in the heart of the City, to be DISPOSED OF, together with the Lease of the eligible Premises, Fixtures, and Stock-in-Trade. Persons of open command may have full particulars of Mr. BEBELMAN, 5, Cheapside (c. 29.)

A BUILDER'S BUSINESS TO BE DISPOSED OF, near the Regent's Park, in St. Pancras, Camden, & Pentonville. A tender may be given with the Premises, or without. Part cash, or the whole paid by instalments, if preferred.—For further particulars, apply (prepaid), to C. A. R. Office of The Builder.

TO ARCHITECTS AND SURVEYORS.

JOHN WILLIAMS begs leave to inform his friends and the profession in general, that the BUSINESS of a BUILDER and DECORATOR, carried on by his late father, at the Colonnade, Russell-square, for nearly half a century, will still be carried on by him. He therefore most respectfully solicits a continuation of the favours so liberally bestowed on his late father, pledging himself that no pains shall be wanting to carry on the business in a manner that will merit the approbation of those who may favour him with their commands. January, 1856.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Brice) & WYMAN (A. L.), Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by them at CHARLES WYMAN'S, "The Builder" Office, No. 13, Hunter-street, in the Parish of St. Pancras, Covent Garden, all in the County of Middlesex.—Saturday, February 2, 1856.

The Builder,

AN ILLUSTRATED JOURNAL FOR THE

Architect, Engineer, Operative & Artist.

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THE BUILDERS' BALL, in AID of the FUNDS of the BUILDERS' BENEVOLENT INSTITUTION, will take place at WILLIS'S ROOMS, St. James's, on the 14th instant.

COMMITTEE OF MANAGEMENT.

Mr. Geo. Bird, Treasurer	Mr. R. J. Hickman
" John Chapman	" J Soward, jun.
" Thomas Cubitt	" Thomas Stirling
" William Ellis	" John Thorn
" William Hutchons	" William Todd, jun.
" John Newson, jun.	" R. Watts, jun.
" William Norris	

Charles T Lucas, esq. President.

Right Hon. Sir B. Hall, Bart. M.P.; William Lee, esq. M.P.

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Christr. Eales, esq.	Mr. A. Moore	James Wagstaff, esq.
	George Myers, esq.	

Of whom Tickets may be obtained; also of the Honorary Secretary, Mr. JOSEPH BIRD, 30, Hanover-cottages, Regent's-park; and at the Office of the Institution, 19, Southampton-street, Bloomsbury.

Double ticket, 21s.; lady's ticket, 8s.; gentleman's ticket, 14s.; including refreshments.

BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.

Head-Master—R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify School-masters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Free-hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera, and Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still-life, &c, the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of China and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 3l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the Museum and Library, either for consultation or copying, as well as to all the public lectures of the Department.

The schools for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. M'Ian. Fees per session,—Advanced Class, 2l. and 3l.; Elementary Class, 1l.; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall mall, London.

ARCHITECTURAL EXHIBITION and COLLECTION of PATENTS and MANUFACTURES connected with Building, NOW OPEN at the GALLERIES, 9, SUFFOLK STREET, Pall-mall East. Admission, One Shilling; or to the Galleries at all times, and to all the Lectures, by season tickets, Half-a-Crown each. Lecture for TUESDAY EVENING, FEBRUARY 12, at EIGHT o'clock, "The Influence of Light and Shadow on Architectural Composition," by THOS. ALLOM, Esq. All particulars at the Galleries.—No lecture on February 5th.

TO ENGINEERS AND SURVEYORS.

THE LOCAL BOARD of HEALTH of HASTINGS require a SURVEYOR able to undertake the duties of that office, under the Public Health Act, 1848. He must be competent to prepare plans, sections, drawings, and estimates, and to be conversant with the practice of engineering generally, and able to superintend and carry out the execution of all necessary works of drainage and others, which will fall within his duties. He will be required to devote the whole of his time to the duties of the office. Salary, 200l. per annum. He will also have to act as Surveyor to the Corporation, with an additional salary of 30l. per annum.—Applications, with age, testimonials of qualification and competency, to be addressed to "The Local Board of Health," indorsed "Application for Office of Surveyor," are to be forwarded, under cover, to the Town Clerk, Hastings, on or before the 21st day of FEBRUARY next.

JOHN G. SHORTER, Town Clerk.

Hastings, January 19, 1856.

COMPETITIONS.

TO ARCHITECTS, SURVEYORS, AND OTHERS.

PLANS, DESIGNS, and DRAWINGS are requested for the ERECTION of TWO CEMETERY CHAPELS, under one roof, together with a Lodge and Entrance-Gates, for the Grantham Burial-Ground containing six acres of land, to include ground-plans and elevations, and to be accompanied by approximating estimates of the expense. The buildings to be faced with Ancaster stone, and the plinths to be of Mansfield stone. The whole expense (including fittings, &c. of chapels) not to exceed the sum of 1,500l. 10l. is offered for the plan of the chapels and buildings considered to be the best, unless the architect shall also contract for the works, and 5l. for the second best. The whole of the plans, &c. to be sent to me, sealed and endorsed, but without any name or distinguishing mark, on or before SATURDAY, the 1st day of MARCH next, inclosing a sealed letter in each case from the person forwarding it.

By order of the Burial Board,

ROBERT HENRY JOHNSTON, Clerk

Grantham, Feb. 5, 1856.

EAST DEREHAM CORN-EXCHANGE COMPANY (provisionally registered.)—Architects desirous of furnishing PLANS for the proposed CORN EXCHANGE, may see a plan of the site, and obtain necessary particulars, on application at the Office of HENRY COOPER, Esq. East Dereham, Norfolk, the Secretary of the Company, on and after the 12th inst. The architect whose plans are accepted will be paid 10l. for such plans. Plans will not be received after WEDNESDAY, the 27th day of MARCH next. All plans to be sent sealed, and to be on the scale of one-eighth of an inch to the foot.

East Dereham, 2nd February, 1856.

N.B.—A specification stating the general mode of construction, the materials to be used, and the manner of finishing, is to be sent with the plans to me as the Committee in their decision. The architect whose plans are accepted will afterwards be required to put the specification into a form suitable for builders to tender from.

TO BUILDERS.

NEW FARMSTEAD.—Persons desirous of TENDERING for FARM BUILDINGS, to be erected at Walton Grounds, Aynho, near Banbury, Oxfordshire, on the estate of Col. North, M.P. may see the plans and specification of the works at the Office of Messrs. DANBY and CALES, Auctioneers and Estate Agents, Banbury. The Tenders are to be delivered at the Office of Mr. J. F. CLARK, Architect, Newmarket, on or before SATURDAY, the 23rd of FEBRUARY. The lowest or any Tender will not necessarily be accepted. Quantities can be obtained on application to Mr. CLARK.

TO BUILDERS.

THE BURIAL BOARD for the PARISH of WALTHAM HOLY CROSS, in the County of Essex, are prepared to receive TENDERS for the ERECTION of TWO MORTUARY CHAPELS, at the New Cemetery, Waltham Abbey. The Drawings, specification, &c. may be seen at the Office of the Architects, Mr. S. HEWITT, Montague Close, Southwark; and at Mr. J. JESSOPP'S Offices, Waltham Abbey. Tenders to be sent in on or before MONDAY, FEBRUARY 25, next, at SEVEN o'clock, to Mr. J. JESSOPP. The Board do not bind themselves to accept the lowest nor any Tender.—February 8, 1856.

TO PAVIORS AND OTHERS.

NOTICE is hereby given that the Commissioners of Paving in Abingdon, are desirous of receiving TENDERS from persons willing to contract for PITCHING and LAYING DOWN, without curb, 5,000 feet and upwards of the best of the YORKSHIRE PAVING STONE, of two inches and a half thickness, and not less than two feet by three feet, in the surface, in such parts of the streets in Abingdon as the Commissioners shall determine; to be laid in the best gravel mortar, in courses varying from six feet to three feet in breadth, except such parts of the footways as are less than three feet, which must be laid with stone of corresponding breadth, of which eighteen inches shall be the minimum; the contractor to restore and make good all the pitching which may be disturbed in laying the new paving stone, the paving to be measured after the work is done to the satisfaction of the Commissioners or their Surveyor. Tenders specifying the price per square foot, to be sent to the office of the Clerks, in Abingdon, on or before the 1st day of MARCH next.

MORLAND and GODFREY, Clerks to the Commissioners.

Abingdon, 8th February, 1856.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS—ORDNANCE WORKS—The Commanding Royal Engineer of the Dover District hereby gives notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall-mall, London, on or before WEDNESDAY, the 20th day of FEBRUARY, 1856, from persons desirous of contracting for extensive ADDITIONS and ALTERATIONS to the WESTERN HEIGHTS BARRACKS, at Dover. Drawings and specifications of the works to be executed, may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Archcliff Fort, Dover, between the hours of TEN and FOUR o'clock from FRIDAY, the 1st of FEBRUARY, to TUESDAY, the 19th of FEBRUARY, 1856 Sundays excepted. A person belonging to the Royal Engineer Department will attend each day at the Western Heights Barracks, from TEN to TWELVE o'clock, to point out the work and explain the drawings. The party whose Tender may be accepted for the work will be required to enter into a bond with two eligible securities, jointly and separately, to be bound under a penalty of 2,000l. for the due performance of the contract. Tenders for the above work to be addressed to the Director General of Contracts, Pall-mall, London, and endorsed "Tender for work at Dover." N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office Dover January 16th, 1856

CONTRACTS. — Royal Engineer's Office, Chatham, 30th January, 1856. NOTICE is hereby given, that TENDERS will be received by the War Department, Pall-mall, London, on or before MONDAY, the 18th day of FEBRUARY, 1856, for the performance of the following branches of ARTIFICERS' WORK, for the War Department, at the undermentioned Stations for a period of two years, from the 1st of APRIL, 1856, determinable at any period after one year, on either party giving to the other three months' notice in writing, viz.:—

At CHATHAM.—Plumbers' Work.

At GRAVESEND and its Environs, comprising Tilbury Fort, Shorne, Mead, and Cliff Barracks.—Bricklayers', Painters', Glaziers', and Paperhangers' Works. Plumbers' Work.

Separate Tenders to be made for these two Stations, as well as for the different Contracts; nevertheless Tenders for Gravesend and Fortress may be submitted for the several trades to one Contractor. Printed forms and conditions of Contract may be obtained on application at the Royal Engineers' Offices, at Chatham, and at Gravesend, from the 4th to the 10th of FEBRUARY (Sunday excepted), after which no Tender can be admitted after the said 18th day of FEBRUARY, 1856.—The War Department reserve to themselves the right of rejecting any or all Tenders that may be presented.

TO BUILDERS

THE GUARDIANS of the POOR of the HERSTMONCEUX UNION are desirous of receiving TENDERS for the ERECTION of a new UNION WORKHOUSE, for the accommodation of 200 in the with Board and Committee Room, Master and Matron's Offices, Infirmary, and the buildings at Redingfield, near Haverhill, Suffolk. Plans, specifications, and conditions may be seen at the Office of the Clerk to the Guardians, at Haverhill, and at the office of Mr. JOHN FRANCIS CLARE, Architect, Newmarket, where full particulars can be obtained. Tenders to be delivered at the Office of the Clerk to the Guardians, before NINE o'clock on FRIDAY morning the 29th day of FEBRUARY next, after which time no Tenders will be received. The contractor will be required to give security to one-fourth the amount of his contract, for the due performance of the work to be completed by the 1st day of JANUARY, 1857. The Guardians do not bind themselves to accept the lowest or any Tender. Dated 25th January, 1856. By order of the Board of Guardians.

JOHN H. JARDINE.

Haverhill, near Newmarket, Suffolk.

TO BUILDERS.—The New Asylum for Fatherless Children.—TENDERS are required for the ERECTION of an ASYLUM at Purley, near Croydon, on the trunk line of the Brighton and South Eastern Railway. Butders who may be desirous of Tendering, may inspect the drawings and specifications of the works at the Office of the Architect, W. B. MOFFATT, Esq. 2, Adelaide-place, London-bridge. Lithographed bills of quantities and forms of Tender, and of schedule of prices may be had upon application to Mr. BALAM and LEE, 10, Buckingham-street, Strand, on payment of two guineas. Sealed Tenders are to be sent to the Office of the Charity, 33, Poultry, under cover, addressed to the Secretaries, not later than TWELVE o'clock on THURSDAY 28th inst., and no Tender must in any case be received after the time specified. The party whose Tender may be accepted will be required to enter into a bond, with two responsible sureties, jointly and severally in the sum of 3,000l. for the due performance of the contract. The Board of Managers do not bind themselves to accept the lowest Tender.

DAVID W. WIRE, } Hon.
THOMAS W. AVELING, } Secs.

Office, 33, Poultry, 1st February, 1856

BURIAL GROUND, NORTHWOOD, Isle of Wight.—To BUILDERS.—Persons desirous of CONTRACTING for the ERECTION of CHAPELS, LODGE, ENTRANCE-GATES, &c. near Cowes, for the Northwood Burial Board, can inspect the plans and specifications at the Office of the Architect, Mr. [illegible] Great James-street, Bedford-row, London, and after that date Tenders to be delivered on or before MONDAY, the 25th inst. at the Office of the Board, Cowes, addressed to [illegible] Esq. Other Tenders

HENRY JAMES PAVANT, Clerk to the Board.

West Cowes

TO BUILDERS.

PERSONS desirous of CONTRACTING for the ERECTION of SCHOOLS at PWLLHELI, in the county of Carnarvon, to contain [illegible] are requested to call at the Office of Mr. Street, No. [illegible] Strand, where they will find Messrs. WILLMOTT and ASHDOWN, Architects, Liverpool, ready to receive all Tenders sent in to them, and to contract with the lowest Tender.

February 6, 1856. WILLMOTT and ASHDOWN.

TO ENGINEERS, MACHINE MAKERS, AND OTHERS.

CHARLES MACINTOSH and CO., Patentees and Manufacturers of the VULCANIZED INDIA RUBBER in all degrees of elasticity, recommend this material as capable of sustaining the action of hot or cold water, gas, steam, acids, and creosote. It is also extensively for valves in marine and land engines, railway buffers and springs, washers for pipe joints, and for various other purposes. Sheets, cylinders, and pumps, chemical cisterns, &c. &c. Articles moulded or otherwise, made to any size or form. Address, Cannon-street West, London, and Cambridge-street, Manchester.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE PACKING (of every description), and SECRET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes, very cheap. Railroad Cushions and Rubber Springs of the most approved pattern. Perforated Rubber Sheets. Rubber Solution, Rubber Paper, and Rubber Bands. Every description of Vulcanized Rubber goods, of superior make, and improved Vulcanized Rubber Thread of great strength.

Vulcanized Rubber Sheet, from 0 per to four feet wide and of any length required, cut to any of the sizes of the Portable Rubber Bath, or any of the kinds made to any pattern required.

NB All orders for the above goods punctually attended to, addressed to the Manufactory, JAMES LANE HANCOCK, Gas Bellows, Lower-road, Islington.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure than any other hose pipe, and is not liable to perish, or be injured by frost. Manufactured only by WAITHMAN & CO., Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.

½	¾	1	1¼	1½	2	2½	3 in.
6d.	8d.	10d.	1s.	1s. 3d.	1s. 6d.	2s.	2s. 6d.

Extra strong quality.

2½	3	3½	4	5 inches.
2s. 6d.	3s.	3s. 6d.	4s.	5s. per yard.

No. 3. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

1	1¼	1½	2	2½	3 inches.
4d.	5d.	6d.	8d.	10d.	1s. per yard

The above Piping fitted with screw caps complete at 1d. per yard extra. Union Hose Pipe Couplings, &c., always kept in stock.

TARPAULINS, SAIL CLOTHS, &c. New and Second-hand Canvas and Industrial, at 1s. 4½d. per lb.

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H.M.'s Dockyards), manufacture every description of India-rubber goods, and supply the trade with the raw material at the reduced price of 1s. 4½d. per lb. for sheet and rope.

The Waterproof Clothing Warehouse, 31, Wellington-street, Strand, and the various India-rubber appliances, will meet with prompt attention.

CAUTION.—S. W. SILVER and Co. have found it necessary to insert on all their manufactures, thus "S. W. SILVER and CO. WORKS, NORTH WOOLWICH."

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the durability of GUTTA PERCHA TUBING, the Right Honourable the Lords of the Committee of Privy Council for Trade, &c., have directed FROM SHEERNESS AND PORTSMOUTH DOCKYARDS, and from the Isle of Wight, Specimens of Gutta Percha Tubing to be submitted to a careful examination by the Engineer of the Board of Trade, who has carefully examined the same, and has now reported that it has been in use for nearly Seven Years, and is found to be perfectly sound and free from decay.

Now from this Testimonial it will be seen that the CORROSIVE WATER from the Isle of Wight has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF ROAD, CITY ROAD, LONDON.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.

H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, 8, Aldersgate-street, London. These Pencils are prepared in every degree of hard-ness and blackness, and are recommended for their superior quality.

H H H for drawing on wood.	F F light and shading.
H H for architectural use.	F for general use.
H R for engineering.	B black for shading
H for sketching.	B B ditto ditto.
H B hard and black for drawing.	B B B ditto ditto.
M medium	B B B B ditto ditto

Sold by all the principal Stationers in town or country.

THE STATUE and IRON FOUNDRY, Lower-road, Deptford, Manufactory of every description of Cast and Wrought Work.

SAW-MILL TO BE SOLD, nearly new, and in excellent working order, a deal frame capable of cutting 20 inches deep, and a timber frame capable of taking in a piece 20 inches square. For terms apply to Messrs. [illegible], London.

TO CONTRACTORS.—Sixty to Eighty Tons of flat bottom CONTRACTORS' RAILS to be DISPOSED OF.—Apply to R. M. Office of The Builder.

GAS COOKING-STOVES, for large or small establishments. DEANE, DRAY, and CO., 31, Arthur-street West, London-bridge.

DEANE, DRAY, and CO.

Gentlemen,—I have great pleasure in bearing testimony to the [illegible] one day I roasted fowls, and many oxen of ham, beef, veal, mutton, lamb, bacon, &c.; roasting in one department a baron of beef [illegible]

I am, Gentlemen, yours respectfully,

EDWARD HORNE.

WARMING LARGE BUILDINGS, &c.—[illegible] prepared to [illegible]

CUNDY'S PATENT PURE WARM-AIR [illegible]

BUILDINGS HEATED by HOT WATER. G. HOOPER IRONWORKS, 70, DRURY-LANE [illegible]

ROYAL POLYTECHNIC GAS FIRE, BACH'S CONSUMER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private rooms, shops, halls, &c. Smoke, dust, ashes, and accident from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation.—To be seen in action at DEFRIES'S Office, 14a, Regent-street, London.

NAILS and IRONMONGERY, from BIRMINGHAM direct.

Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the

LOWEST BIRMINGHAM PRICES

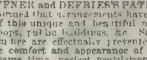
a complete LIST of which will be forwarded up on application.

FREDERICK HEATH,

Nail Manufacturer and General Dealer,

Pleasant-parade, BIRMINGHAM;

or at 16, Gresham-street, LONDON.

HEATING BY  HOT WATER.

JOHN WEEKS and CO., King's-road, Chelsea, HOT-WATER APPARATUS MANUFACTURERS. Patentees of several important improvements in the Hot-water Apparatus. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c., where they have fixed their [illegible] their Patents, to which they beg to call attention.

TO BUILDERS, CARPENTERS, PAINTERS, PAPER-HANGERS, &c.

JOHN DALE, 18 and 19, Caswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his extensive stock of ironmongery, which cannot be surpassed in quality, quantity, and cheapness by any house in London.

Elliptic Stoves, double backs, 21" per inch, at 14s. each

Register Stoves, 6d. 6d. 7d. 8d. and 9d. per inch.

Set Cooking Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

2 ft., 3l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.

3-feet Cottage Ranges, with ovens and back boilers, 2 each.

3-feet self-acting kitchen, 6 each

Air Bricks, 4s. per doz.

Best Town Close Fire Ditto, Scotch, 6d. per cwt.

Best Pure Cut Clasp and Rose,

½	¾	1	1½	2	2½	3-in. & larger.
1d.	1½d.	2d.	3d.	4d.	5d.	6d. per yard.

And every description required in the trade, be it brass, iron, or upholstery, at the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 159, Shoreditch. A great variety of Elliptic, Register, and other Stoves, Cottage and Fire Ranges always in stock.

Register Stoves, with Sole, Back, and Improved New Pattern Curved Top, Register, with strong bars and Trivets, 9d. per inch.

Best Solid Bright Fire Bars, per inch, 10d.

Bright Stoves with Two Fires, 4s. to 5s. each.

Cast Rain water Pipe	2	3	4 inch.
	9d.	1s.	1s. 3d. per yard.

Cast Gutters—4 inch, 9d. per yard.

O G Gutters	4	4½ inch.
	1s. 1d.	1s. 3d. per yard.

Patent Line	2	3	4	5	6
	4½d.	5d.	7½d.	9d.	1s. per lin. ft.

6 inch Rd Ward Mortice, with best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s. per cwt.

Dr. Arnott's Ventilators, 4s. 6d. each.

An extensive stock of bar, rod, hoop, and sheet iron Brick Moulds kept in Stock. Any size made to order.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler.

12	15	18 inch
26s.	30s.	32s. 34s

Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—

34	36	38	42 4 inch
54s.	56s.	58s.	60s.

Strong Elliptic Stoves, with Extra Deck and Solid Bars, per in. 2d.

9	12	15	18	21	24 inch
1s. 6d.	2s.	2s. 6d.	3s.	3s. 6d.	4s. each.

Strong Elliptic Stoves, with Extra Deck and Solid Bars, per in. 2½d.

9	12	15	18	21	24 inch
1s. 9d.	2s. 3d.	2s. 9d.	3s. 6d.	4s.	4s. 6d. each.

Strong Elliptic Stoves, with Extra Deck and Solid Bars, per in. 3d.

9	12	15	18	21	24 inch
2s.	2s. 6d.	3s. 3d.	4s.	4s. 6d.	5s. each.

Strong Elliptic Stoves, with Extra Deck and Solid Bars, per in. 3½d.

9	12	15	18	21	24 inch
2s. 3d.	2s. 9d.	3s. 6d.	4s. 3d.	5s.	5s. 6d. each.

Register Stoves, with Sole, Back, and Improved New Pattern Curved Top, Register, with strong bars and Trivets, 9d. per inch.

Best Solid Bright Fire Bars, per inch, 10d.

Bright Stoves with Two Fires, 4s. to 5s. each.

Cast Rain water Pipe	2	3	4 inch.
	9d.	1s.	1s. 3d. per yard.

Cast Gutters—4 inch, 9d. per yard.

O G Gutters	4	4½ inch.
	1s. 1d.	1s. 3d. per yard.

Patent Line	2	3	4	5	6
	4½d.	5d.	7½d.	9d.	1s. per lin. ft.

6 inch Rd Ward Mortice, with best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s. per cwt.

Dr. Arnott's Ventilators, 4s. 6d. each.

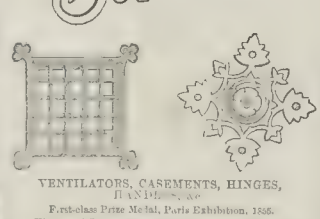
An extensive stock of bar, rod, hoop, and sheet iron Brick Moulds kept in Stock. Any size made to order.

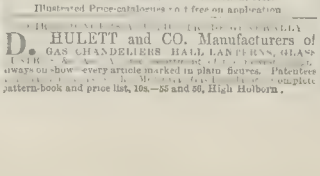
HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND, LONDON.

Specimens at the Architectural Exhibition.





VENTILATORS, CASEMENTS, HINGES, HANDLES, &c.

First-class Prize Medal, Paris Exhibition, 1855.

Illustrated Price-catalogues sent free on application.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS [illegible] always on show every article marked in plain figures. Patentees of [illegible] Pattern-book and price list, 10s.—55 and 56, High Holborn.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO., 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, conchhouse, and other gates and doors of large and small dimensions, a few weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axle-trees, sugar-mills, &c.

TO STONEMASONS, BUILDERS, RAILROAD CONTRACTORS, AND OTHERS.

RICH. RICHARDS and SON, 95, New Park-street, Southwark, London, Manufacturers of TRAVELLING CRANES and JENNIES, to span from 3 to 70 feet, on the latest and best principle, warranted to lift from 5 to 30 tons, or upwards, with A Cranes, double and single purchase; stone saws, hammered and of the best quality, suitable for Portland stone, marble, Peterhead granite, &c. Saws for Cast and Wrought Iron, Steel, and Copper, of any length, also saws for Cast and Wrought Iron Boilers, Gas-meters, Gas-holders, and Tanks, of any size, with Chain, suitable for the blocks, for hoisting any weight, made of Cast Steel, and tested by patent machinery. Lifting and screw Jacks, of the best and most approved construction, for railways, and cranes and hoisting-tackle of every description. Estimates given.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, and the Stock on the Premises of Messrs. Bramah and Prichard, &c. is the Stock of Locks, Safes, Latches, Bells, and Finger-plates, Copper and Zinc; Patent Locks for all descriptions of Doors, Glass, and Wood Fanlights of Houses, and Patent Sliding Sashes. Dr. Arnott's Ventilator, being the first registered Venetian Ventilator, and the best for the price.

J. H. BOOBBYER (late STURCH and BOOBBYER), established 1807, 97, Great Saffron-hill, London, is the sole Manufacturer of the lowest priced, yet Best Quality Locks, for the supply of Goods from the best Manufactories, at the lowest prices.

1a, Stanhope-street, Clare-market, London.

JOHN TANN'S new patent RELIANCE LOCK and FIRE-PROOF SAFE, the strongest and cleverest safe in the world, combining fire and thief resistance, and the best of Messrs. WATERLOW, Birchin-lane; and at the Works, 1, Hop-ground, Back-road, London. Iron doors for strong rooms and party walls.

WANTED, a second-hand TRAVELLING JENNIE (or crane), to lift 5 tons, and one also to lift not less than 15 tons, with all the gearing complete. Full particulars as to the span, length of jib, and dimensions, and height from the ground, with the lowest price, forwards addressed to RICHARDS and SON, 95, New Park-street, Southwark, London, will meet with immediate attention.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE, Manufacturers of Bar Iron, Boiler, Gas Purse and Engine Work, Cranes, Girders, &c.

STEWART'S PATENT CAST-IRON GAS & WATER PIPES. Office, No. 7, Sise-lane, London.

IRONMONGERY.—Builders and the Trade generally will effect a considerable saving by purchasing of LEWIS and BRASS, Furnishing Ironmongers and Stove and Range Manufacturers, 26, City-road, corner of Tabernacle-row.

Per cent. reduction from the Builders' List.

16-in.	15-in.	14-in.	13-in. per cwt.
½ in.	¾ in.	1 in.	1¼ in. and larger.

PATENT SASH LINE.

3d.	3½d.	4d.	5d.	6d.	7d.	8d.	9s. per gross.
No. 1	2	3	4	5	6	7	8

5-in. Mortice Locks, best Brass Furniture, Shifting Spindles, 2s. 6d. each; 6-in. ditto, 3s. each.

Strong Elliptic Stoves, 14s. per cwt.

Strong Register Stoves, 18s. per cwt.

36-in. Self-acting Oven and Boiler Cottage Ranges, complete, 34s. each; 36-in. ditto, Self-acting Oven and Boiler Ranges, best wrought bars and wrought fittings, complete, 50s. each.

A large Stock kept of every description of builders' ironmongery; cornice, sash, and door pulleys, and sash line at low rates. List of prices forwarded by post on application.

ESTABLISHED 1760.

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSE, 19, Horseferry-road, and 2, New Peter-street, Westminster. Contractors, Builders, &c. supplied with general Ironmongery at prices equal to all competition.

REDUCED LIST OF PRICES

Best Cut Clasp and Rose Nails

1¼ in.	1½ in.	2 in.	2½ in.	3 to 6 inch.
Per cwt.	18s.	17s.	16s.	15s. per cwt.

Best Cut Floor Brads ..... 18s. 6d. and 18s. per cwt.

Best Cut Lath Nails ..... 1s. 6d. "

Best Zinc Slating Nails ..... 2s. "

Best Glues ..... 1½d. to 2s. "

RAIN WATER CASTINGS, per yard

Sizes	2 in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	1s.	1s. 3d.	1s. 6d.	1s. 9d.	2s.	2s. 3d.
Half-round Gutters	1s.	1s. 6d.	2s.	2s. 6d.	3s.	3s. 6d.
O G Gutters	1s.	1s. 6d.	1s. 9d.	2s.	2s. 3d.	2s. 6d.
Pipe Shoes, per cwt.	1s.	1s.	1s.	1s.	1s.	1s.
Ditto, with Iron ditto	1s. 9d.	1s. 3d.	1s. 6d.	1s. 7d.		

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges at the lowest wholesale prices.

TERMS—NET CASH.

Estimates given for any description of Wrought or Cast Iron Work.

IRONMONGERY.

PFEIL AND STEDALL.

THE LARGEST STOCK AT

THE LOWEST PRICE,

3 AND 6, BROAD-STREET, BLOOMSBURY.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES [illegible] patents of [illegible] Proof Safes [illegible]

[illegible] STRONGEST, [illegible] MOST SAFEGUARDS EXTANT.

MILNER'S PHŒNIX [illegible] LIVERPOOL, [illegible] 8, Lord-street, Liverpool. London Depôt, 47a, Moorgate-street, [illegible]

STEAM BOILERS for Marine, Locomotive and Land-Engines, Wrought Iron Girders and Bridges, Gas Holder- and Gas Apparatus, Columns Girders and General Castings, Chains, Cables, and Contractors' Iron Work, manufactured by [illegible]

TO MANUFACTURING CHEMISTS, BUILDERS, &c.

WILLIAM DYER, PLUMBER, &c. No. 4, HIGH-STREET, BROMLEY, Middlesex [illegible] to lead, by Debrick's Patent process. It is highly recommended for chemical vessels, repairing old lead [illegible] Dyer's, where [illegible] Lists, cisterns, tanks, cisterns, &c.

THE NEW PATENT

INTERLOCKING CURVILINEAR REVOLVING IRON SHUTTER

IS GREATLY SUPERIOR TO ALL OTHERS FOR LIGHTNESS, STRENGTH, SECURITY, DURABILITY, AND EASE, AND ALSO MUCH CHEAPER.

MANUFACTURED BY

BUNNETT AND CO. ENGINEERS, FOUNDERS, &c.

ORIGINAL PATENTEES OF REVOLVING IRON SHUTTERS, No. 26, LOMBARD-STREET, LONDON; and DEPTFORD, KENT.

The edges of each lath are accurately turned by powerful PATENTED MACHINERY, and slide endways into each other, FORMING A COMPLETE HINGE THROUGHOUT, interlocking so effectually that no force can separate them; and if made of the best galvanized iron, are almost indestructible.

A CHEAPER MODIFICATION FOR WAREHOUSES, COTTAGES, PORTABLE BUILDINGS, &c. ALSO FOR EXPORTATION.

PATENTEES OF METAL SASH-BARS AND MOULDINGS.

Descriptive Illustrated Prospectuses and all necessary information forwarded on application.

PATENT HOOP-IRON BOND FOR BUILDING PURPOSES.

TARIFF OF PRICES Beyond the current Price of Hoop-iron.

The undermentioned Gauges are kept in stock; but any Gauge or width will be supplied within a few days, at a small advance on the following prices:—

Gauge.	In wide.	Per 1,000 ft.
No 16	$1\frac{1}{4}$	7s. 0d.
15	$1\frac{1}{4}$	7s. 6d.
15	$1\frac{1}{2}$	8s. 0d.
15	2	8s. 6d.
15	$2\frac{1}{2}$	9s. 6d.

Plan and Elevation of Bond, showing Position and Form of the Claws.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of $1\frac{1}{2}$ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston. London Depôt—463, OXFORD-STREET.

IRON FOUNDRY, HARROW-STREET, LANT-STREET, SOUTHWARK. W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel and Railing Bars, Panels, Iron Coping, Hot Plates, Tank Plates, Area Gratings, Sash Weights, Fly and other Wheels, Riggers, Pinions, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

CANNON IRON FOUNDRY, 80, Goswell-street, St. Luke's.—JONES and BLAXTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain and Ornamental [illegible] Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wheel Plates, &c.

BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

FOUNDRY AND IRON WORKS, 69, DRURY-LANE, and CHARLES-STREET, DRURY-LANE. GLOVER, BROS.,

Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION either structural or ornamental.

Patterns of Girders, Columns, Balconies, Railing, Ornamental Cortrage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathes, and Steam-engines; Range and Hot-plate Metal. An improved Soot Door, adapted for internal work.

A large stock of Rain-water Pipes, Plain and O G Gutters, Air bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings, Hurdles, &c.

Plain and Ornamental Vases 20 per cent. cheaper than Terra cotta.

Estimates given for Iron Buildings, Wrought-iron Roofing, Greenhouses, Staircases, Wrought-iron Girders, Fireproof Doors, Iron safes and Stirrup Irons, Tanks and Boilers, and every description of ironwork to specification, and the work executed with every attention to quality and despatch.

GLOVERS' IRONWORKS, 168, DRURY-LANE, and CHARLES-STREET.

IMPERIAL IRON FOUNDRY, and ECONOMIC RANGE MANUFACTORY.

Three ft. wide	£6	10	
Three ft. three in.	7	0	
Three ft. six in.	7	15	
Three ft. nine in.	9	0	
Four ft.	11	1	
Four ft. six in.	13	12	
Five ft.	14	14	

Covings, 5s. per foot. Fixing, 5s. per foot.

This valuable KITCHEN RANGE, the Manufacturer has much gratification in stating, has been in use several years, and given the utmost satisfaction. It may be used either with the fire open or closed, thereby avoiding the objection so naturally felt against having the fire at all times shut up, which is well known to generate a close and unwholesome vapour.

The Prize Medal and Honourable Mention was awarded to this Range at the Great Exhibition of 1851.

To be seen in operation at the Manufacturer's, J. SHERWIN, 62, TABERNACLE-WALK, FINSBURY. Castings of every description in Loam or Sand.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators. HULETT and CO. 55, High Holborn.

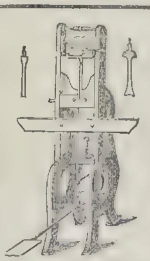
TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS, THE BEAR GARDEN LEAD WORKS, SOUTHWARK. Sole Manufacturers of Delbruck's Patent Autogenous Soldering [illegible], invite the attention of Manufacturing Chemists to the Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired [illegible], making them complete, without the introduction of foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with [illegible] LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.



KIMBERLEY'S NEW PATENT MORTISING MACHINE occupies but little room, is most simple and durable, and complete within itself, with seven chisels and three core drivers, and being all iron, is almost impossible of injury or derangement.

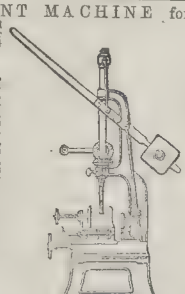
Thousands who use it bear witness to it.

A Book sent by post, with full particulars, and a great number of testimonials.

See, also, Rimball's Patent Flooring Cramps, Scaffolding Brackets, Door Springs, &c. &c.

London Agents—Messrs. PUGH & CO. No. 13, King-street, Snow-hill, Wholesale Ironmongers; or the Works, Birmingham.

NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire. Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Cornice-poles, Rings and Lacquered Case Tube for Picture Rods, Desk Rails, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the nobility, clergy, &c. that they supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.

R. S. NEWALL and CO.'s Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world.

OFFICES.—Gateshead-on-Tyne. 1[illegible], Strand, London. 67, Hyde-park-street, Glasgow. 97, Dale-street, Manchester.

SAWING, PLANING, and MOULDING MACHINERY.—SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and [illegible] very extensive and first-class Steam Machinery, and Tools for making all kinds of Machines for Sawing, Planing, and [illegible] Moulding Wood. They have constantly on hand Machinery [illegible] partly made, so that they can [illegible] at a short notice supply [illegible]. S. W. and Co. beg to [illegible] the attention to [illegible] of machinery [illegible] the honour [illegible] of supplying some of the most distinguished [illegible] and contractors in the world with their Machines for home and foreign use.

A. MOREWOOD and CO. (late Morewood and Rogers), Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.

PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.

PLAIN or CORRUGATED, and Curved of all Gauges.

Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. [illegible].

Also the Patent Galvanized Tinned Iron Tubes, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building, at the OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

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TUPPER and CARR, Contractors and Manufacturers of all sorts of IRON ROOFING. PLAIN, CORRUGATED, PAINTED, or GALVANIZED. Estimates and Drawings furnished on application. Experienced Workmen sent to all parts of the Country. MANSION-HOUSE PLACE, and LIMEHOUSE, LONDON; BERKLEY-STREET, BIRMINGHAM.

TUPPER and CARR'S (Craufurd's) PATENT GALVANIZED IRON, For Roofs, Flats, Cisterns, [illegible], Gutters, Pipes, Fencing, &c.

To be obtained at TUPPER and CARR'S WAREHOUSES, REGENT'S CANAL DOCK, LIMEHOUSE, LONDON, or BERKLEY-STREET, BIRMINGHAM.

Sheets, Bars, Rods, Hoops, Nails, [illegible], Screws, Wire, and Manufactured Articles, Pails, Coal Scoops, Buckets, Pumps, &c. always in Stock.

N.B. An allowance to the trade.

Address all letters to TUPPER and CARR, 3, MANSION-HOUSE-PLACE, CITY, LONDON.

SKAIFE'S GALVANIZING WORKS, Commercial-road, Limehouse, London.

Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where iron not liable to rust is required.

Patent Galvanized Iron supplied in every form.

Sheets plain and corrugated [illegible] fixed complete.

J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and [illegible].

An Allowance to the Trade.

CASTINGS FOR ENGINEERS, BUILDERS, and CONTRACTORS, Supplied on reasonable terms by DODDS and CO., WINDSOR WORKS, CITY-ROAD, LONDON. N.B. The execution of all orders promptly attended to.

WILLIAM DODDS and CO. MANUFACTURE and CONTRACT for RAILWAY CARRIAGE and GENERAL IRONWORK, WROUGHT and CAST IRON BRIDGES, IRON ROOFS, &c. IMPERIAL IRONWORKS, Wenlock-road, City-road, London. Offices—28, Leadenhall-street.

SAMUEL HEMMING'S PATENT much approved PORTABLE BUILDING and ROOFING MANUFACTORY, REMOVED from BRISTOL to BOW, near London, close to the Bow Railway Station. A large variety of buildings always in view, churches, chapels, shooting boxes, lodges, bazaars, ornamental villas, dwelling-houses, farm buildings, and fire-proof stores. Also, railway stations, trucks, and carriages made to any plan on the shortest notice.

JOHN HENDERSON PORTER, ENGINEER AND CONTRACTOR, IRON BUILDING AND ROOFING WORKS, GAS STREET, BIRMINGHAM.

LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.

PATENT PLUMBIC ZINC. GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than [illegible] or one-[illegible] as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about	18 oz. per foot super.	
12	,,	20 ,,
13	,,	23 ,,
14	,,	2[illegible] ,,

Full particulars and the reduced price sent by post on application to

A. MOREWOOD and CO., DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process), WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.

GALVANIZED SHEET IRON and WIRE of every description superior to all others that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

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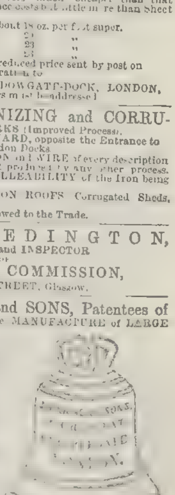
JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.



J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process cement [illegible], by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, [illegible] at less cost than [illegible] heretofore [illegible].

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast to any size, note, or weight, [illegible].

TURRET [illegible] MACHINERY.

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale with improved Clappers, and [illegible] on a new system, which gives superior tone and facility for ringing.

ITALIAN and GALWAY MARBLE QUARRIES.—Depot, WHITEHALL WHARF, Parliament-street, Westminster.—Mr. FRANKLIN begs to invite the Sculptors, Marble Masons, Builders, &c. to inspect his extensive STOCK of Italian, Irish, and foreign MARBLES, which he is constantly importing in blocks and slabs, consisting of upwards of twenty different varieties, which he is enabled to offer at very reduced rates. Several large blocks of statuary, suitable for sculpture, &c. now landing.

TO BUILDERS, MARBLE MASONS, AND OTHERS.
THE LIZARD SERPENTINE COMPANY have to acquaint the public, that the Serpentine Chimney-pieces and other articles, recently sold by public auction in London, were not the produce of any of the Quarries belonging to the LIZARD SERPENTINE COMPANY, which continues successfully to carry on its business in Slab and Manufacture; Goods, in stone of very superior quality, and in great variety of colour, at the Factory, Poltesco, Lizard. Show-rooms, 20, Surrey-street, Strand.
HENRY COX, Manager, Poltesco, Lizard.
F. W. RUFFLE, Agent in London.

SERPENTINE.—The attention of Architects, Builders, and Masons is invited to this very beautiful material, which is rendered useful in the highest degree, from the brilliancy of its polish, and resists being unsusceptible of injury from acids or crease. Chimney-pieces, tazzas, vases, bust-stands, fonts, church columns, slabs, and a variety of ornamental articles are manufactured by the extensive Works of the LONDON and PENZANCE SERPENTINE COMPANY, Penzance, Cornwall. Varieties of the above articles are constantly on sale at the Company's Depôt, LOWER BELGRAVE-WHARF, MACCLESFIELD-STREET NORTH, CITY-ROAD, and also at their Stall in the Mineral Manufactures Court, Crystal Palace, Sydenham
N.B.—This Company obtained a Gold Medal at the Great Exhibition of 1851, a Silver Medal from the Royal Cornwall Polytechnic Society, and a Bronze Medal at the Paris Exposition of 1855. C. ADENEY, Secretary.

Lloyd's Marble Wharf, Thames-bank, Pimlico, Adjoining Vauxhall-bridge.
ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

MARBLE.—The Italian Marble Company, Importers of the produce of their many quarries in the provinces of Massa Carrara, Italy, beg to inform the general marble trade in the United Kingdom that they are prepared to undertake Contracts for any quantity of Statuary, Veined, Sicilian, Bardilla, Dove, and other Marbles, in blocks of all dimensions, delivered on shipboard at Leghorn, or in dock, London. A constant stock is always kept at the London Depôt. Orders for Paving Slabs, Garden and Hall Statues, Vases, Tazzas, Consoles, &c. executed and delivered at reasonable rates.—For further particulars apply at the Offices of the Company, 18, Cannon-street, City.
WILLIAM W. BONNIN, London Secretary.

TO SCULPTORS, BUILDERS, MASONS, &c.
B. FABBRICOTTI respectfully invites the Gentlemen connected with the Marble Trade to inspect his fresh STOCK composed of statuary, vein, Sicilian, black and gold dove, Bardilla, Sienna, and Breccia, in Block and particularly to the attention to a large quantity of his best statuary, sixty blocks, all recent landed.
Monuments, vases, and statues, finely executed in Italy.
Carrara Wharf, Thames-bank, Pimlico.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.
THOMAS JACKSON begs to draw the attention of the public to the most extensive stock of Marble Chimney Pieces in the Metropolis, consisting of a selection of upwards of two hundred, and manufactured by steam power from the finest Italian and other marble, and with that careful attention to the details and finish so necessary in good marble work. The stock consists of elegant Drawing-Room Chimney-Pieces in Statuary Marble; bold, massive Chimney-Pieces, in Black, Black and Gold, Bardilla, Sienna, Verd Antique, Brocatella, Dove, St. Anne's, and Serpentine Marble, suitable for Dining Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Emperor's Red and Amber Marble, for Boudoirs, Breakfast-Rooms, best and secondary Bed-Rooms, &c.; also, Monuments, Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the most classical designs, and in all the varieties of the finest Italian and British Marble, at the lowest remunerative prices.

STONE, GRANITE, and MARBLE.—
BRAMLEY FALL, CAEN,
DARLEY DALE, FARLEY DOWN,
HARE HILL, HUDDERSTONE,
PORTLAND, and various other Bed and Slab.
Yorkshire Paving, Landings, Steps, Sills, Sinks, Coping, &c.
Granite Blocks, Trams, Curbs, Pitching, &c.
Veining Slabs, Chimney Pieces;
Marbles, in Blocks and Slabs.
At FREEMAN'S Stone Wharfs, Millbank-street, Westminster; City-road Basin; and Deptford.

DARLEY DALE STONE.—This Stone, introduced by Sir Charles Barry at St. Edward's Grammar School, Birmingham, and well known as having been selected for
ST. GEORGE'S HALL, LIVERPOOL,
and numerous works, including the Railway Station, Birmingham; Borough Bank, Liverpool; Evesham-bridge; Mr. Beaufoy's Schools, Lambeth; and the Portico and Corridor of the Town-hall, Leeds; is kept in considerable quantity at the Darley Dale Stone Wharf, City Basin, London.—Apply to W. and J. FREEMAN, Millbank-street, Westminster; or GEORGE WALL, at the Quarries, near Matlock.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman, Caen, begs to state shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Town-hall.

CAEN and AUBIGNY STONE.—GATES and GEORGE (late Luard, Beedham, and Co.), Caen-wharf, Rotherhithe, London, Stone Merchants and Quarrymen, continue to supply from their Wharf, as above, CAEN, AUBIGNY, PORTLAND and YORK-HIRE STONE

BATH STONE.—HENRY STONE, QUARRYMASTER, begs to inform Architects, Builders, and others, that he still continues to supply the best COMBE DOWN, HAMPTON DOWN, and BOX GROUND WEATHER STONE, delivered in the trucks at Box or Bath station on the most reasonable terms. H. S. begs to call particular attention to his Hampton Down Stone, it being of a very fine texture and rich colour, adapted for either external or internal purposes. Ashlar and plain Range Stone cut to order. Curious Sicilian Basil and delivered to any part round the coast.—Residence, WIDCOMBE, Bath.

BANGOR WHARF, King's-road-bridge, Camden-town.—STRINGFIELD and COOPER, late W. W. Rawlins, beg to call the attention of Builders and others to their stock of Bangor slates, laths, plaster, Roman, Portland, and Keene's cement, blue lias, Dorking, and chalk lime, plasterers' hair, Yorkshire plain, pan, and ridge tiles, glazed sewer pipes, closet-pans, and traps, Welsh fire-bricks, gravel and shells for garden paths, ballast, sand, &c. Materials landed, wharfed, and carted.

ANCASTER STONE, so remarkable for its free working quality, combined with colour and durability. Price, and cost of transit to any part, may be obtained, upon application at Mr. W. THOMPSON'S Office, Elmer-street, Grantham.

YORKSHIRE STONE.—THOMAS TUNEY, Stone Merchant, Tanfield-place, Leeds, begs to inform Architects, Surveyors, and Local Boards, that he can supply direct from his Quarries, by water or railway, Paving, Landings, Steps, &c. cut out to sizes, on the most advantageous terms.—Prices sent on application.

YORKSHIRE STONE.
GEO. VINT and BROTHERS, IDLE, near LEEDS,
Beg to inform Architects, Surveyors, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Paving, Bramley Fall, Park Spring, Robin Hood, Harehill, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

BATH STONE OF BEST QUALITY.
RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS.
BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

PIMLICO MARBLE WORKS,
BELGRAVE-WHARF,
LOWER BELGRAVE-PLACE.
SAMUEL CUNDY.
THE STOCK OF LOW-PRICED CHIMNEY-PIECES ARE WELL AND CAREFULLY MANUFACTURED OF THE BEST MATERIAL,
PRIZE MEDAL IN 1851 FOR A MONUMENTAL WORK.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terrace at the Crystal Palace, supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—TREGELLES and TAYLOR, 3, Pinner's court, Old Broad-street. Manager—JAS. J. TRATHAN, Liskeard.
This Granite is selected for the New Westminster-bridge.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SCOLES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Sills, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

FOR MACADAMIZING ROADS.—The HARDEST and most DURABLE STONE.—The Proprietor of an extensive Quarry at Duncannon Rock, containing Blue Elvan Granite, is prepared to supply any quantity of the above Stone, its durability having been tested, and proved to be 25 per cent. harder than Guernsey Granite.—For further particulars apply by letter to Mr. JOHN NEWTON, Norway-wharf, Hertford-road, Kingsland-basin.—Two Coal Waggons for Sale.

SLATING.—T. B. HANNAFORD is not only in a position (through having a large share in a Slate Quarry) to execute any number of the above work, at extremely low prices, but guarantees a first-class material, in all respects similar to the slates he has used in covering the principal mercantile and governmental buildings in the City—Travaiga Wharf, Rotherhithe.

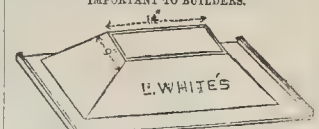
PARIS EXHIBITION.—ENAMELLED SLATE.—TWO FIRST CLASS MEDALS.—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1848. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of lobe-tables, chiffoniers, consoles, &c.; baths, baptistries, sitar-tablets, pilasters, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, passages, and dairies, street-pavement, &c. Full information on application to Mr. MAGNUS, as above, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Hertfordshire and Hertfordshire Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in any quantities at Messrs. FREEMAN'S, Millbank street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

O. McCARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened, by the yard or per barge. Stocks, lime, and old bricks. Rubbish delivered per barge, in any quantity, alongside the Thames.

PAVING, 9s. 9d. per SQUARE YARD.—Basements, Footways, Malt-houses, Corn Stores, Floors of Warehouses, and every description of Pavement laid down at the above price, and the work guaranteed.
Apply to JOHN PILKINGTON, POLONCEAU'S BITUMEN, PAVEMENT OFFICE, MONUMENT CHAMBERS, 51, FISH-STREET-HILL.
N.B. Country Agents, and Railway Engineers and Contractors, supplied with the best Bitumen for covering Bridges and Arches.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.
W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf.
Contracts supplied to any extent.

IMPORTANT TO BUILDERS.


REGISTERED CAST-IRON CHIMNEY-HOPPER and CHIMNEY-BAR COMBINED, ensuring a perfect formation of the Flue, and rendering smoky chimneys impossible. One trial will cause their adoption in every building.
Price from 8s. 6d. each, according to size.
IRON GIRDERS and COLUMNS to MODEL or DRAWING
IRON PIPES and connections for gas, water, and liquid manure.
RAIN-WATER PIPE and EAVE GUTTERS, at wholesale prices. Also, O.G. Gutters, Sash-weights, STABLE FITTINGS, pumps, tomb railing, cattle and pig troughs, and COLUMNS with caps and bases, and every kind of builders' castings, in stock, at LYNCH WHITE'S Iron Wharf, Upper Ground-street, London, near Blackfriars-bridge.

VENTILATION.—PURE AIR.

With single pulley, from 6s. each; with leading pulley, from 6s. 6d.
These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

SOUTH WALES RAILWAY.—Notice is hereby given, that the next HALF-YEARLY ORDINARY MEETING of the Proprietors in this Company, will be held, pursuant to the Act of Parliament, at the GREAT WESTERN ROYAL HOTEL, PADDINGTON, on FRIDAY, the 29th day of FEBRUARY instant, at ONE o'clock precisely, for the election of four directors and one auditor, in the place of the same number who will retire by rotation, and for the general purposes of business.
C. R. M. TALBOT, Chairman.
The Transfer Books will be Closed on and after the 15th instant, and will not be re-opened until after the said Half-yearly Ordinary Meeting on the 29th instant.
By order,
FRED. G. SAUNDERS, Secretary.
South Wales Railway Office, 10, Eastbourne-terrace, London, February 6, 1856.

SPECIAL NOTICE.
The Books of the Society close on 1st of March, and Proposals lodged at the Head Office, or with the Agencies, on or before that date, will secure the advantage of the present year's entry, and of One Year's Additional Bonus over later Proposals.
MUTUAL LIFE ASSURANCE.
The Whole Profits divided amongst the Assured.

THE SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY. Instituted 1831. Incorporated by Special Act of Parliament.
The fund accumulated from the contributions of members, exceeds NINE HUNDRED THOUSAND POUNDS.
The annual revenue exceeds ONE HUNDRED and SIXTY-THREE THOUSAND POUNDS.
The amount of existing assurances exceeds FOUR MILLIONS and a QUARTER STERLING.
The amount paid to the representatives of deceased members is upwards of SIX HUNDRED and FIFTY THOUSAND POUNDS, of which SEVENTY-EIGHT THOUSAND POUNDS are Bonus additions.
The NEXT DIVISION of PROFITS TAKES PLACE at the 1st of MARCH, 1856, and policies effected before that date secure one year's additional bonus over those effected after that date.
ROBERT CHRISTIE, Manager.
WILLIAM FINLAY, Secretary.
Head Office—36, St. Andrew-square, Edinburgh
London Office—126, Bishopsgate-street, corner of Cornhill.
W. H. SMALRIDGE, Interim Agent.

SPECIAL NOTICE.
KENT MUTUAL ASSURANCE SOCIETY.
OFFICES,
QUEEN-STREET-PLACE, NEW CANNON-STREET, LONDON.
The united annual incomes exceed 27,000l.; and all Profits belong to the Assured
LIFE
The next division of Profits will include parties assuring before the 24th March next.
The new business of the last eight months exceeds 5,000l. in Annual Premiums.
FIRE
The Guarantee Funds, having increased to Half-a-Million
The annual income, since last annual meeting, has increased beyond 2,000l.
GEORGE CUMMING, Manager.
N.B.—Agents are still wanted for some vacant localities

THE ASYLUM LIFE ASSURANCE OFFICE, 72, CORNHILL, LONDON.
Established 1824.
Policies on healthy and diseased lives, at home and abroad, for civil, military, and naval appointments.
The Office being on purely proprietary principles, no partnership among policy holders is involved.
Full prospectuses, proposal papers, &c. apply to
MANLEY HOPKINS, Resident Director.

PROVISIONAL PATENT.—A SCHOOL FORM, with folding desk, which combines in one article a seat with back and locked book cupboards, a writing or reading desk, and a ten-table, adapted for schools, hospitals, barracks, prisons, institutions, &c., and for domestic and artisans' shops, wherever economy of space, furniture, and expense are important. On view in use, at the British School, Craven-hill, Westbourne-terrace. Trade liberties on most liberal terms.—Address, Mr. B. 8, Craven-place, Paddington.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is GROSSE'S WHOLESALE WAREHOUSE, 7, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this Establishment.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that **FOUR-FIFTHS** of the **ROUGH PLATE**, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by **HARTLEY'S PATENT**—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for **RIDGE** and **FURROW ROOFS**, giving a SPAN of **TWELVE FEET**, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders **BLINDS UNNECESSARY**, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

January 1, 1855. **** Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

ARCHITECTURAL AND ORNAMENTAL DECORATIONS.

Architects and the Trade are respectfully invited to inspect specimens of the

PATENT VITREOUS MARBLES AND CONSOLIDATED GLASS,

Applicable for Piers, Pilasters, Chimney-pieces, Shop Facias, Table-tops, Panels, &c &c

Show-rooms, 40, Broad-street-buildings, City; 4, Russell-place, Fitzroy-square; 112, New-street, Birmingham, &c. &c.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 42 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non-conductor of heat and deadening Sound.

INODOROUS FELT, for damp walls and for damp floors, under carpets and floor cloths. Price ONE PENNY per Square Foot.

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing the radiation of Heat, saving 25 per cent. of Fuel

CROGGON and CO.'s PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and

Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

REES and BAKER, PAINTED and STAINED GLASS MANUFACTURERS, for Cathedral, Church, and other Windows, 25, Hatton-garden, Holborn, London. G. REES and J. BAKER, having resigned their engagements at Messrs. Powell and Sons' Glass Works, Whitefriars, City, most respectfully beg to inform the nobility, clergy, architects, surveyors, contractors and the public, that after nearly twelve years' occupation at Messrs. Powell's, in the working and carrying out the most intricate and classic windows, they have commenced business, and earnestly solicit their patronage, with the assurance of promptness, accuracy, and elegance of style and material. In calling the attention of some of our best architects, they frequently suggest to put the work in the hands of practical men to carry out with care and due regard to the subject of which they treat. G. R. and J. B. being the original operators of the Patent Press and Medieval Glass, will accept such cartoons, drawings, &c. from architects, amateurs, or the public, however rude the sketch or design may be, they having received in many signal instances the highest approval in Grecian and Italian works of mannitude, where criticism cannot be doubted. Specimens in all forms can be seen between the hours of Seven a.m. to Seven p.m. where all orders can be taken and punctually attended to. Arms found and memorial windows carefully painted. Designs and estimates given.

Figures and Subjects from 12s. per foot.
Geometrical Patterns, from 5s. per foot.
Ornamental Quarries, from 2s. 9d. per foot.

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 295, Oxford-street.

REDUCED TARIFF.

CCC CROWN, 18 Tables, per crate, 20s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 3½d. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Sashes primed and glazed, 3d. per foot.

Catalogues free, on application to the Managers, as above.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Pipe, White-lead, Lead, Iron and Brass Pumps, Water-closet Cocks and Plumbers' Brasswork, Paints, Colours, Oil, and Turpentines of the finest quality, at wholesale prices. Lists on application at THOS. MILLINGTON'S Warehouse, 37, Bishopsgate-street, London. Established more than 100 years.

JAMES PHILLIPS and CO. beg to call the attention of Builders and the Trade to their present LOW PRICES of GLASS for cash.—C C C per crate of 18 tables, 23s.; 16 oz. sheet glass, 2d. per foot; crown and sheet squares, in 100 feet boxes, from 14½ to 22½, 2d. per foot; enamelled glass, in crates, 6d. per foot: ground, ditto, 3d. per foot; foreign sheet in cases of 200 feet, 26s. 30s. 40s. and 42s.; ¼ patent rough plate tiles, 10s. per doz. Cathedral and stained glass, and all the neutral tints.—116, BISHOPSGATE-STREET WITHOUT.

SUPERIOR BRITISH PLATE-GLASS AT VERY LOW RATES.

THE UNION PLATE-GLASS COMPANY having recently completed very considerable improvements and additions to their works, take the opportunity of informing their friends that they will now be able to supply orders without delay; and respectfully invite the attention of the trade generally to the low rates at which their now much-esteemed manufacture is sold.

Lists of prices may be obtained on application at
The Works, Pocket Nook, St. Helen's, Lancashire.
The Warehouse, 99, Hatton-garden, London.
" 45, Piccadilly, Manchester.
Messrs. C. and J. Malloch, 30, Turner's-court, Glasgow.
" John Dix and Co. Bath-street, Bristol.
" H. Sibthorpe and Son, Cork-hill, Dublin.

ROUGH PLATE-GLASS from ¼ to ⅜ in. thick, suitable for the windows and roofs of mills, mechanics' shops, market halls, railway stations, &c.

Beautiful and highly-finished POLISHED PLATE-GLASS, for shop-fronts and all superior glazing purposes, and for silvering.

Superior silvered Plate-glass Mirrors of all sizes.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 315, OXFORD-STREET.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s.; 4ths, 28s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 3½d.; larger sizes, up to 22 by 14, 2d.; ground-glass, in cases, 3½d. per foot; Crown and Sheet. British, Patent, and Hartley's Patent; Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

G. FARMILOE and SON, 118, St. John-street, West Smithfield.

FRANK SMITH'S ECCLESIASTICAL WAREROOMS, 13, Southampton-street, Strand.—Altar tables and chairs, pulpits, reading-desks, reredoses, font covers, &c. and every description of carving executed from architects' designs. Church walls, roofs, altars, &c. decorated. An illustrated Catalogue sent on receipt of four postage-stamps.—Specimens may be seen at the Architectural Exhibition, Suffolk-street, Pall Mall, and at the Wareroome.

TO ARCHITECTS, BUILDERS, AND OTHERS.

MESSRS. FRANCIS, RICKABY, and DUNN beg to call the attention of the above to their IMPROVED REVOLVING WOOD and IRON SHUTTERS; also, to their extensive assortment of BRASS and other METAL SASH BARS, STALL-BOARD PLATES, &c. F. R. and D. having erected new and powerful machinery for the sole manufacture of the above, are enabled to offer them at a considerable reduction of price.—Prospectuses can be had or forwarded, on application to 34a, Gray's-inn-lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER, to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 116, Broadwall.

J. FISHER, 70, YORK-ROAD, LAMBETH, formerly shop foreman to Messrs. Lawrence, Shop-front Builder and Manufacturing Joiner. 1½ and 1¼ four-panel doors from 6s. each; 1½ sashes and frames from 7d. per foot; 2 inch ditto from 8d. Windows fitted with Gribbon's Patent Hinges for cleaning, painting, &c. All kinds of joiners' work estimated for according to design.—A List of Prices sent on application.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner.—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, 2s. ditto, 1s. 6d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Estimates, with prices and discounts to builders and the trade, forwarded on application, post free.

SMOKY CHIMNEYS CURED EFFECTUALLY for TEN SHILLINGS, by SUTER'S PATENT WIND-GUARD.—This Guard allows free egress to the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

To be had of Ironmongers and Builders; and of the Patentee, at his Office, 65, Fenchurch-street, London.

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Crystal Palace, February 1, 1856.

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VOL. XIV.—No. 679.

ARRIVING at the next important class of works of which designs or drawings are in the Architectural Exhibition, we have the circumstances of actual taste even more directly presented to us than before. Believing that—however useful the comprehensive study—the concurrent *practice* of different styles is unfavourable to perception of the real *art* by the public, we cannot say that the efforts in the department we are about to speak of, taken together, are quite satisfactory in their present tendency, and their relation to the expected future in architecture. There are certainly some of the exhibitors who show, more and more, the desire to make for themselves a style, and to keep to that only; and such efforts deserve commendation. Such cases are, however, exceptional; and, as it need hardly be said, many adopt indifferently, either of the styles or several. We conceive this system to be disadvantageous, even to the architect, be he ever so accomplished.

It has been said that the first principles of all styles would be found the same; but it is clear that the degree of prominence allowed to particular principles, and the class of resulting forms are ever varying: else, what is there to make the discrepancies, or, in short, the styles? The question then is, can the eye that has acquired preference, from familiarity, in one particular direction, regard another class of forms without depreciating the real merit which there may be in them. Can the ordinary, or even the professional observer, shift the gear of his ideas at every building that he approaches, so as to do full justice to the *art* in all? It is clearly important that no such impediment should be raised to the perception of *art* by the public.——If the desire of novelty be otherwise the predominant feeling, is not mere change of style mistaken for the only legitimate novelty,—the infusion of fresh *art?* Neither the art nor the novelty is gained by changes of style: novelty being a necessary element in art, though not all that is required.

In these respects the public and the profession stand, we say, much in the same position. Looking to the latter, can any one doubt that one style for an architect to work upon, is enough for a life-time; or that, whatever may seem the art-results in the case of some individuals, the works of these would have claimed a rank even higher than they do, had a different course been pursued? We presume it is not now necessary to show on the one hand, that little will be effected without the study of existing models, if only as a starting point, or on the other, that to work in, what is often called, "the spirit of" an old style, is not the precise course which should be observed. We know that an opinion is held that the decline of art was in some degree connected with the manifestation of individuality of taste amongst architects,—that is to say, that in the best periods of art, the individual architects had no fame, whilst in the later periods the opposite is to be noticed. Such a view—which we believe we have correctly stated—is scarcely to be accepted. It seems to us to ignore the effects of the invention of printing, and the circumstances of the later period in regard to attention newly paid to art-history—as shown by the works of Vasari and others,—whilst it also gives too little importance to the fact that the names of many of the chief architects of the earlier periods *have* come down to us, even under difficulties in the way of preserving records. The chief reason of *the decline of art*, as it is called, so far as it followed "the revival," must, it seems to us, be looked for in a somewhat different direction; and this inquiry we have before now, tried to aid. We do, indeed, believe that in a healthful state of art, the mind of the individual artist would always be found to mould the character of his work; and it is because we believe that this individuality is *lost* under the present system, that we counsel reformation. It results naturally from the pursuit of several styles, that to be incorrect in the patterns of them is more dreaded than is the lack of invention. We say it is a great error not to study and understand the several styles; but it is a greater error to allow them to become the "fetters of genius." It seems opposed to all that we know of the operations and capacity of the mind, to expect great results from efforts which, being numerous, are dissimilar and excursive. In educating, and in gathering the material of art, the area taken must be wide and omnifarious; but, in application of the products, the aim must be direct and concentrated. We say, then, that one style only should be developed or fashioned by architects; and that any others should be used only as feeders to its art. It is of less importance what such style should be, than that there should exist, *to a certain extent*, unison of ideas. It is the very point we would advance, that this would render possible and conduce to, instead of repressing, originality. The public would appreciate *art*, and would not mistake the substitute for the work of invention. Though, for a time, several systems might continue to prevail, we believe that very soon indeed, the daily increasing interchange of ideas amongst architects would complete the fusion of opinions, of which already, even amidst opposition of language, there are indications.

Were it necessary for us to point to any style practised, as one which would most claim to be worked on, it is clear we should desire to choose one which would be already familiar to the largest number of persons.

The state of public taste is the main cause of the motley garniture of the domestic architecture which passes for that of the nineteenth century. The only fault of architects is, that they are too ready to follow the mere whims of employers; though we allow they can scarcely do otherwise. Your excellent John Bull has a great idea, that if he spends his own money, he may do what he likes with it. It is part of his prerogative to do so: and you, the architect, had better not whisper a doubt, or even a suggestion. What is it to him, if you, or a hundred others, are not pleased: the house is for *him;* and to please *himself* is his object? Now, here we come to the very touchstone of the question. A man has no right to present a disagreeable object to the sight of others; he has no right to offend the public eye, and vitiate the public taste, or even to wound the sensibility of that choice section whom Shakspeare calls "the judicious"—ever the true court of appeal—whose "censure" "must, in your allowance, o'erweigh a whole theatre of others." The outer surface of a man's house is *not* his property; but rather belongs to those who are compelled to see it from the public way. Neither is the inside of the house to be given up to individual caprice: it cannot be kept ever shrouded from all eyes but those of the original perpetrator. But, more than this, no man can be wanting in knowledge and love of art, without doing, *ipso facto*, a great amount of mischief,—by standing in the way of those benefits which the cultivation of the beautiful was intended by Nature to confer. Ignorance is criminal, because the results are not confined to the individual himself, but pass by infection to deteriorate masses of society. A man's house, in its architecture, is either an active *focus* of good influences, or it is powerfully the reverse: and could it be made amenable to legislative supervision, would as much merit attention as details merely structural or sanitary. The power of an individual architect in the right direction, often depends upon his possession of qualities which may be quite independent of his capacity as artist. Constantly is he regarded as a sort of superior clerk of the works. With the variety of styles which may be seen attempted within a short distance, every employer has just enough knowledge to impose one or other of them, as a condition. The architect does the best under the circumstances. People who expect a higher course from the artist, must again be reminded that those are not in a position to *protest*, who act as architects. Thus, of late years, each architect has either subsided into an instrument of the caprices of others, at least in the matter of style, or it has not occurred to him that there might be argument against the existing state of things,—finding which, he has accepted it as his own principle.

The effects of prescribing the decorative character of a design, and accommodating the uses of the building to such preconception,—in place of the proper course, namely, that of beginning upon the *plan*—though with an eye to decorative effect, manifest themselves in different ways. It may be sufficient that we should allude to some of these. For example, in the Exhibition, there are elevations of designs for street houses in the Gothic style, such as Nos. 54 and 157, by Mr. C. L. Eastlake, and Mr. C. J. West, which have been named, not without approbation, in some quarters. They are apparently students' drawings. As such, it is worthy of notice that they are only elevations. No. 54 displays some variety in details; but the error of the course taken, to which we have above referred, is very remarkable. Examine into the manner of lighting the different rooms, with reference to the absence of dark corners, and symmetry internally; and ask, how could the water be got away from the roofs; and the crudeness of the conception will be obvious. However you view the question of utilitarianism and art, is it not clear, that you never even arrive at the art-question, if the mechanical insufficiency of the design be obtruded on you at the outset? Moreover, it should be understood that an architectural design is simply nothing, unless it be the *locum tenens* of something which could be erected. Now, look at the trifling affair of rain-water pipes. The author of the design just mentioned, shows some of them, apparently because they can be made tributary to what is conceived to be picturesqueness. But, neither here, nor in nine out of ten designs that we could name, is the requisite provision made in this particular. Mr. E. B. Lamb has a design (129) for a "House to be erected in London." We suggest the application of the rain-water pipe test to *it*. Could the pipe which would seem to be required in the front, be brought down without cutting through the decorative masonry, or otherwise destroying the character of the design?——Mr. Edmeston's "House, Marine Parade, Eastbourne, plastered front" (334), appears to have the same defect. Doubtless, to get the water from the porch and one part of the roof, a pipe might be contrived in a chase in the wall, so as to be out of the way of the entrance,—though we have known leakage in such a case, to be attended with inconvenience. But how about the intersection of the eaves gutter by the dormer windows?——Nay, Mr. D. Brandon, too, who exhibits (86 and 87) "Sketch for the Mansion erected at Colesbourne, Gloucestershire," and "South View of the Manor House, Aylesbury, Bucks,"—the former a Tudor building in stone, with square tower, oriels, and a red-tiled roof; and the latter, a red brick and stone building in a

similar style, falls into somewhat the same error;—for, if the water might be taken down without intersecting windows and similar important features, the numerous pipes required could not but produce an effect which would be so far different to that shown in the drawing, that this should not have been (we must be pardoned for saying) falsified. We speak thus strongly, because it is this blinking at the exigencies of the structure which has brought architecture into the state in which it has lately been; and for which state the study of Gothic architecture is really that which offers, and will afford to us the antidote. Let, then, the committee consider whether a few clear suggestions to exhibitors might not next year be useful. They don't want to see impossible dwelling-houses, however sparkling with polychromy, or picked out with cuspidated tracery. Plans, therefore, if not appended to such drawings, should not be unconsidered; or the exhibitor of such works, having regard to the criticism which appears in some of the journals, will do harm rather than good. In the matter of "down-pipes," had we the framing of any *architectural commandments*, we would say, they should never be omitted. Neither, indeed, should any other thing be glossed over in a drawing, which will modify the effect of the building when erected.——Mr. Brandon also exhibits (43), a "South View of the Mansion, Fonthill-park, Wilts." The building is designed with Palladian enrichments, in three stories: and there is a tower and an arcaded porch.—— We have spoken of Mr. Edmeston's drawing (No. 334). In spite of the apparent defect which we have mentioned, it is a pleasing design. The bow window, generally required in a house such as this appears to be, with its verandah, is well treated, and colour is made to contribute to the design, in place of having overpowering prominence. Cement affords the means of preserving a house from damp, in an exposed situation; and it is here correctly used. The common error is not in the use of cement, but in making it in imitation of forms which are better fitted to, and have become associated with another material. It is remarkable, that Mr. C. Gray, in a letter in the *Times*,—which he wrote subsequently to the article in that journal lately, on architecture and constructive truth—should have fallen into the error of apparently condemning the use of cement on all occasions, and under all circumstances. For, he himself has, we think, employed the material, both correctly, with regard to structural truth, as well as physical properties, and with some amount of good taste. It appears to be used in parts of his designs for houses in the present exhibition. Of these, we find (162) "Tavistock Chambers," in course of erection in Southampton-street, Strand; (163) "Semi-detached Villas," erecting at Wood-green, at a cost of 550*l.* each; and (301) "Detached Villa, recently erected on Tulse-hill." These works certainly deserve commendation for invention in details: and in the use of the coloured materials of several different kinds, which is characteristic of his style, the architect has made a step,—his colours operating this year with diminished intensity. The attic windows in combination with the cornice—always difficult—are here cleverly managed. The treatment of the *forms* of decorative brickwork also is better in Mr. Gray's works, than it is in many recent attempts. Effect in the cornices is obtained by introducing small arches; and Mr. R. R. Rowe adopts a similar expedient in (304) "Vicar's-buildings, Cambridge: a model lodging-house for sixteen families, built of white and red brick, at a cost of 2,000*l.*" The drawing (431), "House and Workshops erected on Bishopshill, York," by Mr. G. F. Jones, is also an effective brick building. Bricks, set angle-wise, here form the principal vehicle of decoration. We may remark, that to produce good architecture either in terra-cotta, or with the ordinary forms of bricks, is by no means so easy as might be supposed by those who have not tried it. In the former material, in mouldings, the several pieces are liable to be distorted, from the firing; so that they do not preserve the regularity of line which is obtainable in masonry, and which is so essential to the effect of a cornice; whilst the ordinary forms of bricks can hardly be applied in the situation of cornice mouldings, without the impression of the limited scope of the material, and of the absence of due facilities for proportion in the several fillets or facias. The available projection is very small indeed, in consequence of the difficulty which there is at all external angles. The greatest attention throughout should be paid to "bond;" and it is hardly possible to succeed without fixing the place of every individual brick. Speaking of brickwork, Mr. R. Kerr's efforts deserve more particular attention than we were able to give them when noticing churches. He exhibits (232) "A Sketch, illustrative of the Construction of Ornamental Brickwork," as he says, "according to a system carried out of late years by the author," "the general principle" being "the introduction of bricks of the common size, and of certain simple mouldings and ornaments, thus producing an elaborate effect at a cost which is very insignificant." The particular design thus headed, shown in a large effective drawing, represents a long structure—a kind of summer kiosk—with piers and arches, and four square towers. The building stands in the centre of a stream, and the main floor is reached by steps at each end from the water. The requirements of utility and structure having sat very lightly upon the designer, the intractability of the material has not operated disadvantageously, and the building would have a fine effect. In the other works, however, as in (236) "Two Villas at Enfield, Middlesex, in Ornamental Brickwork," we cannot think that the same skill in overcoming the obstacles is shown. The absence of grace in profiles, and of proportion in the parts of mouldings, resulting from the difficulty in "bricks of the common size," is here observable. The pattern of balustrade chosen is open to question as suggesting comparison with what could be effected in stone; and the imitation of stone quoin and rustic work, though it has been generally adopted by others, appears to involve a similar error. There is a rule of general application in the treatment of materials which will apply to efforts after "ornamental brickwork,"—whether with the common forms of bricks, or otherwise. Distinctive character must be discovered in the material, and that expressed; or the use of the material will only offend—by suggesting inferiority.

The "House now erecting at Edgbaston, Birmingham," by Mr. J. C. Chamberlain, should be one of the noticeable works of the Exhibition, —for, elevations and two perspective views are considered necessary for its due appreciation. It certainly displays talent. Red, white, and blue bricks, dressings of Bath stone, encaustic tiles in window heads and string courses, are all employed; yet what—save the admiration of those who regard as excellent only forms assumed to be continental or Venetian—is gained by leaving the English Gothic? The case is exactly one of those to which our opening remarks will apply. We fear the assumed gain of novelty is attended with loss, even as regards structural truth. With all the design and fancy which there is in the continental Gothic; in some equally important points, we doubt whether it ever equalled our own style. The distinctive characteristics of the general style seem to us constantly departed from; and in the modern efforts by Heideloff, and even those by French architects, the structural errors are even more prominent.——Mr. Digweed's somewhat eccentric taste, shown in his "Designs for Parsonages, Villas, &c." (261, 306, and 529) may be pardoned; because there is some real design in those productions; and a similar remark might be hazarded of Mr. Dwyer's "Design for a Moulded and Vitrified Brick Mansion, with Terra Cotta Enrichments" (82). By the hand last referred to, are some good "Designs for Villas" (83), and a "Design for Lodges, Shotover House, Oxfordshire" (331), and in the Designs for "Park Gates, Stapleford" (144, 145, and 307), the wood and ironwork are excellent in effect, and highly suggestive for other combinations.——Mr. D. Burton's "Grove House, Regent's-park" (185), both as to design and drawing, carries its age well amongst the multitude of different manners that have grown up about it. Though Greek architecture may have gone out of date for villas, this design may be studied with advantage in the grouping of its external features, and in the plan which is here so well explained. Mr. Burton also exhibits some "Daguerreotypes" (490—495), of the house at Grimston, Yorkshire," and of the Palm-house at Kew (501 and 504). With the style of Grove House, that of the "Villa Residence for John Knipe, esq. Worcester" (193); which is brick and stone and half-timbered Gothic, by Mr. R. W. Armstrong, presents a singular contrast.——The house at Bumblekyte, Staffordshire, lately erected for the Rev. J. L. Petit, by Mr. T. Hill, is shown by a view (253), a partial section (254), and a sketch (250), by the owner, taken whilst it was in progress. Externally it is a building of one story, with a porch,—but crowned by a portion of the structure, in the position of a staircase lantern, having circular windows, and the chimneys grouped about it. The *ornament* externally is only what may be found in a brick cornice. The section of the staircase-hall is not clear as to the use of the arches which are comprised in the height of the lean-to roof,—for, they are shown enclosed by curtains; and it would appear that there are no upper rooms, nor even a passage-way round on the corresponding level. The interior, however, belongs to a lover of art; as equally manifestly, does the exterior stand forth as that of Mr. Petit's own house.—— An "Elevation of a Mansion—a study" (270), is profusely covered with enrichments, some of which are highly original, and others not deficient in merit. Again, however, we are troubled with a structural question. In this design, how is the attic story (for, judging from the height, there must be one) lighted?——Other designs in the Italian style, we may say have considerable merit, as for example (368), a "Design for a Mansion," by Mr. D. Ruddle. The coins on the piers at the angles, however, for the sake of breadth, should not have been introduced.—— The "View on the Banks of the Mersey" (371), by W. Scott, shows a row of houses with good Venetian windows; and "Lingdale House, Cheshire" (422), by the same hand, is still better, both in general grouping and in originality of detail.——Mr. G. Morgan exhibits a general view and elevation of the houses proposed, or commenced, on the estate called the "The Cedars," at Putney (391—392 and 434). ——Messrs. Wetten and Harris's "Design for a Suburban Villa" (393), is described as a new application of ordinary materials, being an attempt to combine utility and beauty. Though the design—of Gothic character—has merit, the particular intention is not very obvious; and the exposure to the weather of trussed framing to the gable, is one of those devices which now might be fairly debated on.——There are still many designs left unnoticed, as those by Mr. J. Woodman, Mr. E. Scott, Mr. W. Young, Mr. H. J. Stevens (Osmaston Manor, Derbyshire), (540 to 542), Mr. Hellyer, and others. Why, in the lodge near Pontefract (27), does the architect of this otherwise good design (Mr. G. H. Jones), corbel out a bay window which is on the *ground* story?——In Messrs. Ashpitel & Whichcord's large drawing, the houses are the best of the designs there shown; and Mr. J. Wylson's "Scoto-Parisian Dwellings for the Middle Classes" (439), besides a good plain elevation, has features of plan which merit observation.

We have said nothing about the designs for internal decorations, and the specimens of work which are exhibited, except generally. We should however, find as much matter for comment here, as in any branch of the Exhibition.

Landlord and Tenant.—Recovery of Possession through Breach.—In the Court of Queen's Bench, on the 5th inst. an action was tried, Long *v.* Lewis, which was brought to recover possession of eighteen small tenements, situated in Spring-gardens, parish of St. Dunstan's, Stepney. The plaintiff, Mr. Jeremiah Long, is a surveyor, and the defendant is a house-agent. The houses were let to the defendant in 1852, and had gone so generally out of repair, that the plaintiff deemed it advisable to bring the present action to recover possession of them. Mr. Cooke Evans, who appeared for the plaintiff, having elicited these facts, Mr. Hawkins, for the defendant, admitted that he could not struggle against such evidence; and the jury, therefore, found a verdict for the plaintiff.

ON THE APPLICATION OF PAINTED GLASS IN ARCHITECTURE.*

THERE is no subject, perhaps, which has occasioned greater differences of opinion than the principle upon which glass paintings should be formed. Some think that we ought to content ourselves with producing copies of ancient work: others, on the contrary, maintain that we ought to endeavour simply to carry out the rules adopted by the old glass painters, without imitating their defects; and amongst these, there is much controversy as to the extent to which ancient precedents should be modified or departed from.

But I believe there is little or no difference of opinion as to the unsatisfactory character in general, of the works actually produced. Even the *Ecclesiologist* newspaper, which I am always proud to quote, when it speaks the truth, has made the discovery, how completely the peculiar sort of glass painting with which it is conversant, and which it has taken such pains to extol, has stood still, for at least the interval between the Hyde-park and the Paris exhibitions. The cause to which this is attributable is evident, and must, so long as it unhappily exists, frustrate any endeavour, however well meant or well devised, for the improvement of glass painting. I allude to the incapacity of those persons to whom, in general, we entrust the execution of our painted windows. With less than half-a-dozen exceptions they are but glaziers, having picked up a small smattering of drawing at the schools of design, or else architects' clerks, as little conversant as they, with figure drawing. The competition amongst these men, and their attempts to undersell one another, are so great, as totally to preclude all study. Cheap production is the one thing aimed at. The consequence is, that we do not see in England, as we do in France, even decent copies of old glass, but only a wretched style of representation, the result of people attempting to design before they have learnt to draw; in comparison with which the sight of a really accurate copy of old glass would be a positive relief, since that, at all events, would display some little art, such, indeed, as was possessed by the ancient artist. Any candid observer must have perceived that, in the Exhibition in Hyde-park, the English glass painters were beaten hollow by foreigners, in every respect, whether in those works whose only merit consisted in their conformity with mediæval drawing, or in those of higher pretensions. And we can hardly complain if foreign artists regarded the subsequent distribution of medals and certificates, as a mode of blustering through a scrape which, otherwise, might have proved fatal to the reputation of the most prominent of our professed mediævalists. Since then, notwithstanding the enormous sums which we have expended within the last twenty years, more than equal, I believe, to the contemporaneous expenditure of the whole continent, we can boast scarcely of more than one window—I question really if more than two could be named—which, in point of art, would bear a comparison with the modern windows at Munich or Cologne. Now, for all this, it is we, the patrons of the art, and not those who practise it, who are to blame. The glass-painters are not wrong in supplying an article suited to the market; but we are wrong for not acting up to our professions. We decorate our churches, and pretend to say that the offering should be made in no niggard spirit, and yet place in them works so vile as would ensure their immediate expulsion from any private dwelling. It must be admitted, however, in excuse of the great body of donors of painted windows, that they are, perhaps without being aware of it, under the leadership of men to whom the associations connected with the Middle Ages are as everything, and who care not for art, so long as they possess something that will remind them of the Middle Ages. Ignorant of what mediæval art really is—else they could hardly look so complacently on its caricature—and more mediæval in their feelings and tastes than those who lived in the Middle Ages, these are the men who, whilst talking of art (to save appearances), do all in their power to drive artists from the field, lest, peradventure, church windows should become—to use their own phrase—"too Raffaellesque," and exhibit the paganism of grace and beauty.

It is high time, however, that these blind guides should be left to fall into the ditch by themselves. Mediæval art may not be high art, but if we intend not to fall below it, it can be done only by employing artists upon all windows consisting wholly or in part of pictures, leaving the pattern-work, if we please, to the glaziers and their assistant draughtsmen;—and by an artist I do not mean a person who has barely learnt the simpler proportions of the human figure, and can just make shift, without any enormous blunder, to make a spiritless or caricatured copy of a print from Fra. Angelico or Steinle,—but a man, in short, whom artists of character and reputation would themselves call an artist.

It will facilitate my argument if I give a slight sketch of the nature, rise, and progress of glass painting. I must, however, crave your indulgence for many little inaccuracies into which I may fall here, and elsewhere in this paper, from a desire to be brief.

Although the art of glass painting is comparatively recent, the art of making, and, indeed, colouring glass, is of such high antiquity that its origin is unknown. The Egyptians were familiar with it; and it was brought to perfection by the Greeks and Romans,—to the latter of whom the discovery of window glass is due. Every colour that we see in mediæval work was known to the Greeks; and though the moderns may have emulated the skill of antiquity in the formation of glass ornaments, the colouring of the ancients remains unrivalled. There is no glass that I have seen, the colours of which, in point of richness and harmony, will compare with those of the ancient Greeks; and we may well be astonished at the achievements in this, as in other arts, of that wonderful and highly gifted people.

Glass once having been made into sheets, its employment in windows would naturally follow. A bronze frame has even been found at Pompeii, which, it is supposed, served the purpose of a lattice. But the windows of St. Sophia, at Constantinople, remain, as proofs of the manner in which, at first, large apertures were closed with glass. The window is divided into little squares by a pierced stone panelling, each panel being furnished with a rabbet for the retention of the glass. That coloured glass, as well as white, was used in these windows, depends on the testimony of contemporaneous writers: and it is easy to conceive the effect of a stiff pattern composed of little squares, of rich transparent colour, set in an opaque frame. The nature of the pattern might be advantageously varied, and rendered more tasteful, by imparting a less severe form to the framework,—as we see in some of the Eastern mosques, where the windows are filled with what, for want of a better word, I may call stencilled patterns, in plaster, —of various design,—the openings of which are stopped with bits of white and coloured glass, stuck on at the back of the plaster framework. The transition from this to the glazing, with which we are familiar—composed of leadwork and glass—would be easy. And many specimens, and even entire windows, remain, where the form of the pattern is given by the leadwork only, the colouring being done with pieces of white and coloured glass. The next step was to heighten the effect produced by such simple means, by painting upon the glass with an opaque enamel colour, which was attached to the glass by the action of a furnace. And in this short sentence I have described to you what painted glass is. At first the process was literally what I have described: a good part of the design continued to be made out with the leadwork, and the more delicate work was painted upon the glass with the enamel colour. I am unable to say when the discovery of glass painting was made; for there is a question amongst antiquaries whether the "Treatise of Theophilus," in which the process is minutely described, was written in the tenth or twelfth century. However, I have myself seen remains of painted glass as early as the first half of the twelfth century, and it is possible that in France, where I believe the practice of the art commenced, some earlier specimens may yet be discovered.

The same mode of procedure continued until the middle of the sixteenth century, with but very trifling additions; the most important of which was the art of staining glass yellow, with a preparation of silver, which was discovered at the beginning of the fourteenth century. And the surprising contrast between the stiff mosaic of the twelfth century and the glass picture of the sixteenth, is wholly owing to differences in the design, in the nature of the glass itself, and in the handling of the opaque enamel colour. A further discovery, made a little before the middle of the sixteenth century, was destined, in course of time, to work a great, and as I think prejudicial, change in the art. The facility with which the opaque enamel, "the enamel brown," as it is called, was applied, led to the belief that transparent colour might, in like manner, be affixed to glass, by mixing the proper colouring material with flux or enamel, and burning it in. And soon the glass-painter was possessed of a palette almost as well furnished with different tints as that of his brother painters in oil. The use of enamel colours was prejudicial, not merely in diminishing the brilliancy and power of the work, but more particularly from its tendency to make the artist lose sight of the peculiar characteristics of the material on which he had to work, and to treat glass rather as canvass than glass. The last windows of importance that were painted before the general introduction of enamel colouring, are the windows of the chapel of the Miraculous Sacrament, in Brussels Cathedral, as well as the two transept windows, all which were executed within three or four years of 1550. It is impossible to look at these windows without perceiving how thoroughly their author understood the nature of his material. These works are quite different from oil paintings, frescoes, or mosaics. They are emphatically glass paintings, of a high and rare order, uniting such brilliancy and power of colour as are the natural attributes of glass, with a degree of pictorial effect which augurs well for the future of glass painting; if its principles are only honestly carried out in an artistic spirit. It is true that some of our glaziers have despised these magnificent works; but they may depend on it that, if by some astonishing miracle they shall themselves be enabled to paint glass as badly, they will make their fortunes. In almost all the subsequent glass paintings, we see more or less the mark of the beast, in the confounding of the principle proper to painting on an opaque surface with that proper to painting upon a transparent material. Sometimes, as at Gouda Church, in Holland, the chief fault is, in the dulling down of the whole picture to a level with the enamel-coloured glass used in it; sometimes, as in the windows on the south side of Brussels Cathedral, the windows—said to have been designed by Rubens's scholars—there is the additional mistake of selecting a design which cannot be adequately expressed in glass. The Modern Munich school is open to the imputation of both faults, to the first especially: and several of the windows of the Maria Hilf Church, at Munich, excite one's regret that so much truly admirable art had not been expended on a material more suited to its style, such as fresco or canvass. I am so persuaded of the superior fitness of the earlier method of glass painting which prevailed up to 1550, that in the course of the following remarks I wish to be understood as advocating that system exclusively.

In the application of painted glass to architecture, much of the difficulty with which the subject is beset would vanish, if all the buildings intended to be so decorated were of one character, or belonged to one style of architecture only: as it is, we ought, by rights, to consider the principles which should guide us in selecting glass paintings fit for buildings possessing every variety of character, and erected in every conceivable style of architecture. But as so wide a range is not within the compass of a paper like the present, I will confine my observations to ecclesiastical edifices in the Gothic and Classic styles.

With regard to Gothic buildings the thought naturally occurs, that the painted glass which

* The following essay, by Mr. Charles Winston, was read at the Architectural Exhibition on the 29th ult.

was used contemporaneously with the architecture, must be that most likely to harmonise with it. But this, I apprehend, is true only to a certain extent. It would be paying a poor compliment to Gothic architecture, to maintain that nothing better than the drawing and composition such as we see in mediæval windows, would harmonise with it. It is the magnificent colouring of ancient glass which constitutes its redeeming feature; and it seems most in accordance with modern notions, that the colouring of a picture should not be its only excellence. The difficulty is to strike out the path of reformation.

I have often looked at an old window and a modern one together, from a distance too great for anything else to be distinguished, except the general effect of the colouring, and have wondered why it was, that the old window seemed most in keeping with the place—waiving for a moment the superiority of its colouring. And I may well express my astonishment, that any person's eyes should be so dull and insensible to colour, as to mistake an ordinary modern window for an ancient one. It is true, that, on a near view,—as at the Sainte-Chapelle, at Paris,—artificial dirt and scumbling, most cleverly applied, may disguise to some extent the flimsiness and crudeness of the modern material; but it is impossible, by any trick of this sort, to make two things, which are so different in their chemical constituents as ordinary new glass and old, look alike. If there could be any doubt on the subject it would only be necessary to retire to a sufficient distance, as from the restored windows in the apsidal chapels at Bourges, to have it dispelled.

After a good deal of consideration I have come to the conclusion, which I dare say some of you will have anticipated, that the rich, cool, quiet tone of old glass, being favourable to repose, has a peculiar grave and solemn character, which harmonises with a Gothic interior. And that this gravity is more perceptible in the earlier than the later glass paintings, the colouring of which is neither so deep, nor so quiet as that of the earlier ones; and which again is associated with a less grave or severe style of architecture.

Thus we find Early English architecture associated with the glass of the twelfth and thirteenth centuries, which is the richest and deepest tinted window-glass in existence. I am not speaking of the coloured glass merely, but of the white also, the tint of which, though sometimes looking quite white by contrast, is really a rich sea-green. Again we find Decorated architecture associated with glass, differing indeed but little from that of the former period, except in the quality of certain colours. Of the blue, especially which, in the twelfth century, was a perfect sapphire, so closely resembling the old Greek blue glass as to corroborate Theophilus's statement that it was made out of antique mosaic work,—the colour deteriorating in proportion, I suppose, as the original supply failed; but all which glass is employed in designs of a less severe character than those of the twelfth and thirteenth centuries. So, again, we find the Perpendicular architecture of the fifteenth century associated with glass much lighter in tint, and that of the sixteenth century, with glass of a gayer and warmer tone, than any which had preceded it.

If, then, we accede to the proposition that in their general appearance there is a certain degree of harmony between ancient glass paintings and the contemporaneous architecture (and which has been shown to arise in great measure from their colouring), a proposition which I hardly think can be considered fanciful, we shall have established the first step of a system which I think is capable of being worked out satisfactorily and [illegible]

Surveyors to Boards of Works under New Act.—The Holborn Board of Works have elected Mr. Lewis H. Isaacs their surveyor. The salary is 250*l.* per annum. There were forty-five candidates, we are told. The Lea District Board have elected Mr. Francis E. Thorne.

* To be continued

THE LATE MR. CUBITT.

As an addition to the memoir we gave of the late Mr. Thos. Cubitt, the following particulars of some of his undertakings, from the pen of one who was acquainted with him for more than forty-six years, will interest many of our readers.

Mr. Cubitt's first work, of any extent, was the new roofing of the Russell Institution, in Great Coram-street, under the superintendence of the late Mr. John Shaw, then architect to Christ's Hospital, London. Although Mr. William Wilkins had previously reported on the safety and good condition of the building, it was found, by a more scrupulous architect, that the roof was not only in bad condition, but formed of improper materials, and unfitted for reparation: new works were therefore ordered, which proceeded with rapidity, and were finished to the entire satisfaction of the architect and the committee of the society. Soon afterwards the new London Institution advertised for tenders for its proposed building in Finsbury-circus, when Mr. Cubitt's was accepted. The foundation was laid in May, 1815, and, with a promptness and daring which marked Mr. Cubitt's character in all future works, he immediately purchased a piece of ground on the east side of Gray's-inn-road, commenced a series of workshops, purchased horses, carts, and materials, and engaged gangs of carpenters, smiths, plumbers, glaziers, painters, bricklayers, &c. with foremen to each class. This bold and hazardous plan was then a novelty in London, and consequently provoked much speculation. Bound, under a penalty, to complete the new building by a given time, Mr. Cubitt found that he was at the mercy of each class of tradesmen if his work was not finished by the time stipulated. By having workmen on his own premises and subjected to the laws and system of the place, he felt some security as to time. He was also enabled to go to the best markets for materials. His first stipulation with his employers was to have regular and speedy payments for works as they progressed, and he pursued this system in all future engagements, even to the works at Osborne and Buckingham palaces.

Shortly after the commencement of the London Institution, he found a harassing and expensive obstacle to surmount—insecure and bad ground for the foundation. Digging, and carting away a vast mass of materials, with deep piling and concrete, were found to be necessary: this occasioned much delay as well as expense, and was not calculated on in the first estimates. As he proceeded he found that working drawings had not been prepared by the architect when wanted, whence carpenters and other workmen were kept out of employ, and the builder most seriously annoyed and injured. Having finished his first large edifice in Moorfields, and obtained the desired credit of the Managing Committee, and from City companies, he took an eligible piece of ground at Highbury, in the parish of Islington. There he erected some moderately-sized villas, with large gardens, and on commanding sites. These were eligibly sold and let, when he directed his attention to another piece of land between Newington-green and the principal street of the parish, which had been occupied as market gardens and grazing fields. At this place he found it necessary to purchase premises on the north side of the Green, and also a tract of land to make a road of approach to the proposed new buildings. Here he soon raised detached villas and rows of houses, which, like the former, were speedily disposed of.

A piece of ground, of 6 acres, abutting on the upper, or the north road Islington, used as a nursery garden and for grazing, called Barnsbury, next attracted his attention, and here he began in 1825. Purchasing this, and making it freehold, he laid it out for streets and a square, and let the same to builders on leases for long terms. Besides a few houses he built as samples, all the remainder, to the amount of ninety-three, have been raised by other speculators, and are all on a small scale. The Church Missionary Society purchased a part of this ground to attach to their college.

About the year 1820, Mr. Cubitt commenced building a row of nine houses, to occupy the south side of Tavistock-square, in the parish of St. Pancras, for Benjamin Oakley, Esq. who had purchased and occupied a detached house in the vicinity. Though superior to the other houses which had been previously raised in that neighbourhood, they are not equal to Mr. Cubitt's usual works, for the proprietor was too economical in his outlay. They were intended as legacies to his daughters, and were first let at 150*l.* per house. This place being contiguous to the builders' workshops, timber, and masons' yards, induced the enterprising builder to take a tract of ground on ninety-nine years' lease belonging to the Duke of Bedford and to the Earl of Southampton, comprehending an eligible and healthy site. Here he successively built the houses of Upper Woburn-place and Woburn-buildings, Gordon-square, Tavistock, Endsleigh, and Gordon streets, also Gordon-square, with part of the south side of that of Euston. Some of these are let at from 210*l.* to 150*l.* per annum each. This tract, however, is not wholly yet covered, as the class of inhabitants for whom these houses were intended have (following the tide of fashion) migrated more to the west, where the numerous new and splendid houses facing Hyde-park and its immediate neighbourhood have sprung up. Perceiving the disposition of the fashionable world to follow in the wake of royalty, Mr. Cubitt fixed on a tract of land for building speculations at the nearest place he could find unoccupied in the immediate vicinity of the royal palace, and entered into engagements with the Marquis of Westminster in 1824 for 140 acres of land. In 1829 the writer of this notice made the following remarks on this district for "The Picture of London," then reprinting. "Within five years this land has been nearly covered with houses of the largest size, surrounding spacious squares, or on the sides of wide and handsome streets. Of all the extraordinary building works carried into effect by a London gentleman or tradesman we may fairly adduce this as unparalleled. Most of the houses surrounding one large square (Belgrave) have been erected, some of which are finished and occupied, and several others of nearly equal dimensions and value completed. When we consider the capital advanced for such hazardous speculations—the peculiar difficulties of the times—the immense augmentation of parochial and government taxes—with the employment they have given to thousands of merchants, manufacturers, tradesmen, artificers, and workmen, we cannot but admire the mind that projected and carried into effect so many novelties, and to such a large amount of expenditure." Did space permit, an essay of considerable extent and of no small degree of interest might be written illustrative of the moral courage, perseverance, and sound judgment of one man, who, single-handed, organised such a machine of personal, mechanical, and scientific power. On this occasion the writer can only suggest brief hints and intimations. In the second volume of "Public Edifices of London," are views of one side of Belgrave-square and a portion of Eaton-square, with short notices of the buildings then erected (1829), in progress, and as proposed to be executed.

About four miles S.W. of London-bridge is a large open piece of land, called Clapham-common, which has long been noted for mansions and villas, which have been progressively built and adapted for the residences of bankers, merchants, and other wealthy persons, whose offices, counting-houses, warehouses, &c. are within the closely-pent streets of the city. To the S.W. of this common were several fields, called Clapham-park, of about 250 acres, belonging to Atkins Bowyer, Esq. lord of the manor, who sold them to Mr. Cubitt, in 1824. Perceiving its capabilities, he immediately laid out the whole in lots for detached mansions and villas on a large scale, formed wide roads four miles in extent, and planted many thousand trees, which were intended for transplantation to plots of ground as houses arose. His next plan was to purchase houses and lands adjoining this property for the purpose of making wide and fine roads of approach to the new park. This effected, he commenced building large mansions, and invited the public to take sites for others. From that time to the

present works have been continued, and the whole ground is now nearly covered. It must be borne in mind, that these houses are praiseworthy from their intrinsic goodness of construction, as well as for their materials.

Besides the places and public and private buildings already referred to, there are several others, both in London and in the country, with which Mr. Cubitt's name is intimately associated The most remarkable of these is a plot of land on the river Medway, near Rochester, in Kent, on which he has expended full eighty thousand pounds for machinery, works, and plant, to make bricks and other objects of baked clay. The machines, tools, and processes of working are all of the most improved and expensive kind: the clay is of peculiarly fine and excellent quality; and the works had just been brought into the best condition, when its proprietor was arrested in his terrestrial career.

The extent of the preceding narrative admonishes the writer to close it rather abruptly, and before the whole be fully and clearly explained. To accomplish these works, sometimes with urgency and rapidity, at others with circumspection and apparent timidity, required unabated vigilance. Sometimes more than two thousand men were employed, all of whom were to be paid regularly every week; and to provide the necessary supplies, not only for this phalanx, but to pay clerks' salaries, and for the vast amount of material in machinery, for wear and tear, and in the buildings which were in daily progress, demanded ceaseless exertion for the working head. Money panics and workmen's strikes occasionally broke in upon and harassed the builder's mind, that was already upon the full stretch. His philosophy and courage, however, bore him up through the whole.

JOHN BRITTON.

THE ABBEY KITCHEN AT FONTEVRAULT.

HAD Mr. Scott been present when I read my paper at the Architectural Exhibition, he would hardly, I think, have taken the trouble of writing a letter to you, to convict me of inaccuracy in my notice of the building at Fontevrault. The report in your columns, being unaccompanied by illustrations, was necessarily imperfect. Those which I exhibited explained the plan and construction sufficiently, I hope, to prevent my hearers from carrying away any false impression. As to the use or destination of the building, I did not pretend to offer any opinion whatever. I had not happened to meet with the notice of it in Turner's "Domestic Architecture," or any other work; although I had no doubt so curious a specimen must have been amply described and figured. My knowledge was merely derived from personal observation, and not from what had been said or written by any one.

On referring to Turner, I observe that although he speaks of the building decidedly as a kitchen (and in all probability he is quite right), he adds that it is "commonly called the octagon chapel or tower of Evrault." I find, therefore, that in designating it as a chapel, I did no more than give it its usual title; and to show that I did not intend to assert positively that it was a chapel, I added, "if it be one, for I do not know that its purpose has been ascertained." At the time I wrote my remarks, I quite conceived the possibility of its having been a kitchen; and my recollection of the comparatively simple edifices at Glastonbury and Stanton Harcourt by no means altered my opinion as to the needless intricacy of its construction.*

I find also that the plan which I exhibited, and which I had worked out from the exceedingly rough and hasty sketch I was permitted to make on the spot, corresponds with Turner's carefully drawn plan more closely than I could have expected. Except that I have not noticed the substitution of blank wall for two of the apses, and have placed the door in a different compartment, the plans are nearly identical. I did not attempt to give the correct proportions; indeed, some I purposely exaggerated, for the sake of showing the construction more clearly.

As Mr. Scott admits, that the construction "has the effect of changing the direction of the sides of the octagon, and making the fire-places appear, externally, to be placed against its angles instead of its sides," I am not disposed to dispute whether I was strictly right or not in describing the building as an octagon with apses at its angles. The question is merely one of words, so long as I described the thing, which I hope I did, fairly. Externally, it certainly presents the aspect of an octagon with apses at its angles. To this external appearance I referred. It is true there is a certain bulging out in the lower part, which a simple octagonal tower, crowned, in the usual way, with an octagonal spire, would not necessarily have: this was fully expressed in my sketch of the exterior. The manner of combining this octagon (call it real or apparent, whichever you will, but it is the one which gives its form to the spire), with that to whose sides the apses or fire-places are attached, which combination Mr. Scott admits to be effected by a "somewhat intricate contrivance," is what I took some pains to explain by my sketches. And I still think that this contrivance, although not perhaps without purpose, was a more intricate one than the occasion required, or than was usual in an age generally remarkable for its architectural simplicity and purity.

I may here make another remark on the building in question, but without commentary, as the principle to which it refers would require much time and space for its full discussion. The intervals between the external apses are occupied by engaged shafts, which, both in Turner's finished engraving, and my rough sketch, differ from each other in no perceptible manner. Now, the internal shafts which correspond to these differ very much from each other, both in appearance and office; the one being low and strong, and used in support of a large arch; the other being tall and comparatively slender, and having little more to do than to mark an angle.

An instance of the octagonal plan, having the apse attached to each side, is given in the "Statistique Monumentale de la Charente,"—St. Michel d'Entraigues, near Angouléme. The church is now, I fear, restored, if not wholly rebuilt; so that I cannot tell what may be its present appearance; but I presume, from the description, that it must have had an octagonal roof, spire, or cupola, the faces of which, and not the edges, corresponded with the apses of the building; or it may have had a round dome on Byzantine pendentives: these would not have required any change to have been made in the original octagon. There can be no doubt of the soundness and security of this simple construction; nor can I conceive that the case is altered if the apses become fireplaces, surmounted by chimneys.

My object was to show an instance of what seemed to me unnecessary or misapplied ingenuity, and I preferred pointing out a very curious and unique mediæval specimen, even at the risk of some inaccuracy, instead of alluding to any modern example, with the certainty of giving personal offence.* J. L. PETIT.

P.S. I may be permitted to take this opportunity of saying how much I feel gratified by Mr. Fergusson's kind acknowledgment of my concurrence with him on all essential points. Had I seen the introductory chapter of his "Handbook of Architecture" before I read my paper, I should have modified such expressions as might seem to clash with his remarks; and this I could easily have done, without compromising in the slightest degree the object I had in view. As it is, I find I have said quite enough, in different parts of my paper, to prove that my expressed opinion was not opposed to his in any matter of importance. J. L. P.

CONSUMPTION OF SMOKE.—The Steam-Collier Association at Newcastle-on-Tyne are preparing a boiler to test the various designs sent in to compete for the 500*l.* prize offered by the association for the effectual consumption of smoke with a due regard to the economy of fuel.

* There is another building in the town of Fontevrault much more like the Glastonbury kitchen in design, and nearer to it in date. It is square, having square ones at the angles, and a vaulted roof of a very domical form, from the centre of which rises a slender octagonal turret. I find that I made a note on the spot, to the effect that the inside of this turret is not blackened, as by smoke, but worn as by a bell-rope.

* We have received a communication from Mr G. G. Scott, in reply to Mr. Petit's lecture generally: this will appear next week.

PROVINCIAL NEWS.

Spalding.—The Exchange building here is nearly finished.

Gringley.—The new National Schools at Gringley-on-the Hill were opened on Wednesday before last. The schools which have just been completed are situated to the west of the village, and consist of a boys' school, a girls' school, and a residence for the master. They were designed by Mr Henry Goddard, of Lincoln, and are in the Domestic English style. The walls are of red brickwork, and the angles are ornamented with buttresses having Ancaster stone weatherings. The windows have stone joints, mullions, sills, and heads, with relieving arches of brickwork over them. The roofs, which are of a high pitch, are covered with slate. The frontage is towards the south of the Retford-road, and is 62 feet in length. At the west end is the master's residence, having a projecting three-light window, and at the east end the boys' school, which stands slightly in advance. The girls' school is placed longitudinally in the centre, and at its junction with that of the boys there is a perforated gablet for a bell. The works were executed by Messrs. Bowes and Cobb, of Gringley; and the total cost, including fence and offices in the rear, will be about 600*l.*

Stamford.—In consequence, says the *Lincolnshire Chronicle*, of the deficient supply of gas in St. Martin's, the gas company have been at the expense of laying down new mains, with the view to afford a better light in that part of the town.——"By the decease of Mr. Robert Woolston," says the same paper, "the situation of surveyor to the Stamford Improvement Commissioners becomes vacant. A special meeting will be held on Tuesday evening next, for the purpose of electing Mr. Woolston's successor: the salary is 25*l.* per annum, with 5*l.* as inspector of fire brigade, the duties being combined. We hear that there are already four or five candidates for the office."

Northampton.—At the last quarterly meeting of the Lunatic Asylum directors, the committee appointed to superintend the making of bricks reported that they invited tenders for the manufacture of a million bricks of clay from the Asylum property, the work being done by labourers in the Asylum. Mr. Ireson tendered at 19s. per 1,000 bricks. In pursuance of a contract entered into with him, there were made and stocked, in 1854, 539,761 hard bricks, at 19s. per 1,000, and 10,000 soft bricks, at 14s.; for which 519*l.* 15s. 6d. was paid; and, in 1855, 467,560 hard and 26,542 soft bricks, for which 462*l.* 15s. was paid. An expenditure for laths, &c. for sheds, pantiles, ridge tiles, &c. made the total payment 994*l.* 11s. 4d. They had now 1,043,863 stocked on the Asylum premises, and the present value of the kilns, which were the property of the directors, was about 50*l.* It was believed enough bricks had been made for both the wings contemplated for additional accommodation: only one wing, however, being proposed to be done this year, the committee thought there was no necessity to go on any further.

Chelmsford.—The materials of the buildings on the site upon which the new Corn Exchange is to be erected were sold on Tuesday in last week, and brought a larger sum than anticipated, the coach-building workshop at the back (92 feet by 22 feet), producing 85*l.* and the total produce of the sale being 330*l.* The plans for the new erection have been finally agreed upon by the directors, and these, according to the local *Chronicle*, are to be open for public inspection, and steps taken forthwith to procure the necessary contracts.

Chatham.—Mr. A. Laurie has been promoted to be the chief engineer and inspector of machinery at the dockyard here, at a salary of 650*l.* per annum. The saw-mills and metal-mills are working day and night.

Oxford.—The front of Jesus College has been restored, or rather remodelled. The east-end of the chapel forms a portion of the elevation, the design for which was furnished by Mr. Buckler, architect. Its stone window has been restored, and ornamented with stained glass, executed by Mr. Hedgeland. The gateway of the college has become a prominent feature: the entrance is surmounted by a tower, with enriched para-

pet and battlements; and, as there is a staircase in the northern angle, advantage has been taken of it to carry up a square turret, which is also embattled, and forms the loftiest point of the building. There are many sculptures in this upper portion of the design. Over the moulded archway is a bay-window, with a roof of stone. The rest of the design, south of the gateway, has three tiers of plain windows, crowned with a parapet, surmounted by stacks of chimneys. Mr. James Long, jun. was the contractor for the masonry.

INQUIRY INTO CONDITION OF THE IRISH LUNATIC ASYLUMS.

To make additional provision for the care and treatment of the insane poor of Ireland, to the number of 2,500,—340,000*l.* have been spent by the Lords of the Treasury, to be repaid by the counties. The architects employed in the principal asylums were,—Belfast, Mr. Lanyon; Omagh, the late Mr. Farrell and Son; Sligo, Mr. W. Deane Butler; Mullingar, Mr. Mulvany; Ballinasloe, Mr. Kempster; Killarney, Sir Thos. Deane; Cork, Mr. Atkins; Kilkenny, the late Mr. Papworth; and Richmond, Mr. Murray.

Deputations from the different counties having made complaints that the outlay in some cases had been extravagant, a commission was appointed to inquire into the facts, consisting of Mr. T. L. Donaldson, architect; Mr. James Wilkes, medical officer of the Stafford County Lunatic Asylum; and Mr. Spencer Shelley, to act as secretary. The commissioners' report has recently been printed, and is now before us. Although courteously worded, and drawn up with an evident desire not to injure individuals, it is quite evident that the commissioners are far from satisfied in some cases with what has been done, and this is further shown by their recommendation that in the cases of Omagh, Kilkenny, and Richmond, various works should be done to make good defects without further charge to the ratepayers; that at Sligo the sum of 3,000*l.* should be deducted from the sum for which the ratepayers are liable, and various defects remedied without further cost to them; at Killarney the sum of 1,455*l.* and various works done; at Mullingar, 1,715*l.* remitted, and works done; and at Cork, the sum of 6,013*l.* remitted, and water-closets and ventilation made good, without further charge to the ratepayers. The penetration of the driving rains through the uncoursed rubble masonry, has led to a large expenditure. In some cases, the walls were found absolutely reeking with wet, producing rot in the timbers inserted in them. The ratepayers urge that the experience of the Board of Works derived from the like defects in workhouses and other buildings should have led them to insist on another mode of construction and extraordinary precautions to prevent the recurrence of so terrible an evil, which had baffled architects and builders of the highest repute. The commissioners are inclined to think that if a front mortar, such as Portland cement, had been used, to the depth of 3 or 4 inches during the work, and the joints had been at once struck, as in hydraulic constructions, it would have proved an effectual prevention to the admission of wet at the joints and beds.

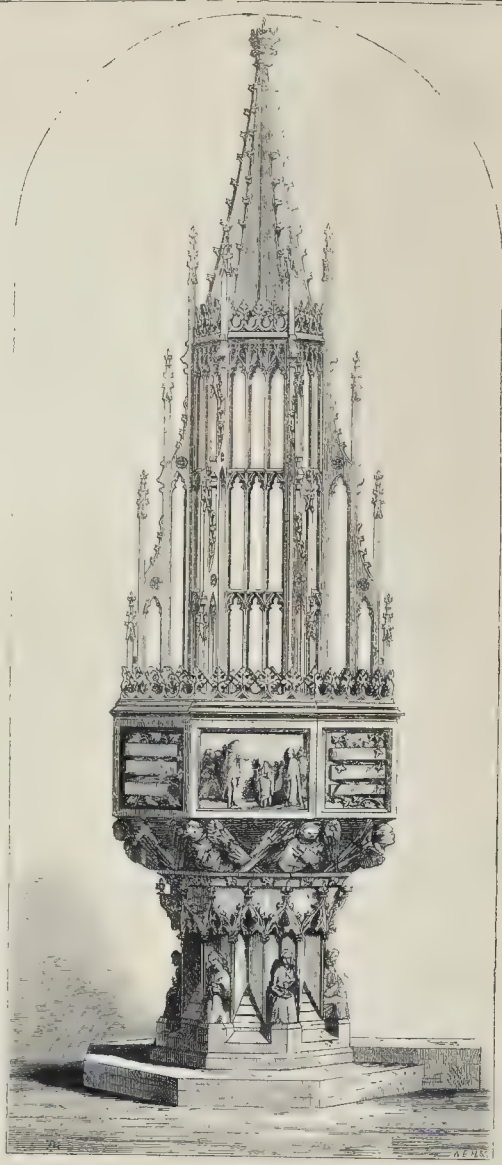
THE DUDLEY WORKHOUSE COMPETITION.

This extraordinary affair has been brought to a stop by the following resolution, passed, according to the Birmingham *Daily Mercury*, at the last meeting of the guardians:—"That as it was found impossible to carry out Mr. Nicholl's plans, the guardians, with great regret, found themselves compelled to abandon them."

A correspondent on the subject, after commenting upon the previous proceedings, says:—

"By reference to the circular sent to the contractors (a copy of which I enclose), you will perceive that the tenders range from 22,690*l.* to 33,270*l.* I ask, sir, in the name of common sense, and for the protection of the well-known contractors, whose names are attached to the highest amounts, where are the grounds for so wide a difference? Each contractor received, by application at the office at West Bromwich, a printed copy of quantities: there cannot be a doubt but they were all alike, yet observe the contrast. This is a case alike interesting to the architect and builder, and almost without a parallel even in these vicious times of competition."

The writer subjoins a list of the leading items in each trade, to show the quantity of work required; but the insertion of it would answer no good end.



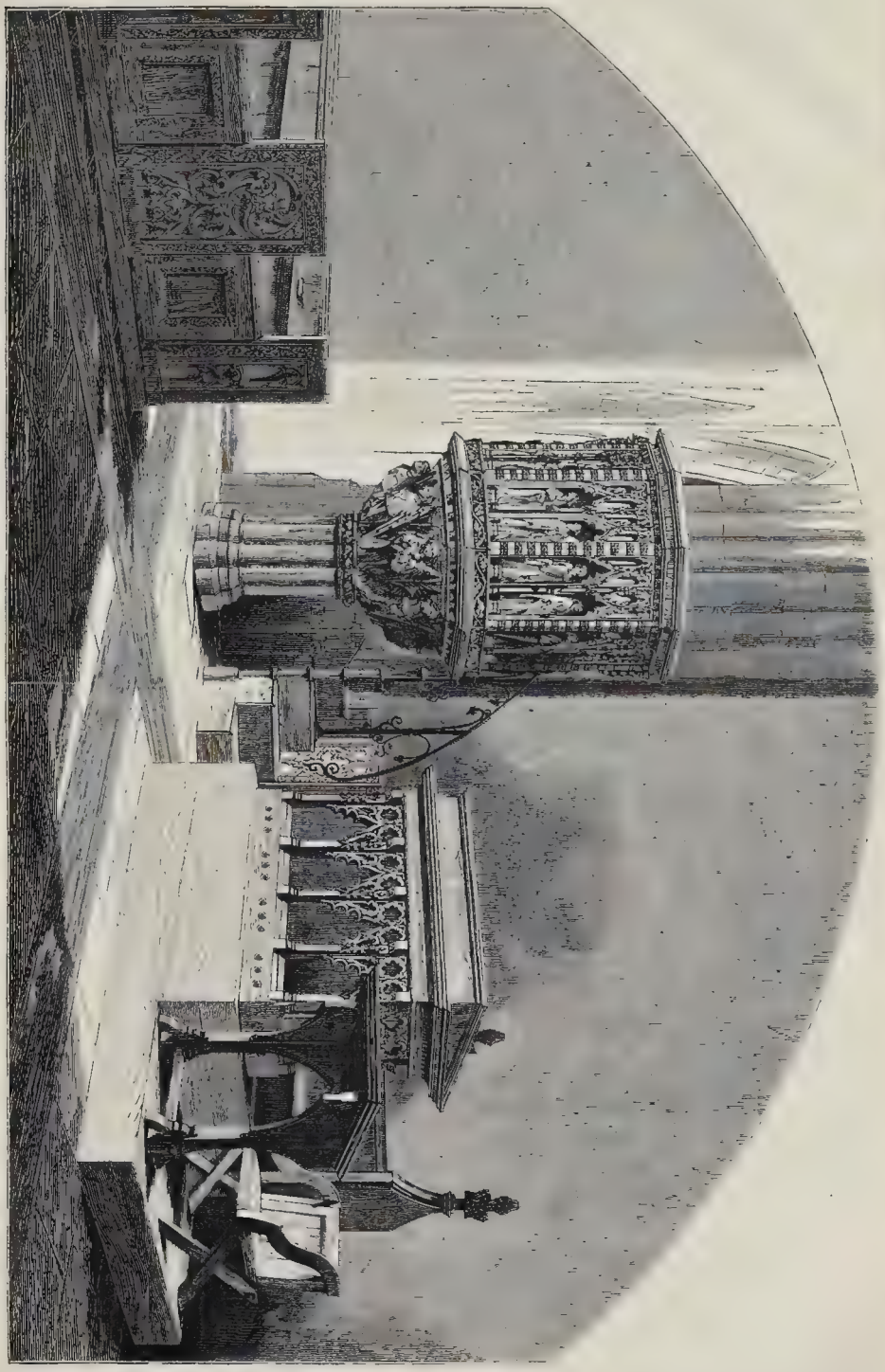
NEW FONT AND COVER: CHURCH OF ST. MARY REDCLIFF.

NEW PULPIT, SEATS, &c. ST. MARY REDCLIFF, BRISTOL.

Some time ago the vestry of St. Mary Redcliff determined on removing the incongruous pews and fittings from the interior of their noble church, and substituting others of more fitting character. Tenders were obtained, and that by Mr. William Bennett, of Portishead, was accepted. Part of the works,—namely, the seats in the nave, screens at the west end of it, the pulpit, reading-desk, seats in chancel, &c.—has been completed, from the designs of Mr. Godwin. The whole of the woodwork is of English oak. The pulpit, shown in our engraving, is fully enriched, and has carved figures of the apostles. Around the top of it is written,—"Sanctify them through Thy truth: Thy word is truth;" and again, "Faith cometh by hearing, and hearing by the word of God." The cost of the pulpit was 97*l.*

Some of the bench-ends are carved, as shown: others are left plain, until funds arrive. The reading-desk, made in accordance with the views of the vestry, to accommodate two readers and a "clerk," is moveable.

The font, not in Mr. Bennett's contract, was executed by Mr. Rice. The basin is an octagon, and has on four of the sides groups in relief,—Christ blessing little Children, the Naming of John, the Baptism of Christ, &c. Angels support the basin; and around the stem, under canopies, are eight seated figures, sculptured in alabaster. The rest of the font is of Caen stone. The oak canopied-cover, although determined on by the vestry, is not yet executed.



PULPIT, READING-DESK, AND SEATS; CHURCH OF ST. MARY REDCLIFF, BRISTOL.—Mr. Godwin, Architect.

CANTERBURY IN THE OLDEN TIMES.

Canterbury, Dur Whern, latinized, *Durovernum*, or the "City of the swift waters," as the words imply in the ancient British language,* in which it was also denominated "Caer Ceint," the capital of Kent, derives its more modern denomination from the Anglo-Saxon *Cantwaraburh*. The city, in the days of the Romans, was probably nothing more than a series of dwellings among the trees. These woods covered a vast extent of the neighbouring country even down to a more recent era. A charter of Henry I. relating to the hospital of Harbledown before the hamlet itself bore that name, describes the institution as the "Hospital in the Forest of Blen." Of the importance of Canterbury as a station even in the earliest times there is ample proof: the Romans considered it of sufficient consequence to connect it by stone causeways with Lympne and Sandwich. It was long the metropolis of the kings of Kent, of the Jutes, the most enlightened of the Anglo-Saxon settlers of this country; and in later days it is described as a city renowned throughout Christendom for its edifices and the "glorious saints that lay shrined therein." We turn, then, to seek the vestiges of the Roman, the first authentic invader of Kent—for nothing of the Briton now remains. Somner indeed says, that some British bricks were found in the ancient wall of the city: it is doubtful, however, if his knowledge were sufficiently accurate to decide what British bricks were.

We find evidence of the occupation of the Romans in tesselated pavements, pottery, funeral urns, arms, implements, and personal ornaments, and in the remains of fortresses and villas.† The Saxon, the Roman's successor, and perhaps during the latter period of Roman settlement possessor of some portion of the island, constructed few buildings of durable materials; and the Dane, who often visited the Kentish coasts, was a marauder, whose career was marked by havoc and destruction; and although he temporarily established some authority in this part of England, his tenure was never lasting, and his customs, language, and institutions exercised no permanent influence nor impression. The Norman came, and spire and arch and battlements of stone sprang up around him: the cathedral exchanged its first simple style of construction for a more elaborate and tasteful architecture, and in due time arose one of the most beautiful specimens of its class, the gate of St. Augustine's monastery.

Yet, survey Canterbury a few centuries back from such point of view as its ancient history and descriptions develope, and what a strange scene it would exhibit.

Down the narrow dark streets, unlighted in the gloomiest nights, might be seen the motley inhabitants, wandering forth with links or lanthorns: here, little wooden houses with roofs of straw or rushes presented themselves, or here we might have seen low buildings with overhanging roofs: the eaves of the better, or rather the richer classes, were supported by grotesque figures, called telamonies, goblins, and grinning monsters; whilst runic knots, scrolls, and zigzags, completed the list of all that was intended to be considered as ornamental. Here were lanes, odd nooks, and corners, queer old buildings with some monster or elfin carved upon the massive beams, at which the pilgrim stared, hardly knowing whether to cross himself or not, whether it betokened a saint duly canonized, or a devil, or a punchinello who owed his existence to that comic spirit which the genius of ecclesiastical architecture and art invoked in the middle ages, in strange contrast to its devotional tendencies.

The oldest document in the city archives, with the exception of charters and grants, is dated A.D. 1258. Between this period and the present era we have several volumes of manuscripts, consisting of wills, grants, burgmote rolls and proceedings, chamberlains' and other officers' accounts, and a vast mass of ill-sorted law proceedings, many of them relating to that ancient tribunal the Court of "Piet Poudre," an institution of Norman origin, and supposed to be so called from the appearance of the suitors, who were mostly poor and dust-covered pedestrians from the country.

Domesday Book has several entries respecting Canterbury. In King Edward's time the king had 51 burgesses paying rent, and 212 others under his privilege and jurisdiction. There were three mills paying 118 shillings, and a toll yielding 68 shillings, and eight acres of meadow, belonging to the king's legate, and 1,000 acres of wood not bearing fruit, from which issued 24 shillings, "although he that now holds it pays 30*l.* of money refined and weighed, and 24*l* of money by tale." In the whole, in the time of King Edward, the city was worth 51*l*. The record then goes on to state, that "a certain monk of Canterbury has taken away two houses of two of the burgesses; one without and one within the wall, built on the king's highway."

The earliest mention of a governor at Canterbury occurs in a charter of Christ Church, bearing date A.D. 780, where the name of Aldhunce occurs as *præfectus*. In 950, the name of a portreve (*Hlothewig Portgerefa*) appears in a deed of sale of land in Canterbury. In 1011, a "præpositus regis" was taken prisoner by the Danes. Domesday Book records the name of a *præpositus*, Brumannus.

The castle is mentioned in Domesday: probably, however, it was a very different building from the present, which is of Norman construction. It is recorded in the Crown Rolls, 15th Edward II. "that one William Savage, *janitor portæ*, carried off the daughter of Hamon Trendhurst, and detained her in this stronghold for eight days." Lewis, when he invaded England in the time of King John, received the submission of the castle at Canterbury.

That there was a castle before the conquest, at Canterbury, is evident from the survey of Domesday, in which it appeared the king had this castle for certain burgages, in exchange with the archbishop and the abbot of St. Augustine. Henry II. considerably increased its extent and fortifications. As early as the reign of Edward II. a common gaol or prison was kept within it; and, according to Lambarde, it was at one period the principal gaol of the county. When it ceased to be used for this purpose, at least about A.D. 1577, it fell into neglect and decay. It still presents an imposing appearance; and, although deprived of its tower, its great extent for its area is 88 feet by 80 feet, and its walls about 11 feet thick, gives some idea of its former strength and magnificence.

On the third, or state floor, were large arched windows: at the north side was the grand entrance, now bricked up, and concealed by the works of a gas company. Under this entrance, as in many Norman castles, was the principal dungeon. There were, however, other places of confinement: in one of these the Jews, under one of the persecutions which that people suffered from the bigotry or the avarice of the age, were confined.

Dr. Plot mentions that, in his time, A.D. 1672, many of the stones on the north-east staircase were inscribed with versicles from the psalms, in Hebrew characters. The writer of this paper has in vain endeavoured to find some of these interesting relics. Much, however, of the fabric and materials of the castle have been year by year destroyed, or used for building; and some idea of the extent of this ancient fortress may be surmised, by noting its present remains, and then surveying the manner of small houses in its immediate neighbourhood which have been constructed from its materials.

The present guildhall is a building of comparatively modern construction. It is erected upon the foundation, or rather upon the first floor of an ancient hall, the Gothic stonework, pillars, and arches of which partially remain, and exhibit both solidity and elegance. Here the commons of Canterbury and their corporate functionaries used to meet. There was once, according to Somner, a still more ancient building existing for civic purposes, called the "Spech House," where was likewise a prison; we have very little doubt, however, but that hall was identical with the undercroft of our guildhall, the surface of the streets having risen, by the accumulation of the soil of centuries, from 10 to 12 feet above their ancient level. It was called, as above, the "Spech House," the term "guildhall" being first applied in the charter of Henry VI. when the baliwick of the city was changed into a mayoralty.

The priory of Dominicans, or Black Friars, in Saint Alphage parish, was founded soon after the year 1221 by Henry III. who is said to have built these religious a monastery on the banks of the Stour, on land given them by Archbishop Leighton. Scarcely any of these venerable ruins remain, except the chapel and adjoining premises, and the buildings on the opposite side of the river. The south gateway, built not long before the 30th Edward III. and faced with black flints, was pulled down some years since. The bridge with Gothic arches has been destroyed within our own time, to make way for an unsightly but more convenient substitute. The priory originally formed a square, which enclosed the burying-ground: in this cemetery were buried some eminent persons. The friars possessed land on the other side of the river, down towards Abbett's Mill, and westward towards Saint Peter's: here they held orchards and pleasant gardens. The monastery had two other gates or passages besides the one described above,—one in the street near St. Alphage Church, and the other in Best-lane near the waterlock, opposite the "Prince of Orange" lane, near the Rush Market: this passage led directly to their church.

The chapel was the original hall or refectory of the monks. John Wenar appears to have been the last prior; for on 25th Henry VIII. 6th February, five years before the dissolution, he grants to Richard Burchard, in a lease for forty years, a garden of the Friars' Preachers, close adjoining their house. The original surrender of the priory into the hands of Henry VIII. is lost or destroyed, as it was not in existence in the records when Dugdale prepared his work on monasteries.

The Black Friars' yard appears to have been often used as a gathering-ground for the citizens of Canterbury. Here, under the then bailiff, William de Chilham, they drew up a list of grievances and items of proscription against the monks of Christ Church, because they refused to pay towards the supply and furnishing of twelve horsemen, demanded as a contribution from the city by Edward I. for his Scottish wars.

Archbishop Theodore, the seventh after Augustine, is said to have founded a school or college at Canterbury, by permission of Pope Vitalianus, wherein he placed professors of all the liberal sciences, but this school has long since disappeared. The earliest authentic record of a public school seems to have been about A.D. 1259, when one Robert is mentioned as "master of the school at Canterbury;" after which, in the time of Archbishop Reynolds, arose a great controversy between the rector of the aforesaid school and the parson of Saint Martin, who by right and custom held a sort of free school in that parish.

There are but few allusions to Thomas à Becket in the city records, and those mostly incidental ones. Saint Thomas's-hill was formerly called "Saint Thomas à Becket's-hill;" and on the neighbouring eminence of Harbledown, one of the archbishop's shoes was preserved, or rather the sole of one, which, being set with jewels or coloured stones, the pilgrims, upon the payment of a fee, were permitted devoutly to kiss.

There are a variety of miscellaneous entries in the ancient records of Canterbury:—A.D. 1545, the corporation pay fourteen shillings for a load of wood to burn a heretic, and two shillings to some person to burn him. In 1559, William Sanford recalls the supremacy of the spiritual, not the lay pope, by tolling the "ave" bell, contrary to the half-reformation measures of Henry VIII. In 1550 there is an entry for the "burning of Arden, and the execution of one George Bradshaw." A.D. 1571, Mother Hudson is presented to the grand jury as a witch. Two years later, Queen Elizabeth was at Canterbury, and lodged at St. Augustine's.

It is probable that the Mint existed even in the times of the Anglo-Saxons: at all events,

* Lelan l conjectures, from Dur Avon, the latter term having been, as he writes, a sel ct name of the river, now Stour, at Dover, the ancient name.

† The Museum at Canterbury contains many specimens of Roman antiquities found in or near the city. Among these is a small statue of Latona, in a recumbent posture, taken from a sepulchral urn.

we have the evidence of Anglo-Saxon coin, gold triens struck perhaps under the direction of an archbishop, with the legend of "Dorovernis," on the reverse. A market cross was erected at the "bull's stake," in 1446, in place of an older one.

There are several entries concerning the Dungeon-field. It appears to have been the property of the citizens for recreation from time immemorial: here they shot at the mark with arrows, and here, at a later period, they practised at the target with "blundering musquets," culverins, and other firearms. Somner supposes the mound to have been situated without the walls of the ancient city. This is not unlikely. Much speculation has been hazarded respecting the origin of the mound, and some antiquaries have endeavoured to prove it to be an erection analogous to Silbery-hill and other tumuli, coeval, perhaps, with the ritual of the Sabean or Druidic form of worship. The name assigned to the mound is variously written:—"Totam terram nostram quam habuimus ad Dungonem," Danzonem; also, "in campo qui vocatur Dangun," in a deed of 14th Edward I. likewise, "juxta le Daungeon," as also in rentals of the cathedral; and Roger Brent, in his will, dated 1486, mentioning his manor there, calls it so, and the hill hard by "Dungeon Hill." The common and prevalent impression is, that the name is a derivative from the Danes, as if of the Danes, "Danes' work," being the production of these marauders in some attack upon the city. But its propinquity to the castle, and its similarity to the dungeon mounds commonly erected near the stone castles of the Norman proprietors, appear clearly to point out both its origin and its denomination. Leland, who wrote his "Itinerary" in the time of Henry VIII. informs us that many years previous to his time, men seeking for treasure "at a place cauled the Dungen, where Barnhale's house is now, and ther yn digging thei found a corse closed in lead." On the mound, we are also informed, an ancient windmill once stood. There were anciently two mounds, and the one which remains was once covered with oaks, which, in the time of Elizabeth, a certain Hugh Johns was permitted to cut down, "provided he plant twenty ashes or elms and keep them to grow." From time to time, however, the right of the citizens to take pastime and recreation in this ground appears to have been disputed, and the Dungeon Field, modernly "the Dane John," seems to have been constantly a subject of contention between them and the parties to whom the corporation leased the manor.

The burgmote horn is a curious relic of antiquity. It was blown, on the court day, in some public place, and near the residences of the corporation, to warn them to assemble. At these meetings great strictness of conduct was at one time enjoined; prayers were regularly said, and the Scriptures read; members coming in late, to avoid the service, were peremptorily fined; as were all who presumed to enter with their hats on.

There must have been several gardens, courts, open places, and orchards, and even vineyards, in or near the city. Among these we might note the burial-grounds of the Black Friars, the Grey Friars, the precincts of St. Augustine, and the courts and tree-shaded retreats of the cathedral. Oaten Hill, the two mounds of the Dane John, the river,—then bright and sparkling, the principal stream passing through the centre of the city,—were conspicuous objects. Above the houses arose St. George's, Westgate, and other towers, with floating banners; the structures themselves provided with machicolations, loop-holes, portcullises, iron-bound gates, embattled and crenellated turrets, and other modes of offence and defence. Enclosing these were the city walls, somewhat lofty and conspicuous, at least on the southern and eastern sides, and surmounted with towers at stated distances. Around these walls branched off the river: on one side sweeping by the castle, it formed a defence to the south-west, whilst the main stream entering not far above, by the "Poor Priests' Hospital," flowed through the city. A portion of the current, however, was diverted through the moat or ditch under the Dane John walls, which, flowing round a considerable portion of the city, entered the main stream at the water-lock near Abbott's mill. The other branch of the Stour protected the north-western walls by Westgate, where there was then no road-bridge, but perhaps a drawbridge;—the Parliamentary forces, when they occupied Canterbury, having forded the stream near this locality. The castle, if then dismantled (of which, however, we have no account), must have exhibited an imposing appearance, for it is nearly of the date and style of the edifice at Rochester, which yet so grandly sentinels the Medway.

The houses at Canterbury were for the most part lowly and insignificant. Some of them, however, were highly ornamented and timbered, the eaves, and door-posts, and gateways exhibiting the profuse fancy of the Gothic architecture, in grotesque figures and emblems, some of which still remain. Many of the public buildings were grand; and steeples, belfries, and glittering spires rose above the trees in every direction. In Leland's time there were thirteen churches within the walls and three without; besides which were once five other churches long since demolished. There were hospitals at St. Margaret's, St. Laurence's, and the King's Bridge, the latter for poor pilgrims and wayfarers; a house belonging to the Black Prince's chantry; and a Home for the Order of Knights Templars. There were six gates. There were stone crosses almost in every main street; sanctuaries for wandering merchants, where saints were blessed, and wares disposed of. There were boats and barges gliding up and down the river, and passing the mills by locks. Swans, too, might be observed floating on the waters, guarded by their keepers, called "swanupers," who were engaged and paid by the city authorities. The city walls, a completing portion of which had been added by Archbishop Sudbury in the reign of Richard II. were, in the reign of Elizabeth, efficiently repaired, and adapted for fire-arms, although the archers still practised at the butts in the Dungeon field. No doubt, however, the city, with many a quaint court and curious building, with its old hostelries, and heavy-timbered, wide, projecting houses, its narrow, close lanes, bearing the romantic epithets of "Spech House," "Little Pet," "Break Pot," "Sunny Wine," and "Sheep Shank," exhibited a very different aspect to that of its present appearance. It was, then, for the most part, comprised within the walls, although its liberties extended to the suburbs of Northgate, Wincheap, and St. Dunstan's, localities which, from the presence of hospitals and other public institutions, must have collected a considerable population around them even in those days. Towards the east might be observed the priories of St. John and St. Gregory; and in a more southerly direction arose the ancient tower of St. Ethelbert, now entirely destroyed, and the gate of St. Augustine, which remains as one of the most beautiful specimens of the ornamental Gothic yet preserved in this kingdom. Beyond these, in the distance, was, and still remains, St. Martin's Church, claimed as being founded upon the site, perhaps in part erected with the materials, of one of the oldest Christian temples in England. Near it, in a quiet and beautiful spot, wells a spring, over whose bright, pure waters a benediction of health has seemed to abide from the remotest ages.*

THE BIRMINGHAM SCHOOL OF ART.

THE annual meeting of the Birmingham Society of Arts and Government School of Art was held on Tuesday evening before last, under the presidency of the Earl of Hardwicke.

The proceedings were opened by the reading of the committee's report by the Hon. and Rev. G. M. Yorke, chairman of the committee.

The chairman then addressed the meeting, and was followed by Mr. Cole, C.B. the Inspector General of the Department of Art, who, in his address, stated that having visited some thirteen or eighteen of the principal towns in France, he ventured to say that none of them had anything like the amount of Government assistance which our Government—or, in other words, the public of England—agreed to give to Birmingham. In the towns of France there were schools of art and science in which drawing, modelling, and architecture, were taught, but in all cases they were supported by the locality in which they were situated, the necessary taxation being raised by means of octroi dues imposed on food coming into the town. As far as he had observed, the French Government did nothing whatever for provincial schools except send them an occasional bad picture. At any rate, he had not found in France a single institution which received from its centre so much assistance as Birmingham derived from the Department of Practical Art in London. In reference to the progress of the Birmingham School, he could say with perfect justice, that in his opinion, and that of his colleague, Mr. Redgrave, there was no old school of design in the kingdom which had attained so great a success. Indeed, Birmingham was working almost as well at the present time as they could desire.

Mr. Redgrave, R.A. the Government Art Superintendent, also addressed the meeting. Mr. Cole, he remarked, had said something about the French Schools of Art. He might add to that gentleman's testimony his own belief that Birmingham students were taught much more than students in the French schools.

* These interesting memorials are from a paper by Mr. John Brent, jun. F.S.A. read at a meeting of the British Archæological Association.

THE MASTERS IN TRAINING AT MARLBOROUGH HOUSE.

SOME letters have reached us, not exactly denying the statement made by the writer of the communication headed as above (p. 51, *ante*), but explaining that the head master made use of the words complained of only in reference to the morning attendances, and without any intention of reflecting on the general conduct of the masters in training; and further, that the dismissal referred to was for another reason than that given. One of the writers says,—

"If the class be not composed of men of honour, and good conduct, it must be disgraceful to the officers of the department, whose duty it is to select those whose habits, integrity, and acquirements render them capable of carrying out the great and noble objects they undertake, which are to diffuse a sound and thorough art education, to make that education practical, and assist in developing our national resources and skill; to create a taste which has not before existed in the land; and make that taste minister to the happiness, morality, and glory of our country."

Another correspondent complains that "the master of the Kensington branch school was lately met, at the door of his class room, by an attendant, with the assurance that if he attempted to enter he would be, by the orders of Mr. Burchett, head-master, forcibly ejected; and although immediate application was made by him to the authorities at Marlborough House, he has been unable to obtain any, even the slightest explanation of so singular an outrage."

Without passing any judgment on individuals, on insufficient evidence, it would surely seem that matters are not going quite so smoothly as they should, and require looking to.*

REMOVAL OF TENANTS UNDER THE NEW METROPOLITAN BUILDING ACT.

AT Worship-street, the other day, Mr. Charles Reeves, the surveyor to the Commissioner of Sewers, attended before Mr. Hammill, to obtain from him a peremptory order for the expulsion of the occupants of certain houses at Mile-end, under the following circumstances:—

Mr. Reeves stated that the prosecution was the first of the kind which had been instituted under the 18th and 19th of the present reign, cap. 122, and which only came into operation on the 1st of January last. The section of the statute under which he made the application was the 80th, the terms of which enacted, that in all cases where any structure had been certified by a competent surveyor to be dangerous to its inmates, a justice of the peace might, if satisfied of the correctness of such certificate, upon the application of the commissioners, by order under his hand, direct any inmates of such structure to be removed therefrom by a constable, or any peace-officer; and if such inmates had no other abode, he might require them to be received into the workhouse established for the reception of the poor of the place in which such structure was situated. In pursuance, therefore, of an intimation he had received from the police authorities, he had that morning proceeded to inspect a locality called Spring-gardens, at Mile-end Newtown, where he found a number of houses, consisting of twenty-one in all, the whole of which were in such a state of ruinous dilapidation, as not only to place the lives of the inmates themselves in imminent danger, but also those of any persons passing through the street. It was manifest such a state of things could not be

* Since the above was put into type, we have received some very lengthy communications on the subject, but they do not lead us to a different inference.

allowed any longer to continue; and he had, therefore, forwarded a certificate to that effect to the commissioners, who had at once directed him to take the necessary steps for the removal.

After some conversation, the magistrate affixed his signature to the order; and it was handed over to the officers, that it might be carried into execution forthwith.

ST. SAVIOUR'S, SOUTHWARK.

IN your number of the *Builder*, the 26th of January last (p. 46), you have mixed up my name, with other gentlemen who have been engaged as well as myself, in mauling and overhauling the parochial church of St. Saviour, Southwark, at various periods during the last thirty years. Now, as I have no wish to interfere, or to assume the merit or demerit of anybody's work but my own, I trust you will do me the justice and favour to separate my doings from others who have been my competitors, in what has been called a restoration or rebuilding of the ancient structure.

I must, therefore, begin with the Tower (1818), which I found in a dangerous state. It was encompassed, inside and out, with cast-iron ties of rather peculiar construction; and the four pinnacles were *saved*, notwithstanding some strenuous efforts for their demolition.

In the year 1822 the Choir was taken in hand, a considerable portion of the triforium and clerestory was rebuilt, the east-end window inserted after the model at Salisbury, and nearly the whole of the chalk vaulting taken down and rebuilt, not with lath and plaster as in the transepts.

As to the Lady Chapel or Spiritual Court, in 1832, the restoration was left entirely with me: the only condition annexed by the gentlemen who kindly undertook to pay for it was, that the cost of it should not exceed 2,500*l*. Another 500*l*. would have been serviceable, but it was not to be had; and I may think and trust that the 2,500*l*. were well laid out.

Now as to the so-termed restoration or rebuilding of the transept, the credit (?) belongs entirely to Mr. R. Wallace, as also the altar-screen, both about the year 1830. The south transept, now rebuilt about twenty-five years, affords a most admirable lesson to the student in *decaying* Bath stone.

The final destruction of the nave, under the auspices of Mr. Rose, was much to be deplored,* and your observations will no doubt be agreed to, *nem. con.* It was inconveniently raised to afford room for the dead below, now rendered utterly nugatory.

I ought not to close this communication without a tribute of praise to the present worthy chaplain, the Rev. William Curling, and Mr. Williams, warden of the Great Account, for the insertion of memorial painted windows (by Ward) of six of our early martyrs, in the spiritual court, and the required removal of some obstructions. The picturesque effect inside and outside is greatly improved. GEORGE GWILT.

THE FALL OF WALL IN THE NEW-ROAD, ST. PANCRAS.

ON the 5th inst., the inquiry touching the recent loss of life caused by the fall of wall at Messrs. Hopkinson's factory was resumed.

Mr. Parry, instructed by Messrs. Jaques, Layton, and Co., of Ely-place, with Mr. Orridge, appeared as counsel for Messrs. Hopkinson: Mr. Talfourd Salter, in the absence of Mr. Ballantine, represented the County Fire-office: Sir Richard Mayne attended to give evidence as to the proper performance of the duties devolving upon the police authorities in cases under the new Act; and Mr. M. Nelson, who had surveyed the premises by direction of the coroner; Mr. Reeves, the surveyor to the metropolitan police; Mr. Baker, the district surveyor; Mr. Beaumont and Mr. Tims, gentlemen connected with the County and other fire insurance-offices, as also the Messrs. Hopkinson, were present during the inquiry.

Sir Richard Mayne said that, on the morning of the 25th of January, he received a report, that the wall of Messrs. Hopkinson's factory, in Diana-place, had fallen, and had crushed the houses numbered 3, 4, 5, and 6, Fitzroy-place, and that a body had subsequently been found in the ruins. He subsequently received a notice, under the 69th section of the New Building Act, relating to dangerous structures, from Mr. Baker, the district surveyor of St. Pancras. This was also dated the 25th; and he immediately gave orders to Mr. Reeves, the surveyor to the police, to make a survey and report to him. He reported the remainder of the walls in a dangerous state, and the owners were at once served with notice to shore them up and secure them. This was served on the owners on the 28th, after the wall had fallen which crushed the houses and caused this death.

Sir R. Mayne, in answer to questions by the coroner, said he considered he had taken every step necessary under the 69th section, which stated "that when any building, wall, or other structure, is in a dangerous state, the commissioners should require a survey of such structure to be made by the district surveyor, or some other competent surveyor." He had done so. He had given no new instructions to the police in reference to fires since the passing of the act, or in reference to the safety of buildings or structures.

Mr. Henry Baker, the district surveyor, saw the building on the Monday after the fire, and he subsequently inspected it, before the wall fell. It was then a good wall, quite safe, perfectly upright, and there were no cracks whatever in it that he saw. His belief was, that but for the very high gale which prevailed on the Thursday it would have stood for years.

Mr. I'Anson, the builder of the premises in 1852, said the wall was sound in every way, and was supported, back and front, by buttresses, and it was perfectly straight.

Other witnesses having given evidence,

The Coroner remarked that he did not, after what they had heard, think it necessary to examine Mr. Nelson upon the subject, unless the jury desired it. This inquiry had been useful, as it had brought out some curious anomalies in the New Metropolis Buildings Act. It was certainly an improvement upon the old measure, but it did not go far enough. A verdict of "accidental death" was recorded.

DRAINAGE OF ST. JAMES'S-PARK.

DURING the past month some heavy works have been in the course of execution in Whitehall and under the stone building of the Horse Guards, in constructing a brick culvert, which it is intended to continue across the Parade-ground to the lake in the inclosure of the park, for the purpose of draining off whenever considered necessary, the whole of the ornamental waters, in order to cleanse the reservoir. At present there is only an overflow drain, sufficient to maintain the level of water in the park, which is occasionally used for letting off the superfluous waters; but the remaining quantity contained in the reservoir averaging a depth of about 9 to 10 feet, is comparatively stagnant, and has not been emptied for many years.

About the year 1829, with this view, and by order of the Government, a steam-engine was employed to lift the water to the level of the overflow drain; but this operation was abandoned long before the desired object was accomplished.

A correspondent informs us, that the works which are now in progress were designed by the engineers to the late Metropolitan Commissioners of Sewers.

The difficulties, the writer says, which have had to be contended with in going under the heavy building and clock tower of the Horse Guards, have been of a very trying nature, the culvert constructed beneath it averaging 13 feet below the foundation of the building, the lower 5 feet of which had to be excavated and tunnelled through running sand and silt, with much of water from land-springs, which were more or less affected at the rise of every tide in the river. Mr. G. T. Fry is the superintending clerk of works; and Mr. Joseph Yeoman the contractor.

ELECTION OF SUPERINTENDING ARCHITECT OF METROPOLITAN BUILDINGS.

THE Metropolitan Board of Works met on the 4th inst. and proceeded to elect a superintending architect. The chairman said he had received applications from sixteen candidates, viz.:—Messrs. W. Hosking, E. W. Lower, J. Blore, J. H. Taylor, F. Marrable, G. L. Taylor, G. Legg, H. Harrison, J. T. Wood, C. W. Pined, Thomas Taylor, John Barnett, E. C. Hakewell, Wm. Young, F. W. Stent, and S. C. Gant. He ought, however, to state that that morning he had received a letter from Mr. G. L. Taylor, withdrawing his name, as he considered the salary offered for the duties too small. A member of the board very properly advised that the appointment should be deferred, and the question of salary re-considered: it was, however, negatived. The list of names, without meaning any disrespect, must have shown the board that their proposal had not found favour in the eyes of men of standing in the profession.

Four of the candidates were first selected by show of hands to go to the final election; namely, Professor Hosking, Mr. Marrable, Mr. Hakewell, and Mr. Barnett; and each of these, after their applications had been read, addressed the Board, and answered such questions as were put to them. We need, however, only mention one, put by the chairman to Mr. Hosking, with reference to the effect of clause 114 of the Building Act, which says:—"Any person, *except* the said official referees and registrar, who at the time when this Act comes into operation is employed in the office of metropolitan buildings may, within six months from such time, apply to the Metropolitan Board of Works for employment; and such Board shall thereupon take such application into consideration;" and we must conclude, from the result, that the reply failed to assure the Board that this clause, although worded without any such intention, might not be made a ground of objection, in the event of Mr. Hosking's election. This note is due to Mr. Hosking, who came forward as a candidate rather from a sense of duty than otherwise.

Three several shows of hands were then taken, and ultimately Mr. Marrable was elected superintending architect.

Mr. Marrable said, in his address, that he had been engaged for some time under Mr. Edward Blore: and that, as to the want of age and experience which some had urged against him, every day would lessen the objection.

THE ART-UNION OF LONDON.

ON Monday next, the print for the year, "Harvest in the Highlands," from the well-known picture by Landseer and Callcott, will be delivered on payment of the subscription; and we advise all our readers who value a fine print to make early application for it. It is engraved by Willmore, in his best manner, and is worth much more than the amount of the subscription, although, in addition, each subscriber will, as usual, have the chance of obtaining a work of art, to be selected by himself, from one of the current exhibitions; or a bronze or Parian statuette.

The friends of this most useful society will be glad to hear that the Council have now in hand some works of extraordinary excellence and beauty.

A correspondent writes to urge the Council to issue a work in *colours*. He says:—"To colour an engraving is unsatisfactory. To use the words of Sir Walter James, 'a coloured print can be none other than a miserable failure.' Having just had coloured, in the best manner, the excellent print of 'The English Merry-making,' I can testify to the truth of the hon. baronet's assertion. I cannot but think, if the experiment were tried of introducing, in place of the present colourless print, some such beautiful specimen of chromo-lithography as Hunt's 'Apple Blossom,' or 'Bird's Nest,' it would be found eminently successful."

We happen to know that the Council have long had this subject under their consideration, but have not yet found what they consider a suitable production of the kind.

THE VICTORIA TUBULAR BRIDGE AT MONTREAL.

WE see from the "Canadian Railway and Steamboat Guide," published at Montreal, that in consequence of some doubts having been expressed as to the comparative economy of a tubular bridge to cross the St. Lawrence on the Grand Trunk line of Canadian railways, Mr. R. Stephenson has addressed the directors in a long and elaborate report, in which he enters fully into the subject, maintaining that a tubular bridge is, on the whole, the best as well as cheapest bridge that can be thrown across such a river as the St. Lawrence. He compares the work with other and as nearly as possible parallel instances in which such bridges have been preferred. One of these is adduced as the most remarkable parallel case, namely, the triangular or "Warren" bridge, erected by Mr. Joseph Cubitt over a branch of the Trent, near Newark, on our own Great Northern line. "The spans," he remarks, "are very similar, and so are the depths. In calling your attention to the comparison, you must bear in mind that all possible skill and science were brought to bear upon every portion of the details of the Newark Dyke bridge, in order to reduce the total weight and cost to a minimum. The comparison stands thus:—

Victoria Bridge as being erected.

Span, 242 feet; weight, including bearings, 275 tons, for a length of 257 feet.

Newark Dyke Bridge, as erected.

Span, 240 feet, 6 inches; weight, including bearings, 292 tons, for a length of 254 feet;

which shows a balance of 17 tons in favour of the Victoria tubes. The Newark Dyke bridge is only 13 feet wide, while the Victoria tube is 16 feet, having a wider gauge railway passing through it." Meantime the Victoria bridge approach works are progressing; but when the whole may be finished, is a question on which there seems to be much doubt and anxiety at Montreal.

* See "Archæologia," vol. 29, pl. 29; and a clever lithograph, by George Hawkins, October, 1834.

A COMMENTATOR ON VITRUVIUS.

THE difficulties of understanding the treatise of Vitruvius are being cleared away, and we have before us a contribution to the unravelling of a portion of the work which had given much trouble.* Mr. Bonomi does scarcely justice to himself in saying there is nothing new or original in the few important pages that he has printed. By collating the Latin text, and the translation by Wilkins, with a translation into Italian by Leonardo da Vinci; and by notes, explanatory remarks, and diagrams of his own, he has succeeded in rendering the celebrated canon of the proportions of the human frame intelligible, if not practically useful to artists. Hitherto, the diagrams by the different editors, had been singularly unsuccessful: but the diagram now supplied from a drawing by Leonardo da Vinci —preserved, together with the translation, in the library of the Academy of Venice—clears up the obscurity. Mr. Bonomi refers to the use of guiding lines in the Egyptian works; and alluding to the statement of Vitruvius, that his canon was that used by all the famous artists of antiquity, the present writer suggests that we have probably in it the celebrated canon of Polycletus. It seems likely that Leonardo had access to some copy of Vitruvius, which has not been preserved to our time. The value of Leonardo's explanation consists in the manner of combining the circle and the square, and in its affording some additional divisions, as those marked by horizontal lines, dividing the square into equal spaces. Thus, beginning from the soles of the feet of the erect figure, the first division determines the length of the leg by crossing at the top of the tibia. The second division determines the length of the thigh, crossing the body at the bottom of the pubis. The third line crosses the chest at the centre of the nipples, and the fourth touches the top of the scalp. The corresponding perpendicular lines also determine points. The outer perpendiculars of the square touching the tips of the fingers when the arms are outstretched,—the first division inwards determines the length of the fore arm. We have thus a square of which each side is divided into four equal parts, called cubits, each cubit being equal to $1\frac{1}{2}$ foot, or to 6 palms. Each palm contains four digits. The lateral dimensions of the figure vary in proportion to the height, with individuals. The other proportions of height, referred to by Vitruvius, are elucidated; and they are compared with those adopted in some of the best works, and with the system of the moderns. In the ancient canon, no division was found, such as that adopted by Audran, Clarac, and all modern artists,—viz. that of the head into four equal parts, and those parts into twelve minutes; for, in fact, as our author shows, no such division exists,—the head being an eighth of the whole height, and the face a tenth of the whole height: nevertheless, he shows that the scales which he has figured (and which form, with the diagrams, useful contributions to our knowledge of the ancient measures of length) may be applied,—each digit being equal to four minutes; consequently, three digits are equal to one part, and, therefore, twelve digits, or three palms, are equal to one head, or one-eighth of the whole height.

Our author has manifested considerable literary as well as artistic ability in the manner in which he has presented such points to our notice. To the architect it should be especially gratifying to examine the latest commentation upon an old author, who, however much he may have been sometimes depreciated, and sometimes unnecessarily extolled, can never be otherwise than interesting, if not directly useful, by his precepts; whilst to others Mr. Bonomi has now rendered the canon of Vitruvius, or Polycletus, so serviceable, that no painter or sculptor can well afford to defer the study of the useful pamphlet which we have made the subject of our notice.

MR. BRASSEY.—By a decree dated January 12, Mr. Brassey, the eminent engineer, has been appointed a Knight of the Legion of Honour. Since 1839 Mr. Brassey has been connected with the construction of the principal French railways.

* "The Proportions of the Human Figure:" with six Illustrative Outlines. By Joseph Bonomi, Sculptor. London: Renshaw.

Notices of Books.

A Treatise on Electricity, in Theory and Practice. By AUG. DE LA RIVE, Foreign Member of the Royal Society of London, &c. In 3 vols. Vols. I. and II. London: Longman and Co. 1853-5.

THIS will be a standard work on Electricity when completed. The first volume was printed some time since, but circumstances delayed the progress of the second, which was intended to be the last: although nearly twice as large as the first, however, the author finds that his subject is not even yet exhausted: hence there will be another volume, which is to appear in course of the present year. The work is translated from the French manuscript by Mr. Charles V. Walker, who has carried it through the press. De la Rive is a celebrated electrician, and he deals fully and in a friendly way with other men of science eminent in his own sphere; so that to all who desire to have an acquaintance with the recent ideas and experiments of electricians, and with the theory and practice of electricity generally, this is one of the most valuable as well as most recent sources which they can consult.

VARIORUM.

HALLAM'S "Introduction to the Literature of Europe in the fifteenth, sixteenth, and seventeenth Centuries," fifth edition, in four volumes, is now being issued by Mr. Murray. High as this excellent work stands in public estimation, the lapse of time only proves that it is acquiring a still stronger hold on the general favour.——"Enquire Within upon Everything," published by Messrs. Houlston and Stoneman, of Paternoster-row, seems really to be a most diversified and valuable compendium of useful receipts, advices, and instructions for household and general reference. It treats of all sorts of things, from mending broken china to "how to get married."

Miscellanea.

THE BUILDERS' BALL.—We must remind our readers that the annual ball for behoof of the Builders' Benevolent Institution comes off on Thursday, the 14th inst. at Willis's Rooms, King-street, St. James's, at 9 p.m. when it is to be hoped that there will be an imposing turn out of the friends of the Institution. "I am no dancer" is no excuse in the cause of charity: all are promenaders at least, and the dancing can be left to the younger and more agile amongst the crowds whom we hope to see in attendance. The balls already given have produced no less a sum than 700*l*, for this excellent charity, and we trust an effort will be made so that the receipts on the present occasion may materially increase the amount. We hope no question of "dignity" will keep away those who ought to assist it elevating its character by their countenance and support. Tickets may be had from the Honorary Secretary, Mr. Joseph Bird, of Hanover Cottages, Regent's-park, from the numerous stewards, or at the office of the Institution, 19, Southampton-street, Bloomsbury.

THE MASONS' PROVIDENT INSTITUTION.—The Annual Meeting of the members and friends of this institution was held on the 23rd ult. at the Athenæum, in George-street, St. Pancras, Mr. C. H. Smith in the chair, when the Secretary read the annual report, from which we regret to find that the institution is not in so flourishing and hopeful a condition as we could wish. There can scarcely be said to be any serious retrogradation as yet, but the state of affairs only justifies what we long since urged, that the several kindred institutions now in existence should be amalgamated into one general association. Meantime the president of the Masons' Provident, Mr. Tite, has signified his design to consult with other friends of the institution as to what should be done to forward its interests.

KENDALL AND OTHERS AGAINST THE VISITORS OF CAMBRIDGESHIRE LUNATIC ASYLUM.—This important case, which has been running on for a very long time, has been finally decided in favour of the architects. In order that we may give the particulars of it at greater length than we could find space for to-day, we postpone a report of it.

FLUE PIPES.—A correspondent suggests, that architects and builders are wrong in using glazed earthen pipes, for chimneys, 9 inches diameter outside, and about $7\frac{3}{4}$ inches inside, being much too small: the consequence is, he says, the chimneys invariably smoke.

OXFORD ARCHITECTURAL SOCIETY.—The first meeting for the term was held on the 30th ult. when a report was read, commenting on works lately done in Oxford. The Hon. H. C. Forbes, M.A. of Oriel College, read a paper,—being "Preliminary Remarks to a Course of Elementary Lectures on Gothic Architecture." Mr. Parker said he was sorry to express any difference of opinion with a part of a paper with most of which he so cordially agreed, but must continue to protest against the use of the terms first, second, and third Pointed, especially in Elementary Lectures, as they are calculated so frequently to mislead beginners in the study of Architecture. It is not yet settled which is the First Pointed Style, whether the Saracenic or the Romanic Architecture of the eleventh century in the south of France, which are Pointed Styles, though not Gothic. The Early English Gothic of the thirteenth century is certainly not the *First Pointed Style*. Another objection to the use of this term is, that there are great numbers of round-headed doorways, square-headed, and segmental-headed windows in all the Styles in England, and that beginners are continually misled by names, and cannot understand that a round-headed doorway can be anything but Norman, although the mouldings and ornaments may show clearly to a more experienced eye that it is of the thirteenth century.

MASTERS AND WORKMEN.—The Messrs. Doulton of Lambeth have recently completed a new building for their works, and on the 22nd ult. they inaugurated it by an entertainment to their workmen. In the course of some speeches, which were delivered on the occasion, Mr. John Doulton said,—Masters had more to do with their workpeople than merely paying them money; and though some manufacturers might think that when they had paid the wages there was an end of the matter, they did not think so. Let it ever be remembered that the interests of men were closely connected with each other: the firm, of which he was a member, recognizing that, had always endeavoured, so far as it was in their power, to provide for the moral and intellectual good of those they employed, thinking that by so doing they were best discharging their duty. They were all dependent upon each other: the head could not dispense with the hand, nor the body with the feet. They had, therefore, a hand in the erection of that building, and an honest pride in endeavouring to keep at the top of the tree. Mr. Henry Doulton in like spirit rejoiced to know, that as masters and men, they did not consider their interests were antagonistic: on the contrary, they perceived that the prosperity of the employer benefitted the employed. He felt gratified at the fact that although he was the master, they regarded him as their friend. It was impossible to open the new building under more favourable auspices: as employers, they could not forget that they were indebted for its erection to the industry of their men, for without their efforts it would not have been achieved.

COMPULSORY DRAINAGE UNDER THE METROPOLIS LOCAL MANAGEMENT ACT.—At the Southwark police court on 1st inst. the owner of five small houses in Cottage-place, White-street, Bermondsey, was summoned before Mr. a'Beckett, under the Metropolis Local Management Act, by order of the vestry of the parish of Bermondsey, for allowing them to be in a filthy condition, and injurious to the health of the inhabitants, &c. and after some evidence was led and explanations made, Mr. a'Beckett ordered a cesspool to be emptied and filled up, and proper drains constructed, so as to communicate with the sewer; at same time directing the defendant to pay 2*l*. 9s. 2d. costs. The owner, of two houses in the same vicinity, was summoned under the same act, for having open cesspools, and the water-closets in a filthy condition, when, Mr. O'Brien and Dr. Richmond having sworn that the water-closets did not communicate with the sewer, the magistrate made the required order, with 1*l*. 3s. 8d. costs.

THE PHOTOGRAPHIC SOCIETY.—The present exhibition at No. 5, Pall-mall East, is certainly the most interesting the society has yet formed. The advance that has been made in the production of architectural subjects is extraordinary. See, for example, "Peterborough Cathedral," by Mr. Craddock (84); Mr. Pumphrey's frame, containing six subjects (153); Mr. F. Bedford's "Baptistery, Canterbury Cathedral;" and many others. The committee ought to require that those photos that are "touched" should be distinguished.

PROGRESS OF INSTRUCTION IN ART.—Notwithstanding the war, Birkenhead, Basingstoke, Andover, Southampton, Plymouth, Belfast, Cork, and Limerick, have established or re-established schools of art during the past year, making at the present time a total of sixty-three schools throughout the United Kingdom. At the beginning of this year, Manchester started elementary drawing classes in no fewer than fourteen parochial schools: each class numbers forty students, and each student pays a penny a week for the instruction, which is thus wholly self-supporting.

Dismissal of a Surveyor.—In the case of Bray v. Chandler, tried February 1, in the Court of Common Pleas, the plaintiff was a surveyor, and the defendant a solicitor, at Sherborne, in Dorsetshire, and also owner of the Northumberland-park estate, at Tottenham. In February, 1855, the defendant engaged the plaintiff to act as surveyor on that estate, at a salary of 200*l.* a year, for 2¼ years, and he was in addition to have a commission for letting and selling the property. Part of the agreement was, that the plaintiff should make all such plans and surveys as the defendant should require, that under no pretence whatever should the plaintiff contract any debt in the name of the defendant, or receive any money on his account. The plaintiff was dismissed from his employment in September last, and he now sought to recover about 20*l.* for commission, 33*l.* 6s. 8d. for salary due to the time of dismissal, and also damages for the loss of the employment. The defendant's case was, that the plaintiff had broken his agreement, inasmuch as he had received on account of the defendant 7*l.* 10s. as deposits from persons taking houses, and that he had incurred a debt for him to the extent of 4*l.* 10s. for putting up the names of the streets. It was also said that the plaintiff had not properly prepared some plans and specifications, and that he had in some instances charged commission for letting houses which had been actually let by a person named King, who was also employed upon the estate. The jury ultimately found a verdict for the plaintiff.—Damages, 200*l.*

Elmes's Testimonial Fund.—A trust has been constituted, and it has been resolved,—"to give the interest of the fund to Mrs. Elmes for her life; on her decease, to her son for his life; and on his decease, to found two scholarships, to be called the 'Elmes Scholarships,' for architectural students, or students of the fine arts, available for two years each; to pupils of the Royal, the Collegiate, or the Mechanics' Institution [Liverpool, we suppose], as the trustees for time being may decide on the merits of a specific examination for the purpose." Vacancies in the number of trustees are to be filled up "by election by the presidents for the time being of the Royal, the Collegiate, and the Mechanics' Institutions [Liverpool], and of the Royal Institute of British Architects; and in case any three of them should not agree, the mayor of Liverpool for the time being to have the casting vote." The balance in the bank is stated to be 1,449*l.* 6s. 2d.; and it has been resolved, —"That a bond of the corporation of Liverpool be taken out for 1,400*l.* that body having agreed to allow 5 per cent. per annum interest; that the expenses of the trust deed and bond be paid out of the surplus money; and that the balance, if any, be paid over to Mrs. Elmes."

The Gallery of Illustration.—When Mrs. Reed, better known as Miss P. Horton, commenced her "Illustrative gatherings" at St. Martin's Hall, we were constrained, in spite of our admiration of the great talents of the lady herself, the musical ability of Mr. Reed, and the cleverness of the entertainment generally, to find fault with the arrangement of the stage as inartistic and trumpery. Mrs. Reed has now re-commenced her entertainment at the Gallery of Illustration in Regent-street; and, with the aid of Mr. Grieve, has this time provided herself, by way of compensation, with a charming apartment, curtained and decorated, with conservatory at the back, into which the sun shines through the clear air; the whole forming as pretty a picture as eye would desire to look on. Of the performance itself we cannot speak too highly: it ought to be very popular, and doubtless will be.

Churchyard of St. Margaret's, Westminster.—Some few years ago, you kindly inserted a communication from me respecting St. Margaret's churchyard. Allow me to recall your attention to the matter. It certainly is "passing strange" that, being so near to our legislators, and doubtless forming to many of them an approach to the Houses of Parliament, this churchyard should nevertheless be allowed to remain in so disgraceful a state as it is. It is not only disagreeable to all who have to pass through it, on account of the effluvia so constantly arising from the graves, but it is positively dangerous, for the stones which mark the resting-places of the dead are arranged in such a remarkably disorderly manner, and at such various levels, that it is at all times difficult to cross it without many a stumble; and in a fog, or at night, the passage is yet more arduous. There seem to me two simple remedies: one would be to remove the whole of the stones level the ground [illegible] in the usual thoroughfares, and plant the other portions with evergreens. This would add much to the appearance of the Abbey, especially if the land around that venerable pile were treated in a similar manner. The other method would be to pare the whole of the yard to one level, and then, if it is requisite, the tombstones might be brought in very nearly in their present places.—J. N.

Compulsory Repair of Dwellings of Poor.—A letter by Mr. F. Vigers, of Frederick's-place, Old Jewry, London, to the President of the Metropolitan Board of Management, has been printed, suggesting means for the improvement of the dwellings of the Metropolitan poor. The principal recommendation of the writer is, that in the event of the owner failing to comply with an order to repair dilapidated premises, which the Metropolitan Board shall be empowered to give, the Board shall effect the repair, and subject the property to an annual charge for interest and proportion of principal.

The Patent Universal Safety Hook.—Hunt's patent hook for cranes, polechains, waggons, railway, navy, and other uses, affords the means of instant release, whatever the strain, as for instance in the separation of coupled carriages while running off the rail, or in freeing fallen hors s from their traces without cutting, &c. The hook can be had of any size or shape. It is made somewhat on the watch-guard hook principle, but with additional movement. The semicircular hooking part can be readily replaced in the pin joints when worn. The whole is made fast, and released, by the turn of a collar attached to the neck or head of the hook. The invention is said to be superior in strength as well as security to other modes of hooking heavy weights.

Iron and Steel.—Mr. H. Bessemer has recently patented a process for the conversion of iron into steel in retorts or chambers placed in a vertical position, to allow the iron or steel under operation to descend through them by the force of gravity, and thus allow the process of cementation to go on continuously; melting in close pots, or vessels, steel made by puddling pig or refined iron, until so much carbon only is left in combination with it as to constitute steel; an arrangement of separate compartments, or pot chambers, in a furnace for founding steel, or mixtures of steel and cast-iron, and a peculiar method of conveying the molten metal to the mould, &c. Mr. Bessemer also specifies under another patent for a mode of casting railway wheels of molten steel, or steel and iron.——Messrs. Morewood and Rogers, of Enfield, have recently taken out a patent for a new method of coating sheet-iron for the use of the japanner, for painted work, and various other purposes. The process consists in obtaining a coating of tin or zinc from an acid solution, instead of dipping in melted metal, and in afterwards applying a non metallic coating of a material repellant of moisture, and which may be employed at so low a temperature as does not interfere with the original toughness of the iron. A resinous material is preferred, which will facilitate the process of soldering.——The iron trade in South Staffordshire and East Worcestershire, is reported to be in a good state, prices downward in tendency.

The Liverpool Timber Trade.—From various circulars of firms engaged in the timber trade at Liverpool, it appears that, taking everything into consideration, the state of the timber trade is on the whole satisfactory,—indeed more so than in 1854 and 1853. The importations from the Baltic are less than half the usual average, and chiefly from Sweden, but the chief falling off has been in the arrivals from St. Domingo, Cuba, and Demerara. Want of tonnage seems to be the chief cause of complaint. The following tables show the number of vessels, and their tonnage, employed in the timber trade of the Mersey during the year, contrasted with those employed in the previous one:—

From Jan. 31st, 1855, to 30th Jan. 1856.			
British America	397	vessels	307,294 tons.
Baltic	37	„	10,825 „
	434		318,119
From Jan. 31st, 1854, to Jan. 31st, 1855.			
British America	421	vessels	311,109 tons.
Baltic	69	„	19,562 „
	490		330 671

The most remarkable feature in the trade is the great advance in the value of Quebec yellow pine timber, and the continued low price of spruce deals, essentially building timber. Owing to the extraordinary import of spruce deals, and large accumulation of stock, they have continued at their low value throughout the season, whilst Quebec pine, having been imported sparingly, has advanced from the low price of 1s. 2d. per foot to its present high rate of 1s. 7½d. and 1s. 8d. and even 1s. 10d. for a cargo of large average. In July, St. John pine was worth from 1s. 8d. to 1s. 9d. per foot for 15 inch average, and it continued gradually to rise till September and October, to 2s. and that of 20 inches to 2s. 2d. the wind cargo. Later in the season, when superior qualities were exhausted, the arrivals being pressed on the market, only realized 3½d. to 4d. per foot over the average girth.

Board of Examiners for District Surveyorships.—At the first meeting of the Board of Examiners appointed by the Royal Institute of Architects, various candidates came before them, and the board agreed to recommend to the Institute that a certificate should be granted to Mr. R. Booth, Mr T. Myers, and Mr. G. Elkington. The certificates have since been sealed.

Charges for "Instructions" and "Quantities."—Happening to be in Rugby on business a few weeks since, I paid my half-a-crown, and had the felicity to obtain, "*sur-le-champ*," a copy of the instructions for the new town-hall competition. On glancing over this precious document, I saw at once that its requirements involved an utter impossibility, thus rendering the exaction of the 2s. 6d. still more atrocious; for I venture to affirm, advisedly, that no individual of common honesty or common sense would ever think of becoming a competitor under such conditions. However, that which I more particularly wish to relate comes now. To a certain builder of Rugby, connected with the town-hall speculation, I made some remark as to the objectionable nature of this charge for the instructions; whereupon he slyly confessed that it certainly was not justifiable, as,—for instance, not a whit more so than an architect's demand of from one to ten guineas for bills of quantities, in the case of competitions amongst builders. They, as well as architects, observed he, were put to great personal trouble and expense in such matters, and it was scarcely fair to exact a surveyor's perquisite beside. Several complaints of this Rugby proceeding have been made in your journal, but would it not be advisable to set our own affairs in order before indulging in rash criticisms of those of other people? Let your readers turn to the first page of a recent *Builder*, and there they will see, in an advertisement, that a sum of *three guineas* is demanded by an architect from every intending competitor for the execution of a building; and the cream of the joke is, that "the committee do not bind themselves to accept the lowest or *any* tender," nor do they even pledge themselves to return the money under *any* circumstances. Methinks this is quite on a par with the Rugby affair, at all events.—Frank.

Slag compared with Slate.—As to the value and weight of each per foot, calculating 1½d. per foot, the supposed price of Duchess slate when prepared for roofing:—

VALUE.

	Value.	Ironstone Slag. Per Ton.	Clay Slag. Per Ton.
	£ s. d.	£ s. d.	£ s. d.
Slag ½ inch thick	13 5 7½	2 13 0	3 6 6
Slag ¾ inch thick	26 11 3	5 6 0	6 13 0
Slag ⅞ inch thick	53 2 6	10 12 0	13 6 0

WEIGHT.

	Slate.		Ironstone Slag.		Clay Slag.
Feet.	Tons.	Cwt.	Tons.	Cwt.	Tons.
3,125	2	8½	3	6	4
4,570	3	3	5	6	4
8,000	10	7½	5	6	4

The clay slag is calculated by the weight of the Rowley rag slag, the ironstone slag by Dr. Smith's estimate of the weight of iron slag, and the slates by the price and weight per thousand, charged at Blisworth Wharf. As the above calculations can be verified, what is there to prevent the ironstone and clay slags being manufactured, but the fear of making iron too cheap, as the manufacture has been proved beyond all doubt in all the slags.—W. G. Elliott.

Blisworth, 29th January, 1856.

TO CORRESPONDENTS.

"*Cleansing Oil Paintings.*" To remove dirt, a little soap and water, carefully applied with a sponge, is perhaps the safest mode. The removal of varnish, however, is not to be thus effected, and we do not advise the use of even spontaneous evaporation for this purpose, as we have found a solvent of varnish in such a case almost as exact as a menstruum if the other sort of the paint [illegible] more likely than from the mere friction. The removal of old varnish is a perilous process requires great caution and experience: there are picture dealers who profess to do the art.

"*Aqua Pura.*"—A correspondent wishes to know how best and most economically to arrange for the filtering of rain-water which in the cistern (a 250 gallon one), so as to be able at any time to draw off the water either filtered or unfiltered.

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REUBEN GREEN, Clerk to the Vestry.

February 7, 1856.

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Brighton, 29th January, 1856.

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G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster

DAVIES and NORMAN, Agents

Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.

GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

NOTICE.—BLUE LIAS LIME.—L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.

L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to insure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's-cross.

GREY STONE LIME WHARFS, 13, UPPER GROUND-STREET, Blackfriars (Surrey side), and 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, is 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Woolwich-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 30, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf (as above), since also to keep a LARGER STOCK of the above valuable HYDRAULIC LIME, always on hand, that their orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations should be given a few days before required.

GIBBS, CANNING, and CO.'S BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.

ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.

SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants Builders, contractors, and others supplied with every description of building material at the lowest market prices.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, picked stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and flare, bricks fire-goods, &c. can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

LIME.—Gray Stone, 9s. 6d.; Chalk, 8s. per yard; at THOMAS J. COLE'S Depôt, Peckham Canal.

Sand, Cement, Slates, Tiles, and Drain Pipes, supplied at equally low rates. Terms, cash. Builders' material landed, wharfed, and carted.

TO CEMENT and PLASTER MANUFACTURERS and OTHERS.—TO BE DISPOSED OF, a CEMENT STEAM-MILL, with wharf, two kilns, plaster oven, and extensive cellaring and warerroom, situated in an increasing town, on the South Coast Railway. The premises are held under a lease, with power of purchase. As a knowledge of the business is not needful, the concern is well worthy the attention of an active man, with small capital, who would devote the whole of his time to its extension. Apply at 32, Cranbourn-street, Leicester square

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.

JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale Business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of best quality upon advantageous terms. Application either at Harwich or to his Agent, GEORGE MORRIS, 30, New Ormond street, Queen-square, London.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD HOXTON.

BRICK MOULDS (improved), Steel-face Stocks and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick Mill Work and Implements. J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
DEEP-RED RUBBING BRICKS
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 8, ADELAIDE-PLACE, London-bridge.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the Bricklayers' Arms. Intending purchasers to favour him with a visit, in order to inspect his stock and judge for themselves.

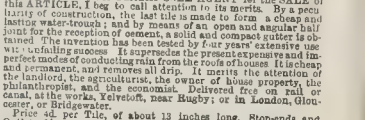
Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 30,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power. One man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the EREC-TION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.



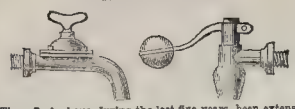
BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES, either old or new whether of thatch, slate, or tile, and other structures. Sole Agent, J. B. LAWES, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Kelvedon, near Hadley; or in London, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for the WARE is REMOVED to No. 21, WHARF, Macclesfield street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 881, of the Great Exhibition, rank the Manufactories known so long as "The Potteries," Tunstall, Staffordshire, as the first of the kind in the world.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—
LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 300 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,
Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 15-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

B. FOWLER & CO.'S
PORTABLE PUMPS,

2 inch to 9-inch Barrels.
Plain or Sliding Telescope Suction,
ON HIRE.

SINGLE AND DOUBLE PUMPS,
all sizes,
to any depth, for Hand or Steam Power.

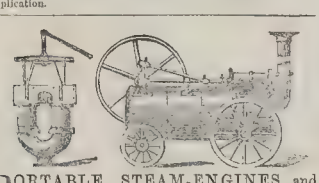
Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET,
Fleet-street.

WARNER'S PATENT
VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 40 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in. short	1 ft. 7 in.	Fitted for lead, gutta percha or cast iron flanged pipe, as required.	1 10 0
2½ „ long	3 3		1 14 0
3 „ ditto	3 6		2 8 0
3½ „ ditto	3 6		2 12 0
4 „ ditto	3 6		3 3 0
2½ „ short, with 15 feet of lead pipe attached, ready for fixing			2 14 0
2½ in. long ditto ditto			2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot. forcing, &c. plant houses; they may be fixed, when desired, under the stage. May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.



PORTABLE STEAM-ENGINES and
PUMPS kept in Stock for Hire at reduced Prices. H. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

STEAM PUMPING ENGINES.—
PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,
Engineers and Contractors, John's-place, Holland-street, Southwark, London.

PUMPING and WINDING ENGINE.—
TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 99, Blackfriars-road.

A COMPACT 4-horse HORIZONTAL
ENGINE, boiler and fittings complete, in good order, and ready for fixing. Lowest price, 85l.—Address, BLYTH (Brothers), Baldwin's-place, Gray's-inn-lane, Holborn.

STEAM-ENGINES on SALE, new and
second-hand, from one to twenty-horse power; a ten-horse Jukes's smoke-burner, and a variety of machinery consisting of boilers and tanks, three throw pumps, lathes, planing and drilling machines, screw-presses, &c. &c.—Apply to D. W. ASH, 187, Southwark-bridge-road, Newington-causeway, where the above may be seen.

N.B. Machinery of all kinds purchased.

STEAM-ENGINE for SALE, a five-horse,
high-pressure Steam engine, with about 20 feet of shafting and riggers, by Robinson and Son, late Bramah.—Apply on the Premises, the Statue and Iron Foundry, Lower Belgrave-place, Pimlico.

DRAUGHTS ROUND DOORS and
WINDOWS. — GREENWOOD'S PATENT INDIA-RUBBER STOPS, to supersede list or leather, for the purpose of keeping out dust and draught round doors, windows, closets, show-cases, &c. making the same air-tight. Price 6d. per foot. Spring Slides for bottoms of doors, 4s. each.

JOHN GREENWOOD, Carpenter, 10, Arthur-street West, London-bridge.

DRYING and SEASONING PROCESS by
CURRENTS of STEAM HEATED, or FIRE HEATED AIR, (SYMINGTON'S and DAVISON and SYMINGTON'S PATENTS).—This new, important, and valuable Steam-Heating Apparatus, is simple in construction, strong, safe, and durable; capable of repair by any ordinary smith or engineer, and can be put up or removed with great facility. It can be worked with the utmost safety, and with economy, as either steam, direct from the boiler, or exhaust steam from a high pressure engine, will answer the purpose for producing a temperature of about 200 degrees. When a higher temperature is needed, the improved fire-heating apparatus can be supplied. The drying process is used with the greatest advantage for seasoning wood, drying printed and other papers, &c.; and for all purposes where a perfect and even drying is required. The heated current is rapid, continuous, and con trollable.—For further information, references, &c. apply to th Patent Desiccating Company, No. 17, Gracechurch-street, London.

THE PERMANENT WAY COMPANY,
26, Great George-street, Westminster, have now published a Second Edition of their CIRCULARS, which may be had post-free upon application. Among other recent important Inventions, the Company beg to call particular attention to Prince's Patent for Casting Railway Chairs, Pole's Patent Improved Fish Joint, and Dr. Boucherie's improved Process for Preserving Sleepers, Fencing, Telegraph Posts, &c. from decay.—Every information may be had upon application to CHARLES MAY, F.R.S. the Manager; or to WILLIAM HOWDEN, Secretary.

HANDS'S PATENT ECONOMISING
KILN is the only simple and effectual mode to use the heat, for drying moist moulded clays, sound at any season, in time of burning and cooling the kiln, with perfect ventilation.—Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TO THE COMMISSIONERS OF THE BOARD OF HEALTH, AND TO ALL PERSONS INTERESTED IN THE SMOKE QUESTION.

HANDS'S PATENT is the only simple and
certain remedy for the SMOKE NUISANCE; it has combined, where necessary, the advantages of a drying process and perfect ventilation, without a particle of complicated machinery. Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TARPAULINS for COVERING ROOFS
during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

TO BE SOLD, cheap, a STEAM STONE-
SAWING FRAME; also a very powerful Hydraulic Press, by Bramah, with pump, complete; also some first-rate Steam Boilers and Patent Mortising Machines.—Apply to JOHN FRANCE, Engineer, 30, North Wharf-road, Paddington.

Superior Glazed Stoneware Pipes, Bends, Junctions, Traps, &c. Hopper and other Pans, with best White Glaze inside.

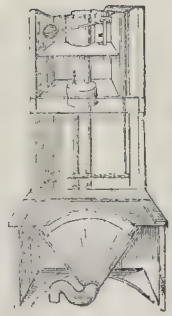
Pan, 3s. 6d.

Trap, 2s.

Syphon Pan, with or without STEPHEN GREEN'S Patent Air tight Valve.

Registered Flushing Basin, the most effective Syphon-trap yet offered to the public.

STEPHEN GREEN, IMPERIAL POTTERIES, LAMBETH.



IMPORTANT TESTIMONIALS
TO THE EFFICIENT WORKING OF
STEPHEN GREEN'S
PATENT SYPHON FLUSHING BASIN,
AND
SELF-ACTING CLOSET CONNECTIONS.

Oxford, November, 1849.

GENTLEMEN,—Sixteen of your Closets having been put into operation at Christ Church College, I have great pleasure in giving you my testimony as to their efficiency and simplicity.

HENRY J. UNDERWOOD, Architect.
R. S. HOGGAR, Engineer.

Royal Arsenal, Woolwich, June 24, 1852.

GENTLEMEN,—I have much pleasure in giving my testimony in favour of your Patent Syphon Flushing Basin, with Self-acting Closet Connections. There are several fixed here, which have been in use for upwards of twelve months, giving perfect satisfaction.

I am, Gentlemen,
Your obedient Servant,
WILLIAM CARTWRIGHT.

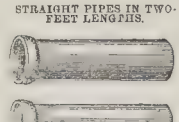
This effective article has not any Crank or Wire to get out of order, and is all complete and ready for use, and may be seen in operation at STEPHEN GREEN'S Manufactory, Lambeth.

JAMES STIFF,
MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

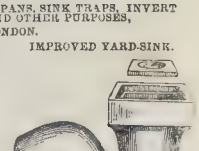
IMPROVED WATER-CLOSET PANS AND TRAPS, WHITE INSIDE.

Pan, 3s. 6d. Trap, 2s.

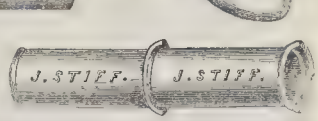
STRAIGHT PIPES IN TWO-FEET LENGTHS.



IMPROVED YARD-SINK.



HALF-SOCKET PIPES, in 2 feet lengths, at usual prices, by the use of which, Drains may be readily examined, and Junctions inserted, in the event of requiring further connections.



May be had also at Messrs. GLADDISH'S LIME WHARFS, Pedlar's-acre, Westminster-bridge, City-road Wharf, City Basin Dock head, Bermondsey; Denyer's Wharf, foot of Battersea-bridge, Chelsea; Pratt Wharf, King's-road, Camden New Town; J. TURNER, 2, South Wharf, Praed-street, Paddington; COLWILL, Brothers, 32, Brydges-street, Covent Garden; and at EDWARD COCK'S 94, Wardour-street, Oxford-street. Drawings and List of Prices will be forwarded free on application.

AYLESFORD POTTERY COMPANY,
BELVEDERE-ROAD, LAMBETH.
MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dock-yard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

£5,000.—TO BUILDERS, &c.—This sum to be LENT on Mortgage, of long leaseholds, freeholds, &c. amply secured.—Apply, personally, between the hours of TEN and ONE o'clock, to Mr. H. H. COLLINS, 54, Montague-place, Bedford-square.

LOANS from 25*l.* to 1,000*l.* upon approved personal or other security, repayable by easy instalments, extending over any period not exceeding fifty months, are readily OBTAINABLE from the BRITISH MUTUAL SUBSCRIPTION LOAN ASSURANCE CLASSES. Prospectuses, reports, and every information may be obtained on application at the British Mutual Life Office, 17, New Bridge-street, Blackfriars. Rules 6d. each copy. 1s. per post.
CHARLES JAMES THICKE, Resident Secretary.

METROPOLITAN LOAN COMPANY,
Established 1839.
1, CRAVEN-STREET, STRAND, LONDON.
Loans are advanced in amounts varying from [illegible] repayable weekly or otherwise, as may be agreed upon, at a discount of [illegible] per cent. for twenty-five weeks, and for [illegible] weeks at 5 per cent.—Forms may be had, price 2d.; if by post, three postage stamps to be enclosed. ROBERT NORTON, Secretary.

TO OLD MATERIAL DEALERS. — The MATERIALS of two OLD HOUSES, upon Tower-hill, TO BE SOLD by TENDER.—Particulars may be obtained at the Nag's Head, Paternoster-row. The highest Tender will not be necessarily accepted.

TO DRAIN-TILE MAKERS.
WANTED IMMEDIATELY, 10,000 9-inch RED GLAZED SOCKET-PIPES, to Farnborough Station, South-Western or South-Eastern Railway.—Address to H. BIRCH, Contractor, Farnham, Surrey.

THE PATENT ARCHITECTURAL POTTERY COMPANY, POOLE, DORSETSHIRE, MANUFACTURERS of GLAZED and COLOURED, MARBLED and VENETIAN, HOLLOW and SOLID BRICKS, and of PLAIN and FANCY QUARRIES. [illegible] bricks are for the exterior of public buildings, mansions, streets, and cottages, and for the interior of halls, conservatories, schools, hospitals, barracks, &c. &c. They are of a beautiful buff stone colour, the surface slightly granulated and the [illegible], so as to render them thoroughly architectural. The glazed surface makes them impervious to wet and dirt, and supersedes the use of cement and paint. The rain alone keeps them clean, and there are no limits to their durability. They are [illegible] true, so as to take a fine even joint, and give the wall a beautiful appearance. The Venetian bricks serve to dress the windows, doors, string courses, &c. &c. in the best possible taste. Various sizes, shapes, &c. are made according to order. The quarries are of the usual sizes, chiefly 6 inches, of approved [illegible] for plain or diamond floors, compartments, borders, &c. For a sight of samples, and the requisite information, apply to Mr. PILTON, Belvedere-road, Lambeth; or to the Company, at their Manufactory, Poole, Dorset.

WILLIAM GILBERT, Tividale Pottery and Blue Tile Works, near Tipton, Staffordshire. The BLUE WARE SANITARY PIPES made by W. GILBERT are the only GLAZED pipes of the kind manufactured in England. They are [illegible] being subjected to intense heat in the kilns, being [illegible] they are as smooth and straight as stoneware pipes; will bear a greater pressure, and endure in the drains a longer term than any other material. The sockets are deep and made much stronger than the body of the pipe, so as to resist all unequal pressure of the ground. These pipes are cheaper than stoneware, and may be had in 2 feet lengths, of 2 in. 3 in. 4 in. 6 in. 9 in. 12 in. 15 in. and 18 in. bore, with all bends, syphons, junctions, bends, gullies, and sink grates to match. Fire-clay [illegible] of all sizes. Glazed stoneware sewerage pipes, &c. &c. Terra-cotta [illegible] brackets, trusses, vases, fountains, busts, statues, pedestals, &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.
FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulic [illegible]. Pamphlet [illegible].
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

VICTORIA POTTERY, LEIGH, NEAR SOUTHEND, ESSEX.

DAVID MOUNTAGUE,
MANUFACTURER of superior GLAZED STONEWARE PIPES (in accordance with the rules established by the Commissioners of Sewers), Bends, Traps, Closet-pans, Jars, Bottles, and every article in Stone Ware on advantageous terms. Also MANUFACTURER of [illegible] Cement and Plaster of Paris [illegible]. Orders executed from the above [illegible] from [illegible] wharf, [illegible], Bankside, Blackfriars, and from [illegible] Stratford [illegible].

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS. [illegible] by all the [illegible] manufacture, [illegible] combined with cheapness, will be found to meet the [illegible] of consumers.—[illegible] Agents, L. B. PEARS and Co. Great Northern wharf, York-road, King's-cross.

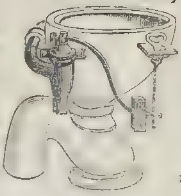
WHITE and BLUE CLOSET BASINS,
URINALS, &c.
MILLWALL POTTERY.
DEPOT:
ARTHUR-STREET, NEW OXFORD-STREET.

PATENT DRAIN-PIPES, UNGLAZED, [illegible]
PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d.	per foot.
4	"	"	"	"	4d.	"
6	"	"	"	"	6d.	"
9	"	"	"	"	[illegible]	"
[illegible]	"	"	"	"	1s. 5d.	"
[illegible]	"	"	"	"	[illegible]	"

These pipes are made [illegible] to great [illegible] pressure of ordinary glazed pipes. The prejudice against red-ware [illegible] earthenware, UNGLAZED, is the oldest material [illegible] in a perfect state in Rome, Babylon, Nineveh, &c. &c.

WATER-CLOSET, WITH APPARATUS COMPLETE, FOR 13s. 6d.

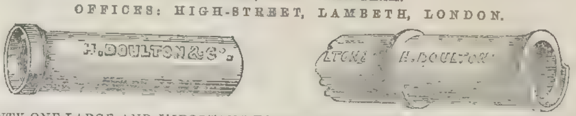


DOULTON & WATTS,
LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,
AND
LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,
With Handle, Lever, and Weight, ready for fixing,
Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

HENRY DOULTON AND CO. MANUFACTURERS OF GLAZED STONE-WARE DRAIN PIPES.
MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; AND SMETHWICK, NEAR BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

SOCKET.



HALF-SOCKET.

TWENTY-ONE LARGE AND IMPORTANT TOWNS HAVE BEEN DRAINED WITH DOULTON'S GLAZED STONE-WARE PIPES, *and in no case has the slightest failure occurred.*
Messrs. D. and Co. do not publish Testimonials, but references can be given to any of the Engineers and Surveyors under whom they have executed works. DRAWINGS, WITH PRICES, MAY BE HAD ON APPLICATION AS ABOVE.

JOHN DOULTON, BROTHERS, AND CO.
LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF
DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.
TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c. at the

NEAR POOLE, DORSET.
These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to
THE AGENTS,
Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;
Where a large stock is always kept on hand.

WILLIAM INGHAM AND SONS,
WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS,
NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to [illegible] inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Cattle-troughs, and a variety of Articles in Terra-cotta.
N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.
London Agents—Messrs. CHADWICK and AKEROYD, Wellington Stone-wharf, Regent's-park Basin.
Manchester Agent—Mr. TODD CARR, Arch 14, [illegible], London-road Station.
Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.
Leeds Stores—Albion-place, Albion-street.
W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above named Articles are manufactured from the celebrated Wortley Fire-clay, and they [illegible] the same for upwards of thirty years [illegible] first [illegible].

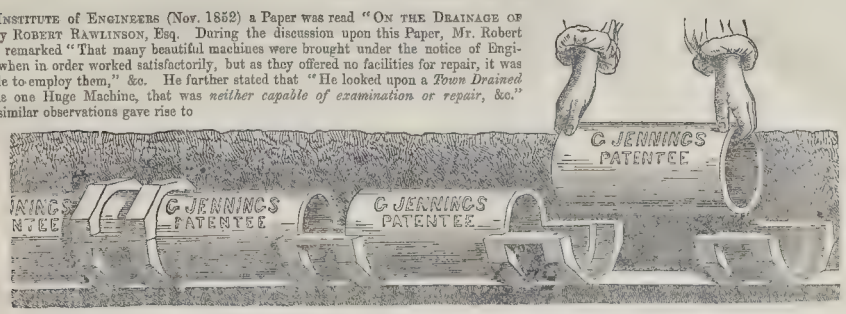
KINSON POTTERY AND CLAY WORKS, POOLE, DORSET,
DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description [illegible] Pipes [illegible] Retorts, Furnace Blocks, Crucibles, Fire [illegible]
The Fire Bricks made from the Clay [illegible] tested, and proved to be in every respect [illegible] and Newcastle.
DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

TO ENGINEERS, ARCHITECTS, SURVEYORS, AND OTHERS, INTERESTED IN EFFICIENT DRAINAGE.

At the INSTITUTE of ENGINEERS (Nov. 1852) a Paper was read "ON THE DRAINAGE OF TOWNS," by ROBERT RAWLINSON, Esq. During the discussion upon this Paper, Mr. Robert Stephenson remarked "That many beautiful machines were brought under the notice of Engineers, that when in order worked satisfactorily, but as they offered no facilities for repair, it was not desirable to employ them," &c. He farther stated that "He looked upon a *Town Drained by Pipes* as one Huge Machine, that was *neither capable of examination or repair*, &c." These and similar observations gave rise to



JENNINGS'S PATENT DRAIN-PIPES.

A drawing was made similar to the above, and submitted to Mr. Charles May, and Mr. William Carpmael, Civil Engineers, for their respective opinions. Their report being satisfactory, a Patent was taken. The same drawing was afterwards shown to Thomas Hawksly, esq. C.E., W. Haywood, esq. and Professor Hosking, all of whom expressed themselves much pleased with the invention, Mr. Haywood remarking,—"the work of supervision would be much lessened," and Mr. Hosking, "that the objection to Pipe Drainage was removed." These opinions have since been practically confirmed, and for the last six months GEORGE JENNINGS has not availed himself of any mechanical journal, to extend the publicity of his various sanitary inventions, having had as much business as he could satisfactorily execute. For the same reason he would have remained silent, but having seen it publicly stated that the old-fashioned Drain-pipes, "IF LAID WITH ORDINARY CARE, DO NOT NEED EXAMINATION," he thinks, in justice to his Patented Improvement in Pipes, he ought to say a little about Pipes in general.

First.—He would allude to the laying of drain-pipes "with ordinary care." When laying or entering one socket or half-socket pipe into another, can the workman or superintendent be certain that the pipe so entered INTERNALLY carries the same line as the one previously laid?

Secondly.—TO MAKE A PERFECT JOINT (query, if made at all at the bottom) the contractor's workman MUST DISTURB sufficient ground UNDER EVERY PIPE to pass the stopping material UNDER and AROUND each joint. If the joint be well stopped (and it is most important it should be) with cement, mortar, or clay, can the workman or superintendent insure, internally, a joint free from obstruction, although a BRUSH, A MOP, OR AN OLD SACK, may have been passed up and down the pipe? All persons who have considered the question of pipe-drainage in detail, will admit that the efficiency and durability of the same depends greatly on the soundness of the joints, inasmuch as any loss of sewage AT THE JOINTS is a loss of SCOURING or FLUSHING POWER within the pipe; hence arises the great deposit found in pipes generally. Again, as regards pipes laid in public or other buildings, any "escape of sewage at the joints must necessarily be MOST INJURIOUS TO HEALTH, as well as destructive to the permanency of the work, as all heavy sewage, wanting the power of WATER LOST, remains, and ultimately stops the drainage.

Thirdly.—Are not a line of the old-fashioned pipes, when once laid, "as a sealed book?" No examinations can be made, no stoppages removed, or junctions introduced, without breaking up and destroying one or more pipes,—thus saturating the excavation, and rendering it impossible to properly restore the drainage disturbed.

The drains of any building ought to be as permanent as the foundations they pass under, and to assert "that pipes do not need examination," is no proof that they may not require it. A ship may never be lost, but a prudent owner will insure; and that article will be found best in the end, that offers the greatest facilities for examination and repair. Again,—to say "that pipes do not need examination," is a fallacy. Instance the "examinations" carried out by order of the Metropolitan Commissioners of Sewers, by their engineers, Messrs. Lovick, Cooper, Roe, Donaldson, and Grant, where in every instance, after opening the ground, the pipes, offering no means of examination, were of necessity obliged to be BROKEN INTO to ascertain the amount of deposit in them.

The patronage "JENNINGS'S DRAIN-PIPES" have received, and still are receiving, is a proof that engineers, architects, and surveyors, who have in their specifications described them, and the builders who have employed them, consider that Local or Domestic circumstances may render the introduction of Junctions, or the examination of pipe-drains necessary,—both of which may be accomplished by the adoption of Jennings's Pipes, WITHOUT IN ANY WAY DISTURBING THE INVERT OR GENERAL DRAIN. These Pipes can be laid in HALF THE USUAL TIME, and GOOD WORK INSURED. The workman has only to bed the chairs to the proper fall and right distance apart, on concrete or otherwise, according to the nature of the soil they are laid in. This done, and the rebates of the chairs filled with cement, the Pipes have only to be dropped into the rebates and pressed down to the line of chair, the distance between each Pipe (see illustration) allowing the workman to properly strike up the joint of the invert, and the engineer or superintendent TO SEE THE WORK IS PROPERLY DONE before allowing the saddle-pieces to be put on.

From the foregoing description, it will be seen that the laying of the pipe and the making of the joints is done at one and the same time, and the drain mechanically completed, without the disturbing the ground under the pipes, or the application of the BRUSH, MOP, or OLD SACK, referred to. And should it be necessary AT ANY TIME to examine a drain so laid, the saddle-pieces afford every facility; and the same applies to the introduction of junctions: a workman has only to remove a plain saddle, and exchange it for one having a junction in it of the required size. These pipes, although so recently invented, have been approved and adopted by Colonel Jebb, at the Model Prison, Pentonville, Penitentiary, Millbank, Brixton, and Fulham Prisons, and the New Prison, Chatham; by the Authorities of the Dockyards and Arsenal, Woolwich, Deptford, and Chatham; the Barracks and Schools, Canterbury, and the Government Works, Enfield Lock; by the Surrey and Wilts County Magistrates; by the Town Councils of Oxford, Yeovil, and other towns; by Chas. Reeves, esq. for Police Stations and other Works; by the Guardians of the Strand and eighteen other Unions; by the Directors of the Equitable Gas-works, Thames Bank; by Sir J. Paxton, for the Crystal Palace and other Works; by T. H. Wyatt, esq. for several important Works; by the late Mr. Mason, for the London Hospital; by Edwin Nash, esq. for the Schools at Sutton, &c.; by William Moseley, esq. for the New City Bank, &c.; by W. B. Gringel, esq. for several Works in Bristol; by the Committee and Architect, W. B. Moffatt, esq. for the Idiot Asylum, Reigate; by Wm. Tite, esq. for the Necropolis Station; by Edward I'Anson, esq.; Professor Hosking; James Howell, esq.; Messrs. Hunt and Stephenson; John Lister, esq.; H. Dawson, esq.; Joseph Jennings, esq.; J. Noble, esq.; J. Edmonston, esq.; by Messrs. Young and Co. ship-builders; Messrs. Elliott, Watney, and Co.; and many other firms.

GEORGE JENNINGS returns his thanks to those gentlemen who have so largely described his various inventions in their specifications, and would here observe, that his only object is to promote the introduction of SANITARY IMPROVEMENTS, BEARING THE STAMP OF COMMON SENSE. He wishes to offer no factious opposition to any particular trade or interest, but is prepared to encounter all and everything for the cause he advocates.

The Pipes above illustrated and referred to, with all the advantages they offer, are the SAME PRICE AS CHARGED BY THE RESPECTABLE LONDON POTTERS.

The Show-rooms now built on Jennings's Wharf, Holland-street, Blackfriars, will be open in March next, for the Exhibition of Sanitary Inventions, suitable for EVERY CLASS OF BUILDING, PUBLIC OR PRIVATE. In the meantime, Illustrated Particulars and Prices of JENNINGS'S Self-acting and other Watercloseets, Urinals, Lavatories, Pumps, Sluices-Valves, Fire and other Cocks, Gully-traps, Shop-shutter Shoes, Earthenware Drain and Soil Pipes, &c. &c. can be had free, on application, or by post, on enclosing two stamps to

GEORGE JENNINGS, SANITARY ENGINEER, GREAT CHARLOTTE-STREET, BLACKFRIARS.

N.B.—Illustrations and Particulars of FOUR OTHER PATENTS FOR SANITARY PURPOSES just taken by GEORGE JENNINGS will appear in the course of a week. In the mean time they can be seen at the Factory, as above.

GIBBS, CANNING & CO.

MANUFACTURERS of GLAZED STONEWARE PIPES, Bends, Junctions, &c.; also FLUE BRICKS, Vitrified Blue Bricks as used at Messrs. Chubb's Iron Works, Wednesbury, Staffordshire, for Mr. Ashwin, at CHARLES RICHARDSON, No. 8, South Wharf, Paddington, London.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantity, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern Railway Yard, York-road, King's-cross.

SUPERIOR STONEWARE GLAZED SOCKET PIPES of a quality not to be surpassed — E. and W. STURGE respectfully invite attention to their very superior Socket Pipes, which they are enabled to offer at a much lower price than the trade, viz. 25 per cent. less than the usual prices. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Stills, &c. all at low prices. Quay Road, Bridge Wharf, City road.

N.B. A small extra charge is made upon goods required to be delivered south of the River Thames.

THE STAFFORDSHIRE SANITARY POTTERY COMPANY.

Proprietors, E. F. WINSTONE and Co. — Manufacturers of glazed stoneware pipes and traps for drainage purposes, also vitrified and glazed sewer pipes, 100, Great College-street, Camden-town, London, late of Pickering-street, City road.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, [illegible] a small or quantity of water than is usually needed, and effectually prevents [illegible] RAILWAY STATIONS, HOTELS, PUBLIC BUILDINGS, and [illegible] establishments. Also HIGH PRESSURE powerful [illegible]

PATTEN, 22, Old Fish street, near St. Paul's, London. Price [illegible] perfect action guaranteed.

SALES BY AUCTION.

READING, BERKS.—To Railway Contractors, Builders, Brewers, Coal Merchants, Carriers, and Others.

MR. WILLIAM BROWN will SELL by AUCTION, on MONDAY, the 11th day of FEBRUARY, 1856, at TEN o'clock precisely, at the MIDDEN STABLES, near the Great Western Railway and Reading and Regate Railway Stations at Reading, FIFTY most active powerful English CART HORSES, in good working condition, the property of Mr. R. Brotherhood, now offered to the public in consequence of the New Line west of the Reading Station being nearly completed. The Auctioneer begs to draw the particular attention of his friends and the public to the superior Stock, which has been selected with great care and at high prices by Mr Brotherhood who's well-known judgment has given such general satisfaction at previous sales. Amongst the Stock will be found Five very promising well-bred Cart Colts, rising three years old, which have never been worked. The Horses may be seen at work on the Line near the Reading Station, daily (Sunday excepted), and on the morning of sale at Mr. Hope's Stables, Great Western Tap, close to the Stations of the Two Railways.—Catalogues may be had four days before the time of sale (or sent by post), on application to Mr. Brotherhood, Railway Works, Chippenham; or at the offices of the Auctioneer, 154, Friar-street, Reading. Conditions of Sale as usual.

TO COACHBUILDERS, COACH SMITHS, IRONMONGERS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, FEBRUARY 19, at ELEVEN, on the PREMISES, Gerrard-street, Oxford-street, in lots, without reserve, SEVENTY TONS IRON and STEEL and IRONMONGERY, including about thirty tons BC bars assorted, twenty tons Staffordshire bars, eight tons coach-spring steel (Oxley's and Turton's), five tons best cast and double shear steel, two tons bolts and nuts, 20 cwt. as coach-bolts, assorted; 300 dozen files and rasps, 100 bags wrought and cut nails, one ton best Derby town clout, one ton snap head rivets, 50 gross wood screws, five tons orange coil and wheelwrights' chain, two tons burrs, washers, and bolt rings; sixty pairs cart arms, coal patent axles, coach-springs, coach ironmongery, double-purchase crab, builders' ironmongery, and a general assortment of ironmongery. To be viewed on Monday previous to the Sale, when Catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TELEGRAPH WIRE

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY, FEBRUARY 25 at TWELVE, at the AUCTION MART, Bartholomew-lane, London, in lots, without reserve, EIGHTY MILES of TELEGRAPH WIRE, insulated, No. 16 copper wire, in No. 5 suits-percha casing, manufactured by the Gutta-Percha Company, City-road; adapted for subterranean or submarine telegraph, and now lying at Cotton's Wharf, Tooley-street.—To be viewed at any time, by order, which, with catalogues, may be had of Messrs. GODDARD and EVRE, Solicitors, No. 101, Wood-street, Cheapside; or of Messrs. FULLER and HORSEY, 13, Billiter-street, City, London

Fine large Elm, Sycamore, useful Ash, Beech, and Oak Timber, with top, lop, and lady, standing on the Hungerford-park Estate

MR. ALEXANDER DAVIS is honoured with instructions from Major Wilks, to SELL by AUCTION, at the CROWN HOTEL, Hungerford, Berks, on FRIDAY, the 15th day of FEBRUARY, 1856, at THREE o'clock in the Afternoon, viz.—Thirty-four Elm Trees (some of very large size), forty-seven fine Ash, two large Sycamore, twenty-four Beech, thirty-seven fine Oaks, and two hundred and eight small Oaks, standing as above: they may be viewed by applying to Mr. JAMES HOPKIN, the keeper on the Estate, of whom Catalogues can be had; also at the Place of Sale; by post, on application; and of the Auctioneer, Valuer, and Estate Agent, Market-place, Newbury, Berks.

WESTMINSTER.—Surplus Builder's Stock and Effects.

MESSRS. EVERSFIELD and HORNE are instructed by the proprietor, in consequence of the senior partner retiring from business, to SELL by AUCTION, on the PREMISES, Regency-street, Westminster, on TUESDAY, the 19th of FEBRUARY, at TWELVE for ONE, the SURPLUS STOCK-IN-TRADE, comprising a large quantity of dry deals, planks, and battens; pitpared floor battens, dry prime planks, seasoned wainscot, useful boards and quartering, old doors, sashes and framing, Portland stone, a copper skylight, &c. Also the valuable SURPLUS PLANT, comprising two young powerful draught horses, three carts, stone truck, blocks and falls, scaffold poles, boards, cords and putlogs, wheeling-planks, work benches, barrows, and mortar-boards; a very excellent joinery bench, with ten drawers, and other effects.—May be viewed one day previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Stock Exchange.

ON THE BANKS OF THE REGENT'S CANAL BASIN

MR. LEREW will SELL by AUCTION, on the PREMISES, Edward-street, Regent's-park, on TUESDAY, FEBRUARY 12th, at TWELVE, 2,500 dry stock PLANKS, DEALS, and BATTENS; twenty-five loads of hardboard yellow pine TIMBER; five loads of Arbroath plank, quartering, cut stuff, &c.—May be viewed the day before the sale; when catalogues may be had on the Premises, and of Mr. LEREW, Carpenter's-yard, Hampstead-road.

TO BUILDERS, CABINET AND PIANOFORTE MAKERS, AND OTHERS.

MR. LEREW is instructed to prepare for SALE by AUCTION, on the PREMISES, Nos. 41 and 42, Union-street, Somers-town, on MONDAY, FEBRUARY 18th, at ELEVEN for TWELVE, on account of the number of lots, about 4 cwt. of MAHOGANY in logs, logwood, and planks; 1,000 feet of wide pine board, 80 four-panel and sash doors, and other prepared work; mails, ironmongery, ranges, stoves, workbenches, and effects.—To be viewed two days prior to the sale, and catalogues had on the Premises; and of Mr. LEREW, Carpenter's-yard, Hampstead-road.

POSTPONEMENT OF SALE.—To Contractors, Builders, and Others.—North Hyde, Middlesex, near the Southall Railway Station.

MR. HARDING begs respectfully to announce that the SALE of 400,000 last STOCK BRICKS, of an excellent quality, advertised to take place on Wednesday, the 13th inst., is POSTPONED until next week, the day and hour to be duly published in the local papers; and that the whole of the valuable Stock will be SOLD by AUCTION, in the manner previously mentioned, about 100,000 more, lying on the stone field, will be included in the sale. They may be viewed until the auction takes place, by application to Mr. NEWELL, Boat-owner, Bulls-bridge, near Hayes, Middlesex; also of Mr. Flaxwood, at the Brick-field; or at the Auctioneer's, Hope Cottage, New Brentford, Middlesex.

IMPORTANT TIMBER SALE.—CONSERVATIVE LAND SOCIETY.—St. Margaret's Estate, Twickenham.—The valuable fall of TIMBER on the above Estate, [illegible] Materials, to be SOLD by AUCTION, by [illegible] Mr. Robins, at the Mart, on WEDNESDAY, the 20th inst., at TWELVE for ONE o'clock precisely, in the following lots, unless previously disposed of by private contract:—

Lot 1. Two Elm trees, measuring 10 feet 6 inches in girth, and 60 feet in length.
2. Two Elm trees, measuring 10 feet 6 inches in girth, and 60 feet in length.
3. Two Elm trees, measuring 10 feet 6 inches in girth, and 60 feet in length.
4. Two Elm trees, measuring 10 feet 6 inches in girth, and 60 feet in length.
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35. Two Elm trees, measuring 10 feet 6 inches in girth, and 60 feet in length.
36. Two Elm trees, measuring 10 feet 6 inches in girth, and 60 feet in length.
37. Two Elm trees, measuring 10 feet 6 inches in girth, and 60 feet in length.
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TO BUILDERS.—TO BE LET, on a [illegible] Building Lease for ninety-nine years, [illegible] Hollis's Estate, in Bermondsey-street, Bermondsey, with a frontage of 41 feet 6 inches, by the depth of 90.—Further particulars may be had of Mr. Mabbett, Estate Agent, Queen-street, Mayfair, Berkeley-square.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 5, Chancery-lane.

FREEHOLD GROUND, CHANCERY-LANE and FETTER-LANE.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 26th of FEBRUARY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking, on Building Lease for Eighty Years, certain PLOTS of GROUND, situate at the south-west end of Chancery-lane, and the south-east end of Fetter-lane. Further particulars may be had, and plans seen, on application to Mr. HAYWARD, Engineer to the Commission, at these Offices, in the Guildhall. The Commissioners will require a plan and elevation of the premises proposed to be built, to be submitted to them for approval; and do not bind themselves to accept any proposal, unless deemed advantageous.

JOSEPH DAW, Principal Clerk.

Sewers' Office, Guildhall, January 2, 1856.

HARROW.—FREEHOLD LAND.—TO BE SOLD, 100 ACRES, in a ring fence, and several other eligible plots of FREEHOLD LAND, at a moderate price, contiguous to the Harrow and Stanmore Railway, surrounded and intersected by capital roads. Residents are entitled to the privileges of the Harrow School, and the London and North Western Railway Company offer to persons building houses of approved elevation, worth 50l. per year each, a free first-class pass between Harrow station and Euston-square, for eleven years. There is an abundant supply of excellent water, and every superior brick-earth on the land.—Apply to WILLIAM B. COOPER, Esq. Solicitor, 3, Verulam-buildings, Gray's-inn.

BUILDING-GROUND, Clerkenwell, in the direct line of the new street from Farringdon-street to Islington.—GROUND TO BE LET for third-rate houses, with or without workshops and back entrances (a capital site for a public-house). To see plan and particulars, inquire at the Office of T. RANDALL, Esq. Architect, 38, Great Winchester-street, City, between the hours of TEN and FOUR o'clock.

TO BE LET, SEMI-DETACHED VILLAS, in immediate neighbourhood of Victoria New Docks, and in parish of Plaistow. Each house contains two parlours and breakfast-room, three bed-rooms, kitchen, scullery, pantries, and W.C. They are completely fitted up with every convenience,—coppers, water, stoves, and blinds. They are partially stuccoed and varnished, and all are papered with newest patterns. They are ready for immediate occupation, and, in consequence of the failure of the builder, they will be let for the low rent of 22l. per annum. Taxes are very moderate, and railroad and omnibus conveyance within easy distance. Apply to Messrs. WM. G. and E. HABERSHON, Architects, 38, Bloomsbury-square, London; at whose Office views and drawings may be seen.

TO CAPITALISTS, BUILDERS, and SPECULATORS.—The valuable BUILDING ESTATE of "Oak Bank," surrounded on all sides by good roads, having extensive frontages to the river Itchen, and fine views of the town of Southampton, the docks and shipping, and Southampton Water, is TO BE LET on Building Leases for 1,000 years from the present proprietor. This valuable building property is within a few minutes' walk of the docks and town of Southampton, and being without the municipal boundary, the rates and taxes are almost nominal. Its peculiar formation permits it to be made available for dwellings suitable to every class.—Further particulars will appear in a future advertisement; and the plans may be viewed and full information obtained on application to Mr. ALFRED G. DAVIS, Architect, Surveyor, and Land Agent, Offices, Onslow-road, Southampton: on and after the 25th day of February.

WHARF and STEAM SAW-MILLS TO BE LET.—The extensive premises, known as the "ABBEY WHARF," King's-road, Reading (with long frontage towards the Kennet; and powerful CRANE), on which a large timber trade has for many years been carried on. Also, the powerful, newly-erected STEAM SAW-MILLS, now in full work; with counting-house, large warehouses, stabling, &c. The trade is capable of being increased; and the Proprietor of the Steam Mill equal to carrying on business to any extent.—For particulars and terms, apply to Mr. WILLIAM BROWN, Surveyor and Estate Agent, 154, Friar-street, Reading.—N.B. Immediate possession may be had.

FREEHOLD GROUND for Building on.—TO BE LET, upon BUILDING LEASES, PLOTS of GROUND, in the Worthy Road, Holloway, two or three minutes' walk from the Archway Tavern. Omnibuses every four or five minutes to all parts of London. Situate in St John's-road, which is being [illegible]. For further particulars, apply to Mr. H. WITHERS, 9, Poultry. The leases direct from the freeholder. Money advanced.

GUILDHALL, 4th February, 1856.—The Committee for Letting the City's Lands will meet at GUILDHALL, on WEDNESDAY, the 27th instant, at NINE o'clock precisely, to receive PROPOSALS for BUILDING LEASES of several PLOTS of GROUND on the north side of Worship-street, Finsbury-square. Also to receive proposals for Leases of a House, No. 18, on the north side of Banner street; a House, No. 4, Leonard-square; and a House, No. 53, on the east side of Tabernacle-walk, Finsbury. Plans of the property may be seen, and further particulars and forms of Tender obtained, at the Architect's Office, Guildhall.

FERDINAND BRAND, Comptroller.

TO MANUFACTURERS, MERCHANTS, and OTHERS.—TO BE LET, a HOUSE, well and substantially built, and in excellent condition, with extensive PREMISES, situate in the western part of the City, and admirably adapted to any business requiring light, power, and other advantages.—For particulars, apply to Mr. C. PALMER, General Railway Office, 44, Gresham-street, City.

BROAD STREET, RATCLIFF.—THREE HOUSES, Nos. 53, 96, and 97, and FOUR SMALLER, Nos. 5, 6, 7, and 8, BURLINGTON-PLACE, TO BE LET, by TENDER, on a repairing lease, for twenty-one years, from Lady-day next. Sealed tenders to be given in before MONDAY, the 3rd of MARCH, 1856, at the Clerk's Office, Coopers'-hall, Basinghall-street, where further particulars may be obtained. The Court will meet at the Hall on TUESDAY, 4th MARCH, at ELEVEN, when the Tenders will be opened, and the Lessees appointed.—The Court will not be bound to accept the [illegible] Tender.

JAS BOYER, Clerk.

Coopers' Hall, February 5, 1856.

SUPERIOR PLOT of GROUND TO LET, [illegible] Situation very good for shop and [illegible] Apply at No. 4, Field-terrace, Kent-road, Surrey, near the Railway station.—Rent low.

TO MANUFACTURERS and OTHERS requiring WATERSIDE PREMISES.—TO BE LET, LOCKE'S WHARF, Limehouse, on the north side of the River Lea, near the Railway Station, and seven miles by road from London. The premises consist of a [illegible] warehouse, with counting-house and [illegible] Apply to Mr. RICHARDS, Auctioneer, Tottenham.

HAMPTON-COURT.—About Eight Acres of BUILDING GROUND TO BE LET, on 99 years' lease, or SOLD in small or large plots, near the above Palace and Railway, at moderate rents or prices. An advance of say 80 per cent. on the outlay would be made to respectable parties taking a considerable frontage. A small portion of the ground would be let for shops and cottages if desired; the residue for detached or semi-detached villas and small houses. Also, to be let or sold (belonging to the same proprietor), a convenient Family Residence, with six bed-rooms, at a moderate rent.—For terms, &c. apply to Mr. F. LETT, Architect, 36, Essex-street, Strand.

SURBITON-HILL and KINGSTON.—Several detached and semi-detached VILLAS, part unfinished and part in carcase, TO BE SOLD on very advantageous terms. The freeholds will be sold, or the purchases may be made subject to a ground-rent. Annual rental of houses, from 20l. to 70l. Also, a PAIR of semi-detached RESIDENCES, one let at 85l. per annum; the other at present untenanted; lowest price, freehold, 380l.—For further particulars apply to Mr. LANG, Berrylands, Surbiton-hill, Kingston-on-Thames.

FREEHOLD BUILDING LAND TO BE LET or SOLD (ninety-nine years), in the High-street, Peckham (Belmont grove). GROUND for FOURTEEN HOUSES, 16 feet frontages, brick walls all round, fronting road made; would let immediately. Direct from the freeholder. A quantity of materials, with two sheds included.—Apply to W. W. RAWLINS, Queen's-road, Peckham.

TO BUILDERS and OTHERS. — An excellent SITE TO BE LET or SOLD, for BUILDING PURPOSES, with a good double frontage, situate in a leading thoroughfare, and in the neighbourhood of Smithfield, well suited for shops and dwelling house, and workshops. The materials of the present erections may be used if sound, in erecting any new buildings that may be approved. Money will be advanced if required by the purchaser, or taken to carry out the undertaking, upon a satisfactory arrangement.—Inquire of Messrs. HOWARD and LOWTHER, Solicitors, 14, Finch-lane, Cornhill-street; Mr. EDWARD LOWTHER, 58, Red Lion-street, Clerkenwell; or of Mr. MURRELL, Auctioneer, 1, Walbrook, City.

TO TIMBER MERCHANTS and OTHERS.—The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of English Timber, &c. Spacious Dry and Drawing Docks, 30 and 40 feet Cranes, Steam Engine for converting Timber, &c. Freights paid on delivery.—Apply to G. NOKES and Co. as above.

TO ENGINEERS.—TO BE DISPOSED OF, by direction of the executors, a very compact BUSINESS in London, which has been established many years. The premises are centrally situate, and conveniently arranged for the business. The principal tools are nearly new, by Smith, Beacock, and Tannett, of Leeds, and include a 12-inch self-acting slide lathe, planing machine, and drilling machine; there are also three other lathes, high-pressure steam-engine and boiler, smiths' forges and tools, fitters' benches, vices, and tools. About 1,000l. will be required, and to any person of high character desirous of starting business, a very eligible opportunity is presented.—For further particulars, apply to Messrs. FULLER and HORSEY, Billiter-street, City.

AN old-established IRONMONGER'S BUSINESS TO BE DISPOSED OF, well situated, moderate stock at invoice prices. Premium 250l.—Apply to Mr. TINDALE, Portland-place, Commercial-road, Stepney.

A BUILDER'S BUSINESS TO BE DISPOSED OF, near the East-end of London. For Stock, Utensils, &c. Price, 250l. None but principals treated with. Part of purchase can remain unpaid if preferred. For further particulars, apply (prepaid), to G. A. B. Office of "The Builder."

THE VIEILLE MONTAGNE ZINC MINING COMPANY'S PURE PATENT WHITE ZINC PAINT is unequalled for permanency of colour, hardness, and brilliancy of surface; it is unaffected by sulphuretted or other vapours or emanations. Being completely innocuous and free from the pernicious effects of white lead, it may be employed in all apartments whilst in use with not any inconvenience to the inmates.

The greatest caution is recommended to avoid any spurious compound that might be offered as "Pure White Zinc." If any adulteration has taken place in the oxide, either in consequence of impurity in the material primarily used, or by reason of the imperfect and careless production, or by mixing with the oxide certain substances calculated to give it increased weight, it then produces a very inferior instead of a very superior paint, and the economy realised by the employment of such oxides becomes a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the VM mark in Hull by Messrs. BELL, LEMMING, and CO.; Messrs. GREENHALGH and Son, Manchester; T. B. MORLEY and CO. and by the Company's Grinding Agents in London, Messrs. CHARLES DEVAUX and CO., Wellington-road, King's Cross; and at Stolberg, near Aix-la-Chapelle, and Painting Agent, Mr FREDK BRABY, Fitzroy Works, Newroad. In Manchester and Liverpool by R. CLAY, Merseyside, who is the acknowledged Agent for the Company for Zinc Paints, and undertakes painting ships, warehouses, dwelling-houses, &c. in Leith, by Messrs. R. ANDERSON and CO. Timber-bush Building, Leith Walk. In Dublin, by Messrs. BOXILES.—ZINC PAINTS, in Kegs of 14, 21 and 28lbs and upwards, to be had of the Company's Agents in Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Belfast, and Cork; and in the Isles of Jersey, Guernsey, Man, and Wight; also in Paris, Lille, and Bordeaux.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with Zinc Paint by contract.

For further particulars, apply to the Company's General Agents in London, 12, Manchester buildings, Westminster.

TERRA-COTTA WORKS, Blackfriars-road, London.—The PRIZE MEDAL for MANUFACTURE WORKMANSHIP and TASTE has been awarded to M. D. BLANCHARD, late of Coade's Original Works, and successor to them in the manufacture of artificial stone, that has been so extensively adopted for nearly a century in this country, by our eminent architects and others, in the adornment of our noblest buildings, and is the only true material that is capable to stand the ravages of time unimpaired. Groups, Statues, Vases, Fountains, and Architectural Embellishments, at prices and quality that defy competition. A large Stock of newly designed Chimney Shafts and Pots, to suit the various styles of buildings, at very low prices, and worthy of notice.

BLASHFIELD'S PATENT TERRA-COTTA, Manufactured at Mill-wall, Isle of Dogs.—Capitals, Consoles, Tracery for Parapets, Balusters, String Courses, Friezes, Bas-relievi, Vases, Statues, Chimney-shafts, and all other Architectural Terra-cotta Work, executed, and moulds in the most approved manner, on the shortest notice. Blashfield's Patent Hollow Bricks can be seen at BLASHFIELD'S Warehouse and Show rooms, No. 1, Broad-street, Pentonville.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Brad) & WYMAN, Nos. 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields, in the County of Middlesex; and published by the said CHARLES WYMAN, at the Office of "The Builder," No. 2, York-street, Covent-garden, in the Parish of St. Paul, Covent-garden, aforesaid.—Saturday, February 9, 1856.

The Builder.

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BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.

Head Master, R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart, or to others to impart, Art-education, to develope its relation to the requirements of trade and manufacture and its application to the common uses of life. Special courses are arranged in order to qualify Schoolmasters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Freehand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Moulding, and Casting. The Class-days for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still-life, &c. the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also Classes for instruction in the technical processes of Chinn and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. Mylan. Fees per session.—Advanced Class, 2l. and 4l.; Elementary Class, 1l.; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall mall, London.

COMPETITIONS.

TO ARCHITECTS SURVEYORS, AND OTHERS.

PLANS, DESIGNS, and DRAWINGS are requested for the ERECTION of TWO CEMETERY CHAPELS, under one roof, together with a Lodge and Entrance-Gates, for the Grantham Burial-Ground (containing six acres of land), to include ground-plans and elevations, and to be accompanied by approximate estimates of the expense. The buildings to be faced with Ancaster stone, and the plinths to be of Mansfield stone. The whole expense (including fittings, &c. of chapels) not to exceed the sum of 1,500l. 10l. is offered for the plan of the chapels and buildings considered to be the best (unless the architect shall also contract for the works), and 5l. for the second best The whole of the plans, &c. to be sent to me, sealed and endorsed, but without any name or distinguishing mark, on or before SATURDAY, the 1st day of MARCH next, inclosing a sealed letter in each case from the person forwarding it.

By order of the Burial Board.

ROBERT HENRY JOHNSTON, Clerk.

Grantham, Feb. 5, 1856.

EAST DEREHAM CORN-EXCHANGE COMPANY (provisionally registered).—Architects desirous of furnishing PLANS for the proposed CORN-EXCHANGE, may see a plan of the site, and obtain necessary particulars, on application at the Office of HENRY N. COOPER, Esq. East Dereham, Norfolk, the Secretary of the Company, on and after the 12th inst. The architect whose plans are accepted will be paid 10l. for such plans. Plans will not be received after WEDNESDAY, the 12th day of MARCH next. All plans to be sent sealed, and to be on the scale of one-eighth of an inch to the foot.

East Dereham, 2nd February, 1856.

N.B.—A specification stating the general mode of construction, the materials to be used, and the manner of finishing, is to be sent with the plans, to assist the Committee in their decision. The architect whose plans are accepted will afterwards be required to put the specification into a form suitable for builders to tender from.

ARCHITECTURAL ASSOCIATION.—At the next Ordinary Meeting, FEBRUARY 22nd, the President, Mr. ALFRED BAILEY, will read a Paper on "Cemetery Architecture."

The Class of Design will meet February 23th; subject for sketch: "A Domestic Gothic Window without Mullions," height, 5 feet; width, 2 feet 6 inches.

T. W. GOODMAN, } Honorary
J. A. BUNKER, } Secretaries.

Lyon's Inn Hall.

ARCHITECTURAL EXHIBITION.—Will CLOSE on SATURDAY, 23rd. Now open at the Galleries, Suffolk-street, Pall Mall, East. Lecture for TUESDAY Evening, February 19th, at EIGHT o'clock, "Observations on the Exhibited Contributions in the department for Materials and Manufactures," by JAMES EDMESTON, Jun. Esq. Hon. Secretary. Admittance, One Shilling. Season Tickets, half-a-crown

ART UNION OF LONDON (by Royal Charter). Prizeholders select for themselves from the Public Exhibitions. Every subscriber of One Guinea, will have besides the chance of a Prize, an impression of a plate of Harvest in the Highlands, engraved by J. T. Wilmore, A.R.A. from the important and well-known Picture by Sir E. Landseer, R.A. and Sir Augustus Callcott, R.A. The Prints are now ready for delivery.

GEORGE GODWIN, } Honorary
LEWIS POCOCK, } Secretaries.

444, West Strand.

CONTRACTS.

TO BUILDERS.

THE BURIAL BOARD for the PARISH of WALTHAM HOLY CROSS, in the County of Essex, are prepared to receive TENDERS for the ERECTION of TWO MORTUARY CHAPELS, at the New Cemetery, Waltham Abbey. The drawings, specification, &c. may be seen at the Office of the Architect, Mr. S. HEWITT, Montague Close, Southwark; and at Mr. J. JESSOPP'S Offices, Waltham Abbey. Tenders to be sent on or before MONDAY, the 25th FEBRUARY 25, next, at SEVEN o'clock, to Mr. J. JESSOPP.—The Board do not bind themselves to accept the lowest nor any Tender. February 8, 1856.

CAMBERWELL CEMETERY.—To NURSERYMEN, &c.—Tenders are required for the supply and planting of SHRUBS in the ornamental plots at the New Cemetery, Camberwell. The Tenders are to be in the form of a schedule of the various descriptions of trees, shrubs, &c. proposed to be used, to which the prices must be affixed; such prices including carriage to the cemetery and planting. Further particulars, with plans, &c. may be seen at the Office of the Architect, Mr. W. B. MOFFATT, No. 2, Adelaide-place, London bridge; and Tenders addressed to the Burial Board for the Parish of Camberwell, Vestry-hall, Camberwell; and sent in on or before MONDAY, the 25th instant.

GEO. W. MARSDEN, Clerk to the Burial Board.

TO BUILDERS.

THE GUARDIANS of the POOR of the RISBRIDGE UNION are desirous of receiving TENDERS for the ERECTION of a new UNION WORKHOUSE, for the accommodation of 296 inmates, with Board and Committee Rooms, Master and Matron's Offices, Infirmary, and other buildings, at Kedington, near Haverhill, Suffolk. Plans, specifications, and conditions may be seen at the Office of the Clerk to the Guardians, at Haverhill; and at the office of Mr. JOHN FRANCIS CLARK, Architect, Newmarket, where full particulars can be obtained. Tenders to be delivered at the Office of the Clerk to the Guardians, before NINE o'clock on FRIDAY morning, the 29th day of FEBRUARY next, after which time no Tenders will be received. The contractor will be required to give security to one-fourth the amount of his contract, for the due performance of the work; to be completed by the 1st day of JANUARY, 1857. The Guardians do not bind themselves to accept the lowest or any Tender.—Dated 30th January, 1856.—By order of the Board of Guardians.

JOHN H. JARDINE.

Haverhill, near Newmarket, Suffolk.

REGENT-STREET TABERNACLE, UPTON.—Plans and specification of the above building, for the Methodist New Connexion, are lying for inspection at the Offices of Mr. WILLIAM WIGGINTON, Architect, Wolverhampton-street, Dudley, under cover, to whom Tenders are to be forwarded by FRIDAY, the 29th instant. The Trustees do not pledge themselves to accept the lowest or any Tender.

Dudley, February 3, 1856.

TO CONTRACTORS and OTHERS.—The Committee for BUILDING a CHURCH at BYKER, Newcastle-on-Tyne, are desirous of receiving offers for the PURCHASE of the STONE on the Site. The superficial extent is one acre, and the depth of good stone considerable, with very little baring. The purchasers will have to work out the stone within a limited period, and to comply with such other conditions as the committee may require. Besides the ordinary modes of conveying away the stone the purchasers may have the facility of making an arrangement with the proprietors of an adjoining private railway, terminating at a convenient wharf, which passes on every convenience for shipping stone on the River Tyne. Mr. CLIFFORD or Mr. YOUNG, Schoolmaster, Byker, will show the site, and offers may be addressed to the Rev. T. R. GREEN, St. Mary's-place, Newcastle-on-Tyne.—Byker, Feb 5, 1856.

TO DEODORIZING COMPANIES.

TENDERS for DEODORIZING and REMOVING the SOIL from the CAMP, COLCHESTER for 3000 men, will be received at the Royal Engineer Office, at the Camp, where any information may be obtained, on personal application, and also Plans of Pentagon, which must be filled in and returned to that Office by the 23rd inst.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives notice, that General of Contracts, Pall-mall, London, on or before WEDNESDAY, the 20th day of FEBRUARY, 1856, from persons desirous of contracting for extensive ADDITIONS and ALTERATIONS to the WESTERN HEIGHTS BARRACKS, at Dover. Drawings and specifications of the works to be executed, may be seen by persons fully competent to undertake the work in the Ordnance Supply, and forms of Tender obtained at the Royal Engineer Office, Archcliff Fort, Dover, between the hours of TEN and FOUR o'clock, from FRIDAY, the 1st of FEBRUARY, to TUESDAY, the 19th of FEBRUARY, 1856, Sundays excepted. A person belonging to the Royal Engineer Department will attend each day at the Western Heights Barracks, from TEN to TWELVE o'clock, to point out the work and explain the drawings. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 2,000l. for the due performance of the contract. Tenders for the above work to be addressed to the Director General of Contracts, Pall mall, London, and endorsed "Tender for work at Dover."—N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, January 16th, 1856.

ORDNANCE CONTRACT for AGRICULTURAL DRAINAGE Sealed Tenders addressed to the Director General of Contracts, War Department, Pall-Mall, London, will be received until TWELVE o'clock on FRIDAY, 29th FEBRUARY instant, from parties willing to Contract for the AGRICULTURAL DRAINAGE of the SPACES and PARADES between the battalions and ground adjoining, at the CAMP at ALDERSHOT. Specification, Plans, and Forms of Tender, together with any further information required, may be obtained on application to Mr. DREW, Clerk of Works, Royal Engineer's Office, Aldershot Camp, on and after MONDAY next, the 18th instant. The Tender to state the price at per acre, and to be endorsed, "Tender for Agricultural Drainage at the Camp at Aldershot." The War Department reserve the right of rejecting the whole or any of the Tenders.

Royal Engineer's Office, Aldershot, Feb. 13, 1856.

KESWICK WATERWORKS.—To IRONFOUNDERS, BRASS-FOUNDERS, and OTHERS.

THE DIRECTORS of the Keswick Waterworks Company hereby give Notice, that they are prepared to receive TENDERS from parties willing to undertake either of the following CONTRACTS:—

CONTRACT No. 1.—For the supply of about 138 tons of CAST-IRON WATER-PIPES and OTHER CASTINGS.

CONTRACT No. 2.—For the supply of SLUICE-VALVES, HYDRANTS, and STREET FITTINGS.

The drawings and specification may be seen, and further information obtained on application at the Office of JOSEPH HALL, Keswick, or at the Office of ROBERT RAWLINSON, C.E. 34, Parliament-street, Westminster. Forms of Tender, schedule, and bills of quantities, will be supplied at 2s. 6d. the set. Sealed Tenders to be delivered at the Office of the undersigned, before TWELVE o'clock on MONDAY the 25th FEBRUARY instant, addressed to the Directors of the Waterworks Company, endorsed "Tender for Contract No. 1 or 2," as the case may be.

Signed, JOSEPH HALL, Solicitor to the Company.

Keswick, 11th February, 1856

TO BUILDERS AND OTHERS.

THE JOINT BURIAL BOARD for the TOWNSHIP and PARISH of FOLKESTONE, in the county of Kent, are desirous of CONTRACTING for BUILDING and FINISHING, at the new Cemetery, near Cherlton-road, TWO CHAPELS, a Porter's Lodge and Appurtenances, and the Boundary Wall, and for providing and fixing the Entrance-gates, &c. Parties willing to Contract, may see the plans and specifications at the Office of JOSEPH MESSENGER, Esq. Clerk to the Board, Bouverie square, Folkestone, between the hours of TEN and FOUR on any day (Sunday excepted). Sealed Tenders (marked "Tender for Buildings at Folkestone Cemetery") for executing the whole or any of the works, are to be left at my Offices in Church-street, Folkestone, not later than FOUR o'clock in the Afternoon of TUESDAY, the 11th day of MARCH next. It is stipulated that it shall not be incumbent on the Board to accept the lowest or any Tender.—By order of the Board.

Folkestone, 12th February, 1856. RICHARD HART, Clerk.

TO BUILDERS AND CONTRACTORS.

NEW CHURCH at WREXHAM.—Persons willing to CONTRACT for the works to be done in BUILDING a new CHURCH (to contain 1,000 persons) at Wrexham, may now see the plans and specifications at the house of Mr. LOVATT, Parish Clerk, in Wrexham. The intended site is within a quarter of a mile of Wrexham Station, on the Great Western Railway. Sealed Tenders must be delivered to the Rev. GEORGE ROBERTS LEE, the Vicar of Wrexham, on or before the 15th of MARCH next. The lowest Tender will not necessarily be accepted; and the contractor will be required to enter in a bond with sureties for the due completion of the work.—Any further information may be obtained, and a copy of the plans may be seen, on application to the Architect. H. KYRKE PENSON, Architect.

21, Wind-street, Swansea, February 11th, 1856.

BURIAL GROUND, NORTHWOOD, Isle of Wight.—To BUILDERS.—Persons desirous of CONTRACTING for the ERECTION of CHAPELS, LODGE, ENTRANCE-GATES, &c. near Cowes, for the Northwood Burial Board, can inspect the plans and specifications at the Offices of the Architects, Messrs. MEW and MANNING, 21, Great James-street, Bedford-row, on and after the 14th instant.—Tenders to be delivered on or before MONDAY, the 25th instant. The Board do not bind themselves to accept the lowest or any other Tender.

HENRY JAMES DAMANT, Clerk to the Board.

West Cowes.

[For remainder of Contracts see next page.

CONTRACTS.

WESTBURY CEMETERY.—To BUILDERS and OTHERS.—The Burial Board of the Parish of Westbury are desirous of receiving TENDERS for the BUILDING on their new burial ground TWO CHAPELS and a LODGE, and also for CONSTRUCTING the BOUNDARY WALLS, laying out and levelling the land, with entrance gates. According to the plans and drawings prepared for that purpose by Mr E G BRITTON, of Oxford, the Architect. The plans, drawings, and specifications may be seen at my Office, in Westbury, and also at the Office of Mr BRITTON, 11, Beaumont-street Oxford, between the hours of 10 a.m. and 5 p.m. until the 3rd day of MARCH next and the Board will not object to receive Tenders from the separate trades or for the whole or any part of the works; but they do not bind themselves to accept either of them, or the lowest Tender. Tenders are to be delivered to me on or before the 10th day of MARCH next, marked "Tender for the Cemetery." Security for the due performance of the work to be prepared at the expense of the contractor will be required.

HENRY PINNIGER, Clerk to the Board.

Westbury, 11th February, 1856.

THE MARCH LOCAL BOARD of Health are prepared to receive TENDERS from competent persons willing to EXECUTE any of the WORK comprised in the following CONTRACTS for the Drainage and Water Supply of the District:—

CONTRACT A.—Sewers and Drainage Works.
CONTRACT B.—Well-sinking, Brick Tower, and Engine-House.
CONTRACT C.—A Steam-Engine, Wrought-iron Tank, Cast-iron Pipes, Pipelaying, and Sundry Iron-work.

The plans and specifications may be inspected at the office of the said Local Board in MARCH. Printed copies may be seen and printed forms of Tender and further information may be obtained, on application at the Office of Mr R REYNOLDS ROWE, Civil Engineer and Architect, 13, Emanuel-street, Commercial Road East, London, N.E. Sealed Tenders, properly endorsed are to be delivered at the office of the said Local Board on or before SATURDAY, the 8th day of MARCH, 1856. The Local Board do not bind themselves to accept the lowest or any of the Tenders.—By order.

THOS T ELLIOTT, Clerk to the Local Board.

March, Isle of Ely, February 11, 1856.

TO BUILDERS.

NEW FARMSTEAD.—Persons desirous of TENDERING for FARM BUILDINGS to be erected at Walton Grounds, near Banbury, Oxfordshire, on the estate of Col North, M.P. may see the plans at the offices of the works at the office of Messrs PUSEY and CALEY, Auctioneers and Estate Agents, Banbury. The Tenders are to be delivered at the office of Mr J F CLARK, Architect, Newmarket, on or before SATURDAY, the 23rd of FEBRUARY. The lowest or any Tender will not necessarily be accepted. Quantities can be obtained on application to Mr CLARK

THE LOCAL BOARD of HEALTH for the District of WATFORD are prepared to receive TENDERS for the MAKING and CONSTRUCTING a section of the SEWAGE TANKS at the outfall of the sewers near the Town of Watford. The plan and drawings and specification may be inspected, also further particulars obtained by application at the Offices of JAMES PIRRAW OF Tottenham. The specification and condition of contract may be had upon payment of 5s. Tenders to be sent in on or before MONDAY, the 25th instant, endorsed "Tender for Sewage Tanks." By order of the Board.

JOHN SEDGWICK, Clerk.

Board-room, Watford, February 8, 1856.

MIDDLESEX and ESSEX TURNPIKE ROADS. Notice is hereby given, that the Trustees of these Roads are willing to receive PROPOSALS and CONTRACT for supplying BLUE STURN or GRANITE, of the hardest and heaviest quality, broken to a gauge of an inch and a half, best and heaviest quality, broken to a gauge of an inch and a half, to be free from dust, and delivered alongside Messrs. MESSON'S Wharf, adjoining to and on the eastern side of the River Lea, at Stratford, Essex. Such granite to be delivered there within four weeks from the date of the Tender being accepted, if such granite is of the size and contracted for and delivered within that time, a proportionate payment will be made in cash. APRIL next, above period. Sealed and endorsed "Tender for Granite," to Tenders sealed and endorsed "Tender for Granite," to be delivered at the Office of the Trust, before the 21st of FEBRUARY instant. The Trustees do not bind themselves to accept the lowest, or any specific offer that may be made to them.

GEORGE DACRE,
Clerk and Solicitor to the said Trustees.

Turnpike Office, Bow, Middlesex, February 8, 1856

DUDLEY UNION NEW WORKHOUSE.

The plans for this building (which, in accordance with the resolution of the Board of Guardians is to be erected for the sum of £4,000) may be inspected at the Office of Messrs. BIDLAKE and LYATT, Architects, of Wolverhampton, at which office and of the undersigned, the Specifications and Conditions of Contract may be had after the 10th instant, on payment of £1 1s. The working drawings and specifications will be ready in the beginning of MARCH, and the time limited for the delivery of TENDERS for BUILDING will be until MONDAY, the 28th of APRIL. The schedule being on the plan separate from the main building contracts are required to furnish distinct estimates for the two portions of the building.—By order of the Board.

THOMAS SHORTHOUSE, Clerk.

Dudley, Feb 11, 1856.

TO BUILDERS, MARBLE MASONS AND OTHERS.

THE LIZARD SERPENTINE COMPANY have to acquaint the public, that the Serpentine Chimney-pieces and other articles brought well by public attention in London were not the productions of the Quarries belonging to the LIZARD SERPENTINE COMPANY, which continues successfully to carry on its business in Slab and Manufactured Goods, that of the very superior quality, and in great variety of colours, at the Factory, Polless, Lizard, and Penzance, Cornwall, 29, Surrey-street, Strand.

HENRY FOX, Manager, Polless, Lizard.
F. W. RUFFLE, Agent in London.

Lloyd's Marble Wharf, Thames-bank, Pimlico,
A second Waggon of

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf all hours.

MARBLE.—The Italian Marble Company, Importers of the produce of the finest marble quarries in the province of Massa Carrara, Italy, beg to inform the general marble trade in the United Kingdom, that they are prepared to undertake contracts for any quantity of Statuary, Veined, Sicilian, Red, Black, Dove, and other Marbles, in blocks full dimensions, delivered on shipboard at Leghorn, or in dock, London. A constant stock in hand of the finest Carrara Statuary Dove, Sicilian, Red, Black, Veined, and Breccia Marbles. Garden Statues, Vases, Tazzas, Chimney-pieces, &c. executed and delivered at reasonable rates. For further particulars apply at the Offices of the Company, 18 Cannon-street, City.

WILLIAM W. BONNY, London Secretary.

TO BUILDERS, MASONS, AND OTHERS.

THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Bardilla, dove black, black and gold, Sienna, and Sicilian, constantly on hand, and at 36, Portland Place, Stone-yard, Lisson-grove, Paddington, Blocks, slabs, landings, and hearths of every description, granite, earth, &c. All goods carefully packed and forwarded to any part of England. THOMAS JACKSON, Marble and Stone Sawing Mills, Commercial-road, Pimlico, London.

TO BUILDERS, BUILDERS, MASONS, &c.

B. FABBRICOTTI respectfully invites the attention of Builders, Masons, Stone Merchants, &c. to his fresh STOCK, composed of statuary, vein, Sicilian, black and gold, dove, Bardilla, Siena, and Breccia, in block and particular, all of which attention to a large quantity of his best statuary, slabs, blocks, of all sizes, just landed.

Monuments, vases and tablets, finely executed to Italy.
Carrara Wharf, Thames-bank, Pimlico.

STONE, GRANITE, and MARBLE.—
BRAMLEY FALL, GAEN,
BARLEY DALE, FARLEY DOWN,
HARE HILL, HUDDLESTONE,
PORTLAND, and various Stones, in Block and Slab,
Yorkshire Paving, Landings, Steps, Sills, Sinks, Coping, &c.;
Granite Blocks, Troughs, Curbs, Pitchers, &c.
Valentia Slate Slabs, Grindstones;
Marbles, in Blocks and Slabs.

At FREEMAN'S Stone Wharfs, Millbank-street, Westminster; City-road Basin; and Deptford.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slabs on hand, suitable for shelves.

JOHN BAZLEY WHITE and BROTHERS,
MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab. Marble masons &c

DARLEY DALE STONE.—This Stone, introduced by Sir Charles Barry at St. Edward's Grammar Sch. ol, Birmingham, and well known as having been selected for

ST. GEORGE'S HALL, LIVERPOOL,
and numerous works, including the New Exchange, Birmingham; Bronte Bank, Liverpool; Evesham-bridge; Mr Beaufoy's Schools, Lambeth; and the Portico and Cornice of the Town-hall, Leeds; is kept in considerable quantity at the Darley Dale Stone Wharf, City Basin, London. Apply to W and J FREEMAN, Millbank-street, Westminster, or GEORGE WALL, at the Quarries, near Matlock.

CAEN and AUBIGNY STONE.—P FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôt, Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 265, High-street, Southwark, near the Townhall.

CAEN and AUBIGNY STONE.—GATES and GEORGE (late Lourd, Beetham, and Co.), Caen-wharf, Rotherhithe, London, General Stone Merchants and Quarrymen, continue to supply from their Wharf as above, CAEN, AUBIGNY, PORTLAND and YORKSHIRE STONE.

BATH STONE.—HENRY STONE, QUARRYMASTER, begs to inform Architects, Builders, and others that he still continues to supply the best COMB DOWN, HAMPTON DOWN, and BOX GROUND WEATHER STONE. Delivered in the trucks at Box or Bath station on the most reasonable terms. H. S. pays particular attention to his Hampton Down Stone, it being of a very fine texture and rich colour, adapted for either external or internal purposes. Either sawn and sawn Stone cut to order. Cargoes shipped in Bristol, and delivered to any part round the coast.—Residence, WIDCOMBE Bath

STONE! STONE! STONE!—At Lowest PRICES, all kinds of Stone supplied to any extent. Quarry worked, sawn, or scantled to dimensions. Delivered to any part by vessel or road. A large depôt for all the above at reasonable prices

Depôts, Victor a Stone Wharf, Isle of Dogs, and No. 3 Wharf, Great Northern Railway, King's cross.

Grindstones, fire goods, and terra cotta. Special estimates given to supply large contracts

Address, S. TRICKETT, General Stone Merchant, Victoria Wharf, Isle of Dogs.

YORKSHIRE STONE.

GEO. VINT and BROTHERS,
IDLE, near LEEDS,
Beg to inform Architects, Builders, Contractors, Bunders, and Masons, that they can supply to any extent all kinds of YORKSTONE, including Paving, Bramley Fall, Pork Stone, Rough Hood, Harehill, &c. at the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible stone at prices not exceeding the ordinary cements Full particulars furnished on application to Mr. FRED RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS,
QUARRYMEN AND STONE-MERCHANTS,
BATH.

List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace. Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. ROAD, Haytor Granite Offices, Millbank-row, Westminster.

GRANITE.—The Chacewering Granite Company, Liskeard, Cornwall.
London Agents—THOMAS TREGELLAS TAYLOR 3, Pinner's-court, Old Broad-street. Manager, JAS J TRATHAN, Liskeard
This Granite is selected for the New Westminster-bridge

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SOLES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

FOR MACADAMIZING ROADS.—The HARDEST and most DURABLE STONE.—The Proprietor of an extensive Quarry at Dunscat, in Fife, containing Blue Whin and Greenstone of the very best quality for making any quantity of the above Stone, its superiority having been tested, and proved to be 25 per cent harder than Guernsey Granite.—For further particulars apply by letter to Mr. JOHN NEWTON, Norway-wharf, Hertford-road, Kingsland-basin.—Two Coal Waggons for Sale.

SLATING.—T. B. HANNAFORD is not only in a position (through having a large share in a Slate Quarry), to execute any amount of the above work at extremely low prices, but guarantees a first-class material, in all respects similar to the slates he has used in covering the principal mercantile and governmental buildings in the City. Tredaga Wharf, Bristol-road.

VALENTIA SLATE SLABS.—The Valentia Slate Company invite attention to their Slabs, now supplied, of very large dimensions and of superior quality. They have been used for the Crystal Palace, the New Houses of Parliament, Buckingham Palace, the British Museum, National Gallery, Bethlem Hospital, Greenwich Hospital, Kensington Palace, Marlborough House, Pentonville Prison, and other public buildings. Marble Floors laid and repaired. Hearth-slabs, Mantels, Chimney-pieces, Steps, Landings, Borders, &c. kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

PARIS EXHIBITION. — ENAMELLED SLATE—TWO FIRST-CLASS MEDALS.—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1848. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of lee-tables, chiffoniers, consoles, &c.; corated slabs for the tops of lee-tables, chiffoniers, consoles, &c.; baths baptistries, altar-tablets, pilasters, columns, vases, pedestals, and brackets; washstand tops, billiard tables, linings to halls, and dairies. Price lists can be had on application to vestibules and dairies. Price lists can be had on application to Mr MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.

N.B. Plain slate work executed in the most single article to the most extensive contracts, for home and abroad.

CROGGON and COMPANY,
Manufacturers of
PATENT ASPHALTE ROOFING,
BOILER, RAILWAY, SHEATHING and INODOROUS FELT,
For Damp Walls, and Lining Iron Houses,
2, DOWGATE-HILL, LONDON.

TO CONTRACTORS, BUILDERS, &c.—EIGHTY AXE-DRESSED GRANITE BLOCKS TO BE SOLD a bargain. They are worked all round, and the beds made and taken to a height. The blocks are 2 feet 9 inches and 2 feet 7 inches, 1 foot 11 inches wide, and 1 foot 9 inches high. To be seen at the South Devon Wharf, Lower East Smithfield.—Price and particulars can be had by applying, by letter only, to B. R. PENTON, Postoffice, Lupus-street, Pimlico.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Prey rubbish delivered per barge, in any quantity, alongside the Thames.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS

W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No 21 Wharf, Harrow-road, to No. 3, North Wharf-road, Paddington have now in stock Fill Orders and Screened Gravel. For terms, &c apply at the Wharf.

Contractors supplied to any extent.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hydrostatic Purposes, Water Pressure, Lifting Springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Driving Bands of superior make, and improved Vulcanized Rubber suppli pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Airbeds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

CHAS. MACINTOSH and CO. Patentees of the VULCANIZED INDIA-RUBBER, and GENERAL MANUFACTURERS of WATERPROOF, AIRPROOF, and ELASTIC RUBBER GOODS log to inform all persons who desire to correspond with the Original and Only House that SOLE establishments are No 1, Cannon-street West, London, and Cambridge-street, Manchester This notice is necessary, as the term "Macintosh" is used in connection with their SOLE goods, &c is frequently adopted both in London and the country by vendors of India-rubber goods, who deal in articles not of the manufacture of CHAS. MACINTOSH and CO.—Goods manufactured by CHAS. MACINTOSH and CO. are stamped with the name of the firm.

TO ENGINEERS, MILLOWNERS, &c.

N. Woolwich Elastic steam-packing Canvas and India-rubber, at 1s. 4½ per lb.

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H. M.'s Dockyards), have considerably enlarged their manufactory in order to meet the daily increasing demand upon them for this effective and durable article, are enabled to offer the very best material at the reduced price of 1s. 4½d per lb for sheet or pack'ge.

Testimonials may be seen at S. W. SILVER and CO.'s Warehouses, Nos. 3 and 4, Billingsgate-street; opposite London Tavern, where orders for steam Packing, also Buffer Springs, Pump Clacks, and the various India-rubber appliances, will meet with prompt attention.

CAUTION.—S. W. S. and Co. have found it necessary to stamp all their manufacture, thus—"S. W. SILVER and CO. WORKS, NORTH WOOLWICH."

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe Manufactured only by WAITHMAN & CO. Bentham's, Leicester.

No.	1 quality, inches diameter, and price per yard.					
½	1	1½	2	2½	3	3 in.
9d.	11d.	1s 1d.	1s 4d.	1s 8d.	1s 7d.	1s 9d.	2s.	2s 4 d.	2s 6d.	2s 9d.

Super-extra stout quality.

2	2½	3	3 inches.
2s.	2s 4d.	2s 9d.	3s. per yard.

No. 2. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

½	¾	1	1½	2	2½ inches.
9d.	10d.	11d.	1s.	1s 3d.	1s 6d per yard.

The hose is warranted at an extra charge of 1d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

DURABILITY of GUTTA PERCHA TUBING. Many inquiries having been made as to the durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter FROM CHARLES MONDAY, Esq., Barr, VENTNOR, ISLE of WIGHT.

Second Testimonial. "March 10th, 1852. In reply to your letter, received this morning, I am glad to find Gutta Percha Tubing for Pump service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first having down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES,
18, WHARF-ROAD, CITY-ROAD, LONDON.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE made to Builders up on the lowest terms. Marquees and temporary Awnings on sale or hire. Orders for post receive the most prompt attention.—WILLIAM PIDDOCK, 187, Fore-street City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND FOR BUILDING PURPOSES.

TARIFF OF PRICES
Beyond the current Price of Hoop-Iron.

The undermentioned Gauges are kept in stock; but any Gauge or width will be supplied within a few days, at a small advance on the following prices:—

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1¼	7s. 0d.
15	1½	7s. 6d.
15	1¾	8s. 0d.
15	2	8s. 6d.
15	2½	9s. 6d.

Plan and Elevation of Bond, showing Position and Form of the Claws.

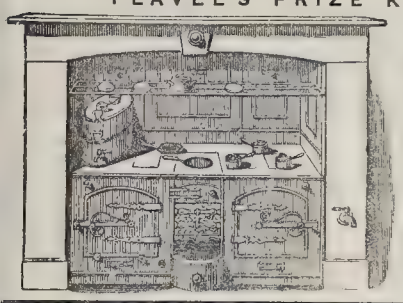
THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11½ inches on both sides alternately, and turning one side of each notch in succession contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent, that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which being driven half into the brickwork, embedded in the structure preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

London Depôt—463, OXFORD-STREET.

FLAVEL'S PRIZE KITCHENER.



The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

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NEW PATENT INVENTIONS FOR STABLE REQUISITES.

PARIS EXHIBITION AWARD TO

COTTAM and HALLEN, of Winsley-street,

The original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, and to which they have made important additions, the main features of the same being explained in the following description and Engraving.

A represents the Patent Halter-guide and Chain-rein, the ball of which is taken to the back of the manger-works with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable.

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety covers. Sanitary Traps. Stable Pumps, Loose Box Fittings, Gutta-percha Pre-serving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

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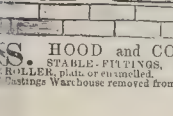

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2s. 9d.	3s. 6d.	4s. 3d.	5s. 6d.	7s. 6d.	9s. per gross.
No 1	2	3	4	5	6

5 in. Mortise Locks, best Brass Furniture Shifting Spindles, 2s. 6d. each; 6 in. ditto, 3s. each.

Strong Register Stoves, double backs, 2½d. per inch.

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16s 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

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Sizes—4 in. 5½ in. 3 in. 4½ in. 4 in. 4½ in. 5 in.

Pipes	11d.	1s. 3d.	1s. 6d.	1s. 8d.	2s. 1d.	
Half-round Gutters	8d.	8½ d.	9d.	1s.	1s. 2d.	
O G Gutters	1s.	1s. 1d.	1s. 3d.	1s. 5d.		
Ditto, with plain clips cast on	1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.		
Ditto, with hon ditto	1s. 2d.	1s. 3d.	1s. 5d.	1s. 7d.		

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

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Estimates given for any description of Wrought or Cast Iron Work

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FOX and BARRETT'S PATENT.

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The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic outbuildings, within the reach of everyone.

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RESISTING SAFES non-conducting and vaporizing with all the improvements, under their Quadruple patents of 1851 and 1855, in taking their outpower Proof Solid Lock and Door (with all wards), so as to secure THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.

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12	"	20	"
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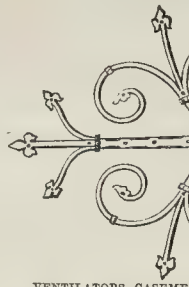

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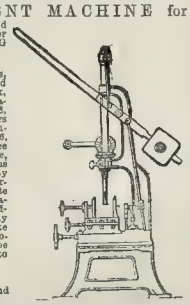

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FREDERICK HILTH,
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CLARK and HUNT'S IRONMONG STOVE, and METAL WAREHOUSE, 159, Shoredi A great variety of Elliptic, Register, and other Stoves, C and best Ranges fitted, always in Stock.

Improved Sel Cottage Range Large Oven and

30	32	34	
28s.	30s.	32s.	

Best Self-acting with Oven an Boiler, Bright W Bars—

34	36	38	
54s.	56s.	58s.	

Strong Elliptic with Extra Bo Solid Bars, per i

Register Stoves, with Solid Bars, per inch, 5d.
Improved New Pattern Circular Cheek Register, with st Bars and Trivit, 5d. per inch.
Best Solar Ditto, with Fire Brick Back, per inch, 10
Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe {	2	2½	3 inch.
	11d.	1s. 2d.	1s. 6d. per ya
Cast Gutters—4 inch, 9d. per yard.			
O G Gutters {	4		4½ inch.
	1s. 1d.		1s. 3d. per

Patent Line {	3	4	5	6	
	4½d.	5d.	7d.	8d.	1s. per ba

6-inch Rd. Ward Mortise, with best Furniture and Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 5wt.
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An extensive stock of bar, rod, hoop, and sheet iron
Brick Moulds kept in stock. Any size made to orde

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Elliptic Stoves, double backs, 2½d. per inch, and upwards.
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Self-acting Ranges, with circular ovens and sack boilers, best wrought bars and bright fittings:—
3 ft., 2l. 18s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3-feet Cottage Ranges, with ovens and back boilers, 22s. each.
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Air Bricks, 4s. per doz.
Best Town Glue, 5½d. Ditto, Scotch, 6½d. per cwt.
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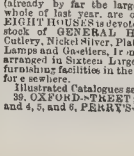

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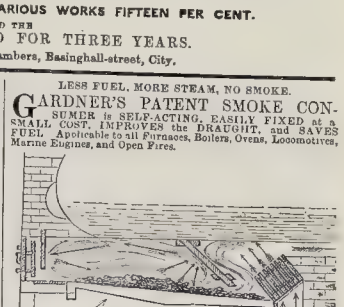

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The Builder.

VOL. XIV.—No. 680.

WE are about to tell rather a long story, and perhaps a dry one,—the history of the dispute between the committee of visitors of the Cambridge Pauper Lunatic Asylum and the architects who were so fortunate as to have their design for a new asylum selected in a competition invited by the aforesaid visitors: we have no doubt, however, it will be found valuable by a considerable section of our readers.

In the year 1850 (September), the committee of visitors, through their clerk, Mr. David King, offered, through various newspapers, a premium of 150 guineas for the best plan, with estimates and specification, for a pauper lunatic asylum. The advertisement was of the usual character, and said, "any further information may be obtained" on application to the clerk. Desiring to compete, Messrs. Kendall, jun. Cope, and Edlin (whom we will throughout call Messrs. Kendall), wrote to him as invited, and in reply received a copy of a resolution of the visitors, extracted from their minute-book, ordering their clerk to advertise, and setting forth that the author of the selected design, if not employed, should receive the 150 guineas "upon the completion and delivery to the clerk to the visitors of all necessary drawings and sections requisite for carrying such plans into effect;" but if employed in the superintendence, payment for such drawings was to be included in the payment for superintendence. It is necessary to call attention to this: it is unusual, did not form any part of the advertisement, though it appears the committee considered that the architects were to be as much bound by it as by the printed advertisement, and might not have been seen by the competitors, as they were not bound to apply for further information.

In answer to the advertisement, upwards of fifty designs were sent in on the 30th December, 1850. The committee considered them until March, 1851, when they wrote to Messrs. Kendall, saying their plans were unanimously chosen for adoption. They attended the magistrates, and explained satisfactorily the design, which was then sent to the Lunacy Commissioners for their approval. In due time their architect reported, saying that he considered the estimate given in, 26,250*l.* was inadequate for the erection of the building; and he recommended the committee to have a revised estimate from the architects before the building was proceeded with. The committee communicated with the latter on this subject; and in order to surmount the objection, the plans and specifications were put into the hands of Mr. George Myers, the builder, and he at once offered the committee of visitors, in writing, November 25, 1851, *to execute the work, in the best manner, for the stipulated sum of* 26,250*l.* if they would give it into his hands without competition. With this the committee of visitors were satisfied; ordered some additional works amounting to 1,250*l.* and again returned the plans to the Commissioners in Lunacy for approval. In January, 1852, the Lunacy Commissioners approved, and the Secretary of State at the same time also approved the plans; and the clerk of the visitors wrote to the architects, for a form of advertisement to builders for tenders. In February the architects met the committee, at Fulbourn, where the building was to be erected, staked out the site, and were the next day directed to get out the working drawings. Some alterations were made, and the plans, so altered, were sent to the Secretary of State, and received his approval, 6th March, 1852; as they did afterwards the approval of the Justices of the County of Cambridge, in Sessions; also, the Justices of the Isle of Ely, in Sessions, and the Council of the Borough of Cambridge. United, the bodies passed a resolution, granting the sum of 30,000*l.* for the purposes of the works, and the working drawings were proceeded with, and the quantities taken out; when at Mr. Myers's wish, the architects wrote to the clerk of the committee, in May, 1852,—to say that, if his offer to do the entire work for the sum submitted with the design, was not accepted by the committee without competition, *he would consider himself absolved from his offer.* Soon the working drawings were completed; but it will be well, perhaps, to digress here a little, to state some facts connected with the case. It appears that the adjoining counties of Bedford, Herts, and Hunts were contemplating the erection of new lunatic asylums; and that the Cambridge committee had been, and were then, in communication with them, to amalgamate and erect one large united asylum, instead of several smaller buildings. This occasioned much delay: and it should be mentioned here, that Dr. Hill, who is the medical superintendent of the York Lunatic Asylum, was appointed by the Bedford visitors, or was consulted as to the best way of carrying out their views. Dr. Hill was also one of the original competitors for the Cambridge Asylum, and was supported by Lord Hardwicke and his brother, both on the Cambridge committee; and efforts appear to have been made from the first to bring in Dr. Hill for the work. Various meetings of the Bedford and Cambridge committees took place as to the junction, but they found it could not be carried out. The clerk communicated this to the architects, and in June, 1852, advertisements for tenders appeared. A year and a half, it will be seen, had then elapsed, during which period materials and labour had greatly increased in value, and therefore it was to be expected that the original estimate would be proportionally increased; but Mr. Myers, notwithstanding any loss that might have accrued, would have carried out his offer if they had placed the matter in his hands. On the 16th July, 1852, the committee met to open the tenders: there were seven, the lowest, 33,650*l.* (from Mr. Myers), and the highest, 55,760*l.* and they resolved, "That as the tenders were considerably above the amount they were authorised to expend, neither of them should be accepted, but that the visitors should, if necessary, apply to the several courts of Quarter Sessions and town council for their sanction to an additional outlay." It was the committee's fault that they did not accept Mr. Myers's original tender, not the fault of the architects, and knowing well how material and labour had risen in cost during the time the matter had been in abeyance, they could not complain, and they did not. The matter stood over, and they tried to join with Bedford again: various meetings were held, efforts were again made to effect a junction with Bedford county, and Mr. Myers wrote a tender to do all the building works (with some reductions agreed upon by the architects) for 27,000*l.* and the engineering works for 3,000*l.* in all 30,000*l.* but the offer was not accepted. Fresh drawings embracing the alterations were made and explained on the 13th May, 1853, when, also, Dr. Hill expounded the details of his plan for a large asylum, and urged upon them its desirableness, instead of building for Cambridge only. They passed a resolution that it was desirable to unite with the other counties. Afterwards, Messrs. Kendall were written to, "as the junction matter was still pending," for their account up to that time, and the total amount of their claim against the visitors, "in the event of their plans being given up." The architects, considering they had determined not to build their individual asylum, sent in an account to the following effect:—

Premium for the best design	£157 10
2½ per cent. commission on the lowest tender, 33,650*l.*	841 5
Travelling and other expenses.....	50 0
Total	£1,048 15

Mr. Percy, the surveyor who took out the quantities, also sent in his account:—

1½ per cent. on the lowest tender.....	£504 15
For sundry expenses.....	36 15
Total.....	£541 10*

On the 23rd of November, 1853, the committee of visitors met and decided *against* joining with Bedford, &c. and after various meetings, finding, as they said, that Mr. Hill's plan was more simple and capable of being carried into execution, than that of Messrs. Kendall, recommended that Mr. Hill's plan be adopted." No complaint is made against Messrs. Kendall, but after giving them three years and more of labour, the visitors coolly supersede them, saying, "they find Mr. Hill's plan more simple and capable of being carried out."

Mr. Hill's plans were afterwards rejected at the Sessions, the Court not thinking it right to rescind their former resolution. Lord Hardwicke, in consequence, resigned his position as one of the committee, as he had moved the adoption of the report at the county meeting. The town council of Cambridge also rejected the new design for the same reason. But the committee of visitors were determined. To make the story short, Dr. Hill's design was adopted; and an agent on the part of Mr. King, offered to pay the architects the premium of 150 guineas, and to submit all other matters in difference to arbitration; but as he wanted barristers, and Messrs. Kendall required architects, they could not agree; and the architects feeling, as well they might, seriously aggrieved and prejudiced by such a termination of the engagement, considered it was proper to submit the case on that account to the public, through a court of law.

The Attorney-General, and Messrs. Phipson and Bovil, barristers, recommended that the action should be brought against Mr. David King, the clerk and agent of the committee of visitors, and through whom all their orders came. The cause was opened on February 16, 1855, at the Court of Common Pleas, Guildhall, when the Lord Chief-Justice recommended "the action to be referred to Mr. Cleasby, with the usual powers and terms, to raise any point of law at request of either party; and if he or the Court say action will not lie, then he and the Court to say what and against whom is the remedy; and in any event to find what is the amount due: the 150 guineas to be paid in a month, without prejudice to any question in the action." The jury then found a verdict for the plaintiff, subject to the above reference, which was agreed to by both parties.

The arbitrator held his first meeting on the 21st of May, 1855. On the part of the architects appeared Mr. Cockerell, Mr. Tite, and Mr. Mocatta; in support of the committee of visitors, Mr. Bellamy, Mr. Poynter, and Mr. Shaw, who considered that the terms of the advertisement covered everything,—competition drawings, working drawings, details, and all services, though for three years or more, short of the actual erection of the buildings!!! For the competition twenty-seven large sheets, containing sixty-one distinct drawings, had been sent in. The working drawings, made by order

* This account is also disputed, but Mr. Percy only waited to know the proper person to sue, and will now try the case at once.

of the committee, consisted of eighty-five distinct drawings and details, on sixteen sheets of large paper; and of these two sets had been required. In the whole there were 241 drawings, with a full working specification.

Mr. Tite's evidence was clear and precise. He considered that an architect is entitled to a commission of 5 per cent. on the amount of the contract, if he actually superintends the erection of the building designed by him, and to 2½ per cent. on the lowest tender, if, after the working drawings, estimates, and specifications are completed ready for contracting, and the tenders are received, he is not employed in the superintendence of the erection, whether in consequence of the abandonment of the works by his employer, or from any other cause. That such rates of commission are exclusive of travelling expenses, allowance for time, and the charges of the measuring surveyor (which are paid to such measuring surveyor by the builder if the work proceeds, and by the employer of the architect if it is abandoned). He quoted the opinion of a committee of the Institute of Architects, to the effect that, although this was the customary charge, it ought to be at least 3 per cent. He drew a distinction between drawings requisite for showing how the designs could be carried into effect as asked for in the clerk's first letter to which we have referred, and the drawings afterwards made by order of the visitors necessary for obtaining tenders in competition: and finally he considered the charge made (1,048*l.* 15s.) fair and proper for the employment specified.

On the 26th November, 1855, the arbitrator made his award, and found that the amount due to the architects beyond the premium of 157*l.* 10s. previously paid was 498*l.* 16s. making together 656*l.* 6s.; and he directed that if the action was maintainable against the clerk, that then he should pay all the costs (taxed) of the suit of the arbitration and award. That if not, then both parties were to bear equally the expenses of the reference and award. The committee raised the question at law, that their clerk was not liable; that though they might owe the architects money, they had no fund or money to pay them with, and that by law the architects had no remedy against them individually or collectively, or against their clerk. On this question the arbitrator, by mutual consent, drew up a special case, to be argued before the Judges, the real question being, *by what form of proceeding, and against what parties the above-named sum could be recovered.*

On the 29th ult. the case was argued by counsel on both sides in the Court of Common Pleas.

Chief Justice Jervis said—This is a very important, and in some measure a difficult case. I and my learned brothers have, since the last hearing, given it our best consideration; and though I am not free from doubt, yet I think that the plaintiffs are entitled to a judgment. Looking at the Act of Parliament, I think that the legislature intended that the Visitors should be a body with power to act on behalf of the county, to select designs, and enter into contracts, subject to the approval of the magistrates assembled in Sessions, and finally, that of the Secretary of State. It would appear that in the first place the Visitors applied for plans, and agreed to pay the sum of 150 guineas to the successful competitor, on condition that, if the plan selected as the best were eventually carried out, it should not be paid for, but be taken as paid for in the sum paid for the erection of the building. Plans were sent in, and that of the plaintiffs was selected: and so far the proceedings were in accordance with the 17th section of the Act. It is my opinion that the Visitors were acting strictly within the scope of their authority: the legislature contemplated that they should have power to superintend the erection of the building, or to buy or lease one, so that it is clear that they had power to enter into contracts: they did enter into a contract, and the question now is whether it could be enforced. Now, the legislature never intended that public officers should be personally liable, and so by the sixteenth section provided that they should sue and be sued by their clerk. I think that was only in order to afford an easy mode of doing that which they were liable to without. The next question is, are they liable for the work done in addition to the supply of the original plan? I think that they are; for, if they had power to make a contract for the building, they had power to order specifications and working drawings: they did order them, and the question now is, whether the plaintiffs have a right to be paid for their work and labour done. I think they have, and my judgment therefore goes for the plaintiffs on both points.

Mr. Justice Cresswell, Mr. Justice Williams, and Mr. Justice Crowder fully coincided with the Chief Justice, and a verdict was recorded for the plaintiffs.

The conduct of the Committee of Visitors of Cambridgeshire, Isle of Ely, and borough of Cambridge, in this affair, needs no comment from us. Messrs. Kendall, Cope, and Edlin, have achieved a useful victory, though in a pecuniary point of view their personal profit will probably be small.

MR. PETIT'S LECTURE.

THE PRESENT MOVEMENT.

I WAS prevented from hearing Mr. Petit's lecture on "Utilitarianism in Architecture," and knew it only from the report you have given, which I presume to be a pretty full one. With nearly all which is really on the subject he puts forth as his title I most cordially agree. His remarks are replete with good sense, and rich in useful practical hints, as indeed are all Mr. Petit's writings.

It is almost idle to state on what point I differ from him. There are, as every one knows, two parties among those who give attention to architecture at the present day—those who favour, and those who oppose, the revival of Gothic, as distinguished from Classic architecture; and the mere statement of which side different individuals chance to take, is as unimportant as it is uninteresting; and in the present instance, it is of so little consequence to your readers whether Mr. Petit happens to think one way and I another, that I must really apologize for intruding upon them with apparently so very little to say; for *de gustibus non est disputandum;* and really all which Mr. Petit and a hundred others have to say on one side, or those who think differently say on the other, amounts in the end to little more than registering our individual votes on our several sides. Of course, every one has something to say about his opinion, but as matters of taste depend not on *argument*, but on *feeling*, we never practically get beyond the simple registration of our suffrages.

If Mr. Petit takes more interest in a railway shed than in the best modern churches, or if I happen to feel more interest in the revival he repudiates than in works of infinitely greater pretension of the style of the last two centuries, no statement of our reasons will influence either of us, or perhaps any one else. Still, however, it may be well, if only for form's sake, to state one's dissent, as well as one's regret, at not having on our side a man for whom personally, as well as for his remarkable talents, I feel so strong a regard as Mr. Petit.

Mr. Petit, as all the world knows, published in 1841 a delightful book on Church Architecture. In that book he did not, it is true, express himself strongly as to the probable success of our revival then recently commenced; but the express object of his book was to promote it. Throughout the whole of the book he seems to take it for granted that our future churches will be Gothic. He accordingly urges strongly the study of our ancient buildings, points out their excellences, and presses the revival of their spirit.

"The builder of churches," he says, "ought to make observations on the most extensive scale, to collect examples from other countries, and to look upon those of his own not as inconvenient old fabrics, which he may one day have to enlarge or rebuild, but as models of grace and dignity, from which he may gain much instruction. He should measure most accurately both the lines and angles of many humble and unpretending structures, which the antiquary and even the artist disdains to notice. He will thus learn, not to imitate, but to invent, perhaps to mark the period of his labours by a style distinguished from that of his ancestors, otherwise than by its meagreness and deformity."

Let it not, however, be said, that he raised his expectations high, and that fifteen years' experience has disappointed them. He did *not* do so. Let us hear him again.

"But, above all, let the architect himself be prepared to sacrifice much. Let him not grudge his time and labour to a task of which he cannot hope to reap the honour and profit: let him be content to lay the foundations of an edifice which a future generation shall see completed; to toil for the recovery of hidden principles and lost harmonies which the master-spirit of a succeeding age may awaken into life and perfection;—or else let him not seek to be entrusted with the humblest edifice dedicated to the service of the Almighty. To this self-devotion we owe the monuments of ancient piety: their builders were not led by ambition,—they sought not, and received not, the rewards of personal fame. Few of their names are known, while their works are the admiration of posterity."

Now, what can this mean but that the architects engaged in the Gothic revival were not to expect in their own day the honours of success, and that they were nevertheless not to allow themselves to be discouraged by apparent failure? That, like the husbandman, who "waits for the precious fruit of the earth, and hath long patience for it," we should also be patient, though we may see no fruit in our own day; and "be content to lay the *foundations* of an edifice which a future generation shall see completed."

How does the sentiment—noble as it was just—accord with his present statement,—"I now feel that if genius, talent, or knowledge could have ensured success, the revival would have been already complete?"

They can only be reconciled by placing the writer in the long catalogue of those who preach what they do not practise, and who utterly fail in the exercise of the patience which they enjoin upon others!

Instead of a whole generation which Mr. Petit stated, in 1841, to be likely to elapse before seeing the fruit of our labours, fifteen years' only have passed;—some, alas, of our band have fallen early victims of too anxious labour,—but those who were young when Mr. Petit exhorted them to patience are still but in middle age; and many, whose boyish zeal was stirred up by the works of Mr. Petit and others, are but now commencing an enthusiastic and honourable course of active exertion. I would then ask any dispassionate observer, whether the progress made since Mr. Petit first wrote, has been so disproportioned to that which he led us to expect *in an entire* "*age*," as to warrant his breach of the patience which he urged upon others, and his conclusion that the success of the endeavours he so eloquently encouraged may now be deemed hopeless? I do not hesitate to say, that the *very contrary* has been the case. The progress, though slow, as Mr. Petit warned us to expect, has been sure and substantial, and in my opinion, with all its drawbacks, such as would have astonished us in 1841, had we been able to foresee it.

Architects must not be considered to be free agents: they are not allowed to advance as they would wish: they have in many instances to fight almost every step: unreasonable employers; non-employers whose patronage they might have justly expected; those who oppose their movement; and ill-natured critics among those who favour it; the disquietude of the age, which denies them time for study; and the coldness of all around them which "checks the genial current of the soul," are all so many daily and hourly clogs upon rapid progress. I do not hesitate to say, that no set of men possess so much enthusiasm as the Gothic revivers. They work from real and deeply-seated love, and every hindrance and every chill gives them deep pain. They have little patience with themselves, but they merit all the patience from others which Mr. Petit urged, but himself denies.

Mr. Petit himself, in 1841, says of the architect:—

"Can we say that he has generally met with that support and encouragement which he has a right to demand; and which being withheld, we cannot look for those efforts on his part that will secure excellence? I do not speak merely of pecuniary reward: this is the last inducement which will influence a man of genius, even working for his subsistence. But do we give him that encouragement which can only be afforded by a due appreciation of his works, by discriminating praise, by fair and candid criticism, by congeniality of taste and feeling? Does he not in most cases stand alone, or supported only by such assistance as he would most willingly dispense with?"

In spite, however, of all hindrances, I do assert that we have made great and signal progress. It is quite true that the country is studded with churches, the majority of which scarcely reach mediocrity; but this is only parallel to what is the case in other styles. The system of the day places the majority of works, in whatever style, in the hands, not of the small band of architects who follow their profession as an *art* to which every feeling of their hearts is devoted, but in those of the many who follow it as a *trade*. And I speak advisedly when I say, that not one church in five is placed in the hands of those who care a jot about the success of the revival. As one of the examiners for the Church-building Society, I can assert that a large majority of the new churches are designed by persons who have given no attention to the subject—persons employed through local interest, through competition, and through the utter ignorance of the employers; while young architects of undoubted talent, and having both knowledge, skill, and enthusiastic zeal, go unemployed because they will not stoop to the arts which the public seem to consider the necessary passport to their favours. It is no wonder that the works of such men cause our movement to be regarded as a mere fashion; but, happily, there remains a firm band who work from no such motive, but from pure and earnest love and devotion; and I cannot but feel confident that labour which proceeds from such feelings will eventually be successful, though even that may stand in need of the patience so eloquently preached, but so little practised by my friend Mr. Petit.

With all its disadvantages, however, and its partial failures, I challenge the history of art to show in any fifteen years such a revolution as has been effected in church architecture between the years 1840 and 1855. What we have done is open to all kinds of criticism, and we see our faults and weaknesses too clearly to allow us to object to their being pointed out by others; but with all our failures we have worked a vast and signal revolution; and, which is much more important, we are prepared and determined to carry it on to its ultimate consequences, and to develope the style which we have thus far revived into *one of our own*, independent of precedent and of antiquarianism.

Mr. Petit, fifteen years back, spoke in terms of praise of a church then recently built in Staffordshire. A friend of mine, who stands very high in our profession, was lately referred to this by an admirer of Mr. Petit's works, and actually took a journey to see it, when he found it so utterly bad as to be beneath all criticism. I mention this, not in disparagement of Mr. Petit's judgment, but to show the progress which has converted what he then praised into an object almost beneath contempt. Mr. Petit has, since that, honoured one of my own churches in the same way, yet this church would now fail of being admitted as a favourable exponent of our progress. The same result will ever be found by comparing parallel works of a few years back with those of the present time. It is true that the same architect may fluctuate; but compare fairly the works of those who are in earnest in our revival, and you will find them to display unequivocal signs of a regularly progressive advance. We may wish that this advance were quicker, but its existence, on Mr. Petit's own showing, is sufficient to encourage us to patient perseverance,—not to mention that it is to our movement that we mainly owe the growing appreciation of "Utilitarianism in Architecture;" of the great principle of making utility and construction conduce to beauty; and the exposure and repudiation of the degrading system of shamming and deception which was eating away the very vitals of our art.

The great weakness of modern art is the *inconstancy* of the public taste,—and I can conceive of nothing more injurious than the course followed by Mr. Petit, of first fostering a great movement by a series of publications eminently calculated to promote it; and, when it has so thoroughly taken root as (in its own department) to have driven all competitors out of the field, and placed itself in a position to commence a healthy course of development such as can alone make it a genuine offspring of our age, to turn suddenly round and throw cold water on the entire movement! It is this waywardness and fickleness of taste which makes architecture contemptible. People follow one style as the great panacea till they chance to visit a country they have not before seen, and come home filled with new notions, which they urge upon others till they happen to make another tour, which pushes the last idol from its pedestal, and enshrines a new one, only in its turn to be overthrown. This frivolity and unsteadiness of aim will destroy success in anything. It is only those who fix their aim steadily on one object, and make whatever else they meet with contribute its quota towards its accomplishment, who have a chance of ultimate success.

The fact, however, is, not that *we* have failed, but that *Mr. Petit's* views have changed. He may be unconscious both of the fact and of its causes, but others can pretty readily appreciate both; and Mr. Petit will perhaps pardon me if I give a rough guess at the latter.

Though a clergyman, Mr. Petit's tastes (so far as they bear upon architecture) are rather artistic than ecclesiastical. Many, on the other hand, who have promoted our movement, have been rather ecclesiastical than artistic in their views; and, as is usual with all zealous persons, have been guilty of many exaggerations, and not a few frivolities. Mr. Petit's turn of mind is eminently one to rebel against such eccentricities, and would lead him to attribute to the whole movement what is in fact the mere boiling over of undue warmth and unrestrained enthusiasm. Again: those who have taken the more ecclesiastical view have not received Mr. Petit's works so kindly as they deserved. They were too purely æsthetical for them, and were not warmly responded to. This, though Mr. Petit's kindly feelings render him incapable of bitterness, would increase the coldness between him and the party in question. Then, again, he would see in the criticisms of that party much waywardness, and not a little unjust partiality, against which his natural sense of justice would rebel, and which would tend to convert coldness into something bordering upon hostility. To crown all, he would see this sweeping criticism especially directed against one of his most intimate friends, Mr. Winston—a man whose temperament was less calculated to bear quietly with it than his own. Mr. Winston's services to our revival have been of the most important character, but his feelings have clearly been so warped by the criticism he has received that he has almost been converted into an opponent of the entire movement, and can scarcely restrain himself from converting his valuable lectures on stained glass into mere philippics upon the Camden Society; while every one who knows him and Mr. Petit is well aware of the influence which this has had upon the kind and generous feelings of the latter gentleman. Thus prepared by a gradual process to fall off from us, Mr. Petit has revisited Italy, and (with the eye of an artist) seeing beauties in what he once viewed as "a miserable display of wasted labour," he now finds the elements of some imaginary future development, where once his mind "dwelt with pain upon the professed abandonment of those principles by which alone art can be advanced, or preserved from falling into decay."

Mr. Petit's list of failings in Gothic architecture do not appear to me to need much remark, being merely attempts to excuse his own change of opinion.

If many Gothic buildings have mouldings of too great a depth, others are not moulded at all, and he has shown us that some French examples with plain bold mouldings look the best. Surely, then, this fault is not essential to the style! Nor do I believe that the decay of our mediæval buildings is owing to an excess of moulding. It simply results from the humidity of our climate, and the inferiority of much of our stone. Where the stone is bad, we find the plain ashlar gone as well as the mouldings, and where good stone is used, the ornamental features are often as well preserved as the ashlar. Classic details are as little proof against decay as Gothic. Where do we see a more shapeless mass of hopeless rottenness than All Saints' Church at Oxford, built in the Palladian style at the time of Queen Anne? Are the Peckwater buildings, the Clarendon, and the theatre in the same city, better preserved than Gothic buildings of twice their age? And has not the exterior of Inigo Jones's Banqueting-house been wholly renewed in our own day? The only thing which makes Sir Christopher Wren's buildings other than masses of decay, is the happy introduction in his time of Portland stone. The constant reparations of French cathedrals proceeds far less from the actual decay of their material than from the rage for freshness of surface which unhappily prevails so strongly in that country.

It is quite true, that where any special weight is to be carried, the form of the arch should be proportioned to its load. The pointed arch carries greater weight, and has less outward pressure than the semi-circle; but still there are places where the latter may be theoretically better, though, for my own part, while I have severely suffered from the tendency of the round arch to spread laterally, I have never yet experienced the tendency of the pointed one to rise in the centre. The one is a practical fault which any one will find if he does not look well to his abutments: the other is little more than an imaginary imperfection. The great superiority of the pointed over the round arch is that the former may be made of every conceivable degree of lowness or height which its use or position may dictate, while the latter is the same under all circumstances; and even if we throw the segmental arch into its scale, all we can say is, that it may be of any height not exceeding half its span, while the pointed arch may be of any height you please. But if this argument does not claim for it the preference, Gothic architecture puts in another claim, viz. that of freely admitting not only every kind of pointed arch, but also (as Mr. Petit has himself shown) the semi-circle and the segment, uniting in itself all kinds of arches which are founded on the circle, and not, that I know of, excluding any other form.

The question of how far it is legitimate for ornament to imitate constructive features, is one well worthy of a careful and philosophical investigation. I think there should be limits to this; and, if the old Gothic builders carried it to excess, it is a point offering us a fair opportunity in which to improve upon their practice and develope for ourselves.

The objection, on the ground of an imperfection (real or imaginary) in one pattern or tracery, appears to me almost puerile. Surely Gothic architecture does not hang upon the mathematical exactness with which a circle will stand upon two arches! With good management the objection vanishes, as the width of the tracery-bar fills up the notch complained of. No one has had much to do with architecture without knowing that little mathematical inaccuracies beset him in every style, which it is a part of his art so far to abate as to render them inoffensive.

The objection to that concentration of pressure which gives buttresses a functional predominance over walls, certainly, if an objection at all, does not apply to the majority of churches which we are likely to build, and which are devoid of vaulting. This, or any other principle, may be carried to excess, but *we* are quite safe on that score. I may here be met by Mr. Garbett's argument, that in omitting the vaulting we make our buildings imperfect. This I simply

deny. I grant that a vaulted church is the fullest development of the style; but I hold that a Gothic barn is as good a building in its way as a cathedral. I yesterday visited an abbey barn after spending some hours in a cathedral; and the idea of one being, of its kind, a less perfect building than the other, or less carrying out the principles of its style never so much as occurred to me. Mr Petit's objection to Gothic churches because they cannot compete in height with the gigantic houses which may surround them, seems to me both sophistical and erroneous. It is manifest that *no* ordinary church can compete with some of these overgrown piles; but surely a Gothic church is likely to be higher than any other; and the argument that it will fail the more manifestly from the fact of its making the most of its height, I do not hesitate to pronounce utterly fallacious. The very fact of its differing *in kind* from the lofty houses will diminish their influence upon it. A tall man makes a short man look shorter; but he will have no such influence upon creatures of another species. I heartily thank Mr. Petit, however, for his very valuable suggestion of bringing *mass* to bear against height. I shall certainly endeavour to avail myself of it.

I must apologise for the length to which I have extended my remarks. I have no hope of shaking Mr. Petit, or influencing those who agree with him. If he should think it worth while to notice what I have said, though I have no idea what line he would take, I doubt not that he will (as a clever man always can) perfectly satisfy all who already agree with him. My object is rather to prevent his unsettling the minds of those who had embarked in the same course with us. These I exhort not to be shaken by the changes of others, but, having chosen their course, to pursue it with patience and determination. I doubt whether, if Mr. Petit had the least idea of the enthusiasm and earnest zeal which exists on our side, and how completely it is with us a matter of heart and of love, and how little one of mere fashion, he would not, even now, throw the weight of his influence and knowledge into our scale, and assist us in getting over the difficulties, and in avoiding the imperfections, which he perceives, rather than attempt to quash a movement which, for unity of purpose and heartiness in the pursuit of it, has no parallel in the history of modern art.

Geo. Gilbert Scott.*

FOREIGN ART AND SCIENCE NEWS.

Rome.—Restorations.—The Loggia in the castle of the Vatican Palace, whose stucco works and frescoes had much suffered by time, has been completely restored. The majestic porticoes also on the Place before St. Peter's Dome, in the midst of which stands the obelisk of Caligula, have been restored. Especially the 162 saints and founders of monastic orders, who stand on the balustrade which runs around the roof and its galleries towards the Place before St. Peter's, are now restituted to their original condition.

The New Rhine Bridge at Cologne. — The Building Privy Councillor, M. Anders; the director of river constructions, M. Nobling; inspector of the Rhine navigation, M. Britzke; and the water architect (Wasser-Baumeister) M. Crewes, have inspected the terrain destined for the above huge structure, about the suitability of which doubts had arisen. The commission, however, confirmed the first plan.

A Novel Science.—The researches and results of the Abbé Paramell, to discover sources of water in every soil, have been long known. Now, M. P. has brought his doctrine into a perfect shape, and has published his work under the title, "L'Art de découvrir les Sources."

Florence.—The Amazon Shield.—This important work of mediæval sculpture has caused much controversy of late, men like Cornelius having taken part in the dispute. The following is its history. Through the chances of a general ransacking of all the collections of Europe, this costly shield had been sent with other plate to a Jew at Cologne. One of the persons who saw it by accident, was the painter Osterwald, who, understanding its value, induced his brother (a dealer in art-objects) to buy it. Hence the fame of the Amazon shield became spread over Germany, and Osterwald made a lithograph of it in its natural size. Cornelius, when passing through Cologne, saw it, and recommended the king to purchase it for the Berlin Museum. The king, on seeing it, said smilingly, that "he was not rich enough to purchase it." The King of Hanover also entered into negociations; but out of delicacy awaited the decision of the king, who finally bought it. Besides the lithograph, a galvanoplastic *fac-simile* in silver had been made of the shield, at the Sayner works, and it was one of those specimens which was presented by the Duchess of Sutherland to the members of the Cologne *Gesang-Verein*. It has been much debated whether this shield is by the hand of Benvenuto Cellini: on comparing it with the many works of that master in the Ducal Collection of Florence, some doubt may be entertained thereon. Still the work belongs to the best Italian period and style. It is worthy of remark that a shield of similar character was designed by Cornelius, executed by the first silversmiths of Berlin, and is now to be seen at Windsor Castle.

SIR ARCHIBALD ALISON ON ARCHITECTURE.

At a recent meeting of the Architectural Institute of Scotland, held in Glasgow, Sir Archibald Alison made an address, of which we now give an outline.

It had often occurred to him, the speaker said, on walking over their city and attending to the prodigious increase of architectural ornament, that they were deeply indebted to the Architectural and other similar Institutes in different parts of the country, which had spread so far the taste for ornament of this description, and led to so large a proportion of the surplus wealth of the country being employed on works of architectural ornament and utility. If any city in the world was called upon to devote a large portion of its surplus wealth to such works, it was Glasgow, which at once possessed the wealth that was absolutely necessary, and also the durable stone which rendered the works almost immortal. They had only to look at the Cathedral, which had stood for 600 or 700 years, to see that a building of such material once erected was destined to elevate the minds of men through many centuries. In surveying the various edifices which had been raised in this and other cities of the empire of late years, all must have been struck with one observation, that while in them all we perceived a great striving after excellence, there was a great difference in the degree to which that excellence was attained. Now, he believed, the great object was to see what was the *principle* upon which each style should be founded, and thus discover both what was the leading principle which each style should bring out, and by what way. By a violation of that principle the most costly efforts proved unsuccessful. If we looked back to the history of architecture, we should find there was a leading principle in all the different styles of architecture which had existed from the earliest times, and in different nations, and that perfection was to be attained in each only by following out the principle upon which the style was originally formed. The earliest works extant were the Egyptian, and the principle of the Egyptian architecture was the cavern. The Greek architecture was perfectly different. Its principle was the principle of the beam, obviously imitations of temples of wood, with no imitation in any part of the cavern or of the rock. Accordingly the Doric architecture, which was the earliest style, contained exactly the large straight trunk of a tree, with some chiselling down at the side. The principle of Greek architecture was, strictly speaking, one story only, and that with straight lines. The principle of the arch was foreign to Greek architecture. It was to be found in the *cloacæ*, but there was no example of it in the edifices. It followed from this that the ornaments of the Greek architecture were such as might be expected in imitations of wood. The roof was supported by two beams meeting on the top, and the triglyphs were the ends of those beams projecting at the side. The Romans introduced the arch, and in addition to that, the laying of one tier of building above another. They introduced the different stories. The Coliseum exhibited three different orders of architecture—the Doric, the Ionic, and the Corinthian, above each other, each perfect in itself, and each the order of a separate story. The orders were the same as the Greek, but they introduced an arch between the columns, and put the Doric below, the Ionic in the middle, and the Corinthian on the top. The reason was, that in a city of such magnitude as Rome, ground was of such value that they could not afford to spread out their edifices as the Greeks did, or as was done at Pompeii, where there were no edifices higher than that room. The Gothic architecture was neither an imitation of the Roman, Grecian, nor Egyptian; but its principle was the imitation in stone of willow rods. No one could look at a Gothic cathedral without seeing that the ornaments, down to the minutest description, were all imitations of willow rods. It resulted from that, that the roof of the Gothic architecture must be entirely different from that of either the Roman, Egyptian, or Grecian. The Gothic architecture necessarily involved a lofty roof to close in those arches formed by binding the willows together. There was another style of architecture not much known in this country, but which prevailed more widely than any other, and that was the Saracenic, and the principle of that architecture was the tent. Now, he suspected, as these were the obvious principles of the different styles of architecture, the cause of failure was not attending properly to the principle upon which each style was formed. He apprehended the Greek architecture was the one, of all others, best adapted to public edifices, where we only required a single room. (For a church, the Gothic architecture was the one peculiarly adapted.) The Parthenon, the temples of Theseus and Ægisthus, were so many models of perfection that would never be exceeded in edifices of that sort. Accordingly, this style had been attempted in our own country with eminent success. He never saw the buildings on the Mound, at Edinburgh, without thinking how admirably adapted the Greek style was for a single room. There was another style required in cities—the architecture of what we call tenements. For that it had been his decided opinion for many years that no style was better adapted than the Roman, as carried out in the Coliseum and the buildings of Venice. Each story should have its own appropriate ornament: there should be a bar between each story with the ornaments appropriate to its style. But where this style of architecture was adopted we must have the upper story the highest, and a flat roof, and nothing but a balustrade on the top, for a roof on the top of this style was inconsistent with its style, and never failed to injure, if not destroy the effect. The principle of houses in the country was quite different. There, there was no pressure for room. If a man were to build a Palladian front in the country, every one would see the impropriety of it, subjecting the inhabitants to the inconvenience of going up stairs. For country houses the proper style was either the Abbey-Gothic style, or it was the Grecian style with open colonnades. But if we came to have Grecian columns in the outside of a building, it was necessary that the columns should be entire columns, and should be in front of the edifice, and cover a certain space, being the colonnade intended to afford a walk sheltered from the sun in warm climates. They should not be ¾ columns applied to the building. This style was taken from the habit in warm climates of having a space sheltered from the sun and the rain. If we had the columns in front of the edifice, then we had a shade between the columns, which gave the effect of Greek architecture; whereas, if they were applied to the building, then they gave no shade at all, and there was no use of them. He would here mention, in particular, as the finest existing specimen of this style, the famous colonnade of the Louvre. The Madeleine and all the public edifices of Paris had these colonnades. How beautiful was the effect of the colonnade at Hamilton Palace! It was quite suitable, in connection with them, to have pilasters at the side, corresponding with the style. In regard to the Elizabethan style of architecture, so much used in the country, no style was better adapted for edifices of that sort, and it was great matter of congratulation that so many buildings of that kind were going up in every part of the country. The principle being irregularity, any one addition did not disfigure the symmetry of the building, but rather the opposite. In regard to the Gothic architecture, there were two

* In my notice (in your last number but one) of the accidental errors in Mr Petit's remarks on the abbey kitchen at Poole vault, I was, as Mr. Petit says, under some misapprehension from not knowing when I wrote that he had illustrated them with sections, &c. which I learned after I had sent you my remarks I am not aware, however, that this led to any error, beyond my saying that no allusion had been made to the pyramidal roof for which I beg to apologise. The points which I wished to correct, viz. that the building was a kitchen, not a chapel; that the apses are on the side of the octagon rather than at a side, and that there was no difficulty in somewhat complex construction, are not affected by it; and as these all bear upon the utilitarian qualities of the structure, I thought it might be well to point them out, though the subject is of little importance. I regret that Mr. Petit's paper should be thought long. I must, however, add in self-defence, that the question of the merit on of these apses is "not merely one of words," as, with the exception of external appearance, the evils of one arrangement are avoided, and the advantages of the other attained; and Mr. P. will find that he referred to construction, stability, and convenience, as well as appearance. What I wished to point out was, that the complexity of the construction (which I dare say was needless) did not arise from any misplacement of the apses, they being placed as Mr. Petit stated that they ought to be. J. G. S

most important observations to be made. It was the very reverse of the Grecian. The roof was not only an improvement, but a necessary part. It was as great a deformity in it not to have a roof as in the Grecian architecture to see one at all, because the principle in the Gothic was to have high columns going up, terminating in a lofty aisle. Of course, the aisle must be covered on the outside, and we must use the roof; and the higher the roof the more beautiful the building. The freemasons who built these cathedrals possessed architectural taste in no ordinary degree. They put flying buttresses and pinnacles, which concealed the uniformity of the slate or stone roof, and made it an additional beauty instead of a deformity to the edifice. In regard to the sides of the building, the Gothic architecture was a style in which the ornaments, being the imitation of the willow-wands, must be very minute, exquisitely beautiful when seen near, but invisible at a distance of 200 yards. But the Gothic architects, being aware their ornaments could produce no effect at a distance, constructed the building itself in the form of a cross, the effect of which was, that the light of the sun, wherever it fell, was sure to throw a great mass of shade beside it; and thus, in the language of Scott—

"Buttress and buttress alternately
Seemed formed of ebon and ivory."

And, let it be seen at the distance of fifty miles, it was still a most impressive object. Any person going to Westminster-bridge, and looking at the front of the Houses of Parliament, though above a million sterling had been laid out on them, would see that the effect of the front to the river below the roof was a decided failure, for want of the cross part of the edifice, or lateral chapels or flying buttresses. These were not wanted in the Grecian style. A row of columns, 60 feet in the shaft, would be a most magnificent sight. The shadow between them would of itself charm the eye at any distance. If the Temple of Diana at Ephesus were, by Aladdin's lamp, removed to that place, everybody would be fascinated by the spectacle. In the Cathedral of Cologne, where there were plenty of projecting parts, there every one would see the success of the principle. Great also is the effect derivable from statues upon grand pedestals, and also from public fountains. He needed not tell the meeting what was the effect of fine statues. A statue, independently of its own beauty, formed a foreground, and added immensely to the beauty of the adjacent building. A traveller to Munich, Parma, or Berlin, found a statue in the vicinity of every public building. The fountains in Trafalgar-square had often been laughed at, but if not perfection, they are at least a step in the right direction. They are not so fine as those in front of St. Peter's at Rome, but he wished we had some more of them. But if any person doubted the effect of these fountains, he had only to go to Sydenham and see the fountains at the Crystal Palace, which, in point of beauty and height, far exceeded any he ever saw on the continent. They were 100 feet higher than those at St. Cloud, and also higher than those at Versailles. What would it be if we had such fountains playing up in the centres of all our great squares, and then flowing down in all directions in granite conduits, diffusing health, coolness, and cleanliness in every direction!

THE BRITISH INSTITUTION.

IT is much more pleasant to praise than to find fault; but, as the truth must be told, the present exhibition of modern works of art in the gallery of the British Institution is not a good one. It contains a number of quite worthless pictures, and very few works of great merit. The two pictures of highest class are Sir George Hayter's "Martyrdom of Ridley and Latimer" (No. 60), and Mr. Louis Haghe's "Choir of the Church of Santa Maria Novella, Florence (148); but neither of these will do much to advance the reputation of the painters. The first is disfigured by a heavy, untruthful sky (as if after the burning, by the way, rather than before it), and general feebleness; and the second, although painted in parts with great power, is wanting in sentiment and feeling, to say nothing of the doubtful perspective of the right side of the apartment, and is altogether inferior to those fine works in water-colour which have made Mr. Haghe's name famous. Mr. Ansdell exhibits an excellent specimen of his art, called "Severe Weather" (16), in which the rams, life-size, are wonderfully well painted. Mr. Buckner's "Roman Piper" (177), and some of his other pictures; "The Cradle," by Deane (74); "Little Gretchen," by H. Le Jeune (246); Mr. Hardy's "Dinner-Time" (402), and "An Interior" (491); and "Maternal Love," by G. E. Hicks (395), are very charming pictures. "The Ptarmigan's Haunt" (339) by J. Wolf, is a remarkable work, painted with minute care in the details, and yet not wanting in general effect. Mr. Dearle has several very clever small landscapes, which should be looked at; and in this department, indeed, there is no lack of excellence. We may especially mention "A Scene suggested by the Death of Pompey" (184), by T. Danby; "Winter Evening" (204), by C. Branwhite; "Dunolly Castle" (432) by J. Danby; "Squally Weather off Dover" (520), by John Wilson; and H. J. Boddington's "Close of a Summer-Day" (533). Lance has one of his marvellous representations of fruit (42); and Miss Mutrie's Azaleas (22), and Magnolia (91), will delight all who love flowers.

PROVINCIAL NEWS.

Chesterton (*Staffordshire*). — New national schools have been opened beside the new church and parsonage in the centre of this village. The schools were erected after designs furnished by Messrs. Ward, of Hanley. They comprise the main school, a room 65 feet by 18 feet, infant school, 35 feet by 21 feet, and two class-rooms, containing galleries. Connected with the girls' school are industrial buildings (not yet completed), where the elder girls will have the opportunity of learning household work—such as washing and getting up linen, cooking, &c. There is also a master's house, not yet completed. The schools are so planned that the whole of the area can be thrown together for purposes of a public meeting, lecture, or concert. An effect is produced in the main school by an arrangement of common blue and red quarries round the room to the height of 4 or 5 feet, with a few of Minton's tiles introduced, a gift from that gentleman. The builder is Mr. Booth, of Lawton.

Wells.—Several new buildings are to be shortly erected in or near this city. Besides a new church in the east part of the town, there will be a new banking-house in high-street, and a new paper-mill of some extent at Wookey Hole.

Liverpool.—This thriving town is ever on the change with building improvements. "Almost every week," says the local *Times*, "it is our pleasing duty to record the downfall of old habitations to make way for the erection of handsome new buildings. These spirited endeavours to improve our street architecture have been mostly effected in the immediate neighbourhood of the Exchange, and, in the majority of cases, by private individuals. Water-street, Brunswick-street, Oldhall-street, and Dale-street have been, and are, undergoing the greatest changes. The lamentations of our contemporary, *The Builder*, over the cheap spirit of the age, which tempts people to try for how low a sum they can have a pile erected—with high architectural pretensions—does not apply to the recently-erected commercial chambers in this town, which possess, in an eminent degree, the four principal requisites,—strength, beauty, durability, and comfort. Many of them are fronted with stone, while the others are generally of red brick and stone dressings." Public improvements also progress apace. The pile of buildings on the south side of Dale-street, as well as those in High-street, are rapidly falling beneath the workmen's hands; and on the north side of Dale-street, from the old Gas-office to Hatton-garden, the shopkeepers are "selling off" previous to the razing of their premises to make way for the erection of new police-offices. In Brunswick-street, Oldhall-street, and Water-street piles of building are rising, and the note of preparation is heard in other parts of the town. This season promises to be a good one for all branches of trade connected with building. The local *Journal* states that the ground near the Town-hall purchased by the London Fire and Life Assurance Company for the offices, for themselves and others, which Professor Cockerell has designed, is said to have cost the purchasers altogether about 70,000*l.* or an average of over 50*l.* the square yard, some portion of it (corner of Dale-street and Exchange-street East) 70*l.* The old materials or buildings were sold week before last by auction to Mr. Williams, builder, for about 520*l.* the lots averaging 130*l.* each. The buildings are said to be in good condition. They are to be cleared away by the 20th March.

Salford.—The new day-schools which have been erected in connection with St. Simon's Church, were opened on Tuesday in last week. There are large rooms for boys and girls, and a lesser one for infants. The total cost has been about 2,200*l.* of which about 190*l.* have yet to be raised. The cost of land was 389*l.*; contract for building, 1,500*l.*; architect's bill, 100*l.*

Rosedale (*Yorkshire*). — Messrs. Peters and Co. of Newcastle, proprietors of ironstone, have let a contract to Messrs. Forster and Lawton, builders and contractors, Sunderland, to construct a tidal dock at Rosedale, between Staiths and Whitby. The dock will be about three acres in extent.

Glasgow. — The new Procurator's Hall is nearly completed. The keystones to the arches of the basement openings are sculptured masks of well-known celebrities of the bench and bar, including Lords Erskine, Mansfield, Brougham, Blair, Stair, Kames, Forbes, Reddie, Millar, Moncreiff, Jeffrey, Cockburn, and Rutherfurd.

THE WELLINGTON COLLEGE.

AMONGST the many honorary and monumental erections of all kinds and degrees of merit that the admiration of his countrymen have raised to the memory of the Duke of Wellington, none has taken the beneficial and permanent form that is proposed to be carried out in the institution which we this week illustrate,—an institution which is the result of voluntary subscriptions entered into under the highest patronage on the occasion of the Great Duke's death,—and which seeks to benefit the living while it honours the illustrious dead.

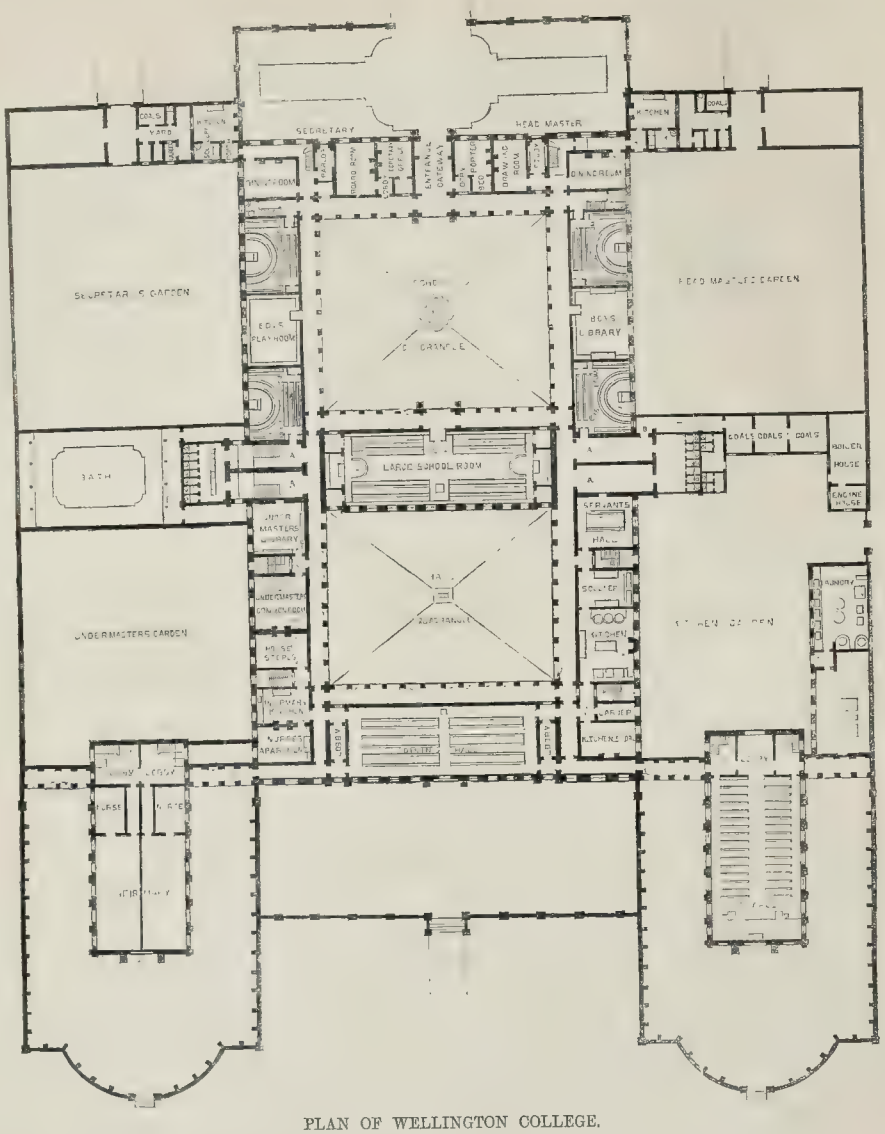
It is intended to devote the college for the education of the orphans of officers of her Majesty's army, and of the army of the Honourable East-India Company: these it is proposed to divide into three classes, admissible at rates of payment varying from 10*l.* to 20*l.* per annum.

The governors having obtained a site, consisting of 132 acres, in the parish of Sandhurst, near the town of Wokingham, in the county of Berks, situate on the Reading and Reigate Railway, and about ten miles from Windsor, requested Mr. John Shaw, of Christ's Hospital, to furnish them with designs, which being submitted to them, gained, we understand, their unqualified approval.

The college, as designed, will consist of two quadrangles, each surrounded by arcades, so as to afford perfect communication under cover. The northern or entrance front, shown in our engraving, contains, right and left of the entrance gateway, the apartments of the head master and the office, board-room, and the apartments of the house-steward. The first, or school quadrangle, has on its north side the buildings specified above; on the south side the great school-room; on the east side are two class-rooms or studies, with the boys' library; and on the west side two other class-rooms, with a boys' day-room. The second quadrangle has the great school-room on the north, and the dining-hall to the south; on the east, the servants' hall, kitchen, scullery, larder, and stores; and on the west, the undermaster's common room and library, with other apartments. The mezzanine in this quadrangle contains on the east side the house matron's apartments and stores; also the sleeping-rooms for the female servants; on the west side are the bed-rooms of the undermasters and those for the men-servants. The two upper floors of the east and west buildings contain dormitories for the pupils, who, to the number of 246, are provided with separate berths, each 10 feet by 7 feet, wherein each has his bed and ample accommodation for clothes, washing, and writing.

The buildings are to be erected of brick, those for the facings being picked of a uniform dark red colour: the dressings of the windows and quoins are to be alternately bright red brick and Box stone: the other ornamental portions, such as strings, &c. are to be of the same stone.

The contract being offered for select competition, resulted in the following tenders for the



PLAN OF WELLINGTON COLLEGE.

erection of the main body of the building, as described above, with all its enclosing walls and detached offices.

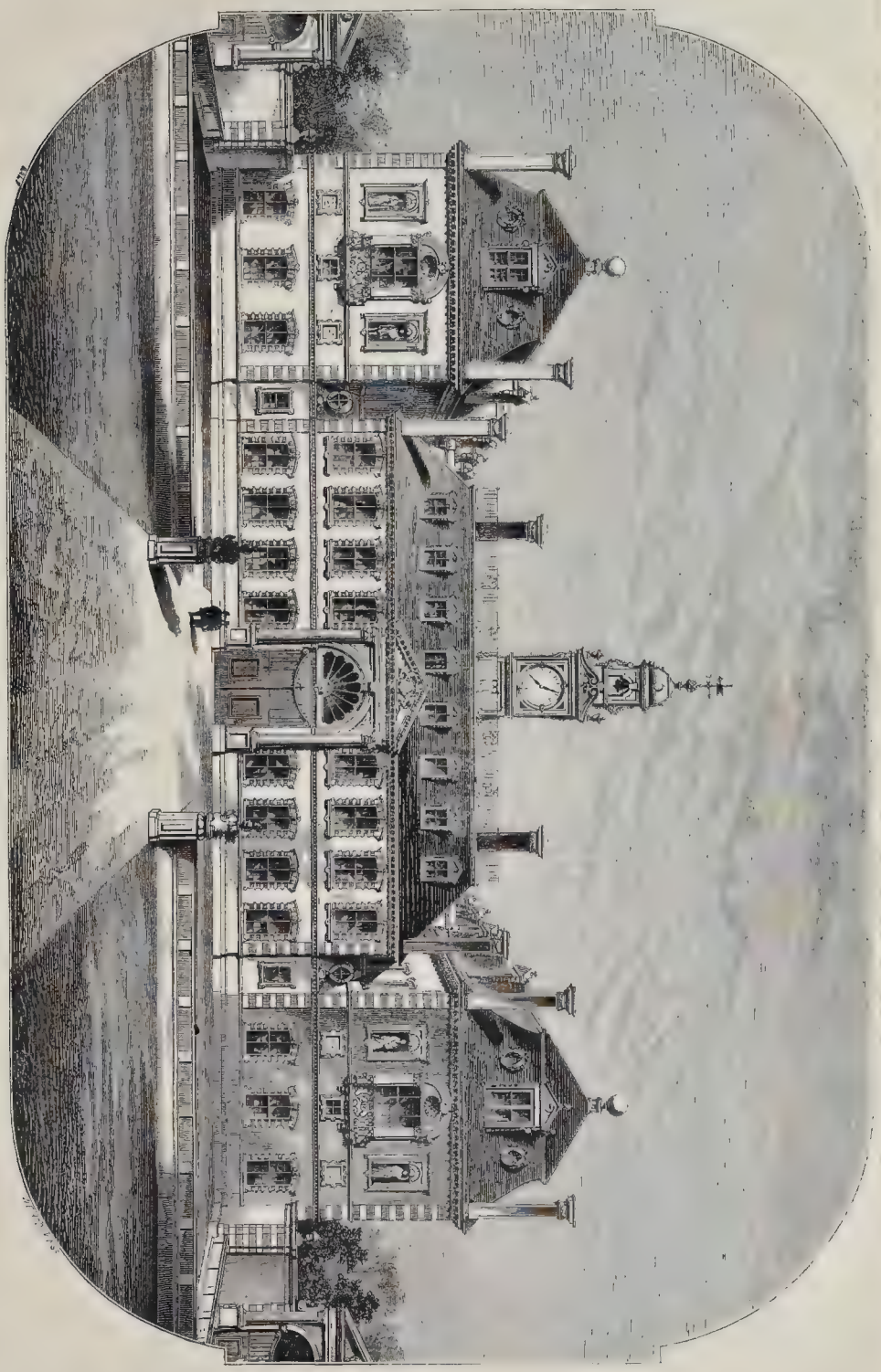
Haward and Nixon	£45,710
Cubitt and Co.	45,125
Piper	43,600
Lucas	42,026
Mansfield and Son	41,175
Locke and Nesham	40,471
Myers	38,127
Pearce and Gurrier	37,810
Kelk	36,865
Holland	36,175

From various causes, the tenders, though received near the middle of last year, and that of the Messrs. Hollands accepted, did not lead to the immediate progress of the works, which were deferred to the commencement of this year, but the builders are now busy on the site, and will soon show the extent of the buildings at present contracted for.

The design contemplates the erection of an infirmary and chapel, in advance of the main south front, but connected with it by arcades. These, however, form no part of the present contract; the funds that are applicable for building purposes not being at present sufficient for embracing the whole design.

The water supply is in the able hands of Messrs. Easton and Amos, and the heating and ventilation in those of the Messrs. Headen, of Trowbridge.

The site is worthy of a few words, having been selected by his Royal Highness Prince Albert, to whose judgment it does credit, being at once elevated, yet sheltered, and having an extended view to the south-west, reaching to Strathfieldsaye, the national gift to its great name-patron. The soil is a sandy gravel, dry, and admirably adapted for the purpose it is to be applied to, while the extent of the estate will afford many points for effective treatment, not the least of which will be the formation of a handsome sheet of water, for which purpose a special quantity of twenty acres were allotted by the prince; thus securing life for the landscape in lieu of a marsh at present existing on that particular spot.



WELLINGTON COLLEGE, SANDHURST.—MR. JOHN SHAW, ARCHITECT.

CHURCH BUILDING NEWS.

Wheatley (*Oxford*).—The foundation-stone of a new church for Wheatley parish was laid by the bishop of the diocese, on Tuesday in week before last. The old edifice had latterly indicated signs of decay, and Mr G. E. Street, the diocesan architect, inspected it, and reported to the effect that there was ground for anxiety as to the state of the building in a few years, if allowed to remain. For this and other reasons it was resolved to erect a new church on another site. Besides the value of the materials of the old church, a sum of nearly 1,500*l.* was raised towards the requisite amount; and the promoters of the undertaking commissioned the architect just named to prepare plans for the work, and entered into a contract with Mr. John Castle, builder, for its completion. The style of the new church will be Decorated. It will be built of stone, and surmounted by a tower and steeple, which, however, will not at present be erected. Its dimensions will be:—nave, 51 feet 4 inches, by 47 feet; chancel, 31 feet by 16 feet; and it will accommodate 412 adults and 99 children—total, 511. It will be dedicated to St. Mary. As the materials of the old church are included in the contract, its demolition has already been commenced. The sum of between 500*l.* and 600*l.* is still required for the building fund.

Barton.—The ancient church of St. Peter's has been enriched with the addition to the chancel of a stained window, representing the Resurrection and Ascension of our Lord. It is the gift of Mrs. Uppleby, of Bardney Hall, in memory of the late vicar, the Rev. George Uppleby. Messrs. Eddie have signified their intention to erect, in the same building, a new organ, in memory of their late father. It is also intended to erect an organ, by subscription, in St. Mary's church. The instrument is now being built by Messrs. Foster and Andrews, of Hull, and will cost about 180*l.*

Whetstone.—For some years past, the tower and spire of Whetstone Church were in a very dilapidated and dangerous condition, but these portions of the edifice are now restored. The architects were Messrs. Parson and Dain, and the builders Messrs. Lindley and Firn. The outlay has been 700*l.*

Thorley.—The ancient church of St. James, Thorley, has recently undergone a process of restoration. The Norman doorway, south entrance, and sedilia, two piscinæ, and an ancient staircase, have been restored, and a five-light east window has been put in. The remainder of the building has been extensively repaired.

Broadwater (*Sussex*).—Another stained glass window has been executed by Messrs. Gibbs, for Broadwater Church, and put up in its place. The work is the gift of Mrs. Ann Thwaytes, of Charman-Dean.

Wells.—The pews in St. Cuthbert's Church are to be altered; and a new church is to be erected in the east part of the town.

Cheltenham.—A serious accident lately occurred at St. Mary's Church, here, by the giving way of a large portion of the ceiling over the reading-desk. Mr. H. Dangerfield, the Borough surveyor, was sent for by the churchwardens to examine the ceiling and roof, and reported the former to be in a very dangerous and insecure state, so much so that it would be absolutely necessary to close the church for some time. The laths were completely rotten, as well as the rafters.

Ludlow.—The ancient glass in the old church of Ludlow is being cleaned and repaired, by Mr. Evans, of Shrewsbury; and two windows are completed. Unfortunately, in the north and south windows but little glass remains perfect: the lights already completed on the north side are St. Barnabas, St. Leonard, St. Appolonia, St. George, St. Catherine, St. Ellena, an English Queen supported by angels, and the Virgin and Child. The work of restoration is proceeding in other parts: the reredos has been restored and enriched with colour by Mrs. Rattee, of Cambridge.

Chester.—Messrs. Gibbs have just obtained in a competition with various others, the contract for an east window to St. Bridget's Church, Chester, to be erected in memory of the late rector of that church.

Stafford.—The consecration of the portion of the cemetry connected with the Church of England, for the parishes of St. Mary and St. Chad, took place on Thursday before last. The cemetery is four acres in extent; but, according to the local *Advertiser*, it is too small. The chapels were originally designed together, but are separately erected. They are built of freestone from neighbouring quarries, the face of the external walls being axed and drafted, and set in small courses. The interior of the chapels is open to the roof. The rafters are framed diagonally. The whole partakes of an Early English character. The registrar's lodge is of brick, with stone dressings, having Gothic-headed windows to harmonize with the chapels. The whole of the works have been erected, at a cost of 1,770*l.* by Mr. C. Espley, from designs and under the superintendence of Mr. C. Trubshaw, of Stafford, architect. The grounds have been planted with ornamental shrubs, under the management of Mr. Sandy.

Batley.—The foundation-stone of a new Congregational Chapel, has been laid here. The chapel will be in the Gothic style, and will accommodate a large congregation, who intend to convert their present chapel into a school building. The designs for the new chapel have been furnished by Mr. M. Sheard, jun., of Batley, architect.

THE CLOCK AT THE HOUSES OF PARLIAMENT.

The proceedings connected with the intended clock at Westminster are not regarded complacently by some of our correspondents: all sorts of unfairness are complained of, but we are not in a position to say that the case is made out. One remarks that "the faces are so arranged (although of immense size) as to be perfectly useless for the purpose of distinguishing the time (even to a person standing in Palace-yard)," and asks "if it be true that the clock is made of cast-iron?" He further complains that the matter is now wholly in the hands of *one* gentleman, Mr. Denison. Another writer says all the English bellfounders have been insulted in connection with this clock, and is surprised they should be so quiet under it. Are we to believe that we are travelling backwards on *all* roads?

CRYSTAL PALACE.

The Directors of the Crystal Palace are about to extend their sphere of operations to the illustration of Art as allied to Manufacture, and with this view have determined upon the foundation of a Ceramic Court as an experiment, which, if attended with success, will be followed by a series that shall eventually represent the productive power of the principal manufactures of England.

With reference to the initiatory step, it would be superfluous to enlarge upon the interest which will attach to a collection of rare and valuable objects, illustrating the beauty and variety of a manufacture with which Art formed so early and intimate an alliance, and which presents, through all its details, a combination of Science and Art without a parallel in the whole range of industrial action. The national importance of our potteries, in a commercial point of view, is not yet thoroughly appreciated. They call into exercise important powers of chemical analysis and mechanical ingenuity, and they develope artistic faculties to an extent and with a fitness certainly unequalled in any other branch of manufacture. The nature and extent of their own commercial resources, for without such a knowledge they can never properly appreciate their national interests.

The proposed exhibition has been confided to the direction of Mr. Thos. Battam, and will contain a large collection of Plastic Art, from the earliest dates of its invention down to the present time.

We understand that the directors have elected Mr. James Fergusson to the office of general manager of the Crystal Palace. Mr. Fergusson is well known to our readers by his various works on the fine arts, and on architecture: what his particular views may be as to the Crystal Palace we do not know, but there is no doubt if he brings his mind to bear upon the subject, advantages will follow. That a *good* manager is needed at the Crystal Palace has too long been evident.

Railways in Ceylon.—A company has been organized for the introduction of railways into Ceylon. Their capital is 1,000,000*l.* in 50,000 shares of 20*l.* each, the first deposit being 1*l.*

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

At the meeting of the Institute on the 28th ult.,—M. Penrose in the chair,—Mr. G. B. Williams was elected as Fellow.*

The discussion on the paper read at the last meeting,—"Remarks on the Forms, Methods of Casting and Ringing of large Bells," was resumed. The evening was chiefly occupied by an address from Mr. E. B. Denison, the substance of which we give below.

The chairman announced the decease of Mr. G. T. Andrews, Fellow, and of Mr. Mountford Nurse.

On Monday evening, the 11th instant, the discussion on the subject of bells was resumed.

The following gentlemen were elected:—Mr. G. Vulliamy, as Fellow; Messrs. H. R. Fricker, G. Low, and F. Warren, as Associates.

MR. E. B. DENISON ON BELLS AND THE MODE OF RINGING THEM.

From various experiments I have come to the conclusion that bells of the common and well-known shape, with a thick lip or soundbow, are the most effective known instruments for producing a loud and musical sound, such as you want when you erect a large public clock, or put up a peal of church bells. And I confess also, that after trying at Messrs. Warners', a number of experiments with bells of the usual general form, but with various deviations in the details, I am equally satisfied that there is nothing to be gained by deviating materially from the established proportions of the best old bells. And I think it is some confirmation of my views to tell you that Professor Wheatstone having been commissioned by the Board of Works, with Sir C. Barry, on his own suggestion, to collect information at the late Paris Exhibition, "respecting the most esteemed chimes in France and Belgium, and whether there are in those countries makers acquainted with the traditions of the art, or who have applied the discoveries of science to the improvement of bells, or to efficient substitutes for them," has come back with the conclusion that no such efficient substitutes have been discovered, nor is there any known improvement on the established mode and materials for casting them. Sir C. Barry and he, indeed, seem to have been rather impressed with the merits of the cast steel bells which you may have seen noticed in the newspapers. I have not heard them myself, but I have heard such decided condemnation of their harshness of sound from other persons of probably more experience in such matters, that I do not the least believe in their being received generally as an efficient (though they may be a cheap) substitute for the more expensive compound of copper and tin; and, on the whole, that seems to be Professor Wheatstone's opinion also.

But although I have thus satisfied myself that the common form and material of large church and clock bells, such as we want at Westminster, are substantially the right ones, there still remains a great deal to do to ascertain the more precise details of form and composition which will produce the best sound out of a given quantity of metal. And here I considered that we had to begin at the beginning, and it is hardly an exaggeration to say, that instead of presuming that anything is right because we now find it in use among the bell-founders, it is rather safer to presume that it is wrong. That there is something very far wrong somewhere in the modern style of casting bells, and especially large bells, is manifest from this—that everybody who has paid any attention to the subject, complains of the lamentable inferiority of modern bells to old ones, and even to bells made in the early part of this century. Let me quote again that same letter of Professor Wheatstone's to the Board of Works, with reference to this subject:—"The very unsatisfactory result of the chimes constructed for the Royal Exchange, which have been twice re-cast, without any ultimate advantage, shows that no known bell-founder in England can be relied

* At the previous meeting the following gentlemen were elected:—Messrs. W. J. Smith and G. Morgan, as Fellows; Messrs. H. Prior, C. Saunders, and J. Edmeston, jun. as Associates.

on." And then he makes the suggestion which I quoted just now. I know perfectly well that the makers of all these three unsuccessful peals of large bells (two of which were cast by Mr. Mears, and the third by Messrs. Taylor, of Loughborough), can produce volumes of testimonials to the excellence of their bells. But I have seen rather too much of testimonials to pay much regard to them, whether they relate to bells, clocks, or morals. To say nothing for the present about the two latter articles, I have heard people describe bells as "very fine," which I would not buy at a penny a pound, except for the purpose of selling again at ninepence. As for the opinion of musicians, as such, I value it rather less than that of other people, because I have always found that the first and almost the only thing they look at, is whether a peal of bells are in tune with each other, the least important part of the business, for two reasons,—first, because if they are out of tune (unless very atrociously), they can be cut into tune; and, secondly, because a set of iron saucepans could be made as perfectly in tune as the finest peal of bells. And with regard to single bells, where the question of tune does not arise, still, unless a man knows by experience what kind of sound a certain weight of bell-metal ought to produce, it is impossible that his judgment can be worth anything on the merits of any particular bell. Most Oxford men believe their Great Tom is a very fine bell, just because it makes a loudish noise, and they have no idea, and cannot have any, whether it is either the quantity or quality of noise which ought to come out of a bell of 7½ tons. Whereas, I know that a *good* bell of half that weight would give a much louder and a much pleasanter sound, and that, in fact, the bell is about as bad as possible. I mention that, because it is not a modern one, having been cast in 1680; and because the *occasional* occurrence of bad old bells, and also of good modern ones, proves that the general badness of the modern ones, compared with the general goodness of the old ones, is not to be accounted for by the hypothesis that they improve by age; though it is true, that they generally do improve a little for a few years. Without saying that any of the modern large bells, such as those of York, Lincoln, and Montreal, are quite as bad as the Oxford bell, they are all very far short of what they ought to be, and very inferior to the *old* Tom of Lincoln, which was cast in 1610, and was considered the finest large bell in England, as I can easily believe from the density of the metal, of which I have a piece, and I shall say more about it presently.

It has been stated in substance by the founders of the two first condemned Exchange peals, that the second of them at any rate must have been good ones, because they (or most of them) were cast from the same *sweeps* or patterns as the celebrated Bow bells, which were cast by the predecessors of the same firm in the last century; and, indeed, they say the same of many others of the modern peals which people are stupid enough to pronounce very bad. I am rather inclined to think that this identity of shape, together with the inferiority of sound, which is manifest to everybody except the founders, proves something very different, viz. that they have forgotten the traditions of their own art and of their own house; and as the quality of bells cannot possibly depend on more than these three things—shape, metal, and casting, and they themselves tell us that the shape is the same, they leave us no other solution, except that they use bad metal, or have lost the art of casting it properly, or both. That some of the modern bells are unsoundly cast, I can say positively, because I have seen the metal full of holes, which are sometimes visible on the surface, but sometimes, and I suspect more frequently, invisible until the bell is broken. The larger a bell is, the more likely this is to happen, as it is well known that thick castings are harder to make sound than thin ones; and that is an obvious explanation of the fact, that the large bells of modern times are even worse than the small ones. Now, it luckily happens, that we have a ready means of discovering whether a bell is both soundly cast and of good metal, by simply taking its specific gravity for the soundness, and analyzing a piece of it for the purity. You may file off enough from any bell to enable a chemist to analyse it, and see whether it contains any baser (*i. e.* cheaper) metals than copper and tin. And we know what the specific gravity ought to be: the old Lincoln bell was 8·78, and the old Doncaster bells (of 1722, not 1835, for some of the latter I know were unsound) were 8·76: the French authorities on the subject, I find, put it as high as 8·82, and from actual experiment. It is remarkable that there is scarcely any difference between the specific gravity of the alloy, whether it contains the largest or the smallest proportions of tin to copper that are ever used; because, though the tin is much lighter, it makes a denser compound with the copper until it reaches the proportion of speculum metal, about 1 to 2; whereas, bell-metal never has more tin than 1 to 3, and the modern bell-metal not so much as 1 to 4, because it is only put in in those proportions, and some of the tin always wastes in melting. The rule for getting the specific gravity is so simple that I may as well give it. Suppose the weight of the bell is A, then weigh it in water (taking care that it is both filled and submerged), and call that weight W; then the specific gravity $= \frac{A}{A-W}$; which ought to be 8·75 at least. With regard to the best proportions of tin and copper I am not able yet to state any certain conclusions. The fact, however, is, that the old Lincoln bell contained rather less than ·75 of copper, and the rest was tin ·20, and antimony, and a very small quantity (no doubt accidental) of nickel, with what the chemists call mere traces of some other metals. There was, some years ago, a fashion of putting antimony into speculum metal, but it seems now to be thought better to fill its place with tin. No antimony is found in the old Doncaster bell-metal, nor, I understand, in that of the old York bells, in which the proportion is 1 of tin to 3 of copper, as in the Lincoln bell it is about 1 of tin and antimony together to 3 of copper. I find also in a French book on alloys, three authorities for 1 of tin to 3½ of copper, others for 1 to 3, but only one for 1 to 4. I will just caution you against confounding 1 *to* 4 with 1 *in* 4. Remember, that if the tin comes out on analysis one-fourth of the whole, or ·25, it means that the tin is not one-fourth, but one-third of the copper. I mention this, because I have constantly found people confound the two things in other matters besides bell-founding. The bell-founders do not like this *high* metal, as it is called, because it is harder to cut if the bells require tuning; but they have no business to want tuning, and never do when they are cast of the proper thickness for their size. If the high metal is the best, that is a singularly bad reason for not using it. So far as I have yet been able to judge from experiments, I am of opinion that it is the best, for the more the tin is reduced below the point where it would make the metal too brittle, the less time the bell appears to hold the sound when it is struck. Lord Rosse adopted a multiple of what are called the atomic or equivalent proportions of tin and copper in his great speculum, which are 59 and 32 very nearly; and from some facts which Mr. Dent has told me about different compositions for chronometer springs, and other experiments, there seems reason to believe that there is some advantage in keeping to the chemical equivalents. At any rate it can do not harm, and you will find that 4 of tin to 13 of copper does give very nearly the ratio of 59 to 6 × 32, and it certainly produces a very hard, and elastic, and strong bell-metal, very like the Lincoln bell in appearance.

I have not time to enter into the details of casting, nor is there any occasion for it. I have told you how you may ascertain whether any given bell is made of sound bell-metal; and if the bell-founders are made to understand generally, as Messrs. Warner do with regard to the Westminster bells, that their bells will be rejected if they are not made of sound bell-metal of proper density, they will take very good care that they are. I will, however, just mention that Lord Rosse's method of getting a sound speculum, by casting it on a cold bottom, would not do for bell-founding; for you will see at once that a thing of the shape of a bell cannot cool in layers like a flat speculum of uniform thickness. What we want is a method of keeping the metal in the upper part or waist of the bell hot and fluid as long as possible, so that it may keep falling down into the sound bow or thick part as the metal cools there. Moreover, copper and its alloys of tin have this remarkable property, that the slower they are cooled the harder and denser they are. A bell-metal bullet, cast in a cold mould and thrown into water as soon as it is solid, is quite soft and stringy inside, though very smooth outside, compared with one cast in a hot mould and cooled as slowly as possible; indeed, they are so different that you would suppose the latter had twice as much tin in it as the former, if you did not know their history. Mr. Varley tells me, that some copper cylinders for printing were cast of even greater density than hammered copper, by forcing the metal down into the runner or "git" with a piston heavily weighted. Messrs. Warner's plan of casting bells from iron cores and copes, coated only with the loam, seems to offer great facilities for this forcible mode of densification.

But there is another cause of the inferiority of modern peals of bells, which is still more easy to judge of and to get rid of, if you choose. It was noticed in a short paper on bells in the Ecclesiologist, vol. XIV. that less metal is now used to produce a given note than in the old bells. Of course, if the result was equally good, that would be a great proof of the skill of the modern bell-founders. But unfortunately, the result is very bad. I do not think, however, that they are so much to blame for it as the public, who in this, as in everything else connected with building, are always demanding grand effects out of insufficient means. At the same time, as the bell-founders seem rather disposed to humour than to correct the public ignorance on this point, I will try at any rate to make you understand this fallacy. First of all then remember, that any musical note can be got out of any weight of metal. You may get a note an octave or two deeper than the E flat, which I expect our great Westminster bell to be, out of fourteen ounces just as well as fourteen tons of bell-metal, if you only make it thin enough. And on the other hand, we could have those fourteen tons of metal cast into a bell with a note one or two octaves higher, if we only made it small and thick enough. In the former case you know, we should have a bell that would be scarcely heard at the distance of ten yards instead of ten miles; and in the latter, the mass would be too thick to be put into musical vibration at all, and it would give very little more than the mere sharp noise of a blow. Somewhere between these limits necessarily lies the thickness and shape of a bell which will give the best sound for its weight: if you make the bell larger and thinner than that best form (whatever it is), you lose in power and quality of tone, though you increase the depth of note; and if you make it smaller and thicker, you raise the note, and when you get beyond a narrow limit, you lose in power too, because the bell becomes too thick to be made to vibrate throughout. Now, I am quite satisfied, and I believe it is generally acknowledged, that the most effective proportions for a bell are where the thickness of the waist is about $\frac{1}{8}$th, and that of the sound-bow about $\frac{1}{7}$th of the diameter. And these proportions will, of course, give one definite and ascertained note, and no other, for any bell of given weight and shape. The tenor at Bow, for instance, is C, and weighs fifty-three cwt. But Messrs. Taylor have made the tenor of their new peal at the Exchange, of the same note, with only thirty-three cwt.; and in some other peals which I have seen, they have deviated still further from the old proportions, for they carry this system even further than the other bell-founders. Again, it is a law of mathematical certainty, that if you make eight bells of any metal and any shape, provided only they are all of the same metal and proportions (*i. e.* the thickness varied in proportion to the diameter), and of dimensions in this ratio—30, 32, 36, 40, 45, 48, 60, they will give the notes of the common diatonic scale; and, in fact, be a peal of bells in perfect tune with each other. Moreover, their weights will vary as the cubes of the diameters, or the tenor be eight

times as heavy as the treble. But in practice it is found expedient to make the two or three smallest bells, especially the treble, rather thicker and heavier in proportion, and within moderate limits there is no objection to it. For instance, in the grand old peal of Exeter Cathedral, the tenor is sixty-seven cwt.; and the third of the ten is rather more than one-seventh instead of one-eighth of that weight. But in modern peals, you will be lucky if you get a tenor of eight bells more than four times as heavy as the treble, or the tenor of six more than double of the treble, though it ought to be nearly four times as much, even allowing for a little increase of thickness of the treble. Now, when you have not only inferior casting, but this system of spoiling all the large bells of a peal by thinning them besides, you need not be surprised at the universal complaints of the badness of modern bells. The remedy for this is simple enough: stipulate that no bell in the peal is to be thinner in the sound-bow than $\frac{1}{24}$th of the diameter, and this defect will disappear at once; only in that case people must give up making the absurd demand upon the bell founders to give them a peal of bells in E for the money which will only buy copper and tin enough for a peal in G. When the specification was issued for the Westminster bells, one of the bell-founders wrote to ask what note Mr. Denison intended the great bell to be. I answered that Mr. Denison intended the bell to be of such note as it might turn out to be when made of the proper size and thickness to produce a good bell of 14 tons. I expect that note will be E flat; but I cannot say positively that it will be lower than E, because I have not yet quite determined the exact proportions which seem to be the best, by casting experimental bells of a quarter of the size, or $\frac{1}{64}$th of the weight, and consequently just two octaves higher. The third quarter bell will be the octave above the great bell, and therefore half the size and $\frac{1}{8}$th of the weight. You will find the order and construction of the chimes, and of the clock itself, in the Treatise on Clocks, which I wrote for the last edition of the "Encyclopædia Britannica," and which was separately published by Black, of Edinburgh, last year.

This is a convenient place for giving a list of the largest bells in the world, according to the best information I can get from various sources:—

	Weight.		Diameter		Thickness	Note.
	Tons	Cwt.	Ft.	In.	In.	
The great bell of Moscow, broken in 1737	193	0	21	0	23	...
Bell at the Kremlin, fell in 1855	63	0	...			..
Pekin	53	0	...			..
Novogorod	31	0				...
Vienna, 1711	17	11	9	10		...
Sens	15	0	8	7		
Westminster, 1856	14	0	9	2	9	E flat
Erfurt, 1497	13	15	8	7½		F
Notre Dame, Paris, Louis XIV	12	16	8	7	7½	F [only proba-
Montreal, 1847	12	15	8	7	8¼	F
Cologne	11	3	...		..	...
York, 1845	10	15	8	4	8	F sharp
Bruges	10	5	...		...	G
St. Peter's, Rome..	8	0	...			...
Oxford, 1680	7	12	7	1	6½	...
Antwerp	7	3	..		...	...
Exeter, 1675, very thick in the waist..	5	11	6	4	5	A ?
Lincoln, 1835	5	8	6	10½	6	A
St. Paul's, 1709	5	4	6	9	...	..
Ghent	4	18	...		...	..
Boulogne, modern	4	18	...			...
Old Lincoln, 1610 ...	4	8	6	3½		B
Fourth quarter-bell, Westminster, 1856	4	0	6	1½	6	B flat

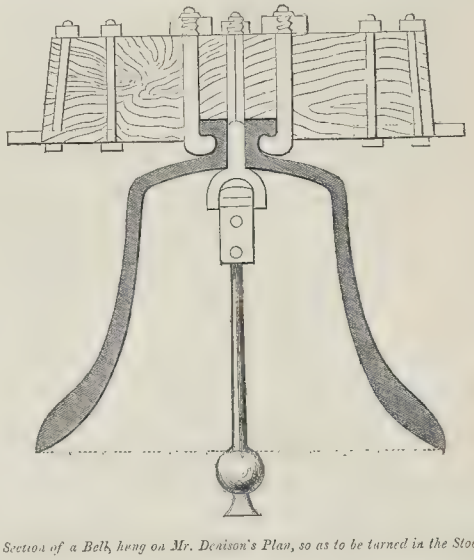
You observe that the diameter of the Erfurt bell, which is said to be the finest in the world, is less than Mr. Taylor's figures. As both his authority and mine agree about the weight, and this size is given me by a very accurate person, who measured it himself, and it is more consistent with the weight (the bell being a very thick one), I have little doubt that this is correct. Others give also greater sizes and weights for the Notre Dame bell, but these are the figures lately obtained by Mr. Donaldson from M. Viollet le Duc, the architect superintending the works at Notre Dame now, and he has sent a drawing of the actual figure, or sweep, of the bell on a large scale; so that this also seems to me the most likely to be correct.

I must add that the clapper is stated to be of the enormous weight of 23 cwt. or $\frac{1}{17}$th of the weight of the bell, which is about four times as much as I have ever seen suggested for the clapper of a ringing bell, though I lately had one put to a tolling bell of twice the usual weight, with very good effect. But M. Viollet le Duc has fortunately sent the dimensions of the clapper also; and it is clear from them, that the weight which has been given to him is fabulous, and at least three times too much. Even 7 cwt. would make it twice the weight of the clappers of the York and Montreal bells. I suspect ours are generally too small, and I am certain that when the bells can only be tolled, by reason of the weakness of the tower, much larger clappers might be well and safely used, provided the bells are really tolled, and not the clappers pulled against them with a force which depends entirely on the discretion of the man who does it. When the bell is too heavy to be tolled in the common way, the clapper ought to have a separate pulley, not at the side, but in front of the middle of the bell, and so placed that the ringer cannot hold the clapper against the bell. I believe more bells have been cracked by the slovenly practice of tolling by the rope tied to the clapper, than by all other things together, besides its twisting the clapper itself on one side, and deranging it for ringing. This is only one of the many points in which the saving of shillings often entails the waste of pounds, and sometimes hundreds of pounds, as at Doncaster in 1835, where the whole peal was recast at a cost of 300*l.* because the two largest bells had been cracked through mismanagement.

It did not appear to me that Mr. Smith made out a very good case against the swinging of bells. Indeed, as Mr. Barry said the other night, his own experiments were enough to satisfy us at that end of the room (if we had doubted it before), that swinging a bell, or a gong either, does increase the sound considerably. The notion of ringing bells in full swing being modern, and contrary to the intention of those who built our church towers, seems to me to have no shadow of evidence to support it.

* * * * *

I must not overlook the disease of which bells generally die, that is, cracking after the clapper has worn them thin in one place; and I offer you a plan for turning a bell in the stock. You will understand it in a moment from this drawing. It is nothing but a thick round neck



Section of a Bell, hung on Mr. Denison's Plan, so as to be turned in the Stock.

to the bell instead of a crown, with a flange round the top, which is embraced by six bolts coming through the stock. The clapper-bolt runs square through the stock, but round through the top of the bell, and has nothing to do with carrying the weight of the bell. When the bell is worn in one place, you have only to loosen the bolts a little, and then a few of the ringers, standing round the bell, will easily twist it round a little way for the clapper to act in a fresh place. If this is done once in ten or twenty years, according to the work of the bell, it may just as well last 1,000 years as 100, and this mode of hanging evidently need cost not a penny more than the common plan.

SURPLUS FROM PATENT OFFICE FEES.

The subject of patent law reform has just been revived by Sir Joseph Paxton, M.P., in a letter to the present Council of the Society of Arts. In this communication Sir Joseph invites attention to the large and constantly-increasing revenues derived from the fees paid by inventors for letters patent, and to the mode in which they are applied. He states that, in the year 1854, after deducting all expenses, there was a clear available surplus of 15,600*l.*, which was absorbed by the Treasury. He further estimates the present annual surplus at 60,000*l.* which will rise to 100,000*l.* in the year 1859, if the present system be adhered to. He conceives that the legislature never could have intended to impose such a tax upon patentees for the general purposes of the state, and he considers that the Society of Arts is bound to exert itself to rescue this annual surplus from the hands of the Treasury. He lays it down as a principle that the charge upon inventors for securing their patent rights should not exceed what is requisite for maintaining the Patent Office in a proper state of efficiency.

The Council of the Society of Arts, acquiescing in the opinion that there was room at all events for inquiry, appointed a very large and powerful committee of inventors and others to consider and report upon the subjects referred to in Sir Joseph Paxton's letter. The first meeting of this committee took place on Friday in last week. It appeared to be the unanimous opinion of the meeting that the first thing to be done was to obtain the recognition by the Government of the principle that the revenue arising from patent fees should be applied to furthering the objects of inventors; and that the fees so levied should not go into the general revenue of the country but should be applied specially for the promotion of the progress of invention. Various resolutions were passed in furtherance of the object in view.

Fire at Beeston Church, Leeds.—This old church was severely damaged by fire on Monday before last. The disaster is attributed to over-heating the flues. The organ was totally consumed, and a large part of the roof destroyed.

OLD LONDON LANDMARKS.

AT the lower end of Clerkenwell Green was formerly the celebrated fountain, or Clerken-well, so called from the parish clerks of the city of London; who in ancient times used to meet there annually, to represent scriptural plays. The fountain was removed and some buildings planted on the site, but still the ancient well was represented by a pump, on part of which an inscription was properly put by the authorities to mark the historical celebrity of the spot. We were not sorry, considering the account we have heard of the recent condition of the drainage of some of the places surrounding it, and the close neighbourhood of graveyards, to see the handle of the pump chained up and fastened with a padlock; but note that the surrounding brickwork is falling sadly to decay, and are asked to say a word on the subject, lest the matter should be overlooked, now that the pump is unused; and that, perhaps, for want of a little present care, the memorial may be lost sight of.

SUSSEX COUNTY LUNATIC ASYLUM COMPETITION.

THE magistrates of Sussex, desirous of erecting a lunatic asylum, for 400 patients, at Wivelsfield, adjoining Hayward's Heath, invited five architects, known to have erected such asylums, to compete for the same, offering the superintendence of the building to the first, and two premiums of 100*l.* and 75*l.* to the second and third best. After considering the merits of the several designs for three months, they have selected that by Mr. H. E. Kendall, jun. the architect of the Essex County Lunatic Asylum, for adoption. One of the invited competitors did not send in, and it was agreed that the amount of the premiums should be divided equally between the three unsuccessful candidates. The chosen design is a three-storied building, of Romanesque elevation, very simple in form.

Notices of Books.

Mathematics for Working Men. Part I. Arithmetic and Algebra. By T. TATE. London: Longman and Co. 1856.

THIS is a practical work by a competent author. It contains the principles of arithmetical calculations; the estimation of works by the builders' price-book, with the general principles of estimation; and a new list of the constants of labour, with their application in calculating the value of work. It is better adapted to the requirements of workmen in the building trades than to any other, being full of examples, illustrating the measure of surfaces and solids, the value of carpenters, joiners, bricklayers, plasterers, slaters, glaziers' and other work, estimates for building cottages, stables, staircases, &c. &c.

London in the Olden Time,—Memoir and Pictorial Map. By WILLIAM NEWTON, Author of a Display of Heraldry. Published for the Author, 66, Chancery-lane, by Bell and Daldy, 186, Fleet-street.

THE large pictorial map to which the Memoir is appended in this new publication by Mr. Newton, purports to represent the metropolis as it stood in the reign of Henry VIII. before the suppression of the religious houses. The basis of the Map is Roque's Survey, in the beginning of the last century, assisted by various plans, maps, and representations of more ancient date. Stow's Survey forms the basis of the Memoir, in like manner aided by other authorities. Without committing ourselves to all the details of a laborious work of this kind, regarding many of which, indeed, there must ever exist a degree of uncertainty at the best, still it is a very elaborate and carefully compiled production, both pictorially and by description, and forms a highly interesting volume.

VARIORUM.

A "Catalogue of the Museum of Ornamental Art, at Marlborough House, Pall-mall." Part I. by J. C. Robinson, Curator, has been published by Chapman and Hall. It consists of 128 pages, large octavo, of letter press, besides a large number of pages full of illustrative sketches of works of art in the museum,—all at the nominal price of sixpence. The third edition is already in course of issue. This is something more than an ordinary catalogue, even as regards the printed matter.——"Orr's Circle of the Sciences" (Houlston and Stoneman), is assuming the shape of handsome volumes, two of which are now before us,—one on Organic Nature, being the second of the System of Natural Philosophy, and comprising Zoology, or the Natural History of Animals, by W. S. Dallas, F.L.S. and profusely illustrated with engravings. The other is on Inorganic Nature, and comprises treatises on Geology, Mineralogy, and Crystallography. The first treatise in this volume is one by Professor Ansted, on Geology, containing special divisions on Architectural Geology, Engineering Geology, the Geology of Mineral Fuel, and on the application of Geology to the Fine Arts, comprising an interesting section on the peculiarities of landscape scenery. The Mineralogical Treatise is by Professor Tennant, and the Crystallographic, by the Rev. Walter Mitchell. The works of writers of this stamp, cannot but sell well, and be profitable to the publishers.——Mr. Tate has had published by Longman, a little tract on "The New Coinage considered in relation to our School Arithmetics," for the use of teachers and tradesmen, and containing new and simple rules for converting the present coinage into the anticipated new coinage, and conversely, with numerous examples of the new coinage on the various rules of arithmetic. Mr. Tate is of opinion that the pound sterling will be retained as the unit of the expected decimal currency, and that the old copper coinage will be withdrawn, and a new substituted. This is much to be regretted: the penny, with its halves and fourthings, is the true unit, and the broad base of the monetary pyramid, and ought to be retained at all hazards. Nor need the pound or sovereign be withdrawn, although disused in formal accounting, any more than the five-pound note. The penny as the basis would only necessitate the introduction of a silver tenpenny-piece, and a golden hundred-penny-piece, for formal decimal accounting, leaving the old gold coinage to rank with the five-pound notes, and the hundred-pound notes as all equally beyond the categories of the ordinary system of decimal accounting. With the French, mere francs constitute the highest item of accounting, to the exclusion of all golden coinage; but with a hundred-penny-piece, we would have the element of gold represented in accounting, as well as that of silver in the tenpenny, and that of copper in the penny, and its halves and quarters; and this without the necessity of a monetary revolution, or the risk of a physical revolution, as by tampering with the copper coinage of the masses.

Miscellanea.

SALE OF TIMBER.—At a recent sale of navy oak and other timber, grown on the estate of Lord Portman, in the manors or parishes of Orchard Portman, Staple Fitzpaine, Bickenoll, Thurlbeer, West Hatch, &c. which took place at the Greyhound Inn, at Staple Fitzpaine, there were 1,547 trees, divided into 136 lots. The lots sold realized nearly 3,000*l.*

ARCHITECT'S "CLERK."—Will you or some of your enlightened subscribers, be kind enough to inform me when the above cognomen was first applied, and why? I have looked in vain through *Johnson, Walker,* and other English lexicographers, for its derivation or application to this subject: they invariably tell me, that a "clerk" is a bookkeeper or accountant, &c. &c. Now, I happen to be one who has nearly all his life unremittingly racked his brains, in order to acquire a position in Architecture and Engineering, and who so far has attained a share of eminence in both—yet because (as a young man), I am *only* managing assistant to an Architect and Engineer of high standing, I have duly conferred upon me the title of "*Clerk.*" (?) It is highly aggravating to me after all this study and application, and no doubt to many others similarly situated, to have simply (by virtue of the title) the credit of a mere practitioner in "the rule of three." Of course I respect every man's position in life honourably obtained, be it what it may, but "call a spoon, a spoon," and then I know what you mean. If I should be one for my trouble, you may designate me as such; but I have the vanity notwithstanding of claiming to be at least

AN ARCHITECT'S "ASSISTANT."

ELECTION OF SURVEYORS FOR ST. PANCRAS.—On the 13th inst. the St. Pancras Board of Local Management elected Mr. W. Booth Scott as their chief surveyor, Mr. Charles Worrell as clerk to the chief surveyor, and Mr. Isaac Douglas, Mr. William Whitbread, Mr. Robert Cunningham, and Mr. William Johnson, as assistant surveyors.

PROPOSED TESTIMONIAL TO THE FOUNDER OF BUILDERS' BENEVOLENT INSTITUTION.—At the suggestion of Mr. Alderman Cubitt, M.P. and other friends, it is proposed that a testimonial should be presented to Mr. Thomas Cozens, as the Founder of the Builders' Benevolent Institution, and a committee has been formed to carry out the proposition. It is to be hoped they will succeed. Mr. Cozens well deserves some memorial.

SMOKELESS FIRES.—I have always been considered, even by my two elder sisters, an excellent hand at lighting a fire in the good old-fashioned way, which I learnt once upon a time;—Paper first, then half a halfpenny bundle of wood, or, latterly, a patent fire-wheel; then the cinders and small coal, with a nice nubbly bit or two on the top for a finish. But it seems that I am wrong, and everybody else is wrong also, except your correspondent of last Saturday, who tells us how a fire *should* be laid. His plan seemed a very odd one to me; but as I am quite ready to believe that a nation *may* do things improperly for several centuries, and all the while think its blunders are beauties, I determined the experiment should have what advertisers claim—*one* trial. I *have* made the trial, laying the fire according to his directions, and the result has been "a blaze of triumph." It burnt up quickly and brightly, smoked less, and I think consumed less fuel. The economical part of the question is of great consequence to us; for ever since my beneficent godmother, Vestris, retired from public life, and declined the fairy business, the prince and I have been very shabbily treated, and live upon our little income in obscure lodgings, near Red Lion-square, on account of the College, at No. 33, which he attends; and I also go to the women's classes, after I have taken our boy, Cinderello (whose ambition it is to become president of the Ramoneur Association), to Herr Ronge's *Kinder Garten.* I must ask Mr. Maurice to let me organize a fire-lighting class; for I see Mr. Helps, in this month's *Frazer,* looks upon the art as a neglected female accomplishment. By the way, there are a few lines in his pleasant article which concern, and will greatly please, your professional readers.—CINDERELLA.

METROPOLITAN INTRAMURAL BURIAL.—Sir R. Broun has published another pamphlet, in the form of letters, to Sir George Grey, the Home Secretary, on the subject of "Burials within the Metropolis; or, the Dead Man's Question," in which he calls upon Sir George to prevent the interment of so many dead bodies within the limits of the metropolitan district. Sir Richard points attention to the fact, that Dr. Letheby, the new medical officer of health for the City of London, has congratulated the City Sewers Commission, that the last of the city burial-grounds, sixty-five in number, has now been closed; and he hopes that, within the present session, it will be the Home Secretary's task, as the supreme officer of metropolitan health, to do that which will enable him in like manner to congratulate the inhabitants of the whole metropolis, within another year, that the last of its nearly 250 charnel nooks has ceased to exist as a prolific source of pestilential disease.

THE CRADLE FOR THE EMPRESS.—A handsome cradle was wanted for the Empress of the French, something really elegant and good; and to whom think you, good reader, did the authorities apply to design and superintend it for them? Actually to a French architect, M. Baltard: and, what is more, the result is said to be very satisfactory; although we must confess that the description given of it does not commend it to our minds very strongly. It is to be in "the form of a boat." We should have liked it as well if it had been in the form of a—cradle.

THE VICTORIA DOCKS.—The Government are, we believe, in treaty for the purchase of the Victoria Docks, situated on the opposite side to Woolwich.

NEWCASTLE-UPON-TYNE SOCIETY OF ANTIQUARIES.—The annual meeting of this society was held in the Old Castle of Newcastle, on Monday before last, when the secretary read a report, in which the council congratulated the members on the prosperity and progress of the society. Some conversation then took place regarding a covered archway from the castle to the railway arches; and Mr. Longstaffe brought forward a motion, to the effect that the quarto series of the "Archæologia Œliana" being now completed, for the future the publications of the society shall be printed in demy octavo. Another motion was substituted by Mr. Fenwick, to the effect, that it be an instruction to the council to perfect the secretary's set of the Surtees' publications. The motion having been carried, office-bearers were elected for the ensuing year; president, Sir J. E. Swinburne, bart.

Belgrave-square.—A "Belgravian," anxious for the reputation of the late Mr. George Basevi, wishes to mention with reference to Mr. Britton's notice of the buildings erected by the late Mr. Cubitt, that with some trifling exceptions, "the houses in Belgrave-square were built by some gentlemen at that time termed the 'French Company,' to which Mr. Basevi was the architect, and under whose sole direction they were erected."

Fire at New Hall of Caius College, Cambridge.—On Saturday before last serious alarm was created in Cambridge, by the occurrence of a fire in the above hall, recently completed at a great expense. The ornamental work of the hall and the kitchen are damaged by floods of water poured in—the hall, also, by the partial destruction of the floor. The amount cannot yet be estimated. The cause of the fire is said to have been the insufficient size of the flue of the kitchen chimney, causing a large accumulation of soot: this had ignited, and heated the bricks to an extent sufficient to fire the dado and the floor of the hall, which is situate immediately over the kitchen, and is separated from it by a brick roof, arched in compartments, the floor of the hall being pugged under with lime and cement, in order to render the whole, what it was considered to be, fireproof.

Dangerous Property of Water divested of Air.—In a lecture recently delivered before the Royal Cornwall Polytechnic Society, by Mr. R. Hunt, F.R.S. attention was directed to some remarkable points in connection with the action of heat on water that contains no air, stating that, arising from this circumstance, as well as from the spheroidal condition of the steam generated, we have two very active and predisposing causes of boiler explosions. Water, in congelation, rejects all air, and if thus or otherwise deprived of air, it will not boil at 212 deg. Fahrenheit, if excluded from the atmosphere. In this state the temperature will increase even to between 270 deg. and 280 deg.: about these points the whole will explode like gunpowder. This condition of water is not unfrequently found formed in steam boilers, where, during ebullition, the steam carries off the air.

Trinity Church, Tulse-hill.—On Tuesday before last the church recently erected on Tulse-hill was consecrated by the Bishop of Winchester. The church is in the geometrical Decorated style, after a design by Mr. Barry, of Liverpool. The spire rises to a height of 170 feet. The roof, 105 feet long, is in one span of 55 feet 6 inches, resting entirely upon the outer walls. The church has north and south transepts, with galleries above them, and is capable of seating 1,000 persons. The edifice, with the adjoining parsonage, has been built at a cost of rather less than 8,000*l.*

Adulteration of White Lead.—Much has lately been said on the adulteration of food, drugs, &c. which may lead to the improvement of health, and the driving out of the field many of the impositions in practice. The exposure of those touching human life was of paramount importance; still there is a large field open for the inquiry in the various articles used in trade, and amongst them I think few demand a more searching inquiry than white lead. That there can be 1st, 2nd, 3rd, and 4th best, and genuine, is in itself so great an absurdity, that no man buying the worst can suppose he has much of the true article; but while every maker professes to sell so many qualities, how essentially requisite is it that the man who wishes to have the true and genuine one should know how, in an easy and simple way, to test the quality. With this view I would ask, through the medium of your work, as a boon to every man engaged in the consumption of the same, if some kind friend would furnish in your pages the proper test?—J. F.

Holborn-hill again.—Your able advocacy of the improvements in the Metropolis deserves the greatest praise, and I cannot help suggesting your calling aloud for a remedy to the cruel and degrading struggling of horses on Holborn and Snow Hills, daily and hourly drawing heavy conveyances with twenty or more persons, which, in my opinion, calls for the interference of the Society for the Prevention of Cruelty to Animals. I hope you will call public attention to this great evil in the very heart of the metropolis, which may easily be remedied by a few brick arches commencing at St. Andrew's burial-ground and ending at Snow-hill. The property on the left-hand side is not now so valuable, and the width will allow enough of the old roadway to remain for those who prefer it. How the authorities can allow such a nuisance to exist is truly astonishing; and I do hope that you will call public attention to it, which will hasten a remedy and save the poor jaded horses which struggle up and down the hills with their heavily-loaded vehicles, all which may be easily accomplished at no very great outlay, especially as private interests must always give way to public improvement.

John Lawrie.

Churchyard of St. Margaret's, Westminster.—My attention has been drawn to a passage in the *Builder*, relating to the churchyard of St. Margaret's, Westminster. You will be glad to hear that the first steps towards putting this churchyard in good order were taken some days ago, and I trust that a plan for its thorough repair and arrangement will be carried out with as little delay as possible.—H. J. Malde, Churchwarden of St. Margaret's.

Timber Sale.—On Thursday, Mr. Bentley sold by auction, at the Crown Hotel, Broad-street, upwards of 850 oak, elm, and ash trees, from estates at Brausford, Leigh, Powick, and Longdon Hillend. There has not been so large a sale of timber for some years, and it went off exceedingly well. Elm and ash fetched from 1s. to 1s. 4d. per foot, and oak from 2s. to 3s.—*Worcester Chronicle.*

Price of Gas at Lee, Lewisham, and Greenwich.—The inhabitants of Lee, Lewisham, and Blackheath, held a public meeting on 31st ult. at Lee Bridge, as to a reduction in the price of gas; when Mr. Bennett, of Blackheath (the Chairman), stated the reasons given by the Gas Company's servants for charging 5*s.* 6*d.* per 1,000 in Lewisham and 4*s.* 6*d.* in Greenwich, namely, the expense of mains, iron being very dear when the pipes were laid; the enlargement of the Company's plant costing more to supply the "out district;" and also the price of coals. He deprecated the enforcement of two prices, and called upon the inhabitants to avail themselves of the new Liability Act, and secure an improved local gas-work of their own. This proposition was very warmly received by the meeting. Mr. Newman concurred, and stated that from a return published in the *Builder* last year, it appeared that they were paying much more in that district than in any other round London; and that there was no reason why gas could not be sold at 2*s.* 6*d.* per 1,000 He suggested, however, that a deputation be appointed to wait on the Phœnix Gas Directors, requesting to be placed on the same footing as the Greenwich consumers. A deputation was accordingly named. Several gentlemen stated their dissatisfaction with the quality also, and the bad supply of the Company's gas; others with the undue measurement by their metres.

School of Art for Taunton.—On Thursday before last, a public meeting—convened by circulars issued by the Bailiffs of the Borough on behalf of a Provisional Committee—was held at the Guildhall, when the necessary steps for the organization of a "School of Science and Art" in Taunton, in connection with the Department of Science and Art, at Marlborough House, were unanimously resolved on, and a committee appointed to carry out the measure.

Houses in Carey-street.—A correspondent directs our attention to "some dangerous old buildings in this street, ranging eastward from the corner of Bell-yard and Star-yard, which are truly unsafe." Our correspondent has only to give information to the Commissioners of Police, and they will direct a survey to be made under the new Building Act.

The Architectural Exhibition.—On the 13th, H.R.H. Prince Albert visited the exhibition.

Puddlers' Strike at Derwent Iron Works.—During the last fortnight the puddlers employed at the Derwent Iron Works, Bishopwearmouth, have been on strike. It appears that the men are fifty-four in number. There is a dispute as to wages, but the workmen contend that the iron is not in a proper working state. The puddlers left work at a moment's notice, and upwards of 350 other workmen were hence thrown out of employment. The owners of the works refused to pay the puddlers their wages then due, as they had not given a fortnight's notice. The Sunderland magistrates have decided that one half the wages should be forfeited. The strike, by last accounts, still continues.

Destruction of the Pavilion Theatre, Whitechapel.—Early in the morning of the 13th, this theatre was entirely destroyed by fire. The cause is unknown, and some attribute it to the spontaneous combustion of oily tow or lamp-black in the painting loft.

Sale of Plant at Birkenhead Dock Works.—Messrs. Brassey and M'Cormick having fulfilled their great contract at the Birkenhead Docks, by the completion of the embankment enclosing the south reserve, and the whole of the dock property having been purchased by the Corporation of Liverpool, the immense stock of plant and materials with which the work has been carried on has been offered at public auction, by Messrs. Thos. Winstanley and Sons. One day's sale alone produced between 6,000*l.* and 7,000*l.* and the whole property was expected to realize about 14,000*l.* or 15,000*l.* Lot 466, a 40-horse-power horizontal engine, brought 1,100*l.* or about 28*l.* per horse, 447, three boilers, 210*l.*; 449, four pair of mortar-mills, 850*l.*; 517, 30-horse high-pressure beam-engine, 945*l.*; 518, a set of 14-inch iron pumps, 310*l.*

The Welch Iron Trade.—The ironworks generally throughout South Wales are in full employ, not only in the manufacture of rails and bars, but also of pig iron. Large orders for rails are said to have been taken by those works which roll rails, at from 8*l.* 10*s.* to 9*l.* 10*s.* per ton. In several localities extensions of premises are going on.

Fire at East Malling Church.—This Church was discovered to be on fire on Monday before last. The woodwork suffered to a considerable extent, the damage being estimated at 300*l.* The cause of the fire was the overheating of a flue, which, passing through the roof, ignited the woodwork.

Preservation of the South Castle at Southampton.—A public meeting has been held at the Guildhall, Southampton, for the preservation of the architectural remains, called the South Castle, and associated buildings, known as the Old Gaol and Debtors' Ward, and for setting them apart permanently for a museum, library, and school of design. The mayor presided.

Institution of Mechanical Engineers.—The ninth annual general meeting of this institution was held on 30th ult., at the house of the institution, Newhall-street, Birmingham, Mr. William Fairbairn, F.R.S., president, in the chair. The annual report of the council spoke of the satisfactory position and progress of the institution. The election of officers for the present year took place, together with the election of several new members, Mr. Joseph Whitworth being elected president. A paper was then read "On the Pumping Engines of the Wolverhampton Water Works, with some Remarks on Water Pumping," by Mr. Henry Marten, of Wolverhampton. The second was "On Wood Bearings for Screw Propeller Shafts," by Mr. John Penn, of London. The next was a "Description of an Improved Construction of Crossing," by Mr. Henry Woodhouse, of Stafford. The last paper was "On an Improved Safety-valve," by Mr. Ramsbottom, of Manchester. In the evening a number of the members and their friends dined together at Dee's Hotel, in celebration of the ninth anniversary of the institution.

The Barracks Competition.—The decision of the committee now waits the approval of Lord Panmure. The letters containing successful competitors' names have not yet been opened. It appears that the first decision of the committee has been revised.

TENDERS

For building a residence in the Italian style in East-India-road; Mr. William Ellison, architect:—

	New House.	Allowed for old House on Site.
Hunter	£1,890	— £60
Hack and Son	1,870	— 75
Blackburn	1,860	— 105
Rivett	1,832	— 75
Watts	1,820	— 102
Jeffrey (accepted)	1,795	— 90

For the Midland Institute buildings, Birmingham; Mr. E. M. Barry, architect:—

	In Stone.	In Cement.
Piper (London)	£16,840	— £15,380
Smith (Birmingham)	16,145	— 14,470
Nowell „	16,700	— 14,276
Cubitt (London)	15,730	— 14,106
Pashby (Birmingham)	15,550	— 14,050
Hardwick „	15,540	— 14,045
Lucas (London)	15 464	— 13,964
Cresswell (Birmingham)	15,300	— 13,680
Wilson „	15,150	— 13,680
Briggs „	14,900	— 13,460
Branson and Gwyther (accepted)	14,474	— 12,948

TO CORRESPONDENTS.

"*Ornamenting Candles*"—A correspondent, who signs herself "Deborah D" wishes to know the best means of "illuminating candles," i.e. colouring, not lighting them; whether they must necessarily be of wax, or if Price's patent composites will afford a successful ground for operating upon. The difficulty is to lay the colour on smoothly.

"H. K."—"J. F."—"J. T."—"C. A. W."—"C. H. W."—"One of the Public"—"A Master in Training"—"An Artist"—Two Bell-founders"—"J. H."—"T. B."—"J. J. (it must be done by bringing previous knowledge to bear on accounts of the time occupied and materials used)—"W. B."—"J. R."—"B. B. B."—"J. B."—"Gas".—"Sir R. R."—"P. B."—"H. C."—"H. L."—"A Reader"—"W. F. H."—"H. B." (it is not a builder's business; and we cannot say what he ought to charge for doing it. It must depend upon the circumstances) "J. S."—"G. C" (Stone)—"J. D." Dover (send address to publisher)—"W. L."—"J. A."—"W. G. S."—"G. F. F."—"Lloyd and Sympson" (will appear)—"G. B. N."—"An indigent Glass-painter"—"Superintending Architect of Metropolitan Buildings" (Mr. John Henry Taylor wishes us to state, that he withdrew from being a candidate for this office "when the salary was fixed at 800*l.* considering it not sufficient to induce any architect of experience to devote his whole time faithfully to the discharge of such very important duties."

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the Editor, and not to the Publisher.

NOTICE.

From and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *viâ* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

APPLIED MECHANICS. — Professor WILLIS, M.A. F.R.S. will commence a COURSE of THIRTY-SIX LECTURES, on APPLIED MECHANICS, on WEDNESDAY next, at TWELVE o'clock, to be continued on each succeeding THURSDAY and WEDNESDAY, at the same hour. Fee for the Course, £2. NATURAL HISTORY.—Mr. HUXLEY, F.R.S. will commence a COURSE of FIFTY LECTURES, on NATURAL HISTORY, on WEDNESDAY next, at TEN o'clock a.m. to be continued on each succeeding THURSDAY, FRIDAY, and WEDNESDAY at the same hour. Fee for the Course, £2.—These lectures will be delivered at the Government School of Mines, Jermyn-street, where further particulars may be obtained

Notice.—The Museum of Practical Geology is now open gratuitously to the public, every day but FRIDAY.

TRENHAM REEKS, Registrar.

SAINT MARYLEBONE.—SEWERS DEPARTMENT, FEBRUARY 9, 1856. Notice is hereby given, that the Vestrymen of the parish of St. Marylebone are ready to receive APPLICATIONS from persons competent to fill the OFFICES of CLERK of WORKS and OFFICE CLERK in the SEWERS DEPARTMENT of the said vestry. The clerk of the works must be able to write a good business hand, to be competent to the taking of levels and sections, and to the making of working drawings; and to have a practical knowledge of the formation and building of sewers and drains, and to be under the direction of the parish surveyor; the salary to be 150l. per annum. The office clerk must be able to write a good hand, to draw neatly, and to be competent to take plans, levels, and sections; to be under the direction of the parish surveyor, for the work of the sewers department, or any other employment the said surveyor may direct; the salary to be 100l. per annum. The persons elected to either of the foregoing offices will be required to devote their whole time to the duties of their respective offices. The ELECTIONS will take place on SATURDAY, the 1st day of MARCH, between the hours of ELEVEN and ONE o'clock; and all applications for the above situations must be delivered at the COURT HOUSE, Maryleb ne-lane, addressed to the VESTRY CLERK, on or before TUESDAY, the 26th day of FEBRUARY instant; and the candidates must attend personally at the Court House, Marylebone-lane, on THURSDAY, the 28th day of FEBRUARY, 1856 at the hour of ELEVEN o'clock in the forenoon, and produce a specimen of their own drawing and handwriting.—By order,

W. E. GREENWELL, Vestry Clerk.

WANTED, a good practical STREET MASON, to act as CLERK of WORKS, for the CARRIAGE and FOOTWAYS, in the STRAND DISTRICT, comprising the parishes of St. Anne, Soho, St. Clement Danes St. Paul, Covent-garden, St. Mary-le-Strand, Liberty of the Rolls, and the precinct of the Savoy. He will be required to understand measuring, and must write a legible hand. Salary, 100l. per annum. Applicants to state on what works last engaged.—Letters in the handwriting of the applicants, with testimonials, to be addressed to Mr. GEORGE FREDERICK FIG, Surveyor to the Board of Works for the Strand District, 23, Henrietta-street, Covent-garden, of whom further particulars may be obtained. No application will be received after TWELVE o'clock at noon, on WEDNESDAY, the 20th FEBRUARY instant.—Feb. 13, 1856.

PARISH of ST. JOHN, HAMPSTEAD.—INSPECTOR of NUISANCES and SURVEYOR.—Notice is hereby given, that at the Vestry to be held at the Hampstead Workhouse, on FRIDAY, the 22nd day of FEBRUARY, 1856 at HALF-PAST SEVEN o'clock in the evening, the Vestrymen will proceed to appoint a fit and competent person to execute the duties of INSPECTOR of NUISANCES and of SURVEYOR of PAVEMENTS and of ROADS and LIGHTING for this parish. Such officer will be required to reside in this parish, and to devote his whole time and attention to the duties of his office. The salary will be 200l. per annum. A thorough and practical acquaintance with sewerage, drainage, road-making, and paving, and other similar works, will be a necessary qualification. The duties can be ascertained on application at the Vestry-clerk's office, in Hampstead Workhouse. Written applications for the office, in the handwriting of the candidates, with testimonials, must be sent or delivered to the Vestry-clerk on or before WEDNESDAY, the 20th instant; and the candidates must attend personally at the time fixed for the vestry.—By order,

THOMAS TOLLER, Vestry-clerk.

Hampstead, February 8, 1856.

CEMENT WORKS.—WANTED, an active, energetic TIMEKEEPER and UNDER FOREMAN, who has had practical experience, and thoroughly understands the manufacture of Portland and Roman cements; he must be sober. He will be required to work at the different branches of the manufacture.—Address, by letter, with full particulars, wages, references, &c. to MR. KEALLMARK, 89, Old Broad-street, London.

TO PAINTERS AND GRAINERS.

JAMES SMITH is in want of a first-rate GRAINER and PAINTER; liberal wages will be given. He must be steady, and of Temperance.—Penn-street, Bo-ton

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WANTED, a STOKER, to attend to one 50-horse Boiler. Wages 21s. a week. Apply, by letter only, stating full particulars of ability, to A. B. Merrett's Newspaper Office, 7, St. John's-square

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TO SMITHS

WANTED, a WORKING FOREMAN for a SMITH'S SHOP, where about eight hands are employed; he must be a good workman, and acquainted with the usual branches in the house line Address, E. at the Office of "The Builder."

TO GRAINERS.

WANTED, a good GRAINER: must also be a good writer. Constant employment.—Apply, stating terms, &c. to WM. CARTHEWAITE, Framwellgate-street, Darlington, Durham. None but first-rate workmen need apply.

TO CLERKS OF WORKS.

WANTED immediately, a thoroughly efficient CLERK of WORKS.—Application to be made, by letter only, to Mr. CHARLES BAILY, Architect, Newark, stating terms required, reference to previous employers, and upon what buildings engaged during the past two or three years.

TO DECORATORS AND OTHERS.

WANTED, EMPLOYMENT, by a thorough good GRAINER and WRITER. Would make himself useful at painting, gilding, and glazing. Wages 2l. 7s. per week. Good reference from or country.—Address, HENRY WILLIS, 24, Cranford-street.

TO BUILDERS, PLUMBERS, PAINTERS, GLAZIERS, &c.

WANTED, by a respectable and sober Young Man, aged 26 and married, a constant SITUATION as PAINTER, GLAZIER, and PAPERHANGER, and can do plumbing if required. Wages not so much an object as constant employment. Good reference can be given, if required. Address to M. A. S 70, Mary-street, Hoxton

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TO ARCHITECTS, BUILDERS, AND OTHERS.

WANTED, a SITUATION, as OUT-DOOR SUPERINTENDENT of WORKS, by one having a thorough practical knowledge of building and drainage works; also measuring up works, and can make working drawings. Reference to London and provincial architects by whom he has been employed for several years.—Address, F. P. 7, Villa-street, Alonzy-road, Camberwell

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WANTED, a SITUATION as SHOP FOREMAN of JOINERS.—Address, [M. L. 8, Clarence-terrace, Barnsbury park.

TO BUILDERS, CONTRACTORS, &c.

WANTED, by a Young Man, 26 years of age, who writes a good hand, and has had some years' experience in an office, and also upon Public Works, a SITUATION as GENERAL CLERK, or PRIME COST KEEPER. Reference excellent Salary moderate. Address, A. B. 71, Nicholas-street, New North road.

TO BUILDERS AND PLUMBERS

WANTED, a PERMANENT SITUATION or JOB, in town or country, by a young man with a good character from his late employer, as PLUMBER. Can fill up his time in painting and glazing.—Address, M. N. Office of "The Builder."

WANTED, a RE-ENGAGEMENT as SHOP or GENERAL FOREMAN, or CLERK of WORKS, by a Man of great experience. Country not objected to.—Address, C. R. 1, Beaufort-terrace, Rumbold-lane, Peckham-rye, Surrey.

TO BUILDERS.

WANTED, by a thorough Practical Working Man, a SITUATION as IN or OUT-DOOR FOREMAN. Satisfactory references can be given.—Direct to W. W. Office of "The Builder."

TO ARCHITECTS, BUILDERS, AND CONTRACTORS.

WANTED, a SITUATION as CLERK or FOREMAN of WORKS, by a practical man, having been for the last three years engaged on public works. Competent to superintend work of any description. Excellent testimonials and references.—Address, A. B. 20, Sand-street, Charlton, Kent.

TO BUILDERS.

WANTED, a SITUATION, as SHOP or GENERAL FOREMAN, by an experienced man. Satisfactory references and testimonials.—Address, J. D. 61, Lower-marsh, Lambeth.

TO BUILDERS, CONTRACTORS, AND CARPENTERS.

WANTED, EMPLOYMENT, as UNDER-FOREMAN and TIMEKEEPER, or Otherwise, by a respectable Young Man, lately engaged on a Government contract, as Under-Foreman and Clerk. Is acquainted with office-routine, measuring, &c. Can work at the bench, to which he is partial, and with opportunities for improvement, would accept moderate wages.—Reference permitted to last employer.—Address, DELTA, Post-office, Eltham.

TO ARCHITECTS.

WANTED, by the Advertiser, a SITUATION as IMPROVER, in an Architect's Office.—Address, S. S. 7, Great College-street, Westminster.

WANTED, by a Person of considerable experience in town and country works, a RE-ENGAGEMENT as BUILDER'S FOREMAN Good reference as to ability, legrity, &c. can be given. Locality no object.—Address, Y. Z 29, Beckford row, Walworth-road.

TO BUILDERS AND PAINTERS.

WANTED, by a Young Man, a SITUATION as PAINTER and GLAZIER. Has a practical knowledge of colours, and is competent to take charge of work. Good references can be given.—Address, G. F. 71, Great Clarendon-street, Clarendon-square.

WANTED, a SITUATION as FOREMAN in a BRICKYARD (Close or Scotch Kiln), by a Person who has been in the above line these last twenty-five years; has been foreman for one of the largest builders in London, likewise for gentlemen in the country; with coals or woods of any kind. Character, if required.—Address, W. A. L. Post-office, Wadhurst, Suss x

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WANTED, by a Young Man, aged 24, a SITUATION as PAINTER, GRAINER, and GLAZIER. Wages low. Is a good grainer; has specimens on hand. Is willing to make himself generally useful.—Address, R. M. 26, Raven-street, London Hospital.

WANTED, a permanent SITUATION by a Young Man, as PLUMBER, who can fill his time up at painting and glazing.—Address, G. B. Office of "The Builder."

TO BUILDERS, HOUSE PAINTERS AND DECORATORS

WANTED, by a respectable Young Man, a SITUATION as PAPER-HANGER, either day or piece-work.—Address, O. E. 14, Winchester-terrace, Winchester-street, Pentonville.

TO MASTER BUILDERS.

WANTED, by a respectable Young Man from the country, aged 19, a SITUATION to WORK at BENCH, where good opportunities are afforded for improvement. Has served the five years' apprenticeship with his late employer.—West-end preferred.—For further particulars, address to the Manager, Agricultural Department, Baker-street Bazaar.

WANTED, a SITUATION, in a Builder's Office, by a Young Man, 23 years of age, who is fully capable of taking out quantities, measuring up works, and the general routine of the office. The advertiser was brought up to the trade, has been employed by London builders for three years, and has latterly been engaged in the superintendence of outdoor works of magnitude.—Address, Mr. SPENCER, Mr. Beadon, Stationer, Worcester-street, Wolverhampton.

TO BRICKMAKERS, &c.

WANTED, a SITUATION as FOREMAN, or CLOSE-KILN BURNER. The advertiser was upwards of ten years burner to the late Mr. T. Cubitt, of Thames-bank, Pimlico.—Address, A. B. 6, Moreton-street, Pimlico.

TO BUILDERS AND OTHERS.

THE Advertiser, aged 31, a thoroughly competent FOREMAN and CLERK, will be glad with the general routine of building and office work generally. As a good draughtsman, quick estimater, measure up work, take out quantities, &c. &c. is desirous of an immediate ENGAGEMENT.—Address, W. H. at Campbell's Coffee-house, No. 3, Mount-street, Lambeth

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TO BUILDERS AND OTHERS.

THE Advertiser, who is qualified to prepare plans working plans, details, and other drawings, measure up works, take out quantities, &c. wishes for a SITUATION. Salary moderate.—address, L. P. S. 25, Jonson's-place, Harrow-road.

TO ARCHITECTS, SURVEYORS, BUILDERS, &c

THE Advertiser, aged 22, is open to an ENGAGEMENT in an Office of the above description; is a neat and correct draughtsman, and good penman and accountant. Good references can be given.—Address, M. A. care of Mr. Watkins, 3, Nassau-street, Soho.

TO LOCAL BOARDS of HEALTH, ENGINEERS, CONTRACTORS, &c.—A Gentleman, just disengaged, offers his services to the above, in any capacity, where an intimate acquaintance with, and practical experience of, all works relating to statutory operations would be required. First-class testimonials as engineer, manager, general assistant, clerk of works, paymaster, &c. Terms, for a permanency, moderate.—Address, C. E. 14, Mortimer-street, Cavendish-square, London.

TO ARCHITECTS, SURVEYORS, &c.

THE Advertiser, aged 19, who has been nearly five years in the above professions, wishes for an ENGAGEMENT. A small salary required.—Address, W. H. L. 4, Horbury-terrace, Notting-hill.

TO BUILDERS

THE Friends of a respectable Youth, aged 15, wish to APPRENTICE him to the BUILDING TRADE. A moderate premium will be given.—Address, H. (stating particulars) Post-office, Kidlington, Oxfordshire.

TO ARCHITECTS.

THE Advertiser, who understands planning and perspective, together with the general duties of an Architect's Office, wishes for an ENGAGEMENT.—Address, A.B. Mr. Miller's Library, 1, Little College-street, Westminster.

TO BUILDERS' WIDOWS, GUARDIANS OF FAMILIES, AND OTHERS.

THE Advertiser, who has been in business for himself, wishes to ENGAGE himself to either of the above, to take the whole or part charge of a business; has no objection to any part of the country.—Direct to G. A. 8, Heath-street, Commercial-road, Stepney, London.

TO BUILDERS AND CONTRACTORS.

THE Advertiser, a Young Man, 26 years of age, requires a SITUATION in either of the above Offices. He has had great experience as an accountant and draughtsman, as well as having had the superintendence of several large contracts as clerk of works. The highest testimonials can be produced.—Address, X. Y. Z. 29, Beaumont square, Mile end-road.

TO ARCHITECTS AND SURVEYORS.

THE Advertiser, who is a good Architectural Draughtsman, and acquainted with Land and Town Surveying and Levelling, is desirous of an ENGAGEMENT.—Address, ALPHA, 28, Shaftesbury-terrace, Pimlico.

INTEGRITY UNITED to ACTIVITY.—An energetic, striving Young Man, who is practically acquainted with the measuring of builder's work, and who has filled the situation of clerk of works satisfactorily to his employer, wishes for a SITUATION either in the office, or in charge of Buildings, where he would prove invaluable for his attention to business, and to the interest of his employers.—Address, MORIAH, 57, Red Lion street, Holborn.

ENGINEERING.

A GENTLEMAN acquainted with surveying and mensuration, wishes for EMPLOYMENT by an engineer, in order to acquire a knowledge of the above profession. No premium would be paid, and no salary expected. No objection to go abroad.—Address, Mr. J. LISTER SMITH, Wilderwick, East Grinstead, Sussex.

AS WORKING FOREMAN of BRICKLAYERS.—A thorough practical and experienced MAN, seeks EMPLOYMENT Piecework if preferred. Direct, A. G. 3, Prince's-place, Bird-street, Lambeth.

TO BUILDERS AND MASTERS.

A YOUNG MAN wishes to meet with a MASTER that would take him for two years at a small weekly salary, and teach him a trade. Aged 20. Town or country. Would make himself useful.—Direct, G. B. Office of "The Builder."

TO ARCHITECTS.

A GOOD DRAUGHTSMAN and fair COLOURIST, competent to make working, finished, and perspective drawings, in Gothic or Italian, is OPEN to an ENGAGEMENT. Salary moderate.—Address, B. W. Office of "The Builder."

TO TIMBER MERCHANTS

AN active, middle-aged Man, thoroughly conversant with the trade, wishes EMPLOYMENT as SALESMAN in a retail timber yard. Can give first-rate references as to character and ability.—Address, J. L. Office of "The Builder."

A RESPECTABLE YOUTH, aged 14, who can sketch and write fairly, and is anxious to make himself useful wishes for EMPLOYMENT, in a professional office. Salary merely nominal. Address, post-paid, H. T. 1, Almaterrace, Stockwell Parade-road, Clapham.

TO BUILDERS.

AN active MAN is open to an ENGAGEMENT, as FOREMAN. He is well versed in all the details of the trade, is a good draughtsman, and has had sixteen years' good practice.—Address, R. J. Office of "The Builder."

TO ARCHITECTS AND SURVEYORS.

A YOUNG GENTLEMAN, whose articles with an Architect and the first Surveyor have recently expired, desires an ENGAGEMENT. Has been in the profession five years, is well acquainted with the New Building Act, and the routine of an architect's office.—Address, SNOW, Office of "The Builder."

TO ARCHITECTS.

A GENTLEMAN desirous of improvement, wishes to meet with an ENGAGEMENT in the Office of a London Architect of good practice Satisfactory testimonials can be given. Salary moderate.—Address, M. A. Office of "The Builder."

TO CONTRACTORS AND OTHERS.

A THOROUGH practical Man is open to an ENGAGEMENT as CLERK of WORKS, or to manage a Business, which office he is now fulfilling. He is well versed in making finished working drawings, taking out quantities, and measuring up extra works. References as to ability.—Address, A. S. 14, Thornhill-place, Caledonian-road, Islington. No objection to the country.

TO BUILDERS.

A YOUNG MAN, who has worked at the bench six years, and been in a builder's office upwards of four years, is desirous of an immediate ENGAGEMENT, either in the shop or Office. References unexceptionable.—Address, R. S. care of Mr. Deakin, Signal Works, Earl-street, Southwark-bridge-road.

TO NOBLEMEN AND GENTLEMEN PROPRIETORS OF ESTATES.

A YOUNG MAN, a Surveyor and Builder, solicits an ENGAGEMENT as BUILDING AGENT, to superintend erections and general repairs, and personally to superintend the workmen. Would collect rents if required. Security given, and references and testimonials of the most satisfactory nature will be produced.—Address, A. B. Retreat Cottage, Dorking, Surrey.

TO BUILDERS.

AN experienced BUILDER'S CLERK is open to an ENGAGEMENT, either in the Office or as Manager of a Joinery Business. Address, Y. Z. 5, George-terrace, West-street, Croydon.

TO BUILDERS AND OTHERS.

AN experienced BUILDER'S CLERK is open to a RE-ENGAGEMENT.—References unexceptionable.—Address, A. B. Mr. Cowley, Upper Sydenham.

A PRACTICAL CLERK of WORKS and WORKING DRAUGHTSMAN, is open to an ENGAGEMENT.—Address, B. B. Hope Coffee-house, Bull-alley, Moorgate-street.

TO BUILDERS.

AN experienced BUILDER'S CLERK is in want of an ENGAGEMENT in an OFFICE; is capable of making finished and working drawings, taking out bills of quantities, making estimates, and the routine generally of a builder's business. Terms moderate. Satisfactory references given.—Address, N. O. 5, Claremont-place, Hornsey-road.

TO STATUARIES, &c.

A GOOD CARVER is desirous of EMPLOYMENT; he has had much practice on monumental and chimney-piece work, and is well acquainted with Gothic.—Address, J. E. 51, Wilton-street, Westminster.

TO BUILDERS AND PLUMBERS

A GOOD PLUMBER wishes EMPLOYMENT in town or country. No objection to the three branches. Can give good reference.—Address, T. B. 11, Charles-street, Eastbourne-terrace, Bayswater.

CONSTANT EMPLOYMENT.

A HANDY MAN, who can do plastering, whitewashing, paperhanging, set stoves, and other jobbing work, and who would be willing to make himself generally useful and study the interests of his employer, is WANTED, by a Gentleman having a large number of houses. Wages, 3s. 6d. per day. Apply, by letter only, stating age, how, and where last employed, to Mr. E. JAMES, No. 3, Fore street, City.

TO BUILDERS AND OTHERS.

AN Experienced and Practical Surveyor is OPEN to a partial or permanent ENGAGEMENT in Measuring, Estimating, taking out quantities, or the making up of Builders' Accounts.—Address, H. J. Office of "The Builder."

TO ARCHITECTS, &c.

A GENTLEMAN would be glad to meet with an ENGAGEMENT as PRINCIPAL ASSISTANT, or otherwise. He is a good draughtsman, and has had considerable experience in designing in the Italian and Ecclesiastical styles of architecture, and possesses a good knowledge of detail and construction.—Address, ZETA, 13, Canterbury row, Newington.

A GENTLEMAN, thoroughly and practically acquainted with Counting-house duties, a competent Book-keeper, accurate Accountant, and able to conduct an extensive correspondence, is desirous of EMPLOYMENT in a respectable house of business, at a moderate salary.—Address, P. Office of "The Builder."

WATERSIDE MANUFACTURING PREMISES TO BE LET (or Lease to be Sold), particularly adapted for Cement Manufacturers being completely fitted with Kilns and furnace-work on the latest improved principles; also, a large Plot of Ground adjacent, with sheds and stabling suitable for a carpenter, wheelwrights, livery-yard, or as an adjunct to the wharf, situate near the Canal bridge, Kingsland-road.—For particulars, apply to Messrs. EVERSFIELD and HORNE, Auctioneers, 40, Parliament-street.

ST. JOHN'S, HORSELYDOWN.—Extensive and eligible PREMISES TO BE LET, by Tender, by the Governors of St. Olave's Free Grammar School, Southwark, on a seven-one years' repairing lease from Lady-day now next ensuing, that is to say, all those Premises, a brute and Tavern situate in the parish of Magdalen-street, Tooley-street, known and lately used as the Branch School. The Premises comprise a gateway-entrance; residence; large and well-lighted boudoir, with suitable offices, and a spacious open area; and are very suitable for any business requiring space, light, and security. The property is situate in the parish of St. John's, Horselydown, in the county of Surrey, together with the appurtenances thereunto respectively belonging. The particulars and conditions, plans of the premises, and specifications of the repairs to be performed, may be seen at the Office of Mr. HENRY STOCK, the Surveyor, No. 6, Duke-street, Southwark, between the hours of TEN and FOUR o'clock, any day, Sundays excepted; and Tenders (in writing only) are to be delivered at the Office of Mr. R. MINSHULL JONES, No. 190, Tooley-street, Southwark, on or before ELEVEN o'clock on THURSDAY, the 21st FEBRUARY next, immediately after which a Court of Governors will be held at the School House, for the purpose of taking the same into consideration, and where persons making such Tenders are to attend punctually at TWELVE o'clock of the same day; but the governors do not bind themselves to accept the highest or any offer or offers.
February 6th, 1856.

TO BE LET on Building Lease, the HALL and PREMISES belonging to the Worshipful Company of Weavers, opposite the entrance to Guildhall, in Basinghall street. A suitable site for the erection of Offices or any large building. Frontage, about 37 feet; depth 120 feet. The Court will meet at the premises for receiving TENDERS for the same, on TUESDAY, the 4th MARCH next. The premises may be viewed by permission of the tenants, and further particulars may be obtained of JOSEPH JENNINGS, Esq. 3, Foley-place, Cavendish-square; and of Messrs. DAVIDSON and BRADBURY, Solicitors, No. 18, Basinghall-street.

TO BUILDERS, CONTRACTORS, and OTHERS.—TO BE LET, for eighty years, a large HOUSE, containing upwards of twenty rooms, which, in consequence of the formation of a new street, will have a frontage of nearly 100 feet one way and 40 feet another; is capable of being divided into three houses to pay a handsome per-centage on the outlay. Also, Building Land adjoining thereto, suitable for a small but elegant style of house. Arrangements can be made with persons taking the latter to enable them to perform the alterations to the present building for the proprietor, at prices and terms to be agreed upon. Apply to Mr. PIBNE, Architect, Oakley-street, Chelsea.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the offices of Messrs. MORGAN and PHIPSON, Architects, 5, Chancery lane.

FREEHOLD GROUND, CHANCERY-LANE and FETTER-LANE.—The Commissioners of Sewers of the City of London hereby give Notice, That they will meet in the GUILD HALL of the said City, on TUESDAY, the 26th of FEBRUARY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking, on Building Lease for Eighty Years, certain PLOTS of GROUND, situate at the south-west end of Chancery lane, and the south-east end of Fetter lane.—Further particulars may be had, and plans seen, on application to Mr. HALWARD, Surveyor to the Commission, at these Offices, in the Guildhall. The Commissioners will require a plan and elevation of the premises proposed to be built, to be submitted to them for approval; and do not bind themselves to accept any proposal, unless deemed advantageous.

JOSEPH DAW, Principal Clerk.
Sewers' Office, Guildhall, January 9, 1856.

STRATFORD, ESSEX.—FREEHOLD LAND, within three miles of London, exonerated from land-tax and free of tithe, TO BE LET on LEASE, for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H. DEAN Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 7, Bloomsbury square, London.

TO ENGINEERS, ARCHITECTS, SOLICITORS, ARTISTS, AND OTHERS.—A first-rate HOUSE TO BE LET, on lease, No. 14, HART-STREET, BLOOMSBURY, in excellent repair, and fitted up with solid Spanish mahogany doors, and peculiarly well adapted for any gentleman in the above professions, having light superior offices, and every domestic convenience and comfort.—May be viewed, and particulars had on the Premises, from NINE till TWELVE, or FIVE to SEVEN; also of Mr. WARD, 27, Regent-street, Waterloo-place.

HARROW.—FREEHOLD LAND.—TO BE SOLD, 100 ACRES, in a ring fence, and several other eligible plots of FREEHOLD LAND, at a moderate price contiguous to the Harrow Railway Station, and intersected by capital roads. Residents are entitled to the privileges of the Harrow School, and the London and North Western Railway Company offer to persons building houses of approved elevation, worth 50l. per year each, a free first-class pass between Harrow station and Euston square, for eleven years. There is an abundant supply of excellent water, and very superior brick-earth on the land.—Apply to WILLIAM B. COOPER, Esq. Solicitor, 3, Verulam-buildings, Gray's-inn.

BUILDING-GROUND, Clerkenwell, in the direct line of the new street from Farringdon-street to Islington.—GROUND TO BE LET for third-rate houses, with or without workshops and back entrances in capital site for a public-house.—To see plan and particulars inquire at the Office of N. T. RANDALL, Esq. Architect, 28, Great Winchester-street, City, between the hours of TEN and FOUR o'clock.

TO BE LET, SEMI-DETACHED VILLAS, in immediate neighbourhood of Victoria New Docks, and in parish of Plaistow. Each house contains two parlours and breakfast-room, three bed-rooms, kitchen, scullery, pantries, and W.C. They are completely fitted up with every convenience,—coppers, water, stoves, and blinds. They are partially grained oak and varnished, and all are papered with newest patterns. They are ready for immediate occupation, and, in consequence of the failure of the builder, they will be let for the low rent of 28l. per annum. Taxes are very moderate, and railroad and omnibus conveyance within easy distance.—Apply to Messrs. WM. G. and E. HADERSHON, Architects, 38, Bloomsbury-square, London; at whose Office views and drawings may be seen.

TO CAPITALISTS, BUILDERS, and SPECULATORS.—The valuable BUILDING ESTATE of "Oak Bank," surrounded on all sides by good roads, having extensive frontages to the river Itchen, and fine views of the town of Southampton, the docks and shipping, and Southampton Water, is TO BE LET on Building Leases for 1,000 years from the present proprietor. This valuable building property is within a few minutes' walk of the docks and town of Southampton, and being within the municipal boundary, the rates and taxes are almost nominal. Its peculiar formation permits it to be made available for dwelling suitable to every class.—Further particulars will appear in a future advertisement; and the plans may be viewed and full information obtained on application to Mr. ALFRED G. LOCK, Architect, Surveyor, and Land Agent, Offices, Onslow-road, Southampton: on and after the 25th day of February.

BROAD-STREET, RATCLIFF.—THREE HOUSES, Nos. 95, 96, and 97, and FOUR SMALLER, Nos. 8, 9, 10, and 11, BURLINGTON-PLACE, TO BE LET, by TENDER, on a repairing lease, for twenty-one years, from next Midsummer-day next. Sealed Tenders to be delivered on or before MONDAY, the 3rd of MARCH, 1856, at the Clerk's Office, Coopers'-hall, Basinghall-street, where further particulars may be obtained. The Court will meet at the Hall on TUESDAY, 4th MARCH, at ELEVEN o'clock, where parties who have sent in Tenders are requested to attend. The Court do not bind themselves to accept the highest or any Tender.
JAS. BOYER, Clerk.
Coopers'-hall, February 5, 1856.

TO ENGINEERS.—TO BE DISPOSED OF, by direction of the executors, a very compact BUSINESS in London, which has been established many years. The premises are centrally situate, and conveniently arranged for the business. The principal tools are nearly new, by Smith Beacock, and Tannett, of Leeds, and include a 12-inch self-acting slide lathe planing machine, and drilling machine; there are also three other lathes, high-pressure steam-engine and boiler, smiths' forges and tools, fitters' benches, vices, and tools. About 1,000l. will be required, and to any active young man desirous of starting in business, a very eligible opportunity is presented.—For further particulars, apply to Messrs. FULLER and HORSEY, Billiter-street, City.

TO MANUFACTURERS, MERCHANTS, and OTHERS.—TO BE LET, a HOUSE, well and substantially built, and in excellent condition, with extensive PREMISES, situate in the western part of the City, and well adapted for shops and dwelling-house, and workshops. The materials of the present erections may be used if sound, in erecting any new buildings that may be approved. Money will be advanced if required by the purchaser, or taken to carry out the undertaking, upon a satisfactory arrangement.—Inquire of Messrs. HOWARD and DOLLMAN, Solicitors, 141, Fenchurch-street; Mr. EDWARD LOWTHER, 38, Red Lion-street, Clerkenwell; or of Mr. MURRELL, Auctioneer, 1, Walbrook, City.

TO BUILDERS and OTHERS. — An excellent SITE TO BE LET or SOLD, for BUILDING PURPOSES, with a good double frontage, situate in a leading thoroughfare, and in an established neighbourhood, well adapted for shops and dwelling-house, and workshops. The materials of the present erections may be used if sound, in erecting any new buildings that may be approved. Money will be advanced if required by the purchaser, or taken to carry out the undertaking, upon a satisfactory arrangement.—Inquire of Messrs. HOWARD and DOLLMAN, Solicitors, 141, Fenchurch-street; Mr. EDWARD LOWTHER, 38, Red Lion-street, Clerkenwell; or of Mr. MURRELL, Auctioneer, 1, Walbrook, City.

HANDS'S PATENT ECONOMISING KILN is the only simple and effectual mode to use the heat, for drying moist moulded clays, sound at any season, in time of burning and cooling the kiln, with perfect ventilation.—Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TO THE COMMISSIONERS OF THE BOARD OF HEALTH, AND TO ALL PERSONS INTERESTED IN THE SMOKE QUESTION.

HANDS'S PATENT is the only simple and certain remedy for the SMOKE NUISANCE: it has combined, where necessary, the advantages of a drying process and perfect ventilation, without a particle of complicated machinery. Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 6s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed on the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSS'S WHOLESALE WAREHOUSE, 29, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER-HANGINGS. — JEFFREY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, which in price, style, and colouring, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls.—Factory, 115, Whitechapel; Show-room, 500, Oxford-street.

PANTILES.—WANTED, a quantity of NEW PANTILES, of approved quality, to be delivered near the London Docks.—Address, stating price, to Mr. JAMES RIVETT, Builder, Stratford, Essex.

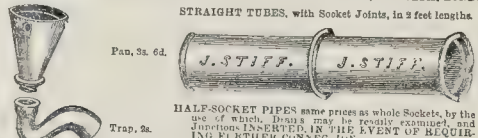
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



Pan, 3s. 6d. Pan, 3s. 6d.

Trap, 2s. Trap, 2s.

HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

Drawings, with Prices, will be forwarded free, on application.

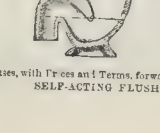
GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.



Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light and Dark, equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Portzolano.

NOTICE.—M. H. BLANCHARD, 74, Blackfriars-road, London, Manufacturer of PLASTER of PARIS of a superior quality, suitable for Sculpture, Architectural Embellishments, &c.—will not twist, warp, or give after set, but will retain its hardness and strength.

Superfine, per ton	£7 0 0
Fine	3 0 0
Coarse	2 10 0

Delivered for Cash to any of the Metropolitan Railway Stations, or within the Metropolis.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

TATHAM & CO.—No. 14, SOUTH WHARF, PADDINGTON, BRICK, LIME, and CEMENT MERCHANTS, SOUTHAM BLUE LIAS LIME DEPOT.

Bath, Portland, Lias, and Roman Cements; Parian and Keene's Cements, Plaster of Paris, Glazed Stoneware Sewage Pipes, Fire Goods, Vitrified Blue Bricks, White Building Bricks, White Enamelled Pans and Traps, and every description of Building Material.

N.B. Lump and Ground BLUE LIAS LIME delivered in boat-loads direct from the Works in Warwickshire, to any part of the river or canal.

SOUTHAM BLUE LIAS LIME DEPOT, No. 14, SOUTH WHARF, PADDINGTON.

TATHAM & CO. have arranged for a constant supply of the above very superior BLUE LIAS LIME, which for the last two years has been extensively used at most of the large works constructed during that period or now in hand, and any orders they are favoured with will command their best attention.

Boatloads of either Lump or Ground Lime can be delivered direct from the Works in WARWICKSHIRE to any part of the Rivers Thames or Lee, alongside any wharf on canal, or by boat or rail to any part of the kingdom.

PORTLAND CEMENT.—TATHAM & CO. are enabled to offer a very superior quality of this valuable Cement at a moderate price, and all orders addressed to No. 14, SOUTH WHARF, PADDINGTON, will receive the best and most prompt attention.

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS, ISLE of SHEPPEY, Kent.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

PORTLAND and ROMAN CEMENT, TERRA-COTTA POTS, &c.—J. M. BLASHFIELD begs to acquaint the Public that he has entirely CLOSED his Establishment on the Surrey side of the Thames, and that articles of his manufacture can only be obtained at his Works, Mill-wall, Poplar, or at his Warehouse, Praed-street, Paddington.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME.

THE LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements, at reduced prices, the material being excavated in its pure and unadulterated state, from quarries on their own property. The Company particularly recommend a trial of their XXXX Bath Cement, as far superior to any article now in the market. These cements can be sent by rail or ship-d from their wharf, direct to all parts.—Agents required, and a liberal discount allowed. Orders received by Mr. KIALLMARK, 80, Old Bread-street, City, or by RICHARD WINTER, Cement Works, Dunball, Bridgewater.

BATH CEMENT.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

PORTLAND CEMENT.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. with much pleasure announce to their Friends and the Public, that they have completed the enlargement of their works, in order to meet the great increasing demand for their Cement; and are now prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes Cement is applicable.—Orders received at Great Scotland-yard, and at the Works.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be used for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Paint-dealers in Original Packages, each cask stamped—HUBBUCK—LONDON—PATENT. And when so marked, the quality is guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester.—T. H. BOORMAN, WILD, and CO. beg to inform the public and trade generally, that they have completed their works for the manufacture of PORTLAND CEMENT, and from their contiguity to the river Medway, as well as the branch line of the South-Eastern Railway from Strood to Maidstone, a siding from which will be carried into their works, enabling them thereby to transmit any orders they may receive to any station on the before-mentioned line, and confidently hope they shall be able to supply the public with a first-rate article, in both cement and lime, on moderate terms. Persons sending orders for cement, are respectfully requested to say for what purpose it is required, and printed instructions will be affixed to the head of each cask. Orders to be addressed to Mr. THOMAS WEEKES, Agent at the Works.

Agents in London:—Messrs. GEORGE POTTER and CO. Lime Merchants, Purfleet Wharf, Blackfriars; and 19, North Wharf-road, Paddington.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.

G. BURGE, Jun. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.

DAVIES and NORMAN, Agents.

Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.

GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

NOTICE.—BLUE LIAS LIME.—L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.

L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to insure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's cross.

GREY STONE LIME WHARFS, 12, UPPER GROUND STREET, Blackfriars (Surrey side 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Best Grey Stone, or Grey Chalk, free on board at Works, 1s. 3d. per ton.
Small ditto, ditto, 6d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London. March 30, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.

GIBBS, CANNING, and CO.'S BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.

ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.

SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants Builders, contractors, and others supplied with every description of building material at the lowest market prices.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and fare, bricks fire-goods, &c can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge Stratford, Essex; or from the Works at Grays, Essex.—Orders by letter, to Messrs. MEESON and CO, Gray's, Essex, executed with despatch.

LIME.—Gray Stone, 9s. 6d.; Chalk, 8s. per yard; at THOMAS J. COLE'S Depôt, Peckham Canal.

Sand, Cement, Slates, Tiles, and Drain Pipes, supplied at equally low rates. Terms, cash. Builders' material landed, wharfed, and carted.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.

JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale Business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of best quality upon advantageous terms.—Application either at Harwich or to his Agent, GEORGE MORRIS, 30, New Ormond street, Queen-square, London.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.

BRICK MOULDS (improved), Steel-faced Stocks and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick Mill Work and Implements.—J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 3, ADELAIDE-PLACE, London-bridge.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Stamp Place, half-washed Stocks, and Place Bricks, also on sale These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Fit Sand of superior quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

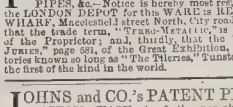
OLD BRICKS.—FOR SALE, 100,000; also a large quantity of capital Fire Bricks and Tiles, at the Gas Works, Schoolhouse-lane, Ratcliff.

CAPITAL MALM CUTTERS, Yellow and Pale Seconds, and Paviours, FOR SALE, delivered to any part of London.—Apply by letter, post paid, to EDWARD WEST, Turk's-row, Turk's Head Inn, Twickenham, opposite St. Margaret's Estate.

N.B.—Stock, Grizzle, and Place Bricks for sale.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. Vide "Mechanic's Magazine," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.



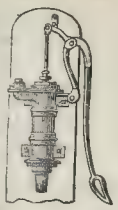
BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield street North, City road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "HONORS OF THE JURIES," page 681, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (perfectly non-absorbent) STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers. Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

TO BUILDERS AND PLUMBERS.
The attention of the Trade is called to
JOHN WARNER & SONS'
PATENT VIBRATING
STANDARD PUMP,
which is recommended for the simplicity of its construction, and the ease with which it works.
By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.
Beer and Water Engines for raising fluids from a depth not exceeding 33 feet; also, Garden Engines constructed on the same principle.
JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.



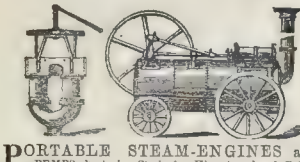
R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS,
Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.
Pumps of any size, single or double barrel, up to double 15-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 43s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

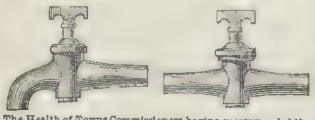
B. FOWLER & CO.'S
PORTABLE PUMPS,
3-inch to 9-inch Barrels,
Plain or Sliding Telescope Suction,
ON HIRE.
SINGLE AND DOUBLE PUMPS,
all sizes,
to any depth, for Hand or Steam Power.
Patent Double-action and General Pump-makers, Builders' Smiths, &c.
WHITEFRIARS-STREET,
Fleet-street.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street Blackfriars-bridge (Surrey Side.

PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 20-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 92, Blackfriars-road.

TO WATER COMPANIES AND PLUMBERS.
HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from Leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, sooks, or wire.
LEAD, IRON, and TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

LYTCHETT POTTERY.—For SALE by PRIVATE CONTRACT, the LEASE and PLANT of the above Premises. The lease consists of about fourteen acres of land and a good cottage. The land contains a large quantity of very superior clay for pottery and fire goods. The drain pipes made from the clay are equal, if not superior, to any yet in the market, and the fire goods will bear comparison with any yet made. The plant comprises three pottery kilns and two brick kilns, with pug mills &c., pug mills, and all other necessary apparatus. Lytchett Pottery is 4 miles from the South Western Railway, and 3 miles from the port of Poole. For further particulars, and to view, apply to H. P. FISHER, Blandford.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.
VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Potters Wharf, near Barkside. DAVID MORNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices here to offer to Builders and others, STONEWARE PIPES &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb 11, 1856.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.
HENRY DOULTON AND CO.
Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their
GLAZED STONEWARE DRAIN-PIPES,
Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

JOHN DOULTON, BROTHERS, AND CO.
LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF
DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.
TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,
LAMBETH POTTERY, HIGH-STREET, LAMBETH,
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to
5s. 6d.
These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pans.

GREAT REDUCTION IN THE PRICE OF STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his
GLAZED STONEWARE DRAIN-PIPES.
LISTS OF PRICES FORWARDED ON APPLICATION.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET,
DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.

WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.
The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.
DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern wharf, York-road, Kings-cross.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.
FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains, pumps of every description. Estimates prepared for all works connected with hydraulic press. Pumps on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

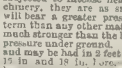
COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES BENDS, JUNCTIONS, and TRAPS of the best quality, and allowed by all to be of the best manufacture, by the unparalleled quality, combined with cheapness will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern wharf, York-road, Kings-cross.

WHITE and BLUE CLOSET BASINS, URINALS, &c.
MILLWALL POTTERY.
DEPOT:
ARTHUR-STREET, NEW OXFORD-STREET.

TO DRAIN PIPE MAKERS.
WANTED IMMEDIATELY, 10,000 9-inch RED GLAZED SOCKET-PIPES, to Farnborough Station, South Western, for South Eastern Railway.—Address to H. BIRCH, Contractor, Farnham, Surrey.

WILLIAM GILBERT, Tividale Pottery and Blue The Works near Tipton, Staffordshire.—The BLUE WARE SANITARY PIPES made by W. GILBERT are the only GLAZED pipes of the kind manufactured in England. They are well vitrified, smoothly glazed, and very durable, being subjected to intense heat in the kilns. Being moulded by machinery, they are as smooth and straight as stoneware pipes; will bear a greater pressure, and endure in the drains a longer term than any other material. The sockets are deep, and made much stronger than the body of the pipe, so as to resist all unequal pressure under ground. These pipes are cheaper than stoneware, and may be had in 2 feet lengths, of 2 in. 3 in. 4 in. 6 in. 9 in. 12 in. 15 in and 18 in. bores, with all kinds of syphons, junctions, bends, gauges, and drain gratings to match. Flreclay chimney-pots of 100 patterns. Glazed stoneware sewerage pipes, &c. &c. Terra cotta clay brackets, trusses, vases, fountains, busts, statues pedestals, &c

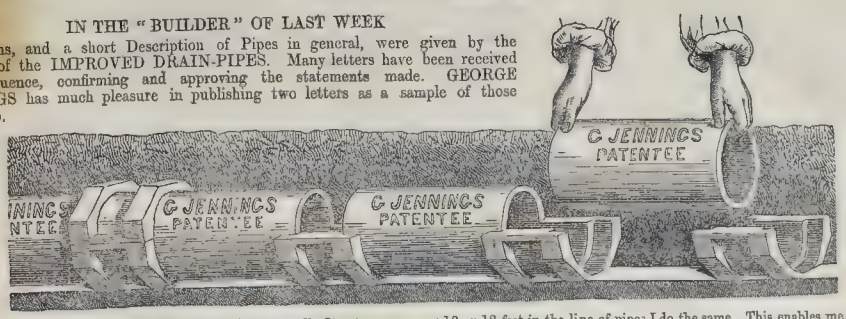
DRAUGHTS ROUND DOORS and WINDOWS.—GREENWOOD'S PATENT INDIA-RUBBER STOPS, to supersede list or leather, for the purpose of keeping out dust and draught round doors, windows, closets, cupboards, &c. making the same air-tight. Price 4d. per foot. Spring Slides for bottoms of doors, 4s. each.
JOHN GREENWOOD, Carpenter, &c. Arthur-street West, London-bridge.



TO ENGINEERS, ARCHITECTS, SURVEYORS, AND OTHERS, INTERESTED IN EFFICIENT DRAINAGE.

IN THE "BUILDER" OF LAST WEEK

Illustrations, and a short Description of Pipes in general, were given by the Patentee of the IMPROVED DRAIN-PIPES. Many letters have been received in consequence, confirming and approving the statements made. GEORGE JENNINGS has much pleasure in publishing two letters as a sample of those referred to.



"City Bank, Threadneedle Street,
"February 12th, 1856.

"SIR,—I quite agree with all you state in your advertisement in last week's *Builder*. As a further illustration of the necessity of examination, I may add, that I was sent by Messrs. Hunt and Stevenson, in 1853, to Dr. Wordsworth's, to examine and report upon the drainage of the mansion and offices. Before I could do so, I had to break into the drain-pipes at various points. Eventually it was found necessary to break the pipes every fifteen feet to cleanse them; the difficulty of restoration was great, and the expense considerable.

"As a clerk of works of some years' standing, permit me to observe that drains and drain-pipes are often nearly stopped by shavings, &c. before the works are out of the contractor's hands.

"However strict a clerk of works may be, foreign matters will find their way into the drainage.

"In all cases where I have used your pipes—and I recommend its adoption generally—I leave a saddle loose at the foot of every soil or rain pipe, and every 10 or 12 feet in the line of pipes I do the same. This enables me, at the completion of the works, to see if my drains are perfectly clear; if so, I have the saddles previously left loose, bedded like the rest. Although a comparative stranger, I wish you all the success your ingenuity deserves.

"I am, Sir, your obedient Servant,
"JOHN JARVIS.

"Mr. George Jennings."

"Surveyor's Office, Yeovil, February 11th, 1856.

"SIR,—I have much pleasure in bearing testimony in favour of your patent drain-pipes. We are using them in this town both for public and private drains, and they are generally considered equal in manufacture, and superior in principle, to any other pipes yet offered to the public.

"I am, Sir, your obedient Servant,
"ROBERT L. WILLIAMS, Town Surveyor.

"Mr. Jennings."

The Pipes above illustrated and referred to, with all the advantages they offer, are the SAME PRICE AS CHARGED BY THE RESPECTABLE LONDON POTTERS.

The Show-rooms now built on Jennings's Wharf, Holland-street, Blackfriars, will be open in March next, for the Exhibition of Sanitary Inventions, suitable for EVERY CLASS OF BUILDING, PUBLIC OR PRIVATE. In the meantime, Illustrated Particulars and Prices of JENNINGS'S Self-acting and other Waterclosets, Urinals, Lavatories, Pumps, Sluice-Valves, Fire and other Cocks, Gully-traps, Shop-shutter Shoes, Earthenware Drain and Soil Pipes, &c. &c. can be had free, on application, or by post, on enclosing two stamps to

GEORGE JENNINGS, SANITARY ENGINEER, GREAT CHARLOTTE-STREET, BLACKFRIARS.

N.B.—Illustrations and Particulars of FOUR OTHER PATENTS FOR SANITARY PURPOSES just taken by GEORGE JENNINGS will appear in the course of a week. In the mean time they can be seen at the Factory, as above.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.

Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.

Barnsley Agent—Mr. JAMES SAGAR, Canal Wharf.

Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

AYLESFORD POTTERY COMPANY,

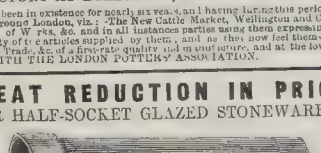
BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them, and as they now feel themselves established as Potters, beg to offer their goods to Contractors the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.



AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

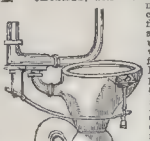
MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

SUPERIOR STONEWARE GLAZED

PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Slabs, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS,



manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 23, Old Fish-street, near St. Paul's, London—Price for Closet and Apparatus complete, from 23s. and perfect action guaranteed.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

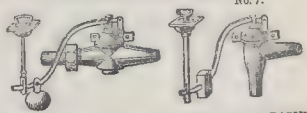
PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at				3d. per foot.
4	"	"	"	4d. "
6	"	"	"	6d. "
9	"	"	"	9d. "
12	"	"	"	1s. 5d. "
15	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture. And it is well known that good earthenware, UNGLAZED, is the oil test material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE

No. 7.



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SALES BY AUCTION.

TO COACHBUILDERS, COACH SMITHS, IRONMONGERS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, the 19th of FEBRUARY, and following day, at ELEVEN, on the PREMISES, George-street, Oxford-street, in lots, without reserve, SEVEN TONS IRON and STEEL and IRONMONGERY, including about thirty tons 8C bars assorted, twenty tons Staffordshire bars, eight tons coach-spring steel (Oxley's and Turton's), five tons best cast and double shear steel, two tons bolts and nuts, 200 gross coach-bolts, assorted; 300 dozen files and rasps, 100 bags wrought and cut nails, one ton best Derby town cloul, one ton snap head rivets, 500 gross wood screws, five tons crane coil and wheelwrights' chain, two tons burrs, washers, and bolt-rings; sixty pairs cart arms, mail patent axles, coach springs, coach ironmongery, double-purchase crab, builders' ironmongery, and a general assortment of brass ancastry. To be viewed on Monday previous to the Sale, when Catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-st reet, City.

TELEGRAPH WIRE

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY, FEBRUARY 25 at TWELVE, at the AUCTION MART, Bartholomew-lane, London, in lots, without reserve, EIGHTY MILES of TELEGRAPH WIRE, marked No. 16 copper wire, in No. 5 gutta-percha casing, manufactured by the Gutta-Percha Company, City-road; adapted for subterranean or submarine telegraph, and now lying at Dotton's Wharf, Tooley-street.—To be viewed at any time, by order, which, with catalogues, may be had of Messrs. GODDARD and EVNS, Solicitors, No. 101, Wood-street, Cheapside; or of Messrs. FULLER and HORSEY, 13, Billiter-street, City, London.

WESTMINSTER Surplus Builder's Stock and Effects.

MESSRS. EVERSFIELD and HORNE are instructed by the proprietor, in consequence of the senior partner retiring from business, to SELL by AUCTION, on the PREMISES, Earl-street, Westminster, on TUESDAY, the 19th of FEBRUARY, at TEN for ELEVEN, the SURPLUS STOCK-IN-TRADE, comprising a large quantity of dry deals, planks, and battens, prepared floor battens, dry pine plank, seasoned walnut, useful lots of mahogany, panelling, doors, sashes and framing, Portland stone, a copper skylight, &c. Also the valuable SCRUBS PLANT, comprising two young powerful draught horses, three carts, stone truck, blocks and falls, scaffold poles, boards, cords and putlogs, wheeling-planks, work benches, barrows, and mortar-boards, a very excellent mahogany desk, with ten drawers, and other effects.—May be viewed one day previous, and catalogues had on the Premises, and of the Auctioneers, 46, Parliament-street, or Coal Exchange.

ST JOHN'S WOOD—Lea shall Premises, with Workshops.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, at the MART, on TUESDAY, FEBRUARY 26th, at TWELVE, by order of the Assignees of Wm. Tavener, a substantial brick-built RESIDENCE, containing ten rooms, with workshops, yard, and stabling, situate on the south side of Clifton-road, St. John's-wood; held for an unexpired term of ninety-six years, at a ground-rent of 9l. The Premises are in hand but of the estimated annual value of 84l.—May be viewed, and particulars had, of Messrs. DAVIS and VIGERS, Esq. Solicitor, No. 10, Great Carter-lane, Doctors'-commons; and of the Auctioneers, 46, Parliament-street; or Coal-exchange.

GREEN PARK.—MATERIALS OF THE RESERVOIR

MESSRS. EVERSFIELD and HORNE are instructed by the Commissioners of Her Majesty's Public Works and Buildings, to SELL by AUCTION, on TUESDAY, MARCH 4th, the whole of the SOUND BRICKWORK and PLANT of the LARGE RESERVOIR near PICCADILLY, in the Green-park. May be viewed and catalogue had, at the Office of Works, Whitehall-place; and at the Auctioneers', 46, Parliament-street, or Coal Exchange.

SOUTHALL.—Important Sale of Bricks (adjoining the Canal), Plant and Freehold and Leasehold Land.

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, Southall, Middlesex, about half a mile from the station, on FRIDAY, FEBRUARY 29th, at TWELVE, in ONE lot, about 1,000 BRICKS, comprising stocks, place, grizzles, and main stocks and arches, sound in quality, and of good colour; also the brickmaking plant, and implements, consisting of washing mills, pug mills, iron plates, planks, sheets, barrows, screens, sieves, crusher, chaff-cutter, harness, stable utensils, erections of cottages and sheds, thirty-ton boat, and other effects; also the lease of the field, partly improved for the ensuing season. May be viewed, and catalogues had on the Premises; also of C. KENSLEY Esq. Solicitor, 73, Basinghall-street; at the Inns; and of the Auctioneers, 46, Parliament-street, Westminster, or Coal Exchange.

A Dejeuner provided on arrival of the 11'30 train from London.

EARLY SALE.—To BUILDERS, CABINET and PIANO-FORTE MAKERS, and OTHERS.

MR. LEREW will SELL by AUCTION on the PREMISES N 41 and 42, Union-street, Somerstown, on MONDAY, FEBRUARY 18, at ELEVEN for TWELVE, an account of the numerous lots, three feet 7 prepared flooring, seven feet 6 counting, seven feet of wide pine boards, two feet and 4 feet oak, seven feet 6 and 4 feet prepared lime boards, mogany, ranges, stoves, anvil, sundry machine-chimney-pieces, scaffolding, ladders, benches, screws, workbenches, &c. May be viewed the morning of sale, and catalogues had, on the Premises, and of the Auctioneer, Cardington-street, Hampstead road; near the East-end station.

DUNTON-GREEN, near Sevenoaks, Kent. Sale of valuable Oak and Ash Timber.

MR. WILLIAM HODSOLL is instructed by John Wilford, Esq. to SELL by AUCTION, at the ROSE AND CROWN INN, Dunton-green, on FRIDAY, 22nd FEBRUARY, 1856, at THREE o'clock, 142 superior OAK TIMBER TREES, including many of large scantling and excellent quality; also 28 ash TREES, all standing in the Park, about one mile from the Dunton-green station.—May be viewed on application to Jesse Brooks, at Broughton House, near Riverhead; and cut lots had one week previously, at the Inns in the neighbourhood; at the Place of Sale; and of Mr. WILLIAM HODSOLL, Auctioneer, &c. Farningham, Kent

FIRST MONTHLY SALE—MONDAY NEXT LAMBETH-ROAD. Large quantity of BUILDING MATERIALS, deals, battens, flooring boards, parallel and other doors, rafters, girders, brestsummers, die-square, sash lights, iron window-sashes, bricks, York-stone paving, tiles, slates, complete church pulpit, &c.

MR. GEORGE DOUGAL will SELL by AUCTION, on the PREMISES, adjoining the Railway arch, Lambeth-road, on MONDAY next, FEBRUARY 18th, at TWELVE, the above and numerous effects, without the slightest reserve.—On view. Catalogues on the Premises, and of the Auctioneer, Westminster-road.

TWO HOUSES IN CARCASS, CHELSEA.

MR. GEORGE BERRY will SELL by AUCTION, at the COMMERCIAL HALL, Chelsea, on THURSDAY, FEBRUARY 21, at ONE for TWO, in two lots, TWO substantially-erected CARCASSES, in a forward state, the floors and staircases being laid, and may be completed by a moderate outlay. They are Nos. 20 and 21, Lamb's-street, Pauline, Chelsea, and contain on the basement cellar, with area in front, separate kitchen, with fire-proof range, and entrance from the street; ground floor, 2 parlours, folding doors between, and part of the front window to each; first floor, 2 bedrooms, and part of the front window to each; second floor, 2 bedrooms, and part of the front window to each. Lease of 80 years from Midsummer last, at 8l. per annum. Land-tax redeemed. To be viewed by cards, which may be had at the Crown at Hull, of Messrs. Lee and Pembroke, 84, Lombard-street, and of the Auctioneer, 30, Malcolm-street, Belgrave-square.

SALES BY AUCTION.

Important Sale of Timber, felled, and lying on the Conservative Land Society's Estate, St. Margaret's, Isleworth. 70 Stacks of Hardwood, 7,000 Faggots, 100,000 Old Bricks, materials of Lodge &c.

MR. RICHARDS will SELL by AUCTION, on the PREMISES, Twickenham, on WEDNESDAY, FEBRUARY 27, and following day, at TWELVE o'clock, each day, 266 WITCH ELMS oaks, lime, walnut, horse-chesnut, Spanish ditto, beech, Turkey oak, ash, sycamore, hornbean, larch, cherry, acacia, and cedar timber trees, of extraordinary dimensions and superior quality, 70 stacks of hardwood, 7,000 large faggots, materials and effects. St. Margaret's is eight miles from London, surrounded by good roads, and close to the river. There is also a powerful crane within a quarter of a mile. The Timber will be SOLD on WEDNESDAY, and the Hardwood, Faggots, and materials on THURSDAY. A luncheon will be provided.—May be viewed six days prior to sale, when Catalogues may be obtained at the Office of the Society, 33, Norfolk-street, Strand; of GEORGE MORGAN, Esq., 3, Chancery-lane; at the Coach and Horses, Isleworth; and of the Auctioneer, Tottenham.

WILLOUGHBY PARK, TOTTENHAM—Builder's Stock-5,000 Bricks, Stone, 2,000 Duchess Slates, 300 Squares of Floor, &c. Deal-building House and Cart and Effects.

MR. RICHARDS will SELL by AUCTION, on the PREMISES near the PARK RAILWAY STATION, on TUESDAY, FEBRUARY 19, at TWELVE o'clock, Stock and Place BRICKS, 100 stone sills, 70 six feet stone steps, 1 squares of prepared flooring, battens, 3½ inch dry, moulded and other doors and linings, sashes and frames, a large variety of joiners' work, standard ladders, long scaffold-poles, boards, putlogs, wheeling-planks, work benches, screens, brushes, drain pipes, 500 yards of gravel, &c. View day prior and morning of Sale: catalogues on the Premises, and of the Auctioneer, Tottenham.

TO RETAIL TIMBER MERCHANTS, CONTRACTORS BUILDERS, SAW-MILL PROPRIETORS, AND OTHERS.

MESSRS. DAVIS and VIGERS are instructed by Mr. Samuel Cumsdell, upon his retirement from business, to SELL by AUCTION, on the PREMISES, Bellane, Spitalfields, and Queen-street, Church street, Whitechapel-road, on MONDAY, MARCH 3rd, and several following days, at TWELVE for ONE o'clock each day and without reserve, his extensive, well-seasoned, and valuable STOCK and PLANT, comprising 6,000 first-quality yellow Gothic and Hamburgh deals, 1,500 white Gothic and Christiana deals, 500 yellow Wyborg battens, 20,000 feet of Spanish and Honduras mahogany, cut from two to five years, Dutch oak, elm, and other planks, and plank, thoroughly seasoned, prepared floor battens, and a large and useful assortment of dry cut stuff, 1,200 scaffold poles, 2,000 scaffold boards, 1,500 putlogs, 100 doz. cords (some new) wheeling planks, stock of ironmongery, five wrought-iron box girders, cast-iron columns, the fittings and tools of smiths' shop, plate, crown, and other glass, lead, in sheet and pipe, colours, oil, turps, fitchings of plumbers, painter's and glaziers' shops, fifty carpenter's benches, iron cramps, travelling jenny, six single and double-purchase crabs, powerful screw-jacks, fifty ladders, two pug-mills and a limemill, blocks of Portland and other stone, Yorkshire pavings, landings, &c.; mason's sawing tackle and stone-saws, and two timber carriages, three stone-trucks, two spring-vans, eight carts (vari us), three hand stone-trucks, two powerful cart horses and two light van horses, with numerous items of valuable and useful property, forming the entire stock and effects of the executors of a large and well-regulated builder's establishment.—To be viewed two days before and on the morning of sale. Catalogues will be forwarded by post, or may be had on the Premises; of Messrs. WARRINGTON and BEARSON, New City Chambers, Bishopsgate; and of the Auctioneers' Offices, 3, Frederick's-place, Old Jewry.

N B The lease of the extensive premises in Bell-lane to be sold, with immediate possession to the purchaser.

TO BUILDERS, CONTRACTORS, AND SAW-MILL PROPRIETORS AND OTHERS, requiring large Premises in the West of London.

MESSRS. DAVIS and VIGERS are instructed by Mr Samuel Cumsdell, upon his retiring from business, to SELL by AUCTION, on the PREMISES, on MONDAY, MARCH 17th at TWELVE for ONE, unless previously disposed of by Private Contract, the LEASE of his extensive Establishment in Bell-lane, Spitalfields, with immediate possession to the purchaser. The buildings are for the most part newly built, and are of great construction, and comprise carpenters' shops, affording bench room for 50 men, mill rooms, engine and fitting shop, numerous stores, plumbers', painters', wheelers' and smiths' shops, standing for 12 horses, and a loose box; capital range of counting-house, residence for foreman, &c., and yard with a frontage to Bell-lane of 100 feet, and superficial feet, and with powerful steam engine of 14 horse power at the rent per annum are held by lease for thirty-one years, from which 50l. per annum, free from land tax, which is paid by the lessor.—To be viewed by cards, to be had of Messrs. DAVIS and VIGERS.—Particulars and Conditions of Sale may be had of R. S. CUMSDELL, Esq., Solicitor, Bishopsgate Churchyard; of Messrs. WARRINGTON and BEARSON, New City Chambers, Bishopsgate, on the Premises; and at the Auctioneers' Offices, 3, Frederick's-place, Old Jewry.

PRELIMINARY ADVERTISEMENT.

The valuable Lease of extensive Brickfields at West Drayton, also the stock of bricks, Implements, and Effects.

MR. MARSH has been favoured with instructions from the Trustees of Mr. Samuel Pocock, to SELL by AUCTION, in the presence of such (if any) previously disposed of by Private Contract, the very valuable LEASE of the extensive BRICKFIELDS, containing about ninety-eight Acres, with the Cottages and Buildings thereon, at West Drayton, Middlesex, near a station on the Great Western Railway, and on which the property abuts on the north and south sides. Held upon lease for sixty-one years from Lady Day last, at an annual rent of 44l. Also, the valuable stock of Bricks, Implements, and Effects. Detailed advertisements will appear; and in the interim every information may be obtained at Mr Marsh's Offices, 2, Charlotte-row, Mansion House.

Immediate Sale of the ample Stock of a note l good Paper-hanging Manufacturer.

MR. EDWIN WHITE will SELL by AUCTION, with out reserve, at his spacious ROOMS, 7, Bishopsgate-street Without, on WEDNESDAY, the 19th of FEBRUARY, at TWELVE for ONE o'clock precisely, a large and choice assortment of PAPER-HANGINGS, consisting of gilds, flocks, satins, damasks, velvets, chintzes, borders, friezes, and others, in multifarious elegant designs, a few marble chimney-pieces, and items removed for convenience of sale. On view the day prior and morning of sale, when catalogues may be had.

TO BUILDERS, CONTRACTORS, AND OTHERS.

MR. HARDING will SELL by AUCTION, at the Brick-field, North Hyde-lane, Middlesex, near the Southall Railway Station, and closely adjacent to the Grand Junction Canal, on WEDNESDAY, 20th FEBRUARY, at ONE o'clock, 250,000 BRICKS, the stock of Stock Place, Grisel, and others, of a very superior description. May be viewed, and catalogues had of Mr Fleetwood, adjoining the Brickfield, and at the Auctioneer's Offices, 27, New Broad-street, London.

IMPORTANT SALE OF BUILDING MATERIALS.

MR. F. HALL has been favoured with instructions to SELL by AUCTION the first portion of the valuable MATERIALS of Messrs. WESTWOOD and TAYLOR'S OFFICES, Great James-street, Bucklersbury, on the PREMISES, adjoining, on WEDNESDAY, FEBRUARY 27, at TWELVE for ONE precisely. The Lot consists of the internal fittings, roofs, and floors, handsome Spanish mahogany doors, antique staircase, and mahogany balusters, panelling, and handrail; massive marble chimneypieces; 100 pairs of sash and frames; remarkable large timber, and a large number of feet of wainscoting and partitions, Portland portico with pieces of the columns and term pedestals, a quantity of spiral York paving, a fine range of offices, fencing, &c. Also, any of the above-named lots may be viewed the day preceding, and morning of sale; and catalogues had on the Premises, and at the Auctioneer's Office, Chester-street, Kennington.

SALES BY AUCTION.

DEPTFORD CREEK, near the Soapery.

MR. J. ASHFORD will SELL by AUCTION, on MONDAY, the 18th of FEBRUARY, 1856, at TWELVE o'clock, on the PREMISES, as above, a 10 horse high-pressure STEAM ENGINE, large quantity of chain, pig-shoes, &c. iron and wood tanks, about 100 loads of prime Memel timber, comprising 200 half timbers of various lengths; quantity of fir planks, boards, quartering, &c. fifty stacks of fir firewood, and a quantity of useful effects, removed from the Commercial Docks for convenience of Sale.—On view the morning of Sale. Catalogues may be had on the Premises, and of the Auctioneer, &c. High-street, Deptford.

A PROFITABLE INVESTMENT. — To ENGINEERS or CAPITALISTS.—A valuable PATENT TO BE SOLD, that is patronised by Her Majesty's Honourable Board of Ordnance; or a PARTNER WANTED to JOIN the PATENTEE, for the extension of his business.—For particulars, apply (if by letters), to A. B. Mr. R. L. Curtis, Surveyor, No. , Riches court Lime street, City.

WANTED, a PLUMBING, PAINTING, and GLAZING BUSINESS, in a country town, where the stock and fixtures would not be expensive. The Advertiser, who is leaving the business in which he has been engaged as a tradesman or a wideow as a working partner.—Address to A. B. care of Messrs. Day and Co. 6, Laurence Pountney-hill, Cannon street, London.

TO SURVEYORS, AUCTIONEERS, AND ESTATE AGENTS.

A GENTLEMAN, who has relinquished private practice to accept a public appointment is desirous of LETTING his COUNTRY OFFICES, with a dwelling house, in a provincial town. The premises are held at a very low rent, but the offices having been rebuilt by the present tenant within the last year, a premium of 150l. will be required to cover part of the outlay and the other furniture. There is a good opening for a surveyor, and an introduction will be given. For further particulars, apply to Mr J. W. PENFOLD, Architect and Surveyor, 2, Charlotte-row, Mansion house.

WANTED to PURCHASE an OLD MANSION, HOUSES, or PLOT of GROUND, freehold, copyhold, or long leasehold, in the METROPOLIS or its immediate vicinity preferred.—Address fullest particulars and lowest price to MR KEARDEN, 31, Piccadilly.

WANTED, in Westminster, in the neighbourhood of the Abbey, a PLOT of GROUND, for building, or a large old house, freehold or leasehold, for a long time.—Direct, C. D. Adams's Newspaper-office, 9, Parliament-street.

WANTED, a good FAMILY RESIDENCE, to RENT or PURCHASE: the West end preferred. The reception and principal bed rooms must be large, and the situation must be healthy and airy. Rent (or purchase) about 200l. per annum. If with stabling it will be preferred.—Full particulars, stating position and terms, to be addressed to H. P. G. care of Mr. Hammond 27, Lombard-street.

TO IRONFOUNDERS and OTHERS.—WANTED TO RENT, a BUILDING suitable for an iron foundry, where power could be had to drive a fan: or an iron foundery already fitted up.—Apply by letter, stating particulars, to R. Office of "The Builder."

TO BUILDERS and OTHERS.—Spacious WORKSHOPS, STABLES, and OUTBUILDINGS room for thirty benches).—The above are situate near Wandsworth-road, a short distance from the goodsstation of the South-Western Railway Company. Rent very moderate. No fixtures to be taken. Apply at the PRINCE OF WALES, Union-road, Wandsworth-road, near the premises.

THE VIEILLE MONTAGNE ZINC MINING COMPANY'S PURE PATENT WHITE ZINC PAINT is unequalled for body, purity, hardness, and brilliancy of surface; it is unaffected by sulphureous and other noxious exhalations. Being completely innoxious and free from the pernicious effects of white lead, it may be employed all apartments whilst in use without any inconvenience to the inmates.

The greatest caution is recommended to avoid any sparious compounds that might be sold at cheap rates as Pure Oxide of Zinc. If any adulteration has taken place in the oxide, either in consequence of impurity in the material of which it is made or of prodnct, an imperfect mode of production, or by mixing with the oxide of zinc such substances as Sulphate of Zinc, Chalk, &c. it then produces a very inferior instead of a superior paint, and the economy realised by the purchasers of such oxides becomes a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the VM mark on Bill by Messrs. BELL, SPENCE, and Co.; when ground and dry, by Messrs. P. R. MORLEY and Co. and by the Company's Grinding Agents in London, Messrs. CHARLES DEVAS and Co. Woodside Agents, 62, King William-street City; and by the Manufacturing and Planning Agent, Mr. FREDK. BRABY, Pitzroy Works, New-road. In Manchester and Liverpool by R. CLAY, 8, Mercer-street, who is the acknowledged Painter to the Company for Zinc Paints, and who undertakes painting the interior of houses, dwelling-houses, &c. in Leith, by Messrs. R. ANDERSON and Co. Timber-merchants, and in Southampton, by Mr. H. J. BUCHAN. Dry OXIDES and PAINTS, in kegs of 14, 28, 56, 112 lbs. and upwards, to be had of the Company's Agents in Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and the Isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with Zinc Paints by contract

For further particulars, apply to the Company's General Agency in London, 12, Manchester-buildings, Westminster.

TERRA-COTTA WORKS, Blackfriars-road, London.—The PRIZE MEDAL for MATERIAL and WORKMANSHIP in TERRA COTTA to M. H. BLANCHARD late of Coade's original Works, and successor to them in the manufacture of this invaluable material, that has been successfully adopted for nearly a century in this country, by our eminent architects and others. The advancement of our noble Building Art is the only great material that is capable to stand the test. Architectural Embellishments of great and quality that will defy competition. A large Stock of newly-designed Chimney Shafts and Pots, suitable for the various styles of buildings, at very low prices, and worthy of notice.

BLASHFIELD'S PATENT TERRA-COTTA, Manufactured at Mill-wall, Isle of Dogs.—Capitals Consoles, Tracery for Parapets, Balusters, String Courses, Friezes, Bas-relief, Vases, Statues, Chimney-shafts, and all other Architectural Ornament modelled, finished, and burnt in the best manner, and warranted to stand heat and frost, either in Buff or Red-coloured Terra-Cotta; great variety of the said CHARLES BLASHFIELD'S Warehouse and Show-rooms, No. 1, Pyn-street, Pall-mall.

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The Builder.

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BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL MALL, LONDON.

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The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify Schoolmasters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects: Free-hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still-life, &c. the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of China and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. M'Ian. Fees per session,—Advanced Class, 2l. and 4l.; Elementary Class, 1l.; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall-mall, London.

THE SOCIETY of ARTS' ANNUAL COLLECTION of INVENTIONS will be OPENED at the Society's House, John-street, Adelphi, on EASTER-MONDAY, the 24th MARCH. It will comprise models and specimens of recent inventions, whether patented, registered, or not, and of works of recent construction. Articles for exhibition must be forwarded, carriage paid, on the 6th, 7th, or 8th of MARCH.

INVENTORS who purpose to contribute MODELS or SPECIMENS to the Society of Arts' Annual Collection of Inventions, should communicate with the Secretary without delay, as the Exhibition will be opened at the Society's House, John-street, Adelphi, on Easter Monday, the 24th of March.

ST. THOMAS CHARTER-HOUSE SCHOOL of ART, Goswell-street, in connection with Marlborough House, Pall-mall.—Evening Classes from Seven till Half-past Nine. Studies:—Class A, Freehand Drawing and Shading, from the flat and the round; Ornament Figure, &c. in chalk and sepia; Painting in Oil and Watercolours, &c. &c. Class B, Practical Geometry and Perspective, Architectural and Mechanical Drawing; Modelling in Clay and Casting.—Terms and further particulars to be obtained of the Secretary.

ARCHITECTURAL EXHIBITION, and Collection of Materials and Manufactures connected with Building, WILL CLOSE on SATURDAY NEXT. Open from NINE till dusk. Admission One Shilling.—All articles exhibited MUST be REMOVED on the 25th or 26th inst.

COMPETITIONS.

TO ARCHITECTS, SURVEYORS, AND OTHERS.

PLANS, DESIGNS, and DRAWINGS are requested for the ERECTION of TWO CEMETERY CHAPELS, under one roof, together with a Lodge and Entrance-Gates, for the Grantham Burial-Ground (containing six acres of land), to include ground-plans and elevations, and to be accompanied by approximating estimates of the expense. The buildings to be faced with Ancaster stone, and the plinths to be of Mansfield stone. The whole expense (including fittings, &c. of chapels) not to exceed the sum of 1,500l. 10l. is offered for the plan of the chapels and buildings considered to be the best, unless the architect shall also contract for the works, and 5l. for the second best. The whole of the plans, &c. to be sent to me, sealed and endorsed, but without any name or distinguishing mark, on or before SATURDAY, the 1st day of MARCH next, inclosing a sealed letter in each case from the person forwarding it.

By order of the Burial Board,
ROBERT HENRY JOHNSTON, Clerk.
Grantham, Feb. 5, 1856.

LIVERPOOL FREE PUBLIC LIBRARY and MUSEUM. To ARCHITECTS.—The Council of the Borough of Liverpool are about to ERECT a BUILDING for the purposes of the FREE PUBLIC LIBRARY and the DERBY MUSEUM, and offer a premium of One Hundred and Fifty Guineas for the best Designs, and One Hundred Guineas for the second. The Designs are to be sent in on or before SATURDAY, MAY 31. Copies of the printed conditions and instructions to Architects competing; and lithographed plans and sections of the site, may be had on application to Mr. J. STUART DALTON, Librarian, Free Public Library, Duke-street, Liverpool.

TO ARCHITECTS, &c. — PLANS for a NEW WORKHOUSE for BOLTON UNION.—The Guardians of the Poor of the Bolton Union are desirous of obtaining PLANS, SECTIONS, and WORKING DRAWINGS, for the ERECTION of a WORKHOUSE, to accommodate 1,000 inmates, the cost of the buildings not to exceed 18l. per head. A premium of 50l. will be awarded for the best, and [illegible] for the second best plan, but the Guardians will not be responsible for any payment for unsuccessful designs. The plans of the two successful competitors to be the property of the Guardians, who do not pledge themselves to employ either of the successful competitors in carrying out the undertaking. The designs must be sent in under seal, without name, and with a private mark or motto thereon, accompanied by a letter under cover, and sealed, containing a corresponding mark or motto, and the designer's name and address, to the Clerk, on or before MONDAY, the 7th APRIL, 1856.

JOHN WOODHOUSE, Clerk to the Guardians.
Union office, Acresfield, Bolton, February 15, 1856.

GRANTHAM BURIAL BOARD.—EXTENSION of TIME for PLANS, &c.—The period for sending in Plans for Chapels, Lodge, and Entrance Gates, is EXTENDED to SATURDAY, 22nd MARCH. Plans are also requested for PLANTING the GROUND and LAYING OUT the ROADS and WALKS therein, two-thirds as consecrated, one-third unconsecrated, to be sent in by the same time, for which an additional premium of 5l. is offered. The ground is an oblong square of 220 yards by 133 yards. Entrance west.—By order of the Board,

ROBT. HY. JOHNSTON, Clerk.
Grantham, February 20th, 1856.

TO ARCHITECTS AND SURVEYORS.

THE COMMITTEE for BUILDING NEW NATIONAL SCHOOLS at LUTON, Beds. are desirous of receiving DESIGNS in COMPETITION for the ERECTION of such SCHOOLS. A plan of the site, with further particulars, may be had on application, by letter only, enclosing six penny postage stamps, to Mr. D. B. STALKER, National Schoolmaster, Luton.

CONTRACTS.

CHORLEY IMPROVEMENT.—SEWERAGE. To IRONFOUNDERS. The Chorley Improvement Commissioners hereby give Notice, that they are prepared to receive TENDERS from parties willing to undertake the following Contract:—

CONTRACT, No. 4.—For Supply of Cast-Iron Street Gullies.

Form of Tender may be obtained on application at the Commissioner's Office, Chorley; or at the Offices of ROBERT RAWLINSON, C.E. 34, Parliament-street, Westminster.—Sealed Tenders to be delivered at the Commissioners' Office, Chorley, before TWELVE o'clock, on SATURDAY, the 1st day of MARCH next, endorsed "Tenders for Gullies, Contract No. 4."

(Signed) RICHARD JACKSON, Clerk to the Commissioners.
Chorley, February 18, 1856.

BURLEY-IN-WHARFEDALE (Yorkshire) SEWERAGE WORKS.—The Local Board of Health for the district of Burley-in-Wharfedale hereby give notice, that they are prepared to receive TENDERS from competent persons for MAKING and FINISHING certain SEWERS, DRAINS, MAN-HOLES, GULLIES, and other WORKS required for the sewerage and drainage of their district. Duplicate copies of the plans, sections, detailed drawings, and specifications may be seen at Burley, on application to the undersigned: also at the Offices of Mr. J. McLANDSBOROUGH, Civil Engineer, 4, Queen's-gate, Bradford, from whom printed forms of tender, and any further information may be obtained. Tenders, properly sealed and endorsed, must be delivered to the undersigned, on or before FRIDAY, the 7th day of MARCH next. The Local Board do not bind themselves to accept the lowest or any Tender.—By order,

EDWARD BRUMFITT, Clerk to the Board.
Burley-in-Wharfedale, near Otley, 13th February, 1856.

CONTRACTS.

ORDNANCE CONTRACT for AGRICULTURAL DRAINAGE.—Sealed Tenders addressed to the Director General of Contracts, War Department, Pall Mall, London, will be received until TWELVE o'clock on FRIDAY, 29th FEBRUARY instant, from parties willing to Contract for the AGRICULTURAL DRAINAGE of the SPACES and PARADES between the battalions and ground adjoining, at the CAMP at ALDERSHOT. Specifications and forms of Tender, together with any further information required, may be obtained on application to Mr. DREW, Clerk of Works, Royal Engineer's Office, Aldershot Camp, on and after MONDAY next, the 18th instant. The Tender to state the price at per acre, and to be endorsed, "Tender for Agricultural Drainage at the Camp at Aldershot." The War Department reserves the right of rejecting the whole or any of the Tenders.

Royal Engineer's Office, Aldershot, Feb. 13, 1856.

ORDNANCE CONTRACT.—To BUILDERS and CONTRACTORS.—Sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, until TWELVE o'clock on MONDAY, 10th MARCH next, from parties willing to contract for the ERECTION of a LAND TRANSPORT ESTABLISHMENT at the Camp, Aldershot. Plans may be seen, and specification and form of Tender obtained on application to Mr. BAKER, Clerk of Works, Royal Engineer Office, Camp, Aldershot, on and after MONDAY next, the 25th inst. The Tender to be endorsed, "Tender for Land Transport Establishment, Aldershot." The War Department reserves the right of rejecting the whole or any of the Tenders.

War Department, Aldershot Camp, 20th February, 1856.

THE LOCAL BOARD of HEALTH for the District of WATFORD are prepared to receive TENDERS for the MAKING and CONSTRUCTING certain SEWAGE TANKS at the Outfall of their district, near the Town of Watford. The plan and drawings and specification may be inspected, also further particulars obtained, by application, at the Offices of JAMES PILBROW, C.E. Tottenham. The specification and conditions of contract may be had upon payment of 5s. Tenders to be sent in on or before MONDAY, the 25th instant, endorsed "Tender for Sewage Tanks."—By order of the Board,

JOHN SEDGWICK, Clerk.
Board-room, Watford, February 8, 1856.

TO BUILDERS AND OTHERS.

THE JOINT BURIAL BOARD for the TOWNSHIP and PARISH of FOLKESTONE, in the county of Kent, are desirous of CONTRACTING for BUILDING and FINISHING, at the new Cemetery, near Cheriton-road, TWO CHAPELS, a Porter's Lodge and Appurtenances, and the Boundary Wall, and for providing and fixing the Entrance-gates, &c. Persons willing to Contract, may see the plans and specifications at the Office of JOSEPH MESSENGER, Esq. Architect to the Board, Bouverie-square, Folkestone, between the hours of TEN and FOUR on any day after the 19th instant. Sealed Tenders (marked "Tender for Buildings at Folkestone Cemetery") for executing the whole or any of the works, are to be left at my Offices in Church-street, Folkestone, not later than FOUR o'clock in the Afternoon of TUESDAY, the 11th day of MARCH next. It is stipulated that it shall not be incumbent on the Board to accept the lowest or any Tender.—By order of the Board,

Folkestone, 12th February, 1856. RICHARD HART, Clerk.

TO CONTRACTORS and BUILDERS.—The Board of Works for the Greenwich District, are prepared to receive TENDERS from Contractors for making the requisite ENTRIES from HOUSES and BUILDINGS into the MAIN SEWERS of the DISTRICT. Further particulars may be known on and after MONDAY, the 25th instant, at the Clerk's Office, 1A, Burney-street, Greenwich, where all Tenders for the above must be sent in, sealed up and endorsed, "Drainage Tender," at or before FOUR o'clock in the afternoon of TUESDAY, the 4th of MARCH next. By order.

Greenwich, February 21, 1856. E. W. JAMES, Clerk.

BOARD of WORKS for the HOLBORN DISTRICT.—The Board will meet at the Workhouse, in Little Gray's-inn-lane, on MONDAY, the 3rd day of MARCH next, at SEVEN o'clock in the afternoon precisely, to receive separate and distinct proposals in writing, sealed up, from persons desirous of CONTRACTING for one year, from Lady-day next—First, for Removing the Dust, Ashes, Dirt, Shavings, Brick Rubbish, Oyster-shells, Decayed Vegetables, and all Refuse Matter, from the houses throughout this district, except Ely-place, Ely-mews, and the Liberty of Glasshouse-yard), and second, for Carting away the Slop and Street-sweepings, when collected and swept up by the rakers, and the employment of Slop-carts, Horses, and Men for the purpose. All persons delivering proposals should attend. The Board does not bind itself to accept the lowest or any Tender. The security of two responsible householders will be required for the due performance of the Contracts; and the names and addresses of the parties proposed as such security must be delivered in with the Tenders.—Printed forms, and full particulars as to the parishes included in this district, may be had at the Clerk's Office. One half of the expense of the Contracts to be paid by the contractors. By order of the Board,

S. W. HOPWOOD, Clerk.
Offices, 47, Chancery-lane, February, 1856.

CONTRACT for LIGHTING with GAS and REPAIRING PUBLIC LAMPS.—The Crown Estate Paving Commissioners do hereby give Notice, that they are ready to receive TENDERS from persons willing to enter into a CONTRACT for the execution of the above-mentioned services in and about the Regent's park, forming the district under their jurisdiction, for a term of seven years, from the 24th day of JUNE, 1856. Printed specifications and forms of Tender may be obtained on application to me here, where the Tenders are to be delivered at or before ONE o'clock on WEDNESDAY, the 5th day of MARCH next.

FRANCIS ADAMS, Clerk to the Commissioners.
1, Whitehall place, Feb. 15, 1856.

[*For remainder of Contracts see next page.*

CONTRACTS.

WESTBURY CEMETERY.—To BUILDERS and OTHERS.—The Burial Board of the Parish of Westbury are desirous of receiving TENDERS for BEDING on their proposed ground TWO CHAPELS, a LODGE, and also for CONSTRUCTING the BOUNDARY WALLS, laying out, levelling the land, with paths, &c., according to the plans and drawings prepared for that purpose by Mr. E. G. BRUTON, of Oxford, the Architect. The plans, drawings, and specification may be seen at my office, in Westbury, and at St. Mary's Chapel, in the Cemetery, Oxford, between the hours of 10 a.m. and 3 p.m. until the 3rd day of MARCH next, and the Board will not object to receive Tenders from the separate trades, or for the whole or any part of the works; but they do not bind themselves to accept either of them, or the lowest Tender. Tenders are to be forwarded to me on or before the 10th day of MARCH next, marked "Tender for the Cemetery." Security for the due performance of the work to be prepared at the expense of the contractor will be required.

HENRY FINNIGER, Clerk to the Board.

Westbury, 11th February, 1856.

THE MARCH LOCAL BOARD of Health are desirous to receive TENDERS from competent persons willing to UNDERTAKE any of the WORKS mentioned in the following CONTRACTS for the Drainage and Water Supply of the District:—

CONTRACT A.—Sewerage and Drainage Works.

CONTRACT B.—Well-sinking, Brick Tower, and Engine-House.

CONTRACT C.—A Steam-Engine, Wrought-iron Tank, Cast-iron Pipes, Pipe-laying, and Sundry Ironwork.

The plans and specification may be inspected at the Office of the said Local Board in MARCH. Duplicate copies may be seen and printed forms of Tender and further information may be obtained, on application at the Office of Mr. R. REYNOLDS ROWE, Solicitor and Architect, 19, Emmett-street, Commercial-road, Peterborough, and Bank-chambers, Bridge-street, Peterborough. Sealed Tenders, properly endorsed, are to be delivered at the Office of the said Board, not later than SATURDAY, the 8th day of MARCH, 1856. The Local Board do not bind themselves to accept the lowest or any of the Tenders.—By order,

THOS. T. ELLIOTT, Clerk to the Local Board.

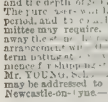
March, Isle of Ely, February 11, 1856.

TO CONTRACTORS and OTHERS.—The Committee of the BUILDING CHURCH at BYKER, Newcastle-on-Tyne are desirous of receiving offers for the PURCHASE of the STONE on the site. The superficial extent is one acre, and the depth of the stone considerable, with very little facing. The pure stone will have to work out the stone within a limited period, and to comply with other conditions as the committee may require. Besides the ordinary modes of conveying away the stone, the premises have the facility of making an arrangement with the Newcastle and Carlisle Railway, for a siding, which passes very close to the quarry, and which communicates with the River Tyne. Mr. CLIFFORD or Mr. YOUNG, Solicitors, Byker, will show the stone, and offers may be addressed to the Rev. T. R. GREEN, St. Mary's place, Newcastle-on-Tyne.—Byker, Feb. 5, 1856.

CONTRACT for the SUPPLY of BUILDING MATERIALS for CONVICT PRISONS.—Persons desirous of TENDERING for the SUPPLY of TIMBER, Deals, Slates, Lime, Sand, Bricks, Lead, Glass, Wrought-iron, Iron, Ironmongery, Gas and Water Pipes, White Lead, Oil, &c. for twelve months from the 1st APRIL next to the 31st MARCH, 1857, for Pentonville, Millbank, Brixton, Parkhurst, Portsmouth, Dartmoor, Chatham, and Parkhurst Prisons, and Surbiton House, Fulham, are desired to forward the same, addressed, "Directors of Convict Prisons, 54, Parliament-street, London," on or before 10 o'clock in the MAID of the following day, viz., 11th inst., p.m. Forms of Tender may be had on application at the several Prisons; or at the Office of the Directors, 54, Parliament-street, London.

54, Parliament-street, 18th February, 1856.

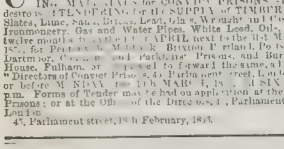
KIMBERLEY'S NEW PATENT SCAFFOLDING BRACKET entirely supersedes the old and ever troublesome cord. It may be made of iron, kind in Wrought Iron screwbolt, very cheap, and it is next to no trouble ever when in use. They are greatly admired, and require time only to supplant entirely the usually uncertain cord. Bricks, with full particulars, by post. The whole Bricklaying Trade and others are in want of the Patent, and have required for the last century.



London Agents:—

Messrs. PUGH & CO. 13, King-street, Snow-hill, London. See also KIMBERLEY'S Patent Bit or Spring Chisel, Screws, Casement, and Iron Stock Locks, Bench Screws, &c. &c.

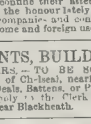
MACHINERY.—SAWING, PLANING, and MOULDING



SAMUEL WORSNAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Tenoning, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they are at all times on short notice to supply them. S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the principal Companies and Contractors in the world with their Machines for home and foreign use.

TO TIMBER MERCHANTS, BUILDERS, CONTRACTORS, and OTHERS.—TO BE SOLD, a PLANING-MACHINE (by Worsnam, of Chelsea), nearly new; or would be exchanged for Timber, Deals, Battens, or Prepared Flooring. It may be seen at the Yard, next the Clerk of the Works, Victoria-road, Old Charlton, near Blackheath.

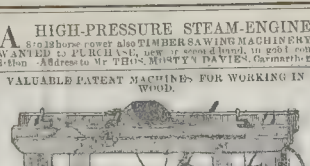
JOHN PARKIN and CO. late BLAKE and PARKIN, NEW MEADOW STEEL WORKS, SHEFFIELD, MANUFACTURERS of CIRCULAR and MILL SAWS, IMPROVED CAST-STEEL FILES, for the use of engineers and smiths, PATENT TEMPERED MACHINE KNIVES and CUTTERS, manufactured for making or cutting wood, for cutting paper, iron, stone, leather, &c. made and fitted in connexion with the trade. Also Warranted to work with a harder and finer edge than any others of the kind.



INVENTORS of COKE-ANNEALED CAST-STEEL for lathe, piston-rods, &c. MANUFACTURERS of RAILWAY SPRINGS, BLISTER, SHEAR, and CAST STEEL, &c.

A HIGH-PRESSURE STEAM-ENGINE, 8-horse power also TIMBER SAWING MACHINERY, WANTED to PURCHASE, new or second hand, in good condition. Address to Mr. THOS. MORTYN DAVIES, Carmarthen.

VALUABLE PATENT MACHINES FOR WORKING IN WOOD.



SASH AND MOULDING MACHINE.

PRIZE MEDALS have been awarded to these celebrated machines, both by the Great Exhibition in London, and many scientific institutions. They are extensively used throughout the United Kingdom, by joiners, contractors, coach and cabinet makers, railway carriage and wagon builders, machinists, agricultural implement makers, shipbuilders; and also by the British and Foreign Governments. The planing and moulding machine, tenoning, mortising, grooving, beading, sawing, and boring. These machines are in every respect perfect, either in hard or soft wood, and will perform all the ordinary descriptions of work required in the above trades in a very rapid and superior manner, and at a greatly reduced cost.—Sold only by WILLIAM FURNESS, Patentee, 70, Lark-lane, Liverpool, from whom full particulars may be obtained.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND,

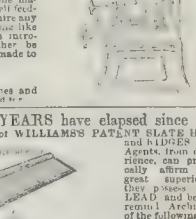
London.

PULPIT LIGHTS, LATCHES, BELL-PULLS, &c.

Specimens at the Hardware Court, Crystal Palace, Sydenham.

Illustrated Price-catalogues post free on application.

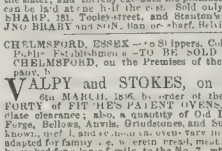
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinet-makers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongers' Establishment, 28, Wailing-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine, and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery constructed to

SEVERAL YEARS have elapsed since the introduction of WILLIAMS'S PATENT SLATE HIPS and RIDGES. The Agents, from experience, can practically affirm the great superiority they possess over LEAD and beg to remind Architects of the following advantages:—



WILLIAMS'S PATENT RIDGE is equal in durability to Lead; its appearance surpasses it. It is unaffected by the weather; it offers no temptation for theft; it prevents damage to new slating, because it is fixed by the slater, and thereby excludes the plumber from the roof; and can be laid at one half the cost. Sold only by JAS. and JNO. SHARP, 181, Tooley-street, and Stanton's Lower Wharf; and JNO. BRADY and SON, Stanton or Wharf, Belvidere-road, Lambeth.

CHELMSFORD, ESSEX.—80 Sippers, Colonists, Schools, and Public Establishments.—TO BE SOLD by AUCTION, at CHELMSFORD, on the Premises of the Patent Oven Company, by

VALPY and STOKES, on THURSDAY, the 6th MARCH, 1856, by order of the Proprietors about FORTY of FIT HER'S PATENT OVENS, in lots, for immediate clearance; also, a quantity of Old Iron, Smiths' Tools, Forge, Bellows, Anvils, Grindstones, and Sundries. These well-known, useful, and economical ovens vary in size, from the No. 1, adapted for family use, to oven bread, meat, and vegetables may be cooked for a large family, to the No. 7, which is calculated to cook for 150 persons daily; and they are constructed in a most substantial manner of cast and wrought iron, with the best work man-ship. Worthy the attention of shippers and colonists.—Catalogues may be obtained of the Auctioneers, Chelmsford, Essex.

GAS COOKING-STOVES, for large or small establishments.—DEANE, DRAY, and CO., Arthur-street East, London-bridge.

Testimonial respecting the Crystal Palace Kitchen, as fitted by DEANE, DRAY, and CO.

8, Bridesmount-place, Hampstead, March 8th, 1855.

Gentlemen,—I have great pleasure in bearing testimony to the capabilities of your extensive range Gas Cooking Apparatus, being the largest and most perfect yet in use. Suitable for hotels, mansions, club houses, private houses, and the army having cooked in one day 1,000 joints and many tons of hams, veal cutlets, lamb, tongue, &c.; roasting in one department a baron of beef weighing 230 lbs. in nine hours, into other apartments, preceded by a dinner, for Prince Albert and the foreign ministers. The whole has been in full operation for ten months, and are now in as perfect order as when first finished. They have not cost one shilling for repairs.

I am, Gentlemen, yours respectfully,

EDWARD HORNE.

Messrs. Deane, Dray, and Co.

ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post. DEANE, DRAY, and CO., corner of the Monument, London-bridge. Established A.D. 1700.

BUILDINGS HEATED by HOT WATER. G. B. COOPER, IRONWORKS, 126, DRURY-LANE, Ranges, Hot Plates, Gas Cooking Apparatus, Baths, &c. Ornamental and Constructive Ironwork.

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description and the most extensive dimensions can be efficiently warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. where they have put their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

CAST STEEL.—Messrs. NAYLOR, VICKERS, and CO. RIVER DON WORKS, SHEFFIELD, are now prepared to execute orders for CAST STEEL INGOTS, from 3cwt. to 6,000 each, Locomotive Crank Axles, Tyre Bars without welding, Shafts, Cranks, Axles, and every description of heavy forgings in Steel, to pattern.—For further particulars, apply as above.

GASELIERS in GLASS and METAL.—The increased and increasing use of Gas in private houses has induced WILLIAMS BURTON to collect from the various manufactories all that is new and choice in Pendants, Brackets, and Chandeliers, adapted to offices, passages, and dwelling-rooms, as well as to have some designed expressly for him; these are ON SHOW over his EXTENSIVE LARGE ROOMS, and present, for novelty, variety, and purity of taste, an unequalled assortment. They are marked in plain figures, at prices proportionate with the economy they afford to make this most valuable agent the cheapest and most remarkable in the kingdom, viz. from 12s. 6d. to eight guineas.

THE BEST SHOW of IRON BEDSTEADS in the KINGDOM is WILLIAMS BURTON'S. He has FURNISHED a ROOM solely to the EXCLUSIVE SALE of Iron and Brass Bedsteads and Children's Cots, with appropriate Bedding and Mattresses. Common Iron Bedsteads from 16s.; Patent Folding Bedsteads, from 19s.; Portable Iron Bedsteads, fitted with dovetail joints and patent sacking, from 17s. 6d.; and Cots, from 30s. each. Handsome ornamental Iron and Brass Bedsteads, in great variety, from 2l. 7s. 6d. to 15l. 15s.

The alterations and additions to these extensive premises already by far the largest in Europe, have occupied the whole of last year, are of such a character that the entire RIGHT HOUSE is devoted to the display of the most magnificent Stock in GENERAL HOUSEFURNISHING, including Cutlery, Nickel Silver Plated Goods, Baths, Brushes and Turnery, Lamps and Gaseliers, Iron and Brass Bedsteads, and Bedding, so arranged in SEVEN LARGE ROOMS, as to afford purchasers in such large premises in the selection of goods that cannot be hoped for elsewhere.

Illustrated Catalogues sent (per post) free.

29, OXFORD-STREET; 1, 1a, 2, and 3, NEWMAN-STREET; and 4, 5, and 6, PERRY'S PLACE. Established 1820.

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LOWEST BIRMINGHAM PRICES

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AND SMOKE-CONSUMING

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The following are the prices of those for ordinary use :—

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1 foot 7 inches wide, 12-inch fire	£3 10 0	2 feet wide and under	£4 0 0
1 foot 9 inches wide, 14-inch fire	3 12 6	Above 2 feet wide, and not exceeding 3 feet 6 inches..	4 10 0
The above Grates can be increased in width to that of any fire-place by iron or slate slips ; iron slips supplied at 6*d.* per inch.		,, 3 feet 6 inches ,, 3 feet	5 0 0
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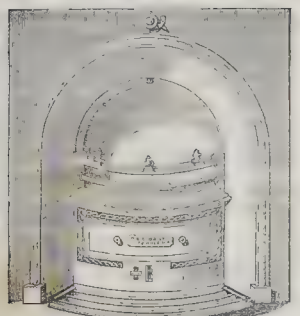

For the manufacture of which D. and E. BAILEY obtained the SILVER MEDAL at the PARIS EXHIBITION. The above excellent invention has been carefully modelled and manufactured by D. and E. BAILEY, 272, Holborn, who having experienced great difficulty in keeping pace with the increased demand for the above Stoves, have now made such arrangements as will enable them to supply their customers with the Smokeless Grates, of ordinary dimensions, from their stock on hand, which consists of various designs in black, bright, and polished steel, richly decorated with ormolu ornaments.

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4th. Will burn night and day, requiring only to be supplied with fuel twice in twenty-four hours.

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Messrs. PARKIN and MARSHALL have also pleasure in stating that they are appointed Sole Wholesale Agents for the Sale of the undernamed Articles, manufactured by Mr. ENOCH OLDFIELD TINDALL, Iron Works, Scarborough, viz : TINDALL'S PATENT PORTABLE MANGLES, WASHING AND WRINGING MACHINES, NAPKIN PRESSES, COOKING RANGES, LAUNDRY STOVES, SANATORY TRAP AND GRATE, CHAFF CUTTERS, OAT, BARLEY, MALT, AND LINSEED MILLS, BEAN MILLS, ORCHARD BREAKERS, PORTABLE SAW-MILLS, TURNIP CUTTERS, &c.

THE PATENT COOKING RANGES AND ROASTERS are now amongst the most complete and inexpensive before the Public, and are aptly termed the Antiquated Ranges of the Century.

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Patent Galvanized Iron supplied in every form.

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GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth of an inch as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.			
12	,,	20	,,
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GALVANIZED SHEET IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

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Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.

Also the Patent Galvanized Tinned Iron Tube, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

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R. S NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the nobility, clergy, &c. that they supply Lightning Conductors, with the points and all staples complete for houses, churches, &c.

R. S NEWALL and CO.'S Patent Copper Rope Conductor is approved by the architect, the engineer, and the electrician, and is in all parts of the world.

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'ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND FOR BUILDING PURPOSES.

TARIFF OF PRICES
Beyond the current Price of Hoop-iron.

The undermentioned Gauges are kept in stock; but any Gauge or width will be supplied within a few days, at a small advance on the following prices:—

Gauge.	In. wide.		Per 1,000 ft.
No. 16	.. 1¼	..	7s. 6d.
15	.. 1½	..	7s. 6d.
15	.. 1¾	..	8s. 0d.
15	..	..	8s. 6d.
15	..	..	9s. 6d.

Plan and Elevation of Bond, showing Position and Form of the Claws.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent, that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

London Depôt—463, OXFORD-STREET.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

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COTTAM and HALLEN, of Winsley-street,

The original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, and to which they have made important additions, the main features of the same being explained in the following description and Engraving.

A represents the Patent Halter-guide and Collar-rein, the tail of which is taken to the back of the manger-works with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

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COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety covers; Sanitary Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Preserving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

An extensive Assortment of Patterns for both Plain and Ornamental Castings, and every description of Wrought and Cast-iron Work for building and other purposes.

Agricultural and Horticultural Implements, Iron Gates, both plain and ornamental; Hurdles, Strain Fencing, &c.

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Present prices for cash:—

BEST CUT CLASP.

16s. 6d.	15s. 3d.	14s. 6d.	14s. per cwt.
1½ in.	2 in.	2½ in.	3 in. and larger.

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3s. 3d.	3s. 9d.	4s. 3d.	5s 6d.	7s 6d.	9s. per gross.
No. 1	2	3	5	6	

5 in. Mortise Locks, best Brass Furniture Shifting Spindles, 2s. 6d. each; 6 in. ditto, 3s. each.

Strong Elliptic Stoves, double backs, 2½d. per inch.
Strong Register ditto ditto 5d. ,,

36 in. Self-acting Oven and Boiler Cottage Ranges, complete, 34s. each; 36 in. Self-acting Oven and Boiler Ranges, best wrought bars and wrought fittings, complete, 50s. each.

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REDUCED LIST OF PRICES.

Best Cut Clasp and Rose Nails

1¼ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. per cwt.
Best Cut Floor Brads			13s. 6d. and 14s. per cwt.
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RAIN WATER CASTINGS, per yard.

Sizes—2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	11d.	1s. 2d.	1s. 3d.	1s. 8½.	2s. 1d.	
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Ditto, with plain clips cast on			1s. 1l	1s. 9d	1s. 3d	1s. 6d
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THE LARGEST STOCK AT

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Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

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PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 95, High Holborn.

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BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c always in stock.

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Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Hook-safes and Strong Rooms, Tanks and Boilers, and every description of ironwork to specification, and the work executed with every attention to quality and despatch.

GLOVERS' IRONWORKS,
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IMPERIAL IRON FOUNDRY, and ECONOMIC RANGE MANUFACTORY.

Three ft. wide	£6 10
Three ft. three in	7 0
Three ft. six in.	7 15
Three ft. nine in.	9 0
Four ft.	10 10
Four ft. six in.	13 12
Five ft.	14 14

Covings, 5s. per foot.
Fixing, 3s. per foot.

This valuable KITCHEN RANGE, the Manufacturer has much gratification in stating, has been in use several years, and given the utmost satisfaction. It may be used either with the fire open or closed, thereby avoiding the objection so naturally felt against having the fire at all times shut up, which is well known to generate a close unwholesome vapour.

The Prize Medal and Honourable Mention was awarded to this Range at the Great Exhibition of 1851.

To be seen in operation at the Manufacturer's.

J. SHERWIN, 69, TABERNACLE-WALK, FINSBURY.

Castings of every description in Loam or Sand.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, 2½d. per inch, and upwards.

Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 3l. 16s.; 3 ft. 6 in., 5l.; 4 ft., 3l. 15s.

3-feet Cottage Ranges, with ovens and back boilers, 25s. each.

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Air Bricks, 4s. per doz.

Best Town Glue, 5½. Ditto, Scotch, 6½ per cwt.

Best Fine Cut Clasp and Rose.

1¼	1½	2	2½	2¾	3-in. & larger.
16s. 6d.	16s. 6d.	15s. 6d.	15s. 6d.	15s.	14s. per cwt.

And every material required in the building, hall furniture, upholstery, and brass-foundry trades on the most reasonable terms.

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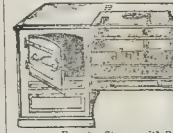
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in stock.



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28s.	30s.	32s.	34s	Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—
34	36	38	42-inch.	
54s.	56s.	58s.	60s.	

Strong Elliptic Stoves, with Extra Back and Side Bars, per in. 2½d.

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Bright Stoves, with Two Fires, 40s. 50s. 100s. each.

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	1.d.	1s.3d.	1s. 4d. per yard.
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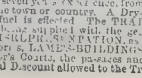
By Her Majesty's  Royal Letters Patent.

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"	XI.	Ornaments from Persian MSS	..	..	..	..	..	..	3 "										
									48										

The Author will endeavour in the several chapters to define the apparent origin, and trace the development of the several styles of Ornament. He will proceed to ascertain the laws which govern those compositions, both those which are general to all styles and those which are peculiar to each. He will further attempt in the 20th chapter to show how, bearing in mind those general laws which he will endeavour to provide the works of nature will be arranged for fresh inspiration, we may yet go forward, and, whilst availing ourselves of the experience of all time, may be enabled to produce works in harmony with our own times, instead of blindly following in the footsteps of the past.

The collection of this vast amount of material has been the labour of many years. On the eve of giving it forth to the world the Author fully feels the difficulty of the task he has undertaken; he trusts, however, less that with this colossal work, and in both engraved in any way with the decorative arts, will have before them an amount of material which does not elsewhere exist in any such ornament form, and in the use of which it will be his endeavour to serve them as a guide.

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With Illustrations

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By RICHARD HERRING.
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The Builder.

VOL. XIV.—No. 681.

IT is desirable that the various building materials and appliances which form part of the Architectural Exhibition, in Suffolk-street, now about to close, should not have been brought together in vain, but that those engaged in building should remember what they have seen, and inquire of themselves, when opportunities occur, if they cannot introduce this or that improvement, or avail themselves of this or that material. How many of us gaze upon an improvement, admit its excellence, and then forthwith, as if we had never seen it, proceed to work on the old plan.

The evening of Tuesday, the 19th, was set apart at Suffolk-street to give attention to these contributions,—the committee duly appreciating their importance. Mr. Tite had undertaken to make some remarks upon them, but being prevented by Parliamentary duties, Mr. Edmeston, jun. the honorary secretary, took his place, and after two or three preliminary observations, thus proceeded:—

The time and earnest thought expended upon many a design, of even an indifferent character—the labour bestowed, the knowledge necessary, the never-ending education required in the architect—are only, after all, one portion—one small section, of the influences at work to produce a result for you, the Public, Employer, Patron; and it is unquestionably of most vital importance, if there is ever to be a high and universal expression of architectural art in this country, that all this should be understood and appreciated; if ever the day is to arrive when excellence is to be looked for, not only in a few isolated instances,—public buildings, perhaps, and the like, or extraordinary and unusual efforts, but in small streets and cottages, and out-of-the-way places, so that care, propriety, and a thoughtful mind shall be the rule, and not the exception.

Mr. Petit observed in his lecture that the bird, the bee, and the beaver, all in their way occupy a higher position than the human architect in point of wonderful use, ingenuity, and adaptation in their structures; but he pointed out how the efforts of human genius had higher purposes,—a further and higher development of certain noble faculties of mind, in designer and spectator.

In all our lectures thus far it is these higher principles that have been chiefly considered; and we have now to see that there is yet another class of workers in the great cause, who silently, with but little outward ostentation, and with but little or no share in the final result, are, year by year, untiringly applying money, ingenuity, and skill to assist; and if you have done well to inquire into and investigate the principles and design of the completed work, it will be as well, and it is as important, that you should be as fully sensible of all the less apparent efforts which, in their way, are as worthy of study and attention.

It was well that we began with the higher matter, but we cannot have a more appropriate subject for consideration at this our last meeting for the season, than practical evidences like these of what may be done in some of the subsidiary branches of building operation; and some little explanation of the means employed in different cases must tend to increase our respect for the enterprise, talent, and industry of the inventors. Nor let it be supposed that this subject is one in which the public at large have little interest, or one exclusively for the architect's attention only. Why should it be left to the architect to suggest, in every case, the application of this or that new material or contrivance? Why not, while you desire the best design he can give, request him also to apply the newest contrivances, to employ the most suitable materials, even if the house you build is not exactly like all the other houses in the street, and in spite of the kind remarks on your wild vagaries in which your neighbours may indulge? Not only is there often a cold encouragement for such inventions, but there is often an absolute prohibition; and the architect, if he dare step out of the beaten path, is liable to reprehension for jeopardizing the name, the reputation, or mental capacity of his client, or of lowering the value of his property. It is in this, as in other things: let there be a demand for the exercise of good taste and sound principles, and a proper contempt for their deficiency, and that demand will be met. Refuse to accept inefficiency, and there will be no need to prop up ability and professional standing with extraneous aids; and in like manner learn to believe that bricks and mortar, and cement, four-panel deal doors and ceiling cornices, are not all that is necessary to an ordinary work of domestic architecture, and you will have new materials and applications provided for you,—new additions to your comforts and daily enjoyment of living,—you will open the door to a host of inventions and improvements ready and desirous to expand themselves in your behalf, and you will confer a benefit on your age and country, as well as on thousands of intelligent labourers in this great city, and you will besides do somewhat towards getting rid of constructions that will not stand, walls that will settle, and bare and counterfeit productions of all kinds, that are only provided because you will have them, live in them, or buy them.

The several contributions we have to consider class themselves pretty readily under three or four heads; and it will simplify our inquiries if we proceed at once to this division of our subject; and first we may instance what may be called "new material;"—for example, the productions of the Indurated Stone Company, the injected stone by Barrett's patent, the Tamworth bricks, those from the Poole Company, the iron slag, hose applied to pipe uses, the serpentine, and the artificial stones and terra-cottas: all these are either new as building materials, or, not being new, are in so new a form as to be entitled to be considered in that light. We may then examine the contrivances of mechanical ingenuity or construction,—the productions with which utility in its simplest sense has more to do than art; and then those contributions which are complete in themselves, like the beautiful decorations of M. Remon, in the elaborate chimney-piece contributed by Mr. Collmann.

First, then, the new materials. Perhaps nothing comes so distinctly under this head as the transformation of sand, loam, or chalk, into hard and endurable stone, by the Tunbridge Company; and the other process of Messrs. Barrett, by which a soft stone becomes hard as marble, and capable of receiving a polish.

The Tunbridge Company indurate any soft stone by soaking it in a solution of chemically-prepared gas tar and resin; and they had several specimens so prepared in our last Exhibition. Since then, however, they have extended their patent to preparing an artificially-compressed stone: thus sand, loam, gravel, being thoroughly dried and mixed with the solution upon a hot-plate, all ready for use, may be pressed into the mould, and in half an hour the bracket, moulding, piece of ornament, or whatever it may be, is complete, and formed in a hard stone.

Messrs. Barrett's process is similar in some respects, sulphur or some bituminous solution being employed in the same way, and injected by exhaustion of air. The stone is then rubbed like marble, and afterwards polished; and the advantages are an increase of strength and durability. And of equal interest is the artificial stone of Messrs. Ransome, which is made from grains of sand, limestone, marble, or of any similar material, and which becomes an indissoluble, impervious mass, when cemented together by what is in fact a solution of glass, after exposure in a kiln. The solution is made of flint, dissolved in a caustic alkali (soda or potash), at a much higher temperature, in close boilers or cylinders: when mixed with the particles alluded to, it is moulded, dried and burnt to a red heat, and the material has the advantage of contracting hardly at all in the drying. In striking contrast with this is the stone manufactured by Mr. Austin, composed of a strong cement, mixed with powdered stone or grit, and suffered to dry without the assistance of heat. This material has been proved to be of the most lasting character, if sufficient time is allowed in the preparation. As the whole is carefully prepared by hand, and as it is not subject to the contraction or alteration of form in the burning to which terra-cotta is liable, it has in that respect the advantage; and in some descriptions of work it is not a slight one.

Then we have the burnt clays of Mr. Pulham and the Farnley Company: in these the fresh clay is mixed with grit, and then burnt at a great heat; and some of Mr. Pulham's specimens are granulated with a view to obtain a closer imitation of stone; and besides the ornamental uses of this material, it may be applied to steps, paving, floors, &c. The glazed and coloured bricks of the Poole Company are composed of a finer clay still, as a degree of heat is required for glazing which would melt a clay of a common character. The manufacturers lay much stress upon the value of the glaze, but I would suggest that for almost all purposes, except, indeed, when absolutely immersed in water, the unglazed tiles or bricks are most available for architectural purposes.

Nor need the Poole Company consider it an additional recommendation to their excellent material, to say that their bricks are made to resemble stone, or may be marbled, after all that has been said and written these few years past about truthfulness in material and propriety of application. Let the bricks be bricks, and neither stone nor marble, and the company will find that the article will become of infinitely more extended use. A study of the design by Mr. Chamberlain, of Birmingham, Mr. Gray, of Buckingham-street, and others in the exhibition, will show that bricks are wanted to look like themselves, and that they may be used much better and more easily in that way than if made to imitate marble or stone, which they never can do, if their necessary use in small pieces were the only obstacle.

In those artificial stone productions, also, where the forms are obtained by compression in a mould, an imitation of carved stonework would appear inadvisable, since there can be no under-cutting in relief, and a result is obtained which in really carved work would not be tolerated. On the other hand, the font of the Farnley Company looks precisely as if it was copied from a framed work of wood: it cannot but occasion regret if we feel that the care and ingenuity expended are guided by wrong canons of taste, and have found a wrong direction, particularly where the things themselves are so excellent. Let it be remembered in the matter of ornament also, that too little is in every case better than too much; and to quote Mr. Fergusson's admirable Handbook of Architecture, — "All materials are nearly equally good when used honestly, and for the purpose for which they are best adapted, and all become bad either when used for a purpose for which they are not appropriate, or when one material is used in the place of another." Form should always be the clue by which bodies and their properties should be known,—a rule illustrated all through the kingdom of nature; for as Mr. Digby Wyatt observes, "Never does a flower look like a piece of metal, or a piece of timber like a rock."

The bricks from Mr. Arnold of Tamworth, are chiefly noticeable for hardness and great strength: for paving, curbs, and such purposes they would appear valuable additions to similar materials; but the colour of the specimens would appear to interdict their use ornamentally. The inventor, however, advertises the material in blue, red, or strawberry colour; and I am told that Mr. Arnold is making chimney, and if so, there must be a class of goods of firmer texture than we have seen. The cost of production is moderate, and the machinery may produce any number of patterns, as a change of dies is all the alteration necessary.

The material brought again into notice by the Lizard Serpentine Company, is of great beauty, and deserving much attention, and is now to be had in large blocks, of 10 or 12 feet in length.

The upper strata of the serpentine rocks are found to be brittle and unsound, and the energies of this company have been directed to procuring the stone from a considerable depth, where the defects apparently nearer the surface disappear.

This stone is used in the external walling, at the Lizard, in a rough state, where it has stood the test of climate for some centuries. Nor was it unknown nearer home, though it seems to have got into disuse after the early part of the last century. We find the serpentine introduced in a chimneypiece, in Hampton Court Palace, of a dark green colour, and the polish more perfect than the contiguous marble. I must allude to a most interesting set of contributions from Messrs. Chance, of Birmingham, which were sent to these galleries, and afterwards withdrawn in consequence of the discovery of great improvements in the production. The invention consisted in melting a basaltic stone, similar to that of the Giant's Causeway, and running it into moulds; and it was found that the stone could be made to take in this way any required form. The rapid cooling, however, at first allowed, converted the material into a species of slag, but it was soon discovered that a slower process left the character of the stone unchanged, and it has been applied to the ornamentation of houses in some instances already. The chief objection was the colour, opaque and black almost, and which rendered painting necessary; and it was, I believe, in consequence of some process by which a pleasant and agreeable tint could be given, that the specimens were withdrawn.

Messrs. Waithman's hose piping is undoubtedly a new application. It is for purposes similar to the leather hose, with which we are all acquainted, but is not half the price, and is, besides, lighter and less bulky, the best quality of 2-inch hose costing only 2s. per yard. Not only for ships, fire-engines, and out-of-door purposes, is this hose applicable, but also for building purposes and for some others, for which its adaptability might certainly have been overlooked. Thus, it has been used in the application of paint or colour to the front of a house in this way:—a reservoir of the paint or colour is set on the parapet, and the workman uses a hollow brush connected therewith, by means of a length of the half-inch hose; and the consequence is, that he works away with a never-ceasing supply; and if he stays to look about him, we may imagine he will very speedily make a mess of it. The same thing has been done by connecting with the nearest water supply a similarly-made brush — a mop, for carriage-washing—by which there is a constant supply of water, and the sand or grit is continually driven out of the mop, and the carriage is thoroughly washed, and not scratched. I have not heard that the domestic scrubbing-brush has been fitted with this article, but it would be, I dare say, equally easy.

Mr. Magnus's enamelled slate, and Mr. Minton's tiles, are of such acknowledged excellence that it appears unnecessary to make any observations upon them. I believe the process by which the slate is enamelled is a secret: the colour is, however, applied by a great heat, and becomes permanent.

Mr. Minton's inlaid encaustic tiles are a species of mosaic, the pattern being inlaid with clay: his Venetian tiles are made from powdered and coloured clays compressed in metal dies: the pieces are cemented together at the back, and the indented tiles, covered with enamels in different colours.

The iron slag, melted again and turned into moulds, deserves consideration.

Among the contrivances of mechanical ingenuity, there are, perhaps, none marked with a more common-sense adaptation than those by Mr. Jennings, Mr. Botten, Mr. Pierce, Mr. Chappuis, Mr. Moore, and Messrs. Bunnett.

Mr. Jennings's improvement upon the ordinary drain-pipe, by which the pipe can be got at without disturbance, and junctions can be effected, as also his cistern-valve and gully-trap, are excellent, and, like all simple and good things, occasion surprise that they were never thought of before; and, indeed, there is hardly any contribution from this exhibitor without evidence of thought and care, and well deserving attention—especially the sanitary contrivances.* Almost as much may be said of Mr. Botten's contributions, and especially of Underhay's Patent Regulator. Upon similar grounds, Messrs. Bunnett's contributions are worthy of all praise, as are also those of Mr. Moore. Messrs. Bunnett's revolving iron shutter has the peculiarity of rolling either way; that is, it may be shut down either inside or out. The shutter is an example of the assistance afforded by powerful and accurate machinery, which turns up the edge of each slip of iron with such accuracy that when slid endways into each other, a perfect hinge throughout the entire length is formed, working quite smooth and easy; and the pieces of iron are at the same time interlocked so effectually, that the laths will rend across the centre rather than separate.

No exhibitor has come forward more boldly to challenge criticism than Mr. Pierce; and whether we take his small stoves at 11s. 6d. or those of a larger character, they are equally good, and deserving of commendation. They are all upon the principle of using fire-brick lumps as the medium for conducting the heat of the fire, and to warm the fresh air for consumption, instead of using an iron surface, which also warms the air in the room without keeping up any supply of fresh warmed air, so desirable and conducive to health, and which also, by creating what is called a plenum effect, assists to prevent draughts. Mr. Magnus's stove is similar to Mr. Pierce's in principle, but he employs no iron at all, not even for the outer casing, using instead the enamelled slate, which, perhaps, gives him somewhat the advantage, so far as appearance is concerned.

So long as Mr. Pierce confines himself to the common-sense utility of his inventions, we can applaud and admire his industry and talent, but is there not apparent a want of right guidance where the article is made to leave its simplest form, and to receive some moulding for artistic effect? We may give an unqualified and unquestioning approval to the cheap portable oven, sold for 15s. and which strikes us as being as good as it is cheap; while the handsome grate in its margin of alabaster, with its vases and shield, and the iron chimney-piece in the other room, copied from one in stone, in spite of all the labour bestowed upon them, excite a feeling not precisely a pleasurable or satisfactory one. How is this? Is it the absence of that utilitarian feeling enlarged upon by Mr. Petit in his lecture,—a forgetfulness of the maxim he laid down, that "original purposes must not be overlooked in the slightest degree."

There is perhaps no class of manufacture so much in want of improvement in design as the ordinary stoves in common use.

M. Chappuis's daylight reflectors are well known to be devised upon sound principles, and to answer their purpose. The recent improvements consist in silver-plated surfaces, instead of using leaf silver for this purpose; and the use of metal, instead of glass, for the silvering, is another improvement. Some of the reflectors exhibited are also contrived to obviate the dazzling effect of refracted light, by filling the reflecting surface with numberless concavities and convexities, so as to soften the light, and diffuse it at different angles. In the gas reflectors, the former mode of using copper plated surfaces is done away with, and a combination of crystal with silver-plated copper is used in such a manner as to exclude air from the silvered surface, and at the same time permit the glass to expand when heated. Many thousands of these useful articles have been sold within the last three or four years, and a great addition to comfort obtained in numberless instances. I hope, however, we shall never see any new buildings designed with so little regard to the exigences of situation as to render any such assistance necessary. A reference to the elevation of some houses erected at Maidstone, in Messrs. Ashpitel and Whichcord's large drawing; or to Mr. Waterhouse's building at Manchester (63), will show that it is perfectly easy to do away with all obstructions to light. The merits of Mr. Tyerman's hoop-band are so evident, and the additional cost is so nominal, that I should think no one would ever use any of the old bond, which, as frequently applied, might as well be omitted altogether.

Before we examine the artistic productions complete in themselves, there is a class of contributions which comes half-way between these and those last alluded to,—things complete as far as they can be, independent of their final situation.

Thus Mr. Leake contributes some specimens of leather hangings, in use among the ancient Egyptians—for I believe there is a specimen of embossed leather of 900 B.C. in the British Museum, and which was very prevalent in the two last centuries, though not then treated exactly as now. The mode then adopted was to prepare the leather by hand, and without machinery, pressing into moulds, so as to give the required form, with small wooden tools, which, when dry, was coated over with silver leaf, and then lacquered to produce a gold colour. Now, however, science steps in, and, with the assistance of steam to soften the leather, metal moulds to receive it, and hydraulic pressure, we get not only the patterns suitable for hanging, but also cornices, brackets, and other wooden and stone forms, into which the leather is forced,—a species of application which our forefathers were saved, for want of knowing better. Messrs. Jackson's most excellent productions in papier-maché are somewhat akin to the leather manufactures, and are of great perfection as to workmanship. I understand the large figure is similar to some that have been put up in St. George's Hall, at Liverpool; and it may perhaps be asked, how is the doctrine of truthfulness and honesty, so much insisted on, to be applied to productions so meritorious in themselves as these? are such in all cases to be rejected? By no means. And —speaking altogether in ignorance as to how or in what part of St. George's Hall the figure exhibited is used—if I say that, in such a building, to my mind, the introduction of such a figure in such a material is inapplicable and dishonest,—since the character of the building would lead a spectator to believe that stone or marble only would be used, and would be suitable, perhaps,—I illustrate the distinction as clearly as I can,—while at the same time there are thousands of situations where an imitation of statuary, in a subordinate composition, would be perfectly legitimate, as the reality of the imitation would never be suspected, could never be questioned, and would please and satisfy the eye by reminding of the original type. And something of this would apply to Mr. Kershaw's imitations of woods and marbles, which are so very beautiful, that one is led to suspect that they would cost as much to produce as a veneer of the real material.

To pass on to the excellent productions in glass mosaic, by Mr. Stevens. We have heard already from Mr. Fergusson, how the Assyrians used a mosaic composed of clay cones, three or four inches long, coloured, and let into a plaster ground, — which ground played an important part in the effect produced; — and we have heard from Mr. Scharf a description of the Roman mosaic, where the whole pattern is made of very small pieces, in opposition to the Florentine method, in which were used pieces as large as could be got with convenience. These mosaics were formed of gems, marbles, or coloured stones, inlaid in a slab of marble; but there is also a Roman mosaic of glass, in which, a flat rigid surface being prepared and overlaid with plaster, the pattern is drawn upon the plaster, and the small spaces being scooped out, one by one, are filled in with cement, and the tesseræ of glass, or porcelain, are pressed in. Mr. Stevens's process is somewhat analogous; but he uses glass altogether, and as geometric patterns only are used, there is much less expense. Mr. Stevens, however, although he has not gone beyond this method hitherto, is quite willing to work out any more complicated designs as are found in ancient specimens; and it is, perhaps, surprising that so excellent, lasting, and tasteful a method of decoration is not applied more generally. At the church of All Saints, Notting-hill, erected under the able superintendence of Mr. W. White, the mosaic is

* We would add a strong expression of our own good opinion of Mr Jennings's improved Drain-pipes. The arrangement is excellent.

let into the Bath stone spandrils of the clerestory windows, and is suggestive of many similar applications in our church interiors. The productions of the Ladies' Guild are also a species of mosaic, but beneath, instead of on the surface, the paper is inlaid in patterns, though sometimes painted.

Messrs. Hart's many contributions are worthy of attention; and as an example of design applied to common things, I may mention the coal-plate, by their foreman, Mr. Ash. Only let it be once acknowledged that nothing is too insignificant to be treated with some feeling of art, and we shall soon have a universal improvement in things more important.

Messrs. McLauchlan and Mr. Simpson have evidently studied to unite excellence of design founded upon architectural models, with excellence of workmanship. Messrs. McLauchlan's looking-glass details, and the carved panel, are of early Gothic character; and they have adopted a method of ornamenting the gilt *plain* surfaces, with burnished patterns, which is in itself a far better plan than the more common method of burnishing members of mouldings only, or the prominences of ornamental work, by which the general design is often much confused. This mode of ornamentation by two shades of brilliancy, at the same time making the outline pattern with an engraved line, is undoubtedly capable of great development and variety.

Mr. Simpson has also carefully followed the models within his reach, for the purpose of producing paperhangings to harmonize in design with mediæval architecture. There is in all a proper flatness of treatment, and the colours are quiet and mostly well contrasted, and the introduction of crests and initials is undoubtedly appropriate. These manufacturers are evidently in earnest, and deserve to succeed.

The tiles by Mr. Brown, of Surbiton-hill, and the porcelain baths by Mr. Finch, in one piece, are both good, and we are indebted to the Vieille Montagne Zinc Company for an improvement in the mode of applying zinc to roofing purposes—by which the usual boarding is omitted: the rafters form the rolls, and the metal receives, through the short distance between the rolls, the additional strength derived from corrugation.

Mr. Winston gave us an explanation of the method of painting and enamelling upon glass, but we have in Messrs. Bowden's contributions an article of much greater brilliancy, and in which the effect is got by cutting, somewhat in the manner of the Bohemian glass, the patterns being ground out with a stone wheel, after which a wooden one is applied to produce the polish. It is a peculiarity in the manufacture that the entire design is almost altogether left to the workman: he has no drawing, nothing but a dab or two of whitening on the glass; and if we were to ask him to sketch or draw his pattern, he would be wholly unable to do it, in spite of the precision with which he draws and works with his wheel.

Under our present head we may note the examples of carving and modelling: those by Mr. Taylor, being models of the carved details of a bookcase, are good, and lead us to believe that the work from which they are taken is worthy of its designer, Mr. J. K. Colling, who has for so many years devoted his study and attention to foliages, and so successfully. There is also much beauty in Mr. Phyggen's model, called the "Heavenly Chorus." Second, however, to nothing in these rooms is Messrs. Collmann and Davis's carved oak mantelpiece, designed by Mr. Collmann. We know that in many cases recently, foreign carvers and artists have been employed; and while there is now a very fair amount of talent available among the English stone carvers, we have here a production in *wood* carving entirely by English workmen: the work as we see it is precisely as it has been left by the chisel, and has not been touched with sandpaper: the ornaments are none of them affixed, but the whole is cut out of the solid oak. And while the workmanship of Messrs. Collmann and Davis is worthy of all praise, they deserve further credit for having given us a specimen which is not of a Gothic character, as an evidence that there is no want of superior workmen ready to devote their talents to a class of work which has lately become very unusual.

M. Remon's and Messrs. Galli and Cotti's contributions come under the head of the works of art complete in themselves. It is gratifying to see an exhibitor take such pains to exemplify his talent as M. Remon has done; and as the object of this inquiry is not criticism, there are but few remarks to make of an explanatory character.

The centre panels are in the Renaissance style, and an oak ground has been chosen as being suitable, and because cabinet furniture was during that period mostly of oak and walnut. The panels to the left are in the manner of the period of Louis XV. in the style of Watteau. Those to the right are in the style of Louis XVI. and Marie Antoinette, corresponding with the style of the Adams in this country, but with much less stiffness and tenuity; the distinctions so nicely kept up, the way in which the extravagance and ugliness of these styles of art are kept subdued and in good taste, show that M. Remon is as much a master of his subject theoretically as he shows himself to be practically. As a further exemplification of these styles, reference should be made to the exquisite drawing by M. Prignot, who gives us the interiors of two rooms, carried out entirely, and both of which are designed in the same tasteful, judicious, and careful manner, and above all with a view to harmony, between the furniture and the architectural decorations themselves—a thing now, alas! hardly ever thought of.

Messrs. Galli and Cotti will, I hope, have succeeded in calling such attention to their fresco painting, as will lead to a trial of it being made; for, as the material is non-absorbent, it would appear to be especially applicable to a city like this, where so much coal is burnt, and where all porous materials become of one black hue, for it is *externally* that Messrs. Galli and Cotti wish their workmanship applied, and stipulate only that it should be done between the months of April and August, or even in September, if the painting face the south. Although the colours in use are few, comparatively, great scope is afforded an artist conversant with the material; and with fair usage the work, if properly done, is everlasting, and requires only an occasional washing with plain water to restore it to its pristine beauty.

Enough has, however, I hope, been said to show you how extensive is the interest that must attach to the art of architecture, and to all the multitude of manufactures, applications, sciences, and inventions connected with it. There is no view of the question you can take up, no direction in which you can turn, without being met with countless subjects of inquiry—numberless sources of enjoyment: take it in its highest and most abstract sense as a high art, or in its most practical feature of building constructions, as your particular turn of mind may lead, and you will find a never-failing food for study, never-ending opportunities for mental exercise, perpetual additions to attract your attention.

At the close of Mr. Edmeston's interesting observations, which included an appeal to the ladies to help them in earnest next year, some notes on the articles exhibited, forwarded by the Council of the Institute of Architects, at the request of the Committee of the Architectural Exhibition, were read; and then, with a cordial vote of thanks to the committee and to the various lecturers, the proceedings terminated.

The notices sent by the Council were brief expressions of opinion. We extract some passages likely to be useful to exhibitors by giving assurance to the public:—

4. Wilshere's Substitute for Paint.—The stain is agreeable, well toned, and allows the natural grain of the wood to be seen through it: there may be a doubt whether the varnish can really be depended on as a protection against the weather.

5. The Indurated *Natural* Stone (of Tunbridge Wells Co.).—Must be valuable where hard stone cannot be readily procured; and this article is said to be moderate in cost. The probable action of fire on the *artificial* stone should be considered, even granting that the atmosphere may be resisted as described in the catalogue. The cast work is not considered altogether satisfactory.

6. The Glazed Bricks and Coloured Tiles of the Poole Company show a meritorious advance in the manufacture; but they are expensive.

13. Serpentine Marble.—The Lizard Company exhibit well-prepared specimens. It is to be hoped that the same care in stopping and polishing is bestowed on larger articles made to order.

14. Ornamental Cut-Glass (Bowden's).—Appears good for domestic purposes, and reasonable in cost.

Green Slate from Carnarvon (not numbered).—Has good colour; is apparently of good quality; giving a metallic ring on being struck, and admitting of being cleft in moderately thick slabs: it is desirable to know the results of experience as to its durability.

20. Papier-Maché and Carton Pierre (Messrs. Jackson's),—Is a beautiful material; successfully applied to carry out an artistic design.

28. Models of Bells (by W. L. Baker),—Exhibit a clever method of hanging them; but it is desirable to know how the cast-iron cage, &c. may stand the test of a lengthened trial on a large scale.

29. Hollow Bricks, &c. and Brickwork (by B. Looker),—Are apparently good. The ventilation proposed to be effected in the humble class of dwellings is very desirable.

35. Magnus's Enamelled Slate Chimney-piece and Stove.—Apart from the clever imitation of porphyry, advantages are perceived in the combination of the two methods of warming rooms, &c. in this article.

41. Paper-haugings (Simpson).—Some are very good, apparently copied from old examples; while in others, the apparent imitation of encaustic tiles is to be regretted.

42. Bunnett's Interlocking Shutters, &c.—are ingenious contrivances, but require care in their application.

44. Italian Roof-tiles (by Brown).—The manufacture is good; but the affectation of age attempted to be given by the green colour must be objected to.

45. Botten's Patent Regulator and Water-closets.—On the whole, good; are useful where it is required to regulate strictly the supply of water to the pan; but inconvenient where it may be desired to discharge more water through it. The other articles are ingenious.

47. Indurated Stone (Barrett's patent).—The question arises whether dependance can be placed on the permanent condition of stone so treated.—[It certainly deserves a trial].

48. Artificial Stone (from Seeley's).—The experience of thirty odd years proves the durability of this article.

50. Self-acting Lever Tap (Davis's)—appears ingenious, though somewhat complicated.

54. Baths and Fittings (Finch)—3, 4, 5, 6, 7 (tiles)—are well known and useful. The other items under this number appear good.

55. Gas and Day-light Reflectors.—Are very useful where there is a deficiency of natural light. The latter are very serviceable. Some method of rendering them in unison with the architecture of the building in which they are introduced may be considered desirable.

In designing furniture, whether mediæval or modern, convenience and applicability to the purpose should not be lost sight of: sharp unnecessary angles and projections should be avoided.

Fresco paintings on walls are becoming more appreciated, where their durability can be depended on, and their execution may not occasion greater comparative outlay than other methods of decoration. Should the specimens shown combine these advantages, a very desirable means of improving the appearance of our rooms will be placed at the disposal of architects.

The iron and brass work in the third room does not display much novelty: the brass appears to be better designed than the iron. It may be remarked, that sharp unnecessary edges should be avoided in all articles required to be handled in constant use. Exception must be

taken to the design and painting of the porcelain finger-plates.

In conclusion, the Council of the Institute of British Architects must not omit to express their opinion as to the advantage to architects, manufacturers, and the public generally, which is likely to arise from periodical exhibitions, such as the present, of materials, manufactures, and inventions connected with architecture, by tending to keep up a fair spirit of emulation among the producers, and conducing to the development of structural science in combination with artistic design.

THE NEW PALACE AT WESTMINSTER. SIR CHARLES BARRY'S CHARGES.

Copies of Treasury minute, dated the 6th February, 1854, and 29th January, 1856, have been issued, with regard to the claims of Sir Charles Barry for services connected with the building of the New Palace at Westminster. This sets forth, that on the 26th May last the following offer was made to Mr. White, as acting for Sir C. Barry, with a view finally to settle all questions as to commission, measurement, and all other claims up to October 2nd, 1853, to which date the closed accounts extended, Sir C. Barry, it should be said, having put in various claims for extra payment over and above his commission:—

"1. That a commission of three per cent. should be allowed on the entire outlay of 1,506,845*l.* up to the 2nd October, 1853.

2. That a remuneration for measurement upon the whole of the works included in that outlay should be paid at the rate of one per cent.

3. That those commissions should cover all demands of every kind whatsoever for the past, the services for warming, lighting, and ventilating alone excepted, which should be dealt with separately, and upon their own merits.

4. That the remuneration of Sir Charles Barry for the future should be fixed at—

Three per cent. commission on the outlay as architect, and one per cent. for measurement upon all works to which measurement applies; and that no furniture, &c. should in future be furnished by Sir C. Barry, except by the special order of the Treasury.

After numerous further interviews and discussions with Mr. White, that gentleman, on the part of Sir Charles Barry, declined the terms of settlement thus offered, and pressed again the claims for the extra services performed.

My Lords having again referred Sir C. Barry's claims for a report to the Board of Works, and having very carefully reviewed the whole case, continue to be of opinion that the terms herein stated are not only fair, but liberal; that they include all remuneration to which Sir C. Barry is justly entitled for the services he has performed; and that they could not extend the same consistently with their duty to the public.

Considering, moreover, that the matter has gone on for nearly twenty years without any distinct understanding being arrived at, notwithstanding the efforts of every successive Board of Treasury to do so, my lords are of opinion that it is inconsistent with the public interests that it should be any longer delayed; and they therefore, as far as they are concerned, must record these terms as their final decision upon the questions at issue. They are pleased, consequently, to direct that no further payment be made on account, until a final settlement of the past, and an agreement as to the future, are concluded."

Sir Charles Barry has since published a statement, showing that when he first entered upon his duties in 1837, it was with the understanding that the usual commission of 5 per cent. would be the amount of his remuneration; that after eighteen months he was informed of an order from the Treasury that, for certain reasons assigned, his remuneration was to be limited to a fixed sum of 25,000*l.* being nearly 10,000*l.* short of his stipulated commission, and that the same principle of limitation was to be applied to all public buildings from that time. Against this decision Sir Charles entered a protest, which has never been answered or contested; nevertheless, by the advice of his friends, he acquiesced in the decision, upon condition that it should be reconsidered on the completion of a considerable portion of the work, when he expressed his belief that the injustice of such a reduction from his legitimate claims would be manifest.

That owing to a great extension of the building, and numerous changes, sanctioned and commended by Parliamentary committees, increase in the value of materials, and other causes, the expenditure has been greatly increased, and the arrangement in question altogether nullified.

The Government has in effect admitted the nullity of that arrangement by making unconditional payments to the architect from time to time, of about 20,000*l.* beyond the original fixed sum. After much negociation with many successive Governments for nearly twenty years, the present one has made an offer of 4 per cent. upon outlay, and a special recompense for the trouble and difficulties encountered by the architect in respect of the warming, ventilating, and lighting arrangements of the building. To avoid further contention, but not until after having in vain urged repeatedly a reference to arbitration as the only fair and proper mode of deciding upon the various questions at issue, Sir Charles has been induced, at a very considerable sacrifice, to consent to the principle of remuneration now proposed, upon condition that certain extra services, not pertaining to his duties as architect of the new palace, and to which the proposed commission can have no reference, should be recognized and recompensed, either by a fixed sum, or at such an amount as might be determined by arbitration, to which proposition, however, the Government has not acceded.

With respect to the appointment of the late Mr. Pugin, and to a claim made by their Lordships for a set-off upon the architect's commission on account of moneys paid to him, Sir Charles points out that Mr. Pugin was not employed upon any duties that devolved upon the architect of the new palace, inasmuch as all designs for that building had emanated from Sir Charles himself; but only as the superintendent of the wood-carving department, in carrying out the architect's designs, to which office he was appointed by the Government at a salary.

As to the mention made of the furniture in the minute, which, we are able ourselves to say, has led extensively to the very disagreeable inference that the architect had *supplied* it, in the way of trade, Sir Charles states that he had only been employed to make the designs for it, see to its being properly executed in accordance with the contract, and check the accounts.

Sir Charles conceives that he has a right to complain that the Lords Commissioners of her Majesty's Treasury have constituted themselves the judges in their own case; that they have formed their decision partly upon *ex parte* statements, to which he is an entire stranger; that, while they are now paying at the least 5 per cent. to all architects and engineers of independent practice for works of the plainest and most simple, although most expensive, character, they make the New Palace at Westminster, which undoubtedly is the most elaborate and complicated edifice in modern times in this country, the sole exception, and propose not only to pay to its architect nearly 20,000*l.* less than his legitimate claims, but to deprive him of all remuneration whatever for many extra services not pertaining to his duties as the architect of the New Palace, and to which their offer of commission can have no reference; and, lastly, that their lordships have not acceded to a reference of the several questions, at issue, although Sir Charles has repeatedly expressed his perfect readiness to abide by the verdict of such a tribunal.

In the course of the correspondence which has been going on, Sir Charles, in reply to a statement from the Treasury that "my Lords" were acting on precedent, gave the following list of public buildings, upon the cost of which their respective architects had received 5 per cent. *since* the year 1832:—The British Museum, the General Post Office, the State Paper Office, Whitehall Chapel, Westminster Hall, the National Gallery, the new front of Buckingham Palace, the Museum of Economic Geology, the new Money Order Office (St. Martin's-le-Grand), the Royal Pavilion at Brighton, St. Katherine's Hospital (Regent's-park), the Lodges and Gateways in the Parks, Kensington Palace, Temporary Houses of Parliament, Chapel Royal, St. James's, the Courts of Law, &c. &c.*

In some of the above instances the architects were also relieved of the measuring and making up of the accounts, &c. It appears, therefore, that payment at the rate of 5 per cent. to the architects of all public buildings has invariably been the rule of the Board of Works since the year 1832: prior to that time the same rule prevailed except in respect of those buildings which were carried into effect under the direction of those architects who were for a time attached to the Board, who received 3 per cent. for certain understood reasons.

With reference to the additions and alterations made under the direction of Mr. Nash, at Buckingham Palace, and the subsequent alterations under Mr. Blore, at the same building, the remuneration received by these two gentlemen was not only at the rate of 5 per cent. but they were also relieved from all labour, cost, and responsibility as to measuring, &c.

As to the works at Windsor Castle, Sir Jeffery Wyattville was not only paid at the rate of 5 per cent. but he had also the same relief afforded him as to measuring, &c. which circumstance, and not the payment to him of 5 per cent. as supposed by their lordships, was, as appears by a Treasury minute of the 6th October, 1826, considered to be an equivalent for his journeys, and some other extras usually charged by architects. Notwithstanding, however, this arrangement in lieu of a charge for journeys, Sir Jeffery had also the advantage of having a residence assigned to him in the Castle, free of charge, during the whole of the time he was employed upon the works of that building. In short, the payments made to the architects of the two above-mentioned works, together with the immunities and advantages which they enjoyed, constituted a remuneration fully equal to 7 per cent.

As to his own case, Sir Charles states that he has not only performed all the professional duties which Sir Jeffery Wyatville and Mr. Nash performed in respect of Windsor Castle and Buckingham Palace, but in addition has been called upon to take upon himself the labour and responsibility of making contracts, forming elaborate schedules of prices, measuring, and making up accounts amounting to nearly 1,500,000*l.*, and of adjusting disputed claims to a considerable extent, from which onerous duties they were altogether exempt; and that he has had at least as great, if not much greater, difficulties than they had to contend with in carrying into effect the works at the new Palace at Westminster, owing to the necessity of forming an artificial foundation in the river; the limited clearances from time to time of the site; the necessity of keeping up old buildings—often a work of much difficulty and danger—and constantly adding temporary accommodation, so that the sittings of Parliament might not be interrupted; the interference with the progress of the works by parliamentary committees and other authorities, involving numerous alterations and delays, and the impossibility, in consequence, of spending, upon an average, more than 90,000*l.* per annum, by which the works have now been in hand more than eleven years beyond the time originally assumed for the completion.

The tone of the Treasury "Minute" throughout seems to us harsh and unfair. We give the following letter on the subject from amongst those which have reached us from correspondents:—

I am sure the profession generally will be much pleased to see the firm manner in which Sir Charles Barry has asserted his claims to proper remuneration for his laborious services connected with the new Houses of Parliament. It is monstrous to suppose that a man of his great ability is to be denied the proper reward for a work of such extraordinary character. My object, however, is to confirm Sir Charles's remarks in reference to the late Mr. Welby Pugin. That gentleman, in a conversation with me not long before his death, expressed much

* To this list may be added Board of Trade and Treasury Buildings, Trafalgar-square, Piccadilly improvements—all carried out under the professional guidance of Sir C. Barry.

annoyance at the prevalent reports, which attributed the best portions of the design of the New Palace at Westminster to his skill. I had frequently heard these remarks myself from people in high position, and upon mentioning it to Pugin, he most emphatically denied the truth of the rumours, and desired me to make the facts known wherever I could, adding some very complimentary remarks upon Sir Charles Barry as an architect, and claiming for him that facility and readiness of design which he is known to possess. My intimacy with Mr. Pugin commenced while a pupil with his father, and I never knew a person more ready to give praise where he thought it due, while at the same time he never ceased to denounce those who pretended to skill which did not belong to them.

BENJ. FERREY.

Any evidence as to Mr. Pugin's position should be quite unnecessary after the letter addressed to us by that gentleman some years ago, which was printed in our columns.

ON THE APPLICATION OF PAINTED GLASS IN ARCHITECTURE.*

A FEW years ago I should not have ventured, in advocating a new system of glass painting, to have recommended any but a very general conformity with ancient precedents, from the want of a material similar to ancient glass. But this desideratum has now been obtained, entirely by the skill and perseverance of some of my scientific friends, the successful issue of whose exertions is, perhaps, best acknowledged by the attempts at imitation on the part of those who at first were loudest in decrying and ridiculing their discoveries. The similarity of this new material to the old is, however, so close, that we may gather hints for its employment from the works of the ancient glass painters.

An extended acquaintance with ancient painted windows will convince us that the nature and execution of the design varied with the nature of the material employed.

In the twelfth and thirteenth centuries, the mode of painting was of a kind admirably calculated to tell on glass so powerful in its local colour as the material then used. The form of the features and draperies was strongly marked with opaque outlines, which, in fact, amounted to, and served as, the deeper shadows; and these were united and softened with a shadow in half tint, roughly applied as a wash. The pictures were also composed on a principle well suited to a stiff mosaic. The figures, placed in a single line, were separated from each other, and insulated by a stiff-coloured ground, by which means distinctness was attained without the aid of atmospheric effect. A somewhat similar mode of treatment was practised in the fourteenth century, but not so satisfactorily;—a more complicated kind of composition being usually adopted, destructive of the former means of producing distinctness, in lieu of which no new method was introduced.

The fifteenth century is distinguished by a far more delicate mode of execution. The former thick outlines were reduced to hairstrokes; and carefully finished shadows, varying in depth, succeeded the monotonous wash of shadow in half tint. The groups of figures, too, were arranged, as we see them in ordinary paintings, —some standing before the others. And if the artist did not succeed in separating the figures from each other, and making his composition distinct, it was but from want of skill, not from intention. In the sixteenth century, this object was fully attained; only, however, by a more vigorous and skilful application of the means which the artists of the fifteenth century possessed.

Glass paintings may, indeed, be divided into two classes. The first where the mode of representation is conducted on an artistically flat principle,—as in a bas relief. The other, where the picture is composed on the principle of representing depth. It would be too much to say that either of these different principles has always been consistently carried out in ancient glass paintings. The first, or flat principle, is best indicated in the works of the twelfth and thirteenth centuries, in which there is little attempt to represent objects situated in more than a single plane, having a thickness not greater than that of the human figure. This principle, as I have said, was violated in the fourteenth century; the whole of which century, as well as the whole of the fifteenth, was spent in the passage from the flat to the rotund style of representation, the change not being complete till the second quarter of the sixteenth century.

We need not trouble ourselves, therefore, much with any intermediate types, but confine our attention to the remains of painted glass belonging to the twelfth and thirteenth and to the sixteenth centuries.

Of the twelfth or thirteenth century, the best subject for examination, is the Medallion window,—so called from its design, consisting of a series of panels or medallions, containing groups of figures, and embedded in an ornamental ground. I am not one of those accustomed to go into a fit of enthusiasm at the sight of one of these windows, which, I suspect, owe their popularity, principally, to the unquestionable beauty of their individual tints; for they are often confused in composition, and occasionally exhibit an undue predominance of some particular colour. I look upon them not as models for imitation, but only as affording the means of instruction, and hints for the achievement of something better suited to the requirements of the higher artistic knowledge and more fastidious taste of the age in other matters.

On examination, we find, as I have already stated, the figures composing the group for the most part separated from each other, arranged in a single line, and cut out by the coloured ground of the panel, which usually is of deeper hue than the flesh or draperies, and is left unornamented, doubtless to avoid distracting the attention from the figures. The figures are thus rendered distinct and effective,—at a distance proportioned to their size,—without the aid of a receding background, and with but little assistance from light and shade. The frame or border of the panel, the ornament which fills the interstices between the panels, and composes the border which encircles the whole design, are all superficial in design. On looking at Roman work of the time of the Empire, and at the carved ivories which from thence form a continuous chain, illustrating the transition from the Pagan to the Christian sentiment in art, we perceive at once the influence under which the glass painters of the twelfth or thirteenth centuries worked, and the classic origin of their ideas of art. And when we consider that all early Gothic art is derived more immediately from the Greek than the Roman, we need not be surprised at the strong resemblance which exists between the draperies and ornaments of the glass paintings of the twelfth and thirteenth centuries, and those of the archaic, rather than the later Greek sculpture, the remains of which, lying chiefly in Asia Minor, might perhaps have been better known to the artists of Byzantium.

A good deal of confusion and trifling criticism might be avoided, if, in all our applications of painted glass to Gothic architecture, we should propose to ourselves,—not the following of any particular style, which can hardly fail to involve a following of certain defects, that had better be avoided,—but the attainment of real harmony between the new work and the old architecture.

If this be our aim, — unless, indeed, we are prepared to admit that the very defectiveness of old glass paintings is an element of such harmony, in which case the sooner we get rid of Gothic architecture the better,—we shall find the present mode of estimating a new window, —in proportion to its chance of being mistaken for an old one,—only a mischievous guide, and shall learn, on the contrary, to value its inevitable nineteenth-century character, as one of its principal excellences.

With a view to ascertain how far we might succeed in attaining harmony between late Norman architecture and painted glass, by an attempt to work up to the high standard which influenced the artists of the twelfth and thirteenth centuries, instead of working down to the level which they themselves attained, I caused the experiment to be tried a few years ago, of introducing into some windows in the round part of the Temple Church, figures after Greek designs. The experiment was, no doubt made cautiously, and even timidly; but its success has been such, in the judgment of those best qualified to form an opinion, that I have now no hesitation whatever in recommending, in nineteenth-century glass work designed for a twelfth or thirteenth century building, the introduction as much as possible of the Greek element in the form of the ornament, as well as in that of the draperies; taking care, of course, to express in the figures true Christian sentiment, as we find that expressed by the greatest of all Christian or any other painters. I laugh at the imputation of "eclecticism," which such a recommendation is likely enough to provoke from persons ignorant of the real meaning of the word. For if this is eclecticism, it must follow that Raffaelle himself was the most odious of eclectics. That the recommendation, which is now of somewhat old standing, is not an impracticable one, has been lately proved to me by the sight of some cartoons, done by an artist, for some windows in one of the transepts of Lincoln Cathedral.

I really believe that the nearer our glass paintings approach Greek excellence, the better they will be found to harmonise with the ancient architecture of the twelfth and thirteenth centuries. I use the term "ancient" architecture advisedly, because I doubt if they would be found to harmonise so completely with modern Gothic; in which I wholly miss that inexpressible vigour, and real feeling for high art, which are the natural result of honestly working up to a high standard, instead of idly descending to a low model; and which most interesting features, I am bound in common fairness to say, I recognise more or less fully in all modern edifices erected in the classic styles.

In like manner we might advantageously borrow ideas from the antique in the arrangement of the groups, attending particularly to Mr. Cockerell's hint, in his admirable lectures on sculpture,—about affecting diagonal and avoiding perpendicular lines in the figures. The painting of the figures should of course be executed in the manner which the experience of the old glass painters has shown to be best suited to a dense, strongly-coloured material, and they should be shaded so as to appear rotund. For, in speaking of a flat style, I always mean an artistically flat one,—a style, in short, induced by the necessity of employing stiff colour, in which the skill of the artist is evinced by conforming to unavoidable conditions, and yet producing a good and effective picture,—not a style in which, from a want of artistic knowledge, every figure looks as flat as if it had been ironed out against a wall.

In the form and general arrangements of the medallions, and of the entire window, ideas might be borrowed from antique mosaics and other work. Even Italian ceilings might show how the ground colours of the panels could be more varied than is ordinarily the case in mediæval example; care of course being taken that a change in the ground colour should be followed by a corresponding change in the colouring of the group, which should almost always be either decidedly lighter or decidedly darker than the ground on which it is placed.

Many of the pattern windows of the twelfth and thirteenth centuries, which, like all other mediæval pattern windows, are principally composed of white glass, are truly admirable in design, and could hardly be improved on. But there is yet a wide field for the invention of new patterns borrowed from the antique, and which, if carried out in a proper spirit, would harmonise with ancient architecture as well, and with the new picture windows probably better than the older patterns.

Of course, all these remarks are made subject to the employment of the new material I have already alluded to; a recommendation which, as I have no sort of interest in the matter, I may be allowed to make with a pure conscience.

I shall offer but few observations upon the nature of the glass paintings which seem most fit for the windows of a building of the fourteenth century. It is true that deep-toned glass is a

* See p. 71, *ante*.

concomitant of decorated architecture; but I question much if a mass of such deep colouring as this glass might present is best adapted to a window having mullions and tracery. A mass of deep dense colour always appears to me to confuse the more minute tracery. On the other hand, a window with mullions and tracery is apt to lose its breadth of effect, unless some general hue or design pervades, and so unites together, the whole of the lights. For these reasons, I think that, upon the whole, the rich sea-green white pattern windows of the period, with or without a row of coloured panels containing groups of figures running across the lower lights, produce the most satisfactory effect. If so, they afford an excellent guide. The patterns themselves are generally most beautiful, and it would not be easy to improve upon them. And the remarks I have already made upon the general treatment of medallion pictures, to be executed in a dense deeply-coloured material, would be equally applicable to the panels of those designs. I need hardly trouble myself to condemn the employment, in the fourteenth century, often to the oppression of the poor figures beneath, of canopy work, which, like an architect's geometrical drawing, does not distinctly express the various plans and projections of the design, but is found barely to indicate them, even after a long and laborious search. It would be hard to say, after so many existing examples, that the use of figures and canopies in painted windows, is not in strict accordance with Gothic principles. But the only principle with which we are concerned, is that of good taste; and the use of such designs, being in their nature incapable of adequate representation in a dense deeply coloured material like that of the fourteenth century, is only one of the many proofs of the decline of art which that century affords. The Gothic architecture of the fifteenth and sixteenth centuries is so much alike, that it is not surprising to find the sixteenth-century glass paintings that have happened to be placed in buildings of the fifteenth century agree so completely with the architecture. Indeed, the glass paintings of both periods are alike in principle; the development of this principle, in the sixteenth century, constituting the chief difference between them. The old painted glass of the fifteenth century is pleasing, from its pearly lustre, the result chiefly of delicate shading and high finish; but the glass of the sixteenth century is as pearly, and in all other respects superior; for which reason we may devote our attention to it.

The works of the second quarter of the sixteenth century, in which I include both Gothic and Cinque-cento examples,—for the style of ornament is but an accident, having no bearing on the general subject,—if considered as forming collectively a class of glass paintings in which pictorial effect is aimed at, rather than a rich collection of brilliant tints, are so nearly perfect in all their varieties, from the simple figure with its background of tapestry, to the composition in which several planes of vision are represented, as in the fresco of the school of Athens, and in some of the cartoons; that it seems almost superfluous to advocate their study as models. A great many of these designs exist; and a skilful artist will easily perceive, and as easily avoid their defects. The finest are undoubtedly those in which, as in the cartoons, and other works intended to be executed in a material not favourable to a representation of depth, the figures occupy the immediate foreground, and constitute the most important feature of the picture; the background being a mere accessory, composed,—unless when the nature of the design or other circumstances require that it should be occupied with architectural forms,—of a light neutral blue glass, which, whether left all clear as sky, or partially covered with a landscape, by its sober colouring, relieves and throws forward the more positive colouring of the group. It is important to observe that these, as well as the earlier glass paintings, are composed on the principle of a broad sunshine effect, by which distinctness is attained without having recourse to any very extended mass of shade. Hence the brilliancy of these works, as compared with later examples, in which the opposite principle has been adopted of shading up to a point of light, and which in many cases leaves more than one-half of the picture,—not in transparent shade, as in oil painting, but,—on account of the different conditions of a glass painting,—covered with a harsh, dry, heavy coat of dull colour. The expedients adopted to obtain a receding effect, when objects at different distances are represented in the background, are as simple as, and very analogous to, those used in the school of Athens.

Having thus completed our remarks on the mediæval styles, only a very few observations need be made on the nature of the glass paintings most likely to harmonise with buildings in the Classic styles.

With regard to Palladian buildings, we have the Cinque-cento style ready made to our hands, the various designs of which more or less rich in colour, light or deep in tint, flat or receding in their design, would supply ample hints for meeting any exigency of local position or character of the surrounding architecture.

With regard to Greek buildings, the ground has hitherto remained untrodden, and we are left without any practical guide. No one, I apprehend, would think of adopting the Byzantine expedient of a pierced stone framework, even if such could be proved to be of classic origin. If we infer the proper style of glass paintings from an examination of antique works in fresco or mosaic, we shall be inclined to adopt a style light, gay, and lively in its colouring, like the Cinque-cento, and possessing little of the deep, solemn character of the glass paintings of the twelfth century, the material of which, as already stated, is almost identical with the glass of the ancient Greeks. The question is,—supposing that the Greeks had been acquainted with the manufacture of window glass, what sort of colouring would they have been most likely to have employed in their windows? If we think that they would have given the preference to cool, richly-coloured glass, the supposition may be reconciled with the different aspect of the ancient mosaics, by considering that these works were composed of materials most of which are naturally of a light colour,—and that forming opaque surfaces, deriving their effect from reflected light, they were not so suited to display deep or rich colour as an object that transmits light. The subject, it must be admitted, is one of considerable difficulty. If I *must* offer an opinion on it, I should incline to think that richly-coloured glass, representing pictures in mosaic, such as those which have been already referred to, would prove most in harmony with the architecture, even though such treatment might have the effect of diminishing the apparent size of the building. Such is an outline of my views on this interesting subject,—views which, in whatever manner they may appear to have been stated, I can answer for it, have not been conceived in a dogmatic spirit. The shortness of time allowed has compelled me to abstain from many kindred topics, and barely to allude to others, so that I have presented little else than the epitome of an argument. I can only hope that I have expressed it intelligibly. In conclusion, I will offer a few remarks on a subject, the consideration of which, as it is of very general application, I have postponed to the last. I allude to the vexed question, whether a pictorial design in glass should ever have a receding background, or transgress the limits of a single light in a window?

It cannot be denied that there is an abundance of ancient glass painting, having, or intended to have, receding backgrounds; whilst of designs extending beyond the limits of a single light, there is a series, commencing with the introduction of the mullioned window. Those, therefore, who argue in denial of either proposition, must make out that it impugns some principle of taste; for it is idle to say that it is opposed to any Gothic principle.

It may readily be conceded that a receding background is incompatible with the use of a dense, richly coloured material, like that of the twelfth, thirteenth, and fourteenth centuries. But, unless it can be shown that no glass paintings, whatever be the principle of their composition, can adequately represent depth,—and before we admit this, we must deny the evidence of our senses,—it seems to savour of ultra-mediævalism to banish them from buildings into which they were admitted by those who actually lived in the Middle Ages; and so, still further to restrict the range of subjects, already sufficiently circumscribed by the conditions of glass painting.

We may, I think, very fairly, and safely, continue to prove to the world that we, at all events, do not profess to be wiser than our ancestors, until such time as our modern mediævalists have either produced some new variety of subjects, in all respects equal to the class they reject; or else, retaining such class, have hit upon some new mode of treating it, which shall be as satisfactory as that adopted by the artists of the sixteenth century.

And with regard to the question of carrying a subject into more than one light, there are many persons, whose reputation for good taste would perhaps stand a comparison with that of our mediævalists, who are unable to perceive the ill effect which they allege is produced by even a figure being cut through by a mullion. As far as my own experience goes, I have always found that, if a sufficient quantity of the object separated remain on each side of the mullion, the eye passes across the mullion without being sensible of any interruption of the design. It is true that a confused effect will be produced if a sufficient quantity of the object cut through does not lie on each side of the mullion, to attract the eye across; and this, no doubt, is the reason why, in several Cinque-cento designs, where the head of the window is filled with a quantity of minute tracery, as in the windows of King's College Chapel; no attempt is made to extend the design from the lower lights into the tracery. Every principle must be more or less confined in its application by circumstances; but it is one thing to modify the application of a principle, and another to reject it altogether. And the rejection of the principle of carrying a subject across several lights of a window would involve, equally with the rejection of compositions having receding backgrounds, the further curtailment of the stock of subjects to which the choice of the glass painter is confined, without, as it seems to me, any commensurate result.

Charles Winston.*

CANNING-TOWN:

A NEW LONDON DISTRICT.

We have before now mentioned the manner in which Mr. Mare, the shipwright, has battled with Father Thames, and succeeded in planting his engines and steam-hammers on a spot which a few years ago was covered by every high tide. The establishment of this great manufactory, kept moving by the hands of 4,000 or 5,000 people; the Victoria Docks, and other works which are in progress in this neighbourhood, have led to the formation of a new town, unknown to the great mass of Londoners.

We all know the consequences of planting large populations on ill-adapted lands, without making provision for that most important necessary of accumulated life, *drainage;* and it might have been hoped that the sad effects in known instances would have led to the prevention of other similar mistakes. It is, however, not so; for on a part of the Plastow Marshes, not far from Mr. Mare's shipyard, Canning-town has been commenced, without the provision of either proper roads or drainage.

On one side of the new town an earthen embankment dams off the water of the Bow-creek. The level on which all the houses are placed is below that of the ordinary half-height of the Thames. Standing near the iron bridge which crosses Bow-creek, let us take a peep at the scene which presents itself. Near at hand

* We have received the following with reference to Mr. Scott's paper in our last:—"Sir: Mr. G. G. Scott, as a practitioner of Gothic architecture, may feel sore at his views not being universally received. But I protest against his assertion, as unjust and altogether fabulous, that I have been rendered hostile to 'the movement' by the illhumour of certain foolish zealots, whose peevish misrepresentations I have had to correct. Although fond of antiquarian pursuits, I have, in common with many sober-minded antiquaries, invariably opposed the attempt to mediævalize the nineteenth century; because, besides being otherwise objectionable, it appeared likely to lower the standard of art. My belief on the last point is corroborated by what I see continually. I may add, that it is not likely that Mr. Petit should have been disturbed by the treatment I have experienced from these friends of Mr. Scott, since he has always concurred with me in laughing at it, as something inexpressibly diverting. I am thus driven to crave permission to intrude on your valuable s; &c. and am, &c.
C. Winston."

CANNING-TOWN: A LONDON SUBURB.

is the new town, and on all sides of the green level London is marching with giant strides. A few years since, if a dozen people were seen crossing this bridge in the course of a day it was a matter of wonder: now the bridge has become a great thoroughfare. Nine or ten years since there were only two or three houses, and now look at them! It would surely suggest that the sewerage of London should be taken further afield. If they put it into this creek, or into Barking-creek, but little advantage will be gained. Our previous half measures have been attended with such an enormous expense and so much damage to health and life, that it is time we adopted another course. If the sewage is to be manufactured, and distributed as a manure over the land, instead of poisoning the water; or if for some time to come we must, for want of knowledge, continue to waste it;—in either case the manufacturing of the refuse, or the entrance of it into the Thames, ought to be at a safe distance from our two or three millions of people. If the sewerage of the north of London is to be passed into the river, it must, to be effectual, be nearer to the sea than Plastow-marsh or Barking-creek. It would be, to say the least, a waste of money, to carry the drainage and run it into the Thames at a point from which, instead of sweeping into the sea, it will come back and float to and fro past the City like the body of a poor boy drowned here some time ago, or the dog to which we have before alluded, and be deposited on the banks of Rotherhithe or Lambeth. We have spoken to many persons of experience on the river, men who have for years been acquainted with the currents, &c. of Father Thames, and there is but one opinion amongst these practical men. However, it is not our present object to say more on this important point. We would direct attention to our sketch, which will help those who cannot pay a visit to the place to understand the position of affairs.

In the view of Canning-town, as it appears from near to the iron bridge, the green level is shown extending over a great extent. Along the margin of this flat land, in every direction, houses, shops, public houses, and churches, are now to be seen skirting the level, and gaining every week further and further upon the space, which is chiefly several feet below the high-water mark of the Thames. The new town, which already consists of several long streets, will, in the course of a few years, spread out and meet the approaching houses, and all this level will be planted with dwellings and inhabited by many thousands of people. The artificial bank of Bow-creek and the embankment of the Thames are all that prevent the houses here from being flooded every high tide. To provide for the effectual drainage of this district by the ordinary means is impossible. The houses here have been erected without the means of either carrying off the refuse or properly getting rid of the damp. In course of time the *débris* of these and other houses will raise the level; but in the meantime it is sad to think of the sacrifice of human life which must take place without prompt measures. With some difficulty we managed to reach the place on foot from the turnpike road, and found the condition of the streets miserable: many of them, although the day was tolerably fine, were almost impassable, and vehicles sank almost up to the axletrees in the mud. In many parts were great pools of stagnant water. Several of the inhabitants said that if we had come a few days before, during the rain, it would not have been an easy matter to get along the streets at all. Most persons complain already of the drainage. We understand that it is proposed to take the sewerage to a certain depth, and pump it into the Thames by steam power. If something is not done, in two or three years' time the ground will be poisoned by cesspools, water will stand on the surface, and evils of a serious nature will follow.

In a score of years or less, Canning-town will be an important place, with its churches, omnibus and cab stations, and its masses of rich and poor. Let us hope for the introduction of measures proportionate to the extent of the future requirements. Flesh and blood are precious materials.

ON THE INFLUENCE OF LIGHT AND SHADOW IN ARCHITECTURAL COMPOSITION.*

AMONG the many studies of the architect, none deserves greater attention than that of the varied arrangements of light and shadow: by this means the first impression is made on the mind, of grandeur, or of meanness, of beauty, or of deformity. We see at a glance whether or not a master-hand has been engaged; for, should the *general effect* prove disagreeable, no labour on the details will ever compensate for that deficiency. But the architect who works upon some ascertained principle of effect will always be able, if he choose, to depend on the same knowledge for his details; and, from the fact of his being able to grasp the whole, will feel no difficulty in mastering the minor portions of his subject.

It is the want of this knowledge that so frequently produces disappointment after unrestricted outlay. Labour, the most costly, is thrown away on parts that never can help the general effect, because mere ornamentation will never produce it. It becomes, then, necessary to find some principles on which we may rest for guidance under given circumstances; and, although many obstacles may arise to the *perfect* realization of our conceptions; yet, if we are confident in the effect we wish to produce, these obstacles will never prevent a comparatively satisfactory result.

* The following paper, illustrated by sketches, was read at the Architectural Exhibition on the 13th instant.

It has been said, and, indeed, often repeated in print, with considerable authority of late years, that architects should confine themselves to the more severe character of geometrical drawings,—that *outline* or simple *form*, without substance, is *best* adapted to *ensure purity* of design,—and that in this manner their ideas will be better presented for public inspection than by any other means.

Without questioning the *use* of simple outline, I deny that it is *all* that is required, or that in its utmost perfection it will ever give a just and truthful idea of the reality. Light and shadow must ever exert the most powerful influence on architectural effect; and I am totally at a loss to conceive any reasonable argument that should prevent its being studied from the beginning of every work, in conjunction with the absolute necessities of arrangement. I think it will be pretty readily admitted that to judge of the merits of a thing it must be seen. Then *how* is an architectural composition to be judged of *before* it is *built?* By simply representing it as it will appear with all its lights and shadows truthfully displayed. Every one knows that it is an impossibility to see a building when executed as it was seen when drawn geometrically; and, although such drawings are necessary to the workman, they convey the most false impression to the general observer. In fact, it requires a mature and practised judgment to calculate, from geometrical drawings *alone*, the true effect *in execution*. I allude to these printed notions because I am of opinion that they have already had a tendency to divert the mind of the student from what I believe to be a healthy and useful course of study. I would not lead him to imagine that he must of necessity be either a Raffaelle or a Michelangelo; but *I do* think he would be more successful in the execution of his work as an architect if he studied *somewhat* more as a painter. By studying as a painter I do not mean that meretricious daubing which might be aptly called the gamboge and burnt sienna styles, but that he should find out and impress himself with the true principles of art, by which a large field would be opened to his imagination. He would see how nearly allied these principles are in *all* branches of *art*; and we should then have less chance of deploring the loss of opportunities, so frequently complained of when too late for remedy.

But to ascertain the value of this quality in architecture, let us suppose ourselves looking over some rich valley, with its varied beauties of rock, wood, and water. How grand, and yet how exquisitely delicate, are the lights and shadows as they fall on the natural objects! We are delighted with the harmony of the scene, until, in the midst of all, a huge mass of building destroys the charm. We detect its meanness from its want of depth in its shadows. The absence of light playing on graceful forms tells us it is *labour* without *mind*. It is a blot: it defaces the beauties of nature; and we execrate

the ignorance that could perpetrate a work so vile amidst so much loveliness.

But let us suppose in its place a classic temple, with its rich, deep shadows, among its columns, its broad and bold cornices, its delicate enrichments, all keeping their relative value to the whole. Will not this be the crowning interest of the view? Or let it be a Gothic shrine of English architecture, with its bold arches, and play of light upon its tracery, buttresses, and pinnacles. Should we not be attracted to this point as to a gem set in the face of the landscape, and be so strongly impressed with its value, its interest, and its being truly a work of art, that all other feelings would give place to the desire of more minute examination? I, of course, speak here of the general effect of light and shadow; but, if this produces at a glance so strong an influence on the mind, it must surely be one of the most important studies of the architect.

With painters there are three distinct principles of effect recognised; and, if the architect, while making his design, will consider the aspect under which it is to be generally seen, he will readily understand which of these effects it will be desirable to work up to. It may be objected, and at first sight it may appear a very fair objection, that if my suggestions are acted on, conventionality and mannerism will rule everything. But a little reflection on the various uses for which buildings are constructed (which must of course always rise paramount to every other consideration), will show us that such a result is not to be feared. Besides, these three simple principles to which I allude, admit in *themselves* of such *infinity* of modification, that instead of trammelling the *mind*, they become only *landmarks* to tell us *where we are*, and in which direction to *go* to find *what* we *want*.

In speaking of them as simple, I do not mean to say that this knowledge is attained without patient investigation and labour, for their very simplicity will only be acknowledged upon intimate acquaintance with them.

It is probable that my observations as to the *possibility* of an architect applying the knowledge of a painter may be received with considerable doubt by many. It may appear to them that artistic effect is a visionary idea, or only to be met with on the canvass of the painter, and that with materials such as brick and stone it is nonsense to expect it. They will say, "Give us practical knowledge in the way of building, and leave these theories to the painter, who alone can make use of them." My answer to these objections is this: The painter who represents on canvass that which is manifestly untrue in *nature* only creates disgust in the beholder. The architect who creates with certainty that which shall satisfy the eye of the painter has attained one of the highest qualifications of practical knowledge in his profession.

I have sketched slightly the three different effects referred to: they are each positive in their character, and distinct from each other.

The first with the *dark* in the centre, surrounded by light; the lower one with *light* in the centre, surrounded by *dark;* the middle one occupying the *medium* between light and shade, and having nearly equal portions of light and shade crossing each other.

You will observe that by one of these effects or the other, everything in nature must be seen; for if we look *towards* the light, any object between us and the light must be dark; and if we look *from* the light, or in the same direction as light itself, the objects will be more or less light according to their local colour; and, by looking *across* the rays of light, we shall have, of course, side light, with about the same quantity of shade on all objects within our view.

In the treatment of such a subject as the lower one, care must be taken that the centre light, which is actually the building, should spread itself out—apparently in the easy enjoyment of the space about it,—for nothing can look worse than a square band-box-looking house in such a situation. This object may generally be effected by the offices and outbuildings being partially brought into view, and by hiding their exact termination, giving an appearance of extent greater than they actually possess. The distribution of shadow on the central mass of light will determine the character of the structure; and if the nature of the requirements will admit of the greater mass of shadow being brought into the centre, with subordinate portions to the ends, and led off by the windows and minor details, the effect never can be bad. But in this mode of composition, the great point to guard against is the *equality of shadow;* for if a number of shadows of like force cross and re-cross this light, the brilliancy or breadth must be diminished and the general effect neutralised. The shadows should, therefore, if I may use the expression, be *clustered* rather than distributed over the whole surface, for if we look on a building charged with ornament in all its parts, we may at first sight be struck by the amount of labour bestowed on it, but it will fail to satisfy the judgment when viewed as a whole, because it wants breadth of light and depth of shadow.

In some buildings, such as Wollaton Hall, Nottinghamshire, for example, much undoubtedly depends on the sky line, or outer form of the building; but if deep recesses are formed within this shade, they will, being darker than the whole mass, throw out the face of the front as in reflected light, and if boldly executed will always create a rich and imposing effect. It is evident that thin and trifling ornament would be lost here. In working up to this principle of light and shadow, all materials and objects that will receive light in front, such as stone terraces, statues, or broad gravel walks, will not only heighten the effect by reflected light on the surface, but give cheerfulness to the rooms within; while grass or any dark material on which the shadow falls would, independently of the chill and damp of green adjoining the north side of a building, tend to neutralise and destroy the effect.

It is seldom, however, that we have the opportunity of making so diversified an outline as that of Wollaton Hall, and we must, therefore, depend more upon the *plan* for giving that diversity rather than the *elevation;* and in considering the north front of a building, it is therefore desirable that the face should be broken up so as to receive the sun into the masses of shade. These projections will receive the south-east and south-west sun, which will not only, by its positive light, but also, by its reflected light, enliven the whole of the north front. Everything, therefore, that tends to give a deeper shadow *within* the *boundary* of the shade,—by which the forms within will be relieved,—and every break of light on the outside, or edge of the shade *itself*, will tend to improve and give intensity to this effect.

I would here point out that each shadow has its centre, or a portion is darker than the mass; as also with the lights, *some portion* is lighter than the rest. And it is this quality of concentration, or of giving a focus to both the lights and the shadows, that gives *power* and *richness* to all the natural objects: and inasmuch as we follow out *this principle* in our works, they will be so far removed from *flatness* and *neutrality* of effect.

It is evidently a practical truth that to prevent confusion of ideas, the eye requires a certain degree of repose in *parts* of every composition: they are the quiet resting-places of the mind, from whence each portion is classified and rapidly understood. The *reservation* of portions which shall be *plain* and *simple* in their character is therefore of quite as much consequence in every design as the *addition* of enrichments; and this is not only applicable to ornament alone, but to the general effect of the whole. Ignorant persons, in their desire for display, heap one thing on another in the greatest profusion, in the vain expectation of captivating the mind by reckless expenditure. They only create a costly confusion, which, to cultivated taste, is so much the more disgusting from its vulgar pretensions.

A perfect and certain knowledge of how and where to bring these parts together, so that one harmonious whole shall first strike and interest the observer, and afterwards continue to satisfy his judgment, ought to be one of the leading points of architectural education.

I grant that to the student this will not appear, nor will it ever be an easy task. Perfection in any branch of learning never is easy. But that is no reason why the architect should rest satisfied to leave the arrangement of light and shade as a matter for chance only to regulate.

If there be such a thing as pre-eminent beauty and fitness in works that have been the admiration of ages, surely there must be a cause for such beauty, and a reason for such fitness. I would say, then, let us never rest until we find out this cause. Do not be so servile as to copy these works, but find out the cause that gives them the effect we admire, and you have the master-key in your own hands. This is genius,—this is the very foundation of taste.

The architect who practises his profession conscientiously, will never consider his labour in perfecting his building; but from the habits and usages of the profession, and perhaps from allowing themselves to rest on their purely constructive ability, there are some who never appear to go to *first causes* in the higher branches of their art, and who sometimes permit themselves to be talked down by amateurs. The consequence is, that any appearance of original thought is put down by the constant cry of, "Where's your authority?" For my part, I never could understand this cuckoo cry. Is it that we are labouring to deceive the future antiquary?

In the arrangement of light and shadow, the colour of the material must be taken into consideration; for if the building be of a very dark colour, it will be difficult to give it a pleasing effect.

The use of bricks appears to be coming into fashion from various considerations: but we should, I think, pause, before we allow the indiscriminate use of this material in external decoration. In situations that are tolerably free from the effects of smoke, a great degree of beauty may be attained by the judicious mixture of red and white, and other bricks. I say *judicious* mixture, for otherwise they are apt to appear like patchwork; but, if properly used, they always look well in the *country*, from the harmonious effect of red and white with green. But in London their colour is soon lost in one dingy coat of black, for they have a peculiar tendency to retain the soot, which rain washes *into* them rather than *off* them. The common stock brick, as used in London, is therefore fatal to anything like breadth of effect.

Portland-place in its *dimensions* is certainly one of the finest streets in London, but its really noble space is scarcely redeemed from meanness, by reason of its houses being built chiefly of brick.

But there is a material which by its general use in this metropolis has helped us over many difficulties; and yet in raising my voice in its favour, I may, for ought I know, be getting myself into difficulties,—for so much has been said about *truthfulness of material*, and the very phrase itself carrying with it a conviction of so much virtuous intention, that if I am inclined to receive it in this instance as containing more of *sound* than of *sense*, I fear I shall be at once put down as one so totally blind as to be incapable of receiving the new lights now breaking on our intellects.

Among the many strictures put forth with much authority by certain amateurs, cement and all stuccos for external decoration come in for unlimited abuse, and are held up for universal condemnation. I must say that this reprobation of a material which has redeemed London from the dingy monotony of brick, appears to me somewhat unreasonable. Those who remember it in the time of George III. will not, I think, be among the number who would restore its soot-begrimed walls of brick, however their consciences may suffer from the use of stucco.

Stone is certainly of all other materials the most beautiful and harmonious for the display of light and shade; but when stone is not to be had, stucco comes nearest to it in appearance: it preserves the work beneath from decay: it keeps out damp: it is easily restored; and at a trifling cost will look cheerful and new.

Now, in the name of common sense, why are we to forego these advantages? Is it because one or two crotchetty people would persuade us that we are telling an untruth? Then let us tell the honest truth, and say, "I use it because

I prefer *cheerfulness* to *gloom*, and it is the only thing I can get to answer that purpose." Whether this plain view of the case will satisfy these sticklers for truth at any price, or not,—it must be admitted that London requires a light material for architectural effect; as, from the nature of the climate and the smoky atmosphere, we shall always have plenty of shade.

In the treatment of street architecture, it is necessary that the horizontal lines of shadow should be kept so far of one uniform height as to satisfy the eye as to their extent. I mean that this uniform line may be both too long and too short. It is too long when, as in the city of Turin, the constant repetition of the same height of cornices becomes most tiresome and monotonous. It is too short, when (as is frequently observable in London), each small frontage asserts its independence in perfect disregard of its neighbour; and the result is, like many other cases of want of unanimity, that it is complete only in its confusion and total want of general effect.

Perhaps the best example that I can point out as the nearest to perfection in street architecture is that of the High-street in Oxford. Here there is just sufficient horizontal shadow to aid the perspective, and to satisfy the eye in comprehending each building as it rises to view in passing from one to the other,—enough variety to excite the imagination, and an alternate play of light and repose, that has always produced the most striking effect even to the casual observer.

I have said that colour itself may have much influence on light and shadow in architectural composition, for it will be seen immediately that *red* and *blue* will tell much more as shade than *yellow* and *white*. Hence, wherever brick is used, it will serve to direct and concentrate the attention on either the yellow or the white; but wherever used, it should be so blended by gradual means into the other colours as to prevent anything like a chequered appearance, and only to appear what it really is, merely ornamental material.

Thus far I will heartily agree with our new lights, and will hold up *my* feeble taper in their company; but of all the false tastes ever imposed by the tyranny of fashion, or the blind notions of the antiquary, that of bedaubing sculptured decorations with indiscriminate blue, yellow, red, and green paint, is the most barbarous. It is gilding refined gold;—nay, it is putting a baser metal than gold over gold itself. We laugh at the savage who, in his ignorance of the beauty of form, disfigures those limbs that are the admiration of an enlightened mind; but that *we* in the *nineteenth* century, with all our boasted refinement—with our progress of mind and manly self-dependence—should allow ourselves to be imposed on by the vulgar notion of picking out a beautifully executed design with the most gaudy pigments that can be obtained, is to me most unaccountable. I know that here again I am on dangerous ground. I feel that I am rowing against the stream—that my glimmering lamp is in danger of being puffed out by the overwhelming authority of antiquity; but, if we refer to antiquity for precedents and beauty, history will show that even here was a gradual development of that perfection which we admire, and we shall as surely perceive that so soon as the *greater principles* of art were lost sight of, art itself became debased in the hands of our forefathers.

Nothing can, however, be further from my intention than to condemn the use of colour altogether, for I am too well aware of the glorious combinations of colour in nature, to neglect or think lightly of her schooling; but sculptured stone is NOT the place for it in any architectural composition. It is allowing the labourer to destroy the work of the master. Who would think of painting the Apollo Belvidere, or put on him red drapery, and nicely paint his eyes, lips, and eyebrows? No! The hand that executes a piece of ornamental sculpture stands in no need of colour to pick out the groundwork with red, blue, or green. Such an act is like placing an elegant poem in the hands of the town-crier.

The architect requires only the delicate gradations of light and shade in his composition to work out his meaning; and this will harmonize with, but never obtrude itself on, the general features of the design.

Returning to the three principles of effect already alluded to, they may be modified to almost any extent, and so that a chief light is reserved, others may be introduced, should the subject require them. Of course the greater the quantity of dark round a light, the brighter that light will appear. The value of shadow, therefore, as a means of giving breadth and brilliancy of effect should not be forgotten in the choice of a site, especially for such a thing as a mansion in the country. Here the very shadows of the house will appear light and delicate in their colour, if the shadow of foliage or any dark object is seen in their vicinity. Indeed, the choice of a background is of much more consequence in architectural effect than is generally supposed. In many instances we see proprietors, in their wild rage for building, sweep away everything before them, and are afterwards obliged to plant round their houses trees that can never serve the purpose for which they are planted within their lifetime.

Light and shade, therefore, in the choice of a site in the country, is a point of the utmost consequence to the architect; for, however good in design or arrangement, he will find a difficulty in making his structure interesting if he be completely isolated from every other object; and I would here recommend to the student, that instead of too much line and rule work, he should accustom himself to sketch his designs *always* in perspective before making his geometrical elevation, together with the situation in which it is to be built. This will at once test his idea, and save him much trouble in the end, of course always supposing him to have an idea.

Perhaps I ought not to leave this subject without a few words on interior effect. In this I fancy we are somewhat excelled by our continental neighbours, especially in modern works: at all events the mode of admitting light to the interior of our public and private buildings is worthy of more consideration than it generally obtains; for, provided a sufficient quantity of light is supposed to be admitted for the uses of the building, little attention is paid to its picturesque or artistic effect; and yet we shall find that the comfort of a dwelling, or the interior beauty of a public building, consists more in the agreeable distribution of its light than we at first suspect. It will be found that in all cases where the positive light from the sky can be kept off the eye, the architectural proportions will be seen to the greatest advantage; or, in other words, whenever the actual source of light can be so concealed as to allow its rays to illuminate the particular object most interesting or central, the most forcible and agreeable effect of light and shade will be the result; for, as in the position we ourselves occupy we are in the shade, the principal light will be surrounded by shadow, and by its brilliancy alone will illuminate by a sweet and soft reflection every thing around it.

One of the effects may also be produced in another way, which is by the introduction of light from the top of a building, as in the magnificent church of the Madeleine, at Paris, and also in the Pantheon, at Rome, where, by its admission in this manner, we not only have a flood of light passing through the centre, but every point of the architecture is illuminated, and throws broad but softened shadows throughout the building. I once saw this latter structure, by a sudden rising of the Tiber, flooded by its waters, and the whole height of its splendid architecture reflected as in a mirror. The effect had all the characteristics that Burke describes as necessary to the sublime and beautiful, viz. height, depth, and space. From the many advantages arising from this mode of lighting buildings from the top, the wonder is that it is not more frequently adopted.

In our own churches we find so little attention paid to their being agreeably lighted, as frequently to have a large east window glaring full in the eyes of the congregation. The consequence is, that the most painful sensation is felt in attempting to look into the gloom that surrounds the communion-table, or to witness the service; and in many of these structures the head of the clergyman, while preaching, can only be distinguished as a dark object between the congregation and the light. This does not require argument to prove that it is totally wrong. The light should be thrown on the communion-table, and the objects about it, and enough on the head of the preacher to show the expression of the face, which, if not absolutely necessary to the thorough comprehension of his meaning, prevents the mind from being disturbed by the constant effort to penetrate the gloom without effect.

In our modern churches our architects have, by their adoption of a subdued light in their glass, acknowledged the principle that there may be too much light in an ecclesiastical building. By thus subduing the light, a soft and quiet effect is certainly attained, but at the expense of retaining too much neutrality. A small quantity of pure light properly introduced would give point and brilliancy without destroying the sober tone of the whole.

In a church built by myself at Highbury, a few years since, I have endeavoured to carry this principle into execution. I am of course greatly indebted to the stained glass for the means of doing so, and I would here call your attention to the value of colour in this situation. The stone carving on the screen gives additional richness to the colour, while the deep rich tones of the colour itself adds another charm to the delicate pearly shadows and sparkling lights of the stone carving. It is in such situations as this that the one will so powerfully assist the other. It may be truly said in regard to art, that colour put into unskilful hands is like placing sharp instruments in the hands of a child,—a hundred to one that some mischief is done. Should any be doubtful of the truth of this, let them explain why so many gradations exist between the works of a *sign painter* and the productions of a *Titian*.

Should these observations be the means of inducing the student to think more of the *principles of design*, and less of the mere act of copying, which never will lead to great things, my object will be accomplished. Let him imbue his mind thoroughly with the good and the beautiful in each particular style—for all have their beauties,—and I am confident there is talent, energy, and originality of thought in the present generation sufficient to stamp the present era with its own peculiar mark,—which shall be in no wise inferior to any other within the history of our profession.

Thomas Allom.

FOREIGN INTELLIGENCE.

Constantinople.—A Relic of Delphi.—There have been made here, of late, excavations between the two obelisks on the Hippodrome, for uncovering the foundation of the serpented bronze column (*Schlangensäule*). There can be no doubt that this is the same column which bore once in Delphi the golden tripod which the Greeks had consecrated to the Delphic Apollo after the victory over Xerxes. The golden tripod was subsequently taken away by the Phoceans, but the bronze column was still at Delphi, in the time of Pausanias. Later still, even, the column was brought by Constantine to Constantinople, and exhibited on the Hippodrome, and when lately the ground around it was excavated, it was found that it stuck two mètres under the surface of the soil. On the spirals of the serpents, which constitute this column, some inscriptions were found, but much corroded by the *errugo*. On the second spiral from below is to be read, "*Amprak. . . . Fo . . .*," and on the seventh spiral, "*Tenio.*" According to Herodotus, the name of the *Tenians* was inscribed on the tripod of Delphi.

Paris: New Works at the Ecole Militaire.—This interesting building is receiving great additions, under the directions of the Government engineers. Two pavilions will be added, forming the continuation of the façade on the Champs de Mars, being 101 mètres long and 15 mètres deep. They are one story high, and are surmounted by a pediment and an attic. The sculptures of the pediment represent the imperial eagle, &c. The edifice and the lateral galleries of the Cour d'Honneur, have been completely restored, and the fine railing of the Cour Montant equally completed. Other improvements have thence resulted, for the whole

space of the Champs de Mars, and a number of houses, which would have masqued the new pavilions, have been demolished. Thus an area of 80,000 square mètres has been added to the immense place, which borders on the south of the palace of the Ecole Militaire.

Paris: Assyrian Sarcophagus.—The sarcophagus of the king of Sidon, Asmunazar, which had been presented to the French Museum, by the Duke de Luines, and conveyed from Beyrout to Paris, has been placed in the Asiatic collection of the Louvre, near to the Phœnician sarcophagus, of white marble, which also has been presented by M. Peritié, at Beyrout. At the last sitting of the Institute, M. de Luines read a paper on the sarcophagus of Asmunazar, which contained a translation of the Phœnician inscription, engraved in fine characters on the lid, and containing the name of the king and his ancestors.

Cologne: Mural Paintings.—The Provincial Government of Cologne have ordered M. Hohe, professor of drawing, to copy and trace the old mural paintings of St. Gereon's Church. They belong to the thirteenth century, and are conspicuous for correct design and brilliant colouring, and represent figures of saints, above life size; containing also the apocalyptic signs of the evangelists, who stand in the niches of the chapel. The surrounding ornaments are in the Romanic character, passing somewhat into the Gothic.

Munich Art-Union.—This institution numbered, last year, 3,330 members, who paid a subscription of 39,141 florins. The Union purchased during that period, 117 articles of art, amongst which were mostly oil paintings, for which they expended 25,000 florins: the remaining 3,500 were expended in members' prizes.

Vienna.—The Second Spire of St. Stephen's.—The windows of the south gable of the Vienna Cathedral having been restored, the completion of the second spire is in contemplation. To lessen the expense, it is intended to erect an iron framework, in which the masonry is to be inserted; the same process (according to our informant) as was resorted to in the restoration of the other spire in the years 1839 and 1842. The expenses of this vast undertaking are estimated at 500,000 florins, but the Common Council of Vienna are willing to contribute 15,000 annually during the whole time of the rebuilding.

The largest Locomotive in the World—the Duke of Brabant, constructed at Seraign, and which attracted so much notice at the Paris Exhibition, is now at work at Charleroy. Its weight is 6,000 kilos, and it can move fifty waggons of 10,000 kilos each—about a million of pounds.

PROVINCIAL NEWS.

Kingskerswell, near Torquay.—A contract for the erection of parochial schools has just been made with a local builder for the sum of 487*l.* They will be commenced forthwith, and carried out according to the designs of Mr. J. W. Hugall, of Cheltenham.

Romsey.—The nave of the Abbey Church of Romsey, which had been closed for many months during the construction of a new roof over it, in consequence of the utter decay of the old one, was last Sunday opened again for public worship. The new roof is similar in its design to the ancient one, which had from time to time been lowered in its pitch, as the ends of the timbers became decayed. The roof is now framed to the original height, and gives great dignity to the building. It is internally of a waggon-headed form, divided into panels by oak ribs and bosses as in the previous roof. Messrs. Gover and Fluder were the contractors, under the superintendence of Mr. Ferrey. A new vicarage-house, in the Mediæval style, is also nearly completed from the design of Mr. Ferrey.

Cambridge.—In allusion to some misapprehension said to exist in this city as to the expense of laying down supply pipes by the water company, and to the fact that the company, at their own expense, lay down the service pipes to the fronts of all houses or premises on the application of the occupier to be supplied with water, the *Cambridge Chronicle* says,—"We are informed that the cost of laying down the service pipes inside the consumer's premises does not exceed 2*s.* per yard for pipes of ½ inch bore, and 3*s.* per yard for pipes of ¾ inch bore, of the weights prescribed by the company's regulations; and that the average cost of laying on the water into houses in Barnwell and Castle-end, where the water is most required, is under 15*s.* to each consumer, and in many cases much less."

Birmingham.—Mr. Adderley, M.P. having offered to set aside ten acres of land on his estate at Saltley, for a park and recreation-ground open to the public, active steps are to be taken to render the offer available, to form a Working Man's Park Association, and take the management of the park. A large quantity of land is reserved all round for building purposes, but until built upon will form the play-ground. Mr. Adderley intends to erect at the principal entrance a museum and reading-room, at a cost of 1,300*l.*

Liverpool.—The Town Council have given powers to the Free Library and Museum Committee to raise 20,000*l.* the interest to be paid out of the Museum Rate, for the purchase of land opposite St. George's-hall, for the erection of the proposed new buildings, towards the construction of which Mr. W. Brown has promised 6,000*l.*

West Hartlepool.—The market buildings will be of considerable size, to allow for the future extension of the town, which is rapidly increasing in population and house property. The façade is of stone and iron. At each end of the building there will be three separate entrances, under archways, formed in an Ionic façade. The roof is in three spans, and circular in form.

York.—The contractors for an extensive drainage of this city, Messrs. Swire and Blair, have completed their contract, to the satisfaction, apparently, of the authorities; but scarcely to their own, we should think, since they must be heavy losers by the contract. They have constructed 5,061 yards of sewers, at a total cost to them (including some extra works) of 8,369*l.* according to the local *Herald*. The sum for which they contracted to do the whole (exclusive of the extras) was 3,550*l.* Their tender was the lowest of eight, the others ranging from 4,116*l.* to 6,797*l.* 3*s.* "Not having tried the strata previously to having given in their estimate [did *any* of the competitors incur sufficient expense for such a purpose on the mere chance of obtaining the contract?], they met with unforeseen difficulties, particularly on the Mount." Nevertheless, they honourably fulfilled their contract; but the Corporation in consideration of difficulties which it is obvious not one of the competitors fully appreciated, contributed an additional sum of 641*l.* which, with 250*l.* already paid on account of the Mount drainage, made up the sum of 891*l.* which the contractors had expended on that portion of the drainage. In all, the contractors appear to have received 5,067*l.*; so that the loss on the outlay in the contract amounted to 3,302*l.* exclusive of their own labour and anxiety.—Amongst other great improvements of this city deemed desirable, the paper already quoted specifies a spacious Market-house.

Huddersfield—National Schools, with teacher's house, are being erected at Milnsbridge, a manufacturing village near Huddersfield. Within the last few years the increase of population has been so great, that the present schools in connection with the church have been found inadequate to meet the wants of the locality. The new schools consist of a general school, 60 feet by 30 feet, for mixed classes of boys and girls, with a class-room attached, and calculated to hold 280 children; an infants' school, 44 feet by 21 feet, for 120 children; making a total accommodation for 400 children; and a teacher's house, containing six rooms, arranged on two floors: this is placed in the centre of the building between the two school-rooms. The building faces the Manchester-road, and stands upon one-third of an acre of land. Mr. E. W. Tarn, of London, is the architect; and Messrs. Hampshire, of Huddersfield, have contracted for the whole building (except the carpenter's work) at 768*l.* The carpenter's work (including desks and other fittings) is contracted for by Mr. Youdon, of Huddersfield, at 299*l.* 10*s.* The style adopted is the Early English. The total cost, including the site, will not exceed 1,300*l.*

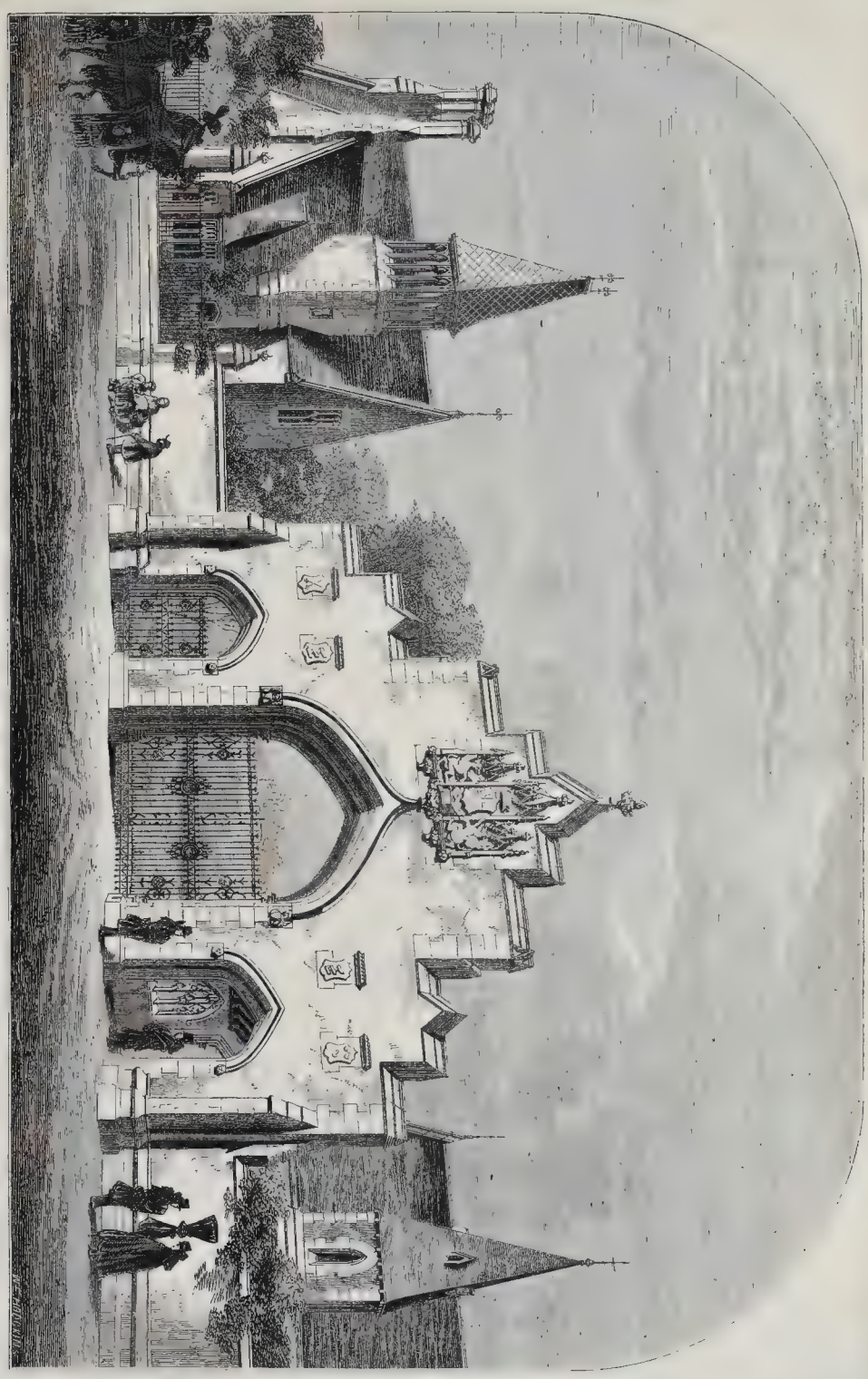
Dundee.—Exertions are being made here for the realization of a large public hall, which is much wanted. The *Dundee Warder* in reporting a meeting held on the subject, urges the propriety of looking a little more to the outward aspect and ornamental character desirable in such an edifice, than some of the mill-owning gentlemen who take an interest in the project seem to contemplate. A hall capable of accommodating 1,500 to 2,000 persons appears to be what is required; and the *Warder* remarks, that 3,000*l.* ought to be the means aimed at, including 500*l.* or thereby, for sightly frontage. The site suggested is one of two near Reform-street.

THE CITY OF LONDON CEMETERY, AT ILFORD.

We had proposed to withhold our concluding illustration of this cemetery, namely, the Entrance Gateway, Lodge, and Residence, until it was opened; but this event still seems so uncertain, that we will not postpone the view any longer. The commissioners appear to be in great difficulties, mainly arising out of the construction of the Act, which authorised parochial burial boards to lay out cemeteries for their respective parishes, and for the protection of the clergy and church officials, gave those officers powers of dissenting, objecting, or negativing with regard to fees, and in other respects. This might have acted very well where the Burial Board was constituted for one parish only, and where, consequently, there was but one clergyman, sexton, and clerk, to consult about their fees and other things; but as the Commissioners of Sewers have laid out a cemetery for the whole City, which comprises more than a hundred parishes, to nearly the whole of which parishes there are distinct clergymen and other officers, and as the consent of the whole of these vestries is requisite to fees and other respects, it must be seen what difficulties lie in the way of a comfortable adjustment of the affair.

Were we to assert that the question of fees is really the sole obstacle to consecrating and opening, it would be vehemently denied by many; but it is singular that no obstacles showed themselves until the question of fees to the clergy was entered upon. The commissioners offered a graduated scale of fees, but this did not appear to be satisfactory, and immediately afterwards the obstacles all sprang up in a bunch. The ground could not be consecrated because there was a bridle road, used principally by one or two gentlemen, who go through on horseback occasionally, although this had been thought of no consequence before. Another objection about a rent-charge on the whole of the Earl of Mornington's estate in Essex was made; then came the objection to the commission appointing a chaplain, and a host of others, into which we may not enter. If in some parishes the original fees are insisted upon (and which, perhaps, legally can be done), as much as 4*l.* 5*l.* and 6*l.* will have to be paid for one interment, and of course, in such case, that body would not be buried in the City Cemetery when they could avoid it by going to another cemetery; and if every one of the 101 parishes were to have a different scale of charges, nobody who wished to bury a body in the City Cemetery would know what they would have to pay for it. Thus the matter stands. The offer of 6*s.* made by the commission for each body has not yet been accepted. The commission have promulgated their table of charges for interments among the various vestries; and each of the 100 vestries, clergymen, churchwardens, clerks, and sextons, are now discussing and criticising. All the difficulties, we believe, are nearly got over but this. Probably the commission will be obliged after all to go to Parliament, to get the Legislature to fix the scale of remuneration to the clergy and others, and to enable the Burial-Board to do the best they can for the citizens.

Other views and particulars will be found at p. 578, vol. xiii.; and p. 30, in present volume: we need scarcely repeat that Mr. Haywood was the architect.



ENTRANCE GATEWAY, CITY OF LONDON CEMETERY.—MR. WILLIAM HAYWOOD, ARCHITECT.

CHURCH-BUILDING NEWS.

Lincoln.—The Wesleyan chapel here was re-opened on 7th inst. The lower part of it has been remodelled, the gas rearranged, a new organ introduced, and the whole throughout repainted and decorated. The standard lights in the gallery have been removed, the gallery, with the body of the chapel, being now lighted from the ceiling, in which a sun-light is fixed, "giving," says the local *Chronicle*, "the effect of a mid-day sun." The heating apparatus was manufactured by the patentees, Messrs. Longbottom, of Leeds. These improvements and alterations have cost 1,111*l.* The general works have been executed by Mr. C. Ward, builder, and the painting and decorations by Messrs. Pilkington and Scott. The whole has been carried out under the directions and superintendence of Messrs. Bellamy and Hardy, of Lincoln, architects.

Hastings.—The town council have recently awarded the premium of 10*l.* offered for the best design for laying out their proposed cemetery, to Mr. H. Carpenter, of Brighton, architect. The episcopal and dissenters' chapels, with waiting-rooms and vestries attached, will form one block of buildings. The plan also contemplates the construction of catacombs at the end of the principal avenue, surmounted by a terrace, consisting of a series of Gothic arches in the Decorated style.

Cowes.—The tenders for the wall round the cemetery were as follows, according to the *Hampshire Advertiser:* — Phillis, 195*l.* 15s.; Cox, 197*l.* 10s.; T. Wheeler, 209*l.* 10s.; Sibick, 246*l.* 16s.; Ball, 260*l.* 10s.; Hardy, 265*l.*; G. Wheeler, 275*l.*; R. Taylor, 295*l.* That of Mr. Phillis, of Southampton, being the lowest, was accepted. The tenders for drainage and road-making were considered so excessively high, that they were severally declined, the high price being attributed to the mistake of glazed pipes having been inserted instead of drain-pipes.—— At a meeting of the board last week, Mr. Pritchard's tender for draining the cemetery and making the roads was accepted, at 152*l.* for the principal portion and 215*l.* for the ground about to be enclosed; and contracts are issued for the erection of two chapels, lodge, and receiving-house.

Sherborne.—At a recent meeting of the Local Burial Board, various works were let;—Mr. Stephens, for making roads, laying out and planting, draining, fences, &c. 631*l.* 17s.; Mr. Guppy, for building the Episcopal chapel and lodge, 812*l.* 15*l.*; Mr. Down, for building the Dissenters' chapel, reception-house, lych-gate, and entrance, 676*l.* 10s. 8d.: total, 2,121*l.* 2s. 8d. The board, having various tenders, selected the above three, being about 30*l.* below all other classifications they could make. The chapels are Early English, the Episcopal having a bell-turret, the Dissenters' a wheel window, and both alike in size. The board have commenced the works.

Rochdale.—The new church of St. Alban's, Rochdale, was consecrated by the Bishop of Manchester, on Saturday in week before last. The architect was Mr. Joseph Clarke, of London. The edifice stands on an eminence at Pinfold, and has a spire 140 feet high. The windows throughout, excepting a large east window, are glazed in grissaille patterns. Mr. Hardman has prepared sketches for the east window from the designs of the architect. The altar-table, standing on a floor of encaustic tiles, with which the whole of the chancel is laid, is of oak, carved by Mr. H. Ringham, of Ipswich. The roof of chancel is waggon-headed and panelled. It is intended, at some future time, to introduce colour into this roof, as well as more generally throughout the church, a specimen of which has been shown on the nave roof. The nave has north and south aisles, the tower occupying the south-west angle, and serving as a porch. The church is filled with low open seats, worked in pitch pine, stained. The nave floor is paved with Peake's tiles. Flues are constructed for heating the church. At the west end it has been found necessary to erect a gallery for children. The stone carving throughout the church is by Mr. Bonehill, of Manchester. Mr. Thomas Booth was clerk of the works. The tender for the building was 4,100*l.* The walls are of parpoint, with Huddersfield stone for all external dressings, and Bath stone for all internal work. The renovation of the old parish church, under the same architect, will shortly be recommenced. The contractor, during the winter, has been framing the new nave roof, and this, including the re-setting of the centres, which are insecure, and re-building the clerestory walls, will complete the second portion of the works.

METROPOLITAN BOARD OF WORKS.

AT a meeting on Friday 15th, Mr. John Thwaites, the president, in the chair, the committee recommended, in the engineers' department, three assistant engineers, at a salary of 350*l.* per annum each, with 50*l.* each as travelling expenses; six clerks of the works, at three guineas per week each; six draughtsmen, four at three guineas, and two at two-and-a-half guineas per week each; and four engineers' clerks, the first at 175*l.* the second 150*l.* and the third and fourth clerks 100*l.* per year each. In the architects' department two clerks were recommended, the first at 200*l.* and the second at 150*l.* per annum. The report was ultimately adopted. As to the salaries of clerks in the secretaries' department, the second first-class clerk's salary was raised from 300*l.* to 350*l.* per annum, the same as the first clerk; and the salaries of the second and third clerks were reduced to 185*l.* and 175*l.* Mr. Collinson's motion,—

"That, taking into consideration the greatly increased and daily increasing amount of traffic over London-bridge, and in Wellington-street, and High-street, Southwark, and also considering that there is a sum of 80,000*l.* arising from the coal duties set apart for making improvements in Southwark, it is most desirable that immediate and active measures be taken to provide for making a new line of street from some part of the High-street, Southwark, towards the western part of the district," was put aside by a resolution, — "That the board proceed to the next business."

THE SANITARY WORKS OF CARLISLE.

THE sewers and drains for Carlisle have been completed at a total cost of about 23,300*l.* The annual rate in the pound to pay principal and interest in thirty years is sixpence. At a meeting of the health committee on the 8th inst. it was resolved, on the motion of the mayor, Dr. Elliott, "That the thanks of this meeting be given to Robert Rawlinson, Esq. C.E. for the efficient manner in which he has carried out the works for sewering the town, and the exactitude with which the original estimate has been adhered to." This resolution of the board and town council must have been the more gratifying to the engineer as there was a violent local opposition at the commencement of the works.

For ourselves, we are glad to find that the sanitary works of a town can be brought to a close satisfactorily for something near the original estimate: we have been troubled with grumbling more than enough, and are pleased to find a local board finish without a complaint. Sanitary improvement has been fairly started: opposition may delay, but cannot stop it.

THE DESIGNS FOR AN OMNIBUS.

THE Directors of the London General Omnibus Company having offered a premium for the best design for an omnibus, received a large number of drawings and models, and appointed three gentlemen not connected with the company to decide as to their respective merits. The following report, which has just been addressed to the company by the referees, will tell its own story:—

"Gentlemen:—Acting in accordance with your request, as adjudicators upon the designs for an omnibus, sent in reply to your offered premium of 100*l.* for the best, we have had before us designs and models submitted by seventy-five competitors. Several of these having been deposited after the date fixed in your advertisement, and on other grounds not coming within the terms of the competition, were at once put aside. The remainder we have carefully examined with reference to the requirements set forth by you, and to the police regulations; and we have first to express our regret that, although many of the propositions display considerable ingenuity, and offer here and there improvements, we do not find anyone design of supereminent merit, or calculated, in its present shape, to afford that increased amount of comfort and accommodation your company, with praiseworthy foresight, desires to give the public, and which will doubtless be looked for at your hands. Inasmuch, however, as we are required to select one of the designs as the best amongst those submitted, considered with regard to your stipulations and wants, we beg leave to point out the design No. 64, sent in by Mr. Miller, of Hammersmith. Inquiry of Mr. Miller, and the examination of a full-sized omnibus built by him (after arriving at this determination), have shown us that if his intentions were more completely expressed in his drawing than is the case, the design would be more worthy of the premium. We must repeat, that we find no design that we can recommend for adoption intact, or which, to speak truly, is worth the premium offered; although there are points about some of the designs which, being combined, would aid in producing what you and the public desire,—a light, commodious, and well-ventilated omnibus.

(Signed) "CHARLES MANBY,
GEORGE GODWIN,
THOS. WRIGHT."

Several architects were amongst the competitors (Messrs. Salvin, jun.; Truefitt; Wilson, of Bath; &c.); and there were suggestions from Capt. Fowke, Capt. Wilson, Mr. Lott, and others unconnected with the trade.

Mr. Clemence's "Excelsior" (No. 20), Mr. Ayshford's saloon omnibus, Rock and Gowar's design, Rimmel's (No. 22), and others have good points.

Those designs in which any considerable ingenuity is displayed are mostly impracticable.

The selected design (Miller's) has circular ends, upright sides down to the seat, so as to give greater width at that point, to enable the sitter to draw back when a passenger is passing him; a well for the legs, narrower than the upper part, which permits the body of the carriage to hang nearer to the ground than in those ordinarily in use; and a simplification of the springs.

THE MEDALS OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

AT a special general meeting of the Institute, held on Monday evening, February 18th,

The Royal gold medal was unanimously awarded, subject to her Majesty's gracious approval, to William Tite, Fellow, F.R.S. M.P.

The Soane medallion was awarded to Mr. Leonard R. Roberts, of Sackville-street, Piccadilly, for his design for a town mansion.

A medal of merit was awarded to Mr. Thomas C. Sorby, of Guildford-street, Russell-square, for his design for Law Courts.

A medal of merit to Mr. James Blake, of Handsworth, Birmingham, for his design for a town mansion.

And the silver medal of the Institute to Mr. T. A. Britton, of Camden-town, for an essay on "The Timber growing Countries of Europe and America."

The students' prize in books for monthly sketches was awarded to Mr. C. N. Beazley.

The subjects for competition for the current year were announced. Among them are a metropolitan hotel, and illustrations of mediæval buildings in Ireland and Scotland, hitherto unpublished, with descriptive particulars.

THE CONDITION OF THE THAMES.

INSTITUTION OF CIVIL ENGINEERS.

IN the course of the discussion of Mr. Robinson's paper "On the Past and Present Condition of the River Thames," Jan. 22nd and 29th, one of the fallacies of the paper was shown to be the assumption of the inability or the unwillingness of the inhabitants of the metropolis to find such a sum as 3,000,000*l.* for restoring to a satisfactory state their excellent river, when it could be done by an annual rate of threepence in the pound, on the rateable value of the fixed property of the metropolis, taken at 12,000,000*l.* per annum, or a little more than one farthing in the pound on the annual income of the 2,500,000 inhabitants, which had been estimated at 100,000,000*l.*: a threepenny rate on rateable property would pay 4*l.* per cent. interest on the capital, and extinguish the principal in forty years; without taking into account any return for the produce of the sewerage, and without calculating upon any augmentation of the population and property of the metropolis, although they did, in point of fact, increase 15 per cent. in every succeeding cycle of ten years.

The real cause of failure in the various plans that had been proposed for doing away with the pollution of the Thames and for improving the sewerage of the metropolis, during the last few years, was to be sought in the dissensions and divisions among the commissioners of the successive Boards of Sewers. The fierce conflict between the advocates of the "big sewer" and the "little pipe" systems, emulating Gulliver's controversy between the "big Endians" and the "little Endians," although, at first, amusing to the spectators, had become serious in retarding

progress, and had prevented the adequate use of material which, if properly employed, was calculated to be an important agent in a great improvement, for the benefit of the public, whose health and comfort were dependent upon the promptitude and vigour of the operations of sewerage.

If the members of the Institution would unanimously insist upon the impropriety of permitting any sewage matter to be poured into the Thames, within a certain distance of the metropolis, the calm but confident expression of their opinion would carry conviction to the minds of the public. Let the true, scientific, and practical principles be so settled, and the public would readily supply the means for execution. The people did not like filth, and would not tolerate it in any form; nor did they like having the tax-collector's hand in their pockets too frequently; but for the sake of cleanly homes and wholesome air they would pay handsomely, provided the matter did not savour of a job.

The question,—to whom did the river belong, and who was to blame for its present condition? came under consideration, and the claim of the Crown was strongly combatted. The citizens naturally resisted so monstrous a claim: they asked to have the question tried by the short and inexpensive process of the Common Law Courts, but were introduced to the Lord Chancellor, before whom, during the last twelve years, there had been already executed more parallels, zig-zags, and other tortuous approaches and exhibitions of strategy, than before Sebastopol, without ever yet arriving at the stage of examining a single witness, or ascertaining one solitary fact.

The Corporation proposed to place the whole management of the river in a smaller committee of their own body, under the control of an Act of Parliament, and to borrow upon their own landed property 300,000*l.* to aid the execution of the plan.

This noble design had, however, been put in suspense by the Crown lawyers, who had filed an information, and obtained an injunction to stop the works. They sought to wrest the right to the soil of the river from the Corporation, and claimed to have the improvement fund as part of the hereditary revenues of the Crown, to be applied to the private uses of the Sovereign, instead of appropriating the whole fund, as the Corporation proposed, to the improvement of the river. The Corporation had strenuously resisted this; and the suit had been pending twelve years, during which time the river had been suffering from the want of that vigorous treatment which the Corporation were disposed, under the advice of the engineers, to have applied to it out of their own funds.

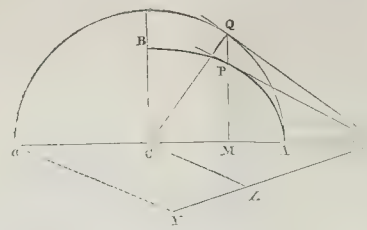
If the plan recommended by Mr. Walker and his colleagues was not a proper remedy for existing evils, a better system should be sought for at the hands of competent advisers, and it ought to be carried out by the Corporation, or the Crown, or some other authority; but the Corporation could not be expected to expend any more money in the state of uncertainty created by the Chancery suit. They had already indorsed the bonds of the navigation fund to the extent of 150,000*l.* the interest of which a falling revenue was not now sufficient to pay; besides which the Corporation had advanced above 60,000*l.* in removing shoals and other improvements, even whilst they were compelled to waste a large sum annually in law costs.

It was difficult to conceive how any objections could be raised to a plan so evidently for the improvement of the river and the benefit of the metropolis, without adding to the funds or the patronage of the Corporation. Yet there was every appearance of the suit being interminable, because in reality the question did not relate to the Thames alone. If the claim of the Crown could be successfully maintained, it would enable the Royal Prerogative to take possession, as its appanage, of the shores of Birkenhead and elsewhere; and then, at the commencement of some new reign, the Crown might say that such acquired demesnes, in addition to the woods and forests, and other acknowledged hereditary revenues of the Crown, were preferable to the civil list granted by the representatives of the nation, for the support of the Sovereign. This, then, was only the thin edge of the wedge, and it was incumbent on all to aid in resisting such unjust claims.

Composition for Roofing, &c.—A specimen of Lancaster's "Lignum Textile" was lately exhibited at the Streatham Gardeners' Society's rooms, and after some discussion on its merits, was admitted, says the *Notts Guardian*, to be a desirable and useful article for covering frames, houses, pits, &c. in winter. The material is described as "woven wood or veneer, dressed with some waterproof composition, which, after being passed between heavy rollers and exposed to the atmosphere, is said to become nearly as hard as metal."

GEOMETRICAL PROPERTIES OF CONIC SECTIONS.

THE ELLIPSE.*



A straight line which touches a curve at any point without cutting it, is called the *tangent* to the curve at that point, and it is the straight line which appears to blend with the curve at the point of contact. If a body in motion is compelled by any force to move in a certain curve, the moment that force ceases to act, the body will leave the curve, and move on in the straight line, which is the tangent at the point where the force ceases, supposing no other force to act on the body. This tendency in moving bodies to fly off at a tangent gives rise to the well-known force called *centrifugal force*, and is simply the natural tendency of bodies to move in a straight line, when not acted on by any external force.

The drawing of a tangent to a curve has always been considered an important problem. Suppose it required to draw a tangent at the point P on the ellipse. Since a straight line can always be drawn when any two points thereon are found, we have only to find the point T, where the tangent will meet the axis of the ellipse, and then draw a line through P and T. To do this most readily, we make use of the circumscribed circle. Draw an ordinate to the ellipse at P, and produce it until it meets the circle in Q; then draw the radius C Q, and draw a line Q T perpendicular to C Q; then Q T will be the tangent of the circle at Q. Now it is one of the properties of the ellipse that the *sub-tangent*, M T, *for any one ordinate*, M P Q, *is the same for all ellipses having the same major axis*. Hence it follows that T is the point on the axis where the tangent at P will cut it.

If it is required from any point T on the axis of the ellipse to draw a tangent to the curve, it will be necessary to find the point M at the foot of the ordinate, and then to draw the ordinate M P at right angles to the axis. Now one of the properties of the ellipse is that C T : C A = C A : C M, or C M *is a third proportional to* C T *and* C A.

The length, C M, can therefore be found geometrically by the sixth book of Euclid in the following manner:—

Draw any line, T Y, and take T X = C A; join C X, and draw A Y parallel to C X; then X Y will be equal to the required C M; then draw M P perpendicular to the axis, and P will be the point where the tangent from T meets the curve.

E. W. T.

A PERMANENT CHEMICAL FILTER.

Your correspondent will find, I think, the following simple filter answer his purpose:—

If his cistern is *deep* in proportion to its *width*, an arrangement must be made, by which the filtering materials may be supported at about *two-fifths of the total height of the cistern from its base*. For this purpose I would suggest, that a strong plate of *zinc* (or of *iron*, *tinned*, or *galvanized*, either coating to be thicker than ordinary), pierced in the middle with a considerable number of holes,—say, ¼ inch in diameter, be made to rest upon metal or brickwork attached to the sides of the cistern. If the latter is a comparatively *shallow* one, the *bottom itself* had better be perforated, and a chamber for the reception of the *aqua pura* fitted below; but as your correspondent has not favoured me with particulars of any kind, I cannot tell what arrangement would answer *best* for *his especial case*, so I am forced to occupy more of your space, and encroach more upon my own time, and, possibly, *his* patience, than would otherwise be necessary.

* See p. 63, *ante*.

However, let the support be of *zinc*, *iron*, *slate*, or any other suitable material, and the formation of a filter is then simple enough: cover the plate for a couple of inches, with hard clean pebbles, just large enough to remain there without passing through the holes, and over this strew good, sharp *pit sand* (as little *ferruginous* as can be had), until the total thickness is six inches: the whole should then be moistened and pressed. Charcoal (about three inches) forms the next layer; it should be powdered, and sifted from all fine dust, the fragments, varying from the size of a hemp-seed, to that of a small pea, being *alone employed*: this, in its turn, must be covered by an equal thickness of fine sand and powdered *peroxide of manganese*, mixed in the proportion of three parts of sand to one of the oxide; a little pure sand being sprinkled on the top. To prevent the upper beds being disturbed by a strong current of water, some stones, or pebbles, must crown the whole.

This filter will last a lifetime: if the water is much impregnated with organic matter, the top layer of stones and sand may require changing after five or six years.

But few people know the value of commercial *manganese* as a purifier of water: it accomplishes what even *charcoal* does very imperfectly, namely, destroys all offensive matters *in solution*, as well as those *mechanically suspended*.

Mr. Lipscombe, if he wishes to make his filters *quite* perfect, would do well to try it. My late experiments have convinced me that Messrs. John Bozley White and Co.'s *Portland cement*, with a little *sharp sand*,* is the best that can be employed about a cistern: it appears to have a positive dislike to *lichens* and *confervæ*.

Wentworth L. Scott.

COST OF SITES IN LONDON.

From the great interest which you have taken in the improvement of the dwellings of the poor, and the able manner in which you have exposed their present lamentable condition, I feel assured you will admit into your columns observations on a subject most immediately connected with their improvement, and that is, the artificial state in which the metropolis is placed with reference to *sites* upon which such dwellings might be erected, and the extravagantly high prices which are demanded for them.

By a series of circumstances, which it is not necessary to review, three public bodies have become possessed of sites of great extent in three different localities,—in the east, west, and centre of London,—upon each of which suitable habitations ought to be erected for the occupation of the labouring classes. I refer to the Board of Works, which has a very large space of building ground in Whitechapel, Spitalfields, and other districts; to the Corporation of the City of London, who, in the vicinity of Farringdon-street, and the lower part of Saffron-hill, have cleared an extensive area; and to the Westminster Improvement Commissioners, in the neighbourhood of Victoria-street, who have, also, become possessed of a broad expanse of building ground.

Now, sir, what I wish to observe upon this fact, is this,—first, that these three public bodies have cleared away an almost incredible number of houses occupied by the labouring population; secondly, that they have provided no substitute for those demolished dwellings, and have never instituted an inquiry as to how or where the poor inmates have to find a home; thirdly, that the price they are now asking for building land in their separate districts amounts to an insurmountable obstruction to the erection of habitable dwellings for these classes.

The Board of Public Works, or, as they are more familiarly known, the Commissioners of Woods and

* Sand of an inferior and dirty character may be much improved by a few days' digestion in dilute sulphuric acid,—comm. o l of vitriol (at 1½d. per lb) 1 lb.; water, two to two and half gallons. This will do over and over again: the sand must be well washed afterwards.

Forests, are the trustees of Crown property, and they have had extensive spaces lying unoccupied for a period of ten or more years,—and they may lie waste for ten years longer before they will make any abatement. It would be well if these trustees of the public property would seriously consider the injury they are inflicting upon a numerous portion of her Majesty's subjects, and in this respect contrast their conduct with that of the Emperor of the French, who, by direct grants of sites or money, or both, is holding out every encouragement for the erection of dwellings for the labouring classes in Paris, Marseilles, Lyons, &c.

The Corporation of the City of London, in the year 1851, had, by a vote of the court, 42,500*l.* appropriated for the erection of model lodging-houses, but nothing has yet been done.

The Westminster Improvement Commissioners have great powers, both by an original Act and by an Act obtained in 1853 for the erection of dwellings for the industrial classes, but both Acts appear, as to this object, up to the present time, a dead letter.

PHILANTHROPOS.

METROPOLITAN BUILDING ACT, 1855.

BUILDER'S NEGLECT TO GIVE NOTICE OF WORKS TO DISTRICT SURVEYOR.

IN the case of Hesketh (district surveyor) *v.* Middleton, heard at the Southwark police-court on the 16th instant, it appeared that Middleton took a wooden building in Bermondsey-street, built before the Act came into operation, the east front being unenclosed. He up put an inclosure to this front with painted canvas on boarding. In the centre was a door, and two staircases within, leading to seats which rise one above another, sufficient to accommodate from 150 to 200 persons. Opposite the seats was a stage for the exhibition of "Marionettes." All these fittings were put in by Middleton since January 4, 1856. He had brought them in his van, and had put them up himself. He advertised performances by the "marionettes" in this theatre, and at least 100 persons were proved to have been present at one time. Payments were taken at the door.

The district surveyor summoned Middleton for not having given him notice of the works before commencing them (sec. 38), and sued for the penalty under sec. 41. He proved the above facts, and referred to sec. 3, "external wall," sec. 12, and first schedule, preliminary rules, 1, 2, &c. as requiring the vertical inclosure to be built under the rules of the Act, and to H. 3, "public building," secs. 22 and 30, as requiring the galleries, stairs, and passages to be subject to the rules of the Act, and erected with the approval of the district surveyor as to their safety. The works being subject to the Act, are, by sec. 31, placed under the district-surveyor's supervision, and notice is required to be given by the builder to him, under the 38th section; and Middleton had, by neglect, incurred the penalty under sec. 41.

The magistrate, Mr. A'Beckett, convicted him; but as the district surveyor did not press for a heavy penalty, on account of its being under a new Act, he was fined 1s. with costs, the magistrate saying that he would not be so leniently dealt with on any future occasion. The building will have to be altered.

WATERWORKS FOR HEANOR.

WATERWORKS are about being established at this place under the auspices of the Local Board of Health. Owing to the great scarcity of water in the neighbourhood—arising, partly from the town being situated on the summit of a hill, which rises more than 200 feet above the adjacent valley of the River Erewash, and partly from the constant and increasing abstraction of the water underneath by mining operations—the Local Board last year called to their assistance Mr. Norris, engineer, of Nottingham, who devised a scheme of "constant" water supply, which met with their approbation, and being submitted to the General Board of Health for their sanction, previously to a proposed mortgage of the rates of the district, also received the approval of that body, after an inquiry on the spot by one of their engineering inspectors. Mr. Norris's project in its main features, consists of a shaft to be sunk a sufficient depth (about 90 yards) to reach the water-bearing strata, at a point near the south-western extremity of the district; at the mouth of which will be fixed a 15-horse high-pressure steam engine, to raise the water by means of a lift and plunger pump, and force it into a covered service reservoir (capable of holding three days' consumption), situated on the highest point of Tag-hill. From this reservoir the water will be distributed through a 6-inch cast iron leading main, through the whole of the built portion of the district. The engineer's estimate for the construction of the works is 3,500*l.* nearly the whole of the contracts for which have recently been let; that for the main pipes (about 4½ miles), to Mr. Geo. Staley, of the Butterley Iron Works, and the others to Messrs. C. C. and A. Dennett, contractors and builders, of Nottingham. The works will be immediately commenced, and the invaluable boon of pure and potable water, to which the inhabitants have been so long strangers, will be dispensed throughout the district, it may be hoped, during the ensuing summer.

HANGING BELLS TO TURN IN THE STOCK.

WITH reference to Mr. Denison's plan illustrated in our last number, Mr. W. L. Baker, whose plan has been described in our pages, has sent us a communication urging that it was he who called attention to the destructive effect of the constant action of the clapper upon a single portion of the sound-bow, and first suggested that a bell should be cast in a way that would enable it to be turned round so as to present a new point of contact to the clapper without refitting or reconstructing any portion of the gear. Further, that his specification, after describing two ways in which his idea may be put into execution, points out that the object may also be attained "by casting an axis on the top of the crown." He says that "a bell hung upon one central bolt or axis, is capable of being moved round upon that axis with great ease, so as to present at intervals the whole of the internal surface of the sound-bow to the action of the clapper, and in a clock-tower bell the whole of the external surface of the sound-bow to the action of the hammer."

We avoided printing the comparison which Mr. Denison drew between Mr. Baker's plan and that which he thought his own, being anxious not to damage Mr. Baker's just claims.

GAS.

A LECTURE to working gasfitters and others, on science as connected with gasfitting, was delivered at the St. Martin's school-room, St. Martin's-lane, London, by Mr. Alexander Wright, on Thursday evening in last week. The lecture was well attended by the working classes of the Gasfitters' Institution, and by many gentlemen connected with gas-engineering.——At the opening of the West Ham Gas Works there were only 8 retorts: there are now 64 required to supply the increased demand for gas in that neighbourhood.——The inhabitants of Huntingdon have resolved not only to purchase the local gasworks for 4,250*l.* but also to raise 2,250*l.* to put the concern into an efficient state. Capital is to be raised in 650 shares of 10*l.* each.——The Chester Town-Council have under consideration a proposal for the amalgamation of the two gas companies, under an Act securing to the corporation power at a future period to purchase the plant and works; but in the meantime raising the maximum price from 4*s.* 6*d.* to 5*s.* and providing for subsequent reductions from surplus profits beyond 10 per cent. and a contingent-fund of 10 per cent. on the capital. The projected arrangement seems to resemble that at Liverpool, where the anticipated reductions year after year have been found to be downright humbug, 10 per cent. profits and reserve-funds notwithstanding.——The Birkenhead Commissioners have had a report from their committee on the complaints as to gas and water supply, in which they are recommended seriously to consider the propriety of taking both supplies into their own hands, negotiating, if possible, with the Gas and Water Company for the purchase of their works, or applying to Parliament for power to construct new works. The report has been adopted by the Commissioners.——A strike of the workmen at the Halifax Gas Company's works took place on Saturday before last. The cause was a threatened reduction of wages from 24*s.* 6*d.* to 23*s.* The men quitted without giving notice, and the manager had fifteen of them lodged in custody. He gives no previous notice himself, it appears, when dismissing his workmen.

TIME AND MATERIALS *versus* MEASUREMENT AND VALUE.

LAMPRELL *v.* COLLIER.—In this case the plaintiff is a builder, carrying on business in Long-lane, West Smithfield: the defendant is an auctioneer, carrying on business in Moorgate-street. In the year 1854, plaintiff executed general repairs to a dilapidated house belonging to the defendant, the nature of which was such, that no specification or contract could be made for them; and during their progress, Mr. Wright, a surveyor, was frequently on the premises, inspecting the works; and at the completion of the works, plaintiff handed his account of time and materials to the surveyor to peruse on behalf of defendant: this account amounted to £1,054 5s. Upon seeing this, the surveyor said he should measure the works, and make out a measurement account, which he did, making the amount 583*l.* 4s. 6d. and the defendant, upon being appealed to by plaintiff, refused to pay anything beyond the last-mentioned sum. Plaintiff then offered to refer the question to independent surveyors, but defendant refusing to do so, an action was brought in the Court of Queen's Bench for the amount of plaintiff's time and material bill, which, at the last summer assizes held at Croydon, was referred to Mr. Charnock, barrister.

At the reference before the arbitrator, the plaintiff proved, by his books and invoices, that he had paid out of pocket between 900*l.* and 1,000*l.* for the works, and that his charges to defendant were fair and reasonable. For the defence it was contended that, at the commencement of the works, a conversation took place between plaintiff, defendant, and Mr. Wright, at which plaintiff agreed to execute the works under the direction of the latter, and that, at their completion, he should certify the amount defendant should pay for them,—that the prices were fair, and if ever so unfair, plaintiff must be content with them. In reply, plaintiff denied the alleged conversation, and stated there had been no agreement that the works should be measured,—that during their progress no measurements were made,— that the surveyor did not attempt to measure them until after plaintiff delivered his time and material account,—and that when the surveyor did measure, most of the works were covered, and the house occupied: it was therefore impossible to measure them properly. Plaintiff also called the tradesmen who executed different branches of the works, and proved that their cost price was much more than the surveyor had allowed for them, including builder's profit.'

After an inquiry, extending over twenty-one meetings, the arbitrator has published his decision, awarding to plaintiff the full amount of his claim, the costs of the trial at Croydon, and the costs of the reference.

KENDALL *v.* KING.*

IN the report on the above-named case, in your publication of the 16th inst. what I (in common with Mr. Bellamy and Mr. Shaw), said before the arbitrator, illuminated as it is with three notes of admiration, is made to take a colour which does not belong to it. Whether Messrs. Kendall and Co. by entering into the competition on the terms proposed, committed themselves to the acceptance of 157*l.* 10s. as a full remuneration for "all services short of the actual erection of the buildings," is wholly extraneous to the real question, upon which my opinion was asked, and which is passed without notice in the report. That was, whether for the work and labour actually performed by Messrs. Kendall and Co. their charge of 1,048*l.* 15s. was or was not excessive. I thought it was. I beg leave to add, that I fully concur with the principle laid down by Mr. Tite—when it applies.

AMBROSE POYNTER.

BALL OF THE BUILDERS' BENEVOLENT INSTITUTION.

THE pleasant assemblage of the friends of this institution, at Willis's rooms, on the 14th February, has added about 120*l.* to the funds, and will serve to give comfort to those who need it.

Surely this is dancing to a good purpose. There were about 500 persons present, including Messrs. Charles Lucas, president, William Lee, M.P. John Lee, Charles Mayhew, Frederick Ashton, Barry, John Jay, J. Hunt, James Wagstaff, Dunnage, Sewell, Christopher Eales, Henry Dodd, Thomas Cozens (the founder of the institution), Joseph Bird, Soward, Collins, Stanbury (Birmingham), James Newson, jun. W. Norris, W. Hutchons, W. Ellis, Joseph Lambert, D. Nicholson, jun. Charles Formby, John Chapman, Stirling, William Todd, jun. &c. &c.

The whole affair was managed very well, and did credit to the committee.

Miscellanea.

ELECTRO-TELEGRAPHIC PROGRESS.—A telegraph to Australia is projected by the Mediterranean Electric Telegraph Company, who are at present engaged in uniting the European lines with Africa through Sardinia. The Australian project is an extension of the East Indian, already noted. The East Indian will comprise two great branches, the northern branching towards Cabul and Cashmere, while proceeding to Calcutta, and the southern passing along the Bengal coast, and by the Sunda islands to the north of Australia, whence it will coast southwards along the eastern side of the Australian continent to Port Adelaide. The entire length of the line is estimated by the Genoa *Corriere Mercantile* at 20,000 kilometres.

* The title of the firm should have stood in our report Kendall Pope (not Cope), and Edlin.

Great Fire at Clerkenwell.—On the 14th inst. a fire, originating in a large factory belonging to an ivory, brass, and wood turner, in Yardly-street, Exmouth-street, destroyed not only the factory itself, but also fourteen houses, extending right and left in the same and adjoining streets. This and some other recent fires, in which adjoining premises have suffered severely, should call attention to the dangerous and censurable mode pursued of stocking back-yards of houses with timber. Wooden buildings are prohibited by the Building Act, but our legislators have failed to discover any danger in permitting timber to be stacked, without let or hinderance, in any quantity. Some remedy should be devised.

Fire at Leeds Industrial School.—The south wing of this modern building was burnt on Saturday before last, by a fire originating between the joists and the flooring, both of the school-room and of the dormitory of the boys' department, and believed to have been caused by the overheating of a hot-air flue, with which the establishment is warmed.

Fire at a new Workhouse in Caithness.—At Halkirk, Caithness, a large workhouse is in course of erection, and was pretty far advanced towards completion, when a fire, it is believed, wilfully raised, completely gutted the walls of all woodwork on Friday before last. The supposed incendiary is an Irishman who had been employed as a labourer on the works, but was dismissed, and was known to have threatened to "make a poor-house of it before he was done with it." The scoundrel has been laid hold of, and according to the *John O'Groat's Journal*, the case is likely to be proved against him. The joiners' tools were all burnt, and many of the poor fellows will be heavy losers in consequence. The contractor for the building is Mr. Robert Johnson, of Edinburgh, builder, and the amount of the contract is 3,547*l*. The damage is variously estimated, but 1,800*l*. is said to be about the mark. It is feared that no insurance had been effected by the contractor.

The Iron Trade.—This trade has of late been very dull, and the demand for sheet and plate-iron in particular has much fallen off. Some large works are on short time, and prices have still a downward tendency, "underselling" being much complained of by those who regard it as their interest to raise prices rather than to lower them. The price of hot-blast pigs is reported to have fallen in the Yorkshire and Derbyshire districts from 7*s*. to 10*s*. a ton.——It appears from a paper on "The Mining Resources of France from 1841 to 1851," prepared by Mr. H. Reader Lack, of the Statistical Department of the Board of Trade, that Great Britain raises four times as much iron, and sixteen times as much coal, as France. The mineral productions of that country are, however, rapidly increasing. The production of coal, lignite, and anthracite, was, in 1841, of the value of 33,159,044 frs.; in 1852, 46,751,806 frs.;—iron and steel, in 1841, 141,789,500 frs.; and in 1852 it had increased to 297,330,748 frs.

Memoirs of Libraries.—The prospectus of a new and elaborate work on the history and economy of libraries, by Mr. Edward Edwards, of Manchester, has been issued. The work itself will be in two volumes, at a price not exceeding 24*s*. and will be published by Messrs. Black, of Edinburgh, probably in the course of the present year. The table of contents, and the researches of the author, in this particular department, afford assurance that this will be a work *per se*, and exhaustive of the subject.

The Meeting of the British Association.—The annual meeting of the British Association for the Advancement of Science has been fixed to be held at Cheltenham for this year, in the week commencing August 6th, and active preparations are being made in the county of Gloucester, in order to give a fitting reception to the members. Lord John Russell, who has lately taken up his residence in this county, aids the committee, and a subscription has been entered into to defray the necessary expenses.

New Health Act.—The Registrar-General having been applied to by several of the newly-appointed officers of health, for liberty to obtain information from the registrars essentially necessary for the due performance of their duties, has, in answer to their letters and those of registrars on the same subject, permitted the registrars to supply copies of their usual weekly returns to these gentlemen, but "does not wish the registrars to be subjected to the trouble of so doing without being properly remunerated."

Modern Lamps.—Very lately two huge gas-lamps have been attached on either side of the middle door of St. Philip's Church, Regent-street: surely some Irish hod-man must have suggested the design, as I cannot think that any architect or builder would place such outrageous specimens on any classic building. Perhaps the "parochial authorities" have bought them second-hand at the smash of some gin-palace in the New Cut or Wapping. Pray do your best to have proper ecclesiastical gaseliers substituted.

Gas.

The "Amateur Musical Society."—This amateur *Musical* Society being now considered by the world of London as one of the established musical societies of the metropolis, it will only remain for themselves to follow that course which will best carry out the objects for which it was originally founded, and at the same time insure a lasting duration. The addition of madrigals and part-songs by Mr. Leslie's choir may be made a feature and an advantage, if not overdone; but if the orchestral members—in number about eighty—have not more work assigned them than has lately been the case, the main object of their meeting—the practice of instrumental music—may be ultimately lost sight of. The fact is, the performance once a fortnight of a short and easy symphony and two light overtures and a march will hardly be an inducement to so many gentlemen to forego other engagements and assemble with their various instruments, some from considerable distances, at the Hanover-square Rooms. We observe that the best works please the audience the most, and the performance of the great symphonies of Beethoven, Mozart, Spohr, Mendelssohn, with the *best* overtures of Weber, Mozart, Cherubini, Rossini, and Auber, elicit far greater applause than the inferior compositions of the same or other masters;—not that we would advocate the performance of *great works* only;—variety is charming, and *toujours perdrix* not desirable; but let great works be the rule, and lighter ones the exception. *Au reste*, the *stuff* of which this orchestra of amateurs is composed may be fairly judged of by the number of capital solo-players that constantly emerge from its ranks, and the excellent precision and skill with which the music generally is performed. We wish the Society every success. Music and architecture are cognate.

Building-trade Strike at Paisley.—On Monday last, the slaters and bricklayers of Paisley turned out on strike for rise of wages. The bricklayers' demand is 3*l*. a-week—a rise of 1*l*. 10*s*., and the slaters are asking 1*l*. 13*s*.—a rise of 11*s*. Most of the masters have submitted to these terms. It is little to the credit of the workmen to take advantage of the present emergency, when they knew that owners of property, damaged by the late storm, must have it repaired at whatever cost; and it is nothing short of extortion for the bricklayers to be demanding 10*s*. per day.—*Glasgow Gazette*.

Strike of Masons at Witley Court.—The extensive improvements and alterations at Witley Court, which were proceeding rapidly and satisfactorily, have been interrupted by the strike of the stonemasons, some sixty in number, engaged thereon. They insist on working only nine instead of ten hours a day. The wages they receive are said to be very good, and Mr. Wood, the contractor, it is said, will not comply with their demand. It is thought not unlikely that the rest of the men, 250 in number, will also turn out.

Harmony of Theory and Practice in Mechanics.—Mr. Macquorn Rankine, C.E., on his appointment to the Chair of Civil Engineering in the University of Glasgow, delivered an introductory lecture on the above subject. The lecturer commenced by showing that in geometry, in poetry, in rhetoric, and in the fine arts, the Greeks are our masters, but that in physics and mechanics their notions were pervaded by a great fallacy—a double system of natural laws; and that this fallacy of a supposed discordance between rational and practical, celestial and terrestial machines, continued in force, and appears to have gathered strength and to have attained its full vigour during the middle ages. In the 15th, 16th, and 17th centuries, the system falsely termed Aristotelian was overthrown, and the truth began to be duly appreciated, that sound theory in physical science consists simply of facts, and the deduction of common sense from them reduced to a systematic form. The lecturer proceeded to show many evils which arise from ingenious and practical men not being acquainted with scientific principles, and how often time and money are expended in visionary inventions, particularly perpetual motion, of which two appeared in the last year's patent list.

Embank the Thames.—Upon the carrying out in a comprehensive form of this great national work depends the effectual cleansing and purity of the Thames. By embanking it, the mud banks will be got rid of, and the scour of the river increased, and so most effectually cleansed. Intercepting sewers will be but a very imperfect alleviation, as, when other sources of impurity are considered, and the great mass of human beings living on the river are also taken into account, it must ever be a means of carrying off sewage. If the intercepting scheme is to be carried out at such fearful cost to the ratepayers, and such a very problematical result, by all means preserve the sewage for the Thames marshes, and not keep it in a state of oscillation and suspension between Gravesend and Woolwich, by its being poured into the river at the latter point.

A Heavily Taxed Ratepayer.

Neglect of Work by Engineers.—At Bilston Petty Sessions, on Friday before last, Joseph Evans, an engineer employed at Messrs. Baldwin's works, was charged with having absented himself from his work on the preceding night. He was committed to prison for one month. Isaac Stokes, an engineer employed at the works of Mr. B. Gibbons, was charged with a similar offence. He was sent to gaol for fourteen days.

Statue of the late Mr. Baines.—The committee for erecting a statue of the late Mr. Edward Baines at Leeds, decided last week upon the statuettes sent in by Mr. Behnes and Mr. Noble. The former gentleman sent in one, an improvement upon that previously forwarded. The latter sent two—one an improvement on the original, the other new. The committee unanimously decided upon giving the commission to Mr. Behnes. The second prize of 30*l*. will, consequently, be paid to Mr. Noble. The statue is to be eight feet high, and to stand upon a pedestal of Sicilian marble. The committee, according to the *Leeds Intelligencer*, have now selected a site, at the east side of the vestibule of the Town Hall, to cost 700 guineas.

Bath Graphic Society.—This successful society gave the second of their *conversazioni* on Tuesday evening before last. In the octagon room, the centre of which was occupied by lounges, were arranged portfolios of sketches. The long room, furnished with chairs and couches, was lined with paintings and drawings two or three deep. The third large room was devoted to refreshments.

The Excavations at Fountains Abbey.—Lord De Grey has recently recommenced his winter's excavations at Fountains Abbey. The excavators commenced operations in the base story of the Fraterhouse. Part of the floor yet remains; and amongst the rubbish some early English capitals, of the finest Nidderdale marble yet discovered, have just turned up. The great kitchen, refectory, buttery, and cloister-court will next be exposed.

Fall of a Bridge and Loss of Life.—On Wednesday last, two arches of a railway bridge in course of construction over the river Doon, in Ayrshire, suddenly fell to the ground, burying two men in the ruins. They were got out as quickly as possible, but died in a very short time. The catastrophe is attributed to the heavy rains following the severe frosts, and softening the lime.

Marsden's "Patent Artery and Vein System" of Ventilation.—Mr. Marsden's mode of ventilating sewers, public or other buildings, mines, tunnels, &c. consists of the action of a series of small "vein" pipes, as he calls them, concentrating from various parts of the cavity, chamber, or locality to be ventilated, into one air-tight and trapped receiver, communicating with what he calls an "artery;" but which, by parity of similitude, he ought, in fact, to call a great vein, the whole system being venous or concentrating and withdrawing, and not arterial or radiating and distributive, so far at least as regards the withdrawal of foul air through his ventilating pipes. These "arteries," or larger vein pipes, in turn convey the noxious gases collected by the smaller vein pipes onwards, either to a trunk vein or directly to a main-receiver, trapped, and leading them into an extracting shaft with fan, which, in the ventilation of sewers or mines, not only generates the suction power (worked by steam-engine or water power), whereby the gases are withdrawn, but also hands them up to furnaces prepared in a main shaft for their combustion. What Mr. Marsden appears more especially to claim, is the idea of ventilation from various points by a concentration of "vein" pipes, at once separating and enclosing the gases while conveying them away to trapped receivers and main-pipe conductors, to be expelled and consumed by modes already suggested and indeed already realized. The reverse process or distribution of pure air to mines, &c.—a true *arterial* system,—may be carried out through the same system of pipes and fans, &c.

Construction of Flues.—As things of utility, as well as of taste, are noticed in the *Builder*, I need not apologize for calling your attention to the flues laid in Messrs. Berens, Blumberg, and Co.'s buildings, Cannon-street, under my superintendence as clerk of the works, by direction of Mr. Husking. The horizontal flues, 220 feet in length (from Hayden's warming apparatus), are all 9-inch patent drain-pipes, laid in brick chambers, with concrete bottoms and slate tops. The saddle-pieces in connection with these pipes, at convenient distances, are only loosely bedded, and afford every facility for sweeping at stated periods. These pipes have been in use fifteen months, and are so satisfactory that I have instructions to carry out the same plan in the next buildings. It has occurred to me, that for church flues running underground, or for flues round hot-houses, these pipes would be most economical, and the saddle-pieces would afford every facility for sweeping.—W. L.

THE HARDWARE AND METAL TRADES' PENSION SOCIETY.—On Tuesday last, a concert, headed instrumentally by Fraülein Gräves and Sainton, and by Miss Dolby and Mr. Wilbye Cooper, vocally, was given at the Hanover-square Rooms, in aid of the funds of the Iron, Hardware, and Metal Trades' Pension Society, and was exceedingly well attended. We were to this time somewhat in ignorance of the progress of this association; but under the management of the committee who so well organized Tuesday night's concert, it ought to be prosperous.

ARCHITECTS' "CLERKS."—A gentleman who has a somewhat exalted idea of his distinguished position as "*only* managing assistant to an architect and engineer of high standing," is extremely indignant that he should be termed a "clerk." It is, he says, highly aggravating to him to be so designated. He has looked out the term—at least he says so—in Johnson's Dictionary, and finds it to mean a bookkeeper or accountant. I am afraid your correspondent has not referred to a good edition of Johnson. If he will do so, he will find among others, the following meanings of the word "clerk:"—1. A clergyman. 2. A man of learning and letters. 3. A person who is employed in writing for another. 4. An officer of various boards; but not a bookkeeper or accountant. If he had been aware that the original meaning of clerk was a man of learning; that it is the proper designation of a clergyman; that the principal law officer of a city or borough is termed the city or town clerk; that the principal officer of many corporations is termed the clerk; and that the clerks in the Courts of Chancery and Houses of Parliament—not to mention hundreds of other clerks—are gentlemen who would scarcely consider the position of an architect's "assistant" equal to their own, he would, perhaps, feel less aggravated by the designation. Your correspondent states his desire that we should "call a spoon a spoon," and almost tempts one to be guilty of the rudeness by manifesting so much anxiety to enhance the dignity of his position by borrowing from the linen-draper's "assistant" his usual denomination.—AN ACCOUNTANT.

DWELLINGS OF THE POOR NEAR SWINDON.—A correspondent, who takes an active and official interest in the sanitary welfare of Swindon, sends us a painful account of a visit paid to some agricultural cottages in that neighbourhood,—"dens," he remarks, "equal to the vile ones so ably set forth in your excellent book of 'London Shadows.'" And that such dens do exist, alas! in but too many localities besides London, it required no special detail to assure us. "Inquiring for the house," continues our correspondent, in reference to one of the dwellings referred to, "an inhabitant of the swampy lane told us, '*You must go on till you come to a gurt and nasty pond, and the house is close to't.*' It was close—four feet only from the '*nasty pond*,' which afforded the only water they had to use, and was further the receptacle for all the privy soil and sewage of the lane when rain came to flush the ditches." In this hopeless abode, as might well be anticipated, there lay the head of a family of ten children, in the "prime of life," but on the brink of the grave. Neither he, nor his wife, nor his little ones, had tasted food for four and twenty hours. It is probable that, ere long, the parish will have what is left of his family to provide for. Would it not have been a decided saving had they provided for the removal of the "gurt and nasty pond," and thus have conferred the boon of health and life upon the miserable head of such a family, and so have enabled him to provide for them himself?

HILLOTYPE.—The *Rondout* (U.S.) *Courier* says,—after years of untiring application and almost unexampled perseverance, the hopes of our townsman, the Rev. L. L. Hill, are crowned with success, and he is about to realise a reward for his toil. He has already received an offer of 30,000 dollars for the Hillotype. A great addition recently made to the invention consists in reproducing the colours of nature on collodionised glass. This revolution will extend to portrait and landscape painting, as Mr. Hill is able to copy pictures of any size, and to produce any number of copies from one original. The Hillotype consists in taking all the natural colours by a single process—every tint of countenance, and every shade of dress, and even the precise colour of the eye, being transformed to the picture.

THE BIRMINGHAM GLASS CUTTERS' SOCIETY.—The assistance afforded by the "United Flint Glass Cutters' Society" of Birmingham to its needy members is worthy of imitation by similar societies. The last yearly balance sheet of the society states that about 150 men received weekly assistance from the society's funds for a considerable period in course of the year, and that the amount distributed was nearly 2,000*l.*, while 1,600*l.* remained in hand. It is to the working of such societies as this that Birmingham, according to the local *Journal*, in some measure owes its immunity from strikes.

TENDERS

For the Royal Surrey Gardens Music Hall. Mr. Horace Jones, architect. Quantities taken out by Mr. Reddall:—

Jay	£19,700 0 0
Gammon	18,900 0 0
Ashby and Sons	18,889 0 0
Ashby and Horner	18,846 0 0
Myers	18,800 0 0
Mansfield	18,720 0 0
Lawrence and Sons	18,620 0 0
Brass and Sons	18,450 0 0
Lucas, Brothers	18,000 0 0
Willson	17,284 0 0
Scott and Cornwall	17,175 0 0

For buildings to be erected at Newark for the Royal Sherwood Foresters, or Notts Militia. Mr. Charles Baily, architect, Newark. Quantities supplied by Mr. C. Poland:—

Higgs and Cullingford, London	£3,980 0 0
Searle, London	3,960 0 0
J. and T. Wallis, Market Rasen	3,956 0 0
Cave, Gainsborough	3,913 0 0
Cooper, Newark	3,895 0 0
Culshaw, Biggleswade	3,760 0 0
Mackenzie, Newark	3,627 0 0
Johnson, France, and Co. Sheffield	3,618 11 0
Lane, jun, Newark	3,543 10 0
Wilson and Ashton, Retford	3,495 10 0
Barber, Barlborough	3,423 15 0
C. and A. Dennett, Nottingham	3,395 0 0
Segley, Shawcroft, Manchester	3,383 0 0
Marshall and Henderson, Newark	3,348 0 0
J. Ferguson, Nottingham (accepted)	2,950 0 0

For a chapel at Brompton. Mr. Mumford, architect:—

		If with curved plaster ceiling instead of open timber roof, add	If with Kentish rag facings to side walls instead of malm facings, add
Colls and Co.	£2,890 0 0	£198 0 0	£80 0 0
Chapman and Parsons	2,697 10 0	60 0 0	80 0 0
Symons	2,670 0 0	124 0 0	40 0 0
Tarrant	2,644 0 0	147 0 0	59 0 0
Aviss and Sons	2,615 0 0	152 0 0	86 0 0
Todd	2,579 0 0	139 0 0	53 0 0
W. Higgs	2,576 0 0	130 0 0	30 0 0
Wilson	2,550 0 0	37 12 0	37 10 0
Delay	2,499 0 0	133 0 0	87 0 0
Coney	2,487 10 0	27 10 0	12 10 0
Fisher	2,285 0 0	95 0 0	50 0 0
Rudkin	2,170 0 0	100 0 0	99 0 0

TO CORRESPONDENTS.

"*The Smokeless Fire*."—We have received at least two dozen letters on this subject, to which we may look again presently.

"Croydon."—"Inquirer."—"T. T."—"M. J."—Accrington (properly managed, it would).—"W. F. H."—"W. H."—"J. C."—"J. N."—"A. P."—"C. B."—"B. F."—"Mr. H."—"J. S. N."—"E. A."—"T. A."—"A Manufacturer's Clerk"—"Another Clerk."—"E. R."—"R. H." and "J. W. O."—"W. L. S."—"A Twelve Years' Subscriber" (has not hit on the right method).—"A Lover of Truth."—"Mr. A."—"E. A. H." (thanks).—"H. H."—"Verax."—"W. B." (we cannot question a solemn award on simple assertion).—"T. S." Colchester—"A. T. S. P. R." (the approval of drawings for a Public building rests with the District Surveyor, unless difference arise, in which case appeal may be made to Board of Works).—"E. L. T."—"R. and B."—"J. O"—"G. M."—"J. J."—"F. G. S."—"F. and C."—"H. E. K."—"T. L. D."—"F. G. S."—"E. R."—"A. G. H."—"J. B." Bells (too late for this week).—"J. E."—"W. R."—"M. H."—"J. M."—"A Lover of Gothic."

Mr. Petit's rejoinder to Mr. Scott reached us too late for the present number.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *viâ* France, must be prepaid: the stamped copy of the paper is of no avail.

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By order, EDWARD S. STEPHENSON,
Clerk and Solicitor to the Trustees
NOTE.—The Trustees meet on the second Wednesday in every month, to consider such applications for loans as have been sent in one clear week at the least before the first day of the month.—The sureties must be unexceptionable.

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CHARLES JAMES THICKE, Resident Secretary.

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2.
LETTERS on ENGLISH AGRICULTURE. By JAMES CAIRD, Esq. the *Times* Commissioner. Reprinted by permission. Second Edition. 8vo. 14*s.*

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AN Architectural Firm in a good practice in the Midland Counties has a VACANCY for an ARTICLED PUPIL.—Address, Messrs. PARSONS and DAIN, St. Marnan's, Leicester

TO PLUMBERS.

A GOOD PLUMBER is in want of constant EMPLOYMENT. No objection to fill up his time with painting and glazing. A good reference can be given from his late employers.—Address, W. T. Mr. Howard, Builder, No. 2, Chandos-street, Strand

AN ASSISTANT ENGINEER or Superintendent of Works is desirous of an ENGAGEMENT. Has been employed on the Continent; speaks German. Age 24.—Address, FIDIS, at Maddick, Brothers, 282, Strand.

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A THOROUGH practical Man is open to an ENGAGEMENT to take the MANAGEMENT of an ESTATE, &c. He is a first-rate draughtsman, and thoroughly understands accounts, measuring up, and superintending and pricing every description of work. Unexceptionable references.—Address, H. T. 14, Thornhill-place, Caledonian-road, Islington. Essex country not objected to.

AN ARCHITECT, about to retire, wishes to LET his OFFICE.—Address, J. CROSSLAND, 2, Fenchurch-street

TO ARCHITECTS.

A GENTLEMAN desirous of improvement, wishes to meet with an ENGAGEMENT in the Office of a London Architect of good practice. Satisfactory testimonials can be given.—Address, M. A. Office of "The Builder."

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AN active, middle-aged Man, thoroughly conversant with the trade, wishes EMPLOYMENT as SALESMAN in a retail timber yard. Can give first-rate references as to character and ability.—Address, J. B. Office of The Builder."

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AN active MAN is open to an ENGAGEMENT, as FOREMAN. He is well versed in all the details of the trade, is a good draughtsman, and has had sixteen years' good practice.—Address, B. C. Office of "The Builder."

TO PERSONS BUILDING, or making Alterations. TO BE SOLD a BARGAIN, an excellent modern mahogany SHOP FRONT, glazed with plate-glass squares, by 4, with massive folding doors, hung with patent springs; hinges; entablature, pilasters, stall-board, and shutters, complete; with outside spring blinds. The above can be extended shortened, or used as two fronts. Apply at 1, Judd-street, Brunswick-square.

PAINT! PAINT! PAINT!—The LONDON PATENT ANTI-OXIDE PAINT has been specially selected by the Government Engineers &c., the principal Contractors and the largest and most extensive firms have discovered for wood and iron. Twenty per cent. cheaper than ordinary paint. Sold and forwarded to all parts of the country. Reception of orders, address of the MANAGER, at the Office of the Company, 20, New Bridge street, Blackfriars.

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H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 149, fleet-street, London.

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Sold by all the principal Stationers in town or country.

PORTLAND and ROMAN CEMENT, TERRA-COTTA POTS, &c.—J. M. BLASHFIELD begs to acquaint the Public that he has entirely CLOSED the Establishment on the Surrey side of the Thames, and that articles of his manufacture can only be obtained at his Works, Mill-wall, Poplar, or at his Warehouse, Fried-street, Paddington.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME.

The LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements, at reduced prices, the material being excavated in its pure and unadulterated state, from quarries on their own property. The Company particularly recommend a trial of their XXXX Bath Cement, as far superior to any article now in the market. These cements can be sent by rail or shipped from their wharf, direct to all parts.—Agents required, and a liberal discount allowed. Orders received by Mr. KIALLMARK, 80, Old Broad-street, City, or by RICHARD WINTER, Cement Works, Dunball, Bridgewater.

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PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. with much pleasure announce to their Friends and the Public, that they have completed the enlargement of their works, in order to meet the great increasing demand for their Cements; and are now prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes Cement is applicable.—Orders received at Great Scotland-yard, and at the Works.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 8, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment on advantageous terms.

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Superfine, per ton	£7 0 0
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Bath, Portland, Lias, and Roman Cements; Parian and Keene's Cements, Plaster of Paris, Glazed Stoneware Sewage Pipes, Fire Goods, Vitrified Blue Bricks, White Building Bricks, White Enamelled Pans and Traps, and every description of Building Mater al.

N.B. Lump and Ground BLUE LIAS LIME delivered in boat-loads direct from the Works in Warwickshire, to any part of the river or canal

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Boatloads of either Lump or Ground Lime can be delivered direct from the Works in WARWICKSHIRE to any part of the Rivers Thames or Lee, alongside any wharf on canal, or by boat or rail to any part of the kingdom.

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ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extremes of heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application to their Office, adjoining the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwater, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Acc ur of COMPARATIVE EXPERIMENTS on the strength of this and other Cements used at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank street, Westminster, who prepare one quality only of Portland Cement.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Paint-dealers in Original Packages, each cask stamped HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester.—T. H. BOORMAN, WILD, and CO. beg to inform the public and trade generally, that they have completed their works for the manufacture of PORTLAND CEMENT, and from their contiguity to the river Medway, as well as the branch line of the South-Eastern Railway from Strood to Maidstone, a siding from which will be carried into their works, enabling them thereby to transmit any orders they may receive to any station on the before-mentioned line, and confidently hope they shall be able to supply the public with a first-rate article, in both cement and lime, on moderate terms. Persons sending orders for cement, are respectfully requested to say for what purpose it is required, and printed instructions will be affixed to the head of each cask. Orders to be addressed to Mr. THOMAS WEEKES, Agent at the Works.

Agents in London:—Messrs. GEORGE POTTER and CO. Lime Merchants, Purfleet Wharf, Blackfriars; and 19, North Wharf-road, Paddington.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.

G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.
DAVIES and NORMAN, Agents.
Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.

GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

NOTICE.—BLUE LIAS LIME.—L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.

L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to insure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's-cross.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.

Small ditto, ditto, 4d. per ton.

Barges loaded in a few minutes.

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NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London. March 20, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.

GIBBS, CANNING, and CO.'S BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.

ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.

SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.

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NOTICE.

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WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime, and Cement Works, Southam.

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BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and flare, bricks fire-goods, &c. can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.

JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a WHOLESALE business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of best quality upon advantageous terms. Application either at Harwich or to his Agents, GEORGE MORRIS, 20, New Ormond-street, Queen-square, London.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.

BRICK MOULDS (improved), Steel-face Stocks and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick Mill Work and Implements.—J. REACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 5, ADELAIDE-PLACE, London bridge.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings of good and sound quality, constantly on sale at H. DODD'S Brick-fields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting house, Hoxton Brick-fields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable for Yer sgnd.

WHITE SUFFOLK PERFORATED BRICKS.—Messrs. J. EASTWOOD and SONS take this opportunity of informing their customers and the trade, that they have made arrangements for the Manufacture of White Suffolk Perforated Bricks. In ouring defects common to bricks of this description, care has been bestowed to produce them of a true and perfect shape, of an even and beautiful surface, and free from fire-flaws.—J. EASTWOOD and SONS, Belvedere-road, Lambeth.

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RISBRIDGE NEW UNION WORKHOUSE.—GOOD BRICK EARTH can be had within a short distance of the site, on reasonable terms.—Apply to Mr. THOS. FROST, Wratting Wash, Haverhill.
February 18, 1856.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

TO BUILDERS and OTHERS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.—Grey Stocks, 25s. per thousand; Grizzles, 20s. per thousand; Rough Stocks, 20s. Place, 18s.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide place, London-bridge.

BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES either old or new, whether of thatch, slate, or tile, and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-round for the reception of cement, a solid and complete gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses by cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 87, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REMARKS OF THE JURIES," page 581, of the Great Exhibition, rank the Manufactories known so long as "The Fileries," Tunstall, Staffordshire, as the first of the kind in the world.

MANDER, BROTHERS,

VARNISH MANUFACTURERS,

WOLVERHAMPTON,

And 37, UPPER BAKER-STREET, LONDON.

MANDER, BROTHERS, have to announce to their Friends and the Trade, that in consequence of the increase of their London Trade, and to accommodate their Customers, they have taken the Premises,

No. 37, UPPER BAKER-STREET,

DORSET SQUARE (near the New-road),

as a Depôt for their Varnishes, where for the future a Stock of every description will be kept, ready for immediate despatch.

MANDER, BROTHERS (who have had a Medal awarded to them at the recent Paris Exhibition), have been enabled to effect several imp rtant Improvements in their Varnishes, which now combine unusual beauty of surface with great durability, more particularly for OUT-DOOR WORK.

Samples can be had at the Depôt.

Mr. W. M. G. KELLEY, Agent

ESTABLISHED IN 1814.

AWARDED TO MANDER, BROTHERS.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability; Slabs and Tiles for Fireplaces and Hearths, Cornices for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchens Rarely to be had in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (perfectly non-absorbent) and STUCCO CEMENT STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road Office, 4, George-yard, Lombard-street.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY respectfully solicits the attention of buyers to his present extensive and well-assorted Stock of Deals, and the very low prices of Pine and other Deals, &c. &c.

Yellow Deals from	£21	0 per 120
Do. Battens	13	10 "
Spruce Deals, from	18	0 "
Pine Plank, 12 ft. 3 in. by 11, from	29	10 "
Mahogany in Planks and Boards	6d.	per foot super.

Prepared Flooring, &c. equally low. A list of prices forwarded on receipt of a postage stamp.—Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

GREAT REDUCTION.—Yellow Deals, 3s. 6d.; Pine Plank, 3s. 9d.; F. Walnut, 7½d.; Mahogany, 6d.; 1¼ Yellow Battens, 12s. 10d. per 120 13 feet. Cartage free to any part of Town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth, walk.

SEASONED FLOORING.—GEO. NOKES and Co. (late Archbutt and Atkinson), beg to assure builders and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash:—

¼ inch White, 13s. 6d. per square.		¼ inch Yellow, 15s. per square	
½ ditto	15s.	"	ditto 16s. 6d. "
¾ ditto	18s.	"	ditto 20s. "
	Laths, 3s. per load		

Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.

ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road

GEORGE SMITH, TIMBER-MERCHANT, LONDON, Address to No. 18, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks PREPARED FLOORING, &c. from the Saw-mills. Goods in Bond for Exportation.

N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of its kind ever established, a large assortment of PREPARED FLOORINGS, which for quality, seasoned, and ready for use, from ¼-inch to 1¼-inches thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses. Skirting, Lathing, and Joists. Cills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application. Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico, and Saw-mills, Planing, and Moulding Mills, Kensington, Chelsea.

OAK SASH-CILLS, QUARTERING, &c. ready cut out to sizes and lengths required, at the lowest price.

Address, E. SIMMS,

SAWING, PLANING, AND MOULDING MILLS, KING'S ROAD, CHELSEA, AND WILTON-ROAD, PIMLICO

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, calls the attention of builders and shop fitters to his carefully selected MAHOGANY, suitable for Counter Tops, and to his seasoned Materials for builders, cabinet and blind makers, &c. Delivered, cartage free, to any of the London railway stations, or within three miles from Kennington Church.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

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SAMUEL CROWHURST, Jun. begs to call the attention of Builders, Cabinetmakers, &c. to his Stock of seasoned and well-assorted Timber Goods, Deals, and Mahogany, in Logs, Planks, Boards, &c. at prices which will be found quite if not less than are advertised. Country Builders supplied on the most liberal terms. Timber-yard, Hanover-street, Walworth; and Frances-street, New Kent-road, near the Church

MACHINE CARVING WORKS (Patent). Fine ornamental and every other description of CARVING A magnificent Gothic Screen, Stained Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

ACORN TIMBER WHARF and SAW MILLS,

CANAL BRIDGE, OLD KENT-ROAD, LONDON.

A Monthly Price Current forwarded on application.

RICHARD MAY, Proprietor

FRENCH POLISH and SPIRIT VARNISHES made from Methylated spirit as per proof.

Best French Polish	6s. 6d.	per gallon.
Spirit Varnish	6s. 6d.	"
White French Polish	10s. 0d.	"
Methylic French Polish	6s. 6d.	"

By JAMES SLIPER, 87, Leather-lane, and 14 and 15, Dorrington-street, Holborn, London.

STAINING DEAL TO IMITATE ALL KINDS of WOODS (requires NO SIZING), and will stand the exposure to the weather. Prices 6s. per gallon. Varnishes for WAYLOR'S STILES may be had at the Factory, 41, James street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes

IMITATION of WOODS and MARBLES.—A grainer of established name is willing to TEACH the above art, or portions of it, to a few adult pupils, by a course of tuition by means of evening lessons, to be entered immediately. The advertiser having a little time to spare before the summer trade commences, is ready to devote it to the above purpose. For particulars, &c. address A. B. 91, John-street, Fitzroy-square.

LATHS.—Full tale Baltic single LATHS, 4d. 3s. per load, cash, at H. ARUNDELL'S, Webber-street, Blackfriars-road.

J. P. LANG, PLUMBER and LEAD-LIGHT GLAZIER, 10, Tavistock-place, Tavistock-square. Every description of church and ornamental glazing executed with neatness and despatch, at the lowest possible prices. The trade supplied with all kinds of window lead. Old lead taken in exchange

TO TIMBER MERCHANTS and OTHERS. The Proprietors of Leth's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of Rough Timber, &c. Stacks Dry and covered, Docks, and 10 ton Cranes, Sawpits for converting Timber, &c. Freights paid on delivery.—Apply to G. NOKES and Co. as above.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER CUTTING MILLS, Commercial-road, Lambeth.—The proprietors beg to announce to the trade that they have completed their extensive arrangements, and will be happy to execute all orders intrusted to their care with despatch and punctuality.

N.B. All goods sawn at these mills fetched and delivered free of charge.

SPECIAL NOTICE

The Books of the Society close on the 31st of March, and Proposals lodged at the Head Office, or at any of the Agencies, on or before that day, will secure the advantage of the present year's entry, and of One Year's additional Bonus over those effected after that date.

MUTUAL LIFE ASSURANCE.

The Whole Profits divided amongst the Assured.

THE SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY. Instituted 1831. Incorporated by Special Act of Parliament.

The Capital belonging to the Society from the contributions of members, exceeds NINE HUNDRED THOUSAND POUNDS

The Annual Revenue exceeds ONE HUNDRED and SIXTY-THREE THOUSAND POUNDS

The amount of existing assurances exceeds FOUR MILLIONS and a QUARTER STERLING

The amount of the separate funds of deceased members exceeds SIX HUNDRED and FIFTY THOUSAND POUNDS, of which SEVENTY-EIGHT THOUSAND POUNDS are Bonus additions.

THE NEXT DIVISION of PROFITS TAKES PLACE at the 1st of MARCH, 1856, and policies effected before that date receive one year's additional bonus over those effected after that date.

ROBERT CHRISTIE, Manager.

WILLIAM PINLAY, Secretary.

Head Office—26 St. Andrew-square, Edinburgh

London Office—196, Bishopsgate-street, corner of Cornhill.

W. H. SMALRIDGE, Interim Agent

SPECIAL NOTICE

KENT MUTUAL ASSURANCE SOCIETIES.

CHIEF OFFICE:

QUEEN-STREET-PLACE, NEW CANNON-STREET, LONDON.

The united annual incomes exceed £7,000l.; and all Profits belong to the Assured.

LIFE.

The next division of Profits will include parties assuring before the 24th March next.

The new business of the last eight months exceeds 5,000l. in Annual Premiums.

FIRE

The Guarantee Fund is being increased to Half-a-Million.

The annual income, since last annual meeting, has increased beyond 5,000l.

GEORGE CUMMING, Manager.

N.B. Agents are still wanted for some vacant localities.

SIXTH BONUS.

UNION ASSURANCE SOCIETY.—(FIRE—LIFE—ANNUITIES)

Instituted in the reign of Queen Anne, A.D. 1714.

Cornhill, and 70, Baker-street, London.

Chairman—J. Remington Mills, esq.

Deputy-Chairman—Henry Alfred Soames, esq.

James Bentley, esq.	J. Jun Paynter, esq.
Thomas Budley, esq.	John Rogers, esq.
Daniel Burton, esq.	Henry Ruth, esq.
Nicholas Charrington, esq.	George Spencer Smith, esq.
P. Pearce Cuttle, esq.	Richd Hartman Solly, esq.
William Galpin, esq.	W. Foster White esq.
Thomas Mills, esq. M.P.	Samuel Wilson, esq. Ald.
John Mills, esq.	Stephen Wilson, esq.

The LIFE BONUS of the year 1856, of four fifths of the profits of the LIFE DEPARTMENT, has been just declared, and (with the exception of a reserve of nearly 10,000l to accumulate towards the next Bonus of 1859) is payable upon and with the sum assured, being at the rate of 10l. 10s. per cent. for the last seven years, on Policies effected in Great Britain upon the Profit System

THIS BONUS MAY BE APPLIED EITHER

By having the annual premium reduced for the next seven years, which will in many cases extinguish the same for that period,

Or by adding the amount to the sum insured;

Or the value thereof may be received immediately in money.

The Directors beg to state that, by a recent clause in the regulations of this Society, the assured realise the advantages of MUTUAL OFFICES by sharing the entire profits less one-fifth as a small compensation for the necessary guarantee, and are free from the liability incurred by the members of such Societies

The accumulated invested capital now amounts to upwards of ONE MILLION sterling.

THOMAS LEWIS, } Joint Secretaries.
WM. B. LEWIS, }

TO ARCHITECTS.

COMPETITION and other DRAWINGS COLOURED by an experienced architectural colourist, on reasonable terms. Perspective and other drawings put in outline, &c. Drawings coloured for gentlemen in the country, and transmitted by post. Specimens of colouring produced.—Address, B. C. Mrs. Plummer's Library, Theobald's-road, Bedford-row.

ARCHITECTURAL DESIGNS and PERSPECTIVES for the Academy, &c. DRAWN and COLOURED in an Architectural Atmosphere, by an experienced figure and landscape painter.—For terms, &c. address to X. Y. the Post-office, 84 Edgeware-road.

DRAWING, &c.—One Guinea per Quarter. Comprising Architectural, Engineering Mechanical, Perspective, and Water Colour Drawing; Taking out Quantities; Measuring Builders' Work, &c. &c. Gentlemen who cannot attend at the Establishment, can be attended at their residence on moderate terms, in any part of town or country, by Mr. SMITH or Mr. LEWIS.—Offices, 24, Guildford-street.

DRAWING CLASSES.—24, Guildford-St. Russell-square.—At this Establishment Pupils are thoroughly instructed in Architectural, Civil Engineering, and Mechanical Drawing; Ornamental, Perspective, and Water-Colour Drawing; Taking out Quantities, Measuring, Estimating, &c. &c.

Terms, One Guinea per Quarter. Prospectuses and full particulars may be had at the Offices.

THE PHOTOGRAPHIC SOCIETY'S THIRD ANNUAL EXHIBITION will OPEN to the public on MONDAY next, JANUARY 7th, at the Gallery of the Society of Painters in Water Colours, 5, Pall-mall East. Open at Ten. Admission 1s. Evening, from seven till Ten. Admission 6d.

MATHEMATICAL DRAWING INSTRUMENTS.—JOHN ARCHBUTT, 28, Westmoreland-bridge-road, Lambeth, near Astley's Theatre, begs to call attention to his Stock of Instruments manufactured by superior workmen, the prices will be found extremely low when charged for articles of similar quality and workmanship. Rules, scales, tapes, &c. of equally low prices. An illustrated price-list will be immediately forwarded, free on application.

N.B. A few New and Second-hand Levels and Theodolites always for Sale.

TO ARCHITECTS

COMPETITION and other DRAWINGS.—Mr THOMAS BOYS, Member of the New Society of Painters in Water Colours, and Author of "The Picturesque Architecture of Paris, Ghent, Rouen, &c. and of "London as it is," offers his services in Tinting Backgrounds, Landscapes, Perspective Views, Interiors, &c. from the rough copy or sketch he has had in such subjects, he is fully aware of the points essentially necessary to be attended to. Drawings may be sent, coloured in a superior manner.—Address, Mr. BOYS, 29, Albany-street, Regent's-park

ARCHITECTURE, CIVIL ENGINEERING, and SURVEYING CLASSES Established by Messrs. HYDE, SMITH, and LEWIS, Architects, Civil Engineers, Surveyors, &c. For Preparing Gentlemen for Architects, Builders, Engineers, Surveyors, Draughtsmen, Measurers, &c. &c. DAY and EVENING INSTRUCTION in Architectural, Civil Engineering, and Mechanical Drawing; Coloring, Shading and Tinting; Ornamental and Water-colour Drawing; Perspective, Isometrical, and Geometrical Drawing, Making Finished and Working Drawings; Preparing Specifications, Taking out Quantities, Estimating, Measuring and Valuing Builders' Work, &c. &c. Terms: Day Pupils, Three Guineas per Quarter; Evening Pupils, One Guinea per Quarter. There are no extra charges for the use of books of the above, with the use of Drawing Boards, T squares, Plans, Drawings, Models, &c. Prospectuses and full particulars may be had at the Offices, 24, Guildford-street, Russell-square

THE VIEILLE MONTAGNE ZINC MINING COMPANY'S PURE PATENT WHITE ZINC PAINT is unequalled for permanency of colour, for beauty and brilliancy of surface, and is unaffected by sulphurous or any other vapours or exhalations. Being completely unobjectionable and free from the poisonous effects of the lead, it may be used in all apartments whilst in use without any inconvenience to the inmates.

The greatest caution is recommended to avoid any serious compounds that might be sold as cheap rates as Pure White Zinc. If any alteration has taken place in the colour, or in the consistency, after the paint has been mixed and ground, to produce it, an imperfect mode of production, that is, one in which the oxide contains substances calculated to give it more than its proper weight, it then produces a very inferior body of paint, and a very poor paint, and the economy realised by the purchasers of such oxides becomes a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, ground in oil, are sold with the VM mark in Ball by Messrs. BLUNDELL, SPENCE, and CO.; when ground and dry, by Messrs. T. B. MORLEY and CO. and by the Company's Grinding Agents in London, Messrs. CHARLES DEVAUX and CO. Whose sole Agents, 63, King William-street, City; and by the Manufacturing and Painting Agent, Mr. FREDK. BRABY, Fitzroy Works, Newroad, in Manchester and Liverpool by S. CLAY, Mersey-road, who is the acknowledged Painter to the Company for Zinc Paints, and undertakes painting ships, warehouses, dwelling-houses, &c. In Leith, by Messrs. R. ANDERSON and CO. Timber-bush; and in Southampton, by Mr. H. J. BUCHAN. Dry OXIDES and PAINTS, in kegs of 14, 21 and 28lbs and upwards, to be had of the Company's Agents in Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Perth and the Isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with the Zinc Paint by contract.

For further particulars, apply to the Company's General Agency in London, 12, Manchester-buildings, Westminster

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BLASHFIELD'S PATENT TERRA-COTTA, Manufactured at Mill-wall, Isle of Dogs. Can also Consoles, Tracery for Parapets, Balusters, String Courses, Friezes, Rosettes, Vases, Mottoes, Chimney-shafts, and all other architectural ornaments modelled, finished, and burnt in the best manner, and warranted to stand heat and frost, either in Buff or Red coloured Terra-cotta. A great variety and large stock may be seen at BLASHFIELDS' Warehouse and Show rooms, No. 1, Praed-street, Paddington.

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TO BUILDERS, MARBLE MASONS, AND OTHERS.

THE LIZARD SERPENTINE COMPANY have to acquaint the public, that the Serpentine Chimney-pieces and other articles, recently sold by public auction in London, were not the produce of any of the Quarries belonging to the LIZARD SERPENTINE COMPANY, which continues successfully to carry on its business in Slab and Manufactured Goods, in stone of very superior quality and in great variety of colour, at the Factory, Poltesco, Lizard. Show-rooms, 20, Surrey-street, Strand.

HENRY COX, Manager, Poltesco, Lizard.
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ITALIAN and GALWAY MARBLE QUARRIES. Depôt, WHITEHALL WHARF, Parliament-street, Westminster.—Mr. FRANKLIN begs to invite the Sculptors, Marble Masons, Builders, &c. to inspect his extensive STOCK of Italian, Irish, and foreign MARBLES, which he is constantly importing in blocks and slabs, consisting of upwards of twenty different varieties, which he is enabled to offer at very reduced rates. Several large blocks of statuary, suitable for sculpture, &c. now landing.

Lloyd's Marble Wharf, Thames-bank, Pimlico,
Adjoining Vauxhall-bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

MARBLE.—The Italian Marble Company, Importers of the produce of their many quarries in the province of Massa Carrara, Italy, beg to inform the general marble trade in the United Kingdom that they are prepared to undertake Contracts for any quantity of Statuary, Veined, Sicilian, Bardilla, Dove, and other Marbles, in blocks of all dimensions, delivered on shipboard at Lechorn, or in dock, London. A constant stock is always kept at the London Depôt. Orders for Paving Slabs, Garden and Hall Statues, Vases, Tazzas, Consoles, &c. executed and delivered at reasonable rates.—For further particulars apply at the Offices of the Company, 18, Cannon-street, City.
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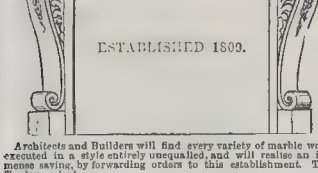
B. FABBRICOTTI respectfully invites the Gentlemen connected with the Marble Trade to inspect his fresh STOCK, composed of statuary, vein, Sicilian, black and gold, dove, Bardilla, Sienna, and Breccia, in blocks and particularly calls their attention to a large quantity of his best statuary, sixty blocks, of all sizes, just landed.
Monuments, vases, and statues, finely executed in Italy.
Carrara Wharf, Thames-bank, Pimlico.

SCULPTURED STATUARY MARBLE CHIMNEY-PIECES, in great variety, on view at the Westminster Marble Company's Works, Earl-street, Millbank.



Architects and Builders will find every variety of marble work executed in a style entirely unequalled, and will realise an immense saving, by forwarding orders to this establishment. The Trade supplied.

MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.
THOMAS JACKSON begs to draw the attention of the public to the most extensive stock of Marble Chimney-Pieces in the Metropolis; consisting of a selection of upwards of two hundred, and manufactured by steam power from the finest Italian and other marble, and with that careful attention to the details and finish so necessary in good marble work. The Stock consists of elegant Drawing-Room Chimney-Pieces in Statuary Marble; bold, massive Chimney-Pieces, in Black, Black and Gold, Bardilla, Sienna, Verd Antique, Brocatella, Dove, St. Ann's, and Serpentine Marble, suitable for Dining-Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Emperor's Red and Amber Marble, for Boudoirs, Breakfast-Rooms, best and secondary Bed-Rooms, &c.; also, Monuments, Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the most classical designs, and in all the varieties of the finest Italian and British Marble, at the lowest remunerative prices.

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BRAMLEY FALL, CAEN,
DARLEY DALE, FARLEY DOWN,
HARE HILL, HUDDLESTONE,
PORTLAND, and various Stones, in Block and Slab.
Yorkshire Paving, Landings, Sawn Sills, Sinks, Coping, &c.;
Granite Blocks, T ares, Cu-bs, Pitching, &c.
Valentia Slate Slabs, Grindstones;
Marbles, in Blocks and Slabs.
At FREEMAN'S Stone Wharfs, Millbank-street, Westminster; City-road Basin; and Deptford.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

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MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

DARLEY DALE STONE.—This stone, introduced by Sir Charles Barry at St. Edward's Grammar School, Birmingham, and well known as having been selected for
ST. GEORGE'S HALL, LIVERPOOL,
and numerous works, including the Railway Station, Birmingham; Brough Bank, Liverpool; Evesham-bridge; Mr. Beaufoy's Schools, Lambeth; and the Portico and Corn'se of the Town-hall, Leeds; is kept in considerable quantity at the Darley Dale Stone Wharf, City Basin, London. Apply to W. and J. FREEMAN, Millbank-street, Westminster; or GEORGE WALL, at the Quarries, near Matlock.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lent's Wharf, City Basin, London. Apply to W. and J. FREEMAN, Millbank-street, Westminster; or GEORGE WALL, at the Quarries, near Matlock.

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YORKSHIRE STONE.
GEO. VINT and BROTHERS, IDLE, near LEEDS,
Beg to inform Architects, Surveyors, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Paving, Bramley Fall, Park Spring, Robin Hood, Harehill, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

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BATH STONE OF BEST QUALITY.
RANDELL and SAUNDERS,
QUARRYMEN AND STONE-MERCHANTS,
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List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

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London Agents—TREGELLES and TAYLOR, 3, Pinner's-court, Old Broad-street. Manager—JAS. J. TRATHAN, Liskeard
This Granite is selected for the New Westminster-bridge.

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VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

PARIS EXHIBITION.—ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1848. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of lob tables, chiffoniers, consoles, &c.; baths baptistries, altar-tab.ets, pulsters, columns vases pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad

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ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
PER SQUARE YARD.
Country Buyers supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Polyteucan and Limmer Asphalte Mine Monument Chambers, 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

O. McCARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames

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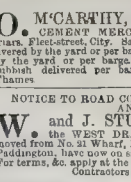
Contractors supplied to any extent.



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TERRA-COTTA CHIMNEY-TOPS
Will withstand the action of the Weather and Sea Breezes, and are
QUITE IMPERISHABLE.
Prices not much higher than Cement.
DOULTON & CO.'S
TERRA-COTTA POTS, &c.
Erected in London upwards of 20 years since, are now as sharp and perfect as when first manufactured
Drawings on application to
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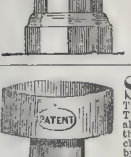
SMOKY CHIMNEYS CURED EFFECTUALLY for TEN SHILLINGS, by SUPER'S PATENT WIND-GUARD.—This Guard allows free egress to the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

To be had of Ironmongers and Builders; and of the Patentee, at his Office, 85, Fenchurch-street, London.

By Her Majesty's Royal Letters Patent.



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SHIP VENTILATORS, requiring no attention, imparting about six times the quantity of fresh air than any other in use.
Also,
VENTILATING SKYLIGHTS, for Slate or Tile Roofing, without Paint or Putty.
Prospectuses sent on application.
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NEW PATENT SMOKE PREVENTER.—The Rev. James Burrow, of Ashford Parsonage, Bakewell, has appointed WILLIAM S. BURTON, of 39, Oxford-street, sole Metropolitan Agent for the sale of his SMOKE PREVENTERS. They have been used under many varied circumstances with great and uniform success. They are very simple, and not liable to get out of order. Price 10s. 6d. 12s. 6d. and 15s. each.
The alterations and additions to these extensive premises already by far the largest in Europe, which occupied the whole of last year, are of such a character that the entire of EIGHT HOUSES is devoted to the display of the most magnificent stock of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel Silver, Plated Goods, Baths, Brushes, and Turnery, Lamps and Gasoliers, Iron and Brass Bedsteads and Beddings), so arranged in Sixteen Large Show Rooms as to afford to parties furnishing facilities in the selection of goods that cannot be hoped for elsewhere.
Illustrated Catalogues sent (per post) free.
39, OXFORD-STREET; 1, 1A, 2, and 3, NEWMAN-STREET; and 4, 5, and 6, PERRY'S-PLACE. Established 1820.

HANDS'S PATENT ECONOMISING KILN is the only simple and effectual mode to use the Leaf, for drying moist moulded clays, sound at any season, in time of burning and cooling the kiln, with perfect ventilation.—Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TO THE COMMISSIONERS OF THE BOARD OF HEALTH, AND TO ALL PERSONS INTERESTED IN THE SMOKE QUESTION.
HANDS'S PATENT is the only simple and certain remedy for the SMOKE NUISANCE: it has combined, where necessary, the advantages of a drying process and perfect ventilation, without a particle of complicated machinery. Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

THE PERMANENT WAY COMPANY, 36, Great George-street, Westminster, have now published a Second Edition of their CIRCULAR, which may be had post-free upon application. Among other recent important inventions, the Company beg to call particular attention to Prime's Patent for Uniting Railway Chairs, Polk's Patent Improved Fish Joint, and Dr. Boucherie's Improved Process for Preserving Sleepers, Fencing, Telegraph Posts, &c. from decay.—Every information may be had upon application to CHARLES MAY, F.R.S. the Manager; or to WILLIAM HOWDEN, Secretary.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s. per foot super, together with every particular of its cost and adaptation, can be obtained of Mr. BURT, 2, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 86, New Bond-street.

ROYAL POLYTECHNIC.—Next Monday Evening Lecture on the 25th, at 8, by the Rev. A. Bath Power, A.M., on Form, in relation to Mechanical Structure. During Lent, Mr. Pepper will lecture on Elementary Astronomy, illustrated with magnificent Dissolving Diagrams, and appropriate Music from Haydn and Handel, every Wednesday and Friday mornings at 2, evenings at 8.
NOTICE! Alteration of Hours. During the Astronomical Lectures, Mr. Pepper's Lecture on the Poison Strychnine will be given only on Monday and Saturday mornings at 2; and Tuesday and Thursday, at 4 and 8. Mr. F. Lennox Horne's serio-Comic Music at Lecture at 8, and the much-admired War Views at 9.30, on Monday, Tuesday, and Saturday. Cuba. Wednesday and Friday, at 4 and 9, and Tuesday, Thursday, and Saturday mornings, at 2.

THE FARNLEY IRON COMPANY, WORTLEY, NEAR LEEDS,

MANUFACTURERS OF

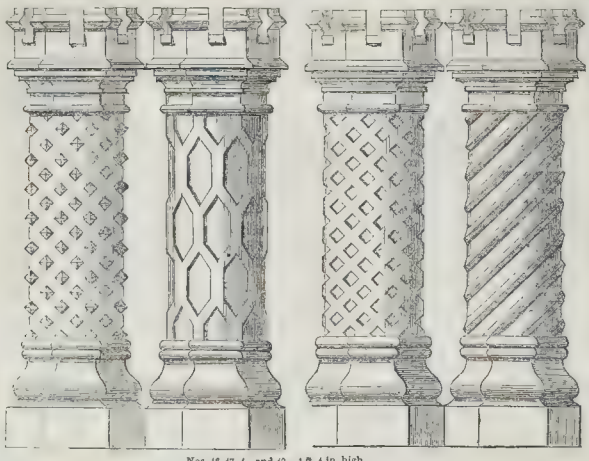
FIRE-BRICKS, PATENT GLAZED STONEWARE DRAIN PIPES, CLOSET-PANS, ORNAMENTAL TRUSSES, BRACKETS, MODILLIONS, PEDESTALS, VASES, &c.;

ALSO OF

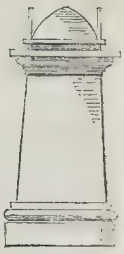
TERRA COTTA CHIMNEY-TOPS,

In upwards of One Hundred Patterns, of various dimensions and of first-rate design, a few of which are given below,—scale half an inch to a foot.

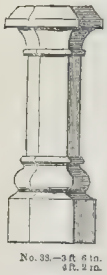
No. 67.—Wind-guard. 3 ft. 6 in.



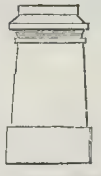
Nos. 46, 47, 4 , and 40.—4 ft. 4 in. high.
" " 6 ft. 0 in. "
" " 9 ft. 6 in. "



No. 65.—3 ft. 6 in.



No. 38.—3 ft. 6 in.
6 ft. 2 in.



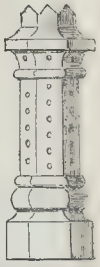
No. 19 Oblong or Square.
2 ft. 3 in.
2 ft. 6 in.
2 ft. 9 in.

No. 2. Wind-guard.
3 ft. 6 in.

No. 3.—2 ft. 0 in.
2 ft. 6 in.

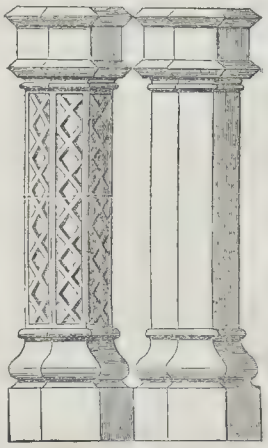
No. 14.—2 ft. 6 in.
2 ft. 9 in.
3 ft. 3 in.

No. 13. 3 ft. 1 in.



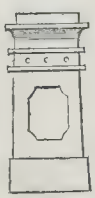
No. 64.—Plain or Wind-guard.
3 ft. 10 in.
4 ft. 2 in.
4 ft. 6 in.

No. 76 (round).—1 ft. 10 in. high.



No. 75 (square).—1 ft. 10 in.

No. 80.—4 ft. 3 in.
6 ft. 6 in.



No. 34.
5 ft. 3 in.

No. 18.
1 ft. 9 in.

No. 21.
Oblong or Square.
1 ft. 9 in.
2 ft. 0 in.
2 ft. 3 in.

No. 4
5 ft. 3 in.

No. 79.
6 ft. 2 in.

ARCHITECTS' DESIGNS CAREFULLY EXECUTED, AND WITH QUICK DESPATCH.

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PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

B. FOWLER & CO.'S PORTABLE PUMPS,
3-inch to 9-inch Barrels,
Plain or Sliding Telescope Suction,
ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power,

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 3	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron	2 8 0
3½ „	ditto 3 6	flanged pipe,	2 12 0
4 „	ditto 3 6	as required.	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing.....		2 14 0
2½ in.	long ditto ditto		2 16 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage. May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

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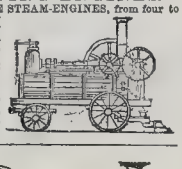


PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 92, Blackfriars-road.

STEAM-ENGINES for SALE.—A Six and a Ten horse High-pressure. Also, a Donkey Engine.—Apply to JOHN DUFF and CO. Engineers, Glasgow, Makers of Land and Marine Engines, Boilers, Derrick and other Cranes, &c.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT, —Second Testimonial.—"March 10th, 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years; and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

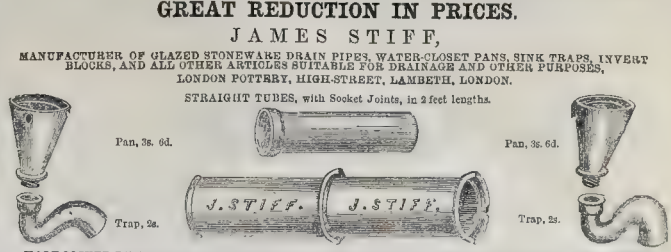
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

Drawings, with Prices, will be forwarded free, on application.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

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Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.

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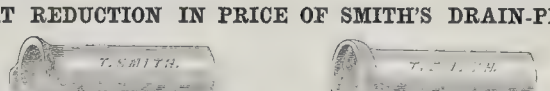
Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the Original Manufacturer of the CONED or REBATED SOCKET-PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

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MR. M. B. NEWTON,

Late MANAGER and CORRESPONDENT to the FARNLEY IRON COMPANY'S FIRE-CLAY and TERRA-COTTA WORKS, having relinquished the above engagement, respectfully intimates to his Friends that he has OPENED

THE WHARF No. 4, KING'S CROSS GOODS STATION, LONDON, as a DEPOT for GLAZED SANITARY TUBES, FIRE-BRICKS, CLAY RETORTS, and OTHER GOODS, MANUFACTURED BY

JOSEPH CLIFF, WORTLEY, NEAR LEEDS.

N.B.—PRICE LISTS having just undergone a revision, Parties will meet with the most liberal Terms at this Wharf.

(Further Advertisement next week.)

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CHARLES MACINTOSH and CO. Patentees and Manufacturers of the VULCANIZED INDIA-RUBBER in all degrees of elasticity, recommend this material as capable of sustaining the action of hot or cold water, gas, steam, acids, and grease. It is used extensively for valves in marine and land engines, railway buffers and springs, washers for pipe-joints, hose and tubing; also for gas-holders, acid pumps, alkali cisterns, &c. &c. Articles, moulded or otherwise, made to any size or figure.—Address, 3, Cannon-street West, London; and Cambridge-street, Manchester.

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N. Woolwich Elastic Steam-packing (Canvas and India-rubber), at 1s. 4½ per lb

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H. M.'s Dockyards), having considerably extended their manufacture in order to meet the daily increasing demand upon them for this effective and durable article, are enabled to offer the very best material at the reduced price of 1s. 4d. per lb. for sheet and rope.

Testimonials may be seen at S. W. SILVER and CO.'s Warehouses, Nos. 3 and 4, Bishopsgate-street (opposite London Tavern), where orders for Steam Packing, also Buffer Springs, Pump Clacks, and the various India-rubber appliances, will meet with prompt attention.

CAUTION.—S. W. S. and Co. have found it necessary to stamp all their manufacture, thus—"S. W. SILVER and CO. WORKS, NORTH WOOLWICH."

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Dining-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Gaswell-mews, Gaswell-road, London.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Beetham, Lancaster.

No. 1 quality, inches diameter, and price per yard.

¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	3 in.
9d.	11d.	1s.	1s.	1s.	1s.	1s.	1s.	1s.	2s.	2s.	2s.
1d.	3d.	3d.	5d.	7d.	9d.	1d.	2d.	4d.	6d.	8d.	9d.

Super-extra stout quality.

2	2½	3	3½	4 inches.
2s.	2s.	2s.	2s.	3s. per yard.
6d.	9d.	6d.	9d.	

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

1	1½	2	2½	2½ inches.
9d.	1d.	1½d.	1s.	1s. 6d per yard.

The hose is Burnettized at an extra charge of 3d. per yard Union Joints, Branch Pipes, and Jets, are also supplied.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

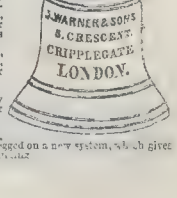
J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, or weight, singly or in peals.

TUNED BY MACHINERY.

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and peeled on a new system, which gives superior tone and facility for practice.



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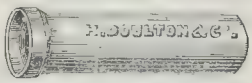
GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.

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WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.

WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

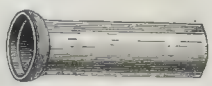
The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties desire them to be sent to each,—take this as a fair test of the quality of the articles supplied by them; and as the Proprietors of several of the Potteries, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

LYTCHETT POTTERY.—For SALE by PRIVATE CONTRACT, the LEASE and PLANT of the above Premises. The lease consists of about fourteen acres of land and a good cottage. The land contains a large quantity of very superior clay for pottery and fire-goods. The drain-pipes made from the clay are equal, if not superior, to any yet in the market; and the fire-goods will bear comparison with any yet made. The plant comprises three pottery kilns and two brick kilns, with pipe machines, pug-mills, and all other necessary apparatus. Lytchett Pottery is 4 miles from the South-Western Railway, and 3 miles from the port of Poole.—For further particulars, and to view, apply to H. F. FISHER, Blandford.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 80 Bankside.—DAVID MORGAN, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

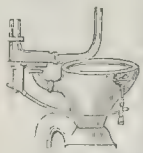
CLOSET BASINS, WHITE and BLUE, URINALS, &c.

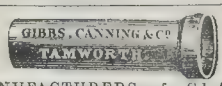
MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually used, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of which can be seen at the Premises of the Patentee, W. PATTEN, 23, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.





MANUFACTURERS of GLAZED STONEWARE PIPES, Bends, Junctions, &c.; also FIRE BRICKS, Vitrified Blue Bricks (as used by her Majesty's Commissioners of Sewers), White Fire Clay, Facing Bricks, &c. &c. Agents.—CHARLES RICHARDSON, No. 6, South Wharf, Paddington London.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash, Junction Bends, &c. Pans and Traps of the first quality, Yorkshire Paving, Sinks, Stils, &c. &c. at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS, LAMBERT'S PATENT.

These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The quadrantum Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, prisons, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

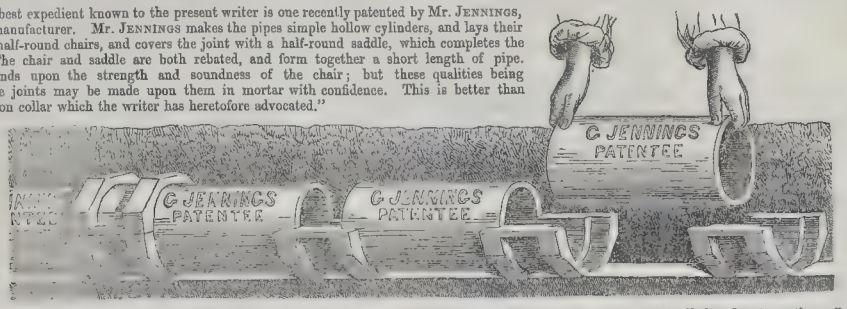
TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and Tents for Balls or sale. Price Lists forwarded on receipt of address. Illustrations with full particulars, post free.—T. S. BOLTON, City Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

TO ENGINEERS, ARCHITECTS, SURVEYORS, AND OTHERS, INTERESTED IN EFFICIENT DRAINAGE.

Extract from the "ENCYCLOPÆDIA BRITANNICA," *Vol.* 8, *Part I. page* 129, *on Drainage of Towns, by* W. HOSKING, *Esq.*

"Simple hollow cylinders, whether of iron or of pottery, are more likely, with the same care in the manufacture, to be sound than socketted pipes of either substance; and for this reason, if for no other, pot pipes should be simple hollow cylinders, and some other expedient ought to be employed for making the joints, than that by which the pipe is liable to be rendered both unsound in its manufacture, and impracticable *when the work requires to be repaired.* Expedients have been devised to this effect, and are gradually making their way into use.

"The best expedient known to the present writer is one recently patented by Mr. JENNINGS, a London manufacturer. Mr. JENNINGS makes the pipes simple hollow cylinders, and lays their ends upon half-round chairs, and covers the joint with a half-round saddle, which completes the circuit. The chair and saddle are both rebated, and form together a short length of pipe. Much depends upon the strength and soundness of the chair; but these qualities being secured, the joints may be made upon them in mortar with confidence. This is better than the sheet iron collar which the writer has heretofore advocated."



In the "BUILDER" of February 9th, GEORGE JENNINGS stated that the price of his Patent Drain-Pipes, with all the advantages they offered, were "the same price as charged by the respectable London Potters." Two days after the appearance of this advertisement, all the Potters issued fresh lists, REDUCING THEIR PRICES AND INCREASING THEIR DISCOUNTS. And in the "BUILDER" of the 16th instant, one week after GEORGE JENNINGS'S advertisement, no less than seven notices of "GREAT REDUCTION IN PRICES" appear. THIS MAY OR MAY NOT BE OWING TO THE ADVERTISEMENT OF THE 9TH INSTANT. But to PREVENT MISTAKES, GEORGE JENNINGS does not AT PRESENT propose any reduction in the price of his Improved Pipes, as charged in list prior to the 9th of February, hoping the quality of the article, combined with acknowledged advantages, will be worth the halfpenny or penny per foot charged in excess of THE PRESENT London Potters' prices.

The Show-rooms now built on Jennings's Wharf, Holland-street, Blackfriars, will be open in March next, for the Exhibition of Sanitary Inventions, suitable for EVERY CLASS OF BUILDING, PUBLIC OR PRIVATE. In the meantime, Illustrated Particulars and Prices of JENNINGS'S Self-acting and other Waterclosets, Urinals, Lavatories, Pumps, Sluice-Valves, Fire and other Cocks, Gully-traps, Shop-shutter Shoes, Earthenware Drain and Soil Pipes, &c. &c. can be had free, on application, or by post, on enclosing two stamps to

GEORGE JENNINGS, SANITARY ENGINEER, GREAT CHARLOTTE-STREET, BLACKFRIARS.

Note.—The attention of Architects is particularly invited to a NEW DOUBLE-SEATED VALVE CLOSET, recently patented by G. JENNINGS. It is exceedingly simple, noiseless, and must be durable. The Patentee has such confidence in its efficiency, that a warranty for SEVEN YEARS will be given with every Closet sold. Same Price as ordinary Valve Closets, in their different qualities.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.

AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

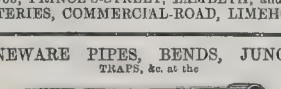
HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c. at the



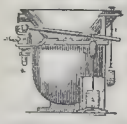
NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to THE AGENTS.—

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;
Where a large stock is always kept on hand.

UNDERHAY'S PATENT REGULATOR CLOSETS for constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in fixing, and a better flush of water obtained in use.

Pan, Valve, Self-acting, and Servants' Closets, on this principle, may be seen at the Works. They are very cheap, their efficience is guaranteed. 5,000 of them have been sold, and no instance of failure has occurred.



These Stoneware Closets are cheaper, stronger, and more ornamental, than any other. Many thousands are in use, and greatly approved of.

Manufactured by CHARLES BOTTEN and SON, Brass Founders, Crawford-passage, Clerkenwell London.

BY HER MAJESTY'S ROYAL LETTERS PATENT, APRIL 27, 1855

JAS. LEWIS'S PATENT STENCH-TRAP FOR STREET U-E.

Price, with Gutter Plate, 18 inches by 12 inches, each 25s.; weigh about 2 cwt. Larger sizes made if required.

FOR AREAS, &c.

Price, with Back Plate, 6 inches by 7 inches, each 6s.

FOR COURTS, YARDS, &c.

10 inches by 8 inches, each 10s.

The above articles are protected for the Patentee by the British Government, on account of their construction for the advantages they possess, being a perfect trap for preventing smell proceeding from itself or the drain, should there be water or not in the pan. When stench-traps are put down generally speaking no attention is ever paid to them afterwards—this renders them useless. The above, therefore, are a desideratum, as they require no attention. It is well known when cholera has visited this country, it commences and leaves last those places where the air is vitiated by obnoxious gases proceeding from drains, &c.

Any inhabitant suffering any inconvenience, is entitled, by the Sanitary Act to lay complaint before the public or private authorities of the property, to lay down stench-traps where they are required. Any persons interested in this advertisement will be kind enough to write to the patentee for drawings and if wishful, testimonials. Please order from any respectable ironmonger contractor, or the Patentee, JAMES LEWIS, Ironfounder, Abergavenny. Specimens to be seen in the Court of Inventions, Crystal Palace, Sydenham

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.—This ware, showed by all to be of the best manufacture, by the unparalleled quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 5d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture. And it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

SALES BY AUCTION.

TO CONTRACTORS, BUILDERS, BRICK-MAKERS, AND OTHERS.—The valuable Lease of extensive Brick-fields at West Drayton, Middlesex, a short distance from the Station on the Great Western Railway, and possessing important frontages to the Grand Junction Canal; also a Beer-Shop, House, and Shop, and Twenty-eight Cottages.

MR. MARSH has been favoured with instructions from the Trustees of Mr. Samuel Pocock, to SELL by AUCTION, at the MART, in the City of London, on WEDNESDAY next, FEBRUARY 27th, at TWELVE o'clock, in one lot, the important and valuable LEASE of extensive BRICKFIELDS, at West Drayton, three quarters of a mile from the Station on the Great Western Railway, by which line the fields are separated, and possessing important frontages on the Grand Junction Canal. The whole comprises about 100 Acres of excellent Brick Earth, with ranges of Sheds and Buildings; also a Beer-Shop, Grocer's Shop, and Twenty-six Labourers' Cottages, a Farm Homestead converted into Two Cottages, Large Barn, capital Stabling, Yard Sheds, &c. The property is held upon lease for a term of forty years, from September, 1849, at an annual rental. The purchaser may be accommodated with the valuable stock, of about 500 Bricks, Plant, and Implements, at a valuation.—May be viewed, and particulars obtained on the estate at the De Burgh Arms, West Drayton; of Messrs. LAWRANCE, PEAKE, and HOWARD, Solicitors, Old Jewry Chambers; of G. J. HUSEY, esq. Solicitor, 7, Ironmonger-lane; of W. EDWARDS, esq. Official Assignee, Sambrook-court, Basinghall-street; at the Mart; and at Mr. MARSH'S offices, 9, Charlotte-row, Mansion-house.

TO TIMBER MERCHANTS, BUILDERS, CONTRACTORS MASONS, SAW-MILL PROPRIETORS, AND OTHERS requiring spacious Business Premises.

MR. MARSH has received instructions to LET, with immediate possession, capital BUSINESS PREMISES, situate in East-street, Walworth, with residence attached. For particulars, apply at Mr. MARSH'S, Charlotte-row, Mansion House

TIMBER SALE. — At GARRAWAY'S COFFEE-HOUSE, Change-alley, Cornhill, on FRIDAY, 7th MARCH, 1856, at FOUR o'clock precisely,

14,500 PETERSBURG YELLOW BATTENS and ENDS, the cargo of the "Johanne Marie," partly damaged by seawater on the voyage, to be sold for account of the underwriters and owners.

Also for account of the importers,

500 LOADS of BALTIC and COLONIAL TIMBER.
75,000 BALTIC and COLONIAL DEALS and BATTENS; with other Wood goods.

Further particulars and catalogues in due time, by
CHURCHILL, MACMILLAN, and CO. Wood Brokers,
20, Cannon-street.

HARWICH. - Barges, Boats, Iron, Old Timber, &c. for Sale.—TO BE SOLD by AUCTION, by

MR. HALES, on FRIDAY, 7th MARCH, 1856, by order of Messrs. H. Lee and Son, the proprietors, at their HARBOUR WORKS DEPOT, near the Ordnance Jetty, Harwich, ten good hopper BARGES, with their anchors, chain cables, and windlasses complete; six iron cranes; four railway trucks; and upwards of thirty tons of iron, consisting of large and small chains, malleable scrap and castings; valuable old timber; rope; seven harbour boats, various; firewood, &c. arising from the harbour dredging works; all which will be expressed in catalogues, to be had, with any further required particulars, on reference to the proprietors, Belvedere-road, Lambeth, London; or Mr. HENRY WEBB, Manager at the Harbour Works Depôt; or the Auctioneer, Harwich.—Sale to commence at TWELVE o'clock at noon

HERTFORDSHIRE.—Sale of very useful Timber and Poles.

MR. W. BROWN has received instructions to SELL by AUCTION, upon the PREMISES, at ROSSWAY, on TUESDAY, the 11th of MARCH, 1856, at TWELVE o'clock precisely, about 1,500 LARCH, SPRUCE, and SCOTCH FIRS and POLES, on the Parcels of land, the trees drawn out and conveniently lotted, next the road leading from Rosseway Lodge, towards Tring, distant about three miles from Chesham, Berkhampstead, and Tring, and upwards of 200 Oak, Ash, Beech, and other Trees, partly felled, and the remainder standing on the Hill Farm, Hawridge, between Rosseway and Chesham. Credit will be allowed, subject to conditions to be produced at the time of sale.—May be viewed by applying on the Premises. Catalogues may be obtained of Mr. ROBERT BROWN, Northchurch; of the King's Arms and Goat Inns, Great Berkhampstead; of GEORGE NORRINGTON, Aylesbury and Chesham; Royal Hotel, Tring Station; of Mr. E. BROWN, 3, Northern-terrace, Navarino-road, London; and at the offices of Mr. W. BROWN, Land Agent, Tring.

TELEGRAPH WIRE.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY, FEBRUARY 25, at TWELVE, at the AUCTION MART, Bartholomew-lane, London, in lots, without reserve, EIGHTY MILES of TELEGRAPH WIRE, manufactured, No. 14 gauge, in No. 5 gutta-percha casing, manufactured by the Gutta-Percha Company, City-road; adapted for subterranean or submarine telegraphic purposes, and now lying at Ostend. The wire may be viewed at any time, by order, which, with catalogues, may be had of Messrs. GODMAN and EVANS, Solicitors, No. 101, Wood street, Cheapside; or of Messrs. FULLER and HORSEY, 13, Billiter-street, City, London.

Italian Marble Chimney-pieces and Alabaster Ornaments, recently imported; Slabs of Vein Marble; also a variety of Statuary and Vein Marble Chimney-pieces.

MESSRS. ROBINS will SELL by AUCTION, at their ROOMS in Covent garden, on THURSDAY next, FEBRUARY 28th, at TWELVE, TEN ITALIAN MARBLE CHIMNEY-PIECES, just imported from Florence, a variety of pleasing designs, in statuary and vein marble, presenting beautiful ornaments for the drawing-room all out fifty statuary black and gilt and vein marble chimney-pieces, in order for fixing, and a quantity of slabs of vein marble, of the full sizes.—On view two days prior, with catalogues, at the Auction-rooms, in Covent-garden.

French Paper-hangings, direct from Paris, rich designs in satin and flock, with gold; arranged in convenient lots.

MESSRS. ROBINS will SELL by AUCTION, at their ROOMS, in Covent-garden, on THURSDAY next, FEBRUARY 28, at TWO precisely, FRENCH PAPER-HANGINGS, recently imported direct from Paris, new and elegant patterns in satins and flocks, enriched with gold, also fancy decorations for drawing-rooms and boudoirs.—On view two days prior, at the Auction-rooms, in Covent-garden.

ALDENHAM, HERTFORDSHIRE.—Live and Dead Farming Stock, &c.

MR. W. R. GLASIER will SELL by AUCTION, on the PREMISES, near the Coach and Horses, Radlett, on WEDNESDAY, FEBRUARY 27th, at ELEVEN o'clock precisely, as an invaluable LIVE and DEAD STOCK, comprising six cart and other horses, Alderney and other cows, heifers and calves, a fat bull, spring, and other carts, van, gig, harness, &c. corn drill, &c. &c. together with a number of useful items from a builder's yard and workshop, well worthy the attention of the trade; also a few lots of household furniture.—May be viewed and catalogues had on the Premises; at the Aldenham Inns; at the White Lion, Paddington; and of the Auctioneer, 41, Charing cross.

TO BRICKMAKERS AND OTHERS.—TO BE SOLD by AUCTION, by

MR. ROBINSON, on the PREMISES of the DUST FIELD, corner of the Queen's-road, Hornsey-road, near the Holloway gate, on TUESDAY, MARCH 4th, at TWO o'clock, about 1,000 cubic yards of ASHES and BREEZE, and a quantity of HARD CORE, which will be sold in one lot or lots, according to the convenience of purchasers, the genuine property of Mr. John Camp, and to be sold without reserve.—On view, when catalogues may be had on the Premises; and of the Auctioneer, Repository, Little Britain, City.

SALES BY AUCTION.

SOUTHALL.—POSTPONEMENT OF SALE OF BRICKS.

MESSRS. EVERSFIELD and HORNE respectfully announce, that the SALE of BRICKS and BRICKMAKER'S PLANT, announced to take place on FRIDAY, the 22nd, is POSTPONED until next month.
40, Parliament-street.

MARBLE SLAB.—Near the Great Northern Terminus.

MESSRS. EVERSFIELD and HORNE are instructed to SELL by AUCTION, at the GREAT NORTHERN MARBLE WHARF, Canal-road, King's-cross, on FRIDAY, MARCH 7th, at TEN for ELEVEN, the entire and extensive assortment of MARBLE SLABS; comprising statuary, vein, and Sicilian of large sizes, some black and gold, Siennas, Bardilla, and a choice variety of coloured marbles; all English sawn, and good quality.—May be viewed three days previous, and catalogues had on the Premises; and of the Auctioneers, 40, Parliament-street, or Coal-Exchange.—N B. Three months' credit.

MATERIALS OF THE RESERVOIR, GREEN PARK.

MESSRS. EVERSFIELD and HORNE have received instructions from the Commissioners of Her Majesty's Works and Public Buildings, to SELL by AUCTION, on the PREMISES, on WEDNESDAY, FEBRUARY 27th, at TEN for ELEVEN, the MATERIALS of the LARGE RESERVOIR, near PICCADILLY, comprising 8,000 square yards of the best stock bricks, laid on arches forming the bottom, and about fifty rods of brickwork in the walls, culverts, sides, and ends, several stone landings, cast iron strips, shores, &c. May be viewed, and catalogues had, at the Office of Works and Buildings, Whitehall place; and of the Auctioneers, 40, Parliament-street, Westminster; or Coal Exchange.

ST. JOHN'S WOOD.—Leasehold Premises, with Workshops.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, at the MART, on TUESDAY, FEBRUARY 26th, at TWELVE, by order of the Executors of Wm. Tavener, a bankrupt, a substantial brick-built RESIDENCE, containing ten rooms, with excellent cellarage, and stabling, situate on the south side of Clifton-road, St. John's wood; held for an unexpired term of ninety-six years, at a ground-rent of 9l. The Premises are in hand but little exhausted annual value of 80l. May be viewed, and particulars had of J. CHARLES, Esq. Solicitor, 19, Great Carter-lane, Doctors'-commons; at the Mart; and of the Auctioneers, 40, Parliament-street, Westminster; or Coal-exchange.

BOROUGH-ROAD.—Remaining Stock of Artificial Stone Pottery.

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, 74, Borough-road, Southwark, on WEDNESDAY, APRIL 2nd, at TEN for ELEVEN, the final portion of the extensive STOCK; comprising fountains, vases, figures, groups (including the large "Laocoon," the only one in artificial stone), centre-flowers, &c. To be sold without reserve, and will be the last sale this season. May be viewed one week previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

Sixth Sale of the Surplus Property belonging to the North London Railway Company, with Votes for the County of Middlesex.

MESSRS. BEADEL & SONS have received instructions from the Directors of the above Company to SELL by AUCTION, at the MART, London, on TUESDAY, MARCH 11th, at TWELVE precisely, in 21 lots, the NINTH Portion of the valuable FREEHOLD SURPLUS PROPERTY adjoining the Railway, Camden-town, comprising several freehold Houses, let at rents amounting to 65l. per annum; also well secured ground-rents arising from houses in Brecknock-place, Great and Little Randolph-streets, Grange-street, and Frederick-place. Also Sheppard's House, Homerton, and a plot of valuable leasehold land, Island at Dalston.—Particulars may be obtained of Messrs. TRAHUL, PAINE, & LAYTON, Solicitors, Guildhall-yard; of Messrs. KENYON, PEAKE, & CORNWALL-crescent, Camden-town; at the Auction Mart; and of Messrs. BEADEL & SONS, 25, Gresham-street, London

TO ENGINEERS, MILL-OWNERS, and OTHERS.—Important Sale of Machinery, THIS DAY, SATURDAY, at TWELVE, prompt.

AUGUSTUS SMITH is instructed by Mr. Joseph Apsey, Engineer, to SELL by AUCTION without reserve, upon the PREMISES, John-street, Rotherhithe-street, Cornwall-road, Lambeth, the whole of his valuable STOCK and TOOLS, including two horse-power high-pressure steam-engines, nearly finished; a 8-horse high-pressure engine, about 100 feet of shafting, with bearings, riggers, &c.; a very powerful boring-mill, a six-inch self-acting screw-cutting foot-lathe, compound shaping and planing machine, drilling machine, and other self-acting lathe, 2-feet centres, 21 feet bed, fitted up to plane; two other self-acting lathes, about two tons of cast and shear steel, smiths' forges, fans, and fittings complete, a quantity of planing, house fittings, &c.; 9-feet fly-wheel, cast-iron frame and gearing for two pairs of mill-stones, &c.—On view the day prior to Sale; and upon application at the Counting-house, of Messrs. SMITH, Engineers, 3, Crescent, Blackfriars road, near the bridge.

TO BE LET on Building Lease, the HALL and PREMISES belonging to the Worshipful Company of Weavers, opposite the entrance to Guildhall, in Basinghall-street, a suitable site for the erection of Offices or any large building. Frontage, about 37 feet; depth 120 feet. The Court will meet at the Hall to receive TENDERS for the same, on TUESDAY, the 4th MARCH next. The premises may be viewed by permission of the tenant, and further particulars had of the Clerk, JOSEPH JENNINGS, Esq. 1 Field place, Gray's-inn-square; and of Messrs. DAVIDSON and BRADBURY, Solicitors, No. 15, Bedford-street.

FREEHOLD GROUND, CHANCERY-LANE and FETTER-LANE.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet at the GUILDHALL, on FRIDAY, the 7th day of MARCH, 1856, at TWELVE o'clock at noon precisely, to receive TENDERS for a Building Lease for Eighty years, of certain PLOTS of GROUND, situate at the south-west end of Chancery-lane, and the south-east end of Fetter-lane.—Further particulars may be had, and plans seen, on application to Mr. HAYWARD, Engineer to the Commission, at these Offices, in the Guildhall. The Commissioners will require a plan and elevation of the premises proposed to be built, to be submitted to them for approval; and do not bind themselves to accept any proposal, unless deemed advantageous.

JOSEPH DAW, Principal Clerk.
Sewers' Office, Guildhall, January 2, 1856.

HARROW.—FREEHOLD LAND.—TO BE SOLD, 100 ACRES, in a ring fence, and several other eligible plots of FREEHOLD LAND, at a moderate price, situate on the Harrow Railway Station, surrounded and intersected by Residences of the first class of the principals of the Harrow School, and the London and North Western Railway Company offer to persons building houses of approved elevation, worth 50l. per year each, a free first-class pass between Harrow-on-the-Hill and Euston-square, for one year. There is an abundant supply of excellent water, and very superior brick-earth on the land. Apply to WILLIAM B. COOPER, Esq. Solicitor, 9, Verulam-buildings, Gray's-inn.

FREEHOLD LAND TO BE LET, for long terms, at moderate rent, as under, adjoining on the Ice-cart, Bromley, suitable for manufacturing premises; near the East and West India Docks, for fourth-rate houses; in the East India Dock-road, for second or third rate houses; near the Victoria Docks, for fourth-rate houses; and any improved ground-rents made may be purchased; on Windmill-hill, Gravesend, overlooking the river Thames, for second or third-rate houses.—Apply to Messrs. MORRIS and SON, Architects, Poplar.

TO BE LET, SEMI-DETACHED VILLAS, in immediate neighbourhood of Victoria New Docks, and in parish of Plaistow. Each house contains two parlours and breakfast-room, three bed-rooms, kitchen, scullery, pantry, and W.C. They are completely fitted up with every convenience.—copper, water, stoves, and grates. They are partially grained oak and varnished, and all are papered with newest patterns. They are ready for immediate occupation, and, in consequence of the liberality of the builder, they will be let for the low rents of 28l per annum. Taxes are very moderate, and railroad and omnibus conveyance within easy distance.—Apply to Messrs. WM. G. and E. HARRISON, Architects, 38, Bloomsbury-square, London; at whose Office views and drawings may be seen.

TO BUILDERS.—Dalston.—TO BE LET or SOLD, a GATEWAY HOUSE and PIECE of GROUND behind, 70 feet by 80 feet. Cottages or workshops could be built on the ground.—Apply to JOHN SCARD, Esq Solicitor, 3, North-crescent, Bedford-square.

TO BE SOLD, or LET, on lease, term 99 years, a PIECE of GROUND, for building, 30 feet frontage, about 240 deep, in the AMHERST-ROAD, HACKNEY DOWNS. The ground is made up back and front, and planted with shrubs and fruit trees, with boundary walls, drains, &c.—Apple at Amherst House, Amherst-road, Shakelwell-s, Stoke Newington.

WANTED, FREEHOLD LAND, to build on for a Public Institution, within ten miles of London: no objection to an old Mansion on the same. Full particulars, endorsed "Freehold Land," sealed, and addressed to the Board of Guardians of St. James's, Clerkenwell, to be sent to the Workhouse, Coppice-row, on or before TUESDAY morning, the 26th instant.—By order,
EDWARD SCARGILL, Clerk to the Guardians.

FREEHOLD GROUND for Building on.—TO BE LET, upon BUILDING LEASES, PLOTS of GROUND, in that healthy locality, Holloway, two or three minutes' walk from the Camden-road Station, Omnibuses every four or five minutes to all parts of London. Situate in St. John's-road, where houses let as fast as built. For particulars, apply to Mr. H. WITHERS, 9, Poultry. The leases direct from the freeholder Money advanced

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the finest sites for building purposes anywhere near London, and good villas are in great demand, on account of the situation being lofty, dry, well drained, and exceedingly healthy. Assistance will be afforded to responsible parties.—For particulars, apply to Messrs. J. and C. W. TODD, Milner-street, Brompton, London, or Belmont, Lee, Kent; or Messrs. NELSON and INNES, 6, Whitehall.

ALDERSHOTT CAMP.—PLOTS of LAND TO LET on Building Leases, commanding good frontages and a limitable sites, facing the permanent barracks now erecting, and near the Queen's pavilion. For particulars apply to Mr. THOMAS WHITE, Jun near the Alliance Hotel, and opposite the permanent barracks, Aldershott, Hants.

GROUND TO BE LET in the vicinity of Whitechapel, suitable for a Builder or a Manufactory, containing an area of about 2,000 superficial feet, with some shells erected thereon.—For particulars, apply at J. J. Hickmott's Sawmills, Church-street, Mile-end New-town.

WESTON-SUPER-MARE, SOMERSET. THE WEST COTTAGE ESTATE.—FREEHOLD LAND for the ERECTION of HOUSES, in the centre of the town, and overlooking the sea. TO BE SOLD, in one or more lots, on very reasonable terms.—Further particulars of R. G. PHILLIPS, Weston-super-Mare.

FACTORIES, GRANARIES, &c.—GROUND TO BE LET, suitable for the ERECTION of FACTORIES, with every wharf frontage, on a canal about three miles from London.—Inquire of Mr. ASHFITEL, 5, Crown-court, Old Broad-street, City.

TO LIME and STONE MERCHANTS.—TO BE LET, at a moderate rent, the CHANCELLOR'S WHARF, Queen street, Hammersmith, near the Suspension-bridge, with dwelling house, stable, and sheds.—Apply on the Premises.

TO STONEMASONS, IRONMONGERS, and OTHERS.—TO BE SOLD, several six-roomed CARCASSES, with roofs ready to be made, and the sewers in, and the houses let close up to it. The whole or part of the purchase money would be taken out in stone work or ironmongery, or any other kind of building materials.—Apply on the property, to BAUGHAN and MILLS, top of Carlton-road Kentish-town

TO PLUMBERS, GLAZIERS, PAINTERS, GAS-FITTERS, &c.—TO BE DISPOSED OF, with immediate possession, a very old-established BUSINESS in the above trades.—Apply to MR. JOS. COOPER, Ironmonger, High-street, King's Lynn

TO PLUMBERS, PAINTERS, AND GLAZIERS

TO BE SOLD, a first-rate BUSINESS, in a market-town, situated in the county of Suffolk. The premises comprise a convenient and comfortable dwelling-house, with show and work shops, stabling, gas house, yard and premises, and every requisite necessary. It has been established upwards of sixty years by the present occupier's father, and the reason of parting with it is ill-health, which can be testified. The terms are moderate. For further particulars, inquire of Mr. C. HARRIS, 58, Guildford street, Russell-square. Personal application between nine and seven in the afternoon

TO ENGINEERS.—TO BE DISPOSED OF, by direction of the executors, a very compact BUSINESS in London, which has been established many years. The premises are centrally situate, and conveniently arranged for the business. The principal tools are nearly new, by Smith, Beacock, and Tannett, of Leeds, and include a 13-inch self-acting slide-lathe, planing machine, and drilling machine; there are also three other lathes, high-pressure steam-engine and boiler, smiths' forges, and tools, bitter's benches, vices, and tools. About £—— is required, and to any active young man desirous of starting in business, a very eligible opportunity is presented.—For further particulars, apply to Messrs. FULLER and HORSEY, Billiter-street, City.

TO BUILDERS, PAINTERS, &c.—ALTERATIONS and additional WORKS to be EXECUTED at the villa opposite Barnes Church, Barnes, for GEO. GREEN-HILL, Esq.—Drawings and specification of the same, to be had of Mr. Smith, 26th, 27th, and 28th of FEBRUARY, at the PREMISES to be sent to the place address, on MONDAY, the 3rd of MARCH, 1856.—G. GORDON STANHAM, Architect, St. Alban's Cottage, North-end, Hammersmith.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX, Brothers, & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, February 24, 1856.

The Builder.

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ARCHITECTURAL ASSOCIATION, 9, CONDUIT-STREET, LYONS-INN-HALL, STRAND.—The next Ordinary Meeting will be held MARCH 7th, when Mr. BAILEY will resume his paper on "Cemeteries."

The Class of Design will meet March 14th; subject for sketch, "A Monument to a Musical Composer."

T. W. GOODMAN, } Honorary
J. A. BUNKER, } Secretaries.

SCHOOL of ART and TRAINING SCHOOL, MARLBOROUGH HOUSE, Pall-mall. The Spring Session will commence on the 3rd of MARCH, and terminate on the 15th of JULY. Hours of Study: Morning, Ten to Three. Evening, Seven to Nine, daily, except Saturdays. Fees for Morning and Evening, 4l.; for Evening, 2l. per session. The School for Female Students not in training, is at 37, Gower-street, Bedford-square.—For prospectus's, apply at the Head Master's Office, Marlborough House.

BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.
Head-Master—R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify Schoolmasters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Free hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still Life, &c., the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. M'Ian. Fees per session.—Advanced Class, 2l. and 4l.; Elementary Class, 1l.; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall-mall, London.

ART UNION OF LONDON (by Royal Charter). Prizeholders select for themselves from the Public Exhibitions. Every subscriber of One Guinea, will have besides the chance of a Prize, an impression of a plate of Harvest in the Highlands, engraved by J. T. Willmore, A.R.A. from the important and well-known Picture by Sir E. Landseer, R.A. and Sir Augustus Callcott, R.A. The Prints are now ready for delivery.

GEORGE GODWIN, } Honorary
LEWIS POCOCK, } Secretaries.

444, West Strand.

LECTURES to WORKING MEN, being the second for these courses for the present session, at the Museum of Practical Geology, Jermyn-street, will be on the First Principles of Chemistry, by Dr. HOFMAN, F.R.S. to be commenced on WEDNESDAY, 5th MARCH, at 8 o'clock p.m. Tickets may be obtained at the Museum, on MONDAY, the 3rd, from TEN to FIVE o'clock, upon payment of a registration fee of 6d. for the whole course.

TRENHAM REEKS, Registrar.

COMPETITIONS.

TO ARCHITECTS, SURVEYORS, AND OTHERS.

PLANS, DESIGNS, and DRAWINGS are requested for the ERECTION of TWO CEMETERY CHAPELS, under one roof, together with a Lodge and Entrance-Gates, for the Grantham Burial-Ground containing six acres of land, to include ground-plans and elevations, and to be accompanied by approximating estimates of the expense. The buildings to be faced with Ancaster stone, and the grounds to be of Mapperfield stone. The whole expense (including fittings, &c. of chapels) not to exceed the sum of 1,800l. 10l. is offered for the plan of the chapels and buildings considered to be the most suitable, and the architect shall also contract for the works; and 5l. for the second best. The whole of the plans, &c. to be sent (one, united and endorsed, but without any name or distinguishing mark, on or before SATURDAY, the 1st day of MARCH next, inclosing a sealed letter in each case from the person forwarding it.

By order of the Burial Board.
ROBERT HENRY JOHNSTON, Clerk.

Grantham, Feb. 5, 1856.

LIVERPOOL FREE PUBLIC LIBRARY and MUSEUM. To ARCHITECTS. The Council of the Borough of Liverpool are about to ERECT a BUILDING for the purposes of the FREE PUBLIC LIBRARY and the DERBY MUSEUM, and offer a premium of One Hundred and Fifty Guineas for the best Design, and One Hundred Guineas for the second. The Designs are to be sent in on or before SATURDAY, MAY 31. Copies of the printed conditions and instructions to Architects, competing; and lithographed plans and sections of the site, may be had on application to Mr. J. STUART DALTON, Librarian, Free Public Library, Duke-street, Liverpool.

TO ARCHITECTS, &c. — PLANS for a NEW WORKHOUSE for BOLTON UNION.—The Guardians of the Poor of the Bolton Union are desirous of obtaining PLANS, SECTIONS, and WORKING DRAWINGS for the ERECTION of a WORKHOUSE, to accommodate 1,000 inmates, the cost of the buildings not to exceed 18l. per head. A premium of 50l. will be awarded for the best, and 30l. for the second best plan, but the Guardians will not be responsible for any payment for unsuccessful designs. The plans of the two successful competitors will be the property of the Guardians, who do not pledge themselves to employ either of the successful competitors in carrying out the undertaking. The designs must be sent in under seal, without name, and with a private mark or motto thereon, accompanied by a letter under cover, and sealed, containing a corresponding mark or motto, and the designer's name and address, to the Clerk, on or before MONDAY, the 7th APRIL, 1856.

JOHN WOODHOUSE, Clerk to the Guardians.
Union-office, Acresfield, Bolton, February 15, 1856.

GRANTHAM BURIAL BOARD.—EXTENSION of TIME for PLANS, &c. The period for sending in Plans for Chapels, Lodge, and Entrance Gates, is EXTENDED to SATURDAY, 22nd MARCH. Plans are also requested for PLANTING the GROUND, LAYING OUT the ROADS and WALKS therein (a third as a crescent), on third one reserved, to be set in by the same time, for which an additional premium of 2l. 2s. is offered. The ground is an oblong square of 220 yards by 134 yards. Entrance west.—By order of the Board,

ROBT. HY. JOHNSTON, Clerk.

Grantham, February 20th, 1856.

TO ARCHITECTS AND SURVEYORS.

THE COMMITTEE for BUILDING NEW NATIONAL SCHOOLS at LUTON, Beds, are desirous of receiving DESIGNS in COMPETITION for the ERECTION of such SCHOOLS. A plan of the site, with further particulars, may be had on application, by letter only, enclosing a P.O. postage stamps, to Mr. D. B. STALKER, National Schoolmaster, Luton.

CONTRACTS.

BURLEY-IN-WHARFEDALE (Yorkshire) SEWERAGE WORKS.—The Local Board of Health for the district of Burley-in-Wharfedale hereby give notice, that they are prepared to receive TENDERS from competent persons for MAKING and FINISHING certain SEWERS, DRAINS, MANHOLES, GULLIES, and other WORKS required for the sewerage and drainage of their district. Duplicate copies of the plans, sections, details, drawings, and specifications may be seen at Burley, on application to the undersigned: also at the Offices of Mr. J. M'LANDSBOROUGH, Civil Engineer, 24, Queensgate, Bradford, from whom printed forms of Tender, and any further information may be obtained. Tenders, properly sealed and endorsed, must be delivered to the undersigned, on or before FRIDAY, the 7th day of MARCH next. The Local Board do not bind themselves to accept the lowest or any Tender.—By order,

EDWARD BRUMFITT, Clerk to the Board.
Burley-in-Wharfedale, near Otley, 13th February, 1856.

KENSWORTH CHURCH.—Builders desirous of TENDERING for REPAIRS at the PARISH CHURCH of KENSWORTH, in the County of Hertford, near Dunstable, are requested to send in their Tenders, on or before MONDAY, the 10th MARCH, 1856, addressed to the Churchwardens, at Kensworth. The drawings and specifications may be seen on application at Mr. ROUMIEU'S Office, 10, Lancaster-place, Strand, London; or at the Churchwardens', Kensworth.

TUNSTALL LOCAL BOARD of HEALTH.—To BUILDERS.—CONTRACT for ALTERATIONS of TOWN-HALL.—The Tunstall Local Board of Health are desirous of receiving TENDERS for the necessary WORKS required in the Alterations and Improvement of the Town-hall. Drawings and specifications may be inspected at the Office of the Local Board, Longside-street, Longton, from MONDAY, the 3rd, to SATURDAY, the 8th of MARCH; and further particulars may be obtained, on application to Mr. G. T. ROBINSON, Architect, 34, Upper Parade, Leamington. Tenders to be delivered to me, sealed and endorsed, on or before TUESDAY, the 11th of MARCH next.—By order,

Tunstall, 20th February, 1856. J. LOWNDES, Clerk.

CONTRACTS.

ORDNANCE CONTRACT.—To BUILDERS and CONTRACTORS. Sealed TENDERS will be received by the Director-general of Contracts, War Department, Pall-mall, London, until TWELVE o'clock on MONDAY the 3rd MARCH next, for the WORKS required for the ERECTION of a LAND TRANSPORT ESTABLISHMENT at the Camp, Aldershot, in the manner described, and specified and numbered Ten in a Schedule, copies of which may be seen, and forms of Tender obtained, on application to Mr. BARLE, Clerk of Works, Royal Engineer Office, Camp, Aldershot, on and after MONDAY next, the 3rd inst. The Tender to be endorsed, "Tender for Land Transport Establishment, Aldershot." The War Department reserves the right of rejecting the whole or any of the Tenders.

War Department, All-shot Camp, 30th February, 1856.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District, Tower, hereby gives notice, that sealed TENDERS, addressed to the Director-general of Contracts, will be received at the War Department, Pall-mall, on or before the 20th MARCH next, for the REPAIR of FIRE-ENGINES, BUCKETS, and for executing the WORKS and REPAIRS of the Royal Engineer Department in the London District, viz.: DOMEY'S, WINDSOR, CROYDON, and CARSHALTON HOUSES, and HAMPTON COURT, for a period of three years from the 25th of MARCH next to the 31st MARCH, 1859. Printed schedules and forms of TENDER may be obtained at the Royal Engineers' Office, Hyde-place, Pimlico, between the hours of TEN and THREE, and all Tenders sent in to the 20th MARCH inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineers' Office, London District,
February 25, 1856.

TO BUILDERS AND OTHERS.

THE JOINT BURIAL BOARD for the TOWNSHIP and PARISH of FOLKESTONE, in the county of Kent, are desirous of CONTRACTING for BUILDING and FINISHING, at the Cemetery, near Cheriton-road, TWO CHAPELS, a Porter's Lodge and Appurtenances, and the Boundary Wall, and for providing and fixing the Entrance-gates, &c. Persons willing to contract may see the plans and specifications at the office of JOSEPH GLEDSTANES, Esq. Architect to the Board, Bouverie-square, Folkestone, between the hours of TEN and FOUR on any day after the 25th instant. Sealed Tenders (marked "Tender for Buildings at Folkestone Cemetery") for executing the whole or any of the works, are to be left at my offices in Church-street, Folkestone, not later than FOUR o'clock in the afternoon of TUESDAY, the 18th day of MARCH next. It is stipulated that it shall not be incumbent on the Board to accept the lowest or any Tender. By order of the Board,

Folkestone, 12th February, 1856. RICHARD HART, Clerk.

THE MARCH LOCAL BOARD of Health are prepared to receive TENDERS from competent persons willing to EXECUTE any of the WORKS comprised in the following CONTRACTS for the Drainage and Water Supply of the District:—

CONTRACT A.—Sewers and Drainage Works.
CONTRACT B. Well-sinking, Brick Tower, and Engine-House.
CONTRACT C.—A Steam-Engine, Wrought-iron Tank, Cast-iron Pipes, Pipe-laying, and Sundry Iron-work.

The plans and specifications may be inspected at the Office of the said Local Board in MARCH. Duplicate copies may be seen, and printed forms of Tender and further information may be obtained, on application at the Office of Mr. R. REYNOLDS ROWE, Civil Engineer and Architect, 1, Paston-terrace, Cambridge. Sealed Tenders, properly endorsed, are to be delivered at the office of the said Local Board, not later than SATURDAY, the 8th day of MARCH, 1856. The Local Board are not bind themselves to accept the lowest or any of the Tenders.—By order,

THOS. T. ELLIOTT, Clerk to the Local Board.

March, Isle of Ely, February 11, 1856.

BURSLEM LOCAL BOARD of HEALTH. CONTRACT for FURNITURE and FITTINGS.—The Burslem Local Board of Health are desirous of receiving TENDERS for the SUPPLY of the necessary FURNITURE and FITTINGS for the New Town Hall. Drawings and specifications may be inspected at the Offices of Mr. G. T. ROBINSON, Architect, 22, Upper Parade, Leamington, on MONDAY, the 3rd, to SATURDAY, the 8th MARCH; and at the Public Offices, Moorland-road, Burslem, from MONDAY, the 10th, to SATURDAY, the 15th MARCH.—Tenders to be duly endorsed, sealed and endorsed, on or before TUESDAY, the 18th MARCH next.

By order, J. LOWNDES, Clerk.

Public Offices, Moorland-road, Burslem, 25th Feb. 1856.

TENDERS for BRICKS.—The Directors of the Commercial Gas Company will meet on FRIDAY, the 7th MARCH, at WILLY-WORK, to receive TENDERS for 10,000 best Common STOCKS, to be stacked on the Company's works Stepney, as directed by the Company's engineers. A sample of the Bricks to be seen with the Tender. The Directors do not bind themselves to accept the lowest nor any Tender.—By order of the Board,

GEO. JAQUES, Secretary.

CONTRACT for the SUPPLY of BUILDING MATERIALS for CONVICT PRISONS.—Persons desirous of TENDERING for the SUPPLY of TIMBER, Deals, Slates, Lime, Sand, Bricks, Lead, Glass, Wrought and Cast Iron, Ironmongery, Gas and Water Pipes, White Lead, Oils, &c. for twelve months from the 1st of APRIL next to the 31st MARCH, 1857, for Pentonville, Millbank, Brixton, Parkhurst, Portsmouth, Dartmoor, Chatham, and Portland Prisons, and Birmingham House, Fulham, are requested to forward the same, addressed, "Directors of Convict Prisons, 3, Parliament-street, London," on or before MONDAY, the 10th MARCH, 1856, till SIX o'clock p.m. Forms of Tender may be had on application at the several Prisons; or at the Office of the Directors, 45, Parliament-street, London.

45, Parliament-street, 18th February, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

WILTON LOCAL BOARD of HEALTH. — T. ST. NEWARE PIPE MANUFACTURERS and OTHERS. The Local Board are desirous to receive TENDERS for the supply of about [illegible] SALT GLAZED STONEWARE PIPES (“Jennings’s Patent,” as well as others), of the respective diameters of [illegible] and [illegible] inches, and of about 2,000 lineal feet of each gauge; also RED EARTHENWARE PIPES, of great porosity. Specifications with forms of Tenders, may be had upon payment of 2s. 6d., and further particulars will be given on application to the Clerk to the Board. Tenders, endorsed “Salt glazed Stoneware Pipes,” and “Red Earthenware Pipes,” and addressed to the Chairman of the Board, to be sent to the Clerk, on or before MONDAY, the 10th MARCH next, by TEN o’clock, a.m. The Board do not bind themselves to accept the lowest Tender.

By order of the Board,

THOMAS THRING, Clerk.

Wilton, near Salisbury, Feb. 23, 1856.

BOROUGH of SALFORD. — NEW CEMETERY. TENDERS for WORKS. The Burial Board Committee are desirous of receiving TENDERS for the ERECTION and COMPLETION of THREE MORTUARY CHAPELS, LODGE, and ENTRANCE GATES, at the New Cemetery. The plans and specifications may be inspected at the Office of the Clerk of the Board, Bexley-square, Salford, from MONDAY, the 3rd, to FRIDAY, the 7th MARCH, inclusive. Tenders must be delivered, sealed, at the Office of WILLIAM HILL, Architect, No. 50, Ashton-street, Salford, on or before MONDAY, the 24th MARCH, by TEN o’clock, a.m., and must be endorsed “Tender for Mortuary Chapels.” The Committee will not be bound to accept the lowest or any Tender.

By order of the Committee,

CHARLES GIBSON, Town-clerk.

Town Hall, Salford, Feb. 23, 1856.

THE VESTRY of the Parish of ST. MARY, LAMBETH. — To CONTRACTORS for SEWERS, BUILDERS, and others. — Notice is hereby given, that the Committee for Sewers and Street and House Drainage will meet at the VESTRY HALL, Kennington-green, on MONDAY, the 17th day of MARCH next, at SEVEN o’clock in the Evening, to receive TENDERS for executing the several WORKS required in the NEW SEWERS of the Parish, viz.:—

No. 1. For the Sewer in Kennington-road, from the Obelisk to the Vestry-hall, and in Kennington-green, from the Vestry-hall to the Elephant and Castle.

No. 2. For the Sewer in Kennington-road, from the Vestry-hall to the Canterbury Arms.

No. 3. For the Sewer in Kennington-road, from the Canterbury Arms to the Horns.

No. 4. For the Sewer in Kennington-road, from the Horns to the Cricketers.

No. 5. For the Sewer in Kennington-road, from the Cricketers to the Workhouse.

No. 6. For the Sewer in Kennington-road, from the Workhouse to the Archway.

No. 7. For the Sewer in Kennington-road, from the Archway to the Half Moon.

No. 8. For the Sewer in Kennington-road, from the Half Moon to the Cricketers.

No. 9. For the Sewer in Kennington-road, from the Cricketers to the Workhouse.

No. 10. For the Sewer in Kennington-road, from the Workhouse to the Archway.

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Gauge	In. wide.	Per 1,000 ft.
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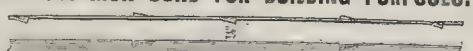

Plan and Elevation of Bond, showing Position and Form of the Claws.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11½ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse side of the iron, thus forming reversed claws, which are so bent that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

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NEW PATENT INVENTIONS FOR STABLE REQUISITES.

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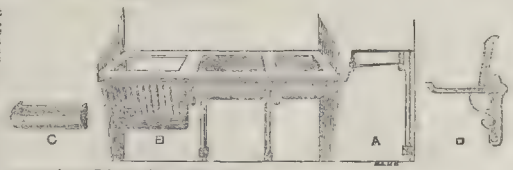
COTTAM and HALLEN, of Winsley-street,

The original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, and to which they have made important additions, the main features of the same being explained in the following description and Engraving.



A represents the Patent Hinge guide and Collar-rein, the slit of which is taken to the back of the manger-works with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable.

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety covers; San-tary Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Preserving Saddle and Harness Bracket, and every Article in Stable Furniture in stock.

An extensive Assortment of Patterns for both Plain and Ornamental Castings, and every description of Wrought and Cast-iron Work for building and other purposes.

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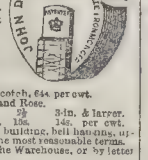

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Register Stoves, 6d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
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Best Fine Cut Chesp and Rose.

½	¾	1	1½	2	2½	3-in. & larger.
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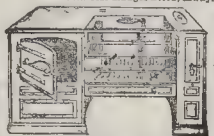
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.



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52s. 56s. 58s. 64s.
Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—
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Cast Rain-water Pipe { 2 2½ 3 inch.
11d. 1s. 3d. 1s. 4d. per yard.
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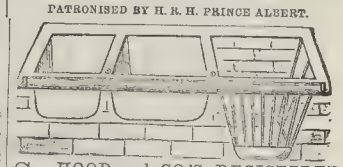

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THIS IS THE ORIGINAL PATENT
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No. 11 gauge weighs about 18 oz. per foot super.

13	"	20	"
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GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved

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Estimates given for Roofs, and every description of Galvanized Building, at the

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FOR SALE, at Jacobs and Hyman's Iron Wharf, Thornhill-bridge, Caledonian-road, King's-cross, TWENTY TONS of NEW SHEET ZINC, price 24*l.* per ton; a quantity of 10-feet iron columns of handsome design, iron girders, edge-runners, French burr stones, steam-boilers, several tons of white lead and paint.—N.B. For Sale or Hire, a Large Land Roller.—Old iron bought at per ton; old zinc, 14*s.* per cwt.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 84 and 85, Bridge-road, Lambeth, where a great variety are always on view for shop, park, railroad, coach-house, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and spring gate fastenings, at moderate prices None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent sale-trees, sugar-mills, &c.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furniture of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, as used in the new registered Venetian Ventilator, so much admired, &c. &c. &c.

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UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any fore-on metal

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Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at

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MARBLE.—NOTICE.—The ITALIAN MARBLE COMPANY have REMOVED their Office from 15, Cannon-street, City, to their WHARF, THAMES BANK, PIMLICO, adjoining the east side of Vauxhall-bridge. Please observe the exact address.

WM. W. BONNIN, Secretary.

MARBLE.—The Italian Marble Company, Importers of the produce of their own quarries in the province of Massa-Carrara, Italy, beg to inform the general Marble Trade in the United Kingdom that they are prepared to undertake contracts for any quantity of Statuary, Veined, Sicilian, Bardilla, Dove, and other Marbles, in blocks of all dimensions, delivered on shipboard at Leghorn, or in dock, London. A constant stock always on view on the premises, where orders are taken for Paving Slabs, Garden and Hall Statues, Vases, Tazzas, Mortars, Consoles, Chimney-pieces of all classes, Circular Table-tops, Monuments, &c. executed in Italy.—For further particulars, inquire at the Office on their Wharf, Thames Bank, Pimlico, adjoining the east side of Vauxhall-bridge.

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ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

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STONE, GRANITE, and MARBLE.—BRAMLEY FALL, CAEN,

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PORTLAND, and various other, in Block and Slab.

Yorkshire Paving, Landings, Steps, Sills, Sinks, Coping, &c.; Granite Blocks, Tame, Cubes, Pitching, &c.

Valentia State Slabs, Grindstones;

Marbles, in Blocks and Slabs,

At FREEMAN'S Stone Wharfs, Millbank street, Westminster; City-road Basin; and Deptford.

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STONE! STONE! STONE!—At Lowest PRICES, all kinds of Stone supplied to any extent. Quarry worked, sawn, or scrabbled to dimensions. Direct to any part by vessel or rail. A single truck load at wholesale prices

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Marble of all kinds and of best quality, in block and slab, Marble mortars, &c.

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CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman, forwards shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Townhall.

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SLATE CISTERNS, SINKS, and every description of SLAB-WORK, in Slate, Roofing Slates, or Covering. T. B. HANNAFORD is not only in a position to execute orders to any amount in the above, at extremely low prices, but guarantees a first-class material in all respects, similar to the slate he has used in fitting up and covering the principal mercantile and Governmental buildings in the City. A priced list sent on application.—TREVALGA WHARF, Ratcliff-cross.

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ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
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Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
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N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

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Contractors supplied to any extent.

By her Majesty's Royal Letters Patent

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SUPERIOR BRITISH PLATE-GLASS AT VERY LOW RATES.
THE UNION PLATE-GLASS COMPANY having recently completed very considerable improvements and additions to their works, take the opportunity of informing their friends that they will now be able to supply orders without delay; and respectfully invite the attention of the trade generally to the low rates at which their now much-esteemed manufacture is sold.
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ROUGH PLATE-GLASS from ¼ to ¾ in. thick, suitable for the windows and roofs of mills, mechanics' shops, market halls, railway stations, &c.
Beautiful and highly-finished POLISHED PLATE-GLASS, for shop-fronts and all superior glazing purposes, and for silvering.
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CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s.; 4ths, 30s.; squares, in cases, 100 feet each, 6 by 4 to 10 by 8, 14d.; larger sizes, up to 22 by 15, 2s.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.
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LEGENDRE, TURPIN, AND CLARK'S
Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at
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PATENT VITREOUS MARBLES AND CONSOLIDATED GLASS,
Applicable for Piers, Pilasters, Chimney-pieces, Shop Facias, Table-tops, Panels, &c. &c.
Show-rooms, 40, Broad-street-buildings, City; 4, Russell-place, Fitzroy-square; 119, New-street, Birmingham, &c. &c.

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By Royal Letters Patent.
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REDUCED TARIFF.
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The Builder.

Vol. XIV.—No. 682.

THE cemetery of the London Necropolis Company, situated on the line of the South-Western Railway, beyond Woking, will be the means of future great benefit to the metropolis. We have before this mentioned the establishment of the cemetery; but would further assist in making its advantages felt. First, however, a few words as to the present position of the all-important Burial Question.

Although changes in the practice of sepulture have been already made, such as will effect amelioration in public health, circumstances which, from time to time, come to our knowledge—viewed with reference to conclusions long since matured and published—show that improvement has yet to be promoted in the popular apprehension of this great question,—towards measures of a sanitary nature not yet in practical operation, and to realise the full social and moral bearings of the subject. We are not about to compare all the conclusions from Mr. Walker's long, serviceable, and unrewarded labours, or every page of the Report on the "Practice of Interment in Towns," by Mr. Chadwick, dated in 1843, with what Government has ventured to do, or to require. Our main object is rather to examine into the capabilities of the Necropolis Company, and of their cemetery,—though with reference to the most advanced opinions upon the question of burials—as to the necessities of London.

Few things appertaining to custom and habit, can be more difficult to regulate than the practice of interments,—at least in this country. Some of the most valuable suggestions and statistics before us, have been drawn from towns on the continent; and as to the provision of houses of reception for the dead, and in the prevention of extortionate charges—swelled by useless, if not objectionable forms of ceremonial—the English despotism of prejudice still withholds measures of sanitary and moral necessity, of which the value has long been seen in Frankfort, Munich, and other capitals. How much of the idea of "reverence for the dead"—supposed here to prevail, and there to be wanting—is purchased at a cost which makes any salutary influence impossible, little study of the subject is required to tell us; how much of life-destruction and moral degradation has been retained, our readers should sadly know.

All this, to the credit of individuals, and, indeed, of recent ministries, has been understood by them. Yet, slight allusion to matters fresh in recollection, would be required to show the difficulty which there is in imposing regulations. The Report above referred to, embodies the results of laborious researches into every branch of the question; and, with the aid of later documents, these conclusions should be obvious to every educated and observant mind,—namely, that the practice of burying in the close vicinity of dwellings is inevitably destructive to the sanitary welfare of the living; that—in all cemeteries—situation; character of soil, and its drainage; proportion of earth to each corpse interred; planting; and the provision of appropriate and beautiful works of nature and art, are each to be attended to; that the decomposition of corpses—though with the *minimum* of injurious exhalation—is to be promoted rather than checked; and that leaden coffins, family graves, brick graves, and "vaults," or *catacombs*, should be disused; that the retention of the body before interment, for a long period, is fraught with injury to health—especially in the single rooms or confined habitations which furnish the bulk of mortality—and in such cases, in addition, either occasions unnecessary and dangerous effects mentally upon survivors, or, more frequently, is also morally degrading and brutalising; that the customary ceremonial at funerals, and the extortion to which all classes are victims, make up a sum of expense which adds to or occasions many of the before-mentioned evils, and brings ruin upon widows and orphans; whilst, for the object of the verification of the fact of death—a thing shown by authenticated cases of suspended animation to be required, as well as for detection of causes of death in certain cases—public receptacles would generally present advantages. How far have these conclusions been at this day accepted, and practically carried out?

If you say that the pestiferous character of grave-yard exhalations is universally admitted,—and that we waste time by allusion to so trite a subject—we remind you that the other day, a dignitary of the church, seemingly disposed to throw difficulties in the way of the consecration of a cemetery, could express his belief that the neighbourhood of a grave-yard was rather beneficial than otherwise,—although, as long ago as the year of grace 1843 aforesaid, the shreds of argument as to the harmlessness of the effluvia had been scattered to the winds. If you believe that all else is now plain and admitted, certain further awkward facts present themselves.

The several Acts of Parliament that are in force, have not been passed without much of the "tinkering legislation" which has at last cried out within the walls of St. Stephen's itself, for reformation. Mr. T. Baker, of the Burials' Acts Office, in Old Palace-yard; and Mr. J. J. Scott, have each published a work, in which the Acts are "consolidated."* It is here seen that there are some important exceptions specified to the operation of the Acts. There are also some omissions which will have to be rectified this year.

The provisions in, or arising out of the Acts, which are most important to the community (independently of the clauses providing for the closure of old burial-grounds, and which take effect by Orders in Council), are the Home Office "Regulations," made in pursuance of the Act, "for conducting Interments in Burial-grounds provided under the Burial Acts 15 and 16 Vict. c. 85, and 16 and 17 Vict. c. 134;" and the "Instructions for Burial Boards in providing cemeteries, and making their Arrangements for Interments,"† approved by the Secretary of State.

Now, it will be recollected that these excited some animadversion; and we are perhaps not going too far to say that they were hailed as intolerable interference with the liberty of the subject. Yet they were and are rather behind the conclusions of experience. For, in defiance of the conclusions—or rather, in deference to popular prejudice—the "Regulations" recognise the practice of interring more than one body in a grave—as in the case of families. They allow of the use of vaults, provided "the corpse be enclosed in an air-tight metallic coffin;" though it had been in evidence in 1843, that such coffins could not be considered as necessarily "air-tight," having frequently to be *tapped* even before leaving the house where the death occurred.

Looking through the "Instructions," we find further inconsistencies, or deference to prejudice, therein, or shown to exist in the Acts. Cemeteries are not to be established where buildings are in progress or contemplated; and the law requires that a distance of 100 yards shall be kept from any existing dwelling-house, without there be the consent of the owner, lessee, and occupier. It is surely, then, an inconsistency to allow houses themselves to approach; or for any extra ground taken, to be let by the parochial board for building purposes, as is proposed in the case of the cemetery of St. Pancras. The "disposition to erect houses in the vicinity of ornamental cemeteries" prevails amongst those who have not made themselves acquainted with the evidence published, of the extraordinary distance to which the pollution of the ground may in certain cases be extended. Something more stringent would seem to be required than the mere *advice*, to leave "a space a few feet or yards in width, according to the size of the cemetery," between its "fence and the nearest graves." The truth is, that the sites of some of the cemeteries recently formed for metropolitan parishes, are so near to the suburbs as to be quite opposed to the spirit of the "Instructions." Again, with reference to family graves; whilst the "Instructions" say that "a fundamental principle of interments is, that no more than one body be buried in any grave at one time," and state that there are towns and districts even in England, where from "time immemorial" it has been "the custom never to re-open a grave which has been buried in;" whilst it is shown that the placing of coffins one over another, greatly prolongs the decomposition which is required; and whilst the "Instructions" also suggest that burial boards might dispose of *plots* of ground for families, with grave spaces to be used alternately, according with the system of the cemetery at Frankfort,—they feel compelled by the prejudices to which we have referred, to permit *exceptions* in favour of family vaults and graves. The Woking Company also are under no restriction in this particular, and allow several interments in a grave in the case of families, as well as the use of brick graves and vaults, and of other graves which, being of "extra depth," would seem to be likewise contrary to the best opinions. Again, the "Instructions," approved by the Secretary of State, say, that the use of monuments and flat stones covering the grave should be discouraged,—as tending to retard decay for nearly three times the period that would be requisite if the grave were covered with turf and planted: but they equally hesitate to impose any restrictions in that particular. The different proposals for removal and reception of the dead, are merely referred to in the manner of suggestion. Reception-houses were originally contemplated by the Woking Company: but an outcry was raised by the people of Lambeth; and, in deference to this, a clause stands in the Company's Act, forbidding them to retain any corpse at the London station during longer than twenty-four hours. The means which they can afford of carrying out what, under proper regulations, and with efficient structural contrivances, would be an important sanitary improvement, are therefore limited to the power allowed them of transferring bodies to Woking, and retaining them there—when desired by relatives—till the day of funeral; and this arrangement has been found to be preferred to the retention of the body, even by persons not residing in confined habitations.

The discrepancy of recognised principles and allowed practice is scarcely to be wondered at, when we regard the extraordinary nature of the case to which restrictions had to be applied. It is not only between *countries*, that customs in the rites of sepulture are at variance: there

* "The Laws relating to Burials in England and Wales, including 15 and 16 Vict. cap. 85; 16 and 17 Vict. cap. 134; 17 and 18 Vict. cap. 87; and 18 and 19 Vict. cap. 79 and cap. 128; with Notes, Forms, and Practical Instructions." By T. Baker, Barrister-at-Law. Maxwell.

"Burials Acts, Metropolitan and Provincial, 1852, 1853, and 1854; with the Incorporated Clauses from the Cemeteries' Clauses Act, 1847, &c. &c.; and explanatory analytical Abstract of the various provisions of the several Statutes. Fifth edition: to which are now added, the Burial Acts of 1855, 18 and 19 Vict. cap. 79, and 18 and 19 Vict. cap. 128; with an Introductory Abstract of their Provisions, and of the Alterations effected thereby in the existing Laws relating to Burials." By James J. Scott, Barrister-at-Law. Knight and Co.

† Printed for her Majesty's Stationery Office. 1854.

are singular differences between the several parts of the United Kingdom, and even between town and town. What would be "customary" in one place, would be but "maimed rites," or the height of impropriety, in other localities. Therefore, the moment that legislative or governmental restrictions are attempted, prejudices are raised, and on the most difficult of all subjects. The mode of transit by "the silent highway," or by canal, had advantages beyond what are available by railroad communication,—efficiently as it may be allowed, this means of conveyance is managed by the Necropolis Company. Plans for the different vessels and carriages were at one time got ready for the Board of Health: difficulties, however, presented themselves as to reaching one chosen site, arising from the crowded state of "the Pool:" and still more serious difficulties were perceived in the cost of property sufficient for embarking places at the river-side, and for the necessary street improvements adjacent,—which would have had to be paid for out of increased *rates*.

We may state as the result of careful inspection of the station at the Westminster-road, and of the cemetery itself, together with the arrangements observed at both places, that we discover nothing which does not present an improvement upon the system of the London suburban cemeteries, even greater than these were supposed to effect upon the older grave-yards. Every pauper grave is allowed to hold but a single corpse during the estimated period of decay; or, rather, no grave can be re-opened "except at the request of the friends of the deceased previously interred, for a space of ten years." The charges for the first four of the five or six classes of burials as conducted by the company, include the grave "in perpetuity."

At this juncture, that such advantages are available, might indeed be regarded as of singular importance, were the actual condition of London understood. In the chief suburban cemeteries, specially exempted from the operation of the Acts, the practice of "pit burial" continues: and practices—such as the keeping graves open—most injurious to public health, are maintained—as in the Victoria-park Cemetery—(or were so, quite recently),—though the sites are already, or will shortly be, surrounded by houses. At Abney-park, the unsuitable clay soil is said to crack, and emit vapours which are so offensive, that the letter-cutters on the grave-stones cannot work without precautions. It is therefore to be regretted, whilst the Acts were made not to impose discontinuance of burials "in any cemetery established under the authority of any Act of Parliament" (16 and 17 Vict. c. 134, s. 5),—the London cemeteries referred to being specially named in the schedule of the earlier Act (15 and 16 Vict.)—that no power of *regulating* these should have been reserved. The omission will, however, be rectified: though it is not at present desired to close such grounds, or to get the power of *preventing* any burial in them. Indeed, in the case of the Victoria-park cemetery, the greater part of the ground has not been touched. The overcrowding of the other portion can be due only to desire of money-getting. However, notwithstanding the exemption, the medical inspectors attached to the Home Office, charge themselves with examination in such cases. But, Dr. Sutherland, who attended to the London district, has been some time in the Crimea; so that as the other inspectors are much occupied in the country, it is possible that the objectionable state of the London grounds has continued longer than it might have done. From a question and answer, on the 11th inst. in the House of Commons, it will have been seen that two or three of the old intramural graveyards are still open.* The sanction of the Home Office in those cases appeared to be made a matter of necessity, by the still unexplained postponement of the opening of the new ground for the City. The ground in Holborn, attached to St. Andrew's Church, now really closed, had been re-opened by taking advantage of the permission to continue the use of the ground of the same parish, in Gray's-inn-lane. The continuance of "pit-burial" at the West Brompton Cemetery was, we believe, an accident, arising out of the absence of the London inspector; and it was very promptly put a stop to. Besides the special cases already referred to, the only exceptions to the complete disuse of London burial-grounds, were in some few cases where one burial in each grave is permitted, till the space is thus filled; in the case of Trinity Church, Brompton, where one burial in each grave is allowed to 1st October, 1859; in the case of St. Mark's Cemetery, Camden-town, to be closed on 1st May next; St. Dunstan's, Stepney, on 24th October next; and All Saints' ground, at Poplar, on 1st May next. There are, however, the important exceptions to the cases of closed grounds, of "existing rights," "private vaults," and private graves;" whilst from West Hackney, there is "no return." These "exceptions," so long as they exist, would justify apprehension—in some degree. The removal of bodies by relatives to new resting-places, practised lately in many cases—as indeed to the cemetery at Woking—is considered to be highly dangerous, and is to be put a stop to during the present session. Mr. Simon, the late medical officer to the City of London, in 1848-9 appeared to report an opposite opinion, as to the danger relatively, of the two courses.

The parishes which now inter in the Necropolis at Woking, are those of St. Giles, Bloomsbury; St. George, Bloomsbury; St. Luke, Chelsea; St. Margaret, Westminster; St. John, Westminster; St. Saviour's, Southwark; St. Olave, Southwark; Bermondsey parish; Chiswick; and St. Paul and St. Nicholas, Deptford: ground has been allotted to St. Anne's Soho, and St. George's in the East; and arrangements are in progress with other parishes. No difference, we are told, is made in the ceremonial between funerals of the better class and those of paupers: the latter are what we can speak to, and they are performed in a very proper manner. The guild of St. Alban, an association of lay members of the English Church, having, as one of their objects, the systematic performance of pious and charitable works, and holding the Christian burial of poor Church people to be especially incumbent on them, also inter at Woking, where a pall and other matters of the kind for the common use are carried with the corpse. The system of the Necropolis Company, we are told, has rendered evident that there is a desire, where it can be done, to dispense with much of the unmeaning frippery of the street procession.

The London station is a building in three stories, the top story being that which is on a level with the line of the South-Western Railway; with which there is a communication from the Necropolis Company's Station, by a short branch. Below, there are two entrances from the public streets: one from the Westminster-bridge-road, by an arch of Norman character, in ornamental red brick and tile work, and the other from the Cornwall-road. The gates, of elaborate workmanship, by Messrs. Bailey, like the ironwork elsewhere which plays an important part in the effect, are of excellent character. The principal gates were exhibited in 1851. On passing along the carriage-way, a neighbouring slaughter-house is so offensive, that it must be productive of some unfounded prejudice against the company's arrangements. The principal portion of the lower floor is occupied by a large room—including also the height of the floor above—used for depositing the bodies till the time of departure of the train. Pause before that black box, made of rough and splintered boards, badly nailed together. Ere this you have looked on death in some shape, and haply not without awe, and other vague and undefinable emotion; and now, not with indifference, or without much self-communing, you seem almost to discern the poor form of the mortal *found drowned*, cased in that "narrow cell," whereon you read this inscription chalked on the lid,—

"*A Female Unknown.*"

Turn to the coffin of a different class, of which the "ornamented plate of inscription, four pair shield handles, and japanned and burnished nails,"—as usual in this class of "ornaments"—seem to conjoin the vanity of show with the utmost abasement of mockery and pretence; and marvel that the vices which find expression in our *art* should be cherished even to the grave. The furniture of our last resting-place should be at least truthful—claiming to be no more than it is. The room we are in—like others in the building—is well ventilated by large panels of perforated zinc; the different channels communicating with a tall shaft, in which means of exhaustion are provided. The coffins are raised by lifts, worked by a steam-engine of six-horse power. There is a principal staircase of good architectural character, lighted from the top, and a separate staircase for the mourners of the pauper class. In the one-pair story, two large spaces are appropriated as waiting-rooms for the male and female mourners of the class last mentioned; and to these, closets and lavatories are provided. Smaller waiting-rooms, each with similar conveniences, and appropriately furnished, are provided for funerals of the "artizan" and next superior classes. On the top floor, the principal waiting-rooms are two for the first-class funeral parties—one on each side of the staircase. Each has an adjoining apartment for closets and lavatories. The provision made in these last particulars may have appeared great; but the usual railway-station system of separate waiting-rooms (that is to say, allowing one for ladies) is required, in fact, for each funeral party. In this view of the case the plan is faulty. The ground taken up is indeed quite inadequate,—shelving off, so as to have for great part of the length very slight depth. The practical effect of the arrangement is at present this:—When the number of funerals in one morning is small, different members of a party are too widely separated: as (in the case of there being *one* first-class funeral) across a public staircase. On the other hand, where the number is greater, for some of the parties there can be no separate ladies' room. A very large station, it may be said, would be required, and great expense in the fittings: but the want of this, if the Woking Cemetery is to be used as much as we hope it will be, will be attended with serious inconvenience. It must be recollected that "separate apartments" for each party of mourners, are offered in the Company's prospectuses. Even with the present area of ground, the arrangement might, we should think, have been better; and the positions of some of the doors of the closets in the second-class rooms are to be altered. A plan having a considerable number of small rooms—capable of being thrown together on the arrival of larger parties than usual—would be found most suitable. In the temporary buildings at Woking, the deficiencies referred to are rather greater than in London; but there, there are female attendants attached to the refreshment department. In other respects, the arrangements of the London station seem unexceptionable,—the moving of the coffins and starting of the train being carefully and noiselessly conducted. The railway, within the terminus (roofed over, on the ridge and valley system), is carried by deep girders above the carriage-way of entrance, which last receives its light from the spaces between the lines, those being filled in with glass slabs. The architecture of the building, next the departure platform, is expressed in good plain brickwork, with arch-headed apertures. A globe gas-light is in the centre of each of these—supported in the case of the windows by an ornamental ironwork standard. The coffins, on reaching the platform, are placed each in a separate compartment, made for the purpose with strong straps to prevent displacement by the motion of the train. The hearses, fitted with these compartments, are of two kinds, differing, however, very slightly, and are similar externally to the ordinary parcels' van, though with several doors, and a more finished appearance. The carriages are the ordinary ones, supplied by the South-Western Company, which, in regard to the second-class, plastered with advertisements, may by some be deemed objectionable. The train proceeds along the South-Western Railway to the branch line leading into the cemetery, which we reach in less than an hour without discovering any difference between our journey and one by an ordinary train, except that we have made no stoppage till we reached the junction. The distance from the Waterloo Station is 24½ miles. We descend at the station near to the chapel

* What is meant by an obscurely-worded order in Council, in the *Gazette* of Tuesday last,—referring to postponement,—we have had no opportunity yet of ascertaining.

in the unconsecrated ground, whilst some of the coffins are removed; and the train which had descended the incline, is drawn on by horses to the consecrated ground some distance farther.

At the cemetery, we find much to interest us; and the particulars will afford matter for another article.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

Bells of the Royal Exchange.—The discussion on the subject of Bells was resumed and closed on the 11th ult. Mr. W. L. Baker, Mr. R. C. Nicols, Mr. Ashpitel, Mr. Foggo, Mr. Ferrey, Mr. Denison, Q.C. and Mr. Varley taking part in it. The chairman, at the close of it, spoke with regard to the failure of the Royal Exchange bells, over which he had no control. They had never succeeded in getting these bells in tune. There was a certain scale of notes which were intended to play tunes, and therefore should have been properly pitched. There was no particular necessity to study expense, and he had been anxious to get a good chime of bells. At Messrs. Mears's works, he found a rude system in operation, which appeared inconsistent with anything likely to ensure tune. He saw, indeed, that the whole matter was traditional; and he therefore suggested that bells so roughly cast could hardly be in tune; and he further proposed to put the series in a row, and by striking, ascertain whether the gamut could be produced. This trial, however, was declined. The machinery for the chimes was made by Mr. Dent, one of the most skilful mechanicians in the world; but as soon as they began to play, the effect was highly disagreeable. In fact, the peal was not in tune. Then came a series of suggestions, such as "the hammer strikes too hard;" but as Mr. Dent said, it was easy to make it strike softer, by merely shortening the lever. The architect and the tower were in fault; indeed, it was anything but the bells; but in fact the tower contained a large square chamber, with four large windows filled with louvres, &c. He even offered to take the louvres away. At last it was agreed to take down the bells, and re-cast them of a larger size, and with two additional bells; but the new bells failed. It was plain that the makers had no rule; yet they produced testimonials without number, and engaged that the bells should be in tune to the satisfaction of Mr. Edward Taylor, Gresham Professor. At first they insisted that the bells were in tune, but Mr. Taylor tested them with a violin to show that there could be no possible mistake. The bells were chipped, cut and altered in every way without success, and he (the chairman) never could get people to believe that *tone* was not *tune*. Mr. Taylor, of Loughborough, re-cast the bells, but without success, and he believed the chimes remained a failure. He had found in an old manuscript an illumination showing a man grinding bells, and he believed that the ancients in fact turned the inside of their bells in an accurate form with regard to the outside, according to some rule now lost. He believed that the same law or mathematical process by which he had seen Erard set out the top of a harp, might be applied to a bell, so as to conduce to its accurate tuning in any particular note. He had heard the traditional story that the founder of the tenor bell of Bow Church never left it, but was always filing or hammering the inside till he got it to the proper note or pitch of the C of that time. The chairman further observed that a letter had appeared in the *Times* stating that the Westminster bell could not be got into the clock-tower, as Sir Charles Barry had forgotten to provide an access for it. It was due to Sir Charles Barry to state that this was not correct. He had not forgotten the matter, nor was there any difficulty in it; neither would it cost 3,000*l.* to erect a scaffold to raise the bell. The meeting was aware that the whole of one side of the lower story of the clock-tower facing west, consisted of a large arch, which had been filled up with brickwork; the bell would be brought up to the arch, and so much of the brickwork removed as might be necessary, and the bell would then be raised without any difficulty whatever.

The Chairman then adverted to and explained some of his remarks made at the opening of the session. His observations will be found below under another heading, for the sake of reference hereafter.

At a meeting on the 25th ult. a letter from Mr. G. G. Scott, in reply to Mr. Tite's previous observations, and the production of which had been delayed, was read. This we also give *in extenso*. M. Viollet le Duc, architect, of Paris, was elected honorary and corresponding member; and a paper, entitled, "Archæological Studies in Jerusalem," was read by Mr. G. J. Wigley, associate.

The Diploma Question.—The Council have come to the following resolution on this subject:—"That the Council feel that it is as yet premature to pronounce an opinion upon a subject of so great importance as the establishment of an examination with reference to granting a diploma in architecture. That before they could recommend the Institute to undertake such a charge, it would be necessary carefully to ascertain the opinion of members of the profession generally. They moreover feel that the duty which has been recently intrusted to the Institute by the Legislature, viz. the examination of the candidates for the office of district surveyor, will enable them, after a sufficient experience of such examinations, to come to a sounder judgment than they can at present on the subject of the diploma." It appears to us that they have adopted the right course.

The ensuing Election of Officers.—Mr. Scoles, the senior hon. secretary of the Institute, having expressed his intention to retire from that office, the duties of which he has fulfilled for many years, the profession will be glad to learn that Mr. Digby Wyatt, at the request of some of the leading members, has consented to allow himself to be put in nomination at the election in May. The many qualifications of Mr. Wyatt, both literary and professional, and the earnest and continuous attention which Mr. C. C. Nelson bestows upon the affairs of the Institute (devoting to it indeed a large portion of his time), give promise of increased usefulness and of an active development of the resources of this body, for promoting the best interests of architecture and the profession in general. Mr. Scoles has earned the best thanks of the Institute by his attention and unfailing urbanity. We have since been asked to say that Mr. Papworth has placed himself at the disposal of the body for election to the above office.

GOTHIC OR CLASSIC?

Mr. Tite said, at the meeting of the Institute to which we have already referred: I am anxious to put myself right with reference to some remarks which I made in the discussion on the diploma question, on the undue preference (in my opinion) given to mediæval architecture, and which remarks have been somewhat misunderstood. I was an early cultivator of mediæval architecture: I esteem it very highly, and I think I understand it; but all that I wanted to urge was that it was not reasonable to abandon the better styles of architecture (for many purposes) for what I considered the fashion of the day. That the study of classical architecture is neglected, is proved by the fact that there have been no competitors for the architectural medals of the Royal Academy, as stated by the Professor in a recent lecture. Now why is that? Surely because the young architects of the day are studying mediæval church architecture to the abandonment of other studies; and I presume, therefore, until the Academy can be induced to give a medal for a design in that style we shall have the same result. Such a state of things I greatly regret, because classical architecture gives us the best and most certain principles of feeling and thought in architecture. With regard to mediæval architecture, it is true we have become good copyists, but our forefathers did vastly more than this, for they urged on their thoughts and inventions,—they went on from excellence to excellence, and they often obtained it in the search after novelty. Young architects should study the principles of things, and apply them to expression, utility, and fitness in architecture. In the remarks to which I have referred, I found fault with the unfitness of modern mediæval churches for the purposes for which they were built. I quoted one which, although elegant and beautiful, was anything but a Protestant church. I stated, amongst other things, that on the south side of the deep chancel of that church there was a range of sedilia. Now of what Protestant use could they be? The rubric says the minister shall "stand on the north side of the altar;" and even among Roman Catholics they are obsolete. Such ornaments are not only useless but expensive, and inconsistent with the purposes to which the churches are applied. Then again I have seen lately, in two large squares near Belgrave-square, large masses of building in which classical architecture would have given a better church than those which have been built there. I allude to Warwick-square and Chester-square, composed of masses of regular Italian buildings; and, forming one side of each square, irregular Gothic churches with spires are placed, which appear to me incongruous and out of place: and inside they are not adapted to those vast congregations which frequent them. That these are the opinions of men as well able to judge as myself, is proved by the remark of Mr. Petit, the learned ecclesiologist. He says,*—"There are good reasons why we should rather make the best of our old churches, than materially alter them or destroy them, to build others in their room. The impression they are calculated to produce more than compensates for some inconvenience in their form or arrangement; but there seems no reason why we should ever plan or build a new church of an inconvenient form, or in any way unsuited to our own manner of worship. If, for instance, it is desirable that all the congregation should be within sight and hearing of the minister, why should a church ever be built in which a part of the congregation is hidden from him when he performs any part of the service in the usual place? And this must be the case in every church having aisles which terminate at the division between the nave and chancel. If we find that galleries are useful and convenient, why should we build churches that will not bear galleries, or to which they are a disfigurement? If we professedly adopt high-pitched roofs as suitable to our climate, why should we ever combine them in such a manner as to leave a lodgment for snow or rain? There may be difference of opinion as to the advantage of an unbroken area, or the expediency of galleries; still they serve my purpose in illustrating the proposition I would advance, which is, that an architect ought not to abandon a convenient arrangement on account of its ugliness, but rather try to get rid of the ugliness without giving up the convenience. If, then, a feeling that his first object is to make his building fully answer its primary purpose, and a determination that nothing shall be allowed to interfere with this object, be referrible to a spirit of utilitarianism, I conceive that so far, at least, an architect ought to be a utilitarian."

That is the opinion of a modern ecclesiologist of great learning and judgment; but I will quote also the opinion of Sir Christopher Wren. He was called upon to build the City churches, and he gives this opinion on the subject.† He says,—"Churchwardens may be careless in speedily repairing drips, but they will usually whitewash the church and set up their names, but neglect to preserve the roof over their heads." He next proceeds to discuss the capacity and dimensions of the proposed new churches, and a mode of calculation to determine them from the number of inhabitants for whom these churches were to be built, which he calculated at 400,000, or five times as many as were burnt out in the City. The churches, therefore, he says, must necessarily be large, and if they were built to hold 2,000 persons each, the accommodation would fall very short of the requisites; but, he adds, in our reformed religion it would seem vain to make a parish church larger than that all who are present can both hear and see the preacher. The Romanists indeed may build larger churches—it is enough if they hear the murmur of the mass and the elevation of the host; but ours should be fitted for auditories. He considered it to be hardly practicable to make a single room so capacious, with pews and galleries, as to hold above 2,000 persons, and all to hear the service, and both to hear distinctly and see the preacher. He endeavoured to effect these objects, he says, in building the parish church of St. James, West-

* *Vide* the *Builder*, January 26, 1856—Mr. Petit's address at the Architectural Exhibition.

† *Vide* Elmes's "Life of Wren," and the "Parentalia."

minster, which he presumed was the most capacious, with these qualifications, that had then been built; and yet at a solemn time when the church was much crowded, he could not discern from a gallery that 2,000 persons were present.

I was rather more urged to express the opinion I did, by not desiring to see classical architecture neglected merely in obedience to a present fashion. I believe that fashion will to a certain extent pass: I may be mistaken, but it appears to me that the universal application of mediæval architecture and forms is an error and a great mistake. I simply suggest that as my opinion; and I regret that that which formed so important and so necessary a subject of study in my early life should be at the present day neglected for something which, though beautiful in its way, has not so many claims upon our attention, and is not so well adapted to our forms of religious worship. I have no desire whatever in the least to interfere with the views of others; but those who choose to adopt these views conscientiously will find in me a man to think for myself. I am glad to have this public opportunity of saying a word upon this matter, because by one of our most eminent professors of architecture I have been a little misunderstood. I only offer this as a matter of explanation and not of discussion at the present moment.

The following is Mr. Scott's letter previously mentioned:—

In a society which supposes each of its members to hold his own individual opinion, and to express them freely as he pleases, it may appear unnecessary to notice mere manifestation of feelings which every one knows our respected friend entertains; but coming *ex cathedrâ* from the chair of our Institute, and from our parliamentary representative, they may, if unanswered, appear to acquire more weight than belongs to them, and be viewed not as the feelings of an individual member only, but as those of the Institute as a body; in which case it would naturally become the duty of those who hold contrary opinions to make a formal protest, or to separate themselves from the society.

Mr. Tite contented himself in his address at the preceding meeting with a general expression of regret that the love of Pointed architecture was becoming too exclusive, but with some compliments to its favourers on their success as compared with their fellow-labourers in France. He commences his second series of remarks with a somewhat stronger expression of his regret, especially that we do not keep ourselves to the buildings for which our style is suited. Warming as he proceeds, he accuses us of being mere blind copyists, incapable of thinking for ourselves, and winds up by showing that our style is unfit for any purposes at all, unless it be for Roman Catholic churches. Now, would it not have been better to have acknowledged this opinion at the outset? We can readily understand that the majority of those who were firmly grounded in the old state of things before our movement had made much progress, are likely to disapprove of what we are doing. It is so with every movement, whether in art, science, or politics: the movement party are invariably maligned and opposed by those whose prepossession they disturb. It is an understood thing, and no one wonders at or complains of it. Mr. Tite, however, takes a higher ground: he admits at first that, in some respects, and in some cases, we are right, and meets us on this ground, but at last winds up by denying that we are in the right anywhere, unless it be in Roman Catholic churches!

I will, however, crave your patience while I follow him into particulars. His first complaint is that our style is applied "to buildings for which Classical architecture is more fitted, such, for example, as town halls and markets." I rejoice to hear that there is such cause of complaint! *I* have long been complaining that it was *not* applied to such buildings, for which it seems to me so eminently adapted. Where, for instance, are finer town halls to be found than in the great mediæval cities of Germany and Flanders; and where better market houses than the *halles* of the Flemish towns? They are only too good and too noble for us; but surely a style which produced *them*, and which has produced equally appropriate buildings for the humblest purposes of trade and husbandry, will not fail in giving such modifications of its nobler conceptions as will meet our circumstances, whatever they may be. Only give us the chance, and I think we can show whether town-halls and markets are unsuited to our style.

Mr. Tite next complains that in building churches in towns we do not respect the style of the "elegant" houses adjoining. I sincerely wish we could say much for the elegance of our town houses! They certainly carry out Lord Bacon's axiom. If they are built *to live in*, they assuredly are not generally built *to look at*; though it is the misery of our lot that we are hourly compelled to look at them! Be this, however, as it may; it is inherent on a period of change that such discordances of style should exist. The architects of the seventeenth century did not scruple to build in their own Renaissance style because surrounded by Gothic buildings: they even patched up the latter in their own style. No change would be made in anything were this principle to be admitted. It is simply the principle of obstruction, which comes ill from the chairman of an institute like ours, which professes to aim at progress.

If, however, our vice-president merely means that we build in our *towns* churches better suited to *rural* situations, I heartily join with him; but is this his own criticism? has he not, or might he not, have learned it from ourselves? I can refer him to able articles on the subject from the pens of leading members of our movement, in which he will find it impartially discussed, and our errors severely exposed. Surely, he will hardly venture to say that Gothic architecture is suited to the country, but unfit for towns!* that it is unsuited to be placed near houses 70 or 80 feet high! I confess I have never heard want of height quoted as one of the defects of Gothic architecture. I do not know whether he refers to the church in Gordon-square as being unfit for such a position, but if he will look out from the side of Hampstead-hill, he will find that this *alone* among all the churches of London (St. Paul's and Westminster Abbey only excepted) is seen rising predominantly over the house-tops, and is a conspicuous object without the aid of a tower. All that keeps us from raising our town churches above the "elegant" houses around them is *our poverty*; a hindrance which would apply equally to any style, excepting that a Gothic church would be vastly improved if we could afford to make it tower above our houses, while an Italian church would probably be thrown out of all proportion by the operation. Our misfortune is independent of our style. We are compelled to build *town* churches with *country* means, and are then laughed at for building country churches in our towns. If we had the funds which were expended a few years back on some of the worst of our "classical" churches, we should not dread the proximity of houses 70 or 80 feet high, nor fear to be accused of building churches only suited to the country. But even if we have in some cases deliberately fallen into the error (which I think has sometimes occurred), that has nothing to do with the style, for no one will accuse Gothic architecture of falling short of the *classical* in *loftiness*.

Mr. Tite then proceeds to compliment the builders of some of the great City warehouses, and further on imagines what some Gothic architect would have made of them. Has he ever seen the *noble* and almost *majestic* mediæval warehouses in some of the ancient German cities? A nobler type for buildings of their kind can hardly be conceived: they have rather too much roof for modern purposes, but are designed with a perfect appreciation of their use, and obtain their noble aspect solely from the simplicity and truthfulness with which their uses are provided for. Some of the finest warehouses I have seen in England and Scotland, built by persons who never thought about building in any style, but simply thought of doing *well* and *efficiently* what they were about, have struck me as having a strong family likeness to these stern and noble structures; and they certainly look better than the huge, over-corniced, though handsome, fronts in the city of London. It is curious that while Mr. Tite lauds our City warehouses in the same breath in which he speaks of the *small projection* in French street architecture, as showing that their architects lean "to the wants of the place and the times," Mr. Fowler very justly complains of their enormously projecting cornices as reducing, in narrow streets, the sky as seen from the street to one-half! He might also have animadverted on the *frightful danger* they incur.

After some very judicious remarks upon *fitness*, and on making a building suitable to its purpose, sentiments which, by the way, he will find admirably enlarged upon by Mr. Pugin in several of his works, and laid down as the key-note of Gothic as distinguished from *modern* architecture—Mr. Tite returns to churches, selecting one which he has seen in the neighbourhood of a manufacturing town as a beautiful piece of copying, but as failing in all its practical uses. Surely, however, he will not argue that the mistakes of an individual architect are to be taken as condemnatory of the style he happens to be working in; or what style would escape? "The congregation *could not hear*;" but is this usually the case with Gothic churches? The very reverse is more frequently the fact. Nor could they "*sit with comfort*;" but surely a seat may be made comfortable or uncomfortable in any style! There was "*no ventilation*;" but is Gothic architecture opposed to ventilation? The "*warming* was defective:" surely a few more hot-water pipes would not have marred the style! The clergyman *complained of the reading-desk*:" what clergyman does not complain of his reading-desk, whatever be the style? It is said that every new incumbent of every church wishes to inaugurate himself by moving the pulpit: then why not complain of his reading-desk? Let him alter it to his mind, and it will not, I dare say, be less "Gothic" than at present, or less like what it would have been in Edward III.'s time! "Indeed, the church is so inconvenient, that *the people would rather stay away than go to it*;" but this may be the fault of the people and the clergyman as much as of the church; yet after all this, the church is "far more beautiful than the architects and masons of Edward III.'s time *could have made it!!!*" Really this *is too* complimentary! What! more so than *Exeter cathedral*; than *St. Stephen's chapel*; than the west front of *York*; than all the churches of Lincolnshire, or the church of St. Ouen, or the *façade* of Rheims? If so, I do pity the taste of those who would rather stay away than go to it! I would willingly bear a little cold, or sit in an uncomfortable seat, for the luxury of seeing such a building!

Now I think I happen to know the church alluded to. It is, if I am right, a very nice, simply designed church. It is generally (it is true) in the form of an old church, but is absolutely free from slavish copyism: instead of being a most accurate and elegant imitation of the style of Edward III. it comes home to my recollection as a somewhat severely simple adaptation of that of Edward I. Instead of being far more elegant than the old people could have made it, all little elegancies of workmanship are carefully eschewed. It is rather ascetic than elegant in its character. Instead of being a specimen of "*identical copying*," and having "no ventilation," it has the novel feature of the clerestory devoted to newly constructed ventilators in lieu of windows. Its seats are unquestionably faulty, as much an exaggeration of *lowness* as the seats of thirty years back were of *height*; and the hot-water apparatus (whether or not from being constructed as a type of Edward III.'s days) does not answer. My own impression was, that this arose not from the style of the apparatus, but from the engineer having been chary of his pipes. There are possibly a few ritual affectations about the chancel which would be as well modified; things which usually depend more on the fancy of the clergyman than the architect, and certainly have nothing to do with the style; one thing, however, I observed, which I much liked—a large and cleverly-contrived recess in

* It is an unfortunate admission on the part of our opponents that Gothic architecture, while it harmonizes with the works of God, clashes so severely with the modern works of man.

the chancel for the organ, such as I have never seen in any church, ancient or modern, and which certainly did not strike me as a specimen of copying or of "*want of all thought.*" The clergyman, however, not only complains of his reading-desk, but of his pulpit. "Being made of stone, it is so cold he cannot put his hand upon it!" Did this ingenious priest never think of the expedient of lining the top with cloth or velvet, which is usual even with wood pulpits? Surely a pulpit may be made either of wood or stone, whatever be the style of the church! It is usual to give the clergyman his choice, and I generally find them choose stone, forgetful of their hands; and among old pulpits I think I have seen more stone or marble ones of the Renaissance than of the Mediæval periods, and I do not at this moment recollect any of the time of Edward III. The last complaint is described "as a most enormous mistake:" it is that the altar-rail only allows room for twelve communicants. It may be better to allow more, but if Mr. Tite will look into it at such a time, he will find that it really makes no practical difference, or very little, whether the rail be long or short, if the rule of the church be carried out of repeating the words prescribed to *each communicant*, or even to two together. If, however, the indecent custom be admitted of repeating them only to each "rail" of communicants, I admit that time is saved by making the rail long, but it is a custom more honoured in the breach than in the observance. Finally, however, we come to the "sweeping clause," which condemns all the forms of Gothic architecture as suited to the Roman Catholic religion and unsuited to our own; and on this ground, in Mr. Tite's *sincere opinion*, he thinks "the architecture which was learnt in Italy was much better suited than that now in fashion. So we are to go into Italy to learn Protestantism! The Popes then were sadly mistaken when they built St. Peter's. Little did they think they were erecting the type of Protestant architecture. I will not, however, follow out the subject: the fallacy of it is too obvious.

One word, however, on the subject of copyism. It is unquestionably one of the great vices of our day, and the more it is run down the better; but let us have fair play. *Laudari a laudato Viro*, is what we all desire; and we equally rebel against being blamed by those who wallow in the same mire with ourselves. Now, the classic architects have no kind of excuse for their copyism. They have been at work for three centuries, and yet too often work like schoolboys: not only every detail is most abjectly copied, but they actually scruple not at copying nearly whole buildings at a time! If we are copyists, we have learned to be so in their offices, where copying is, with some bright exceptions, the sum and substance of architecture. They use *now* the very arrangement of leaves they find in ancient capitals, excepting that they fail of their spirit: even the triglyphs and guttæ, the symbols of transition from wood to stone when the Dorians adopted the materials of the Pelasgi, they copy to this day with scrupulous accuracy, and learn with infinite pains their proper proportions in decimals of minutes! and yet they have the conscience to accuse us of copying, because while learning and reviving the long neglected arts of our native country, we do not at once strike out into new developments. We have had first to make ourselves masters of our grammar, but already we develope more, we copy infinitely less, than they do after three centuries of training. I am one of those who have been behind the scenes, and have been put through all the facings of classical practice; and, while I admire genuine classical architecture quite as much as our excellent vice-president (though I think another style more suitable to ourselves), I know too well the practice of modern classicism not to be fully aware that *ours*, with all its faults, is freedom itself compared with the copyism which preceded it. Our aim is *not to copy* but to *develope*, and to render our style the truthful expression of the wants and circumstances of our day; and to effect this great object will be the constant aim of,

Yours, &c.

GEO. GILBERT SCOTT.

SUGGESTIONS AS TO THE EAST.

THE East, the land of mystery, is now opened to us; and, if not too late, we would suggest several subjects of inquiry.

The geology of a country should be known in order to understand correctly the past and present history of a people. We therefore hope some competent person will inform us as to the order of stratification from the Dardanelles, and on throughout the whole extent of the Black Sea, and the adjoining portion of Asia Minor. The general features are known, but we wish for details. The Sea of Marmora, with its islands and shores of marble, declares the character of its geology in its name: something interesting may however be told as to the rocks found in contact with the marble beds, as also of the extent to which the marble quarries have been worked in times past, and are now worked. Then, as to the shores of the Bosphorus, and the foundations of Constantinople, how far does the clayslate extend, and the limestone beds found at Kulali? We know that coal is worked at Erekly, and Murray gives rather an odd account of the coal-beds, where he states;—"The coal-seams vary in inclination, the average being at an angle of about 30 deg. with the horizon. They crop out over the entire field on the sides of the mountain-ridges, 1,500 to 2,000 feet high, and are much broken by faults. *No evidence of volcanic action has been discovered.*" We have put this last paragraph in italics. It requires explanation. "Seams of coal" at "steep angles" and "mountain ridges" are evidence of "volcanic action," even without the "*faults.*"

The geology of Sinope, Samsoon, and Trebizonde may be correctly ascertained. We do know that much of this coast is oolitic; that the peninsula of Sinope is very like our own island of Portland, in size, in form, and in geology; and we also know that there are many traces of volcanic action, basaltic and other dykes having ruptured the strata. But no map that we have seen represents with any degree of accuracy this portion of Asia Minor. Spurs and ranges of mountains, from 3,000 to 7,000 feet high, can be seen from the deck of a vessel, having snow upon them in May, with the thermometer at 85 deg. in the shade. There is plenty of work for the geologist here. At Trebizonde, the celebrated 10,000 came out from their wanderings upon the sea. A correct knowledge of this country would raise our wonder at the marchings of ancient armies, and increase our admiration for the generals who commanded, and whose commissariat did not fail. The naturalist will find that the bees of this district continue to collect and store up "*mad honey*," as in the days when it proved fatal to the Greeks. We were told it is honey from the wild azalia. Georgia and Circassia present mountains, and, no doubt, minerals, we know little about. Then there is the Crimea: our return transports may bring home samples of the various rocks, and specimens of the fossils so abundant in the oolite and chalk. We should then have visible evidences of the rock cut through in the trenches, and of the fatal Crimean mud. The caves of Inkerman and the ruins of Sebastopol can yield trophies as interesting to science as broken muskets, or as disabled cannon are to national glory. Napoleon I. would not have neglected such hints. Napoleon III. and John Bull may probably "care for none of these things." What is John in his governing capacity? John Bull, the man of science, may think and act with more judgment. Pictorial *sketches* we have had,—good and bad,—more than enough: we wish now to obtain accurate scientific details. These the geologist, the botanist, and conchologist alone can give. The field is wide, and, for the first time in modern history, is fully open. At Constantinople, and throughout Asia Minor, the architectural student may visit tombs, palaces, and mosques, and live: he may study at leisure the construction of Santa Sophia: he may see the eight porphyry columns from the Roman Temple of the Sun; and the four "green granite" columns from the Temple of Diana, at Ephesus, with other wonders, "too numerous to mention." He will see how said columns are bound and braced with copper hoops and bars; how said building has given way, and shrunk beneath the ponderous dome, piers having cracked and floors sunk. Turbaned, but obsequious Turks will tout for "*backshish*," like our own cathedral vergers, and offer bits of the glass mosaic to relic-hunters; or said Turks will knowingly and cunningly point to the cross, as it was carved by the Christian builders, thinking thereby to draw an additional infidel sixpence. We should like to know, from one competent to judge, what is really the effect of the exterior of Santa Sophia: it surely must have some features of grandeur. There are also the Hippodrome, the aqueducts, the fountains, and the palaces,—these latter, huge shams having marble steps and marble columns to support wooden entablatures and shingle pediments. We hope our suggestions may not be too late, but that they may be in time to prompt examination and inquiry. Specimens of Turkish bricks, tiles, and earthenware pipes, as used in collecting water for domestic use, will add value to an architectural museum. Any account of existing Turkish waterworks will be useful; and a sample of water from "*the sweet waters of Europe*," for analysis, may serve to throw light on the name.

ST. OLAVE'S GRAMMAR-SCHOOLS.

IN our last volume (XIII. p. 564) will be found some particulars of the foundation of the School of St. Olave's and St. John's, Southwark, with a description of the buildings recently erected, under the direction of Messrs. Allen, Snooke, and Stock, architects. The engraving in our present number shows the entrance-tower, with the court-room and residence of the principal on the left-hand side, and part of the classical school, with cloisters under it, on the right.

This valuable school was first instituted by Henry Leeke, of St. Olave's, a brewer, who bequeathed, in 1560, 8*l.* per annum for that purpose. In 1571, a charter of incorporation was obtained from Queen Elizabeth, who ordained that it should be called "The Free Grammar-school of Queen Elizabeth, of the parishioners of the parish of St. Olave, in the county of Surrey," and that sixteen men of discretion, and most honest inhabitants in the said parish for the time being, should be governors thereof. In 1579, the churchwardens assigned to the governors a field called Horseydowne, now Horslydown, containing sixteen acres. This field in process of time was built over, and the leases having expired, the yearly revenue derivable therefrom, and from various other donations and bequests, is about 3,400*l.*

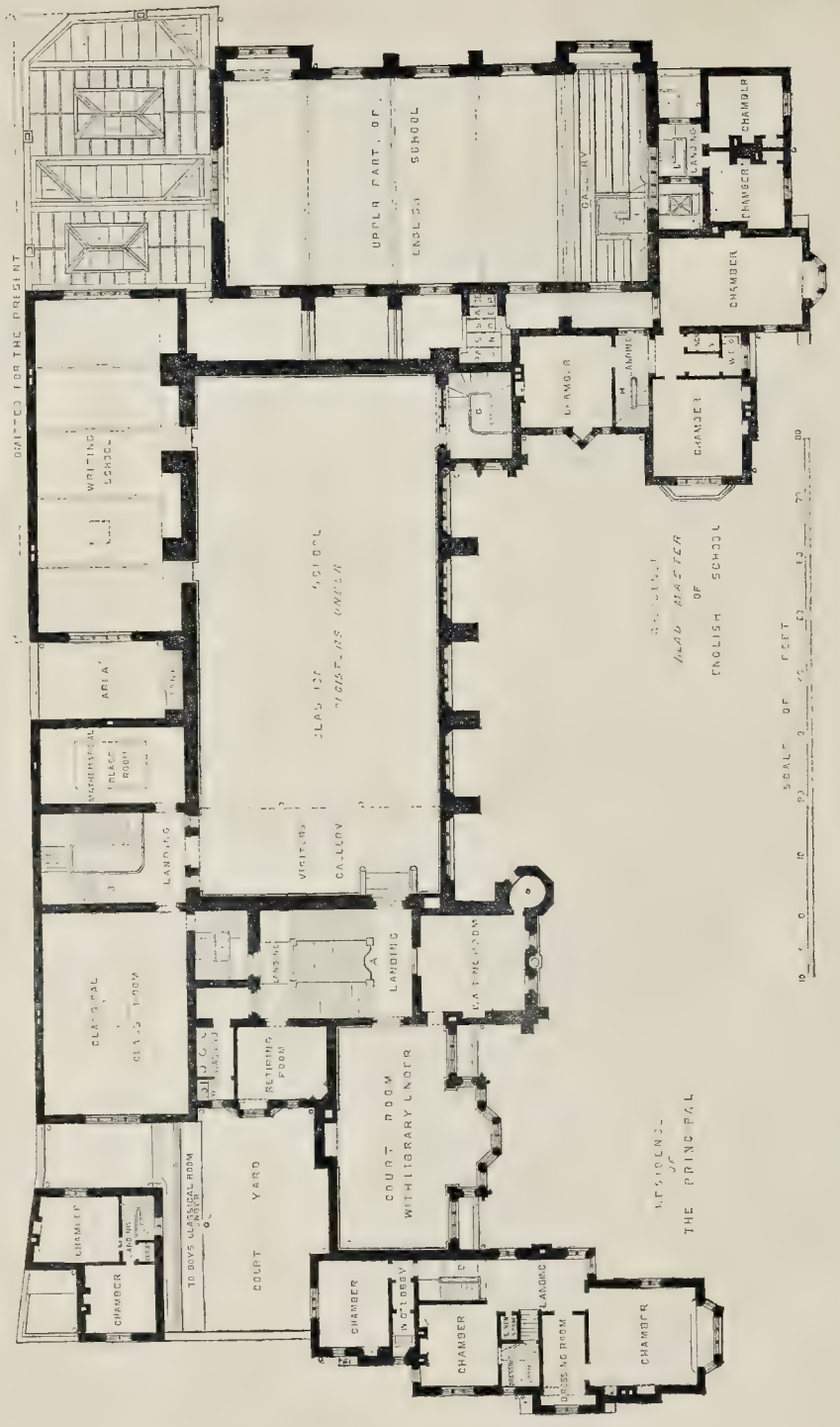
The old school and masters' houses stood in Churchyard-alley, near St. Olave's Church, and were removed in 1830, to make the approaches for London-bridge. A new edifice was then erected on the south side of Bermondsey-street, but the ground being required for railway extension, this also was removed in 1849.

Considerable difficulty having arisen in selecting a new site, it was not till 1852 that the governors were enabled to take possession of their chosen spot, and commence operations.

The new buildings, situate in Queen Elizabeth-street (late Back-street), in the parish of St. John, Horslydown, were commenced in April, 1853, and completed by Mr. Jay, the contractor, in November, 1855: the total cost, including fittings, was under 24,000*l.* The principal materials employed are red brick, from Sittingbourne, in Kent, with blue Staffordshire headers in diapers, and Hare-hill stone, from Messrs. Smith's quarry, near Leeds, Yorkshire. The buildings comprise a court-room, library and offices, large classical and English school, with various class-rooms appurtenant to each, two residences for the principal of each school, and porters' lodges; and they afford accommodation for 800 pupils. It will be seen on the plan that a small part of the design on the right-hand side has yet to be completed. The letters from A to J mark the various staircases.

ASSISTANT ENGINEER FOR DUBLIN.—We have received some comments on the recent election of an assistant engineer at Dublin. The salary is 250*l.* per annum: there were fifty-two applicants.

ST. OLAVE'S GRAMMAR SCHOOL: PLAN OF PRINCIPAL STORY.



GRAMMAR SCHOOL OF ST. OLAVE'S AND ST. JOHN'S, SOUTHWARK.—MESSRS. ALLEN, SNOOKE, AND STOCK, ARCHITECTS.

THE MEDIÆVAL REVIVAL QUESTION.

I REGRET that Mr. Scott should have given a somewhat personal tone to his remarks on my paper, not because it gives me the slightest offence or annoyance,—which I assure you I am far from feeling,—but because it seems likely to confuse the main question.

At the same time I will not deny that he is justified in the line he has taken. I had in some measure rested my case on my own impressions: he naturally wishes that these should not be taken at more than their proper value, and accordingly charges me with having changed my views, with having preached a virtue which I do not practise—namely, patience—and with having allowed my opinions to be biassed by personal considerations, on which account they must be received with caution. Such, I presume, is the drift of his argument.

That my views have changed during the last fifteen years, is no more than I admitted. Few who have pursued a course of study on any subject for that length of time, or who have observed what was passing around them, can say that they have not changed their views in some respects. I stated, "that when few modern Gothic works of merit were in existence, I thought the revival possible, and that a careful study of ancient examples might enable us to work in the ancient spirit." But, after having seen many new Gothic works of great merit, I considered that the attempt to revive the style would not be successful. As soon as I am convinced, by the full success of the Gothic movement, that I am wrong, and that I have mistaken a surmountable difficulty for an impossibility, I shall again change my opinion, and have great satisfaction in confessing it. My judgment is grounded not upon the amount of the progress already made, but upon the direction it has taken. It appears to me to tend rather to mere conformity with mediæval types, than to development of mediæval principles. The progress already made, though very great and most creditable to the energy, talent, and research of those who have attained it, I do not consider to be marvellous, nor more than was to be expected from their exertions. It was probable that after a long course of study among ancient models, some new buildings should appear, not only correct as to general forms and details, but in a considerable measure imbued with the spirit of their types. Many correct Gothic buildings have sprung up, and these I consider as having no small degree of merit. Some have caught the spirit of the mediæval period. These I look upon as possessed of merit of a very high order; but I cannot recognise any such development of mediæval architecture as, without losing its Gothic character, shall meet the wants, conform to the refinement, and express the spirit of the present age; and, in searching for the cause of this deficiency, I thought I discovered it, not in any want of genius or industry on the part of our own architects, but in the nature of Gothic architecture itself.

Mr. Scott, in noticing my first publication on church architecture, says, "Throughout the whole of the book, he seems to take it for granted that our future churches will be Gothic." From this your readers would be led to infer that I recognised or advocated no other style. I find, however, that I said in my 1st vol. p. 44, "The Italian is, perhaps, better adapted for a church than Gothic, where it is necessary to enclose a wide area under a single roof, or to have two tiers of windows on account of galleries, or when the front must range with modern houses." I can assure you, when I prepared my paper for the architectural exhibition, I quite forgot that I had so pointedly referred to the very contingencies which I then brought before the notice of my hearers. After describing some churches of the Italian style, in the neighbourhood of Nice, I remarked (Vol. I. p. 41), "And even in England there are many situations where the horizontal lines of the Italian would harmonize better with the scenery than the more aspiring forms of Gothic." In Vol. I. p. 211, I observe, "The Roman or revived Italian, though grounded on inconsistent principles, nevertheless offers some beauties and advantages unattainable in other styles, and in towns will sometimes harmonise the best with surrounding buildings." In Vol. I. p. 89, I urged strongly, at least strongly enough to call down the wrath of the ecclesiologist, what I have often urged since, the attempt to form a pure and complete round arched style, having the character rather of the Italian than the Norman.

The object of my work was not to revive Gothic architecture, but to offer such suggestions as might tend to the improvement of Church architecture in general, which I by no means considered to be synonymous with Gothic, however probable I might think it that Gothic or mediæval churches alone would be built for some time. I could not easily write on Church architecture without giving my chief attention to the Gothic styles, or dwelling upon their beauties; and if I have given any useful suggestions to the builder of a Gothic church, I am heartily glad of it, and would willingly do so again. If people are determined to build Gothic churches, I can only wish them to be as good ones as possible.

I hardly think my judgment has been warped by any personal feeling against the ecclesiological party. They certainly handled my first publication somewhat roughly, but I have since had no great reason to complain of them. We have often met rather as friends than enemies; and if we have now and then exchanged a rap or two, I hope it has been without malice. I have specially to thank them for their review of my last work, and their full and fair statement of many of the propositions which I most wished to bring under discussion; nor do I quarrel with the strong terms in which, on several points, they have expressed their disapproval. I am sure they will take my part when I am accused of fickleness or inconsistency, and will admit that, to the best of their knowledge, I have continued pretty steadily *qualis ab incepto*.

It was hardly necessary to bring my friend Mr. Winston's name into the discussion, but I may safely leave him to fight his own battles, if he thinks it worth his while; merely remarking that his perfect knowledge of his subject, and the care, labour, and study which it has cost him, might fully justify an occasional demonstration of intolerance on his part, which on mine would be quite unwarrantable.

If any bitter feelings have influenced my judgment, they have been caused by the ruthless tide of restoration which has swept over our ancient monuments, and in so many cases confused or obliterated the most authentic records of their history.

Mr. Scott assures us of the enthusiasm and earnest zeal which exist among the authors and promoters of the Gothic movement. I most sincerely rejoice that their devotion has not entailed upon them the necessity of any heavy sacrifice as regards their interest, prospects, or reputation. They have not been struggling without the favour or encouragement of friends. The style which they are labouring to restore to its perfection is that which has been selected for nearly every new church during about a quarter of a century, and seems still likely to retain its predominance. I cannot flatter myself that I have been in any degree instrumental, as Mr. Scott intimates, in urging or assisting them in their present course; but if so, I am happy to think I have done them no injury; and if I were to deny them my share of the praise to which they are so justly entitled, they would not feel the loss. No opinions expressed by me, or many more, can shake them from their position; nay, whatever may be the actual result of their labours, whether the re-establishment of the Mediæval Gothic as a living progressive style, or the introduction of one altogether new, they will in any case occupy a worthy and conspicuous page in the annals of architecture. They have already achieved no ordinary triumph. if they fail in the full attainment of the object they propose to themselves, it will be only because it involves an impossibility. I must, at least for the present, leave the arguments on the main question as they now stand. The imperfection I noticed in geometrical tracery is but one of many that cannot be avoided, however they may be disguised or modified. Mr. Scott's observation, that "No one has had much to do with architecture without knowing that little mathematical inaccuracies beset him in every style, which it is a part of his art so far to abate as to render them inoffensive," enables me to refer you to a proposition I suggested in my "Architectural Notes in France," and which, though I do not lay it down dogmatically, I think deserves some attention, namely, that a refined style requires a design providing for the strict mathematical observance of certain laws, expressed or understood, even though it may admit of inaccuracies in execution (p. 47, &c.);—in short, that a design should bear the test of accuracy instead of requiring the assistance or disguise afforded by inaccuracy. I do not suppose the proposition to be stated by me for the first time, though I do not remember to have met with it. I am sorry it did not suit my purpose to practise the patience I have preached by waiting forty or fifty years longer before expressing my opinions. I thought, if I had anything to say, I had better say it at once, even at the risk of being premature. However, as I am proved to have no patience myself, I do not feel justified in trespassing any longer on yours. J. L. PETIT.*

THE PROPOSED ROAD ACROSS ST. JAMES'S-PARK.

ON the motion of Sir Benjamin Hall, a select committee has been appointed to consider the best means of communication between those parts of the metropolis which lie north of St. James's-park and those parts which lie south and south-west thereof, and to report thereon to the house.

The committee consist of the following gentlemen;—Sir Benjamin Hall, Lord John Manners, the Chancellor of the Exchequer, Mr. Disraeli, Lord Robert Grosvenor, Lord Hotham, Sir Joseph Paxton, Mr. Stephenson, Sir John Shelley, Mr. Hutchins, Colonel Boldero, Mr. Drummond, Mr. Stuart Wortley, Colonel Wilson Patten, and Mr. Milnes.

Amongst the suggestions which have been sent to us is one from Messrs. Horner and Molesworth, who propose a *sunk* road under the park, and through the ornamental water:—"The road," they say, "would commence in Pall-mall, close to St. James's Palace, and would fall with an inclination of 1 in 24, until it reached the required depth. Where it crossed the Mall (or broad walk), the ornamental water, and the Birdcage-walk, it would be arched over: in other places it would be an open road, with retaining walls at the sides: the tops of the retaining walls would be coped with stone, just above the level of the ground, and would have a light iron railing fixed to the coping."

For our own parts we do not see the necessity for a carriage-way across of any sort. Opening the gates at Marlborough House, in Pall-mall, at Buckingham Palace, and Constitution-hill, would give all the accommodation required, and cost nothing.

The magnificent Mall, extending from the Palace-gates to Spring-gardens, is divided by ranges of trees into four alleys. Might not *one* of these be dedicated to the public throughout the whole line, and a way opened into Pall-mall at the end of it? The retirement of the palace need not be interfered with, while to the public the accommodation would be of incalculable benefit; but to make that advantage complete, there should be no restriction, as in Hyde-park, against Hackney vehicles. So far as the *drive* is concerned, perhaps there is some reason in the prohibition; but in the direct line, the distinction is insensate; and, as relates to a great commercial capital, not in the spirit of our free constitution. The road in the Regent's-park, where these absurd exceptions are not made, is not the less orderly.

The bridge and roads across St. James's-

* We have received the following note:—"Sir: I feel it my duty to correct an error I made in my paper on Mr. Petit's lecture. I alluded in it to a church spoken well of by Mr. Petit in his first book, but which a friend of mine had found to be very inferior. My friend has since told me that, though this was the case, I was mistaken as to the church he meant. I must, therefore, withdraw the statement so far as it helps my argument, to which I find that it is inapplicable; and I should be sorry to say anything which would appear intended to impugn Mr. Petit's judgment in a matter not affecting the argument in hand, though we may fairly differ in our judgment on facts as well as on principles.
GEO. GILBERT SCOTT."

park, designed by Mr. Pennethorne, are very handsome, and include a large amount of ornamental sculpture; but we must nevertheless continue strongly opposed to the proposed division of the park, and hope the committee will elect other means to give the thoroughfare required.

THE GOVERNMENT AND ARCHITECTS' REMUNERATION.

WE are informed that a Treasury minute has been drawn up to the effect, that in future 3 per cent. only is to be paid to the Government architects for public buildings! It needs no foresight to see that, should this be the case, the precedent will greedily be adopted by public companies, boards, &c. and the position of the architect be greatly injured. Some stir should at once be made by the profession to prevent the threatened evil. In the greater number of cases, the present received commission of 5 per cent. affords but bare remuneration for the proper discharge of an architect's duties. The Institute should at once move in this matter if the statement be found correct, and doubtless will do so.

THE BARRACK COMPETITION.

AT last we are able officially to make known the names of the successful candidates in the Barrack competition. 114 sets of designs were sent in, namely, eighty-nine for infantry, and twenty-five for cavalry; the estimated costs varying from 28,000*l.* to 230,000*l.* The designs fill six of the committee-rooms at the House of Commons, and show that many of the competitors have taken great pains in the matter. The following are the names of the successful candidates:—

For Infantry.

1. Mr. Geo. Morgan.
2. Messrs. Lockwood and Mawson.
3. Mr. John Jones.

For Cavalry.

1. Messrs. T. H. and M. D. Wyatt.
2. Mr. Geo. Morgan.
3. Mr. Wm. Young.

Mr. Morgan and Mr. Young have worked together to some extent, and it will be seen that they have had the good fortune to take three of the six premiums. The first on each list will of course be employed, when occasion serves, to carry out his design. Lord Monck was the chairman of the Committee of Selection, and Professor Donaldson was added to the committee to assist.

METROPOLITAN BOARD OF WORKS.

AT the meeting of 22nd ult. the Secretary, Mr. Woolrych, read the report, adopted by the committee of the whole Board, as to the appointment of officers, recommending, as two principal assistant clerks, John Pollard and Edwin Cresey, at 350*l.* per annum each. As assistant clerks, Wm. Tyler, at 175*l.*; C. F. Pocock, 120*l.*; W. P. Andrews, 100*l.*; James Pafe, 90*l.*; and George Edward Link, 80*l.* per annum. In the accountant's department, E. F. Browne at 180*l.*; Charles Nixon, 140*l.*; and Henry Edwards, 100*l.* per annum. That Mr. Thomas Lovick, Mr. John Grant, and Mr. Edwin Cooper, be appointed assistant engineers during the pleasure of the Board, at a salary of 350*l.* each, with an allowance of 50*l.* per annum for travelling expenses respectively. The following as clerks of works, at three guineas per week each, viz. John Douglas, W. Walker, J. J. Lloyd. E. Lacy, J. Robinson, and C. Andrews. That the following be draughtsmen, at three guineas per week: W. Graves, D. M'Laughlan, T. Granger, and H. Coffee; at two-and-a-half guineas per week—R. J. Hunter and E. D. Hacman. As engineer's clerks, W. Conquest, at 175*l.*; Thomas Graham, 150*l.*; and H. R. Merly, at 100*l.* per annum. As clerks to the accountant—principal clerk, Walter Newell, at 200*l.*; assistant, Henry Hale, at 150*l.* That Messrs. Smith and Son be appointed solicitors during the pleasure of the Board.—Some discussion ensued in reference to a proposal to substitute Mr. Donaldson as an assistant engineer instead of Mr. Grant; but the report was finally adopted by a majority of 21 to 15.

The appointment of a committee of works, to consist of fifteen members, was moved by Mr. Wright, pursuant to notice. It was not intended, he said, to delegate to such a committee any executive functions, or any of the powers of the Board itself. He wished to divide the metropolis into about fifteen districts, with reference to public works and to this committee.

Mr. Hunt submitted that they ought not to proceed with the improvements of the metropolis in particular parts, until they had before them some grand scheme for its general improvement, and had recommended that scheme for adoption. If the object of the motion was to let the public know that the Board was ready to receive plans for the general improvement of the metropolis, and then to proceed to select that which they thought best, he was prepared to support the motion of Mr. Wright.—Mr. Hows objected to hand over to such a committee the power which, as was implied in the very name of the Board, it ought itself alone to exercise.—Mr. Turner said it was impossible to consider any particular measure of improvement *per se*, till they had before them such schemes as might be offered for the improvement of the metropolis as a whole. Mr. Bidgood, Mr. Barslem, Mr. Hawkes, Mr. Corrie, Mr. D'Iffanger, Major Lyon, Mr. Hall, Mr. Ware, Mr. Harrison, Mr. Carpmell, and the president, having also joined in the discussion, *pro et con.* the motion for the appointment of the committee was put and carried.

Re Building Act.—On (this) Friday, February 29th, the Board will take into consideration a report from the committee appointed to consider the duties of the Board under the Building Act, containing the following recommendations:—

That the application of Mr. Charles Warr to erect in the Wandsworth-road certain dwelling-houses and shops beyond the general line of frontage be not granted.
That the application of Mr. George Needham to construct the eaves of four adjoining houses in the district of Hackney, in the manner described in such application, be granted.
That Messrs. J. H. Taylor and R. Parkinson be apprised that in the opinion of this Board they are continued by the Metropolitan Building Act as district surveyors of Tottenham and Hornsey, respectively, for the purposes of that Act.
That the hamlet of Penge be constituted a separate district, for the purposes of the Building Act.
That the parishes of Plumstead and Eltham be constituted a separate district, for the purposes of the Building Act.
That Putney and Roehampton be constituted a separate district, for the purposes of the Building Act.

At the Board on Friday, 22nd, it was ordered that the election for the new districts take place on Friday, the 7th March.

THE LEWISHAM DISTRICT-SURVEYORSHIP.

THE QUEEN *v.* BADGER.

AN appeal on the part of Mr. Badger was heard at the Court of Queen's Bench on the 23rd ult. to quash an order of the justices of Kent, for the removal of a district-surveyor from his office. The point in issue was, whether the justices had exceeded their jurisdiction.

Mr. Justice Coleridge delivered judgment, and said the Court was of opinion, after full consideration, that the justices had no jurisdiction in the matter, and that the order for removal of the surveyor ought to be quashed.

Lord Campbell's opinion was read, but as the learned lord's judgment stood alone, Mr. Justice Wightman and Mr. Justice Erle agreeing with Mr. Justice Coleridge in their judgment, the order was quashed.

Mr. Badger will therefore be reinstated.

THE METROPOLITAN BUILDINGS ACT.

HOT-WATER PIPES.

ON the 21st ult. Messrs. John Weeks and Co. of King's-road, Chelsea, appeared before Mr. Traill, at the Greenwich Police Court, to answer a summons taken out against them by Mr. Browne, acting in lieu of the district-surveyor, who was the architect for the alterations, charging them with having placed certain pipes for the conveyance of hot water nearer than 3 inches to the woodwork of the pews of the church of St. Paul, Deptford, contrary to sec. 1, rule 4, of the Metropolitan Buildings Act, 18th and 19th Vict. cap. 122.

The defendants acknowledged the fact, but contended that the provisions of the Act of Parliament did not apply in the case, inasmuch as the water to be conveyed through the pipes could not, by any possibility, be used at a higher temperature than 212 degrees, and that wood would not char under a temperature of 500 degrees.

Mr. Traill said it was not a question as to the degree of heat to be conveyed that the words of the Act of Parliament applied to, but the purpose for which the pipes were to be used.

Mr. Browne said the question had been fully discussed before a committee of the House of Commons, and the evidence of Mr. Braidwood went to show there was danger to be apprehended in such cases. Besides, although there might be no danger from water supplied at a heat of 212 degrees, yet the pipes might, at some future time, be used as a means of conveying dry heat at a much higher temperature.

Mr. Traill said he had no alternative but to make an order on the question, as the point raised called upon him to do no other than expunge the words of the Act of Parliament.

The defendants said it was a question of the highest importance, and affected nearly every church and well-finished house in which hot-water pipes were used.

It was suggested that the Board of Works might be induced to apply to Parliament for an amendment of the Act.

Notice required to Surveyor.—On Saturday last, Robert Danger, builder, was summoned by the District Surveyor of St. Pancras, to Clerkenwell police-court, for penalties incurred by commencing alterations to two houses without giving proper notice. The builder had called at the surveyor's office, and although Sec. 38 was pointed out to him, and the absolute necessity that his notice must be in writing, he refused to give any other than a verbal communication: he was accordingly fined, and had to pay the costs in both cases.

THE CONDITION OF THE THAMES.

INSTITUTION OF CIVIL ENGINEERS.

THE discussion of Mr. Robinson's paper was continued on the 5th and again on the 12th of February.

It was contended, that the health of the inhabitants should not be endangered on account of the conflicting claims of the Government and of the Corporation to the rights of administration, or of dealing with certain powers, by which alone a great benefit could be conferred upon or withheld from the metropolis; for there could be little doubt of the miasmatic vapours arising from the impurities held in suspension by or deposited upon the mud-banks by the waters of the Thames augmenting the spread of disease. It was, therefore, incumbent upon the contending parties rather to combine their forces for the execution of the works of improvement for the common weal.

Ague was formerly the prevalent disease; but the drainage of the land of the marshy districts near the river almost obliterated that malady: then followed fevers of various kinds; but they were diminished or prevented by abolishing cesspools beneath the houses, and by more rigid attention to house sewerage: then came cholera, the recurrence of which would doubtless be in some degree counteracted by ameliorating the state of the banks and shoals of the river, to whose noxious vapours much of the disease of the metropolis must be attributed, when it was considered how many millions of gallons of vapour were given off per day from the river alone. It had been stated that the mortality was three times as great on some parts of the coast and on the shores of muddy rivers, as in the inland districts; and there could be little doubt, that there would be a great accession of disease, but for the constant ebb and flow of the tide. It was therefore much to be doubted, whether any plan by which that incessant change in the water of the river would be to some extent arrested, would be beneficial to the general health of the metropolis.

There could be little doubt also of the advantages to be derived from such shore works as would give to the bed of the river an uniform capacity. The propositions of Wren, Rennie, Mylne, Wyatt, Trench, Martin, Walker, and Page, all had that object in view, and it was most desirable that the Government and the City should settle their differences, in order to the execution of some definite and comprehensive plan.

Recurring to the plan proposed in the paper, it was contended that the scheme of raising the sewage from the mouths of the present sewers would be so expensive as to amount to a prohibition, especially if such power was provided as to enable all the storm-waters to be raised. Besides, if the sewage was all dammed back to the extent that would be necessary for such a system, large portions of Lambeth and Westminster would be rendered uninhabitable.

With reference to an address [by the City solicitor], remarkable not only for the humour and vivacity with which the statement had been given, of the long and close intercourse between the Corporation and the river, and the litigation now induced by the pretensions of the Government, but which had even raised from his bed the venerable genius of the stream, and induced him to unveil his griefs, it was doubted whether the confidence had been fully given; whether, in these conversations, which had probably taken place in the "cool tranquillity of dewy eve," and under the genial influence of City hospitality, Old Father Thames had not made some remonstrance, in a tone of complaint, of sundry negligences on the part of his old friends; of the utter neglect of the grand plan of Sir Christopher Wren; the entire disregard of architectural propriety, or of uniformity of

line, exhibited by the warehouses and wharfs; vast shoals and mud banks on all sides; several of the bridges in a state of jeopardy; and that dire foe "vested interest" allowed to rise up as a lion in the path, barring all improvement. The Corporation had only themselves to blame for all this; but as it appeared that there was such confidential communication between that plain-spoken old gentleman Father Thames, and the worthy energetic legal representative of the Corporation, it was to be hoped that, henceforth, all good plans for amelioration would receive active support and assistance in the City;—for instance, that concessions would be granted by the Corporation to persons desirous of improving their water-side premises, merely on the production and approval of their plans, instead of obliging them, as at present, to obtain the sanction of their neighbours, which was virtually a prohibition, because every man knew that he would be obliged to follow the example of his more energetic neighbour, or he would soon find his premises at the bottom of a mud trap, and out of the reach of the river.

The complaints against Government interference were but too well founded, as was, unfortunately, felt by all who had Bills before the House, for any works on the banks of the Thames. The Bill might go on very smoothly until the third reading, when a sleek gentleman made his appearance with an application merely for the insertion of a little clause for the protection of the rights of the Crown; which meant, that all plans should be submitted to, and be approved by, various heads of "Circumlocution" Offices; the inevitable result being, that the unlucky wight seeking to have his plans approved, wasted his time, and then had to pay a good round sum for some imaginary right supposed to be conceded to him, for doing something which could be of no earthly use to him, or for proceeding without let or hindrance to some place whither he had no intention of or interest in going. Now if he was thus mulcted for the welfare of the nation, or the benefit of our sovereign lady the Queen, no one would grumble very much; but when it was known that the money so obtained only went to fatten "the red-tape worms," the matter was beyond endurance.

ARCHITECTS' RESPONSIBILITIES.

SYMPSON *v.* LLOYD.

IN the Court of Exchequer Jan. 29, Mr. H. T. Cole showed cause against a rule for a new trial, which had been granted on the ground that the verdict which passed for the defendant at the trial at Bristol before Mr. Justice Williams was not justified by the evidence. It appeared that the plaintiff was an attorney, and that he had employed the defendant, who was an architect, to prepare plans and drawings for, and to superintend, the alteration of a house near Weston-super-Mare, on which he contemplated an expenditure of nearly 3,000*l.* The works were extended over a period of six years, and, on their completion, the defendant sent in his bill to the plaintiff, who, although he had occasionally complained of delay on the part of the defendant, did not make any direct or serious imputation on him. The plaintiff, however, disputed the amount of the bill, which was 322*l.*; and, after some legal proceedings, he settled the action through a friend and agent, by paying a sum of money which, with past payments, amounted to 230*l.* With this settlement the defendant deemed that his connection with the plaintiff ceased; but the plaintiff then brought this action against him, in which he claimed compensation from the defendant *for alleged neglect of duty as architect, and for the delay in the prosecution of the works occasioned by the absence of working drawings and plans.* At the trial the plaintiff succeeded in establishing his case to a trifling extent, but the jury disregarded the evidence, and, acting on prejudice, gave a verdict in favour of the defendant. When the report of the learned judge was read, he certified that he thought the verdict ought to have been for the plaintiff for nominal damages, but added that he could not regret the verdict which the jury had given. It was now contended, for the defendant, that the jury were justified in the course they had taken, as it was clear that the claim of the plaintiff was included in the settlement of the defendant's action against him, and that as the jury were the best judges of the facts, their finding ought not to be disturbed, or, at all events, it could only be so on payment of costs.

Mr. Serjeant Kinglake and Mr. Karslake, who appeared for the plaintiff, were not called upon to support their rule, for

The Chief Baron was of opinion that the report of the learned judge was conclusive, and that, the jury having taken a wrong view of the evidence, the case must be sent down to a second trial, unless the defendant would consent to a *stet processus*, the result of which would be that neither party would get his costs. There was no doubt that the plaintiff had made out a case, but it was one of a most trumpery description, and one which entitled him to damages of the smallest, the lowest, the meanest amount. A farthing, or any smaller sum by which the jury could have signified their contempt for his cause of action, might well have been awarded as damages; but to the verdict, with some amount of damages, the plaintiff had made out his title, and the jury were not to be allowed to find for the defendant in defiance of the law and evidence. It might be that the Court would gladly deprive the plaintiff of his costs though he might show himself to be entitled to a verdict; but the Court could not make a law for a particular case or allow a jury to do so. The judgment of the Court, therefore, was, that the rule for a new trial must be made absolute, but without costs, as the verdict was so clearly wrong; but the better way for both parties would be that the defendant should agree to a *stet processus*. Judgment accordingly.

COMPETITIONS.

Darlington Cemetery.—In reply to the advertisement from the Burial Board, which appeared in our columns, thirty-two competitors entered the field, some of whom sent eight or ten designs, making a total of 252 drawings. These were all hung in the Mechanics' Hall for about a month, when the Board selected five designs marked "Labor et spes," (two) "Ad rem cum Deo," "L'esperance," and "Excelsior" (which was also the motto adopted by two other competitors). After satisfying themselves that the plan could be carried out for the estimated amount, the Board selected "design No. 1" marked "Labor et spes;" but have not yet agreed as to the recipient of the second premium. The successful competitor is Mr. Pritchett.

Luton Schools.—Sir,—surely the advertisement for designs for the new National Schools at Luton, Beds. must be intended as a hoax, merely to see whether architects are become totally imbecile, as they offer no inducement, but charge five shillings for a plan of the site to candidates for the *honour* and *mental* as well *manual* labour, and the *materials* required to produce these designs. Now, suppose this Committee were offered the *privilege* of sending one cwt. of tea, sugar, or raisins, one score pair of boots, one hundred tin kettles, or half a hundred straw bonnets, to an unknown *Committee*, and ordered to pay the carriage, and five shillings for a printed description of the articles required in competition, what would they think of the sanity of the advertisers?

AN ARCHITECT.

METROPOLITAN IMPROVEMENTS.

AT a Court of Common Council, held in the City on the 21st ult. the chairman of the City improvements committee brought up the report upon the reference to consider of the appropriation of the site of the Fleet prison and other vacant ground belonging to the City. It stated that the committee were of opinion that no steps should be taken for the appropriation of the site of the late Fleet prison until it be determined whether anything is to be done respecting the removal of Newgate-market, and the arrangement of the markets of the City generally; and whether any alterations are likely to be made with respect to the Central Criminal Court and the gaol of Newgate, so that the site might remain available for any great and comprehensive improvements which may hereafter be agreed upon. After some discussion, the report was agreed to. A report by the City Lands Committee, on the construction of new City law-courts, was then considered. This report, after some preliminary explanation and detail, recommended that the offices lately used for the transaction of the Bridge House business and the Guildhall kitchen, with the adjoining offices, should be converted into new courts, agreeably to plans accompanying the report, and at an estimated expense of 7,500*l.*, and that in the mean time no expense should be incurred in making alterations in the existing courts of law. In the course of the discussion which ensued, Mr. Bunning, the City architect, stated that adequate arrangements for the accommodation of attorneys would be made in the law courts, and that the crypt under the hall would undergo no defacement or injury by being used for the purposes of a kitchen two or three days in the year, especially as the cooking apparatus by gas might be adopted. This report also was agreed to. A voluminous report on Blackfriars Bridge repairs was then made by the Bridge House estates committee, detailing the enormous sums of money expended in repairing Blackfriars Bridge from time to time, and recommending that the unsightly water-ways under the fifth and sixth arches of Blackfriars Bridge, and the dolphin piles and booms connected therewith should be removed, and that in lieu thereof iron ribs should be placed under these arches as shown by the model accompanying the report, at the estimated expense of 17,000*l.* This report was ordered to be printed.

Notices of Books.

The Food of London. By GEORGE DODD, author of "British Manufactures," &c. London: Longman and Co. 1856.

THE supply of food to a great city is, indeed, amongst the most remarkable of social phenomena,—full of instruction on all sides. And, perhaps, the most wonderful of all its characteristics, at least so far as regards the supply of food to London, is the fact, that there is no organised commissariat—no individual responsibility,—that, in fact, "nobody does it." Yet there are *nine hundred millions* of daily rations annually supplied, and by never failing daily, weekly, or other periodical instalments, within the bounds of our immense metropolis! Here is a grinding-mill, of two-million-and-a-half jaw-power, ever at work, and grist ever going into its hoppers and grinders! Not only, indeed, is abundance provided, even while hundreds may be perishing from want of the means to purchase it; but, as Mr. Dodd remarks, the rations are so infinitely varied as to meet every caprice of taste; and if a gourmand or an epicure only wish, once or twice perhaps, for "a dish of peacocks' brains, or of stewed humming-birds, or dove's hearts," doubtless, if his pockets be well lined, "his taste will be gratified: it will simply be a question of price." That London is better supplied without a commissary-general's department than with one who can doubt? Yet how differently such matters are managed in Paris! What a heavy responsibility rests on the shoulders of the authorities and the Government there, even because of a very partial and limited intermeddling with the City's supply. But probably the poor of Paris reap some immediate benefit thereby, which those of London lose in consequence of the want of some such ruling power. The London poor were lately made to pay nearly double price for sugar to their tea and coffee for a time, simply in consequence of certain selfish, greedy, and over-reaching speculations on a great scale amongst the London merchants. Perhaps it would have been well for the London poor had the speculators been compelled by some over-ruling and despotic authority to disgorge their ill-gotten gains, or rather, had they been prevented from reaping so illegitimate and iniquitous a harvest. Yet we should not like to see much intermeddling with the food supply of the people for all that. Our own present freedom of trade, however, or want of interference with its regular routine, did not always exist. In times of old, the corporation of London not unfrequently thrust in a charitable and kindly hand between the poor and their necessities or their oppressors. Thus Stow tells us of two very bad seasons in succession, 1392 and 1393, when the people sickened by eating nuts and apples, wanting better food, and when the mayor and aldermen advanced corn at very low prices to the poor. Again he tells us that the pillory and a pair of stocks upon it at the cage on Cornhill was "for the punishment of bakers offending in the assize of bread, and for millers stealing of corn at the mills." Some such implements for behoof of our modern adulterators, not only in the baking line, but in hundreds of other branches of business connected with the food supply of the metropolis, might have a *wholesome* effect on scoundrels, as well as on their victims, even now.

Mr. Dodd's volume is a very elaborate one, and full of research, as regards both the ancient and the modern supply of food to London. Much of it, however, unavoidably, relates to the metropolis only by inference, and more properly belongs to the subject of the food of England, or of Britain, or the British Isles. The author is chary, and most properly so, of presenting general or aggregate calculations as to slump quantities, or costs, in the matter of supply. Indeed, it must be very difficult, or nearly impossible, correctly to estimate the total supply of almost any one single article, derived from every particular source. Accordingly, he more frequently gives us exact details

of the sale of certain special markets, or of the conveyance by certain particular routes or railways, leaving us rather to infer the probable sum-total, than to be guided by any given figures. Thus we are informed, that "the quantity of milk now brought to London by rail, is prodigious, chiefly by the Eastern Counties Company: in 1854, the conveyance of this company exceeded three millions of quarts." Again; — "the seven railway companies brought nearly 1,200,000 head of live stock to the metropolis, in 1853:" — "in the year 1854, nearly 12,000 coal-laden ships arrived, bringing 3,400,000 tons of coal; and as the railways brought nearly 1,000,000 tons more, the figures show how extensively large was the aggregate quantity." In the first half of 1855, the South-Eastern Railway brought up 16,000 sacks of wheat, together with 21,000 sacks of flour; but some of the other lines far exceed this limit. Vessels from foreign ports, too, frequently bring enormous cargoes of 2,000 or 3,000 quarters at a time. There are 2,500 bakers' shops in the metropolis at present, all "doing" a greater or lesser number of "sacks" a week, — say from ten to twenty, as frequently advertised. A round guess has been made that London disposes annually of 700 to 800 tons of mere watercress, or fifteen millions of bunches of that wholesome little article. In assisting towards the washing down of the more solid provender, one firm alone, Messrs. Truman, the brewers, are said to possess four vats that will contain 80,000 gallons each, and store vats, altogether, for 3,500,000 gallons. The store in spring at one of these vast establishments, has even reached 4,000,000 gallons. The author gives a list of fifteen of the principal brewers of London. "Some computers," he observes, "have guessed that there are 1,200,000 barrels of beer and ale consumed in London annually; while another computer has set down 2,000,000 barrels as the probable quantity brewed in London; and a third has named about a thousand million tumblers' as a probable quantity,—estimates but little accordant, and tending to show how difficult it is to arrive at correct results on such a subject. If, as there seems not much doubt, the two great breweries send forth 50,000 gallons per day each, the magnitude of the trade is rendered sufficiently apparent."

In the estimations of a careful and discreet writer such as this, one cannot but confide with much more surety and satisfaction than in the slap-dash of more daring and *effective* authors. In all the 524 pages of Mr. Dodd's volume, the interest never flags; and the abundance of research makes itself obvious in every page. The portion of his work devoted to old London usages, in respect to food and drink, to "meals," and manners, and to social life in general, is particularly interesting, and replete with substantial "entertainment," — "for man" at least, though not for "beasts." The question of food for the body is made to supply food for the mind.

VARIORUM.

MR. TIMBS's "Year-Book of Facts in Science and Art," for 1855-6, has been issued by Bogue, of Fleet-street. It is illustrated with a wonderfully good likeness of Sir Roderick Impey Murchison, and is really a most useful and interesting publication, in which all the more important facts (and theories too, occasionally) in science and in art that have been elicited in the course of the past year are recorded in moderate compass and in a get-at-able form. All who peruse it will derive refreshing and pleasant reminiscences of the progress of science and art throughout the year: even the facts one has aided in contributing to the store acquire a new interest when thus seen ranged in their new rank and file, and stored away in an easily available shape, for future reference.——Under the title of "Chamouni and Mont Blanc" (published by Cornish, High Holborn), Mr. Eustace Anderson gives a pleasant account of his ascent of the monarch of mountains, on the 15th of August, 1855,—an ascent described in the journals at the time. Mr. Anderson condemns the present system pursued as to guides, which prevents travellers having the assistance of those in whom they have confidence, unless it happens to be "their turn" on the roll.——Hardwicke's "Shilling City Guide" is a pocket directory, containing a list of public companies, assurance offices, and a variety of useful information.——Mr. Fairbairn's new book, "Useful Information for Engineers" (Longman and Co.) is certainly not misnamed. It will have our attention at greater length before long.

Miscellanea.

ILLUMINATING CANDLES.—Your correspondent—"Deborah H."—may *illuminate* her candles, of whatever kind they may be, by dissolving a lump of *spermaceti* of the size of a filbert in 1 ounce of rectified ether; then adding 5 ounces of *spirits of wine*, and using the mixture as the menstruum for her colours. *Mineral pigments* should be avoided as much as possible; and with the softer varieties of *composites*, one colour should be allowed to *dry perfectly* before another is laid on near it, otherwise sharp outlines will be unknown, and the whole will present the attractive appearance best expressed by the word *smudgey*.—W. L. S.

RAILWAY COMPETITION AND CHEAP FARES.—In course of the apparently reckless and ruinous competition which has been going on of late between the Great Northern and the North-Western Railway Companies, a result has even here been realized which fully confirms the truth of what we have so often urged as to the profit of comparatively low fares when contrasted with high, although in the present instance such confirmation could hardly have been anticipated, and indeed could scarcely be expected long to hold good. From Doncaster to London, previously to the present competition, the average weekly passenger traffic yielded about 60*l.* drawn from 40 passengers. During the first week of the cheap trains, the sum realized (from 556 passengers) was 104*l.* 2s.; and although, doubtless, a rush might be expected at the outset which would not be very likely to continue for any length of time, nevertheless, at the close of last week, the receipts at the same station for the up-trains during the week amounted to no less than 146*l.* 17s. derived from 775 passengers. An agreement to refer the dispute back to Mr. Gladstone has probably put an end to the present competition; but it ought to teach every railway company a lesson in the science of profit and loss.

THE SOUTH-STAFFORD WATERWORKS.—The turning of the first sod of these works at Lichfield by Lord Ward, took place on Friday in last week. The district which this company proposes to supply with water, extends from Walsall on the north to Dudley and Rowley Regis on the south, and from Westbromwich on the east to Bilston and Sedgley on the west. It includes, besides the towns above named, Lichfield, Wednesbury, Darleston, Willenhall (if not supplied by the Wolverhampton Waterworks Company), Tipton, and Oldbury, containing an aggregate population of upwards of a quarter of a million of souls. It is proposed in the first instance to make provision for a daily supply of four million gallons, which will be collected at Lichfield in a reservoir capable of holding sixty million gallons, and pumped up from thence to a reservoir of similar capacity at the Moat Hill, near Walsall, from which it will flow by gravitation to reservoirs at Wednesbury and Dudley, for the supply of the district, the pipes to be laid alongside the South Staffordshire Railway. The contract for the construction of the reservoirs at Lichfield and Walsall was announced to have been taken at the half-yearly meeting held in September last, and although some delay occurred, the contractors engage to complete the works in the course of the present year.

THE IRON TRADE.—The ironfounders in Glasgow number about fifty, and we observe that another has just opened in St. James'-street, Paisley-road. Within twenty miles of Glasgow there are also about as many more; so that the consumption of pig iron in this neighbourhood is now upon a very extensive scale, particularly for the production of castings for railways, gas and water works, buildings and bridges. ——Mr. Mickle, of Willington, has obtained a patent for the economising of fuel in iron smelting by the dry distillation of coal, and the use of coke and gas in the blast furnace as fuel, causing, it is said, a much larger production of iron, of improved quality, with an average saving of 7s. to 15s. per ton of pig metal.——Mr. E. Ripley, of Troy (U.S.), has taken out a patent for a method of casting metals, which consists in a peculiar arrangement for quickly withdrawing the air from the mould, so as to insure a better filling up of the same.——Mr. A. Warner, of New Broad-street, has taken out a patent for combining sheet-iron or steel with sheet-lead, zinc, tin, copper, or their alloys. Any two sheets to be combined have a coating of soldering material placed between them, and they are subjected to heat while pressed in a flat state until completely united.

ARCHITECTURAL INSTITUTE OF SCOTLAND.—The Architectural Institute met on Monday, the 18th, Mr. P. Wilson, architect, presiding. A paper was read by Mr. T. Davies, on the relative merits of wrought and cast-iron, as applied to beams for building purposes. Mr. Davies then entered into calculations of the strength of different sections of cast-iron beams; the result of which was, he considered, for general purposes, the most eligible section of beam is that having a web from ⅓ to ½ of the sectional area, and flanges from 3½ to 1, or 3 to 1. The paper was illustrated by a series of tables and diagrams. It was agreed that the Institute should consider about being at the expense of further experiments on the subject, which Mr. Davies consented to superintend. Mr. John Murray, advocate, then read a paper on "The Laying-out of Open Spaces in Towns." Mr. Murray, after discussing the subject generally, stated as his opinion that while large spaces like West Princes-street-gardens and Queen-street-gardens, were most advantageously enclosed and laid out, at other places, where there was no great extent of ground—such as the spaces at Nicolson-square, and at the crossing of Walkes-street and Melville-street—there ought to be no enclosure, but the open space laid down with stone pavement.—*Edinburgh Post.*

ARCHITECTS' BILLS.—At the Cardiff County Court, in course of last week, an action was brought by Mr. George Chittenden, architect, against Mr. V. W. Pritchard, a gentleman resident at Crofta, near Llantrissent, for payment of 11*l.* 18s. for attendances and advice respecting a dispute between the defendant and his builder, Mr. Waller, of Cardiff, and for making certain drawings for additions and alterations to his house at Crofta. The sum of three guineas had been paid into court by defendant. In course of the evidence led, it was proved to the satisfaction of the judge, by the evidence of the plaintiff himself, that he delivered the ground-plan in dispute to the defendant personally, pointing out to him afterwards, on his asking plaintiff for the one-pair plan, dotted lines on the ground-plan, which indicated what defendant required. In respect to this ground-plan, defendant denied, on oath, that he ever either instructed or received any such plan or drawings of any description, from plaintiff, although he admitted that he had consulted him, and for the advice given had paid in the three guineas lodged in court as adequate compensation. The judge expressed his dissatisfaction with certain portions of the defendant's evidence on the one hand, and his favourable impression of the plaintiff's on the other, and at once gave a verdict for the plaintiff.

THE SCRIPTURAL MUSEUM.—The project for the establishment of a Gallery of Scriptural Illustration, with the view of awakening an interest in the study of the Scriptures, and collecting materials for their elucidation, and for the confirmation of their historical accuracy, is assuming a definite form. Rules and regulations have been printed, and the promoters meet at the rooms of the Palestine Archæological Association, in Hart-street, Bloomsbury, where the Rev. Mr. Edwards receives communications and contributions. Amongst the subjects embraced in the collection, are Landscape Scenery of Palestine, Models of Jerusalem, &c. Sacred and Domestic Antiquities of the Israelites, Assyrians, Egyptians, &c. &c. A scheme of lectures will also be organized in connection with the Institution.

SANITARY PROGRESS AT CROYDON. — From printed mortality tables, &c. for the parish of Croydon, for the years ending December 31, from 1848 to 1855 inclusive, it appears that a large proportion of the zymotic class of diseases, occurring at Croydon, prevail in those districts without drainage or water supply. The total number of deaths from all causes last year was 508, which is less by 112 than would have occurred at the average rate of mortality per annum for the last seven years, allowing for increase of population. The births for the year were 747. The total number, of houses in the parish is now 4,287. Of this number there are in the special district 3,296; and of these supplied with water, 2,046; showing still without water supply 1,250; and probably 200 or 300 above that number in the special district unconnected with the drains. Notices of 178 new houses were received and approved in 1855.

THE ARCHITECTURAL EXHIBITION.—In the report last week, the printers turned Mr. Theodore *Phyffers*, the sculptor of the pleasing group called "The Heavenly Chorus," into Mr. Phyggen. We gladly correct the error, and add that the same artist exhibited some wood-carving deserving notice.

LONDON AND MIDDLESEX ARCHÆOLOGICAL SOCIETY.—A meeting of this Society was held at the French Gallery, Pall-mall, on Tuesday evening last, Mr. Beresford Hope presiding, when several interesting papers were read, of which we will give some particulars next week. The meeting was well attended.

RELICS AT BOW.—On the 6th of February, as some workmen were excavating at Mr. Hemming's Iron Church and House Manufactory, Bow, they struck against a large stone, which proved to be the cover of a coffin of the same material cut out of the solid. On opening it the skeleton was found quite perfect, and, from the size of the bones, appeared to be that of a largely-proportioned man. The arm-bones were crossed, and the whole in good preservation. The coffin was found in a firm but moist loamy soil some 4 feet below the surface, and lay due east and west, the head of the skeleton being towards the west. In close proximity an urn was dug out: this contained several small bones, and was of a dark grey pottery, with a diameter at the base of between 4 and 5 inches. Its original shape could not be made out, as the workman's tools had broken it in pieces. A smaller urn or vase of red pottery was likewise discovered. This was much mutilated, but, from the remains, appears to have been very elegantly fashioned in the bowl, with an attenuated neck and a curved handle leading from the top rim to the body of the urn. The ground in which these remains of another age were found was for many years the fair-field, and at one time I believe the site of a monastery. The coffin and urns themselves would, however, appear to belong to the time of the Romans.—JOHN NICHOLLS.

IMPERIAL HOTEL ON SITE OF NATIONAL GALLERY.—It is reported that the bill for an Act to establish at Charing-cross a gigantic English hotel is in a fair way of being passed. The proposed capital for it is 1,000,000*l*. At first sight it certainly seems rather a wild notion to buy the National Gallery; but we have no reliable information on the subject.

ARCHITECTS' BENEVOLENT SOCIETY.—The annual general meeting of this excellent society will be held in the rooms of the Institute of Architects, Grosvenor-street, on Wednesday, the 12th of March, to elect officers and council for the year, and for the general purposes of the society. It is hoped there will be a good muster. The subscribers propose dining together afterwards.

FIRE AT LEEDS INDUSTRIAL SCHOOLS.—With reference to this occurrence, the architects, Messrs. Perkins and Backhouse, wish us to say, that "the origin of the fire is a mystery, for it had no connection whatever with any hot-air flue by which the building is warmed." It commenced in the foul-air extraction-flue, under the raised desks, the platform of which has perforated risers for the exit of the air. The warm-air flues and the extraction-flues for ventilation have no connection whatever. The damage done by the fire is not very serious.

FALL OF A STAIRCASE AT CHELMSFORD.—At the Shire Hall, Chelmsford, on Thursday in last week, while a crowd of persons were collected on the stone staircase leading to the petty sessions room, the staircase fell, carrying those on it down to the flight of stairs below, where one person was killed, and several were severely injured.

CAREY-STREET IMPROVEMENTS.—I notice a movement being made with these anxiously-looked-for and much-required improvements, purposing to carry them out according to the plan in the Sixth Report of the Office of Works, *i. e.* connecting the Strand with the west end of Cheapside, proceeding at once with that portion between Carey-street and Fetter-lane. I therefore suggest that levelling the street should be made a principal feature, in order that so noble a thoroughfare as is contemplated may not be otherwise deteriorated, as in the case of common streets; to facilitate which, I propose a simple plan, viz. that every proprietor of the several buildings on the line of street should contribute to the work proportionately, either by labour under proper direction or by the value thereof. If adopted, it will be of great public benefit in preventing accidents, as well as materially adding to the effect of the street.—W. F. H.

ARCHITECTS IN BOLTON.—In the *Bolton Chronicle* of the 16th ult. I was struck with another of those very interesting accounts that have so lately opened the eyes of the profession to at least one subject connected with it, "competitions," and which you have so ably commented upon at different times. The report I refer to in the above paper is that of the Board of Guardians for the Bolton Union. It appears they are proposing to erect a new union-house, and after a series of squabbling meetings, have come to the resolve to advertise for plans for the same. So far good; but of course these worthy individuals do not do their business by halves: the architect's remuneration must form one item for their discussion, and accordingly they have arrived at the conclusion that 5 per cent. is far too much, and 2 per cent. is quite sufficient. I think such conduct as this of the Bolton guardians should not pass unnoticed, and I am sure I cannot do better than commit the matter to your notice (knowing your zeal in advocating the rights of the profession) to benefit my brother architects.

ONE OF THE VICTIMISED.

DISCOVERY AT MOYSE'S HALL, BURY ST. EDMUND'S.—An archæological discovery, of some local interest, has been made at Moyse's Hall, now occupied as the police-station. The question as to the connection of the eastern side of the adjoining inn with the western division of Moyse's Hall, has been settled by the discovery just made of the original staircase to the upper floor in the first arch between the western and middle alleys, with its perfect well, lighted by two small apertures, one pointed and the other square, and having a doorway into each alley. It is the intention of the authorities, it appears, to preserve this curious staircase, to remove the white-wash from the masonry, and to clear away such obstructions to the view of the whole crypt as can be removed without inconvenience.

SLAG, AS TO CASTING AND ANNEALING.—The liquid slag is conveyed to the casting-table, or mould, similar to metal casting, poured out, and immediately a heavy polished iron roller is passed over the whole surface; the roller rests on two edges, or grooves, equal in height to the intended thickness of the slab or tile, so as to spread out the mass into an equable sheet, and gives a flattened form to a shapeless yielding mass. The quantity of slag cast at once depends on the size of the table: as soon as the slag has solidified, the door of the annealing oven is opened, and the slab, or tile of slag, is thrust from the table into the oven. The ovens are very deep, so as to allow several slabs to lie in them edge to edge; and the oven is closed up very tightly when full, the heat allowed to decline gradually, so that by slow cooling the slag is annealed. On the floor of the building a railway is laid, along which the casting-table is wheeled from one oven to another, as it is necessary that the table should be placed close to the oven into which the slab is removed for annealing so soon as solidified. It will clearly be seen that this manufacture much resembles that of plate-glass, but does not require, in every stage, so much care, experience, and attention as to colour, freedom from specks, veins, wrinkles, mist, or cloudiness, but simply the manual labour of casting, rolling, or pressing into iron moulds of any form or shape, and annealing. As regards the simple manufacture of slag, after reading the evidence of Mr. Davison, of the Dowlais Ironworks, and others, and witnessing the samples produced at Dr. Smith's lecture, and the manufacture of the thin slabs, to represent slate, by Messrs. Chance and Co. who can doubt the practicability of the manufacture becoming general?—W. G. E.

RAILWAY SERVANTS.—It appears from a return just published, that on the 30th June, 1855, the following persons were employed on the railways of the United Kingdom then open for traffic:—viz. 204 secretaries and managers, 33 treasurers, 140 engineers, 356 superintendents, 193 storekeepers, 181 accountants and cashiers, 823 inspectors or timekeepers, 2,183 masters of stations, 322 ticket-collectors, 158 draughtsmen, 7,732 clerks, 1,132 foremen, 3,157 engine-drivers, 3,488 deputy-drivers or firemen, 3,237 guards or breaksmen, 21,247 artificers, 2,836 switchmen, 2,470 gatekeepers, 1,622 policemen, 14,498 porters, 7,172 platelayers, 22,449 labourers, and 2,324 miscellaneous adjuncts. This makes a grand total of 97,952 against 90,409 on the 30th June, 1854:—viz. 80,877 in England, 11,403 in Scotland, and 5,672 in Ireland. The length of line open for traffic was 8,116 miles, and the number of stations 2,798. The total number of persons employed on railroads not open, on the 30th of June, 1855, amounted to 38,546; the length of line in course of construction being 879 miles, and the total length authorized, 4,481. Of these 38,546 persons, 104 were secretaries, 16 treasurers, 181 engineers, 238 superintendents, 55 accountants, 331 inspectors, 61 draughtsmen, 110 clerks, 601 foremen, 216 policemen, 47 porters, 4,962 artificers, 31,370 labourers, and the remainder storekeepers, besides 171 adjuncts of no special vocation. The total number of persons employed on all railways, open or not, was, on the said 30th of June last, 136,498, against 135,810 in 1854: and of these 104,292 were employed in England, 17,388 in Scotland, and 14,818 in Ireland.

ECHO IN ROOMS.—A correspondent from the Menai Bridge asks for "some plan to lessen the echo in a school-room, the size of which is 53 feet by 30, 14 feet to the wall-plate, and 32 feet to the ridge, open-timbered roof, boarded floor, the windows having tumbler casements 6 feet above the floor." The judicious disposal of drapery in such cases often lessens the evil. We understand that a very remarkable cure of a similar annoyance has been recently effected by this means in the new vestry-hall at Paddington.

CAMBRIDGE ARCHITECTURAL SOCIETY.—At the first meeting of the Lent term, held on 20th February, the Rev. W. M. Campion in the chair, some notes on Mediæval illumination and Missal painting were read by Mr. R. W. Brundrit, of Christ's College, who exhibited some magnificent foreign specimens.

THE PLYMOUTH SCHOOL OF ART.—This school, according to the local papers, promises to be a successful undertaking. The accommodation at present provided does not meet the wants of the town, and the managers have been obliged to refuse admission to new applicants.

GREAT BLAST AT HOLYHEAD.—A blast which has required the labour of six men for the last ten months, and 6½ tons of powder to explode it, was let off in the quarry belonging to the new harbour works on Wednesday before last, in presence of the chief engineer and a numerous staff. It is calculated that the quantity of stone loosened by the explosion will be 60,000 tons.

NEW CHURCH IN SOUTHWARK.—A new church is to be erected in Union-street, Blackfriars-road, one of the worst parts of the densely-populated parish of St. George the Martyr, Southwark. The new church will be dedicated to St. Michael.

THE HOMES OF THE PEOPLE.—We may congratulate ourselves on the adoption of this subject for lectures. At Darlington, a few days ago, Mr. Joseph Pease delivered a lecture "On Homes and Habitations."

TENDERS

For West Bromwich Union Workhouse. Messrs Briggs and Everal, architects. Quantities supplied by Messrs. Batstone and Hunt:—

Wilkes, Dariaston	£20,830	0	0
McKenzie, Wellington	17,500	0	0
Hardwick and Son, Birmingham	17,212	0	0
Stokes, Birmingham	17,177	6	0
Wilson, Handsworth	16,896	0	0
Cox and Son, Tipton	16,812	10	0
Heritage, Handsworth	16,471	15	0
Trow and Sons, Wednesbury	16,083	10	3
Parnell, Rugby	15,039	10	4
Ferguson, Nottingham	13,950	0	0

For alteration of premises and building a warehouse for Messrs. W. and J. Freeman, 15, Millbank-street, Westminster. Mr. John Turner, architect. Quantities supplied by Mr. Charles Freeman:—

McCurry, Pimlico	£1,065	0	0
Nick and Son	1,054	0	0
Wilson, Pimlico	1,044	0	0
Tombs, Westminster	960	0	0
Wardle and Baker	900	0	0
Greig, Pimlico	826	0	0
Farmer, Westminster	825	0	0

For extensive alterations at the Devon and Exeter Hospital. Mr. J. Hayward, architect:—

Moass and Bradford	£9,350	0	0
Stafford	9,078	0	0
Mason	8,832	0	0
Ware (accepted)	7,948	0	0

For plastering mansion for Mr. Hartley, at Fairy-hall, Mottingham, Kent. Mr. Thos. Turner, architect:—

Carter	£1,707	0	0
Denison	1,674	0	0
Pottifer and Sons	1,610	0	0
Todd	1,218	0	0

TO CORRESPONDENTS.

"A Bell" thanks!—"J. P."—"R. D. C."—"J. H. C."—"M. and N. H."—"J. D. J."—"E. A." (will find a reply as to clock tower on another page). "Inquirer" (we see no reason, in the statement given, why an architect who sends in two designs should not receive both 1st and 2nd premium).—"J. S. S."—"F. W. O."—"G. E. S."—"Subscriber from beginning."—"J. R."—"A. C."—"S. and H."—"W. O."—"P. G. S."—"G. K."—"E. W. T."—"W. B. A."—"J. B." Bells (in type).—"J. W." (ditto).

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *via* France, must be prepaid: the stamped copy of the paper is of no avail.

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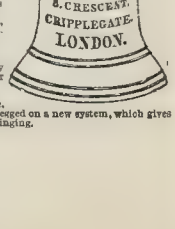

J. W & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.

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By order,
R. SHAPTO HAWKS, Vestry Clerk.
Rotherithe, 22nd February, 1856.

CARPENTER WANTED, to undertake the REPAIRS of several HOUSES, &c. &c. A clever tradesman, with a good recommendation, and above the age of 40, only will be employed; also married, without family: the wife will have to take charge of a lodging-house, and must understand plain cooking, washing, &c. Wages, 24s. per week, and rent free. Apply, by letter only, to T. C. Office of "The Builder."

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Small ditto, ditto, 4d. per ton.

Barges loaded in a few minutes.

Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London. March 20, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.

GIBBS, CANNING, and CO.'s BLUE VITRIFIED BRICKS, PIPES, TUNNELS, BENDS, and FIRE GOODS.

ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.

SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants Builders, contractors, and others supplied with every description of building material at the lowest market prices.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (perfectly non-absorbent) STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, plokings, rough stocks, place, red kiln bricks, pavions, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, and white pebble flints, fire-stones may be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD HOXTON.

BRICK MOULDS (improved), Steel-face Stocks and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick Mill Work and Implements.—J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

THE BEST HERTFORDSHIRE MALM SECONDS:
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK PERFORATED BRICKS.—Messrs. J. EASTWOOD and SONS take this opportunity of informing their customers and the trade, that they have made arrangements for the Manufacture of White Suffolk Perforated Bricks. In curing defects common to bricks of this description, care has been observed to produce them of a true and perfect shape, of an even and beautiful surface, and free from fire-flawns.—J. EASTWOOD and SONS, Belvedere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malms, Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 5, ADELAIDE-PLACE, London-bridge.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. D. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Orange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

CHEAP WHITE BRICKS for FACING HOUSES (Beard's Patent).—These Bricks are of excellent make and colour, are imperishable from frost.—For particulars, apply PATENT BRICK WORKS, Lawford-road, Rugby.

THE PATENT BRICK-MACHINE COMPANY invite orders for their IMPROVED MACHINES, the only ones that manufacture solid bricks equal to hand-made, will actually be at work in a field near London, accessible by railway, where it may now be seen with bricks of last season.

H. C. MOUNT, Secretary.
37, King William-street, City, February, 1856.

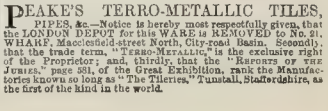
PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of as fine quality as hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—And further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BRICKMAKING by MACHINE, awarded the Gold Medal of Honour, at the Paris Exhibition.—To CONTRACTORS, BRICKMAKERS, and EXPORTERS.—CLAYTON'S PATENT BRICKMAKING MACHINE combining his recent improvements, will be in operation for public view, on MONDAY and TUESDAY next (the 3rd and 4th of MARCH), at the Manufactory, Atlas Works, Upper Park-place, Dorset-square, London. HENRY CLAYTON, Patentee.

TO BRICKMAKERS.—For SALE, a quantity of IRON WHEELING PLATES, navvies' barrows, wheels, &c.—Inquire of H. HARGRAVE, 82, High-street, Shadwell.

TO BRICKMAKERS and BUILDERS.—TO BE SOLD, a BRICKFIELD, in IPSWICH, consisting of superior WHITE and RED EARTH. There are about 3½ acres of land, a good cottage, tile shed, kiln, all the plant, and 30,000 of earth raised.—Apply to WM. P. RUDKINS, Ipswich.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.



BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, J. R. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Tewkesbury-road, Badge Farm, London, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 361, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

SMOKY CHIMNEYS CURED EFFECTUALLY for TEN SHILLINGS, by SUTERS' PATENT WIND-GUARD. This Guard allows free egress to the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

To be had of Ironmongers and Builders; and of the Patentee, at his Office, 85, Fenchurch-street, London.

By Her Majesty's — Royal Letters Patent.

DUPREE and CO.'S DEFIANCE WINDGUARD and VENTILATORS, &c. for the perfect cure of Down-draft Smoky Chimneys, suitable for Public and Private Buildings requiring a constant change of air.

Also

SHIP VENTILATORS, requiring no attention, imparting about six times the quantity of fresh air than any other in use.

Also

VENTILATING ROOFLIGHTS, for Slate or Tile Roofing, without Paint or Putty.

Prospectuses sent on application.

London Depôt—ESNOUF and MANGER, 141, Minories, City.

HANDS'S PATENT ECONOMISING KILN is the only simple and effectual mode to use the heat, for drying moist moulded clays, stand at any season, in time of burning and cooling the kiln, with perfect ventilation.—Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TO THE COMMISSIONERS OF THE BOARD OF HEALTH AND TO ALL PERSONS INTERESTED IN THE SMOKE QUESTION.

HANDS'S PATENT is the only simple and certain remedy for the SMOKE NUISANCE: it has combined, where necessary, the advantages of a draught process and perfect ventilation, without a particle of complicated machinery. Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

CHAS. MACINTOSH and CO. Patentees of the VULCANIZED INDIA-RUBBER, and GENERAL MANUFACTURERS of WATERPROOF, AIRPROOF, and ELASTIC RUBBER GOODS beg to inform all persons who desire to correspond with them direct, that their SOLE ESTABLISHMENTS are No. 3, Cannon-street West, London, and Cambridge-street, Manchester. This notice is necessary, as the term "Macintosh Depôt, Macintosh Warehouse, &c. is frequently adopted both in London and the country by vendors of India-rubber goods, who deal in articles not of the manufacture of CHAS. MACINTOSH and CO.—Goods manufactured by CHAS. MACINTOSH and CO. are stamped with the name of the firm.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT. —Second Testimonial.—"March 10th, 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

TO ENGINEERS, MILL-OWNERS, &c.

N. Woolwich Elastic Steam-packing, Canvas and India-rubber), at 1s. 4½d. per lb.

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H. M.'s Dock-yards), having considerably extended their manufacture in order to meet the daily increasing demand upon them for this effective and durable article, are enabled to offer the very best material at the reduced price of 1s. 4½d. per lb. for sheet and rope.

Testimonials may be seen at S. W. SILVER and CO.'s Warehouses, Nos. 3 and 4, Bishopsgate-street (opposite London Tavern), where orders for Steam Packing, also Buffer Springs, Pump Clacks, and the various India-rubber appliances, will meet with prompt attention.

CAUTION.—S. W. S. and Co. have found it necessary to stamp all their manufacture, thus—"S. W. SILVER and CO. WORKS, NORTH WOOLWICH."

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Bed-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagnelle tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions, Inflatable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.

⅜	½	¾	1	1¼	1½	1¾	2	2¼	2½	2¾	3 in.
9d.	11d.	1s.1d.	1s.3d.	1s.5d.	1s.7d.	1s.9d.	2s.	2s.3d.	2s.6d.	2s.9d.	

Super-extra stout quality.

2	2¼	2½	2¾	3 inches.
2s.	2s.3d.	2s.6d.	2s.9d.	3s. per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

1	1¼	1½	2	2½ inches.
9d.	10d.	11d.	1s.	1s.3d. 1s.6d. per yard.

The hose is Burnettized at an extra charge of 3d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 2, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 8d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and directions to builders and the trade, forwarded on application, post free.

THE PHOTOGRAPHIC SOCIETY'S THIRD ANNUAL EXHIBITION will OPEN to the public on MONDAY next, JANUARY 7th, at the Gallery of the Society of Painters in Water Colours, 5, Pall-mall East. Open at Ten. Admission 1s. Evening, from Seven till Ten. Admission 6d.

TO ARCHITECTS AND OTHERS.

MR. EDWARD L. PARAIRE is desirous of Meeting Gentlemen who require COLOURED ARCHITECTURAL DRAWINGS. External, Internal, Isometrical Perspectives got up; outlines of same neatly coloured, with background, on terms that will insure approval. Temporary assistance given in getting up Plans, Elevations, Sections, Detail, and Working Drawings.—Mr. E. L. P. makes a consideration in his charge where competition of terms proves unsuccessful.

Address, 8, Rathbone-place.

DRAWING, &c.—One Guinea per Quarter. Comprising Architectural, Engineering, Mechanical, Perspective, and Water Colour Drawing; Taking out Quantities; Measuring Builders' Work, &c. &c. Gentlemen who cannot attend at the Establishment, can be attended at their residence on moderate terms, in any part of town or country, by Mr. SMITH or Mr. LEWIS.—Others, 24, Guildford-street.

DRAWING CLASSES.—24, Guildford-St. Russell-square.—At this Establishment Pupils are thoroughly Instructed in Architectural, Civil Engineering, and Mechanical Drawing; Ornamental, Perspective, and Water-Colour Drawing; Taking out Quantities, Measuring, Estimating, &c. &c

Terms, One Guinea per Quarter. Prospectuses and full particulars may be had at the Offices

ARCHITECTURE, CIVIL ENGINEERING, and SURVEYING CLASSES. Established by Messrs. HYDE, SMITH, and LEWIS, Architects, Civil Engineers, Surveyors, &c. For Preparing Gentlemen for Architects, Builders, Engineers, Surveyors, Draughtsmen, Measurers, &c and for giving EVENING INSTRUCTION in Architectural, Civil Engineering, and Mechanical Drawing; Colouring, Shading and Tinting; Ornamental and Water-Colour Drawing; Perspective, Isometrical, and Geometrical Drawing, Modern Finished and Working Drawings, Preparing Specifications, Taking out Quantities, Estimating, Measuring and Valuing Builders' Work, &c. &c. Terms:—Day Pupils, Three Guineas per Quarter; Evening Pupils, One Guinea per Quarter. There are no extras, the terms include the whole of the above, with the use of Drawing Boards, T Squares, Plans, Drawings, Models, &c. Prospectuses and full particulars may be had at the Offices, 24, Guildford-street, Russell-square

MATHEMATICAL DRAWING INSTRUMENTS.—JOHN ARCHBUTT, 80, Westminster-Bridge-road, Lambeth (near Astley's Theatre), begs to call attention to his Stock of Instruments manufactured by superior workmen. The prices will be found considerably lower than ever charged for articles of similar quality and workmanship. Rules, scales, tapes, &c. at equally low prices. An illustrated price-list will be immediately forwarded, free, on application.

N.B. A few New and Second-hand Levels and Theodolites always for Sale.

TO ARCHITECTS.

EXHIBITION and COMPETITION DRAWINGS, coloured or tinted, and superior LITHOGRAPHY, in its various branches, executed by Mr. T. J. RAWLINS (Author of Elementary Drawing Classes, adopted at Marlborough House; Outlines of Sculpture; Modern Architecture, &c.), 38, University-street, University College, London.

THE LONDON and WESTMINSTER BANK issues CIRCULAR NOTES of 10l. each, payable at every important place in Europe. These notes are issued without charge, and they are cashed abroad free of commission. The Bank also issues, free of charge, Letters of Credit on all the principal cities and towns in Europe. The Letters of Credit are issued only at the Head Office in Lothbury. The Circular Notes may be obtained at the Head Office in Lothbury, or at any of the Branches, viz.—

Westminster Branch, 1, St. James's-square.
Bloomsbury ditto, 214, High Holborn.
Southwark ditto, 3, Wellington-street, Borough.
Eastern ditto, 87, High-street, Whitechapel.
Marylebone ditto, 4, Stratford-place, Oxford street.
Temple Bar ditto, 217, Strand.

The rate of interest allowed on deposits of 50l. and upwards, at the Bank or any of its Branches, is now 3 per cent.

J. W. GILBART, General Manager.

METROPOLITAN LOAN COMPANY, Established 1849.
1, CRAVEN-STREET, STRAND, LONDON.

Loans are advanced in amounts varying from 10l. 10s. to 100l. repayable weekly or otherwise, as may be agreed upon, at a discount of 2l. per cent. for twenty-two weeks, and for 50 weeks at 5 per cent. Forms may be had, price 2d.; if by post, three postage stamps to be enclosed.

ROBERT NORTON, Secretary.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSS'S WHOLESALE WAREHOUSE, 29, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 22, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Pots, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.

Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.

Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.

Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

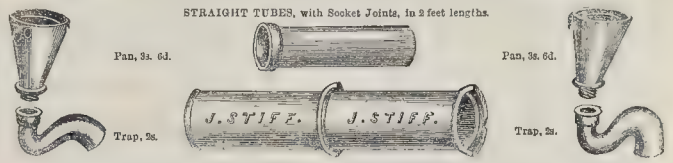
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FEATHER CONNECTIONS.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

Terra-cotta Chimney-pots of various patterns and sizes, also Red Earthenware Drain-pipes, at greatly reduced prices.

R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barves, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B The above can be worked either by hand, horse, or engine power.

Iron Pails 12s per doz. painted.
Ditto ... 14s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS'

PATENT VIBRATING STANDARD PUMP,

which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating lever, the cumbrous entrance and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Lifting and Force Pumps for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels.

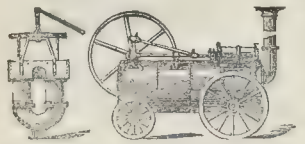
Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS,
all sizes,
to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET,
Fleet-street.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars Bridge (Surrey Side).

STEAM-ENGINES on SALE, new and second-hand, from one to twenty horse power, a 10-horse Jukes' smoke burner, and a variety of machinery, consisting of boilers, tanks, three-throw pumps, lathes, planing and drilling machines, screw presses, a 30-inch paper-cutting machine, &c. &c Apply to D. W. ASH, 187, Southwark-bridge-road, Newington Causeway, where the above can be seen.

PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 92, Blackfriars-road.

STEAM-ENGINES for SALE.—A Six and a Ten horse High-pressure. Also, a Donkey Engine.—Apply to JOHN DUFF and CO. Engineers, Glasgow, Makers of Land and Marine Engines, Boilers, Derrick and other Cranes, &c.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns, commencing at 3s per foot super together with every requisite for its correct and adaptation, can be obtained of Mr. BUFF, 2, Charlotte-row, Mansion House, or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

By her Majesty's Letters Patent.

THE PATENT ARCHITECTURAL POTTERY COMPANY, POOLE, DORSET, Manufacturers of PLAIN, GLAZED and COLOURED BRICKS, CASINGS, &c.; also of Patent TESSELATED, MOSAIC, and other FLOOR TILES. The above Bricks are for the exterior and interior of buildings, conservatories, baths, reservoirs, &c. They are of the nature of superior Dutch Clinkers, and vitrified throughout. The object of the Patentees in producing these articles is to supply a brick which will not absorb moisture, and which will resist the action of the strongest acids. The tiles are made of the same material, and possess the same properties. The Patentees have also introduced a method of producing Bricks and Tiles of any required colour throughout the body, so that they may be cut or worked to any pattern without destroying the colour. The Patentees are prepared to execute orders for the above goods to any extent, and to any design. The Bricks are manufactured to any size, and shapes, glazed or not, may be had at a few days' notice. For samples, prices, &c. address the Secretary to the Company, as above.

JENNINGS'S PATENT DRAIN-PIPES.

For full particulars of these Pipes, and their advantages, AS COMPARED with the old-fashioned Socket and Half-Socket Pipes, see *Builder* of February 9.

For testimonials, &c. see *Builder* of the 9th, 16th, and 23rd ult.

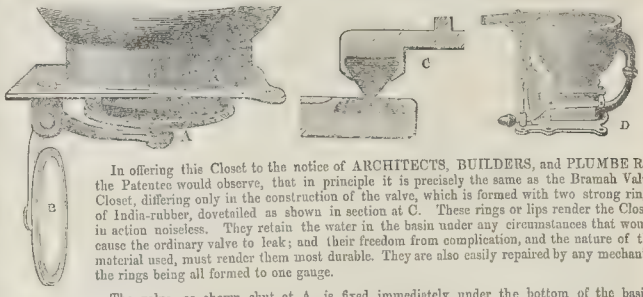
Architects and Engineers describing these Pipes in their specifications will have the GREAT satisfaction of knowing that, in case of stoppage, they afford every facility for examination, as also for the introduction of Junctions, &c. without the slightest disturbance to the Invert or General Drain.

Prices per foot run, including the Patent Chairs and Saddles:—

4-inch.	6-inch.	9-inch.	12-inch.	15-inch.
6d.	8d.	1s. 1½d.	1s. 10d.	3s.

THE USUAL TRADE DISCOUNT ALLOWED.

JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.



In offering this Closet to the notice of ARCHITECTS, BUILDERS, and PLUMBERS, the Patentee would observe, that in principle it is precisely the same as the Bramah Valve Closet, differing only in the construction of the valve, which is formed with two strong rings of India-rubber, dovetailed as shown in section at C. These rings or lips render the Closet in action noiseless. They retain the water in the basin under any circumstances that would cause the ordinary valve to leak; and their freedom from complication, and the nature of the material used, must render them most durable. They are also easily repaired by any mechanic, the rings being all formed to one gauge.

The valve, as shown shut at A, is fixed immediately under the bottom of the basin. B shows the valve open, the centre or flat part being filled in with enamelled ware, made to correspond with the basin it may be fixed under. D is an elevation of the Closet finished, and it is made to work with or WITHOUT wires and cranks, according to the situation it may be fixed in, EXPOSED TO FROST OR OTHERWISE.

G. JENNINGS has such confidence in this Closet, that a written warranty for seven years will be given with every Closet sold.

Illustrated Particulars and Prices of JENNINGS'S Self-acting and other Water-closets, Urinals, Lavatories, Pumps, Sluice-valves, Fire and other Cocks, Gully-traps, Shop-shutter Shoes, Earthenware Drain and Soil Pipes, &c. &c. can be had free, on application, or by post, on enclosing two stamps to

GEORGE JENNINGS, SANITARY ENGINEER, GREAT CHARLOTTE-STREET, BLACKFRIARS.

ESTABLISHED, 1795.

JOSEPH CLIFF,

WORTLEY, NEAR LEEDS, YORKSHIRE.

London Wharf, No. 4, Great Northern Goods Station, King's-cross,

M. B. NEWTON, Agent.

MANUFACTURER OF GLAZED STONEWARE TUBES, SOCKET, HALF-SOCKET, OR BUTT-JOINT; BENDS, SUCTIONS, TRAPS, INVERTS, URINALS, CLOSETS, &c.

CIRCULAR PIPES, from 2 inch to 54 inch diameter.
EGG-SHAPED, from 6 by 4 inches to 36 by 28 inches.

The Proprietor begs to call the especial attention of Engineers and Surveyors to HIS LARGE PIPES for DRAINAGE and WATER-CONDUITS, which can be made of any required strength or thickness.

FIRE CLAY RETORTS have been made at these Works for UPWARDS OF THIRTY YEARS, and have attained to the highest excellency, both in quality and internal smoothness; respecting which unexceptional reference can be given.

Bricks, Lumps, Tiles, Chimney-Linings, Terra Cotta. Chimney-Tops, Windguards, &c. &c. also in Stock.

AGENCIES:

LONDON ..... As above.
LIVERPOOL .... G. F. Chantrell 130, Dale-street.
MANCHESTER.. Jos. Appleby, Oldham-road.
WIGAN .. .... Richard Ellis, Queen-street.
BURNLEY .... James Emmett, E. L. Railway Station.
BRADFORD .. S. Scholes, Garnett-street, Leeds-road.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the common Earthenware of Closet-pans.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. DOULTON'S HALF-SOCKET PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

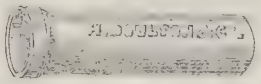
GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

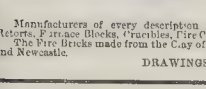
MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

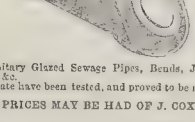
The above Company having now been in existence for nearly six years and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chapman Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

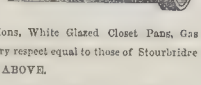
DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.





WHOLE SOCKET.



Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire-Clay, &c. &c.

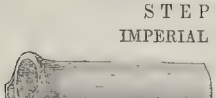
The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

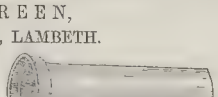
DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.





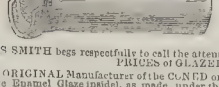
S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

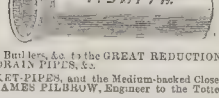
5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.





THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CURVED or REBATED SOCKET-PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 29, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed—I. and W. STURGE respectfully invite attention to the very superior character of their stone ware, which for cheapness are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 2½ per cent. discount off the list for cash. Junction Bends, &c. Traps and Gags of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—I. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

LYTCHETT POTTERY.—For SALE by PRIVATE CONTRACT, the LEASE and PLANT of the above Premises. The lease consists of about forty-seven acres of land and a good cottage. The land contains a large quantity of very superior clay for pottery and fire goods. The drain-pipes made from the clay are equal, if not superior, to any yet in the market; and the bricks also will bear comparison with any yet made. The plant comprises three pottery kilns and two brick kilns, with pipe machines, pug-mills, and all other necessary apparatus. Lytchett Pottery is 9 miles from the South Western Railway, and 3 miles from the port of Poole. For further particulars, and to view, apply to H. P. FISHER, Bramford.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

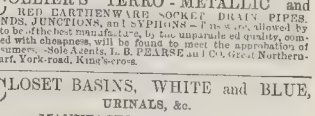
VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, Bankside. DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to direct the attention of Builders, STONEWARE PIPES &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best, cheapest, hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE No. 7.



is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under constant pressure of 100 to 200 feet; they are found to be effectual, durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS. LAMBERT and SON,

Brass Founders and Engineers,

Corner of Short street, New Cut, Lambeth.

N.B. No. 7, combined with DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 17s. 6d. each.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.—Prices are allowed by all to be the best manufactured, to be unparalleled in quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and Co., Great Northern Wharf, York-road, King's Cross.

CLOSET BASINS, WHITE and BLUE, URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners have sanctioned the adoption of the high-pressure principle in all towns. WARNER'S HIGH-PRESSURE COCK is [illegible] from cockroaches and all [illegible] for all [illegible] Closets and Basins with a supply direct from the [illegible] to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TAR PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

SALES BY AUCTION.

TO BUILDERS, CONTRACTORS, AND SAW-MILL PROPRIETORS AND OTHERS, requiring large Premises in the heart of London.

MESSRS. DAVIS and VIGERS are instructed by Mr. Samuel Grimsdell, upon his retiring from business, to SELL by AUCTION, on the PREMISES, on MONDAY, APRIL 14th, at TWELVE for ONE, unless previously disposed of by Private Contract, the LEASE of his extensive Establishment in Bell-lane, Spitalfields, with immediate possession to the purchaser. The buildings are for the most part newly built, and of fire-proof construction, and comprise carpenters' shops, affording bench room for 70 men, mill rooms, engine house, saw-pit, iron store, plumbers', painters', whitesmiths' and smiths' shops, stabling for 14 horses, and a loose box; capital range of counting-house, residence for foreman, &c., and with a large yard occupy a well-enclosed area of about 3 acres, and with premises adjoining let to Mr. Greaves, at about 16s. per annum are held by lease for thirty-one years, from Michaelmas last at 120l. per annum, free from land-tax, which is paid by the lessor. To be viewed by cards, to be obtained of Messrs. DAVIS and VIGERS.—Particulars and Conditions of Sale may be had of E. B. CLARKE, Esq. Solicitor, Bishopsgate Church yard; of Messrs. WARRINGTON and HEPPNER, New City Chambers, Bishopsgate; on the Premises; and at the Auctioneers' Offices, 4, Frederick's-place, Old Jewry.

TO RETAIL TIMBER MERCHANTS, CONTRACTORS, BUILDERS, SAW-MILL PROPRIETORS AND OTHERS.

MESSRS. DAVIS and VIGERS are instructed by Mr. Samuel Grimsdell, upon his retirement from business, to SELL by AUCTION, on the PREMISES Bell-lane, Spitalfields, and Queen-street, Churchyard, Wheler-street, Spitalfields, on MONDAY, MARCH 31st, at TWELVE precisely, the following lots, at TWELVE PRECISELY o'clock each lot, and without reserve, his valuable well-seasoned, and valuable TIMBER, comprising about 1,000 loads of first-quality red and yellow deals, battens, and Russia deals, 1,500 white deals and battens, 300 loads of Memel timber, 200 loads of Quebec and Christiana deals, 1,000 yellow Wainscot battens, 2,000 feet of Scantling, and Mahogany, Walnut, and Oak planks, from 2 to 4 inches thick, and 12 years' dried; also a large quantity of well-seasoned prepared floor battens, and a large and useful assortment of joiners' stuff, 1,000 small pales, 200 small deal boards, 1,500 pitches' load of cords (some near white), planks, stock of ironmongery, five wrought-iron hoop pieces, cast-iron pulleys, 6 ton travelling jenny, six single and double-purchase crabs, power-travelling jenny, six single and double-purchase crabs, powerful set screw jacks, fifty ladders, two pug-mills and a limemill, full set screw jacks, fifty ladders, two pug-mills and a limemill, full sets of Portland and other stone, Yorkshire pavings, landblocks of Portland and other stone, Yorkshire pavings, landblocks of Portland and other stone, portable and stone saws, and two timber carriages, three strong trucks, two powerful cart horses and two short-tail horses, with trimmings complete of valuable and useful property, forming the entire of Messrs. Grimsdell's Stock-in-Trade, and which will be sold in small lots for the convenience of purchasers. To be viewed by cards, to be obtained of the Auctioneers, 4c, Parliament-street, and Exchange.

MARBLE SLABS.—Near the Great Northern Terminus.

MESSRS. EVERSFIELD and HORNE are instructed to SELL by AUCTION, on the PREMISES, Great Northern Wharf, Camden-road Village, on TUESDAY, MARCH 4th, at FIFTEEN for TWELVE, the extensive assortment of MARBLE SLABS, comprising seventeen, and so large as to cut two tables, 11ft. and 9ft. square, and a variety of the most esteemed coloured marbles of various thicknesses, English oaken, and of good quality. May be viewed three days previous to, and catalogues had on the Premises; and of the Auctioneers, 3c, Parliament-street, Royal Exchange and of the Auctioneers, 3c, Parliament-street, Royal Exchange.

N.B. Approved bills of three months to purchasers above 30l.

MARBLE SLAB.—ALTERATION OF DAY OF SALE.

MESSRS. EVERSFIELD and HORNE respectfully announce, that the SALE of MARBLE SLAB at KING'S CROSS, advertised last week for the 7th, will take place NEXT TUESDAY, the 4th MARCH, at 1, Bamcott-street.

HARWICH.—Barges, Boats, Iron, Old Timber, &c. for Sale. TO BE SOLD by AUCTION, by

MR. HALES, on FRIDAY, 7th MARCH, 1856, by order of Messrs. H. Lee and Son, the proprietors, at their HARBOUR WORKS DEPOT, near the Ordnance Jetty, Harwich, ten good barges, HALES, with their gear, built in chalk carlee, and windlasses complete; six iron crabs; four railway trucks; and upwards of thirty tons of iron, consisting of large and small chains, suitable scrap and other iron, valuable old timber; rope; seven harbour boats, various; firewood, &c. arising from the hark or bridge works, all which will be expressly to enable purchasers to load with their own barges. Particulars, on reference to the proprietors, Bishopsgate, London; and Mr. Henry Weaver Manager at the Harbour Works Depot; or of the Auctioneer, Harwich.—Sale to commence at TWELVE o'clock at noon.

IN BANKRUPTCY.—WITHOUT RESERVE TO TIMBER MERCHANTS, SHIP-BUILDERS, BUILDERS, CARPENTERS, &c. &c.

MR. NEEMAN is instructed by the assignees of Messrs. Fossey and Steel, bankrupts, to SELL by AUCTION with reserve, on the PREMISES, Norway Wharf, Millwall, Poplar, on TUESDAY, MARCH 11th, at SEVEN o'clock precisely, all the extensive and valuable STOCK-IN-TRADE, comprising a variety of Baltic and foreign timbers and small deals, Norway and other spars, Memel in logs, &c. planks, and cut into scantlings, boards, battens, prepared well in and cut into scantlings, boards, battens, prepared yellow and white deals, lining boards, Dantzic lights, oak laths, &c. also a four-wheel phaeton, timberjarris, carriage, and other trade implements, sundry timber fittings, &c. &c.—May be viewed two days previous to, and morning of sale, and catalogues had on the Premises, and of the Auctioneer, 3, Crooked-lane, London-bridge.

TO LAND and BUILDING SOCIETIES and OTHERS.—Votes for the County of Kent.—Eligible Freehold Building Land, land-tax redeemed, near to the entrance-gates of the Royal Arsenal, Woolwich.

MESSRS. CHURCH and SON are favoured with instructions to OFFER FOR SALE, by PUBLIC AUCTION, at the TOWN HALL, Greenwich, on THURSDAY, MARCH 13, 1856, at THREE for FOUR o'clock in the afternoon, SEVENTY-SEVEN PLOTS of Valuable BUILDING LAND, in convenient lots, to be let, most eligibly situated on the high-road, Plumstead, within five minutes' walk of the Lower Entrance-gates of the Royal Arsenal, and immediately adjoining the local station of the North Kent Railway. This land offers advantages to large and small capitalists rarely to be met with. It forms part of the Griffin farm and gardens, it is in high state of cultivation, and is pleasantly situated on light gravel. Each lot will have a frontage on an excellent new road, which it is proposed to extend to Plumstead-common, as a direct communication from Plumstead road, and will or title the purchaser to a vote for the county of Kent. Plans, with particulars and conditions of sale, may be had on the Premises; of Mr. H. Davis, Solicitor, Red Lion-square, Holborn; at Garraway's Coffee House, Cornhill; Robson's Rooms, London; and of the Auctioneers, Woolwich and Blackheath.

SALES BY AUCTION.

CHELMSFORD, ESSEX.—To Shippers, Colonists, Schools, and Public Establishments.—To BE SOLD by AUCTION, at CHELMSFORD, on the Premises of the Patent Oven Company.

VALPY and STOKES, on THURSDAY, 6th MARCH, 1856, by order of the Proprietors, about FORTY of FITCH'S PATENT OVENS, in lots, for immediate clearance; also, a quantity of Old Iron, Smiths' Tools, Fixtures, Sash Weights, Grindstones and Sundries. These well-known and valuable Ovens are in use, from the No. 1 to No. 4 size, and will take four or FIVE dozen 4lb. loaves each. Purchasers may depend on their being sold without reserve, as the Premises are to be cleared for a large family. The No. 2, which is calculated to cook for 150 persons daily; and they are constructed in a most substantial manner, of cast and wrought iron, with the best workmanship. Within view of the Steamers and Colonists' Catalogues may be obtained of the Auctioneers, Chelmsford, Essex.

NOTICE to CABINET-MAKERS.

MAHOGANY and TIMBER MERCHANTS, &c.—The new LIVERPOOL PERIODICAL SALE by AUCTION of MAHOGANY and other TIMBER, Woods and Dye-logs at Liverpool, will take place on FRIDAY, the 7th MARCH, at TWELVE o'clock at noon, in the Brokers' Sheds, Brunswick and Toxteth Docks, Liverpool.—For catalogues containing full descriptive particulars, apply to EDWARD CUNNIS, Broker, 6, East Side, Queen's Dock, Liverpool.

TO TIMBER MERCHANTS, SHIP and COACH BUILDERS, CABINET-MAKERS, JOINERS, ASH and other TIMBER, TO BE SOLD by AUCTION, by

MR. T. BAXTER, on TUESDAY, MARCH 4th, 1856, at TWO o'clock, at the GEORGE INN, Beckenham, Kent; comprising Thirty very fine large Elm Trees, and Forty fine Thirty-five feet Ash ditto. Two large Beech, and Three fine large Limes, Horse Chestnut, &c.; all recently cut down, and lying on Beckenham Park Estate at Beckenham, Kent. May be viewed two days preceding the Sale by applying to Mr. Winson, Kent-house-road, near Penge; or to the Carpenter on the Estate, Yard near the Lodge; at Lamplounes Inn at the Lower Castle, Deptford; Crooked Billet, Penge; at the Place of Sale; and of the Auctioneer, 4c Burnley, Kent.

ESSEX and MIDDLESEX.—Paulshim Lodge, Dagenham.—Valuable Detached Enclosure of Arable Land, and Five Houses in the Rectory-walk and Church-walk.

MESSRS. BRUEL and SONS have received instructions to SELL by AUCTION, at the MART, London, on TUESDAY, MARCH 25, at TWELVE, a very desirable VILLA RESIDENCE, known as Paulshim Lodge, with convenient requisite outbuildings and useful fruitful kitchen grounds, together with a small pasture adjoining, pleasantly situate in the Church-walk, within the manor of Dagenham, four miles from Romford, and 14 from Ilford, at both of which are stations on the Eastern Counties Railway; a valuable detached enclosure of productive Arable Land, known as Mill Field, containing 8a. 3r. 3p., in the occupation of Mr. Thomas Ware, at 12l. per annum; also, a desirable Leasehold Property, comprising five houses in Oldham-gardens, Basingstoke-road, Clerkenwell, let to respectable tenants at rents amounting to 24l. 10s. per annum. Possession of the residence and the land upon completion of the purchase. Particulars and plan may be obtained of Messrs. DAVIDSON and BRADBURY, Solicitors, 18, Basinghall-street; at the Auction Mart; and of Messrs. Farrer and Sons, 25, Gresham-street.

Sixth Sale of the Surplus Property belonging to the North London Railway Company, with Votes for the County of Middlesex.

MESSRS. BEADEL and SONS have received instructions from the Directors of the above Company to SELL by AUCTION, at the MART, on TUESDAY, MARCH 11th, at TWELVE o'clock, in 28 Lots, the North Portion of the valuable FREEHOLD SURPLUS PROPERTY adjoining the Railway, Camden Town, comprising several freehold Plots, let on rents amounting to 62l. per annum; also well-placed ground-rents arising from houses in Bromley-place, Great and Little Royal Ingleside-ps, Grimes-street, and Frederick-place. Also Shepherd's Nursery, and a plot of Freehold Land in Hollingbourne-lane, Balsam. Particulars may be obtained of Messrs. Tanner, Pearman, Hart, & Sons, Solicitors, Guildford-street; of Messrs. Rosser, 10, Camden-crescent, Camden-town; at the Auction Mart; and of Messrs. Beadel and Sons 25, Gresham-street.

Extremely valuable first-class Freehold Building Ground, Camberwell, Surrey.

MR. LEIFCHILD has received instructions for the undermentioned SALE by AUCTION, at GARRAWAY'S, on TUESDAY, MARCH 11, at TWELVE PRECISELY, in one lot, a very important FREEHOLD ESTATE, containing about 8a. 2r. 32p. of productive pasture-land, on the south side of Peckham High-road, in the parish of St. George Camberwell, this most desirable property abuts on the Lordship-lane, and Southgrove, and on a public footpath from Grove-hill; its situation is eminently agreeable and salubrious, being in the immediate vicinity of Camberwell-grove, Champion-hill, and Denmark-hill, directly fronting East Dulwich, with a fine view of the Crystal Palace. Every part of this valuable estate is peculiarly adapted for building purposes of a high character, for, in addition to its delightful and healthy aspect, the convenient extent of area so near to London, it contains rich earth, capital quality, and two good roads through it, with the necessary sewers in a great depth, which, from a careful anticipation of the daily increasing demand in this popular and healthy district for residences of a superior class, will be found ready for immediate use, and, upon a close inspection, with particulars and conditions of sale, may be had at Garraway's; of Messrs. Davidson & Bradbury, Solicitors, 18, Basinghall-street; of Mr. Russell, Solicitor, 59, Coleman-street; and at the Offices of Mr. Leifchild, 69, Moorgate-street City.

FARRINGDON STREET EXTENSION.—Building Materials of Ten Houses.

MESSRS. PULLEN and SON have the honour to announce that they will SELL by AUCTION, on the PREMISES, on MONDAY, MARCH 3rd, at TWELVE, in Lots, by order of the Improvements Committee of the Corporation of the City of London, all the valuable BUILDING MATERIALS of TEN HOUSES, SHOPS, and PREMISES, in Tallmadge-street and Peter-street, Frederick-well, comprising 300 loads good bricks, slate and pan tiles, and slates, capital oak and fir timber, in roofs and floors, sashes, doors, partitions, floor boards, shop fronts, lead gutters and pipes, stone paving, shell copers, gasfittings, and various useful trade fixtures; also, two large iron doors, 6 feet by 2 feet 6 inches and stone-work of strong room, Leslie's gas purifier in one case, two pier glasses, a counter three large carved oak mantels, 30 brass lamps, and sundry surplus stores. May be viewed on Saturday. Catalogues had at the Architect's office, Guildhall; and of Pullen and Son, 80, Fore-street, Cripplegate.

TIMBER SALE.—At GARRAWAY'S Coffee House, Change-alley, Cornhill, on FRIDAY, 7th of MARCH, 1856, at FOUR o'clock precisely, 100,000 Baltic and Co quail Deals and Battens, 500 loads of Baltic and Colonial Timber, with other wood goods. Further particulars, and Catalogues to due time, by CHURCHILL, MACMILLAN, & Co. Wood Brokers, 3, Cannon-street.

TO BE LET by TENDER, on a Rebuilding Lease, certain PROPERTY, situate in the front of Heathstreet, Barking-side, Essex. For further particulars, apply to JOHN PERKINS, London-wall.

SUPERIOR BUILDING LAND TO LET, near Carlton-hill, St. John's Wood, and Kilburn-gate; 110 feet above the Thames; commanding views of Hampstead and Richmond; adapted for detached and semi-detached villas, of 60l. to 100l. yearly value. Leasehold for ninety-five years. Rent 8s. per foot frontage; average depth, 95 feet.—Address, Mr. BALL, 44, Regent-street, Piccadilly.

TO BE LET on Building Lease, the HALL and PREMISES belonging to the Worshipful Company of Weavers, opposite the entrance to Guildhall, in Basinghall-street, a suitable site for the erection of Offices on a large building. Frontage, about 37 feet; depth 120 feet. The Court will meet at the premises for receiving TENDERS for the same, on TUESDAY, the 4th MARCH next. The premises may be viewed by permission of the tenants, and further particulars may be obtained of JOSEPH JENNINGS, Esq. 3, Foley-place, Cavendish-square; and of Messrs. DAVIDSON and BRADBURY, Solicitors, No. 18, Basinghall-street.

TO BUILDERS and OTHERS. — An excellent SITE TO BE LET or SOLD, for BUILDING PURPOSES, with a good double frontage, situate in a leading thoroughfare, and in an established neighbourhood, well adapted for a pair and dwelling houses, or shops and dwellings. The most rising of the present erections may be used if sound, in erecting any new buildings that may be approved. Money will be advanced if required by the purchaser, or taken to carry out the undertaking, upon a satisfactory arrangement.—Inquire of Messrs. HOWARD and FOREMAN, Soho-square, Hill, Pemberton-row; Mr. EDWARD LOWTHER, 58, Red Lion-street, Clerkenwell; or of Mr. MURRELL, Auctioneer, 1, Wilbraham, Clive.

STRATFORD, ESSEX.—FREEHOLD LAND within three miles of London, exonerated from land tax, and free of tithe, TO BE LET on lease for a long term of years, in large or small plots, suitable for manufactories, building purposes.—Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

FREEHOLD ESTATE (near the Eastern Counties Railway Terminus, in Shoreditch) TO BE SOLD, consisting of Four Dwelling-houses, Three Shops with dwelling-houses, two cottages, shops adapted for beer licensed premises, stabling, &c. with capital drainage; is part to be let. Also, TO BE LET, a part, or the lease of the whole, of LARGE PREMISES, near the above, consisting of two workshops, about 60 feet long, forge, three stalling and other buildings, with a large yard, also three cottages adjoining.—Apply to Mr TURNBULL, 55, Worship-street, Finsbury.

FREEHOLDS TO BE SOLD, or LET on a Repairing Lease, at a rental; situate on the banks of the River Medway, near the Cross-bridge, Deptford, Kent, consisting of a capital Wharf and Premises, let on lease to the present occupier at 75l. per annum; and Sixteen Dwelling-Houses, which when repaired, would let at weekly rents amounting to 178l. 12s. per annum.—Particulars of Mr. W. S. FRANCIS, Surveyor, 17, Waithman-square, St. George's-fields.

TO PLUMBERS, GLAZIERS, HOUSE-PAINTERS, FURNISHING IRONMONGERS, BUILDERS, or any trade of respectability requiring commodious Shop and Premises.

TO BE LET on LEASE, a capital HOUSE, SHOW-ROOM, WORK-SHOP, STABLE, YARD, and PREMISES, situated well for business, in a large village about 10 miles from London within 12 miles of London; surrounded by all the building activities of a first-class railway station.—Apply to Mr. JOHN DAWSON, Auctioneer and Agent, Marlborough Chambers, 49, Pall-mall.

HAMPTON-COURT.—About Eight Acres of BUILDING GROUND TO BE LET, on ninety-nine years' leases, or LET on small or large plots, at rental equivalent to ground rents, or moderate rents or prices. An advance of say 5l. per cent low in value and the wants of respectable parties taking a desirable frontage. A small portion of the ground would be let for shops and cottages if desired; the residue for detached or semi-detached villas and a few houses of 40l. to 50l. per ann. SOLD (belonging to the same proprietor), a convenient FAMILY RESIDENCE, with six bed-rooms, at a moderate rent.—For plans, &c. apply to Mr. F. LETT, Architect, 36, Essex-street, Strand.

Guildhall, London, 29th February, 1856.

THE COMMITTEE for LETTING the BRIDGE-HOUSE ESTATES will meet at Guildhall on FRIDAY, the 14th day of MARCH next, at ONE o'clock precisely, to LET, for Terms not exceeding Twenty-one or Eighty Years, a Plot of Ground on the west side of Old Change, in the City of London. A plan of the ground and conditions for letting may be seen at the Architect's Office, Guildhall.

FERDINAND BRAND, C. Mptroller.

PUBLIC INSTITUTIONS.—LAND at NORWOOD, SURREY.—Twelve acres FREEHOLD within six miles of the City, FOR SALE. Well adapted for a public institution, a private residence, or Building Society. Land-tax redeemed. Well drained, healthy, peculiarly healthy, with extensive views.—Apply to Mr. PAGET, Estate Agent, 1, Woodcote-place, Chapel-rail, Norwood.

STRATFORD, ESSEX.—FREEHOLD LAND, within three miles of London, exonerated from land-tax and free of tithe, TO BE LET on LEASE, for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

HARROW.—FREEHOLD LAND.—TO BE SOLD, 10 ACRES, in a ring fence, and several other eligible plots of FREEHOLD LAND, on a moderate price and terms, near the Harrow Railway Station, surrounded by and interspersed by capital villas. Rent-tails are entitled to the privilege of the Harrow Railway Station, and the Great Western Railway Company offer to persons building houses of approved elevation, worth 50l. per year each, a free first-class pass between Harrow and Paddington, for twelve years. There is also abundant supply of excellent water, and very superior brick-earth on the land.—Apply to WILLIAM B. COOPER, Esq. Solicitor, 9, Verulam-buildings, Gray's-inn.

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the finest sites for building purposes anywhere round London, and good villas are in great demand, and invariably let. Substantial and well drained, and a certain, healthy. Assistance will be afforded to respectable parties.—For particulars, apply to Messrs. J. and C. W. TODD, Manor-cottage, Lee, near Blackheath; Belmont, Lee, Kent, or Messrs. NELSON and INNES, Whitehall.

ALDERSHOTT CAMP.—PLOTS of LAND To LET on Building Leases, commanding good frontages and admirable sites, facing the principal new erections, and near the Queen's pavilion.—For particulars apply to Mr. THOMAS WHITE, Jun. near the Alliance Hotel, and opposite the permanent barracks, Aldershott Camp.

TO BUILDERS, CONTRACTORS, and OTHERS.—TO BE DISPOSED OF, a BUSINESS, carried on with good success, for seven years, and around Newport Pagnell, Bucks, by the advertiser, who are about to remove to another locality. The work is genuine, and are certain, and the whole trading and fixed premises for large operations. The Premises belong to the advertisers, and can either be purchased or taken at a moderate fixed rental.—Particulars will be forwarded on application to Mr. JOHN A. MARTIN, 7, Cumberland-street, Devonport, Devon.

February 23, 1856.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex. Saturday, March 1, 1856.

The Builder.

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ARCHITECTS' BENEVOLENT SOCIETY.

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NOTICE.—The ANNUAL MEETING of the above Society will be held at the Rooms of the Royal Institute of British Architects, 16, Lower Grosvenor-street, on WEDNESDAY, the 12th MARCH next. The Chair will be taken at THREE o'clock precisely. Information relative to the Society may be obtained of the Honorary Secretary, or of Mr. GOULD, the Collector, 8, Craven-court, Charing-cross.

JOHN TURNER, Hon. Secretary, 154, Walton-street, Grosvenor-place.

1st March, 1856.

ROYAL INSTITUTE of BRITISH ARCHITECTS.

Incorporated 7th William IV.

16, Grosvenor-street, Grosvenor square, London, Feb. 1856

Her Majesty having been pleased to grant her gracious permission that the ROYAL MEDAL be conferred on such distinguished architect or man of Science, of any country, as may have designed or executed any building of high merit, or produced a work tending to promote or facilitate the knowledge of Architecture, or the various branches of Science connected therewith, the Council of this Institute will proceed in January, 1857, to take into consideration the appropriation of the Royal Medal.

Gentlemen desirous to compete for the SILVER MEDALS of the Institute, and the SOANE MEDALLION, with its travelling fund, to be awarded for Essays, illustrations, and Designs, may obtain the necessary information on application to the Honorary Secretaries, by letter, prepaid, at the above address.

ROYAL ACADEMY of ARTS, Trafalgar-square.—NOTICE to ARTISTS.—All Works of Painting, Sculpture, Architecture, or Engraving, intended for the ensuing EXHIBITION at the ROYAL ACADEMY, must be sent in on MONDAY, the 7th, or TUESDAY, the 8th of APRIL next, after which time no Work can possibly be received, nor can any Works be received which have already been publicly exhibited.

FRAMES.—All Pictures and Drawings must be in gilt frames. Oil Paintings under glass, and Drawings with wide margins are inadmissible. Excessive breadth in frames as well as projecting mouldings may prevent Pictures obtaining the situation they otherwise merit. The other regulations necessary to be observed may be obtained at the Royal Academy.

JOHN PRESCOTT KNIGHT, R.A. Sec.

Every possible care will be taken of Works sent for exhibition, but the Royal Academy will not hold itself accountable in any case of injury or loss, nor can it undertake to pay the carriage of any package.

The prices of Works to be disposed of may be communicated to the Secretary.

SCHOOL of ART and TRAINING SCHOOL, MARLBOROUGH HOUSE, Pall-mall.—The Spring Session will commence on the 3rd of MARCH, and terminate on the 15th of JULY. Hours of study—Morning, Ten to Three. Evening, Seven to Nine, daily, except Saturdays. Fees for Morning and Evening, 4l.; for Evening, 2l. per session. The School for Female Students not in training, is at 37, Gower-street, Bedford-square.—For prospectus's, apply at the Head Master's Office, Marlborough House.

ART UNION of LONDON (by Royal Charter). Prizeholders select for themselves from the Public Exhibitions. Every subscriber of One Guinea, will have besides the chance of a Prize, an impression of a Plate of Harvest in the Highlands, engraved by J. T. Willmore, A.R.A. from the important and well-known Picture by Sir E. Landseer, R.A. and Sir Augustus Callcott, R.A. The Prints are now ready for delivery.

GEORGE GODWIN, } Honorary
LEWIS POCOCK, } Secretaries.

444 West Strand.

BOARD of TRADE DEPARTMENT of SCIENCE and ART — INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.
Head-Master—R. BURCHETT, Esq.

The Courses of instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a correct Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify Schoolmasters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Freehand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still-life, &c, the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the Sciences, processes of China and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Modelling and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. Mian. Fees per session,—Advanced Class, 2l. and 4l.; Elementary Class, 1l.; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall mall, London.

COMPETITIONS.

TO ARCHITECTS.

MIDDLESEX INDUSTRIAL SCHOOL.

The Committee of Visitors appointed under an Act of the 17th and 18th Vic. cap. clxx. to provide an Industrial School for the Juvenile Offenders of the County of Middlesex, invite Architects and Others, by PUBLIC COMPETITION, to furnish PLANS and ESTIMATES for such building, to be forwarded, sealed up, and addressed to the Chairman of the said Committee, at the Sessions House, Clerkenwell, on or before SATURDAY, the 26th day of APRIL, 1856. Each set of plans is to be marked with a motto or device, and the name of the author is not to appear, but to be put in a separate sealed letter, bearing on the outside a corresponding motto or device. A premium of 150l. will be paid for the plan which shall be considered the best, 100l. for the second, and 50l. for the third. Particulars as to the site, with a printed copy of instructions, and the conditions upon which the premiums are offered, may be had upon application to me, at the Sessions House, any day between the hours of ELEVEN and FIVE o'clock. Dated this 5th March, 1856.

CHARLES WRIGHT, Clerk to the Visitors.

GRANTHAM BURIAL BOARD.—EXTENSION of TIME for PLANS, &c. The period for sending in Plans for Chapels, Lodge, and Entrance Gates, is EXTENDED to SATURDAY, 22nd MARCH. Plans are also requested for PLANTING the GROUND and LAYING OUT the ROADS and WALKS thereon. Only about one-third is consecrated, one-third unconsecrated, to be sent in by the same time, for which, an additional premium of 5l. is offered. The ground is an oblong square of 220 yards by 120 yards. Entrance, west. By order of the Board,

ROBT. HY. JOHNSTON, Clerk.

Grantham, February 20th, 1856.

BOLTON UNION.—NOTICE to ARCHITECTS, &c—PLAN for a NEW WORKHOUSE.—The site of the intended New Workhouse for the Bolton Union not having yet been determined on, the advertisement requiring Plans to be prepared and forwarded, is for the present WITHDRAWN.

JOHN WOODHOUSE, Clerk to the Guardians.

Union Offices, Acresfield, Bolton, 21st Feb. 1856.

CONTRACTS.

TUNSTALL LOCAL BOARD of HEALTH. To BUILDERS.—CONTRACT for ALTERATIONS of TOWN-HALL. The Tunstall Local Board of Health are desirous of receiving TENDERS for the necessary WORKS required in the Alterations and Improvement of the Town-hall. Drawings and specifications may be inspected at the Office of the Local Board, Amicable street, Tunstall, from MONDAY, the 3rd, to SATURDAY, the 8th of MARCH; and further particulars may be obtained, on application to Mr. G. T. ROBINSON, Architect, 23, Upper Parade, Leamington.—Tenders to be delivered to me, sealed and endorsed, on or before TUESDAY, the 11th of MARCH next.—By order,

Tunstall, 20th February, 1856. J. LOWNDES, Clerk.

BURSLEM LOCAL BOARD of HEALTH. CONTRACT for FURNITURE and FITTINGS.—The Burslem Local Board of Health are desirous of receiving TENDERS for the SUPPLY of the necessary FURNITURE and FITTINGS for the New Town-hall. Drawings and specifications may be inspected at the Offices of Mr. G. T. ROBINSON, Architect, 23, Upper Parade, Leamington, from MONDAY, the 3rd, to SATURDAY, the 8th MARCH; and at the Public Offices, Moorland-road, Burslem, from MONDAY, the 10th, to SATURDAY, the 15th MARCH.—Tenders to be delivered to me, sealed and endorsed, on or before TUESDAY, the 18th MARCH next.

By order, J. LOWNDES, Clerk.

Public Offices, Moorland-road, Burslem, 20th Feb. 1856.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives notice, that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall-mall, on or before the 26th MARCH next, for the REPAIR of FIRE-ENGINES, BUCKETS, and for executing the WORKS and REPAIRS of the Royal Engineer Department in the London District, viz.: LONDON, WINDSOR, CROYDON and CHARLTON, HOUNSLOW and HAMPTON-COURT; for a period of three years from the 1st APRIL, 1856, to the 31st MARCH, 1859. Printed schedules and forms of TENDER may be obtained at the Royal Engineers' Office, 11, James-street, Pimlico, between the hours of TEN and FOUR o'clock from the 1st to the 15th MARCH inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineers' Office, London District,
February 27, 1856.

TO CONTRACTORS and OTHERS.—The Committee for BUILDING a CHURCH at BYKER, Newcastle-on-Tyne, are desirous of receiving tenders or offers for the PURCHASE of the STONE on the Site. The superficial extent is one acre, and the depth of good stone considerable, with very little baring. The purchasers will have to work out the stone within a limited period, and to comply with such other conditions as the committee may require. Besides the ordinary modes of conveying away the stone the purchaser may have the facility (made by an arrangement with the proprietors) of a joining private railway, terminating at a convenient wharf, which possesses every convenience for shipping stone on the River Tyne. Mr. GILBERT, or Mr. YOUNG, Schoolmaster, Byker, will show the site, and offers may be addressed to the Rev. T. R. GREEN, St. Mary's place, Newcastle-on-Tyne.—Byker, Feb. 25, 1856.

ST. SAVIOUR'S DISTRICT.—To CONTRACTORS, BUILDERS, and OTHERS.—The Board of Works for St. Saviour's District, are desirous of receiving TENDERS for the performance of the Works in connection with the separate ENTRIES from Houses and Buildings into the MAIN SEWERS, and other Works connected with drainage and sewerage within the District, for the term of one, two, or three years. The Tenders to be based on the schedule of prices printed for the purposes of the Board; a copy of which can be had upon application at the Board room, on Deptford-bridge, or the requisite number will be forwarded by post on receipt of a letter requesting the same to be sent in, or schedule returned. The Contractor will have to enter into a contract according to the printed form attached to such schedule, and he and two sureties to execute a joint and several bond in 500l. each, and for the performance thereof. All persons tendering must fill in the printed forms of tender, with names of sureties annexed to schedule, and must send in their Tenders to the Board sealed up and endorsed "Tender for General Works," on or before TWELVE o'clock at noon on the afternoon of WEDNESDAY, the 12th of MARCH instant. The Board will pay the expense of the contract, that of the bond must be borne by the Contractor. The Board do not bind themselves to accept the lowest or any Tender.—By order of the Board,

HERBERT STURMY, Clerk.

Board-room, Emerson-street, Bankside, March, 1856.

TO MASONS, PAVIORS, BUILDERS, CONTRACTORS, AND OTHERS.

THE VESTRY of the PARISH of ST. GEORGE-IN-THE-EAST hereby give Notice, that they will meet at the Board-room of the Workhouse, Charles-street, Old Gravel-lane, on THURSDAY, the 13th day of MARCH, instant, at SIX o'clock in the afternoon precisely, to receive TENDERS for the supply of MATERIALS and the execution of all PAVING and MEASURED WORKS, required for the repairing and paving the carriage and footway pavement of the several streets and places; and also for the supply of Materials and the execution of the Jobbing and Measured Works required to the sewers and drains within the said parish. Contracts to be for one year from the 25th MARCH, 1856. Tenders must be sent in on the basis of schedules of prices obtainable at the Vestry offices between the hours of TEN and FIVE, on payment of 5s. for each schedule, such sum to be returned on the receipt of a bond fide Tender. Any Tender not upon the printed form of the Vestry will be rejected. The parties whose Tenders may be accepted for Paving will be required to enter into a bond with two responsible sureties in the sum of 200l. and for Sewers and Drains in the sum of 50l., for the due performance of the contracts. The expense of the bond and contract will be borne by the Vestry, and the Vestry do not bind themselves to accept the lowest or any Tender.

By order of the Vestry, W. L. HOWELL, Clerk.

Vestry Office, 40, St. George-street, 3rd March, 1856.

TO BUILDERS.

PERSONS desirous of TENDERING for ADDITIONS and ALTERATIONS to the FARMHOUSE in the occupation of Mr W. PARSONS, and new FARM BUILDINGS, at Elsfield, near Oxford, on the estate of Colonel North, M.P., may see the plans and specifications at Mr. W. PARSONS', Elsfield. The Tenders are to be delivered at the Office of Mr. J. F. CLARK, Architect, Newmarket, on or before SATURDAY, the 22nd day of MARCH; and the lowest or any Tender will not necessarily be accepted.

WATERING.—The VESTRY of the Parish of SAINT LUKE, CHELSEA, will meet on TUESDAY, the 18th day of MARCH, in the Board-room of the Manor House, King's-road, at ELEVEN o'clock in the Forenoon, to receive TENDERS from persons desirous of CONTRACTING to PROVIDE MEN, HORSES, and WATERING CARTS, from the 25th inst. to the 24th day of SEPTEMBER next, both days inclusive. Detailed particulars, and conditions, together with a form of Tender, may be had, on application at my Office. Sealed Tenders, signed by the proposed Contractor, with the names and description of two sufficient sureties for the performance of the Contract, to be left at my Office, on or before MONDAY, the 17th day of MARCH. The legal charges of the Contract to be paid by the Contractor upon the execution of the same; but no Tender will be received or accepted, unless made on one of the printed forms.—By order, CHARLES LAHEE, Vestry Clerk.

Office, Manor House, King's-road, March, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

THE DIRECTORS of the MIDLAND RAILWAY COMPANY are prepared to receive TENDERS for the SUPPLY of about 2,000 Tons of FISHING PLATES, or about 1,500 Tons of FISH-BOLTS, and 1,000 Tons of CHAIRS, to be delivered on the Line of the Company's Works at Derby, on or before SATURDAY, the 6th June next. Tenders and Lists of the SECRETARY of the STORES COMMITTEE must be addressed as to be received not later than TUESDAY, the 11th of MARCH, 1856.

By order, JOSEPH SAUNDERS, Secretary.

Derby, March 1.

METROPOLIS LOCAL MANAGEMENT ACT.—MASONRY AND PAVING WORKS.—The Vestry of the Parish of ST. MARYLEBONE are prepared to receive TENDERS for the following WORKS, viz.:—For PAVING with Yorkshire Paving Stones and Kerb Paving and Channels, for [illegible] and for the Forms of Tender and further particulars may be obtained at the Contractors' Yards, Wells-street, Oxford-street, and at the Vestry Office, Marylebone-lane, where the Tenders are to be delivered and endorsed "Tenders for Masons' and Pavers' Work," and deposited on or before FOUR o'clock in the Afternoon of FRIDAY, the 21st day of MARCH next; and the Vestry reserve to themselves the right to accept or reject any Tender, or any portion thereof. Each Tender will be required to enter into a Bond with sufficient Sureties for the due performance of the Contract, and the Contractors will be required to sign the same before the Contracts will be sealed.

By order, CHARLES LAHEE, Vestry Clerk.

Offices, Manor House, King's-road, Chelsea, March 1856.

VESTRY of ST. MARY NEWINGTON, SURREY.—Contracts for the Supply of Flint, Pitching, Broken, Granite, and Yorkshire Stone, and other Road Pitchings, Gravel, Cartage, Horse-hire, &c., for the ensuing year. Forms of Tender and Specification may be had at the Vestry Office, Walcot-place, Lambeth. The Vestry will meet at the Vestry Hall, Walcot-place, on MONDAY, the 17th day of MARCH next, at Seven o'clock in the evening, to consider such Tenders as may be received, and willing to CONTRACT, for REMOVING ASH-HOLES, and Rubbish, and doing of such Paving, Curbing, Broken Granite, Gravelling, Repairing, and Asphalte Work, in the Parish, as may be required by the Vestry, from the 25th day of MARCH next, for a period of not less than one nor more than five years. CONTRACTORS will be required to perform all the Work of the Parish as the Parish Surveyor shall direct, and to keep the Roads, Streets, and Highways within the before mentioned period.—For further particulars and forms of Tender apply to the said Surveyor. Tenders to be sealed up and addressed to the Vestry Clerk, at the Vestry Hall, Walcot-place, Lambeth, and delivered at the Vestry Hall, Walcot-place, Lambeth, on or before the hour of SEVEN o'clock in the evening on the 17th day of MARCH next, and endorsed "Tenders for Paving Works," and "Tenders for Masons' Works," as the case may be. The Vestry will meet at the Vestry Hall, Walcot-place, Lambeth, on MONDAY, the 24th day of MARCH next, at Seven o'clock in the evening, to consider such Tenders as may be received, and to appoint Contractors for the several Works. The Vestry will require Sureties for the due performance of the Contracts, and will not be bound to accept the lowest or any Tender.

Dated this 1st day of March, 1856.

By order, HENRY CHESTER, Jun., Clerk to the Vestry.

1, Church-row, Newington.

THE STOCKTON GAS-CONSUMERS COMPANY, LIMITED, are prepared to receive TENDERS for MANUFACTURING, CONSTRUCTING, and ERECTING GAS-APPARATUS and BUILDINGS in the Borough of Stockton, in the County of Durham; and for supplying and LAYING, complete, about 15 miles of MAINS of differing forces, with the requisite Valves, Governors, apparatus complete of gauge-meter, station-meter, and [illegible] he mains and pipes, branches, outlets, and [illegible] mains, branches, outlets, and [illegible] son of retorts, with iron roof, shed, the brick arches and setting of retorts, purifier house, and foundations for purifiers, meter house, and [illegible] other purposes, meter house, and [illegible] the whole to be completed on or before the [illegible] next. Plans and specifications may be seen at the Gas-Works, on the premises of the Company, and at the Office of Mr. W. HUDLESTON, 31, Nicholas-street, Stockton, where Tenders may be delivered. The Gas-Works will be required upon the Contract to be taken down, and the land restored to its present state.

Stockton, March 4, 1856.

ELTHAM, KENT.—TENDERS are required for the ERECTION of Public OFFICES at Eltham, Plans and Specifications to be seen at the Office of Mr. THOMAS CHESTER HAWORTH, Solicitor, Eltham, on and after MONDAY, the 10th inst., and Tenders by SIX o'clock on THURSDAY, the 20th inst. The lowest or any Tender is not necessarily to be accepted.

TO GENERAL CONTRACTORS.

NORTH-COATS INCLOSURE, LINCOLNSHIRE.—CONTRACT, No. 1.—Valuable Quarries in the parish of the Inclosure of the Lordship or Manor of North-coates, in the County of Lincoln.—Lots for sale.—Notice is hereby given, that TENDERS for the EXECUTION of the following WORKS, viz. For the FORMATION of about two miles in length of NEW SEA BANK, the EXCAVATION of about [illegible] cubic yards of SEA BANK, the [illegible] of about [illegible] miles in length of NEW SEA SLUICE, [illegible] and stone, with [illegible] and all necessary Piling and Timber Frames and Timber. Plans and specification of the said works have been prepared by Messrs. MACHAN and FOWLER, Architects and Surveyors, [illegible], and may be inspected by Contractors at the Office, [illegible] day of MARCH, 1856, at their Offices, where all necessary information may be obtained.—Tenders for the whole of the works are to be delivered [illegible] TWELVE o'clock at noon, on WEDNESDAY, the 26th day of MARCH, 1856, endorsed "Tender for North Coates Sea Wall and Sluice Works."

CHARLES NORTH, Valuer.

South Moreby, March 5, 1856.

Ample security will be required, and the Valuer will not be required to accept the lowest or any Tender [illegible].

TO SCAVENGERS.

THE VESTRY of the PARISH of ST. LUKE, CHELSEA, will meet at the Board-room, at the Manor House, Kings-road, Chelsea, on Thursday, the 13th day of MARCH next, at Two o'clock precisely, to receive TENDERS for the [illegible] CONTRACT from the 25th day of MARCH next to the 24th day of June, 1857, inclusive, lying at my Office as above, for CLEANING all the Squares, Streets, Lanes, Courts, Mews, Alleys, Public Passages, Ways, Thoroughfares, and Places under the jurisdiction of the said Vestry. The Vestry do not bind themselves to accept the lowest or any Tender. Each Tender must be accompanied by two sufficient Sureties, with the names and description of two sufficient Sureties for the due performance of his Contract, to be [illegible] before or at the Vestry, on MONDAY, the 17th day of MARCH. The usual clauses of the Contract to be [illegible] on the execution of the same; and no Tender will be received or accepted, unless made on the Printed Form to be obtained at my Office.

By order, CHARLES LAHEE, Vestry Clerk.

Offices, Manor House, King's-road, Chelsea, March, 1856.

CONTRACTS.

LILLESHALL CHURCH, SALOP.—Builders are invited to TENDER for the RESTORATION and PARTIAL REBUILDING of the Parish Church of Lilleshall, near the Lilleshall station on the Shropshire Union Railway.—Plans and specifications can be seen, on application to the Rev. H. G. BUNSEN, Vicar, at Lilleshall; or at the Office of the Architect Mr. NORTON, 24, Old Bond-street, London, on and after MONDAY, the 10th inst. Tenders to be sent to Mr NORTON, on or before the 24th inst.

SURVEY of TIPTON PARISH.—The Tipton Local Board of Health are prepared to receive TENDERS for the SURVEY and LEVELS of the Parish, the whole of the work to be done in conformity with the requirements of the Local Board of Health, in London. Conditions may be seen at the Board's Offices, Church-lane, Tipton, on MONDAYS, WEDNESDAYS, and FRIDAYS, between the hours of NINE and ELEVEN a.m. Tenders will be received by the Board, on or before the 20th day of MARCH, 1856. The Board do not bind themselves to accept the lowest or any Tender.

GEO. M. WARING, Clerk.

Church-lane, Tipton, Feb. 29, 1856.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London.

LOCKS, HINGES, BOLTS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Illustrated Price-catalogues sent free on application.

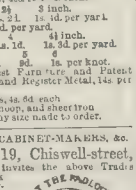
CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 190, Strand.
A great variety of Elliptic, Register, and other Stoves, Cottage and Hall Grates fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler, 9-in. 22 3s. 26-inch. 28s. 30s. 32s. 34s.
Best self-acting Ranges, with Fire, and Back Boiler, Bright Wrought Bars 24 26 28 30 32-inch. 54s. 58s. 58s. 60s.
Strong Elliptic Stoves, with Fire Back and Solid Bars, per in. 9½d.
Register Stoves, with Solid Bars, per inch, 5d.
Improved New Pattern Circular Cross Register, with strong Bars and Trivets, 9d per inch
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Bars, 4s. to 14s. each.
Cast Rain-water Pipe { 2 2½ 3 inch. 1lid. 1s. 2d. 1s. 4d. per yard.
Cast Gutters 4-inch, 9d. per yard. 4½ inch.
O G Gutters { 1s. 1d. 1s. 3d. per yard. 3 4 5 6
Patent Line { 4½d. 5d. 7d. 9d. 1s. per knot.
6-inch Rd. Ward Mortise, with best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s per cwt.

Dr Arnott's Ventilators, 4s. 6d. each
An extensive stock of bar, rod, hoop, and sheet Iron
Brick Moulds kept in stock. Any size made to order.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs, 2½ l. per inch, and upwards.
Register Stoves, 6-inch, 7d. 8d and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings.
8 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3 feet Cottage Ranges, with ovens and back boilers, 23s. each.
3-feet self-acting ditto, ditto, 44s. each
Air Bricks, 4s. per doz.
Best Town Glue, 50s. Ditto, Scotch, 54s. per cwt.
Best Fine Cut Chips and Rose.

½ ½ ¾ ¾ ¾ 3-in. & larger.
10s. 6d. 16s. 6d. 13s. 6d. 15s. 6d. 13s. 14s. per cwt.

And every material required in the Roofing, Bell-hanging, Joinery, and brass-foundry trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter prepaid

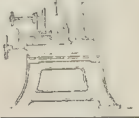
TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c. The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire. Gas Pendant, Brackets, and Jumps of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, for Gasfitting, Bells and Lacquered Case Tube for Pasture Bells, Desk Bells, &c. &c.
Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at
RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouse, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

TO ENGINEERS, &c.—FOR SALE, an 8-inch centre geared FOOT TURNING-LATHE, with slide and hand-rests, face plate, drill, and centre chucks &c. &c. Likewise, a 12 inch centre geared Lathe, with slide and hand-rests, face plate, &c. Also, a small gas-lathe for fluting taps or cutting small wheels.—Apply to F. W. J. 71, St. George's road, Southwark, near the Elephant and Castle.

JOHN PARKIN and CO. late BLAKE and PARKIN, NEW MEADOW STEEL WORKS, SHEFFIELD, MANUFACTURERS of CIRCULAR and MILL SAWS IMPROVED CAST-STEEL FILES, for the use of engineers and mechanics, PATENT HARDENED MACHINE KNIVES and CUTTERS, manufactured for planing and moving wood, for cutting paper, iron, stone, leather, &c made to any pattern or immediate with the utmost exactness. Warranted to work with a harder and finer edge than any other mode of temper.

INVENTORS of CORE-ANNEALED CAST STEEL for tans, piston-rods, &c. MANUFACTURERS of RAILWAY SPRINGS, BLISTER, SHEAR, and CAST STEEL, &c.

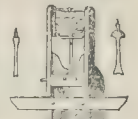
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees, FOWLS, JAMES, and CO. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 28, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

KIMBERLEY'S NEW PATENT MORTISING MACHINE occupies but little room, is most simple and durable, and complete within itself, with seven chisels and three core drivers, and being all iron, is almost impossible of injury or derangement.



Thousands who use it bear witness to it.

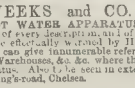
A Book sent by post, with full particulars, and a great number of testimonials.

See, also, Kimberley's Patent Flooring Cramps, Scaffolding Brackets, Dog Stretchers, &c. &c.

London Agents—
Messrs. PUGH & CO.
No 19, King-street, Snow-hill, Wholesale Ironmongers;
or the Works, Birmingham.

212 MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and vaporizing) with all the improvements, under their Quadruple patents of 1848 and 1849 and 1850 including their Compowder Proof Solid Lock and Key, without which no safe is secure.
THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.
MILNER'S PHŒNIX 212 SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 7, Lord-street, Liverpool. London Depôt, 47a, Moorgate street, City.—Circulars free by post.

ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and CO. (opening to the Monument), London-bridge. Established A.D. 1700.

HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description and of the most extensive dimensions can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

CAST STEEL.—Messrs. NAYLOR, VICKERS, and CO. RIVER DON WORKS, SHEFFIELD, are now prepared to execute orders for CAST STEEL BEILS, from 4 lbs. to 1 ton each, Locomotive Tank Axles, Tyre Bars without welding, Shafts, Cranks, Axles, and every description of heavy forgings in Steel, to pattern.—For further particulars, apply as above.

WARMING and VENTILATION, &c.—Mr. S. EGAN ROSSER, C.E. successor to the late Mr. John Sylvester, has REMOVED to 9, CANNON ROW, WESTMINSTER, and may be consulted upon all matters connected with warming and ventilation, heat and its applications, drying and dressing processes, baths and washing establishments, horticultural buildings, stoves and cooking apparatus, chimneys, furnaces, flues and fireplaces, gas ventilation, the ventilation of ships, &c. &c. Mr. R. will be happy to co-operate with architects engaged in the preparation of the plans of buildings, where any arrangements of the above character are required.

February 26th, 1856.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show,—every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list, free.—35 and 36, High Holborn.

IRONMONGERY.
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

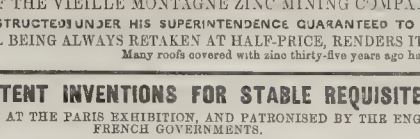
Many roofs covered with zinc thirty-five years ago have never required repairs.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.

COTTAM and HALLEN, of Winsley-street,

Are the original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER TROUGH AS ONE FIXTURE, to which they have made important additions, the main features of the same being explained in the following description and Engraving.



A represents the Patent Halter-staple and Collar rein, the ball of which is taken to the back of the manger-works with freedom and can be up or down the rude-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up, out of the way when not in use.

COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized and enamelled

IMPROVED SURFACE-DRAIN, with safety covers, Sinking Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Preserving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

An extensive Assortment of Patterns for both Plain and Ornamental Castings, and every description of Wrought and Cast-iron Work for building and other purposes.

Agricultural and Horticultural Implements, Iron Gates, both plain and ornamental; Hurdles, Strain Fencing, &c.

The New Illustrated Catalogue for 1856 gratis on application. Estimates and Designs.

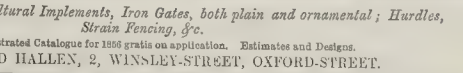
COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

TYERMAN'S PATENT HOOP-IRON BOND FOR BUILDING PURPOSES.

TARIFF OF PRICES
Beyond the current Price of Hoop-iron.

The undermentioned Gauges are kept in stock; but any Gauge or width, will be supplied within a few days, at a small advance on the following prices:—

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1¼	7s. 0d.
15	1½	7s. 6d.
15	1¾	8s. 0d.
15	2	8s. 6d.
15	2½	9s. 6d.



Plan and Elevation of Bond, showing Position and Form of the Claws.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching at intervals of 11½ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which, when so bent, that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

London Depôt—463, OXFORD-STREET.

IRONMONGERY.—Builders and the Trade generally will effect a considerable saving by purchasing of CLUSE and BOSE, Wolverhampton Factors and Stove and Range Manufacturers, 35, City-road, corner of Tabernacle-row.

Present prices for cash:—

BEST CUT CLASP.

16s. 6d.	18s. 3d.	14s 6d.	14s per cwt
1½ in.	2 in.	2½ in.	3 in. and larger.

PATENT SASH LINE

3s. 2d.	3s. 9d.	4s. 3d.	5s. 6d.	7s. 6d.	9s. per gross.
No. 1	2	3	4	5	6

5 in. Mortise Locks, best Brass Furniture Shifting Spindles, 2s. 6d. each; 6 in. ditto, 3s. each

Strong Elliptic Stoves, double backs, 2½d. per inch.
Strong Register ditto ditto 5d. "
30 in Self-acting Oven and Boiler Cottage Ranges, complete, 34s. each; 36 in. Self-acting Oven and Boiler Ranges, best wrought bars and wrought fittings, complete, 45s. each

A large Stock kept of every description of builders' ironmongery; china, glass, and ebony look furniture and finger-plates. List of prices forwarded by post on application.

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSE, 10, Hornsey-road, and 1, New Peter-street, Westminster. Contractors, Builders, &c. supplied with general Ironmongery at prices equal to all competition

REDUCED LIST OF PRICES.

Best Cut Clasp and Rose Nails

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 13s. 6d. and 14s. per cwt.
Best Cut Lath Nails ..... 16s. "
Best Zinc Slating Nails ..... 60s. "
Best Glues ..... 47s. to 63s. "

RAIN WATER CASTINGS, per yard.

Sizes 2 in. 2½ in. 3 in. 4 in. 4½ in. 5 in.

Pipes	11d.	1s. 2d.	1s. 4d.	1s. 6d.	2s. 1d.
Half-round Gutters	8d.	6½ d.	9d.	1s.	1s. 2d.
O G Gutters		1s.	1s. 1d.	1s. 2d.	1s. 6d.
Ditto, with plain clips cast on		1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.
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No. 1 quality, inches diameter, and price per yard.

½	¾	1	1¼	1½	1¾	2	2¼	2½	2¾	3 in.
9d.	11d.	1s. 1d.	1s. 3d.	1s. 5d.	1s. 7d.	1s. 9d.	2s.	2s. 3d.	2s. 6d.	2s. 9d.

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2	2¼	2½	2¾	3 inches.
2s.	2s. 3d.	2s. 6d.	2s. 9d.	3s. per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

1	1¼	1½	2	2¼	2½ inches.
9d.	10d.	11d.	1s.	1s. 3d.	1s. 6d. per yard.

The hose is Burnettized at an extra charge of 3d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

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The Builder.

VOL. XIV.—No. 683.

WE gave last week some particulars of the arrangements made by the London Necropolis Company for funerals at their Cemetery at Woking, and took the opportunity to offer some remarks on the state of the burial question. After speaking of the station in the Westminster-bridge-road, we took the reader to one of the stations in the cemetery itself. We will now pursue our notice and comments.

The estate of the Necropolis Company considerably exceeds in size what is at present laid out, or is thought likely to be ever required for burial purposes. The quantities purchased amounted to over 2,100 acres, the estate reaching, though in straggling pieces, to a length of four miles along the railway, which runs through it. It may be viewed as divided, in the other direction, into two principal portions,—one at the Woking Station of the main line, and the other about two miles farther westward, towards Farnborough and Pirbright. The cost of the ground was about 25*l.* an acre; the land of the old suburban cemeteries being said to have averaged 480*l.* an acre. The eastward portion contains about 400 acres, wholly surrounding the Woking Station; the Staines, Woking, and Wokingham Railway, now in course of construction, also passing through it. Of the westward portion (1,700 acres), 1,000 acres south of the main line, were at first reserved for cemetery purposes, but this quantity must have been increased by the purchase lately of a few small holdings, which were scattered about the general ground. Of the 1,000 acres or more, 400 acres are at present laid out, and prepared for use. The land about the Woking Station, and a portion of that westward (north of the line, and in great part also north of the Basingstoke Canal), called the Hermitage, the committee have just obtained power to let for building upon. It is presumed that the park-like appearance, which may ultimately be got in the cemetery, will render the neighbourhood attractive, whilst the improved practice of interments to which the company are bound by the terms of their Act, would render the usual noxious results imperceptible. The portion of the estate now appropriated for interments, though not deficient in pleasing prospects, and though undulating and varied in many parts, is chiefly heathy moorland, which it will take some few years of "top-dressing" and cultivation, to make as beautiful as—with what has been done, or is doing, in the way of planting—it will no doubt eventually become. The compensating advantage, however, is the perfect suitableness of the soil, for interments. The soil consists of a dry sand; and it is so compact, that graves can be dug to almost any depth, of perfect shape, and without shoring.

The average mortality of London is set down by the company as 60,000; and it is stated to be the opinion of Dr. Sutherland, that the quantity of ground reserved at Woking would, with the proper interval between interments, suffice for the whole metropolis for five or six centuries to come. Looking at published calculations, Mr. Chadwick, on the scale proposed by Riecke, and taking the deaths of the metropolis about the year 1838 as averaging 50,000, found that 444 acres, or a space a little more than a fourth over the area of the Regent's-park, would suffice in perpetuity for the amount of mortality. The 600 acres or more, of reserve at Woking, therefore afford a considerable margin for increase of population, and perhaps even for some interments which are calculated upon from Southampton, Portsmouth, and other towns.

The total area of the London suburban cemeteries is stated to be 282 acres; a quantity which will obviously become inadequate shortly after the practice of "pit-burial," maintained in them, is put a stop to. The graves at Woking, in ordinary cases, are dug to a depth of 6 feet, in "grave spaces" measuring 9 feet by 4 feet. A greater depth, however, is provided when called for: though, of course, according to the opinions which now obtain, great depth is not desirable,—the access of the air, and consequent speedy decomposition, being retarded by it.

The consecrated and the unconsecrated ground are separated from each other by the Pirbright road,—each being enclosed by park fencing. We may here mention that a recent discussion in the House of Lords, with reference to the difficulty made about consecrating the Carlisle ground, in consequence of the absence of what was deemed a proper fence, would show the necessity of proceeding cautiously in future cases.

The stations of the two divisions of the Woking ground are precisely similar to each other,—consisting of temporary buildings round three sides of a quadrangle, of one story in height, and painted in drab and white stripes. A portion of the roof projects a few feet, on iron cantilevers, and is ornamented along the edge. In the permanent buildings better means of shelter would be desirable. The decorative part of the design in the present case, has no distinctive character, and too much resembles an ordinary railway station. The chapels, also similar to each other, take the form of small cross churches with towers and slated spires, and are built of half-timbered brickwork, "rough-cast" externally. The interiors, with stained woodwork and white interspaces, are successful, though plain; but the cross form, which required us to sit almost facing some of the mourners, seems to be open to objections in this class of buildings.* The service at the pauper funerals, which are what we are able to speak to, was impressively conducted. It is, as usual in such cases, and necessarily so, read over several bodies at one time. In this case, two coffins rested on the same bier. No other difference is made between the funerals of different classes. The bier is a light carriage, drawn by horse or by hand, as may be required. It seemed to us of greater height than would be desirable; and the pall was short, and did not hang well. If the latter were cut more to the shape of the mediæval palls, and with heavily-weighted fringe, it would be better, considering how much it is exposed to the wind, on the ground.

Time will be indispensable to develope the sylvan beauty which may characterise the place, and which appears to have been prepared for by planting. Vegetation is not merely desirable for the obvious reasons in cemeteries; but it is, as we need not now say, the best disinfectant and absorbent of the putrescence of the ground. Except in the Abney-park Cemetery, however, little attention is paid to it in London, compared with what is desirable. Far too little space is left for walks, or kept free from graves; and thus, the effect which the monuments might otherwise produce does not result. It would, be worthy of the consideration of the Necropolis Company, how far with advantage, more attention might be given to the matter of monuments than they would seem to be giving, were we to judge only by the few headstones that there are. Half-a-dozen of these are reproduced from old designs, but are clumsily detailed; and the general number have no character whatever, except what may be derived from the segmentally-cut top. For the company to set that forth as "statuary" is clearly what people call "a mockery, a delusion, and a snare." It were much to be desired that an architect were more frequently engaged on subjects of this sort. At most cemeteries, we see ideas, originally good, twisted to hopeless caricature by the mason who has pitched his tent hard by the gates: the sarcophagus, the urn, and the broken column have been "done to death;" and in one cemetery at least, there is a broken *cross*,—the climax of absurdity.

The demeanour of the mourners on the day of our visit was all that could be desired. Indeed, it has occurred that mourners of the pauper class, and some of a much higher grade, respectively have presented appearances and manners which would have justified exchange of places. Still we are compelled to think that cases are not unfrequent, when the solemnity of the occasion is not duly regarded. We make no attempt to understand the peculiar custom of the Irish, or to discover what may have been the exact nature of practices spoken of as obtaining even amongst the early Christians. We can regard it only as a foul stain upon the character of a large section of the people, that a funeral is made an occasion for some sort of excess in dram-drinking. Perchance, the evil may have orginated in the idea that spirituous liquor was required by the bearers of the corpse,—who are not always free from danger. That, however, would not describe or explain the whole case, as it is presented to us from circumstances which come to our knowledge. Indulgence in drink clings to the English character, as its bane and degradation,—we fear, in *fact*, as much it undoubtedly does in the eyes of foreigners. At the funerals by the Necropolis Company, we are told that not unusually, mourners have carried drink with them, of which, on the return journey, they had partaken to such an extent, that they have been found dancing about the carriage, by the ticket-collector. On one morning, at the Westminster-road station, two "mourners" arrived so *drunk*, that the superintendent could not allow them to proceed by the train. We admit that these incidents may be exceptional, and we repeat, that on the day of our visit, though it was the principal day for pauper funerals, not an unseemly act or gesture was to be observed; but even as exceptions, the facts we speak of, and are assured of, are grievous and melancholy, and call for the utmost attention from all who concern themselves with the welfare of the working classes. Feeling thus strongly, we were indeed sorry to see "a pint of rum" and other liquors set down in the list at the refreshment-room at Woking. Restrictions may be hard upon those who do not require them: but some men are infants where drink is concerned, and must be protected against themselves, till (if ever) they arrive at years of discretion: and in this case, we fear, some must suffer, if need be, for the faults of others. We hope that the principle of the arrangements to secure privacy, is so fully observed, that such incidents as we refer to could hardly be witnessed by mourners of other parties, whether belonging to the first or the intermediate classes.—Several persons, of some position in society, have already provided themselves with graves at the cemetery; and there seems to us every argument why others should prefer the same locality,—especially, as it is fairly shown, since the old suburban cemeteries are likely to be closed at no very distant time. Amongst all

* It is due to Mr. S. Smirke, their architect, to say that both the chapels and the stations were *required* by the directors to be erected in as *temporary* and *inexpensive* a manner as could be devised; and that he literally fulfilled their wish is evident from the smallness of the expense incurred for these. Their intention is, we believe, to build something more suitable and handsome, as well as to greatly increase the amount of accommodation, whenever the concern may be productive enough to justify their so doing.

classes, it is found that there is a growing disposition to dispense with much of the useless expenditure on funerals. The company itself will act as undertakers, and certainly are practically carrying out what had been long felt, that funerals could be conducted at half, or a third of the usual rates. Their charge for a first-class funeral, with grave in perpetuity in the consecrated ground, and head and foot stone; with the service, and conveyance for four mourners, is 21*l.* 14s. 2d. They put forth the charges as considerably below what were contemplated by the Board of Health. If they carry out the object of reduction in expenditure on funerals, they may effect as much good in that way as in a sanitary point of view, and perhaps more than that. A good idea has been lately entertained,—that of forming burial insurance clubs; the interments to take place at Woking. But, so many objectionable results have followed on the establishment of similar societies,—sometimes from the entire want of all calculations—sometimes from defalcation by the treasurer, and sometimes in a manner far worse—that difficulty has, we believe, been felt in working the idea. Mr. P. H. Holland, one of the medical inspectors to the Home Office, however, suggests that the difficulty might be got over by the company, were they to stipulate on not making any *money* payment, but that they should perform the funeral merely,—also that there should be no liability from the company in any case where a death occurred within six months, or some similar period, after the commencement of a subscription.

From a report which has just been issued, we learn a few useful particulars of cost. Land, compensation and interest, cost 59,648*l.* 17s. 10d.; and the recent purchases, under the Act of 1855, cost, in addition, 2,452*l.* 2s. 4d. The Woking Branch Line, cost 1,419*l.* 17s. 6d.

The cost of the cemetery itself, so far as laid out, is comprised under the following heads:—

Woking Station ...	£10,627	16	8
Planting and road-making	3,048	14	10
Draining...	8,802	19	10
Fencing	2,958	14	8
Whence it would appear that the cost of the whole works was	£25,438	6	0

The cost of the London station is set down as 23,293*l.* 19s. 8d. Besides these items, however, expenses were incurred for professional advice and superintendence; and the geological survey, by Mr. Prestwich, is set down at 52*l.* 10s. Capt. Moorsom; Sir Wm. Cubitt; Mr. Abraham; Mr. Sydney Smirke, on the Woking buildings; and Mr. Tite, on the London station, were at different times employed. Besides the refreshment-rooms and churches at Woking, there are stables and cottages, and a house for the clergyman, all which, we are told, are included in the items above.

The idea of providing a joint cemetery for several parishes, has been several times mooted. It was long since suggested in our own pages; and the disadvantage of arrangements left in the hands of numerous small parochial boards, was clearly shown by Mr. Chadwick. Both the extramural system, and the union of parishes, formed part of the proposal by Sir Christopher Wren—when he prepared that plan for the rebuilding of the City, which, if carried out, would have preserved London from evils felt to the present hour. The same great architect preceded us in the recommendation that the "dimensions" of monuments "should be regulated by an architect, and not left to the fancy of every mason;" and also thought of a form of hearse, with "two wheels and one horse," which appears to resemble what is used by the Necropolis Company. Extramural sepulture was, however, the ancient custom; and the words of one of the twelve tables, "*Hominem mortuum in urbe ne sepelito neve urito*," are well known. It cannot be too generally understood, that neither deep burial, nor the use of leaden coffins, will do more than retard the ultimate decomposition,—which cannot go on without poisonous exhalation; but which, proper choice of site and soil, and proper manner of burial; and provision for vegetation may reduce to the minimum of result. Lead coffins not only do not—as we think—from the first (and the experiments of Dr. Waller Lewis not forgotten), secure the advantages which appear to be expected under the present Home Office regulations; but the speedy decay of the outer casing, and consequent sinking and breaking of the lead, are events which are too familiar in the practice of architects, to need our producing them as evidence. It is, perhaps, the idea that injurious exhalations can never be wholly prevented, that has led sometimes to the proposal to revive the practice of cremation. Not long since some notice of a society, formed with such an object, appeared in the *Builder*; and a letter from a correspondent, signing himself "W. B." has been some time before us, in which the question is argued with considerable ability. We doubt, however, the possibility of a change—where the sensibilities of relatives, and feelings which it is desirable to foster, and which are not mere prejudices, are so deeply concerned. We believe that the Woking Cemetery, that of the City of London, and perhaps that which is proposed on the Great Northern Railway—with some further attention to the subject by the Government—may be made the means of completing the change from the various sanitary and moral evils which have been connected with the burial of the dead.

All must hope that when that mortal frame which now concentrates all the power of mechanics, the subtilty of chemistry, and the wonder and beauty of nature and art, shall resolve itself into new forms,—parted from the mysterious agency of *life*,—the indestructible elements from their grave, may convey no poison to the living. Surely, if a man strives to *live* not wholly in vain, he should provide against the injury which his body may occasion to his survivors,—so that, like the physician of Paris, "*vir pius, et probus*," he might be made to say on his tombstone, that he had wished to be buried under the free air,—

> "Ne mortuus cuiquam noceret,
> Qui vivus omnibus profuerat."

or, like one buried at Louvain, that,—

> "Partem sui materiælem
> Hic in cœmeterio condi voluit,
> Ne templum dehonestaret,
> Aut nocivis habitibus inficeret."

Those who have the like sense of duty, may find some quiet resting-place in the dry sand of a Woking grave.

THE TREATMENT OF MODERN STAINED GLASS.

THERE are some passages in the paper by Mr. Winston on Stained Glass* which ought not, I think, to be allowed to go unquestioned. I think so, because, owing to Mr. Winston's very laborious and valuable inquiries into the history and manufacture of stained glass, his opinions on other points,—*ex. gr.* on matters of taste,—may possibly be received with more deference than they are entitled to. It is no new thing to find a zealous antiquary unable to grasp the true principles which govern all art: it is, indeed, so common, that it would be a real matter of surprise were Mr. Winston to afford an exception to the rule. I take it that the application of all the faculties to one department of antiquities has a natural tendency to blunt the power of regarding each art as forming a portion only of the whole effect which it is the business of the perfect artist to strive after. It makes men rather regard the elaboration of one detail than the perfect harmony of all the parts, and tends therefore to an unsatisfactory result. This is especially true of stained glass, which, so far as it forms an enrichment of architecture, ought to be treated specially in reference to its fitness for its purpose, and in regard to the general effect of the buildings in which it is introduced, as well as with regard to its own perfection as a work of art. This is what, beyond all doubt, the best of the old artists did with great success. I think, therefore, that I, and others who agree with me, are not the "foolish zealots" Mr. Winston seems to think us, when we see in this, as well as in the nature of the material, some restriction in the style of design applicable to modern works in glass.

About four years since I advocated what I still believe to be true views on this subject in the "Ecclesiologist," and since then, in a note to the second volume of the "Stones of Venice," Mr. Ruskin has given the result of his consideration of the subject. The views we have advocated will find, I am afraid, no favour with Mr. Winston; but I shall ask you, nevertheless, to allow me to quote Mr. Ruskin's words, as containing the best possible corrective to the views which Mr. Winston has propounded. He writes as follows: "Next in the case of windows, the points we have to insist upon are, the transparency of the glass, and its susceptibility of the most brilliant colours, and therefore the attempt to turn painted windows into pretty pictures is one of the most gross and ridiculous barbarisms of this pre-eminently barbarous century. It originated, I suppose, with the Germans, who seem for the present distinguished among European nations by the loss of the sense of colour; but it appears of late to have considerable chance of establishing itself in England: and it is a two-edged error, striking in two directions; first, at the healthy appreciation of painting, and then at the healthy appreciation of glass. Colour, ground with oil, and laid on a solid opaque ground, furnishes to the human hand the most exquisite means of expression which the human sight and invention can find or require. By its two opposite qualities, each naturally and easily attainable, of transparency in shadow and opacity in light, it complies with the conditions of nature; and by its perfect governableness it permits the utmost possible fulness and subtlety in the harmonies of colour, as well as the utmost perfection in the drawing. Glass, considered as a material for a picture, is exactly as bad as oil paint is good. It sets out by reversing the conditions of nature, by making the lights transparent and the shadows opaque; and the ungovernableness of its colour (changing in the furnace), and its violence (being always in a high key, because produced by actual light), render it so disadvantageous in every way, that the result of working in it for pictorial effect would infallibly be the destruction of all the appreciation of the noble qualities of pictorial colour. In the second place, this modern barbarism destroys the true appreciation of the qualities of glass. It denies, and endeavours as far as possible to conceal, the transparency, which is not only its great virtue in a merely utilitarian point of view, but its great spiritual character," and "the true perfection of a painted window is to be serene, intense, brilliant, like flaming jewellery; full of easily legible and quaint subjects, and exquisitely subtle, yet simple, in its harmonies. In a word, this perfection has been consummated in the designs, never to be surpassed, if ever again to be approached by human art, of the French windows of the twelfth and thirteenth centuries."

I have never seen these arguments met; and, as I am sure that they require no support of mine to commend them to the sympathy of your readers, I shall leave them to produce their proper effect.

Mr. Winston's main dogma, that receding backgrounds, and therefore "pretty pictures," are admissible in glass, being sufficiently controverted, I must beg you to allow me to go on to refute his other proposition, that, because he and many persons "are unable to perceive the ill effect of a subject cut through by a mullion," therefore there is no objection to it. Just consider for an instant what this would involve us in. First he would have us work up

* See pp. 71, 97, *ante*.

our glass into imitations of pictures, and then, disregarding the solid obstruction presented by the mullions, carry these "pretty pictures" all across our windows. Pray, if Mr. Winston had to introduce a painted tryptich into a church, may I ask whether he would beg Hunt or Dyce to paint it, and then cut up their painting with lines of tracery carved in oak? Would they be satisfied that "the eye passes across the mullion without being sensible of any interruption of the design?" or would they not rather beseech their employer to let them paint between the mullions of his next tryptich, and not behind them also? And wherein lies the difference? For if, as Mr. Winston wishes, we are to treat our glass as we do our pictures, then why not treat our windows as we do our picture-frames, carefully taking out the mullions and tracery, to leave room for the desired development.

The truth is, that there is ample variety afforded us in the old style of glass painting, if we choose to work it out properly. I grant it is more difficult, and requires more training to attain success than it does in the "pretty picture" line; but this I do not think a disadvantage. And the reason which actuates "our mediævalists" in desiring to revive this early style rather than the work of the sixteenth century, is their conviction that it was carried out with far more regard to true principles, and with far more success; just as in the same days architecture was also so much nobler than afterwards.

What is now required seems to be, that we should consider whether Mr. Winston's dicta on a matter of taste, are to be followed implicitly or not; and though, as I have said, I am always ready to give him my most hearty acknowledgments for what he has done in some respects, I cannot feel that I am bound to do this. He seems to me, if I may say so without offence (and I am specially anxious not to introduce any acrimonious matter into this discussion), to be warped and prejudiced to some extent by a consciousness of his considerable knowledge of the *history* of the art, and to forget that this knowledge is not enough without some of that feeling for general effect upon which artists are bound to depend for success in their work.

There is one other statement which I notice with some regret, because I can hardly suppose it to be the result of more than a moment's reflection. Mr. Winston's belief in the invariable partial success of a modern classic school is singular. Wherein consists it? In false construction, flat roofs, paint, whitewash, or cracked window-heads? Nor less singular is his assertion of the invariable absolute absence of any good in the work of the Mediæval school. If they have done no more, they deserve surely some encouragement for their revival of true principles in ornamentation and construction, for their earnest fighting against the sham architecture of the last few years, for their constant assertion of the paramount necessity of truthfulness in all that we design, and for their appreciation of the advantages of colour on our walls and our floors, as well as in our windows.

It comes, after all, to be a question of individual taste; and then I say that, if we are to trust in men, I, and I suppose most men, would a thousandfold rather follow Mr. Ruskin than Mr. Winston; and that, at any rate, before we give up the attempt to rival the glories of the noblest school of artists on glass the world has yet seen, we must have some visible proofs, of the strongest kind, of the success of Mr. Winston's efforts in the path he has chalked out for himself.

I fear he will give me the credit for being a too determined mediævalist; but I am so on no light grounds, and not without much consideration.

GEORGE EDWARD STREET.

I would have requested your leave to notice Mr. Winston's late lecture at the Architectural Exhibition, as reported in your paper of the 9th ult. but for the words, "to be continued," showing it was not complete. The *Builder* of Saturday supplies the conclusion, which, however, differs so little from the first part, that I almost regret having waited for its appearance. Mr. Winston's argument has a wormy property which does not suffer from being divided, but has as much appearance of head and tail, dissevered as entire, and seems to suffer as little. The lecture, indeed, is very little more than a jumble of misstatements and "passages that lead to nothing." The title, "Application of Painted Glass to Architecture," is a mere delusion, for no rule of application is given, nor is any relative utility or benefit pointed out; and when we have accompanied the lecturer in and out, up and down, over and over, through all his convolutions, we find ourselves at last exactly at our original standing-point, and everything as it was before.

Mr. Winston sets out by noticing the differences of opinion which prevail on the subject of glass-painting, yet believes all are agreed as to the badness of modern windows. He retains niches in his Temple of Fame for less (how many less we cannot say) than half a dozen glass-painters; but, alas! does not leave this dubious half-dozen so much as one production apiece to justify their fame; for in spite of the manifest superiority of foreign glass-painting, as proved in the Hyde-park Exhibition, in spite of "the enormous sums expended on painted windows within the last twenty years," Mr. Winston believes that we can scarcely boast of *one* window, and questions really if more than *two* could be named, which could bear comparison with the modern windows of Munich or Cologne, inferior as Mr. Winston thinks these are, and little to be followed. But let us admit the low standard of acquirement usually to be found among "practitioners" of this art: let us leave the odd collocation of mediævalists, glaziers, and architects' clerks, to settle their own accounts with Mr. Winston; and what are we to get from this argument? On what grounds are we called upon to accept this gentleman as our self-elected teacher, or to submit to the sweeping and somewhat spiteful censure, which is not balanced by a morsel of instruction upon the other side? Is the west window of Norwich Cathedral (one of the most expensive works on which "enormous sums have been expended") one of the only two specimens of English glass-painting, which may be compared with the defective glass of Munich and Cologne? And is the window in the ante-chapel of the Temple the *one par excellence?* Either it must be so, or Mr. Winston is in no position to judge others, being himself included in his own verdict of condemnation. The Norwich west window, so far as my judgment goes, is a coarse and ambitious failure. I examined it by evening sunshine and morning quiet, and could come to no other conclusion; and that this opinion was widely shared, will be in the memory of many: so much so, indeed, that its removal was hinted at within a year of its erection, even among those active in getting it up. For the specimen in the Temple, I can only say, that turning from a careful inspection of it to the windows in the east end of the same church, I felt that the person most benefited by its erection was our veteran Willement, whose windows looked by its side as much in advance of it, as they did to my eyes of most modern glass at the time they were put up. I am sorry to differ from "the judgment of those best qualified to form an opinion," yet these are my impressions. Is it upon these two windows that Mr. Winston stakes the reputation of the art?

The history of painted and coloured glass which follows may be very well as a proof of the erudition which nobody impugned, otherwise it will not much enlighten any reader; and we are scarcely clear of the *stiff* patterns, mosaics, and colours (and surely this word means more to the lecturer than it does to ordinary mortals), when we fall upon a startling proposition which would speedily bring ease to Mr. Winston's troubled spirit, and set at rest our smaller tribulations, were it made into fact and reality. "In the application of painted glass to architecture," says Mr. Winston, "much of the difficulty with which the subject is beset would vanish if all the buildings intended to be so decorated were of one character." How true! how wise! But, unfortunately, there are such a myriad of ifs, which could change this fighting-world into a paradise. If all men were of one mind, for example, there would be no controversies about painted windows, so Mr. Winston has to come down from this simple revelation to the under platform of the "*as it is*," which compels us to *select* glass paintings "fit for buildings possessing every variety of character." And here is again brought forward the oft-repeated accusation, that the lovers and promoters of Gothic architecture demand, as a *sine quâ non*, at least as much ill-drawing in painted glass as prevailed at the birth and growth of its various styles —an accusation both hurtful and untrue—denied over and over again by those accused who were best able to make the denial. Reiteration of an old charge is, however, a safe mode of argument, and a fashionable, not disdained by greater critics than Mr. Winston.

The second part of this lecture, as given in the *Builder*, begins with much laudation of the glass manufactured by Messrs. Powell and Sons. It may be as well to dismiss this, by simply stating the fact, that the successes achieved by Mr. Winston's scientific friends, in the revived manufacture, have received, at various times, and in various quarters, their full meed of honour; and in the present very considerable demand for their glass, I trust the manufacturers are receiving their fair meed of profit; but it must also be said that there are colours and qualities of glass necessary to the glass-painter, which Messrs. Powell cannot, or at least do not, make. * * * *

Now, Mr. Winston professes to give us an account of the progress of glass-painting, from the twelfth to the sixteenth century, which must be satisfactory, being managed after this manner. "We need not trouble ourselves with any intermediate types, but confine our attention to the remains of painted glass belonging to the twelfth, thirteenth, and sixteenth centuries," — that is, passing disdainfully over the fourteenth century, the manhood and strength of the art, of which more anon. This is a pleasant way enough of dealing with difficulties, but it is by no means an instructive one. The Temple Church, Mr. Winston's own experiment, and the Greek excellence which he recommends, come in between these three favoured centuries, and the fourteenth, to which we reach at last. Mr. Winston admits the powerful colour of the time, but questions its propriety as confusing the mullions and tracery, though the all but universal use of the border and clear margin during this period ought to relieve him from his concern on this point; while his objection to canopies, from their want of positive projection, will be shared by few who truly appreciate glass painting, as the art it really was, and is, or should be. As for the sea-green white pattern windows, they are a delusion. I have numbers of specimens of decorated glass, and none of the whites are sea-green: some of them are as white and satiny as the glass of the end of the fifteenth century. Occasionally they appear green from excessive thickness, but such a thing is by no means a distinctive characteristic of the period.

Again, Mr. Winston says—"The Gothic architecture of the fifteenth and sixteenth centuries is so much alike, that it is not surprising to find the sixteenth century glass paintings that have happened to be placed in buildings of the fifteenth century agree so completely with the architecture. Indeed, the glass-painting of both periods are alike in principle; the development of this principle in the sixteenth century constituting the chief difference between them." How strange is this manner of stating a clear and evident natural process. Why not have said that the principles of the fifteenth century continued to prevail for a short time after the commencement of the sixteenth, till it was submerged by the paint and barbarism of the new method? As for claiming on behalf of the Cinque Cento the beautiful pearly lustre of perpendicular glass, the works themselves, even the S. Gudule's windows, on which Mr. Winston hangs his shield, would sullenly disown it.

In discussing the works of the sixteenth century, it is observable that Mr. Winston expands a little on his former prelections. Formerly, if I am not deceived, he professed to hold by the first *quarter* of the century; now it is the first *half*: doubtless St. Gudule's compels the extension.

We come at last to a part which I confess I had waited for with some little expectation, viz. the suggestions for "glass-paintings most likely to harmonize with buildings in the Classic styles." The first portion of this is dismissed as swiftly as pleasantly:—

"With regard to Palladian buildings, we have the Cinque Cento style, ready-made to our hands, the various designs of which, more or less rich in colour, light or deep in tint, flat or receding in their design, would supply ample hints for meeting any exigency of local position or character of the surrounding architecture."

Glass-painters of the nineteenth century! behold yourselves here fully equipped for an assault on all Palladian churches or palaces. It is wonderful what a stroke of the pen can do. When he carries us forward to Greek, the lecturer, to our great disappointment, declines offering an opinion. At most, with an "If I *must*," he gives us a something nothing. And so, with a few remarks settling nothing, upon receding pictures and pictures intersected with mullions, the lecture is finished. We have all been brought to the bar—judged, condemned, and made an end of. If we submit to so summary an overthrowal, we should have, at least, a reward for our humility: and we again ask, what have we gained?

FRAS. W. OLIPHANT.

WAGES OF MASONS AND PLASTERERS. — The *Forres Gazette* states that the masons of Elgin have intimated to their employers that they must have their wages raised to 21s. a week; and the plasterers have made a demand for 20s. if employed in town, and 21s. if sent to the country. Both classes of workmen have at present only 18s. per week.

CLASSIC AND MEDIÆVAL.

It is not my intention to embark in a long correspondence upon the relative merits of classic and mediæval architecture, as applicable to churches, although it might not be difficult to add other reasons to those so well advanced by my friend, Mr. G. G. Scott, in favour of the latter style, at least for ecclesiastical purposes. I would, however, ask all intelligent people to judge by practical results, and not be led away by ingenious and plausible arguments, many of them tending rather to puzzle and confuse than elucidate the subject.

It is certainly amusing to hear the cool way in which many now hold forth upon the duty of adopting a style suited to the requirements of the day, instead of employing known systems of architecture, who never in their own practice have shown the least attempt at progress.

For the want, then, of any other style at present which may satisfy the cravings of theorists, we must fall back upon classic or mediæval architecture; and I ask those not blinded by prejudice, and capable of common observation, whether any comparison can be instituted between the modern churches of classic design, and those built in the mediæval styles? Whether there is not a tone and character imported through the latter style, which it is impossible to obtain by the means of classic composition? I feel satisfied that all true artists, whatever may be their predilections, will admit this: indeed, few persons deny it; and hence, by almost universal consent, mediæval architecture has been so much employed for church purposes. But then exceptions are taken to the forms and arrangement of Gothic churches, as being unsuitable for our Reformed Anglican Ritual, and reference is made to those erected by Sir Christopher Wren, as types of excellence.

Now, no one can be a greater admirer of Wren's works than I am, for they exhibit great genius, and his aim in the designs of his churches seems to be a desire to assimilate classic forms to mediæval composition. The limited spaces allowed to him for the City churches would not admit of chancel arrangements; but in his towers and spires there is the most evident aim at mediæval treatment. It is impossible to doubt Wren's appreciation of Gothic architecture.

If the essential requirements for a church are simply that everybody shall hear, see, and be seen, there must be an abandonment of all internal composition, and we need only copy Fra. Giovanni's great hall at Padua, or other large assembly-rooms, to obtain all that is required.

I contend that the subdivision of our churches by pillars and arches is not objectionable, and that such structural arrangements assist the voice, and prevent the reverberation and blending of sound, incident to vast, unbroken spaces. As to some people not seeing the preacher, this ought not to be a matter of any moment, provided they can hear properly.

In regard to galleries, I could hardly have supposed that anybody in these days would have seriously recognised such erections as fit to be perpetuated in a church; and I cannot but regret that so well-informed and able a man as Mr. Petit should have given the sanction of his name to the use of these deformities by even suggesting "that the Italian style is perhaps better adapted for a church than Gothic, where it is necessary to enclose a wide area under a single roof, or to have two tiers of windows on account of galleries," &c. But as that gentleman admits that his views have changed since the publication of his first work on "Church Architecture," it is to be hoped that his opinion upon this point may lately have undergone some modification.

Mr. Scott has so completely refuted the charge of servile copyism, that I shall not say a word on that head.

It is a somewhat singular coincidence, that at the very time when we are warned against the applicability of mediæval architecture for Protestant churches, the Nonconformists suddenly find its entire fitness for their chapels; and many of their edifices lately erected possess the exact features of churches with arcades, clerestories, aisles, transepts, towers, and spires; and yet these buildings are avowedly auditoriums, and built expressly to secure the desiderata in which our Gothic churches are said by some to be deficient; so that it is difficult to believe the columnar arrangement internally can present any serious impediment to sight or sound. I agree with Mr. Scott in regretting, that when Gothic architecture is beginning to be rightly understood, both in principle and detail, we are to hear its study and practice spoken of in disparagement.

I believe that if the practice of mediæval architecture be persevered in, gradual modifications will follow, and new forms by degrees be evolved. Hitherto attention has been almost exclusively given to English and French Gothic, but the more recent study of Venetian and Lombardic Gothic will at least teach us the true value of colour, and induce us to avail ourselves more freely of local products by using coloured marble and stone, which the facilities of railway communication may place within our reach, even if it does not guide us to new structural combinations.

I would only again say, let any unbiassed person inspect the churches erected in the Classic styles within the last few years, and those built recently in the Gothic style, and I have no doubt of his opinion as to the most suitable architecture for churches. This, after all, is the true test. Nobody will deny that fitness constitutes great excellence in architecture; but those who impugn Gothic as inapplicable to modern wants are singularly inconsistent in praising many Classic buildings recently erected; for though I admit their superiority over buildings of the Georgian era, it surely cannot be a correct expression of design to make large warerooms and storehouses assume the character of Florentine palaces; and yet this seems to be the aim in present street architecture: a hint may well be taken from Mr. Scott's remarks upon this point.

It appears to me that, instead of launching out in derogation of the study of mediæval art, much more good would be effected by urging upon all students the necessity of making themselves masters of the true principles and details of any style in which they may be called upon to practice, rather than by exciting their prejudices against systems which have produced some of the finest buildings in the world.

Benj. Ferrey.

LONDON AND MIDDLESEX AHCHÆOLOGICAL SOCIETY.

At the meeting of this society on the 26th ult. already mentioned, the chairman, Mr. Alexander Beresford Hope, introduced the business of the evening with some very appropriate remarks on the labours of early topographers and London antiquaries.

The Rev. T. Hugo then read the first paper, the subject of which was the Primeval History of London and Middlesex. The state of the metropolis and the adjacent county of Middlesex were, prior to, and at the time of, the Roman invasion, very little known; and although the subject was confessedly obscure, it was not the less interesting, and he hoped to be able to throw a little more light upon it. It appeared that the southern coasts from Kent to Cornwall were those most generally resorted to by foreign traders; and Herodotus spoke of Britain as a place from whence tin was obtained, and the inhabitants were represented as being in a wild state, but to be simple in their manners, not addicting themselves to any luxuries, and being free from vices. The country was stated to be fertile. Strabo also gave a similar description of the inhabitants of Britain, and said that they had large herds of cattle and had plenty of milk, but were unable, notwithstanding, to make cheese. The paper referred to the invasion of Julius Cæsar, but expressed an opinion that, although it appeared very probable that the Roman legions had been encamped near the metropolis, London as a city was at this time utterly unknown; and if it existed at all, it must have been a very insignificant place. Cassivelaunus, who was then king, made a most desperate resistance to the attacks of the various Roman generals who succeeded Cæsar, and when he was impelled to do so, he retreated with his armies to a wood, where he entrenched himself, and, from the appearances that presented themselves on Wimbledon-common, the writer of the paper expressed an opinion that this was very probably the spot to which he retreated. At length the island was, after a desperate struggle, made tributary to the Roman power; but Boadicea, the Queen of the British tribes, revolted, and resolved to resist the invaders. Suetonius, a Roman general, was sent to repress the rebellion, and it was at this period that the name of London was first mentioned, and there could be no doubt that it was a place of some importance.

Mr. Henry Mogford read some notes on the "Later History of London and Westminster." The two most important buildings in connection with this subject, he said, were Westminster Hall and Westminster Abbey, and he gave some interesting details in connection with the ancient and interesting buildings. The last of these, it must be a source of gratification to all to know, was still perfect, but it was much to be regretted that various alterations had been made in the beautiful hall, without even an opportunity being afforded of taking a copy, and of thus handing it down to posterity in its original shape. Reference was made to various interesting relics that had been removed during the building of the new Houses of Parliament, and in particular to two large circular pillars, bearing the arms of the Earl of Stafford, and of the date of 1444, which had formerly stood at the entrance of the old Houses of Parliament, and which were a beautiful specimen of ancient architecture; and the paper expressed a hope that Sir C. Barry would have them replaced in some portion of the new building, as from their recent removal they were no doubt in existence. A proposition had, it appeared, been made to raise the ancient roof of the hall, and thus entirely destroy the original building; but Mr. Mogford said he hoped that all the lovers of mediæval architecture would combine to resist the commission of such an act, and he said he believed that, under the present arrangement in which these buildings were placed, such a proceeding would not be sanctioned.

The Rev. Charles Boutell contributed a paper on "The Royal and other Early Monuments of Westminster Abbey." Mr. Boutell said he considered it would ill become the London and Middlesex Archæological Society to hold their first meeting within the city of Westminster without some special notice being taken of these most interesting and most precious relics. He would accordingly invite to them the thoughtful attention of the society, and with that view would briefly enumerate and describe the more remarkable of these national memorials. After having given such a general description of the Westminster monuments, Mr. Boutell adverted to the suggestions which had been made for the *restoration* of those examples which have suffered the most from the effects of time and of wanton injury: he pointed out the difference between *restoration*, as the term is now understood, and *preservation*; and, while he earnestly deprecated such treatment as could only *restore* these memorials by reconstructing them, he with no less earnestness urged the necessity for the adoption of measures which would save them from actually crumbling away. The architect of the abbey, Mr. G. G. Scott, had already in contemplation a plan of strictly conservative preservation for the royal and early monuments. Mr. Boutell trusted that Mr. Scott would be encouraged to carry out this plan with full effect, and he concluded with suggesting the importance of having drawings and copies of all monumental works and inscriptions in London and Middlesex taken without delay, and carefully preserved as one of the distinctive features in the practical working of the society.

Mr. G. G. Scott read the next paper, the subject of which was "The Chapter-house at Westminster." He said it was well known that this building was the receptacle for the most valuable and ancient records and documents connected with the history of the country, but he regretted to say that it was in a most dilapidated and deplorable condition. The Chapter-house, as they were aware, was the old ruinous half-mouldering building near Poet's Corner, and any one who saw it now would hardly think it possible that it contained any object of interest. In point of fact, however, it was a building of most extraordinary beauty. It was erected in the reign of Henry III. about the year 1250, and at the same period as the Abbey, and it was spoken of at that time as the "incomparable Chapter-house of Westminster," and was used as a chapter-house by the monks of the Abbey. The building was then used for the purposes of the House of Commons, until the time of Edward VI. when that monarch gave up to them St. Stephen's Chapel, and from this time it was used as a receptacle for the records of the kingdom, until 1714, when it was "repaired," as it was called. The Surveyor-General of that time refused to sanction the repairs, and they were placed in other hands, and the result was, that the splendid building was entirely destroyed. The roof was taken off: the vaulting was all destroyed: the beautiful original windows were all blocked up, and round-headed ones placed in their room: the original entrance was blocked up and a miserable door placed in its stead, and the place was

in fact mutilated in every possible manner. It was a work of extreme difficulty, therefore, to be enabled to get at the original building, and it was only after great exertions and labour that he had been enabled to make drawings. Among the discoveries that were made were, one of a whole-length figure, apparently of the Virgin; and also a picture of a female saint, crowned, and having in her hand a gridiron, and at her feet a monk kneeling. Upon one of the doors there were found portions of skins nailed, and, according to an old manuscript that was found in the Chapter-house, these skins were stated to be those of Danes. They had been submitted to the examination of an eminent member of the College of Surgeons, and he had pronounced an opinion that they were undoubtedly those of human beings. In another part of the building he found a long passage which appeared to spring under his feet; and, upon attentive examination, it was found that the floor was nothing but a mass of parchment, consisting of writs, seals, and records which had been wedged down into a solid mass. The whole of these had, it appeared, been removed to the library and were now in proper custody.

Mr. Sydney Smirke afterwards introduced to the company a number of ancient relics, which, he said, were mostly collected by himself or under his own eyes. From Westminster Hall he exhibited the leather sheath of a knife, stamped with fleur-de-lis and with lions passant, and found in a crevice of the masonry of the old walls, together with a quantity of bones, &c. remnants of the royal feasts held in the hall, and which had probably, together with the sheath, been dragged into the holes and crevices by rats and mice. From the Temple Church he exhibited a piece of the sackcloth which enveloped the body of one of the Crusaders, which, he said, resembled some cloth found enclosing two bodies met with when excavating the Chapel Royal, St. James's. Also some iron and wooden wedges used by the masons in levelling the stones of the main pillars of the Round Church. The thickness of the wedges proved the coarseness of the joints of that masonry—a peculiarity often observable in Norman work. Mr. Smirke also exhibited specimens of carved work from this church, from Westminster Hall, and St. Stephen's Chapel, making various remarks thereon, and suggesting that it should be one of the earliest duties of this new local society to endeavour to obtain a safe, permanent, and honourable resting-place for the "old materials" of the extinct monuments of London. He further exhibited a specimen of some fibrous composition used for ornamental ceilings at Wolsey's House at Ipswich, and at Hampton Court, remarking that plaster was not common for decorative purposes early in the sixteenth century in Italy, and still less so in England, of which further proof existed in the leaden ornaments used in the ceiling of the Chapel Royal, St. James's, which he conceived to be a specimen of Holbein's architecture. He further exhibited a plug or dowel of lead used in the vaulting of York Cathedral, and a wrought-iron cramp from the stall of the Chapter-house there, which cramp had, by exfoliation, ruined the masonry. Mr. Smirke, in conclusion, urged antiquaries generally, but especially his professional brethren, not to allow the consideration of the larger features of architecture to cause them to overlook these minor contrivances of our forefathers, which, if not always fraught with instruction, would never fail to be found interesting.

"AQUA PURA."

In the Notices to Correspondents, in the number for Feb. 9th, appears a request, under the above *nom de plume*, "to know how best and most economically to arrange for the filtering of rain-water while in the cistern, * * so as to be able at option to draw off the water, either filtered or unfiltered.

Leaving it to "A. P." to judge as to the eligibility for his purpose of the following expedient, which I have contrived, as regards its economy and otherwise, I beg to place it at his service, and that of the readers of the *Builder* generally:—

Holding, as I do, rain-water in high estimation, and the opinion that, if properly managed, the rain-fall on the roofs of a country house will come little short of the supply wanted for a family,—I am in the habit of providing a cistern capable of containing at least say 100 cubic feet of water, or (100 × 6·25) 625 gallons. In one corner of it I part off, with a movable partition set on the splay, a portion measuring, say 2 feet each way from the corner: this triangular space is the pure water division of the cistern, and the partition is the filter, and is constructed thus:—Form, of a durable wood, three frames of equal size, viz.—that of the intended partition, and of stuff about $1\frac{1}{4} \times \frac{5}{8}$ inch, so that the three are barely 2 inches thick; and to two of these affix closely-perforated zinc, of a stout gauge. Lay one frame flat, with the zinc uppermost, and upon it, two or three plies of blanket stuff: on the latter, lay the open frame, and the inside of that fill up, solid and flush, with coarsely-ground charcoal: then lay on two or three plies of the blanket, and finish with the remaining frame, turned with the zinc downwards: adjust the edges of the frame exactly, and screw the whole firmly together all round.

Supposing the cistern to be a lead-lined wooden one; before lining, affix stout groove-pieces, so as, when finished, to receive the partition freely: for this purpose, those on the sides have to be splayed at back to an angle of 45 deg. in order that the groove in them and the bottom piece may be in one plane. The outer angles of the groove-pieces may be chamfered or rounded: their height should a little exceed that of the overflow. Now line the cistern, carefully dressing the lead into and about the grooves, and lead into the main body of it all the influx pipes; but, from the pure-water division, all the services: slide the filtering partition into its grooves, and caulk carefully round the edges with tow, which is readily removed with a hooked instrument when the partition is to be withdrawn.

Such a filter is very easily cleansed: after brushing well the mud from the outer side, it will generally suffice to subject it to a good *douching* at the pump; but if that be thought insufficient, it will not be found very troublesome to undo, for the ablution of its separate parts. Where its cost has been hesitated at, I have had the cistern prepared for its reception, and itself left for subsequent consideration.

James Wylson.

PROVINCIAL NEWS.

Wisbech.—At a recent meeting of the Local Board of Health, the surveyor reported that he estimated the cost of executing the sewerage works at 6,767*l.* and the annual expense of repairs at 169*l.*; and that it would be best to contract for the execution of the works, and the keeping in repair for twelve months. He also reported as to the waterworks, which were estimated at 17,170*l.* including 1,000*l.* the estimated purchase of land and compensation: these works were also recommended to be put out to contract. It was resolved that the consent of the General Board of Health to the loan of 17,170*l.* be requested.

Dartford.—A transept of glass has just been erected in connection with the Bull Hotel, Dartford. The farmers and others attending Dartford had long suffered for the want of a convenient covered place. The increased accommodation has been obtained by roofing over with glass the inn yard, no longer thronged with coach and post horses, &c. This new market-place was lately opened. The building may also be used for public meetings, concerts, &c. the want of accommodation for which has been long felt in Dartford.

Cowes.—At a meeting of the Local Burial Board last week, Mr. G. Wheeler's tender for the building of two chapels, lodge, and dead-house, with the whole of the front walls and palisading of the new cemetery, was accepted for the sum of 1,150*l.* The following tenders were also given in:—

W. Wheeler	£1,665	0	0
J. Chinchin	1,630	0	0
E. Sherry, London	1,575	0	0
C. Sibbick	1,573	0	0
Grove, Brothers	1,285	10	0
T. Wheeler, Winchester	1,230	0	0

The Board wished the contract to be completed in six months, but the contractor wanted time.

Birmingham.—The foundation-stone of the Edgbaston new vestry hall, which is about to be erected in New Bridge-street, was to be laid on Monday last. The hall, for which plans have been prepared by Mr. Fiddian, will be the only public meeting-place in Edgbaston.

Stoke.—A requisition has been in course of signature to the Chief Bailiff of Stoke-upon-Trent, desiring him to call a public meeting, to express the public appreciation of the offer of Mr. Herbert Minton, to give 500*l.* towards the erection of baths and washhouses, and to consider the best means for securing the early realization of the project.

Evesham.—The new bridge is about to be opened for traffic, as the contractor wants the temporary wooden bridge elsewhere. The approaches, however, will not be completed for some time.

Gloucester.—The laying of the pipes for an additional supply of water from the brook at Witcomb has been completed. Mr. Bateman, of Manchester, the engineer of the Board of Health, has inspected the works. One of the fire-plugs at the Cross was opened, and it was found that the pressure of water was sufficient to throw a stream over the Tolsey.

Liverpool.—The undermentioned contracts for sewering have been accepted by the Local Board of Health:—Netherfield-road North, Mount-street, South-street, St. George's-street, McGregor-street and passages, Owens and Roberts, 623*l.* 7s. 1d.; Portland-place, Portland-square, Portland-buildings and passage, Owens and Roberts, 35*l.* 11s. 9d.; Anderson-street, Aughton-street, and passages, William Tomkinson, 163*l.* 9s.; Anne-street, Salisbury-street, and William-terrace, George Ravenscroft, 87*l.* 10s; Westbourne-street and Alma-street, Richard Smith, 461*l.* 7s.; Lord-street, Raglan-street, Spekeland-street, and a street north of it in West Derby, Isaac Dickson and Co. 271*l.* 10s.; Park-street, Mersey View-street, Vaughan-street, Tamworth-street, Napier-street, and passages, in Toxteth-park, Richard Smith, 708*l.* 14s. 6d.; Wood-street, Penrith-street, Melbourne-street, Carlton-street and passages, Isaac Dixon and Co. 215*l.* 15s.; Llewellyn-street and passages, Richard Smith, 5,241*l.* 6s.

Cheadle.—The *Gardeners' Chronicle* gives an account of some improvements at Abney Hall, near Stockport, the seat of Mr. James Watts, who has built here a mansion and formed gardens. The latter were designed and laid out in the first instance by Mr. Skirving, of Liverpool, but were afterwards greatly altered by Mr. Bigland, of Manchester. The conservatory forms, as it were, part of the south side of the mansion, and is so arranged that a view of the plants is obtained from a picture-gallery which adjoins it on the north side, and also from many parts of the ground-floor. When lighted up at nights it is thrown open to the drawing-room. It is, however, unfortunately ill adapted for plants, owing to want of proper ventilation. The south fronts, which rise one above the other after the manner of the Crystal Palace, are altogether some 20 feet in height, and are glazed with large squares of plate glass: the roofs are ridge and furrow, and are glazed with large panes of sheet glass.

Bradford.—Designs for the interior decoration of St. George's Hall here have been prepared by Mr. J. W. Ingram, the decorator of the Birmingham Townhall, and are under the consideration of the directors of the Hall Company. The ceiling in this design is divided into four compartments, each having its centre flower, gilded, upon a carmine centre, toned down into the neutral tint, from which radiates a circle divided into eight compartments, forming panels, with a gilded ground, on which are emblasoned arms, trophies, and arabesques composed of fruit, flowers, and ornament. The details of the ceiling will be in colours and gold. The cove or segment of a circle, which rises in a span from the cornice to the flat of the ceiling, is divided into a series of panels by a broad band of plaster modelling, consisting of flowers and fruit, tied together by ribbons. These are gilded with different tinted golds, upon a pale purple ground. The panels are a series of arabesques, trophies of flowers and fruit, and musical trophies, on a ground of cerulean blue. The beams of the building, which are ornamented with plaster, are decorated with gold and colours. The rest of the interior is in harmony with the ceiling. The walls will be a pale maize, with an inlaid ornament. The cornice will be in white dead enamel, but profusely gilded.

Leeds.—At a special meeting of the Townhall Committee of the Leeds Town-council, held for considering a new design for a tower

or the Townhall, by Mr. Brodrick, the ventilation of the building, and other matters, the committee, by a majority of eight to four, according to the local *Intelligencer*, have decided to recommend its adoption to the council. The cost is estimated at something like 5,500*l.* which is considerably less than the sum estimated for the design some time ago under discussion in the council. The committee also decided to recommend the council to grant 4,000*l.* for ventilating the building, and 1,500*l.* for fixtures; making a total of some 11,000*l.*——A meeting of the committee for rebuilding the National Schools in Kirkgate, has been held, and 900*l.* subscribed. The estimated cost is 4,000*l.*

Grantham.—At a recent meeting of the Town-council of Grantham, attention was called to the arrangements for the erection of a statue to the late Sir Isaac Newton; and it was stated that there was no definite answer from Government as to granting metal for the statue, although metal would be supplied; but at present Government had none to spare. If peace were established they would soon have metal. The cost of the statue would be 400*l.* or 500*l.*

Crook, near Darlington.—Substantial schools have been erected at Crook, at the expense of the owners of Pease's West Collieries (Messrs. Richardson and Ross, architects), and were opened with considerable *éclat*. The schools are to accommodate about 250 children. The buildings comprise a school-room, 65 feet by 28 feet; boys' class-room, 16 feet by 13 feet; girls' class-room, 16 feet by 12 feet, with separate porches. A commodious residence for the master is attached to the school, comprising parlour, kitchen, scullery, and three bed-rooms; the whole being supplied with convenient water-closets and other outbuildings. The materials are rubble stone for walls, with Brusselton stone dressings; the roofs being slated. The school-room and class-rooms are heated with hot water, by Longbottom and Co. The whole cost of the buildings, with boundary walls and fittings in the school-room, will amount to about 1,300*l.*

Leighton Buzzard.—Tenders have been received for an ornamental shop-front for Mr. Sharman, of Leighton Buzzard (Mr. W. C. Reed, architect), ranging from 580*l.* (T. Piper and Son), to 512*l.* (W. Brass and Son). The tender from Bunnett and Co. for revolving shutters and iron columns was 145*l.*

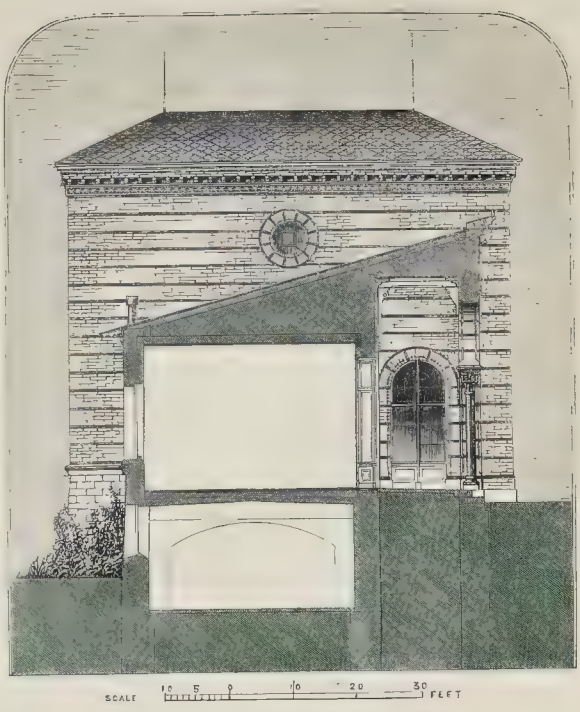
Dunfermline.—It having been satisfactorily proved, says a Scottish contemporary, that Dunfermline was a city in years long past, the Ordnance maps are to have it marked out as a city. Thirty years since and upwards, we happen to recollect, Dunfermline was very commonly known to be a city, and spoken of as such in ordinary talk.

Dublin.—In reply to a deputation from the Royal Dublin Society, who waited upon the Lord Lieutenant, at Dublin Castle, to request his Excellency to appoint a time for laying the first stone of the new Museum of the Society, the first week in March was named for the performance of the ceremony.

GALLERY OF SHOPS AT VOESLAU, AUSTRIA.

FOR some time past the architects of Germany, in designing their buildings, have striven for truthfulness, and they have sought to let the system of construction employed show itself, and to graft on to this, or rather obtain from it, elegance and beauty. The set of small shops, illustrated by the accompanying engravings, have been built at Vöslau, from the designs of Ludwig Förster, the editor of the well-known and very valuable work, the "Allgemeine Bauzeitung," wherein the view was published. M. Daly then gave it in his "Revue," and we have re-engraved it from that source. The object of the building is to afford accommodation during the bathing season, for the dealers in various articles produced on the spot, or of general utility. The arrangement is simple and honest, and the general effect good. The columns are of cut stone: the walls are of brick, varied in colour: the decorative fillings-in are of plaster of Paris; and the salient decorations are of stone, or of pottery.

GALLERY OF SHOPS AT VOESLAU, IN AUSTRIA.



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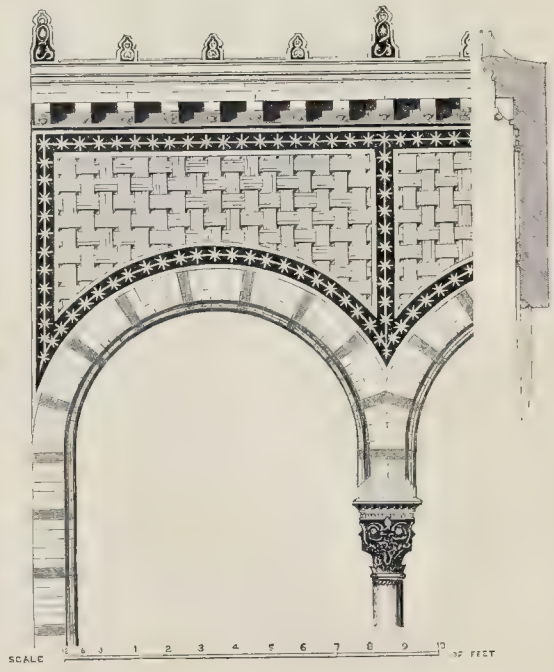
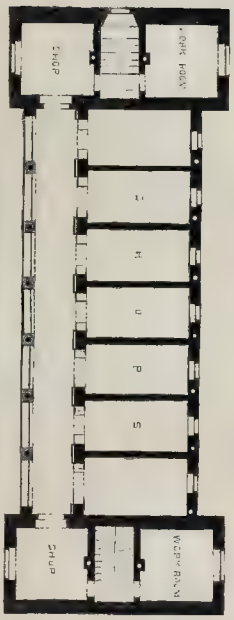


Part of Arcade at Large.



GALLERY OF SHOPS AT VOESLAU, IN AUSTRIA.—M. LUDWIG FÖRSTER, ARCHITECT.

CHURCH-BUILDING NEWS.

Swansea.—The committee for the erection of St. Peter's chapel of ease to the mother church of St. Mary's, Swansea, met on Monday before last to receive tenders for the building of the chapel, when the lowest was declared to be that of Mr. Joseph Richards, builder, of this town, and was unanimously accepted. The sum yet to be raised to complete the building is 750*l.* A burial-ground is attached to the chapel of ease.

Taunton.—The consecration of the cemetery for the parishes of Taunton St. Mary Magdalene, and Bishop's Hull, took place on Tuesday before last. The cemetery, of about eight acres, occupies a field at Mountway. It is divided so as to allot about three-fifths—*i. e.* the eastern portion—to the Church of England, and the remaining two-fifths to the Dissenters. Besides the principal gateway there is an entrance—cast-iron gates—from the Bishop's Hull-road. The lodge contains a board-room, 17 feet by 12 feet, and residence for the keeper. The lodge is entered by a half-timbered porch. The buildings are in the Early Decorated style of old English architecture. The chapels are similar in design and in dimensions, being 31 feet 6 inches by 18 feet. They are roofed at a high pitch with stained pine, having arched braces moulded, and springing from angel corbels, carved in Bath stone. The fittings (to seat forty persons in each chapel) and reading-desks are of wainscot, of ornamental character. The windows, of varied design in their tracery, and having carved heads to their hood moulds, are of Bath stone; also the copings and dressings of turrets in the gables. The buttresses and quoins are of Westleigh limestone, and the facing of coursed Blagdon flint. Each chapel has a vestry. The contractor was Mr. W. Shewbrooks, of Taunton; the architect Mr. Ashworth, of Exeter, who also planned the laying out the ground, &c. Mr. Robert C. White, of Taunton, was clerk of the works; the contractor for the iron railing, Mr. Joseph Savery, of this town; and for roads, Mr. William Badcock. The outlay, according to the *Taunton Courier*, from which we quote, has been about 1,850*l.*; fences, about 800*l.*; and roads, 400*l.*

Cheltenham.—In addition to the work of re-roofing the nave of the parish church here, it is now proposed (but not yet decided on) to remove all the pews on the ground-floor and to put in low seats, similar to those in the two new churches of St. Peter and St. Luke, in the same town.

Bath.—The Bathwick cemetery was recently consecrated. The spot selected is one of the most secluded near the city: it is in a vale under Smallcombe Wood. The land consists of about two acres and a half, a portion of which, according to the *Bath Chronicle*, was granted by Lord William Powlett, the remainder by the rector. In the centre of the ground is a mortuary chapel, in the Early English style of architecture, designed by Mr. Thomas Fuller, of this city, architect to the Bathwick estate, and built by Mr. G. Mann, also of Bath. Above the doorway rises the campanile. The height of this portion of the structure is 45 feet, not including the cross by which it is surmounted, while that of the body is 26 feet, with an extreme length of 44 feet, and a breadth, including the buttresses, of 27 feet. It is lighted by a large window on the east and three small windows on either side, fitted with stained glass. The ground has been laid out by Mr. D. Butler, of Widcombe. On the south side of the ground a sloping bank has been constructed, which will admit of catacombs being constructed in the hill-side, and monuments being erected on the upper terrace. There is at present no lodge at the entrance, but merely a simple gateway: it is intended, however, as soon as sufficient funds can be obtained, to construct a lodge in the same style of architecture as the chapel.

Sandon.—According to the *Chelmsford Chronicle*, Sandon Church has been restored at a cost of about 300*l.* The old pews have been replaced by uniform seats, 2 feet 10 inches high, and 2 feet 3 inches wide, with inclined backs, and without doors. By this rearrangement the number of seats is greatly increased. The floor is raised 8 inches, and repaved with red, white, and black tiles. The paint has been taken off the ancient carved oak pulpit, which has been restored by Messrs. Ringham, of Ipswich. A new reading-desk has been provided. Two new stalls have been obtained in the chancel, with carved ends (by Ringham), the ancient wood carving of the chancel pews having been worked into the stalls. The altar rail, which is new, is supported by iron standards, and the floor within is laid with Minton's tiles. The communion-table has been restored. The whole work has been completed by Mr. Sorrell, of Great Baddow. In pulling down the old pews, an ancient piscina was brought to light, and some fragments of ancient encaustic tiles were also found.

Newark.—The ceremony of laying the foundation-stone of the consecrated chapel connected with the new cemetery, took place on Saturday before last. The architects are Messrs. Bellamy and Hardy, of Lincoln; and the contractor, Mr. Whitworth.

Lincoln.—The Dean and Chapter have restored the oriel window in the north great transept of the cathedral. The stone-work, which had become much injured by time, has been made good. The glass has been re-set, and the damaged portions replaced by new pieces.

Crowle.—It is proposed to add a chancel to St. Stephen's Church, Crowle, Lincolnshire, with open roof and Decorated window. The pillars on each side the communion-table will be gilded. The seats are to be of carved English oak. The east window is to be filled with stained glass. Mr. J. Owen is the architect.

St. Bees.—The ancient abbey church of St. Bees was lately reopened, after various improvements and alterations.

Newcastle-upon-Tyne.—The foundation-stone in connection with the necessary buildings and ground of All Saints' cemetery, at the Minories, has been laid. Mr. John Green is the architect, and Mr. James Gibson the contractor.

Gateshead.—A chapel was lately opened for divine worship at Mount Pleasant, Gateshead, belonging to the Methodist New Connexion. It is built in the Gothic style, with windows of stained glass. The architect was Mr. M. Thompson.——The congregation of the Blackett-street Presbyterian Church some time since appointed a building committee, and resolved that so soon as the treasurer had 1,000*l.* in hand, the committee should proceed to obtain plans for a new place of worship. Since then, the committee, says the local *Observer*, having obtained nearly 200*l.* more than the specified sum, gave notice to some architects of their readiness to receive designs for the proposed new chapel. Four architects complied with the invitation, and, on the recommendation of the committee, the congregation have approved of the design of Mr. Thompson, and awarded him the offered premium. The new edifice will be in the Decorated style.

STAINED GLASS.

Ilam.—Two stained-glass windows—an eastern triplet and a south aisle three-light—are to be executed from the designs of Mr. J. R. Clayton, of Albany-street, Regent's-park, and erected in Ilam Church, Staffordshire.

Regent's-park.—The same artist has also just completed the designs and cartoons for the large window which is to be erected to the memory of the late Mr. R. C. Carpenter, architect, in the Church of St. Mary Magdalene, Munster-street, Regent's-park.

Chelmsford.—Holy Trinity Church has just received the addition of a stained-glass window, encased in new Caen stone work, at the eastern end of the chancel. The subjects are in three compartments, the centre window representing the Saviour on the Cross, and St. Mary and St. John on either side. In the right window is the Saviour bearing his Cross to Calvary, followed by two soldiers, and near him is a kneeling female figure in tears. In the left window the Saviour is appearing to St. Mary Magdelene. The lower parts of the three lights are filled with angels in different attitudes, and across runs a scroll, on which is inscribed the name of the lady in memory of whom the window is dedicated. In the canopies are angels bearing a spear, and sponge on a reed. The upper tracery has four figures of angels and symbols, chiefly referring to the Trinity. The glass was supplied by Mr. Warrington. The stonework of the window and the exterior wall of the chancel was executed by Mr. Bremer, mason, at the almost sole expense of the rector.

Braintree.—Two painted windows have been erected in Bocking Church, on the south side of the Dean's Chancel, at the expense of the dean. They are the production of Mr. George Austin, of Canterbury, who has in all erected eighteen windows in the cathedral of that city.

Glasgow Cathedral.—Stained-glass windows are to be placed in this ancient edifice, the cost being borne chiefly by private individuals. The *Herald* says, the public bodies and individuals, or rather families after named, will each take one of the windows of our venerable minster under their care:—1. The Lord Provost. 2. The Government. 3. Messrs. Baird, of Gartsherrie. 4. The Corporation. 5. The Trades' House. 6. Messrs. John Tennant and Co. 7. William Ewing, esq. 8. James Stirling, esq. of Cordale. 9. Robert Monteith, esq. of Carstairs. 10. Messrs. Campbell and Co. 11. The Houldsworths. 12. The Dennistouns. 13. The Crums. 14. The Faculty of Procurators. 15. The Merchants' House.

THE COMPETITION FOR CHURCH AT LILLE.

ABOUT forty sets of designs, we learn, have been sent in for the church of *Notre Dame de la Treille*; some of them executed with an immense amount of care. The exhibition of them will be opened on the 13th inst. in the upper part of the *Halle au Blé*, a large corn-market, built by M. Benvignat, of Lille, and it will close on the 25th. No place could have been found better suited for the purpose to which the *Halle* will now be applied. The drawings from France alone, we are told, will cover about 1,000 square yards. The decision is promised at the end of the month.

DESTRUCTION OF COVENT-GARDEN THEATRE.

COVENT-GARDEN THEATRE was destroyed by fire on the morning of Wednesday last. Within a few minutes after the discovery, a little before 5 a.m. the flames had obtained possession of the whole interior,—thus once more illustrating the remarks which we made last year, and previously, on the necessity of proper means of exit from places of public entertainment. In the present instance, though no lives appear to be lost, many of those who were present at the *bal masqué*, then terminating, had narrow escapes. Indeed, independent of the defects of plan which are so general, the materials used and the method of construction in the London theatres render them—sooner or later—we might say, inevitably—the prey of fire. We shall have better opportunity, before our next number, of ascertaining what was the exact origin of the conflagration in this instance. At present the bare walls, and the columns and pediment of the portico are alone standing. Bond timber seems to have been introduced, or been left in the walls, at the last alterations, to a greater extent than was supposed; and this having been burnt out, the walls appear at this moment in a dangerous condition. The present, or rather late, building was the third erected on the site. It was originally designed by Sir Robert Smirke, and replaced the theatre burnt down on the 20th September, 1808, and designed by Henry Holland, also the architect of Drury-lane Theatre, which, too, was destroyed in a similar manner. Of both these buildings, last named, and their architect, some particulars will be found in the papers on the Recent History of Architecture, in our last volume. Of Sir Robert Smirke's building, the first stone was laid on the 31st of December, in the year of the fire, or with an interval of little more than three months, and the building was opened on the 18th September in the next year, 1809. The portico was one of the earliest examples of the revival of the Grecian Doric order; though we need not tell our readers that it was not a copy of the portico of the Parthenon, as we are told by

one newspaper writer. The interior of the building was remodelled or rebuilt, within the recollection of our readers, by Mr. Albans, and was described in our volume for 1847, where a view will be found.

All must lament the dreadful disaster which has occurred, not merely for the sake of Mr. Gye, but of the public.

DESTRUCTION OF THE NEW CHURCH AT OVER-TABLEY.

ST. PAUL'S, at Over-Tabley, near Knutsford, completed in March, last year, at a cost of about 1,500*l.* has been gutted by fire, caused, it is supposed, by the overheating of the hot-air apparatus, or some defect in it. The *Macclesfield Courier* says:—"On an inspection of the interior of the hot-air chamber, it appeared that the smoke flue of the furnace, after rising about half a yard, was carried at right angles into the brick flue, built in the wall, entering immediately below the brick-arched covering of the air chamber. This flue rising perpendicularly about 2 feet was then carried obliquely into the chimney, in the corner of the vestry, entering it on the square of the building. This flue, at the point where it entered the chimney, was covered by a flagstone, above which were two courses of bricks, on which rested the wall plate. This flag was found to have been cracked in two places, and showed, as also did the iron bar and rod on which it rested, that it had been sometimes red hot; and from this circumstance it was at first supposed that there having been a lodgment of soot at this point, the fire had originated here. But it was stated, by a person living near the church, that the flue had taken fire some time in November last, and that the flames on that occasion had risen two yards above the top of the chimney: it is, therefore, not improbable that the mischief shown here might have been caused at that time. The flue was eight inches square, and its course upwards had been brought within a brick's width of the joists and floor of the vestry—and it is supposed that the bricks here would become red hot. The flooring of this part of the vestry, it had been frequently remarked, was exceedingly hot. The opinion of the gentlemen assembled appeared to be that the fire had originated at the bottom of the flue, but that it was uncertain whether ignition had first taken place there, which would be in the flooring, or at the top, near the wall plate: circumstances were, however, rather in favour of the former supposition."

We need scarcely say that our object, in chronicling such disasters, is not to give pain or attach blame, but to awaken the attention of builders, clerks of works, and architects, to the paramount necessity for care in the construction of flues.

FALL OF THE SHIRE-HALL STAIRCASE, CHELMSFORD.

THIS sad accident has caused great consternation, as might have been expected, and should lead to the examination of other staircases elsewhere. The *Chelmsford Chronicle* gives particulars of the inquiry which has been made, and quotes a paragraph from its own pages, of January, 1792, showing that the architect of the building was Mr. John Johnson, and that he received a piece of plate, of the value of 100 guineas, "as a public testimony of his integrity and professional abilities in the execution of the said Shire House, as architect and surveyor of the county of Essex."

The steps were of stone, and had been often chipped and repaired. They were tailed into the partition wall at one end. The balusters first gave way, and then the steps broke off, leaving the ends in the wall.

WHITE-LEAD AND ITS ADULTERATION.

IN the *Builder* of Feb. 16th, I observe some remarks on the adulteration of white-lead. As this subject is quite within the province of an analytical chemist, I beg to offer tests for all the substances I can think of likely to be mixed with the above metallic oxide for fraudulent purposes. Of course, the amount of such adulteration can only be ascertained by a complete analysis,* but, for the determination of the kind of admixture, I flatter myself the following rules may be of service:—

1. *Carbonate of Lime* (any form of *chalk, whiting, &c.*)—To detect this substance in *commercial white-lead*, about 40 or 50 grains of the latter must be introduced into a *beaker*, a bottle of white glass, or other suitable vessel, and 3 fluid ounces of dilute hydrochloric acid (otherwise *muriatic acid* or *spirit of sea-salt*,—1 part of the strong acid to 4 or 5 of *distilled water*) added with agitation: then allow the whole to remain for an hour or so, unless means are at hand for boiling it, when this operation, and the use of a clean Florence flask, will expedite the operation. To the clear liquid, poured off, or if necessary, filtered through blotting-paper, add a little *solution of ammonia*, until it smells strongly of the latter, when the addition of some *oxalic acid*, dissolved in water, will cause a white precipitate, or *milkiness*, if there is any carbonate of lime in the sample tested.

2. *Sulphate of Lime* (*gypsum, selenite, plaster of Paris*).—An equal quantity of the *white-lead* should be *boiled* with dilute *nitric acid* (about the same quantity and of the same strength as the hydrochloric acid used in the last experiment), until the addition of more causes no effervescence or other action. Then filter the whole, and throw away the solution; but if anything undissolved remains upon the filter, wash it well with water, and afterwards put in a bottle a large quantity of the same fluid: after some time pour off a little of it (clear), and add ammonia and oxalic acid as before. In this case, a milkiness would mean presence of sulphate of lime.

3. *Carbonate of Baryta* (*witherite, heavy spar*).—Treat with hydrochloric acid as in No. 1. Add solution of *sulphuret of ammonium*, until the liquid has acquired its characteristic odour of rotten eggs: boil until it emits no smell, and filter from the black powder, which is thrown down. To the clear solution, add a saturated one of *sulphate of lime*, when *sulphate of baryta* will be precipitated, if the carbonate of that base is present in the original *white-lead*.

4. *Sulphate of Baryta* (*sulphate of barytes*—native).—To determine the presence or absence of this substance, the pigment under consideration may be boiled with dilute nitric acid, in the manner directed in the exp. No. 2: if a residue is obtained quite insoluble in acid or water, it will most probably be *sulphate of baryta*, which will give a *green tint* to a flame, if introduced into one on the point of a *perfectly clean* wire.

5. *Clay* (any kind of *pipe-clay, porcelain clay, &c.*)—If the residue from the *nitric acid* ebullition has an unctuous, plastic feel in the fingers, it is *clay*. Enough of it being obtained, it may be mixed with a sand, kneaded with water, and baked (*at a red heat*): its texture will then reveal its composition.

6. *Starch* (*flour, &c.*) may be detected by boiling with water, and adding to the filtered liquid a little solution of *iodine* (1 *grain to* 1 *ounce of water*), which will strike a beautiful blue colour if any starch is present.

The *salts* and *reagents* mentioned may be obtained at any respectable operative chemist's. I would especially recommend Messrs. Jackson and Townson, 89, Bishopsgate-street, City.

A few Florence flasks, two dozen test-tubes, and a *washing-bottle* (for directing a stream of water upon a precipitate), will be all the apparatus necessary. In the preceding experiments, I have supposed that the *white lead* is dry,—in powder,—as, when mixed with *oil* or *turpentine*, a novice cannot detect adulterations without great difficulty: however, *generally* these oleaginous substances may be got rid of by repeated digestion in *strong alcohol and ether*, until the *colour* no longer refuses to mix with water; or the oil, &c. may be burnt off in a crucible. Of course starch cannot afterwards be detected. I shall be happy to give any further information, if required.

WENTWORTH L. SCOTT.

* A sample forwarded to me (Care of the College of Chemistry, London) for this purpose, would receive immediate attention.

MENTAL CALCULATION.

INSTITUTION OF CIVIL ENGINEERS.

ON February 19th, Mr. Robert Stephenson, M.P. President, in the chair, Mr. Bidder, referring to the great advantages he had derived from the power of mental calculation, which had given him a rare and unusual facility in dealing with numbers, proceeded to lay before the meeting his general views on the subject.

He was convinced that mental calculation could be taught to children, and be acquired with greater facility and less irksomeness than ordinary arithmetic; although, of course, a child in whom there existed a predilection for calculation would even then be as remarkable, and take as prominent a position as in the acquisition of any other subject.

Before entering more minutely into the subject, it was necessary to enunciate, as a principle, that there was not any Royal or short road to mental calculation: the processes were, like all others in arithmetical computation, to be performed *seriatim*; as, whatever might be the number of figures employed in a calculation, they were only so many symbols, to be dealt with precisely as they would be exhibited in algebraic formulæ, with which the calculations might be considered as identical. In point of fact, many of the processes of mental computation, if produced on paper, would appear most prolix and complicated: they could, however, be accomplished mentally, in consequence of the faculty of occupying the mind simultaneously with the double task of "computing" and of "registering." The first, computing, was executive, or reasoning, and was that portion of the process which, whilst it was the most active, was not that which caused the greatest strain on the mind. When it became necessary to record the result, the second faculty, registering, was called into play. Now it was this latter occupation of registering that was the real strain upon the mind, and by which alone the power of mental computation was limited.

Experience had shown, that up to a certain point, the power of registering was as rapid as that of thought; but the difficulty increased in a very high ratio, in reference to the number and extent of impressions to be registered, until a point was reached where registration in the mind and by writing were exactly balanced: below that point mental registration was preferable: above it, that by writing would be as quick and be more certain. Therefore, the mental process, as compared with the operation of writing, was as the speed of lightning to that of an express train; and if the power of registration could be maintained at all times upon a par with the executive faculty, there would be no difficulty in computing, with immense rapidity, a table of logarithms up to 10 places of figures.

His earliest recollection was that of counting up to ten; then up to 100, and afterwards to 1,000; then, by intuitive process, he taught himself the method of abbreviating the labour of counting; arriving, in fact, at the natural multiplication of numbers into each other, attributing to each a separate and individual value.

In this manner, the actual value of every number, up to 1,000, was impressed on the memory, and he then proceeded onwards *seriatim* up to a million. It was his practice to count numbers practically with peas, marbles, or shots, to compose rectangles of various values, and by counting them the multiplication table was ultimately the result of actual experience and test, and he attained an intimate acquaintance with numbers multiplied with each other, by a tangible process, divested of that formidable character under which it was generally brought before the young student.

Multiplying 173 × 397, the following process was performed mentally:—

100 by 397 = 39,700
70 by 300 = 21,000 = 60,700
70 by 90 .. .. = 6,300 = 67,000
70 by 7 .. .. .. = 490=67,490
3 by 300 .. .. .. = 900=68,390
3 by 90 .. .. = 270=68,660
3 by 7 .. .. = 21 = 68,681

The last result in each operation being alone registered by the memory, all previous results being obliterated.

To show the aptitude of the mind by practice, he would know, at a glance, that 400 × 173 = 69,200
and then ..... 3 × 173 = 519
the difference being..... 68,681 as above.

On the 26th ult. Mr. Bidder resumed his exposition.

With regard to addition and subtraction, it would be perceived, that the same principle, as already explained for multiplication, was adhered to, viz.; that of commencing with the left-hand side, or the large numbers, and adding successively, keeping one result only in the mind. This had the further advantage, that the moment the large figures were operated upon, the mind was no longer charged with them, and they might be dismissed, as it was no longer incumbent to register them. Now, the mere getting rid of this feeling, of its being necessary to charge the memory with them, set the mind free to continue the rest of the operation: it did not follow that he did forget the sums, or figures to be dealt with, still, getting rid of the feeling of the necessity of accurately recollecting them was of manifest advantage. Some examples, both of addition and subtraction, were then given.

Division was, as in ordinary arithmetic, much more difficult than multiplication, as it must be a tentative process, and was only carried out by a series, more or less, of guesses; but no doubt, in this respect, the training arrived at by mental arithmetic gave the power of guessing, to a greater extent than was usually attained, and afforded a corresponding facility in the process. Supposing, for instance, it was necessary to divide 25,696 by 176, the following would be the process:—100 must be the first figure of the factor: 100 times 176 were known at once to be 17,600: subtracting that from 25,696 there remained 8,096: it was perceived that 40 was the next number in the factor: 40 times 176 = 7,040: there then remained 1,056—that it was immediately perceived gave a remaining factor of 6, making in all 146. Thus only one result was retained in the mind at a time; but as contrasted with multiplication it was necessary to keep registered in the mind two results which were always changing, viz.,—the re-

mainder of the number to be divided, and the numbers of the factor, as they were determined; but if it was known, as was the case in the present instance, that 176 was the exact factor, without any remainder; having got the first factor—100—which was perceived at a glance,—it was known, that there were only four numbers which, multiplied by 76, could produce a result terminating in 96, viz.; 21—46—71—and 96; and, therefore, the immediate inference was, that it must be 46, as 121 must be too little, and 171 must be too much, therefore 146 must be the factor. Thus, as before observed, the only facility afforded by mental calculation was the greater power of guessing at every step towards the result.

Square and Cube Roots.—Perhaps there was nothing in which the mental process caused greater astonishment than in resolving the square and cube roots, more particularly the latter; and perhaps in none was it less entitled to occasion wonder, because it partook more of "sleight of art," than of any real power of mind, or of any real useful application of means, as would be apparent on considering them. It was at about the age of somewhat less than twelve that Mr. Bidder was first asked to extract the square root; but before he could comply with the requisition, it was necessary to explain to him what the square root meant, and this was explained by showing that 400 was the square of 20, and that 20 was the square root of 400. As might be expected, all who tested his powers were generally prepared with the means of ascertaining the accuracy of the answers. Now it was well known that the easiest application of multiplication was in squaring numbers, and that it was much more easy than extracting the roots: the consequence was, that those who propounded the questions squared, or cubed, a number, and then gave the result, whence to extract the root; and, if the answer agreed with the number they started with, they were satisfied. The consequence was that nearly every example proposed was a true square or cube; hence the following expedient was hit upon. It appeared, on reflection, that whatever might be the two last figures of a true square, as, for instance, 61, could only be produced by the square of four numbers, viz.,—19, 31, 69, 81; hence, if called upon to extract the square root of 337,561, Mr. Bidder knew instantly that 500 must be the first part of the root, because 10,000 was the square of 100; hence that the hundreds in the square roots of 330,000 would correspond with the digits in the square root of 33, viz.,—5, or 500 in the larger denomination. Having ascertained this, he had to choose between the four other numbers to ascertain the remaining term of the square root; and he was enabled at a glance to perceive that it must be the larger number, 81, from the fact that 81 was to 100 (the difference between 500 and 600), nearly in the proportion of 87,000 to 110,000 (the difference between the square of 500 and 600). As regarded the terminal 25, the square of all numbers ending in 5 terminated in 25; hence it would seem that the choice lay between all the numbers ending in 5 up to 95; as, for instance, in extracting the square root of 442,225, of course, as before, it would be known that the first term was 600, but although the square of all numbers ending in 5 would always terminate in 25; yet there was this guide, that numbers ending in 5, 45, 55, and 95, had no hundreds interposed after the thousands, as, for instance, the square of 155 was 24,025;—then the square of numbers ending in 15, 35, 65, and 85, terminated in 225; as, for instance, the square of 185 was 34,225; and, again, numbers ending in 25 and 75 terminated in 625; as, for instance, the square of 125 was 15,625; therefore with regard to the root of the proposed number, it must lie between the numbers 15, 35, 65, and 85, and from the proportion of the excess of the proposed number over the square of 600, it was evident that it must be 65, therefore it was concluded that the root was 665.

Mr. Bidder went through a number of processes, but we are unable to follow him further. He contended justly, from his own experience, that a facility in using mental arithmetic, combined with an intimate knowledge of the laws of mechanics, must necessarily prove of great utility to the civil engineer: so far as regards himself, it had materially aided his individual career—it had aided him in times past, in suggesting matter for cross-examination, and, as might be imagined, had proved very embarrassing to the witness.

TRISECTION OF AN ANGLE.—In reply to a request, some time ago, for the means of effecting this, we have received several attempts to solve the difficulty, but none which would stand examination. Those of our readers who are desirous of accurate information upon the subject may find it by referring to the article thereon in the *Penny Cyclopædia*. They will there see that it is a problem of the same class as the "Quadrature of the Circle."

COMPETITIONS.

Liverpool Free Public Library and Museum.—Our readers have doubtless observed the advertisement offering premiums for the best designs for the intended building on the north side of Shaw's Brow, Liverpool. The institution will be divided into two departments, the library and the museum, and these are to be kept so far distinct that they can be separated if necessary. The reference library must contain space for at least 100,000 volumes, with accommodation for 500 readers at one time. The lending library must contain space for about 20,000 volumes. As to the museum, the present collection will require about 1,350 lineal feet of wall space. The cost of the building is not to exceed 20,000*l.* There is this peculiarity about the case, that the chairman of the committee is an architect, Mr. J. A. Picton, and one anxious to aid in improving the conduct of competitions, so that the profession may feel assured of fair play. When we last heard, there had been above *three hundred applications* for particulars and plans; above 100 from London alone! It has been suggested in Liverpool that the competing architects themselves should be the committee to make the selection.

ELY SANITARY WORKS.

THE tubular system of sewerage and drainage has now been in operation in the city of Ely for the last sixteen months; and although the low-level sewer has only a *fall of one in a thousand*, it has proved, we are informed, successful. There are upwards of nine miles of public sewerage pipes, and the largest is 12 inches in diameter.

The water-supply is obtained from the river Ouse: it is drawn from the river into a filter-bed, from which it is pumped by a 12-horse high-pressure steam-engine (through 1,400 yards of 8-inch main) into a malleable iron tank, placed on the top of a brick tower, and surrounded by a brick screen, and roofed over with wood covered with asphalte. The tank is 65 feet diameter, by 16 feet deep, and contains 330,881 gallons of water. The total weight of the tank is 45 tons, and it contains 1,485 tons of water.

There is only one main pipe, which enters the bottom of the tank, and answers both for conveying the ascending water into the tank, and the descending water for supplying the town.

There are upwards of nine miles of water-pipes laid down, and the total cost of the works, according to our informant, is 14,000*l.* Mr. William Burns was the engineer.

OXFORD ARCHITECTURAL SOCIETY.

AT the third ordinary meeting, held on the 13th ult. Mr. James Parker delivered a lecture "On the Style of the Thirteenth Century." He took as the groundwork of his lecture the differences which Gervase enumerates between the old Canterbury choir which existed before the fire, and the new choir, which is the one now standing, and is a good specimen of the Early English style. The "elongation of the pillars," he contended, exhibited a new and important principle, and he showed how it was observable, not only in the general design, but even in the sculpture. The second difference mentioned by Gervase, viz. "the capitals were now carved with a chisel, not with an axe," explained the origin of the other great principle, namely, that of *undercutting*, which was shown to pervade all the sculpture and mouldings of the period. The lecturer then explained the changes which Gervase mentions with regard to vaulting, and this led to the consideration of the origin of the pointed arch, which was not mentioned by Mr. Monk in the enumeration of the striking and important changes which he noticed. Mr. Parker did not consider the pointed arch as any new principle in design: it was simply a convenience in construction, and was a most fallacious guide in fixing the dates of buildings, as it was found much earlier than the thirteenth century, and this was the reason why he would never employ the terms first, second, and third pointed, as they expressed no principle, and, instead of assisting the student, were calculated to confuse and mislead him.

Mr. Willis agreed with all Mr. Parker had said: he wished, however, he had laid more stress on the pointed arch, which he thought was the very essence of the Pointed style. He believed there were five theories. 1. That Mr. Parker had explained, which arose from the necessities of saxpartite vaulting. 2. That the pointed arch was suggested by the effect of the intersections of the two round arches in quadripartite vaulting. 3. That the idea had been taken from the intersecting arches which were in such common use. 4. That it was brought into England by the Crusaders. 5. (A very fanciful one) that it was suggested by the figure called Vesica piscis. Mr. Willis did not know to which to give the preference, but thought that, perhaps, all contributed in a degree to the discovery.

On the 20th of February (we are availing ourselves of the local *Herald*), Mr. Parker gave the third of the series of elementary lectures. He began by pointing out that the change from the Early English to the Decorated Style began in the latter part of the thirteenth century, although it was not fully established until the fourteenth. He defended Rickman's name of Decorated as good and appropriate,—window tracery, from which it is named, being more essentially part of the structure than the decorations of any other style; and however plain a building may be, this distinguishing mark of tracery is never wanting. He then gave a slight sketch of the origin and development of tracery, illustrated by a selection of engravings, and referred the members for more full information to Mr. Freeman's work on Window Tracery. He described the peculiar character of Decorated foliage and ornament, its truthfulness and fidelity to nature, and the absence of the conventionalism and the deep undercutting of the Early English style. He also mentioned the ornamenting the flat surface of the wall with Diaper patterns, and showed specimens from the Eleanor crosses at Geddington, of which there are casts in the Society's collection. He also referred to Mackenzie's work on St. Stephen's Chapel, Westminster, which was placed on the table, and expressed his regret that the English Royal Chapel should have been entirely destroyed at the very time that the French Royal Chapel (La Sainte Chapelle in Paris) was being beautifully restored.

BUILDING NEWS FROM CANADA.

A NEW Baptist church has been erected at Woodstock, from a design in the early English style of pointed architecture, furnished by Mr. David Murray, of Hamilton, architect. The building is 65 feet long and 42 feet wide, and has a basement room 9 feet high, under the whole church, which stands north and south, with steeple at the south end. It has been ventilated and warmed on a plan said to be invented by Sheriff Rutland, of Coburg, C.W.; but merely consisting of the introduction of warmed air from a ventilating and warming stove in the basement, and the withdrawal of air under the floor through two air chimneys in the north wall, which thus ventilate the whole, while drawing the warm air down from the ceiling to circulate among the feet of the sitters. The same system has been applied to the new jail of the county of Oxford, and the Hamilton jail, and other buildings. The Welland county jail is also about to be warmed and ventilated in the same way, as also the Merritsville jail and a large church at Guelph. The Woodstock Baptist Church is built of white bricks produced at Woodstock. The courses, buttress caps, and dropstones are of Ohio freestone, varying slightly from the colour of the bricks. The spire was left unfinished for the season. The basement is to be occupied as school-room, and for lectures, &c. The windows of the chapel are of diamond pattern, with outer borders of stained glass.

SOLID SWISS PARQUETERIE.

The Solid Swiss Parqueterie, which is gradually becoming known in England, promises to supply a want. It is made solid throughout, and every portion of the ornamental woods forming the patterns is grooved and tongued together, and jointed with marine glue. It can thus be fixed immediately upon the joists when applied for flooring, rendering under flooring unnecessary. This Parqueterie has also the advantage of being much lower in price than the ordinary veneered work which has hitherto been in use. Being manufactured by machinery, and in large quantities, a great reduction in its cost has been obtained, and it can be supplied in London at prices commencing from 1s. per foot super. It is now being laid at the house of the Turkish ambassador, amongst other places. It seems only right that we should make it known to our readers.

ARCHITECTS' BILLS.

ASHPITEL AND WHICHCORD *v.* THOMSON.

THIS action in the Court of Common Pleas, Guildhall, February 19, was brought to recover the sum of 39*l.* 5s. 5d. for professional services rendered, and for money paid by the plaintiffs. The defendant is a draper in the Edgware-road. Mr. Laxton appeared for the plaintiffs, and Mr. Collier, Q.C. for the defendant.

The defendant's house having settled, the plaintiffs were called in to give their opinion, and afterwards superintended the works for the repair of the settlement, and checked the account of Mr. Stopher, the builder. The defendant, in January, 1853, being desirous of having the premises re-erected, consulted

the plaintiffs, stating that he wished his business interrupted as little as possible. The plaintiffs suggested an iron house, lined with slate: the defendant approved of this, and the designs were prepared, and arrangements made that the old premises should be pulled down, and the new building erected in five days. The defendant determined on having the designs submitted to the official referees. The old Metropolitan Buildings Act not providing for a building of this description, the case was ultimately referred to the Treasury, who granted permission for the erection of the building. The defendant, however, altered his mind, and would not have it erected.

The defence was, the plaintiffs had been called in by the builder, and that they were acting on his behalf, and not for the defendant, and that they undertook to prepare the designs for the iron house for costs out of pocket in event of the house not being erected. The jury, after retiring to consider their verdict, came into court, and gave a verdict for the plaintiffs for 28*l.* 5s. 5d.

PRINTS.

Fruit, after Lance.—Messrs. M. and N. Hanhart have just produced, in chromolithography, a fac-simile of one of Mr. Lance's gorgeous fruit pieces, including a melon, grapes, currants, and plums, on a piece of matting. It is a very successful and beautiful specimen of the art, and we are not surprised to hear that Mr. Lance has passed a most favourable opinion upon it. The many touches that go to produce the varied surface of the melon are admirably rendered. The same firm has also issued a "View of Paris," after Mr. T. Boys—a view comprising the Louvre, the Seine, and the bridges.

Messrs. Rowney have now on view a collection of chromolithographs which deserve attention.

Portrait of Professor Edward Forbes.—The friends of the late Edward Forbes (who was taken from the world too soon) will find the portrait of him which has been published by Mr. Claudet, at his Gallery in Regent-street, an excellent memorial of him. It is engraved by Mr. Charles Cook, from a daguerreotype by Mr. Claudet, who has done much good service in his art.

RECENT PATENTS.

AMONGST the specifications of patents recently granted are the following, extracted from lists reported in the *Mechanics' Magazine*:—

Page, J. "Improvements in moulding or shaping metals." In this invention, in casting such articles as pipes, core-bars, "capable of expanding and collapsing in diametrical dimensions," are employed. These core-bars are each composed of longitudinal pieces of segmental metal plates, so combined as to be capable of forming bars of various diameters, and are adjusted by means of a central spindle, carrying on its projecting end a metal disc furnished with suitable inclined pieces.

Poole, M. "An improvement in sculpturing surfaces of marble and stone," (a communication). This invention consists in rolling or rocking an engraved or embossed metallic surface in contact with a surface of marble or wood, sand or other suitable cutting material being interposed between.

Brant, J. C. "Improvements in laying rails, chairs, and sleepers for the permanent way of railways." This invention consists in the application of cork in various ways to the permanent way of railways; also in using longitudinal and transverse sleepers tied together so as to form a continuous line of way on a solid and equal bearing.

The following is amongst those for which provisional protection has been granted:—

François Coignet, of Rue Hauteville, Paris, France. "Certain improvements in the use and preparation of plastic materials or composition to be used as artificial stone, or as concrete or cement for building and other purposes."

AMERICAN PATENTS.

THE following are selected from lists of recent patents, reported in the Journal of the Franklin Institute of Pennsylvania:—

For an Improvement in Roofing Compositions: James West, Syracuse, N. Y.

Claim.—"The use of lime, in combination with the rubber, gutta percha, and shellac solutions."

For an Improved Mode of Hanging Window Sashes: J. W. Ross, Zanesville, O.

Claim.—"Attaching the straps to the sashes, said straps passing in reverse direction, around pulleys, on a shaft in the style of the casing, the pulley being attached permanently to the shaft, and the pulley placed loosely upon it, and the pulleys being connected and disconnected when desired, the pulley having a pulley attached to it, to which pulley an elastic band is attached, said band being also attached to the sash."

For a Mortising Machine: Loomis E. Payne and Orris Pier, Stowe, Vermont.

Claim.—"A double semi-circular mortise bit, or gauge, arranged so as to clear itself thoroughly in its action; and this, in combination with the double eccentric plate, to regulate the motion to and fro of said mortise bit."

For a Machine for Cutting Double Tenons: C. P. S. Wardwell, Lake Village, New Hampshire.

Claim.—"The combination and arrangement of the intermediate obliquely set or drunken saw, with the clearing or finishing true circular saw for operation together, and whereby the drunken saw not only serves to largely reduce the wood between the tenons, as required, for the completion of the tenons, but to form a wider kerf or pathway for the axle of the finishing saw to admit of the deep insertion of the latter into the wood, and of its operation as a clearer between the double tenons during the continuous progress or feed of the timbers."

Notices of Books.

VARIORUM.

"Lessons in General Knowledge" is an elementary reading-book, by Dr. R. J. Mann (Longman and Co. publishers), intended to serve as a familiar and attractive introduction to the principles of natural science. Special attention has been given to style as well as matter, and the whole is occasionally illustrated by engravings. This appears to be a very good book indeed of its kind, and suitable, not only for children, but for young persons generally, and for not a few who have got beyond juvenility.——Another pamphlet on "Sunday Trading in London, its Causes and its Remedies," has been published by Mr. Rivington, of Waterloo-place, an old advocate of this good cause. In the present effort "the case of the tradesmen" is briefly stated. "A London employer," as the author is, deserves to be heard on this subject.——Two very interesting shilling parts of Longman's "Travellers Library" have just been issued. They are titled, "Sketches of Nature in the Alps," and are translated from the German of Frederick Von Tschudi. The special subjects comprise of course both vegetable and animal as well as mineral existence in the Alps. The firs or pines are a prominent feature in Alpine scenery. The Wettertanne, or Weather-fir, is a very picturesque and well-known element in the landscape, towering upwards in a pyramidal form, and spreading forth its lower arms like umbrellas, made as if for shelter to the Alpine tourist. The Wettertanne grows not unfrequently to a height of 100 or 130 feet, and measures from 4 to 5 feet in diameter at 2 feet from the ground. It lives to a venerable age and grows very slowly. The staple growth of the Alps are the trees of the pine and fir species. The fir (*Fichte*) and red spruce fir (*Roththanne*) are the chief constituents of the regular forests in the northern and western parts. The larch grows in the lower portion of the Alpine zone, and the *Pinus Cembra* in the upper. The larch is the tree which yields the best turpentine of all the coniferæ.

Reading for the Million.—The recent sale of the copyrights of the well-known collection of works known as *Bentley's Standard Novels*, have afforded Messrs. Routledge an opportunity of carrying out their scheme for issuing the best productions of modern writers at a cheap rate. We go out of our way to mention it. The Bulwer novels, which have been, and are so deservedly popular, will be immediately followed by a succession of able fictions. For this purpose, the copyrights of the sea stories of Captain Marryat and J. F. Cooper have been secured, and those of some of the best works of Albert Smith, G. R. Gleig, Ingoldsby, Maxwell, Mrs. Gore, Lady Scott, and Thomas Hood. The sale, we learn, realised nearly 7,000*l.* and the works to which we have referred are the cream of the collection. The Bulwer Lytton speculation having been carried out with great spirit and gratifying results to public, publisher, and author, we are glad to hear of the extension of the scheme.

Miscellanea.

ARCHITECTURAL INSTITUTE OF SCOTLAND.—The eighth meeting for the session of this Institute was held in George-street Hall, on Monday night last—Mr. Kirk in the chair. The secretary read a paper by Mr. Thomson, of Banchory, on "The Egyptian Obelisks now in Rome," which traced the history of these monuments, and entered into details regarding particular obelisks.

NATIONAL PORTRAIT GALLERY.—Earl Stanhope's motion, "That a humble address be presented to her Majesty, that her Majesty would be graciously pleased to take into her Royal consideration, in connection with the site of the present National Gallery, the practicability and expediency of forming by degrees a gallery of original portraits, such portraits to consist as far as possible of those persons who are most honourably commemorated in British history as warriors or as statesmen, or in arts, in literature, or in science," was agreed to, the words "such portraits to consist as far as possible of the most eminent persons in British history," being subsituted for "those persons who are most honourably commemorated in British history."

INSTITUTION OF CIVIL ENGINEERS OF IRELAND.—The ordinary general meeting of this institution was held on the 12th ult. at their rooms, 41, Upper Sackville-street, Dublin, Mr. Richard Griffith, president, in the chair, when Mr. John Hill, county surveyor, read a paper "On the Maintenance of Macadamised Roads, as exemplified by his Management of the Central District of Roads in Ireland under the Commissioners of Public Works." The charge of the commissioners over the roads in question, and all of a similar class in Ireland, having ceased on the 1st July, 1854, Mr. Hill took occasion to bring forward, among other detail connected with the management pursued, statistical information of the cost of maintenance under that system during each year from 1843 to 1853 inclusive, and contrasted it with the rates at which the contracts had been since let, for five years, under the ordinary operation of the Grand Jury Laws, by which it appeared that an increase of expense had now taken place which varied from 20 to 75 per cent. while the condition of the roads had been seriously deteriorated. In reference to the general question of road maintenance, he attached the greatest importance to timely and energetic work in the early part of winter, and asserted the principle that the object in view should always be attained by measures of a precautionary rather than of a remedial nature. The same principles applied with even greater force to the roadways of greatest traffic, such as those in cities and large towns. A long discussion followed, in which the president and most of the members present took part; and amongst other matters referred to, the relative advantages of pavements and of Macadamised roads for the streets of cities received attention, very varying opinions being expressed. The meeting then adjourned.—*Saunders's Newsletter.*

GAS.—The Liverpool United Gas Company have declared their usual dividend of 5 per cent. for the *half*-year; and the directors have been empowered to borrow 31,400*l.* under the provisions of the Act. ——At the half-yearly meeting of the York Gas Company, a dividend of 6 per cent. free from income-tax, was declared; and the directors were empowered to expend from 8,000*l.* to 10,000*l.* in providing a new gasholder, the business of the company having of late greatly increased.——The town of Honley has been supplied with gasworks, and nearly all the houses are lighted but not the streets as yet.——The works of the Churwell Gas-light Company, which have cost nearly 1,500*l.* are now in full operation, and a dividend of 5 per cent. has been declared, leaving a handsome surplus to be carried over to the next account.

RAILWAY TO PORTSMOUTH DOCKYARD.—Government has at last granted a sum of 70,000*l.* for the construction of a railway, commencing at the terminus of the London and South-Western, and the South Coast, Railways, in Landport, and ending in Portsmouth Dockyard.

THE THAMES AND THE CROWN.—In the latter part of the article on "The Condition of the Thames," page 106, the authorised report of the discussion which you quote contains an attack on the Crown, which is not just. The land between high and low water round the British Islands is the property of the Crown, except in cases where a grant has been made of it, of which there are many instances. This right was confirmed by a decision of the twelve judges, some years since, in the case of the Hull and Selby Railway. The Corporation of London have not, as yet, been able to produce a grant of the land on the shores of the Thames, from any sovereign; so that in this case to which the reporter refers, the Crown really is supporting the rights of the people against the usurpation of the Corporation.

A CONSTANT READER.

THE RELATIONS BETWEEN MASTERS AND WORKMEN.—Mr. Mackinnon lately moved in the House of Commons, for the appointment of a select committee to consider the inconvenience now felt from the want of equitable tribunals by means of which any difference between masters and operatives might be satisfactorily adjusted; and also to ascertain whether the *conseils des prud'hommes* in France had answered the purpose for which they were established. He was not anxious for any particular form of tribunal, nor did he seek to give it power to fix maximum or minimum rates of wages: all he sought was the establishment of equitable tribunals, which should be able to reconcile masters and workmen, and to prevent the recurrence of so tremendous a misfortune as a strike. Sir G. Grey said he thought it desirable that tribunals of the kind suggested should be established, but such tribunals should not regulate wages. The motion was agreed to.

NEWGATE JAIL.—At a meeting of the Court of Aldermen of the City of London last week, Alderman Cubitt brought up the report of the committee on the state of Newgate Jail, and its improvement or removal. The report, after some preliminary remarks, in which it was stated that till some important alteration was made in the physical structure of the interior of the building, Newgate must continue to be a standing reproach to the City of London, proceeded to intimate that a plan was under consideration which would give 120 separate cells at a cost estimated by the City architect at 10,000*l.*; that they had in view another plan of a comprehensive nature for the entire demolition of the courts and of the jail, and the reconstruction of the courts and such a portion of the jail as might suffice for the custody of prisoners while trials were going on, the objects of this plan being to dispense with Newgate as a prison, except only as above stated. A plan had also been submitted to the committee for such additions to the prison at Holloway as would enable it to receive the prisoners now kept at Newgate. The cost of these combined operations, that is, the reconstruction of the Criminal Courts and a portion of Newgate, was estimated by the City architect at 87,000*l.* less the value of a piece of land at the Old Bailey set free, and estimated at 9,000*l.* In working out these plans, the City architect had so arranged as to permit the smaller one to form an integral part of the larger. The report, after some discussion, was received, and referred back to the committee to act therein as they should think fit.

THE "PATHOLOGY OF ENGLISH ART."—At the Liverpool Philomathic Society's, on Wednesday evening in last week, a lecture was delivered by Mr. J. T. Foard, on "The Pathology of English Art; its diseases,—chronic, epidemic, and hereditary." One of the chief pathological states of high art was described, according to the local *Journal*, as "an eruptive disease, recurrent like the measles or small-pox, attacking with fearful violence almost every painter in every stage of national history—its ravages being of the most painful kind." It made its first appearance in this country during the life of Sir Joshua Reynolds, and Sir Joshua himself was attacked by it at the first exhibition of the Royal Academy in 1769, where it broke out in the shape of "Lady Blake as Juno receiving the Cestus from Penus,"—"Miss Morris, as Hope, nursing Love," &c. &c. At present the symptoms assume in general a somewhat milder form, as in "Nymphs Bathing,"—"Nymphs Reclining,"—"Nymphs Surprised," &c. A description of one would serve for all. To convert "Nymphs Bathing" into the "Sirens," or "Venus and her Nymphs," would be merely a matter of repletion. "But if the Choice of Paris were required, the recipe would be as follows:—Take the same three figures: turn the green sea into green fields, the sea-weed into ditches, the shells into sheep, &c.; add an adolescent male figure nude; garnish with extra blue sky and a rocky foreground; serve. Repeat this *ad nauseam*, and you have modern English or nineteenth century classic art." The paper next referred to the "manufacturing" of pictures, which "impaired the function and paralysed the action of one-half of the body corporate of art." A denunciation of the Pre-Raffaellite school concluded the whole. A discussion ensued, and the thanks of the society were awarded to Mr. Foard.

VALUE OF LAND IN THE CITY.—The following tenders were received by the City Commissioners of Sewers, last week, for a plot of ground in Chancery-lane. Frontage, 38 feet; depth, 24 feet:—

	Per Annum.
Haynes and Eyre	£40
Palmer	70
Pursell	100
Marsh, for the Law Union Assurance	125
Reserved price	140

At which price it was taken by Mr. Marsh, making the price for freehold, at thirty-three years' purchase, 4,620*l.*

STOPPING TRAINS.—It would be a great desideratum in railway travelling if, with the stopping trains, some arrangement could be contrived by which the loss in speed in pulling up to stop, and the loss in speed in starting, could be reduced to a minimum; in other words, if the act of stopping a train should not cause much more loss of time than the mere delay for passengers to alight; and this is now the more necessary since there is such a large body of daily travellers on the metropolitan lines, who are both accommodated and incommoded by a frequent stoppage of trains, and where, from the distribution of passengers at different points, it is necessary that most trains should stop frequently. To a certain extent the arrangement to be proposed is adopted, namely, that of laying the line on an elevation whenever it approaches a station—that each line of rail should have a continuous rise for some distance on both sides of the station, and should arrive at an apex at the proper stopping point. It may be said that an arrangement of the kind would be very inconvenient for fast trains, and would cause delay; but since it is always a desideratum to ensure moderation of speed in passing a station, this is necessarily secured by such an arrangement as is proposed, and with the ordinary stopping trains. The pace is rapidly curtailed by the steep incline in stopping, while the start is accelerated by the descending incline, thereby attaining both the ends desired. To a certain extent this has been adopted, but not regularly, and not sufficiently to prove of general service. You can always detect its existence by the rapid and easy way in which you stop, and equally so start. We have only to wish to have it general, when the permanent way requires alteration, and also in new construction it is worthy of consideration.—H. C.

LONDON BRIDGE.—On reading Mr. Collinson's motion respecting the Southwark and London Bridge Improvements, it occurred to me how easy it would be to alter the present bridge to meet the demands of the increasing traffic, adding but little extra weight and at a trifling cost, compared with the advantages gained. I would remove the present footpath and parapets each side, and erect two rows of iron columns at a sufficient width to allow the heavy portion of traffic, and a foot-path for the drivers, say two feet wide, which would leave sufficient room for two other lines for carriages and the lighter portion of traffic each side of centre line of bridge, thus making six distinct lines of traffic instead of four, and by dividing the different ways by raising one course of stones three inches above the others would prevent confusion, by each entering its proper line. The above-mentioned columns should stand about twenty feet apart, to support the trussed girders longitudinally, which would carry an elevated platform for foot passengers, a sufficient height, say eighteen or twenty feet, to allow for the traffic underneath to be reached by four flights of steps from the present foot-paths, communicating with each other at the ends of the bridge, to allow persons to ascend either side, take their proper side in crossing, and descend the side they may require. The weight of stone removed would nearly equal the weight added, and bear part of the expense: one side could be done at a time, without causing much delay to the traffic, and if skilfully designed would make a useful, ornamental, and noble construction worthy of the name of an—ENGLISHMAN.

FORGING IRON.—Mr. W. Clay has recently patented a method of manufacturing forged iron so as to economize the metal. His claim is for making shafts or other articles, of wrought iron, by piling together suitable lengths, and the employment of a core of sand or charcoal dust, &c., as described.

DESTRUCTION OF BLACK-BEETLES.—Some fifteen years ago, I had the ill-luck to import into my house (I believe from Brighton) a sort of long-bodied beetles, which bred rapidly, and infested for years my kitchen, scullery, bakehouse, &c., and every now and then made their appearance in the better apartments; a nimble gentleman, of near an inch and half long, meeting one occasionally on the stairs or in the passages. I have heard them called "cock-roaches," but whether properly or not, I know not: at all events, they were a serious annoyance. A year or so ago, I saw advertised "Chase's Beetle Poison," at one shilling the box; and as I thought the trial worth making, I got my grocer to procure me four boxes. The contents of two of them I distributed, with an interval of a week or two, in the chief haunts of the beetles. The other two boxes I have still; but a beetle I have not seen now for many months, and I believe them to be totally destroyed. It is right to mention that four young chickens, which had access to the scullery when the poison was there, died, and were thought to have been killed by it; but dogs and cats took no harm—probably did not eat it. As this is a *bonâ fide* communication, intended solely for the benefit of others who may be similiarly annoyed, I inclose you my name and address, which you are at perfect liberty to give to any *bonâ fide* inquirer.—W.

ARCHITECT'S "CLERK."—Your correspondent who has deigned to notice my communication, and whose modesty would not allow him to be "guilty of the rudeness" of punning upon my remarks, must surely know that, though literally the appellation of "clerk" is applicable to a clergyman and a man of letters, yet in modern phraseology this sense of it is obsolete, except indeed a very few instances, such as law-deeds, &c. Who ever hears now-a-days of the use of the term in that sense? for, if so applied, the parson of the parish would be the "parish clerk," and the mayor of a town in the same sense would be the "town clerk!" Let us for a moment suppose this. 1. A clergyman is a clerk: by usage, the man who sits under him and says "Amen" is a clerk. 2. A man of learning and letters: a lawyer must be one; and his boy who copies his letters and runs errands is so designated. 3. One who writes for another, whom *Johnson* also calls a "secretary," and which is the present understood term for such a man. 4. Officers of various boards. Surely your correspondent must know that the various capacities of the last-mentioned qualify their positions, and we know at once by the term what they are—as the "town clerk," "clerk of the peace," "clerk of the Crown," or "clerk of the House of Commons," &c. &c. By these examples we see that the degrees of comparison, and, indeed, the etiquette of modern usage, would not sanction this multifarious term to be applied in its abstract sense; so we use other phrases better adapted to the understanding, and hence the general term "clerk," in its ordinary acceptation, is, "clerk, *s.* a secretary or bookkeeper" (Johnson). The distinguishing feature of this term of my thesis, from its misapplication, is so assimilated with the word "clerk" in its commonest sense; that, there the difficulty lies. Thus we say—an "architect's assistant," who, in no small degree, contributes to the fame of his employer, by his talent and ability, is by usage a clerk; so also is the man who keeps his accounts, and the boy who dusts the office; and, therefore, Mr. Brown or Mr. Jones, head-assistant, who, like myself, may have pretensions to a higher grade, has no word in this huge language of ours with its upwards of *twenty-six thousand* words, to distinguish him from the errand boy. If your correspondent's knowledge of the matter had been greater, he would have attempted, with less indignation, to give an answer to my original question definitely, as to "when the cognomen was first applied," and why? "to one who is neither Clerk of the Peace, Town Clerk, Clerk of the Crown, Clerk of the House of Commons," nor any of "the hundreds of other Clerks" who would look down with —— upon one who is

"*Only* AN ARCHITECT'S ASSISTANT."

TENDERS

For pulling down the old and rebuilding a new branch bank at Leighton Buzzard, Beds, for the London and County Banking Company. Mr. A. Parnell, architect. Quantities supplied:—

Myers	£2,830	15	0
Nash, Leighton Buzzard	2,811	2	3
Brass and Son	2,583	0	0
M'Kenzie	2,510	0	0
Clark, Leighton Buzzard	2,421	2	2
Wilson	2,268	0	4
Woodruff	2,229	15	0
Greig (accepted)	2,170	18	0

For schools and residences, Crosby. Mr. J. P. Jones, architect:—

Thomas	£2,780	0	0
Williams	2,736	0	0
Jones and Co.	2,690	0	0
Harrison (accepted)	2,526	0	0

For two detached houses, Seaforth: same architect—

Cottingham	£1,320	0	0
Williams	1,250	0	0
Harris (accepted)	1,180	0	0

TO CORRESPONDENTS.

"W. B." (thanks).—"A. W."—"E. A."—"T. E. T." (thanks)—"T. H. W."—"G. M."—"R. B."—"C. F. D" (thanks). "W. W."—"E. H."—"C. H." (will appear). "W. W. P."—"Mr. G."—"A Subscriber," "C. etc." apply to some competent practical man.—"H. H."—"H. B."—"W. K."—"F. W. L."—"B. and E."—"J. B. N."—"H. R." St. Columb (it depends on the arrangement made in the first instance).—"J. A. P."—"J. P. H."—"J. E." (the subject of varnish, &c. for external doors was treated of in our pages some time ago).—"R. C. E." (Mr. Albano).—"F. F. W."—"G. G." St. Helen's.—"G. S."—"W. H. N."—"W. A."—"Sub." (why not hang the doors in four or more leaves?).—"L. N. S."—"A. S."—"E. A. C."—"B. H."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *viâ* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

METROPOLIS LOCAL MANAGEMENT ACT SAINT LEONARD, SHOREDITCH, Middlesex.—The Vestrymen of the Parish of St. Leonard, Shoreditch, in the county of Middlesex, in pursuance of the Act of Parliament, 18 and 19 Vic. cap. 120, "For the better Local Management of the Metropolis," will meet in the School-room of the New Tabernacle, Old-street-road, in the said parish, on THURSDAY, the 20th day of MARCH, at SIX o'clock in the evening, to elect the undermentioned officers, viz.:—

A MEDICAL OFFICER of HEALTH, at a salary of 300l. per annum.

A CHIEF SURVEYOR, at a salary of 300l. per annum.

An ASSISTANT SURVEYOR, at a salary of 120l. per annum, to act under the orders of the Chief Surveyor.

TWO INSPECTORS of NUISANCES, at a salary of 100l. each per annum; and

A MESSENGER, at a salary of 1l. 5s. per week.

The above officers will be required to devote their whole time to the duties of their office, which will be as defined by the Act of Parliament, and from time to time by the orders of the Vestry, except the medical officer, who will be allowed private practice, but must hold no other public appointment in the parish. Candidates are required to send in their applications and testimonials addressed to the Vestry, at the Offices, 37, Hoxton-square, on or before WEDNESDAY, the 12th inst.; and they must also attend the Committee (personally) at the School room, adjoining the New Tabernacle, in Old-street-road, on THURSDAY, the 13th of MARCH, 1856, at ELEVEN o'clock in the morning. They will also be required to attend a special meeting of the Vestry, to be held at the School-room of the New Tabernacle, in Old-street-road, on WEDNESDAY, the 26th day of MARCH, 1856, at ELEVEN o'clock in the morning. The applications and testimonials of the candidates for the medical officer, will be forwarded to the General Board of Health for examination, and if the report from the Board of Health should not be received by the 26th inst. the election of such officer will be deferred, of which due notice will be given.—Any further particulars or information may be obtained by application to

Clerk pro tem. to the Vestry.

Offices, 37, Hoxton-square 6th March, 1856.

THE MERTHYR TYDFIL LOCAL BOARD of HEALTH are desirous of receiving applications for the appointment of SURVEYOR to the said Board. He will be required to give the whole of his time to the Board, receive plans for building, inspect and measure all work done by the Board and their contractors, make out the accounts, and perform the duties required by the Public Health Act. Salary, 150l. per annum.—Applications to be addressed to Mr. JAMES WARD RUSSELL, Clerk to the said Local Board, on or before SATURDAY, the 15th day of MARCH next.

Merthyr Tydfil, February 28, 1856.

VESTRY of ST. MARY, NEWINGTON, SURREY.—Notice is hereby given, that this Vestry will meet on WEDNESDAY, the 12th MARCH next, at SEVEN o'clock in the evening, at the Infant School-room, Queen's Head-row, Newington, to proceed to ELECT a ROAD FOREMAN, to act under and assist the Surveyor of Roads, at wages of 1l. 15s. per week. Applicants for the office must have a practical knowledge of the making and repair of roads and footpaths, and of paving; the qualities of stone and other materials; and must produce testimonials as to their character and efficiency, and testimonials must be sent to the undersigned on or before MONDAY, the 10th MARCH next; and the applicants must personally attend the Road and Paving Committee of the Vestry at SEVEN o'clock in the evening of that day, at the Vestry room of the parish church, Newington.—Dated 27th February, 1856.

H. and F. FLEETER, Clerks to the Vestry,
1, Crescent-row, Newington-butts.

WANTED, for a Builder and Contractor's establishment in Liverpool, a FOREMAN, to take the out-door department. No one need apply who is not fully competent to undertake such a situation.—Address, stating wages required and references as to character and ability, to BUILDER, care of Mr. H. Greenwood, 18, Canning-place, Liverpool.

TO PLUMBERS AND GLAZIERS.

WANTED, in a country town, a good PLUMBER and GLAZIER for a constancy.—Apply to WILDER and TANNER, Chelmsford, Essex.

TO ARCHITECTS' ASSISTANTS AND DRAUGHTSMEN.

WANTED, immediately, a good ARCHITECTURAL DRAUGHTSMAN, who is capable of taking off quantities, estimating and measuring off works, has a practical knowledge of business generally, writes a good hand, and is of steady habits. Applicants to state salary.—Apply to Mr JOHN GREEN, Architect, &c., Grey-street, Newcastle-on-Tyne.

Mr. GREEN also has a VACANCY for a respectable Youth as PUPIL.

TO BUILDERS' CLERKS.

WANTED, in a Builder and Contractor's Office, a CLERK, fully qualified for making finished and working drawings, taking out quantities, estimating, measuring up works, and the general routine of a builder's office, and practically acquainted with the building business.—Apply by letter, with full particulars, salary, &c. to A. X., office of "The Builder."

WANTED, a CLERK of WORKS.—Apply to G. H. STOKES, Esq. Solicitor, 18, New-street, Spring gardens.

WANTED, a CLERK of the WORKS, to Superintend the Restoration of a Church. Satisfactory references from architects will be required.—Apply to Mr. WILLIAM SLATER 4, Carlton chambers, Regent-street.

TO BUILDERS.

WANTED, a SITUATION, in a Builder's Office, by a Young Man, who is fully capable of taking out quantities, measuring up works, and the general routine of the office. References unexceptionable.—Address, S. S. 47, Essex-street, Strand.

TO WHARFINGERS AND OTHERS.

WANTED, by an intelligent and respectable Young Man, active and confidential EMPLOYMENT, who has a knowledge of bookkeeping, and of the Building and Wharfage businesses. Principals will meet with prompt attention by directing to A. B. Mr. D. White's, 3, Winchester-place, Pentonville-hill.

TO MASTER PAINTERS, BUILDERS, AND OTHERS.

WANTED, by a Young Man, aged 29, EMPLOYMENT as GRAINER, PAINTER, &c. or to superintend work. Has had first-rate experience. Specimens on hand. Wages moderate. References given.—Address, T. LLOYD, 28, Henry-street, Hampstead-road.

TO CARPENTERS AND BUILDERS.

WANTED, to APPRENTICE a strong, healthy Lad, for about TWO YEARS, where he will have an opportunity of improving himself in the practical part of the business, having followed the same about five years.—Address, J. KERRY, Southgate, Middlesex.

TO BUILDERS, CONTRACTORS, &c.

WANTED, a SITUATION, by the Advertiser, who is about to leave a firm of high standing, where he has been engaged in the country above eight years.—Address, T. HORNE, Office of "The Builder."

WANTED, by the Advertiser, a SITUATION as SHOP FOREMAN of JOINERS. Has filled a similar situation with one of the principal builders in London for the last twelve years; cause of leaving being the proprietor is retiring from business. Unexceptionable references for character and ability.—Address, A. R. Mr. Grimaldi's, Bell-lane, Spitalfields.

WANTED, by a Gentleman of experience, aged 37, a SITUATION in an Architect and Surveyor's Office, at the West End. Is a first-rate draughtsman, penman, and has been used to the routine of either office. Salary, he considers, per annum. References can be given.—Address, ALPHA, Office of "The Builder."

WANTED, by a Practical Man, who has been twenty-five years in business as a Carpenter and Joiner, EMPLOYMENT in a Builder's Office, or to superintend workmen and to make himself generally useful to his employer; or in a Timber-Merchant's establishment. Undeniable references to all his several character and security, if required. Address by post only to A. B. Mr. Tarver, Timber Merchant, &c. Bridge-wharf, Battersea, Surrey.

WANTED, by a Person of considerable experience in all branches connected with buildings, in town or country, a RE-ENGAGEMENT as BUILDER'S FOREMAN or CLERK of WORKS. Good reference as to ability, integrity, &c. can be given. Location no object.—Address, E. R. 3, France-street, Tottenham-court-road.

TO STONE AND RED WARE POTTERS, BRICK AND TILE MAKERS, AND OTHERS.

WANTED, by a thorough practical Man, a SITUATION, to superintend or take the work; can burn as well as make; well understands sanitary pipe making, both salt and other glazes, likewise the brick and tile and terra cotta work, in all its branches, having had some years' experience; is a good accountant, and has a good connection for the sale of stone and red ware, both in London and the country.—Apply to W. W. care of Mr. S. Bishop, 43, Mount-street, Lambeth.

TO ARCHITECTS.

WANTED, by a Gentleman, who has recently completed his articles in the office of a London architect of good standing, a SITUATION as CLERK, for six or twelve months, in a country office. Salary moderate.—Address, E. D. P. 34, Albert-street, Mornington-crescent.

TO ARCHITECTS AND SURVEYORS, OR BUILDERS.

WANTED, by a Young Man, aged 24, a SITUATION as CLERK, in either of the above offices; is a good draughtsman, well acquainted with the quality and prices of materials, measuring up work, and superintending workmen; also a good book-keeper. First-rate references.—Address, J. S. 6, Prospect-place, South-street, Greenwich.

TO CIVIL ENGINEERS, ARCHITECTS, SURVEYORS, &c.

A YOUNG GENTLEMAN, who has studied his profession practically and theoretically, wishes a RE-ENGAGEMENT, at home or abroad.—Address, SNIP, City News Rooms, 66, Cheapside.

TO MASTER BRICK AND TILE MAKERS.

WANTED, by the Advertiser, a SITUATION as FOREMAN, in the above line. Has a thorough knowledge of the close or Scotch kiln work in all its branches. Good testimonials.—Address, G. H. 4, Glengall-place, Millwall, Poplar, London.

TO ARCHITECTS AND SURVEYORS.

A YOUTH, who has been two and a half years in an architect and surveyor's office, OFFERS his SERVICES where a moderate remuneration would be given in return. Good testimonials as to morals and ability from previous employers.—Address, A. B. Post-office, Worcester.

WANTED, a SITUATION as CLERK, or FOREMAN of WORKS or WHARF; or in any other capacity where perseverance and integrity are essential. First-rate references.—Letters, post-paid, to W. R. 14, Aske-terrace, Hoxton.

TO ENGINEERS, CONTRACTORS, AND BUILDERS.

WANTED, by a respectable Young Man (the son of a builder), an ENGAGEMENT as CLERK of WORKS, BUILDER'S FOREMAN, or in any similar capacity. References unexceptionable.—Address, P. P. No. 10, Little Clarendon-street, Somer-town.

CARPENTER AND HOUSE JOINER ON A GENTLEMAN'S ESTATE.

WANTED, a SITUATION as above, by a young Man from the country. He can be well recommended.—Apply to Mr. PEARCEY, Bookseller, 3, Church-street, Rotherhithe, Surrey.

WANTED, by a thorough practical PLUMBER, who understands iron main-pipe laying, casting zinc working, &c. a SITUATION as FOREMAN, or to MANAGE a BUSINESS; can keep the accounts. Satisfactory references.—Address, PLUMBER, 21, Pope-street, City, London.

TO ENGINEERS, &c.

WANTED, by a Young Man, aged 21, acquainted with mechanical drawing, a SITUATION as IMPROVER in the above trade. A small salary only required.—Address, A. B. care of Mr. Henry, Tailor, 15, Cobourg-street, Clerkenwell.

TO BUILDERS, CARPENTERS, &c.

WANTED, by a Young Man of 20, EMPLOYMENT as IMPROVER, at the bench, or otherwise. Understands taking out quantities, measuring, plain drawing, and book-keeping. Office and bench work combined, if required. With opportunities for improvement, moderate wages accepted. Town or country. In-doors preferred.—Address, SIGMA, Post-office, Tottenham.

TO ARCHITECTS AND SURVEYORS, BUILDERS, TIMBER MERCHANTS, &c.

WANTED, a SITUATION as CLERK, to either of the above, by a Young Man, aged 25, being well acquainted with the general routine of an Architect's or Builder's office; also measuring up work and keeping accounts, superintending workmen, if required, and a good plain draughtsman. Good references can be given.—Address, R. M. Post-office, 118, Edgware-road, Paddington.

TO ARCHITECTS AND BUILDERS.

WANTED, a SITUATION as CLERK of WORKS, SHOP, or FOREMAN of WORKS, by an experienced practical man, aged 43, with testimonials for services of years, and excellent references.—Address, J. E. D. 31, Lower Marsh, Lambeth.

TRAVELLER WANTED.—TIMBER TRADE.—Any person having a thorough knowledge of his business, of industrious habits, and if any connection at command the better, will be liberally treated with. Letters can be addressed in the first instance, stating age, previous employment, &c. to X. Y. Z. Messrs. Reynolds and Falconer, 15, Old Broad-street, City.

TO ARCHITECTS.

THE Advertiser, who is a first-rate Draughtsman, and has a thorough knowledge of detail and construction, is open to an ENGAGEMENT.—Address, G. G. No. 39, Michaelis-place, Brompton.

TO BUILDERS AND SURVEYORS.

THE Advertiser is OPEN to a SITUATION in Town or Country, as WALKING FOREMAN, or ASSISTANT in the Office. Is well acquainted with the duties of an office, and can prepare fair and working drawings. If a place of trust be required, security can be given.—Address, J. C. care of Mr. Harman, the Square, High-street, Winchester.

THE FUNNEL FIRE-LIGHTER.—To OWNERS of MACHINERY, FIREWOOD DEALERS, and OTHERS.—WANTED, a person to MANUFACTURE the "FUNNEL FIRE LIGHTER" for the Patentee. The article is made of firewood, and the chief operations to be performed are sawing, chopping, piercing, and threading. Securing a thorough draft of air through the mass of fuel to be lighted, with a sufficient lateral expansion of flame, it is an unfailing fire lighter, needing no bellows and requiring no attention after being lighted. It also possesses the valuable property of concentrating the flame which is projected beyond the stove, and thereby making it useful for cookery, &c. the moment the article is lighted. It is also especially safe for children to use, as it throws out no sparks in front; and being cleanly to handle, and even elegant to look upon, and capable of being cheaply produced, it promises to light a good proportion of the half million of fires daily made in London. The patentee is willing to contract with a manufacturer for such a supply of the article as he may need for the consumption of London, and all other places to which he may send the article from London.—Further particulars, specimens of the article, and the method of manufacture, will be shown to bonâ fide inquirers by Mr. W. H. NEWMAN, 45, Cannon-street-road, Commercial-road East.

TO ARCHITECTS

THE Advertiser, who has had fifteen years' experience, is desirous of a RE-ENGAGEMENT, in a London Office. Is well acquainted with colouring, perspective, mediæval, and Italian detail, and is considered a good draughtsman. References good. Salary moderate.—Address, Q. E. D. 3, Bloomfield-terrace, Pimlico.

TO ARCHITECTS AND SURVEYORS.

THE Advertiser is desirous of a SITUATION in either of the above offices; is a good plain and perspective draughtsman, and accustomed to assist generally in taking out quantities.—Address, to the care of R. M. 31, Winsor-terrace, City-road.

TO WAREHOUSEMEN, WHARFINGERS, AND OTHERS.

THE Advertiser wishes for a SITUATION in any firm, as FOREMAN, or CLERK, to take orders, and attend to the delivery of goods, or any situation where trust is required. Can write a good hand, and keep accounts. Can have a character for honesty, sobriety, and attention to business.—A letter addressed to P. S. No. 4, King's terrace, Hammersmith, will be immediately attended to.

TO ARCHITECTS, SURVEYORS, AND BUILDERS.

THE Advertiser, aged 33, is desirous of an ENGAGEMENT. Has had considerable experience in preparing working and finished drawings, estimating, measuring, and superintending works, and can undertake the routine generally.—Address, J. K. Mr. Webster's, 8, Sandwich-street, Brunswick-square.

TO BUILDERS.

THE Advertiser, who is about leaving his situation, wishes for an ENGAGEMENT as SHOP FOREMAN, and well understands setting out boards, and is capable of undertaking any job. Good references given as to ability and sobriety.—Address, J. H. No. 8, York-street, Hackney-road.

PLUMBING.—EMPLOYMENT Wanted, by a respectable experienced Man. Does not profess painting and glazing, but willing to make himself useful. Respectable reference.—Address, W. T. No. 4, Warwick-row, Pimlico.

DISCHARGE of DUTIES FAITHFULLY. Any Builder or Contractor requiring a persevering Young Man of thorough business habits, as TIMEKEEPER or GENERAL FOREMAN, and who understands the executing and measuring of builders' work, will please address EBENEZER, 76, Hatton-garden.

TO ARCHITECTS.

AN experienced CLERK of WORKS is now at liberty for ENGAGEMENT with any gentleman in the profession.—Address, A. B. care of Mr. D. Carter, No. 1, Providence-place Clarence-road, Kentish town, London.

A YOUTH (16 years old), who can map and copy drawings, put plans on leases, write a good hand, and is accustomed to office business generally, wishes for a SITUATION. Salary, 12s. a week.—Address, prepaid, J. COOPER, Post-office, Mount-street, Lambeth.

TO ENGINEERS AND IRON-FOUNDERS.

A THOROUGH practical experienced MOULDER in loam and sand castings of every description, wishes an ENGAGEMENT as FOREMAN. He is a good accountant, and quite capable of conducting a foundry on the most approved and economical principles. Good reference can be given. Would have no object on to piecework.—Address, MOULDER, Office of "The Builder."

TO BUILDERS AND OTHERS.

A YOUNG MAN, 24 years of age, a complete Builder's Clerk, is open to a RE-ENGAGEMENT. He was brought up to the trade, and has had six years' experience in one of the largest and first established businesses in London. Address, Mr. SPENCER, Mr. Beadon, Stationer, Worcester-street, Wolverhampton.

TO ARCHITECTS, &c.

AN ASSISTANT, accustomed to prepare finished working and detail drawings, and set out building works, wishes for an ENGAGEMENT, in town, either temporary or permanent.—Address, F. W. No. 8, Farringdon-street.

TO ARCHITECTS, SURVEYORS, &c.

A YOUNG MAN wishes for a RE-ENGAGEMENT in either of the above professional offices. Can draw out plans, elevations, and sections; has a slight knowledge of construction. Is a good penman, and a fair hand at accounts. Address, C. H. Office of "The Builder."

TO BUILDERS, &c.

AN experienced CLERK wishes EMPLOYMENT in an OFFICE, to make finished or working plans, take out quantities, or make estimates; is well acquainted with the general routine of office duties. Salary moderate. Good references.—Address, A. Y. No. 5, Gloucester-street, Regent's-park.

A GOOD THREE-BRANCH HAND wants a constant SITUATION. Understands general repairs in all its branches. First-rate references as to ability, &c.—Address, W. B. S. 33, Victoria-terrace, High-street, St. John's-wood.

TO ENGINEERS AND ARCHITECTS.

A YOUNG MAN, who has had much experience in PLAN DRAWING, is open to an ENGAGEMENT. Has a knowledge of French. For information as to ability and character, apply to F. H. ROUS, Wigton, Cumberland.

TO ARCHITECTS.

A GOOD DRAUGHTSMAN, competent to make working, finished, and coloured perspective drawings, desires a RE-ENGAGEMENT, at a moderate salary.—Address, W. W. Office of "The Builder."

AN ARCHITECTURAL DRAUGHTSMAN is desirous of a RE-ENGAGEMENT in Town accustomed to the getting out of perspective, finished, working, and detail drawings. Salary moderate. Address, A. B. 9, Elizabeth-street South, Pimlico.

TO ARCHITECTS, &c

A YOUNG MAN, with three years' experience in the office of an Architect, Builder, and Surveyor, in a cathedral town, is desirous of ENGAGING in a similar SITUATION. Can produce satisfactory testimonials of character, with specimens of drawing and writing.—Address, F. S. office of "The Builder."

TO ARCHITECTS.

AN ARCHITECTURAL COLOURIST of considerable experience, ENGAGES to COLOUR COMPETITION and OTHER DRAWINGS on reasonable terms. Perspective and other drawings put in outline. Lithographs, &c. &c. Drawings coloured, and transmitted to the country. Specimens produced.—Address, B. C. Mrs. Plummer's Library, Theobald's-road, Bedford-row.

A FIRST-RATE and expeditious PLAN DRAUGHTSMAN, ORNAMENTAL WRITER, and COLOURIST, is open to an ENGAGEMENT to make finished plans of town improvements, estates, railways, docks, mines, canals, roads, and projects of every kind. Has been employed by the most eminent engineers, architects, surveyors, and the Government for 18 years.—Apply by letter to R. THEODORE, 4, Trafalgar-square.

A YOUNG MAN, aged 20, from the country, who has had four years' practice at the carpentering and joinery, wishes to PLACE HIMSELF under a MASTER BUILDER for one or two years, for further INSTRUCTIONS. Can give the highest references.—Apply by letter to J. HURLEY, Beaumont Lodge, near Old Windsor, Berks.

AS CARPENTER.—WANTED, by the Advertiser, aged 40, a SITUATION, as CARPENTER and JOINER, on a gentleman's estate, or in any large establishment.—Can have sixteen years' unexceptionable character.—Address, post-paid, J. W. 5, Belvedere-road, Lambeth.

PARTNERSHIP.—Capital required, about 2,000l.—Any party having this amount at command, and who is either a good draughtsman, &c. or practical builder, may join the advertiser, carrying on business in the Midland Counties, wherein a certain independence can be made. Testimonials as to character and general capabilities, will be required.—Address, by letter, to X. Y. Z., Bolt-court, Fleet-street, London.

TO the ARCHITECTS of ENGLAND and SCOTLAND.—PARTNERSHIP.—A Married Gentleman, aged 30, who for 10 years has laboriously applied himself to the study of architecture in connexion with engineering and works, and has travelled much abroad, as well as all over England and Wales, and has acquired such facility for designs and rapid means of expression therein, by actual and practical drawings, as never to have failed in success, is desirous of JOINING his SERVICES to an architect whose practice may be increasing, as to repair a Partner to develope it. An enthusiastic admiration of his profession, with great application to the same, would be brought to bear on the services here offered. A library of architectural works, a large houseful of rich antique furniture, and a collection of photographs and pictures, would be brought to assist in retaining his position as that of a gentleman. Architects replying, to state terms and what works generally comprise their practice. Address, A. B. Z. Wade's Library, 13, High-street, Kensington

THE PHOTOGRAPHIC SOCIETY'S THIRD ANNUAL EXHIBITION is NOW OPEN, at the Gallery of the Society of Painters in Water Colours, 5, Pall-mall East. Open at TEN. Admission, 1s. Evening, from SEVEN to TEN. Admission, 6d. The Exhibition will be closed at the end of the present month.

SPECIAL NOTICE.

KENT MUTUAL ASSURANCE SOCIETIES.

CHIEF OFFICE:
QUEEN-STREET-PLACE, NEW CANNON-STREET, LONDON.

The united annual incomes exceed 27,000l.; and all Profits belong to the Assured.

LIFE.

The next division of Profits will include parties assuring before the 24th March next.

The new business of the last eight months exceeds 5,000l. in Annual Premiums.

FIRE.

The Guarantee Fund is being increased to Half-a-Million.

The annual income, since last annual meeting, has increased beyond 5,000l.

GEORGE CUMMING, Manager.

N.B. Agents are still wanted for some vacant localities.

SIXTH DIVISION OF PROFITS.

CLERICAL, MEDICAL, and GENERAL LIFE ASSURANCE SOCIETY, 99, Great Russell street, Bloomsbury, London.

SPECIAL NOTICE.

All persons who assure on the Participating Scale before June 30th, 1856, will be entitled to a Share of the SIXTH BONUS, which will be declared in the January following.

Proposals should be forwarded to the office before June 1st next.

The Thirty-first Annual Report just issued can be obtained of the Society's Agents, or of

GEO. H. PINCKARD, Resident Secretary.

SIXTH BONUS.

UNION ASSURANCE SOCIETY.—(FIRE LIFE ANNUITIES)

Instituted in the reign of Queen Anne, A.D. 1714.
Cornhill, and 70, Baker-street, London.
Chairman—J. Remington Mills, esq
Deputy-Chairman—Henry Hulbert Norman, esq

James Bentley, esq	John Paynter, esq.
Thomas Bradley, esq	John Rogers, esq.
Thornhill Britten, esq.	Henry Rutt, esq.
Nicholas Charrington, esq.	George Spencer Smith, esq.
S. Preston Child, esq.	Richd Hor-man Solly, esq.
William Gilpin, esq.	W. Foster White, esq.
Thomas Mills, esq. M.P.	Samuel Wilson, esq. Ald.
John Morley, esq.	Stephen Wilson, esq.

THE LIFE BONUS of the year 1856, of four-fifths of the profits of the LIFE DEPARTMENT, has been just declared, and (with the exception of a reserve of nearly 20,000l. to accumulate towards the next Bonus of 1861) is payable upon and with the sum insured, being at the rate of 10l. 10s. per cent for the last seven years, on Policies effected in Great Britain upon the Profit System.

THIS BONUS MAY BE APPLIED EITHER

By having the annual premium reduced for the next seven years, which will in many cases extinguish the same for that period;

Or by adding the amount to the sum insured;

Or the value thereof may be received immediately in money.

The Directors beg to state that, by a recent change in the regulations of this Society, the assured realize the advantages of MUTUAL OFFICES by sharing the entire profits less one-fifth as a small compensation for the necessary guarantee), and are free from the liability incurred by the members of such Societies.

The accumulated invested capital now amounts to upwards of ONE MILLION sterling.

THOMAS LEWIS, } Joint Secretaries.
WM. B. LEWIS, }

THE PERMANENT WAY COMPANY, 26, Great George street, Westminster, have now published a Second Edition of their CIRCULAR, which may be had post free upon application. Among other recent important inventions, the Company beg to call particular attention to Prince's Patent for Casting Railway Chairs, Pole's Patent Improved Fish Joint, and Dr. Boucherie's improved Process for Preserving Sleepers, Fencing, Telegraph Posts, &c. from decay.—Every information may be had upon application to CHARLES MAY, F.R.S. the Manager; or to WILLIAM HOWDEN, Secretary.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY respectfully solicits the attention of buyers to the further reduction in the price of Yellow Deals, and the very low prices of Pine and other Deals, &c. &c. :—

Yellow Deals, from	£21	0 per 120
Do. Battens	12	10 "
Spruce Deals, from	16	0 "
Pine Plank, 12 ft. 3 in. by 11, from	22	10 "
Mahogany in Planks and Boards		6d. per foot super.

Prepared Flooring, &c. equally low. A list of prices forwarded on receipt of a postage stamp. Borough-road, Southwark, and Elm-street, Gray's-inn lane

SEASONED FLOORING.—GEO. NOKES and CO. late Archbutt and Atkinson), beg to acquaint builders and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash :—

4 inch White, 13s. 6d. per square.		4 inch Yellow, 15s. per square.	
3 ditto	15s.	"	ditto 16s. 6d. "
1 ditto	18s.	"	ditto 20s. "

Laths, 3s. per load.

Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.

ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road).

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No. 18, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Saw-mills. Goods in Bond for Exportation.

N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned, and ready for use, from 4-inch to 14-inches thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Cills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

OAK SASH-CILLS, QUARTERING, &c. ready cut out to sizes and lengths required, at the lowest price.

Address, E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S-ROAD, CHELSEA, AND WILTON-ROAD, PIMLICO.

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shop-fitters to his carefully selected MAHOGANY, suitable for Counter Tops, and to his seasoned Materials for builders, cabinet and lined makers, &c. Delivered carriage free, to any of the London railway stations, or within three miles from Kennington Church.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

TO BUILDERS, CARPENTERS, &c.

SAMUEL CROWHURST, Jun. begs to call the attention of Builders, Cabinetmakers, &c. to his Stock of seasoned and well-assorted Timber Goods, Deals, and Mahogany in Logs, Planks, Boards, &c. at prices which will be found equal if not less than any advertised. Country Builders supplied on the most liberal terms. Timber-yard, Hanover-street, Walworth; and Frances-street, Newington, near the Church

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor

STAINING DEAL TO IMITATE ALL KINDS of WOODS it requires NO SIZING, and will stand the exposure to the weather. Price 6s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 4a, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

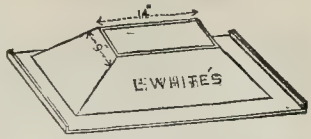
TO TIMBER MERCHANTS and OTHERS. The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of English Timber, &c. Spacious Dry and Drying Docks, 30 and 10-ton Cranes, Sawpits for converting Timber, &c. Freights paid on delivery.—Apply to G. NOKES and Co. as above.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER-CUTTING MILLS, Commercial-road, Lambeth. The proprietors beg to announce to the trade that they have completed their extensive arrangements, and will be happy to execute all orders intrusted to their care with despatch and punctuality.

N.B. All goods sawn at these mills fetched and delivered free of charge.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 194, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 2s.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 3s. 6d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application, post free.

IMPORTANT TO BUILDERS.



REGISTERED CAST-IRON CHIMNEY-POT, HOPPER and CHIMNEY-BAR COMBINED, ensuring a perfect formation of the Flue, and rendering smoky chimneys impossible. One trial will cause their adoption in every building.

Price from 8s. 6d. each, according to size.

IRON GIRDERS and COLUMNS to MODEL or DRAWING.

IRON PIPES and connections for gas, water, and liquid manure.

RAIN-WATER PIPE and EAVE GUTTERS, at wholesale prices. Also, O-G Gutters, Sash-weights, STABLE FITTINGS, pumps, tomb railing, cattle and pig troughs, and COLUMNS with caps and bases, and every kind of builders' castings, in stock, at LYACH WHITE'S Iron Wharf, Upper Ground-street, London, near Blackfriars-bridge.

H. DOULTON & CO'S. TERRA-COTTA CHIMNEY-TOPS

Will withstand the action of the Weather and Sea Breezes, and are

QUITE IMPERISHABLE.

Prices not much higher than Cement.

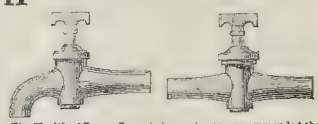
DOULTON & CO.'S TERRA-COTTA POTS, &c.

Erected in London upwards of 20 years since, are now as sharp and perfect as when first manufactured.

Drawings on application to H. DOULTON & CO. High-street, Lambeth.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



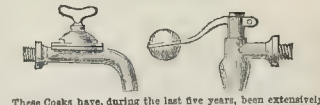
The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

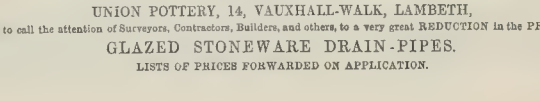
THOMAS LAMBERT and SON,
Brass and Iron Founders, Short-street, New-cut, Lambeth.

BRICK, POTTERY, and TILE-YARD TO BE LET, the Stock to be taken at a Valuation.—A desirable opportunity now offers to any person of small capital to take a large BRICK and POTTERY YARD, where any quantity of Bricks and Pipes can be made. The Yard is situated near the increasing town of Southampton, where there is a constant demand for Bricks, &c. The Clay is very superior, and coals are cheap. Apply to CHARLES BAKER, Southampton.

TO BRICK-MAKERS, ENGINEERS, and OTHERS.—PATENT TO BE SOLD.—The exclusive right of making PERFORATED BRICKS by hand, with any shape, size, and number of holes, saving 2 per cent. in clay, drying, fuel, and carriage, with other advantages. No infringement on any other Patent.—For particulars apply to Messrs. AVERY, BELFORD, and CO. 93, Essex-street, Strand, London.

BRICK-MAKING by MACHINE.—Awarded the Gold Medal of Honour at the Paris Exhibition. CLAYTON'S PATENT BRICK-MAKING MACHINE, combining his recent improvements. In consequence of the numerous applications to see this machine at work since Tuesday last, H. CLAYTON has arranged to have another of them in operation for public view on Monday and Tuesday next, 14th and 11th March, at the Manufactory, Atlas Works, Upper Park-place, Dorset-square, London.—HENRY CLAYTON, Patentee.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.



WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

TATHAM & CO.—No. 14, SOUTH WHARF, PADDINGTON.
BRICK, LIME, and CEMENT MERCHANTS,
SOUTHAM BLUE LIAS LIME DEPOT.
Bath, Portland, Lias, and Roman Cements; Parian and Keene's Cements, Plaster of Paris, Glazed Stoneware Sewage Pipes, Fire Goods, Vitrified Blue Bricks, White Building Bricks, White Enamelled Pans and Traps, and every description of Building Material.
N.B. Lump and Ground BLUE LIAS LIME delivered in boat-loads direct from the Works in Warwickshire, to any part of the river or canal.

SOUTHAM BLUE LIAS LIME DEPOT,
No. 14, SOUTH WHARF, PADDINGTON.
TATHAM & CO. have arranged for a constant supply of the above very superior BLUE LIAS LIME, which for the last two years has been extensively used at most of the large works constructed during that period or now in hand, and any orders they are favoured with will command their best attention.
Boatloads of either Lump or Ground Lime can be delivered direct from the Works in WARWICKSHIRE to any part of the Rivers Thames or Lee, alongside any wharf on canal, or by boat or rail to any part of the kingdom.

PORTLAND CEMENT.—TATHAM & CO. are enabled to offer a very superior quality of this valuable Cement at a moderate price, and all orders addressed to No. 14, SOUTH WHARF, PADDINGTON, will receive the best and most prompt attention.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C.J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, in Upper Thames street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL. Light and Dark, equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-pots, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

NOTICE.—M. H. BLANCHARD, 74, Blackfriars-road, London, Manufacturer of PLASTER of PARIS of a superior quality, suitable for Sculpture, Architectural Embellishments, &c.—will not twist, warp, or give after set, but will retain its hardness and strength.

Superfine, per ton	£7 0 0
Fine	3 0 0
Coarse	2 10 0

Delivered for Cash to any of the Metropolitan Railway Stations, or within the Metropolis.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

PORTLAND and ROMAN CEMENT, TERRA-COTTA POTS, &c.—J. M. BLASHFIELD begs to acquaint the Public that he has entirely CLOSED his Establishment on the Surrey side of the Thames, and that articles of his manufacture can only be obtained at his Works, Mill-wall, Poplar, or at his Warehouse, Fraed-street, Paddington.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME.
The LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements, at reduced prices, the material being excavated in its pure and unadulterated state, from quarries on their own property. The Company particularly recommend a quality of and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's-cross

GREY STONE LIME WHARFS,
12, UPPER GROUND-STREET, Blackfriars (Surrey side),
7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.
GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 20, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.
GIBBS, CANNING, and CO.'S BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.
ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.
SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

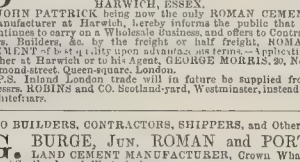
GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants Builders, contractors, and others supplied with every description of building material at the lowest market prices

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (perfectly non-absorbent) STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and flare, bricks, fire-goods, &c. can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

HUBBUCK'S PATENT WHITE ZINC PAINT,
The Permanent White of the Ancient Artist.
HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Oilmen and Artists' Colourmen. In Original Packages, each cask stamped—HUBBUCK and SON—LONDON—PATENT. And when so marked, the quality is guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.
G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.
DAVIES and NORMAN, Agents
Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.



GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

NOTICE.—BLUE LIAS LIME.—L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the extensive quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.
L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to secure a genuine quality of and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's-cross

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.
JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of best quality upon advantageous terms.—Application either at Harwich or to his Agent, GEORGE MORRIS, 20, New Ormond-street, Queen-square, London.
P.S. Inland London trade will in future be supplied from Messrs. ROBINS and CO. Scotland-yard, Westminster, instead of Whitefriars.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS.—BRICKS delivered in any part of the River up to Battersea-bridge, at the following prices, viz.: Grey Stocks, 23s. per thousand; Grizzles, 20s. per thousand; Rough Stocks, 20s.; Place, 18s. to 15s. per thousand. Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.
Malm Place, half washed Stocks, and Place Bricks, also on sale These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK PERFORATED BRICKS.—Messrs. J. EASTWOOD and SONS take this opportunity of informing their customers and the trade, that they have made arrangements for the Manufacture of White Suffolk Perforated Bricks. In ouring defects common to bricks of this description, care has been bestowed to produce them of a true and perfect shape, of an even and beautiful surface, and free from fire-flaws.—J. EASTWOOD and SONS, Belvedere-road, Lambeth.

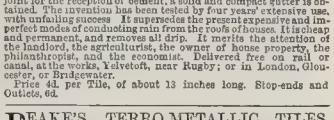
WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 5, ADELAIDE-PLACE, London-bridge.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.
BRICK MOULDS (improved), Steel-faced Stocks and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick MOULD Work and Implements.—J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

THE PATENT BRICK-MACHINE COMPANY invite orders for their IMPROVED MACHINES, the only ones that manufacture solid bricks equal to hand-made, will shortly be at work in a field near London, accessible by railway, where it may now be seen with bricks of last season.
H. C. MOUNT, Secretary.
37, King William-street, City, February 1, 1856.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions in the neighbourhood of London, at 7d. per foot, above 100 feet, 6d.—Office, 1, Adelaide place, London-bridge.



BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of home property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Kelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.
Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade terms, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 881, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability, Slabs and Tiles for Fireplaces and Hearths, Covings for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in. short	1 ft. 7 in.	Fitted for lead, gutta percha or cast iron pipe	1 10 0
2½ „ long	3 3		1 14 0
3 „ ditto	3 6		2 8 0
3½ „ ditto	3 6	flanged pipe, as required	2 12 0
4 „ ditto	3 6		3 3 0
2½ short, with 15 feet of lead pipe attached, ready for fixing			2 14 0
2½ in. long ditto ditto			2 16 0

The above Pump being very convenient for fixing in situations where there is not much space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot forcing, and plant houses; they may be fixed, when desired, under the stage. Any ironmonger [illegible] Ironmongers or Plumbers in the country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c. Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 3s. per doz. painted
Ditto .... 4s. per doz. galvanized

Upper Ground-street, Blackfriars Bridge, Surrey Side.

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels.

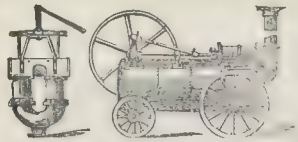
Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

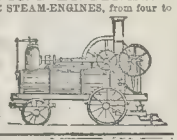


PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground street, Blackfriars-bridge (Surrey Side).

PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire. Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 62, Blackfriars-road.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.



JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland street, Southwark, London.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

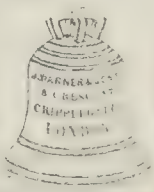
J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has been [illegible] accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, or weight, single or in peals.

TUNED BY MACHINERY.

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers and pegged on a new system which gives superior tone and facility for ringing.



KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Fireplace Backs, Furnaces, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

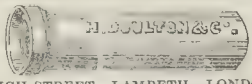
GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

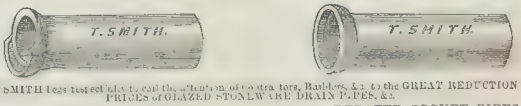
Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.

AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

Terra-cotta Chimney-pots of various patterns and sizes, also Red Earthenware Drain-pipes, at greatly reduced prices.

AYLESFORD POTTERY COMPANY'S PATENT DRAIN-PIPES.

THE above Company respectfully invites the attention of Engineers, Architects, Surveyors, Builders, &c. to an improved Drain-Pipe, whereby all stoppages may be cleared without disturbing the invert of the drain, by simply removing the cover (marked A or B), whichever may be preferred.

Pipes thus constructed may be laid at intervals in a drain of ordinary socket-pipes.

With the great advantage these Pipes offer, they are *cheaper* than any yet submitted to the public.

London Depôt—AYLESFORD WHARF, Belvedere-road, Lambeth.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

Drawings, with Prices, will be forwarded free, on application.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.

Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.

Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.

Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

MANUFACTURERS of GLAZED STONEWARE PIPES, Bends, Junctions, &c.; also FIRE BRICKS, Vitrified Blue Bricks as used by her Majesty's Commissioners of Sewers, White Fire Clay, Facing Bricks, &c., &c. Agents,—CHARLES RICHARDSON, No. 6, South Wharf, Paddington, London.

LYTCHETT POTTERY.—For SALE by PRIVATE CONTRACT, the LEASE and PLANT of the above Premises. The leasehold consists of about fourteen acres of land and a good cottage. The land contains a large quantity of very superior clay for pottery and fire-goods. The drain-pipes made from the clay are equal, if not superior, to any yet in the market; and the fire-goods will bear comparison with any yet made. The plant comprises three pottery kilns and two brick kilns, with pipe machines, pug-mills, and all other necessary apparatus. Lytchett Pottery is 4½ miles from the South-Western Railway, and 3 miles from the port of Poole.—For further particulars, and to view, apply to H. F. FISHER, Blandford.

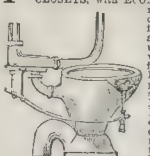
PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO., Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Wharfs.

PRICES.

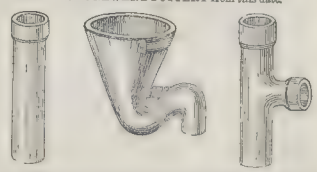
3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. "
15	"	"	"	"	1s. 6d. "
18	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of the basin may be seen, fixed upon the Premises of the Patentee, W. PATTEN, 52, Old Fish-street, near St. Paul's, London. Price for Closet and Apparatus complete, from 35s. and perfect action guaranteed.



GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, Broadway, DAVID MONTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to Consumers and others, STONEWARE PIPES &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. Feb. 11, 1856.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

TO WATER-CLOSET MAKERS.

WANTED, for Workmen's Cottages, FIFTY CLOSETS of the simplest principle and strongest construction.—Full particulars, with prices, to be sent to Mr. WALTER SCOTT, Architect, Liverpool.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.—This ware, allowed by all to be of the best manufacture, by the unparalleled quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country; an extensive assortment of specimens and patterns commencing at 1s. per foot super. together with every particular of its cost and adaptation, can be obtained of Mr. BURT, 2, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

SALES BY AUCTION.

TO LAND and BUILDING SOCIETIES and OTHERS. Votes for the County of Kent.—Eligible Freehold Building Land, land-tax redeemed, near to the entrance-gates of the Royal Arsenal, Woolwich.

MESSRS. CHURCH and SON are favoured with instructions to OFFER FOR SALE, by PUBLIC AUCTION, at the TOWN-HALL, William-street, Woolwich, on THURSDAY, MARCH 31, 1856, at THREE for FOUR o'clock in the afternoon, SEVENTY-SEVEN PLOTS of Valuable FREEHOLD BUILDING LAND, land-tax redeemed, most eligibly situated on the high road, Plumstead, within five minutes' walk of the lower entrance-gates of the Royal Arsenal, and immediately adjoining the level crossing of the North-Kent Railway. This land offers advantages to large and small capitalists rarely to be met with. It forms part of the Griffin farm and gardens, is in a high state of cultivation, and is planted with luxuriant fruit trees. Each lot will have a frontage on an excellent new road, which it is proposed to extend to Plumstead-common, as a direct communication from Plumstead road, and will entitle the purchaser to a vote for the county of Kent. Plans, with particulars and conditions of sale, may be had on application to Mr. H. Davis, Solicitor, Rectory-place, Woolwich; at Garraway's Coffee House, Change-alley, Cornhill, London; and of the Auctioneers, William street, Woolwich.

ESSEX.

MESSRS. BEADEL and SONS are instructed to SELL by AUCTION, at the MART, on TUESDAY, MARCH 25, EIGHT brick-built and tiled COTTAGES, situate on Chadwell-heath, in close proximity to the high road from London to Romford, let at rents amounting to 7*l.* *s.* per annum; the beneficial Interest arising from the House, Shop, and Premises, known as 8, High-street, Whitechapel, held from the Mercers' Company at 50*l.* per annum, and let to a most respectable tenant at 80*l.* per annum; a Policy of Assurance in the Equitable Office, for the sum of 727*l.* 10*s.* effected in the year 1821, upon the life of a party aged sixty.—Particulars and conditions of Sale may be obtained of Messrs. McLeod and Stenning, 16, London-street, Fenchurch-street; of H. J. Preston, Esq. 10, Austinfriars; at the Mart; and of Messrs. Beadel and Sons, 25, Gresham street.

ESSEX and MIDDLESEX.—Paulatim Lodge, Dagenham. Valuable Detached Enclosure of Arable Land, and Five Houses in the Bagnigge wells road, Clerkenwell.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, London, on TUESDAY, MARCH 25, at TWELVE, a very desirable VILLA RESIDENCE, known as Paulatim Lodge, with conservatory, excellent out-buildings, and tastefully laid out grounds, together with a small pasture adjoining, pleasantly situate on Chadwell-heath, within three miles of the village of Dagenham, two miles from Romford, and three from Ilford, at both of which are stations on the Eastern Counties Railway; a valuable detached enclosure of productive Arable Land, known as Mill Field, containing 3a. 0r. 8p. in the occupation of Mr. Thomas Wane, at 12*l.* per annum: also, a desirable Leasehold Property, comprising five houses in Oldham-gardens, Bagnigge-wells-road, Clerkenwell, let to respectable tenants at rents amounting to 94*l.* 10*s.* per annum. Possession of the residence can be had upon completion of the purchase.—Particulars and conditions may be obtained of Messrs. Davidson and Bradbury, Solicitors, 18, Basinghall-street; at the Auction Mart; and of Messrs. Beadel and Sons, 25, Gresham-street.

Sixth Sale of the Surplus Property belonging to the North London Railway Company, with Votes for the County of Middlesex.

MESSRS. BEADEL and SONS have received instructions from the Directors of the above Company to SELL by AUCTION, at the MART, on TUESDAY, MARCH 18th, at TWELVE o'clock, in 24 Lots, the Sixth Portion of the valuable FREEHOLD SURPLUS PROPERTY adjoining the Railway, Camden-town, comprising several freehold Houses, let at rents amounting to 620*l.* per annum; also well-secured ground-rents arising from houses in Brecknock-place, Great and Little Randolph streets, Grange street, and Frederic-place. Also Sheppard House, Homerton, and a plot of valuable leasehold building land at Dalston. Particulars may be obtained of Messrs. Tibbits, Palmer, and Lawton, Solicitors, Guildhall-yard; of Messrs. Kennedy and Bossy, 1, Cornwall-crescent, Camden town; at the Auction Mart; and of Messrs. Beadel and Sons, 25, Gresham street.

Valuable Building Materials of Aberdeen Cottage, Balham, Surrey.

MESSRS. NORTON, HOGGART, and TRIST have received instructions from the Crystal Palace Railway Company to offer for SALE, on the PREMISES, on TUESDAY, MARCH 11, at TWELVE, in lots, without the slightest reserve, the valuable BUILDING MATERIAL of a spacious residence, offices, &c. situate at Balham, within a few doors of Balham-hill Chapel, with walls and other fences; consisting of good sound brick-work, slated roofs, flooring boards, joists, girders, glazed sashes, panelled doors, marble chimney pieces, lead flats and cisterns, copper hips, ridges, pipes, pumps, and the whole of the valuable fixtures, and a variety of useful materials. A more detailed advertisement will appear early next week.—Catalogues are in preparation, and may shortly be had at the Plough, Clapham; Castle, Tooting; Spread Eagle, Wandsworth; on the Premises; and of Messrs. Norton, Hoggart, and Trist, 62, Old Broad street, Royal Exchange.

PAPER-HANGINGS AND CHIMNEY-PIECES.

MR. EDWIN WHITE will SELL by AUCTION, unreservedly, at the PUBLIC SALE-ROOMS, 170, Bishopsgate-street-without, on WEDNESDAY next, MARCH 12th, at TWELVE for ONE o'clock precisely, several thousand pieces of French and English PAPER-HANGINGS, consisting of flocks, satins, damasks, and others, in some of the most elaborate, artistic, and fanciful designs ever executed; and a number of excellent marble and stone chimney pieces. View, day prior and morning of sale, when Catalogues may be had.

TO BUILDERS and OTHERS.—Large quantity of Building Materials for unreserved Sale.

MR. PETER BROAD will SELL by AUCTION, on the PREMISES, at the rear of the Royal Hotel, Shepherd's Bush, on FRIDAY, the 14th day of MARCH, 1856, at TWO o'clock precisely, the remaining STOCK of a BUILDER, including deal and elm boards, ironmongery, joiners' benches, a mortising-machine, slate-cutting machine, various tools, large quantity of papier maché ornaments, glass, old lead, scrap iron, short timber, firewood, &c. &c. On view day prior; catalogues on the Premises; and of the Auctioneer, 28, Poultry.

BRIXTON-HILL.—Contractor's Plant and Effects, at the Reservoir of the Lambeth Waterworks.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors of the late Mr. Nesham to SELL by AUCTION, on the PREMISES of the LAMBETH WATERWORKS COMPANY, Brixton-hill, on WEDNESDAY, MARCH 19th, at TEN for ELEVEN, in consequence of the completion of the contract, the valuable PLANT and EFFECTS, comprising about 3,500 2½-inch battens, 3,000 feet of baulk timber, 250 navvie barrows, 50 wheeling planks, 400 scaffold boards, poles, and putlogs, seven pile-driving engines and monkeys, pug-mills, ladders, screens, brick and dobbin carts, a large quantity of centres, ribs, quartering, firewood, and other effects. May be viewed two days' previous, and catalogues had on the Premises; also at the George the Fourth; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

SOUTHALL.—Bricks and Brickmaking Plant.

MESSRS. EVERSFIELD and HORNE beg to announce that they will SELL by AUCTION, at Mr. PEARSE'S BRICKFIELD, near the Station, Southall, on TUESDAY, MARCH 11th, at TWO, about 1,000,000 BRICKS; comprising stocks, place, grizzles, and malm pickings and paviors; also, the plant and implements; 30 ton boat, and other effects.—May be viewed and catalogues had on the Premises; also of T. D. Keighley, Esq. Solicitor, 73, Basinghall-street; and of the Auctioneers, 40, Parliament-street, or Coal-Exchange. Trains leave Paddington at 11.30, and 1.30.

SALES BY AUCTION.

EDGEWARE-ROAD.—The Stock of a Timber Dealer.

MR. LEREW is directed to SELL by AUCTION on the PREMISES, No. 137, Edgeware-road, on MONDAY, MARCH 10, at TWELVE for ONE, without reserve, 600 yellow pine and white planks, deals, and battens, 2,000 feet wide pine board, 1,000 feet mahogany, dry cut stuff, quartering, prepared floor boards, laths, doors, counting-house fittings, two trucks, &c.—Auction Offices, Cardington-street, Hampstead-road, near the Euston Station.

TO BUILDERS and OTHERS.—Extensive Sale of Timber, Stone Fittings, &c. Westminster.

MR. F. HALL has been favoured with instructions to SELL by AUCTION, on the PREMISES, on THURSDAY, MARCH 13, at TWELVE for ONE, the second portion of the valuable MATERIALS of Her Majesty's Stationery Offices, Great James-street, Westminster; comprising massive timbers of long lengths, fine joists of all lengths and scantling; internal and external doors; forty pairs of sashes and frames; clean flooring boards and battens; register and other stoves; wainscoting and partitions; frames, principals, and truss girders, stone-paving steps, and landings; a large quantity of excellent firewood, and various other useful materials and effects. May be viewed, and catalogues had on the Premises; and at the Auctioneer's Offices, Chester-street, Kennington.

IN BANKRUPTCY, WITHOUT RESERVE.—TO TIMBER MERCHANTS, SHIP-BUILDERS, BUILDERS, CARPENTERS, &c. &c.

MR. FREEMAN is instructed by the assignees of Messrs. Fossey and Steel, bankrupts, to SELL by AUCTION without reserve on the PREMISES, Norway Wharf, Millwall, Poplar, on TUESDAY, MARCH 11th, 1856, at ELEVEN o'clock precisely, all the extensive and valuable STOCK IN TRADE, comprising every variety of English and foreign timbers, planks, and cut stuff, Norway and other spars, scaffold-poles, &c. yellow pine and white spruce deals, boards, and battens, prepared yellow and white flooring boards, Dantzic lath wood, laths, &c. &c.; also a four wheel phaeton, timber carts, carriages, and other trade implements, counting house fittings, &c. &c.—May be viewed two days previous to, and morning of sale, and catalogues had on the Premises, and of the Auctioneer, 3, Crooked-lane, London-bridge.

FREEHOLD GROUND for Building on.—TO BE LET, upon BUILDING LEASES, PLOTS of GROUND, in that healthy locality, Holloway, two or three minutes' walk from the Archway Tavern. Omnibuses every four or five minutes to all parts of London. Situate in St. John's-road, where houses let as fast as built. For particulars apply to Mr. H. WITHERS, 9, Poultry; or Mr. WILLS, 2, Esplanade, Ealing. The leases direct from the freeholder.

LAND TO BE LET, on Building Leases for 100 years, at the Kilburn park Estate, Paddington, for the erection of upwards of eighty semi detached moderate and compact villa residences. Advances of money to parties of respectability if required.—Apply to Mr. J. BLORE, Architect and Surveyor, 8, Michael's-place, Brompton.

FREEHOLD GROUND, Fetter-lane.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 29th of APRIL next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking on BUILDING LEASE for eighty years certain PLOTS of GROUND, situate at the south-east end of Fetter-lane. Further particulars may be had, and a plan seen, on application to Mr. HAYWOOD, Engineer to the Commissioners, at these Offices in the Guildhall. The Commissioners will require a plan and elevation of the Premises proposed to be built to be submitted to them for approval; and do not bind themselves to accept any proposal unless deemed advantageous. JOSEPH DAW.
Sewers' Office, Guildhall, March 4th, 1856.

SUPERIOR BUILDING LAND TO LET, near Carlton-hill, St. John's Wood, and Kilburn-gate; 110 feet above the Thames; commanding views of Hampstead and Richmond; adapted for detached and semi-detached villas, of 60*l.* to 150*l.* yearly value. Leasehold for ninety five years. Rent, 5*s.* per foot frontage; average depth, 95 feet.—Address, Mr. BALL, 44, Regent-street, Piccadilly.

STRATFORD, ESSEX.—FREEHOLD LAND within three miles of London, exonerated from land tax, and free of tithe, TO BE LET on lease for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

TO BUILDERS.

STOKE, next GUILDFORD.—Parties desirous of TENDERING for the ERECTION of SCHOOLS and MASTER'S RESIDENCE, for the above parish, can inspect the plans and specification, and obtain bills of quantities upon the usual terms, at my Office, Guildford, on and after MONDAY, the 10th instant, where said Tenders will be received up to FIVE o'clock, on THURSDAY, the 20th instant. The Committee do not bind themselves to accept the lowest or any Tender.
March, 1856. THOS. GOODCHILD, Architect.

TO WHARFINGERS, COAL-MERCHANTS, and OTHERS requiring WATERSIDE PREMISES.—TO BE LET, BEAUFORT WHARF, Carting-lane, Strand. There is water-way for eight barges, landing-stage, stabling for twenty horses, with roomy lofts, and other out-buildings. There is also a neat dwelling-house and counting-house.—Inquire of Mr. PRESTON, Jun. 10, Wych-street, Drury-lane.

BUILDING LAND TO BE LET, at

HALLSVILLE....	Term 1,000 years,	for small cottages.
CANNING TOWN	" 1,000	"	for small cottages.
NORWOOD........	" 1,000	"	for villa residences.
STRATFORD	" 100	"	for small cottages.
POPLAR........	" 98	"	for fourth-rate houses.

Advances 50*l.* to 100*l.* at 5 per cent. on each cottage.
Apply to Mr. Wm. ELLISON, Architect, Stainsby road, Limehouse.

Guildhall, London, 28th February, 1856.

THE COMMITTEE for LETTING the BRIDGE-HOUSE ESTATES will meet at Guildhall on FRIDAY, the 14th day of MARCH next, at ONE o'clock precisely, to receive TENDERS for a BUILDING LEASE for Eighty Years of a Plot of Ground on the west side of Old Change, in the City of London. A plan of the ground and conditions for letting may be seen at the Architect's Office, Guildhall.
FERDINAND BRAND, Comptroller.

TO BUILDERS and OTHERS.—An excellent SITE TO BE LET or SOLD, for BUILDING PURPOSES, with a good double frontage, situate in a leading thoroughfare, and in an established neighbourhood, well adapted for shops and dwelling-houses, and workshops. The materials of the present erections may be used if sound, in erecting any new buildings that may be approved. Money will be advanced if required by the purchaser, or taken to carry out the undertaking, upon a satisfactory arrangement.—Inquire of Messrs. HOWARD and DOLLMAN, Solicitors, 141, Fenchurch-street; Mr. EDWARD LOWTHER, 58, Red Lion-street, Clerkenwell; or of Mr. MURRELL, Auctioneer, 1, Walbrook, City.

TO BUILDERS and OTHERS.—TO BE LET, a most eligible PLOT of FREEHOLD LAND, land-tax redeemed, near Clapham-park, on most advantageous terms, sufficient for about forty-two houses, suitable for fourth-rate houses and shops, with a good corner for a public-house; or the Freehold to be Sold.—For particulars, apply to R. G. care of Mr. Doyle, 4, Maze-pond, Borough.

HARROW.—FREEHOLD LAND.—TO BE SOLD, 100 ACRES, in a ring fence, and several other eligible plots of FREEHOLD LAND, at a moderate price, contiguous to the Harrow Railway Station, surrounded and intersected by capital roads. Residents are entitled to the privileges of the Harrow School, and the London and North Western Railway Company offer to persons building houses of approved elevation, worth 50*l.* per year each, a free first-class pass between Harrow station and Euston-square, for eleven years. There is an abundant supply of excellent water, and very superior brick earth on the land.—Apply to WILLIAM B. COOPER, Esq. Solicitor, 3, Verulam-buildings, Gray's-inn.

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the finest sites for building purposes anywhere round London, and good villas are in great demand, on account of the situation being lofty, dry, well drained, and exceedingly healthy. Assistance will be afforded to responsible parties.—For particulars, apply to Messrs. J. and C. W. TODD, Milner-street, Brompton, London; or Belmont, Lee, Kent; or Messrs. NELSON and INNES, 6, Whitehall.

ALDERSHOTT CAMP.—PLOTS of LAND TO LET on Building Leases, commanding good frontages and admirable sites, facing the permanent barracks now erecting, and near the Queen's pavilion.—For particulars apply to Mr. THOMAS WHITE, Jun. near the Alliance Hotel, and opposite the permanent barracks, Aldershott, Hants.

NEW BOND-STREET.—TO BE LET on LEASE, CAPITAL PREMISES, 60 feet deep, in perfect repair, suitable for a Public Institution, Club, Bank, &c. containing elegant suites of rooms on the ground and first floors, and twelve rooms above.—Apply to Messrs. RUSHWORTH and JARVIS, Auctioneers, Saville row, Regent-street; and 19, Change-alley, Cornhill.

FOUNDLING HOSPITAL.—The Committee of Governors will meet at the Hospital on SATURDAY, the 15th instant, at TEN o'clock, to receive PROPOSALS for a LEASE of PREMISES in Sugar-loaf-court, Garlick-hill, Upper Thames-street.—Plans of the property may be seen, and further particulars obtained, at Mr. HENRY CURREY'S Office, No. 4, Lancaster-place, Strand.—By order of the Committee,
March, 1856. J. BROWNLOW, Secretary.

FREEHOLD SITE, fit for a PUBLIC BUILDING, about eight miles from London, on the road to Kingston, near two railways. A most healthy spot, with finest views, 13 acres in extent, with frontage of nearly 1,700 feet.—Apply to Mr. ASHPITEL, 5, Crown-court, Old Broad-street, City.

TO BUILDERS and OTHERS.—Some CARCASSES, at HAMMERSMITH, TO BE SOLD, very cheap. A portion of the money for finishing may be had if required. Apply at S. W. JOHNSON'S, Esq. 5, Gray's-inn-square.

TO BE LET, a PLOT of GROUND, averaging about 37 feet by 34 feet, at the rear of Nos. 32, 33, and 34, Market-street, Borough-road, Southwark, suitable for the erection of builders' workshops thereon, or for other purposes.—For particulars apply to Messrs. WILLSHIRE and PARRIS, Architects and Surveyors, 5, Wolsingham place, Lambeth.

WATERSIDE PREMISES, Chancellor-wharf, near the Suspension-bridge, Hammersmith, TO BE LET, or LEASE TO BE DISPOSED OF.—For terms, apply on the Premises.

FREEHOLD LAND TO LET, on Building Leases. The Rev. WILLIAM FORD and Mr. HENRY WEBBER, executors of Richard Barford, Esq. late of Tollington-park, have to offer two valuable PLOTS of FREEHOLD LAND, for building leases, for a term of ninety years, in Barford-street, Liverpool-road, Islington. The land-tax is redeemed, and the sewers made. For particulars, apply to Mr. HENRY WEBBER, Timber Merchant, 31, Old street, St. Luke's.

FREEHOLD LAND, SHEPHERD'S-BUSH.—TO BE LET, or SOLD, by Private Contract, about THIRTY-SIX ACRES of valuable FREEHOLD BUILDING LAND, land-tax redeemed; most desirably situate, three miles from Hyde-park. Plans and terms of Mr. PETER BROAD, 28, Poultry.

TO BUILDERS, CARPENTERS, AND OTHERS.

TO BE SOLD, the GOODWILL of an old-established BUILDER'S BUSINESS, a few miles from town. The stock may be taken at a valuation. The premises comprise convenient eight roomed house, yard and workshops, &c. On lease, the present owner being the freeholder. For further particulars and terms, apply to Mr. W. R. GLASIER, Auctioneer, &c. 41, Charing-cross.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—TRUMBLE and CO. Manufacturers, Leeds, beg to call the attention of the trade to their immense STOCK of PAPER-HANGINGS, at No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, and Machine Goods. The whole being their own manufacture, can supply on the very best terms.

PAPER-HANGINGS.—JEFFREY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, which in price, style, and colouring, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls.—Factory, 115, Whitechapel; Show-room, 500, Oxford-street.

TO BUILDERS AND OTHERS.

CHEAP PAPER-HANGINGS.—Builders and Contractors having a quantity of Paper-hanging and Painting to be done, would find it advantageous to them, by applying to J. BALDWIN, as he would have no objection in taking house property in payment for the same.—J. BALDWIN and SON, House Painters and Decorators, 62, St. John-street, Clerkenwell.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!! Builders, the Trade, Country Dealers, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 22, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSS'S WHOLESALE WAREHOUSE, 22, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, March 8, 1856.

The Builder,

A JOURNAL FOR THE

Architect, Engineer, Operative & Artist.

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ROYAL INSTITUTE of BRITISH ARCHITECTS

Incorporated 7th William IV.

16, Grosvenor-street, Grosvenor square, London, Feb. 1856.

HER Majesty having been pleased to grant her gracious permission that the ROYAL MEDAL be conferred on such distinguished Architect or man of Science, of any country, as may have designed or executed any building of high merit, or produced a work tending to promote or facilitate the knowledge of Architecture, or the various branches of Science connected therewith, the Council of this Institute will proceed in January, 1857, to take into consideration the appropriation of the Royal Medal.

Gentlemen desiring to compete for the SILVER MEDALS of the Institute, and the SOANE MEDALLION, with its travelling stipend, to be awarded for Designs, Illustrations, and Designs, may obtain the necessary information on application to the Honorary Secretaries, by letter, prepaid, at their above address.

ROYAL ACADEMY of ARTS, Trafalgar-square.

NOTICE to ARTISTS.—All Works of Painting, Sculpture, Architecture, or Engraving, intended for the ensuing EXHIBITION at the ROYAL ACADEMY, must be sent in on MONDAY, the 7th, or TUESDAY, the 8th of APRIL next, after which time no Work can possibly be received, nor can any Works be received which have already been publicly exhibited.

FRAMES.—All Pictures and Drawings must be in gilt frames. All Paintings under glass, and Drawings with wide margins are inadmissible. Excessive breadth in frames as well as projecting mouldings may prevent Pictures or Drawings the situation they otherwise merit. The other regulations necessary to be observed may be obtained at the Royal Academy.

Every possible care will be taken of Works sent for exhibition, but the Royal Academy will not hold itself accountable in any case of injury or loss, nor can it undertake to pay the carriage of any package.

The prices of Works to be disposed of may be communicated to the Secretary.

BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.

Head-Master—R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify Schoolmasters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Free-hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Mou ding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and Ornament, Flowers, objects of Still-life, &c., the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of Painting and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Modelling and Casting, may be attended separately on payment of 1l. per session.

Students have full access to the valuable collections of the Museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 27, Gower-street, Bedford-square. Superintendent, Mrs. M'Ian. Fees 4l. per session,—Advanced Class, 2l. and 1l.; Elementary Class, 1l. Evening Class, 10s.

Further information may be obtained on application at the Office of the Head Master, Marlborough House, Pall-mall, London.

COMPETITIONS.

TO ARCHITECTS.

MIDDLESEX INDUSTRIAL SCHOOL.—The Committee of Visitors appointed under an Act of the 17th and 18th Vic. cap. clxix. to provide an Industrial School for the Juvenile Offenders of the County of Middlesex, invite Architects and Others, by PUBLIC COMPETITION, to furnish PLANS and ESTIMATES for such building, to be forwarded, sealed up, and addressed to the Chairman of the said Committee, at the Sessions-House, Clerkenwell, on or before SATURDAY, the 26th day of APRIL, 1856. Each set of plans is to be marked with a motto or device, and the name of the author is not to appear, but to be put in a separate sealed letter, bearing on the outside a corresponding motto or device. A premium of 10l. will be paid for the plan which shall be considered the best, 7l. 7s. for the next, and 5l. for the third. Particulars as to the site, with a printed copy of instructions, and the conditions on which the premiums are offered, may be had upon application to me, at the Sessions House, any day between the hours of ELEVEN and FIVE o'clock.—Dated this 6th March, 1856.

CHARLES WRIGHT, Clerk to the Visitors.

GRANTHAM BURIAL BOARD.—EXTENSION of TIME for PLANS, &c.—The period for sending in Plans for Chapels, Lodge, and Entrance Gates, is EXTENDED to SATURDAY, 22nd MARCH. Plans are also required for PLANTING the GROUND and LAYING OUT the ROADS and WALKS therein. Two-thirds as consecrated, one-third unconsecrated, to be sent in by the same time, for which an additional premium of 5l. is offered. The ground is an oblong square of 220 yards by 132 yards. Entrance west. By order of the Board,

ROBT. HY. JOHNSTON, Clerk.

Grantham, February 20th, 1856.

GARSTON, near LIVERPOOL.—To ENGINEERS, SURVEYORS, &c.—The Survey for the District of Garston, to which the Public Health Act, 1848, is applied, being now ready, the Local Board of Health for that district are desirous of obtaining PLANS, SPECIFICATIONS, and ESTIMATES, for a system of SEWERAGE for effectually draining the district. Premiums of 70l. and 30l. respectively will be given to the Authors of the Two Plans, &c. &c. as approved of, which Plans, &c. &c. will become the property of the Board. The specification must contain all information regarding materials, &c. necessary to practically working of the drainage, and must include, so far as practicable, a scheme for preserving the sewage matter for agricultural or other purposes. Mr. GOTTO'S Plans of the Parish, on the sale are erroneous by the General Board of Health, are in the custody of the Surveyor, Mr. JAMES STANDING, and may be inspected at his house, Mayfield-road, Aigburth, on application to him. But inasmuch as lithographed copies of the general plan, on a scale of two feet to a mile, may be had from the Surveyor price 10s., no trachings will be allowed to be taken from the original plans. Four plans, at least, from as many different hands for competitors, must be sent in, otherwise the premiums will not be awarded.—The plans, specifications, &c. signed with a motto or device, and accompanied by a letter marked with a similar motto or device, enclosing the name and address of the Author, must be sent (carriage free) to the Office of Mr. J. B. LLOYD, Solicitor, 8, Exchange alley, Liverpool, on or before the 15th day of MAY next.

Dated the 5th day of March, 1856.

TO ARCHITECTS, BUILDERS, and OTHERS.—PREMIUM of 20l. for PLANS of OFFICES.—The Directors of the Manchester, Sheffield, and Lincolnshire Railway Company offer a PREMIUM of 20l. for the best PLANS and SPECIFICATIONS for a STACK of OFFICES, to be erected near their docks, at Great Grimsby. The proposed site has a frontage of 100 feet to the Cleethorpe's road, and a depth of 240 feet. The offices are intended to be let, in suites of two or more rooms, to separate firms; and the object in view being to secure ample and convenient accommodation by THE MOST ECONOMICAL EXPENDITURE OF CAPITAL, the Directors will give a preference to the plans which best answer this object. The plans and specifications must be forwarded, under sealed covers, marked "Plans for Offices," to the undersigned, on or before the 7th APRIL next.—Any further information may be obtained, on application to ADAM SMITH, Esq. C.E. Great Grimsby.—By order,

EDWARD ROSS, Secretary

Manchester, March 11, 1856

THE BURIAL BOARD of the PARISH of HITCHIN, in the county of Hertford, are desirous of receiving PLANS, DESIGNS, and ESTIMATES, comprising ground-plans, sections, and elevations, for laying out, planting, and fencing a new BURIAL GROUND, with suitable entrance gates at each end, and for building Two Chapels and a Lodge. The ground is nearly square and level, and contains five acres. The chapels it is proposed to place in the centre, and in one building: the area of the interior of each chapel to be 35 feet by 17 feet, and the chapels to be separated by a wall. The cost of the chapels and cottage not to exceed 1,200l. The party whose plans are approved, will, at the option of the Board, be paid the sum of 21l. and have the superintendence of the works. The plans and estimates must be delivered, free of expense, at the Office of the Clerk to the Board, situate at Hitchin aforesaid, on or before the 7th day of April next. Each plan is to be distinguished by a motto and a sealed letter similarly endorsed, containing the author's name and address, to be sent therewith. The Board do not bind themselves to accept any plan, and all those not approved will be returned upon application. CHARLES TIMBS, Clerk to the Board.

Hitchin, 10th March, 1856.

CONTRACTS.

TO BUILDERS.

TENDERS WANTED for the BUILDING of TEN HOUSES in Hart's-buildings, Bridge-street, Warrington, on the premises lately occupied by Mr. Joseph Chrimes. Cooper, and Mr. Thomas Headbeater, Brewer. Plans and specifications to be seen at Mr. JOHN PIERPOINT'S, 27, Horse Market-street, Warrington, and Tenders to be sent, free of expense, to THEOPHILUS TUNSTALL, 27, Redcross-st. est Liverpool, on or before 20th MARCH.—T. T. will not be bound to accept of the lowest Tender.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives notice that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall-mall, on or before the 20th MARCH next, for the REPAIR of FIRE-ENGINES, BUCKETS, and for executing the WORKS and REPAIRS of the Royal Engineer Department in the London District, viz.: LONDON, WINDSOR, CROYDON and CARSHALTON, HOUNSLOW and HAMPTON-COURT, for a period of three years from the 1st APRIL, 1856, to the 31st MARCH, 1859. Printed schedules and forms of TENDER may be obtained at the Royal Engineers' Office, 11, James street, Pimlico, between the hours of TEN and THREE o'clock from the 1st to the 19th MARCH inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineers' Office, London District,

February 27, 1856.

TO BUILDERS.

PERSONS desirous of TENDERING for ADDITIONS and ALTERATIONS to the FARMHOUSE in the occupation of Mr. W. PARSONS; and new FARM BUILDINGS, at Elsfield, near Oxford, on the estate of Colonel North, M.P., may see the plans and specifications at Mr. W. PARSONS'S, Elsfield. The Tenders are to be delivered at the Office of Mr. J. F. CLARK, Architect, Newmarket, on or before SATURDAY, the 22nd day of MARCH, and the lowest or any Tender will not necessarily be accepted.

TO GENERAL CONTRACTORS.

NORTH-COATS INCLOSURE, LINCOLNSHIRE. CONTRACT, No. 1.—The Valuer acting in the matter of the Inclosure of the Fitties or Outmoors, at North-Coats, in the County of Lincoln, is desirous of receiving TENDERS for the ERECTION of the following WORKS, viz. For the FORMATION of about two miles in length of NEW SEA BANK, the EXCAVATION of 4b ut three-quarters of a mile in length of NEW DRAIN, and the ERECTION of a NEW SEA SLUICE, of brick and stone, with land and flood gates, and all necessary piling an 1 timber breastwork thereto. Plans and specifications of the said works have been prepared by Messrs. MAUGHAN and FOWLER, Architects and Surveyors, Louth, and may be inspected by Contractors, from the 17th to the 22nd day of MARCH, 1856, at their Offices, where all necessary information may be obtained.—Tenders for the whole of the works are to be delivered to them, before TWELVE o'clock, on WEDNESDAY, the 26th day of MARCH, 1856, endorsed "Tender for North Coats Sea Work," and addressed to me.

CHARLES NORTH, Valuer.

South Moresby, March 5, 1856.

Ample security will be required, and the Valuer will not be required to accept the lowest or any Tender submitted.

SURVEY of TIPTON PARISH.—The Tipton Local Board of Health are prepared to receive TENDERS for the SURVEY and LEVELS of the Parish, the whole of the work to be done in conformity with the requirements of the General Board of Health in London. Conditions may be seen at the Board's Offices, Church-lane, Tipton, on MONDAYS, WEDNESDAYS, and FRIDAYS, between the hours of NINE and ELEVEN a.m. No Tender will be received after MONDAY, the 24th day of MARCH, 1856. The Board do not bind themselves to accept the lowest or any Tender.

GEO. M. WARING, Clerk.

Church-lane, Tipton, Feb. 29, 1856.

SKIRWITH CHURCH.—To BUILDERS.

Such persons as may be desirous of TENDERING for the ERECTION of the NEW CHURCH and PARSONAGE-HOUSE, at Skirwith, near Penrith, in the County of Cumberland, in form of that the drawings and specifications may be seen at Skirwith Church, on application to the Rev. C. PARKER. Bills of quantities and forms of Tender will be furnished by the Architects, Messrs. FRANCIS, 38, Upper Bedford-place, Russell-square, London, who will also give any further information. The Trustees will not be bound to accept the lowest Tender, and no estimate will be received except upon the form of Tender supplied by the Architects.—Tenders to be sent in, endorsed "Tender for Works, Skirwith Church, &c." and addressed to Messrs. FRANCIS, 38, Upper Bedford place, Russell-square, London, on or before SATURDAY, the 29th of MARCH next.

BOARD of WORKS, POPLAR DISTRICT.

TO STONE MERCHANTS, MASONS, SCAVENGERS, CARMEN, and OTHERS.—The Board of Works for the district will meet at the Town-hall, Poplar, on TUESDAY, the 18th of MARCH instant, at SIX o'clock in the evening precisely, to receive TENDERS, and to CONTRACT,

FIRST.—For the Supply of Aberdeen, Haytor, or Guernsey Granite, Edge-Splayed Kerb, Granite Pitchers dressed for channels and for crossings, and Tooled York, and 1 Broken Guernsey Stone.

SECONDLY.—For Masons' Work.

THIRDLY. For the Supply of Gravel and Flints.

FOURTHLY. For Horse and Cart Hire.

FIFTHLY.—For the Collection of Dust, Ashes, Rubbish, &c. &c.

The several Contracts are to commence at Lady-day next, and to terminate at Lady-day, 1857. The Contractors will be required to furnish the names of two responsible persons, who will be required to enter into bond with them, in the sum of 300l. for the due performance of their Contracts, and will be required to sign the acceptance of their Tender, for the expense of the contract and bond to be prepared by the said Board. The Board do not bind themselves to accept the lowest or any Tender, and the parties Tendering will be required to be in attendance. Tenders must be delivered sealed up upon the forms prepared for that purpose (and none other will be received), on or before the hour last instant, at TWELVE o'clock, after which none will be received.—Further particulars and forms of Tenders can be had on application at the Town hall, Poplar, any day between the hours of TEN, a.m. and FOUR, p.m.

CHARLES C. CEELY, Clerk to the Board.

Town-hall, Poplar, March 7, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

NEWPORT DOCKS.—NOTICE to CONTRACTORS.—The Directors of the Newport Dock Company are desirous of receiving TENDERS for the EXECUTION of the following WORKS:—An EXPENSION of the existing DOCK, ALTERATIONS and ADDITIONS to the present LOCK and ENTRANCE, and the CONSTRUCTION of an AQUEDUCT from the river Usk. The plans, sections, specifications, and conditions of the above named works and others connected with them, may be seen at the Office of JAMES ABERNETHY, Esq., 3, Parliament-street, Westminster, Engineer to the Company, and at the Dock Office, Newport, Monmouthshire, on and after MONDAY, the 10th inst. of whom forms of Tender may be obtained. Sealed Tenders, addressed to the Secretary to the Newport Dock Company, Dock Office, Newport, Monmouthshire, to be sent in on or before WEDNESDAY the 2nd APRIL next.

HENRY TOMKINS, Secretary.

Dock Office, Newport, Monmouthshire, 6th March, 1856.

THE BOARD of WORKS for the LIME-HOUSE DISTRICT; comprising the Parish of St. Anne, Limehouse, the Hamlet of Ratcliff, and the Parishes of St. Paul, Shadwell, and St. John, Wapping, Middlesex.—CONTRACT for GUERNSEY GRANITE.—The Board hereby give Notice that the Committee for Paving, Lighting, &c. will meet at the Office of the Board, White Horse-street, Commercial-road East, on MONDAY, the 31st MARCH, at THREE o'clock in the afternoon precisely, to receive TENDERS from persons willing to CONTRACT for the said WORKS and REPAIRS to the ROAD and CARRIAGEWAYS of the several streets, courts, alleys, and other places, under the jurisdiction of the said Board, for three years, from 4th APRIL, 1856.—Further particulars may be known, and printed forms of Tender, with schedules of works and prices, Tender to obtained by parties intending to Tender for the Works, upon application at the said Office after the 24th instant, between the hours of TEN and FOUR o'clock. Tenders, sealed up, and endorsed "Tender for Paving," must be delivered at the said Office, not later than ONE o'clock on the 31st day of MARCH, 1856. The Board do not bind themselves to accept the lowest or any Tender. No Tender will be received after the time specified, and unless upon the printed form.

By order,

THOS. W. RATCLIFF, Clerk to the Board.

7th March, 1856.

THE BOARD of WORKS for the LIME-HOUSE DISTRICT, comprising the Parish of St. Anne, Limehouse, the Hamlet of Ratcliff, and the Parishes of St. Paul, Shadwell, and St. John, Wapping, Middlesex.—To PAVIORS and MASONS.—Notice is hereby given, that the Committee for Paving, Lighting, &c. will meet at the Office of the Board, White Horse-street, Commercial-road East, on MONDAY, the 31st MARCH, at THREE o'clock in the afternoon precisely, to receive TENDERS from persons willing to CONTRACT for the said WORKS and REPAIRS to the ROAD and CARRIAGEWAYS of the several streets, courts, alleys, and other places, under the jurisdiction of the said Board, for three years, from 4th APRIL, 1856.—Further particulars may be known, and printed forms of Tender, with schedules of works and prices, may be obtained by parties intending to Tender for the Works, upon application at the said Office after the 24th instant, between the hours of TEN and FOUR o'clock. Tenders, sealed up, and endorsed "Tender for Paving," must be delivered at the said Office, not later than ONE o'clock on the 31st day of MARCH, 1856. The Board do not bind themselves to accept the lowest or any Tender. No Tender will be received after the time specified, and unless strictly in accordance with the printed forms.

By order,

THOS. W. RATCLIFF, Clerk to the Board.

7th March, 1856.

TO CONTRACTORS.

THE LOCAL BOARD of HEALTH for the City of BATH, hereby give Notice that they are ready to receive TENDERS from competent Persons who may be willing to undertake all or any of the following CONTRACTS:—

CONTRACT No. 1.—For Pitching and Paving the various Streets in the City of Bath.

CONTRACT No. 2.—For Pitching and Paving the Out part of the Parish of Walcot in the Borough of Bath.

CONTRACT No. 3.—For Pitching and Paving Widcombe.

CONTRACT No. 4.—For Pitching and Paving Bathwick.

Specifications may be seen and Forms of Tender obtained on application at the Surveyor's Office, No. 1, Queen-square, between the hours of TEN and THREE, till the last day of MARCH. Tenders must be sent to the undersigned, addressed to the Board of Health, Guildhall, Bath, endorsed "Tender for Paving," on or before TEN o'clock in the Morning of the last day of MARCH instant. The Committee do not bind themselves to accept the lowest or any Tender.—By order of the Board,

THOS. BRIDWELL, Clerk.

Bath, March 1st, 1856.

WATERING CONTRACT.—The Board of Works for the Strand District, is desirous of receiving TENDERS for WATERING the several PARISHES in this district, from the 25th day of MARCH instant, to 29th SEPTEMBER next. Parties are to specify the price per week for each man to be employed in watering. Full particulars of the work, and each cart, horse, and hose to be used, the rate per week for each man to be employed in watering, and forms of Tender, may be obtained at the offices of the Board, No. 10, Hanover-street, Hanover-square, between the hours of TEN and FOUR, on and after MONDAY next, when they are to be returned, addressed to the Chairman of the Board, at the Office aforesaid, on or before TUESDAY, the 18th day of MARCH instant. The Board do not bind themselves to accept the lowest or any Tender.

JAMES H. F. LEWIS, Clerk to the Board.

March 7th, 1856.

TO BUILDERS.

PERSONS desirous of CONTRACTING for the ERECTION of TWO semi-detached VILLAS on the [illegible] Park, near Pembroke, may inspect the [illegible] from the [illegible] at the premises, on and after MONDAY next, the 10th instant, [illegible] to be received on or before TUESDAY, the 18th instant. The [illegible] not bind themselves to accept the lowest or any Tender.

[illegible] MORGAN and PHIPSON, Architects, 5, [illegible]

NOTICE TO BUILDERS.

BERWICK CHURCH, near LEWES.—[illegible] the RESTORATION of this [illegible] are now in Berwick Rectory, [illegible] All parties desirous of [illegible] for the execution of the [illegible] may inspect the [illegible] at the Office of [illegible] Architect, 4, [illegible] Lincoln's-inn-fields, on and after MONDAY, the 17th instant, [illegible] Tenders addressed to the Rev. [illegible] Berwick Rectory, Polegate, Sussex, will be received [illegible] 1st APRIL next. The Architect does not bind himself to accept the lowest Tender. [illegible] work to be executed in accordance with the [illegible] Lewes Assizes, 1856.

TO BUILDERS and OTHERS.—TO BE SOLD, a PROOF IRON DOOR, in frame and iron [illegible] of the [illegible] Two pairs of [illegible] complete, also fitted with iron shutters. [illegible] which we have no further use for them.—Apply to Mr. [illegible]

TYERMAN'S PATENT HOOP-IRON BOND.

Adopted by the Honourable Board of Ordnance, the Commissioners of Parks, Palaces, and Public Buildings, &c. &c. &c.

TARIFF OF PRICES Beyond the current Price of Hoop-iron

Gauge.	In wide.	Per 1 yard.
No 16 ..	1½ ..	2d.
17 ..	1½ ..	2½d.
15 ..	1½ ..	3d.
13 ..	2 ..	4d.
12 ..	2½ ..	5d.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11 inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

London Depôt—163, OXFORD-STREET.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND,

London.

LOCKS, HINGES, BOLTS, &c.

First-class Prize Medal, Paris Exhibition, 1855.

Illustrated Price-catalogues post-free on application.

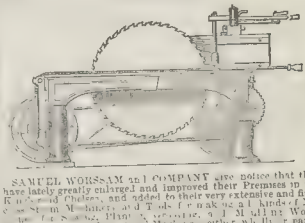
KIMBERLEY'S NEW PATENT SCAFFOLDING BRACKET entirely supersedes the old and ever troublesome cords. They are made of every kind in Wrought Iron are light, very strong, and it is next to impossible to wear them out. They are greatly admired, and require time only to supplant entirely the usually uncertain cords. Books, with all particulars, by post. The whole Building Trade admit this is an article they have required for the last century.

London Agents:—

Messrs. PUGH & CO. 13, King-street, Snow-hill, London.

See also KIMBERLEY'S Patent Screws, Sash Sash Cord Screws, Casement Fasteners, Stock Locks, Bench Stops, &c. &c.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Stock of Machinery and Tools for making all kinds of Machine for Sawing, Planing, Moulding, Mortising, Tenoning, and Boring Wood; and that they are at all times ready to supply them, or any of the separate parts, to those who prefer making their own; and they also beg to state that they execute their orders to the highest degree of excellence, and have had the honour lately of supplying some very extensive and complete sets of machinery to the Contractors for the Government Works, with their Machines for home and foreign use.

OLD STOVES and RANGES.—EDWARDS, SON, and CO. have constantly on hand a large assortment of OLD STOVES and KITCHEN RANGES, in very good condition, which they can recommend as second-hand, but which, after three months' work, and which, are here sold at exceedingly low prices.—Polstead-street, Oxford-street.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans free.—J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

CONTRACTORS' WAGGONS and RAILS. MATTHEW T. SHAW has now on hand a quantity of [illegible] and [illegible] with wrought [illegible] and cast wheels, in best-oak condition, 30/ to 35/ each; also 40 tons of bridge rails, 42 lbs. to the yard; also 100 tons flat-bottom rails, 40 lbs. to the yard, and 50 tons 45 lbs to the yard. Contractor for plant of every kind. 64, CANNON-STREET.

TWENTY new WAGGONS for PERMANENT WAY.—MATTHEW T. SHAW has the above FOR SALE, by the first maker, well suited to carry minerals. Also a quantity of railway plant bought for prompt cash.—64, CANNON-STREET.

SKAIFE'S GALVANIZING WORKS, Commercial-road, Lambeth, London.

Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where Iron not liable to rust is required.

Patent Galvanized Iron supplied in every form.

Sheets plain and corrugated.—Roofs fixed complete.

J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.

An Allowance to the Trade.

JOHN WALKER, Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor, IRON MERCHANT, &c.

Offices and Works—Mill-wall, Poplar, London.

A. MOREWOOD and CO. (late Morewood and Rogers), Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham

PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.

PLAIN or CORRUGATED, and Carved, of all Gauges.

Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.

Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building, at the

OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

PATENT SASH and BLIND LINE AUSTIN'S IMPERIAL can be obtained of all ROPEMAKERS, IRONMONGERS, FACTORS AND WHOLESALE HOUSES, IN TOWN OR COUNTRY. Established 1774.

TO ARCHITECTS, BUILDERS, AND THE TRADE.

PATENT PLUMBIC ZINC.

GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.		
12	"	20 "
13	"	23 "
14	"	26 "

Full particulars and the reduced price sent by post on application to

A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

WILLSON and ROBINSON, GALVANIZING and CORRUGATING IRON WORKS, CHURCH-ROW, LIMEHOUSE, LONDON.

PATENT GALVANIZING and CORRUGATING IRONWORKS (improved Process). WORKS GLASSHOUSE YARD, opposite the Entrance to the London Docks.

GALVANIZED SHEET-IRON and WIRE of every description guaranteed to be produced by the only process which THE TOUGHNESS and MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

SAMUEL HEMMING'S PATENT much approved PORTABLE BUILDING and ROOFING MANUFACTORY, REMOVED from BRISTOL to BOW, near London, close to the Bow Railway Station.—A large variety of buildings always on view, churches, chapels, schools, boxes, offices, bazaars, ornamental villas, dwelling-houses, farm buildings, and fire-proof stores. Also, railway stations, trucks, and carriages made to any plan on the shortest notice

TUPPER and CARR, CORRUGATED IRON MANUFACTURERS, Galvanized and Ungalvanized, Iron Roof Builders, and Electric Telegraph Contractors. Works BIRMINGHAM and LIVERPOOL. Offices—3, MANSION HOUSE-PLACE, LONDON.

N.B. Iron of every description galvanized. An allowance to the Trade.

JOHN HENDERSON PORTER, ENGINEER AND CONTRACTOR, IRON BUILDING AND ROOFING WORKS, GAS-STREET, BIRMINGHAM.

LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

J. NAYLOR'S IRONMONGERY, NAIL, and METAL WAREHOUSE, 238, Oxford-street, near the Marble Arch.—Builders, Carpenters, Cabinet-Makers, Locksmiths, and Bedstead Ironmongers, supplied at the lowest prices.

FOR SALE, at JACOBS and HYMAN'S IRON WHARF, Thornhill-bridge, Caledonian-road, Kingscross, Ten Tons of NEW SHEET ZINC, price 24l. per ton; also a quantity of 10-feet iron columns of handsome design, iron girders, cast-runners, French burr stones, steam boilers, several tons of white-lead and paint. For sale or hire, a land-roller. Old iron bought at 42 per ton; old zinc, 14s. per cwt.

N.B. Old machinery of every description bought.

PATENT HAND-RAILS, WITHOUT HEADING JOINTS.—Established nearly thirty years, and patronized by the most eminent architects in the kingdom.

N.B.—A PORTABLE PULPIT FOR SALE, with hand-rails, &c. complete, convertible into a flight of circular stairs, to economize space. &c.—JOHN MELVILLE, 64, John-street, Fitzroy-square, London.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-press ice [illegible] &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 55, High Holborn.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pans.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.

AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

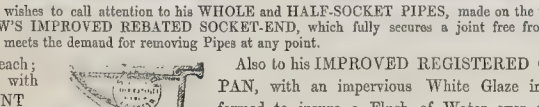
MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

Terra-cotta Chimney-pots of various patterns and sizes, also Red Earthenware Drain-pipes, at greatly reduced prices.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.

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W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years, can furnish first-class references.

CHEAP AND DURABLE ROOFING.

By Her Majesty's Royal Letters Patent.

F. McNEILL and CO. of LAMB'S-BUILDINGS, BUNHILL-ROW, LONDON,

Manufacturers and ONLY Patentees of

THE PATENT ASPHALTED FELT, FOR ROOFING HOUSES, VERANDAHS, SHEDS, &c.

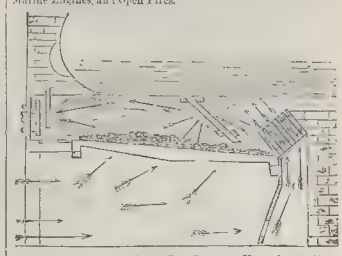
Patronized by

HER MAJESTY'S WOODS AND FORESTS,
HER MAJESTY'S COMMISSION OF CUSTOMS,
HONOURABLE EAST-INDIA COMPANY,
HONOURABLE BOARD OF ORDNANCE,
HER MAJESTY'S ESTATE, ISLE OF WIGHT,
ROYAL BOTANICAL GARDENS, REGENT'S PARK,

And by the most eminent members of the Royal Agricultural Societies of England, Scotland, and Ireland; at whose great national shows it has been exhibited, and OBTAINED THE PRIZE, for being the best and cheapest article for roofing; also used for under slates at the Royal Agricultural Society's House, in Hanover-square. Its advantages are lightness, warmth, durability, and economy. It is impervious to rain, snow, and frost, and a non-conductor of heat and sound. The Felt can be cut to any length, by 32 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples, with full directions as to its uses and the manner of applying it, with TESTIMONIALS, some of them of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 25 per cent. in fuel is effected. The TRADE are respectfully enjoined to send their orders DIRECT to the FACTORY, as the surest means of being supplied with the genuine article, and in lengths best suited to their roofs. They are likewise CAUTIONED AGAINST MISREPRESENTATION, as THE ONLY WORKS in Great Britain where the above roofing is made are F. McNEILL and CO.'s Manufactories, LAMB'S-BUILDINGS, BUNHILL-ROW. Roofs covered with the Felt to be seen at the Factory, also the new Vice-Chancellor's Courts, the passages and offices leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

LESS FUEL, MORE STEAM, NO SMOKE.

GARDNER'S PATENT SMOKE CONSUMER is SELF-ACTING, EASILY FIXED at a SMALL COST, IMPROVES the DRAUGHT, and SAVES FUEL. Applicable to all Furnaces, Boilers, Ovens, Locomotives, Marine Engines, and Open Fires.



"Chemical Works, Bow Common, November 9, 1855.

"DEAR SIR,—In answer to your further inquiry concerning the saving of fuel in connexion with the use of your patented apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I beg now to state that we are enabled without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.

"I remain, dear Sir, yours truly,

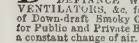
"To E. V. GARDNER, Esq." "FRED'K. ALLEN.

Apply to the PATENTEE, 21, Norfolk-street, Middlesex Hospital; or to Messrs. BURDIDGE and HEALY, 128, Dorset-street, Fleet-street.

Bakers' Ovens fitted for 3l. license included.

SMOKY CHIMNEYS CURED EFFECTUALLY for TEN SHILLINGS, by SUTER'S PATENT WIND-GUARD.—This Guard allows free egress to the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

To be had of Ironmongers and Builders; and of the Patentee, at his Office, 65, Fenchurch-street, London.

By Her Majesty's  Royal Letters Patent.

DUPREE and CO.'S DEFIANCE WINDGUARD and VENTILATORS, &c. for the perfect cure of Down-draft Smoky Chimneys, suitable for Public and Private Buildings requiring a constant change of air.

Also

SHIP VENTILATORS, requiring no attention, imparting about six times the quantity of fresh air than any other in use.

Also

VENTILATING SKYLIGHTS, for Slate or Tile Roofing, without Paint or Putty.

Prospectuses sent on application.

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VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an

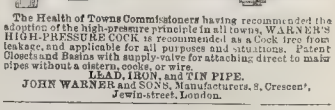
EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 8s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 137, Union-street, Borough; and of all respectable ironmongers, builders, &c.

TO WATER COMPANIES AND PLUMBERS.

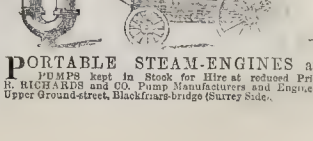
HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 92, Blackfriars-road.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 32s. per doz. painted
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels.

Plain or Sliding Telescope Suction,

ON HIRE.

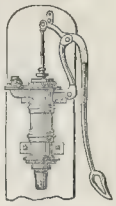
SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,



which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the pr ce considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS, 8, Cresent, Jewin-street, London, Manufacturers and Patentees.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGOTT, 113, Fore-street City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.—This ware, allowed by all to be of the best manufacture, by the unparalleled quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern wharf, York road King's-cross.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft.	6 in. lengths, at			3d. per foot.	
4	"	"	"	6d.	"
6	"	"	"	8d.	"
9	"	"	"	9d.	"
12	"	"	"	1s. 5d.	"
15	"	"	"	2s. 6d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London. Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

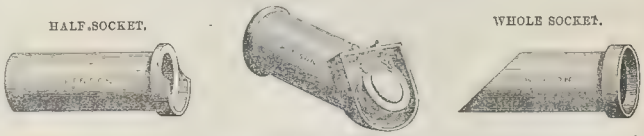
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.



Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.

HALF-SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.

THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

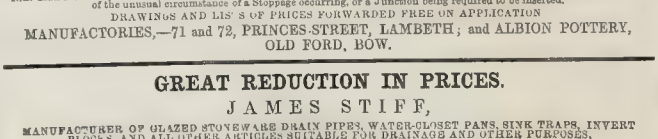
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

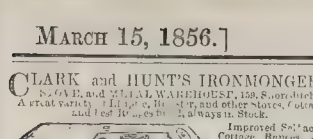
STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

Drawings, with Prices, will be forwarded free, on application.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 153, Shoreditch. A great variety of Kitchen Ranges, and other Stoves, Cottage and Test Ranges to be always in Stock.



Improved Self-acting Cottage Ranges, with Large Ovens and Boilers, 8 by 12 ... 14 ... per inch.
38s. 36s. 32s. 30s.
Best self-acting Kitchens with Oven and Back Boiler, Bright Wrought Bars ...
21 26 38 42-inch
54s. 70s. 82s. 95s
Strong Ellip tic Stoves, with Extra Thick and Solid Bars, per in 2½d
Register Stoves, with Solid Bars, per inch, 5d.
Improved New Pattern Cornfort cock Register, with strong Bars and Trivits, 8d. per inch.
Best Solar ditto, with Fire Brick Backs, per inch, 10d.
Bright Stoves, with Two Bars, 40s. to 100s. each.

Cast Rain-water Pipe	2	2½	3 inch.	
	11d.	1s. 2d.	1s. 4d. per yard.	
Cast Gutters—4 inch, 9d. per yard.				
O G Gutters			4½ inch.	
	1s. 1d.	1s. 3d. per yard.		
Patent Line	2	3	4	5
	4½d.	5d	7d.	9d.

1s. per knot.
6-inch Rd. Ward Mortise, with best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s. per cwt.

Dr. Arnott's Ventilators, 4s. 6d. each.
An extensive stock of bar, rod, hoop, and sheet iron
Brick Moulds kept in stock. Any size made to order.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trade to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London

Elliptic Stoves, double backs, 21d. per inch, and upwards.
Register Stoves, 3d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3-feet Cottage Ranges, with ovens and back boilers, 30s. each.
3-feet self-acting ditto, ditto, 34s. each.
Air Bricks, 4s. per doz.
Best Town Glaze, 38s. Ditto, Scotch, 64s per cwt.
Best Fine Cut Clasp and Rose.

½	¾	1	1¼	1½	3-in. & larger.
10s. 6d.	10s 6d.	12s. 6d.	15s. 6d.	18s.	14s. per cwt.

And every material required in the building, bell hanging, upholstery, and brass-founding trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter prepaid

THE STATUE and IRON FOUNDRY, Lower Belgrave-place, Pimlico.—Castings of every description executed at the above Works.

IRON FOUNDRY, HARROW-STREET, LANT-STREET, SOUTHWARK. W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Sound and Railing Bars, Panels, Iron Coping, Hot Plates, Bank Plates, Area Gratings, Sash Weights, Fly and other Wheels Riggers, Rollocks, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

WANTED, a PAIR of WROUGHT or CAST IRON DOORS, from 6 feet to 10 feet high, and from 6 feet to 9 feet wide.—Full particulars, with price and where to be seen, by letter only, to THOS. HUBBUCK and SON, 115 Upper East Smithfield, London.

IRONMONGERY.
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,
THE BEAR GARDEN LEAD WORKS, SOUTHWARK,
Sole Manufacturers of Delbruck's Patent Antogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of
UNITING LEAD TO LEAD WITHOUT SOLDER,
Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.
PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and
STEWART'S PATENT CAST-IRON GAS and WATER PIPES.
Office, No. 7, Bloomsbury-square, London.

THE LIZARD SERPENTINE COMPANY manufacture and set in block and slab the beautiful stone now raised from the lower beds of their quarries. Chimney-pieces, Columns, Fonts, and ornamental works on view, at 20, Surrey-street, Strand.
HENRY COX, Manager at the Lizard.
F. W. RUFFLE, Agent in London.

MARBLE.—The Italian Marble Company, Importers of the produce of their own quarries, in the province of Massa Carrara, Italy, beg to inform the general Marble Trade in the United Kingdom that they are prepared to undertake contracts for any quantity of statuary, Venetian, Bardilla Dove, and other Marbles, in blocks of all dimensions, delivered on shipboard at Leghorn, or in dock, London. A constant stock always on view in the premises, where orders are taken, for Paving Slabs, Garden and Hall Statues, Vases, Tazzas, Mortars, Consoles, Chimney pieces of all classes, Circular Tabletops, Monuments, &c executed in Italy. For further particulars, inquire at the Office on their Wharf, Thames Bank, Pimlico, adjoining the first side of Vauxhall-bridge.
WILLIAM W. BONNIN, Secretary.
Lloyd's Marble Wharf, Thames-bank, Pimlico,
Adjoining Vauxhall-bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

MARBLE. — NOTICE. — The ITALIAN MARBLE COMPANY have REMOVED their Office from 18, Cannon-street, City, to their WHARF, THAMES BANK, PIMLICO, a little to the east side of Vauxhall-bridge. Please observe the exact address.
WM. W. BONNIN, Secretary.

TO BUILDERS, MASONS, AND OTHERS.
THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Brecchia, Lave, black, black and gold, Sienna, St. Anna, statuary, serpentine, verd antique, &c. Portland, Bremen, Caen, and other stones, in blocks, slabs, landings, and hearthstones. York-street, Westminster, and 21, Castle-street, Leicester-square, Strand.

TO SCULPTORS, BUILDERS, MASONS, &c.
B. FABRICOTTI respectfully invites the gentlemen connected with the Marble Trade to inspect his fresh STOCK, composed of statuary, vein, Sicilian, black and gold, Caen, Bardilla, Siena, and Portland stone, and particularly calls their attention to a large quantity of his best statuary, sixty blocks, of all sizes, just landed.
Monuments, vases, &c. executed in Italy.
Carrara Wharf, Thames-bank, Pimlico

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all description of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

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BRAMLEY FALL, CAEN,
DARLEY DALE, FARLEY DOWN,
HARE HILL, HUDDLESTONE,
PORTLAND, and other STONES, in Blocks and Slab,
Yorkshire Paving, Landings, Steps, Sills, Sinks, Copings, &c.;
Granite Blocks, Trams, Curbs, Pitchings, &c.
Valentia Slate Slabs, Grindstones;
Marbles, in Blocks and Slabs.
At FREEMAN'S Stone Wharfs, Millbank-street, Westminster; City-road Basin; and Deptford.

STONE! STONE! STONE!—To the Trade, Builders, and Others.—The Cheapest place in London for Paving, Sinks, Self-feed Slab, Hare-hill Slab, Steps, Landings, Bath Stone, Portland, Granite, Plumbing, Curb, and every description of Stone, is at JOHN KNIGHT and SONS' Stone Wharf, Mid-road, York Paving, 8d. 9d. per foot; Slab for Hearths, &c., 4l. per foot super. Bath Stone, best quality, delivered in any part of London, 1s. 7½d. per foot.—Terms, cash on delivery.

STONE! STONE! STONE!—At Lowest PRICES, all kinds of Stone supplied to any extent. Quarry worked, sawn, or scrabbled to dimensions. Direct to any part by vessel or rail. A single truck load at wholesale prices.
Depôts—Victoria Stone Wharf, Isle of Dogs, and No. 3 Wharf, Great Northern Railway, King's cross.
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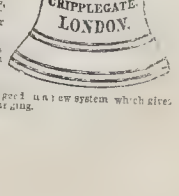

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The Builder.

VOL. XIV.—No. 684.

TO PARIS at this moment all eyes are directed. The world waits on tip-toe to hear the result of the conferences now going on there. Earnest must be the hope of all who have at heart the welfare of their fellow-creatures, that a substantial peace, honourable and remunerative to the allies, may be achieved. Even the probabilities, however, are at present shrouded in mystery; and all the arrangements which have been made give the notion of an elaborate scheme for stock-jobbing purposes. Who will assess the value of one single hour's exclusive knowledge of the decisions of the curtained and guarded conference chamber?

It would be instructive to trace, hereafter, the real names of the large dealers in Government securities, both in England and France, immediately preceding the announcements of the plenipotentiaries. With this, however, beyond the passing remark, we need not interfere. It is not Paris political that immediately concerns us, but Paris monumental, artistic, and sanitary: and our present object is to add to our series of views illustrative of that capital—a view of the east end and south side of the cathedral of Notre Dame.*

We have already referred briefly to the history of Notre Dame.† The chapels about the choir were finished at the end of the thirteenth century or the beginning of the fourteenth. Between the south side of the cathedral and the Seine stood the episcopal palace, a structure of great antiquity. All that remained of it, together with the modern building which had taken the place of the old work, was sacked and destroyed in 1831, and at the present time the new sacristy of the cathedral (shown in our view) and a public garden occupy the site. M. Guilhermy, in his "Itinéraire," from which we are quoting, gives a graphic account of the destruction of the palace. The building, invaded, he says, by a countless and furious mob, was nothing more than a ruin in a few minutes. At one and the same moment they rooted up the railings and the flights of steps, they undermined the walls, they tore off the roof, they threw out of the windows the marbles, woodwork, and furniture of the apartments. A troop of barbarians formed a chain from the library of the palace down to the parapet of the quay: the books and precious MSS. were passed from hand to hand, each tearing them as he would, and the last man pitched them into the river. And all this was done accompanied by fierce songs and frightful howlings!

The enclosure of the choir and absis of the cathedral was reconstructed at intervals between the years 1257 and 1310. The trefoiled niches in the face of the flying buttresses contained statues which all showed traces of colour, and belonged to the fourteenth century. The flying buttresses themselves (rebuilt when the chapels were constructed) are to our eyes heavy and ugly, and seem to want pinnacles at the top. Their ugliness was less observable when they were in their ancient dark coat.

The new works at the cathedral were begun about 1845, in which year the Government were roused to the necessity of maintaining the ancient monuments of the State, and voted a sum of money for the purpose. The superintendence of the restoration was placed in the hands of M. Lassus and M. Viollet-le-Duc, by whom it has been carried out with unremitting attention. The building had been greatly damaged by the men of the preceding century.

The choir of Notre Dame is one of, if not the, earliest specimen of what we should here call Early English. The first stone was laid in the year of the completion of St. Germain des Prés, 1163, and in 1182 the high altar was consecrated.

The general uniformity of style in a building so vast as Notre Dame of Paris, is very striking to an eye accustomed to the varieties observable in most of our cathedrals. Although its erection occupied a considerable period of time, there is a remarkable correspondence in character throughout. The stone of which the building is constructed is from the quarries in the neighbourhood of Paris, the possession of which has tended so much to the elegance of the city. The enormous wooden roof, of oak, which crowns the building, 356 feet (French) in length, is covered, according to M. Guilhermy, with 1,236 sheets of lead, each 10 feet long and 3 feet wide. At the point where the transept crosses the nave there was anciently a spire, also covered with lead, 104 feet high from the ridge of the roof. It fell into decay in 1792, and was removed soon afterwards.

The magnificent rose window in the south transept, seen in the view, is filled with the original stained glass. This is the case, too, with the window in the north transept and the rose window in the west front. The glass is beautiful in colour, and exhibits a multitude of subjects.

The Hôtel de Cluny, on the other side of the Seine, but not far off, contains some of the vestiges of earlier buildings which were found on the site of Notre Dame. The Palais des Thermes, which adjoins the Hôtel de Cluny, is the most ancient monument in Paris, being at least as old as the beginning of the fourth century. Together, they contain a collection of national antiquities of the deepest interest, comprising about 2,600 objects,—sculpture, carving, pictures, glass, jewellery, ivories, decorations, enamels, porcelain, and metal work.

There is nothing more instructive in Paris than this museum, and it is a heavy reproach to those who have the power, that in England, where the number of such works in private hands is so great as it is, there is no similar collection open to the public.

The Hôtel de Cluny is itself a quaint fifteenth-century building, displaying many curious bits, especially the chapel, with its central column, its range of canopied niches, and the staircase in the angle with pierced stone screen around it.

If there had been a national institution of this kind in England, we should probably have retained here the singularly fine gold *retable*, which was given by the Emperor Henry, in 1019, to the cathedral of Basle, and is now in the Hôtel de Cluny. It was hidden in the vault of the cathedral for safety, when the people of Basle adopted the reformed religion, and was afterwards sold for the benefit of the canton. A year or so ago the owner of it sought to sell it to some public institution, and the French Government obtained possession of it. It is an extraordinary relic, whether considered with regard to its date or its intrinsic beauty. The principal feature is an arcade of five openings, the centre higher than the others, with a figure in each. The whole is in low relief, executed in *repoussé* work, sharpened by the graver. The citizens of Basle, who have been spending much money in the restoration of their cathedral, must regret their loss.

Wandering here in the Palace of the Baths, where the Roman emperor Julian resided, and through the museum of the Hôtel de Cluny, the manners, progress, and the achievements in art of the French people, during at least fifteen centuries, are brought vividly before the eyes and mind of the observer.

* See p. 137.

† See p. 537, vol. xiii. and for a view of the ironwork on one of the doors, p. 635, in same volume. For recent notices and views of other buildings in Paris, see pp. 481, 505, 511, 537, 543, &c. same volume; and pp. 1 and 7, present volume.

PARIS NEWS.

Construction of Granaries.—Amongst the practical results of the Paris Universal Exhibition, the introduction of M. Fluent's granaries is not the meanest. Their object is to preserve the corn sound, even in great masses. They are constructed so as to form a division of compartments (*Silos*), all on one line, and occupying the whole height of a building. The grain is passed through hoppers, each being regulated by an especial trap. Towards the end of the silo, the grain does not descend perpendicularly, but is prevented by a number of diaphragms, placed one above another, at an angle of 45 degrees, and extending all the length of the silo. In consequence of this division in small and vertical compartments, the mass of grain becomes divided, and has to glide down in a diagonal line. The interval and the dimensions are thus distributed so as to allow the passing of the grain upon the whole length of the compartment, which passage takes place at a rate made uniform by the equality of friction. At the issue from the vertical silo, the grain is conducted through a spout, when it is seized by an Archimedian screw, at each winding of which there is a little palette, which turns the grain as would a shovel. It is thus conducted into a small reservoir, whence it is reconducted to the top of the granary, above the upper orifice of the vertical silos. Here it is taken hold of by a sieve, which agitates it again, and makes it descend in a sort of rain on the lower mass.

A Marble Company.—There has been formed at Paris a company for working the extensive marble quarries of the Departement de la Sarthe. The value of marble used in Paris for sepulchral monuments, is six millions; while that of the marble used in the whole of France, reaches thirty millions.

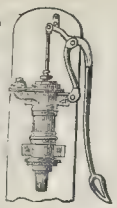
Aluminium.—The Annuaire of the Bureau de Longitude, Paris, states the specific gravity of the new metal, as follows:—At the temperature of water of 4 degrees Réaumur, the specific gravity of melted aluminium is 2·56, that of forged (malleated), 2·67; whereas that of gold is 19·36; and that of platinum, 21·53.

Chatelain, Atlas.—Chronological Atlas of Railroads. Paris, 1856.—In this deserving work the different periods of French railway construction during the last thirty-two years, are made visible in a series of maps. The first chart depicts the embryo state of French railroads from 1823 to 1839; the second, the state of infancy to the year 1841; and thus successively every period of expansion is laid down. Chart eighth shows the different railways, which, from 1823 to 1856, have been constructed by the different Governments. A general historical Atlas of all the railways in the world will become, by and bye, a desideratum.

INQUIRY INTO THE DESTRUCTION OF COVENT-GARDEN THEATRE.

LITTLE progress has been made towards discovering the cause of the destruction of Covent-garden Theatre. On Tuesday last an inquest was opened before Mr. Bedford, the coroner for Westminster, at the instance of the churchwardens of the parish of St. Paul, Covent-garden, who instructed their vestry-clerk, Mr. Mosley Tayler, to take the requisite steps in the matter. The duties of the coroner in old times included inquiry into the origin of fires; and the revival of this portion of the office (originally made by Mr. Payne, the coroner for the City) has very properly been carried forward in the present most important instance. The walls of the theatre—some of them reaching to the height of 70 or 80 feet—the north wall bounding a thoroughfare, and all the walls endangering the adjacent premises—have become even less secure than when we noticed them last week. If we refer to that immediate evidence—as to *one* of the bearings of inquiries like this which

TO BUILDERS AND PLUMBERS.
The attention of the Trade is called to
JOHN WARNER & SONS'
PATENT VIBRATING
STANDARD PUMP,
which is recommended for the simplicity of its construction, and the ease with which it works.
By the introduction of the vibrating standard, the cumbrous carriage and expensive rings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.
Beer and Water Engines for raising fluids from a depth not exceeding 33 feet; also, Garden Engines constructed on the same principle.
JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.



R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS.
Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.
Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

B. FOWLER & CO.'S
PORTABLE PUMPS,
3-inch to 9-inch Barrels,
Plain or Sliding Telescope Suction,
ON HIRE.

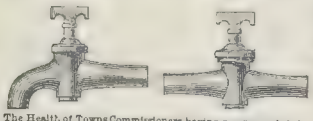
SINGLE AND DOUBLE PUMPS,
all sizes,
to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.
WHITEFRIARS-STREET,
Fleet-street.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of bench pumps and all the driving gear complete. The Contractor for whom it was first up will make a considerable sacrifice on the cost price, to let the whole on hire. Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 92, Blackfriars-road.

TO WATER COMPANIES AND PLUMBERS.
HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a cock free from leakage, and applicable for all purposes and situations. Patent Closet and Basin Cocks with supply-valve for attaching direct to main pipes without a cistern. Cocks, or wire
LEAD, IRON, and TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

LYTCHETT POTTERY.—For SALE by PRIVATE CONTRACT, the LEASE and PLANT of the above Premises. The lease consists of about fourteen acres of very superior clay for pottery and brickmaking. The drain pipes made in this pottery are equal, if not superior, to any yet in the market, and the Brickmade will bear comparison with any yet made. The plant comprises three potters kilns and two brick kilns, with pug machines, pipe-mills, and all other necessary apparatus. Lytchett Pottery is 3 miles from the South-Western Railway, 1 mile from the port of Poole. For further particulars, and to view, apply to H. F. FISHER, Blandford.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.
VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Pale on Wharf, 80 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Stoneware POTTERY. Having now fitted up the Steam Apparatus for the Drain Pipes and Stoneware Pipes &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application, as above.—Feb. 11, 1856.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF
DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.
TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,
LAMBETH POTTERY, HIGH-STREET, LAMBETH,
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to
5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pans.

GREAT REDUCTION IN THE PRICE OF STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET,

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.

WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.
The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.
DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate by applying to L. B. PEARSE and CO. Great Northern Wharf, York Road, Kings-road.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulic or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 7, Strand, London.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES BENDS, JUNCTIONS, and TRAPS (the waterful power by all to be of the best manufacture, but of unparalleled quality, combined with the greatest strength to meet the approbation of consumers). Agents, L. B. PEARSE and Co. Great Northern wharf, York-road, Kings-cross.

WHITE and BLUE CLOSET BASINS, URINALS, &c.
MILLWALL POTTERY.
DEPOT:
ARTHUR-STREET, NEW OXFORD-STREET.

TO DRAIN PIPE MAKERS.
WANTED IMMEDIATELY, 10,000 9-inch RED GLAZED SOCKET-PIPES, to Farnborough Station, South Western, or South Eastern, Railway.—Address to H. BIRCH, Contractor, Farnham, Surrey.

WILLIAM GILBERT, Tividale Pottery and Blue Tile Works, near Dudley, Staffordshire. The BLUE WARE SANITARY PIPES made by W. GILBERT are the only GLAZED pipes of the kind manufactured in England. They are well vitrified, so otherwise glazed, and very durable, being subjected to intense heat in the kilns. Being moulded by machinery, they are as smooth and straight as stoneware pipes; form thus any other material. The sockets are deep and made much stronger than the body of the pipe, so as to resist all unequal pressure under ground. These pipes are cheaper than stoneware, and may be had in 2 feet lengths, of 2 in., 3 in., 4 in., 6 in., 9 in., 12 in., 15 in. and 18 in. bore, with all kinds of syphons, junctions, bends, stables, and sink grates to match. Fire-clay chimney-pots of 10 patterns. Glazed stoneware sewerage pipes, &c. &c. Terra cotta clay brackets, trusses, vases, fountains, busts, statues pedestals, &c.

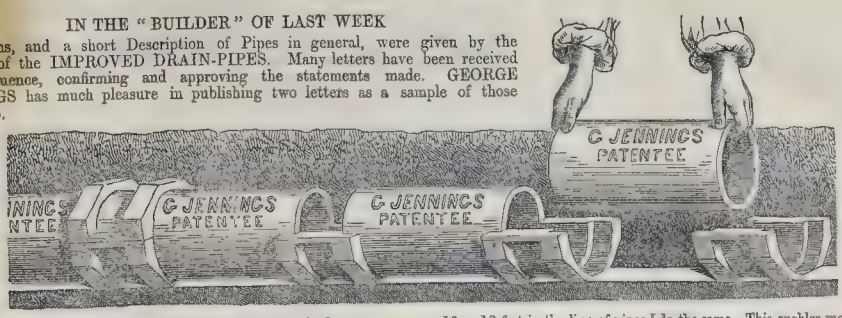
DRAUGHTS ROUND DOORS and WINDOWS.—GREENWOOD'S PATENT INDIA-RUBBER STOPS, to supersede list or leather, for the purpose of keeping out dust and draught round hung windows, closets, show-cases, &c., making the same air-tight. Price 6d. per set. Spring Slides for bottoms of doors, &c. &c.

JOHN GREENWOOD, Carpenter, 10, Arthur-street West, London-bridge.

TO ENGINEERS, ARCHITECTS, SURVEYORS, AND OTHERS, INTERESTED IN EFFICIENT DRAINAGE.

IN THE "BUILDER" OF LAST WEEK

Illustrations, and a short Description of Pipes in general, were given by the Patentee of the IMPROVED DRAIN-PIPES. Many letters have been received in consequence, confirming and approving the statements made. GEORGE JENNINGS has much pleasure in publishing two letters as a sample of those referred to.



"City Bank, Threadneedle Street,
"February 12th, 1856.

"SIR,—I quite agree with all you state in your advertisement in last week's *Builder*. As a further illustration of the necessity of examination, I may add, that I was sent by Messrs. Hunt and Stevenson, in 1853, to Dr. Wordsworth's, to examine and report upon the drainage of the mansion and offices. Before I could do so, I had to break into the drain-pipes at various points. Eventually it was found necessary to break the pipes every fifteen feet to cleanse them; the difficulty of restoration was great, and the expense considerable.

"As a clerk of works of some years' standing, permit me to observe that drains and drain-pipes are often nearly stopped by shavings, &c. before the works are out of the contractor's hands.

"However strict a clerk of works may be, foreign matters will find their way into the drainage.

"In all cases where I have used your pipes—and I recommend its adoption generally—I leave a saddle loose at the foot of every soil or rain pipe, and every 10 or 12 feet in the line of pipes I do the same. This enables me, at the completion of the works, to see if my drains are perfectly clear; if so, I have the saddles previously left loose, bedded like the rest. Although a comparative stranger, I wish you all the success your ingenuity deserves.

"I am, Sir, your obedient Servant,
"JOHN JARVIS.

"Mr. George Jennings."

"Surveyor's Office, Yeovil, February 11th, 1856.

"SIR,—I have much pleasure in bearing testimony in favour of your patent drain-pipes. We are using them in this town both for public and private drains, and they are generally considered equal in manufacture, and superior in principle, to any other pipes yet offered to the public.

"I am, Sir, your obedient Servant,
"ROBERT L. WILLIAMS, Town Surveyor.

"Mr. Jennings."

The Pipes above illustrated and referred to, with all the advantages they offer, are the SAME PRICE AS CHARGED BY THE RESPECTABLE LONDON POTTERS.

The Show-rooms now built on Jennings's Wharf, Holland-street, Blackfriars, will be open in March next, for the Exhibition of Sanitary Inventions, suitable for EVERY CLASS OF BUILDING, PUBLIC OR PRIVATE. In the meantime, Illustrated Particulars and Prices of JENNINGS'S Self-acting and other Waterclosets, Urinals, Lavatories, Pumps, Sluice-Valves, Fire and other Cocks, Gully-traps, Shop-shutter Shoes, Earthenware Drain and Soil Pipes, &c. &c. can be had free, on application, or by post, on enclosing two stamps to

GEORGE JENNINGS, SANITARY ENGINEER, GREAT CHARLOTTE-STREET, BLACKFRIARS.

N.B.—Illustrations and Particulars of FOUR OTHER PATENTS FOR SANITARY PURPOSES just taken by GEORGE JENNINGS will appear in the course of a week. In the mean time they can be seen at the Factory, as above.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's park Basin.

Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.

Burnley Agent Mr. JAMES SAGAR, Canal Wharf.

Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERY ASSOCIATION.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.

AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

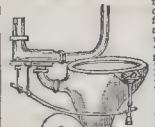
BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction, the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 23, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 39s. and perfect action guaranteed.



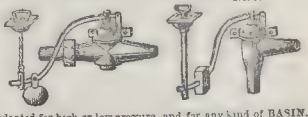
PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES

3 inch bore, in 2 ft. 6 in. lengths, at				3d. per foot.
4	"	"	"	4d. "
6	"	"	"	6d. "
9	"	"	"	9d. "
12	"	"	"	1s. 3d. "
15	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The principal resistance red-ware is overcome by this manufacture. And it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE No. 7.



is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under considerable pressure of 100 to 200 feet; they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New-cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price, complete, 14s. 6d. each.

SALES BY AUCTION.

TO COACHBUILDERS, COACH SMITHS, IRONMONGERS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, the 19th of FEBRUARY, and following day, at ELEVEN, on the PREMISES, George-street, Oxford-street, in lots, without reserve, SEVENTY TONS IRON and STEEL and IRONMONGERY, including about thirty tons SC bars assorted, twenty tons Staffordshire bars, eight tons oval, spring steel (Oakley's and Fenton's), five tons best cast and fluted axle shear steel, two tons bolts and nuts, 200 gross coach-bolts, assorted, 300 dozen files and rasps, 100 bags wrought and cut nails, one ton best Derby spun chain, one ton snaphead rivets, 50 gross wood screws, five tons crane coil and wheelwrights' chain, two tons burrs, washers, and bolt-rings; sixty pairs cart arms, mail patent axles, coach springs, coach ironmongery, double-purchase crab, builders' ironmongery, and a general assortment of ironmongery To be viewed on Monday previous to the sale, when Catalogues may be had in the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TELEGRAPH WIRE

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY, FEBRUARY 25th, at TWELVE, at the AUCTION MART, Bartholomew-lane, London, in lots, without reserve, EIGHT MILES of TELEGRAPH WIRE, insulated, No. 16 copper wire, in No. 5 gutta-percha casing, manufactured by the Gutta-Percha Company, City-road; adapted for either land or submarine telegraph, and now lying at Cotton's Wharf, Tooley-street. To be viewed at any time, by order, which, with catalogues, may be had of Messrs. Gordon and Ford, solicitors, No. 19, Wood-street, Cheapside; or of Messrs. FULLER and HORSEY, 13, Billiter-street, City, London.

WESTMINSTER. Surplus Builder's Stock and Effects.

MESSRS. EVERSFIELD and HORNE are instructed by the proprietor, in consequence of the senior partner retiring from business, to SELL by AUCTION, on the PREMISES, Earl-street, Westminster, on TUESDAY, the 19th of FEBRUARY, at TEN for ELEVEN, the SURPLUS STOCK-IN-TRADE, comprising a large quantity of dry deals, planks, and battens, prepared floor battens, No. 1 dry Wood-street, Cheapside; or of Messrs. FULLER and HORSEY, 13, Billiter-street, City, London.

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ST. JOHN'S-WOOD.—Leasehold Premises, with Workshops.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, at the MART, on TUESDAY, FEBRUARY 26th, at TWELVE, by order of the Assignees of Wm. Tavener, a substantial brick-built RESIDENCE, containing ten rooms, with work-shops, yard, and garden, situate on the south side of Clifton-road, St. John's wood; held for an unexpired term of ninety-six years, at a ground-rent of 9l. The Premises are in hand but of the estimated annual value of 64l.—May be viewed, and particulars had at the Mart; also of J. CHAPPLE, Esq. Solicitor, 19, Great Carter-lane, Doctors'-commons; and of the Auctioneers, 40, Parliament-street; or Coal-exchange.

GREEN PARK.—MATERIALS OF THE RESERVOIR

MESSRS. EVERSFIELD and HORNE are instructed by the Commissioners of Her Majesty's Public Works and Buildings, to SELL by AUCTION, on TUESDAY, MARCH 11th, on the ground of the SOUTH BROOK RESERVOIR and PLANT of the LARGE RESERVOIR near PIMLICO, in the Green Park—May be viewed and catalogues had at the Office of Works, White-hall-place; and at the Auctioneers', 40, Parliament-street, or Coal Exchange.

SOUTHALL.—Important Sale of Bricks, adjoining the Canal.

Plant and Premises at the Lower of the Field and Dock

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, Southall, Middlesex, about half a mile from the station, on FRIDAY, FEBRUARY 22nd, at TWELVE for ONE, by order of the BRICKMAKER, by placing orders, all that valuable and extensive PLANT, Machinery, and Implements, consisting of wash-mills, pug-mills, barrows, planks, horizontal engine, 8-horse power, sieves, cut-crusher, shaft-cutter, harness, stable utensils, erections of cottages and sheds, thirty-one boat, and other effects; also the lease of the field, partly prepared for the making season. May be viewed, and catalogues had on the Premises; also of C. KEIGHLEY Esq. Solicitor, 73, Strand-street; at the Inns; and of the Auctioneers, 40, Parliament-street, Westminster, or Coal Exchange, London.

N.B. Luncheon provided on arrival of the 11.0 train from London.

EARLY SALE.—To BUILDERS, CABINET and PIANOFORTE MAKERS, and OTHERS

MR. LEREW will SELL by AUCTION, on the PREMISES, Nos. 41 and 43, Union-street, Somerstown, on MONDAY, FEBRUARY 18th, at ELEVEN for TWELVE on account of the number of lots, a quantity of MAHOGANY, planks, deals, and battens, consisting of prepared flooring, 8,000 feet of scantling, 6,000 feet of wide pine board, 300 6-feet and 4-feet oak staves, dry cut stuff, 80 four-post and cane bedsteads, and other prepared work; two lots of brass and iron mongery, rasps, stoves and oil, six marble chimney pieces, seasoned lights, frames, sashes, screen, kitchen-range, &c. May be viewed the day prior and morning of sale, and catalogues had on the Premises, and of the Auctioneer, Cardington-street, Hampstead-road, near the Euston station.

DUNTON-GREEN, near Sevenoaks, Kent. Sale of valuable Oak and Ash, To-be

MR. WILLIAM HODSOLL is instructed by Josiah Weedall, Esq. to SELL by AUCTION, at the ROYAL ANCHOR INN, Dunton-green, on FRIDAY, 22nd FEBRUARY next, at THREE o'clock, 192 superior OAK TIMBER TREES, including many of great dimensions and excellent quality; also 36 capital ASH TREES, all standing upon the Homewood estate, in the parish of Otford, Kent. May be viewed on application to Jesse Snooks, at Brunton House, near Riverhead, and catalogues had of the work pits, also at the Inns in Dunton-green and at the Place of Sale, and of Mr WILLIAM HODSOLL, Auctioneer, &c. Tunbridge, Kent.

TWO HOUSES IN CARCASS, CHELSEA

MR. GEORGE BERRY will SELL by AUCTION, at the COMMERCIAL HALL, Chelsea, on THURSDAY, FEBRUARY 21, at ONE for TWO, in two lots, TWO substantially-framed CARCASSES, in a forward state, the floors and staircases being laid, and roofs tiled, &c., the Premises being No. 5, Paultons-square, Chelsea, each containing eight rooms, with garden in front, ornamental leases of which will be granted direct from the Ecclesiastical Commissioners, at a ground-rent of 8l. each.—May be viewed, and had at the Auctioneer's Offices, 44, Lincoln's-inn-fields; and of Messrs. LEE and FEMBERTON, 44, Lincoln's-inn-fields; and of the Auctioneer, 24, Millbank-street, Westminster.

SALES BY AUCTION.

Important Sale of Timber, felled, and lying on the Conservative Land Society's Estate, St. Margaret's, Twickenham. 70 Stacks of Hardwood, 7,000 Faggots, 100,000 Old Bricks, materials of Lodge, &c.

MR. RICHARDS will SELL by AUCTION, on the PREMISES, Twickenham, on WEDNESDAY, FEBRUARY 20th, and following day, at TWELVE o'clock, each day, 226 WITCH ELMS oak, lime, walnut, horse-chestnut, Spanish ditto, beech, Turkey oak, ash, sycamore, hornbeam, larch, cherry, acacia, and cedar timber trees, of extraordinary dimensions and superior quality, 70 stacks of hardwood, 7,000 large faggots, materials and effects. St. Margaret's is eight miles from London, surrounded by good roads, and close to the river. There is also a powerful crane within a quarter of a mile. The Timber will be sold on WEDNESDAY, and the Hardwood, Faggots, and materials on THURSDAY. A luncheon will be provided.—May be viewed six days prior to sale, when Catalogues may be obtained at the Office of the Society, 31, Norfolk-street, Strand; of Gaisford MORGAN, Esq. 5, Chancery-lane; at the Coach and Horses, Isleworth; and of the Auctioneer, Tottenham.

WILLOW-WALK PARK, TOTTENHAM Builder's Stock-300,000 Bricks, Stone, 2,000 Duchess Slates, 100 Squares of Floor, 100 Scaffolding Horse and Cart, and Effects.

MR. RICHARDS will SELL by AUCTION, on the PREMISES near the PARK RAILWAY STATION, on TUESDAY, FEBRUARY 19, at TWELVE o'clock, Stock and Implements, at one sale, 300,000 first prime stock bricks, 100 squares of prepared flat, bullnose, 20-in inch ditto, moulded and other doors and hammer, sashes and frames, and a variety of joiners' work, standard lavatories, deal and deal-ends boards, pulleys, and 1 cords, wheeling-planks, screens, benches drain pipes, 500 yards of gravel, &c. View day prior and morning of Sale Catalogues on the Premises, and of the Auctioneer, Tottenham.

TO RETAIL TIMBER MERCHANTS, CONTRACTORS BUILDERS, SAW-MILL PROPRIETORS, AND OTHERS.

MESSRS. DAVIS and VIGERS are instructed by Mr Samuel Grimsdell, upon his retirement from business, to SELL by AUCTION, on the PREMISES, Bellhaw, Spitalfields, and 19, Long-street, (late Church-street Whitechapel-road, on MONDAY, MARCH 3rd, and several following days, at TWELVE for ONE o'clock each day, and without reserve, his extensive, well-seasoned, and valuable STOCK and PLANT, comprising 600 first quality yellow, deals, and Hudson deals, 150 white Memel and yellow Swedish yellow Wyborg battens, 50 feet of Spanish and Honduras mahogany, cut from two to five years, Dutch crown Riga timber, oak and elm plank, thoroughly seasoned, prepared floor battens, and a large and useful assortment of dry cut stuff, 1,000 scaffold poles, 2,000 scaffold boards, 1 powerful 20-horse (nominal) wheeling planks, stock of ironmongery, five wrought-iron box girders, cast-iron columns, the fittings and tools of smiths' shop, plate, crown, and other glass, lead, in sheet and pipe, colours, oil, turps, fittings of plumbers, painters' and glaziers' shop, fifty carpenters' benches, iron cramps, travelling jenny, six single and double-purchase crabs, powerful screw-jacks, fifty ladders, two pug-mills and a limemill, blocks of Portland and other stone, Yorkshire paving, landings, &c.; mason's saving tackle and stone-saws, and two timber carriages, three stone-trucks, two spring-vans, eight carts (various), three-hand stone-trucks, two powerful cart-horses and two light van-horses, with numerous items of valuable and useful property, forming the entire stock and fittings, and requisites of a large and well-established builder's establishment. To be viewed two days before and on the mornings of sale. Catalogues will be forwarded by post, or may be had on the Premises; of Messrs. WARRINGTON and BEATSON, New City Chambers, Bishopsgate; and at the Auctioneers' Offices, 9, Frederick's place, Old Jewry.

N.B.—The lease of the extensive premises in Bell-lane to be sold, with immediate possession to the purchaser.

TO BUILDERS, CONTRACTORS, AND SAW-MILL PROPRIETORS AND OTHERS, requiring large Premises in the heart of London

MESSRS. DAVIS and VIGERS are instructed by Mr Samuel Grimsdell, upon his retiring from business, to SELL by AUCTION, on the PREMISES, on MONDAY, MARCH 17th at TWELVE for ONE, the extensive Premises in Bell-lane, Spitalfields, with immediate possession to the purchaser. The buildings are of the most part newly built, and of fire-proof construction, and comprise carpenters' shops, affording beneficial room for 60 men, mill-rooms, powerful 4-horse fitting shop, numerous stores, plumbers' and painters', smiths' shops, stabling for 14 horses, and a loose box; capital range of outhouses and premises for foreman &c., and with a large yard occupy a well enclosed area of about 3,000 feet, held with premises adjoining let to Mr. Gregory, at 31l. 10s. per annum, and the whole during the current term, from Michaelmas last at 120l. per annum, free from land-tax which is paid by the tenant. To be viewed by cards, to be obtained of Messrs. DAVIS and VIGERS, Percival-street, Rosoman-street; and may be had of E. S. CLARKE, Esq. Solicitor, Bishopsgate Churchyard; of Messrs. WARRINGTON and BEATSON, New City Chambers, Bishopsgate; on the Premises; and at the Auctioneers' Offices, 9, Frederick's-place, Old Jewry.

PRELIMINARY ADVERTISEMENT.

The valuable Lease of extensive Brickfields at West Drayton; also the stock of Bricks, Implements, and Effects.

MR. MARSH has been favoured with instructions from the Trustees of Mr. Samuel Pocock, to SELL by AUCTION, in the present month (if not previously disposed of by Private Contract), the valuable LEASE of the extensive BRICKFIELDS, containing about nine acres, with the Cottages and Buildings thereon, situate at West Drayton, Middlesex, near a station on the Great Western Railway, and on which the property abuts on the north and south sides, for an unusual term of 4000. Also, the stock of Bricks, Implements, and Effects. Detailed advertisements will appear; and in the interim, every information obtained at Mr MARSH'S Offices, 2, Charlotte-row, Mansion House

Immediate Sale of the surplus Stock of a noted good Paperhanging Manufacturer.

MR. EDWIN WHITE will SELL by AUCTION, without reserve at his spacious ROOMS, Bishopsgate-street Without, on TUESDAY, the 19th of FEBRUARY, at TWELVE for ONE o'clock precisely, a large and choice assortment of PAPER-HANGINGS, consisting of gold, flocks, velvets, damasks, chintzes, marbles, granites, oaks, and others, in multifarious and desirable styles for modern purposes, and items removed for convenience of sale.—On view the day prior and morning of sale, when catalogues may be had

TO BUILDERS, CONTRACTORS, AND OTHERS.

MR. HARDING will SELL by AUCTION, at the Brick-field, North Hyde Lane, Southall, near the Southall railway station, on WEDNESDAY, the 20th of February, at TWELVE o'clock, 350,000 BRICKS, consisting of Stock, Place, Grizel, and others, of a very superior description. May be viewed, and catalogues had of Mr FELLOWSON, adjoining the Brick-field, and at the Auctioneer's offices, 21, New Broad-street, London.

IMPORTANT SALE OF BUILDING MATERIALS

MR. F. HALL has been favoured with instructions to SELL by AUCTION, the first portion of the excellent MATERIALS of Her Majesty's late STATIONERY OFFICES, Great James-street, Bedford-row, Westminster, on the PREMISES as last sold, on WEDNESDAY, FEBRUARY 27, at TWELVE for ONE. They comprise the walls of the internal antique staircase, and mahogany balusters, panelling, and handrails; massive marble chimneypieces; 100 pairs of sashes and of wainscoting and partitions; Portland portico with 2 pairs of Ionic columns and turned balusters, 3 statues of capital York paving, lighter and other stoves, ranges, &c.; and a varie y of other useful materials.—May be viewed on the 26th and morning of sale, and catalogues had on the Premises and at the Auctioneer's office, City-chambers, Bennington.

SALES BY AUCTION.

DEPTFORD CREEK, near the Scapery.

MR. J. ASHFORD will SELL by AUCTION, on MONDAY, the 18th of FEBRUARY, 1856, at TWELVE o'clock, on the PREMISES, as above, a 10 horse-high-pressure STEAM ENGINE, large quantity of chain, pitch, &c. iron and wood tanks, about 100 loads of prime Memel timber, comprising 9 to 9 half timbers of various lengths; quantity of fir planks, boards, quartering, &c. fifty stacks of fir firewood, and a quantity of useful effects, removed from the Commercial Docks for convenience of sale. To view the morning of Sale. Catalogues may be had on the Premises, and of the Auctioneer, &c. High-street, Deptford.

A PROFITABLE INVESTMENT. — To ENGINEERS or CAPITALISTS.—A valuable PATENT TO BE SOLD, that is patronised by Her Majesty's Honourable Board of Ordnance; or a PARTNER WANTED to JOIN the PATENTEE, for the extension of his business.—For particulars, apply (if by letters, to A. B. Mr. R. L. Curtis, Surveyor, No. , Riches-court, Lime-street, City

WANTED, a PLUMBING, PAINTING, and GLAZING BUSINESS, in a country town, where the stock and fixtures would not be expensive. The Advertiser, who is leaving the business in which he has been engaged as a tradesman or a widow as a working partner.—Address to A. B. care of Messrs. Jas. Gay and Co. 8, Laurence Pountney-hill, Cannon-street, London

TO SURVEYORS, AUCTIONEERS, AND ESTATE AGENTS

A GENTLEMAN, who has relinquished private practice to accept a public appointment is desirous of LETTING his COUNTRY OFFICES, with a dwelling-house, in a provincial town. The premises are held at a very low rent, but the offices having been built by the tenant within the last year, a premium of 100l. will be required to cover part of the outlay, and the office furniture. There is a good opening for a surveyor, and an introduction will be given. For further particulars, apply to Mr. J. W. PENFOLD, Architect and Surveyor, 2, Charlotte-row, Mansion house.

WANTED to PURCHASE an OLD MANSION, HOUSES, or PLOT of GROUND, freehold, copyhold, or long leasehold, in the METROPOLIS or its immediate vicinity. Any person forwarding the fullest particulars and lowest price to Mr. REARDEN, 91, Piccadilly.

WANTED, in Westminster, in the neighbourhood of the Abbey, a PLOT of GROUND, for building, or a large old house, freehold or leasehold, for a long time.—Direct, C. D. Adams's Newspaper-office, 9, Parliament-street.

WANTED, a good FAMILY RESIDENCE, to RENT or PURCHASE: the West end preferred. The reception and principal bed rooms must be large, and the situation must be healthy and airy Rent or purchase 1 about 230l. per annum If with stabling it will be preferred.—Full particulars stating position and price, to be addressed to H. P. G. care of Mr. Hammond 57, Lombard-street.

TO IRONFOUNDERS and OTHERS.—WANTED TO RENT, a BUILDING suitable for an iron foundry, where power could be had to drive a fan: or an iron-foundry already fitted up.—Apply by letter, stating particulars, to R. Office of "The Builder."

TO BUILDERS and OTHERS.—Spacious WORKSHOPS, STABLES, and OUTBUILDINGS (room for thirty horses), to be LET, at Nine-elms, near Wandsworth-road, a short distance from the goods station of the South-Western Railway Company. Rent very moderate. No fixtures to take.—Apply at the PRINCE OF WALES, Union-road, Wandsworth-road, near the premises.

THE VIEILLE MONTAGNE ZINC MINING COMPANY'S PURE PATENT WHITE ZINC PAINT is unequalled for permanency of colour, hardness, and brilliancy of surface in covering all woods and metals from any other vapours or emanations. Being completely innoxious and free from the pernicious effects of white lead, it may be employed in all apartments whilst in use without any inconvenience to the inmates.

The greatest caution is recommended to avoid any spurious compounds that might be sold at cheaper rates as Pure Oxide of Zinc. If any adulteration has taken place in the oxide, either in consequence of impurity in the material primarily made use of, or from the admixture of other substances, the paint will not only produce it, an imperfect more or less opaque colour, but in proportion as the oxide contain substances calculated to give it increased weight, it then produces a very inferior article instead of a very superior paint, and the economy realised by the purchaser of such oxides becomes a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the VM mark—in Hull by Messrs. BLUNDELL, SPENCE, and CO.; when ground and dry, by Messrs. T. B. MORLEY and CO. and by the Company's Grinding Agent in London, Messrs CHARLES DEVAUX and CO. Wholesale Agents, 69, King William-street City; and by the Manufacturing and Painting Agent, Mr FREDK. BRABY, Fitzroy Works, Newroad. In Manchester and Liverpool by CLAY, 5, Mersey-street, who is the acknowledged Painter to the Company for Zinc Paints, and undertakes painting ships, warehouses, dwelling-houses, In Leith, by Messrs. R. ANDERSON and CO. Timber-builders and in Southampton, by Mr. H. J. BUCHAN. Dry OXIDES and PAINTS, in kegs of 14, 21, and 28 lbs and upwards, to be had of the Company's Agents at Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and the Isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with Zinc Paints by contract.

For further particulars, apply to the Company's General Agency in London, 13, Manchester buildings, Westminster.

TERRA-COTTA WORKS, Blackfriars-road, London The PRIZE MEDAL for MATERIAL, WORKMANSHIP in TERRA COTTA to MR. T. HARMAN, late of Coade's Original Works, and sole owner to them in the manufacture of this durable material, that has been so successfully adopted for nearly a century in this country, by our eminent architects and others, in the adornment of our noblest buildings, and is the only fire-proof material for external use. Specimens of time unimpaired, Gr ups, Statues, Vases, Fountains, and Ecclesiastical Embellishments, at prices and quality that will defy competition. A large Stock of Chimney Shafts, Vases, and Pots, to suit the various styles of buildings, at very low prices, and worthy of notice.

BLASHFIELD'S PATENT TERRA-COTTA, Manufactured at Mill-wall, Isle of Dogs.—Capitals Consoles, Trusses for Parapets, Balusters, String Courses, Friezes, Bas-relievos, Vases, Statues, Chimney-shafts, and all other Architectural Ornaments, Moulded, Sculptured, and Carved, in the best manner, and warranted to stand heat and frost, either in Buff or Red-coloured Terra-cotta.—A great variety and large stock may be seen at BLASHFIELD'S Warehouse and Show-rooms, No. 1, Praed-street, Paddington.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX and Sons, & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, February 16, 1856.

The Builder.

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ARCHITECTS' BENEVOLENT SOCIETY.

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The List of Subscribers and Annual Report may be obtained of the Hon. Secretary. Subscriptions will be received by WILLIAM TITE, Esq. St. Helen's-place, the Treasurer; or by Mr. GOLD, the Collector, 8, Craig's-court, Charing-cross.

J. TURNER, Hon. Secretary, 15, Wilton-street.

BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.

Head-Master—R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify schoolmasters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Free-hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still life, &c. the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of China and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees £2 per session, or part of the session. For Evening Classes only, £1 per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of £1. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. Mejan. Classes for session,—Advanced Class, 2l. and 4l.; Elementary Class, 1l.; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall-mall, London.

THE SOCIETY of ARTS' ANNUAL COLLECTION of INVENTIONS will be OPENED at the Society's House, John-street, Adelphi, on EASTER-MONDAY, the 24th MARCH. It will comprise models and specimens of recent inventions, whether patented, registered, or not, and of works of recent construction. Articles for exhibition must be forwarded, carriage paid, on the 6th, 7th, or 8th of MARCH.

INVENTORS who purpose to contribute MODELS or SPECIMENS to the Society of Arts' Annual Collection of Inventions, should communicate with the Secretary without delay, as the Exhibition will be opened at the Society's House, John-street, Adelphi, on Easter Monday, the 24th of March.

ST. THOMAS CHARTER-HOUSE SCHOOL of ART, Goswell-street, in connection with Marlborough House, Pall-mall. Evening Classes from Seven till Half past Nine. Studies: Class A, Freehand Drawing and Shading, from the flat and the round; Ornament Figure, &c. in chalk and sepia; Painting in Oil and Watercolours, &c. &c. Class B, Practical Geometry and Perspective; Architectural and Mechanical Drawing; Modelling in Clay and Casting.—Terms and further particulars to be obtained of the Secretary.

ARCHITECTURAL EXHIBITION, and Collection of Materials and Manufactures connected with Building, WILL CLOSE on SATURDAY NEXT. Open from NINE till dusk. Admission One Shilling.—All articles exhibited MUST be REMOVED on the 27th or 28th inst.

COMPETITIONS.

TO ARCHITECTS, SURVEYORS, AND OTHERS.

PLANS, DESIGNS, and DRAWINGS are requested for the ERECTION of TWO CEMETERY CHAPELS, under one roof, together with a Lodge and Entrance Gates, for the Grantham Burial-Ground (containing six acres of land), to include ground-plans and elevations, and to be accompanied by approximate estimates of the cost of the buildings to be faced with Ancaster stone, and the plinths to be of Mansfield stone. The whole expense (including fittings, &c. of chapels) not to exceed the sum of £1500. £10 is offered for the plan of the chapels and buildings considered to be the best, unless the architect shall also contract for the works, and £5. for the second best. The whole of the plans, &c. to be sent to me, sealed and endorsed; but without any name or distinguishing mark, on or before SATURDAY, the 1st day of MARCH next, inclosing a sealed letter in each case from the person forwarding it.

By order of the Burial Board,
ROBERT HENRY JOHNSTON, Clerk.

Grantham, Feb. 5, 1856.

LIVERPOOL FREE PUBLIC LIBRARY and MUSEUM.—To ARCHITECTS.—The Council of the Borough of Liverpool are about to ERECT a BUILDING for the purposes of the FREE PUBLIC LIBRARY and the DERBY MUSEUM, and offer a premium of One Hundred and Fifty Guineas for the best Design, and One Hundred Guineas for the second. The Designs are to be sent in on or before SATURDAY, MAY 31. Copies of the printed conditions and instructions to Architects, competing; and lithographed plans and sections of the site, may be had on application to Mr. J. STUART DALTON, Librarian, Free Public Library, Duke-street, Liverpool.

TO ARCHITECTS, &c. — PLANS for a NEW WORKHOUSE for BOLTON UNION.—The Guardians of the Poor of the Bolton Union are desirous of obtaining PLANS, SECTIONS, and WORKING DRAWINGS for the ERECTION of a WORKHOUSE, to accommodate 1500 inmates, the cost of the buildings not to exceed 12 per head. A premium of 50l. will be awarded for the best, and 30l. for the second best plan, but the Guardians will not be responsible for any payment for unsuccessful designs. The plans of the two successful competitors to be the property of the Guardians, who do not pledge themselves to employ either of the successful competitors in carrying out the undertaking. The designs must be sent in under seal, without name, and with a private mark or motto thereon, accompanied by a letter under cover, and sealed, containing a corresponding mark or motto, and the designer's name and address, to the Clerk, on or before MONDAY, the 7th APRIL, 1856.

JOHN WOODHOUSE, Clerk to the Guardians.

Union-office, Acresfield, Bolton, February 15, 1856.

GRANTHAM BURIAL BOARD.—EXTENSION of TIME for PLANS, &c.—The Period for sending in Plans for Chapels, Lodge, and Entrance Gates, is EXTENDED to SATURDAY, 22nd MARCH. Plans are also requested for PLANTING the GROUND and LAYING OUT the ROADS and WALKS thereon, two-thirds as consecrated, one-third unconsecrated, to be sent in by the same time, for which an additional premium of £5 is offered. The square is to be 220 yards by 133 yards. Entrance west.—By order of the Board,

ROBT. HY. JOHNSTON, Clerk.

Grantham, February 9th, 1856.

TO ARCHITECTS AND SURVEYORS.

THE COMMITTEE for BUILDING NEW NATIONAL SCHOOLS at LUTON, Beds, are desirous of receiving DESIGNS in COMPETITION for the ERECTION of such SCHOOLS. A plan of the site, with further particulars may be had on application, by letter only, and sixpence in postage stamps, to Mr. D. H. STARKIE, National Schoolmaster, Luton.

CONTRACTS.

CHORLEY IMPROVEMENT.—SEWERAGE TOR-MOUNDERS.

The Chorley Improvement Commissioners, being about to sewer, hereby give notice, that they are prepared to receive TENDERS from parties willing to undertake the following Contract:—

CONTRACT, No. 3.—For supply of Cast-Iron Street Gullies.

Forms of Tender may be had on application at the Commissioner's Office, Chorley; or at the Offices of ROBERT RAWLINSON, C.E. 24, Parliament-street, Westminster.—Sealed Tenders to be delivered at the Commissioners' Office, in the Town, by TWELVE o'clock, on SATURDAY, the 1st day of MARCH next, endorsed "Tenders for Gullies, Contract No. 3."

(Signed) RICHARD JACKSON, Clerk to the Commissioners.

Chorley, February 18, 1856.

BURLEY-IN-WHARFEDALE (Yorkshire). SEWERAGE WORKS.—The Local Board of Health for the district of Burley-in-Wharfedale hereby give notice, that are instructed to receive TENDERS from competent parties for MAKING and FINISHING certain SEWERS, DRAINS, MANHOLES, GULLIES, and other WORKS required for the sewerage and drainage of their district. Duplicate copies of the plans, sections, detailed drawings, and specifications may be seen at Burley, on application to the undersigned; also at the Offices of Mr J. M. LANDSBOROUGH, C.E. Engineer, 3, Queen-street, Bradford, from wh m printed forms of Tender, and any further information may be obtained. Tenders, properly sealed and endorsed, must be delivered to the undersigned, on or before FRIDAY, the 7th day of MARCH next. The Local Board do not bind themselves to accept the lowest or any Tender.—By order,

EDWARD BRUMPITT, Clerk to the Board.

Burley-in-Wharfedale, near Otley, 13th February, 1856.

CONTRACTS.

ORDNANCE CONTRACT for AGRICULTURAL DRAINAGE.—Sealed Tenders addressed to the Director General of Contracts, War Department, Pall-Mall, London, will be received until TWELVE o'clock on FRIDAY, 29th FEBRUARY instant, from parties willing to Contract for the AGRICULTURAL DRAINAGE of the SPACES and PARADES between the battalions and ground adjoining, at the CAMP at ALDERSHOT. Specifications and forms of Tender, together with any further information required, may be obtained on application to Mr. DREW, Clerk of Works, Royal Engineer's Office, Aldershot Camp, on and after MONDAY next, the 18th instant. The Tender to state the price per acre, and to be endorsed, "Tender for Agricultural Drainage at the Camp at Aldershot." The War Department reserves the right of rejecting the whole or any of the Tenders.

Royal Engineer's Office, Aldershot, Feb. 13, 1856.

ORDNANCE CONTRACT.—To BUILDERS and CONTRACTORS.—Sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, until TWELVE o'clock on MONDAY, 10th MARCH next, from parties willing to contract for the ERECTION of a LAND TRANSPORT ESTABLISHMENT at the Camp, Aldershot. Plans may be seen, and specification and form of Tender obtained on application to Mr. BAKER, Clerk of Works, Royal Engineer Office, Camp, Aldershot, on and after MONDAY next, the 25th inst. The Tender to be endorsed, "Tender for Land Transport Establishment, Aldershot." The War Department reserves the right of rejecting the whole or any of the Tenders.

War Department, Aldershot Camp, 20th February, 1856.

THE LOCAL BOARD of HEALTH for the District of WATFORD are prepared to receive TENDERS for the MAKING and CONSTRUCTING certain SEWAGE TANKS at the outfall of their district, near the Town of Watford. The plan and drawings and specification may be inspected, also further particulars obtained, by application, at the Offices of JAMES PILBROW, C.E. Tottenham. The specifications and conditions of contract may be had upon payment of 5s. Tenders to be sent in on or before MONDAY, the 25th instant, endorsed "Tender for Sewage Tanks."—By order of the B. ard,

JOHN SEDGWICK, Clerk.

Board room, Watford, February 8, 1856.

TO BUILDERS AND OTHERS.

THE JOINT BURIAL BOARD for the TOWNSHIP and PARISH of FOLKESTONE, in the county of Kent, are desirous of CONTRACTING for BUILDING and FURNISHING, at the new Cemetery, near Cherlton-road, TWO CHAPELS, a Porter's Lodge and Entrance Gates, and the Boundary Wall and for providing and fixing the Entrance-gates, &c. Persons willing to contract, may see the plans and specifications at the Office of JOSEPH MENGHAM, Esq. Architect to the Board, Bouverie square, Folkestone, between the hours of TEN and FOUR on any day after the 19th instant. Sealed Tenders (marked "Tender for Buildings at Folkestone") for executing the whole or any of the works, are to be left at my Offices in Church-street, Folkestone, not later than FOUR o'clock in the afternoon of TUESDAY, the 18th day of MARCH next. It is stipulated that it shall not be incumbent on the Board to accept the lowest or any Tender.—By order of the Board,

Folkestone, 13th February, 1856. RICHARD HART, Clerk.

TO CONTRACTORS and BUILDERS.—The Board of Works for the Greenwich District, are prepared to receive TENDERS from Contractors for making the necessary DRAINS from HOUSES and BUILDINGS into the MAIN SEWERS of the DISTRICT. Further particulars may be known on and after MONDAY, the 25th instant, at the Board's Offices, Burney-street, Greenwich, where all Tenders for the above must be sent in, sealed up and endorsed, "Drainage Tenders," at or before FOUR o'clock in the afternoon of TUESDAY, the 4th of MARCH next.—By order,

Greenwich, February 21, 1856. H. W. JAMES, Clerk.

BOARD of WORKS for the HOLBORN DISTRICT.—The Board will meet at the Workhouse, in Little Gray's-inn-lane, on MONDAY, the 3rd day of MARCH next, at SEVEN o'clock in the afternoon precisely, to receive separate and distinct proposals in writing, sealed up, from persons desirous of CONTRACTING for one year, from Lady-day next—1st, for Removing the Dust, Ashes, Dirt, Soil, Stones, Brick Rubbish, Oyster Beds, Decayed Vegetables, and all Refuse Matter, from the Houses throughout this District (except Lamb's Conduit-street, and the Liberty of Glasshouse-yard); and secondly, for cleansing the Streets, Courts, Alleys, Passages, and Yards, and for sweeping the same, and the employment of Scavengers, Horses, and Wagons for the purpose. All persons delivering proposals are to attend. The Board do not bind itself to accept the lowest or any Tender. The security of two responsible householders will be required for the due performance of the Contracts; and the names and addresses of the parties proposed as such security must be delivered in with the Tenders.—Printed forms, and full particulars as to the quantities, may be had in the district, and at the Clerk's Office. One half of the expense of the Contracts to be paid by the contractors. By order of the Board,

S. W. HOPWOOD, Clerk.

Office, 7, Chancery-lane, February, 1856.

CONTRACT for LIGHTING with GAS and REPAIRING PUBLIC LAMPS.—The Crown Estate Paving Commissioners are ready to receive TENDERS from parties ready to receive TENDERS from persons willing to enter into a CONTRACT for the execution of the above mentioned services in and about the Royal Parks and Palaces, and the Districts under the jurisdiction, for a term of seven years, from the 24th day of JUNE, 1856. Printed specifications and forms of Tender may be obtained on application to me here, where the Tenders are to be delivered at or before ONE o'clock on WEDNESDAY, the 5th day of MARCH next.

FRANCIS ADAMS, Clerk to the Commissioners.

1, Whitehall, place, Feb. 13, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

WESTBURY CEMETERY.—To BUILDERS and OTHERS.—The Burial Board of the Parish of Westbury invite sealed Tenders for BUILDING and COMPLETING the CHAPELS and LODGE, and also for CONSTRUCTING the BOUNDARY WALLS and ENTRANCE GATES of the Cemetery, according to the plans prepared for that purpose by Mr. E. G. BRETON, of Oxford, the Architect. The plans, drawings and specifications may be seen at Mr. BRETON'S, Architect, Oxford, between the hours of 10 a.m. and 5 p.m. until the 3rd day of MARCH next, and no Tender will be received unless delivered from the separate trades, or for the whole or any part of the works, but each Tender must specify whether for them, or for the lowest Tender for the whole of the works, and be delivered at the Vestry Room, Westbury, before the 10th day of MARCH next, marked "Tender for the Cemetery." Security for the due performance of the work to be prepared at the expense of the contractor will be required.

HENRY PINNIGER, Clerk to the Board.

Westbury, 19th February, 1856.

THE MARCH LOCAL BOARD of Health are prepared to receive TENDERS from competent persons for the EXECUTION of the WORKS connected in the following CONTRACTS for the Drainage and Water-supply of the District:—

CONTRACT A.—Sewers and Drainage Works.

CONTRACT B.—Well-sinking, Brick Tower, and Engine-House.

CONTRACT C.—A Steam-Engine, Wrought-iron Tank, Cast-iron Pipes, Pipe-laying, and Sundry Iron-work.

The plans and specifications may be inspected at the office of the said Local Board on MARCH 1st, where forms of tender may be obtained, and further information may be obtained of Mr. R. REYNOLDS, Rome Cottage, Bromley, Kent, C.E., Engineer to the Board.

Bridge. Sealed Tenders, properly endorsed, are to be delivered at the office of the Board, at Bow Bridge, before SATURDAY, the 1st day of MARCH next.

The Board do not bind themselves to accept the lowest or any tender.

By order,

THOS. T. ELLIOTT, Clerk to the Local Board.

March, 1st, 1856.

TO CONTRACTORS and OTHERS.—The Commissioners of Harbour Circuit at Byker, Newcastle-on-Tyne, are desirous of receiving TENDERS for the SUPPLY of STONE for the Breakwater and Pier Extension at the mouth of the River Tyne. The superficial extent of the work, and the depth of water, are sufficient to admit vessels of large burden; and the quarries will be open to the Contractors, who will have the power of working as much stone as they require. Besides the ordinary means of conveying away the stone by sea, arrangements have been made with the Railway Company for a branch railway, from the Byker Bridge Station, to the Breakwater, terminating at the end of the Pier, which will afford every convenience for shipping the stone. Mr. LIFFORD, Mr. LOCKE, Mr. STEPHENSON, Mr. BIDDER, and others, have been appointed Engineers to report upon the merits of the Tenders.

Plans, Specifications, and Forms of Tender may be had on application at the Harbour Office, Byker, and all communications and offers may be addressed to the Rev. T. R. GREEN, St. Mary's place, Newcastle-on-Tyne.—Byker, Feb. 5, 1856.

CONTRACT for the SUPPLY of BUILDING MATERIALS for CONVICT PRISONS.—Persons desirous of TENDERING for the SUPPLY of TIMBER, Deals, Slates, Lime, Cement, Lead, Oils, Wrought and Cast Iron, Ironmongery, and other Building Materials required for the Convict Prisons, for twelve months from the 1st of APRIL next to the 31st of MARCH, 1857, for Portsmouth, Millbank, Brixton, Pentonville, Portsmouth, Dartmoor, Chatham, and Parkhurst Prisons, and Surbiton Hospital, Portland, are requested to send, addressed, "Deputy-Surveyor, Portland Prison," their Tenders on or before MONDAY, the 10th day of MARCH next, by 4 o'clock p.m. Forms of Tender may be had on application at the several Prisons, or at the Office of the Directors, 45, Parliament-street, London.

45, Parliament-street, 18th February, 1856.

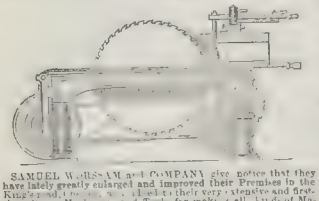
KIMBERLEY'S NEW PATENT SCAFFOLDING BRACKET entirely supersedes the old and ever-troublesome cords. They are made of cast iron, and require little to no subsequent repairs. They are greatly admired, and require none but very simple, easy, cheap, and little next to no subsequent wear-and-tear. They are to be had of Messrs. PUGH & CO., Ironmongers, Kingsland, London, and of all respectable Ironmongers throughout the kingdom.

London Agents:

Messrs. PUGH & CO. 13, King-street, Snow-hill, London.

See also KIMBERLEY'S Patent Door Springs, Skylight Screws, Casement Fastenings, Stock Locks, Bench Screws, &c. &c.

MACHINERY.—SAWING, PLANING, and MOULDING.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the Kingsland-road, and have added thereto very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they are at all times enabled to execute orders with promptness, and have had the honour of being supplied with many of the largest Machines by the most eminent Engineers and Contractors in the world.

S. W. and Co. beg to state that they confine their attention to this class of machinery, and have had the honour of supplying some of the largest Engineering Companies and Contractors in the world with their Machines for home and foreign use.

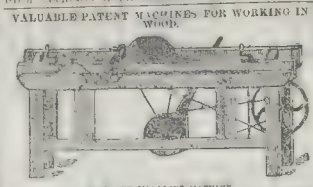
TO TIMBER MERCHANTS, BUILDERS, CONTRACTORS, and OTHERS.—TO BE SOLD, a PLANING-MACHINE by Worssam, of Chelsea, nearly new, or would be exchanged for timber, Deals, Battens, or Prepared Flooring Boards. Apply to the Clerk of the Works, Victoria-road, Old Charlton, near Blackheath.

JOHN PARKIN and CO. late BLAKE and PARKIN of NEW MEADOW STEEL WORKS, SHEFFIELD, MANUFACTURERS OF CIRCULAR and MILL SAWS, IMPROVED CAST-STEEL FILES, for the use of engineers and machinists, PATENT TEMPERED MACHINE KNIVES and CUTTERS, moulds, targets for planing, turning wood, &c. &c. and many other articles too numerous to mention. Warranted to work with a harder and finer edge than any other manufacture.

INVENTORS of CAST-AND-ANNEALED CAST STEEL for taps, piston-rods, &c. MANUFACTURERS of RAILWAY SPRINGS, BLISTER, SHEAR, and CAST STEEL, &c.

A HIGH-PRESSURE STEAM-ENGINE, with Saw Frame and 24 in. TIMBER SAWING MACHINERY, WANTED to PURCHASE, new or second hand, in good working order. Address to THOS. MORTON DAVIES, Carpenter, Ipswich.

VALUABLE PATENT MACHINES FOR WORKING IN WOOD.



SASH AND MOULDING MACHINE.

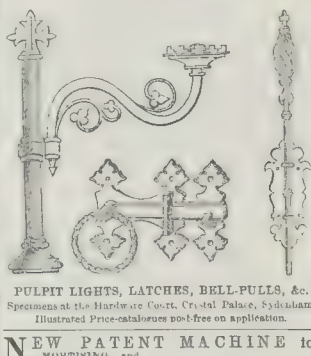
PRIZE MEDALS have been awarded to these celebrated machines, both at the Great Exhibition in London and many scientific institutions. They are extensively used throughout the United Kingdom, by joiners, cabinet-makers, coach and cabinet makers, railway carriage and waggon builders, machinists, agricultural implement makers, shipbuilders; and by the Royal and Imperial Governments for planing and squaring up, moulding, tenoning, mitreing, grooving, rebating, sawing, and boring. They certainly are the very best of their kind either in hard or soft wood, and will perform all the ordinary descriptions of work required in the above trades in a very rapid and superior manner, and at a greatly reduced cost.—Sold only by WILLIAM FERNESS, Patentee, 20, Lawton-street, Liverpool, from whom full particulars may be obtained.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND,

London.



PULPIT LIGHTS, LATCHES, BELL-PULLS, &c.

Specimens at the Hardware Court, Crystal Palace, Sydenham.

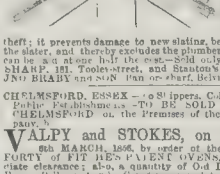
Illustrated Price-catalogues post-free on application.

NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.

House and Coach Builders, Joiners, Cabinet-makers, and others, doing similar work, are invited to call at the Patentees', LEWIS JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see it in action this very simple, powerful, and expeditious machine, which is the only one yet brought out for performing these three separate kinds of work by the machine; and as it is self feeding, it does not require any skill or care in using, like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery introduced.

SEVERAL YEARS have elapsed since the introduction of WILLIAMS'S PATENT SLATE HIPS and RIDGES. The Agents, from experience, can practically affirm the great superiority they possess over LEAD and beg to remind Architects of the following advantages:—



WILLIAMS'S PATENT RIDGE

is equal in durability to Lead; its appearance surpasses it; it is uninfluenced by the weather; it offers no temptation for theft; it prevents damage to new slating, because it is fixed by the slater, and thereby excludes the plumber from the roof; and can be put at one half the cost.—Sold only by JAS. and JNO. SHARP, 191, Tooley-street, and Stanton's Lower Wharf; and JNO. BRABY and SON, Plan or chart, Belvidere-road, Lambeth.

CHELMSFORD, ESSEX.—To Shippers, Colonists, Schools and Public Establishments.—TO BE SOLD by AUCTION, at CHELMSFORD on the Premises of the Patent Oven Company.

VALPY and STOKES, on THURSDAY, 6th MARCH, 1856, by order of the Proprietors, about FORTY of FIFE'S PATENT OVENS, in lots, for immediate clearance; also, a quantity of Oval Iron, Smiths' Tools, Forge, Bellows, Anvils, Grindstones, and Sundries. These with known, useful and extensively in use, from the No. 1, adapted for family use, where no bread, meat, and vegetables may be cooked for a large family, to the No. 7, which is calculated to cook for 150 persons daily; and they are constructed in a most substantial manner of cast and wrought iron, with the best workmanship. Worthy the attention of shippers and colonists.—Catalogues may be obtained of the Auctioneers, Chelmsford, Essex.

GAS COOKING-STOVES, for large or small establishments.—DEANE, DRAY, and CO., 1, Arthur-street East, London-bridge.

Testimonial respecting the Crystal Palace Kitchen, as fitted by DEANE, DRAY, and CO.

9, Ridgmount-place, Hampstead, March 9th, 1855.

Gentlemen,—I have great pleasure in bearing testimony to the capabilities of your extensive Gas Cooking Apparatus, being the largest and most perfect yet in use. Suitable for hotels mansions, club houses, private houses, and the army. I have cooked in one day, 1,000 fowls and many cwts. of ham, beef, veal, mutton, lamb, tongue, &c.; roasting in one department a baron of beef weighing 23 lbs. in nine hours, fifty-three minutes, presented by J. Barker, esq. Tender, distorted, to the dresser, for the banquet given to the foreign minister. The oven has been in full operation for ten months, and are now in as perfect order as when first finished. They have not cost one shilling for repairs.

I am, Gentlemen, yours respectfully,

EDWARD HORNE.

Messrs. Deane, Dray, and Co.

ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the grove and fender department of Deane, Dray, and Co.'s establishment, where may also be obtained, gratuitously with prices, or forwarded free by post, DEANE, DRAY, and CO.'s opening to the Monument, London-bridge. Established A.D. 1700.

BUILDINGS HEATED by HOT WATER. G. B. COOPER, IRONWORKS, 191, DRURY-LANE. Ranges, Hot Plates, Gas and Coal Grates, Hobs, &c. Ornamental and Constructive Ironwork.

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and Co. can give numerous references to Churches, Hospitals, Houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

CAST STEEL.—Messrs. NAYLOR, VICKERS, and CO. RIVER DON WORKS, SHEFFIELD, are now prepared to execute orders for CAST STEEL RODS, from 3 lbs. to 5,000 lbs. each, Locomotive Crank Axles, Tyre Bars without welding, Plate, Crank Axles, and every description of heavy forgings in Steel, to pattern.—For further particulars, apply as above.

GASELIERS in GLASS and METAL.—The increased and increasing use of Gas in private houses has induced WILLIAM BURTON to collect from the various manufacturers all that is new and choice in Brackets, Pendants, and Chandeliers, and put to office passages, and the other rooms, as well as to have designed expressly for him; these are ON SHOW over his SIXTEEN LARGE ROOMS, and present, for novelty, variety, and purity of taste, an unequalled assortment. They are marked in plain figures, at prices proportionable with those which have tended to make his Establishment the largest and most remarkable in the Kingdom.—39, Newman-street, corner of Perry's-place.

THE BEST SHOW of IRON BEDSTEADS in the KINGDOM is WILLIAM S. BURTON'S. He has FOUR LARGE ROOMS devoted to the EXCLUSIVE SHOW of Iron and Brass Bedsteads and Children's Cots, with appropriate Bedding and Mattresses. Iron Bedsteads, from 10s.; Portable Folding Bedsteads, from 12s. 6d.; Patent Iron Bedsteads, with all the latest improvements, from 2l. 7s. 6d. to 15l. 15s.

The alterations and additions to these extensive premises (already by far the largest in Europe), which occupied the whole of last year, are of such a character that the entire of EIGHT HOUSES, as shown in the Plan of the Ground, are now one magnificent SUITE of GENERAL HOUSE FURNISHING APARTMENTS, Bed, Bath, Table, Kitchen, Furniture, Glass, Lamps, Clocks, Britannia Metal Goods, Baths, Fenders, Fire-irons, Lamps and Gasseliers, Iron and Brass Bedsteads, and Bedding, so arranged in Sixteen Large Show-rooms, as to afford purchasers an unusual facility in the selection of goods that cannot be hoped for elsewhere.

Illustrated Catalogues sent (per post) free.

39, NEWMAN-STREET; 4, PERRY'S-PLACE, and 1, and 2, NEWMAN-STREET; and 4, 5, and 6, PERRY'S-PLACE. Established 1820.

212" MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and vaporizing) with all the improvements, under their QUARTER patents of 1853-54 and 1855, including their Gunpowder Proof Solid Lock and Door (without which no safe is secure).

THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.

MILNER'S PHŒNIX (212") SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depôt, 47a, Moorgate-street, City. Circulars free by post.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on hand, every article marked in plain figures. Patentees and manufacturers of the Mercurial Bo Regulator. Complete pattern-book and price list, 10s.—65 and 66, High Holborn.

NAILS and IRONMONGERY, from BIRMINGHAM direct.

Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the

LOWEST BIRMINGHAM PRICES

A complete LIST of which will be forwarded upon application to FREDERICK BLYTH, Nail Manufacturer and Factor, Recent-parade, BIRMINGHAM; or at 16, Gresham-street, LONDON.

THE STATUE and IRON FOUNDRY, Lower Belgrave-place, Pimlico.—Castings of every description executed at the above Works.

SAW-MILL TO BE SOLD, nearly new, and in excellent working order. A good frame, capable of cutting 22 in. feed, and a 7-cwt. frame capable of cutting 5 ft. log 40 feet long and 2 feet square, by one of the best makers.—For particulars, apply to Mr. HORN, 14, Whitechapel, London.

A
FIRST-CLASS MEDAL
WAS AWARDED TO
F. EDWARDS, SON, and CO.
AT THE
PARIS EXHIBITION,
For the SPECIMENS they exhibited of
DR. ARNOTT'S
SMOKE-CONSUMING GRATE,
AND SMOKE-CONSUMING
COOKING APPARATUS.

F. EDWARDS, SON, and CO. beg to inform the public that their STOCK of GRATES is ENTIRELY REFORMED, and consists SOLELY of GRATES on the SMOKE CONSUMING PRINCIPLE. A large variety in real Bronze, Ormolu, Steel, and Berlin Black; suitable for Drawing rooms, Dining-rooms, and Libraries, from 7l. to 50l.

The following are the prices of those for ordinary use:—

For Bed-rooms, Offices, &c.				For Sitting-rooms, Parlours, Bed-rooms, Offices, &c.			
1 foot 7 inches wide, 12-inch fire	£3	10	0	2 feet wide and under	£4	0	0
1 foot 9 inches wide, 14-inch fire	3	12	6	Above 2 feet wide, and not exceeding 3 feet 6 inches	4	10	0
The above Grates can be increased in width to that of any fire-place by iron or slate slips; iron slips supplied at 6d. per inch.				,, 3 feet ,,	5	0	0
				,, 3 feet 6 inches ,,	5	10	0

By the Grates on this principle, as properly constructed by F. Edwards, Son, and Co. smoky chimneys are avoided, an agreeable fire is maintained, with one-half the trouble attending the ordinary grate, and a saving of from forty to fifty per cent. is effected in the consumption of fuel.

PROSPECTUSES, WITH FULL PARTICULARS AND TESTIMONIALS, SENT ON APPLICATION.

To be seen in daily operation at the Show Rooms, 42, Poland-street, Oxford-street, London.

DR. ARNOTT'S SMOKELESS GRATES,

For the manufacture of which D. and E. BAILEY obtained the SILVER MEDAL at the PARIS EXHIBITION. The above excellent invention has been carefully modelled and manufactured by D. and E. BAILEY, 272, Holborn, who having experienced great difficulty in keeping pace with the increased demand for the above Stoves, have now made such arrangements as will enable them to supply their customers with the Smokeless Grates, of ordinary dimensions, from their stock on hand, which consists of various designs in black, bright, and polished steel, richly decorated with ormolu ornaments.

The great advantages of these Stoves over all others are—

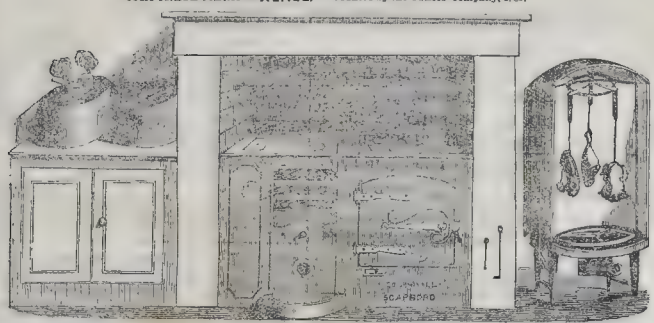
1st. The entire absence of smoke.
2nd. An immense saving in fuel.
3rd. A cheerful fire, with simple means for regulating the heat.
4th. Will burn night and day, requiring only to be supplied with fuel twice in twenty-four hours.

For invalids' bed-rooms, these stoves will be found invaluable.

Prices and Prospectuses may be obtained on application where the Smokeless Grates may be seen in daily use.

D. & E. BAILEY, IRONMONGERS,
272, HOLBORN, LONDON.

PARKIN AND MARSHALL,
GENERAL MERCHANTS, AND MANUFACTURERS OF
TABLE CUTLERY, PEN and POCKET KNIVES, SCISSORS, RAZORS, ELECTRO-PLATED WARES, FILES, SAWS, EDGE and JOINERS' TOOLS, AUGURS, STEEL, &c. &c.
TELEGRAPH WORKS, SHEFFIELD.
OFFICES—{NEW YORK—71, JOHN-STREET / BOSTON—35, KILBY-STREET. U.S.
MELBOURNE—94, COLLINS-STREET EAST.
CORPORATE MARK XLALL.—Granted by the Cutlers' Company, 1789.



Messrs. PARKIN and MARSHALL have also pleasure in stating that they are appointed Sole Wholesale Agents for the Sale of the undernamed Articles, manufactured by Mr. ENOCH OLDFIELD TINDALL, Iron Works, Scarborough, viz.:—TINDALL'S PATENT PORTABLE MANGLES, WASHING AND WRINGING MACHINES, NAPKIN PRESSES, COOKING RANGES, LAUNDRY STOVES, SANATORY TRAP AND GRATE, CHAFF CUTTERS, OAT, BARLEY, MALT, AND LINSEED MILLS, BEAN MILLS, OILCAKE BREAKERS, PORTABLE SAW-MILLS, TURNIP CUTTERS, &c.

THE PATENT COOKING RANGES AND ROASTERS are now amongst the most complete and inexpensive before the Public, and are selling all over the north quarter of our country.

THE IMPROVED LAUNDRY STOVE will heat Fifteen Flats at once, occupies only 12 inches in space, is removeable from one room to another and will be found invaluable in Public Hospitals, Infirmaries, Laundries, and Private Families.

E. O. T.'S SANATORY GRATE AND TRAP is now acknowledged to be the best and most secure from effluvia as well as not being liable to choke, as it really is cleaned that has been introduced.

THE MANGLES AND WRINGING MACHINES have been introduced into the Royal Household, most of the Public Laundries, and upwards of a thousand Private Families, as clear testimony to their efficiency and superiority over all others.

THE OAT BRUISERS AND CHAFF CUTTERS, like the above, combine cheapness with the greatest simplicity of construction, and only need to be tried to be appreciated. They effect great saving, and should be in every stable.

Drawings of Mangles, &c. with Testimonials, can be had on application at Telegraph Works, Sheffield, or of the Retail Agents, who are appointed in almost every principal Town in the United Kingdom.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person. 5th. From its lightness, weighing only about 3½ lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, slate, or tiles, it is a most effective non-conductor.

INDORUOUS FELT, for damp walls and for damp floors, under carpets and floor cloth.—PRICE ONE PENNY per Square Foot.
CROGGON and CO.'S PATENT FELTED SHEATHING, for covering the bottoms of boats, &c. and
DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c. preventing the radiation of Heat, saving 25 per cent. of Fuel, and deadening Sound.

Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

CASTINGS
FOR
ENGINEERS, BUILDERS, and CONTRACTORS,
Supplied on reasonable terms by
DODDS and CO.
WINDSOR WORKS, CITY-ROAD, LONDON.
N.B. The execution of all orders promptly attended to.

WILLIAM DODDS and CO.
MANUFACTURE and CONTRACT for
RAILWAY CARRIAGE and GENERAL IRONWORK,
WROUGHT and CAST IRON BRIDGES,
IRON ROOFS, &c.
IMPERIAL IRONWORKS,
Wenlock-road, City-road, London.
Offices—28, Leadenhall-street.

SAMUEL HEMMING'S PATENT much approved PORTABLE BUILDING and ROOFING MANUFACTORY, REMOVED from BRISTOL to BOW, near London, close to the Bow Railway Station.—A large variety of buildings always on view, churches, chapels, shooting boxes, lodges, bazaars, ornamental villas, dwelling-houses, farm buildings, and fire-proof stores. Also, railway stations, trusses, and carriages made to any plan on the shortest notice.

TUPPER and CARR,
CORRUGATED IRON MANUFACTURERS,
Galvanized and Ungalvanized,
Iron Roof Builders, and Electric Telegraph Contractors.
Works—BIRMINGHAM and LEAMHOUSE.
Offices—3, MANSION HOUSE-PLACE, LONDON.
N.B.—Iron of every description galvanized. An allowance to the Trade.

SKAIFE'S GALVANIZING WORKS,
Commercial-road, Limehouse, London.
Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where Iron not liable to rust is required.
Patent Galvanized Iron supplied in every form.
Sheets plain and corrugated. Roofs fixed complete.
J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Phosphor Zinc, and Tables.
An Allowance to the Trade.

JOHN HENDERSON PORTER,
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IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be moved up one-sixth more on, with as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about	18	oz per foot super.	
12	,,	20	,,
13	,,	24	,,
14	,,	26	,,
,,	,,	,,	,,

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON,
to whom all letters may be addressed.

PATENT GALVANIZING and CORRUGATING IRONWORKS, improved Process,
WORKS GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

THOMAS EDINGTON,
PURCHASER and INSPECTOR
OF
CASTINGS on COMMISSION,
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JOHN WALKER,
Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor,
IRON MERCHANT, &c.
Offices, Arthur-street West, London-bridge;
Works, Mill-wall, Poplar.

A. MOREWOOD and CO. (late Morewood and Rogers),
Dowgate Dock, Upper Thames street, London, and Baskerville Works, Birmingham
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, ruddle, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tubes, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
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COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, conchhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for buildins and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER (late STRUTH and BOOBBYER), Great Exhibition of 1851, who invites the attention of the Trade, &c. to his Stock or Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc, Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Sliding Spindles; Dr. Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, so much admired, &c. &c. &c. each.
J. H. BOOBBYER (late STRUTH and BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.
14, Stanhope-street, Clare-market, London.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the Nobility, Clergy, &c. that they supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.
R. S. NEWALL and CO.'S Lightning Conductor is acknowledged by scientific men, and has been fixed by them in all parts of the world.
OFFICES
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27, Duke-street, Manchester.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

'ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND FOR BUILDING PURPOSES.

TARIFF OF PRICES
Beyond the current Price of Hoop-iron.

The undermentioned Gauges are kept in stock; but any Gauge or width will be supplied within a few days, at a small advance on the following prices:—

Gauge.	In. wide.	Per 1,000 ft.
No. 16 ..	1¼ ..	7s. 0d.
15 ..	1½ ..	7s. 6d.
15 ..	1¾ ..	8s. 0d.
15 ..	..	8s. 6d.
15 ..	..	9s. 0d.

Plan and Elevation of Bond, showing Position and Form of the Claws.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11¼ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent, that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

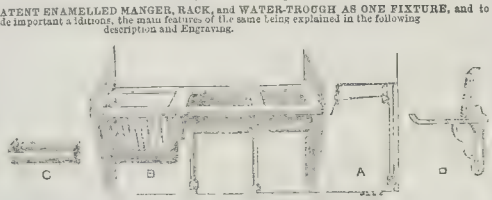
London Depôt—463, OXFORD-STREET.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

PARIS EXHIBITION AWARD TO

COTTAM and HALLEN, of Winsley-street,

The original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, and to which they have made important additions, the main features of the same being explained in the following description and Engraving.



A represents the Patent Haller-guide and Collar-rein, the ball of which is taken to the back of the manger-works with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable.

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM'S MANGERS are constructed on the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety covers; Sanitary Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Preserving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

An extensive Assortment of Patterns for both Plain and Ornamental Castings, and every description of Wrought and Cast-iron Work for building and other purposes.

Agricultural and Horticultural Implements, Iron Gates, both plain and ornamental; Hurdles, Strain Fencing, &c.

The New Illustrated Catalogue for 1856 gratis on application. Estimates and Designs.

COTTAM and HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

IRONMONGERY.—Builders and the Trade generally will effect a considerable saving by purchasing of CLUSE and ROSE, Wolverhampton Factors and Stove and Range Manufacturers, 36, City-road, corner of Tabernacle-row.

Present prices for cash:—

BEST CUT CLASP.

16s. 6d.	15s. 3d.	14s. 0d.	14s. per cwt
1½ in.	2 in.	2½ in.	3 in. and larger.

PATENT SASH LINE.

3s. 3d.	3s. 9d.	4s. 3d.	5s. 6d.	7s. 6d.	9s. per gross.
No. 1	2	3	4	5	6

5 in. Mortise Locks, best Brass Furniture Shifting Spindles, 2s. 6d. each; 6 in. ditto, 3s. each.

Strong Elliptic Stoves, double backs, 21d. per inch.

Strong Register ditto ditto 5d. ,,

36 in. Self-acting Oven and Boiler Cottage Ranges, complete, 34s. each; 36 in. Self-acting Oven and Boiler Ranges, best wrought bars and wrought fittings, complete, 50s. each.

A large Stock kept of every description of builders' ironmongery; china, glass, and ebony look furniture and finger-plates. List of prices forwarded by post on application.

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSE, 19, Horseferry-road, and 1, New Peter-street, Westminster.—Contractors, Builders, &c. supplied with general Ironmongery at prices equal to all competition.

REDUCED LIST OF PRICES.

Best Cut Clasp and Rose Nails

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	15s.	13s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 13s. 6d. and 14s. per cwt.
Best Cut Lath Nails ..... 18s. ,,
Best Zinc Slating Nails .. .. 40s. ,,
Best Glues .. .. 47s. to 53s. ,,

RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	11d.	1s. 2d.	1s. 4d.	1s. 8½ d.	2s. 1d.		
Half-round Gutters	8d.		8½d.	9d.	1s.	1s. 2d.	
O G Gutters					1s. 1d.	1s. 2d.	1s. 3d.
Ditto, with plain clips cast on			1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.	
Ditto, with box ditto			1s. 3d.	1s. 4d.	1s. 8d.	1s. 7d.	

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

TERMS—NETT CASH.

Estimates given for any description of Wrought or Cast Iron Work

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE,
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and
STEWART'S PATENT CAST-IRON GALLEY and WATER PIPES.
Office, No. 7, Bise-lane, London.

TO MANUFACTURING CHEMISTS, BUILDERS, &c.

WILLIAM DYER, PLUMBER, &c. No. 4, HIGH-STREET, BROMLEY, Middlesex.—Burning or uniting lead to lead, by Delbruck's Patent process. It is highly recommended for chemical vessels, repairing flat gutters, or lapping, if new, where solder is required, of leaden tanks, cisterns, &c.

ROYAL POLYTECHNIC GAS FIRE. BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation.—To be seen in action at DEFRIES'S Office, 145, Regent-street, London.

IRONMONGERY.

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THE LARGEST STOCK AT

THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK.

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

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Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at

RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouses, Nos. 9, 11, and 13, Charles-street, Long-acre, London.

JOHN TANN'S new patent RELIANCE LOCK and FIRE-PROOF SAFES for the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. WATERLOW, Birchin-lane; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and party-walls.

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PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure locks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 55, High Holborn.

IRON FOUNDRY, HARROW-STREET, LANT-STREET, SOUTHWARK.

W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel and Railing Bars, Panels, Iron Coping, Hot Plates, Tank Plates, Area Gratings, Sash Weights, Fly and other Wheels, Diggers, Pinions, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

CANNON IRON FOUNDRY, 80, Goswell-street, St. Luke's.—JONES and BLAXTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wheel Plates, &c.

BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

FOUNDRY AND IRON WORKS, 68, DRURY-LANE, and CHARLES-STREET, DRURY-LANE.

GLOVER, BROS.,

Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION, either structural or ornamental.

Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathes, and Steam-engines; Range and Hot-plate Metal. An improved Soot Door, adapted for internal work.

A large stock of Rain-water Pipes, Plain and O G Gutters, Air-bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings, Hurdles, &c.

Plain and Ornamental Vases 20 per cent. cheaper than Terra-cotta.

Estimates given for Iron Buildings, Wrought-iron Roofing, Greenhouses, Staircases, Wrought-iron Girders, Fireproof Doors, Book-safes and Strong Rooms, Tanks and Boilers, and every description of ironwork to specification, and the work executed with every attention to quality and despatch.

GLOVERS' IRONWORKS,
168, DRURY-LANE, and CHARLES-STREET.

IMPERIAL IRON FOUNDRY, and ECONOMIC RANGE MANUFACTORY.

Three ft. wide	£6 10
Three ft. three in.....	7 0
Three ft. six in.	7 15
Three ft. nine in.....	9 0
Four ft.	10 10
Four ft. six in.....	12 12
Five ft.	14 14

Coverings, 7s. per foot.
Fixing, 5s. per foot.

The valuable KITCHEN RANGE, the Manufacturer has much gratification in stating, has been in use several years, and given the utmost satisfaction. It may be used either with the fire open or closed, thereby avoiding the chimney so naturally felt against having the fire at all times shut up, which is well known to generate a close unwholesome vapour.

The Prize Medal and Honourable Mention was awarded to this Range at the Great Exhibition of 1851.

To be seen in operation at the Manufacturer's.

J. SHERWIN, 68, TABERNACLE-WALK, FINSBURY.

Castings of every description in Loam or Sand.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of Ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, 2½d. per inch, and upwards.

Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and hack boilers, best wrought bars and bright fittings:—

5 ft., 3l. 10s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.

3-feet Cottage Ranges, with ovens and back boilers, 32s. each.

3-feet self-acting ditto, ditto, 34s. each.

Air Bricks, 4s. per doz.

Best Town Coke, 25s. Ditto, Scotch, 64s. per cwt.

Best Fine Cut Clasp and Rose.

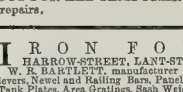
1½	1¾	2	2½	3	3-in. & larger.
16s. 6d.	16s. 6d.	15s. 6d.	13s. 6d.	15s.	14s. per cwt.

And every material required in the building, bell-hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 159, Shoreditch.

A great variety of Elliptic Stoves, Cottage and best Ranges fitted, always in Stock.



Improved Self-acting Cottage Ranges, with Large Oven and Boiler.

30	32	34	36-inch.
28s.	30s.	32s.	34s.

Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars:—

34	36	38	42-inch.
54s.	56s.	58s.	64s.

Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 2½d.

Register Stoves, with Solid Bars, per inch, 5d.

Improved New Pattern Circular Check Register, with strong Bars and Trivits, 6d. per inch.

Best Solar ditto, with Fire Brick Back, per inch, 10d.

Bright Stoves, with Two Fires, 40s. & 50s. each.

Cast Rain-water Pipe { 2 | 2½ | 3 inch.
1½d. | 1s. 3d. | 1s. 6d. per yard.

Cast Gutters—4 inch, 9d. per yard.

O G Gutters ..... { 4 | 4½ inch.
1s. 1d. | 1s. 3d. per yard.

Patent Line { 2 | 3 | 4 | 5 | 6
4½d. | 5d. | 7d. | 9d. | 1s. per knot.

6-inch Ribbed Ward Mortise, with Best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s. per cwt.

Dr. Arnott's Ventilators, 4s. 6d. each.

An extensive Stock of Bar, rod, hoop, and sheet iron.

Brick Moulds kept in stock. Any size made to order.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

January 1, 1855.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality, Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

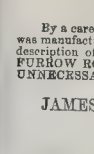
ARCHITECTURAL AND ORNAMENTAL DECORATIONS.

Architects and the Trade are respectfully invited to inspect specimens of the

PATENT VITREOUS MARBLES AND CONSOLIDATED GLASS,

Applicable for Piers, Pilasters, Chimney-pieces, Shop Facias, Table tops, Panels, &c &c

Show-rooms, 46, Broad-street-buildings, City; 4, Russell-place, Fitzroy square, 112, New-street, Birmingham, &c. &c.



SANDS AND EMERY,

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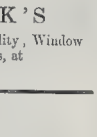

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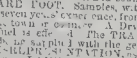
By Her Majesty's  Royal Letters Patent.

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"	X.	" the Moors	5 "				109
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			48				

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The Builder.

VOL. XIV.—No. 681.

IT is desirable that the various building materials and appliances which form part of the Architectural Exhibition, in Suffolk-street, now about to close, should not have been brought together in vain, but that those engaged in building should remember what they have seen, and inquire of themselves, when opportunities occur, if they cannot introduce this or that improvement, or avail themselves of this or that material. How many of us gaze upon an improvement, admit its excellence, and then forthwith, as if we had never seen it, proceed to work on the old plan.

The evening of Tuesday, the 19th, was set apart at Suffolk-street to give attention to these contributions,—the committee duly appreciating their importance. Mr. Tite had undertaken to make some remarks upon them, but being prevented by Parliamentary duties, Mr. Edmeston, jun. the honorary secretary, took his place, and after two or three preliminary observations, thus proceeded:—

The time and earnest thought expended upon many a design, of even an indifferent character —the labour bestowed, the knowledge necessary, the never-ending education required in the architect—are only, after all, one portion—one small section, of the influences at work to produce a result for you, the Public, Employer, Patron; and it is unquestionably of most vital importance, if there is ever to be a high and universal expression of architectural art in this country, that all this should be understood and appreciated; if ever the day is to arrive when excellence is to be looked for, not only in a few isolated instances,—public buildings, perhaps, and the like, or extraordinary and unusual efforts, but in small streets and cottages, and out-of-the-way places, so that care, propriety, and a thoughtful mind shall be the rule, and not the exception.

Mr. Petit observed in his lecture that the bird, the bee, and the beaver, all in their way occupy a higher position than the human architect in point of wonderful ingenuity, and adaptation in their structures; but he pointed out how the efforts of human genius had higher purposes,—a further and higher development of certain noble faculties of mind, in designer and spectator.

In all our lectures thus far it is these higher principles that have been chiefly considered; and we have now to see that there is yet another class of workers in the great cause, who silently, with but little outward ostentation, and with but little or no share in the final result, are, year by year, untiringly applying money, ingenuity, and skill to assist; and it will have done well to inquire into and investigate the principles and design of the completed work, it will be as well, and it is as important, that you should be as fully sensible of all the less apparent efforts which, in their way, are as worthy of study and attention.

It was well that we began with the higher matter, but we cannot have a more appropriate subject for consideration at this our last meeting for the season, than practical evidences like these of what may be done in some of the subsidiary branches of building operation; and some little explanation of the means employed in different cases must tend to increase our respect for the enterprise, talent, and industry of the inventors. Nor let it be supposed that this subject is one in which the public at large have little interest, or one exclusively for the architect's attention only. Why should it be left to the architect to suggest, in every case, the application of this or that new material or contrivance? Why not, while you desire the best design he can give, request him also to apply the newest contrivances, to employ the most suitable materials, even if the house you build is not exactly like all the other houses in the street, and in spite of the kind remarks on your wild vagaries in which your neighbours may indulge? Not only is there often a cold encouragement for such inventions, but there is often an absolute prohibition; and the architect, if he dare step out of the beaten path, is liable to reprehension for jeopardizing the name, the reputation, or mental capacity of his client, or of lowering the value of his property. It is in this, as in other things: let there be a demand for the exercise of good taste and sound principles, and a proper contempt for their deficiency, and that demand will be met. Refuse to accept inefficiency, and there will be no need to prop up ability and professional standing with extraneous aids; and in like manner learn to believe that bricks and mortar, and cement, four-panel deal doors and ceiling cornices, are not all that is necessary to an ordinary work of domestic architecture, and you will have new materials and applications provided for you,—new additions to your comforts and daily enjoyment of living,—you will open the door to a host of inventions and improvements ready and desirous to expand themselves in your behalf, and you will confer a benefit on your age and country, as well as on thousands of intelligent labourers in this great city, and you will besides do somewhat towards getting rid of constructions that will not stand, walls that will settle, and bare and counterfeit productions of all kinds, that are only provided because you will have them, live in them, or buy them.

The several contributions we have to consider class themselves pretty readily under three or four heads; and it will simplify our inquiries if we proceed at once to this division of our subject; and first we may instance what may be called "new material;"—for example, the productions of the Indurated Stone Company, the injected stone by Barrett's patent, the Tamworth bricks, those from the Poole Company, the iron slag, hose applied to pipe uses, the serpentine, and the artificial stones and terra-cottas: all these are either new as building materials, or, not being new, are in so new a form as to be entitled to be considered in that light. We may then examine the contrivances of mechanical ingenuity or construction,—the productions with which utility in its simplest sense has more to do than art; and then those contributions which are complete in themselves, like the beautiful decorations of M. Remon, in the elaborate chimney-piece contributed by Mr. Collmann.

First, then, the new materials. Perhaps nothing comes so distinctly under this head as the transformation of sand, loam, or chalk, into hard and endurable stone, by the Tunbridge Company; and the other process of Messrs. Barrett, by which a soft stone becomes hard as marble, and capable of receiving a polish.

The Tunbridge Company indurate any soft stone by soaking it in a solution of chemically-prepared gas tar and resin; and they had several specimens so prepared in our last Exhibition. Since then, however, they have extended their patent to preparing an artificially-compressed stone: thus sand, loam, gravel, being thoroughly dried and mixed with the solution upon a hot-plate, all ready for use, may be pressed into the mould, and in half an hour the bracket, moulding, piece of ornament, or whatever it may be, is complete, and formed in a hard stone.

Messrs. Barrett's process is similar in some respects, sulphur or some bituminous solution being employed in the same way, and injected by exhaustion of air. The stone is then rubbed like marble, and afterwards polished; and the advantages are an increase of strength and durability. And of equal interest is the artificial stone of Messrs. Ransome, which is made from grains of sand, limestone, marble, or of any similar material, and which becomes an indissoluble, impervious mass, when cemented together by what is in fact a solution of glass, after exposure in a kiln. The solution is made of flint, dissolved in a caustic alkali (soda or potash), at a much higher temperature, in close boilers or cylinders: when mixed with the particles alluded to, it is moulded, dried and burnt to a red heat, and the material has the advantage of contracting hardly at all in the drying. In striking contrast with this is the stone manufactured by Mr. Austin, composed of a strong cement, mixed with powdered stone or grit, and suffered to dry without the assistance of heat. This material has been proved to be of the most lasting character, if sufficient time is allowed in the preparation. As the whole is carefully prepared by hand, and as it is not subject to the contraction or alteration of form in the burning to which terra-cotta is liable, it has in that respect the advantage; and in some descriptions of work it is not a slight one.

Then we have the burnt clays of Mr. Pulham and the Farnley Company: in these the fresh clay is mixed with grit, and then burnt at a great heat; and some of Mr. Pulham's specimens are granulated with a view to obtain a closer imitation of stone; and besides the ornamental uses of this material, it may be applied to steps, paving, floors, &c. The glazed and coloured bricks of the Poole Company are composed of a finer clay still, as a degree of heat is required for glazing which would melt a clay of a common character. The manufacturers lay much stress upon the value of the glaze, but I would suggest that for almost all purposes, except, indeed, when absolutely immersed in water, the unglazed tiles or bricks are most available for architectural purposes.

Nor need the Poole Company consider it an additional recommendation to their excellent material, to say that their bricks are made to resemble stone, or may be marbled, after all that has been said and written these few years past about truthfulness in material and propriety of application. Let the bricks be bricks, and neither stone nor marble, and the company will find that the article will become of infinitely more extended use. A study of the design by Mr. Chamberlain, of Birmingham, Mr. Gray, of Buckingham-street, and others in the exhibition, will show that bricks are wanted to look like themselves, and that they may be used much better and more easily in that way than if made to imitate marble or stone, which they never can do, if their necessary use in small pieces were the only obstacle.

In those artificial stone productions, also, where the forms are obtained by compression in a mould, an imitation of carved stonework would appear inadvisable, since there can be no under-cutting in relief, and a result is obtained which in really carved work would not be tolerated. On the other hand, the font of the Farnley Company looks precisely as if it was copied from a framed work of wood: it cannot but occasion regret if we feel that the care and ingenuity expended are guided by wrong canons of taste, and have found a wrong direction, particularly where the things themselves are so excellent. Let it be remembered in the matter of ornament also, that too little is in every case better than too much; and to quote Mr. Fergusson's admirable Handbook of Architecture, — "All materials are nearly equally good when used honestly, and for the purpose for which they are best adapted, and all become bad either when used for a purpose for which they are not appropriate, or when one material is used in the place of another." Form should always be the clue by which bodies and their properties should be known,—a rule illustrated all through the kingdom of nature; for as Mr. Digby Wyatt observes, "Never does a flower look like a piece of metal, or a piece of timber like a rock."

The bricks from Mr. Arnold of Tamworth, are chiefly noticeable for hardness and great strength: for paving, curbs, and such purposes they would appear valuable additions to similar materials; but the colour of the specimens would appear to interdict their use ornamentally. The inventor, however, advertises the material in blue, red, or strawberry colour; and I am told that Mr. Arnold is making chimney, and if so, there must be a class of goods of firmer texture than we have seen. The cost of production is moderate, and the machinery may produce any number of patterns, as a change of dies is all the alteration necessary.

The material brought again into notice by the Lizard Serpentine Company, is of great beauty, and deserving much attention, and is now to be had in large blocks, of 10 or 12 feet in length.

The upper strata of the serpentine rocks are found to be brittle and unsound, and the energies of this company have been directed to procuring the stone from a considerable depth, where the defects apparently nearer the surface disappear.

This stone is used in the external walling, at the Lizard, in a rough state, where it has stood the test of climate for some centuries. Nor was it unknown nearer home, though it seems to have got into disuse after the early part of the last century. We find the serpentine introduced in a chimneypiece, in Hampton Court Palace, of a dark green colour, and the polish more perfect than the contiguous marble. I must allude to a most interesting set of contributions from Messrs. Chance, of Birmingham, which were sent to these galleries, and afterwards withdrawn in consequence of the discovery of great improvements in the production. The invention consisted in melting a basaltic stone, similar to that of the Giant's Causeway, and running it into moulds; and it was found that the stone could be made to take in this way any required form. The rapid cooling, however, at first allowed, converted the material into a species of slag, but it was soon discovered that a slower process left the character of the stone unchanged, and it has been applied to the ornamentation of houses in some instances already. The chief objection was the colour, opaque and black almost, and which rendered painting necessary; and it was, I believe, in consequence of some process by which a pleasant and agreeable tint could be given, that the specimens were withdrawn.

Messrs. Waithman's hose piping is undoubtedly a new application. It is for purposes similar to the leather hose, with which we are all acquainted, but is not half the price, and is, besides, lighter and less bulky, the best quality of 2-inch hose costing only 2s. per yard. Not only for ships, fire-engines, and out-of-door purposes, is this hose applicable, but also for building purposes and for some others, for which its adaptability might certainly have been overlooked. Thus, it has been used in the application of paint or colour to the front of a house in this way:—a reservoir of the paint or colour is set on the parapet, and the workman uses a hollow brush connected therewith, by means of a length of the half-inch hose; and the consequence is, that he works away with a never-ceasing supply; and if he stays to look about him, we may imagine he will very speedily make a mess of it. The same thing has been done by connecting with the nearest water supply a similarly-made brush — a mop, for carriage-washing—by which there is a constant supply of water, and the sand or grit is continually driven out of the mop, and the carriage is thoroughly washed, and not scratched. I have not heard that the domestic scrubbing-brush has been fitted with this article, but it would be, I dare say, equally easy.

Mr. Magnus's enamelled slate, and Mr. Minton's tiles, are of such acknowledged excellence that it appears unnecessary to make any observations upon them. I believe the process by which the slate is enamelled is a secret: the colour is, however, applied by a great heat, and becomes permanent.

Mr. Minton's inlaid encaustic tiles are a species of mosaic, the pattern being inlaid with clay: his Venetian tiles are made from powdered and coloured clays compressed in metal dies: the pieces are cemented together at the back, and the indented tiles, covered with enamels in different colours.

The iron slag, melted again and turned into moulds, deserves consideration.

Among the contrivances of mechanical ingenuity, there are, perhaps, none marked with a more common-sense adaptation than those by Mr. Jennings, Mr. Botten, Mr. Pierce, Mr. Chappuis, Mr. Moore, and Messrs. Bunnett.

Mr. Jennings's improvement upon the ordinary drain-pipe, by which the pipe can be got at without disturbance, and junctions can be effected, as also his cistern-valve and gully-trap, are excellent, and, like all simple and good things, occasion surprise that they were never thought of before; and, indeed, there is hardly any contribution from this exhibitor without evidence of thought and care, and well deserving attention—especially the sanitary contrivances.* Almost as much may be said of Mr. Botten's contributions, and especially of Underhay's Patent Regulator. Upon similar grounds, Messrs. Bunnett's contributions are worthy of all praise, as are also those of Mr. Moore. Messrs. Bunnett's revolving iron shutter has the peculiarity of rolling either way; that is, it may be shut down either inside or out. The shutter is an example of the assistance afforded by powerful and accurate machinery, which turns up the edge of each slip of iron with such accuracy that when slid endways into each other, a perfect hinge throughout the entire length is formed, working quite smooth and easy; and the pieces of iron are at the same time interlocked so effectually, that the laths will rend across the centre rather than separate.

No exhibitor has come forward more boldly to challenge criticism than Mr. Pierce; and whether we take his small stoves at 11s. 6d. or those of a larger character, they are equally good, and deserving of commendation. They are all upon the principle of using fire-brick lumps as the medium for conducting the heat of the fire, and to warm the fresh air for consumption, instead of using an iron surface, which also warms the air in the room without keeping up any supply of fresh warmed air, so desirable and conducive to health, and which also, by creating what is called a plenum effect, assists to prevent draughts. Mr. Magnus's stove is similar to Mr. Pierce's in principle, but he employs no iron at all, not even for the outer casing, using instead the enamelled slate, which, perhaps, gives him somewhat the advantage, so far as appearance is concerned.

So long as Mr. Pierce confines himself to the common-sense utility of his inventions, we can applaud and admire his industry and talent, but is there not apparent a want of right guidance where the article is made to leave its simplest form, and to receive some moulding for artistic effect? We may give an unqualified and unquestioning approval to the cheap portable oven, sold for 15s. and which strikes us as being as good as it is cheap; while the handsome grate in its margin of alabaster, with its vases and shield, and the iron chimney-piece in the other room, copied from one in stone, in spite of all the labour bestowed upon them, excite a feeling not precisely a pleasurable or satisfactory one. How is this? Is it the absence of that utilitarian feeling enlarged upon by Mr. Petit in his lecture,—a forgetfulness of the maxim he laid down, that "original purposes must not be overlooked in the slightest degree."

There is perhaps no class of manufacture so much in want of improvement in design as the ordinary stoves in common use.

M. Chappuis's daylight reflectors are well known to be devised upon sound principles, and to answer their purpose. The recent improvements consist in silver-plated surfaces, instead of using leaf silver for this purpose; and the use of metal, instead of glass, for the silvering, is another improvement. Some of the reflectors exhibited are also contrived to obviate the dazzling effect of refracted light, by filling the reflecting surface with numberless concavities and convexities, so as to soften the light, and diffuse it at different angles. In the gas reflectors, the former mode of using copper plated surfaces is done away with, and a combination of crystal with silver-plated copper is used in such a manner as to exclude air from the silvered surface, and at the same time permit the glass to expand when heated. Many thousands of these useful articles have been sold within the last three or four years, and a great addition to comfort obtained in numberless instances. I hope, however, we shall never see any new buildings designed with so little regard to the exigences of situation as to render any such assistance necessary. A reference to the elevation of some houses erected at Maidstone, in Messrs. Ashpitel and Whichcord's large drawing; or to Mr. Waterhouse's building at Manchester (63), will show that it is perfectly easy to do away with all obstructions to light. The merits of Mr. Tyerman's hoop-band are so evident, and the additional cost is so nominal, that I should think no one would ever use any of the old bond, which, as frequently applied, might as well be omitted altogether.

Before we examine the artistic productions complete in themselves, there is a class of contributions which comes half-way between these and those last alluded to,—things complete as far as they can be, independent of their final situation.

Thus Mr. Leake contributes some specimens of leather hangings, in use among the ancient Egyptians—for I believe there is a specimen of embossed leather of 900 B.C. in the British Museum, and which was very prevalent in the two last centuries, though not then treated exactly as now. The mode then adopted was to prepare the leather by hand, and without machinery, pressing into moulds, so as to give the required form, with small wooden tools, which, when dry, was coated over with silver leaf, and then lacquered to produce a gold colour. Now, however, science steps in, and, with the assistance of steam to soften the leather, metal moulds to receive it, and hydraulic pressure, we get not only the patterns suitable for hanging, but also cornices, brackets, and other wooden and stone forms, into which the leather is forced,—a species of application which our forefathers were saved, for want of knowing better. Messrs. Jackson's most excellent productions in papier-maché are somewhat akin to the leather manufactures, and are of great perfection as to workmanship. I understand the large figure is similar to some that have been put up in St. George's Hall, at Liverpool; and it may perhaps be asked, how is the doctrine of truthfulness and honesty, so much insisted on, to be applied to productions so meritorious in themselves as these? are such in all cases to be rejected? By no means. And —speaking altogether in ignorance as to how or in what part of St. George's Hall the figure exhibited is used—if I say that, in such a building, to my mind, the introduction of such a figure in such a material is inapplicable and dishonest,—since the character of the building would lead a spectator to believe that stone or marble only would be used, and would be suitable, perhaps,—I illustrate the distinction as clearly as I can,—while at the same time there are thousands of situations where an imitation of statuary, in a subordinate composition, would be perfectly legitimate, as the reality of the imitation would never be suspected, could never be questioned, and would please and satisfy the eye by reminding of the original type. And something of this would apply to Mr. Kershaw's imitations of woods and marbles, which are so very beautiful, that one is led to suspect that they would cost as much to produce as a veneer of the real material.

To pass on to the excellent productions in glass mosaic, by Mr. Stevens. We have heard already from Mr. Fergusson, how the Assyrians used a mosaic composed of clay cones, three or four inches long, coloured, and let into a plaster ground, — which ground played an important part in the effect produced; — and we have heard from Mr. Scharf a description of the Roman mosaic, where the whole pattern is made of very small pieces, in opposition to the Florentine method, in which were used pieces as large as could be got with convenience. These mosaics were formed of gems, marbles, or coloured stones, inlaid in a slab of marble; but there is also a Roman mosaic of glass, in which, a flat rigid surface being prepared and overlaid with plaster, the pattern is drawn upon the plaster, and the small spaces being scooped out, one by one, are filled in with cement, and the tesseræ of glass, or porcelain, are pressed in. Mr. Stevens's process is somewhat analogous; but he uses glass altogether, and as geometric patterns only are used, there is much less expense. Mr. Stevens, however, although he has not gone beyond this method hitherto, is quite willing to work out any more complicated designs as are found in ancient specimens; and it is, perhaps, surprising that so excellent, lasting, and tasteful a method of decoration is not applied more generally. At the church of All Saints, Notting-hill, erected under the able superintendence of Mr. W. White, the mosaic is

* We would add a strong expression of our own good opinion of Mr Jennings's improved Drain-pipes. The arrangement is excellent.

let into the Bath stone spandrils of the clerestory windows, and is suggestive of many similar applications in our church interiors. The productions of the Ladies' Guild are also a species of mosaic, but beneath, instead of on the surface, the paper is inlaid in patterns, though sometimes painted.

Messrs. Hart's many contributions are worthy of attention; and as an example of design applied to common things, I may mention the coal-plate, by their foreman, Mr. Ash. Only let it be once acknowledged that nothing is too insignificant to be treated with some feeling of art, and we shall soon have a universal improvement in things more important.

Messrs. McLauchlan and Mr. Simpson have evidently studied to unite excellence of design grounded upon architectural models, with excellence of workmanship. Messrs. McLauchlan's cooking-glass details, and the carved panel, are of early Gothic character; and they have adopted a method of ornamenting the gilt *Solain* surfaces, with burnished patterns, which is in itself a far better plan than the more common method of burnishing members of mouldings only, or the prominences of ornamental work, by which the general design is often much confused. This mode of ornamentation by two shades of brilliancy, at the same time making the outline pattern with an engraved line, is undoubtedly capable of great development and variety.

Mr. Simpson has also carefully followed the models within his reach, for the purpose of producing paperhangings to harmonize in design with mediæval architecture. There is in all a proper flatness of treatment, and the colours are quiet and mostly well contrasted, and the introduction of crests and initials is undoubtedly appropriate. These manufacturers are evidently in earnest, and deserve to succeed.

The tiles by Mr. Brown, of Surbiton-hill, and the porcelain baths by Mr. Finch, in one piece, are both good, and we are indebted to the Vieille Montagne Zinc Company for an improvement in the mode of applying zinc to roofing purposes—by which the usual boarding is omitted: the rafters form the rolls, and the metal receives, through the short distance between the rolls, the additional strength derived from corrugation.

Mr. Winston gave us an explanation of the method of painting and enamelling upon glass, but we have in Messrs. Bowden's contributions an article of much greater brilliancy, and in which the effect is got by cutting, somewhat in the manner of the Bohemian glass, the patterns being ground out with a stone wheel, after which a wooden one is applied to produce the polish. It is a peculiarity in the manufacture that the entire design is almost altogether left to the workman: he has no drawing, nothing but a dab or two of whitening on the glass; and if we were to ask him to sketch or draw his pattern, he would be wholly unable to do it, in spite of the precision with which he draws and works with his wheel.

Under our present head we may note the examples of carving and modelling: those by Mr. Taylor, being models of the carved details of a bookcase, are good, and lead us to believe that the work from which they are taken is worthy of its designer, Mr. J. K. Colling, who has for so many years devoted his study and attention to foliages, and so successfully. There is also much beauty in Mr. Phyggen's model, called the "Heavenly Chorus." Second, however, to nothing in these rooms is Messrs. Collmann and Davis's carved oak mantelpiece, designed by Mr. Collmann. We know that in many cases recently, foreign carvers and artists have been employed; and while there is now a very fair amount of talent available among the English stone carvers, we have here a production in *wood* carving entirely by English workmen: the work as we see it is precisely as it has been left by the chisel, and has not been touched with sandpaper: the ornaments are one of them affixed, but the whole is cut out of the solid oak. And while the workmanship of Messrs. Collmann and Davis is worthy of all praise, they deserve further credit for having given us a specimen which is not of a Gothic character, as an evidence that there is no want of superior workmen ready to devote their talents to a class of work which has lately become very unusual.

M. Remon's and Messrs. Galli and Cotti's contributions come under the head of the works of art complete in themselves. It is gratifying to see an exhibitor take such pains to exemplify his talent as M. Remon has done; and as the object of this inquiry is not criticism, there are but few remarks to make of an explanatory character.

The centre panels are in the Renaissance style, and an oak ground has been chosen as being suitable, and because cabinet furniture was during that period mostly of oak and walnut. The panels to the left are in the manner of the period of Louis XV. in the style of Watteau. Those to the right are in the style of Louis XVI. and Marie Antoinette, corresponding with the style of the Adams in this country, but with much less stiffness and tenuity; the distinctions so nicely kept up, the way in which the extravagance and ughness of these styles of art are kept subdued and in good taste, show that M. Remon is as much a master of his subject theoretically as he shows himself to be practically. As a further exemplification of these styles, reference should be made to the exquisite drawing by M. Prignot, who gives us the interiors of two rooms, carried out entirely, and both of which are designed in the same tasteful, judicious, and careful manner, and above all with a view to harmony, between the furniture and the architectural decorations themselves—a thing now, alas! hardly ever thought of.

Messrs. Galli and Cotti will, I hope, have succeeded in calling such attention to their fresco painting, as will lead to a trial of it being made; for, as the material is non-absorbent, it would appear to be especially applicable to a city like this, where so much coal is burnt, and where all porous materials become of one black hue, for it is *externally* that Messrs. Galli and Cotti wish their workmanship applied, and stipulate only that it should be done between the months of April and August, or even in September, if the painting face the south. Although the colours in use are few, comparatively, great scope is afforded an artist conversant with the material; and with fair usage the work, if properly done, is everlasting, and requires only an occasional washing with plain water to restore it to its pristine beauty.

Enough has, however, I hope, been said to show you how extensive is the interest that must attach to the art of architecture, and to all the multitude of manufactures, applications, sciences, and inventions connected with it. There is no view of the question you can take up, no direction in which you can turn, without being met with countless subjects of inquiry—numberless sources of enjoyment: take it in its highest and most abstract sense as a high art, or in its most practical feature of building constructions, as your particular turn of mind may lead, and you will find a never-failing food for study, never-ending opportunities for mental exercise, perpetual additions to attract your attention.

At the close of Mr. Edmeston's interesting observations, which included an appeal to the ladies to help them in earnest next year, some notes on the articles exhibited, forwarded by the Council of the Institute of Architects, at the request of the Committee of the Architectural Exhibition, were read; and then, with a cordial vote of thanks to the committee and to the various lecturers, the proceedings terminated.

The notices sent by the Council were brief expressions of opinion. We extract some passages likely to be useful to exhibitors by giving assurance to the public:—

4. Wilshere's Substitute for Paint.—The stain is agreeable, well toned, and allows the natural grain of the wood to be seen through it: there may be a doubt whether the varnish can really be depended on as a protection against the weather.

5. The Indurated *Natural* Stone (of Tunbridge Wells Co.).—Must be valuable where hard stone cannot be readily procured; and this article is said to be moderate in cost. The probable action of fire on the *artificial* stone should be considered, even granting that the atmosphere may be resisted as described in the catalogue. The cast work is not considered altogether satisfactory.

6. The Glazed Bricks and Coloured Tiles of the Poole Company show a meritorious advance in the manufacture; but they are expensive.

13. Serpentine Marble.—The Lizard Company exhibit well-prepared specimens. It is to be hoped that the same care in stopping and polishing is bestowed on larger articles made to order.

14. Ornamental Cut-Glass (Bowden's).—Appears good for domestic purposes, and reasonable in cost.

Green Slate from Carnarvon (not numbered).—Has good colour; is apparently of good quality; giving a metallic ring on being struck, and admitting of being cleft in moderately thick slabs: it is desirable to know the results of experience as to its durability.

20. Papier-Maché and Carton Pierre (Messrs. Jackson's),—Is a beautiful material; successfully applied to carry out an artistic design.

28. Models of Bells (by W. L. Baker),—Exhibit a clever method of hanging them; but it is desirable to know how the cast-iron cage, &c. may stand the test of a lengthened trial on a large scale.

29. Hollow Bricks, &c. and Brickwork (by B. Looker),—Are apparently good. The ventilation proposed to be effected in the humble class of dwellings is very desirable.

35. Magnus's Enamelled Slate Chimney-piece and Stove.—Apart from the clever imitation of porphyry, advantages are perceived in the combination of the two methods of warming rooms, &c. in this article.

41. Paper-hangings (Simpson).—Some are very good, apparently copied from old examples; while in others, the apparent imitation of encaustic tiles is to be regretted.

42. Bunnett's Interlocking Shutters, &c.—are ingenious contrivances, but require care in their application.

44. Italian Roof-tiles (by Brown).—The manufacture is good; but the affectation of age attempted to be given by the green colour must be objected to.

45. Botten's Patent Regulator and Water-closets.—On the whole, good; are useful where it is required to regulate strictly the supply of water to the pan; but inconvenient where it may be desired to discharge more water through it. The other articles are ingenious.

47. Indurated Stone (Barrett's patent).—The question arises whether dependance can be placed on the permanent condition of stone so treated.—[It certainly deserves a trial].

48. Artificial Stone (from Seeley's).—The experience of thirty odd years proves the durability of this article.

50. Self-acting Lever Tap (Davis's)—appears ingenious, though somewhat complicated.

54. Baths and Fittings (Finch)—3, 4, 5, 6, 7 (tiles)—are well known and useful. The other items under this number appear good.

55. Gas and Day-light Reflectors.—Are very useful where there is a deficiency of natural light. The latter are very serviceable. Some method of rendering them in unison with the architecture of the building in which they are introduced may be considered desirable.

In designing furniture, whether mediæval or modern, convenience and applicability to the purpose should not be lost sight of: sharp unnecessary angles and projections should be avoided.

Fresco paintings on walls are becoming more appreciated, where their durability can be depended on, and their execution may not occasion greater comparative outlay than other methods of decoration. Should the specimens shown combine these advantages, a very desirable means of improving the appearance of our rooms will be placed at the disposal of architects.

The iron and brass work in the third room does not display much novelty: the brass appears to be better designed than the iron. It may be remarked, that sharp unnecessary edges should be avoided in all articles required to be handled in constant use. Exception must be

taken to the design and painting of the porcelain finger-plates.

In conclusion, the Council of the Institute of British Architects must not omit to express their opinion as to the advantage to architects, manufacturers, and the public generally, which is likely to arise from periodical exhibitions, such as the present, of materials, manufactures, and inventions connected with architecture, by tending to keep up a fair spirit of emulation among the producers, and conducing to the development of structural science in combination with artistic design.

THE NEW PALACE AT WESTMINSTER. SIR CHARLES BARRY'S CHARGES.

Copies of Treasury minute, dated the 6th February, 1854, and 29th January, 1856, have been issued, with regard to the claims of Sir Charles Barry for services connected with the building of the New Palace at Westminster. This sets forth, that on the 26th May last the following offer was made to Mr. White, as acting for Sir C. Barry, with a view finally to settle all questions as to commission, measurement, and all other claims up to October 2nd, 1853, to which date the closed accounts extended, Sir C. Barry, it should be said, having put in various claims for extra payment over and above his commission:—

"1. That a commission of three per cent. should be allowed on the entire outlay of 1,506,845*l.* up to the 2nd October, 1853.

2. That a remuneration for measurement upon the whole of the works included in that outlay should be paid at the rate of one per cent.

3. That those commissions should cover all demands of every kind whatsoever for the past, the services for warming, lighting, and ventilating alone excepted, which should be dealt with separately, and upon their own merits.

4 That the remuneration of Sir Charles Barry for the future should be fixed at—

Three per cent. commission on the outlay as architect, and one per cent. for measurement upon all works to which measurement applies; and that no furniture, &c. should in future be furnished by Sir C. Barry, except by the special order of the Treasury.

After numerous further interviews and discussions with Mr. White, that gentleman, on the part of Sir Charles Barry, declined the terms of settlement thus offered, and pressed again the claims for the extra services performed.

My Lords having again referred Sir C. Barry's claims for a report to the Board of Works, and having very carefully reviewed the whole case, continue to be of opinion that the terms herein stated are not only fair, but liberal; that they include all remuneration to which Sir C. Barry is justly entitled for the services he has performed; and that they could not extend the same consistently with their duty to the public.

Considering, moreover, that the matter has gone on for nearly twenty years without any distinct understanding being arrived at, notwithstanding the efforts of every successive Board of Treasury to do so, my lords are of opinion that it is inconsistent with the public interests that it should be any longer delayed; and they therefore, as far as they are concerned, must record these terms as their final decision upon the questions at issue. They are pleased, consequently, to direct that no further payment be made on account, until a final settlement of the past, and an agreement as to the future, are concluded."

Sir Charles Barry has since published a statement, showing that when he first entered upon his duties in 1837, it was with the understanding that the usual commission of 5 per cent. would be the amount of his remuneration; that after eighteen months he was informed of an order from the Treasury that, for certain reasons assigned, his remuneration was to be limited to a fixed sum of 25,000*l.* being nearly 10,000*l.* short of his stipulated commission, and that the same principle of limitation was to be applied to all public buildings from that time. Against this decision Sir Charles entered a protest, which has never been answered or contested; nevertheless, by the advice of his friends, he acquiesced in the decision, upon condition that it should be reconsidered on the completion of a considerable portion of the work, when he expressed his belief that the injustice of such a reduction from his legitimate claims would be manifest.

That owing to a great extension of the building, and numerous changes, sanctioned and commended by Parliamentary committees, increase in the value of materials, and other causes, the expenditure has been greatly increased, and the arrangement in question altogether nullified.

The Government has in effect admitted the nullity of that arrangement by making unconditional payments to the architect from time to time, of about 20,000*l.* beyond the original fixed sum. After much negociation with many successive Governments for nearly twenty years, the present one has made an offer of 4 per cent. upon outlay, and a special recompense for the trouble and difficulties encountered by the architect in respect of the warming, ventilating, and lighting arrangements of the building. To avoid further contention, but not until after having in vain urged repeatedly a reference to arbitration as the only fair and proper mode of deciding upon the various questions at issue, Sir Charles has been induced, at a very considerable sacrifice, to consent to the principle of remuneration now proposed, upon condition that certain extra services, not pertaining to his duties as architect of the new palace, and to which the proposed commission can have no reference, should be recognized and recompensed, either by a fixed sum, or at such an amount as might be determined by arbitration, to which proposition, however, the Government has not acceded.

With respect to the appointment of the late Mr. Pugin, and to a claim made by their Lordships for a set-off upon the architect's commission on account of moneys paid to him, Sir Charles points out that Mr. Pugin was not employed upon any duties that devolved upon the architect of the new palace, inasmuch as all designs for that building had emanated from Sir Charles himself; but only as the superintendent of the wood-carving department, in carrying out the architect's designs, to which office he was appointed by the Government at a salary.

As to the mention made of the furniture in the minute, which, we are able ourselves to say, has led extensively to the very disagreeable inference that the architect had *supplied* it, in the way of trade, Sir Charles states that he had only been employed to make the designs for it, see to its being properly executed in accordance with the contract, and check the accounts.

Sir Charles conceives that he has a right to complain that the Lords Commissioners of her Majesty's Treasury have constituted themselves the judges in their own case; that they have formed their decision partly upon *ex parte* statements, to which he is an entire stranger; that, while they are now paying at the least 5 per cent. to all architects and engineers of independent practice for works of the plainest and most simple, although most expensive, character, they make the New Palace at Westminster, which undoubtedly is the most elaborate and complicated edifice in modern times in this country, the sole exception, and propose not only to pay to its architect nearly 20,000*l.* less than his legitimate claims, but to deprive him of all remuneration whatever for many extra services not pertaining to his duties as the architect of the New Palace, and to which their offer of commission can have no reference; and, lastly, that their lordships have not acceded to a reference of the several questions, at issue, although Sir Charles has repeatedly expressed his perfect readiness to abide by the verdict of such a tribunal.

In the course of the correspondence which has been going on, Sir Charles, in reply to a statement from the Treasury that "my Lords" were acting on precedent, gave the following list of public buildings, upon the cost of which their respective architects had received 5 per cent. *since* the year 1832:—The British Museum, the General Post Office, the State Paper Office, Whitehall Chapel, Westminster Hall, the National Gallery, the new front of Buckingham Palace, the Museum of Economic Geology, the new Money Order Office (St. Martin's-le-Grand), the Royal Pavilion at Brighton, St. Katherine's Hospital (Regent's-park), the Lodges and Gateways in the Parks, Kensington Palace, Temporary Houses of Parliament, Chapel Royal, St. James's, the Courts of Law, &c. &c.*

In some of the above instances the architects were also relieved of the measuring and making up of the accounts, &c. It appears, therefore, that payment at the rate of 5 per cent. to the architects of all public buildings has invariably been the rule of the Board of Works since the year 1832: prior to that time the same rule prevailed except in respect of those buildings which were carried into effect under the direction of those architects who were for a time attached to the Board, who received 3 per cent. for certain understood reasons.

With reference to the additions and alterations made under the direction of Mr. Nash, at Buckingham Palace, and the subsequent alterations under Mr. Blore, at the same building, the remuneration received by these two gentlemen was not only at the rate of 5 per cent. but they were also relieved from all labour, cost, and responsibility as to measuring, &c.

As to the works at Windsor Castle, Sir Jeffery Wyattville was not only paid at the rate of 5 per cent. but he had also the same relief afforded him as to measuring, &c. which circumstance, and not the payment to him of 5 per cent. as supposed by their lordships, was, as appears by a Treasury minute of the 6th October, 1826, considered to be an equivalent for his journeys, and some other extras usually charged by architects. Notwithstanding, however, this arrangement in lieu of a charge for journeys, Sir Jeffery had also the advantage of having a residence assigned to him in the Castle, free of charge, during the whole of the time he was employed upon the works of that building. In short, the payments made to the architects of the two above-mentioned works, together with the immunities and advantages which they enjoyed, constituted a remuneration fully equal to 7 per cent.

As to his own case, Sir Charles states that he has not only performed all the professional duties which Sir Jeffery Wyatville and Mr. Nash performed in respect of Windsor Castle and Buckingham Palace, but in addition has been called upon to take upon himself the labour and responsibility of making contracts, forming elaborate schedules of prices, measuring, and making up accounts amounting to nearly 1,500,000*l.*, and of adjusting disputed claims to a considerable extent, from which onerous duties they were altogether exempt; and that he has had at least as great, if not much greater, difficulties than they had to contend with in carrying into effect the works at the new Palace at Westminster, owing to the necessity of forming an artificial foundation in the river; the limited clearances from time to time of the site; the necessity of keeping up old buildings—often a work of much difficulty and danger—and constantly adding temporary accommodation, so that the sittings of Parliament might not be interrupted; the interference with the progress of the works by parliamentary committees and other authorities, involving numerous alterations and delays, and the impossibility, in consequence, of spending, upon an average, more than 90,000*l.* per annum, by which the works have now been in hand more than eleven years beyond the time originally assumed for the completion.

The tone of the Treasury "Minute" throughout seems to us harsh and unfair. We give the following letter on the subject from amongst those which have reached us from correspondents:—

I am sure the profession generally will be much pleased to see the firm manner in which Sir Charles Barry has asserted his claims to proper remuneration for his laborious services connected with the new Houses of Parliament. It is monstrous to suppose that a man of his great ability is to be denied the proper reward for a work of such extraordinary character. My object, however, is to confirm Sir Charles's remarks in reference to the late Mr. Welby Pugin. That gentleman, in a conversation with me not long before his death, expressed much

* To this list may be added Board of Trade and Treasury Buildings, Trafalgar-square, Piccadilly improvements—all carried out under the professional guidance of Sir C. Barry.

annoyance at the prevalent reports, which attributed the best portions of the design of the New Palace at Westminster to his skill. I had frequently heard these remarks myself from people in high position, and upon mentioning it to Pugin, he most emphatically denied the truth of the rumours, and desired me to make the facts known wherever I could, adding some very complimentary remarks upon Sir Charles Barry as an architect, and claiming for him that facility and readiness of design which he is known to possess. My intimacy with Mr. Pugin commenced while a pupil with his father, and I never knew a person more ready to give praise where he thought it due, while at the same time he never ceased to denounce those who pretended to skill which did not belong to them.

BENJ. FERREY.

Any evidence as to Mr. Pugin's position should be quite unnecessary after the letter addressed to us by that gentleman some years ago, which was printed in our columns.

ON THE APPLICATION OF PAINTED GLASS IN ARCHITECTURE.*

A FEW years ago I should not have ventured, in advocating a new system of glass painting, to have recommended any but a very general conformity with ancient precedents, from the want of a material similar to ancient glass. But this desideratum has now been obtained, entirely by the skill and perseverance of some of my scientific friends, the successful issue of whose exertions is, perhaps, best acknowledged by the attempts at imitation on the part of those who at first were loudest in decrying and ridiculing their discoveries. The similarity of this new material to the old is, however, so close, that we may gather hints for its employment from the works of the ancient glass painters.

An extended acquaintance with ancient painted windows will convince us that the nature and execution of the design varied with the nature of the material employed.

In the twelfth and thirteenth centuries, the mode of painting was of a kind admirably calculated to tell on glass so powerful in its local colour as the material then used. The form of the features and draperies was strongly marked with opaque outlines, which, in fact, amounted to, and served as, the deeper shadows; and these were united and softened with a shadow in half tint, roughly applied as a wash. The pictures were also composed on a principle well suited to a stiff mosaic. The figures, placed in a single line, were separated from each other, and insulated by a stiff-coloured ground, by which means distinctness was attained without the aid of atmospheric effect. A somewhat similar mode of treatment was practised in the fourteenth century, but not so satisfactorily,—a more complicated kind of composition being usually adopted, destructive of the former means of producing distinctness, in lieu of which no new method was introduced.

The fifteenth century is distinguished by a far more delicate mode of execution. The former thick outlines were reduced to hairstrokes; and carefully finished shadows, varying in depth, succeeded the monotonous wash of shadow in half tint. The groups of figures, too, were arranged, as we see them in ordinary paintings, —some standing before the others. And if the artist did not succeed in separating the figures from each other, and making his composition distinct, it was but from want of skill, not from intention. In the sixteenth century, this object was fully attained; only, however, by a more rigorous and skilful application of the means which the artists of the fifteenth century possessed.

Glass paintings may, indeed, be divided into two classes. The first where the mode of representation is conducted on an artistically flat principle,—as in a bas relief. The other, where the picture is composed on the principle of representing depth. It would be too much to say that either of these different principles has always been consistently carried out in ancient glass paintings. The first, or flat principle, is best indicated in the works of the twelfth and thirteenth centuries, in which there is little attempt to represent objects situated in more than a single plane, having a thickness not greater than that of the human figure. This principle, as I have said, was violated in the fourteenth century; the whole of which century, as well as the whole of the fifteenth, was spent in the passage from the flat to the rotund style of representation, the change not being complete till the second quarter of the sixteenth century.

We need not trouble ourselves, therefore, much with any intermediate types, but confine our attention to the remains of painted glass belonging to the twelfth and thirteenth and to the sixteenth centuries.

Of the twelfth or thirteenth century, the best subject for examination, is the Medallion window,—so called from its design, consisting of a series of panels or medallions, containing groups of figures, and embedded in an ornamental ground. I am not one of those accustomed to go into a fit of enthusiasm at the sight of one of these windows, which, I suspect, owe their popularity, principally, to the unquestionable beauty of their individual tints; for they are often confused in composition, and occasionally exhibit an undue predominance of some particular colour. I look upon them not as models for imitation, but only as affording the means of instruction, and hints for the achievement of something better suited to the requirements of the higher artistic knowledge and more fastidious taste of the age in other matters.

On examination, we find, as I have already stated, the figures composing the group for the most part separated from each other, arranged in a single line, and cut out by the coloured ground of the panel, which usually is of deeper hue than the flesh or draperies, and is left unornamented, doubtless to avoid distracting the attention from the figures. The figures are thus rendered distinct and effective,—at a distance proportioned to their size,—without the aid of a receding background, and with but little assistance from light and shade. The frame or border of the panel, the ornament which fills the interstices between the panels, and composes the border which encircles the whole design, are all superficial in design. On looking at Roman work of the time of the Empire, and at the carved ivories which from thence form a continuous chain, illustrating the transition from the Pagan to the Christian sentiment in art, we perceive at once the influence under which the glass painters of the twelfth or thirteenth centuries worked, and the classic origin of their ideas of art. And when we consider that all early Gothic art is derived more immediately from the Greek than the Roman, we need not be surprised at the strong resemblance which exists between the draperies and ornaments of the glass paintings of the twelfth and thirteenth centuries, and those of the archaic, rather than the later Greek sculpture, the remains of which, lying chiefly in Asia Minor, might perhaps have been better known to the artists of Byzantium.

A good deal of confusion and trifling criticism might be avoided, if, in all our applications of painted glass to Gothic architecture, we should propose to ourselves,—not the following of any particular style, which can hardly fail to involve a following of certain defects, that had better be avoided,—but the attainment of real harmony between the new work and the old architecture.

If this be our aim, — unless, indeed, we are prepared to admit that the very defectiveness of old glass paintings is an element of such harmony, in which case the sooner we get rid of Gothic architecture the better,—we shall find the present mode of estimating a new window, —in proportion to its chance of being mistaken for an old one,—only a mischievous guide, and shall learn, on the contrary, to value its inevitable nineteenth-century character, as one of its principal excellences.

With a view to ascertain how far we might succeed in attaining harmony between late Norman architecture and painted glass, by an attempt to work up to the high standard which influenced the artists of the twelfth and thirteenth centuries, instead of working down to the level which they themselves attained, I caused the experiment to be tried a few years ago, of introducing into some windows in the round part of the Temple Church, figures after Greek designs. The experiment was, no doubt made cautiously, and even timidly; but its success has been such, in the judgment of those best qualified to form an opinion, that I have now no hesitation whatever in recommending, in nineteenth-century glass work designed for a twelfth or thirteenth century building, the introduction as much as possible of the Greek element in the form of the ornament, as well as in that of the draperies; taking care, of course, to express in the figures true Christian sentiment, as we find that expressed by the greatest of all Christian or any other painters. I laugh at the imputation of "eclecticism," which such a recommendation is likely enough to provoke from persons ignorant of the real meaning of the word. For if this is eclecticism, it must follow that Raffaelle himself was the most odious of eclectics. That the recommendation, which is now of somewhat old standing, is not an impracticable one, has been lately proved to me by the sight of some cartoons, done by an artist, for some windows in one of the transepts of Lincoln Cathedral.

I really believe that the nearer our glass paintings approach Greek excellence, the better they will be found to harmonise with the ancient architecture of the twelfth and thirteenth centuries. I use the term "ancient" architecture advisedly, because I doubt if they would be found to harmonise so completely with modern Gothic; in which I wholly miss that inexpressible vigour, and real feeling for high art, which are the natural result of honestly working up to a high standard, instead of idly descending to a low model; and which most interesting features, I am bound in common fairness to say, I recognise more or less fully in all modern edifices erected in the classic styles.

In like manner we might advantageously borrow ideas from the antique in the arrangement of the groups, attending particularly to Mr. Cockerell's hint, in his admirable lectures on sculpture,—about affecting diagonal and avoiding perpendicular lines in the figures. The painting of the figures should of course be executed in the manner which the experience of the old glass painters has shown to be best suited to a dense, strongly-coloured material, and they should be shaded so as to appear rotund. For, in speaking of a flat style, I always mean an artistically flat one,—a style, in short, induced by the necessity of employing stiff colour, in which the skill of the artist is evinced by conforming to unavoidable conditions, and yet producing a good and effective picture,—not a style in which, from a want of artistic knowledge, every figure looks as flat as if it had been ironed out against a wall.

In the form and general arrangements of the medallions, and of the entire window, ideas might be borrowed from antique mosaics and other work. Even Italian ceilings might show how the ground colours of the panels could be more varied than is ordinarily the case in mediæval example; care of course being taken that a change in the ground colour should be followed by a corresponding change in the colouring of the group, which should almost always be either decidedly lighter or decidedly darker than the ground on which it is placed.

Many of the pattern windows of the twelfth and thirteenth centuries, which, like all other mediæval pattern windows, are principally composed of white glass, are truly admirable in design, and could hardly be improved on. But there is yet a wide field for the invention of new patterns borrowed from the antique, and which, if carried out in a proper spirit, would harmonise with ancient architecture as well, and with the new picture windows probably better than the older patterns.

Of course, all these remarks are made subject to the employment of the new material I have already alluded to; a recommendation which, as I have no sort of interest in the matter, I may be allowed to make with a pure conscience.

I shall offer but few observations upon the nature of the glass paintings which seem most fit for the windows of a building of the fourteenth century. It is true that deep-toned glass is a

* See p. 71, *ante*.

concomitant of decorated architecture; but I question much if a mass of such deep colouring as this glass might present is best adapted to a window having mullions and tracery. A mass of deep dense colour always appears to me to confuse the more minute tracery. On the other hand, a window with mullions and tracery is apt to lose its breadth of effect, unless some general hue or design pervades, and so unites together, the whole of the lights. For these reasons, I think that, upon the whole, the rich sea-green white pattern windows of the period, with or without a row of coloured panels containing groups of figures running across the lower lights, produce the most satisfactory effect. If so, they afford an excellent guide. The patterns themselves are generally most beautiful, and it would not be easy to improve upon them. And the remarks I have already made upon the general treatment of medallion pictures, to be executed in a dense deeply-coloured material, would be equally applicable to the panels of those designs. I need hardly trouble myself to condemn the employment, in the fourteenth century, often to the oppression of the poor figures beneath, of canopy work, which, like an architect's geometrical drawing, does not distinctly express the various plans and projections of the design, but is found barely to indicate them, even after a long and laborious search. It would be hard to say, after so many existing examples, that the use of figures and canopies in painted windows, is not in strict accordance with Gothic principles. But the only principle with which we are concerned, is that of good taste; and the use of such designs, being in their nature incapable of adequate representation in a dense deeply coloured material like that of the fourteenth century, is only one of the many proofs of the decline of art which that century affords. The Gothic architecture of the fifteenth and sixteenth centuries is so much alike, that it is not surprising to find the sixteenth-century glass paintings that have happened to be placed in buildings of the fifteenth century agree so completely with the architecture. Indeed, the glass paintings of both periods are alike in principle; the development of this principle, in the sixteenth century, constituting the chief difference between them. The old painted glass of the fifteenth century is pleasing, from its pearly lustre, the result chiefly of delicate shading and high finish; but the glass of the sixteenth century is as pearly, and in all other respects superior; for which reason we may devote our attention to it.

The works of the second quarter of the sixteenth century, in which I include both Gothic and Cinque-cento examples,—for the style of ornament is but an accident, having no bearing on the general subject,—if considered as forming collectively a class of glass paintings in which pictorial effect is aimed at, rather than a rich collection of brilliant tints, are so nearly perfect in all their varieties, from the simple figure with its background of tapestry, to the composition in which several planes of vision are represented, as in the fresco of the school of Athens, and in some of the cartoons; that it seems almost superfluous to advocate their study as models. A great many of these designs exist; and a skilful artist will easily perceive, and as easily avoid their defects. The finest are undoubtedly those in which, as in the cartoons, and other works intended to be executed in a material not favourable to a representation of depth, the figures occupy the immediate foreground, and constitute the most important feature of the picture; the background being a mere accessory, composed,—unless when the nature of the design or other circumstances require that it should be occupied with architectural forms,—of a light neutral blue glass, which, whether left all clear as sky, or partially cover l with a landscape, by its sober colouring, relieves and throws forward the more positive colouring of the group. It is important to observe that these, as well as the earlier glass paintings, are composed on the principle of a broad sunshine effect, by which distinctness is attained without having recourse to any very exaggerated degree of shade. Hence the brilliancy of these works, as compared with later examples, in which the opposite principle has been adopted of shading up to a point of light, and which in many cases leaves more than one-half of the picture,—not in transparent shade, as in oil painting, but,—on account of the different conditions of a glass painting,—covered with a harsh, dry, heavy coat of dull colour. The expedients adopted to obtain a receding effect, when objects at different distances are represented in the background, are as simple as, and very analogous to, those used in the school of Athens.

Having thus completed our remarks on the mediæval styles, only a very few observations need be made on the nature of the glass paintings most likely to harmonise with buildings in the Classic styles.

With regard to Palladian buildings, we have the Cinque-cento style ready made to our hands, the various designs of which more or less rich in colour, light or deep in tint, flat or receding in their design, would supply ample hints for meeting any exigency of local position or character of the surrounding architecture.

With regard to Greek buildings, the ground has hitherto remained untrodden, and we are left without any practical guide. No one, I apprehend, would think of adopting the Byzantine expedient of a pierced stone framework, even if such could be proved to be of classic origin. If we infer the proper style of glass paintings from an examination of antique works in fresco or mosaic, we shall be inclined to adopt a style light, gay, and lively in its colouring, like the Cinque-cento, and possessing little of the deep, solemn character of the glass paintings of the twelfth century, the material of which, as already stated, is almost identical with the glass of the ancient Greeks. The question is,—supposing that the Greeks had been acquainted with the manufacture of window glass, what sort of colouring would they have been most likely to have employed in their windows? If we think that they would have given the preference to cool, richly-coloured glass, the supposition may be reconciled with the different aspect of the ancient mosaics, by considering that these works were composed of materials most of which are naturally of a light colour,—and that forming opaque surfaces, deriving their effect from reflected light, they were not so suited to display deep or rich colour as an object that transmits light. The subject, it must be admitted, is one of considerable difficulty. If I *must* offer an opinion on it, I should incline to think that richly-coloured glass, representing pictures in mosaic, such as those which have been already referred to, would prove most in harmony with the architecture, even though such treatment might have the effect of diminishing the apparent size of the building. Such is an outline of my views on this interesting subject,—views which, in whatever manner they may appear to have been stated, I can answer for it, have not been conceived in a dogmatic spirit. The shortness of time allowed has compelled me to abstain from many kindred topics, and barely to allude to others, so that I have presented little else than the epitome of an argument. I can only hope that I have expressed it intelligibly. In conclusion, I will offer a few remarks on a subject, the consideration of which, as it is of very general application, I have postponed to the last. I allude to the vexed question, whether a pictorial design in glass should ever have a receding background, or transgress the limits of a single light in a window?

It cannot be denied that there is an abundance of ancient glass painting, having, or intended to have, receding backgrounds; whilst of designs extending beyond the limits of a single light, there is a series, commencing with the introduction of the mullioned window. Those, therefore, who argue in denial of either proposition, must make out that it impugns some principle of taste; for it is idle to say that it is opposed to any Gothic principle.

It may readily be conceded that a receding background is incompatible with the use of a dense, richly coloured material, like that of the twelfth, thirteenth, and fourteenth centuries. But, unless it can be shown that no glass paintings, whatever be the principle of their composition, can adequately represent depth,—and before we admit this, we must deny the evidence of our senses,—it seems to savour of ultra-mediævalism to banish them from buildings into which they were admitted by those who actually lived in the Middle Ages; and so, still further to restrict the range of subjects, already sufficiently circumscribed by the conditions of glass painting.

We may, I think, very fairly, and safely, continue to prove to the world that we, at all events, do not profess to be wiser than our ancestors, until such time as our modern mediævalists have either produced some new variety of subjects, in all respects equal to the class they reject; or else, retaining such class, have hit upon some new mode of treating it, which shall be as satisfactory as that adopted by the artists of the sixteenth century.

And with regard to the question of carrying a subject into more than one light, there are many persons, whose reputation for good taste would perhaps stand a comparison with that of our mediævalists, who are unable to perceive the ill effect which they allege is produced by even a figure being cut through by a mullion. As far as my own experience goes, I have always found that, if a sufficient quantity of the object separated remain on each side of the mullion, the eye passes across the mullion without being sensible of any interruption of the design. It is true that a confused effect will be produced if a sufficient quantity of the object cut through does not lie on each side of the mullion, to attract the eye across; and this, no doubt, is the reason why, in several Cinque-cento designs, where the head of the window is filled with a quantity of minute tracery, as in the windows of King's College Chapel; no attempt is made to extend the design from the lower lights into the tracery. Every principle must be more or less confined in its application by circumstances; but it is one thing to modify the application of a principle, and another to reject it altogether. And the rejection of the principle of carrying a subject across several lights of a window would involve, equally with the rejection of compositions having receding backgrounds, the further curtailment of the stock of subjects to which the choice of the glass painter is confined, without, as it seems to me, any commensurate result.

Charles Winston.*

CANNING-TOWN:

A NEW LONDON DISTRICT.

We have before now mentioned the manner in which Mr. Mare, the shipwright, has battled with Father Thames, and succeeded in planting his engines and steam-hammers on a spot which a few years ago was covered by every high tide. The establishment of this great manufactory, kept moving by the hands of 4,000 or 5,000 people; the Victoria Docks, and other works which are in progress in this neighbourhood, have led to the formation of a new town, unknown to the great mass of Londoners.

We all know the consequences of planting large populations on ill-adapted lands, without making provision for that most important necessary of accumulated life, *drainage*; and it might have been hoped that the sad effects in known instances would have led to the prevention of other similar mistakes. It is, however, not so; for on a part of the Plastow Marshes, not far from Mr. Mare's shipyard, Canning-town has been commenced, without the provision of either proper roads or drainage.

On one side of the new town an earthen embankment dams off the water of the Bow-creek. The level on which all the houses are placed is below that of the ordinary half-height of the Thames. Standing near the iron bridge which crosses Bow-creek, let us take a peep at the scene which presents itself. Near at hand

* We have received the following with reference to Mr. Scott's paper in our last:—"Sir: Mr. G. G Scott, as a practitioner of Gothic architecture, may feel sore at his views not being universally received But I protest against his assertion, as unjust and altogether fabulous, that I have been rendered hostile to 'the movement' by the illhumour of certain foolish zealots, whose perish misrepresentations I have had to correct. Although fond of antiquarian pursuits, I have, in common with many sober-minded antiquaries, invariably opposed the attempt to mediæval ze the nineteenth century; because, b sides being otherwise objectionable, it appeared likely to lower the standard of art. My belief on the last point is corroborated by what I see continually. I may add, that it is not likely that Mr Petit should have been disturbed by the treatment I have experience l from thee rien is of Mr Scott, since he has always concurred with me in laughing at it, as something inexpressibly diverting. I am thus driven to crave permission to intrude on your valuable s; ace, and am, &c.
C. Winston."

CANNING-TOWN: A LONDON SUBURB.

is the new town, and on all sides of the green level London is marching with giant strides. A few years since, if a dozen people were seen crossing this bridge in the course of a day it was a matter of wonder: now the bridge has become a great thoroughfare. Nine or ten years since there were only two or three houses, and now look at them! It would surely suggest that the sewerage of London should be taken further afield. If they put it into this creek, or into Barking-creek, but little advantage will be gained. Our previous half measures have been attended with such an enormous expense and so much damage to health and life, that it is time we adopted another course. If the sewage is to be manufactured, and distributed as a manure over the land, instead of poisoning the water; or if for some time to come we must, for want of knowledge, continue to waste it;—in either case the manufacturing of the refuse, or the entrance of it into the Thames, ought to be at a safe distance from our two or three millions of people. If the sewerage of the north of London is to be passed into the river, it must, to be effectual, be nearer to the sea than Plastow-marsh or Barking-creek. It would be, to say the least, a waste of money, to carry the drainage and run it into the Thames at a point from which, instead of sweeping into the sea, it will come back and float to and fro past the City like the body of a poor boy drowned here some time ago, or the dog to which we have before alluded, and be deposited on the banks of Rotherhithe or Lambeth. We have spoken to many persons of experience on the river, men who have for years been acquainted with the currents, &c. of Father Thames, and there is but one opinion amongst these practical men. However, it is not our present object to say more on this important point. We would direct attention to our sketch, which will help those who cannot pay a visit to the place to understand the position of affairs.

In the view of Canning-town, as it appears from near to the iron bridge, the green level is shown extending over a great extent. Along the margin of this flat land, in every direction, houses, shops, public houses, and churches, are new to be seen skirting the level, and gaining every week further and further upon the space, which is chiefly several feet below the high-water mark of the Thames. The new town, which already consists of several long streets, will, in the course of a few years, spread out and meet the approaching houses, and all this level will be planted with dwellings and inhabited by many thousands of people. The artificial bank of Bow-creek and the embankment of the Thames are all that prevent the houses here from being flooded every high tide. To provide for the effectual drainage of this district by the ordinary means is impossible. The houses here have been erected without the means of either carrying off the refuse or properly getting rid of the damp. In course of time the *débris* of these and other houses will raise the level; but in the meantime it is sad to think of the sacrifice of human life which must take place without prompt measures. With some difficulty we managed to reach the place on foot from the turnpike road, and found the condition of the streets miserable: many of them, although the day was tolerably fine, were almost impassable, and vehicles sank almost up to the axletrees in the mud. In many parts were great pools of stagnant water. Several of the inhabitants said that if we had come a few days before, during the rain, it would not have been an easy matter to get along the streets at all. Most persons complain already of the drainage. We understand that it is proposed to take the sewerage to a certain depth, and pump it into the Thames by steam power. If something is not done, in two or three years' time the ground will be poisoned by cesspools, water will stand on the surface, and evils of a serious nature will follow.

In a score of years or less, Canning-town will be an important place, with its churches, omnibus and cab stations, and its masses of rich and poor. Let us hope for the introduction of measures proportionate to the extent of the future requirements. Flesh and blood are precious materials.

ON THE INFLUENCE OF LIGHT AND SHADOW IN ARCHITECTURAL COMPOSITION.*

AMONG the many studies of the architect, none deserves greater attention than that of the varied arrangements of light and shadow: by this means the first impression is made on the mind, of grandeur, or of meanness, of beauty, or of deformity. We see at a glance whether or not a master-hand has been engaged; for, should the *general effect* prove disagreeable, no labour on the details will ever compensate for that deficiency. But the architect who works upon some ascertained principle of effect will always be able, if he choose, to depend on the same knowledge for his details; and, from the fact of his being able to grasp the whole, will feel no difficulty in mastering the minor portions of his subject.

It is the want of this knowledge that so frequently produces disappointment after unrestricted outlay. Labour, the most costly, is thrown away on parts that never can help the general effect, because mere ornamentation will never produce it. It becomes, then, necessary to find some principles on which we may rest for guidance under given circumstances; and, although many obstacles may arise to the *perfect* realization of our conceptions; yet, if we are confident in the effect we wish to produce, these obstacles will never prevent a comparatively satisfactory result.

* The following paper, illustrated by sketches, was read at the Architectural Exhibition on the 13th instant.

It has been said, and, indeed, often repeated in print, with considerable authority of late years, that architects should confine themselves to the more severe character of geometrical drawings,—that *outline* or simple *form*, without substance, is *best* adapted to *ensure purity* of design,—and that in this manner their ideas will be better presented for public inspection than by any other means.

Without questioning the *use* of simple outline, I deny that it is *all* that is required, or that in its utmost perfection it will ever give a just and truthful idea of the reality. Light and shadow must ever exert the most powerful influence on architectural effect; and I am totally at a loss to conceive any reasonable argument that should prevent its being studied from the beginning of every work, in conjunction with the absolute necessities of arrangement. I think it will be pretty readily admitted that to judge of the merits of a thing it must be seen. Then *how* is an architectural composition to be judged of *before* it is *built?* By simply representing it as it will appear with all its lights and shadows truthfully displayed. Every one knows that it is an impossibility to see a building when executed as it was seen when drawn geometrically; and, although such drawings are necessary to the workman, they convey the most false impression to the general observer. In fact, it requires a mature and practised judgment to calculate, from geometrical drawings *alone*, the true effect *in execution*. I allude to these printed notions because I am of opinion that they have already had a tendency to divert the mind of the student from what I believe to be a healthy and useful course of study. I would not lead him to imagine that he must of necessity be either a Raffaelle or a Michelangelo; but *I do* think he would be more successful in the execution of his work as an architect if he studied *somewhat* more as a painter. By studying as a painter I do not mean that meretricious daubing which might be aptly called the gamboge and burnt sienna styles, but that he should find out and impress himself with the true principles of art, by which a large field would be opened to his imagination. He would see how nearly allied these principles are in *all* branches of *art*; and we should then have less chance of deploring the loss of opportunities, so frequently complained of when too late for remedy.

But to ascertain the value of this quality in architecture, let us suppose ourselves looking over some rich valley, with its varied beauties of rock, wood, and water. How grand, and yet how exquisitely delicate, are the lights and shadows as they fall on the natural objects! We are delighted with the harmony of the scene, until, in the midst of all, a huge mass of building destroys the charm. We detect its meanness from its want of depth in its shadows. The absence of light playing on graceful forms tells us it is *labour* without *mind*. It is a blot: it defaces the beauties of nature; and we execrate

the ignorance that could perpetrate a work so vile amidst so much loveliness.

But let us suppose in its place a classic temple, with its rich, deep shadows, among its columns, its broad and bold cornices, its delicate enrichments, all keeping their relative value to the whole. Will not this be the crowning interest of the view? Or let it be a Gothic shrine of English architecture, with its bold arches, and play of light upon its tracery, buttresses, and pinnacles. Should we not be attracted to this point as to a gem set in the face of the landscape, and be so strongly impressed with its value, its interest, and its being truly a work of art, that all other feelings would give place to the desire of more minute examination? I, of course, speak here of the general effect of light and shadow; but, if this produces at a glance so strong an influence on the mind, it must surely be one of the most important studies of the architect.

With painters there are three distinct principles of effect recognised; and, if the architect, while making his design, will consider the aspect under which it is to be generally seen, he will readily understand which of these effects it will be desirable to work up to. It may be objected, and at first sight it may appear a very fair objection, that if my suggestions are acted on, conventionality and mannerism will rule everything. But a little reflection on the various uses for which buildings are constructed (which must of course always rise paramount to every other consideration), will show us that such a result is not to be feared. Besides, these three simple principles to which I allude, admit in *themselves* of such *infinity* of modification, that instead of trammelling the *mind*, they become only *landmarks* to tell us *where we are*, and in which direction to *go* to find *what* we *want*.

In speaking of them as simple, I do not mean to say that this knowledge is attained without patient investigation and labour, for their very simplicity will only be acknowledged upon intimate acquaintance with them.

It is probable that my observations as to the *possibility* of an architect applying the knowledge of a painter may be received with considerable doubt by many. It may appear to them that artistic effect is a visionary idea, or only to be met with on the canvass of the painter, and that with materials such as brick and stone it is nonsense to expect it. They will say, "Give us practical knowledge in the way of building, and leave these theories to the painter, who alone can make use of them." My answer to these objections is this: The painter who represents on canvass that which is manifestly untrue in *nature* only creates disgust in the beholder. The architect who creates with certainty that which shall satisfy the eye of the painter has attained one of the highest qualifications of practical knowledge in his profession.

I have sketched slightly the three different effects referred to: they are each positive in their character, and distinct from each other.

The first with the *dark* in the centre, surrounded by light; the lower one with *light* in the centre, surrounded by *dark;* the middle one occupying the *medium* between light and shade, and having nearly equal portions of light and shade crossing each other.

You will observe that by one of these effects or the other, everything in nature must be seen; for if we look *towards* the light, any object between us and the light must be dark; and if we look *from* the light, or in the same direction as light itself, the objects will be more or less light according to their local colour; and, by looking *across* the rays of light, we shall have, of course, side light, with about the same quantity of shade on all objects within our view.

In the treatment of such a subject as the lower one, care must be taken that the centre light, which is actually the building, should spread itself out—apparently in the easy enjoyment of the space about it,—for nothing can look worse than a square band-box-looking house in such a situation. This object may generally be effected by the offices and outbuildings being partially brought into view, and by hiding their exact termination, giving an appearance of extent greater than they actually possess. The distribution of shadow on the central mass of light will determine the character of the structure; and if the nature of the requirements will admit of the greater mass of shadow being brought into the centre, with subordinate portions to the ends, and led off by the windows and minor details, the effect never can be bad. But in this mode of composition, the great point to guard against is the *equality of shadow;* for if a number of shadows of like force cross and recross this light, the brilliancy or breadth must be diminished and the general effect neutralised. The shadows should, therefore, if I may use the expression, be *clustered* rather than distributed over the whole surface, for if we look on a building charged with ornament in all its parts, we may at first sight be struck by the amount of labour bestowed on it, but it will fail to satisfy the judgment when viewed as a whole, because it wants breadth of light and depth of shadow.

In some buildings, such as Wollaton Hall, Nottinghamshire, for example, much undoubtedly depends on the sky line, or outer form of the building; but if deep recesses are formed within this shade, they will, being darker than the whole mass, throw out the face of the front as in reflected light, and if boldly executed will always create a rich and imposing effect. It is evident that thin and trifling ornament would be lost here. In working up to this principle of light and shadow, all materials and objects that will receive light in front, such as stone terraces, statues, or broad gravel walks, will not only heighten the effect by reflected light on the surface, but give cheerfulness to the rooms within; while grass or any dark material on which the shadow falls would, independently of the chill and damp of green adjoining the north side of a building, tend to neutralise and destroy the effect.

It is seldom, however, that we have the opportunity of making so diversified an outline as that of Wollaton Hall, and we must, therefore, depend more upon the *plan* for giving that diversity rather than the *elevation;* and in considering the north front of a building, it is therefore desirable that the face should be broken up so as to receive the sun into the masses of shade. These projections will receive the south-east and south-west sun, which will not only, by its positive light, but also, by its reflected light, enliven the whole of the north front. Everything, therefore, that tends to give a deeper shadow *within* the *boundary* of the shade,—by which the forms within will be relieved,—and every break of light on the outside, or edge of the shade *itself*, will tend to improve and give intensity to this effect.

I would here point out that each shadow has its centre, or a portion is darker than the mass; as also with the lights, *some portion* is lighter than the rest. And it is this quality of concentration, or of giving a focus to both the lights and the shadows, that gives *power* and *richness* to all the natural objects: and inasmuch as we follow out *this principle* in our works, they will be so far removed from *flatness* and *neutrality* of effect.

It is evidently a practical truth that to prevent confusion of ideas, the eye requires a certain degree of repose in *parts* of every composition: they are the quiet resting-places of the mind, from whence each portion is classified and rapidly understood. The *reservation* of portions which shall be *plain* and *simple* in their character is therefore of quite as much consequence in every design as the *addition* of enrichments; and this is not only applicable to ornament alone, but to the general effect of the whole. Ignorant persons, in their desire for display, heap one thing on another in the greatest profusion, in the vain expectation of captivating the mind by reckless expenditure. They only create a costly confusion, which, to cultivated taste, is so much the more disgusting from its vulgar pretensions.

A perfect and certain knowledge of how and where to bring these parts together, so that one harmonious whole shall first strike and interest the observer, and afterwards continue to satisfy his judgment, ought to be one of the leading points of architectural education

I grant that to the student this will not appear, nor will it ever be an easy task. Perfection in any branch of learning never is easy. But that is no reason why the architect should rest satisfied to leave the arrangement of light and shade as a matter for chance only to regulate.

If there be such a thing as pre-eminent beauty and fitness in works that have been the admiration of ages, surely there must be a cause for such beauty, and a reason for such fitness. I would say, then, let us never rest until we find out this cause. Do not be so servile as to copy these works, but find out the cause that gives them the effect we admire, and you have the master-key in your own hands. This is genius,—this is the very foundation of taste.

The architect who practises his profession conscientiously, will never consider his labour in perfecting his building; but from the habits and usages of the profession, and perhaps from allowing themselves to rest on their purely constructive ability, there are some who never appear to go to *first causes* in the higher branches of their art, and who sometimes permit themselves to be talked down by amateurs. The consequence is, that any appearance of original thought is put down by the constant cry of, "Where's your authority?" For my part, I never could understand this cuckoo cry. Is it that we are labouring to deceive the future antiquary?

In the arrangement of light and shadow, the colour of the material must be taken into consideration; for if the building be of a very dark colour, it will be difficult to give it a pleasing effect.

The use of bricks appears to be coming into fashion from various considerations; but we should, I think, pause, before we allow the indiscriminate use of this material in external decoration. In situations that are tolerably free from the effects of smoke, a great degree of beauty may be attained by the judicious mixture of red and white, and other bricks. I say *judicious* mixture, for otherwise they are apt to appear like patchwork; but, if properly used, they always look well in the *country*, from the harmonious effect of red and white with green. But in London their colour is soon lost in one dingy coat of black, for they have a peculiar tendency to retain the soot, which rain washes *into* them rather than *off* them. The common stock brick, as used in London, is therefore fatal to anything like breadth of effect.

Portland-place in its *dimensions* is certainly one of the finest streets in London, but its really noble space is scarcely redeemed from meanness, by reason of its houses being built chiefly of brick.

But there is a material which by its general use in this metropolis has helped us over many difficulties; and yet in raising my voice in its favour, I may, for ought I know, be getting myself into difficulties,—for so much has been said about *truthfulness of material*, and the very phrase itself carrying with it a conviction of so much virtuous intention, that if I am inclined to receive it in this instance as containing more of *sound* than of *sense*, I fear I shall be at once put down as one so totally blind as to be incapable of receiving the new lights now breaking on our intellects.

Among the many strictures put forth with much authority by certain amateurs, cement and all stuccos for external decoration come in for unlimited abuse, and are held up for universal condemnation. I must say that this reprobation of a material which has redeemed London from the dingy monotony of brick, appears to me somewhat unreasonable. Those who remember it in the time of George III. will not, I think, be among the number who would restore its soot-begrimed walls of brick, however their consciences may suffer from the use of stucco.

Stone is certainly of all other materials the most beautiful and harmonious for the display of light and shade; but when stone is not to be had, stucco comes nearest to it in appearance: it preserves the work beneath from decay: it keeps out damp: it is easily restored; and at a trifling cost will look cheerful and new.

Now, in the name of common sense, why are we to forego these advantages? Is it because one or two crotchetty people would persuade us that we are telling an untruth? Then let us tell the honest truth, and say, "I use it because

I prefer *cheerfulness* to *gloom*, and it is the only thing I can get to answer that purpose." Whether this plain view of the case will satisfy these sticklers for truth at any price, or not,—it must be admitted that London requires a light material for architectural effect; as, from the nature of the climate and the smoky atmosphere, we shall always have plenty of shade.

In the treatment of street architecture, it is necessary that the horizontal lines of shadow should be kept so far of one uniform height as to satisfy the eye as to their extent. I mean that this uniform line may be both too long and too short. It is too long when, as in the city of Turin, the constant repetition of the same height of cornices becomes most tiresome and monotonous. It is too short, when (as is frequently observable in London), each small frontage asserts its independence in perfect disregard of its neighbour; and the result is, like many other cases of want of unanimity, that it is complete only in its confusion and total want of general effect.

Perhaps the best example that I can point out as the nearest to perfection in street architecture is that of the High-street in Oxford. Here there is just sufficient horizontal shadow to aid the perspective, and to satisfy the eye in comprehending each building as it rises to view in passing from one to the other,—enough variety to excite the imagination, and an alternate play of light and repose, that has always produced the most striking effect even to the casual observer.

I have said that colour itself may have much influence on light and shadow in architectural composition, for it will be seen immediately that *red* and *blue* will tell much more as shade than *yellow* and *white*. Hence, wherever brick is used, it will serve to direct and concentrate the attention on either the yellow or the white; but wherever used, it should be so blended by gradual means into the other colours as to prevent anything like a chequered appearance, and only to appear what it really is, merely ornamental material.

Thus far I will heartily agree with our new lights, and will hold up *my* feeble taper in their company; but of all the false tastes ever imposed by the tyranny of fashion, or the blind notions of the antiquary, that of bedaubing sculptured decorations with indiscriminate blue, yellow, red, and green paint, is the most barbarous. It is gilding refined gold;—nay, it is putting a baser metal than gold over gold itself. We laugh at the savage who, in his ignorance of the beauty of form, disfigures those limbs that are the admiration of an enlightened mind; but that *we* in the *nineteenth* century, with all our boasted refinement—with our progress of mind and manly self-dependence—should allow ourselves to be imposed on by the vulgar notion of picking out a beautifully executed design with the most gaudy pigments that can be obtained, is to me most unaccountable. I know that here again I am on dangerous ground. I feel that I am rowing against the stream—that my glimmering lamp is in danger of being puffed out by the overwhelming authority of antiquity; but, if we refer to antiquity for precedents and beauty, history will show that even here was a gradual development of that perfection which we admire, and we shall as surely perceive that so soon as the *greater principles* of art were lost sight of, art itself became debased in the hands of our forefathers.

Nothing can, however, be further from my intention than to condemn the use of colour altogether, for I am too well aware of the glorious combinations of colour in nature, to neglect or think lightly of her schooling; but sculptured stone is not the place for it in any architectural composition. It is allowing the labourer to destroy the work of the master. Who would think of painting the Apollo Belvidere, or put on him red drapery, and nicely paint his eyes, lips, and eyebrows? No! The hand that executes a piece of ornamental sculpture stands in no need of colour to pick out the groundwork with red, blue, or green. Such an act is like placing an elegant poem in the hands of the town-crier.

The architect requires only the delicate gradations of light and shade in his composition to work out his meaning; and this will harmonize with, but never obtrude itself on, the general features of the design.

Returning to the three principles of effect already alluded to, they may be modified to almost any extent, and so that a chief light is reserved, others may be introduced, should the subject require them. Of course the greater the quantity of dark round a light, the brighter that light will appear. The value of shadow, therefore, as a means of giving breadth and brilliancy of effect should not be forgotten in the choice of a site, especially for such a thing as a mansion in the country. Here the very shadows of the house will appear light and delicate in their colour, if the shadow of foliage or any dark object is seen in their vicinity. Indeed, the choice of a background is of much more consequence in architectural effect than is generally supposed. In many instances we see proprietors, in their wild rage for building, sweep away everything before them, and are afterwards obliged to plant round their houses trees that can never serve the purpose for which they are planted within their lifetime.

Light and shade, therefore, in the choice of a site in the country, is a point of the utmost consequence to the architect; for, however good in design or arrangement, he will find a difficulty in making his structure interesting if he be completely isolated from every other object; and I would here recommend to the student, that instead of too much line and rule work, he should accustom himself to sketch his designs *always* in perspective before making his geometrical elevation, together with the situation in which it is to be built. This will at once test his idea, and save him much trouble in the end, of course always supposing him to have an idea.

Perhaps I ought not to leave this subject without a few words on interior effect. In this I fancy we are somewhat excelled by our continental neighbours, especially in modern works: at all events the mode of admitting light to the interior of our public and private buildings is worthy of more consideration than it generally obtains; for, provided a sufficient quantity of light is supposed to be admitted for the uses of the building, little attention is paid to its picturesque or artistic effect; and yet we shall find that the comfort of a dwelling, or the interior beauty of a public building, consists more in the agreeable distribution of its light than we at first suspect. It will be found that in all cases where the positive light from the sky can be kept off the eye, the architectural proportions will be seen to the greatest advantage; or, in other words, whenever the actual source of light can be so concealed as to allow its rays to illuminate the particular object most interesting or central, the most forcible and agreeable effect of light and shade will be the result; for, as in the position we ourselves occupy we are in the shade, the principal light will be surrounded by shadow, and by its brilliancy alone will illuminate by a sweet and soft reflection every thing around it.

One of the effects may also be produced in another way, which is by the introduction of light from the top of a building, as in the magnificent church of the Madeleine, at Paris, and also in the Pantheon, at Rome, where, by its admission in this manner, we not only have a flood of light passing through the centre, but every point of the architecture is illuminated, and throws broad but softened shadows throughout the building. I once saw this latter structure, by a sudden rising of the Tiber, flooded by its waters, and the whole height of its splendid architecture reflected as in a mirror. The effect had all the characteristics that Burke describes as necessary to the sublime and beautiful, viz. height, depth, and space. From the many advantages arising from this mode of lighting buildings from the top, the wonder is that it is not more frequently adopted.

In our own churches we find so little attention paid to their being agreeably lighted, as frequently to have a large east window glaring full in the eyes of the congregation. The consequence is, that the most painful sensation is felt in attempting to look into the gloom that surrounds the communion-table, or to witness the service; and in many of these structures the head of the clergyman, while preaching, can only be distinguished as a dark object between the congregation and the light. This does not require argument to prove that it is totally wrong. The light should be thrown on the communion-table, and the objects about it, and enough on the head of the preacher to show the expression of the face, which, if not absolutely necessary to the thorough comprehension of his meaning, prevents the mind from being disturbed by the constant effort to penetrate the gloom without effect.

In our modern churches our architects have, by their adoption of a subdued light in their glass, acknowledged the principle that there may be too much light in an ecclesiastical building. By thus subduing the light, a soft and quiet effect is certainly attained, but at the expense of retaining too much neutrality. A small quantity of pure light properly introduced would give point and brilliancy without destroying the sober tone of the whole.

In a church built by myself at Highbury, a few years since, I have endeavoured to carry this principle into execution. I am of course greatly indebted to the stained glass for the means of doing so, and I would here call your attention to the value of colour in this situation. The stone carving on the screen gives additional richness to the colour, while the deep rich tones of the colour itself adds another charm to the delicate pearly shadows and sparkling lights of the stone carving. It is in such situations as this that the one will so powerfully assist the other. It may be truly said in regard to art, that colour put into unskilful hands is like placing sharp instruments in the hands of a child,—a hundred to one that some mischief is done. Should any be doubtful of the truth of this, let them explain why so many gradations exist between the works of a *sign painter* and the productions of a *Titian*.

Should these observations be the means of inducing the student to think more of the *principles of design*, and less of the mere act of copying, which never will lead to great things, my object will be accomplished. Let him imbue his mind thoroughly with the good and the beautiful in each particular style—for all have their beauties,—and I am confident there is talent, energy, and originality of thought in the present generation sufficient to stamp the present era with its own peculiar mark,—which shall be in no wise inferior to any other within the history of our profession.

Thomas Allom.

FOREIGN INTELLIGENCE.

Constantinople.—A Relic of Delphi.—There have been made here, of late, excavations between the two obelisks on the Hippodrome, for uncovering the foundation of the serpented bronze column (*Schlangensäule*). There can be no doubt that this is the same column which bore once in Delphi the golden tripod which the Greeks had consecrated to the Delphic Apollo after the victory over Xerxes. The golden tripod was subsequently taken away by the Phocœans, but the bronze column was still at Delphi, in the time of Pausanias. Later still, even, the column was brought by Constantine to Constantinople, and exhibited on the Hippodrome, and when lately the ground around it was excavated, it was found that it stuck two mètres under the surface of the soil. On the spirals of the serpents, which constitute this column, some inscriptions were found, but much corroded by the *errugo*. On the second spiral from below is to be read, "*Amprak. . . . Fo . . .*," and on the seventh spiral, "*Tenio.*" According to Herodotus, the name of the *Tenians* was inscribed on the tripod of Delphi.

Paris: New Works at the Ecole Militaire.—This interesting building is receiving great additions, under the directions of the Government engineers. Two pavilions will be added, forming the continuation of the façade on the Champs de Mars, being 101 mètres long and 15 mètres deep. They are one story high, and are surmounted by a pediment and an attic. The sculptures of the pediment represent the imperial eagle, &c. The edifice and the lateral galleries of the Cour d'Honneur, have been completely restored, and the fine railing of the Cour Montant equally completed. Other improvements have thence resulted, for the whole

space of the Champs de Mars, and a number of houses, which would have masqued the new pavilions, have been demolished. Thus an area of 80,000 square mètres has been added to the immense place, which borders on the south of the palace of the Ecole Militaire.

Paris: Assyrian Sarcophagus.—The sarcophagus of the king of Sidon, Asmunazar, which had been presented to the French Museum, by the Duke de Luines, and conveyed from Beyrout to Paris, has been placed in the Asiatic collection of the Louvre, near to the Phœnician sarcophagus, of white marble, which also has been presented by M. Peritié, at Beyrout. At the last sitting of the Institute, M. de Luines read a paper on the sarcophagus of Asmunazar, which contained a translation of the Phœnician inscription, engraved in fine characters on the lid, and containing the name of the king and his ancestors.

Cologne: Mural Paintings. — The Provincial Government of Cologne have ordered M. Hohe, professor of drawing, to copy and trace the old mural paintings of St. Gereon's Church. They belong to the thirteenth century, and are conspicuous for correct design and brilliant colouring, and represent figures of saints, above life size; containing also the apocalyptic signs of the evangelists, who stand in the niches of the chapel. The surrounding ornaments are in the Romanic character, passing somewhat into the Gothic.

Munich Art-Union. — This institution numbered, last year, 3,330 members, who paid a subscription of 39,141 florins. The Union purchased during that period, 117 articles of art, amongst which were mostly oil paintings, for which they expended 25,000 florins: the remaining 3,500 were expended in members' prizes.

Vienna.—The Second Spire of St. Stephen's.—The windows of the south gable of the Vienna Cathedral having been restored, the completion of the second spire is in contemplation. To lessen the expense, it is intended to erect an iron framework, in which the masonry is to be inserted; the same process (according to our informant) as was resorted to in the restoration of the other spire in the years 1839 and 1842. The expenses of this vast undertaking are estimated at 500,000 florins, but the Common Council of Vienna are willing to contribute 15,000 annually during the whole time of the rebuilding.

The largest Locomotive in the World—the Duke of Brabant, constructed at Seraign, and which attracted so much notice at the Paris Exhibition, is now at work at Charleroy. Its weight is 6,000 kilos, and it can move fifty waggons of 10,000 kilos each—about a million of pounds.

PROVINCIAL NEWS.

Kingskerswell, near Torquay.—A contract for the erection of parochial schools has just been made with a local builder for the sum of 487*l.* They will be commenced forthwith, and carried out according to the designs of Mr. J. W. Hugall, of Cheltenham.

Romsey.—The nave of the Abbey Church of Romsey, which had been closed for many months during the construction of a new roof over it, in consequence of the utter decay of the old one, was last Sunday opened again for public worship. The new roof is similar in its design to the ancient one, which had from time to time been lowered in its pitch, as the ends of the timbers became decayed. The roof is now framed to the original height, and gives great dignity to the building. It is internally of a waggon-headed form, divided into panels by oak ribs and bosses as in the previous roof. Messrs. Gover and Fluder were the contractors, under the superintendence of Mr. Ferrey. A new vicarage-house, in the Mediæval style, is also nearly completed from the design of Mr. Ferrey.

Cambridge.—In allusion to some misapprehension said to exist in this city as to the expense of laying down supply pipes by the water company, and to the fact that the company, at their own expense, lay down the service pipes to the fronts of all houses or premises on the application of the occupier to be supplied with water, the *Cambridge Chronicle* says,—"We are informed that the cost of laying down the service pipes inside the consumer's premises does not exceed 2s. per yard for pipes of ½ inch bore, and 3s. per yard for pipes of ¾ inch bore, of the weights prescribed by the company's regulations; and that the average cost of laying on the water into houses in Barnwell and Castle-end, where the water is most required, is under 15s. to each consumer, and in many cases much less."

Birmingham.—Mr. Adderley, M.P. having offered to set aside ten acres of land on his estate at Saltley, for a park and recreation-ground open to the public, active steps are to be taken to render the offer available, to form a Working Man's Park Association, and take the management of the park. A large quantity of land is reserved all round for building purposes, but until built upon will form the play-ground. Mr. Adderley intends to erect at the principal entrance a museum and reading-room, at a cost of 1,300*l.*

Liverpool.—The Town Council have given powers to the Free Library and Museum Committee to raise 20,000*l.* the interest to be paid out of the Museum Rate, for the purchase of land opposite St. George's-hall, for the erection of the proposed new buildings, towards the construction of which Mr. W. Brown has promised 6,000*l.*

West Hartlepool.—The market buildings will be of considerable size, to allow for the future extension of the town, which is rapidly increasing in population and house property. The façade is of stone and iron. At each end of the building there will be three separate entrances, under archways, formed in an Ionic façade. The roof is in three spans, and circular in form.

York.—The contractors for an extensive drainage of this city, Messrs. Swire and Blair, have completed their contract, to the satisfaction, apparently, of the authorities; but scarcely to their own, we should think, since they must be heavy losers by the contract. They have constructed 5,061 yards of sewers, at a total cost to them (including some extra works) of 8,369*l.* according to the local *Herald*. The sum for which they contracted to do the whole (exclusive of the extras) was 3,550*l.* Their tender was the lowest of eight, the others ranging from 4,116*l.* to 6,797*l.* 3s. "Not having tried the strata previously to having given in their estimate [did *any* of the competitors incur sufficient expense for such a purpose on the mere chance of obtaining the contract?], they met with unforeseen difficulties, particularly on the Mount." Nevertheless, they honourably fulfilled their contract; but the Corporation in consideration of difficulties which it is obvious not one of the competitors fully appreciated, contributed an additional sum of 641*l.* which, with 250*l.* already paid on account of the Mount drainage, made up the sum of 891*l.* which the contractors had expended on that portion of the drainage. In all, the contractors appear to have received 5,067*l.*; so that the loss on the outlay in the contract amounted to 3,302*l.* exclusive of their own labour and anxiety.—Amongst other great improvements of this city deemed desirable, the paper already quoted specifies a spacious Market-house.

Huddersfield—National Schools, with teacher's house, are being erected at Milnsbridge, a manufacturing village near Huddersfield. Within the last few years the increase of population has been so great, that the present schools in connection with the church have been found inadequate to meet the wants of the locality. The new schools consist of a general school, 60 feet by 30 feet, for mixed classes of boys and girls, with a class-room attached, and calculated to hold 280 children; an infants' school, 44 feet by 21 feet, for 120 children; making a total accommodation for 400 children; and a teacher's house, containing six rooms, arranged on two floors: this is placed in the centre of the building between the two school-rooms. The building faces the Manchester-road, and stands upon one-third of an acre of land. Mr. E. W. Tarn, of London, is the architect; and Messrs. Hampshire, of Huddersfield, have contracted for the whole building (except the carpenter's work) at 768*l.* The carpenter's work (including desks and other fittings) is contracted for by Mr. Youdon, of Huddersfield, at 299*l.* 10s. The style adopted is the Early English. The total cost, including the site, will not exceed 1,300*l.*

Dundee.—Exertions are being made here for the realization of a large public hall, which is much wanted. The *Dundee Warder* in reporting a meeting held on the subject, urges the propriety of looking a little more to the outward aspect and ornamental character desirable in such an edifice, than some of the mill-owning gentlemen who take an interest in the project seem to contemplate. A hall capable of accommodating 1,500 to 2,000 persons appears to be what is required; and the *Warder* remarks, that 3,000*l.* ought to be the means aimed at, including 500*l.* or thereby, for sightly frontage. The site suggested is one of two near Reform-street.

THE CITY OF LONDON CEMETERY, AT ILFORD.

WE had proposed to withhold our concluding illustration of this cemetery, namely, the Entrance Gateway, Lodge, and Residence, until it was opened; but this event still seems so uncertain, that we will not postpone the view any longer. The commissioners appear to be in great difficulties, mainly arising out of the construction of the Act, which authorised parochial burial boards to lay out cemeteries for their respective parishes, and for the protection of the clergy and church officials, gave those officers powers of dissenting, objecting, or negativing with regard to fees, and in other respects. This might have acted very well where the Burial Board was constituted for one parish only, and where, consequently, there was but one clergyman, sexton, and clerk, to consult about their fees and other things; but as the Commissioners of Sewers have laid out a cemetery for the whole City, which comprises more than a hundred parishes, to nearly the whole of which parishes there are distinct clergymen and other officers, and as the consent of the whole of these vestries is requisite to fees and other respects, it must be seen what difficulties lie in the way of a comfortable adjustment of the affair.

Were we to assert that the question of fees is really the sole obstacle to consecrating and opening, it would be vehemently denied by many; but it is singular that no obstacles showed themselves until the question of fees to the clergy was entered upon. The commissioners offered a graduated scale of fees, but this did not appear to be satisfactory, and immediately afterwards the obstacles all sprang up in a bunch. The ground could not be consecrated because there was a bridle road, used principally by one or two gentlemen, who go through on horseback occasionally, although this had been thought of no consequence before. Another objection about a rent-charge on the whole of the Earl of Mornington's estate in Essex was made; then came the objection to the commission appointing a chaplain, and a host of others, into which we may not enter. If in some parishes the original fees are insisted upon (and which, perhaps, legally can be done), as much as 4*l.* 5*l.* and 6*l.* will have to be paid for one interment, and of course, in such case, that body would not be buried in the City Cemetery when they could avoid it by going to another cemetery; and if every one of the 101 parishes were to have a different scale of charges, nobody who wished to bury a body in the City Cemetery would know what they would have to pay for it. Thus the matter stands. The offer of 6s. made by the commission for each body has not yet been accepted. The commission have promulgated their table of charges for interments among the various vestries; and each of the 100 vestries, clergymen, churchwardens, clerks, and sextons, are now discussing and criticising. All the difficulties, we believe, are nearly got over but this. Probably the commission will be obliged after all to go to Parliament, to get the Legislature to fix the scale of remuneration to the clergy and others, and to enable the Burial-Board to do the best they can for the citizens.

Other views and particulars will be found at p. 578, vol. xiii.; and p. 30, in present volume: we need scarcely repeat that Mr. Haywood was the architect.

ENTRANCE GATEWAY, CITY OF LONDON CEMETERY.—MR. WILLIAM HAYWOOD, ARCHITECT.

CHURCH-BUILDING NEWS.

Lincoln.—The Wesleyan chapel here was re-opened on 7th inst. The lower part of it has been remodelled, the gas rearranged, a new organ introduced, and the whole throughout repainted and decorated. The standard lights in the gallery have been removed, the gallery, with the body of the chapel, being now lighted from the ceiling, in which a sun-light is fixed, "giving," says the local *Chronicle*, "the effect of a mid-day sun." The heating apparatus was manufactured by the patentees, Messrs. Longbottom, of Leeds. These improvements and alterations have cost 1,111*l.* The general works have been executed by Mr. C. Ward, builder, and the painting and decorations by Messrs. Pilkington and Scott. The whole has been carried out under the directions and superintendence of Messrs. Bellamy and Hardy, of Lincoln, architects.

Hastings.—The town council have recently awarded the premium of 10*l.* offered for the best design for laying out their proposed cemetery, to Mr. H. Carpenter, of Brighton, architect. The episcopal and dissenters' chapels, with waiting-rooms and vestries attached, will form one block of buildings. The plan also contemplates the construction of catacombs at the end of the principal avenue, surmounted by a terrace, consisting of a series of Gothic arches in the Decorated style.

Cowes.—The tenders for the wall round the cemetery were as follows, according to the *Hampshire Advertiser:* — Phillis, 195*l.* 15s.; Cox, 197*l.* 10s.; T. Wheeler, 209*l.* 10s.; Sibick, 246*l.* 16s.; Ball, 260*l.* 10s.; Hardy, 265*l.*; G. Wheeler, 275*l.*; R. Taylor, 295*l.* That of Mr. Phillis, of Southampton, being the lowest, was accepted. The tenders for drainage and road-making were considered so excessively high, that they were severally declined, the high price being attributed to the mistake of glazed pipes having been inserted instead of drain-pipes.—— At a meeting of the board last week, Mr. Pritchard's tender for draining the cemetery and making the roads was accepted, at 152*l.* for the principal portion and 215*l.* for the ground about to be enclosed; and contracts are issued for the erection of two chapels, lodge, and receiving-house.

Sherborne.—At a recent meeting of the Local Burial Board, various works were let;—Mr. Stephens, for making roads, laying out and planting, draining, fences, &c. 631*l.* 17s.; Mr. Guppy, for building the Episcopal chapel and lodge, 812*l.* 15*l.*; Mr. Down, for building the Dissenters' chapel, reception-house, lych-gate, and entrance, 676*l.* 10s. 8d.: total, 2,121*l.* 2s. 8d. The board, having various tenders, selected the above three, being about 30*l.* below all other classifications they could make. The chapels are Early English, the Episcopal having a bell-turret, the Dissenters' a wheel window, and both alike in size. The board have commenced the works.

Rochdale.—The new church of St. Alban's, Rochdale, was consecrated by the Bishop of Manchester, on Saturday in week before last. The architect was Mr. Joseph Clarke, of London. The edifice stands on an eminence at Pinfold, and has a spire 140 feet high. The windows throughout, excepting a large east window, are glazed in grissaille patterns. Mr. Hardman has prepared sketches for the east window from the designs of the architect. The altar-table, standing on a floor of encaustic tiles, with which the whole of the chancel is laid, is of oak, carved by Mr. H. Ringham, of Ipswich. The roof of chancel is waggon-headed and panelled. It is intended, at some future time, to introduce colour into this roof, as well as more generally throughout the church, a specimen of which has been shown on the nave roof. The nave has north and south aisles, the tower occupying the south-west angle, and serving as a porch. The church is filled with low open seats, worked in pitch pine, stained. The nave floor is paved with Peake's tiles. Flues are constructed for heating the church. At the west end it has been found necessary to erect a gallery for children. The stone carving throughout the church is by Mr. Bonehill, of Manchester. Mr. Thomas Booth was clerk of the works. The tender for the building was 4,100*l.* The walls are of parpoint, with Huddersfield stone for all external dressings, and Bath stone for all internal work. The renovation of the old parish church, under the same architect, will shortly be recommenced. The contractor, during the winter, has been framing the new nave roof, and this, including the re-setting of the centres, which are insecure, and re-building the clerestory walls, will complete the second portion of the works.

METROPOLITAN BOARD OF WORKS.

AT a meeting on Friday 15th, Mr. John Thwaites, the president, in the chair, the committee recommended, in the engineers' department, three assistant engineers, at a salary of 350*l.* per annum each, with 50*l.* each as travelling expenses; six clerks of the works, at three guineas per week each; six draughtsmen, four at three guineas, and two at two-and-a-half guineas per week each; and four engineers' clerks, the first at 175*l.* the second 150*l.* and the third and fourth clerks 100*l.* per year each. In the architects' department two clerks were recommended, the first at 200*l.* and the second at 150*l.* per annum. The report was ultimately adopted. As to the salaries of clerks in the secretaries' department, the second first-class clerk's salary was raised from 300*l.* to 350*l.* per annum, the same as the first clerk; and the salaries of the second and third clerks were reduced to 185*l.* and 175*l.* Mr. Collinson's motion,—

"That, taking into consideration the greatly increased and daily increasing amount of traffic over London-bridge, and in Wellington-street, and High-street, Southwark, and also considering that there is a sum of 80,000*l.* arising from the coal duties set apart for making improvements in Southwark, it is most desirable that immediate and active measures be taken to provide for making a new line of street from some part of the High-street, Southwark, towards the western part of the district," was put aside by a resolution, — "That the board proceed to the next business."

THE SANITARY WORKS OF CARLISLE.

THE sewers and drains for Carlisle have been completed at a total cost of about 23,300*l.* The annual rate in the pound to pay principal and interest in thirty years is sixpence. At a meeting of the health committee on the 8th inst. it was resolved, on the motion of the mayor, Dr. Elliott, "That the thanks of this meeting be given to Robert Rawlinson, Esq. C.E. for the efficient manner in which he has carried out the works for sewering the town, and the exactitude with which the original estimate has been adhered to." This resolution of the board and town council must have been the more gratifying to the engineer as there was a violent local opposition at the commencement of the works.

For ourselves, we are glad to find that the sanitary works of a town can be brought to a close satisfactorily for something near the original estimate: we have been troubled with grumbling more than enough, and are pleased to find a local board finish without a complaint. Sanitary improvement has been fairly started: opposition may delay, but cannot stop it.

THE DESIGNS FOR AN OMNIBUS.

THE Directors of the London General Omnibus Company having offered a premium for the best design for an omnibus, received a large number of drawings and models, and appointed three gentlemen not connected with the company to decide as to their respective merits. The following report, which has just been addressed to the company by the referees, will tell its own story:—

"Gentlemen:—Acting in accordance with your request, as adjudicators upon the designs for an omnibus, sent in reply to your offered premium of 100*l.* for the best, we have had before us designs and models submitted by seventy-five competitors. Several of these having been deposited after the date fixed in your advertisement, and on other grounds not coming within the terms of the competition, were at once put aside. The remainder we have carefully examined with reference to the requirements set forth by you, and to the police regulations; and we have first to express our regret that, although many of the propositions display considerable ingenuity, and offer here and there improvements, we do not find any one design of supereminent merit, or calculated, in its present shape, to afford that increased amount of comfort and accommodation your company, with praiseworthy foresight, desires to give the public, and which will doubtless be looked for at your hands. Inasmuch, however, as we are required to select one of the designs as the best amongst those submitted, considered with regard to your stipulations and wants, we beg leave to point out the design No. 64, sent in by Mr. Miller, of Hammersmith. Inquiry of Mr. Miller, and the examination of a full-sized omnibus built by him (after arriving at this determination), have shown us that if his intentions were more completely expressed in his drawing than is the case, the design would be more worthy of the premium. We must repeat, that we find no design that we can recommend for adoption intact, or which, to speak truly, is worth the premium offered; although there are points about some of the designs which, being combined, would aid in producing what you and the public desire,—a light, commodious, and well-ventilated omnibus.

(Signed) "CHARLES MANBY,
GEORGE GODWIN,
THOS. WRIGHT."

Several architects were amongst the competitors (Messrs. Salvin, jun.; Truefitt; Wilson, of Bath; &c.); and there were suggestions from Capt. Fowke, Capt. Wilson, Mr. Lott, and others unconnected with the trade.

Mr. Clemence's "Excelsior" (No. 20), Mr. Ayshford's saloon omnibus, Rock and Gowar's design, Rimmel's (No. 22), and others have good points.

Those designs in which any considerable ingenuity is displayed are mostly impracticable.

The selected design (Miller's) has circular ends, upright sides down to the seat, so as to give greater width at that point, to enable the sitter to draw back when a passenger is passing him; a well for the legs, narrower than the upper part, which permits the body of the carriage to hang nearer to the ground than in those ordinarily in use; and a simplification of the springs.

THE MEDALS OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

AT a special general meeting of the Institute, held on Monday evening, February 18th,

The Royal gold medal was unanimously awarded, subject to her Majesty's gracious approval, to William Tite, Fellow, F.R.S. M.P.

The Soane medallion was awarded to Mr. Leonard R. Roberts, of Sackville-street, Piccadilly, for his design for a town mansion.

A medal of merit was awarded to Mr. Thomas C. Sorby, of Guildford-street, Russell-square, for his design for Law Courts.

A medal of merit to Mr. James Blake, of Handsworth, Birmingham, for his design for a town mansion.

And the silver medal of the Institute to Mr. T. A. Britton, of Camden-town, for an essay on "The Timber growing Countries of Europe and America."

The students' prize in books for monthly sketches was awarded to Mr. C. N. Beazley.

The subjects for competition for the current year were announced. Among them are a metropolitan hotel, and illustrations of mediæval buildings in Ireland and Scotland, hitherto unpublished, with descriptive particulars.

THE CONDITION OF THE THAMES.

INSTITUTION OF CIVIL ENGINEERS.

IN the course of the discussion of Mr. Robinson's paper "On the Past and Present Condition of the River Thames," Jan. 22nd and 29th, one of the fallacies of the paper was shown to be the assumption of the inability or the unwillingness of the inhabitants of the metropolis to find such a sum as 3,000,000*l.* for restoring to a satisfactory state their excellent river, when it could be done by an annual rate of threepence in the pound, on the rateable value of the fixed property of the metropolis, taken at 12,000,000*l.* per annum, or a little more than one farthing in the pound on the annual income of the 2,500,000 inhabitants, which had been estimated at 100,000,000*l.*: a threepenny rate on rateable property would pay 4*l.* per cent. interest on the capital, and extinguish the principal in forty years; without taking into account any return for the produce of the sewerage, and without calculating upon any augmentation of the population and property of the metropolis, although they did, in point of fact, increase 15 per cent. in every succeeding cycle of ten years.

The real cause of failure in the various plans that had been proposed for doing away with the pollution of the Thames and for improving the sewerage of the metropolis, during the last few years, was to be sought in the dissensions and divisions among the commissioners of the successive Boards of Sewers. The fierce conflict between the advocates of the "big sewer" and the "little pipe" systems, emulating Gulliver's controversy between the "big Endiens" and the "little Endiens," although, at first, amusing to the spectators, had become serious in retarding

progress, and had prevented the adequate use of material which, if properly employed, was calculated to be an important agent in a great improvement, for the benefit of the public, whose health and comfort were dependent upon the promptitude and vigour of the operations of sewerage.

If the members of the Institution would unanimously insist upon the impropriety of permitting any sewage matter to be poured into the Thames, within a certain distance of the metropolis, the calm but confident expression of their opinion would carry conviction to the minds of the public. Let the true, scientific, and practical principles be so settled, and the public would readily supply the means for execution. The people did not like filth, and would not tolerate it in any form; nor did they like having the tax-collector's hand in their pockets too frequently; but for the sake of cleanly homes and wholesome air they would pay handsomely, provided the matter did not savour of a job.

The question,—to whom did the river belong, and who was to blame for its present condition? came under consideration, and the claim of the Crown was strongly combatted. The citizens naturally resisted so monstrous a claim: they asked to have the question tried by the short and inexpensive process of the Common Law Courts, but were introduced to the Lord Chancellor, before whom, during the last twelve years, there had been already executed more parallels, zig-zags, and other tortuous approaches and exhibitions of strategy, than before Sebastopol, without ever yet arriving at the stage of examining a single witness, or ascertaining one solitary fact.

The Corporation proposed to place the whole management of the river in a smaller committee of their own body, under the control of an Act of Parliament, and to borrow upon their own landed property 300,000*l.* to aid the execution of the plan.

This noble design had, however, been put in suspease by the Crown lawyers, who had filed an information, and obtained an injunction to stop the works. They sought to wrest the right to the soil of the river from the Corporation, and claimed to have the improvement fund as part of the hereditary revenues of the Crown, to be applied to the private uses of the Sovereign, instead of appropriating the whole fund, as the Corporation proposed, to the improvement of the river. The Corporation had strenuously resisted this; and the suit had been pending twelve years, during which time the river had been suffering from the want of that vigorous treatment which the Corporation were disposed, under the advice of the engineers, to have applied to it out of their own funds.

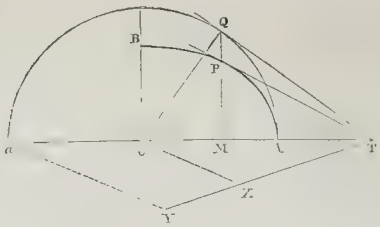
If the plan recommended by Mr. Walker and his colleagues was not a proper remedy for existing evils, a better system should be sought for at the hands of competent advisers, and it ought to be carried out by the Corporation, or the Crown, or some other authority; but the Corporation could not be expected to expend any more money in the state of uncertainty created by the Chancery suit. They had already indorsed the bonds of the navigation fund to the extent of 150,000*l.* the interest of which a falling revenue was not now sufficient to pay; besides which the Corporation had advanced above 60,000*l.* in removing shoals and other improvements, even whilst they were compelled to waste a large sum annually in law costs.

It was difficult to conceive how any objections could be raised to a plan so evidently for the improvement of the river and the benefit of the metropolis, without adding to the funds or the patronage of the Corporation. Yet there was every appearance of the suit being interminable, because in reality the question did not relate to the Thames alone. If the claim of the Crown could be successfully maintained, it would enable the Royal Prerogative to take possession, as its appanage, of the shores of Birkenhead and elsewhere; and then, at the commencement of some new reign, the Crown might say that such acquired demesnes, in addition to the woods and forests, and other acknowledged hereditary revenues of the Crown, were preferable to the civil list granted by the representatives of the nation, for the support of the Sovereign. This, then, was only the thin edge of the wedge, and it was incumbent on all to aid in resisting such unjust claims.

Composition for Roofing, &c.—A specimen of Lancaster's "Lignum Textile" was lately exhibited at the Streatham Gardeners' Society's rooms, and after some discussion on its merits, was admitted, says the *Notts Guardian*, to be a desirable and useful article for covering frames, houses, pits, &c. in winter. The material is described as "woven wood or veneer, dressed with some waterproof composition, which, after being passed between heavy rollers and exposed to the atmosphere, is said to become nearly as hard as metal."

GEOMETRICAL PROPERTIES OF CONIC SECTIONS.

THE ELLIPSE.*



A straight line which touches a curve at any point without cutting it, is called the *tangent* to the curve at that point, and it is the straight line which appears to blend with the curve at the point of contact. If a body in motion is compelled by any force to move in a certain curve, the moment that force ceases to act, the body will leave the curve, and move on in the straight line, which is the tangent at the point where the force ceases, supposing no other force to act on the body. This tendency in moving bodies to fly off at a tangent gives rise to the well-known force called *centrifugal force*, and is simply the natural tendency of bodies to move in a straight line, when not acted on by any external force.

The drawing of a tangent to a curve has always been considered an important problem. Suppose it required to draw a tangent at the point P, on the ellipse. Since a straight line can always be drawn when any two points thereon are found, we have only to find the point T, where the tangent will meet the axis of the ellipse, and then draw a line through P and T. To do this most readily, we make use of the circumscribed circle. Draw an ordinate to the ellipse at P, and produce it until it meets the circle in Q; then draw the radius C Q, and draw a line Q T perpendicular to C Q; then Q T will be the tangent of the circle at Q. Now it is one of the properties of the ellipse that the *sub-tangent*, M T, *for any one ordinate*, M P Q, *is the same for all ellipses having the same major axis*. Hence it follows that T is the point on the axis where the tangent at P will cut it.

If it is required from any point T on the axis of the ellipse to draw a tangent to the curve, it will be necessary to find the point M at the foot of the ordinate, and then to draw the ordinate M P at right angles to the axis. Now one of the properties of the ellipse is that C T : C A = C A : C M, or C M *is a third proportional to* C T *and* C A.

The length, C M, can therefore be found geometrically by the sixth book of Euclid in the following manner:—

Draw any line, T Y, and take T X = C A; join C X, and draw A Y parallel to C X; then X Y will be equal to the required C M; then draw M P perpendicular to the axis, and P will be the point where the tangent from T meets the curve. E. W. T.

A PERMANENT CHEMICAL FILTER.

Your correspondent will find, I think, the following simple filter answer his purpose:—

If his cistern is *deep* in proportion to its *width*, an arrangement must be made, by which the filtering materials may be supported at about *two-fifths of the total height of the cistern from its base*. For this purpose I would suggest, that a strong plate of *zinc* (or of *iron, tinned*, or *galvanized*, either coating to be thicker than ordinary), pierced in the middle with a considerable number of holes,—say, ½ inch in diameter, be made to rest upon metal or brickwork attached to the sides of the cistern. If the latter is a comparatively *shallow* one, the *bottom itself* had better be perforated, and a chamber for the reception of the *aqua pura* fitted below; but as your correspondent has not favoured me with particulars of any kind, I cannot tell what arrangement would answer *best* for *his especial case*, so I am forced to occupy more of your space, and encroach more upon my own time, and, possibly, *his* patience, than would otherwise be necessary.

* See p. 63, *ante*.

However, let the support be of *zinc, iron, slate*, or any other suitable material, and the formation of a filter is then simple enough: cover the plate for a couple of inches, with hard clean pebbles, just large enough to remain there without passing through the holes, and over this strew good, sharp *pit sand* (as little *ferruginous* as can be had), until the total thickness is six inches: the whole should then be moistened and pressed. Charcoal (about three inches) forms the next layer; it should be powdered, and sifted from all fine dust, the fragments, varying from the size of a hemp-seed, to that of a small pea, being *alone employed*: this, in its turn, must be covered by an equal thickness of fine sand and powdered *peroxide of manganese*, mixed in the proportion of three parts of sand to one of the oxide; a little pure sand being sprinkled on the top. To prevent the upper beds being disturbed by a strong current of water, some stones, or pebbles, must crown the whole.

This filter will last a lifetime: if the water is much impregnated with organic matter, the top layer of stones and sand may require changing after five or six years.

But few people know the value of commercial *manganese* as a purifier of water: it accomplishes what even *charcoal* does very imperfectly, namely, destroys all offensive matters *in solution*, as well as those *mechanically suspended*.

Mr. Lipscombe, if he wishes to make his filters *quite* perfect, would do well to try it. My late experiments have convinced me that Messrs. John Bazley White and Co.'s *Portland cement*, with a little *sharp sand*,* is the best that can be employed about a cistern: it appears to have a positive dislike to *lichens* and *confervæ*.

Wentworth L. Scott.

COST OF SITES IN LONDON.

From the great interest which you have taken in the improvement of the dwellings of the poor, and the able manner in which you have exposed their present lamentable condition, I feel assured you will admit into your columns observations on a subject most immediately connected with their improvement, and that is, the artificial state in which the metropolis is placed with reference to *sites* upon which such dwellings might be erected, and the extravagantly high prices which are demanded for them.

By a series of circumstances, which it is not necessary to review, three public bodies have become possessed of sites of great extent in three different localities,—in the east, west, and centre of London,—upon each of which suitable habitations ought to be erected for the occupation of the labouring classes. I refer to the Board of Works, which has a very large space of building ground in Whitechapel, Spitalfields, and other districts; to the Corporation of the City of London, who, in the vicinity of Farringdon-street, and the lower part of Saffron-hill, have cleared an extensive area; and to the Westminster Improvement Commissioners, in the neighbourhood of Victoria-street, who have, also, become possessed of a broad expanse of building ground.

Now, sir, what I wish to observe upon this fact, is this,—first, that these three public bodies have cleared away an almost incredible number of houses occupied by the labouring population; secondly, that they have provided no substitute for those demolished dwellings, and have never instituted an inquiry as to how or where the poor inmates have to find a home; thirdly, that the price they are now asking for building land in their separate districts amounts to an insurmountable obstruction to the erection of habitable dwellings for these classes.

The Board of Public Works, or, as they are more familiarly known, the Commissioners of Woods and

* Sand of an inferior and dirty character may be much improved by a few days' digestion in dilute sulphuric acid,—common oil of vitriol (at 1½d. per lb.) 1 lb.; water, two to two and half gallons. This will do over and over again (the sand must be well washed afterwards.

Forests, are the trustees of Crown property, and they have had extensive spaces lying unoccupied for a period of ten or more years,—and they may lie waste for ten years longer before they will make any abatement. It would be well if these trustees of the public property would seriously consider the injury they are inflicting upon a numerous portion of her Majesty's subjects, and in this respect contrast their conduct with that of the Emperor of the French, who, by direct grants of sites or money, or both, is holding out every encouragement for the erection of dwellings for the labouring classes in Paris, Marseilles, Lyons, &c.

The Corporation of the City of London, in the year 1851, had, by a vote of the court, 42,500*l.* appropriated for the erection of model lodging-houses, but nothing has yet been done.

The Westminster Improvement Commissioners have great powers, both by an original Act and by an Act obtained in 1853 for the erection of dwellings for the industrial classes, but both Acts appear, as to this object, up to the present time, a dead letter.

PHILANTHROPOS.

METROPOLITAN BUILDING ACT, 1855.

BUILDER'S NEGLECT TO GIVE NOTICE OF WORKS TO DISTRICT SURVEYOR.

IN the case of Hesketh (district surveyor) *v.* Middleton, heard at the Southwark police-court on the 16th instant, it appeared that Middleton took a wooden building in Bermondsey-street, built before the Act came into operation, the east front being uninclosed. He up put an inclosure to this front with painted canvas on boarding. In the centre was a door, and two staircases within, leading to seats which rise one above another, sufficient to accommodate from 150 to 200 persons. Opposite the seats was a stage for the exhibition of "Marionettes." All these fittings were put in by Middleton since January 4, 1856. He had brought them in his van, and had put them up himself. He advertised performances by the "marionettes" in this theatre, and at least 100 persons were proved to have been present at one time. Payments were taken at the door.

The district surveyor summoned Middleton for not having given him notice of the works before commencing them (sec. 38), and sued for the penalty under sec. 41. He proved the above facts, and referred to sec. 3, "external wall," sec. 12, and first schedule, preliminary rules, 1, 2, &c. as requiring the vertical inclosure to be built under the rules of the Act, and to H. 3, "public building," secs. 22 and 30, as requiring the galleries, stairs, and passages to be subject to the rules of the Act, and erected with the approval of the district surveyor as to their safety. The works being subject to the Act, are, by sec. 31, placed under the district-surveyor's supervision, and notice is required to be given by the builder to him, under the 38th section; and Middleton had, by neglect, incurred the penalty under sec. 41.

The magistrate, Mr. A'Beckett, convicted him; but as the district surveyor did not press for a heavy penalty, on account of its being under a new Act, he was fined 1*s.* with costs, the magistrate saying that he would not be so leniently dealt with on any future occasion. The building will have to be altered.

WATERWORKS FOR HEANOR.

WATERWORKS are about being established at this place under the auspices of the Local Board of Health. Owing to the great scarcity of water in the neighbourhood—arising, partly from the town being situated on the summit of a hill, which rises more than 200 feet above the adjacent valley of the River Erewash, and partly from the constant and increasing abstraction of the water underneath by mining operations—the Local Board last year called to their assistance Mr. Norris, engineer, of Nottingham, who devised a scheme of "constant" water supply, which met with their approbation, and being submitted to the General Board of Health for their sanction, previously to a proposed mortgage of the rates of the district, also received the approval of that body, after an inquiry on the spot by one of their engineering inspectors. Mr. Norris's project in its main features, consists of a shaft to be sunk a sufficient depth (about 90 yards) to reach the water-bearing strata, at a point near the south-western extremity of the district; at the mouth of which will be fixed a 15-horse high-pressure steam engine, to raise the water by means of a lift and plunger pump, and force it into a covered service reservoir (capable of holding three days' consumption), situated on the highest point of Tag-hill. From this reservoir the water will be distributed through a 6-inch cast iron leading main, through the whole of the built portion of the district. The engineer's estimate for the construction of the works is 3,500*l.* nearly the whole of the contracts for which have recently been let; that for the main pipes (about 4½ miles), to Mr. Geo. Staley, of the Butterley Iron Works, and the others to Messrs. C. C. and A. Dennett, contractors and builders, of Nottingham. The works will be immediately commenced, and the invaluable boon of pure and potable water, to which the inhabitants have been so long strangers, will be dispensed throughout the district, it may be hoped, during the ensuing summer.

HANGING BELLS TO TURN IN THE STOCK.

WITH reference to Mr. Denison's plan illustrated in our last number, Mr. W. L. Baker, whose plan has been described in our pages, has sent us a communication urging that it was he who called attention to the destructive effect of the constant action of the clapper upon a single portion of the sound-bow, and first suggested that a bell should be cast in a way that would enable it to be turned round so as to present a new point of contact to the clapper without refitting or reconstructing any portion of the gear. Further, that his specification, after describing two ways in which his idea may be put into execution, points out that the object may also be attained "by casting an axis on the top of the crown." He says that "a bell hung upon one central bolt or axis, is capable of being moved round upon that axis with great ease, so as to present at intervals the whole of the internal surface of the sound-bow to the action of the clapper, and in a clock-tower bell the whole of the external surface of the sound-bow to the action of the hammer."

We avoided printing the comparison which Mr. Denison drew between Mr. Baker's plan and that which he thought his own, being anxious not to damage Mr. Baker's just claims.

GAS.

A LECTURE to working gasfitters and others, on science as connected with gasfitting, was delivered at the St. Martin's school-room, St. Martin's-lane, London, by Mr. Alexander Wright, on Thursday evening in last week. The lecture was well attended by the working classes of the Gasfitters' Institution, and by many gentlemen connected with gas-engineering.——At the opening of the West Ham Gas Works there were only 8 retorts: there are now 64 required to supply the increased demand for gas in that neighbourhood.——The inhabitants of Huntingdon have resolved not only to purchase the local gasworks for 4,250*l.* but also to raise 2,250*l.* to put the concern into an efficient state. Capital is to be raised in 650 shares of 10*l.* each.——The Chester Town-Council have under consideration a proposal for the amalgamation of the two gas companies, under an Act securing to the corporation power at a future period to purchase the plant and works; but in the meantime raising the maximum price from 4*s.* 6*d.* to 5*s.* and providing for subsequent reductions from surplus profits beyond 10 per cent. and a contingent-fund of 10 per cent. on the capital. The projected arrangement seems to resemble that at Liverpool, where the anticipated reductions year after year have been found to be downright humbug, 10 per cent. profits and reserve-funds notwithstanding.——The Birkenhead Commissioners have had a report from their committee on the complaints as to gas and water supply, in which they are recommended seriously to consider the propriety of taking both supplies into their own hands, negotiating, if possible, with the Gas and Water Company for the purchase of their works, or applying to Parliament for power to construct new works. The report has been adopted by the Commissioners.——A strike of the workmen at the Halifax Gas Company's works took place on Saturday before last. The cause was a threatened reduction of wages from 24*s.* 6*d.* to 23*s.* The men quitted without giving notice, and the manager had fifteen of them lodged in custody. He gives no previous notice himself, it appears, when dismissing his workmen.

TIME AND MATERIALS *versus* MEASUREMENT AND VALUE.

LAMPRELL *v.* COLLIER.—In this case the plaintiff is a builder, carrying on business in Long-lane, West Smithfield: the defendant is an auctioneer, carrying on business in Moorgate-street. In the year 1854, plaintiff executed general repairs to a dilapidated house belonging to the defendant, the nature of which was such, that no specification or contract could be made for them; and during their progress, Mr. Wright, a surveyor, was frequently on the premises, inspecting the works; and at the completion of the works, plaintiff handed his account of time and materials to the surveyor to peruse on behalf of defendant: this account amounted to £1,054 5*s.* Upon seeing this, the surveyor said he should measure the works, and make out a measurement account, which he did, making the amount 583*l.* 4*s.* 6*d.* and the defendant, upon being appealed to by plaintiff, refused to pay anything beyond the last-mentioned sum. Plaintiff then offered to refer the question to independent surveyors, but defendant refusing to do so, an action was brought in the Court of Queen's Bench for the amount of plaintiff's time and material bill, which, at the last summer assizes held at Croydon, was referred to Mr. Charnock, barrister.

At the reference before the arbitrator, the plaintiff proved, by his books and invoices, that he had paid out of pocket between 900*l.* and 1,000*l.* for the works, and that his charges to defendant were fair and reasonable. For the defence it was contended that, at the commencement of the works, a conversation took place between plaintiff, defendant, and Mr. Wright, at which plaintiff agreed to execute the works under the direction of the latter, and that, at their completion, he should certify the amount defendant should pay for them,—that the prices were fair, and if ever so unfair, plaintiff must be content with them. In reply, plaintiff denied the alleged conversation, and stated there had been no agreement that the works should be measured,—that during their progress no measurements were made,— that the surveyor did not attempt to measure them until after plaintiff delivered his time and material account,—and that when the surveyor did measure, most of the works were covered, and the house occupied: it was therefore impossible to measure them properly. Plaintiff also called the tradesmen who executed different branches of the works, and proved that their cost price was much more than the surveyor had allowed for them, including builder's profit.

After an inquiry, extending over twenty-one meetings, the arbitrator has published his decision, awarding to plaintiff the full amount of his claim, the costs of the trial at Croydon, and the costs of the reference.

KENDALL *v.* KING.*

IN the report on the above-named case, in your publication of the 16th inst. what I (in common with Mr. Bellamy and Mr. Shaw), said before the arbitrator, illuminated as it is with three notes of admiration, is made to take a colour which does not belong to it. Whether Messrs. Kendall and Co. by entering into the competition on the terms proposed, committed themselves to the acceptance of 157*l.* 10*s.* as a full remuneration for "all services short of the actual erection of the buildings," is wholly extraneous to the real question, upon which my opinion was asked, and which is passed without notice in the report. That was, whether for the work and labour actually performed by Messrs. Kendall and Co. their charge of 1,048*l.* 15*s.* was or was not excessive. I thought it was. I beg leave to add, that I fully concur with the principle laid down by Mr. Tite—when it applies.

AMBROSE POYNTER.

BALL OF THE BUILDERS' BENEVOLENT INSTITUTION.

THE pleasant assemblage of the friends of this institution, at Willis's rooms, on the 14th February, has added about 120*l.* to the funds, and will serve to give comfort to those who need it.

Surely this is dancing to a good purpose. There were about 500 persons present, including Messrs. Charles Lucas, president, William Lee, M.P. John Lee, Charles Mayhew, Frederick Ashton, Barry, John Jay, J. Hunt, James Wagstaff, Dunnage, Sewell, Christopher Eales, Henry Dodd, Thomas Cozens (the founder of the institution), Joseph Bird, Soward, Collins, Stanbury (Birmingham), James Newson, jun. W. Norris, W. Hutchons, W. Ellis, Joseph Lambert, D. Nicholson, jun. Charles Formby, John Chapman, Stirling, William Todd, jun. &c. &c.

The whole affair was managed very well, and did credit to the committee.

Miscellanea.

ELECTRO-TELEGRAPHIC PROGRESS.—A telegraph to Australia is projected by the Mediterranean Electric Telegraph Company, who are at present engaged in uniting the European lines with Africa through Sardinia. The Australian project is an extension of the East Indian, already noted. The East Indian will comprise two great branches, the northern branching towards Cabul and Cashmere, while proceeding to Calcutta, and the southern passing along the Bengal coast, and by the Sunda islands to the north of Australia, whence it will coast southwards along the eastern side of the Australian continent to Port Adelaide. The entire length of the line is estimated by the Genoa *Corriere Mercantile* at 20,000 kilometres.

* The title of the firm should have stood in our report Kendall Pope (not Cope), and Edin.

Great Fire at Clerkenwell.—On the 14th inst. a fire, originating in a large factory belonging to an ivory, brass, and wood turner, in Yardly-street, Exmouth-street, destroyed not only the factory itself, but also fourteen houses, extending right and left in the same and adjoining streets. This and some other recent fires, in which adjoining premises have suffered severely, should call attention to the dangerous and censurable mode pursued of stocking back-yards of houses with timber. Wooden buildings are prohibited by the Building Act, but our legislators have failed to discover any danger in permitting timber to be stacked, without let or hinderance, in any quantity. Some remedy should be devised.

Fire at Leeds Industrial School.—The south wing of this modern building was burnt on Saturday before last, by a fire originating between the joists and the flooring, both of the school-room and of the dormitory of the boys' department, and believed to have been caused by the overheating of a hot-air flue, with which the establishment is warmed.

Fire at a new Workhouse in Caithness.—At Halkirk, Caithness, a large workhouse is in course of erection, and was pretty far advanced towards completion, when a fire, it is believed, wilfully raised, completely gutted the walls of all woodwork on Friday before last. The supposed incendiary is an Irishman who had been employed as a labourer on the works, but was dismissed, and was known to have threatened to "make a poor-house of it before he was done with it." The scoundrel has been laid hold of, and, according to the *John O'Groat's Journal*, the case is likely to be proved against him. The joiners' tools were all burnt, and many of the poor fellows will be heavy losers in consequence. The contractor for the building is Mr. Robert Johnson, of Edinburgh, builder, and the amount of the contract is 3,547*l*. The damage is variously estimated, but 1,800*l*. is said to be about the mark. It is feared that no insurance had been effected by the contractor.

The Iron Trade.—This trade has of late been very dull, and the demand for sheet and plate-iron in particular has much fallen off. Some large works are on short time, and prices have still a downward tendency, "underselling" being much complained of by those who regard it as their interest to raise prices rather than to lower them. The price of hot-blast pigs is reported to have fallen in the Yorkshire and Derbyshire districts from 7*s*. to 10*s*. a ton.—— It appears from a paper on "The Mining Resources of France from 1841 to 1851," prepared by Mr. H. Reader Lack, of the Statistical Department of the Board of Trade, that Great Britain raises four times as much iron, and sixteen times as much coal, as France. The mineral productions of that country are, however, rapidly increasing. The production of coal, lignite, and anthracite, was, in 1841, of the value of 33,159,044 frs.; in 1852, 46,751,806 frs.;—iron and steel, in 1841, 141,789,500 frs.; and in 1852 it had increased to 297,330,748 frs.

Memoirs of Libraries.—The prospectus of a new and elaborate work on the history and economy of libraries, by Mr. Edward Edwards, of Manchester, has been issued. The work itself will be in two volumes, at a price not exceeding 24*s*. and will be published by Messrs. Black, of Edinburgh, probably in the course of the present year. The table of contents, and the researches of the author, in this particular department, afford assurance that this will be a work *per se*, and exhaustive of the subject.

The Meeting of the British Association.—The annual meeting of the British Association for the Advancement of Science has been fixed to be held at Cheltenham for this year, in the week commencing August 6th, and active preparations are being made in the county of Gloucester, in order to give a fitting reception to the members. Lord John Russell, who has lately taken up his residence in this county, aids the committee, and a subscription has been entered into to defray the necessary expenses.

New Health Act.—The Registrar-General having been applied to by several of the newly-appointed officers of health, for liberty to obtain information from the registrars essentially necessary for the due performance of their duties, has, in answer to their letters and those of registrars on the same subject, permitted the registrars to supply copies of their usual weekly returns to these gentlemen, but "does not wish the registrars to be subjected to the trouble of so doing without being properly remunerated."

Modern Lamps.—Very lately two huge gas-lamps have been attached on either side of the middle door of St. Philip's Church, Regent-street: surely some Irish hod-man must have suggested the design, as I cannot think that any architect or builder would place such outrageous specimens on any classic building. Perhaps the "parochial authorities" have bought them second-hand at the smash of some gin-palace in the New Cut or Wapping. Pray do your best to have proper ecclesiastical gaseliers substituted.

Gas.

The "Amateur Musical Society."—This amateur *Musical* Society being now considered by the world of London as one of the established musical societies of the metropolis, it will only remain for themselves to follow that course which will best carry out the objects for which it was originally founded, and at the same time insure a lasting duration. The addition of madrigals and part-songs by Mr. Leslie's choir may be made a feature and an advantage, if not overdone; but if the orchestral members—in number about eighty—have not more work assigned them than has lately been the case, the main object of their meeting—the practice of instrumental music—may be ultimately lost sight of. The fact is, the performance once a fortnight of a short and easy symphony and two light overtures and a march will hardly be an inducement to so many gentlemen to forego other engagements and assemble with their various instruments, some from considerable distances, at the Hanover-square Rooms. We observe that the best works please the audience the most, and the performance of the great symphonies of Beethoven, Mozart, Spohr, Mendelssohn, with the *best* overtures of Weber, Mozart, Cherubini, Rossini, and Auber, elicit far greater applause than the inferior compositions of the same or other masters;—not that we would advocate the performance of *great works* only;—variety is charming, and *toujours perdrix* not desirable; but let great works be the rule, and lighter ones the exception. *Au reste*, the *stuff* of which this orchestra of amateurs is composed may be fairly judged of by the number of capital solo-players that constantly emerge from its ranks, and the excellent precision and skill with which the music generally is performed. We wish the Society every success. Music and architecture are cognate.

Building-trade Strike at Paisley.—On Monday last, the slaters and bricklayers of Paisley turned out on strike for rise of wages. The bricklayers' demand is 3*l*. a-week—a rise of 1*l*. 10*s*., and the slaters are asking 1*l*. 13*s*.—a rise of 11*s*. Most of the masters have submitted to these terms. It is little to the credit of the workmen to take advantage of the present emergency, when they knew that owners of property, damaged by the late storm, must have it repaired at whatever cost; and it is nothing short of extortion for the bricklayers to be demanding 10*s*. per day.—*Glasgow Gazette*.

Strike of Masons at Witley Court.—The extensive improvements and alterations at Witley Court, which were proceeding rapidly and satisfactorily, have been interrupted by the strike of the stonemasons, some sixty in number, engaged thereon. They insist on working only nine instead of ten hours a day. The wages they receive are said to be very good, and Mr. Wood, the contractor, it is said, will not comply with their demand. It is thought not unlikely that the rest of the men, 250 in number, will also turn out.

Harmony of Theory and Practice in Mechanics.—Mr. Macquorn Rankine, C.E., on his appointment to the Chair of Civil Engineering in the University of Glasgow, delivered an introductory lecture on the above subject. The lecturer commenced by showing that in geometry, in poetry, in rhetoric, and in the fine arts, the Greeks are our masters, but that in physics and mechanics their notions were pervaded by a great fallacy—a double system of natural laws; and that this fallacy of a supposed discordance between rational and practical, celestial and terrestial machines, continued in force, and appears to have gathered strength and to have attained its full vigour during the middle ages. In the 15th, 16th, and 17th centuries, the system falsely termed Aristotelian was overthrown, and the truth began to be duly appreciated, that sound theory in physical science consists simply of facts, and the deduction of common sense from them reduced to a systematic form. The lecturer proceeded to show many evils which arise from ingenious and practical men not being acquainted with scientific principles, and how often time and money are expended in visionary inventions, particularly perpetual motion, of which, two appeared in the last year's patent list.

Embank the Thames.—Upon the carrying out in a comprehensive form of this great national work depends the effectual cleansing and purity of the Thames. By embanking it, the mud banks will be got rid of, and the scour of the river increased, and so most effectually cleansed. Intercepting sewers will be but a very imperfect alleviation, as, when other sources of impurity are considered, and the great mass of human beings living on the river are also taken into account, it must ever be a means of carrying off sewage. If the intercepting scheme is to be carried out at such fearful cost to the ratepayers, and such a very problematical result, by all means preserve the sewage for the Thames marshes, and not keep it in a state of oscillation and suspension between Gravesend and Woolwich, by its being poured into the river at the latter point.

A Heavily Taxed Ratepayer.

Neglect of Work by Engineers.—At Bilston Petty Sessions, on Friday before last, Joseph Evans, an engineer employed at Messrs. Baldwin's works, was charged with having absented himself from his work on the preceding night. He was committed to prison for one month. Isaac Stokes, an engineer employed at the works of Mr. B. Gibbons, was charged with a similar offence. He was sent to gaol for fourteen days.

Statue of the late Mr. Baines.—The committee for erecting a statue of the late Mr. Edward Baines at Leeds, decided last week upon the statuettes sent in by Mr. Behnes and Mr. Noble. The former gentleman sent in one, an improvement upon that previously forwarded. The latter sent two—one an improvement on the original, the other new. The committee unanimously decided upon giving the commission to Mr. Behnes. The second prize of 30*l*. will, consequently, be paid to Mr. Noble. The statue is to be eight feet high, and to stand upon a pedestal of Sicilian marble. The committee, according to the *Leeds Intelligencer*, have now selected a site, at the east side of the vestibule of the Town Hall, to cost 700 guineas.

Bath Graphic Society.—This successful society gave the second of their *conversazioni* on Tuesday evening before last. In the octagon room, the centre of which was occupied by lounges, were arranged portfolios of sketches. The long room, furnished with chairs and couches, was lined with paintings and drawings two or three deep. The third large room was devoted to refreshments.

The Excavations at Fountains Abbey.—Lord De Grey has recently recommenced his winter's excavations at Fountains Abbey. The excavators commenced operations in the base story of the Fraterhouse. Part of the floor yet remains; and amongst the rubbish some early English capitals, of the finest Nidderdale marble yet discovered, have just turned up. The great kitchen, refectory, buttery, and cloister-court will next be exposed.

Fall of a Bridge and Loss of Life.—On Wednesday last, two arches of a railway bridge in course of construction over the river Doon, in Ayrshire, suddenly fell to the ground, burying two men in the ruins. They were got out as quickly as possible, but died in a very short time. The catastrophe is attributed to the heavy rains following the severe frosts, and softening the lime.

Marsden's "Patent Artery and Vein System" of Ventilation.—Mr. Marsden's mode of ventilating sewers, public or other buildings, mines, tunnels, &c. consists of the action of a series of small "vein" pipes, as he calls them, concentrating from various parts of the cavity, chamber, or locality to be ventilated, into one air-tight and trapped receiver, communicating with what he calls an "artery;" but which, by parity of similitude, he ought, in fact, to call a great vein, the whole system being venous or concentrating and withdrawing, and not arterial or radiating and distributive, so far at least as regards the withdrawal of foul air through his ventilating pipes. These "arteries," or larger vein pipes, in turn convey the noxious gases collected by the smaller vein pipes onwards, either to a trunk vein or directly to a main-receiver, trapped, and leading them into an extracting shaft with fan, which, in the ventilation of sewers or mines, not only generates the suction power (worked by steam-engine or water power), whereby the gases are withdrawn, but also hands them up to furnaces prepared in a main shaft for their combustion. What Mr. Marsden appears more especially to claim, is the idea of ventilation from various points by a concentration of "vein" pipes, at once separating and enclosing the gases while conveying them away to trapped receivers and main-pipe conductors, to be expelled and consumed by modes already suggested and indeed already realized. The reverse process or distribution of pure air to mines, &c.—a true *arterial* system,—may be carried out through the same system of pipes and fans, &c.

Construction of Flues.—As things of utility, as well as of taste, are noticed in the *Builder*, I need not apologize for calling your attention to the flues laid in Messrs. Berens, Blumberg, and Co.'s buildings, Cannon-street, under my superintendence as clerk of the works, by direction of Mr. Husking. The horizontal flues, 220 feet in length (from Hayden's warming apparatus), are all 9-inch patent drain-pipes, laid in brick chambers, with concrete bottoms and slate tops. The saddle-pieces in connection with these pipes, at convenient distances, are only loosely bedded, and afford every facility for sweeping at stated periods. These pipes have been in use fifteen months, and are so satisfactory that I have instructions to carry out the same plan in the next buildings. It has occurred to me, that for church flues running underground, or for flues round hot-houses, these pipes would be most economical, and the saddle-pieces would afford every facility for sweeping.—W. L.

THE HARDWARE AND METAL TRADES' PENSION SOCIETY.—On Tuesday last, a concert, headed instrumentally by Fraülein Gräves and Sainton, and by Miss Dolby and Mr. Wilbye Cooper, vocally, was given at the Hanover-square Rooms, in aid of the funds of the Iron, Hardware, and Metal Trades' Pension Society, and was exceedingly well attended. We were to this time somewhat in ignorance of the progress of this association; but under the management of the committee who so well organized Tuesday night's concert, it ought to be prosperous.

ARCHITECTS' "CLERKS."—A gentleman who has a somewhat exalted idea of his distinguished position as "*only* managing assistant to an architect and engineer of high standing," is extremely indignant that he should be termed a "clerk." It is, he says, highly aggravating to him to be so designated. He has looked out the term—at least he says so—in Johnson's Dictionary, and finds it to mean a bookkeeper or accountant. I am afraid your correspondent has not referred to a good edition of Johnson. If he will do so, he will find among others, the following meanings of the word "clerk:"—1. A clergyman. 2. A man of learning and letters. 3. A person who is employed in writing for another. 4. An officer of various boards; but not a bookkeeper or accountant. If he had been aware that the original meaning of clerk was a man of learning; that it is the proper designation of a clergyman; that the principal law officer of a city or borough is termed the city or town clerk; that the principal officer of many corporations is termed the clerk; and that the clerks in the Courts of Chancery and Houses of Parliament—not to mention hundreds of other clerks—are gentlemen who would scarcely consider the position of an architect's "assistant" equal to their own, he would, perhaps, feel less aggravated by the designation. Your correspondent states his desire that we should "call a spoon a spoon," and almost tempts one to be guilty of the rudeness by manifesting so much anxiety to enhance the dignity of his position by borrowing from the linen-draper's "assistant" his usual denomination.—AN ACCOUNTANT.

DWELLINGS OF THE POOR NEAR SWINDON.—A correspondent, who takes an active and official interest in the sanitary welfare of Swindon, sends us a painful account of a visit paid to some agricultural cottages in that neighbourhood,—"dens," he remarks, "equal to the vile ones so ably set forth in your excellent book of 'London Shadows.'" And that such dens do exist, alas! in but too many localities besides London, it required no special detail to assure us. "Inquiring for the house," continues our correspondent, in reference to one of the dwellings referred to, "an inhabitant of the swampy lane told us, '*You must go on till you come to a gurt and nasty pond, and the house is close to't.*' It was close—four feet only from the '*nasty pond*,' which afforded the only water they had to use, and was further the receptacle for all the privy soil and sewage of the lane when rain came to flush the ditches." In this hopeless abode, as might well be anticipated, there lay the head of a family of ten children, in the "prime of life," but on the brink of the grave. Neither he, nor his wife, nor his little ones, had tasted food for four and twenty hours. It is probable that, ere long, the parish will have what is left of his family to provide for. Would it not have been a decided saving had they provided for the removal of the "gurt and nasty pond," and thus have conferred the boon of health and life upon the miserable head of such a family, and so have enabled him to provide for them himself?

HILLOTYPE.—The *Rondout* (U.S.) *Courier* says,—after years of untiring application and almost unexampled perseverance, the hopes of our townsman, the Rev. L. L. Hill, are crowned with success, and he is about to realise a reward for his toil. He has already received an offer of 30,000 dollars for the Hillotype. A great addition recently made to the invention consists in reproducing the colours of nature on collodionised glass. This revolution will extend to portrait and landscape painting, as Mr. Hill is able to copy pictures of any size, and to produce any number of copies from one original. The Hillotype consists in taking all the natural colours by a single process—every tint of countenance, and every shade of dress, and even the precise colour of the eye, being transformed to the picture.

THE BIRMINGHAM GLASS CUTTERS' SOCIETY.—The assistance afforded by the "United Flint Glass Cutters' Society" of Birmingham to its needy members is worthy of imitation by similar societies. The last yearly balance sheet of the society states that about 150 men received weekly assistance from the society's funds for a considerable period in course of the year, and that the amount distributed was nearly 2,000*l.*, while 1,600*l.* remained in hand. It is to the working of such societies as this that Birmingham, according to the local *Journal*, in some measure owes its immunity from strikes.

TENDERS

For the Royal Surrey Gardens Music Hall. Mr. Horace Jones, architect. Quantities taken out by Mr. Reddall:—

Jay	£19,700	0	0
Gammon	18,900	0	0
Ashby and Sons	18,889	0	0
Ashby and Horner	18,846	0	0
Myers	18,800	0	0
Mansfield	18,720	0	0
Lawrence and Sons	18,620	0	0
Brass and Sons	18,450	0	0
Lucas, Brothers	18,000	0	0
Willson	17,284	0	0
Scott and Cornwall	17,175	0	0

For buildings to be erected at Newark for the Royal Sherwood Foresters, or Notts Militia. Mr. Charles Baily, architect, Newark. Quantities supplied by Mr. C. Poland:—

Higgs and Cullingford, London	£3,980	0	0
Searle, London	3,960	0	0
J. and T. Wallis, Market Rasen	3,956	0	0
Cave, Gainsborough	3,913	0	0
Cooper, Newark	3,895	0	0
Culshaw, Biggleswade	3,750	0	0
Mackenzie, Newark	3,627	0	0
Johnson, France, and Co. Sheffield	3,618	11	0
Lane, jun., Newark	3,543	10	0
Wilson and Ashton, Retford	3,495	10	0
Barber, Barlborough	3,423	15	0
C. and A. Dennett, Nottingham	3,395	0	0
Segley, Shawcroft, Manchester	3,383	0	0
Marshall and Henderson, Newark	3,343	0	0
J. Ferguson, Nottingham (accepted)	2,950	0	0

For a chapel at Brompton. Mr. Mumford, architect:—

		If with curved plaster ceiling instead of open timber roof, add	If with Kentish rag facings to side walls instead of malm facings, add
Colls and Co.	£2,890 0 0	£196 0 0	£80 0 0
Chapman and Parsons	2,697 10 0	60 0 0	80 0 0
Symons	2,670 0 0	124 0 0	40 0 0
Tarrant	2,644 0 0	147 0 0	59 0 0
Avias and Sons	2,615 0 0	153 0 0	86 0 0
Todd	2,570 0 0	139 0 0	53 0 0
W. Higgs	2,576 0 0	130 0 0	30 0 0
Wilson	2,550 0 0	37 12 0	37 10 0
Delay	2,499 0 0	133 0 0	87 0 0
Coney	2,487 10 0	27 10 0	12 10 0
Fisher	2,285 0 0	95 0 0	50 0 0
Rudkin	2,170 0 0	100 0 0	99 0 0

TO CORRESPONDENTS.

"*The Smokeless Fire.*"—We have received at least two dozen letters on this subject, to which we may look again presently.

"Croydon."—"Inquirer."—"T. T."—"M. J." Accrington (properly managed, it would).—"W. F. H."—"W. H."—"J. C."—"J. N."—"A. P."—"C. B."—"B. F."—"Mr. H."—"J. S. N."—"E. A."—"T. A."—"A Manufacturer's Clerk."—"Another Clerk."—"E. R."—"B. H." and "J. W. O."—"W. L. S."—"A Twelve Years' Subscriber" (has not hit on the right method).—"A Lover of Truth."—"Mr. A."—"E. A. H." (thanks).—"H. H."—"Yerax."—"W. B." (we cannot question a solemn award on simple assertion).—"T. S." Colchester.—"A. T. S. P. R." (the approval of drawings for a Public building rests with the District Surveyor, unless difference arise, in which case appeal may be made to Board of Works).—"E. L. T."—"R. and R."—"J. O."—"G. M."—"J. J."—"F. G. S."—"F. and C."—"H. E. K."—"P. L. D."—"F. G. S."—"E. R."—"A. G. H."—"J. B." Bells (too late for this week).—"J. E."—"W. R."—"M. H."—"J. M."—"A Lover of Gothic."

Mr. Petit's rejoinder to Mr. Scott reached us too late for the present number.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *viâ* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

METROPOLITAN LOAN COMPANY,
Established 1839.
1, CRAVEN STREET, STRAND, LONDON.

Loans are advanced in amounts varying from 5*l.* 10*s.* to 100*l.* repayable weekly or otherwise, as may be agreed upon, at a discount of 2½ per cent. for twenty-five weeks, and for 50 weeks at 5 per cent. Forms may be had, price 2*d.*; if by post, three postage stamps to be enclosed.
ROBERT NORTON, Secretary.

MONEY on LOAN, at 3*l.* per Cent. per Annum.—ARNEWAY'S CHARITY.—NOTICE IS HEREBY GIVEN, that the Trustees of this Charity are enabled to lend out the Trust Moneys to poor occupiers or traders resident within the City and Liberty of Westminster, that is to say, within the parishes of St. Margaret and St. John the Evangelist, St. Anne, Soho, St. Clement Danes, St. George, Hanover-square, St. James, St. Martin-in-the-Fields, St. Mary-le-Strand, and St. Paul, Covent-garden. The amount of each loan is not to exceed 100*l.* is to clear interest after the rate of 3*l.* per cent. per annum, and is to be secured by the bond of the borrower, with two sureties. Printed Forms of Application, and all necessary information, may be obtained by applying personally, between the hours of Ten and Three o'clock in the day, at the office of the Clerk and Solicitor to the Trustees, No. 14, Great Queen-street, St. James's Park.
By order, EDWARD S. STEPHENSON,
Clerk and Solicitor to the Trustees.

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PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwater, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank street, Westminster, who prepare one quality only of Portland Cement.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Paint-dealers in Original Packages, each cask stamped—HUBBUCK—LONDON—PATENT. And when so marked, the quality is guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester.—T. H. BOORMAN, WILD and CO. beg to inform the public and trade generally, that they have completed their works for the manufacture of PORTLAND CEMENT, and from their contiguity to the river Medway, as well as the branch line of the South-Eastern Railway from Strood to Maidstone, a siding from which will be carried into their works, enabling them thereby to transmit any orders they may receive to any station on the before-mentioned line, and confidently hope they shall be able to supply the public with a first-rate article, in both cement and lime, on moderate terms. Persons sending orders for cement, are respectfully requested to say for what purpose it is required, and printed instructions will be affixed to the head of each cask. Orders to be addressed to Mr. THOMAS WEEKES, Agent at the Works.

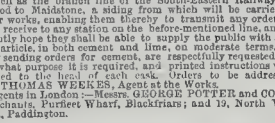
Agents in London:—Messrs. GEORGE POTTER and CO. Lime Merchants, Purfleet Wharf, Blackfriars; and 19, North Wharf-road, Paddington.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.

G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.

DAVIES and NORMAN, Agents.

Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.



GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel street, Liverpool.

NOTICE.—BLUE LIAS LIME.—L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.

L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to insure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's-cross.

GREY STONE LIME WHARFS,
12, UPPER GROUND-STREET, Blackfriars (Surrey side),
7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 3d. per ton.

Small ditto ditto, 4d. per ton.

Barges loaded in a few minutes.

Woudham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 20, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.

GIBBS, CANNING, and CO.'s BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.

ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.

SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works. Address, WILLIAM OLDHAM, Blue Lias Lime, and Cement Works, Southam.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants Builders, contractors, and others supplied with every description of building material at the lowest market prices.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and flare, bricks, fire-goods, &c. can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.

JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale Business, and offers to Contractors, Builders, &c by the freight or half freight, ROMAN CEMENT of best quality upon advantageous terms. Application either at Harwich or to his Agent, GEORGE MORRIS, 20, New Ormond-street, Queen-square, London.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.

BRICK MOULDS (improved), Steel-face Stocks and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick Mill Work and Implements.—J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENTISH STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY.
(Within a short distance of the fire bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 5, ADELAIDE-PLACE, London bridge.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Countin-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

WHITE SUFFOLK PERFORATED BRICKS.—Messrs. J. EASTWOOD and SONS take this opportunity of informing their customers and the trade, that they have made arrangements for the Manufacture of White Suffolk Perforated Bricks. In curing defects common to bricks of this description, care has been bestowed to produce them of a true and perfect shape, of an even and beautiful surface, and free from fire-flaws.—J. EASTWOOD and SONS, Belvedere-road, Lambeth.

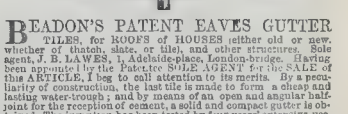
TO BUILDERS AND CONTRACTORS

RISBRIDGE NEW UNION WORKHOUSE.—GOOD BRICK EARTH can be had within a short distance of the site, on reasonable terms.—Apply to Mr. THOS. T. FROST, Wratting Wash, Haverhill.
February 13, 1856.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1, 1856. Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

TO BUILDERS and OTHERS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.:—Grey Stocks, 23s. per thousand; Grizzles, 20s. per thousand; Rough Stocks, 30s.; Place, 10s.—Terms, cash ton delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 2½ per foot; above 50 feet, 3d.—Office, 1, Adelaide-place, London-bridge.



BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and requires no keep. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Velvetholt, near Rugby; or in London, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 27, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 931, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

MANDER, BROTHERS,

VARNISH MANUFACTURERS,

WOLVERHAMPTON,

And 37, UPPER BAKER-STREET, LONDON.

MANDER BROTHERS have to announce to their Friends at the Trade and General that in consequence of the increase of their London Trade, and to accommodate their Customers, they have taken the Premises,

No. 37, UPPER BAKER-STREET,
DORSET SQUARE (near the New-road),

as a Depôt for their Varnishes, where for the future a Stock of every description will be kept, ready for immediate demand.

MANDER, BROTHERS (who have had a Medal awarded to them at the recent Paris Exhibition), have recently effected very important Improvements in their Varnishes, which have produced a beautiful Polish of surface with great Durability, more particularly for OUT-DOOR WORK.

Samples can be had at the Depôt.

Mr. W. M. G. KELLEY, Agent
ESTABLISHED IN 1801.

AWARDED TO MANDER, BROTHERS.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical and Alhambric Mosaic Pavements of all the Ancient Character, of extreme durability, Slabs and Tiles for Fireplaces and Hearths, Cornices for the Floor Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Rooms, may be had in great variety at the Warehouse, Minton Bank-side, Chelsea-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH. Imperfectly non-absorbent. STUCCO CEMENT STUCCO CEMENT.—CLARK and BENGOUGH, Manufacturers, Crescent Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY respectfully solicits the attention of buyers of Deals to his extensive Stock, the prices of which have been reduced to the following low prices of Pine and other Deals, &c. &c.:—

Yellow Deals from	£21 0 per 190
Do. Battens	12 10 "
Spruce Deals, from	18 0 "
Pine Flank, 18 ft. 3 in. by 11, from	22 10 "

Mantel Pieces in Planks and Boards, 6d. per foot super.
Prepared Flooring, &c. equally low. A list of prices forwarded on receipt of a penny stamp.—Borough-road, Southwark, and Lime-street, Gracechurch-lane.

GREAT REDUCTION.—Yellow Deals, 3s. 6d.; Pine Flank, 8s. 9d.; P. Walnut, 7½; Mahogany, 6d.; 5½ Yellow Battens, 19s. 10d. per 100 12 feet. Cartage free to any part of town.—T. FORMAN, 1, Walnut tree-walk, Lambeth walk.

SEASONED FLOORING.—GEO. NOKES and Co., for Architects and Advisers, beg to recommend builders and others that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash:—

½ inch White, 12s. 6d. per square.		½ inch Yellow, 10s. per square.		
1 ditto	15s.	"	ditto	13s. 6d. "
1 ditto	18s.	"	ditto	20s. "

Laths, 3s. per load.

Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.

ST. PANCRAS SAW-MILLS, Cambridge street, Old St. Pancras road.

GEORGE SMITH, TIMBER-MERCHANT, LONDON (address 3, No. 1, Battlefield-road, Clapham road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. fit to the Nails. Goods in Bond for Exportation.

N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

EDWARD SIMMS begs to inform Builders and the trade that he has now on hand at his manufactory, the best of its kind ever offered, a large assortment of PREPARED FLOORING and MATCH BOARDING, seasoned, and ready for use, from 4 inch to 1½ inch thick, in White or Yellow Deal, or Pitch Pine. Also Dry Deals, in all thicknesses, for Packing Cases, Pitch Pine Flank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, Ebury-street, Chelsea.

OAK SASH-CILLS, QUARTERING, &c. ready cut out to sizes and laths required, at the lowest price.

Address, E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KINGS ROAD, CHELSEA, AND WILTON ROAD, PIMLICO.

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shopfitters to his carefully selected MAHOGANY, suitable for Counter Tops, and to his seasoned Materials for builders cabinet and joiners' work. Deliver by cartage free to any of the London railway stations, or within three miles of Kennington Church.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

TO BUILDERS, CARPENTERS, &c.

SAMUEL CROWHURST, Jun. begs to call the attention of Builders, Cabinetmakers, &c. to his Stock of seasoned and well assorted Timber Goods, Deals and Battens in Logs, Planks, Boards, &c. at prices which will be found equally low as any advertised. Country Builders supplied on the most liberal terms. Timber yard, Hanover-street, Walworth; and Princes-street, Newington, near the Church.

MACHINE CARVING WORKS (Patent), for mouldings and every other description of CARVING by a machine, on Grecian Screen Carved Glass Frame, and other specimens, Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belmont-road, Lambeth, foot of Hungerford Bridge.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

FRENCH POLISH and SPIRIT VARNISH made from Methylated Spirit, 60 over proof.

Best Pearl Polish	6s. 6d. per gallon.
Spirit Varnish	8s. 6d. "
White Hard Polish	10s. 6d. "
Methylated Finish	6s. 6d. "

By JAMES SLIPPER, 87, Leather-lane, and 14 and 15, Dorrington-street, Holborn, London.

STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NO SIZING, and will stand the exposure to the weather. Price 6s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 4a, James-street, Oxford street; also Manufacturer of Improved Knotting and Decorative Varnishes.

IMITATION of WOODS and MARBLES.—A grainer of established name is ready to PLACE the above art, practised with a few weeks' pupilage, by a course of fifteen lessons, from no house, to be carried on immediately. The advertiser having a little time to spare for the summer trade engagements, is ready to devote it to the above purpose.—For particulars, address A. B., 3, Judd street, Fitzroy-square.

LATHS.—Full tale Baltic single LATHS, 3s. per load, cash, at H. ARUNDELL'S, Webber-street, Blackfriars-road.

J. P. LANG, PLUMBER and LEAD-LIGHT GLAZIER, 10, Tavistock-place, Tavistock-square. Lead-glazing in all its branches executed with neatness and despatch, at the lowest possible prices. The trade supplied with all kinds of window lead. Old lead taken in exchange.

TO TIMBER MERCHANTS and OTHERS. The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of English Timber, &c. possessing dry and well-drawing Docks, and Steam Cranes. Superior Sawing, &c. Freights paid to Builders. Apply to G. NOKES and Co. as above.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER CUTTING MILLS, Commercial-road, Lambeth.—The proprietors beg to announce to the trade that they have completed their extensive arrangements, and will be happy to execute all orders intrusted to their care with despatch and punctuality.

N.B. All goods sawn at these mills fetched and delivered free of charge.

SPECIAL NOTICE.

The Books of the Society close on the 31st of March, and Proposals lodged at the Head Office, or with any of the Agencies, on or before that date, will secure the advantage of the present year's entry, and of One Year's Additional Bonus over later Proposals.

MUTUAL LIFE ASSURANCE.

The Whole Profits divided amongst the Assured.

THE SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY Instituted 1831. Incorporated by Special Act of Parliament.

The fund accumulated from the contributions of members, exceeds SIX HUNDRED THOUSAND POUNDS STERLING.

The annual revenue exceeds ONE HUNDRED and SIXTY-THREE THOUSAND POUNDS.

The amount of existing assurances exceeds FOUR MILLIONS and a QUARTER STERLING.

The amount paid to the representatives of deceased members exceeds SIX HUNDRED and FIFTY THOUSAND POUNDS, being SEVEN EIGHT THOUSAND POUNDS above Seventy per cent.

The NEXT DIVISION of PROFITS TAKES PLACE at the 1st of MARCH, 1856, and policies effected before that date receive one year's additional bonus over those effected after that date.

WILLIAM HILLHOUSE, Manager.
WILLIAM PINLAY, Secretary.
Head Office—20, St. Andrew-square, Edinburgh.
London Office, 126, Bishopsgate-street, corner of Cornhill.
W. H. SMAIRIDGE, Interim Agent.

SPECIAL NOTICE

KENT MUTUAL ASSURANCE SOCIETIES.
HEAD OFFICES:
QUEEN-STREET-PLACE, NEW CANNON-STREET, LONDON.

The united annual incomes exceed 27,000l.; and all Profits belong to the Assured.

LIFE

The next division of Profits will include parties assuring before the 30th March next.

The new business of the last eight months exceeds 5,000l. in Annual Premiums.

FIRE.

The Guarantee Fund is being increased to Half-a-Million.

The annual income, since last annual meeting, has increased beyond 500l.

GEORGE CUMMING, Manager.

N.B. Agents are still wanted for some vacant localities.

SIXTH LOND-

UNION ASSURANCE SOCIETY.—(FIRE—LIFE—ANNUITIES).

Instituted in the reign of Queen Anne, A.D. 1714.
Cornhill, and 70, Baker-street, London.
Chairman—J. Remington Mills, esq.
Deputy-Chairman—Henry Ashwin Barnes, esq.

James Bentley, esq.	J. bn Paynter, esq.
Thomas Bodley, esq.	John Rees, esq.
Darnell Bryden, esq.	Henry Rich, esq.
Nicholas Charrington, esq.	George Spencer Smith, esq.
B. Preston Child, esq.	Richd Hor-man Solly, esq.
William Colpin, esq.	W. Foster White esq.
Thomas Mills, esq. M.P.	Samuel Wilson, esq. Ald.
John Morley, esq.	Stephen Wilson, esq.

The LIFE BONUS of the year 1853, of four-fifths of the profits of the LIFE DEPARTMENT, has been just declared, and (with the exception of a reserve of nearly 50,000l. to accumulate towards the next Bonus of 1858), is payable upon and with the sum assured, being at the rate of 10l. 18s. per cent. for the last seven years, on Policies effected in Great Britain upon the Profit System.

THIS BONUS MAY BE APPLIED EITHER

By having the annual premium reduced for the next seven years, which will in many cases extinguish the same for that period,

Or by adding the amount to the sum insured;

Or the value thereof may be received immediately in money.

The Directors beg to state that, by a recent change in the regulations of the Society, the assured from the advantages of MUTUAL OFFICES by sharing the entire profits less one-fifth as a small compensation for the necessary guarantee, and are free from the liability incurred by the members of such Societies.

The accumulated invested capital now amounts to upwards of ONE MILLION sterling.

THOMAS LEWIS, } Joint Secretaries.
WM. B. LEWIS, }

TO ARCHITECTS.

COMPETITION and other DRAWINGS.—COLOURED by an experienced Architectural Draftsman, on reasonable terms. Perspective and other drawings put in outline, &c. Drawings coloured for gentlemen in the country, and transmitted by post, with instructions for coloring produced.—Address, B. C. Mrs. Plummer's Library, Theobald's-road, Bedford-row.

ARCHITECTURAL DESIGNS and PERSPECTIVES for the Academy, &c. DRAWN and COLOURED by an Architectural Artist, who is experienced in figure and landscape painting.—For terms, &c. address to X. Y. at the Post-office, 84 Edgeware-road.

DRAWING, &c.—One Guinea per Quarter. Comprising Architectural, Engineering, Mechanical, Perspective, and Water Colour Drawing. Taking out Quantities; Measuring, Builders' Work, &c. &c. Gentlemen who cannot attend at the Establishment, can be attended at their residence on moderate terms, in any parts of town or country, by Mr. SMITH or Mr. LEWIS.—Offices, 24, Guildford-street.

DRAWING CLASSES.—24, Guildford-St. Russell square.—At this Establishment Pupils are thoroughly Instructed in Architectural, Civil Engineering, and Mechanical Drawing; Ornamental, Perspective, and Water-Colour Drawing; Taking out Quantities, Measuring, Estimating, &c. &c. Terms and particulars may be had at the Offices.

THE PHOTOGRAPHIC SOCIETY'S THIRD ANNUAL EXHIBITION will OPEN to the public on MONDAY next, JANUARY 7th, at the Gallery of the Society of Painters in Water Colours, 5, Pall-mall East. Open at Ten. Admission 1s. Evening, from Seven till Ten. Admission 6d.

MATHEMATICAL DRAWING INSTRUMENTS.—JOHN ARCHBUTT, 30, Westminster-Bridge-road, Lambeth (near Astley's Theatre), begs to call attention to his Stock of Instruments manufactured by superior workmen. The prices will be found considerably lower than ever charged for articles of similar quality and workmanship. Rules, scales, tapes, &c. at equally low prices. An illustrated price-list will be immediately forwarded free on application.

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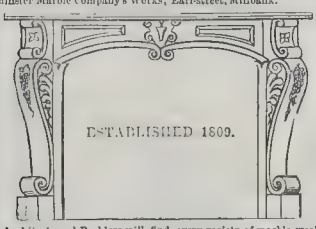

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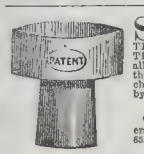

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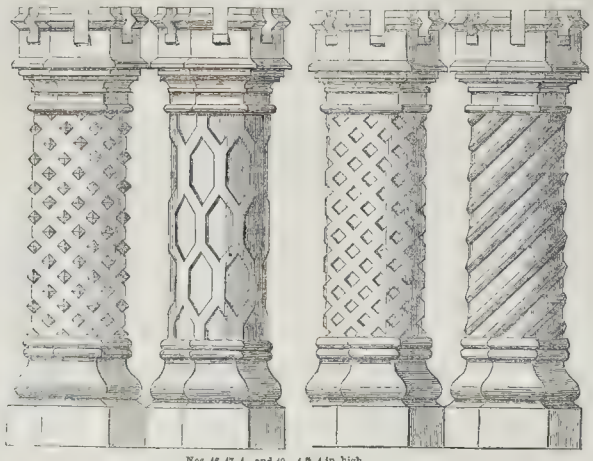

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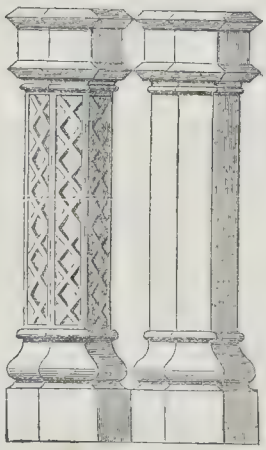

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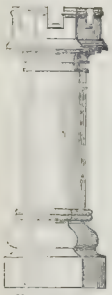

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LIVERPOOL.... No. 9, Russell street; 83, Renshaw-street; and Shipping Wharf, Leeds-street.
NEWCASTLE.... W. B. Wilkinson and Co. Queen street.
GRIMSBY..... P. G. Sharp, Esq.
MANCHESTER.. No. 48, Travis-street, and 23, 24, and 25, Birmingham-street, London-road.
HULL..... No. 60, Queen-street, and Wellington-street.
BRADFORD..... Horton-road.
LEEDS ..... Wellington-street, adjoining the Midland Station, and Shipping Wharf, Victoria Works, Hunslet.
SUNDERLAND.. W. B. Wilkinson and Co. Queen street.
WARE ..... G. E. King, Stone Merchant.

WHERE DRAWINGS, WITH PRICES, &c. MAY BE OBTAINED.

R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.
Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

B. FOWLER & CO.'S PORTABLE PUMPS,
3-inch to 9-inch Barrels,
Plain or Sliding Telescope Suction,
ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes,
to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.
WHITEFRIARS-STREET,
Fleet-street.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 31 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in. short	1 ft. 7 in.	Fitted for lead, gutta percha or cast iron flanged pipe, as required.	1 10 0
2½ „ long	3 3		1 14 0
3 „ ditto	3 6		2 3 0
3½ „ ditto	3 6		2 12 0
4 „ ditto	3 6		3 3 0
2½ „ short, with 15 feet of lead pipe attached, ready for fixing			2 14 0
2½ in. long ditto ditto			2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in wash-houses with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, vans, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.
Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,
Engineers and Contractors,
John's-place, Holland-street,
Southwark, London.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

PUMPING and WINDING ENGINE.—TO BE LET ON HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 92, Blackfriars-road.

STEAM-ENGINES for SALE.—A Six and a Ten horse High-pressure. Also, a Donkey Engine.—Apply to JOHN DUFF and CO. Engineers, Glasgow, Makers of Laird and Marine Engines, Boilers, Derrick and other Cranes, &c.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT.—Second Testimonial.—"March 10th, 1852. In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

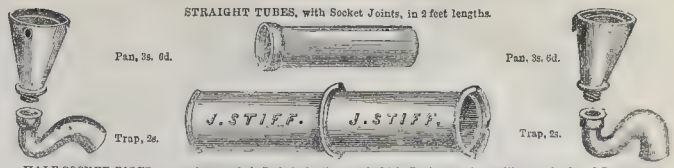
THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.
Drawings, with Prices, will be forwarded free, on application

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.

Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.

Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.

Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.

THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the Original Manufacturer of the CONED or REBATED SOCKET-PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

MR. M. B. NEWTON,

Late MANAGER and CORRESPONDENT to the FARNLEY IRON COMPANY'S FIRE-CLAY and TERRA-COTTA WORKS, having relinquished the above engagement, respectfully intimates to his Friends that he has OPENED

THE WHARF No. 4, KING'S CROSS GOODS STATION, LONDON, as a DEPOT for GLAZED SANITARY TUBES, FIRE-BRICKS, CLAY RETORTS, and OTHER GOODS, MANUFACTURED BY

JOSEPH CLIFF, WORTLEY, NEAR LEEDS.

N.B.—PRICE LISTS having just undergone a revision, Parties will meet with the most liberal Terms at this Wharf.

(Further Advertisement next week.)

TO ENGINEERS, MACHINE MAKERS, AND OTHERS.
CHARLES MACINTOSH and CO. Patentees and Manufacturers of the VULCANIZED INDIA-RUBBER in all degrees of elasticity, recommend this material as capable of sustaining the action of hot or cold water, gas, steam, acids, and grease. It is used extensively for valves in marine and land engines, railway buffers and springs, washers for pipe-joints, hose and tubing; also for gas holders, sand pumps, alkali cisterns, &c. &c. Articles, moulded or otherwise, made to any size or figure.—Address, 3, Cannon-street West, London; and Cambridge-street, Manchester.

TO ENGINEERS, MILL-OWNERS, &c.
N. Woolwich Elastic Steam-packing (Canvas and India-rubber), at 1s. 8d. per lb.

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H. M.'s Dockyards), having considerably extended their manufacture in order to meet the daily increasing demand upon them for this effective and durable article, are enabled to offer the very best material at the reduced price of 1s. 4d. per lb. for sheet and rope.

Testimonials may be seen at S. W. SILVER and CO.'s Warehouses, Nos. 3 and 4, Bishopsgate-street (opposite London Tavern), where orders for Steam Packing, also Buffer Springs, Pump Clacks, and the various India-rubber appliances, will meet with prompt attention.

CAUTION.—S. W. S. and Co. have found it necessary to stamp all their manufacture, thus "S. W. SILVER and CO. WORKS, NORTH WOOLWICH."

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.

¾	⅞	1	1¼	1½	1⅝	2	2½	2½	2⅞	3 in.
9d.	11d.	1s.	1s. 3d.	1s. 5d.	1s. 7½	1s. 9d.	2s.	2s. 3d.	2s. 6d.	3s. 9d.

Super-extra stout quality.

2	2½	2⅝	2⅞	3 inches.
2s.	2s. 3d.	2s. 6d.	2s. 9d.	3s. per yard.

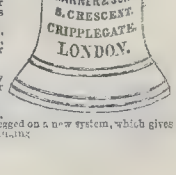
No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

1	1½	2	2½	2½ inches.
9d.	10d.	11d.	1s.	1s. 3d. 1s. 6d. per yard.

The hose is Burnettized at an extra charge of 3d. per yard
Union Joints, Branch Pipes, and Jets, are also supplied.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.



Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, or weight, singly or in peals.

TUNED BY MACHINERY.

Stocked and wheeled ready for hanging. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system, which gives superior tone and facility for ringing.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. DOULTON'S HALF-SOCKET PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

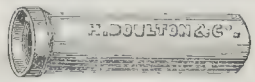
GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

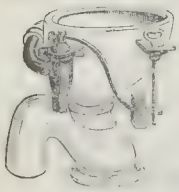
Drawings and Prices will be forwarded on application



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing,

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

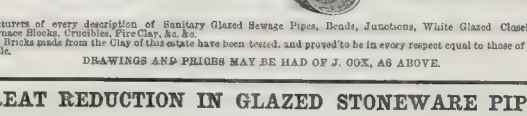
The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly [illegible] having [illegible] supplied DRAIN PIPES, &c. to some of the largest Works and Sewerage Districts, the New Cattle Market, Westminster Bridge Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressed [illegible] Companies offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

LYTCHETT POTTERY.—For SALE by PRIVATE CONTRACT, the LEASE and PLANT of the above Premises. The lease consists of about fourteen acres of land and a good cottage. The land contains a large quantity of very superior clay for pottery and fire-goods. The drain-pipes made from the clay are equal, if not superior, to any yet in the market; and the fire-goods will bear comparison with any yet made. The plant comprises three pottery kilns and two brick kilns, with pipe machines, pug-mills, and all other necessary apparatus. Lytchett Pottery is 14 miles from the South-Western Railway, and 3 miles from the port of Poole.—For further particulars, and to view, apply to H. F. FISHER, Blandford.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 20 Bankside. DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb 11, 1856.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. E. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

CLOSET BASINS, WHITE and BLUE, URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, discharging with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials and references of the highest respectability can be had on application. Specimens of which can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish street, near St. Paul's, London. Price for Closet and Apparatus complete, from 28s. and perfect action guaranteed.

MANUFACTURERS of GLAZED STONEWARE PIPES, Bends, Junctions, &c.; also FIRE BRICKS, Vitrified Blue Bricks (as used by her Majesty's Commissioners of Sewers), White Fire Clay, Facing Bricks, &c. &c. Agents.—CHARLES RICHARDSON, No. 6, South Wharf, Paddington, London.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their pipes, which they are confident are such as must give great satisfaction,—the price being not lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices. E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered. October 1, 1855.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

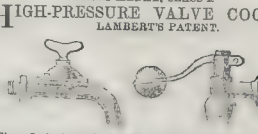
The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or ware.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, Newington, Lambeth.

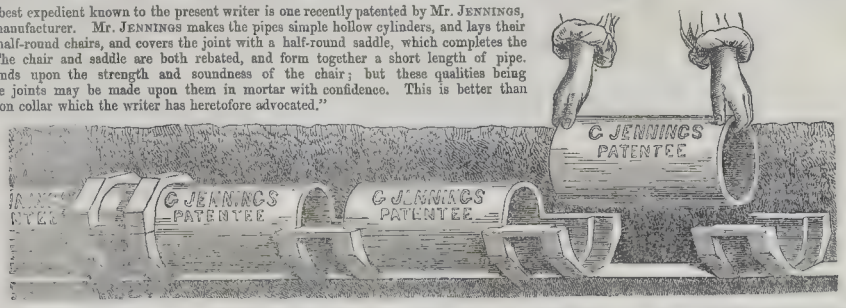
TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of Cordage made by Builders up to the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 113, Fore-street, City. Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

TO ENGINEERS, ARCHITECTS, SURVEYORS, AND OTHERS, INTERESTED IN EFFICIENT DRAINAGE.

Extract from the "ENCYCLOPÆDIA BRITANNICA," *Vol.* 8, *Part I. page* 129, *on Drainage of Towns, by* W. HOSKING, *Esq.*

"Simple hollow cylinders, whether of iron or of pottery, are more likely, with the same care in the manufacture, to be sound than socketted pipes of either ubstance; and for this reason, if for no other, pot pipes should be simple hollow cylinders, and some other expedient ought to be employed for making the joints, han that by which the pipe is liable to be rendered both unsound in its manufacture, and impracticable *when the work requires to be repaired*. Expedients have een devised to this effect, and are gradually making their way into use.

"The best expedient known to the present writer is one recently patented by Mr. JENNINGS, London manufacturer. Mr. JENNINGS makes the pipes simple hollow cylinders, and lays their nds upon half-round chairs, and covers the joint with a half-round saddle, which completes the rcuit. The chair and saddle are both rebated, and form together a short length of pipe. uch depends upon the strength and soundness of the chair; but these qualities being ecured, the joints may be made upon them in mortar with confidence. This is better than ne sheet iron collar which the writer has heretofore advocated."



In the "BUILDER" of February 9th, GEORGE JENNINGS stated that the price of his Patent Drain-Pipes, with all the advantages they offered, were "the me price as charged by the respectable London Potters." Two days after the appearance of this advertisement, all the Potters issued fresh lists, REDUCING HEIR PRICES AND INCREASING THEIR DISCOUNTS. And in the "BUILDER" of the 16th instant, one week after GEORGE JENNINGS'S dvertisement, no less than seven notices of "GREAT REDUCTION IN PRICES" appear. THIS MAY OR MAY NOT BE OWING TO THE OVERTISEMENT OF THE 9TH INSTANT. But to PREVENT MISTAKES, GEORGE JENNINGS does not AT PRESENT propose any reduction in e price of his Improved Pipes, as charged in list prior to the 9th of February, hoping the quality of the article, combined with acknowledged advantages, will worth the halfpenny or penny per foot charged in excess of THE PRESENT London Potters' prices.

The Show-rooms now built on Jennings's Wharf, Holland-street, Blackfriars, will be open in March next, for the Exhibition of Sanitary Inventions, suitable r EVERY CLASS OF BUILDING, PUBLIC OR PRIVATE. In the meantime, Illustrated Particulars and Prices of JENNINGS'S Self-acting and other aterclosets, Urinals, Lavatories, Pumps, Sluice-Valves, Fire and other Cocks, Gully-traps, Shop-shutter Shoes, Earthenware Drain and Soil Pipes, &c. &c. n be had free, on application, or by post, on enclosing two stamps to

GEORGE JENNINGS, SANITARY ENGINEER, GREAT CHARLOTTE-STREET, BLACKFRIARS.

Note.—The attention of Architects is particularly invited to a NEW DOUBLE-SEATED VALVE CLOSET, recently patented by G. JENNINGS. It is ccedingly simple, noiseless, and must be durable. The Patentee has such confidence in its efficiency, that a warranty for SEVEN YEARS will be given with ery Closet sold. Same Price as ordinary Valve Closets, in their different qualities.

REAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

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TRAPS, &c. at the

NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the est quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon appli- dion to THE AGENTS:—

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;

Where a large stock is always kept on hand.

UNDERHAY'S PATENT REGULATOR CLOSETS for constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in fixing, and a better flush of water obtained in use.

Pan, Valve, Self-acting, and Servants' Closets, on this principle, may be seen at the Works. They are very cheap, their efficiency is guaranteed. 5,000 of them have been sold, and no instance of failure has occurred.

These Stop-valves are cheaper, stronger, and more ornamental, than any other Many thousands are in use, and greatly approved of.

Manufactured by
CHARLES BUTTEN and SON,
Brass Founders, Crawford passage, Clerkenwell London.

BY HER MAJESTY'S ROYAL LETTERS PATENT, APRIL 27, 1855.

JAS. LEWIS'S PATENT STENCH-TRAP

FOR STREET U-E.

Price, with Gutter Plate, 18 inches by 12 inches, each 25s.; weigh about 2 cwt. Larger sizes made, if required.

FOR AREAS, &c.

Price, with Back Plate, 6 inches by 7 inches, each 6s.

FOR COURTS, YARDS, &c.

10 inches by 8 inches, each 10s.

The above articles are protected for the Patentee by the British Government, on account of their construction for the advantages they possess, being a perfect trap for preventing smell proceeding from itself or the drain, should there be water or not in the pan. When stench-traps are put down generally speaking no attention is ever paid to them afterwards—this renders them useless. The above, therefore, are a desideratum, as they require no attention. It is well known when cholera has visited this country, it commences and leaves last those places where the air is vitiated by noxious gases proceeding from drains, &c.

Any inhabitant suffering any inconvenience, is entitled, by the Sanitary Act to lay complaint before the public or private authorities of the property, to lay down stench-traps where they are required. Any persons interested in this advertisement will be kind enough to write to the patentee for drawings and if wishful, testimonials. Please order from any respectable Ironmonger contractor, or the Patentee, JAMES LEWIS, Ironfounder, Abergavenny. Specimens to be seen in the Court of Inventions, Crystal Palace, Sydenham

COLLIER'S TERRO-METALLIC and RED BARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.—This ware, allowed by all to be of the best manufacture, by the unparalleled quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. S. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at						3d. per foot.	
4	"	"	"	"		4d.	"
6	"	"	"	"		6d.	"
9	"	"	"	"		9d.	"
12	"	"	"	"		1s. 3d.	"
15	"	"	"	"		2s. 6d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture. And it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

SALES BY AUCTION.

TO CONTRACTORS, BUILDERS, BRICK-MAKERS, AND OTHERS.—The valuable Lease of extensive Brick fields at West Drayton, Middlesex, a short distance from the Station on the Great Western Railway, and possessing important frontages to the Grand Junction Canal: also a Beer-Shop, House, and Shop, and Twenty-six Cottages.

MR. MARSH has been favoured with instructions from the Trustees of Mr. Samuel Pocock, to SELL by AUCTION, at the MART, in the City of London, on WEDNESDAY next, FEBRUARY 27th, at TWELVE o'clock, in one lot, the important and valuable LEASE of extensive BRICKFIELDS, at West Drayton, three-quarters of a mile from the Station on the Great Western Railway, by which line the fields are separated, and possessing important frontages on the Grand Junction Canal. The whole comprises about 10 Acres of excellent Brick Earth, with ranges of Sheds and Buildings; also a Beer-Shop, Grocer's Shop, and Twenty-six Labourers' Cottages, a Farm Homestead converted into Two Cottages, Large Barn, capital Stabling, Cart Sheds, &c. The property is held upon lease for a term of forty years, from September, 1840, at an annual rental. The purchaser will be accommodated with the valuable stock of about 4,000,000 Bricks, Plant, and Implements, at a valuation.—May be viewed, and particulars obtained on the estate at the Dog Burgh Arms, West Drayton; of Messrs. LAWRANCE, PLEWS, and BOWYER, Solicitors, Old Jewry Chambers; of G. J. HUSON, esq. Solicitor, 7, Ironmonger-lane; of W. Edwards, esq. Official Assignee, Bankrupt-court, Basinghall-street; at the Mart; and at Mr. MARSH's offices, 2, Charlotte-row, Mansion-house.

TO TIMBER MERCHANTS, BUILDERS, CONTRACTORS MASONS, SAW-MILL PROPRIETORS, and OTHERS requiring spacious Rooms or Premises.

MR. MARSH has received instructions to LET, with immediate possession, capital BUSINESS PREMISES, situate in East-street, Walworth, with residence attached.—For particulars, apply at Mr. MARSH's, Charlotte-row, Mansion House.

TIMBER SALE. — At GARRAWAY'S COFFEE-HOUSE, Change-alley, Cornhill, on FRIDAY, 7th MARCH, 1856 FOUR o'clock precisely,

1,456 GOTTENBURG YELLOW BATTENS and ENDS, the cargo of the "Johanne Marie," partly damaged by seawater on the voyage, to be sold for account of the underwriters and owners

Also for account of the importers.

220 LOADS of BALTIC and COLONIAL TIMBER.
75,000 BALTIC and COLONIAL DEALS and BATTENS; with other Wood goods

Further particulars and catalogues in due time, by
CHURCH HILL, MACMILLAN, and CO. Wood Brokers,
20, Cannon-street.

HARWICH. — Barges, Boats, Iron, Old Timber, &c. for Sale.—TO BE SOLD by AUCTION, by

MR. HALES, on FRIDAY, 7th MARCH, 1856, by order of Messrs. H. Lee and Son, the proprietors, at their HARBOUR WORKS DEPÔT, near the Ordnance Jetty, Harwich, her anchors and moppy BARGES, with their anchors chain cables, and windlasses complete: six iron crabs; four railway trucks; and upwards of thirty tons of iron, consisting of large and small chains, inalleable scrap and castings; valuable old timber; rope; seven harbour boats, various; firewood, &c. arising from the harbour dredging works; all which will be expressed in catalogues, to be had, with any further required particulars, on reference to the proprietors, Belvedere-road, Lambeth, London; Mr. HENRY WEAVER, Manager at the Harbour Works Depôt, or the Auctioneer, Harwich.—Sale to commence at TWELVE o'clock at noon

HERTFORDSHIRE.—Sale of very useful Timber and Poles.

MR. W. BROWN has received instructions to SELL by AUCTION, upon the PREMISES, at ROSSWAY, on TUESDAY the 11th of MARCH next, at TWELVE o'clock precisely, about 1,200 LARCH, SPRUCE, and SCOTCH FIRS and POLES, and the Faggots cut from the same, drawn out and conveniently lotted, near the Leading from Rosseway Lodge, towards Tring, distant about three miles from Chesham, Berkhampstead, and Tring; and upwards of 200 Oak, Ash, Beech, and other Trees, partly felled, and the remainder standing on the Hill Farm, Hawridge, between Rossway and Chesham. Credit will be allowed, subject to conditions to be produced at the time of sale.—May be viewed by applying to the Premises. Lottings may be obtained of Mr. JOSEPH MEAD, Rossway; at the King's Arms and Goat Inns, Great Berkhampstead: GEORGE NORTHCROFT, Aylesbury and Chesham; Rose and Crown Hotel, Tring Station; of Mr. E. BROWN, 2, North-street, Manchester-square, London; and at the Offices of Mr. W. BROWN, Land Agent, Tring

TELEGRAPH WIRE.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY, FEBRUARY 25th, at TWELVE, at the AUCTION MART, Tokenhouse-yard, London, in lots, without reserve, EIGHTY MILES of TELEGRAPH WIRE, insulated, No. 16 copper wire, in No. 8 gutta-percha coating, manufactured by the Gutta Percha Company, City-road; adapted for subterranean or submarine telegraph, and now lying at Cotton's Wharf, Tooley-street. To be viewed at any time previously by permission, and may be had of Messrs. G. Field and Evill, Solicitors, No. 141, Wood-street, Cheapside; or of Messrs. FULLER and HORSEY, 13, Billiter-street, City, London.

Italian Marble Chimney-pieces, Alabaster Ornaments, recently imported; Slabs of Vein Marble, also a variety of Statuary and Vein Marble Chimney-pieces.

MESSRS. ROBINS will SELL by AUCTION, at their ROOMS, in Covent-garden, on THURSDAY next, FEBRUARY 28th, at TWELVE, TEN ITALIAN MARBLE CHIMNEYPIECES, just imported from Florence, a variety of pleasing vases and figures, sculptured in alabaster, presenting striking examples of the extraordinary effect of statuary in a transparent marble; also a quantity of slabs of vein marble, in order for fixing, and a quantity of slabs of vein marble, of useful sizes.—On view two days prior, with catalogues, of the Auctioneers, in Covent-garden

French Paperhangings, direct from Paris; rich designs in satin and flock, with gold; arranged in convenient lots.

MESSRS. ROBINS will SELL by AUCTION, at their ROOMS, in Covent-garden, on THURSDAY, FEBRUARY 28th, at TWELVE, THOSE PAPERHANGINGS, recently imported from Paris, new and elegant patterns in satins and flocks enriched with gold, also fine decorative wall panels, and Lambrequin cornices.—On view two days prior, at the Auctioneers, in Covent-garden.

ALDENHAM, HERTFORDSHIRE.—Live and Dead Farming Stock, &c.

MR. W. R. GLASIER will SELL by AUCTION, on the PREMISES, near the Coach and Horses Inn, on WEDNESDAY, FEBRUARY 27th, at ELEVEN for TWELVE precisely, as above, valuable LIVE and DEAD STOCKS, comprising six cart and other horses, Aldermey and other cows, heifers, calves, &c. tumbril, spring, and other carts, wains, harness, &c. together with a number of useful items from a builder's yard and workshop, well worthy the attention of the trade; also a few lots of household furniture.—May be viewed and catalogues had on the Premises; at the neighbouring Inns; at the White Lion, Paddington; and of the Auctioneer, at, Charing cross.

TO BRICKMAKERS AND OTHERS.—TO BE SOLD by AUCTION, by

MR. ROBINSON, on the PREMISES of the DUST FIELD, corner of the Queen's-road, Hornsey-road near the Holloway-gate, on TUESDAY, MARCH 4, 1856, at TWO o'clock, about 6,000 chaldrons of ASHES and BREEZE, and a quantity of HARD CORE, which will be sold in one lot or lots, according to the convenience of purchasers, the genuine property of Mr. John Camp, and to be sold without reserve.—On view, when estimates may be had on the Premises; and of the Auctioneer, Repository, Little Britain, City.

SALES BY AUCTION.

SOUTHALL.—POSTPONEMENT OF SALE OF BRICKS.

MESSRS. EVERSFIELD and HORNE respectfully announce, that the SALE of BRICKS and BRICKMAKERS' PLANT, announced to take place on FRIDAY, the 29th inst. is POSTPONED until next month.
41, Parliament-street.

MARBLE SLAB. Near the Great Northern Terminus.

MESSRS. EVERSFIELD and HORNE are instructed to SELL by AUCTION, at the GREAT NORTHERN MARBLE WAREHOUSE, Pentonville, Kingscross, on FRIDAY, MARCH 7th, at TEN for ELEVEN, the entire and extensive assortment of MARBLE SLABS; comprising statuary, veyn and Sicilian of large sized dove; black and gold, Sienna, Bardilia, and a choice variety of coloured marbles; all English sawn, and good quality. May be viewed three days previous, and catalogues had on the Premises; and of the Auctioneers, 40, Parliament-street, or Coal-Exchange. N.B. Three months' credit.

MATERIALS OF THE RESERVOIR, GREEN PARK.

MESSRS. EVERSFIELD and HORNE have received instructions from the Commissioners of Her Majesty's Works and Public Buildings, to SELL by AUCTION, on the PREMISES adjoining, on WEDNESDAY, FEBRUARY 27th, at TEN for ELEVEN, the MATERIALS of the LARGE RESERVOIR, near PICCADILLY, comprising 3,000 square yards of the best stock bricks laid in cement, Portland cement, and about fifty rods of brickwork in the walls, culverts, sides and covered passages, cast iron steps, iron sluices, &c. May be viewed and catalogues had at the office of Works and Buildings, Whitehall-place; and of the Auctioneers, 40, Parliament-street, Westminster; or Coal Exchange.

ST. JOHN'S WOOD.—Leasehold Premises, with Workshops.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, at the MART, on TUESDAY, FEBRUARY 26th, at TWELVE, by order of the Assignees of Wm. Tavener, a bankrupt, a substantial brick-built RESIDENCE, containing ten rooms, with kitchen and detached stabling, situate on the south side of Clifton-road, St. John's wood; held for an unexpired term of ninety-six years, at a ground-rent of 9l. The Premises are in hand but of the estimated annual value of 80l.—May be viewed, and particulars had of Messrs. Fry, Solicitor, 10, Great Carter-lane, Doctors'-commons; at the Mart; and of the Auctioneers, 40, Parliament-street, Westminster; or Coal-exchange.

BOROUGH-ROAD.—Remaining Stock of Artificial Stone

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, 74, Borough road Southwark, on WEDNESDAY, APRIL 2nd, at TEN for ELEVEN, the final portion of the extensive STOCK; comprising fountains, vases, figures, groups (including the large "Laocoon," the only one in artificial stone), centre flowers, &c. To be sold without reserve, and will be the last sale this season. May be viewed one week previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

Sixth Sale of the Surplus Property belonging to the North London Railway Company, with Votes for the County of Middlesex.

MESSRS. BEADEL & SONS have received instructions from the Directors of the above Company to SELL by AUCTION, at the MART, London, on TUESDAY, MARCH 11th, at TWELVE o'clock, in 7 Lots, the Sixth Portion of the valuable FREEHOLD SURPLUS PROPERTY adjoining the Railway, Canonbury, comprising several Freehold Houses, let at rents amounting to 62l. per annum; also well-secured ground-rents arising from houses in Brecknock-place, Great and Little Dolphin-yards, and Compton-road, Pentonville-place. Also Sheppard House, Homerton, and a plot of valuable leasehold land at Dalston. Particulars may be obtained of Messrs. CLARKE & LATTEY, Solicitors, Guildhall-yard; of Messrs. KENNEDY & BONNY, 10, Cornwall-crescent, Camden-town; at the Auction Mart; and of Messrs. BEADEL & SONS, 35, Freshwharf-road, London.

TO ENGINEERS, MILL OWNERS, and OTHERS. Important Sale of Machinery, THIS DAY, SATURDAY, at TWELVE, prompt.

AUGUSTUS SMITH is instructed by Mr. Joseph Apsey, Engineer, to SELL by AUCTION, without reserve, upon the PREMISES, Bute-street, Bourne-street, Cornwall-road, Lambeth, the whole of his valuable STOCK and TOOLS, including two 16-horse high and low pressure steam-engines, nearly finished; a 3-horse high-pressure engine, about 100 feet of shafting, with bearings, riggers, &c.; a very powerful boring mill, a six-inch self-acting screw-cutting foot-lathe, compound shaping and planing machine, drilling-machine, a heavy self-acting lathe, 3-feet centres, 21-feet bed, fitted up to plane; two other self-acting lathes, about two tons of cast and shaft steel, smiths' tools, vices, patterns, benches, fire-proof safe, counting-house fittings, &c.; 9-feet fly-wheel, cast-iron frame and gearing for two pairs of millstones, the property of the Prior Sales; and all engines built at the Factory, or from Augustus Smith, Engineer, Auctioneer, &c. Blackfriars-road, near the Bridge.

TO BE LET on Building Lease, the HALL and PREMISES belonging to the Worshipful Company of Weavers, occupied by the tenant, Mr. Gilbert, in Basinghall-street, a suitable site for the erection of Offices or any large building. Frontage, about 37 feet; depth 130 feet. The Court will meet at the Premises, on TUESDAY, the 4th inst. at TWO o'clock precisely, to receive TENDERS for the same, on TUESDAY, the 4th MARCH next. The premises may be viewed by permission of the tenant, and further particulars may be obtained of JOSEPH JENNINGS, Esq. 3, Foley-place, Cavendish-square; and of CLARK, TAYLOR, and BADMBURY, Solicitors, No. 18, Basinghall-street.

FREEHOLD GROUND, CHANCERY-LANE and PETTERLANE.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet at the GUILDHALL of the said City, on FRIDAY, the 29th of FEBRUARY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for the Grant or Building Lease for Forty Years of certain PLOTS of GROUND, situate at the south-west end of Chancery-lane, and the south-east end of Petter-lane.—Further particulars may be had at the Sewers' Office, Guildhall, of Mr. HAWARD, the Surveyor to the Commission, at the Office, 10, Guildhall. The Commissioners will require a plan and elevation of the premises proposed to be built, to be submitted to them for approval; and do not bind themselves to accept any proposal. Unless delivered sealed to them.

JOSEPH DAW, Principal Clerk.
Sewers' Office, Guildhall, January 2, 1856.

HARROW.—FREEHOLD LAND.—To BE SOLD, by Auction, in suitable lots, and several other eligible plots of FREEHOLD LAND, at a moderate price per foot, on the Harrow Railway Station, and situated and intersected by capital Roads. Residents entitled to the privileges of the Harrow School, and the London and North Western Railway Company's Season Tickets. Plans and particulars of the Estate, with conditions of sale, may be had of Mr. WILLIAM B. COOPER, Esq. Solicitor, 3, Verulam-buildings, Gray's-inn

FREEHOLD LAND TO BE LET, for long terms, at peppercorn rents, and for building on the Estate, Bromley, suitable for manufacturing premises, near the East and West India Docks, for fourth-rate houses; in the East India Dock-road, for second or third-rate houses; near the Victoria Docks, for fourth-rate houses, and any improved ground-rents made may be purchased; on Windmill-hill, Gravesend, overlooking the river Thames, for second or third-rate houses.—Apply to Messrs. MORRIS and SON, Architects, Poplar]

TO BE LET, SEMI-DETACHED VILLAS in immediate neighbourhood of Victoria New Docks, and in parish of Plaistow. Each house contains two parlours and breakfast-room, three bed-rooms, kitchen, scullery, pantries, and W.C. They are completely fitted up with every convenience, coppers, water, stoves, and bells. They are partially finished and varnished, and all are papered with newest patterns. They are ready for immediate occupation, and, in consequence of the failure of the builder, they will be let for the low rent of 32l. per annum. Taxes are very moderate, and railroad and omnibus conveyance within easy distance.—Apply to Messrs. WM. G. and E HABERSHON, Architects, 38, Bloomsbury-square, London; at whose Office views and drawings may be seen.

TO BUILDERS.—Dalston.—TO BE LET, or SOLD, a GATEWAY HOUSE and PIECE of GROUND, behind, 79 feet by 80 feet. Coltages or Workshops could be built on the ground.—Apply to JOHN SCARD, Esq. Solicitor, 2, North-crescent, Bedford-square.

TO BE SOLD, or LET, on lease, terms of 90 years, a PIECE of GROUND, for building, 30 feet frontage, about 240 deep in the AMHERST-ROAD, HACKNEY DOWNS. The ground is made up back and front, and planted with shrubs and fruit trees, with boundary walls, drains, &c. Apply at Amherst House, Amherst road, Shakelwell, Stoke Newington.

WANTED, FREEHOLD LAND, to build on for a Public Institution, within ten miles of London; no objection to an old Mansion on the same. Full particulars required "Freehold Land," sent, and addressed to the Board of Guardians (St James's, Clerkenwell), to be sent to the Workhouse, Coppice-row, on or before TUESDAY morning, the 26th instant.—By order,
EDWARD SCARGILL, Clerk to the Guardians.

FREEHOLD GROUND for Building on.—TO BE LET, upon BUILDING LEASES, PLOTS of GROUND, in that healthy locality, Holloway, two or three minutes walk from the Holloway-road, with omnibuses every five or five minutes to all parts of London. Situate in St John's-road, where houses let as fast as built. For particulars, apply to Mr. H. WITHERS, 9, Poultry. The leases direct from the freeholder. Money advanced.

TO BUILDERS

LEE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the finest sites for building purposes anywhere round London, and good villas are in great demand, on account of the situation being lofty, dry, well drained, and exceedingly healthy. Assistance will be afforded to responsible parties.—For particulars, apply to Messrs. J and C. W. TODD, Milner-street, Brompton, London, or Belmont Lee, Kent; or Messrs. NELSON and INNES, 6, Whitehall.

ALDERSHOTT CAMP.—PLOTS of LAND TO LET on Building Leases, commanding good frontages and admirable sites, facing the permanent barracks now erecting and near the Queen's pavilion.—For particulars apply to Mr. THOMAS WHITE, Jun. near the Admiral's Head, or H. Jel, and opposite the permanent barracks, Aldershott, Hants.

GROUND TO BE LET in the vicinity of Whitechapel, suitable for a Builder or a Manufactory, containing an area of 18,000 superficial feet, with some Shells erected thereon.—For particulars, apply at J. J. Hickmott's Sawmills, Church-street, Mile-end New-town.

WESTON-SUPER-MARE, SOMERSET

THE WEST COTTAGE ESTATE.—FREEHOLD LAND for the ERECTION of 100 HOUSES, in the centre of the town and overlooking the sea. TO BE SOLD, in one or more lots, on very reasonable terms.—Further particulars of B. G. PHILLIPS, Weston-super-Mare.

FACTORIES, GRANARIES, &c.—GROUND TO BE LET, suitable for the ERECTION of FACTORIES, with extensive wharf frontages on a Canal about three miles from London.—Inquire of Mr. ASHPITEL, 3, Crown-court, Old Broad-street, City.

TO LIME and STONE MERCHANTS.—TO BE LET, at a moderate rent, the CHANCELLOR'S WHARF, Queen-street, Hammersmith, near the Suspension Bridge, with dwelling-house, stable, and sheds.—Apply on the Premises.

TO STONEMASONS, IRONMONGERS, and OTHERS.—TO BE SOLD, several six-roomed CARCASSES, in a good situation, Ronford, Essex, ready to turn in, and the houses let close up to it. The whole or part of the materials may be taken in stone work or ironmongery, or any other kind of building materials.—Apply on the property, to BAUGHAN and MILLS, top of Carlton road, Kentish-town

TO PLUMBERS, GLAZIERS, PAINTERS, GAS-FITTERS, &c.—TO BE DISPOSED OF, with immediate possession, a very old-established BUSINESS in the above trades.—Apply to MR. JOS. COOPER, Ironmonger, High-street, King's Lynn

TO PLUMBERS, PAINTERS, AND GLAZIERS

TO BE SOLD, a first-rate BUSINESS, in a market-town, situated in the county of Suffolk. The premises comprise a convenient and comfortable dwelling-house with shop, workshops, stables, pig-house, yard and garden, and every convenience for carrying on the business established upwards of sixty years by the present occupier's father, as the reason of parties wishing to dispose of the same can be testified. The rents are moderate. For full particulars, inquire of Mr. C. HARRIS, 38, Guildford-street, Russell-square. Personal application between five and seven in the afternoon

TO ENGINEERS.—TO BE DISPOSED OF, by direction of the executors, a very compact BUSINESS in London, which has been established many years. The premises are centrally situate, and conveniently arranged for the business. The principal tools are nearly new, by Smith, Beacock, Tannett, of Leeds, and include a 12-inch self-acting slide-lathe, planing machine, and drilling machine; there are also three other lathes, high pressure steam-cocks and boiler, smiths' forge and tools, screw cutches, vices, and tools. About 1l. will be required, and to any active young man desirous of starting in business, a very eligible opportunity is presented.—For further particulars, apply to Messrs. FULLER and HORSEY, Billiter-street, City.

TO BUILDERS, PAINTERS, &c.—ALTERATIONS and additional WORKS to be EXECUTED at the village opposite Barnes Church, Barnes, for GEO. GREENHILL, Esq.—Drawings and specifications to be seen on the Premises on 25th, 26th, 27th, and 28th of FEBRUARY inst. TENDERS to be sent to the above address, on MONDAY, the 3rd of MARCH, 1856.—G. GORDON STANHAM, Architect, St Alban's Cottage, North-end, Hammersmith.

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The Builder.

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ARCHITECTURAL ASSOCIATION, 9, LYONS-INN-HALL, STRAND.—The next Ordinary Meeting will be held MARCH 7th, when Mr. BAILEY will resume his paper on "Cemeteries."

The Class of Design will meet March 14th; subject for sketch, "A Monument to a Musical Composer."

T. W. GOODMAN, } Honorary
J. A. BUNKER, } Secretaries.

SCHOOL of ART and TRAINING SCHOOL, MARLBOROUGH HOUSE, Pall-mall.—The Spring Session will commence on the 3rd of MARCH, and terminate on the 18th of JULY. Hours of study—Morning, Ten to Three, Evening, Seven to Nine, daily, except Saturdays. Fees for Morning and Evening, 4*l.*; for Evening, 2*l.* per session. The School for Female Students not in training, is at 37, Gower-street, Bedford-square.—For prospectus's, apply at the Head Master's office, Marlborough House.

BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.
Head-Master—R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify Schoolmasters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Free-hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Moulding, and Casting, Etching, Wood-engraving, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still life, &c., the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of Dying and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4*l.* per session, or part of the session. For Evening Classes only, 2*l.* per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of 1*l.* per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. Mylan. Fees per session,—Advanced Class, 2*l.* and 4*l.*; Elementary Class, 1*l.*; Evening Class, 10*s.*

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall-mall, London.

ART UNION OF LONDON (by Royal Charter). Prizeholders select for themselves from the Public Exhibitions. Every subscriber of One Guinea will have besides the chance of a Prize, an impression of a plate of Harvest in the Highlands, engraved by J. T. Willmore, A.R.A. from the important and well-known Picture by Sir E. Landseer, R.A. and by Augustus Callcott, R.A. The Prints are now ready for delivery.

GEORGE GODWIN, } Honorary
LEWIS POCOCK, } Secretaries.

444, West Strand.

LECTURES to WORKING MEN, being the second for these courses for the present session, at the Museum of Practical Geology, Jermyn-street. Mr. Lyon on the First Principles of Chemistry, by Dr. HOFMAN, F.R.S. to be commenced on WEDNESDAY, 5th MARCH, at 8 o'clock p.m. Tickets may be obtained at the Museum, on MONDAY, the 3rd, from 7 to 8 and from 11 to 5 o'clock, upon payment of a registration fee of 6*d.* for the whole course.

TRENHAM REEKS, Registrar.

COMPETITIONS.

TO ARCHITECTS, SURVEYORS, AND OTHERS.

PLANS, DESIGNS, and DRAWINGS are requested for the ERECTION of TWO CEMETERY CHAPELS, under one roof, together with a Lodge and Entrance-Gates, for the Grantham Burial-Ground, containing six acres of land, to include ground-plans and elevations, and to be accompanied by approximate estimates of the expense. The buildings to be faced with Ancaster stone, and the roofs to be of Welsh slate. A field stone. The whole expense (including fittings, &c. of chapels) not to exceed the sum of 1,500*l.* 10*l.* is offered for the plan of the chapels and buildings considered to be the best; and the author shall also contract for the works, and 5 per cent. for the superintendence. The whole of the plans, &c. to be sent to me, sealed and endorsed, but without any name or distinguishing mark, on or before SATURDAY, the 1st day of MARCH next, inclosing a sealed letter in each case from the person forwarding it.

By order of the Burial Board,
ROBERT HENRY JOHNSTON, Clerk.

Grantham, Feb. 5, 1856

LIVERPOOL FREE PUBLIC LIBRARY and MUSEUM.—To ARCHITECTS.—The Council of the Borough of Liverpool are about to ERECT a BUILDING for the purpose of the FREE PUBLIC LIBRARY and the DERBY MUSEUM, and offer a premium of One Hundred and Fifty Guineas for the best Designs, and One Hundred Guineas for the second. The Designs are to be sent in on or before SATURDAY, MAY 31. Copies of the printed conditions and instructions to Architects, competing; and lithographed plans and sections of the site, may be had on application to Mr. J. STUART DALTON, Librarian, Free Public Library, Duke-street, Liverpool.

TO ARCHITECTS, &c. — PLANS for a NEW WORKHOUSE for BOLTON UNION.—The Guardians of the Poor of the Bolton Union are desirous of obtaining PLANS, SECTIONS, and WORKING DRAWINGS for the ERECTION of a WORKHOUSE, to accommodate 1,000 inmates, the cost of the buildings not to exceed 18*l.* per head. A premium of 50*l.* will be awarded for the best, and 30*l.* for the second best plan, but the Board are will not be responsible for any payment for unsuccessful designs. The plans of the two successful competitors to be the property of the Guardians, who do not pledge themselves to employ either of the successful competitors in carrying out the proposed works. The designs must be sent in under seal, without name, and with a private mark or motto thereon, accompanied by a letter under cover, and sealed, containing a corresponding mark or motto, and the designer's name and address, to the Clerk, on or before MONDAY, the 7th APRIL, 1856.

JOHN WOODHOUSE, Clerk to the Guardians.
Union-office, Acresfield, Bolton, February 15, 1856.

GRANTHAM BURIAL BOARD.—EXTENSION of TIME for PLANS, &c.—The period for sending in Plans for Chapels, Lodge, and Entrance Gates, is EXTENDED to SATURDAY, 22nd MARCH. Plans are also requested for PLANTING the GROUND and LAYING OUT the ROADS and WALKS therein, two-thirds as consecrated, one-third unconsecrated, to be, if by the same time, for which an additional premium of 5*l.* is offered. The ground is an oblong square of 220 yards by 132 yards. Entrance west. By order of the Board,
ROBT. HY. JOHNSTON, Clerk.

Grantham, February 20th, 1856.

TO ARCHITECTS AND SURVEYORS.

THE COMMITTEE for BUILDING NEW NATIONAL SCHOOLS at LUTON, Beds, are desirous of receiving DESIGNS in COMPETITION for the ERECTION of such SCHOOLS. A plan of the site, with further particulars, may be had on application, by letter only, enclosing 6*s.* in postage stamps, to Mr. D. B. STALKER, National Schoolmaster, Luton.

CONTRACTS.

BURLEY-IN-WHARFEDALE (Yorkshire) SEWERAGE WORKS.—The Local Board of Health for the district of Burley-in-Wharfedale hereby give notice, that they are prepared to receive TENDERS from competent persons for MAKING and FINISHING certain SEWERS, DRAINS, MANHOLES, GULLIES, and other WORKS required for the sewerage and drainage of their district. Duplicate copies of the plans, sections, detailed drawings, and specification may be seen at Burley, on application to the undersigned: also at the Offices of Mr. J. MACKLEBOROUGH, Civil Engineer, 24, Queensgate, Bradford, from whom printed forms of tender, and any further information may be obtained. Tenders, properly sealed and endorsed, must be delivered to the undersigned, on or before FRIDAY, the 7th day of MARCH next. The Local Board do not bind themselves to accept the lowest or any Tender.—By order,
EDWARD BREMFITT, Clerk to the Board.
Burley-in-Wharfedale, near Otley, 14th February, 1856.

KENSWORTH CHURCH. — Builders desirous of TENDERING for REPAIRS at the PARISH CHURCH of KENSWORTH, in the County of Hertford, near Dunstable, are requested to send in their Tenders, on or before MONDAY, the 10th MARCH, 1856, addressed to the Churchwardens, at Kensworth. The drawings and specification may be seen on application at Mr. ROUMIEUS Office, 10, Lancaster-place, Strand, London; or at the Churchwardens', Kensworth.

TUNSTALL LOCAL BOARD of HEALTH.—To BUILDERS.—CONTRACT for ALTERATIONS of TOWN-HALL.—The Tunstall Local Board of Health are desirous of receiving TENDERS for the necessary WORKS required in the Alterations and Improvement of the Town-hall. Drawings and specifications may be inspected at the Office of the Local Board, Amicable-street, Tunstall, from MONDAY, the 3rd, to SATURDAY, the 8th of MARCH; and further particulars may be obtained, on application to Mr. G. T. ROBINSON, Architect, 23 Upper Parade, Leamington.—Tenders to be delivered to me sealed and endorsed, on or before TUESDAY, the 11th of MARCH next—By order,
Tunstall, 20th February, 1856. J. LOWNDES, Clerk.

CONTRACTS.

ORDNANCE CONTRACT.—To BUILDERS and CONTRACTORS.—Sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, until TWELVE o'clock on MONDAY, the 10th MARCH next, from persons willing to enter into Contracts for the ERECTION of a LAND TRANSPORT ESTABLISHMENT at the Camp, Aldershot. Plans may be seen, and specifications and forms of Tender obtained on application to Mr. BAKER, Clerk of Works, Royal Engineer Office, Camp, Aldershot, on and after MONDAY next, the 25th inst. The Tenders to be endorsed, "Tender for Land Transport Establishment, Aldershot." The War Department reserves the right of rejecting the whole or any of the Tenders.

War Department, Aldershot Camp, 8th February, 1856.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives notice, that sealed TENDERS, addressed to the Inspector-General of Contracts, will be received at the War Department, Pall-mall, on or before the 26th MARCH next, for the REPAIRS of FIRE-ENGINES, BUCKETS, &c., and for executing the WORKS and REPAIRS of the Royal Engineer Department in the London District, viz.: LONE ON, WINDSOR, CROYDON and CARSHALTON, HOUNSLOW and HAMPTON-COURT; for a period of three years, from the 1st APRIL, 1856, to the 31st MARCH, 1859. Printed schedules and forms of TENDER may be obtained at the Royal Engineers' Office, 11, James street, Pimlico, between the hours of TEN and THREE o'clock, from the 1st to the 14th MARCH inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineers' Office, London District,
February 27, 1856.

TO BUILDERS AND OTHERS.

THE JOINT BURIAL BOARD for the TOWNSHIP and PARISH of FOLKESTONE, in the county of Kent, are desirous of CONTRACTING for BUILDING and FINISHING, at the Cemetery, on the Cheriton-road, TWO CHAPELS, a Porter's Lodge and Apartments, and the Boundary Wall, and for preparing and laying the Entrance gates, &c. Persons willing to Contract, may see the plans and specifications at the Office of JOSEPH WILKINSON KIRK, Esq. Architect to the Board, Bouverie-square, Folkestone, between the hours of TEN and FOUR, on any day after the 1st instant. Sealed Tenders (marked "Tender for Buildings at Folkestone Cemetery") for executing the whole or any of the works, are to be left at my Offices in Church-street, Folkestone, not later than FOUR o'clock in the afternoon of TUESDAY, the 11th day of MARCH next. It is stipulated that it shall not be incumbent on the Board to accept the lowest or any Tender. By order of the Board,
Folkestone, 12th February, 1856. RICHARD HART, Clerk.

THE MARCH LOCAL BOARD of Health are prepared to receive TENDERS from competent persons willing to EXECUTE any of the WORKS enumerated in the following CONTRACTS for the Drainage and Water Supply of the District:—

CONTRACT A.—Sewers and Drainage Works.
CONTRACT B.—Well-sinking, Brick Tower, and Engine-House.
CONTRACT C.—A Steam-Engine, Wrought-iron Tank, Cast-iron Pipes, Pipe-laying, and Sundry Iron-work.

The plans and specifications may be inspected at the Office of the said Local Board in MARCH. Duplicate copies may be seen, and printed forms of Tender and further information may be obtained, on application at the Office of Mr. R. REYNOLDS BEWLEY, Civil Engineer and Architect, 3, Emmanuel-street, Cambridge. Sealed Tenders, properly endorsed, are to be delivered at the Office of the said Local Board, not later than SATURDAY, the 8th day of MARCH, 1856. The Local Board do not bind themselves to accept the lowest or any of the Tenders. By order,
JOSEPH T. ELLIOTT, Clerk to the Local Board.

March, Isle of Ely, February 11, 1856.

BURSLEM LOCAL BOARD of HEALTH. CONTRACT for FURNITURE and FITTINGS.—The Burslem Local Board of Health are desirous of receiving TENDERS for the SUPPLY of the necessary FURNITURE and FITTINGS for the New Town-hall. Drawings and specifications may be inspected at the Offices of Mr. G. T. ROBINSON, Arch. &c., 23, Upper Parade, Leamington, from MONDAY, the 3rd, to SATURDAY, the 8th MARCH; and at the Public Offices, Moorland-road, Burslem, from MONDAY, the 10th, to SATURDAY, the 15th MARCH.—Tenders to be delivered to me, sealed and endorsed, on or before TUESDAY, the 18th MARCH next.

By order, J. LOWNDES, Clerk.
Public Offices, Moorland-road, Burslem, 20th Feb. 1856.

TENDERS for BRICKS.—The Directors of the Commercial Gas Company will meet on FRIDAY, the 7th MARCH, at TWELVE o'clock, to receive TENDERS for 100,000 best common BRICKS, to be delivered on the Company's works Stepney, as directed by the Company's engineers. A sample of the Bricks to be seen with the Tenders. The Directors do not bind themselves to accept the lowest nor any Tender.—By order of the Board,
GEO. JAQUES, Secretary.

CONTRACT for the SUPPLY of BUILDING MATERIALS for DOVECOT PRISONS.—Persons desirous of TENDERING for the SUPPLY of TIMBER, Deals, Slates, Lime, Sand, Bricks, Lead, Oils, Wrought and Cast Iron, Ironmongery, Gas and Water Pipes, White Lead, Oils, &c. for twelve months from the 1st of APRIL next to the 31st MARCH, 1857, for Pentonville, Millbank, Brixton, Portland, Portsmouth, Dartmoor, Chatham, and Parkhurst Prisons, and Burlington House, Pall-mall, are requested to forward the same, addressed, "Directors of Convict Prisons, 9, Parliament-street, London," on or before MONDAY, the 10th MARCH, 1856, till SIX o'clock p.m. Forms of Tender may be had on application at the several Prisons; or at the Office of the Directors, 45, Parliament-street, London.

45, Parliament-street, 18th February, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

WILTON LOCAL BOARD of HEALTH.—To STONEWARE PIPE MANUFACTURERS and OTHERS.—The Local Board are prepared to receive TENDERS for the Supply of SALT GLAZED STONEWARE PIPES ("Jennings's Patent," as well as others), of the respective diameters of 1 12, [illegible] inches [illegible] about 20,000 lineal feet of [illegible] RED EARTHENWARE PIPES, of great porosity. Specifications with forms of Tenders, may be had on payment of 2s. 6d., and further particulars will be given on application to the Clerk to the Board. Tenders, endorsed "Salt-glazed Stoneware Pipes," and "Red Earthenware Pipes," and addressed to the Chairman of the Board, to be sent in to the Clerk, on or before MONDAY, the [illegible] MARCH next, by TEN o'clock, a.m. The Board do not bind themselves to accept the lowest Tender.

By order of the Board,
THOMAS THRING, Clerk.

Wilton, near Salisbury, Feb. [illegible], 1856.

BOROUGH of SALFORD.—NEW CEMETERY.—TENDERS for WORKS.—The Burial Board Committee are desirous of receiving TENDERS for the ERECTION and COMPLETION of THREE MORTUARY CHAPELS, LODGE, [illegible] at the New Cemetery. The plans and specifications [illegible] [illegible] from MONDAY, the 2[illegible] FEBRUARY, [illegible] SATURDAY, the 1st MARCH, [illegible] WILLIAM HILL, Architect, [illegible] and [illegible] MONDAY, the 3rd MARCH, to SATURDAY, the [illegible] MARCH [illegible] Tenders [illegible] to the Chairman of the Works Committee [illegible] MONDAY, the [illegible] MARCH. The Committee [illegible] bind themselves to accept the lowest or any Tender.

[illegible] GIBSON, Town clerk.

Town-hall, Salford, Feb. [illegible]

THE VESTRY of the Parish of ST. MARY, LAMBETH.—To CONTRACTORS for SEWERS, BUILDERS, and others.—Notice is hereby given, that the Committee [illegible] Drainage, will meet at the VESTRY HALL, Kennington, on MONDAY, the [illegible] day of MARCH, 1856, at SEVEN of the clock in the Evening, to receive TENDERS for the SUPPLY of MATERIALS and the EXECUTION of [illegible] MEASURED WORKS of the [illegible] Vestry [illegible] MONDAY next. Such Tenders must be sealed, directed to the Clerk, endorsed "Tender for Sewer Works," and delivered before ONE o'clock in the afternoon of the [illegible] [illegible] MONDAY next [illegible] TEN and FOUR o'clock. [illegible] will be required for the due performance of the contract. The expense of the bond to be borne by the Contractor; that of the Contract by the Vestry; and the Vestry will not [illegible] the lowest Tender.

By order of [illegible] &c.
THOMAS [illegible], Clerk to the Vestry.

Vestry-hall, Kennington [illegible] February, 1856.

February 23rd, 1856.

ST. MARYLEBONE.—CONTRACTS for GRAVEL and [illegible] LIME, CEMENT, SAND, THAMES BALLAST, and BASS BROOMS.—Notice is hereby given, that the Vestry of the Parish of St. Marylebone, in the county of Middlesex, will meet in the Board-room of the Court-house [illegible] SATURDAY, the [illegible] day of MARCH [illegible] at ELEVEN o'clock in the forenoon, to receive TENDERS [illegible] CONTRACT for the SUPPLY of [illegible] from the [illegible] day of MARCH [illegible] forms of Tender [illegible] Surveyor, Mr. ROBERT SCACE, at his [illegible] Court-house, from TWELVE to ONE o'clock. All Tenders to be upon the printed form, and to be delivered, sealed up, before ELEVEN o'clock, on the said 15th day of MARCH, and no Tender will be received after the specified time. [illegible] with the Tenders. The Vestry do not [illegible] themselves to accept the lowest Tender [illegible] the expense of the bond and Contract. The Vestry will require the parties [illegible] to be in attendance at the [illegible]

By order, W. E. GREENWELL, Vestry Clerk.

February 23rd, 1856.

ST. MARYLEBONE.—CONTRACTS for GUERNSEY, GROBY, or WHITBY CHIPPINGS, or other HARD MATERIAL [illegible] for the repairs of roads much in use, for granite carriage way paving-stones, for Yorkshire footway [illegible] footway kerb.—Notice is hereby given, that the Vestry of the Parish of St. Marylebone, in the county of Middlesex, will meet in the Board-room of the Court-house [illegible] SATURDAY, the [illegible] day of MARCH, 1856, at ELEVEN o'clock in the forenoon, to receive TENDERS [illegible] with the said Vestry [illegible] for one year from the [illegible] day of MARCH, 1856, for the supply of [illegible] The quantity [illegible] required [illegible] tons [illegible] delivered at the parish Stoneyard, or on the streets, as may be required.—Further particulars [illegible] forms of Tender procured from the Surveyor, Mr. ROBERT SCACE, at his daily attendance at the Court-house, from TWELVE till ONE o'clock. All Tenders to be [illegible] delivered sealed up, before ELEVEN o'clock, on the said 15th day of MARCH; and no Tender will be received after the said time. Samples of the [illegible] will be required with the Tenders. The Vestry do not pledge [illegible] lowest Tender. The contractor [illegible] to provide two sureties of 2,000l. each, and to pay three guineas as the expense of the contract. The Vestry consider it desirable that the parties contracting or [illegible] should [illegible] the Tenders.

By order, W. E. GREENWELL, Vestry Clerk.

CONTRACTS are required for ALTERING TWO HOUSES [illegible] SHOPS at Camden [illegible] the amount to be taken in zinc work or zinc work and plumbing.—For particulars, inquire at G. HOWLETT'S Zinc Works, next the Elephant [illegible]

TO CONTRACTORS and OTHERS.—The Committee for BUILDING a CHURCH at BYKER, New castle-on-Tyne, are desirous of receiving offers for the PURCHASE of the STONE [illegible] the superficial extent is one acre, and the depth of good stone considerable, with very little baring. The purchasers will have to work out the stone within a limited [illegible] and such other conditions as the committee [illegible] private railway [illegible] Mr. CLIFF [illegible] Mr. [illegible] the site, and [illegible] may [illegible] T. [illegible] GREEN, St. Mary's-place, Newcastle [illegible]

MIDDLESEX and ESSEX TURNPIKE-ROADS. Notice is hereby given that the Trustees of the [illegible] are [illegible] TENDERS [illegible] BLUE GUERNSEY GRANITE, free from dust, of the best and hardest quality, broken to a gauge [illegible] TONS [illegible] and likewise the Flints, to be delivered alongside the Wharf of [illegible] the Flints be of the size and of the sort contracted for, and deli[illegible] material on the 2[illegible]th April next. Tenders, sealed and endorsed, "Tender for Broken Granite," or "Tender for Flints," as the case [illegible] MONDAY, the [illegible] MARCH next. The Trustees do not bind themselves to accept [illegible]

GEORGE [illegible] the said Trustees.

[illegible]

CONTRACTS.

GLASGOW CORPORATION WATER-WORKS.—LOCH KATRINE AQUEDUCT.—MUGDOCK CONTRACT.—To CONTRACTORS.—The Commissioners empowered by the Glasgow Corporation Water-Works Act, 1855, are now ready to receive TENDERS for the EXECUTION of the WORKS to be comprised in NUMBER TWO, or MUGDOCK CONTRACT. The work consists, amongst other things, of a tunnel, 2,640 yards in length, and 8 feet in diameter, extending from near the village of Strathblane to the valley south of the village of Mugdock, near Milngavie, and the formation of a large reservoir, to be called the Mugdock Service Reservoir, near Milngavie, with some short tunnels, and all the masonry, water-courses, diversions of roads, &c. connected therewith. The earthwork, puddling, and stoning in the embankments and cuttings of the reservoir will amount to nearly 500,000 cubic yards. The plans, sections, drawings, and specifications will be ready for inspection on and after WEDNESDAY, the 5th day of MARCH next, and will be exhibited in the Town-hall, at the Cross of Glasgow (entry by No. 12, Trongate-street), on and after that day. Copies of the specifications and quantities, with all other requisite information, will be obtained by intending contractors on application to the Subscriber, Mr. BURNET, at his Office, City Chambers, Glasgow; and all further information necessary may be obtained from J. F. BATEMAN, Esq. the Engineer, at his Offices in Manchester; and from Mr. ALFRED MOORE, the Assistant-Engineer, at Milngavie, who will accompany contractors over the ground.—Tenders for the construction of the works, addressed to the Commissioners, sealed and marked "Tender for Mugdock Contract," must be delivered at the Subscriber, Mr. BURNET, at [illegible] Office, City Chambers, Glasgow, on or before TUESDAY, the 25th day of MARCH next.

By order of the Committee,
Glasgow, 25th February, 1856. JOHN BURNET, Secretary.

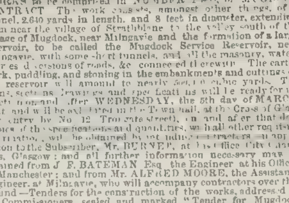
THE LOCAL BOARD of HEALTH for the DISTRICT of CROYDON are willing to receive TENDERS for the SUPPLY of 1,900 feet of 12-inch STONE-WARE DRAIN-PIPES, and for LAYING the SAME (at depths varying from 6 feet to 12 feet, in the [illegible] and Dingwall Roads, Croydon, and also for laying [illegible] feet of [illegible] inch pipes in the Dingwall road, in accordance with a specification to be seen at the Office of Mr. THOMAS COX, Town-hall, Croydon. Tenders to be sent on the 11th of MARCH next.

By order of the Board, H. RICHARDS, Clerk.
Croydon, Feb. 28, 1856.

TO BUILDERS.

TENDERS are required for ADDITIONS, ALTERATIONS, and REPAIRS to be done for H. Ilsley, Esq. to a house and premises at Colehill, Sandy lane, Fulham (lately occupied by Mr. Steele). Drawings and specifications will lie on the premises on and after the 4th MARCH next. Tenders to be addressed to GEORGE EDWARD GORDON, Architect, 17, Cambridge road, Hammersmith, where they will be opened on THURSDAY EVENING, the 13th of MARCH next.

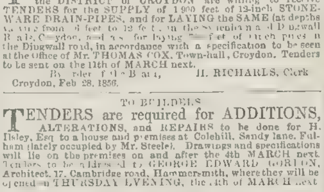
HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London.



VENTILATORS, CASEMENTS, HINGES, HANDLES, &c.

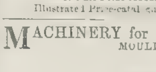
First-class Prize Medal, Paris Exhibition, 1855.
Illustrated Price-catalogues post free on application.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. [illegible] have constantly on hand Machines either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines for home and foreign use.

KIMBERLEY'S NEW PATENT FLOORING CRAMP continues to receive the patronage one and all, of every leading Builder, Engineer, and Architect, not only in England, but throughout the world. Its simplicity, power and economy still remain unequalled [illegible] the [illegible] important [illegible] annual increase in its sale, is the best proof of it. It is useful in many ways as a cramp, and unlimited evidence can be given that it is a most valuable tool, which no Builder should be without.

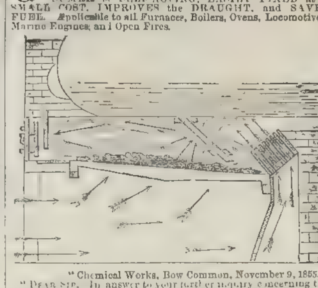


London Agents—Messrs. THOMAS PUGH & CO. Wholesale Ironmongers, 13, King street, Snow-hill, London.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES [illegible] with all the [illegible] patents [illegible] including their Gunpowder Proof Solid Lock [illegible]
THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.
MILNER'S PHŒNIX (212°) SAFE WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depôt, 47A, Moorgate-street, City. Circulars free by post.

LESS FUEL, MORE STEAM, NO SMOKE.

GARDNER'S PATENT SMOKE CONSUMER is SELF-ACTING, EASILY FIXED at a SMALL COST, IMPROVES the DRAUGHT, and SAVES FUEL. Applicable to all Furnaces, Boilers, Ovens, Locomotives, Marine Engines, and Open Fires.



"Chemical Works, Bow Common, November 9, 1855.
"DEAR SIR,—In answer to your further inquiry concerning the saving of fuel in connexion with the use of your patented apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I beg now to state that we are enabled, without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.
"I remain, dear Sir, yours truly,
"To E. V. GARDNER, Esq." "FREDK. ALLEN.

Apply to the PATENTEE, 24, Norfolk-street, Middlesex Hospital; or to Messrs. BURBIDGE and HEALY, 118, Dorset-street, Fleet-street.

Baker's Ovens fitted for 5l. license included.

ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and CO. (opening to the Monument), London-bridge. Established A.D. 1700.

BUILDINGS HEATED by HOT WATER.
G. B. COOPER, IRONWORKS, 121, DRURY LANE.
Ranges, Hot Plates, Gas Cooking Apparatus, Baths, &c.
Ornamental and Constructive Ironwork.

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

CAST STEEL.—Messrs. NAYLOR, VICKERS, and CO. RIVER DON WORKS, SHEFFIELD, are now prepared to execute orders for CAST STEEL BELLS, from 40lbs. to 5,000 lbs. each. Locomotive Crank Axles, Tyres [illegible] without welding, Shafts, C[illegible] Axles, and every description of heavy forgings in Steel, to pattern.—For further particulars, apply as above.

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February [illegible], 1856.

P. O'CONNOR'S PATENT LEVER HINGE. The most perfect and simple INVENTION for CLOSING SWING DOORS and GATES yet produced. The motive power being a weighted lever, it may be easily adapted to any size door, and is not liable to get out of repair as spring hinges generally are. May be had from all Ironmongers and Factors; J. CARTLAND and SON, Manufacturers, Birmingham; or from the Patentee, P. O'CONNOR, Ironmonger, Wavertree, Liverpool.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show, every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list, 10s.—55 and 56, High Holborn.

NAILS and IRONMONGERY,
from BIRMINGHAM direct.
Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the
LOWEST BIRMINGHAM PRICES
a complete LIST of which
will be forwarded upon application.
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Nail Manufacturer and General Factor,
Regent-parade, BIRMINGHAM;
or at 16, Gresham-street, LONDON.

ROYAL POLYTECHNIC GAS FIRE.—BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and [illegible] are effectually prevented [illegible] while it possesses all the comfort and appearance of an open coal fire, [illegible] perfect ventilation. To be seen in [illegible] DEFRIES'S Office 145, Regent-street, London.

CAST IRON PIPES, IRON WORK FOR OVENS, &c.

RAIN PIPES, &c.—F. A. TIDDEMAN and CO. St. Ann's Wharf, Earl-street, City, near Blackfriars-bridge, keep a large stock of Rain Pipes, Heads, Shoes, [illegible] for Water [illegible] Pipes, Hot Water Pipes [illegible] Sash Weights, and other castings, Iron work for [illegible] of every description, [illegible] or in parts.—[illegible] Contracts taken to any extent. Goods landed. A powerful crane.

ST. PANCRAS IRONWORKS,

OLD ST. PANCRAS-ROAD; OPPOSITE THE OLD CHURCH, LONDON.

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HER MAJESTY'S
ROYAL LETTERS PATENT.

FOR IMPROVEMENTS IN THE CONSTRUCTION OF
CORRUGATED IRON BUILDINGS
AND ROOFS,
As erected for and approved of by Government.
FOR ENCLOSURES,
This Patent is as Strong, as Durable, and much Cheaper, than
BRICK WALLS,
And as Portable as HURDLES.

CASTINGS,
HEAVY AND LIGHT,
PLAIN AND ORNAMENTAL.

WROUGHT
IRON-WORK,
AND FORGINGS,
OF
EVERY DESCRIPTION.
SPECIMENS MAY BE SEEN AT THE WORKS.

ENAMELLED MANGERS,
From 17s. 6d.
Patentees of the latest Improvements in Manger and Rack, and Manger, Rack, and Water Trough, approved of by the ROYAL VETERINARY COLLEGE.
EVERY DESCRIPTION OF STABLE FURNITURE.

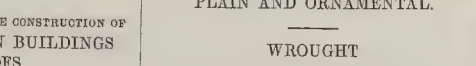
IRON ROOFING OF EVERY DESCRIPTION. CORRUGATED IRON, PLAIN OR GALVANIZED, AT PER CWT.
ESTIMATES BY POST, OR ON APPLICATION. PRICES EQUAL TO ALL COMPETITION.
☞ ADDRESS—THE MANAGER OF ST. PANCRAS IRON WORKS, OLD ST. PANCRAS-ROAD, LONDON.

TYERMAN'S PATENT HOOP-IRON BOND FOR BUILDING PURPOSES.

TARIFF OF PRICES
Beyond the current Price of Hoop-iron.

The undermentioned Gauges are kept in stock; but any Gauge or width will be supplied within a few days, at a small advance on the following prices:—

Gauge.	In. wide.	Per 1,000 ft.
No. 16 ..	1¼ ..	7s. 0d.
15 ..	1½ ..	7s. 6d.
15 ..	1¾ ..	8s. 0d.
15 ..	.. ..	8s. 6d.
16 ..	.. ..	9s. 6d.



Plan and Elevation of Bond, showing Position and Form of the Claws.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent, that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

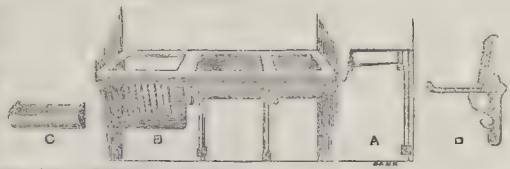
Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.
London Depôt—463, OXFORD-STREET.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

PARIS EXHIBITION AWARD TO
COTTAM and HALLEN, of Winsley-street,

The original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, and to which they have made important additions, the main features of the same being explained in the following description and Engraving.



A represents the Patent Halter-guide and Collar-rein, the ball of which is taken to the back of the manger-works with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure prevents five against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, for mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed box detached, made of galvanized sheet iron, light and durable.

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety covers; Sanitary Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Pre-serving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

An extensive Assortment of Patterns for both Plain and Ornamental Castings, and every description of Wrought and Cast-iron Work for building and other purposes.

Agricultural and Horticultural Implements, Iron Gates, both plain and ornamental; Hurdles, Strain Fencing, &c.

The New Illustrated Catalogue for 1856 gratis on application. Estimates and Designs.

COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, 2½d. per inch, and upwards.
Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3 feet Cottage Ranges, with ovens and back boilers, 72s. each.
2-feet self-acting ditto, ditto, 34s. each.
Air Bricks, 4s. per doz.
Best Town Glue, 50s. Ditto, Scotch, 64s. per cwt.
Best Fine Cut Clasp and Rose.

1½	1¾	2	2½	3	3-in. & larger.
10s. 6d.	16s. 6d.	15s 6d.	20s. 6d.	25s. 6d.	14s. per cwt.

And every material required in the building, bell-hanging, upholstery, and brass-foundry trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter if required.

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Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Plate-iron of Grades, and
STEWART'S PATENT CAST-IRON GUTTERS and WATER PIPES
Offices, No 7, Sise-lane, London.

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WILLIAM DYER, PLUMBER, &c.
No. 4, HIGH STREET, BROMLEY, Middlesex.—Burning or uniting lead to lead, by Debruck's Patent process. It is highly recommended for chemical vessels, repairing old lead gutters, or laying of new, where solder is required, or lining of tanks, cisterns, &c.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 128, Shoreditch.
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler.

30	32	34	36-inch.
28s.	34s.	38s.	44s.

Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—

34	36	38	42-inch
54s.	56s.	58s.	66s.

Strong Elliptic Stoves with Extra Back and Solid Bars, per in. 2½d.
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Improved New Pattern Circular Cheek Register, with strong Bars and Trivets, 7d. per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 40s. 6 100s. each.

Cast Rain-water Pipe {	2	2½	3 inch.
	11d.	1s. 3d.	1s. 4d. per yard.

Cast Gutters—4 inch, 9d. per yard.

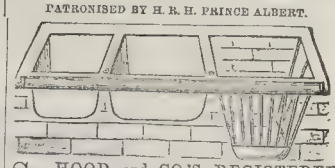
O G Gutters ..... {	4	4½ inch.
	1s. 1d.	1s. 3d. per yard.

Patent Line {	3	3	4	5	6
	44d.	5d.	7d.	9d.	1s. per knot.

6-inch Rd. Ward Mortise, with best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s. per cwt.
Dr. Arnott's Ventilators, 4s 6d. each.
An extensive stock of bar, rod, hoop, and sheet iron
Brick Moulds kept in stock Any size made to order.

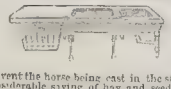
IRON FOUNDRY, HARROW-STREET, LANT-STREET, SOUTHWARK.
W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel and Railing Bars, Panels, Iron Coping, Hot Plates, Tank Plates, Area Gratings, Sash Weights, Fly and other Wheels, Rivets, Pinions, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

PATRONISED BY H. R. H. PRINCE ALBERT.



S. HOOD and CO.'S REGISTERED STABLE FITTINGS, with FRONT REVOLVING ROLLER, plain or enamelled.
Castings Warehouse removed from 81 to 66, Upper Thames-street.

BARTON'S PATENT SAFETY STABLE FITTINGS, and ENAMELLED MANGERS.
THIS IS THE ORIGINAL PATENT



for important improvements in stable-fittings, hay-box, manger, and water-trough, as one fixture, including a method surpassing all others for conveying the collar rings and halter-weights to the back of the fitting, to prevent the horse being cast in the stall. The Hay-Box effects a considerable saving of hay and seeds, and the front roller is a valuable preventive against accident and crib biting. Stable-fittings of every description, plain, enamelled, or galvanized. Also the New Patent Loose Box Fittings, Surface Gutters with moveable cover-plates, Stable Posts, Ramps, Sills, and all kinds of Stable Furniture in Stock. Iron Gates, Tomb Railings, Hurdles, Fencing, &c.
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The merits of this invention are proved by practical experiments, daily, at the Royal Polytechnic the Crystal Palace, and Manufactory. Illustrated catalogues sent on receipt of two postage stamps.
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IRONMONGERY.—Builders and the Trade generally will effect a considerable saving by purchasing of CLUSE and BOSE, Wolverhampton Furnace and Stove and Range Manufacturers, 35, City-road, corner of Tabernacle-row.

Present prices for cash:—
BEST CUT CLASP.

10s. 6d.	15s. 3d.	21s 6d.	14s. per cwt.
1¼ in.	2 in.	2½ in.	3 in. and larger.

PATENT SASH LINE.

3s. 3d.	3s. 9d.	4s. 3d.	5s. 6d.	7s 6d.	9s. per gross.
No. 1	2	3	4	5	6

3 in. Mortise Locks, best Brass Furniture Shifting Spindles, 2s. 6d. each; 6-in. ditto, 4s. each.
Strong Elliptic Stoves, double backs, 2½d. per inch.
Strong Register ditto ditto 5d. "
36 in. Self-acting Oven and Boiler Cottage Ranges, complete, 34s. each; 36 in. Self-acting Oven and Boiler Ranges, best wrought bars and wrought fittings, complete, 3l. 5s. each.
A large Stock kept of every description of builders' ironmongery; china, glass, and ebony lock furniture and finger-plates. List of prices forwarded by post on application.

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REDUCED LIST OF PRICES.
Best Cut Clasp and Rose Nails

1¼ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 13s. 6d. and 14s. per cwt.
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Best Glues ..... 47s. to 53s. "
RAIN WATER CASTINGS, per yard.
Sizes—2 in. 2½ in. 3 in. 3½ in. 4 in. 4½ in. 5 in.
Prices ..... 11d. 1s. 2d. 1s. 4d. 1s. 8d. 1s. 10d. 2s. 2d. 2s. 6d.
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O G Gutters ..... 1s. 1d. 1s. 2d. 1s. 3d. 1s. 5d.
Ditto, with plain clips cast on .... 1s. 1d. 1s. 2d. 1s. 3d. 1s. 6d.
Ditto, with Lion ditto ..... 1s. 2½ 1s. 3d. 1s. 5d. 1s. 7d.
A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.
TERMS—NETT CASH.
Estimates given for any description of Wrought or Cast Iron Work

THE STATUE and IRON FOUNDRY, Lower Belgrave-place, Pimlico. Castings of every description executed at the above Works.

SAW-MILL TO BE SOLD, nearly new, and in excellent working order, a deal frame capable of cutting 22 inches deep, and a timber frame capable of taking in a log 16 feet long and 12 feet wide, by one of the best makers.—For particulars, apply to Mr. HORN, 14, Whitechapel, London.

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CORRUGATED IRON MANUFACTURERS,

Galvanized and Uncalvanized,

Iron Roof Builders and Electric Telegraph Contractors.

Works—BIRMINGHAM and LIVERPOOL.

Offices—3, MANSION HOUSE-PLACE, LONDON.

N.B.—Iron of every description galvanized. An allowance to the Trade.

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ENGINEER AND CONTRACTOR,

IRON BUILDING AND ROOFING WORKS,

GAS-STREET, BIRMINGHAM.

LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

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GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about	18	oz.	per	foot square.
12	16	"	"	"
13	20	"	"	"
14	26	"	"	"

Full particulars and the reduced price sent by post on application to

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PATENT GALVANIZING and CORRUGATING IRONWORKS. Improved Process.

WORKS GLASS-HOUSE YARD, opposite the Entrance to the London Docks.

GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

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Skaife's process is the most efficient preventive against rust, and is extensively used for all purposes where Iron not liable to rust is required.

Patent Galvanized Iron supplied in every form.

Sheets plain and corrugated.—Roofs fixed complete.

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IRON MERCHANT, &c.

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PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,

PLAIN or CORRUGATED, and Curved, of all Gauges.

Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, &c., of all sizes.

Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building, at the

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FOR SALE, at Jacobs and Hyman's Iron Wharf, Thornhill-bridge, Caledonian-road, King's-cross, TWENTY TONS of NEW SHEET ZINC, price 24l. per ton; a quantity of 30-feet iron columns of handsome design, iron girders, cider-runners, French burr stones, steam-boilers, several tons of white lead and paint. N.B. For Sale or Hire, a Large Land Roller.—Old iron bought at 4l. per ton; old zinc, 14s. per cwt.

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A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, so much admired, &c. &c. 6d. each.

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R. S. NEWALL and CO.'s Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world

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JOHN TANN'S new patent RELIANCE LOCK and FIREPROOF SAFES form the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. WATERLOW, Birchin-lane; and at the Works, 1, Hop-street, Hackney-road, London. Iron Doors for strong rooms and party-walls.

IRONMONGERY.

PFEIL AND STEDALL.

THE LARGEST STOCK AT THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK,

Sole Manufacturers of Delbruck's Patent Antogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c. The Trade supplied on the best terms with House Bells, Zinc Tube, and Copper Wire. Gas Pendants, Brackets, and Pendent Descriptions for Gas fitting, in Brass and Iron, Tin Chandelier, Iron and Brass Tubing, Cornice-poles, Rings and Lacquered Cane Tube for Picture Rods Desk Rails, &c. &c.

Superior Relief Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at

RICHARD EVERARD'S, Brass and Bell Foundry and Metal Warehouse, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 85, High Holborn.

TO BUILDERS, CONTRACTORS, &c.—FOR SALE, THREE extra strong IRON GIRDERS (new), price 8l. per ton; weight, three tons each; 19 feet 6 inches long.—Apply to Mr. SMEE, Waterloo Arms, Commercial-road, Lambeth.

GILBERT and FRASI, Ironfounders and Smiths, 55, Golden-lane, Barbican, Manufacture Castings in Sand or Loam, and have a large Stock of Engineers' Patterns of bevel and spur wheels, shafts, drums, riggers, and fly-wheels; also patterns of columns, girders, story-posts, railing-bars, gates, coping, balconies, tomb-panels, cantilevers, newel-bars, arch-gratings, furnace-doors, frames, and bars; flue-doors, boilers, forge-backs, troughs, iron doors, and frames for party-walls; fire-proof rooms on the best principle; bakers' oven work; brickmakers' pugmills, pumps, pipes, kneeling plates, barrow-wheels, wash-mill gratings, and improved clay crushing machines. Tenders given for iron buildings, railing, bothouses, staircases, wrought-iron girders, bookcases, strong-rooms, and every description of iron-work.

TO TIMBER MERCHANTS, BUILDERS, CONTRACTORS, and OTHERS.—TO BE SOLD, a PLANING-MACHINE (by Worssam, of Chelsea), nearly new; or would be exchanged for Timber, Deals, Battens, or Prepared Flooring, Boards.—For particulars, apply to the Clerk of the Works, Victoria-road, Old Charlton, near Blackheath.

MARBLE.—NOTICE.—The ITALIAN MARBLE COMPANY have REMOVED their Office from 18, Cannon-street, City, to their WHARF, THAMES BANK, PIMLICO, adjoining the east side of Vauxhall-bridge. Please observe the exact address.

WM. W. BONNIN, Secretary.

MARBLE.—The Italian Marble Company, Importers of the produce of their own quarries in the province of Massa-Carrara, Italy, beg to inform the general Marble Trade in the United Kingdom that they are prepared to undertake contracts for any quantity of Statuary, Veined, Sicilian, Bardilla, Dove, and other Marbles, in blocks of all dimensions, delivered on shipboard at Leghorn, or in dock, London. A constant stock always on view on the premises, where orders are taken for Paving Slabs, Garden and Hall Statues, Vases, Tazzas, Mortars, Consoles, Chimney-pieces of all classes, Circular Table-tops, Monuments, &c. executed in Italy. For further particulars, inquire at the Office on their Wharf, Thames Bank, Pimlico, adjoining the east side of Vauxhall-bridge.

WILLIAM W. BONNIN, Secretary.

THE LIZARD SERPENTINE COMPANY manufacture and sell in block and slab the beautiful stone now raised from the lower beds of their quarries. Chimney-pieces, Columns, Fonts, and ornamental works on view, at 20, Surrey-street, Strand.

HENRY COX, Manager at the Lizard.
F. W. RUFFLE, Agent in London.

TO BUILDERS, MASONS, AND OTHERS.

THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Bardilla, dove, black, black and gold, Sienna, St. Ann's, statuary, serpentine, verd antique, &c. Portland, Harehill, Park Spring, and other stone, in blocks, slabs, landing-stones, and headstones. Yorkshire landing, granite curb, &c. All goods carefully packed and forwarded to any part of England.—THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

Lloyd's Marble Wharf, Thames-bank, Pimlico, Adjoining Vauxhall-bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

TO SCULPTORS, BUILDERS, MASONS, &c.

B. FABBRICOTTI respectfully invites the Gentlemen connected with the Marble Trade to inspect his fresh STOCK, composed of statuary, vein, Sicilian, black and gold, dove, Bardilla, Siena, and Breccia, in blocks, and particularly call their attention to a large quantity of best statuary, slabs, blocks, of all sizes, just landed.

Monuments, vases, and statues, finely executed in Italy.

Carrara Wharf, Thames-bank, Pimlico.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

STONE, GRANITE, and MARBLE.—BRAMLEY FALL, CAEN, DARLEY DALE, FARLEY DOWN, HARE HILL, HUDDLE-TONE, PORTLAND, and various other, in Block and Slab.

Yorkshire Paving, Landings, Steps, Sills, Sinks, Coping, &c.; Granite Blocks, Trams, Curbs, Pitching, &c.

Valentia Slate Slabs, Grindstones;

Marbles, in Blocks and Slabs,

At FREEMAN'S Stone Wharfs, Millbank-street, Westminster; City-road Basin; and Deptford.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE.—The Chesewring Granite Company, Liskeard, Cornwall.

London Agents—TREHERNES and TAYLOR, 3, Pinner's-court, Old Broad-street. Manager—JAS. J. TRATHAN, Liskeard.

This Granite is selected for the New Westminster-bridge.

STONE! STONE! STONE!—To the Trade, Builders, and Others.—The Cheapest place in London for Paving, Sinks, Self-faced Slab, Harehill Slab, Steps, Landings, Bath Stone, Portland, Granite, Pitching, Curb, and every description of Stone. Apply at ADAM KNIGHT and SON'S, Devon Wharf, Mile end—York Paving, 28s. 0d. per 100 feet; Slab for Hearths, &c. 4d. per foot super. Bath Stone, best quality, delivered in any part of London, 15s. 7½d. per foot. Terms, cash on delivery.

STONE! STONE! STONE!—At Lowest PRICES, all kinds of Stone supplied to any extent. Quarry worked, sawn, or scrabbled to dimensions. Direct to any part by vessel or rail. A single truck load at wholesale prices.

Depôts—Victoria Stone Wharf, Isle of Dogs, and No. 3 Wharf, Great Northern Railway, King's cross.

Grindstones, fire goods, and terra cotta. Special estimates given to supply large parcels.

Address, S. TRICKETT, General Stone Merchant, Victoria Wharf, Isle of Dogs.

YORKSHIRE and PORTLAND STONE.—ROBERT DANIEL, Victoria Wharf, Pimlico, London and Island Wharf, Leeds, begs to inform Contractors, Builders, Masons, and others, that he still continues to supply every description of STONE to any extent at the lowest current prices, comprising Park Spring, Harehill, Potternewton, Robin Hood, Portland, and Caen, in block and slabs of any thickness; Bramley Fall, Yorkshire paving, landings, steps, coping sills, sinks, grindstones, headstones, ledgers, marble slab, granite curb, &c. Any quantity sent direct by rail to any station, or by vessel to any part in the kingdom. A list of prices sent on application.—Address, Victoria Wharf, Pimlico, London.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,

MILLBANK-STREET, WESTMINSTER.

Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

DARLEY DALE STONE.—This Stone, introduced by Sir Charles Barry at St. Edward's Grammar School, Birmingham, and well known as having been selected for

ST. GEORGE'S HALL, LIVERPOOL,

and numerous works, including the Railway Station, Birmingham; Borough Bank, Liverpool; Evesham-bridge; Mr. Beaufoy's Schools, Lambeth; and the Portico and Corniee of the Town-hall, Leeds; is kept in considerable quantity at the Darley Dale Stone Wharf, City Basin, London.—Apply to W. and J. FREEMAN, Millbank-street, Westminster; or GEORGE WALL, at the Quarries, near Matlock.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Townhall.

CAEN and AUBIGNY STONE.—GATES and GEORGE (late Luard, Beedham, and Co.), Caen-wharf, Rotherhithe, London, General Stone Merchants and Quarrymen, continue to supply from their Wharf, as above, CAEN, AUBIGNY, PORTLAND, and YORKSHIRE STONE

BATH STONE.—HENRY STONE, QUARRYMASTER, begs to inform Architects, Builders, and others, that he still continues to supply the best COMBE DOWN, HAMPTON DOWN, and BOX GROUND WEATHER STONE. Delivered in the trucks at Box or Bath station on the most reasonable terms. He begs to call particular attention to his Hampton Down Stone, it being of a very fine texture and rich colour, adapted for either external or internal purposes. Ashlar and Stone Dressings to order. Cargoes shipped in Bristol, and delivered to any part round the coast.—Residence, WIDCOMBE, Bath.

YORKSHIRE STONE.

GEO. VINT and BROTHERS, IDLE, near LEEDS.

Beg to inform Architects, Surveyors, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Paving, Bramley Fall, Park Spring, Robin Hood, Harehill, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to MESSRS. SOM. Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.

List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WESTEND DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SCALES and WOOD brite for the use of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

FOR MACADAMIZING ROADS.—The HARDEST and most DURABLE STONE.—The Proprietor of an extensive Quarry at Duncannon Rock, containing Blue Elvin Granite, is open to contract for to supply any quantity of the above Stone, its durability having been tested, and proved to be 50 per cent. harder than Guernsey Granite.—For further particulars apply by letter to Mr. JOHN NEWTON, Norway-wharf, Hertford-road, Kingsland-basin.—Two Coal Waggons for Sale.

TO BUILDERS

LATHS for SALE.—100 loads of the best PETERSBURG LATHS for sale. Price 33s. cash.—Inquire of JOHN NEWTON, Hertford-road, Kingsland-basin.

SLATE CISTERNS, SINKS, and every description of SLAB WORK, in Slate, Roofing Slates, or Covering. T. B. HANNAFORD is not only in a position to execute orders to any amount in the above, at extremely low prices, but guarantees a first-class material in all respects, similar to the slate he has used in fitting up and covering the principal mercantile and Governmental buildings in the City. Any priced list sent on application.—TREVALGA WHARF, Ratcliff-cross.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

PARIS EXHIBITION. — ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1848. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of loo-tables, chiffoniers, consoles, &c.; baths, baptistries, altar-tablets, pilasters, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

TO CONTRACTORS, BUILDERS, &c.—EIGHTY AXE-DRESSED GRANITE BLOCKS TO BE SOLD a bargain. They are worked all round, and the beds made and taken to a height. The lengths are 3 feet 3 inches and 2 feet 7 inches, 1 foot 11 inches wide and 1 foot 9 inches high. To be seen at the South Devon Wharf, Lower East Smithfield.—Price and particulars can be had by applying, by letter only, to B. R. PENTON, Post-office, Lupus-street, Pimlico.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations,
FROM 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Poloneeau and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.
W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf.
Contractors supplied to any extent.

By her Majesty's — Royal Letters Patent

THE ROYAL PATENT DECORATIVE GLASS COMPANY, 21, Castle-street, Southwark-bridge-road. NOTICE of REMOVAL.—REMOVED to No. 12a, CUMBERLAND-MARKET, REGENT'S-PARK, where machinery has been erected to carry on the manufacture of this most important branch of ornamental glass.
Orders can now be executed, with the great st cheapness and despatch, by EDWARD BAILLIE and CO. 12a, Cumberland-market, and 118, Wardour-street, Soho (successors to M. Toussaint, Cartisser, and Co.)— Specimens of every description of Church Memorial Windows and Decorations. Glass Painting, Staining, and Embossing, may be seen as above. Designs and estimates upon application.—February 26, 1856.

GLASS.—To Glass-Cutters, Benders, Plumbers, and Mechanical Men in general.—A genuine BUSINESS TO BE DISPOSED OF: the present proprietor parting with it in consequence of a death. May be easily learned by persons unacquainted with it, being under perfect management, and requiring but small capital.—For further particulars, apply to J. BOWDEN, 33, Lamb's Conduit-street, Foundling.

PATENT and BRITISH PLATE GLASS.—JAMES HETLEY and CO beg to inform Architects, Builders, and the Trade generally, that their new Tariff of Prices for the above will be sent on application; they will also on receipt of particulars, furnish estimates for any description of Glass now manufactured.—Patent Plate, Sheet, Crown, and Ornamental Window Glass Warehouse, 35, Soho-square, London.

SUPERIOR BRITISH PLATE-GLASS AT VERY LOW RATES.
THE UNION PLATE-GLASS COMPANY having recently completed very considerable improvements and additions to their works, take the opportunity of informing their friends that they will now be able to supply orders without delay; and respectfully invite the attention of the trade generally to the low rates at which their now much-esteemed manufacture is sold.
Lists of prices may be obtained on application at
The Works, Pocket Nook, St. Helen's, Lancashire.
The Warehouse, 99, Hatton-garden, London.
" 48, Piccadilly, Manchester.
Messrs. C. and J. Mulloch, 30, Turner's-court, Glasgow.
" John Dix and Co. Bath-street, Bristol
" H. Bilsborrow and Son, Cork-hill, Dublin.
ROUGH PLATE-GLASS from ¼ to ¾ in thick, suitable for the windows and roofs of mills, mechanics' shops, market halls, railway stations, &c.
Beautiful and highly-finished POLISHED PLATE-GLASS, for shop-fronts and all superior glazing purposes, and for silvering.
Superior silvered Plate-glass Mirrors of all sizes.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications and estimates and lists of prices to be made at their warehouse, 315, OXFORD-STREET.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s; 4ths, 39s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 22 by 14, 2½.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.
G. FARMILOE and SON, 118, St. John-street, West Smithfield.

THE SEVRES GLASS COMPANY.
LEGENDRE, TURPIN, AND CLARK'S
Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at
131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

ARCHITECTURAL AND ORNAMENTAL DECORATIONS.
Architects and the Trade are respectfully invited to inspect specimens of the
PATENT VITREOUS MARBLES AND CONSOLIDATED GLASS,
Applicable for Piers, Pilasters, Chimney-pieces, Shop Facias, Table-tops, Panels, &c. &c.
Show-rooms, 40, Broad-street-buildings, City; 4, Russell-place, Fitzroy-square; 113, New-street, Birmingham, &c. &c.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 26, Soho-square.

By Royal — Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 298, Oxford street.
REDUCED TARIFF.
CCC CROWN, 18 Tables, per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 300 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Sashes primed and glazed, 3d. per foot.
Catalogues free, on application to the Managers, as above.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Pipe, White-lead, Lead, Iron and Brass Pumps, Water-closet Cocks and Plumbers' Brasswork, Paints, Colours, Oil, and Turpentines of the finest quality, at wholesale prices. Lists on application at THOS. MILLINGTON'S Warehouse, 87, Bishopsgate-street, London. Established more than 100 years.

JAMES PHILLIPS and CO. beg to call the attention of Builders and the Trade to their present LOW PRICES of GLASS for cash.—3 C C per crate of 18 tables, 22s; 16 oz. sheet glass, 2d. per foot; crown and sheet squares, in 100 feet boxes, from 14 10 to 22 14, 2d. per foot; enamelled glass, in crates, 6d. per foot; ground, ditto, 3½d. per foot; foreign sheet in cases of 200 feet, 30s. 38s. 46s. and 48s.; ¼ patent rough plate tiles, 10s. per doz. Cathedral and stained glass, and all the neutral tints.—116, BISHOPSGATE-STREET WITHOUT.

J. FISHER, 70, YORK-ROAD, LAMBETH, formerly shop foreman to Messrs. Lawrence, Shop-front Builder and Manufacturing Joiner. 1½ and 1¼ Lun-panel doors from 6s. each; 1¼ sashes and frames from 7d. per foot; 2 inch ditto from 8d. Windows fitted with Grubbon's Patent Hinges for cleaning, painting, &c. All kinds of joiners' work estimated for according to design.—A List of Prices sent on application.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 110, Broadwall.

TO ARCHITECTS, BUILDERS, AND OTHERS.
FRANCIS, RICKABY, and DUNN beg to call the attention of the above to their IMPROVED REVOLVING WOOD and IRON SHUTTERS; also, to their extensive assortment of BRASS and other METAL SASH BARS, STALL-BOARD PLATES, &c. F. R. and D. having erected new and powerful machinery for the sole manufacture of the above, are enabled to offer them at a considerable reduction of price.—Prospectuses can be had or forwarded, on application to 344, Gray's-inn-lane, Holborn.

TO BUILDERS AND OTHERS.
AT the LOWEST PRICES.—TIMBER, DEALS, MAHOGANY, and WAINSCOT. A large assortment of seasoned prepared FLOORING and MATCH-BOARDING of all descriptions. Also an extensive stock of Dry White, Yellow, and Pine Cut Stuff, Slating, Battens, Pantile Laths, Oak Plank, Sash Cills, &c. Timber of all kinds, Planks, Deals, and Battens, fetched from the docks, sawn by patent machinery in the best manner, and delivered at the shortest notice.—THOMAS JACKSON, Sawing and Planing Mills, Commercial-road, Pimlico, London.

FURTHER REDUCTION OF PRICES.—SAMUEL PUTNEY respectfully solicits the attention of buyers to the further reduction in the price of Yellow Deals, and the very low prices of Pine and other Deals, &c. &c.:—

Yellow Deals, from	£21 0 per 120
Do. Battens	13 10 "
Spruce Deals, from	18 0 "
Pine Plank, 12 ft. 3 in. by 11, from	22 10 "
Mahogany in Planks and Boards	6d. per foot super.

Prepared Flooring, &c. equally low. A list of prices forwarded on receipt of a postage stamp.—Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

GREAT REDUCTION. — Yellow Deals, 3s. 6d.; Pine Plank, 3s. 9d.; F. Walnut, 7½d.; Mahogany, 9d.; ½ Yellow Battens, 12s. 10d. per 120 12 feet. Cartage free to any part of town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth-walk.

SEASONED FLOORING.—GEO. NOKES and CO. (late Archbutt and Atkinson), beg to acquaint builders and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash:—

½ inch White, 13s. 6d. per square.		½ inch Yellow, 15s. per square.	
¾ ditto	15s. "	¾ ditto	16s. 6d. "
1 ditto	16s. "	1 ditto	20s. "

Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.
ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road.

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No. 18, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Saw-mills. Goods in Bond for Exportation.
N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned, and ready for use, from ¾-inch to 1¼-inches thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Cills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

OAK SASH-CILLS, QUARTERING, &c. ready cut out to sizes and lengths required, at the lowest price.
Address, E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S-ROAD, CHELSEA, AND WILTON-ROAD, PIMLICO.

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shop-fitters to his carefully selected MAHOGANY, suitable for Counter Tops, and to his seasoned Materials for builders, cabinet and bifud makers, &c. Delivered, cartage free, to any of the London railway stations, or within three miles from Kennington Church.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

TO BUILDERS, CARPENTERS, &c.
SAMUEL CROWHURST, Jun. begs to call the attention of Builders, Cabinetmakers, &c. to his Stock of seasoned and well-selected Timber for Deals, and Mahogany, in Logs, Planks, Boards, &c. at prices which will be found equal if not less than any advertised. Country Builders supplied on the most liberal terms. Timber-yard, Hanover street, Walworth; and Francis-street, Newington, near the Church

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

FRENCH POLISH and SPIRIT VARNISHES made from Methylated Spirit, 63 over proof.

Best French Polish	6s. 6d. per gallon.
Spirit Varnish	6s. 6d. "
White French Polish	10s. 6d. "
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The Builder.

VOL. XIV.—No. 682.

THE cemetery of the London Necropolis Company, situated on the line of the South-Western Railway, beyond Woking, will be the means of future great benefit to the metropolis. We have before this mentioned the establishment of the cemetery; but would further assist in making its advantages felt. First, however, a few words as to the present position of the all-important Burial Question.

Although changes in the practice of sepulture have been already made, such as will effect amelioration in public health, circumstances which, from time to time, come to our knowledge—viewed with reference to conclusions long since matured and published—show that improvement has yet to be promoted in the popular apprehension of this great question,—towards measures of a sanitary nature not yet in practical operation, and to realise the full social and moral bearings of the subject. We are not about to compare all the conclusions from Mr. Walker's long, serviceable, and unrewarded labours, or every page of the Report on the "Practice of Interment in Towns," by Mr. Chadwick, dated in 1843, with what Government has ventured to do, or to require. Our main object is rather to examine into the capabilities of the Necropolis Company, and of their cemetery,—though with reference to the most advanced opinions upon the question of burials—as to the necessities of London.

Few things appertaining to custom and habit, can be more difficult to regulate than the practice of interments,—at least in this country. Some of the most valuable suggestions and statistics before us, have been drawn from towns on the continent; and as to the provision of houses of reception for the dead, and in the prevention of extortionate charges—swelled by useless, if not objectionable forms of ceremonial—the English despotism of prejudice still withholds measures of sanitary and moral necessity, of which the value has long been seen in Frankfort, Munich, and other capitals. How much of the idea of "reverence for the dead"—supposed here to prevail, and there to be wanting—is purchased at a cost which makes any salutary influence impossible, little study of the subject is required to tell us; how much of life-destruction and moral degradation has been retained, our readers should sadly know.

All this, to the credit of individuals, and, indeed, of recent ministries, has been understood by them. Yet, slight allusion to matters fresh in recollection, would be required to show the difficulty which there is in imposing regulations. The Report above referred to, embodies the results of laborious researches into every branch of the question; and, with the aid of later documents, these conclusions should be obvious to every educated and observant mind,—namely, that the practice of burying in the close vicinity of dwellings is inevitably destructive to the sanitary welfare of the living; that—in all cemeteries—situation; character of soil, and its drainage; proportion of earth to each corpse interred; planting; and the provision of appropriate and beautiful works of nature and art, are each to be attended to; that the decomposition of corpses—though with the *minimum* of injurious exhalation—is to be promoted rather than checked; and that leaden coffins, family graves, brick graves, and "vaults," or *catacombs*, should be disused; that the retention of the body before interment, for a long period, is fraught with injury to health—especially in the single rooms or confined habitations which furnish the bulk of mortality—and in such cases, in addition, either occasions unnecessary and dangerous effects mentally upon survivors, or, more frequently, is also morally degrading and brutalising; that the customary ceremonial at funerals, and the extortion to which all classes are victims, make up a sum of expense which adds to or occasions many of the before-mentioned evils, and brings ruin upon widows and orphans; whilst, for the object of the verification of the fact of death—a thing shown by authenticated cases of suspended animation to be required, as well as for detection of causes of death in certain cases—public receptacles would generally present advantages. How far have these conclusions been at this day accepted, and practically carried out?

If you say that the pestiferous character of grave-yard exhalations is universally admitted,—and that we waste time by allusion to so trite a subject—we remind you that the other day, a dignitary of the church, seemingly disposed to throw difficulties in the way of the consecration of a cemetery, could express his belief that the neighbourhood of a grave-yard was rather beneficial than otherwise,—although, as long ago as the year of grace 1843 aforesaid, the shreds of argument as to the harmlessness of the effluvia had been scattered to the winds. If you believe that all else is now plain and admitted, certain further awkward facts present themselves.

The several Acts of Parliament that are in force, have not been passed without much of the "tinkering legislation" which has at last cried out within the walls of St. Stephen's itself, for reformation. Mr. T. Baker, of the Burials' Acts Office, in Old Palace-yard; and Mr. J. J. Scott, have each published a work, in which the Acts are "consolidated."* It is here seen that there are some important exceptions specified to the operation of the Acts. There are also some omissions which will have to be rectified this year.

The provisions in, or arising out of the Acts, which are most important to the community (independently of the clauses providing for the closure of old burial-grounds, and which take effect by Orders in Council), are the Home Office "Regulations," made in pursuance of the Act, "for conducting Interments in Burial-grounds provided under the Burial Acts 15 and 16 Vict. c. 85, and 16 and 17 Vict. c. 134;" and the "Instructions for Burial Boards in providing cemeteries, and making their Arrangements for Interments,"† approved by the Secretary of State.

Now, it will be recollected that these excited some animadversion; and we are perhaps not going too far to say that they were hailed as intolerable interference with the liberty of the subject. Yet they were and are rather behind the conclusions of experience. For, in defiance of the conclusions—or rather, in deference to popular prejudice—the "Regulations" recognise the practice of interring more than one body in a grave—as in the case of families. They allow of the use of vaults, provided "the corpse be enclosed in an air-tight metallic coffin;" though it had been in evidence in 1843, that such coffins could not be considered as necessarily "air-tight," having frequently to be *tapped* even before leaving the house where the death occurred.

Looking through the "Instructions," we find further inconsistencies, or deference to prejudice, therein, or shown to exist in the Acts. Cemeteries are not to be established where buildings are in progress or contemplated; and the law requires that a distance of 100 yards shall be kept from any existing dwelling-house, without there be the consent of the owner, lessee, and occupier. It is surely, then, an inconsistency to allow houses themselves to approach; or for any extra ground taken, to be let by the parochial board for building purposes, as is proposed in the case of the cemetery of St. Pancras. The "disposition to erect houses in the vicinity of ornamental cemeteries" prevails amongst those who have not made themselves acquainted with the evidence published, of the extraordinary distance to which the pollution of the ground may in certain cases be extended. Something more stringent would seem to be required than the mere *advice*, to leave "a space a few feet or yards in width, according to the size of the cemetery," between its "fence and the nearest graves." The truth is, that the sites of some of the cemeteries recently formed for metropolitan parishes, are so near to the suburbs as to be quite opposed to the spirit of the "Instructions." Again, with reference to family graves; whilst the "Instructions" say that "a fundamental principle of interments is, that no more than one body be buried in any grave at one time," and state that there are towns and districts even in England, where from "time immemorial" it has been "the custom never to re-open a grave which has been buried in;" whilst it is shown that the placing of coffins one over another, greatly prolongs the decomposition which is required; and whilst the "Instructions" also suggest that burial boards might dispose of *plots* of ground for families, with grave spaces to be used alternately, according with the system of the cemetery at Frankfort,—they feel compelled by the prejudices to which we have referred, to permit *exceptions* in favour of family vaults and graves. The Woking Company also are under no restriction in this particular, and allow several interments in a grave in the case of families, as well as the use of brick graves and vaults, and of other graves which, being of "extra depth," would seem to be likewise contrary to the best opinions. Again, the "Instructions," approved by the Secretary of State, say, that the use of monuments and flat stones covering the grave should be discouraged,—as tending to retard decay for nearly three times the period that would be requisite if the grave were covered with turf and planted: but they equally hesitate to impose any restrictions in that particular. The different proposals for removal and reception of the dead, are merely referred to in the manner of suggestion. Reception-houses were originally contemplated by the Woking Company: but an outcry was raised by the people of Lambeth; and, in deference to this, a clause stands in the Company's Act, forbidding them to retain any corpse at the London station during longer than twenty-four hours. The means which they can afford of carrying out what, under proper regulations, and with efficient structural contrivances, would be an important sanitary improvement, are therefore limited to the power allowed them of transferring bodies to Woking, and retaining them there—when desired by relatives—till the day of funeral; and this arrangement has been found to be preferred to the retention of the body, even by persons not residing in confined habitations.

The discrepancy of recognised principles and allowed practice is scarcely to be wondered at, when we regard the extraordinary nature of the case to which restrictions had to be applied. It is not only between *countries*, that customs in the rites of sepulture are at variance: there

* "The Laws relating to Burials in England and Wales, including 15 and 16 Vict. cap. 85; 16 and 17 Vict. cap. 134; 17 and 18 Vict. cap. 87; and 18 and 19 Vict. cap. 79 and cap. 128; with Notes, Forms, and Practical Instructions." By T. Baker, Barrister-at-Law. Maxwell.

"Burials Acts, Metropolitan and Provincial, 1852, 1853, and 1854; with the Incorporated Clauses from the Cemeteries' Clauses Act, 1847, &c. &c.; and explanatory analytical Abstract of the various provisions of the several Statutes. Fifth edition: to which are now added, the Burial Acts of 1855, 18 and 19 Vict. cap. 79, and 18 and 19 Vict. cap. 128; with an Introductory Abstract of their Provisions, and of the Alterations effected thereby in the existing Laws relating to Burials." By James J. Scott, Barrister-at-Law. Knight and Co.

† Printed for her Majesty's Stationery Office. 1854.

are singular differences between the several parts of the United Kingdom, and even between town and town. What would be "customary" in one place, would be but "maimed rites," or the height of impropriety, in other localities. Therefore, the moment that legislative or governmental restrictions are attempted, prejudices are raised, and on the most difficult of all subjects. The mode of transit by "the silent highway," or by canal, had advantages beyond what are available by railroad communication,—efficiently as it may be allowed, this means of conveyance is managed by the Necropolis Company. Plans for the different vessels and carriages were at one time got ready for the Board of Health: difficulties, however, presented themselves as to reaching one chosen site, arising from the crowded state of "the Pool:" and still more serious difficulties were perceived in the cost of property sufficient for embarking places at the river-side, and for the necessary street improvements adjacent,—which would have had to be paid for out of increased *rates*.

We may state as the result of careful inspection of the station at the Westminster-road, and of the cemetery itself, together with the arrangements observed at both places, that we discover nothing which does not present an improvement upon the system of the London suburban cemeteries, even greater than these were supposed to effect upon the older grave-yards. Every pauper grave is allowed to hold but a single corpse during the estimated period of decay; or, rather, no grave can be re-opened "except at the request of the friends of the deceased previously interred, for a space of ten years." The charges for the first four of the five or six classes of burials as conducted by the company, include the grave "in perpetuity."

At this juncture, that such advantages are available, might indeed be regarded as of singular importance, were the actual condition of London understood. In the chief suburban cemeteries, specially exempted from the operation of the Acts, the practice of "pit burial" continues: and practices—such as the keeping graves open—most injurious to public health, are maintained—as in the Victoria-park Cemetery—(or were so, quite recently),—though the sites are already, or will shortly be, surrounded by houses. At Abney-park, the unsuitable clay soil is said to crack, and emit vapours which are so offensive, that the letter-cutters on the grave-stones cannot work without precautions. It is therefore to be regretted, whilst the Acts were made not to impose discontinuance of burials "in any cemetery established under the authority of any Act of Parliament" (16 and 17 Vict. c. 134, s. 5),—the London cemeteries referred to being specially named in the schedule of the earlier Act (15 and 16 Vict.)—that no power of *regulating* these should have been reserved. The omission will, however, be rectified: though it is not at present desired to close such grounds, or to get the power of *preventing* any burial in them. Indeed, in the case of the Victoria-park cemetery, the greater part of the ground has not been touched. The overcrowding of the other portion can be due only to desire of money-getting. However, notwithstanding the exemption, the medical inspectors attached to the Home Office, charge themselves with examination in such cases. But, Dr. Sutherland, who attended to the London district, has been some time in the Crimea; so that as the other inspectors are much occupied in the country, it is possible that the objectionable state of the London grounds has continued longer than it might have done. From a question and answer, on the 11th inst. in the House of Commons, it will have been seen that two or three of the old intramural graveyards are still open.* The sanction of the Home Office in those cases appeared to be made a matter of necessity, by the still unexplained postponement of the opening of the new ground for the City. The ground in Holborn, attached to St. Andrew's Church, now really closed, had been re-opened by taking advantage of the permission to continue the use of the ground of the same parish, in Gray's-inn-lane. The continuance of "pit-burial" at the West Brompton Cemetery was, we believe, an accident, arising out of the absence of the London inspector; and it was very promptly put a stop to. Besides the special cases already referred to, the only exceptions to the complete disuse of London burial-grounds, were in some few cases where one burial in each grave is permitted, till the space is thus filled; in the case of Trinity Church, Brompton, where one burial in each grave is allowed to 1st October, 1859; in the case of St. Mark's Cemetery, Camden-town, to be closed on 1st May next; St. Dunstan's, Stepney, on 24th October next; and All Saints' ground, at Poplar, on 1st May next. There are, however, the important exceptions to the cases of closed grounds, of "existing rights," "private vaults," and private graves;" whilst from West Hackney, there is "no return." These "exceptions," so long as they exist, would justify apprehension—in some degree. The removal of bodies by relatives to new resting-places, practised lately in many cases—as indeed to the cemetery at Woking—is considered to be highly dangerous, and is to be put a stop to during the present session. Mr. Simon, the late medical officer to the City of London, in 1848-9 appeared to report an opposite opinion, as to the danger relatively, of the two courses.

The parishes which now inter in the Necropolis at Woking, are those of St. Giles, Bloomsbury; St. George, Bloomsbury; St. Luke, Chelsea; St. Margaret, Westminster; St. John, Westminster; St. Saviour's, Southwark; St. Olave, Southwark; Bermondsey parish; Chiswick; and St. Paul and St. Nicholas, Deptford: ground has been allotted to St. Anne's Soho, and St. George's in the East; and arrangements are in progress with other parishes. No difference, we are told, is made in the ceremonial between funerals of the better class and those of paupers: the latter are what we can speak to, and they are performed in a very proper manner. The guild of St. Alban, an association of lay members of the English Church, having, as one of their objects, the systematic performance of pious and charitable works, and holding the Christian burial of poor Church people to be especially incumbent on them, also inter at Woking, where a pall and other matters of the kind for the common use are carried with the corpse. The system of the Necropolis Company, we are told, has rendered evident that there is a desire, where it can be done, to dispense with much of the unmeaning frippery of the street procession.

The London station is a building in three stories, the top story being that which is on a level with the line of the South-Western Railway; with which there is a communication from the Necropolis Company's Station, by a short branch. Below, there are two entrances from the public streets: one from the Westminster-bridge-road, by an arch of Norman character, in ornamental red brick and tile work, and the other from the Cornwall-road. The gates, of elaborate workmanship, by Messrs. Bailey, like the ironwork elsewhere which plays an important part in the effect, are of excellent character. The principal gates were exhibited in 1851. On passing along the carriage-way, a neighbouring slaughter-house is so offensive, that it must be productive of some unfounded prejudice against the company's arrangements. The principal portion of the lower floor is occupied by a large room—including also the height of the floor above—used for depositing the bodies till the time of departure of the train. Pause before that black box, made of rough and splintered boards, badly nailed together. Ere this you have looked on death in some shape, and haply not without awe, and other vague and undefinable emotion; and now, not with indifference, or without much self-communing, you seem almost to discern the poor form of the mortal *found drowned*, cased in that "narrow cell," whereon you read this inscription chalked on the lid,—

"*A Female Unknown.*"

Turn to the coffin of a different class, of which the "ornamented plate of inscription, four pair shield handles, and japanned and burnished nails,"—as usual in this class of "ornaments"—seem to conjoin the vanity of show with the utmost abasement of mockery and pretence; and marvel that the vices which find expression in our *art* should be cherished even to the grave. The furniture of our last resting-place should be at least truthful—claiming to be no more than it is. The room we are in—like others in the building—is well ventilated by large panels of perforated zinc; the different channels communicating with a tall shaft, in which means of exhaustion are provided. The coffins are raised by lifts, worked by a steam-engine of six-horse power. There is a principal staircase of good architectural character, lighted from the top, and a separate staircase for the mourners of the pauper class. In the one-pair story, two large spaces are appropriated as waiting-rooms for the male and female mourners of the class last mentioned; and to these, closets and lavatories are provided. Smaller waiting-rooms, each with similar conveniences, and appropriately furnished, are provided for funerals of the "artizan" and next superior classes. On the top floor, the principal waiting-rooms are two for the first-class funeral parties—one on each side of the staircase. Each has an adjoining apartment for closets and lavatories. The provision made in these last particulars may have appeared great; but the usual railway-station system of separate waiting-rooms (that is to say, allowing one for ladies) is required, in fact, for each funeral party. In this view of the case the plan is faulty. The ground taken up is indeed quite inadequate,—shelving off, so as to have for great part of the length very slight depth. The practical effect of the arrangement is at present this:—When the number of funerals in one morning is small, different members of a party are too widely separated: as (in the case of there being *one* first-class funeral) across a public staircase. On the other hand, where the number is greater, for some of the parties there can be no separate ladies' room. A very large station, it may be said, would be required, and great expense in the fittings: but the want of this, if the Woking Cemetery is to be used as much as we hope it will be, will be attended with serious inconvenience. It must be recollected that "separate apartments" for each party of mourners, are offered in the Company's prospectuses. Even with the present area of ground, the arrangement might, we should think, have been better; and the positions of some of the doors of the closets in the second-class rooms are to be altered. A plan having a considerable number of small rooms—capable of being thrown together on the arrival of larger parties than usual—would be found most suitable. In the temporary buildings at Woking, the deficiencies referred to are rather greater than in London; but there, there are female attendants attached to the refreshment department. In other respects, the arrangements of the London station seem unexceptionable,—the moving of the coffins and starting of the train being carefully and noiselessly conducted. The railway, within the terminus (roofed over, on the ridge and valley system), is carried by deep girders above the carriage-way of entrance, which last receives its light from the spaces between the lines, those being filled in with glass slabs. The architecture of the building, next the departure platform, is expressed in good plain brickwork, with arch-headed apertures. A globe gas-light is in the centre of each of these—supported in the case of the windows by an ornamental ironwork standard. The coffins, on reaching the platform, are placed each in a separate compartment, made for the purpose with strong straps to prevent displacement by the motion of the train. The hearses, fitted with these compartments, are of two kinds, differing, however, very slightly, and are similar externally to the ordinary parcels' van, though with several doors, and a more finished appearance. The carriages are the ordinary ones, supplied by the South-Western Company, which, in regard to the second-class, plastered with advertisements, may by some be deemed objectionable. The train proceeds along the South-Western Railway to the branch line leading into the cemetery, which we reach in less than an hour without discovering any difference between our journey and one by an ordinary train, except that we have made no stoppage till we reached the junction. The distance from the Waterloo Station is 2¼ miles. We descend at the station near to the chapel

* What is meant by an obscurely-worded order in Council, in the *Gazette* of Tuesday last,—referring to postponement,—we have had no opportunity yet of ascertaining.

in the unconsecrated ground, whilst some of the coffins are removed; and the train which had descended the incline, is drawn on by horses to the consecrated ground some distance farther.

At the cemetery, we find much to interest us; and the particulars will afford matter for another article.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

Bells of the Royal Exchange.—The discussion on the subject of Bells was resumed and closed on the 11th ult. Mr. W. L. Baker, Mr. R. C. Nicols, Mr. Ashpitel, Mr. Foggo, Mr. Ferrey, Mr. Denison, Q.C. and Mr. Varley taking part in it. The chairman, at the close of it, spoke with regard to the failure of the Royal Exchange bells, over which he had no control. They had never succeeded in getting these bells in tune. There was a certain scale of notes which were intended to play tunes, and therefore should have been properly pitched. There was no particular necessity to study expense, and he had been anxious to get a good chime of bells. At Messrs. Mears's works, he found a rude system in operation, which appeared inconsistent with anything likely to ensure tune. He saw, indeed, that the whole matter was traditional; and he therefore suggested that bells so roughly cast could hardly be in tune; and he further proposed to put the series in a row, and by striking, ascertain whether the gamut could be produced. This trial, however, was declined. The machinery for the chimes was made by Mr. Dent, one of the most skilful mechanicians in the world; but as soon as they began to play, the effect was highly disagreeable. In fact, the peal was not in tune. Then came a series of suggestions, such as "the hammer strikes too hard;" but as Mr. Dent said, it was easy to make it strike softer, by merely shortening the lever. The architect and the tower were in fault; indeed, it was anything but the bells; but in fact the tower contained a large square chamber, with four large windows filled with louvres, &c. He even offered to take the louvres away. At last it was agreed to take down the bells, and re-cast them of a larger size, and with two additional bells; but the new bells failed. It was plain that the makers had no rule; yet they produced testimonials without number, and engaged that the bells should be in tune to the satisfaction of Mr. Edward Taylor, Gresham Professor. At first they insisted that the bells were in tune, but Mr. Taylor tested them with a violin to show that there could be no possible mistake. The bells were chipped, cut and altered in every way without success, and he (the chairman) never could get people to believe that *tone* was not *tune*. Mr. Taylor, of Loughborough, re-cast the bells, but without success, and he believed the chimes remained a failure. He had found in an old manuscript an illumination showing a man grinding bells, and he believed that the ancients in fact turned the inside of their bells in an accurate form with regard to the outside, according to some rule now lost. He believed that the same law or mathematical process by which he had seen Erard set out the top of a harp, might be applied to a bell, so as to conduce to its accurate tuning in any particular note. He had heard the traditional story that the founder of the tenor bell of Bow Church never left it, but was always filing or hammering the inside till he got it to the proper note or pitch of the C of that time. The chairman further observed that a letter had appeared in the *Times* stating that the Westminster bell could not be got into the clock-tower, as Sir Charles Barry had forgotten to provide an access for it. It was due to Sir Charles Barry to state that this was not correct. He had not forgotten the matter, nor was there any difficulty in it; neither would it cost 3,000*l.* to erect a scaffold to raise the bell. The meeting was aware that the whole of one side of the lower story of the clock-tower facing west, consisted of a large arch, which had been filled up with brickwork; the bell would be brought up to the arch, and so much of the brickwork removed as might be necessary, and the bell would then be raised without any difficulty whatever.

The Chairman then adverted to and explained some of his remarks made at the opening of the session. His observations will be found below under another heading, for the sake of reference hereafter.

At a meeting on the 25th ult. a letter from Mr. G. G. Scott, in reply to Mr. Tite's previous observations, and the production of which had been delayed, was read. This we also give *in extenso*. M. Viollet le Duc, architect, of Paris, was elected honorary and corresponding member; and a paper, entitled, "Archæological Studies in Jerusalem," was read by Mr. G. J. Wigley, associate.

The Diploma Question.—The Council have come to the following resolution on this subject:—"That the Council feel that it is as yet premature to pronounce an opinion upon a subject of so great importance as the establishment of an examination with reference to granting a diploma in architecture. That before they could recommend the Institute to undertake such a charge, it would be necessary carefully to ascertain the opinion of members of the profession generally. They moreover feel that the duty which has been recently intrusted to the Institute by the Legislature, viz. the examination of the candidates for the office of district surveyor, will enable them, after a sufficient experience of such examinations, to come to a sounder judgment than they can at present on the subject of the diploma." It appears to us that they have adopted the right course.

The ensuing Election of Officers.—Mr. Scoles, the senior hon. secretary of the Institute, having expressed his intention to retire from that office, the duties of which he has fulfilled for many years, the profession will be glad to learn that Mr. Digby Wyatt, at the request of some of the leading members, has consented to allow himself to be put in nomination at the election in May. The many qualifications of Mr. Wyatt, both literary and professional, and the earnest and continuous attention which Mr. C. C. Nelson bestows upon the affairs of the Institute (devoting to it indeed a large portion of his time), give promise of increased usefulness and of an active development of the resources of this body, for promoting the best interests of architecture and the profession in general. Mr. Scoles has earned the best thanks of the Institute by his attention and unfailing urbanity. We have since been asked to say that Mr. Papworth has placed himself at the disposal of the body for election to the above office.

GOTHIC OR CLASSIC?

MR. TITE said, at the meeting of the Institute to which we have already referred: I am anxious to put myself right with reference to some remarks which I made in the discussion on the diploma question, on the undue preference (in my opinion) given to mediæval architecture, and which remarks have been somewhat misunderstood. I was an early cultivator of mediæval architecture: I esteem it very highly, and I think I understand it; but all that I wanted to urge was that it was not reasonable to abandon the better styles of architecture (for many purposes) for what I considered the fashion of the day. That the study of classical architecture is neglected, is proved by the fact that there have been no competitors for the architectural medals of the Royal Academy, as stated by the Professor in a recent lecture. Now why is that? Surely because the young architects of the day are studying mediæval church architecture to the abandonment of other studies; and I presume, therefore, until the Academy can be induced to give a medal for a design in that style we shall have the same result. Such a state of things I greatly regret, because classical architecture gives us the best and most certain principles of feeling and thought in architecture. With regard to mediæval architecture, it is true we have become good copyists, but our forefathers did vastly more than this, for they urged on their thoughts and inventions,—they went on from excellence to excellence, and they often obtained it in the search after novelty. Young architects should study the principles of things, and apply them to expression, utility, and fitness in architecture. In the remarks to which I have referred, I found fault with the unfitness of modern mediæval churches for the purposes for which they were built. I quoted one which, although elegant and beautiful, was anything but a Protestant church. I stated, amongst other things, that on the south side of the deep chancel of that church there was a range of sedilia. Now of what Protestant use could they be? The rubric says the minister shall "stand on the north side of the altar;" and even among Roman Catholics they are obsolete. Such ornaments are not only useless but expensive, and inconsistent with the purposes to which the churches are applied. Then again I have seen lately, in two large squares near Belgrave-square, large masses of building in which classical architecture would have given a better church than those which have been built there. I allude to Warwick-square and Chester-square, composed of masses of regular Italian buildings; and, forming one side of each square, irregular Gothic churches with spires are placed, which appear to me incongruous and out of place: and inside they are not adapted to those vast congregations which frequent them. That these are the opinions of men as well able to judge as myself, is proved by the remark of Mr. Petit, the learned ecclesiologist. He says,*—"There are good reasons why we should rather make the best of our old churches, than materially alter them or destroy them, to build others in their room. The impression they are calculated to produce more than compensates for some inconvenience in their form or arrangement; but there seems no reason why we should ever plan or build a new church of an inconvenient form, or in any way unsuited to our own manner of worship. If, for instance, it is desirable that all the congregation should be within sight and hearing of the minister, why should a church ever be built in which a part of the congregation is hidden from him when he performs any part of the service in the usual place? And this must be the case in every church having aisles which terminate at the division between the nave and chancel. If we find that galleries are useful and convenient, why should we build churches that will not bear galleries, or to which they are a disfigurement? If we professedly adopt high-pitched roofs as suitable to our climate, why should we ever combine them in such a manner as to leave a lodgment for snow or rain? There may be difference of opinion as to the advantage of an unbroken area, or the expediency of galleries; still they serve my purpose in illustrating the proposition I would advance, which is, that an architect ought not to abandon a convenient arrangement on account of its ugliness, but rather try to get rid of the ugliness without giving up the convenience. If, then, a feeling that his first object is to make his building fully answer its primary purpose, and a determination that nothing shall be allowed to interfere with this object, be referrible to a spirit of utilitarianism, I conceive that so far, at least, an architect ought to be a utilitarian."

That is the opinion of a modern ecclesiologist of great learning and judgment; but I will quote also the opinion of Sir Christopher Wren. He was called upon to build the City churches, and he gives this opinion on the subject.† He says,—"Churchwardens may be careless in speedily repairing drips, but they will usually whitewash the church and set up their names, but neglect to preserve the roof over their heads." He next proceeds to discuss the capacity and dimensions of the proposed new churches, and a mode of calculation to determine them from the number of inhabitants for whom these churches were to be built, which he calculated at 400,000, or five times as many as were burnt out in the City. The churches, therefore, he says, must necessarily be large, and if they were built to hold 2,000 persons each, the accommodation would fall very short of the requisites; but, he adds, in our reformed religion it would seem vain to make a parish church larger than that all who are present can both hear and see the preacher. The Romanists indeed may build larger churches—it is enough if they hear the murmur of the mass and the elevation of the host; but ours should be fitted for auditories. He considered it to be hardly practicable to make a single room so capacious, with pews and galleries, as to hold above 2,000 persons, and all to hear the service, and both to hear distinctly and see the preacher. He endeavoured to effect these objects, he says, in building the parish church of St. James, West-

* *Vide* the *Builder*, January 26, 1856 Mr. Petit's address at the Architectural Exhibition.

† *Vide* Elmes's "Life of Wren," and the "Parentalia."

minster, which he presumed was the most capacious, with these qualifications, that had then been built; and yet at a solemn time when the church was much crowded, he could not discern from a gallery that 2,000 persons were present.

I was rather more urged to express the opinion I did, by not desiring to see classical architecture neglected merely in obedience to a present fashion. I believe that fashion will to a certain extent pass: I may be mistaken, but it appears to me that the universal application of mediæval architecture and forms is an error and a great mistake. I simply suggest that as my opinion; and I regret that that which formed so important and so necessary a subject of study in my early life should be at the present day neglected for something which, though beautiful in its way, has not so many claims upon our attention, and is not so well adapted to our forms of religious worship. I have no desire whatever in the least to interfere with the views of others; but those who choose to adopt these views conscientiously will find in me a man to think for myself. I am glad to have this public opportunity of saying a word upon this matter, because by one of our most eminent professors of architecture I have been a little misunderstood. I only offer this as a matter of explanation and not of discussion at the present moment.

THE following is Mr. Scott's letter previously mentioned:—

IN a society which supposes each of its members to hold his own individual opinion, and to express them freely as he pleases, it may appear unnecessary to notice mere manifestation of feelings which every one knows our respected friend entertains; but coming *ex cathedrâ* from the chair of our Institute, and from our parliamentary representative, they may, if unanswered, appear to acquire more weight than belongs to them, and be viewed not as the feelings of an individual member only, but as those of the Institute as a body; in which case it would naturally become the duty of those who hold contrary opinions to make a formal protest, or to separate themselves from the society.

Mr. Tite contented himself in his address at the preceding meeting with a general expression of regret that the love of Pointed architecture was becoming too exclusive, but with some compliments to its favourers on their success as compared with their fellow-labourers in France. He commences his second series of remarks with a somewhat stronger expression of his regret, especially that we do not keep ourselves to the buildings for which our style is suited. Warming as he proceeds, he accuses us of being mere blind copyists, incapable of thinking for ourselves, and winds up by showing that our style is unfit for any purposes at all, unless it be for Roman Catholic churches. Now, would it not have been better to have acknowledged this opinion at the outset? We can readily understand that the majority of those who were firmly grounded in the old state of things before our movement had made much progress, are likely to disapprove of what we are doing. It is so with every movement, whether in art, science, or politics: the movement party are invariably maligned and opposed by those whose prepossession they disturb. It is an understood thing, and no one wonders at or complains of it. Mr. Tite, however, takes a higher ground: he admits at first that, in some respects, and in some cases, we are right, and meets us on this ground, but at last winds up by denying that we are in the right anywhere, unless it be in Roman Catholic churches!

I will, however, crave your patience while I follow him into particulars. His first complaint is that our style is applied "to buildings for which Classical architecture is more fitted, such, for example, as town halls and markets." I rejoice to hear that there is such cause of complaint! *I* have long been complaining that it was *not* applied to such buildings, for which it seems to me so eminently adapted. Where, for instance, are finer town halls to be found than in the great mediæval cities of Germany and Flanders; and where better market houses than the *halles* of the Flemish towns? They are only too good and too noble for us; but surely a style which produced *them*, and which has produced equally appropriate buildings for the humblest purposes of trade and husbandry, will not fail in giving such modifications of its nobler conceptions as will meet our circumstances, whatever they may be. Only give us the chance, and I think we can show whether town-halls and markets are unsuited to our style.

Mr. Tite next complains that in building churches in towns we do not respect the style of the "elegant" houses adjoining. I sincerely wish we could say much for the elegance of our town houses! They certainly carry out Lord Bacon's axiom. If they are built *to live in*, they assuredly are not generally built *to look at*; though it is the misery of our lot that we are hourly compelled to look at them! Be this, however, as it may; it is inherent on a period of change that such discordances of style should exist. The architects of the seventeenth century did not scruple to build in their own Renaissance style because surrounded by Gothic buildings: they even patched up the latter in their own style. No change would be made in anything were this principle to be admitted. It is simply the principle of obstruction, which comes ill from the chairman of an institute like ours, which professes to aim at progress.

If, however, our vice-president merely means that we build in our *towns* churches better suited to *rural* situations, I heartily join with him; but is this his own criticism? has he not, or might he not, have learned it from ourselves? I can refer him to able articles on the subject from the pens of leading members of our movement, in which he will find it impartially discussed, and our errors severely exposed. Surely, he will hardly venture to say that Gothic architecture is suited to the country, but unfit for towns![*] that it is unsuited to be placed near houses 70 or 80 feet high! I confess I have never heard want of height quoted as one of the defects of Gothic architecture. I do not know whether he refers to the church in Gordon-square as being unfit for such a position, but if he will look out from the side of Hampstead-hill, he will find that this *alone* among all the churches of London (St. Paul's and Westminster Abbey only excepted) is seen rising predominantly over the house-tops, and is a conspicuous object without the aid of a tower. All that keeps us from raising our town churches above the "elegant" houses around them is *our poverty*; a hindrance which would apply equally to any style, excepting that a Gothic church would be vastly improved if we could afford to make it tower above our houses, while an Italian church would probably be thrown out of all proportion by the operation. Our misfortune is independent of our style. We are compelled to build *town* churches with *country* means, and are then laughed at for building country churches in our towns. If we had the funds which were expended a few years back on some of the worst of our "classical" churches, we should not dread the proximity of houses 70 or 80 feet high, nor fear to be accused of building churches only suited to the country. But even if we have in some cases deliberately fallen into the error (which I think has sometimes occurred), that has nothing to do with the style, for no one will accuse Gothic architecture of falling short of the *classical* in *loftiness*.

Mr. Tite then proceeds to compliment the builders of some of the great City warehouses, and further on imagines what some Gothic architect would have made of them. Has he ever seen the *noble* and almost *majestic* mediæval warehouses in some of the ancient German cities? A nobler type for buildings of their kind can hardly be conceived: they have rather too much roof for modern purposes, but are designed with a perfect appreciation of their use, and obtain their noble aspect solely from the simplicity and truthfulness with which their uses are provided for. Some of the finest warehouses I have seen in England and Scotland, built by persons who never thought about building in any style, but simply thought of doing *well* and *efficiently* what they were about, have struck me as having a strong family likeness to these stern and noble structures; and they certainly look better than the huge, over-corniced, though handsome, fronts in the city of London. It is curious that while Mr. Tite lauds our City warehouses in the same breath in which he speaks of the *small projection* in French street architecture, as showing that their architects lean "to the wants of the place and the times," Mr. Fowler very justly complains of their enormously projecting cornices as reducing, in narrow streets, the sky as seen from the street to one-half! He might also have animadverted on the *frightful danger* they incur.

After some very judicious remarks upon *fitness*, and on making a building suitable to its purpose, sentiments which, by the way, he will find admirably enlarged upon by Mr. Pugin in several of his works, and laid down as the key-note of Gothic as distinguished from *modern* architecture—Mr. Tite returns to churches, selecting one which he has seen in the neighbourhood of a manufacturing town as a beautiful piece of copying, but as failing in all its practical uses. Surely, however, he will not argue that the mistakes of an individual architect are to be taken as condemnatory of the style he happens to be working in; or what style would escape? "The congregation *could not hear*;" but is this usually the case with Gothic churches? The very reverse is more frequently the fact. Nor could they "*sit with comfort*;" but surely a seat may be made comfortable or uncomfortable in any style! There was "*no ventilation*;" but is Gothic architecture opposed to ventilation? The "*warming* was defective:" surely a few more hot-water pipes would not have marred the style! The clergyman *complained of the reading-desk*:" what clergyman does not complain of his reading-desk, whatever be the style? It is said that every new incumbent of every church wishes to inaugurate himself by moving the pulpit: then why not complain of his reading-desk? Let him alter it to his mind, and it will not, I dare say, be less "Gothic" than at present, or less like what it would have been in Edward III.'s time! "Indeed, the church is so inconvenient, that *the people would rather stay away than go to it*;" but this may be the fault of the people and the clergyman as much as of the church; yet after all this, the church is "far more beautiful than the architects and masons of Edward III.'s time *could have made it!!!*" Really this *is too* complimentary! What! more so than *Exeter cathedral*; than *St. Stephen's chapel*; than the west front of *York*; than all the churches of Lincolnshire, or the church of St. Ouen, or the *façade* of Rheims? If so, I do pity the taste of those who would rather stay away than go to it! I would willingly bear a little cold, or sit in an uncomfortable seat, for the luxury of seeing such a building!

Now I think I happen to know the church alluded to. It is, if I am right, a very nice, simply designed church. It is generally (it is true) in the form of an old church, but is absolutely free from slavish copyism: instead of being a most accurate and elegant imitation of the style of Edward III. it comes home to my recollection as a somewhat severely simple adaptation of that of Edward I. Instead of being far more elegant than the old people could have made it, all little elegancies of workmanship are carefully eschewed. It is rather ascetic than elegant in its character. Instead of being a specimen of "*identical copying*," and having "no ventilation," it has the novel feature of the clerestory devoted to newly constructed ventilators in lieu of windows. Its seats are unquestionably faulty, as much an exaggeration of *lowness* as the seats of thirty years back were of *height*; and the hot-water apparatus (whether or not from being constructed as a type of Edward III.'s days) does not answer. My own impression was, that this arose not from the style of the apparatus, but from the engineer having been chary of his pipes. There are possibly a few ritual affectations about the chancel which would be as well modified; things which usually depend more on the fancy of the clergyman than the architect, and certainly have nothing to do with the style; one thing, however, I observed, which I much liked—a large and cleverly-contrived recess in

[*] It is an unfortunate admission on the part of our opponents that Gothic architecture, while it harmonizes with the works of God, clashes so severely with the modern works of man.

the chancel for the organ, such as I have never seen in any church, ancient or modern, and which certainly did not strike me as a specimen of copying or of "*want of all thought.*" The clergyman, however, not only complains of his reading-desk, but of his pulpit. "Being made of stone, it is so cold he cannot put his hand upon it!" Did this ingenious priest never think of the expedient of lining the top with cloth or velvet, which is usual even with wood pulpits? Surely a pulpit may be made either of wood or stone, whatever be the style of the church! It is usual to give the clergyman his choice, and I generally find them choose stone, forgetful of their hands; and among old pulpits I think I have seen more stone or marble ones of the Renaissance than of the Mediæval periods, and I do not at this moment recollect any of the time of Edward III. The last complaint is described "as a most enormous mistake:" it is that the altar-rail only allows room for twelve communicants. It may be better to allow more, but if Mr. Tite will look into it at such a time, he will find that it really makes no practical difference, or very little, whether the rail be long or short, if the rule of the church be carried out of repeating the words prescribed to *each communicant*, or even to two together. If, however, the indecent custom be admitted of repeating them only to each "rail" of communicants, I admit that time is saved by making the rail long, but it is a custom more honoured in the breach than in the observance. Finally, however, we come to the "sweeping clause," which condemns all the forms of Gothic architecture as suited to the Roman Catholic religion and unsuited to our own; and on this ground, in Mr. Tite's *sincere opinion*, he thinks "the architecture which was learnt in Italy was much better suited than that now in fashion. So we are to go into Italy to learn Protestantism! The Popes then were sadly mistaken when they built St. Peter's. Little did they think they were erecting the type of Protestant architecture. I will not, however, follow out the subject: the fallacy of it is too obvious.

One word, however, on the subject of copyism. It is unquestionably one of the great vices of our day, and the more it is run down the better; but let us have fair play. *Laudari a laudato Viro*, is what we all desire; and we equally rebel against being blamed by those who wallow in the same mire with ourselves. Now, the classic architects have no kind of excuse for their copyism. They have been at work for three centuries, and yet too often work like schoolboys: not only every detail is most abjectly copied, but they actually scruple not at copying nearly whole buildings at a time! If we are copyists, we have learned to be so in their offices, where copying is, with some bright exceptions, the sum and substance of architecture. They use *now* the very arrangement of leaves they find in ancient capitals, excepting that they fail of their spirit: even the triglyphs and guttæ, the symbols of transition from wood to stone when the Dorians adopted the materials of the Pelasgi, they copy to this day with scrupulous accuracy, and learn with infinite pains their proper proportions in decimals of minutes! and yet they have the conscience to accuse us of copying, because while learning and reviving the long neglected arts of our native country, we do not at once strike out into new developments. We have had first to make ourselves masters of our grammar, but already we develope more, we copy infinitely less, than they do after three centuries of training. I am one of those who have been behind the scenes, and have been put through all the facings of classical practice; and, while I admire genuine classical architecture quite as much as our excellent vice-president (though I think another style more suitable to ourselves), I know too well the practice of modern classicism not to be fully aware that *ours*, with all its faults, is freedom itself compared with the copyism which preceded it. Our aim is *not to copy* but to *develope*, and to render our style the truthful expression of the wants and circumstances of our day; and to effect this great object will be the constant aim of,

Yours, &c.

Geo. Gilbert Scott.

SUGGESTIONS AS TO THE EAST.

The East, the land of mystery, is now opened to us; and, if not too late, we would suggest several subjects of inquiry.

The geology of a country should be known in order to understand correctly the past and present history of a people. We therefore hope some competent person will inform us as to the order of stratification from the Dardanelles, and on throughout the whole extent of the Black Sea, and the adjoining portion of Asia Minor. The general features are known, but we wish for details. The Sea of Marmora, with its islands and shores of marble, declares the character of its geology in its name: something interesting may however be told as to the rocks found in contact with the marble beds, as also of the extent to which the marble quarries have been worked in times past, and are now worked. Then, as to the shores of the Bosphorus, and the foundations of Constantinople, how far does the clayslate extend, and the limestone beds found at Kulali? We know that coal is worked at Erekly, and Murray gives rather an odd account of the coal-beds, where he states;—"The coal-seams vary in inclination, the average being at an angle of about 30 deg. with the horizon. They crop out over the entire field on the sides of the mountain-ridges, 1,500 to 2,000 feet high, and are much broken by faults. *No evidence of volcanic action has been discovered.*" We have put this last paragraph in italics. It requires explanation. "Seams of coal" at "steep angles" and "mountain ridges" are evidence of "volcanic action," even without the "*faults.*"

The geology of Sinope, Samsoon, and Trebizonde may be correctly ascertained. We do know that much of this coast is oolitic; that the peninsula of Sinope is very like our own island of Portland, in size, in form, and in geology; and we also know that there are many traces of volcanic action, basaltic and other dykes having ruptured the strata. But no map that we have seen represents with any degree of accuracy this portion of Asia Minor. Spurs and ranges of mountains, from 3,000 to 7,000 feet high, can be seen from the deck of a vessel, having snow upon them in May, with the thermometer at 85 deg. in the shade. There is plenty of work for the geologist here. At Trebizonde, the celebrated 10,000 came out from their wanderings upon the sea. A correct knowledge of this country would raise our wonder at the marchings of ancient armies, and increase our admiration for the generals who commanded, and whose commissariat did not fail. The naturalist will find that the bees of this district continue to collect and store up "*mad honey*," as in the days when it proved fatal to the Greeks. We were told it is honey from the wild azalia. Georgia and Circassia present mountains, and, no doubt, minerals, we know little about. Then there is the Crimea: our return transports may bring home samples of the various rocks, and specimens of the fossils so abundant in the oolite and chalk. We should then have visible evidences of the rock cut through in the trenches, and of the fatal Crimean mud. The caves of Inkerman and the ruins of Sebastopol can yield trophies as interesting to science as broken muskets, or as disabled cannon are to national glory. Napoleon I. would not have neglected such hints. Napoleon III. and John Bull may probably "care for none of these things." What is John in his governing capacity? John Bull, the man of science, may think and act with more judgment. Pictorial *sketches* we have had,—good and bad,—more than enough: we wish now to obtain accurate scientific details. These the geologist, the botanist, and concholo-gist alone can give. The field is wide, and, for the first time in modern history, is fully open. At Constantinople, and throughout Asia Minor, the architectural student may visit tombs, palaces, and mosques, and live: he may study at leisure the construction of Santa Sophia: he may see the eight porphyry columns from the Roman Temple of the Sun; and the four "green granite" columns from the Temple of Diana, at Ephesus, with other wonders, "too numerous to mention." He will see how said columns are bound and braced with copper hoops and bars; how said building has given way, and shrunk beneath the ponderous dome, piers having cracked and floors sunk. Turbaned, but obsequious Turks will tout for "*backshish*," like our own cathedral vergers, and offer bits of the glass mosaic to relic-hunters; or said Turks will knowingly and cunningly point to the cross, as it was carved by the Christian builders, thinking thereby to draw an additional infidel sixpence. We should like to know, from one competent to judge, what is really the effect of the exterior of Santa Sophia: it surely must have some features of grandeur. There are also the Hippodrome, the aqueducts, the fountains, and the palaces,—these latter, huge shams having marble steps and marble columns to support wooden entablatures and shingle pediments. We hope our suggestions may not be too late, but that they may be in time to prompt examination and inquiry. Specimens of Turkish bricks, tiles, and earthenware pipes, as used in collecting water for domestic use, will add value to an architectural museum. Any account of existing Turkish waterworks will be useful; and a sample of water from "*the sweet waters of Europe*," for analysis, may serve to throw light on the name.

ST. OLAVE'S GRAMMAR-SCHOOLS.

In our last volume (XIII. p. 564) will be found some particulars of the foundation of the School of St. Olave's and St. John's, Southwark, with a description of the buildings recently erected, under the direction of Messrs. Allen, Snooke, and Stock, architects. The engraving in our present number shows the entrance-tower, with the court-room and residence of the principal on the left-hand side, and part of the classical school, with cloisters under it, on the right.

This valuable school was first instituted by Henry Leeke, of St. Olave's, a brewer, who bequeathed, in 1560, 8*l.* per annum for that purpose. In 1571, a charter of incorporation was obtained from Queen Elizabeth, who ordained that it should be called "The Free Grammar-school of Queen Elizabeth, of the parishioners of the parish of St. Olave, in the county of Surrey," and that sixteen men of discretion, and most honest inhabitants in the said parish for the time being, should be governors thereof. In 1579, the churchwardens assigned to the governors a field called Horseydowne, now Horslydown, containing sixteen acres. This field in process of time was built over, and the leases having expired, the yearly revenue derivable therefrom, and from various other donations and bequests, is about 3,400*l.*

The old school and masters' houses stood in Churchyard-alley, near St. Olave's Church, and were removed in 1830, to make the approaches for London-bridge. A new edifice was then erected on the south side of Bermondsey-street, but the ground being required for railway extension, this also was removed in 1849.

Considerable difficulty having arisen in selecting a new site, it was not till 1852 that the governors were enabled to take possession of their chosen spot, and commence operations.

The new buildings, situate in Queen Elizabeth-street (late Back-street), in the parish of St. John, Horslydown, were commenced in April, 1853, and completed by Mr. Jay, the contractor, in November, 1855: the total cost, including fittings, was under 24,000*l.* The principal materials employed are red brick, from Sittingbourne, in Kent, with blue Staffordshire headers in diapers, and Hare-hill stone, from Messrs. Smith's quarry, near Leeds, Yorkshire. The buildings comprise a court-room, library and offices, large classical and English school, with various class-rooms appurtenant to each, two residences for the principal of each school, and porters' lodges; and they afford accommodation for 800 pupils. It will be seen on the plan that a small part of the design on the right-hand side has yet to be completed. The letters from A to J mark the various staircases.

Assistant Engineer for Dublin.—We have received some comments on the recent election of an assistant engineer at Dublin. The salary is 250*l.* per annum: there were fifty-two applicants.

ST. OLAVE'S GRAMMAR SCHOOL: PLAN OF PRINCIPAL STORY.

GRAMMAR SCHOOL OF ST. OLAVE'S AND ST. JOHN'S, SOUTHWARK.—MESSRS. ALLEN, SNOOKE, AND STOCK, ARCHITECTS.

THE MEDIÆVAL REVIVAL QUESTION.

I REGRET that Mr. Scott should have given a somewhat personal tone to his remarks on my paper, not because it gives me the slightest offence or annoyance,—which I assure you I am far from feeling,—but because it seems likely to confuse the main question.

At the same time I will not deny that he is justified in the line he has taken. I had in some measure rested my case on my own impressions: he naturally wishes that these should not be taken at more than their proper value, and accordingly charges me with having changed my views, with having preached a virtue which I do not practise—namely, patience—and with having allowed my opinions to be biassed by personal considerations, on which account they must be received with caution. Such, I presume, is the drift of his argument.

That my views have changed during the last fifteen years, is no more than I admitted. Few who have pursued a course of study on any subject for that length of time, or who have observed what was passing around them, can say that they have not changed their views in some respects. I stated, "that when few modern Gothic works of merit were in existence, I thought the revival possible, and that a careful study of ancient examples might enable us to work in the ancient spirit." But, after having seen many new Gothic works of great merit, I considered that the attempt to revive the style would not be successful. As soon as I am convinced, by the full success of the Gothic movement, that I am wrong, and that I have mistaken a surmountable difficulty for an impossibility, I shall again change my opinion, and have great satisfaction in confessing it. My judgment is grounded not upon the amount of the progress already made, but upon the direction it has taken. It appears to me to tend rather to mere conformity with mediæval types, than to development of mediæval principles. The progress already made, though very great and most creditable to the energy, talent, and research of those who have attained it, I do not consider to be marvellous, nor more than was to be expected from their exertions. It was probable that after a long course of study among ancient models, some new buildings should appear, not only correct as to general forms and details, but in a considerable measure imbued with the spirit of their types. Many correct Gothic buildings have sprung up, and these I consider as having no small degree of merit. Some have caught the spirit of the mediæval period. These I look upon as possessed of merit of a very high order; but I cannot recognise any such development of mediæval architecture as, without losing its Gothic character, shall meet the wants, conform to the refinement, and express the spirit of the present age; and, in searching for the cause of this deficiency, I thought I discovered it, not in any want of genius or industry on the part of our own architects, but in the nature of Gothic architecture itself.

Mr. Scott, in noticing my first publication on church architecture, says, "Throughout the whole of the book, he seems to take it for granted that our future churches will be Gothic." From this your readers would be led to infer that I recognised or advocated no other style. I find, however, that I said in my 1st vol. p. 44, "The Italian is, perhaps, better adapted for a church than Gothic, where it is necessary to enclose a wide area under a single roof, or to have two tiers of windows on account of galleries, or when the front must range with modern houses." I can assure you, when I prepared my paper for the architectural exhibition, I quite forgot that I had so pointedly referred to the very contingencies which I then brought before the notice of my hearers. After describing some churches of the Italian style, in the neighbourhood of Nice, I remarked (Vol. I. p. 41), "And even in England there are many situations where the horizontal lines of the Italian would harmonize better with the scenery than the more aspiring forms of Gothic." In Vol. I. p. 211, I observe, "The Roman or revived Italian, though grounded on inconsistent principles, nevertheless offers some beauties and advantages unattainable in other styles, and in towns will sometimes harmonise the best with surrounding buildings." In Vol. I. p. 89, I urged strongly, at least strongly enough to call down the wrath of the ecclesiologist, what I have often urged since, the attempt to form a pure and complete round arched style, having the character rather of the Italian than the Norman.

The object of my work was not to revive Gothic architecture, but to offer such suggestions as might tend to the improvement of Church architecture in general, which I by no means considered to be synonymous with Gothic, however probable I might think it that Gothic or mediæval churches alone would be built for some time. I could not easily write on Church architecture without giving my chief attention to the Gothic styles, or dwelling upon their beauties; and if I have given any useful suggestions to the builder of a Gothic church, I am heartily glad of it, and would willingly do so again. If people are determined to build Gothic churches, I can only wish them to be as good ones as possible.

I hardly think my judgment has been warped by any personal feeling against the ecclesiological party. They certainly handled my first publication somewhat roughly, but I have since had no great reason to complain of them. We have often met rather as friends than enemies; and if we have now and then exchanged a rap or two, I hope it has been without malice. I have specially to thank them for their review of my last work, and their full and fair statement of many of the propositions which I most wished to bring under discussion; nor do I quarrel with the strong terms in which, on several points, they have expressed their disapproval. I am sure they will take my part when I am accused of fickleness or inconsistency, and will admit that, to the best of their knowledge, I have continued pretty steadily *qualis ab incepto*.

It was hardly necessary to bring my friend Mr. Winston's name into the discussion, but I may safely leave him to fight his own battles, if he thinks it worth his while; merely remarking that his perfect knowledge of his subject, and the care, labour, and study which it has cost him, might fully justify an occasional demonstration of intolerance on his part, which on mine would be quite unwarrantable.

If any bitter feelings have influenced my judgment, they have been caused by the ruthless tide of restoration which has swept over our ancient monuments, and in so many cases confused or obliterated the most authentic records of their history.

Mr. Scott assures us of the enthusiasm and earnest zeal which exist among the authors and promoters of the Gothic movement. I most sincerely rejoice that their devotion has not entailed upon them the necessity of any heavy sacrifice as regards their interest, prospects, or reputation. They have not been struggling without the favour or encouragement of friends. The style which they are labouring to restore to its perfection is that which has been selected for nearly every new church during about a quarter of a century, and seems still likely to retain its predominance. I cannot flatter myself that I have been in any degree instrumental, as Mr. Scott intimates, in urging or assisting them in their present course; but if so, I am happy to think I have done them no injury; and if I were to deny them my share of the praise to which they are so justly entitled, they would not feel the loss. No opinions expressed by me, or many more, can shake them from their position; nay, whatever may be the actual result of their labours, whether the re-establishment of the Mediæval Gothic as a living progressive style, or the introduction of one altogether new, they will in any case occupy a worthy and conspicuous page in the annals of architecture. They have already achieved no ordinary triumph. if they fail in the full attainment of the object they propose to themselves, it will be only because it involves an impossibility. I must, at least for the present, leave the arguments on the main question as they now stand. The imperfection I noticed in geometrical tracery is but one of many that cannot be avoided, however they may be disguised or modified. Mr. Scott's observation, that "No one has had much to do with architecture without knowing that little mathematical inaccuracies beset him in every style, which it is a part of his art so far to abate as to render them inoffensive," enables me to refer you to a proposition I suggested in my "Architectural Notes in France," and which, though I do not lay it down dogmatically, I think deserves some attention, namely, that a refined style requires a design providing for the strict mathematical observance of certain laws, expressed or understood, even though it may admit of inaccuracies in execution (p. 47, &c.);—in short, that a design should bear the test of accuracy instead of requiring the assistance or disguise afforded by inaccuracy. I do not suppose the proposition to be stated by me for the first time, though I do not remember to have met with it. I am sorry it did not suit my purpose to practise the patience I have preached by waiting forty or fifty years longer before expressing my opinions. I thought, if I had anything to say, I had better say it at once, even at the risk of being premature. However, as I am proved to have no patience myself, I do not feel justified in trespassing any longer on yours. J. L. PETIT.*

THE PROPOSED ROAD ACROSS ST. JAMES'S-PARK.

ON the motion of Sir Benjamin Hall, a select committee has been appointed to consider the best means of communication between those parts of the metropolis which lie north of St. James's-park and those parts which lie south and south-west thereof, and to report thereon to the house.

The committee consist of the following gentlemen;—Sir Benjamin Hall, Lord John Manners, the Chancellor of the Exchequer, Mr. Disraeli, Lord Robert Grosvenor, Lord Hotham, Sir Joseph Paxton, Mr. Stephenson, Sir John Shelley, Mr. Hutchins, Colonel Boldero, Mr. Drummond, Mr. Stuart Wortley, Colonel Wilson Patten, and Mr. Milnes.

Amongst the suggestions which have been sent to us is one from Messrs. Horner and Molesworth, who propose a *sunk* road under the park, and through the ornamental water:—"The road," they say, "would commence in Pall-mall, close to St. James's Palace, and would fall with an inclination of 1 in 24, until it reached the required depth. Where it crossed the Mall (or broad walk), the ornamental water, and the Birdcage-walk, it would be arched over: in other places it would be an open road, with retaining walls at the sides: the tops of the retaining walls would be coped with stone, just above the level of the ground, and would have a light iron railing fixed to the coping."

For our own parts we do not see the necessity for a carriage-way across of any sort. Opening the gates at Marlborough House, in Pall-mall, at Buckingham Palace, and Constitution-hill, would give all the accommodation required, and cost nothing.

The magnificent Mall, extending from the Palace-gates to Spring-gardens, is divided by ranges of trees into four alleys. Might not *one* of these be dedicated to the public throughout the whole line, and a way opened into Pall-mall at the end of it? The retirement of the palace need not be interfered with, while to the public the accommodation would be of incalculable benefit; but to make that advantage complete, there should be no restriction, as in Hyde-park, against Hackney vehicles. So far as the *drive* is concerned, perhaps there is some reason in the prohibition; but in the direct line, the distinction is insensate; and, as relates to a great commercial capital, not in the spirit of our free constitution. The road in the Regent's-park, where these absurd exceptions are not made, is not the less orderly.

The bridge and roads across St. James's-

* We have received the following note:—"Sir; I feel it my duty to correct an error I made in my paper on Mr. Petit's lecture. I alluded in it to a church spoken well of by Mr. Petit in his first book, but which a friend of mine had found to be very inferior. My friend has since told me that, though this was the case, I was mistaken as to the church he meant. I must, therefore, withdraw the statement so far as it helps my argument, to which I find that it is inapplicable; and I should be sorry to say anything which would appear intended to impugn Mr. Petit's judgment in a matter not affecting the argument in hand, though we may fairly differ in our judgment on facts as well as on principles.
GEO. GILBERT SCOTT."

park, designed by Mr. Pennethorne, are very handsome, and include a large amount of ornamental sculpture; but we must nevertheless continue strongly opposed to the proposed division of the park, and hope the committee will elect other means to give the thoroughfare required.

THE GOVERNMENT AND ARCHITECTS' REMUNERATION.

WE are informed that a Treasury minute has been drawn up to the effect, that in future 3 per cent. only is to be paid to the Government architects for public buildings! It needs no foresight to see that, should this be the case, the precedent will greedily be adopted by public companies, boards, &c. and the position of the architect be greatly injured. Some stir should at once be made by the profession to prevent the threatened evil. In the greater number of cases, the present received commission of 5 per cent. affords but bare remuneration for the proper discharge of an architect's duties. The Institute should at once move in this matter if the statement be found correct, and doubtless will do so.

THE BARRACK COMPETITION.

AT last we are able officially to make known the names of the successful candidates in the Barrack competition. 114 sets of designs were sent in, namely, eighty-nine for infantry, and twenty-five for cavalry; the estimated costs varying from 28,000*l.* to 230,000*l.* The designs fill six of the committee-rooms at the House of Commons, and show that many of the competitors have taken great pains in the matter. The following are the names of the successful candidates:—

For Infantry.

1. Mr. Geo. Morgan.
2. Messrs. Lockwood and Mawson.
3. Mr. John Jones.

For Cavalry.

1. Messrs. T. H. and M. D. Wyatt.
2. Mr. Geo. Morgan.
3. Mr. Wm. Young.

Mr. Morgan and Mr. Young have worked together to some extent, and it will be seen that they have had the good fortune to take three of the six premiums. The first on each list will of course be employed, when occasion serves, to carry out his design. Lord Monck was the chairman of the Committee of Selection, and Professor Donaldson was added to the committee to assist.

METROPOLITAN BOARD OF WORKS.

AT the meeting of 22nd ult. the Secretary, Mr. Woolrych, read the report, adopted by the committee of the whole Board, as to the appointment of officers, recommending, as two principal assistant clerks, John Pollard and Edwin Cresey, at 350*l.* per annum each. As assistant clerks, Wm. Tyler, at 175*l.*; C. F. Pocock, 120*l.*; W. P. Andrews, 100*l.*; James Pafe, 90*l.*; and George Edward Link, 80*l.* per annum. In the accountant's department, E. F. Browne at 180*l.*; Charles Nixon, 140*l.*; and Henry Edwards, 100*l.* per annum. That Mr. Thomas Lovick, Mr. John Grant, and Mr. Edwin Cooper, be appointed assistant engineers during the pleasure of the Board, at a salary of 350*l.* each, with an allowance of 50*l.* per annum for travelling expenses respectively. The following as clerks of works, at three guineas per week each, viz. John Douglas, W. Walker, J. J. Lloyd. E. Lacy, J. Robinson, and C. Andrews. That the following be draughtsmen, at three guineas per week: W. Graves, D. M'Laughlan, T. Granger, and H. Coffee; at two-and-a-half guineas per week—R. J. Hunter and E. D. Hacman. As engineer's clerks, W. Conquest, at 175*l.*; Thomas Graham, 150*l.*; and H. R. Merly, at 100*l.* per annum. As clerks to the accountant—principal clerk, Walter Newell, at 200*l.*; assistant, Henry Hale, at 150*l.* That Messrs. Smith and Son be appointed solicitors during the pleasure of the Board.—Some discussion ensued in reference to a proposal to substitute Mr. Donaldson as an assistant engineer instead of Mr. Grant; but the report was finally adopted by a majority of 21 to 15.

The appointment of a committee of works, to consist of fifteen members, was moved by Mr. Wright, pursuant to notice. It was not intended, he said, to delegate to such a committee any executive functions, or any of the powers of the Board itself. He wished to divide the metropolis into about fifteen districts, with reference to public works and to this committee.

Mr. Hunt submitted that they ought not to proceed with the improvements of the metropolis in particular parts, until they had before them some grand scheme for its general improvement, and had recommended that scheme for adoption. If the object of the motion was to let the public know that the Board was ready to receive plans for the general improvement of the metropolis, and then to proceed to select that which they thought best, he was prepared to support the motion of Mr. Wright.—Mr. Hows objected to hand over to such a committee the power which, as was implied in the very name of the Board, it ought itself alone to exercise.—Mr. Turner said it was impossible to consider any particular measure of improvement *per se*, till they had before them such schemes as might be offered for the improvement of the metropolis as a whole. Mr. Bidgood, Mr. Barslem, Mr. Hawkes, Mr. Corrie, Mr. D'Iffanger, Major Lyon, Mr. Hall, Mr. Ware, Mr. Harrison, Mr. Carpmell, and the president, having also joined in the discussion, *pro et con.* the motion for the appointment of the committee was put and carried.

Re Building Act.—On (this) Friday, February 29th, the Board will take into consideration a report from the committee appointed to consider the duties of the Board under the Building Act, containing the following recommendations:—

That the application of Mr. Charles Warr to erect in the Wandsworth-road certain dwelling-houses and shops beyond the general line of frontage be not granted.
That the application of Mr. George Needham to construct the eaves of four adjoining houses in the district of Hackney, in the manner described in such application, be granted.
That Messrs. J. H. Taylor and R. Parkinson be apprised that in the opinion of this Board they are continued by the Metropolitan Building Act as district surveyors of Tottenham and Hornsey, respectively, for the purposes of that Act.
That the hamlet of Penge be constituted a separate district, for the purposes of the Building Act.
That the parishes of Plumstead and Eltham be constituted a separate district, for the purposes of the Building Act.
That Putney and Roehampton be constituted a separate district, for the purposes of the Building Act.

At the Board on Friday, 22nd, it was ordered that the election for the new districts take place on Friday, the 7th March.

THE LEWISHAM DISTRICT-SURVEYORSHIP.

THE QUEEN *v.* BADGER.

AN appeal on the part of Mr. Badger was heard at the Court of Queen's Bench on the 23rd ult. to quash an order of the justices of Kent, for the removal of a district-surveyor from his office. The point in issue was, whether the justices had exceeded their jurisdiction.

Mr. Justice Coleridge delivered judgment, and said the Court was of opinion, after full consideration, that the justices had no jurisdiction in the matter, and that the order for removal of the surveyor ought to be quashed.

Lord Campbell's opinion was read, but as the learned lord's judgment stood alone, Mr. Justice Wightman and Mr. Justice Erle agreeing with Mr. Justice Coleridge in their judgment, the order was quashed.

Mr. Badger will therefore be reinstated.

THE METROPOLITAN BUILDINGS ACT.

HOT-WATER PIPES.

ON the 21st ult. Messrs. John Weeks and Co. of King's-road, Chelsea, appeared before Mr. Traill, at the Greenwich Police Court, to answer a summons taken out against them by Mr. Browne, acting in lieu of the district-surveyor, who was the architect for the alterations, charging them with having placed certain pipes for the conveyance of hot water nearer than 3 inches to the woodwork of the pews of the church of St. Paul, Deptford, contrary to sec. 1, rule 4, of the Metropolitan Buildings Act, 18th and 19th Vict. cap. 122.

The defendants acknowledged the fact, but contended that the provisions of the Act of Parliament did not apply in the case, inasmuch as the water to be conveyed through the pipes could not, by any possibility, be used at a higher temperature than 212 degrees, and that wood would not char under a temperature of 500 degrees.

Mr. Traill said it was not a question as to the degree of heat to be conveyed that the words of the Act of Parliament applied to, but the purpose for which the pipes were to be used.

Mr. Browne said the question had been fully discussed before a committee of the House of Commons, and the evidence of Mr. Braidwood went to show there was danger to be apprehended in such cases. Besides, although there might be no danger from water supplied at a heat of 212 degrees, yet the pipes might, at some future time, be used as a means of conveying dry heat at a much higher temperature.

Mr. Traill said he had no alternative but to make an order on the question, as the point raised called upon him to do no other than expunge the words of the Act of Parliament.

The defendants said it was a question of the highest importance, and affected nearly every church and well-finished house in which hot-water pipes were used.

It was suggested that the Board of Works might be induced to apply to Parliament for an amendment of the Act.

Notice required to Surveyor.—On Saturday last, Robert Dunger, builder, was summoned by the District Surveyor of St. Pancras, to Clerkenwell police-court, for penalties incurred by commencing alterations to two houses without giving proper notice. The builder had called at the surveyor's office, and although Sec. 38 was pointed out to him, and the absolute necessity that his notice must be in writing, he refused to give any other than a verbal communication: he was accordingly fined, and had to pay the costs in both cases.

THE CONDITION OF THE THAMES.

INSTITUTION OF CIVIL ENGINEERS.

THE discussion of Mr. Robinson's paper was continued on the 5th and again on the 12th of February.

It was contended, that the health of the inhabitants should not be endangered on account of the conflicting claims of the Government and of the Corporation to the rights of administration, or of dealing with certain powers, by which alone a great benefit could be conferred upon or withheld from the metropolis; for there could be little doubt of the miasmatic vapours arising from the impurities held in suspension by or deposited upon the mud-banks by the waters of the Thames augmenting the spread of disease. It was, therefore, incumbent upon the contending parties rather to combine their forces for the execution of the works of improvement for the common weal.

Ague was formerly the prevalent disease; but the drainage of the land of the marshy districts near the river almost obliterated that malady: then followed fevers of various kinds; but they were diminished or prevented by abolishing cesspools beneath the houses, and by more rigid attention to house sewerage: then came cholera, the recurrence of which would doubtless be in some degree counteracted by ameliorating the state of the banks and shoals of the river, to whose noxious vapours much of the disease of the metropolis must be attributed, when it was considered how many millions of gallons of vapour were given off per day from the river alone. It had been stated that the mortality was three times as great on some parts of the coast and on the shores of muddy rivers, as in the inland districts; and there could be little doubt, that there would be a great accession of disease, but for the constant ebb and flow of the tide. It was therefore much to be doubted, whether any plan by which that incessant change in the water of the river would be to some extent arrested, would be beneficial to the general health of the metropolis.

There could be little doubt also of the advantages to be derived from such shore works as would give to the bed of the river an uniform capacity. The propositions of Wren, Rennie, Mylne, Wyatt, Trench, Martin, Walker, and Page, all had that object in view, and it was most desirable that the Government and the City should settle their differences, in order to the execution of some definite and comprehensive plan.

Recurring to the plan proposed in the paper, it was contended that the scheme of raising the sewage from the mouths of the present sewers would be so expensive as to amount to a prohibition, especially if such power was provided as to enable all the storm-waters to be raised. Besides, if the sewage was all dammed back to the extent that would be necessary for such a system, large portions of Lambeth and Westminster would be rendered uninhabitable.

With reference to an address [by the City solicitor], remarkable not only for the humour and vivacity with which the statement had been given, of the long and close intercourse between the Corporation and the river, and the litigation now induced by the pretensions of the Government, but which had even raised from his bed the venerable genius of the stream, and induced him to unveil his griefs, it was doubted whether the confidence had been fully given; whether, in these conversations, which had probably taken place in the "cool tranquillity of dewy eve," and under the genial influence of City hospitality, Old Father Thames had not made some remonstrance, in a tone of complaint, of sundry negligences on the part of his old friends; of the utter neglect of the grand plan of Sir Christopher Wren; the entire disregard of architectural propriety, or of uniformity of

line, exhibited by the warehouses and wharfs; vast shoals and mud banks on all sides; several of the bridges in a state of jeopardy; and that dire foe "vested interest" allowed to rise up as a lion in the path, barring all improvement. The Corporation had only themselves to blame for all this; but as it appeared that there was such confidential communication between that plain-spoken old gentleman Father Thames, and the worthy energetic legal representative of the Corporation, it was to be hoped that, henceforth, all good plans for amelioration would receive active support and assistance in the City;—for instance, that concessions would be granted by the Corporation to persons desirous of improving their water-side premises, merely on the production and approval of their plans, instead of obliging them, as at present, to obtain the sanction of their neighbours, which was virtually a prohibition, because every man knew that he would be obliged to follow the example of his more energetic neighbour, or he would soon find his premises at the bottom of a mud trap, and out of the reach of the river.

The complaints against Government interference were but too well founded, as was, unfortunately, felt by all who had Bills before the House, for any works on the banks of the Thames. The Bill might go on very smoothly until the third reading, when a sleek gentleman made his appearance with an application merely for the insertion of a little clause for the protection of the rights of the Crown; which meant, that all plans should be submitted to, and be approved by, various heads of "Circumlocution" Offices; the inevitable result being, that the unlucky wight seeking to have his plans approved, wasted his time, and then had to pay a good round sum for some imaginary right supposed to be conceded to him, for doing something which could be of no earthly use to him, or for proceeding without let or hindrance to some place whither he had no intention of or interest in going. Now if he was thus mulcted for the welfare of the nation, or the benefit of our sovereign lady the Queen, no one would grumble very much; but when it was known that the money so obtained only went to fatten "the red-tape worms," the matter was beyond endurance.

ARCHITECTS' RESPONSIBILITIES.

Sympson *v.* Lloyd.

In the Court of Exchequer Jan. 29, Mr. H. T. Cole showed cause against a rule for a new trial, which had been granted on the ground that the verdict which passed for the defendant at the trial at Bristol before Mr. Justice Williams was not justified by the evidence. It appeared that the plaintiff was an attorney, and that he had employed the defendant, who was an architect, to prepare plans and drawings for, and to superintend, the alteration of a house near Weston-super-Mare, on which he contemplated an expenditure of nearly 3,000*l.* The works were extended over a period of six years, and, on their completion, the defendant sent in his bill to the plaintiff, who, although he had occasionally complained of delay on the part of the defendant, did not make any direct or serious imputation on him. The plaintiff, however, disputed the amount of the bill, which was 322*l.*; and, after some legal proceedings, he settled the action through a friend and agent, by paying a sum of money which, with past payments, amounted to 230*l.* With this settlement the defendant deemed that his connection with the plaintiff ceased; but the plaintiff then brought this action against him, in which he claimed compensation from the defendant *for alleged neglect of duty as architect, and for the delay in the prosecution of the works occasioned by the absence of working drawings and plans.* At the trial the plaintiff succeeded in establishing his case to a trifling extent, but the jury disregarded the evidence, and, acting on prejudice, gave a verdict in favour of the defendant. When the report of the learned judge was read, he certified that he thought the verdict ought to have been for the plaintiff for nominal damages, but added that he could not regret the verdict which the jury had given. It was now contended, for the defendant, that the jury were justified in the course they had taken, as it was clear that the claim of the plaintiff was included in the settlement of the defendant's action against him, and that as the jury were the best judges of the facts, their finding ought not to be disturbed, or, at all events, it could only be so on payment of costs.

Mr. Serjeant Kinglake and Mr. Karslake, who appeared for the plaintiff, were not called upon to support their rule, for

The Chief Baron was of opinion that the report of the learned judge was conclusive, and that, the jury having taken a wrong view of the evidence, the case must be sent down to a second trial, unless the defendant would consent to a *stet processus*, the result of which would be that neither party would get his costs. There was no doubt that the plaintiff had made out a case, but it was one of a most trumpery description, and one which entitled him to damages of the smallest, the lowest, the meanest amount. A farthing, or any smaller sum by which the jury could have signified their contempt for his cause of action, might well have been awarded as damages; but to the verdict, with some amount of damages, the plaintiff had made out his title, and the jury were not to be allowed to find for the defendant in defiance of the law and evidence. It might be that the Court would gladly deprive the plaintiff of his costs though he might show himself to be entitled to a verdict; but the Court could not make a law for a particular case or allow a jury to do so. The judgment of the Court, therefore, was, that the rule for a new trial must be made absolute, but without costs, as the verdict was so clearly wrong; but the better way for both parties would be that the defendant should agree to a *stet processus*. Judgment accordingly.

COMPETITIONS.

Darlington Cemetery.—In reply to the advertisement from the Burial Board, which appeared in our columns, thirty-two competitors entered the field, some of whom sent eight or ten designs, making a total of 252 drawings. These were all hung in the Mechanics' Hall for about a month, when the Board selected five designs marked "Labor et spes," (two) "Ad rem cum Deo," "L'esperance," and "Excelsior" (which was also the motto adopted by two other competitors). After satisfying themselves that the plan could be carried out for the estimated amount, the Board selected "design No. 1" marked "Labor et spes;" but have not yet agreed as to the recipient of the second premium. The successful competitor is Mr. Pritchett.

Luton Schools.—Sir,—surely the advertisement for designs for the new National Schools at Luton, Beds. must be intended as a hoax, merely to see whether architects are become totally imbecile, as they offer no inducement, but charge five shillings for a plan of the site to candidates for the *honour* and *mental* as well *manual* labour, and the *materials* required to produce these designs. Now, suppose this Committee were offered the *privilege* of sending one cwt. of tea, sugar, or raisins, one score pair of boots, one hundred tin kettles, or half a hundred straw bonnets, to an unknown *Committee*, and ordered to pay the carriage, and five shillings for a printed description of the articles required in competition, what would they think of the sanity of the advertisers?

An Architect.

METROPOLITAN IMPROVEMENTS.

At a Court of Common Council, held in the City on the 21st ult. the chairman of the City improvements committee brought up the report upon the reference to consider of the appropriation of the site of the Fleet prison and other vacant ground belonging to the City. It stated that the committee were of opinion that no steps should be taken for the appropriation of the site of the late Fleet prison until it be determined whether anything is to be done respecting the removal of Newgate-market, and the arrangement of the markets of the City generally; and whether any alterations are likely to be made with respect to the Central Criminal Court and the gaol of Newgate, so that the site might remain available for any great and comprehensive improvements which may hereafter be agreed upon. After some discussion, the report was agreed to. A report by the City Lands Committee, on the construction of new City law-courts, was then considered. This report, after some preliminary explanation and detail, recommended that the offices lately used for the transaction of the Bridge House business and the Guildhall kitchen, with the adjoining offices, should be converted into new courts, agreeably to plans accompanying the report, and at an estimated expense of 7,500*l.*, and that in the mean time no expense should be incurred in making alterations in the existing courts of law. In the course of the discussion which ensued, Mr. Bunning, the City architect, stated that adequate arrangements for the accommodation of attorneys would be made in the law courts, and that the crypt under the hall would undergo no defacement or injury by being used for the purposes of a kitchen two or three days in the year, especially as the cooking apparatus by gas might be adopted. This report also was agreed to. A voluminous report on Blackfriars Bridge repairs was then made by the Bridge House estates committee, detailing the enormous sums of money expended in repairing Blackfriars Bridge from time to time, and recommending that the unsightly water-ways under the fifth and sixth arches of Blackfriars Bridge, and the dolphin piles and booms connected therewith should be removed, and that in lieu thereof iron ribs should be placed under these arches as shown by the model accompanying the report, at the estimated expense of 17,000*l.* This report was ordered to be printed.

Notices of Books.

The Food of London. By George Dodd, author of "British Manufactures," &c. London: Longman and Co. 1856.

The supply of food to a great city is, indeed, amongst the most remarkable of social phenomena,—full of instruction on all sides. And, perhaps, the most wonderful of all its characteristics, at least so far as regards the supply of food to London, is the fact, that there is no organised commissariat—no individual responsibility,—that, in fact, "nobody does it." Yet there are *nine hundred millions* of daily rations annually supplied, and by never failing daily, weekly, or other periodical instalments, within the bounds of our immense metropolis! Here is a grinding-mill, of two-million-and-a-half jaw-power, ever at work, and grist ever going into its hoppers and grinders! Not only, indeed, is abundance provided, even while hundreds may be perishing from want of the means to purchase it; but, as Mr. Dodd remarks, the rations are so infinitely varied as to meet every caprice of taste; and if a gourmand or an epicure only wish, once or twice perhaps, for "a dish of peacocks' brains, or of stewed humming-birds, or dove's hearts," doubtless, if his pockets be well lined, "his taste will be gratified: it will simply be a question of price." That London is better supplied without a commissary-general's department than with one who can doubt? Yet how differently such matters are managed in Paris! What a heavy responsibility rests on the shoulders of the authorities and the Government there, even because of a very partial and limited intermeddling with the City's supply. But probably the poor of Paris reap some immediate benefit thereby, which those of London lose in consequence of the want of some such ruling power. The London poor were lately made to pay nearly double price for sugar to their tea and coffee for a time, simply in consequence of certain selfish, greedy, and over-reaching speculations on a great scale amongst the London merchants. Perhaps it would have been well for the London poor had the speculators been compelled by some over-ruling and despotic authority to disgorge their ill-gotten gains, or rather, had they been prevented from reaping so illegitimate and iniquitous a harvest. Yet we should not like to see much intermeddling with the food supply of the people for all that. Our own present freedom of trade, however, or want of interference with its regular routine, did not always exist. In times of old, the corporation of London not unfrequently thrust in a charitable and kindly hand between the poor and their necessities or their oppressors. Thus Stow tells us of two very bad seasons in succession, 1392 and 1393, when the people sickened by eating nuts and apples, wanting better food, and when the mayor and aldermen advanced corn at very low prices to the poor. Again he tells us that the pillory and a pair of stocks upon it at the cage on Cornhill was "for the punishment of bakers offending in the assize of bread, and for millers stealing of corn at the mills." Some such implements for behoof of our modern adulterators, not only in the baking line, but in hundreds of other branches of business connected with the food supply of the metropolis, might have a *wholesome* effect on scoundrels, as well as on their victims, even now.

Mr. Dodd's volume is a very elaborate one, and full of research, as regards both the ancient and the modern supply of food to London. Much of it, however, unavoidably, relates to the metropolis only by inference, and more properly belongs to the subject of the food of England, or of Britain, or the British Isles. The author is chary, and most properly so, of presenting general or aggregate calculations as to slump quantities, or costs, in the matter of supply. Indeed, it must be very difficult, or nearly impossible, correctly to estimate the total supply of almost any one single article, derived from every particular source. Accordingly, he more frequently gives us exact details

of the sale of certain special markets, or of the conveyance by certain particular routes or railways, leaving us rather to infer the probable sum-total, than to be guided by any given figures. Thus we are informed, that "the quantity of milk now brought to London by rail, is prodigious, chiefly by the Eastern Counties Company: in 1854, the conveyance of this company exceeded three millions of quarts." Again; — "the seven railway companies brought nearly 1,200,000 head of live stock to the metropolis, in 1853:" — "in the year 1854, nearly 12,000 coal-laden ships arrived, bringing 3,400,000 tons of coal; and as the railways brought nearly 1,000,000 tons more, the figures show how extensively large was the aggregate quantity." In the first half of 1855, the South-Eastern Railway brought up 16,000 sacks of wheat, together with 21,000 sacks of flour; but some of the other lines far exceed this limit. Vessels from foreign ports, too, frequently bring enormous cargoes of 2,000 or 3,000 quarters at a time. There are 2,500 bakers' shops in the metropolis at present, all "doing" a greater or lesser number of "sacks" a week, — say from ten to twenty, as frequently advertised. A round guess has been made that London disposes annually of 700 to 800 tons of mere watercress, or fifteen millions of bunches of that wholesome little article. In assisting towards the washing down of the more solid provender, one firm alone, Messrs. Truman, the brewers, are said to possess four vats that will contain 80,000 gallons each, and store vats, altogether, for 3,500,000 gallons. The store in spring at one of these vast establishments, has even reached 4,000,000 gallons. The author gives a list of fifteen of the principal brewers of London. "Some computers," he observes, "have guessed that there are 1,200,000 barrels of beer and ale consumed in London annually; while another computer has set down 2,000,000 barrels as the probable quantity brewed in London; and a third has named about a thousand million tumblers' as a probable quantity,—estimates but little accordant, and tending to show how difficult it is to arrive at correct results on such a subject. If, as there seems not much doubt, the two great breweries send forth 50,000 gallons per day each, the magnitude of the trade is rendered sufficiently apparent."

In the estimations of a careful and discreet writer such as this, one cannot but confide with much more surety and satisfaction than in the slap-dash of more daring and *effective* authors. In all the 524 pages of Mr. Dodd's volume, the interest never flags; and the abundance of research makes itself obvious in every page. The portion of his work devoted to old London usages, in respect to food and drink, to "meals," and manners, and to social life in general, is particularly interesting, and replete with substantial "entertainment," — "for man" at least, though not for "beasts." The question of food for the body is made to supply food for the mind.

VARIORUM.

MR. TIMBS'S "Year-Book of Facts in Science and Art," for 1855-6, has been issued by Bogue, of Fleet-street. It is illustrated with a wonderfully good likeness of Sir Roderick Impey Murchison, and is really a most useful and interesting publication, in which all the more important facts (and theories too, occasionally) in science and in art that have been elicited in the course of the past year are recorded in moderate compass and in a get-at-able form. All who peruse it will derive refreshing and pleasant reminiscences of the progress of science and art throughout the year: even the facts one has aided in contributing to the store acquire a new interest when thus seen ranged in their new rank and file, and stored away in an easily available shape, for future reference.——Under the title of "Chamouni and Mont Blanc" (published by Cornish, High Holborn), Mr. Eustace Anderson gives a pleasant account of his ascent of the monarch of mountains, on the 15th of August, 1855,—an ascent described in the journals at the time. Mr. Anderson condemns the present system pursued as to guides, which prevents travellers having the assistance of those in whom they have confidence, unless it happens to be "their turn" on the roll.——Hardwicke's "Shilling City Guide" is a pocket directory, containing a list of public companies, assurance offices, and a variety of useful information.—— Mr. Fairbairn's new book, "Useful Information for Engineers" (Longman and Co.) is certainly not misnamed. It will have our attention at greater length before long.

Miscellanea.

ILLUMINATING CANDLES.—Your correspondent— "Deborah H."—may *illuminate* her candles, of whatever kind they may be, by dissolving a lump of *spermaceti* of the size of a filbert in 1 ounce of rectified ether; then adding 5 ounces of *spirits of wine*, and using the mixture as the menstruum for her colours. *Mineral pigments* should be avoided as much as possible; and with the softer varieties of *composites*, one colour should be allowed to *dry perfectly* before another is laid on near it, otherwise sharp outlines will be unknown, and the whole will present the attractive appearance best expressed by the word *smudgey*.—W. L. S.

RAILWAY COMPETITION AND CHEAP FARES.—In course of the apparently reckless and ruinous competition which has been going on of late between the Great Northern and the North-Western Railway Companies, a result has even here been realized which fully confirms the truth of what we have so often urged as to the profit of comparatively low fares when contrasted with high, although in the present instance such confirmation could hardly have been anticipated, and indeed could scarcely be expected long to hold good. From Doncaster to London, previously to the present competition, the average weekly passenger traffic yielded about 60*l.* drawn from 40 passengers. During the first week of the cheap trains, the sum realized (from 556 passengers) was 104*l.* 2s.; and although, doubtless, a rush might be expected at the outset which would not be very likely to continue for any length of time, nevertheless, at the close of last week, the receipts at the same station for the up-trains during the week amounted to no less than 146*l.* 17s. derived from 775 passengers. An agreement to refer the dispute back to Mr. Gladstone has probably put an end to the present competition; but it ought to teach every railway company a lesson in the science of profit and loss.

THE SOUTH-STAFFORD WATERWORKS.—The turning of the first sod of these works at Lichfield by Lord Ward, took place on Friday in last week. The district which this company proposes to supply with water, extends from Walsall on the north to Dudley and Rowley Regis on the south, and from Westbromwich on the east to Bilston and Sedgley on the west. It includes, besides the towns above named, Lichfield, Wednesbury, Darleston, Willenhall (if not supplied by the Wolverhampton Waterworks Company), Tipton, and Oldbury, containing an aggregate population of upwards of a quarter of a million of souls. It is proposed in the first instance to make provision for a daily supply of four million gallons, which will be collected at Lichfield in a reservoir capable of holding sixty million gallons, and pumped up from thence to a reservoir of similar capacity at the Moat Hill, near Walsall, from which it will flow by gravitation to reservoirs at Wednesbury and Dudley, for the supply of the district, the pipes to be laid alongside the South Staffordshire Railway. The contract for the construction of the reservoirs at Lichfield and Walsall was announced to have been taken at the half-yearly meeting held in September last, and although some delay occurred, the contractors engage to complete the works in the course of the present year.

THE IRON TRADE.—The ironfounders in Glasgow number about fifty, and we observe that another has just opened in St. James'-street, Paisley-road. Within twenty miles of Glasgow there are also about as many more; so that the consumption of pig iron in this neighbourhood is now upon a very extensive scale, particularly for the production of castings for railways, gas and water works, buildings and bridges. ——Mr. Mickle, of Willington, has obtained a patent for the economising of fuel in iron smelting by the dry distillation of coal, and the use of coke and gas in the blast furnace as fuel, causing, it is said, a much larger production of iron, of improved quality, with an average saving of 7s. to 15s. per ton of pig metal.—— Mr. E. Ripley, of Troy (U.S.), has taken out a patent for a method of casting metals, which consists in a peculiar arrangement for quickly withdrawing the air from the mould, so as to insure a better filling up of the same.——Mr. A. Warner, of New Broad-street, has taken out a patent for combining sheet-iron or steel with sheet-lead, zinc, tin, copper, or their alloys. Any two sheets to be combined have a coating of soldering material placed between them, and they are subjected to heat while pressed in a flat state until completely united.

ARCHITECTURAL INSTITUTE OF SCOTLAND.—The Architectural Institute met on Monday, the 18th, Mr. P. Wilson, architect, presiding. A paper was read by Mr. T. Davies, on the relative merits of wrought and cast-iron, as applied to beams for building purposes. Mr. Davies then entered into calculations of the strength of different sections of cast-iron beams; the result of which was, he considered, for general purposes, the most eligible section of beam is that having a web from $\frac{1}{3}$ to $\frac{1}{2}$ of the sectional area, and flanges from $3\frac{1}{2}$ to 1, or 3 to 1. The paper was illustrated by a series of tables and diagrams. It was agreed that the Institute should consider about being at the expense of further experiments on the subject, which Mr. Davies consented to superintend. Mr. John Murray, advocate, then read a paper on "The Laying-out of Open Spaces in Towns." Mr. Murray, after discussing the subject generally, stated as his opinion that while large spaces like West Princes-street-gardens and Queen-street-gardens, were most advantageously enclosed and laid out, at other places, where there was no great extent of ground—such as the spaces at Nicolson-square, and at the crossing of Walkes-street and Melville-street—there ought to be no enclosure, but the open space laid down with stone pavement.—*Edinburgh Post.*

ARCHITECTS' BILLS.—At the Cardiff County Court, in course of last week, an action was brought by Mr. George Chittenden, architect, against Mr. V. W. Pritchard, a gentleman resident at Crofta, near Llantrissent, for payment of 11*l.* 18s. for attendances and advice respecting a dispute between the defendant and his builder, Mr. Waller, of Cardiff, and for making certain drawings for additions and alterations to his house at Crofta. The sum of three guineas had been paid into court by defendant. In course of the evidence led, it was proved to the satisfaction of the judge, by the evidence of the plaintiff himself, that he delivered the ground-plan in dispute to the defendant personally, pointing out to him afterwards, on his asking plaintiff for the one-pair plan, dotted lines on the ground-plan, which indicated what defendant required. In respect to this ground-plan, defendant denied, on oath, that he ever either instructed or received any such plan or drawings of any description, from plaintiff, although he admitted that he had consulted him, and for the advice given had paid in the three guineas lodged in court as adequate compensation. The judge expressed his dissatisfaction with certain portions of the defendant's evidence on the one hand, and his favourable impression of the plaintiff's on the other, and at once gave a verdict for the plaintiff.

THE SCRIPTURAL MUSEUM.—The project for the establishment of a Gallery of Scriptural Illustration, with the view of awakening an interest in the study of the Scriptures, and collecting materials for their elucidation, and for the confirmation of their historical accuracy, is assuming a definite form. Rules and regulations have been printed, and the promoters meet at the rooms of the Palestine Archæological Association, in Hart-street, Bloomsbury, where the Rev. Mr. Edwards receives communications and contributions. Amongst the subjects embraced in the collection, are Landscape Scenery of Palestine, Models of Jerusalem, &c. Sacred and Domestic Antiquities of the Israelites, Assyrians, Egyptians, &c. &c. A scheme of lectures will also be organized in connection with the Institution.

SANITARY PROGRESS AT CROYDON. — From printed mortality tables, &c. for the parish of Croydon, for the years ending December 31, from 1848 to 1855 inclusive, it appears that a large proportion of the zymotic class of diseases, occurring at Croydon, prevail in those districts without drainage or water supply. The total number of deaths from all causes last year was 508, which is less by 112 than would have occurred at the average rate of mortality per annum for the last seven years, allowing for increase of population. The births for the year were 747. The total number, of houses in the parish is now 4,287. Of this number there are in the special district 3,296; and of these supplied with water, 2,046; showing still without water supply 1,250; and probably 200 or 300 above that number in the special district unconnected with the drains. Notices of 178 new houses were received and approved in 1855.

THE ARCHITECTURAL EXHIBITION.—In the report last week, the printers turned Mr. Theodore *Phyffers*, the sculptor of the pleasing group called "The Heavenly Chorus," into Mr. Phyggen. We gladly correct the error, and add that the same artist exhibited some wood-carving deserving notice.

LONDON AND MIDDLESEX ARCHÆOLOGICAL SOCIETY.—A meeting of this Society was held at the French Gallery, Pall-mall, on Tuesday evening last, Mr. Beresford Hope presiding, when several interesting papers were read, of which we will give some particulars next week. The meeting was well attended.

RELICS AT BOW.—On the 6th of February, as some workmen were excavating at Mr. Hemming's Iron Church and House Manufactory, Bow, they struck against a large stone, which proved to be the cover of a coffin of the same material cut out of the solid. On opening it the skeleton was found quite perfect, and, from the size of the bones, appeared to be that of a largely-proportioned man. The arm-bones were crossed, and the whole in good preservation. The coffin was found in a firm but moist loamy soil some 4 feet below the surface, and lay due east and west, the head of the skeleton being towards the west. In close proximity an urn was dug out: this contained several small bones, and was of a dark grey pottery, with a diameter at the base of between 4 and 5 inches. Its original shape could not be made out, as the workman's tools had broken it in pieces. A smaller urn or vase of red pottery was likewise discovered. This was much mutilated, but, from the remains, appears to have been very elegantly fashioned in the bowl, with an attenuated neck and a curved handle leading from the top rim to the body of the urn. The ground in which these remains of another age were found was for many years the fair-field, and at one time I believe the site of a monastery. The coffin and urns themselves would, however, appear to belong to the time of the Romans.—JOHN NICHOLLS.

IMPERIAL HOTEL ON SITE OF NATIONAL GALLERY.—It is reported that the bill for an Act to establish at Charing-cross a gigantic English hotel is in a fair way of being passed. The proposed capital for it is 1,000,000*l.* At first sight it certainly seems rather a wild notion to buy the National Gallery; but we have no reliable information on the subject.

ARCHITECTS' BENEVOLENT SOCIETY.—The annual general meeting of this excellent society will be held in the rooms of the Institute of Architects, Grosvenor-street, on Wednesday, the 12th of March, to elect officers and council for the year, and for the general purposes of the society. It is hoped there will be a good muster. The subscribers propose dining together afterwards.

FIRE AT LEEDS INDUSTRIAL SCHOOLS.—With reference to this occurrence, the architects, Messrs. Perkins and Backhouse, wish us to say, that "the origin of the fire is a mystery, for it had no connection whatever with any hot-air flue by which the building is warmed." It commenced in the foul-air extraction-flue, under the raised desks, the platform of which has perforated risers for the exit of the air. The warm-air flues and the extraction-flues for ventilation have no connection whatever. The damage done by the fire is not very serious.

FALL OF A STAIRCASE AT CHELMSFORD.—At the Shire Hall, Chelmsford, on Thursday in last week, while a crowd of persons were collected on the stone staircase leading to the petty sessions room, the staircase fell, carrying those on it down to the flight of stairs below, where one person was killed, and several were severely injured.

CAREY-STREET IMPROVEMENTS.—I notice a movement being made with these anxiously-looked-for and much-required improvements, purposing to carry them out according to the plan in the Sixth Report of the Office of Works, *i. e.* connecting the Strand with the west end of Cheapside, proceeding at once with that portion between Carey-street and Fetter-lane. I therefore suggest that levelling the street should be made a principal feature, in order that so noble a thoroughfare as is contemplated may not be otherwise deteriorated, as in the case of common streets; to facilitate which, I propose a simple plan, viz. that every proprietor of the several buildings on the line of street should contribute to the work proportionately, either by labour under proper direction or by the value thereof. If adopted, it will be of great public benefit in preventing accidents, as well as materially adding to the effect of the street.—W. F. H.

ARCHITECTS IN BOLTON.—In the *Bolton Chronicle* of the 16th ult. I was struck with another of those very interesting accounts that have so lately opened the eyes of the profession to at least one subject connected with it, "competitions," and which you have so ably commented upon at different times. The report I refer to in the above paper is that of the Board of Guardians for the Bolton Union. It appears they are proposing to erect a new union-house, and after a series of squabbling meetings, have come to the resolve to advertise for plans for the same. So far good; but of course these worthy individuals do not do their business by halves: the architect's remuneration must form one item for their discussion, and accordingly they have arrived at the conclusion that 5 per cent. is far too much, and 2 per cent. is quite sufficient. I think such conduct as this of the Bolton guardians should not pass unnoticed, and I am sure I cannot do better than commit the matter to your notice (knowing your zeal in advocating the rights of the profession) to benefit my brother architects.

ONE OF THE VICTIMISED.

DISCOVERY AT MOYSE'S HALL, BURY ST. EDMUND'S.—An archæological discovery, of some local interest, has been made at Moyse's Hall, now occupied as the police-station. The question as to the connection of the eastern side of the adjoining inn with the western division of Moyse's Hall, has been settled by the discovery just made of the original staircase to the upper floor in the first arch between the western and middle alleys, with its perfect well, lighted by two small apertures, one pointed and the other square, and having a doorway into each alley. It is the intention of the authorities, it appears, to preserve this curious staircase, to remove the white-wash from the masonry, and to clear away such obstructions to the view of the whole crypt as can be removed without inconvenience.

SLAG, AS TO CASTING AND ANNEALING.—The liquid slag is conveyed to the casting-table, or mould, similar to metal casting, poured out, and immediately a heavy polished iron roller is passed over the whole surface: the roller rests on two edges, or grooves, equal in height to the intended thickness of the slab or tile, so as to spread out the mass into an equable sheet, and gives a flattened form to a shapeless yielding mass. The quantity of slag cast at once depends on the size of the table: as soon as the slag has solidified, the door of the annealing oven is opened, and the slab, or tile of slag, is thrust from the table into the oven. The ovens are very deep, so as to allow several slabs to lie in them edge to edge; and the oven is closed up very tightly when full, the heat allowed to decline gradually, so that by slow cooling the slag is annealed. On the floor of the building a railway is laid, along which the casting-table is wheeled from one oven to another, as it is necessary that the table should be placed close to the oven into which the slab is removed for annealing so soon as solidified. It will clearly be seen that this manufacture much resembles that of plate-glass, but does not require, in every stage, so much care, experience, and attention as to colour, freedom from specks, veins, wrinkles, mist, or cloudiness, but simply the manual labour of casting, rolling, or pressing into iron moulds of any form or shape, and annealing. As regards the simple manufacture of slag, after reading the evidence of Mr. Davison, of the Dowlais Ironworks, and others, and witnessing the samples produced at Dr. Smith's lecture, and the manufacture of the thin slabs, to represent slate, by Messrs. Chance and Co. who can doubt the practicability of the manufacture becoming general?—W. G. E.

RAILWAY SERVANTS.—It appears from a return just published, that on the 30th June, 1855, the following persons were employed on the railways of the United Kingdom then open for traffic:—viz. 204 secretaries and managers, 33 treasurers, 140 engineers, 356 superintendents, 193 storekeepers, 181 accountants and cashiers, 823 inspectors or timekeepers, 2,183 masters of stations, 322 ticket-collectors, 153 draughtsmen, 7,732 clerks, 1,132 foremen, 3,157 engine-drivers, 3,488 deputy-drivers or firemen, 3,237 guards or breaksmen, 21,247 artificers, 2,836 switchmen, 2,470 gatekeepers, 1,622 policemen, 14,498 porters, 7,172 platelayers, 22,449 labourers, and 2,324 miscellaneous adjuncts. This makes a grand total of 97,952 against 90,409 on the 30th June, 1854:—viz. 80,877 in England, 11,403 in Scotland, and 5,672 in Ireland. The length of line open for traffic was 8,116 miles, and the number of stations 2,798. The total number of persons employed on railroads not open, on the 30th of June, 1855, amounted to 38,546; the length of line in course of construction being 879 miles, and the total length authorized, 4,481. Of these 38,546 persons, 104 were secretaries, 16 treasurers, 181 engineers, 238 superintendents, 55 accountants, 331 inspectors, 61 draughtsmen, 110 clerks, 601 foremen, 216 policemen, 47 porters, 4,962 artificers, 31,370 labourers, and the remainder storekeepers, besides 171 adjuncts of no special vocation. The total number of persons employed on all railways, open or not, was, on the said 30th of June last, 136,498, against 135,810 in 1854; and of these 104,292 were employed in England, 17,388 in Scotland, and 14,818 in Ireland.

ECHO IN ROOMS.—A correspondent from the Menai Bridge asks for "some plan to lessen the echo in a school-room, the size of which is 53 feet by 30, 14 feet to the wall-plate, and 32 feet to the ridge; open-timbered roof, boarded floor, the windows having tumbler casements 6 feet above the floor." The judicious disposal of drapery in such cases often lessens the evil. We understand that a very remarkable cure of a similar annoyance has been recently effected by this means in the new vestry-hall at Paddington.

CAMBRIDGE ARCHITECTURAL SOCIETY.—At the first meeting of the Lent term, held on 20th February, the Rev. W. M. Campion in the chair, some notes on Mediæval illumination and Missal painting were read by Mr. R. W. Brundrit, of Christ's College, who exhibited some magnificent foreign specimens.

THE PLYMOUTH SCHOOL OF ART.—This school, according to the local papers, promises to be a successful undertaking. The accommodation at present provided does not meet the wants of the town, and the managers have been obliged to refuse admission to new applicants.

GREAT BLAST AT HOLYHEAD.—A blast which has required the labour of six men for the last ten months, and 6½ tons of powder to explode it, was let off in the quarry belonging to the new harbour works on Wednesday before last, in presence of the chief engineer and a numerous staff. It is calculated that the quantity of stone loosened by the explosion will be 60,000 tons.

NEW CHURCH IN SOUTHWARK.—A new church is to be erected in Union-street, Blackfriars-road, one of the worst parts of the densely-populated parish of St. George the Martyr, Southwark. The new church will be dedicated to St. Michael.

THE HOMES OF THE PEOPLE.—We may congratulate ourselves on the adoption of this subject for lectures. At Darlington, a few days ago, Mr. Joseph Pease delivered a lecture "On Homes and Habitations."

TENDERS

For West Bromwich Union Workhouse. Messrs Briggs and Everal, architects. Quantities supplied by Messrs. Batstone and Hunt:—

Wilkes, Darlaston	£20,830	0	0
McKenzie, Wellington	17,600	0	0
Hardwick and Son, Birmingham	17,212	0	0
Stokes, Birmingham	17,177	6	0
Wilson, Handsworth	16,896	0	0
Cox and Son, Tipton	16,812	10	0
Heritage, Handsworth	16,471	15	0
Trow and Sons, Wednesbury	16,083	10	3
Parnell, Rugby	15,039	10	4
Ferguson, Nottingham	13,950	0	0

For alteration of premises and building a warehouse for Messrs. W. and J. Freeman, 15, Millbank-street, Westminster. Mr. John Turner, architect. Quantities supplied by Mr. Charles Freeman:—

McCurry, Pimlico	£1,065	0	0
Nick and Son	1,054	0	0
Wilson, Pimlico	1,044	0	0
Tombs, Westminster	960	0	0
Wardle and Baker	900	0	0
Greig, Pimlico	826	0	0
Farmer, Westminster	825	0	0

For extensive alterations at the Devon and Exeter Hospital. Mr. J. Hayward, architect:—

Moass and Bradford	£9,350	0	0
Stafford	9,078	0	0
Mason	8,832	0	0
Ware (accepted)	7,948	0	0

For plastering mansion for Mr. Hartley, at Fairy-hall, Mottingham, Kent. Mr. Thos. Turner, architect:—

Carter	£1,707	0	0
Denison	1,674	0	0
Pottifer and Sons	1,610	0	0
Todd	1,218	0	0

TO CORRESPONDENTS.

"A Bell" (thanks).—"J. P."—"R. D. C."—"J. R. C."—"M. and N. H." "J. D. J."—"E. A." (will find a reply as to clock tower on another page).—"Inquirer" (we see no reason, in the statement given, why an architect who sends in two designs should not receive both 1st and 2nd premium).—"J. S. S."—"P. W. C."—"G. E. S."—"Subscriber from beginning."—"J. R."—"A. C."—"S. and R."—"W. O."—"F. G. S."—"G. K."—"E. W. T."—"W. B. A."—"J. B." Bells (in type).—"J. W." (ditto).

"Books and Addresses."—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *vid* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, or weight, singly or in peals.

TUNED BY MACHINERY.

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system, which gives superior tone and facility for ringing.

CLERK of the WORKS. — The Vestry of the Parish of St. Mary, Rotherhithe, will meet on the 4th day of MARCH next, at the COMMITTEE-ROOM at the Workhouse, Deptford Lower-road, at HALF-PAST SIX o'clock in the evening precisely, to appoint a fit and competent person to execute the duties of CLERK of the WORKS for this Parish. Such officer will be required to reside in this parish, and to devote his whole time and attention to the duties of his office. The salary will be 3l. 15s. per week. A thorough and practical acquaintance with the making of drains, laying of drain-pipes, bricklayers' work, and other similar works, will be a necessary qualification. The duties can be ascertained, and applications at the Vestry Clerk's Offices, 61, Paradise-street, Rotherhithe.—Written applications for the office, in the handwriting of the candidates, with testimonials, endorsed "Application for Office of Clerk of the Works," must be sent or delivered to the Vestry Clerk, on or before the 3rd day of MARCH next, and the candidate must attend personally at the time fixed for the Vestry.

By order, R. SHAFTO HAWKS, Vestry Clerk.

Rotherhithe, 22nd February, 1856.

CARPENTER WANTED, to undertake the REPAIRS of several HOUSES, &c &c. A clever tradesman, with a good recommendation, and above the age of 40, only will be employed; also married, without family: the wife will have to take charge of a lodging-house, and must understand plain cooking, washing, &c. Wages, 24s. per week, and rent free. Apply, by letter only, to T. C. Office of "The Builder."

THE MERTHYR TYDFIL LOCAL BOARD of HEALTH are desirous of receiving applications for the appointment of SURVEYOR to the said Board. He will be required to give the whole of his time to the Board, receive plans for building, inspect and measure all work done by the Board and their contractors, make out the accounts, and perform the duties required by the Public Health Act. Salary, 150l. per annum.—Applications to be addressed to Mr. JAMES WARD RUSSELL, Clerk to the said Local Board, on or before SATURDAY, the 15th day of MARCH next.

Merthyr Tydfil, February 28, 1856.

AN APPRENTICE WANTED, by a Working Master, in the Plumbing, Painting, Glazing, Papering, Gas-fitting, &c. One who has a slight knowledge of the trade preferred.—Address, J. H. 69, Castle-street, Leicester-square.

TO PARENTS AND GUARDIANS.

WANTED, at a Patent Office in Chancery-lane, a well-educated Young Man, to LEARN the BUSINESS, who can write a good hand, and is quick and active in his habits. Good references are indispensable. No premium is required, his services being considered in lieu thereof.—Address, J. M. 30, Chancery-lane.

WANTED, in a Builder's Office, by a Surveyor, of many years' practice as a Measurer and Estimator of all kinds of building work; and thoroughly conversant in Book-keeping and Accounts, a PERMANENT SITUATION. A moderate salary only expected.—Address, A. B. Mr. W. Holmes, Plumber, &c. Church-street, Stoke Newington.

TO BUILDERS' CLERKS.

WANTED, by a London Firm, a steady YOUNG MAN, who has been accustomed to the routine of a Builder's Office. Application by letter, stating age, particulars, and salary required, to be addressed to B. C. Office of "The Builder."

WANTED, by an Architect and Surveyor, in Norfolk, an ASSISTANT, capable of making working drawings (chiefly Gothic), measuring up work, and a little land surveying. The salary required, and a brief reference, to be addressed, in writing only, to M. A. at the Office of Mr. Papworth, 14a, Great Marlborough-street, London, and none will be answered except those preferred.

WANTED, a Person of good practical experience in building generally, well understands working drawings, can design or copy, wishes to meet with a SITUATION as MANAGER, or INSPECTOR of WORKS, or the management of a builder's business, or a gentleman's estate. Would undertake to collect rents, keep accounts, &c. No objection to the country, or to go abroad. Unexceptionable references will be given, and good security for any situation of trust.—Address, A. B. to Mr. Clark, News Agent, at the Crystal Palace.

TO BUILDERS.

WANTED, a SITUATION, in a Builder's Office, by a Young Man, who is fully capable of taking out quantities, measuring up works, and the general routine of the office. References unexceptionable.—Address, S. S. 47, Essex-street, Strand.

TO CARPENTERS AND BUILDERS.

WANTED, by a Young Man, aged 22, a SITUATION as IMPROVER in a Carpenter or Joiner's shop. Wages not an object.—Address, A. B. 3, Harvey's-buildings, Strand.

TO CARPENTERS AND BUILDERS.

WANTED, by a steady, active Young Man, aged 23 a SITUATION as IMPROVER in a Carpenter's and Joiner's Shop. Wages not so much an object.—Address, E. D. 35, Clark-street, Stepney, London.

TO MANUFACTURING UPHOLSTERERS AND HOUSE-DECORATORS.

WANTED to APPRENTICE, a genteel YOUTH, in an establishment where he will have the opportunity of obtaining a thorough practical knowledge of the various branches of the trades. A liberal premium will be offered.—Applications, by letter, to Mr. HENRY HODGE, Architect, 7, Castle-terrace, Kentish-town.

TO BUILDERS, CONTRACTORS, &c.

WANTED, by an experienced Man, a SITUATION as TIMEKEEPER, and to make himself generally useful in the counting-house. Wages, 23s. per week. Address, Z. Office of "The Builder."

TO ARCHITECTS AND OTHERS

WANTED, a SITUATION as OUTDOOR SUPERINTENDENT of WORKS, by one having a thorough practical knowledge of building in detail; also measuring up works, and can make working drawings. Reference to Lond-n and provincial architects, by whom he has been employed several years.—Address, J. B. 131, Albany road, Kent-road, London.

WANTED, a RE-ENGAGEMENT as CLERK of WORKS: a thorough practical man, having just finished large public works. The highest testimonials.—Address, M. A. at the Office of "The Builder."

TO BUILDERS AND PLUMBERS.

WANTED, a SITUATION as THREE-BRANCH HAND, by a Young Man aged 28. Has been fourteen years in the trade.—Address, H. K. Mr. Helsen's, 25, Gray-street, Webber-street, Blackfriars road.

TO ARCHITECTS OR BUILDERS

WANTED, a SITUATION as GENERAL or WORKING FOREMAN of MASONS, by one of active business habits, good plain draughtsman, can take out quantities, set out work, &c. Testimonials and reputable reference from last employer.—Address, A. R. 16, North-street, Lambeth, London.

TO ARCHITECTS OR BUILDERS.

WANTED, by an experienced practical Man, a SITUATION as CLERK of WORKS, SHOP or GENERAL FOREMAN of WORKS.—Address, A. B 38, Gibson-street, Lambeth. Character will bear the strictest investigation.

TO SURVEYORS, CONTRACTORS, AND OTHERS.

WANTED, by a practical STREET MASON, a SITUATION as FOREMAN of FOOTWAYS and ROADS. The Advertiser has had many years' experience in the above line, and can have good reference as to ability. Age, 40. Country not objected to.—Address, W. B. 18, Spring-garden-place, Elizabeth-street South, Pimlico.

NOTICE TO STEAM SAW-MILL PROPRIETORS.

WANTED, by a Young Man, a SITUATION as CIRCULAR SAWYER. Can work either segment or plate saw. No objection to town or country. Address, post-paid, T. W. D. 32 Barnet-street, New North-road, Hoxton.

WANTED, a SITUATION, as SHOP OUT-DOOR FOREMAN, or STAIRCASE HAND, by a steady Man, aged 34. Good reference given.—Address, S. H. E. J. Jackson, 2, Cumberland row, King's-cross.

TO BUILDERS, PLUMBERS, PAINTERS, &c

WANTED, by a married Young Man, aged 26, a permanent SITUATION as PAINTER, GLAZIER, and can do plumbing and paper-hanging; has no objection to doing general repairing. Wages, 4s. per day. Good reference can be given if required.—Address, A. B. C. 13, Norfolk-street, Shoreditch.

TO CARPENTERS, JOINERS, &c.

WANTED, to place a YOUTH as INDOOR APPRENTICE.—Apply to R. M. at the Office of "The Builder."

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N.B.—No objection to the country.

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BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the admission of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.
Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 581, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

SMOKY CHIMNEYS CURED EFFECTUALLY for TEN SHILLINGS, by SUPER'S PATENT WIND-GUARD.—This Guard allows free egress to the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

To be had of Ironmongers and Builders: and of the Patentee, at his Office, 65, Fenchurch-street, London.

By Her Majesty's Royal Letters Patent.

DUPREE and CO.'S DEFIANCE WINDGUARD and VENTILATORS, &c. for the perfect cure of Down-draft Smoky Chimneys, suitable for Public and Private Buildings requiring a constant change of air.

Also,

SHIP VENTILATORS, requiring no attention, imparting about six times the quantity of fresh air than any other in use.

Also,

VENTILATING ROOFLIGHTS, for Slate or Tile Roofing, without Paint or Putty.

Prospectuses sent on application.

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HANDS'S PATENT ECONOMISING KILN is the only simple and effectual mode to use the heat, for drying moist moulded clays, found in any season, in time of burning and cooling the kiln, with perfect ventilation.—Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

TO THE COMMISSIONERS OF THE BOARD OF HEALTH, AND TO ALL PERSONS INTERESTED IN THE SMOKE QUESTION.

HANDS'S PATENT is the only simple and certain remedy for the SMOKE NUISANCE: it has combined, where necessary, the advantages of a drying process and perfect ventilation, without a particle of complicated machinery. Address to Mr. JOHNSON HANDS, Brick and Tile Works, Epsom.

CHAS. MACINTOSH and CO. Patentees of the VULCANIZED INDIA-RUBBER, and GENERAL MANUFACTURERS of WATERPROOF, AIRPROOF, and ELASTIC RUBBER GOODS beg to inform all persons who desire to correspond with them direct, that their SOLE ESTABLISHMENTS are No. 3, Cannon-street West, London, and Cambridge-street, Manchester. This notice is necessary, as the term Macintosh Depôt, Macintosh Warehouse, &c. is frequently adopted both in London and the country by vendors of India-rubber goods, who deal in articles not of the manufacture of CHAS. MACINTOSH and CO. — Goods manufactured by CHAS. MACINTOSH and CO. are stamped with the name of the firm.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—PHILIP SIR RAYMOND JARVIS, Bart., YENTNOR, ISLE of WIGHT, Second Testimonial.—" March 16th, 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

TO ENGINEERS, MILL-OWNERS, &c.

N. Woolwich Elastic Steam-packing (Canvas and India-rubber), at 1s 4d. per lb.

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H. M.'s Dockyards), having considerably extended their manufacture in order to meet the daily increasing demand upon them for this effective and durable article, are enabled to offer the very best material at the reduced price of 1s. 4d. per lb. for sheet and rope.

Testimonials may be seen at S. W. SILVER and CO.'s Warehouses, Nos. 3 and 4, Bishopsgate-street (opposite London Tavern), where orders for Steam Packing, also Buffer Springs, Pump Clacks, and the various India-rubber appliances, will meet with prompt attention.

CAUTION.—S. W. S. and Co. have found it necessary to stamp all their manufacture, thus—" S. W. SILVER and CO. WORKS, NORTH WOOLWICH."

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Pillaud Cushions and Rubber Strips cut to any pattern for bagatelle tables. Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.								
¼	½	1	1¼	1½	2	2½	2¾	3 in.
1d.	1½d.	1s.3d.	1s.3d.	1s.5d.	1s.7d.	1s.9d.	2s.	2s.3d.	2s.6d.	2s.9d.

Super-extra stout quality.

2	2½	2¾	3	3 inches.
2s.	2s.3d.	2s.6d.	2s.9d.	3s. per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

1	1½	1¾	2	2½	2½ inches.
6d.	10d.	11d.	1s.	1s.3d.	1s.6d. per yard.

The hose is Burnettized at an extra charge of 3d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 8d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and directions to builders and the trade, forwarded on application, post free.

THE PHOTOGRAPHIC SOCIETY'S THIRD ANNUAL EXHIBITION will OPEN to the public on MONDAY next, JANUARY 7th, at the Gallery of the Society of Painters in Water Colours, 5, Pall-mall East. Open at Ten. Admission 1s. Evening, from Seven till Ten. Admission 6d.

TO ARCHITECTS AND OTHERS.

MR. EDWARD L. PARAIRE is desirous of Meeting Gentlemen who require COLOURED ARCHITECTURAL DRAWINGS. External, Internal, Isometrical Perspectives got up; outlines of same neatly coloured, with background, on terms that will insure approval. Temporary assistance given in getting up Plans, Elevations, Sections, Detail, and Working Drawings.—Mr. E. L. P. makes a consideration in his charge where competition drawings prove unsuccessful.

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DRAWING, &c.—One Guinea per Quarter. Comprising Architectural, Engineering, Mechanical, Perspective, and Water Colour Drawing; Taking out Quantities; Measuring Builders' Work, &c. &c. Gentlemen who cannot attend at the Establishment, can be attended at their residence on moderate terms, in any part of town or country, by Mr. SMITH or Mr. LEWIS.—Offices, 24, Guildford-street.

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Terms, One Guinea per Quarter. Prospectuses and full particulars may be had at the Offices.

ARCHITECTURE, CIVIL ENGINEERING, and SURVEYING CLASSES. Established by [illegible] RYDE, SMITH, and LEWIS, Architects, Civil Engineers, Surveyors, &c. For Preparing Gentlemen for Architects, Builders, Engineers, Surveyors, Draughtsmen, Measurers, &c. and for giving EVENING INSTRUCTION in Architectural, Civil Engineering, and Mechanical Drawing; Colouring, Shading and Tinting; Ornamental and Water-Colour Drawing; Perspective, Isometrical, and Geometrical Drawing; Making Fusible and Working Drawings; Preparing Specifications, Taking out Quantities, Estimating, Measuring and Valuing Builders' Work, &c. &c. Terms:—Day Pupils, Three Guineas per Quarter; Evening Pupils, One Guinea per Quarter. There are no extras, the terms include the whole of the above, with the use of Drawing Boards, T Squares, Plans, Drawings, Models, &c. Prospectuses and full particulars may be had at the Offices, 24, Guildford-street, Russell-square.

MATHEMATICAL DRAWING INSTRUMENTS. JOHN ARCHBUTT, 20, Westminster Bridge road, Lambeth (near Astley's Theatre), begs to call attention to his Stock of Instruments manufactured by superior workmen. The prices will be found considerably lower than ever charged for articles of similar quality and workmanship. Rules, scales, tapes, &c. at equally low prices. An illustrated price-list will be immediately forwarded, free, on application.

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THE LONDON and WESTMINSTER BANK issues CIRCULAR NOTES of 10l. each, payable at every important place in Europe. These notes are issued without charge, and they are cashed abroad free of commission. The Bank also issues, free of charge, Letters of Credit on all the principal cities and towns in Europe. The Letters of Credit are issued only at the Head Office in Lothbury. The Circular Notes may be obtained at the Head Office in Lothbury, or at any of the Branches, viz.—

Westminster Branch, 1, St. James's-square.
Bloomsbury ditto, 214, High Holborn.
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Loans are advanced in amounts varying from 10l. 10s. to 10o l. repayable weekly or otherwise, as may be agreed upon, at a discount of 2½ per cent for twenty-five weeks, and for 50 weeks at 5 per cent.—Forms may be had, price 2d.; if by post, three postage stamps to be enclosed.

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PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSSE WHOLESALE WAREHOUSE, 12, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 23, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

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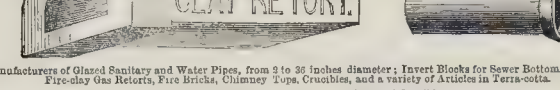
WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,



Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

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W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

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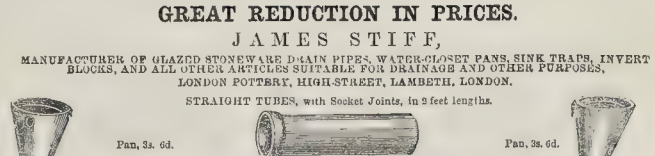
STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

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MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

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Terra-cotta Chimney-pots of various patterns and sizes, also Red Earthenware Drain-pipes, at greatly reduced prices.

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PUMP MANUFACTURERS and ENGINEERS

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N B. The above can be worked either by hand, horse, or engine power.

Iron Pails 48s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

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The attention of the Trade is called to JOHN WARNER & SONS'
PATENT VIBRATING STANDARD PUMP,
which is recommended for the simplicity of its construction, and the ease with which it works.

In the introduction of the vibrating standard, the cumbrous carriage and expensive Shanks Rods are entirely superseded, thus reducing the price to about [illegible] less than Pumps made in the usual way.

It is used under Water Works Engineers for raising fluids from a depth not exceeding 28 feet; also Garden Engines constructed on the same principle.

JOHN WARNER & SONS,
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B. FOWLER & CO.'S
PORTABLE PUMPS,
3-inch to 9-inch Barrels,
Plain or Sliding Telescope Suction,
ON HIRE.

SINGLE AND DOUBLE PUMPS,
all sizes,
to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.
WHITEFRIARS-STREET,
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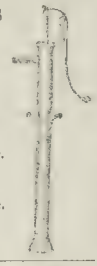

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STEAM-ENGINES on SALE, new and second-hand, from one to twenty horse power, a 10-horse Jukes' smoke burner, and a variety of machinery, consisting of boilers, tanks, three-throw pumps, lathes, planing and drilling machines, screw presses, a 30-inch paper-cutting machine, &c. &c. Apply to D. W. ASH, 187, Southwark-bridge-road, Newington Causeway, where the above can be seen.

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By her Majesty's Letters Patent.

THE PATENT ARCHITECTURAL POTTERY COMPANY, POOLE, DORSET, Manufacturers of PATENT GLAZED and COLOURED BRICKS, CASTS, &c.; also of Patent ENCAUSTIC, MOSAIC, and other FLOOR TILES. The above bricks are for the exterior and interior of buildings, conservatories, baths, reservoirs, &c. They are manufactured of superior Dorsetshire clay, and are the colour of Bath stone. The object of the glaze is to prevent the pores becoming filled with dirt, and so to preserve their appearance that they may be easily cleaned, the rain alone being sufficient for the purpose. The cost is reduced to that of ordinary bricks, for which they are substituted, and shapes, sizes, or patterns will be made to order. For samples, prices, &c. address the Company, as above.

JENNINGS'S PATENT DRAIN-PIPES.

For full particulars of these Pipes, and their advantages, AS COMPARED with the old-fashioned Socket and Half-Socket Pipes, see *Builder* of February 9.

For testimonials, &c. see *Builder* of the 9th, 16th, and 23rd ult.

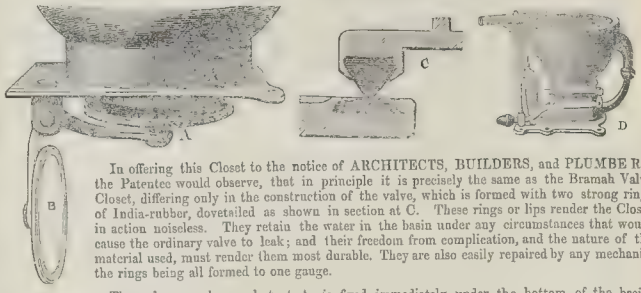
Architects and Engineers describing these Pipes in their specifications will have the GREAT satisfaction of knowing that, in case of stoppage, they afford every facility for examination, as also for the introduction of Junctions, &c. without the slightest disturbance to the Invert or General Drain.

Prices per foot run, including the Patent Chairs and Saddles:—

4-inch.	6-inch.	9-inch.	12-inch.	15-inch.
6d.	8d.	1s. 1½d.	1s. 10d.	3s.

THE USUAL TRADE DISCOUNT ALLOWED.

JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.



In offering this Closet to the notice of ARCHITECTS, BUILDERS, and PLUMBERS, the Patentee would observe, that in principle it is precisely the same as the Bramah Valve Closet, differing only in the construction of the valve, which is formed with two strong rings of India-rubber, dovetailed as shown in section at C. These rings or lips render the Closet in action noiseless. They retain the water in the basin under any circumstances that would cause the ordinary valve to leak; and their freedom from complication, and the nature of the material used, must render them most durable. They are also easily repaired by any mechanic, the rings being all formed to one gauge.

The valve, as shown shut at A, is fixed immediately under the bottom of the basin. B shows the valve open, the centre or flat part being filled in with enamelled ware, made to correspond with the basin it may be fixed under. D is an elevation of the Closet finished, and it is made to work with or WITHOUT wires and cranks, according to the situation it may be fixed in, EXPOSED TO FROST OR OTHERWISE.

G. JENNINGS has such confidence in this Closet, that a written warranty for seven years will be given with every Closet sold.

Illustrated Particulars and Prices of JENNINGS'S Self-acting and other Water-closets, Urinals, Lavatories, Pumps, Sluice-valves, Fire and other Cocks, Gully-traps, Shop-shutter Shoes, Earthenware Drain and Soil Pipes, &c. &c. can be had free, on application, or by post, on enclosing two stamps to

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London Wharf, No. 4, Great Northern Goods Station, King's-cross,
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MANUFACTURER OF GLAZED STONEWARE TUBES, SOCKET, HALF-SOCKET, OR BUTT-JOINT; BENDS, SUCTIONS, TRAPS, INVERTS, URINALS, CLOSETS, &c.

CIRCULAR PIPES, from 2 inch to 54 inch diameter.
EGG-SHAPED, from 6 by 4 inches to 36 by 28 inches.

The Proprietor begs to call the especial attention of Engineers and Surveyors to HIS LARGE PIPES for DRAINAGE and WATER-CONDUITS, which can be made of any required strength or thickness.

FIRE CLAY RETORTS have been made at these Works for UPWARDS OF THIRTY YEARS, and have attained to the highest excellency, both in quality and internal smoothness; respecting which unexceptional references can be given.

Bricks, Lumps, Tiles, Chimney-Linings, Terra Cotta. Chimney-Tops, Windguards, &c. &c. also in Stock.

AGENCIES:

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LIVERPOOL ... G. F. Cantrell, 133, Duke-street.
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GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

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Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

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DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

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These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Surface, may now be obtained at the price of the commonest description of Closet-pans.

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LIVERPOOL POTTERY,

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STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

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TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

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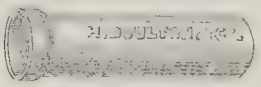
Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

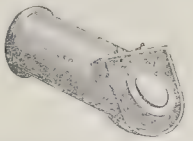
MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. at all of all of which parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

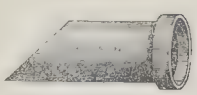
KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.



WHOLE SOCKET.



Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

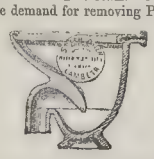
GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.



Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.

THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

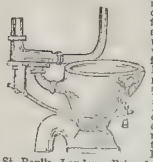
T. S. is the ORIGINAL Manufacturer of the C. R. P. or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS.



manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 23, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 23s. and perfect action guaranteed.

SUPERIOR STONEWARE GLAZED

PIPES of a quality not to be surpassed.—F. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction, the price being also lower than many in the trade, 2½, or even 5 per cent. off the list for cash. Junction Bends, &c. Pans and traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—F. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

LYTCHETT POTTERY.—For SALE by

PRIVATE CONTRACT, the LEASE and PLANT of the above Premises. The lease consists of about fourteen acres of land and a good cottage. The land contains a large quantity of very superior clay for pottery and fire-goods. The steam pipes made from the clay are equal, if not superior, to any yet in the market; and the fire-goods will bear comparison with any yet made. The plant comprises three potters' wheels and two brick kilns, with pipe machines, pug mills, and all other necessary appliances. Lytchett Pottery is 2½ miles from the South-Western Railway, and 3 miles from the port of Poole. For further particulars, and to view, apply to H. T. FISHER, Blandford.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 80, Bankside. DAVID MOUNTAIN, Manufacturer (late of Lambeth POTTERY), having now further reduced the prices, begs to draw the attention of Builders and others, to STONEWARE PIPES &c. &c. in the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

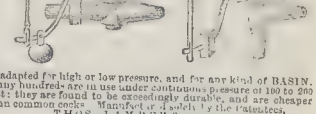
TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES,

acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps for sale or hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE No. 7.



Is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured and sold by the patentees,

THOS. LAMBERT and SON,

Brass Founders and Engineers,

Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES,

BENDS, JUNCTIONS, and SYPHONS.—This ware, allowed by all to be of the best manufacture, by the ordinary test of quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and Co. Great Northern wharf, York road, King's cross.

CLOSET BASINS, WHITE and BLUE, URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners [illegible] recommended the adoption of the high-pressure principle [illegible] AMSON'S HIGH-PRESSURE COCKS [illegible] from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply valves [illegible] to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

SALES BY AUCTION.

TO BUILDERS, CONTRACTORS, AND SAW-MILL PROPRIETORS AND OTHERS, requiring large Premises in the heart of London.

MESSRS. DAVIS and VIGERS are instructed by Mr. Samuel Grimsdell, upon his retiring from business, to SELL by AUCTION, on the PREMISES, on MONDAY, APRIL 14th, at TWELVE for ONE, unless previously disposed of by Private Contract, the LEASE of his extensive Establishment in Bell-lane, Spitalfields, with immediate possession to the purchaser. The buildings are for the most part newly built, and of fire-proof construction, and comprise carpenters' shops, affording bench-room for 50 men, mill-rooms, engine house, fitting shop, numerous stores, plumbers', painters', wheelers' and smiths' shops, stabling for 14 horses, and a loose box; capital range of counting-house, residence for foreman, &c., and with a large yard occupy a well-enclosed area of 21,000 superficial feet, and with premises adjoining let to Mr. Gregory, at 30l. 10s. per annum, are held by lease for thirty-one years, from Michaelmas last at 130l. per annum, free from land-tax, which is rated to the Lease. To be viewed by cards, to be obtained of Messrs. DAVIS and VIGERS, Parliament; of Conditions of Sale may be had of E. S. CLARKE, Esq., Solicitor, Bishopsgate Church yard; of Messrs. WARMINGTON and BEARSON, New City Chambers, Bishopsgate; on the Premises; and at the Auctioneers' Offices, 3, Frederick's-place, Old Jewry.

TO RETAIL TIMBER MERCHANTS, CONTRACTORS, BUILDERS, SAW MILL PROPRIETORS AND OTHERS.

MESSRS. DAVIS and VIGERS are instructed by Mr. Samuel Grimsdell, upon his retirement from business, to SELL by AUCTION, on the PREMISES, Bell-lane, Spitalfields, and Queen-street, Church street Whitechapel-road, on MONDAY, MARCH 3rd, and several following days, at TWELVE for ONE o'clock each day, and without reserve, his extensive, well-seasoned, and valuable STOCK and PLANT, comprising 600 first quality yellow, red, and Dantzic fir planks, 3 to 9 inches thick and 12 to 24 feet; 70 well-worn Wyboro battens, 12 to 24 feet of Scandinavian and Honduras mahogany, cut from two to six years, Dutch crown Riga timber, oak and elm plank, of which a large and well-regulated builder's establishment.—To be viewed two days before and on the morning of sale. Catalogues will be forwarded by post, or may be had on the Premises; of Messrs. WARMINGTON and BEARSON, New City Chambers, Bishopsgate; and at the Auctioneers' Offices, Frederick's-place, Old Jewry.

N.B.—The lease of the extensive premises in Bell-lane to be sold, with immediate possession to the purchaser.

BOROUGH-ROAD.—Remaining Stock of Artificial Stone Figures.

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, 74, Borough-road, Saltpetre-bank, on WEDNESDAY, APRIL 2nd, at TEN for ELEVEN, the final portion of the extensive STOCK; comprising fountains, vases, figures, groups (including the Lion and Lioness, the only one in artificial stone), centre-flowers, &c. To be sold without reserve, and will be the last sale this season. May be viewed one week previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

MARBLE SLAB.—Near the Great Northern Terminus.

MESSRS. EVERSFIELD and HORNE are instructed to SELL by AUCTION, on the PREMISES, Great Northern Marble Wharf, Caledonian Road, Pancras, on TUESDAY, MARCH 4th, at TWELVE for ONE precisely, the extensive assortment of MARBLE SLABS, comprising statuary, vein, and sicilian of large sizes, black and gold, Siena, dove, and a variety of the most esteemed coloured marbles of various thicknesses, English slates, and a quantity of good quality. May be viewed three days previous, and catalogues had on the Premises; and of the Auctioneers, 40, Parliament-street, or Coal-Exchange.

N.B. Approved bills of three months to purchasers above 30l.

MARBLE SLAB.—ALTERATION OF DAY OF SALE.

MESSRS. EVERSFIELD and HORNE respectfully announce, that the SALE of MARBLE SLAB at their Premises, advertised last week for the 7th, will take place NEXT TUESDAY, the 4th MARCH at 30, Pancras-street

HARWICH.—Barges, Boats, Iron, Old Timber, &c. for Sale. TO BE SOLD by AUCTION by

MR. HALES, on FRIDAY, 7th MARCH, 1856, by order of Messrs. H. Lee and Son, the proprietors, at their HARBOUR WORKS DEPÔT, near the Ordnance Jetty, Harwich; ten good Lighter BARGES, with the chain bobs, chain cables, and anchors complete; six iron crabs; four railway trucks; and upwards of thirty tons of iron, consisting of large and small chains, malleable scrap and castings; valuable old timber; rope; and other hull-boat materials, the scrap arising from the harbour dredging works; all which will be expressed in catalogues, to be had, with any further required particulars, on reference to the Depôt. Refreshments at Rebeth, London; or Mr. HENRY WEAVER, Manager at the Harbour Works Depôt; or the Auctioneer, Harwich.—Sale to commence at TWELVE o'clock at noon.

IN BANKRUPTCY.—WITHOUT RESERVE.—TO TIMBER MERCHANTS, SHIP-BUILDERS, BUILDERS, CARPENTERS, &c. &c.

MR. NEEMAN is instructed by the assignees of Messrs. Possey and Steel, bankrupts, to SELL by AUCTION, without reserve, on the PREMISES, Norway Wharf, Millwall, Poplar, on TUESDAY, MARCH 11th, at FIVE o'clock precisely, all the extensive and valuable STOCK in TRADE, comprising every description of English and foreign timbers, planks, and cut stuff, Norway and other spars, scaffold-poles, &c. yellow pine and white spruce deals, battens, and boardings, prepared yellow and white flooring boards, Dantzic lath-wood, laths, &c. &c., also a four-wheel phaeton, timber jacks, carriages, and other trade implements, &c. which may be viewed two days prior to the day of sale, and catalogues had of the Auctioneer, 3, Crooked-lane, London-bridge

TO LAND and BUILDING SOCIETIES and OTHERS.—Votes for the County of Kent.—Eligible Freehold Building Land lately redeemed, near to the entrance-gates of the Royal Arsenal, Woolwich.

MESSRS. CHURCH and SON are favoured with instructions to OFFER FOR SALE, by PUBLIC AUCTION, at the TOWN HALL, William-street, Woolwich, on THURSDAY, MARCH 13, 1856, at THREE for FOUR o'clock in the afternoon, SEVENTY-SEVEN PLOTS of Valuable FREEHOLD BUILDING LAND, lately redeemed, most eligibly situate within a few minutes' walk of the Royal Arsenal, and immediately adjoining the level crossing of the North-Kent Railway. This land offers advantages to large and small capitalists rarely to be met with. It forms part of the well-known and gardens, is in a high state of cultivation, and is planted with luxuriant fruit-trees. Each lot will have a frontage on an excellent new road, which it is proposed to extend to Plumstead-common, as a direct communication from Plumstead road, and will advertise the purchaser to a vote for the county of Kent. Plans, with particulars and conditions of sale, may be had on application to Mr. H. Davis, Solicitor, Rectory-place, Woolwich; of Garraway's Coffee House, Change-alley, London; and of the Auctioneers, William-street, Woolwich.

SALES BY AUCTION.

CHELMSFORD, ESSEX.—To Shippers, Colonists, Schools, and Public Establishments. To BE SOLD by AUCTION, at CHELMSFORD, on the Premises of the Patent Oven Company, h

VALPY and STOKES, on THURSDAY, 6th MARCH, 1856, by order of the Proprietors, about FORTY of FITCHES'S PATENT OVENS, in lots, for immediate clearance; also, a quantity of Old Iron, Smiths' Tools, Forge, Bellows, Vices, Grindstones, and Sundries. These well-known, useful, and economical ovens may be inspected and seen in full operation every morning previous to the sale, and are adapted for family use, wherein bread, meat, and vegetables may be cooked for a large family, to the No. 7, which is calculated to cook for 120 persons daily; and they are constructed in a most substantial manner, of cast and wrought iron, with the best workmanship. With the utensils or shippers and colonies of catalogues may be obtained of the Auctioneers, Chelmsford, Essex.

TO TIMBER MERCHANTS, SHIP and COACH BUILDERS, and OTHERS.—Capital ELM, ASH, and other TIMBER, TO BE SOLD by AUCTION by

MR. T. BAXTER, on TUESDAY, MARCH 4th, 1856, at TWO o'clock, at the GEORGE INN, a Beckenham, Kent; comprising Thirty very fine large Elm Trees, and Forty others, Thirty-five fine clean Ash ditto, Two large Beech, and Three fine large Limes, Horse Chestnut, &c.; all recently cut down, and lying on the Beckenham Park Estate, at Beckenham Kent.—May be viewed by leave preceding the Sale, by applying to Mr. Wynne, Kent-house-road, near Penge; or to the Carpenter, at the Yard near the lodge gate; and catalogues had at the Dover Castle, Deptford; Crooked Billet, Penge; at the Place of Sale; and of the Auctioneer, Ae Burnley, Kent.

ESSEX land MIDDLESEX.—Paulsbin Lodge, Dagenham.—Valuable Freehold Residence and Farm of Land, and Five Houses in the Regent's-park and Pimlico well

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, 1 on WEDNESDAY, MARCH 26, at TWELVE, a very desirable VILLA RESIDENCE, known as Paulsbin Lodge, with convenient, excellent out buildings and productive land and grounds, together with a small pasture adjoining, pleasantly situate on Chadwell-heath, within three miles of the village of Dagenham, two miles from Romford, and three from Ilford, at no distance from stations on the Eastern Counties Railway; a valuable detached enclosure of pasture and arable land, known as Mill Field, containing 3a. 3r. 8p. in the occupation of Mr. Thomas Ware, at 12l. per annum; also, a desirable Freehold Property, comprising five houses in Oldham-gardens, Bagnigge-wells-road, Clerkenwell, let to respectable tenants at rents amounting to 84l. 10s. per annum. Possession of the residence and land upon completion of the purchase. Particulars and conditions may be had of Messrs. Bayliss and Bevan, Solicitors, 18, Bloomsbury-street; at the Auction Mart; and of Messrs. BEADEL and SONS, 25, Gresham-street.

Sixth Sale of the Surplus Property belonging to the North London Railway Company, with Votes for the County of Middlesex.

MESSRS. BEADEL and SONS have received instructions from the Directors of the above Company to SELL by AUCTION, at the MART, on TUESDAY, MARCH 11th, at TWELVE o'clock precisely, the Sixth Portion of the valuable FREEHOLD BUILDING PROPERTY adjoining the Railway, Camden Town, comprising several freehold Houses, let at rents amounting to 69l. per annum; also well-situated ground-rents arising from leases in the various localities of Great and Little Randolph-street, Grange-street, and Frederick-place. Also Sheppard House, Homerton, and a plot of valuable Building Land adjoining, fronting the Lea Bridge-road, the property of Mrs. Thomas Parnell Layton, Solicitor, Guildhall yard; of Messrs. KENNEDY and BONNY, 10, Cornwall-crescent, Camden Town; at the London Mart, and of Messrs. BEADEL and SONS 25, Gresham-street.

Extremely valuable first-class Freehold Building Ground, Camberwell, Surrey.

MR. LEIFCHILD has received instructions to offer for peremptory SALE by AUCTION, at GARRAWAY'S, on TUESDAY, MARCH 4th, at TWELVE for ONE precisely, a very important FREEHOLD ESTATE, containing about 24 acres of productive pasture-land, on the south side of Denmark Hill-street, in the parish of St. George, Camberwell, 1 mile 3 furlongs from the Elephant and Castle, and 1 mile 1 furlong from Southgrove, and on public footpath from Grove-hill; its situation is eminently agreeable and healthful, being in the most elevated vicinity of Camberwell-grove, Champion-hill, and Denmark-hill, directly fronting East Dulwich, with a fine view of the Crystal Palace. Every part of the whole estate is peculiarly well adapted for building purposes of a high character, for, in addition to its decided advantages in situation, and the unusual extent of area so near to London, it contains a never-failing supply of capital spring water, which flows through it, with the necessary sewers at a great depth, have been carried in, ensuring a sanitary condition of the property, a demand for good healthy district for residences of a superior class. The lots will shortly be staked and marked out, and plans, containing particulars and conditions of sale, may be had at Garraway's: of Messrs. DAVIDSON & BRADBURY, Solicitors, 18, Basinghall-street; of Mr. RUSSELL, Solicitor, 30, Coleman-street; and at the Offices of Mr. LEIFCHILD, 69, Moorgate-street City

FARRINGDON STREET EXTENSION.—Building Materials of an Hotel.

MESSRS. PULLEN and SON have the honour to announce that they will SELL by AUCTION, on the PREMISES, on MONDAY, MARCH 3rd, at TWELVE, in Lots, by order of the Improvements Committee of the Corporation of the City of London, all the valuable BUILDING MATERIALS of TEN HOUSES, SHOPS, and PREMISES, in Turnmill street and Peter street, Clerkenwell, comprising 200,000 good sound bricks, slain and pan tiles, and slates, capital oak and fir timber, 20 roofs and flooring boards, doors, partitions, floor boards, sheet fronts, lead gutters and pipes, stone paving, stoves, coppers, gasfittings, and various useful trade fixtures; also, two large iron doors, 8 feet 6 inches and stone-work of strong room, Leslie's gas purifier in iron case, two pier glasses, 3 feet by 3, three large cast-iron girders, 24 inches deep, and sundry surplus stores. May be viewed on Saturday. Catalogues had at the Art Union Office, Guildhall, and of PULLEN and SON, 81, Fore-street, Cripplegate

TIMBER SALE.—At GARRAWAY'S Coffee House, Change-alley, Cornhill, on FRIDAY, 7th of MARCH, 1856, at FOUR o'clock precisely, in the following Lots, and Bedgrund Rivers, 70 Trees of Elm and Colonial Timber, with other wood goods.—Further particulars, and Catalogues in due time, by CHURCHILL, MACMILLAN, & Co. Wood Brokers, 70, Cannon-street.

TO BE LET by TENDER, on a Rebuilding Lease, certain PROPERTY, situate in the front of Heath-street, Hackney, Essex.—For further particulars, apply to JOHN PERRY, 1, Pond's-walk.

SUPERIOR BUILDING LAND TO LET, near Carlton-hill, St. John's Wood, and Kilburn-gate; 110 feet above the Thames: commanding views of Hampstead and Richmond; adapted for detached and semi-detached villas, of 8 to 12 rooms each; also, Land for shorter lease. Rent, 5s. per foot frontage; average depth, 85 feet.—Address, Mr. BALL, 31, Regent-street, Piccadilly.

TO BE LET on Building Lease, the HALL and PREMISES belonging to the Worshipful Company of Weavers, opposite the entrance to Guildhall, in Basinghall-street, a suitable site for the erection of Offices or any large building. Frontage, about 37 feet; depth 120 feet. The Court will meet at the premises for receiving TENDERS for the same, on TUESDAY, the 4th MARCH next. The premises may be viewed by permission of the tenants, and further particulars may be obtained of JOSEPH JEREMINGS, Esq. 3, Falcon-place, Cavendish-square; and of Messrs. DAVIDSON and BRADBURY, Solicitors, No. 18, Bauncball-street.

TO BUILDERS and OTHERS. — An excellent SITE TO BE LET or SOLD, for BUILDING PURPOSES, with a good double frontage, situate in a leading thoroughfare, and in an established and well-built and well-adapted for business and dwelling use, and in which is The said ruins of the present premises may be used if sufficient for the new building. Many will be supplied. Money will be advanced upon the buildings, or taken in any part of the building, upon a satisfactory arrangement.—Inquire of Mr. HOWARD and POLMAN, Solicitors, 141, Fenchurch-street; Mr. EDWARD LOWTHER, 88, Red Lion-street, Clerkenwell; or of Mr. MURDELL, Surveyor, 1, Wimbledon-villas, City.

STRATFORD, ESSEX.—FREEHOLD LAND within three miles of London, excavated from land sale, and free of Rates, TO BE LET on lease for a long term of years, in large or small plots, suitable for manufactories or building purposes, situate Mr. W. H. DEAN Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

FREEHOLD ESTATE (near the Eastern Counties Railway Terminus, in Shoreditch) TO BE SOLD, consisting of two Manufacturing Premises, with dwelling-house, two cottages, shops about 100 feet long, two yards, stabling, &c. with capital drainage; a part to be let. Also, TO BE LET, a part, or the lease of the whole, of LARGE PREMISES, near the above, consisting of two workshops, a dwelling-house, two cottages, stabling, &c. with a large yard, also thoroughly drained.—Apply to Mr. TURNBULL, 48, Worship-street, Finsbury.

FREEHOLDS TO BE SOLD, or LET on a Repairing Lease, at a rental; situate on the banks of the Haven, or near the Cressbridge, Deptford, Kent Railway, of a capital Wharf and Premises, let on lease to the present occupier at 75l. per annum; and Sixteen Dwelling-Houses, which, when repaired, would let at weekly rents amounting to 1l. 15s. per week.—Particulars of W. S. FRANCIS, Surveyor, 11, Well-close-square, St. George's-East

TO PLUMBERS, GLAZIERS, HOUSE-PAINTERS, FURNISHING IRONMONGERS, BUILDERS, or any trade of a respectability to combine commodious Shop, and Premises.

TO BE LET or LEASED, a capital HOUSE, SHOP-ROOM, WORK-SHOP, STABLE, YARD, and PREMISES, situated well for business, in a large market-town, within 12 miles of London; surrounded by all the building activities of a populous railway district.—Apply to Mr. JOHN DAWSON, Auctioneer and Agent, Marlborough Chambers, 10, Pall-mall

HAMPTON-COURT.—About Eight Acres of BUILDING GROUND TO BE LET, on ninety-nine years' lease, or SOLD in small or large plots, near the above palace and railway, at moderate rents or price. An advance of any 50l. required in the outlay would be made to respectable parties taking a considerable frontage. A small portion of the ground would be let for mews and coach-houses, if desired; the residue for detached or semi-detached villas and small houses. Also, TO BE LET or SOLD (belonging to the same proprietor), a convenient FAMILY RESIDENCE, with its appurtenances, at a moderate rent.—For terms, &c. apply to Mr. F. LETT, Architect, 36, Essex-street, Strand

Guildhall, London, 28th February, 1856.

THE COMMITTEE for LETTING the BRIDGE-HOUSE ESTATES will meet at Guildhall on FRIDAY, the 7th day of MARCH next, at TWELVE precisely, to receive TENDERS for a BUILDING LEASE for Eighty Years of a Plot of Ground on the west side of Queen's-road, in the parish of Battersea. A plan of the Estate, and conditions for letting may be seen at the Architect's Office, Guildhall.

FERDINAND BRAND, Comptroller.

PUBLIC INSTITUTIONS.—LAND at NORWOOD, SURREY.—Twelve acres FREEHOLD with a six miles of the City, FOR SALE. Well adapted for a public institution, a private residence, or Building Land—tax redeemed. Well drained locality, peculiarly healthy, with extensive views.—Apply to Mr. PAGET, Estate Agent, 1, Woodcote-place, Guildford, or 1, Norwood

STRATFORD, ESSEX.—FREEHOLD LAND, within three miles of London, excavated from land tax, TO BE LET on lease, for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

HARROW.—FREEHOLD LAND.—TO BE SOLD, 100 ACRES, in a ring fence, and several other eligible plots of FREEHOLD LAND, at a moderate price, contiguous to the Harrow Railway Station, surrounded and bisected by the capital Roads and Thoroughfares of the Parishes of the Harrow School, and the London and North-Western Railway Company offer to persons building houses of approved character, a Station Platform, with convenient Approaches, between Harrow station and Euston square, for eleven years. There is an abundant supply of excellent water, and very superior brick earth on the land.—Apply to WILLIAM B. COOPER, Esq. Solicitor, 5, Verulam-buildings, Gray's-inn.

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the best sites for building purposes in the neighbourhood, and villas are in great demand, on account of the situation being lofty, dry, well drained, and exceedingly healthy. Assistance will be afforded to responsible parties.—For particulars, apply to Messrs. J. and C. W. TODD, Milner-street, Brompton, London, or Belmont, Lee, Kent; or Messrs. NELSON and INNES, 9, Whitehall.

ALDERSHOTT CAMP.—PLOTS of LAND TO LET on Building Leases, commanding good frontages and admirable sites, facing the permanent barracks now erecting, and near the Queen's pavilion.—For particulars apply to Mr. THOMAS WHITE, Jun. near the Alliance Hotel, and opposite the permanent barracks, Aldershott, Hants.

TO BUILDERS, CONTRACTORS, and OTHERS.—TO BE DISPOSED OF, a BUSINESS, carried on, with good success, for seven years, in and around a seaport town of considerable importance, which are about to undertake extensive improvements. The workshops, yard & an extensive, near the waterside, and offer every facility for large operations. Plant, implements, and utensils, and premises, if purchased or taken at a moderate fixed rental.—Particulars will be forwarded on application to M. T. W. care of Mr. John A. Martin, 7, Garland-street, Devonport, Devon.

February 23, 1856.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex. Saturday, March 1, 1856.

The Builder.

AN ILLUSTRATED JOURNAL FOR THE

Architect, Engineer, Operatives & Artist.

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ARCHITECTS' BENEVOLENT SOCIETY.

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NOTICE.—The ANNUAL GENERAL MEETING of the above Society will be held at the Rooms of the Royal Institute of British Architects, 16 Lower Grosvenor-street, on WEDNESDAY, the 12th MARCH next. The Chair will be taken at THREE o'clock precisely. Information relative to the Society may be obtained of the Honorary Secretary, or of Mr. GOULD, the Collector, 8, Fitzroy-square, Fitzroy-square.

JOHN TURNER, Hon. Secretary, 15A, Wilton-street, Grosvenor-place.

1st March, 1856.

ROYAL INSTITUTE of BRITISH ARCHITECTS.

Incorporated 7th William IV.

16, Grosvenor-street, Grosvenor-square, London, Feb 1856

Her Majesty having been pleased to grant her gracious permission that the ROYAL MEDAL be conferred on such distinguished architect or man of Science, of any country, as may have designed or executed any buildings of high merit, or produced a work tending to promote or facilitate the knowledge of Architecture, or the various branches of Science connected therewith, the Council of this Institute will proceed in January, 1857, to take into consideration the appropriation of the Royal Medal.

Gentlemen desirous to compete for the SILVER MEDAIS of the Institute, and the SOANE MEDALLION, with its travelling fund, to be awarded for Essays, Illustrations, and Designs, may obtain the necessary information on applicat on to the Honorary Secretaries, by letter, prepaid, at the above address.

ROYAL ACADEMY of ARTS, Trafalgar-square.

NOTICE to ARTISTS.—All Works of Painting, Sculpture, Architecture, or Engraving, intended for the ensuing EXHIBITION at the ROYAL ACADEMY, must be sent in on MONDAY, the 7th, or TUESDAY, the 8th of APRIL next, after which time no Work can possibly be received, nor can any Works be received which have already been publicly exhibited.

FRAMES.—All Pictures and Drawings must be in gilt frames. Oil Pictures under glass, and Drawings with wide mounting are inadmissible. Excessive breadth in frames as well as projecting mouldings may prevent Pictures obtaining the situation they otherwise merit. The other regulations necessary to be observed may be obtained at the Royal Academy.

JOHN PRESCOTT KNIGHT, R.A. Sec.

Every possible care will be taken of Works sent for exhibition, but the Royal Academy will not hold itself accountable in any case of injury or loss, nor can it undertake to pay the carriage of any package.

The prices of Works to be disposed of may be communicated to the Secretary.

SCHOOL of ART and TRAINING SCHOOL, MARLBOROUGH HOUSE, Pall-mall.

The Spring Session will commence on the 3rd of MARCH, and terminate on the 18th of JULY. Hours of study—Morning, Ten to Three. Evening, Seven to Nine, daily, except Saturdays. Fees for Morning and Evening, 4l.; for Evening, 2l. per session. The School for Female Students not in training, is at 37, Gower-street, Bedford-square.—For prospectus's, apply at the Head Master's Office, Marlborough House.

ART UNION OF LONDON (by Royal Charter).

Prizeholders select for themselves from the Public Exhibitions. Every subscriber of One Guinea, will have besides the chance of a Prize, an impression of a plate of Harvest in the Highlands, engraved by J. T. Willmore, A.R.A. from the important and well-known Picture by Sir E. Landseer, R.A. and Sir Augustus Callcott, R.A. The Prints are now ready for delivery.

GEORGE GODWIN, } Honorary
LEWIS POCOCK, } Secretaries.

444 West Strand.

BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.—TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.

Head Master R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify Schoolmasters of Parochial and other Schools to teach Elementary Drawing as a part of General Education concurrently with Writing.

The Instruction comprehends the following subjects:—Freehand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Temperand Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still-life, &c., the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes of instruction in the technical processes of China and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. M'Ian. Fees per session,—Advanced Class, 2l. and 4l.; Elementary Class, 1l.; Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall mall, London.

COMPETITIONS.

TO ARCHITECTS.

MIDDLESEX INDUSTRIAL SCHOOL.

The Committee of Visitors appointed under an Act of the 17th and 18th Vic. cap. clxix. to provide an Industrial School for the Juvenile Offenders of the County of Middlesex, invite Architects and others, to lay PUBLIC COMPETITION, for Plans and ESTIMATES for such building, to be forwarded, sealed up, and addressed to the Chairman of the said Committee, at the Session-House, Clerkenwell, on or before SATURDAY, the 26th day of APRIL, 1856. Each set of plans is to be marked with a motto or device, and the name of the author is not to appear, but to be put in a separate sealed letter, marked on the outside a corresponding motto or device. A premium of 150l. will be paid for the plan which shall be considered the best, 100l. for the next, and 75l. for the third.—Particulars as to the site, with a printed copy of instructions, and the conditions on which the premiums are offered, may be had upon application to me, at the Sessions House, any day between the hours of ELEVEN and FIVE o'clock.—Dated this 6th March, 1856.

CHARLES WRIGHT, Clerk to the Visitors.

GRANTHAM BURIAL BOARD.—EXTENSION of TIME for PLANS, &c.

The period for sending in Plans for Chapels, Lodge, and Entrance Gates, is EXTENDED to SATURDAY, 22nd MARCH. Plans are also required for PLANTING the GROUND and LAYING OUT the ROADS and WALKS therein two-thirds as consecrated, one-third unconsecrated, to be sent in by the same time, for which an additional premium of 5l. is offered. The ground is as near as may be square of 220 yards by 183 yards. Entrance west.—By order of the Board,

ROBT. HY. JOHNSTON, Clerk.

Grantham, February 20th, 1856.

BOLTON UNION.—NOTICE to ARCHITECTS, &c.—PLAN for a NEW WORKHOUSE.

The site of the intended New Workhouse for the Bolton Union not having yet been determined on, the advertisement requiring Plans to be prepared for the same is hereby WITHDRAWN.

JOHN WOODHOUSE, Clerk to the Guardians.

Union Offices, Acresfield, Bolton, 21st Feb. 1856.

CONTRACTS.

TUNSTALL LOCAL BOARD of HEALTH.—To BUILDERS.—CONTRACT for ALTERATIONS of TOWN-HALL.

The Tunstall Local Board of Health are desirous of receiving TENDERS for the necessary WORKS required in the Alterations and Improvement of the Town-hall. Drawings and specifications may be inspected at the Office of the Local Board, Amicable-street, Tunstall, from MONDAY, the 3rd, to SATURDAY, the 8th of MARCH; and further particulars may be obtained, on application to Mr. G. T. ROBINSON, Architect, 23, Upper Parade, Leamington.—Tenders to be delivered to me, sealed and endorsed, on or before TUESDAY, the 11th of MARCH next—By order,

Tunstall, 20th February, 1856. J. LOWNDES, Clerk.

BURSLEM LOCAL BOARD of HEALTH.

CONTRACT for FURNITURE and FITTINGS.—The Burslem Local Board of Health are desirous of receiving TENDERS for the SUPPLY of the necessary FURNITURE and FITTINGS for the New Town-hall. Drawings and specifications may be inspected at the Offices of Mr. G. T. ROBINSON, Architect, 23, Upper Parade, Leamington, from MONDAY, the 3rd, to SATURDAY, the 8th MARCH; and at the Public Offices, Moorland-road, Burslem, from MONDAY, the 10th, to SATURDAY, the 15th MARCH.—Tenders to be delivered to me, sealed and endorsed, on or before TUESDAY, the 18th MARCH next.

By order,
J. LOWNDES, Clerk.

Public Offices, Moorland-road, Burslem, 20th Feb. 1856.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives notice, that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall-mall, on or before the 29th MARCH next, for the REPAIR of FIRE-ENGINES, BUCKETS, and for executing the WORKS and REPAIRS of the Royal Engineer Department in the London District, viz.—LONDON, WINDSOR, CROYDON and CHARLTON, HOUNSLOW and HAMPTON COURT; for a period of three years from the 1st APRIL, 1856, to the 31st MARCH, 1859. Printed schedules and forms of TENDER may be obtained at the Royal Engineer Office, No. 31, James-street, Pimlico, between the hours of TEN and THREE o'clock from the 1st to the 15th MARCH inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineers' Office, London District.

February 27, 1856.

TO CONTRACTORS and OTHERS.—The Committee for BUILDING a CHURCH at BYKER, Newcastle-on-Tyne, are desirous of communicating for the PURCHASE of the STONE on the Site of the said Church, to any extent, and the depth of good stone considerable, with very little boring. The purchasers will have to work out the stone within a limited period, and to comply with such other conditions as the Committee may require. Besides the ordinary modes of conveying away the stone the purchasers may have the facility of making an arrangement with the proprietors for a going private railway, terminating at a convenient wharf, which possesses every convenience for shipping stone on the River Tyne. Mr. CLIFFORD or Mr. YOUNG, Schoolmaster, Byker, will show the site, and offers may be addressed to the Rev. T. H. GREEN, St. Mary's place, Newcastle-on-Tyne, Byker, Feb 5, 1856.

ST. SAVIOUR'S DISTRICT.—To CONTRACTORS, BUILDERS, and OTHERS.—The Board of Works for St. Saviour's District are desirous of receiving TENDERS for the performance of the Works in making the requisite ENTRIES from Houses and Buildings into the MAIN SEWERS, and otherwise connected with Drainage and Sewerage within the District, for the term of one, two, or three years. The Tenders to be based on the schedule of prices printed for the purposes of the Board, a copy of which can be had upon application at the Board room, on any of the days between and until the Tender day sent in, or schedule returned. The Contractor will have to enter into a contract according to the printed form attached to such schedule, and he and two sureties to execute a joint and several bond in 500l. conditioned for the performance thereof. All persons tendering must fill in the printed forms, with their names and places of abode, and must sign their Tenders to the Board sealed up and endorsed "Tender for General Works." Before HALF-PAST FOUR in the afternoon of WEDNESDAY, the 12th of MARCH instant. The Board will pay the expense of the contract, that of the bond must be met by the Contractor. The Board do not bind themselves to accept the lowest or any Tender.—By order of the Board.

HERBERT STURMY, Clerk.

Board-room, Emerson-street, Paxton, Monday, March, 1856.

TO MASONS, PAVIORS, BUILDERS, CONTRACTORS, AND OTHERS.

THE VESTRY of the PARISH of ST. GEORGE-IN-THE-EAST hereby give Notice, that they will meet at the Board-room of the Workhouse, Charles-street, Old Gravel-lane, on THURSDAY, the 6th day of MARCH instant, at SIX o'clock p.m. precisely, to receive TENDERS for the supply of MATERIALS and for the execution of JOBBING and REPAIRED WORKS required for the repairing and relaying the carriage and footway pavement of the several streets and places; and also for the supply of Materials and the execution of the Jobbing and Measured Works required to the sewers and drains within the said parish, for the term of FOUR YEARS from the 25th MARCH, 1856. Tenders must be sent in upon the basis of schedules of prices obtainable at the Vestry offices between the hours of TEN and FIVE, on payment of 5s. for each schedule, such sum to be returned on the receipt of a bond fide Tender. Any Tender not upon the printed form of the Vestry will be rejected. The parties whose Tender shall be accepted for Paving will be required to enter into a bond with two responsible sureties in the sum of 200l. and for Sewers and Drains in the sum of 300l. for the due performance of the Contracts. The expense of the bond and contract will be borne by the Vestry, and the Vestry do not bind themselves to accept the lowest or any Tender.

By order of the Vestry, W. L. RAVELL, Clerk.

Vestry Office, 40, St. George-street East, 3rd March, 1856.

TO BUILDERS.

PERSONS desirous of TENDERING for ADDITIONS and ALTERATIONS to the FARMHOUSE in the occupation of Mr. W. PARSONS; and new FARM BUILDINGS, at Binfield, near Oakley, on the estate of Colonel North, M.P. may see the plans and specifications at Mr. W. PARSONS'S, Binfield. The Tenders are to be delivered at the Office of Mr. J. F. CLARK, Architect, Newmarket, on or before SATURDAY, the 22nd day of MARCH; and the lowest or any Tender will not necessarily be accepted.

WATERING.—The VESTRY of the Parish of SAINT LUKE, CHELSEA, will meet on TUESDAY, the 18th day of MARCH, at the Lecture-room of the Male Free House, King's-road, at ELEVEN o'clock in the Forenoon, to receive TENDERS from persons desirous of CONTRACTING to PROVIDE MEN, HORSES, and WATER-CARTS, from the 25th inst. to the 29th day of SEPTEMBER next, both days inclusive. Detailed particulars, and conditions, together with a form of Tender, may be had, on application at my Office. Sealed Tenders, signed by the proposed Contractor, with the names and description of two sufficient sureties for the performance of the Contract, to be left at my Office, on or before MONDAY, the 17th day of MARCH. The legal charges of the Contract to be paid by the Contractor upon the execution of the same; but no Tender will be received or accepted, unless made on one of the printed forms.—By order,

CHARLES LAHEE, Vestry Clerk.

Offices, Manor House, King's-road, March, 1856.

[For remainder of Contracts see next page.]

CONTRACTS.

THE DIRECTORS of the MIDLAND RAILWAY COMPANY are prepared to receive TENDERS for the SUPPLY of the following QUANTITIES of FISHED PLATES, 57 tons of FASTENINGS, 15 Tons of CHAIRS, Bolts of Iron and Metal suitable for the Fastenings of the Wheel CENTRES. Plans and Specifications and Tender Forms to control, may be seen at the SECRETARY'S OFFICE, Derby, on the BLACK PATH of the 8 o'clock TRAIN. MITTED must be sent to the Secretary not later than TEN, a.m. on TUESDAY, the 18th of MARCH, 1856.

By order, JOSEPH SANDERS, Secretary.

Derby, March 1, 1856.

METROPOLIS LOCAL MANAGEMENT ACT.—The Metropolis Local Management Act Amendment Act, 1856.—The Vestry of the Parish of ST. MARYLEBONE, pursuant to the above Act, hereby GIVE NOTICE, that they intend to APPLY to PARLIAMENT in the present Session for an Act to enable them to make a Sewer from the Eastern Boundary of the Parish, through Cumberland-gardens, Upper Berkeley-street, Seymour-street, and Portman-street, to the Tyburn Sewer in Upper Grosvenor-street, and to raise the Money required for the purpose by Rates, or by Loans on the Security of the Rates, or partly by Rates and partly by Loans, and to make Provision for the Repayment of the Loans, and for other purposes connected therewith.

Dated this 1st day of March, 1856.

By order of the Vestry,
WILLIAM HENRY WHITE, Vestry Clerk.

Vestry Hall, Marylebone, March 1, 1856.

TO STONE MERCHANTS.

THE VESTRY of the PARISH of ST. LUKE, CHELSEA, will meet at the Board-room, at the Manor House, King's-road, Chelsea, on TUESDAY, the 11th day of MARCH, at ELEVEN o'clock, in the Forenoon precisely, to receive TENDERS from persons willing to CONTRACT from the 25th day of MARCH inst. up to, and inclusive of, the 25th day of MARCH, 1857, pursuant to the terms of a Draft Contract, now lying at the Vestry Office, for SUPPLYING with Stone the Roads, Streets, Lanes, Courts, Alleys, Public Passages, Ways, Footpaths, Fares, and Places under the jurisdiction of the said Vestry. The Vestry will not be obliged to accept the lowest or any Tender, but reserve to themselves the power of contracting with the Owners of any Quarry or Quarries for the supply of Stone from the same, at such price as may be agreed upon between them.

Printed Forms of Tender, with the Specifications and Conditions of Contract, may be had at the Vestry Office, on and after MONDAY, the 3rd day of MARCH inst., on application at the Office of Mr. Lake, the Surveyor to the Vestry, at the Manor House, King's-road, Chelsea.

Each Tender must be delivered at the Vestry Office, sealed up, on or before TUESDAY, the 11th day of MARCH inst., at ELEVEN o'clock in the Forenoon precisely, and must be endorsed "Tender for Stone," and addressed to the Vestry Clerk.

CHARLES LAIRE, Vestry Clerk.

Offices, Manor House, King's-road, Chelsea, March, 1856.

VESTRY of ST MARY NEWINGTON, SURREY contracts for renewal of Roof, Portland Cement, Bricks, Granite Paving, Blue Lias Lime, Plaster of Paris, Roofing Rag, Grate Bars, Iron Pipes, Lead Pipes, Sheet Lead, Solder, &c. The Vestry will meet at the Board-room, Queen's Head-passage, Newington, on WEDNESDAY, the 19th day of MARCH, at ELEVEN o'clock in the forenoon precisely, to receive TENDERS from persons willing to CONTRACT for the performance of the same for the SUPPLY, and for the REPAIRING of the Roads, Streets, Lanes, Courts, Alleys, Public Passages, Ways, Footpaths, Fares, and Places within the Parish, for the term of one year from the 25th day of March next. Printed Forms of Tender, with the Specifications and Conditions of Contract, may be had at the Vestry Office, on and after MONDAY, the 17th day of MARCH inst., on application; and Tenders to be sent in to the said Office, sealed up, on or before TUESDAY, the 25th day of MARCH inst., at ELEVEN o'clock in the forenoon precisely, and endorsed "Tender for Repairing Roads," and addressed to the Vestry Clerk.

The Vestry will not be obliged to accept the lowest or any Tender, but reserve to themselves the power of contracting with the Owners of any Quarry or Quarries for the supply of Stone from the same, at such price as may be agreed upon between them.

Dated this 29th day of February, 1856.

By order of the Vestry,
RICHARD CHESTER, Jun., Clerk to the Vestry.
1, Cadogan-place, Sloane-street.

THE STOCKTON GAS-CONSUMERS COMPANY, LIMITED, Trustees appointed by MANUFACTURERS and MINERS for the purpose of carrying into effect the Gas Consumers Act, 1855, are prepared to receive TENDERS for the MANUFACTURING, SUPPLYING, and DELIVERING of ILLUMINATING GAS, for the Boroughs of Stockton and the County of Durham, and PAVING, LAYING, repairing, and maintaining the Mains of metal thereto belonging, from the 1st of June next. The apparatus now in use is not to be taken to, but the manufacturer is to provide and erect all apparatus, buildings, and premises necessary for the purpose. The Tenders must be sealed up, and addressed to the Secretary, at the Office, No. 1, Finkle-street, Stockton, on or before MONDAY, the 24th day of MARCH, 1856, and must specify the price per 1,000 cubic feet of Gas, and the Tenderer must attend at the Office of the Company, at Stockton, on the 25th day of March, 1856, at Eleven o'clock in the forenoon precisely, when the Tenders will be opened, and the Tenderer whose Tender is accepted will be required to enter into a Contract with the Company, and to give Security for the due performance of the same.

The Company will not be obliged to accept the lowest or any Tender, but reserve to themselves the power of contracting with the Owners of any Quarry or Quarries for the supply of Stone from the same, at such price as may be agreed upon between them.

Dated this 29th day of February, 1856.

By order of the Vestry,
RICHARD CHESTER, Jun., Clerk to the Vestry.
1, Cadogan-place, Sloane-street.

ELTHAM, KENT.—TENDERS are required for the ERECTION of FOUR COTTAGES at Eltham. Plans and specifications to be seen at the Office of Mr. THOMAS HUNTER HAWKINS, Surveyor, Eltham, and after MONDAY Tenders may be sent to MESSRS. Nelson on THURSDAY the 13th inst. The lowest or any Tender is not necessarily to be accepted.

TO GENERAL CONTRACTORS.

NORTH-COATS INCLOSURE, LINCOLNSHIRE. CONTRACT, No. 1.—The Valuer acting in the matter of the Inclosure of the Fifties or Outmeadow, in North-coats, in the County of Lincoln, in the Parish of NEW SPA SLUICE, Thirsk, and was and will be heard thereon; and all persons claiming any Right of Common or other Right in the said Fifties or Outmeadow are hereby required to send in their Claims in writing to the said Valuer, at his Office, No. 1, Finkle-street, Stockton, on or before the 1st day of APRIL, 1856, or in default thereof they will be excluded from the benefit of the said Award.

Dated this 1st day of March, 1856.

THOMAS HUNTER HAWKINS, Valuer.

Stockton, March 1, 1856.

CONTRACTS.

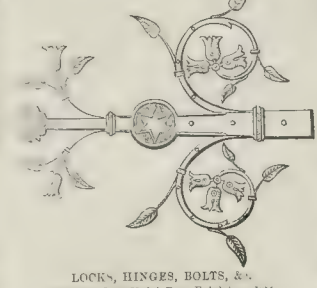
LILLESHALL CHURCH, SALOP.—Builders are invited to TENDER for the RESTORATION and REBUILDING of the Parish Church of Lilleshall near the Donnington Station on the Shropshire Union Railway. Plans and specifications can be seen on application at the Rev. HENRY BEAN'S, at Lilleshall, or at the Office of the Architect Mr. NORTON 24 Old Bond-street, London, and after MONDAY, the 14th inst. Tenders to be sent to Mr. NORTON, on or before the 24th inst.

SURVEY of TIPTON PARISH.—The Tipton Local Board of Health are prepared to receive TENDERS for the SURVEY and LEVELS of the Parish, the whole of the work to be done in accordance with the requirements of the General Board of Health in Lond n. Conditions may be seen at the Board's Offices, Church-lane, Tipton on MONDAY, WEDNESDAY, and FRIDAYS, between the hours of NINE and ELEVEN A.M., after which no Tenders will be received. Tenders to be sent in by the 20th of MARCH, 1856. The Board do not bind themselves to accept the lowest or any Tender.

GEO. M. WARING, Clerk.

Church-lane, Tipton, Feb. 29, 1856.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London.



LOCKS, HINGES, BOLTS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
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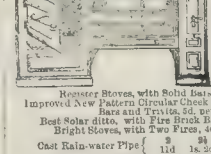
CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 159, Shoreditch.
A great variety of Elliptic, Register, and other Stoves, Cottage and Hall Ranges, fitted, always in Stock.



Improved Self-acting Cottage Ranges, with Large Oven and Boiler,
30 32 34 36 inch.
38s. 40s. 42s. 44s.
Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Iron Bars—
34 36 38 42-inch
54s. 56s. 58s. 60s.
Strong Elliptic Stoves, with Extra Back and Solid Bars, per inch 5d.
Register Stoves, with Solid Bars, per inch 5d.
Improved New Pattern Circular Cheek Register, with strong Bars and Trivits, 5d. per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 40s. to 100s. each.
Cast Rain-water Pipe { 2 2½ 3 inch. 1d 1½d 2d. 1s. 4d. per yard.
Cast Gutters—4 inch, 9d. per yard.
O G Gutters { 4 4½ inch. 1s. 1d. 1s. 3d. per yard.
Patent Line { 2 3 4 5 6 inch. 4d. 5d. 7d. 9d. 1s. per knot.
4-inch Rd. Ward Mortise, with best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s. per cwt.
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An extensive stock of bar, rod, hoop, and sheet iron
Brick Moulds kept in stock. Any size made to order.

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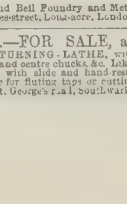
JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs,
25s. per inch, and upwards
Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3-feet Cottage Ranges, with ovens and back boilers, 35s. each.
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Air Bricks, 4s. per doz.
Best Town Glue, 55s. Ditto, Scotch, 64s. per cwt
Best Fine Cut Clasp and Rose.
½ ¾ 1 1¼ 1½ 3-in. & larger.
10d. 9d. 8d. 7d. 6d. 5d. per cwt
And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter prepaid

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire. Gas Pendant, Brackets, and Joints of all descriptions for Gas fitting, in Brass and Iron; Tin Composition, Iron and Brass Tubing, Cornice-poles, Rings and Lacquered Case Tube for Picture Rods, Desk Bells, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, and Metals, &c. at

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TO ENGINEERS, &c.—FOR SALE, an 8-inch centre geared FOOT TURNING-LATHE, with slide and hand-rests, face-plate, drill, and centre chucks &c. Likewise, a 12-inch centre geared Lathe, with slide and hand-rests, face-plate, &c. Also, a small machine for fluting taps or cutting small steel rods. Apply to F. W. J. T., St. George's-road, Southwark, near the Elephant and Castle.

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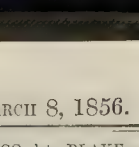

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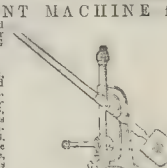
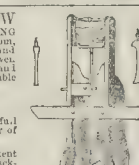


House and Coach Builders, Joiners, Cabinetmakers, and others, whose similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Movers, Ironmongery Establishment, 29, Wading-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work in one machine, and as to self-feeding, it does not require any skill or care in using, like the older machines introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

KIMBERLEY'S NEW PATENT MORTISING MACHINE couples but the room, is most simple and durable, and complete within itself, with seven chisels and three core drivers, but being so true, is almost impossible of injury or derangement.



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No. 14, King-street, Snow-hill, Wholesale Ironmongers;
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212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and tap rising) with all the improvements, under their Quadruple patents of 1850, 1851, and 1855, including their Glazed Inner Iron Lock and Door (without which no safe is secure)
THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.
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JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be efficaually warmed by Hot Water. JOHN WEEKS and CO. can give unanswerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also can be seen in extensive operation at their Premises, King's-road, Chelsea.

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February 20th, 1856.

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PFEIL AND STEDALL.
THE LARGEST STOCK AT
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5 AND 6, BROAD-STREET, BLOOMSBURY.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

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ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.

COTTAM and HALLEN, of Winsley-street,

Are the original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER TROUGH AS ONE FIXTURE, to which they have made important additions, the main features of the same being explained in the following description and Engraving.

A represents the Patent Halter-guide and Collar-rein, the bait of which is taken to the back of the manger-works with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the mischievous Horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety centre; Sanitary Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Preserving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

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Agricultural and Horticultural Implements, Iron Gates, both plain and ornamental; Hurdles, Strain Fencing, &c.

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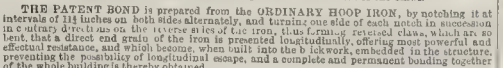
Beyond the current Price of Hoop-Iron.

The undermentioned Gauges are kept in stock; but any Gauge or width will be supplied within a few days, at a small advance on the following prices:—

Gauge.	In. wide.	Per 1,000 ft.
No 16	1½	7s. 6d.
15	1½	7s. 6d.
13	1½	8s. 0d.
15	2	8s. 6d.
13	2½	9s. 6d.



Plan and Elevation of Bond, showing Position and Form of the Claws.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1½ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming retained claws, which are so bent, that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

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London Depôt—463, OXFORD-STREET.

IRONMONGERY.—Builders and the Trade generally will effect a considerable saving by purchasing of CLUSH and ROSE, Wolverhampton Factors and Stove and Range Manufacturers, 35, City-road, corner of Tabernacle-row.

Present prices for cash:—

BEST CUT CLASP.

16s. 6d.	16s. 3d.	14s 6d.	14s per cwt
¾ in.	2 in.	2½ in.	3 in. and larger.

PATENT SASH LINE.

3s. 3d.	3s. 9d.	4s. 3d.	6s. 6d.	7s. 6d.	9s. per gross.
No 1	2	3	4	6	

5 in. Mortise Locks, best Brass Furniture Shifting Spindles, 2s. 6d. each; 6 in. ditto, 3s. each.

Strong Elliptic Stoves, 4 double backs, 3½d. per inch.

Strong Register ditto	ditto	5d.	"

26 in Self-acting Oven and Boiler Cottage Ranges, complete, 34s. each; 30 in. Self-acting Oven and Boiler Ranges, best wrought bars and wrought fittings, complete, 42s. each.

A large Stock kept of every description of builders' ironmongery; china glass and bone lock furniture and finger-plates. List of prices forwarded by post on application.

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REDUCED LIST OF PRICES.

Best Cut Clasp and Rose Nails

1¼ in.	1½ in.	2 in.	2½ in.	3 to 6 inch.
16s 6d.	16s.	15s.	14s 6d.	14s. per cwt.

Best Cut Floor Brads	13s 6d. and 14s. per cwt.
Best Cut Lath Nails	16s. "
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RAIN WATER CASTINGS, per yard.

Sizes—	3 in.	3½ in.	3 in.	4 in.	4½ in.	5 in.
Pipes	11d.	1s. 3d.	1s. 4d.	1s. 8d.	2s. 1d.	
Half-round Gutters	8d.	8½ d.	9d.	1s.	1s. 2d	
O G Gutters		1s.	1s. 1d.	1s. 3d.	1s. 5d.	
Ditto, with plain chips cast on		1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.	
Ditto, with lion ditto		1s. 3d.	1s. 3d.	1s. 5d.	1s. 7d.	

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

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BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

FOUNDRY AND IRON WORKS,

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GLOVER, BROS.,

solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION either structural or ornamental.

Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes Wheels, Pinions, Lathes, and Steam-engines; Range and Hot-plate Metal. An improved Seat Desk and Garden Seat.

A large stock of Rain-water Pipes, Plain and O G Gutters, Air bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings, Hurdles, &c.

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PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper for that material, and at the reduced price costs but little more than Sheet Zinc

No. 11 gauge weighs about 18 oz. per foot super.			
12	"	20	"
13	"	24	"
14	"	26	"

Full particulars and the reduced price sent by post on application to

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GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved

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Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where Iron not liable to rust is required

Tweed Galvanized Iron supplied in every form.

Sheets plain and corrugated.—Roofs fixed complete.

J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.

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PLAIN or CORRUGATED, and Convex Tin Plates

Manufactured articles always kept in stock, such as pails, scoops, boats, milk dishes, skips, &c. of all sizes.

Also the Patent Galvanized Tinned Iron Tubes, Coated Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building, of the

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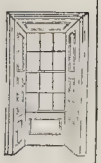

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The Builder.

VOL. XIV.—No. 683.

WE gave last week some particulars of the arrangements made by the London Necropolis Company for funerals at their Cemetery at Woking, and took the opportunity to offer some remarks on the state of the burial question. After speaking of the station in the Westminster-bridge-road, we took the reader to one of the stations in the cemetery itself. We will now pursue our notice and comments.

The estate of the Necropolis Company considerably exceeds in size what is at present laid out, or is thought likely to be ever required for burial purposes. The quantities purchased amounted to over 2,100 acres, the estate reaching, though in straggling pieces, to a length of four miles along the railway, which runs through it. It may be viewed as divided, in the other direction, into two principal portions,—one at the Woking Station of the main line, and the other about two miles farther westward, towards Farnborough and Pirbright. The cost of the ground was about 25*l.* an acre; the land of the old suburban cemeteries being said to have averaged 480*l.* an acre. The eastward portion contains about 400 acres, wholly surrounding the Woking Station; the Staines, Woking, and Wokingham Railway, now in course of construction, also passing through it. Of the westward portion (1,700 acres), 1,000 acres south of the main line, were at first reserved for cemetery purposes, but this quantity must have been increased by the purchase lately of a few small holdings, which were scattered about the general ground. Of the 1,000 acres or more, 400 acres are at present laid out, and prepared for use. The land about the Woking Station, and a portion of that westward (north of the line, and in great part also north of the Basingstoke Canal), called the Hermitage, the committee have just obtained power to let for building upon. It is presumed that the park-like appearance, which may ultimately be got in the cemetery, will render the neighbourhood attractive, whilst the improved practice of interments to which the company are bound by the terms of their Act, would render the usual noxious results imperceptible. The portion of the estate now appropriated for interments, though not deficient in pleasing prospects, and though undulating and varied in many parts, is chiefly heathy moorland, which it will take some few years of "top-dressing" and cultivation, to make as beautiful as—with what has been done, or is doing, in the way of planting—it will no doubt eventually become. The compensating advantage, however, is the perfect suitableness of the soil, for interments. The soil consists of a dry sand; and it is so compact, that graves can be dug to almost any depth, of perfect shape, and without shoring.

The average mortality of London is set down by the company as 60,000; and it is stated to be the opinion of Dr. Sutherland, that the quantity of ground reserved at Woking would, with the proper interval between interments, suffice for the whole metropolis for five or six centuries to come. Looking at published calculations, Mr. Chadwick, on the scale proposed by Riecke, and taking the deaths of the metropolis about the year 1838 as averaging 50,000, found that 444 acres, or a space a little more than a fourth over the area of the Regent's-park, would suffice in perpetuity for the amount of mortality. The 600 acres or more, of reserve at Woking, therefore afford a considerable margin for increase of population, and perhaps even for some interments which are calculated upon from Southampton, Portsmouth, and other towns.

The total area of the London suburban cemeteries is stated to be 282 acres; a quantity which will obviously become inadequate shortly after the practice of "pit-burial," maintained in them, is put a stop to. The graves at Woking, in ordinary cases, are dug to a depth of 6 feet, in "grave spaces" measuring 9 feet by 4 feet. A greater depth, however, is provided when called for: though, of course, according to the opinions which now obtain, great depth is not desirable,—the access of the air, and consequent speedy decomposition, being retarded by it.

The consecrated and the unconsecrated ground are separated from each other by the Pirbright road,—each being enclosed by park fencing. We may here mention that a recent discussion in the House of Lords, with reference to the difficulty made about consecrating the Carlisle ground, in consequence of the absence of what was deemed a proper fence, would show the necessity of proceeding cautiously in future cases.

The stations of the two divisions of the Woking ground are precisely similar to each other,—consisting of temporary buildings round three sides of a quadrangle, of one story in height, and painted in drab and white stripes. A portion of the roof projects a few feet, on iron cantilevers, and is ornamented along the edge. In the permanent buildings better means of shelter would be desirable. The decorative part of the design in the present case, has no distinctive character, and too much resembles an ordinary railway station. The chapels, also similar to each other, take the form of small cross churches with towers and slated spires, and are built of half-timbered brickwork, "rough-cast" externally. The interiors, with stained woodwork and white interspaces, are successful, though plain; but the cross form, which required us to sit almost facing some of the mourners, seems to be open to objections in this class of buildings.* The service at the pauper funerals, which are what we are able to speak to, was impressively conducted. It is, as usual in such cases, and necessarily so, read over several bodies at one time. In this case, two coffins rested on the same bier. No other difference is made between the funerals of different classes. The bier is a light carriage, drawn by horse or by hand, as may be required. It seemed to us of greater height than would be desirable; and the pall was short, and did not hang well. If the latter were cut more to the shape of the mediæval palls, and with heavily-weighted fringe, it would be better, considering how much it is exposed to the wind, on the ground.

Time will be indispensable to develope the sylvan beauty which may characterise the place, and which appears to have been prepared for by planting. Vegetation is not merely desirable for the obvious reasons in cemeteries; but it is, as we need not now say, the best disinfectant and absorbent of the putrescence of the ground. Except in the Abney-park Cemetery, however, little attention is paid to it in London, compared with what is desirable. Far too little space is left for walks, or kept free from graves; and thus, the effect which the monuments might otherwise produce does not result. It would, be worthy of the consideration of the Necropolis Company, how far with advantage, more attention might be given to the matter of monuments than they would seem to be giving, were we to judge only by the few headstones that there are. Half-a-dozen of these are reproduced from old designs, but are clumsily detailed; and the general number have no character whatever, except what may be derived from the segmentally-cut top. For the company to set that forth as "statuary" is clearly what people call "a mockery, a delusion, and a snare." It were much to be desired that an architect were more frequently engaged on subjects of this sort. At most cemeteries, we see ideas, originally good, twisted to hopeless caricature by the mason who has pitched his tent hard by the gates: the sarcophagus, the urn, and the broken column have been "done to death;" and in one cemetery at least, there is a broken *cross*,—the climax of absurdity.

The demeanour of the mourners on the day of our visit was all that could be desired. Indeed, it has occurred that mourners of the pauper class, and some of a much higher grade, respectively have presented appearances and manners which would have justified exchange of places. Still we are compelled to think that cases are not unfrequent, when the solemnity of the occasion is not duly regarded. We make no attempt to understand the peculiar custom of the Irish, or to discover what may have been the exact nature of practices spoken of as obtaining even amongst the early Christians. We can regard it only as a foul stain upon the character of a large section of the people, that a funeral is made an occasion for some sort of excess in dram-drinking. Perchance, the evil may have orginated in the idea that spirituous liquor was required by the bearers of the corpse,—who are not always free from danger. That, however, would not describe or explain the whole case, as it is presented to us from circumstances which come to our knowledge. Indulgence in drink clings to the English character, as its bane and degradation,—we fear, in *fact*, as much it undoubtedly does in the eyes of foreigners. At the funerals by the Necropolis Company, we are told that not unusually, mourners have carried drink with them, of which, on the return journey, they had partaken to such an extent, that they have been found dancing about the carriage, by the ticket-collector. On one morning, at the Westminster-road station, two "mourners" arrived so *drunk*, that the superintendent could not allow them to proceed by the train. We admit that these incidents may be exceptional, and we repeat, that on the day of our visit, though it was the principal day for pauper funerals, not an unseemly act or gesture was to be observed; but even as exceptions, the facts we speak of, and are assured of, are grievous and melancholy, and call for the utmost attention from all who concern themselves with the welfare of the working classes. Feeling thus strongly, we were indeed sorry to see "a pint of rum" and other liquors set down in the list at the refreshment-room at Woking. Restrictions may be hard upon those who do not require them: but some men are infants where drink is concerned, and must be protected against themselves, till (if ever) they arrive at years of discretion: and in this case, we fear, some must suffer, if need be, for the faults of others. We hope that the principle of the arrangements to secure privacy, is so fully observed, that such incidents as we refer to could hardly be witnessed by mourners of other parties, whether belonging to the first or the intermediate classes.—Several persons, of some position in society, have already provided themselves with graves at the cemetery; and there seems to us every argument why others should prefer the same locality,—especially, as it is fairly shown, since the old suburban cemeteries are likely to be closed at no very distant time. Amongst all

* It is due to Mr. S. Smirke, their architect, to say that both the chapels and the stations were *required* by the directors to be erected in as *temporary* and *inexpensive* a manner as could be devised; and that he literally fulfilled their wish is evident from the smallness of the expense incurred for these. Their intention is, we believe, to build something more suitable and handsome, as well as to greatly increase the amount of accommodation, whenever the concern may be productive enough to justify their so doing.

classes, it is found that there is a growing disposition to dispense with much of the useless expenditure on funerals. The company itself will act as undertakers, and certainly are practically carrying out what had been long felt, that funerals could be conducted at half, or a third of the usual rates. Their charge for a first-class funeral, with grave in perpetuity in the consecrated ground, and head and foot stone; with the service, and conveyance for four mourners, is 21*l.* 14s. 2d. They put forth the charges as considerably below what were contemplated by the Board of Health. If they carry out the object of reduction in expenditure on funerals, they may effect as much good in that way as in a sanitary point of view, and perhaps more than that. A good idea has been lately entertained,—that of forming burial insurance clubs; the interments to take place at Woking. But, so many objectionable results have followed on the establishment of similar societies,—sometimes from the entire want of all calculations—sometimes from defalcation by the treasurer, and sometimes in a manner far worse—that difficulty has, we believe, been felt in working the idea. Mr. P. H. Holland, one of the medical inspectors to the Home Office, however, suggests that the difficulty might be got over by the company, were they to stipulate on not making any *money* payment, but that they should perform the funeral merely,—also that there should be no liability from the company in any case where a death occurred within six months, or some similar period, after the commencement of a subscription.

From a report which has just been issued, we learn a few useful particulars of cost. Land, compensation and interest, cost 59,648*l.* 17s. 10d.; and the recent purchases, under the Act of 1855, cost, in addition, 2,452*l.* 2s. 4d. The Woking Branch Line, cost 1,419*l.* 17s. 6d.

The cost of the cemetery itself, so far as laid out, is comprised under the following heads:—

Woking Station ...	£10,627	16	8
Planting and road-making	3,048	14	10
Draining...	8,802	19	10
Fencing	2,958	14	8
Whence it would appear that the cost of the whole works was	£25,438	6	0

The cost of the London station is set down as 23,293*l.* 19s. 8d. Besides these items, however, expenses were incurred for professional advice and superintendence; and the geological survey, by Mr. Prestwich, is set down at 52*l.* 10s. Capt. Moorsom; Sir Wm. Cubitt; Mr. Abraham; Mr. Sydney Smirke, on the Woking buildings; and Mr. Tite, on the London station, were at different times employed. Besides the refreshment-rooms and churches at Woking, there are stables and cottages, and a house for the clergyman, all which, we are told, are included in the items above.

The idea of providing a joint cemetery for several parishes, has been several times mooted. It was long since suggested in our own pages; and the disadvantage of arrangements left in the hands of numerous small parochial boards, was clearly shown by Mr. Chadwick. Both the extramural system, and the union of parishes, formed part of the proposal by Sir Christopher Wren—when he prepared that plan for the rebuilding of the City, which, if carried out, would have preserved London from evils felt to the present hour. The same great architect preceded us in the recommendation that the "dimensions" of monuments "should be regulated by an architect, and not left to the fancy of every mason;" and also thought of a form of hearse, with "two wheels and one horse," which appears to resemble what is used by the Necropolis Company. Extramural sepulture was, however, the ancient custom; and the words of one of the twelve tables, "*Hominem mortuum in urbe ne sepelito neve urito*," are well known. It cannot be too generally understood, that neither deep burial, nor the use of leaden coffins, will do more than retard the ultimate decomposition,—which cannot go on without poisonous exhalation; but which, proper choice of site and soil, and proper manner of burial; and provision for vegetation may reduce to the minimum of result. Lead coffins not only do not—as we think—from the first (and the experiments of Dr. Waller Lewis not forgotten), secure the advantages which appear to be expected under the present Home Office regulations; but the speedy decay of the outer casing, and consequent sinking and breaking of the lead, are events which are too familiar in the practice of architects, to need our producing them as evidence. It is, perhaps, the idea that injurious exhalations can never be wholly prevented, that has led sometimes to the proposal to revive the practice of cremation. Not long since some notice of a society, formed with such an object, appeared in the *Builder*; and a letter from a correspondent, signing himself "W. B." has been some time before us, in which the question is argued with considerable ability. We doubt, however, the possibility of a change—where the sensibilities of relatives, and feelings which it is desirable to foster, and which are not mere prejudices, are so deeply concerned. We believe that the Woking Cemetery, that of the City of London, and perhaps that which is proposed on the Great Northern Railway—with some further attention to the subject by the Government—may be made the means of completing the change from the various sanitary and moral evils which have been connected with the burial of the dead.

All must hope that when that mortal frame which now concentrates all the power of mechanics, the subtilty of chemistry, and the wonder and beauty of nature and art, shall resolve itself into new forms,—parted from the mysterious agency of *life*,—the indestructible elements from their grave, may convey no poison to the living. Surely, if a man strives to *live* not wholly in vain, he should provide against the injury which his body may occasion to his survivors,—so that, like the physician of Paris, "*vir pius, et probus*," he might be made to say on his tombstone, that he had wished to be buried under the free air,—

> "Ne mortuus cuiquam noceret,
> Qui vivus omnibus profuerat."

or, like one buried at Louvain, that,—

> "Partem sui materialem
> Hic in cœmeterio condi voluit,
> Ne templum dehonestaret,
> Aut nocivis halitibus inficeret."

Those who have the like sense of duty, may find some quiet resting-place in the dry sand of a Woking grave.

THE TREATMENT OF MODERN STAINED GLASS.

THERE are some passages in the paper by Mr. Winston on Stained Glass* which ought not, I think, to be allowed to go unquestioned. I think so, because, owing to Mr. Winston's very laborious and valuable inquiries into the history and manufacture of stained glass, his opinions on other points,—*ex. gr.* on matters of taste,—may possibly be received with more deference than they are entitled to. It is no new thing to find a zealous antiquary unable to grasp the true principles which govern all art: it is, indeed, so common, that it would be a real matter of surprise were Mr. Winston to afford an exception to the rule. I take it that the application of all the faculties to one department of antiquities has a natural tendency to blunt the power of regarding each art as forming a portion only of the whole effect which it is the business of the perfect artist to strive after. It makes men rather regard the elaboration of one detail than the perfect harmony of all the parts, and tends therefore to an unsatisfactory result. This is especially true of stained glass, which, so far as it forms an enrichment of architecture, ought to be treated specially in reference to its fitness for its purpose, and in regard to the general effect of the buildings in which it is introduced, as well as with regard to its own perfection as a work of art. This is what, beyond all doubt, the best of the old artists did with great success. I think, therefore, that I, and others who agree with me, are not the "foolish zealots" Mr. Winston seems to think us, when we see in this, as well as in the nature of the material, some restriction in the style of design applicable to modern works in glass.

About four years since I advocated what I still believe to be true views on this subject in the "Ecclesiologist," and since then, in a note to the second volume of the "Stones of Venice," Mr. Ruskin has given the result of his consideration of the subject. The views we have advocated will find, I am afraid, no favour with Mr. Winston; but I shall ask you, nevertheless, to allow me to quote Mr. Ruskin's words, as containing the best possible corrective to the views which Mr. Winston has propounded. He writes as follows: "Next in the case of windows, the points we have to insist upon are, the transparency of the glass, and its susceptibility of the most brilliant colours, and therefore the attempt to turn painted windows into pretty pictures is one of the most gross and ridiculous barbarisms of this pre-eminently barbarous century. It originated, I suppose, with the Germans, who seem for the present distinguished among European nations by the loss of the sense of colour; but it appears of late to have considerable chance of establishing itself in England: and it is a two-edged error, striking in two directions; first, at the healthy appreciation of painting, and then at the healthy appreciation of glass. Colour, ground with oil, and laid on a solid opaque ground, furnishes to the human hand the most exquisite means of expression which the human sight and invention can find or require. By its two opposite qualities, each naturally and easily attainable, of transparency in shadow and opacity in light, it complies with the conditions of nature; and by its perfect governableness it permits the utmost possible fulness and subtlety in the harmonies of colour, as well as the utmost perfection in the drawing. Glass, considered as a material for a picture, is exactly as bad as oil paint is good. It sets out by reversing the conditions of nature, by making the lights transparent and the shadows opaque; and the ungovernableness of its colour (changing in the furnace), and its violence (being always in a high key, because produced by actual light), render it so disadvantageous in every way, that the result of working in it for pictorial effect would infallibly be the destruction of all the appreciation of the noble qualities of pictorial colour. In the second place, this modern barbarism destroys the true appreciation of the qualities of glass. It denies, and endeavours as far as possible to conceal, the transparency, which is not only its great virtue in a merely utilitarian point of view, but its great spiritual character," and "the true perfection of a painted window is to be serene, intense, brilliant, like flaming jewellery; full of easily legible and quaint subjects, and exquisitely subtle, yet simple, in its harmonies. In a word, this perfection has been consummated in the designs, never to be surpassed, if ever again to be approached by human art, of the French windows of the twelfth and thirteenth centuries."

I have never seen these arguments met; and, as I am sure that they require no support of mine to commend them to the sympathy of your readers, I shall leave them to produce their proper effect.

Mr. Winston's main dogma, that receding backgrounds, and therefore "pretty pictures," are admissible in glass, being sufficiently controverted, I must beg you to allow me to go on to refute his other proposition, that, because he and many persons "are unable to perceive the ill effect of a subject cut through by a mullion," therefore there is no objection to it. Just consider for an instant what this would involve us in. First he would have us work up

* See pp. 71, 97, *ante*.

our glass into imitations of pictures, and then, disregarding the solid obstruction presented by the mullions, carry these "pretty pictures" all across our windows. Pray, if Mr. Winston had to introduce a painted tryptich into a church, may I ask whether he would beg Hunt or Dyce to paint it, and then cut up their painting with lines of tracery carved in oak? Would they be satisfied that "the eye passes across the mullion without being sensible of any interruption of the design?" or would they not rather beseech their employer to let them paint between the mullions of his next tryptich, and not behind them also? And wherein lies the difference? For if, as Mr. Winston wishes, we are to treat our glass as we do our pictures, then why not treat our windows as we do our picture-frames, carefully taking out the mullions and tracery, to leave room for the desired development.

The truth is, that there is ample variety afforded us in the old style of glass painting, if we choose to work it out properly. I grant it is more difficult, and requires more training to attain success than it does in the "pretty picture" line; but this I do not think a disadvantage. And the reason which actuates "our mediævalists" in desiring to revive this early style rather than the work of the sixteenth century, is their conviction that it was carried out with far more regard to true principles, and with far more success; just as in the same days architecture was also so much nobler than afterwards.

What is now required seems to be, that we should consider whether Mr. Winston's dicta on a matter of taste, are to be followed implicitly or not; and though, as I have said, I am always ready to give him my most hearty acknowledgments for what he has done in some respects, I cannot feel that I am bound to do this. He seems to me, if I may say so without offence (and I am specially anxious not to introduce any acrimonious matter into this discussion), to be warped and prejudiced to some extent by a consciousness of his considerable knowledge of the *history* of the art, and to forget that this knowledge is not enough without some of that feeling for general effect upon which artists are bound to depend for success in their work.

There is one other statement which I notice with some regret, because I can hardly suppose it to be the result of more than a moment's reflection. Mr. Winston's belief in the invariable partial success of a modern classic school is singular. Wherein consists it? In false construction, flat roofs, paint, whitewash, or cracked window-heads? Nor less singular is his assertion of the invariable absolute absence of any good in the work of the Mediæval school. If they have done no more, they deserve surely some encouragement for their revival of true principles in ornamentation and construction, for their earnest fighting against the sham architecture of the last few years, for their constant assertion of the paramount necessity of truthfulness in all that we design, and for their appreciation of the advantages of colour on our walls and our floors, as well as in our windows.

It comes, after all, to be a question of individual taste; and then I say that, if we are to trust in men, I, and I suppose most men, would a thousandfold rather follow Mr. Ruskin than Mr. Winston; and that, at any rate, before we give up the attempt to rival the glories of the noblest school of artists on glass the world has yet seen, we must have some visible proofs, of the strongest kind, of the success of Mr. Winston's efforts in the path he has chalked out for himself.

I fear he will give me the credit for being a too determined mediævalist; but I am so on no light grounds, and not without much consideration.

GEORGE EDWARD STREET.

I would have requested your leave to notice Mr. Winston's late lecture at the Architectural Exhibition, as reported in your paper of the 9th ult. but for the words, "to be continued," showing it was not complete. The *Builder* of Saturday supplies the conclusion, which, however, differs so little from the first part, that I almost regret having waited for its appearance. Mr. Winston's argument has a 'wormy property which does not suffer from being divided, but has as much appearance of head and tail, dissevered as entire, and seems to suffer as little. The lecture, indeed, is very little more than a jumble of misstatements and "passages that lead to nothing." The title, "Application of Painted Glass to Architecture," is a mere delusion, for no rule of application is given, nor is any relative utility or benefit pointed out; and when we have accompanied the lecturer in and out, up and down, over and over, through all his convolutions, we find ourselves at last exactly at our original standing-point, and everything as it was before.

Mr. Winston sets out by noticing the differences of opinion which prevail on the subject of glass-painting, yet believes all are agreed as to the badness of modern windows. He retains niches in his Temple of Fame for less (how many less we cannot say) than half a dozen glass-painters; but, alas! does not leave this dubious half-dozen so much as one production apiece to justify their fame; for in spite of the manifest superiority of foreign glass-painting, as proved in the Hyde-park Exhibition, in spite of "the enormous sums expended on painted windows within the last twenty years," Mr. Winston believes that we can scarcely boast of *one* window, and questions really if more than *two* could be named, which could bear comparison with the modern windows of Munich or Cologne, inferior as Mr. Winston thinks these are, and little to be followed. But let us admit the low standard of acquirement usually to be found among "practitioners" of this art: let us leave the odd collocation of mediævalists, glaziers, and architects' clerks, to settle their own accounts with Mr. Winston; and what are we to get from this argument? On what grounds are we called upon to accept this gentleman as our self-elected teacher, or to submit to the sweeping and somewhat spiteful censure, which is not balanced by a morsel of instruction upon the other side? Is the west window of Norwich Cathedral (one of the most expensive works on which "enormous sums have been expended") one of the only two specimens of English glass-painting, which may be compared with the defective glass of Munich and Cologne? And is the window in the ante-chapel of the Temple the *one par excellence?* Either it must be so, or Mr. Winston is in no position to judge others, being himself included in his own verdict of condemnation. The Norwich west window, so far as my judgment goes, is a coarse and ambitious failure. I examined it by evening sunshine and morning quiet, and could come to no other conclusion; and that this opinion was widely shared, will be in the memory of many: so much so, indeed, that its removal was hinted at within a year of its erection, even among those active in getting it up. For the specimen in the Temple, I can only say, that turning from a careful inspection of it to the windows in the east end of the same church, I felt that the person most benefited by its erection was our veteran Willement, whose windows looked by its side as much in advance of it, as they did to my eyes of most modern glass at the time they were put up. I am sorry to differ from "the judgment of those best qualified to form an opinion," yet these are my impressions. Is it upon these two windows that Mr. Winston stakes the reputation of the art?

The history of painted and coloured glass which follows may be very well as a proof of the erudition which nobody impugned, otherwise it will not much enlighten any reader; and we are scarcely clear of the *stiff* patterns, mosaics, and colours (and surely this word means more to the lecturer than it does to ordinary mortals), when we fall upon a startling proposition which would speedily bring ease to Mr. Winston's troubled spirit, and set at rest our smaller tribulations, were it made into fact and reality. "In the application of painted glass to architecture," says Mr. Winston, "much of the difficulty with which the subject is beset would vanish if all the buildings intended to be so decorated were of one character." How true! how wise! But, unfortunately, there are such a myriad of ifs, which could change this fighting-world into a paradise. If all men were of one mind, for example, there would be no controversies about painted windows, so Mr. Winston has to come down from this simple revelation to the under platform of the "*as it is*," which compels us to *select* glass paintings "fit for buildings possessing every variety of character." And here is again brought forward the oft-repeated accusation, that the lovers and promoters of Gothic architecture demand, as a *sine qui non*, at least as much ill-drawing in painted glass as prevailed at the birth and growth of its various styles—an accusation both hurtful and untrue—denied over and over again by those accused who were best able to make the denial. Reiteration of an old charge is, however, a safe mode of argument, and a fashionable, not disdained by greater critics than Mr. Winston.

The second part of this lecture, as given in the *Builder*, begins with much laudation of the glass manufactured by Messrs. Powell and Sons. It may be as well to dismiss this, by simply stating the fact, that the successes achieved by Mr. Winston's scientific friends, in the revived manufacture, have received, at various times, and in various quarters, their full meed of honour; and in the present very considerable demand for their glass, I trust the manufacturers are receiving their fair meed of profit; but it must also be said that there are colours and qualities of glass necessary to the glass-painter, which Messrs. Powell cannot, or at least do not, make. * * * *

Now, Mr. Winston professes to give us an account of the progress of glass-painting, from the twelfth to the sixteenth century, which must be satisfactory, being managed after this manner. "We need not trouble ourselves with any intermediate types, but confine our attention to the remains of painted glass belonging to the twelfth, thirteenth, and sixteenth centuries," — that is, passing disdainfully over the fourteenth century, the manhood and strength of the art, of which more anon. This is a pleasant way enough of dealing with difficulties, but it is by no means an instructive one. The Temple Church, Mr. Winston's own experiment, and the Greek excellence which he recommends, come in between these three favoured centuries, and the fourteenth, to which we reach at last. Mr. Winston admits the powerful colour of the time, but questions its propriety as confusing the mullions and tracery, though the all but universal use of the border and clear margin during this period ought to relieve him from his concern on this point; while his objection to canopies, from their want of positive projection, will be shared by few who truly appreciate glass painting, as the art it really was, and is, or should be. As for the sea-green white pattern windows, they are a delusion. I have numbers of specimens of decorated glass, and none of the whites are sea-green: some of them are as white and satiny as the glass of the end of the fifteenth century. Occasionally they appear green from excessive thickness, but such a thing is by no means a distinctive characteristic of the period.

Again, Mr. Winston says—"The Gothic architecture of the fifteenth and sixteenth centuries is so much alike, that it is not surprising to find the sixteenth century glass paintings that have happened to be placed in buildings of the fifteenth century agree so completely with the architecture. Indeed, the glass-painting of both periods are alike in principle; the development of this principle in the sixteenth century constituting the chief difference between them." How strange is this manner of stating a clear and evident natural process. Why not have said that the principles of the fifteenth century continued to prevail for a short time after the commencement of the sixteenth, till it was submerged by the paint and barbarism of the new method? As for claiming on behalf of the Cinque Cento the beautiful pearly lustre of perpendicular glass, the works themselves, even the S. Gudule's windows, on which Mr. Winston hangs his shield, would sullenly disown it.

In discussing the works of the sixteenth century, it is observable that Mr. Winston expands a little on his former prelections. Formerly, if I am not deceived, he professed to hold by the first *quarter* of the century; now it is the first *half*: doubtless St. Gudule's compels the extension.

We come at last to a part which I confess I had waited for with some little expectation, viz. the suggestions for "glass-paintings most likely to harmonize with buildings in the Classic styles." The first portion of this is dismissed as swiftly as pleasantly:—

"With regard to Palladian buildings, we have the Cinque Cento style, ready-made to our hands, the various designs of which, more or less rich in colour, light or deep in tint, flat or receding in their design, would supply ample hints for meeting any exigency of local position or character of the surrounding architecture."

Glass-painters of the nineteenth century! behold yourselves here fully equipped for an assault on all Palladian churches or palaces. It is wonderful what a stroke of the pen can do. When he carries us forward to Greek, the lecturer, to our great disappointment, declines offering an opinion. At most, with an "If I *must*," he gives us a something nothing. And so, with a few remarks settling nothing, upon receding pictures and pictures intersected with mullions, the lecture is finished. We have all been brought to the bar—judged, condemned, and made an end of. If we submit to so summary an overthrowal, we should have, at least, a reward for our humility: and we again ask, what have we gained?

FRAS. W. OLIPHANT.

WAGES OF MASONS AND PLASTERERS. — The *Forres Gazette* states that the masons of Elgin have intimated to their employers that they must have their wages raised to 21s. a week; and the plasterers have made a demand for 20s. if employed in town, and 21s. if sent to the country. Both classes of workmen have at present only 18s. per week.

CLASSIC AND MEDIÆVAL.

It is not my intention to embark in a long correspondence upon the relative merits of classic and mediæval architecture, as applicable to churches, although it might not be difficult to add other reasons to those so well advanced by my friend, Mr. G. G. Scott, in favour of the latter style, at least for ecclesiastical purposes. I would, however, ask all intelligent people to judge by practical results, and not be led away by ingenious and plausible arguments, many of them tending rather to puzzle and confuse than elucidate the subject.

It is certainly amusing to hear the cool way in which many now hold forth upon the duty of adopting a style suited to the requirements of the day, instead of employing known systems of architecture, who never in their own practice have shown the least attempt at progress.

For the want, then, of any other style at present which may satisfy the cravings of theorists, we must fall back upon classic or mediæval architecture; and I ask those not blinded by prejudice, and capable of common observation, whether any comparison can be instituted between the modern churches of classic design, and those built in the mediæval styles? Whether there is not a tone and character imported through the latter style, which it is impossible to obtain by the means of classic composition? I feel satisfied that all true artists, whatever may be their predilections, will admit this: indeed, few persons deny it; and hence, by almost universal consent, mediæval architecture has been so much employed for church purposes. But then exceptions are taken to the forms and arrangement of Gothic churches, as being unsuitable for our Reformed Anglican Ritual, and reference is made to those erected by Sir Christopher Wren, as types of excellence.

Now, no one can be a greater admirer of Wren's works than I am, for they exhibit great genius, and his aim in the designs of his churches seems to be a desire to assimilate classic forms to mediæval composition. The limited spaces allowed to him for the City churches would not admit of chancel arrangements; but in his towers and spires there is the most evident aim at mediæval treatment. It is impossible to doubt Wren's appreciation of Gothic architecture.

If the essential requirements for a church are simply that everybody shall hear, see, and be seen, there must be an abandonment of all internal composition, and we need only copy Fra. Giovanni's great hall at Padua, or other large assembly-rooms, to obtain all that is required.

I contend that the subdivision of our churches by pillars and arches is not objectionable, and that such structural arrangements assist the voice, and prevent the reverberation and blending of sound, incident to vast, unbroken spaces. As to some people not seeing the preacher, this ought not to be a matter of any moment, provided they can hear properly.

In regard to galleries, I could hardly have supposed that anybody in these days would have seriously recognised such erections as fit to be perpetuated in a church; and I cannot but regret that so well-informed and able a man as Mr. Petit should have given the sanction of his name to the use of these deformities by even suggesting "that the Italian style is perhaps better adapted for a church than Gothic, where it is necessary to enclose a wide area under a single roof, or to have two tiers of windows on account of galleries," &c. But as that gentleman admits that his views have changed since the publication of his first work on "Church Architecture," it is to be hoped that his opinion upon this point may lately have undergone some modification.

Mr. Scott has so completely refuted the charge of servile copyism, that I shall not say a word on that head.

It is a somewhat singular coincidence, that at the very time when we are warned against the applicability of mediæval architecture for Protestant churches, the Nonconformists suddenly find its entire fitness for their chapels; and many of their edifices lately erected possess the exact features of churches with arcades, clerestories, aisles, transepts, towers, and spires; and yet these buildings are avowedly auditoriums, and built expressly to secure the desiderata in which our Gothic churches are said by some to be deficient; so that it is difficult to believe the columnar arrangement internally can present any serious impediment to sight or sound. I agree with Mr. Scott in regretting, that when Gothic architecture is beginning to be rightly understood, both in principle and detail, we are to hear its study and practice spoken of in disparagement.

I believe that if the practice of mediæval architecture be persevered in, gradual modifications will follow, and new forms by degrees be evolved. Hitherto attention has been almost exclusively given to English and French Gothic, but the more recent study of Venetian and Lombardic Gothic will at least teach us the true value of colour, and induce us to avail ourselves more freely of local products by using coloured marble and stone, which the facilities of railway communication may place within our reach, even if it does not guide us to new structural combinations.

I would only again say, let any unbiassed person inspect the churches erected in the Classic styles within the last few years, and those built recently in the Gothic style, and I have no doubt of his opinion as to the most suitable architecture for churches. This, after all, is the true test. Nobody will deny that fitness constitutes great excellence in architecture; but those who impugn Gothic as inapplicable to modern wants are singularly inconsistent in praising many Classic buildings recently erected; for though I admit their superiority over buildings of the Georgian era, it surely cannot be a correct expression of design to make large warerooms and storehouses assume the character of Florentine palaces; and yet this seems to be the aim in present street architecture: a hint may well be taken from Mr. Scott's remarks upon this point.

It appears to me that, instead of launching out in derogation of the study of mediæval art, much more good would be effected by urging upon all students the necessity of making themselves masters of the true principles and details of any style in which they may be called upon to practice, rather than by exciting their prejudices against systems which have produced some of the finest buildings in the world.

Benj. Ferrey.

LONDON AND MIDDLESEX ARCHÆOLOGICAL SOCIETY.

At the meeting of this society on the 26th ult. already mentioned, the chairman, Mr. Alexander Beresford Hope, introduced the business of the evening with some very appropriate remarks on the labours of early topographers and London antiquaries.

The Rev. T. Hugo then read the first paper, the subject of which was the Primeval History of London and Middlesex. The state of the metropolis and the adjacent county of Middlesex were, prior to, and at the time of, the Roman invasion, very little known; and although the subject was confessedly obscure, it was not the less interesting, and he hoped to be able to throw a little more light upon it. It appeared that the southern coasts from Kent to Cornwall were those most generally resorted to by foreign traders; and Herodotus spoke of Britain as a place from whence tin was obtained, and the inhabitants were represented as being in a wild state, but to be simple in their manners, not addicting themselves to any luxuries, and being free from vices. The country was stated to be fertile. Strabo also gave a similar description of the inhabitants of Britain, and said that they had large herds of cattle and had plenty of milk, but were unable, notwithstanding, to make cheese. The paper referred to the invasion of Julius Cæsar, but expressed an opinion that, although it appeared very probable that the Roman legions had been encamped near the metropolis, London as a city was at this time utterly unknown; and if it existed at all, it must have been a very insignificant place. Cassivelornus, who was then king, made a most desperate resistance to the attacks of the various Roman generals who succeeded Cæsar, and when he was impelled to do so, he retreated with his armies to a wood, where he entrenched himself, and, from the appearances that presented themselves on Wimbledon-common, the writer of the paper expressed an opinion that this was very probably the spot to which he retreated. At length the island was, after a desperate struggle, made tributary to the Roman power; but Boadicea, the Queen of the British tribes, revolted, and resolved to resist the invaders. Suetonius, a Roman general, was sent to repress the rebellion, and it was at this period that the name of London was first mentioned, and there could be no doubt that it was a place of some importance.

Mr. Henry Mogford read some notes on the "Later History of London and Westminster." The two most important buildings in connection with this subject, he said, were Westminster Hall and Westminster Abbey, and he gave some interesting details in connection with the ancient and interesting buildings. The last of these, it must be a source of gratification to all to know, was still perfect, but it was much to be regretted that various alterations had been made in the beautiful hall, without even an opportunity being afforded of taking a copy, and of thus handing it down to posterity in its original shape. Reference was made to various interesting relics that had been removed during the building of the new Houses of Parliament, and in particular to two large circular pillars, bearing the arms of the Earl of Stafford, and of the date of 1444, which had formerly stood at the entrance of the old Houses of Parliament, and which were a beautiful specimen of ancient architecture; and the paper expressed a hope that Sir C. Barry would have them replaced in some portion of the new building, as from their recent removal they were no doubt in existence. A proposition had, it appeared, been made to raise the ancient roof of the hall, and thus entirely destroy the original building; but Mr. Mogford said he hoped that all the lovers of mediæval architecture would combine to resist the commission of such an act, and he said he believed that, under the present arrangement in which these buildings were placed, such a proceeding would not be sanctioned.

The Rev. Charles Boutell contributed a paper on "The Royal and other Early Monuments of Westminster Abbey." Mr. Boutell said he considered it would ill become the London and Middlesex Archæological Society to hold their first meeting within the city of Westminster without some special notice being taken of these most interesting and most precious relics. He would accordingly invite to them the thoughtful attention of the society, and with that view would briefly enumerate and describe the more remarkable of these national memorials. After having given such a general description of the Westminster monuments, Mr. Boutell adverted to the suggestions which had been made for the *restoration* of those examples which have suffered the most from the effects of time and of wanton injury: he pointed out the difference between *restoration*, as the term is now understood, and *preservation*; and, while he earnestly deprecated such treatment as could only *restore* these memorials by reconstructing them, he with no less earnestness urged the necessity for the adoption of measures which would save them from actually crumbling away. The architect of the abbey, Mr. G. G. Scott, had already in contemplation a plan of strictly conservative preservation for the royal and early monuments. Mr. Boutell trusted that Mr. Scott would be encouraged to carry out this plan with full effect, and he concluded with suggesting the importance of having drawings and copies of all monumental works and inscriptions in London and Middlesex taken without delay, and carefully preserved as one of the distinctive features in the practical working of the society.

Mr. G. G. Scott read the next paper, the subject of which was "The Chapter-house at Westminster." He said it was well known that this building was the receptacle for the most valuable and ancient records and documents connected with the history of the country, but he regretted to say that it was in a most dilapidated and deplorable condition. The Chapter-house, as they were aware, was the old ruinous half-mouldering building near Poet's Corner, and any one who saw it now would hardly think it possible that it contained any object of interest. In point of fact, however, it was a building of most extraordinary beauty. It was erected in the reign of Henry III. about the year 1250, and at the same period as the Abbey, and it was spoken of at that time as the "incomparable Chapter-house of Westminster," and was used as a chapter-house by the monks of the Abbey. The building was then used for the purposes of the House of Commons, until the time of Edward VI. when that monarch gave up to them St. Stephen's Chapel, and from this time it was used as a receptacle for the records of the kingdom, until 1714, when it was "repaired," as it was called. The Surveyor-General of that time refused to sanction the repairs, and they were placed in other hands, and the result was, that the splendid building was entirely destroyed. The roof was taken off: the vaulting was all destroyed: the beautiful original windows were all blocked up, and round-headed ones placed in their room: the original entrance was blocked up and a miserable door placed in its stead, and the place was

in fact mutilated in every possible manner. It was a work of extreme difficulty, therefore, to be enabled to get at the original building, and it was only after great exertions and labour that he had been enabled to make drawings. Among the discoveries that were made were, one of a whole-length figure, apparently of the Virgin; and also a picture of a female saint, crowned, and having in her hand a gridiron, and at her feet a monk kneeling. Upon one of the doors there were found portions of skins nailed, and, according to an old manuscript that was found in the Chapter-house, these skins were stated to be those of Danes. They had been submitted to the examination of an eminent member of the College of Surgeons, and he had pronounced an opinion that they were undoubtedly those of human beings. In another part of the building he found a long passage which appeared to spring under his feet; and, upon attentive examination, it was found that the floor was nothing but a mass of parchment, consisting of writs, seals, and records which had been wedged down into a solid mass. The whole of these had, it appeared, been removed to the library and were now in proper custody.

Mr. Sydney Smirke afterwards introduced to the company a number of ancient relics, which, he said, were mostly collected by himself or under his own eyes. From Westminster Hall he exhibited the leather sheath of a knife, stamped with fleur-de-lis and with lions passant, and found in a crevice of the masonry of the old walls, together with a quantity of bones, &c. remnants of the royal feasts held in the hall, and which had probably, together with the sheath, been dragged into the holes and crevices by rats and mice. From the Temple Church he exhibited a piece of the sackcloth which enveloped the body of one of the Crusaders, which, he said, resembled some cloth found enclosing two bodies met with when excavating the Chapel Royal, St. James's. Also some iron and wooden wedges used by the masons in levelling the stones of the main pillars of the Round Church. The thickness of the wedges proved the coarseness of the joints of that masonry—a peculiarity often observable in Norman work. Mr. Smirke also exhibited specimens of carved work from this church, from Westminster Hall, and St. Stephen's Chapel, making various remarks thereon, and suggesting that it should be one of the earliest duties of this new local society to endeavour to obtain a safe, permanent, and honourable resting-place for the "old materials" of the extinct monuments of London. He further exhibited a specimen of some fibrous composition used for ornamental ceilings at Wolsey's House at Ipswich, and at Hampton Court, remarking that plaster was not common for decorative purposes early in the sixteenth century in Italy, and still less so in England, of which further proof existed in the leaden ornaments used in the ceiling of the Chapel Royal, St. James's, which he conceived to be a specimen of Holbein's architecture. He further exhibited a plug or dowel of lead used in the vaulting of York Cathedral, and a wrought-iron cramp from the stall of the Chapter-house there, which cramp had, by exfoliation, ruined the masonry. Mr. Smirke, in conclusion, urged antiquaries generally, but especially his professional brethren, not to allow the consideration of the larger features of architecture to cause them to overlook these minor contrivances of our forefathers, which, if not always fraught with instruction, would never fail to be found interesting.

"AQUA PURA."

In the Notices to Correspondents, in the number for Feb. 9th, appears a request, under the above *nom de plume*, "to know how best and most economically to arrange for the filtering of rain-water while in the cistern, * * so as to be able at option to draw off the water, either filtered or unfiltered.

Leaving it to "A. P." to judge as to the eligibility for his purpose of the following expedient, which I have contrived, as regards its economy and otherwise, I beg to place it at his service, and that of the readers of the *Builder* generally:—

Holding, as I do, rain-water in high estimation, and the opinion that, if properly managed, the rain-fall on the roofs of a country house will come little short of the supply wanted for a family,—I am in the habit of providing a cistern capable of containing at least say 100 cubic feet of water, or (100 × 6·25) 625 gallons. In one corner of it I part off, with a movable partition set on the splay, a portion measuring, say 2 feet each way from the corner: this triangular space is the pure water division of the cistern, and the partition is the filter, and is constructed thus:—Form, of a durable wood, three frames of equal size, viz.—that of the intended partition, and of stuff about $1\frac{1}{2} \times \frac{5}{8}$ inch, so that the three are barely 2 inches thick; and to two of these affix closely-perforated zinc, of a stout gauge. Lay one frame flat, with the zinc uppermost, and upon it, two or three plies of blanket stuff: on the latter, lay the open frame, and the inside of that fill up, solid and flush, with coarsely-ground charcoal: then lay on two or three plies of the blanket, and finish with the remaining frame, turned with the zinc downwards: adjust the edges of the frame exactly, and screw the whole firmly together all round.

Supposing the cistern to be a lead-lined wooden one; before lining, affix stout groove-pieces, so as, when finished, to receive the partition freely: for this purpose, those on the sides have to be splayed at back to an angle of 45 deg. in order that the groove in them and the bottom piece may be in one plane. The outer angles of the groove-pieces may be chamfered or rounded: their height should a little exceed that of the overflow. Now line the cistern, carefully dressing the lead into and about the grooves, and lead into the main body of it all the influx pipes; but, from the pure-water division, all the services: slide the filtering partition into its grooves, and caulk carefully round the edges with tow, which is readily removed with a hooked instrument when the partition is to be withdrawn.

Such a filter is very easily cleansed: after brushing well the mud from the outer side, it will generally suffice to subject it to a good *douching* at the pump; but if that be thought insufficient, it will not be found very troublesome to undo, for the ablution of its separate parts. Where its cost has been hesitated at, I have had the cistern prepared for its reception, and itself left for subsequent consideration.

James Wylson.

PROVINCIAL NEWS.

Wisbech.—At a recent meeting of the Local Board of Health, the surveyor reported that he estimated the cost of executing the sewerage works at 6,767*l.* and the annual expense of repairs at 169*l.*; and that it would be best to contract for the execution of the works, and the keeping in repair for twelve months. He also reported as to the waterworks, which were estimated at 17,170*l.* including 1,000*l.* the estimated purchase of land and compensation: these works were also recommended to be put out to contract. It was resolved that the consent of the General Board of Health to the loan of 17,170*l.* be requested.

Dartford.—A transept of glass has just been erected in connection with the Bull Hotel, Dartford. The farmers and others attending Dartford had long suffered for the want of a convenient covered place. The increased accommodation has been obtained by roofing over with glass the inn yard, no longer thronged with coach and post horses, &c. This new market-place was lately opened. The building may also be used for public meetings, concerts, &c. the want of accommodation for which has been long felt in Dartford.

Cowes.—At a meeting of the Local Burial Board last week, Mr. G. Wheeler's tender for the building of two chapels, lodge, and dead-house, with the whole of the front walls and palisading of the new cemetery, was accepted for the sum of 1,150*l.* The following tenders were also given in:—

W. Wheeler	£1,665	0	0
J. Chinchin	1,630	0	0
E. Sherry, London	1,575	0	0
C. Sibbick	1,573	0	0
Grove, Brothers	1,285	10	0
T. Wheeler, Winchester	1,230	0	0

The Board wished the contract to be completed in six months, but the contractor wanted time.

Birmingham.—The foundation-stone of the Edgbaston new vestry hall, which is about to be erected in New Bridge-street, was to be laid on Monday last. The hall, for which plans have been prepared by Mr. Fiddian, will be the only public meeting-place in Edgbaston.

Stoke.—A requisition has been in course of signature to the Chief Bailiff of Stoke-upon-Trent, desiring him to call a public meeting, to express the public appreciation of the offer of Mr. Herbert Minton, to give 500*l.* towards the erection of baths and washhouses, and to consider the best means for securing the early realization of the project.

Evesham.—The new bridge is about to be opened for traffic, as the contractor wants the temporary wooden bridge elsewhere. The approaches, however, will not be completed for some time.

Gloucester.—The laying of the pipes for an additional supply of water from the brook at Witcomb has been completed. Mr. Bateman, of Manchester, the engineer of the Board of Health, has inspected the works. One of the fire-plugs at the Cross was opened, and it was found that the pressure of water was sufficient to throw a stream over the Tolsey.

Liverpool.—The undermentioned contracts for sewering have been accepted by the Local Board of Health:—Netherfield-road North, Mount-street, South-street, St. George's-street, McGregor-street and passages, Owens and Roberts, 623*l.* 7s. 1d.; Portland-place, Portland-square, Portland-buildings and passage, Owens and Roberts, 35*l.* 11s. 9d.; Anderson-street, Aughton-street, and passages, William Tomkinson, 163*l.* 9s.; Anne-street, Salisbury-street, and William-terrace, George Ravenscroft, 87*l.* 10s; Westbourne-street and Alma-street, Richard Smith, 461*l.* 7s.; Lord-street, Raglan-street, Speke-land-street, and a street north of it in West Derby, Isaac Dickson and Co. 271*l.* 10s.; Park-street, Mersey View-street, Vaughan-street, Tamworth-street, Napier-street, and passages, in Toxteth-park, Richard Smith, 708*l.* 14s. 6d.; Wood-street, Penrith-street, Melbourne-street, Carlton-street and passages, Isaac Dixon and Co. 215*l.* 15s.; Llewellyn-street and passages, Richard Smith, 5,241*l.* 6s.

Cheadle.—The *Gardeners' Chronicle* gives an account of some improvements at Abney Hall, near Stockport, the seat of Mr. James Watts, who has built here a mansion and formed gardens. The latter were designed and laid out in the first instance by Mr. Skirving, of Liverpool, but were afterwards greatly altered by Mr. Bigland, of Manchester. The conservatory forms, as it were, part of the south side of the mansion, and is so arranged that a view of the plants is obtained from a picture-gallery which adjoins it on the north side, and also from many parts of the ground-floor. When lighted up at nights it is thrown open to the drawing-room. It is, however, unfortunately ill adapted for plants, owing to want of proper ventilation. The south fronts, which rise one above the other after the manner of the Crystal Palace, are altogether some 20 feet in height, and are glazed with large squares of plate glass: the roofs are ridge and furrow, and are glazed with large panes of sheet glass.

Bradford.—Designs for the interior decoration of St. George's Hall here have been prepared by Mr. J. W. Ingram, the decorator of the Birmingham Townhall, and are under the consideration of the directors of the Hall Company. The ceiling in this design is divided into four compartments, each having its centre flower, gilded, upon a carmine centre, toned down into the neutral tint, from which radiates a circle divided into eight compartments, forming panels, with a gilded ground, on which are emblasoned arms, trophies, and arabesques composed of fruit, flowers, and ornament. The details of the ceiling will be in colours and gold. The cove or segment of a circle, which rises in a span from the cornice to the flat of the ceiling, is divided into a series of panels by a broad band of plaster modelling, consisting of flowers and fruit, tied together by ribbons. These are gilded with different tinted golds, upon a pale purple ground. The panels are a series of arabesques, trophies of flowers and fruit, and musical trophies, on a ground of cerulean blue. The beams of the building, which are ornamented with plaster, are decorated with gold and colours. The rest of the interior is in harmony with the ceiling. The walls will be a pale maize, with an inlaid ornament. The cornice will be in white dead enamel, but profusely gilded.

Leeds.—At a special meeting of the Townhall Committee of the Leeds Town-council, held for considering a new design for a tower

or the Townhall, by Mr. Brodrick, the ventilation of the building, and other matters, the committee, by a majority of eight to four, according to the local *Intelligencer*, have decided to recommend its adoption to the council. The cost is estimated at something like 5,500*l.* which is considerably less than the sum estimated for the design some time ago under discussion in the council. The committee also decided to recommend the council to grant 4,000*l.* for ventilating the building, and 1,500*l.* for fixtures; making a total of some 11,000*l.*——A meeting of the committee for rebuilding the National Schools in Kirkgate, has been held, and 900*l.* subscribed. The estimated cost is 4,000*l.*

Grantham.—At a recent meeting of the Town-council of Grantham, attention was called to the arrangements for the erection of a statue to the late Sir Isaac Newton; and it was stated that there was no definite answer from Government as to granting metal for the statue, although metal would be supplied; but at present Government had none to spare. If peace were established they would soon have metal. The cost of the statue would be 400*l.* or 500*l.*

Crook, near Darlington.—Substantial schools have been erected at Crook, at the expense of the owners of Pease's West Collieries (Messrs. Richardson and Ross, architects), and were opened with considerable *éclat*. The schools are to accommodate about 250 children. The buildings comprise a school-room, 65 feet by 28 feet; boys' class-room, 16 feet by 13 feet; girls' class-room, 16 feet by 12 feet, with separate porches. A commodious residence for the master is attached to the school, comprising parlour, kitchen, scullery, and three bed-rooms; the whole being supplied with convenient water-closets and other outbuildings. The materials are rubble stone for walls, with Brusselton stone dressings; the roofs being slated. The school-room and class-rooms are heated with hot water, by Longbottom and Co. The whole cost of the buildings, with boundary walls and fittings in the school-room, will amount to about 1,300*l.*

Leighton Buzzard.—Tenders have been received for an ornamental shop-front for Mr. Sharman, of Leighton Buzzard (Mr. W. C. Reed, architect), ranging from 580*l.* (T. Piper and Son), to 512*l.* (W. Brass and Son). The tender from Bunnett and Co. for revolving shutters and iron columns was 145*l.*

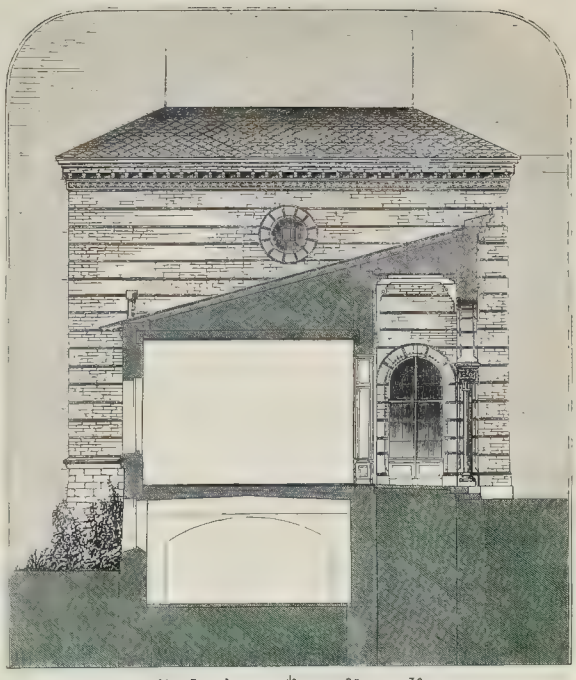
Dunfermline.—It having been satisfactorily proved, says a Scottish contemporary, that Dunfermline was a city in years long past, the Ordnance maps are to have it marked out as a city. Thirty years since and upwards, we happen to recollect, Dunfermline was very commonly known to be a city, and spoken of as such in ordinary talk.

Dublin.—In reply to a deputation from the Royal Dublin Society, who waited upon the Lord Lieutenant, at Dublin Castle, to request his Excellency to appoint a time for laying the first stone of the new Museum of the Society, the first week in March was named for the performance of the ceremony.

GALLERY OF SHOPS AT VOESLAU, AUSTRIA.

FOR some time past the architects of Germany, in designing their buildings, have striven for truthfulness, and they have sought to let the system of construction employed show itself, and to graft on to this, or rather obtain from it, elegance and beauty. The set of small shops, illustrated by the accompanying engravings, have been built at Vöslau, from the designs of Ludwig Förster, the editor of the well-known and very valuable work, the "Allgemeine Bauzeitung," wherein the view was published. M. Daly then gave it in his "Revue," and we have re-engraved it from that source. The object of the building is to afford accommodation during the bathing season, for the dealers in various articles produced on the spot, or of general utility. The arrangement is simple and honest, and the general effect good. The columns are of cut stone: the walls are of brick, varied in colour: the decorative fillings-in are of plaster of Paris; and the salient decorations are of stone, or of pottery.

GALLERY OF SHOPS AT VOESLAU, IN AUSTRIA.



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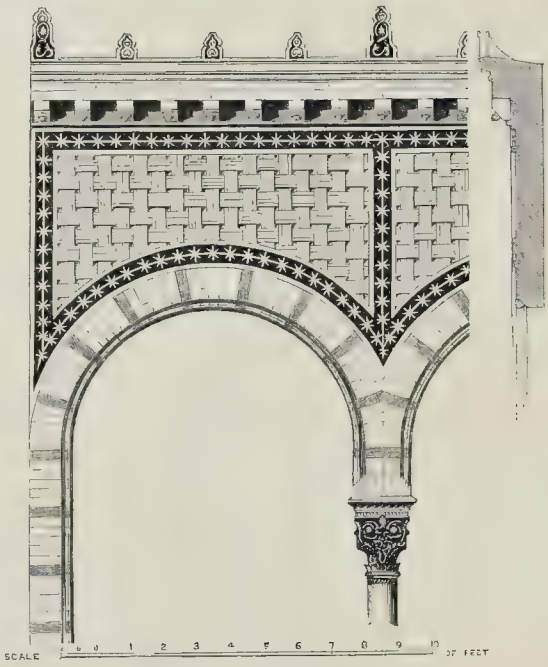
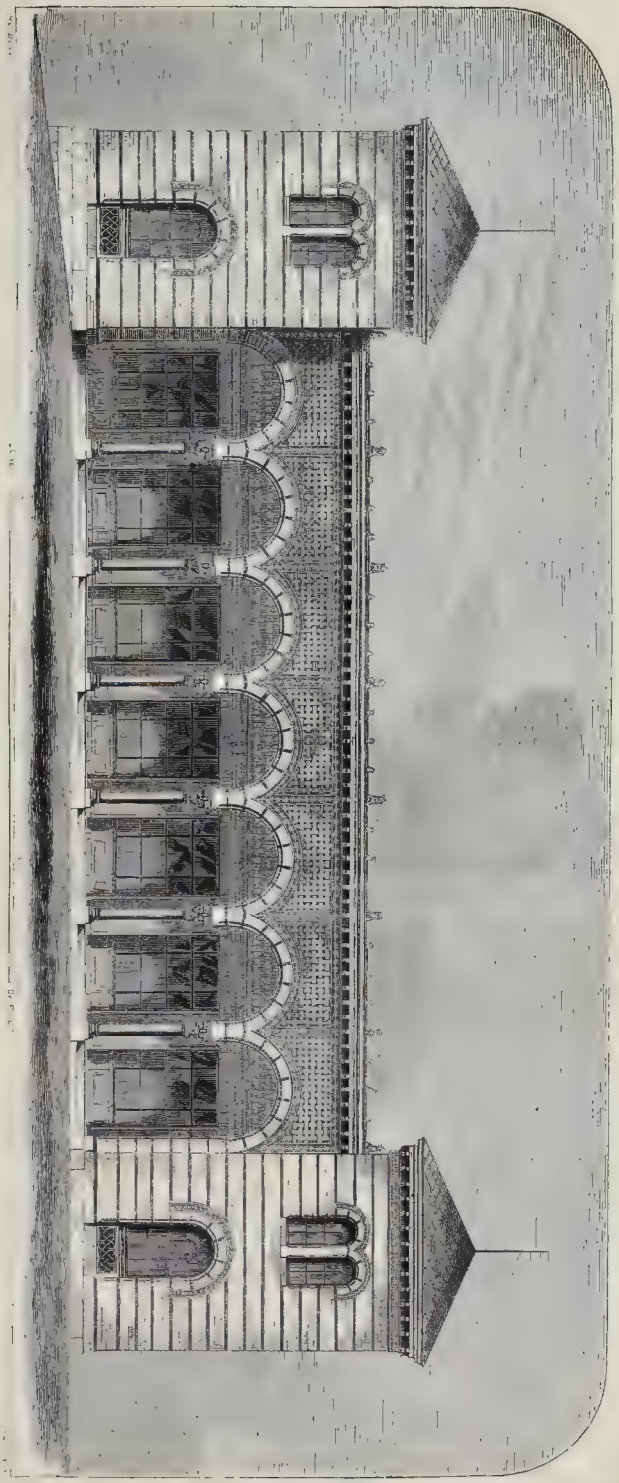
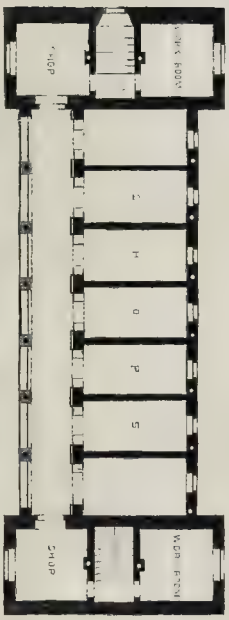


Part of Arcade at Large.





GALLERY OF SHOPS AT VOESLAU, IN AUSTRIA.—M. LUDWIG FÖRSTER, ARCHITECT.

CHURCH-BUILDING NEWS.

Swansea.—The committee for the erection of St. Peter's chapel of ease to the mother church of St. Mary's, Swansea, met on Monday before last to receive tenders for the building of the chapel, when the lowest was declared to be that of Mr. Joseph Richards, builder, of this town, and was unanimously accepted. The sum yet to be raised to complete the building is 750*l.* A burial-ground is attached to the chapel of ease.

Taunton.—The consecration of the cemetery for the parishes of Taunton St. Mary Magdalene, and Bishop's Hull, took place on Tuesday before last. The cemetery, of about eight acres, occupies a field at Mountway. It is divided so as to allot about three-fifths—*i. e.* the eastern portion—to the Church of England, and the remaining two-fifths to the Dissenters. Besides the principal gateway there is an entrance—cast-iron gates—from the Bishop's Hull-road. The lodge contains a board-room, 17 feet by 12 feet, and residence for the keeper. The lodge is entered by a half-timbered porch. The buildings are in the Early Decorated style of old English architecture. The chapels are similar in design and in dimensions, being 31 feet 6 inches by 18 feet. They are roofed at a high pitch with stained pine, having arched braces moulded, and springing from angel corbels, carved in Bath stone. The fittings (to seat forty persons in each chapel) and reading-desks are of wainscot, of ornamental character. The windows, of varied design in their tracery, and having carved heads to their hood moulds, are of Bath stone; also the copings and dressings of turrets in the gables. The buttresses and quoins are of Westleigh limestone, and the facing of coursed Blagdon flint. Each chapel has a vestry. The contractor was Mr. W. Shewbrooks, of Taunton; the architect Mr. Ashworth, of Exeter, who also planned the laying out the ground, &c. Mr. Robert C. White, of Taunton, was clerk of the works; the contractor for the iron railing, Mr. Joseph Savery, of this town; and for roads, Mr. William Badcock. The outlay, according to the *Taunton Courier*, from which we quote, has been about 1,850*l.*; fences, about 800*l.*; and roads, 400*l.*

Cheltenham.—In addition to the work of re-roofing the nave of the parish church here, it is now proposed (but not yet decided on) to remove all the pews on the ground-floor and to put in low seats, similar to those in the two new churches of St. Peter and St. Luke, in the same town.

Bath.—The Bathwick cemetery was recently consecrated. The spot selected is one of the most secluded near the city: it is in a vale under Smallcombe Wood. The land consists of about two acres and a half, a portion of which, according to the *Bath Chronicle*, was granted by Lord William Powlett, the remainder by the rector. In the centre of the ground is a mortuary chapel, in the Early English style of architecture, designed by Mr. Thomas Fuller, of this city, architect to the Bathwick estate, and built by Mr. G. Mann, also of Bath. Above the doorway rises the campanile. The height of this portion of the structure is 45 feet, not including the cross by which it is surmounted, while that of the body is 26 feet, with an extreme length of 44 feet, and a breadth, including the buttresses, of 27 feet. It is lighted by a large window on the east and three small windows on either side, fitted with stained glass. The ground has been laid out by Mr. D. Butler, of Widcombe. On the south side of the ground a sloping bank has been constructed, which will admit of catacombs being constructed in the hill-side, and monuments being erected on the upper terrace. There is at present no lodge at the entrance, but merely a simple gateway: it is intended, however, as soon as sufficient funds can be obtained, to construct a lodge in the same style of architecture as the chapel.

Sandon.—According to the *Chelmsford Chronicle*, Sandon Church has been restored at a cost of about 300*l.* The old pews have been replaced by uniform seats, 2 feet 10 inches high, and 2 feet 8 inches wide, with inclined backs, and without doors. By this rearrangement the number of seats is greatly increased. The floor is raised 8 inches, and repaved with red, white, and black tiles. The paint has been taken off the ancient carved oak pulpit, which has been restored by Messrs. Ringham, of Ipswich. A new reading-desk has been provided. Two new stalls have been obtained in the chancel, with carved ends (by Ringham), the ancient wood carving of the chancel pews having been worked into the stalls. The altar rail, which is new, is supported by iron standards, and the floor within is laid with Minton's tiles. The communion-table has been restored. The whole work has been completed by Mr. Sorrell, of Great Baddow. In pulling down the old pews, an ancient piscina was brought to light, and some fragments of ancient encaustic tiles were also found.

Newark.—The ceremony of laying the foundation-stone of the consecrated chapel connected with the new cemetery, took place on Saturday before last. The architects are Messrs. Bellamy and Hardy, of Lincoln; and the contractor, Mr. Whitworth.

Lincoln.—The Dean and Chapter have restored the oriel window in the north great transept of the cathedral. The stone-work, which had become much injured by time, has been made good. The glass has been re-set, and the damaged portions replaced by new pieces.

Crowle.—It is proposed to add a chancel to St. Stephen's Church, Crowle, Lincolnshire, with open roof and Decorated window. The pillars on each side the communion-table will be gilded. The seats are to be of carved English oak. The east window is to be filled with stained glass. Mr. J. Owen is the architect.

St. Bees.—The ancient abbey church of St. Bees was lately reopened, after various improvements and alterations.

Newcastle-upon-Tyne.—The foundation-stone in connection with the necessary buildings and ground of All Saints' cemetery, at the Minories, has been laid. Mr. John Green is the architect, and Mr. James Gibson the contractor.

Gateshead.—A chapel was lately opened for divine worship at Mount Pleasant, Gateshead, belonging to the Methodist New Connexion. It is built in the Gothic style, with windows of stained glass. The architect was Mr. M. Thompson.——The congregation of the Blackett-street Presbyterian Church some time since appointed a building committee, and resolved that so soon as the treasurer had 1,000*l.* in hand, the committee should proceed to obtain plans for a new place of worship. Since then, the committee, says the local *Observer*, having obtained nearly 200*l.* more than the specified sum, gave notice to some architects of their readiness to receive designs for the proposed new chapel. Four architects complied with the invitation, and, on the recommendation of the committee, the congregation have approved of the design of Mr. Thompson, and awarded him the offered premium. The new edifice will be in the Decorated style.

STAINED GLASS.

Ilam.—Two stained-glass windows—an eastern triplet and a south aisle three-light—are to be executed from the designs of Mr. J. R. Clayton, of Albany-street, Regent's-park, and erected in Ilam Church, Staffordshire.

Regent's-park.—The same artist has also just completed the designs and cartoons for the large window which is to be erected to the memory of the late Mr. R. C. Carpenter, architect, in the Church of St. Mary Magdalene, Munster-street, Regent's-park.

Chelmsford.—Holy Trinity Church has just received the addition of a stained-glass window, encased in new Caen stone work, at the eastern end of the chancel. The subjects are in three compartments, the centre window representing the Saviour on the Cross, and St. Mary and St. John on either side. In the right window is the Saviour bearing his Cross to Calvary, followed by two soldiers, and near him is a kneeling female figure in tears. In the left window the Saviour is appearing to St. Mary Magdelene. The lower parts of the three lights are filled with angels in different attitudes, and across runs a scroll, on which is inscribed the name of the lady in memory of whom the window is dedicated. In the canopies are angels bearing a spear, and sponge on a reed. The upper tracery has four figures of angels and symbols, chiefly referring to the Trinity. The glass was supplied by Mr. Warrington. The stonework of the window and the exterior wall of the chancel was executed by Mr. Bremer, mason, at the almost sole expense of the rector.

Braintree.—Two painted windows have been erected in Bocking Church, on the south side of the Dean's Chancel, at the expense of the dean. They are the production of Mr. George Austin, of Canterbury, who has in all erected eighteen windows in the cathedral of that city.

Glasgow Cathedral.—Stained-glass windows are to be placed in this ancient edifice, the cost being borne chiefly by private individuals. The *Herald* says, the public bodies and individuals, or rather families after named, will each take one of the windows of our venerable minster under their care:—1. The Lord Provost. 2. The Government. 3. Messrs. Baird, of Gartsherrie. 4. The Corporation. 5. The Trades' House. 6. Messrs. John Tennant and Co. 7. William Ewing, esq. 8. James Stirling, esq. of Cordale. 9. Robert Monteith, esq. of Carstairs. 10. Messrs. Campbell and Co. 11. The Houldsworths. 12. The Dennistouns. 13. The Crums. 14. The Faculty of Procurators. 15. The Merchants' House.

THE COMPETITION FOR CHURCH AT LILLE.

About forty sets of designs, we learn, have been sent in for the church of *Notre Dame de la Treille;* some of them executed with an immense amount of care. The exhibition of them will be opened on the 13th inst. in the upper part of the *Halle au Blé*, a large corn-market, built by M. Benvignat, of Lille, and it will close on the 25th. No place could have been found better suited for the purpose to which the *Halle* will now be applied. The drawings from France alone, we are told, will cover about 1,000 square yards. The decision is promised at the end of the month.

DESTRUCTION OF COVENT-GARDEN THEATRE.

Covent-garden Theatre was destroyed by fire on the morning of Wednesday last. Within a few minutes after the discovery, a little before 5 a.m. the flames had obtained possession of the whole interior,—thus once more illustrating the remarks which we made last year, and previously, on the necessity of proper means of exit from places of public entertainment. In the present instance, though no lives appear to be lost, many of those who were present at the *bal masqué*, then terminating, had narrow escapes. Indeed, independent of the defects of plan which are so general, the materials used and the method of construction in the London theatres render them—sooner or later—we might say, inevitably—the prey of fire. We shall have better opportunity, before our next number, of ascertaining what was the exact origin of the conflagration in this instance. At present the bare walls, and the columns and pediment of the portico are alone standing. Bond timber seems to have been introduced, or been left in the walls, at the last alterations, to a greater extent than was supposed; and this having been burnt out, the walls appear at this moment in a dangerous condition. The present, or rather late, building was the third erected on the site. It was originally designed by Sir Robert Smirke, and replaced the theatre burnt down on the 20th September, 1808, and designed by Henry Holland, also the architect of Drury-lane Theatre, which, too, was destroyed in a similar manner. Of both these buildings, last named, and their architect, some particulars will be found in the papers on the Recent History of Architecture, in our last volume. Of Sir Robert Smirke's building, the first stone was laid on the 31st of December, in the year of the fire, or with an interval of little more than three months, and the building was opened on the 18th September in the next year, 1809. The portico was one of the earliest examples of the revival of the Grecian Doric order; though we need not tell our readers that it was not a copy of the portico of the Parthenon, as we are told by

one newspaper writer. The interior of the building was remodelled or rebuilt, within the recollection of our readers, by Mr. Albans, and was described in our volume for 1847, where a view will be found.

All must lament the dreadful disaster which has occurred, not merely for the sake of Mr. Gye, but of the public.

DESTRUCTION OF THE NEW CHURCH AT OVER-TABLEY.

ST. PAUL'S, at Over-Tabley, near Knutsford, completed in March, last year, at a cost of about 1,500*l.* has been gutted by fire, caused, it is supposed, by the overheating of the hot-air apparatus, or some defect in it. The *Macclesfield Courier* says:—"On an inspection of the interior of the hot-air chamber, it appeared that the smoke flue of the furnace, after rising about half a yard, was carried at right angles into the brick flue, built in the wall, entering immediately below the brick-arched covering of the air chamber. This flue rising perpendicularly about 2 feet was then carried obliquely into the chimney, in the corner of the vestry, entering it on the square of the building. This flue, at the point where it entered the chimney, was covered by a flagstone, above which were two courses of bricks, on which rested the wall plate. This flag was found to have been cracked in two places, and showed, as also did the iron bar and rod on which it rested, that it had been sometimes red hot; and from this circumstance it was at first supposed that there having been a lodgment of soot at this point, the fire had originated here. But it was stated, by a person living near the church, that the flue had taken fire some time in November last, and that the flames on that occasion had risen two yards above the top of the chimney: it is, therefore, not improbable that the mischief shown here might have been caused at that time. The flue was eight inches square, and its course upwards had been brought within a brick's width of the joists and floor of the vestry—and it is supposed that the bricks here would become red hot. The flooring of this part of the vestry, it had been frequently remarked, was exceedingly hot. The opinion of the gentlemen assembled appeared to be that the fire had originated at the bottom of the flue, but that it was uncertain whether ignition had first taken place there, which would be in the flooring, or at the top, near the wall plate: circumstances were, however, rather in favour of the former supposition."

We need scarcely say that our object, in chronicling such disasters, is not to give pain or attach blame, but to awaken the attention of builders, clerks of works, and architects, to the paramount necessity for care in the construction of flues.

FALL OF THE SHIRE-HALL STAIRCASE, CHELMSFORD.

THIS sad accident has caused great consternation, as might have been expected, and should lead to the examination of other staircases elsewhere. The *Chelmsford Chronicle* gives particulars of the inquiry which has been made, and quotes a paragraph from its own pages, of January, 1792, showing that the architect of the building was Mr. John Johnson, and that he received a piece of plate, of the value of 100 guineas, "as a public testimony of his integrity and professional abilities in the execution of the said Shire House, as architect and surveyor of the county of Essex."

The steps were of stone, and had been often chipped and repaired. They were tailed into the partition wall at one end. The balusters first gave way, and then the steps broke off, leaving the ends in the wall.

WHITE-LEAD AND ITS ADULTERATION.

IN the *Builder* of Feb. 16th, I observe some remarks on the adulteration of white-lead. As this subject is quite within the province of an analytical chemist, I beg to offer tests for all the substances I can think of likely to be mixed with the above metallic oxide for fraudulent purposes. Of course, the amount of such adulteration can only be ascertained by a complete analysis,* but, for the determination of the kind of admixture, I flatter myself the following rules may be of service:—

1. *Carbonate of Lime* (any form of *chalk, whiting, &c.*)—To detect this substance in *commercial white-lead*, about 40 or 50 grains of the latter must be introduced into a *beaker*, a bottle of white glass, or other suitable vessel, and 3 fluid ounces of dilute hydrochloric acid (otherwise *muriatic acid* or *spirit of sea-salt*,—1 part of the strong acid to 4 or 5 of *distilled water*) added with agitation: then allow the whole to remain for an hour or so, unless means are at hand for boiling it, when this operation, and the use of a clean Florence flask, will expedite the operation. To the clear liquid, poured off, or if necessary, filtered through blotting-paper, add a little *solution of ammonia*, until it smells strongly of the latter, when the addition of some *oxalic acid*, dissolved in water, will cause a white precipitate, or *milkiness*, if there is any carbonate of lime in the sample tested.

2. *Sulphate of Lime* (*gypsum, selenite, plaster of Paris*).—An equal quantity of the *white-lead* should be *boiled* with dilute *nitric acid* (about the same quantity and of the same strength as the hydrochloric acid used in the last experiment), until the addition of more causes no effervescence or other action. Then filter the whole, and throw away the solution; but if anything undissolved remains upon the filter, wash it well with water, and afterwards put in a bottle a large quantity of the same fluid: after some time pour off a little of it (clear), and add ammonia and oxalic acid as before. In this case, a milkiness would mean presence of sulphate of lime.

3. *Carbonate of Baryta* (*witherite, heavy spar*).—Treat with hydrochloric acid as in No. 1. Add solution of *sulphuret of ammonium*, until the liquid has acquired its characteristic odour of rotten eggs: boil until it emits no smell, and filter from the black powder, which is thrown down. To the clear solution, add a saturated one of *sulphate of lime*, when *sulphate of baryta* will be precipitated, if the carbonate of that base is present in the original *white-lead*.

4. *Sulphate of Baryta* (*sulphate of barytes*—native).—To determine the presence or absence of this substance, the pigment under consideration may be boiled with dilute nitric acid, in the manner directed in the exp. No. 2: if a residue is obtained quite insoluble in acid or water, it will most probably be *sulphate of baryta*, which will give a *green tint* to a flame, if introduced into one on the point of a *perfectly clean* wire.

5. *Clay* (any kind of *pipe-clay, porcelain clay, &c.*)—If the residue from the *nitric acid* ebullition has an unctuous, plastic feel in the fingers, it is *clay*. Enough of it being obtained, it may be mixed with a sand, kneaded with water, and baked (*at a red heat*): its texture will then reveal its composition.

6. *Starch* (*flour*, &c.) may be detected by boiling with water, and adding to the filtered liquid a little solution of *iodine* (1 *grain to* 1 *ounce of water*), which will strike a beautiful blue colour if any starch is present.

The *salts* and *reagents* mentioned may be obtained at any respectable operative chemist's. I would especially recommend Messrs. Jackson and Townson, 89, Bishopsgate-street, City.

A few Florence flasks, two dozen test-tubes, and a *washing-bottle* (for directing a stream of water upon a precipitate), will be all the apparatus necessary. In the preceding experiments, I have supposed that the *white lead* is dry,—in powder,—as, when mixed with *oil* or *turpentine*, a novice cannot detect adulterations without great difficulty: however, *generally* these oleaginous substances may be got rid of by repeated digestion in *strong alcohol and ether*, until the *colour* no longer refuses to mix with water; or the oil, &c. may be burnt off in a crucible. Of course starch cannot afterwards be detected. I shall be happy to give any further information, if required.

WENTWORTH L. SCOTT.

* A sample forwarded to me (Care of the College of Chemistry, London) for this purpose, would receive immediate attention.

MENTAL CALCULATION.

INSTITUTION OF CIVIL ENGINEERS.

ON February 19th, Mr. Robert Stephenson, M.P. President, in the chair, Mr. Bidder, referring to the great advantages he had derived from the power of mental calculation, which had given him a rare and unusual facility in dealing with numbers, proceeded to lay before the meeting his general views on the subject.

He was convinced that mental calculation could be taught to children, and be acquired with greater facility and less irksomeness than ordinary arithmetic; although, of course, a child in whom there existed a predilection for calculation would even then be as remarkable, and take as prominent a position as in the acquisition of any other subject.

Before entering more minutely into the subject, it was necessary to enunciate, as a principle, that there was not any Royal or short road to mental calculation: the processes were, like all others in arithmetical computation, to be performed *seriatim*; as, whatever might be the number of figures employed in a calculation, they were only so many symbols, to be dealt with precisely as they would be exhibited in algebraic formulæ, with which the calculations might be considered as identical. In point of fact, many of the processes of mental computation, if produced on paper, would appear most prolix and complicated: they could, however, be accomplished mentally, in consequence of the faculty of occupying the mind simultaneously with the double task of "computing" and of "registering." The first, computing, was executive, or reasoning, and was that portion of the process which, whilst it was the most active, was not that which caused the greatest strain on the mind. When it became necessary to record the result, the second faculty, registering, was called into play. Now it was this latter occupation of registering that was the real strain upon the mind, and by which alone the power of mental computation was limited.

Experience had shown, that up to a certain point, the power of registering was as rapid as that of thought; but the difficulty increased in a very high ratio, in reference to the number and extent of impressions to be registered, until a point was reached where registration in the mind and by writing were exactly balanced: below that point mental registration was preferable: above it, that by writing would be as quick and be more certain. Therefore, the mental process, as compared with the operation of writing, was as the speed of lightning to that of an express train; and if the power of registration could be maintained at all times upon a par with the executive faculty, there would be no difficulty in computing, with immense rapidity, a table of logarithms up to 10 places of figures.

His earliest recollection was that of counting up to ten; then up to 100, and afterwards to 1,000; then, by intuitive process, he taught himself the method of abbreviating the labour of counting; arriving, in fact, at the natural multiplication of numbers into each other, attributing to each a separate and individual value.

In this manner, the actual value of every number, up to 1,000, was impressed on the memory, and he then proceeded onwards *seriatim* up to a million. It was his practice to count numbers practically with peas, marbles, or shots, to compose rectangles of various values, and by counting them the multiplication table was ultimately the result of actual experience and test, and he attained an intimate acquaintance with numbers multiplied with each other, by a tangible process, divested of that formidable character under which it was generally brought before the young student.

Multiplying 173 × 397, the following process was performed mentally:—

100 by 397 = 39,700
70 by 300 = 21,000 = 60,700
70 by 90 .. .. = 6,300 = 67,000
70 by 7 .. .. .. = 490=67,490
3 by 300 .. .. .. = 900=68,390
3 by 90 .. .. = 270=68,660
3 by 7 .. .. = 21 = 68,681

The last result in each operation being alone registered by the memory, all previous results being obliterated.

To show the aptitude of the mind by practice, he would know, at a glance, that 400 × 173 = 69,200
and then ..... 3 × 173 = 519

the difference being..... 68,681 as above.

On the 26th ult. Mr. Bidder resumed his exposition.

With regard to addition and subtraction, it would be perceived, that the same principle, as already explained for multiplication, was adhered to, viz.; that of commencing with the left-hand side, or the large numbers, and adding successively, keeping one result only in the mind. This had the further advantage, that the moment the large figures were operated upon, the mind was no longer charged with them, and they might be dismissed, as it was no longer incumbent to register them. Now, the mere getting rid of this feeling, of its being necessary to charge the memory with them, set the mind free to continue the rest of the operation: it did not follow that he did forget the sums, or figures to be dealt with, still, getting rid of the feeling of the necessity of accurately recollecting them was of manifest advantage. Some examples, both of addition and subtraction, were then given.

Division was, as in ordinary arithmetic, much more difficult than multiplication, as it must be a tentative process, and was only carried out by a series, more or less, of guesses; but no doubt, in this respect, the training arrived at by mental arithmetic gave the power of guessing, to a greater extent than was usually attained, and afforded a corresponding facility in the process. Supposing, for instance, it was necessary to divide 25,696 by 176, the following would be the process:—100 must be the first figure of the factor: 100 times 176 were known at once to be 17,600: subtracting that, from 25,696 there remained 8,096: it was perceived that 40 was the next number in the factor: 40 times 176 = 7,040: there then remained 1,056—that it was immediately perceived gave a remaining factor of 6, making in all 146. Thus only one result was retained in the mind at a time; but as contrasted with multiplication it was necessary to keep registered in the mind two results which were always changing, viz.,—the re-

mainder of the number to be divided, and the numbers of the factor, as they were determined; but if it was known, as was the case in the present instance, that 176 was the exact factor, without any remainder; having got the first factor—100—which was perceived at a glance,—it was known, that there were only four numbers which, multiplied by 76, could produce a result terminating in 96, viz.: 21—46—71—and 96; and, therefore, the immediate inference was, that it must be 46, as 121 must be too little, and 171 must be too much, therefore 146 must be the factor. Thus, as before observed, the only facility afforded by mental calculation was the greater power of guessing at every step towards the result.

Square and Cube Roots.—Perhaps there was nothing in which the mental process caused greater astonishment than in resolving the square and cube roots, more particularly the latter; and perhaps in none was it less entitled to occasion wonder, because it partook more of "sleight of art," than of any real power of mind, or of any real useful application of means, as would be apparent on considering them. It was at about the age of somewhat less than twelve that Mr. Bidder was first asked to extract the square root; but before he could comply with the requisition, it was necessary to explain to him what the square root meant, and this was explained by showing that 400 was the square of 20, and that 20 was the square root of 400. As might be expected, all who tested his powers were generally prepared with the means of ascertaining the accuracy of the answers. Now it was well known that the easiest application of multiplication was in squaring numbers, and that it was much more easy than extracting the roots: the consequence was, that those who propounded the questions squared, or cubed, a number, and then gave the result, whence to extract the root; and, if the answer agreed with the number they started with, they were satisfied. The consequence was that nearly every example proposed was a true square or cube; hence the following expedient was hit upon. It appeared, on reflection, that whatever might be the two last figures of a true square, as, for instance, 61, could only be produced by the square of four numbers, viz,—19, 31, 69, 81; hence, if called upon to extract the square root of 337,561, Mr. Bidder knew instantly that 500 must be the first part of the root, because 10,000 was the square of 100; hence that the hundreds in the square roots of 330,000 would correspond with the digits in the square root of 33, viz.,—5, or 500 in the larger denomination. Having ascertained this, he had to choose between the four other numbers to ascertain the remaining term of the square root; and he was enabled at a glance to perceive that it must be the larger number, 81, from the fact that 81 was to 100 (the difference between 500 and 600), nearly in the proportion of 87,000 to 110,000 (the difference between the square of 500 and 600). As regarded the terminal 25, the square of all numbers ending in 5 terminated in 25; hence it would seem that the choice lay between all the numbers ending in 5 up to 95; as, for instance, in extracting the square root of 442,225, of course, as before, it would be known that the first term was 600, but although the square of all numbers ending in 5 would always terminate in 25; yet there was this guide, that numbers ending in 5, 45, 55, and 95, had no hundreds interposed after the thousands, as, for instance, the square of 155 was 24,025;—then the square of numbers euding in 15, 35, 65, and 85, terminated in 225; as, for instance, the square of 185 was 34,225; and, again, numbers ending in 25 and 75 terminated in 625; as, for instance, the square of 125 was 15,625; therefore with regard to the root of the proposed number, it must lie between the numbers 15, 35, 65, and 85, and from the proportion of the excess of the proposed number over the square of 600, it was evident that it must be 65, therefore it was concluded that the root was 665.

Mr. Bidder went through a number of processes, but we are unable to follow him further. He contended justly, from his own experience, that a facility in using mental arithmetic, combined with an intimate knowledge of the laws of mechanics, must necessarily prove of great utility to the civil engineer: so far as regards himself, it had materially aided his individual career—it had aided him in times past, in suggesting matter for cross-examination, and, as might be imagined, had proved very embarrassing to the witness.

TRISECTION OF AN ANGLE.—In reply to a request, some time ago, for the means of effecting this, we have received several attempts to solve the difficulty, but none which would stand examination. Those of our readers who are desirous of accurate information upon the subject may find it by referring to the article thereon in the *Penny Cyclopædia*. They will there see that it is a problem of the same class as the "Quadrature of the Circle."

COMPETITIONS.

Liverpool Free Public Library and Museum.—Our readers have doubtless observed the advertisement offering premiums for the best designs for the intended building on the north side of Shaw's Brow, Liverpool. The institution will be divided into two departments, the library and the museum, and these are to be kept so far distinct that they can be separated if necessary. The reference library must contain space for at least 100,000 volumes, with accommodation for 500 readers at one time. The lending library must contain space for about 20,000 volumes. As to the museum, the present collection will require about 1,350 lineal feet of wall space. The cost of the building is not to exceed 20,000*l.* There is this peculiarity about the case, that the chairman of the committee is an architect, Mr. J. A. Picton, and one anxious to aid in improving the conduct of competitions, so that the profession may feel assured of fair play. When we last heard, there had been above *three hundred applications* for particulars and plans; above 100 from London alone! It has been suggested in Liverpool that the competing architects themselves should be the committee to make the selection.

ELY SANITARY WORKS.

THE tubular system of sewerage and drainage has now been in operation in the city of Ely for the last sixteen months; and although the low-level sewer has only a *fall of one in a thousand*, it has proved, we are informed, successful. There are upwards of nine miles of public sewerage pipes, and the largest is 12 inches in diameter.

The water-supply is obtained from the river Ouse: it is drawn from the river into a filter-bed, from which it is pumped by a 12-horse high-pressure steam-engine (through 1,400 yards of 8-inch main) into a malleable iron tank, placed on the top of a brick tower, and surrounded by a brick screen, and roofed over with wood covered with asphalte. The tank is 65 feet diameter, by 16 feet deep, and contains 330,881 gallons of water. The total weight of the tank is 45 tons, and it contains 1,485 tons of water.

There is only one main pipe, which enters the bottom of the tank, and answers both for conveying the ascending water into the tank, and the descending water for supplying the town.

There are upwards of nine miles of water-pipes laid down, and the total cost of the works, according to our informant, is 14,000*l.* Mr. William Burns was the engineer.

OXFORD ARCHITECTURAL SOCIETY.

AT the third ordinary meeting, held on the 13th ult. Mr. James Parker delivered a lecture "On the Style of the Thirteenth Century." He took as the groundwork of his lecture the differences which Gervase enumerates between the old Canterbury choir which existed before the fire, and the new choir, which is the one now standing, and is a good specimen of the Early English style. The "elongation of the pillars," he contended, exhibited a new and important principle, and he showed how it was observable, not only in the general design, but even in the sculpture. The second difference mentioned by Gervase, viz. "the capitals were now carved with a chisel, not with an axe," explained the origin of the other great principle, namely, that of *undercutting*, which was shown to pervade all the sculpture and mouldings of the period. The lecturer then explained the changes which Gervase mentions with regard to vaulting, and this led to the consideration of the origin of the pointed arch, which was not mentioned by Mr. Monk in the enumeration of the striking and important changes which he noticed. Mr. Parker did not consider the pointed arch as any new principle in design: it was simply a convenience in construction, and was a most fallacious guide in fixing the dates of buildings, as it was found much earlier than the thirteenth century, and this was the reason why he would never employ the terms first, second, and third pointed, as they expressed no principle, and, instead of assisting the student, were calculated to confuse and mislead him.

Mr. Willis agreed with all Mr. Parker had said: he wished, however, he had laid more stress on the pointed arch, which he thought was the very essence of the Pointed style. He believed there were five theories. 1. That Mr. Parker had explained, which arose from the necessities of saxpartite vaulting. 2. That the pointed arch was suggested by the effect of the intersections of the two round arches in quadripartite vaulting. 3. That the idea had been taken from the intersecting arches which were in such common use. 4. That it was brought into England by the Crusaders. 5. (A very fanciful one) that it was suggested by the figure called Vesica piscis. Mr. Willis did not know to which to give the preference, but thought that, perhaps, all contributed in a degree to the discovery.

On the 20th of February (we are availing ourselves of the local *Herald*), Mr. Parker gave the third of the series of elementary lectures. He began by pointing out that the change from the Early English to the Decorated Style began in the latter part of the thirteenth century, although it was not fully established until the fourteenth. He defended Rickman's name of Decorated as good and appropriate,—window tracery, from which it is named, being more essentially part of the structure than the decorations of any other style; and however plain a building may be, this distinguishing mark of tracery is never wanting. He then gave a slight sketch of the origin and development of tracery, illustrated by a selection of engravings, and referred the members for more full information to Mr. Freeman's work on Window Tracery. He described the peculiar character of Decorated foliage and ornament, its truthfulness and fidelity to nature, and the absence of the conventionalism and the deep undercutting of the Early English style. He also mentioned the ornamenting the flat surface of the wall with Diaper patterns, and showed specimens from the Eleanor crosses at Geddington, of which there are casts in the Society's collection. He also referred to Mackenzie's work on St. Stephen's Chapel, Westminster, which was placed on the table, and expressed his regret that the English Royal Chapel should have been entirely destroyed at the very time that the French Royal Chapel (La Sainte Chapelle in Paris) was being beautifully restored.

BUILDING NEWS FROM CANADA.

A NEW Baptist church has been erected at Woodstock, from a design in the early English style of pointed architecture, furnished by Mr. David Murray, of Hamilton, architect. The building is 65 feet long and 42 feet wide, and has a basement room 9 feet high, under the whole church, which stands north and south, with steeple at the south end. It has been ventilated and warmed on a plan said to be invented by Sheriff Rutland, of Coburg, C.W.; but merely consisting of the introduction of warmed air from a ventilating and warming stove in the basement, and the withdrawal of air under the floor through two air chimneys in the north wall, which thus ventilate the whole, while drawing the warm air down from the ceiling to circulate among the feet of the sitters. The same system has been applied to the new jail of the county of Oxford, and the Hamilton jail, and other buildings. The Welland county jail is also about to be warmed and ventilated in the same way, as also the Merritsville jail and a large church at Guelph. The Woodstock Baptist Church is built of white bricks produced at Woodstock. The courses, buttress caps, and dropstones are of Ohio freestone, varying slightly from the colour of the bricks. The spire was left unfinished for the season. The basement is to be occupied as school-room, and for lectures, &c. The windows of the chapel are of diamond pattern, with outer borders of stained glass.

SOLID SWISS PARQUETERIE.

The Solid Swiss Parqueterie, which is gradually becoming known in England, promises to supply a want. It is made solid throughout, and every portion of the ornamental woods forming the patterns is grooved and tongued together, and jointed with marine glue. It can thus be fixed immediately upon the joists when applied for flooring, rendering under flooring unnecessary. This Parqueterie has also the advantage of being much lower in price than the ordinary veneered work which has hitherto been in use. Being manufactured by machinery, and in large quantities, a great reduction in its cost has been obtained, and it can be supplied in London at prices commencing from 1s. per foot super. It is now being laid at the house of the Turkish ambassador, amongst other places. It seems only right that we should make it known to our readers.

ARCHITECTS' BILLS.

ASHPITEL AND WHICHCORD *v.* THOMSON.

THIS action in the Court of Common Pleas, Guildhall, February 19, was brought to recover the sum of 39*l.* 5s. 5d. for professional services rendered, and for money paid by the plaintiffs. The defendant is a draper in the Edgware-road. Mr. Laxton appeared for the plaintiffs, and Mr. Collier, Q.C. for the defendant.

The defendant's house having settled, the plaintiffs were called in to give their opinion, and afterwards superintended the works for the repair of the settlement, and checked the account of Mr. Stopher, the builder. The defendant, in January, 1853, being desirous of having the premises re-erected, consulted

the plaintiffs, stating that he wished his business interrupted as little as possible. The plaintiffs suggested an iron house, lined with slate: the defendant approved of this, and the designs were prepared, and arrangements made that the old premises should be pulled down, and the new building erected in five days. The defendant determined on having the designs submitted to the official referees. The old Metropolitan Buildings Act not providing for a building of this description, the case was ultimately referred to the Treasury, who granted permission for the erection of the building. The defendant, however, altered his mind, and would not have it erected.

The defence was, the plaintiffs had been called in by the builder, and that they were acting on his behalf, and not for the defendant, and that they undertook to prepare the designs for the iron house for costs out of pocket in event of the house not being erected. The jury, after retiring to consider their verdict, came into court, and gave a verdict for the plaintiffs for 28*l.* 5s. 5d.

PRINTS.

Fruit, after Lance.—Messrs. M. and N. Hanhart have just produced, in chromolithography, a fac-simile of one of Mr. Lance's gorgeous fruit pieces, including a melon, grapes, currants, and plums, on a piece of matting. It is a very successful and beautiful specimen of the art, and we are not surprised to hear that Mr. Lance has passed a most favourable opinion upon it. The many touches that go to produce the varied surface of the melon are admirably rendered. The same firm has also issued a "View of Paris," after Mr. T. Boys—a view comprising the Louvre, the Seine, and the bridges.

Messrs. Rowney have now on view a collection of chromolithographs which deserve attention.

Portrait of Professor Edward Forbes.—The friends of the late Edward Forbes (who was taken from the world too soon) will find the portrait of him which has been published by Mr. Claudet, at his Gallery in Regent-street, an excellent memorial of him. It is engraved by Mr. Charles Cook, from a daguerreotype by Mr. Claudet, who has done much good service in his art.

RECENT PATENTS.

AMONGST the specifications of patents recently granted are the following, extracted from lists reported in the *Mechanics' Magazine*:—

Page, J. "Improvements in moulding or shaping metals." In this invention, in casting such articles as pipes, core-bars, "capable of expanding and collapsing in diametrical dimensions," are employed. These core-bars are each composed of longitudinal pieces of segmental metal plates, so combined as to be capable of forming bars of various diameters, and are adjusted by means of a central spindle, carrying on its projecting end a metal disc furnished with suitable inclined pieces.

Poole, M. "An improvement in sculpturing surfaces of marble and stone," (a communication). This invention consists in rolling or rocking an engraved or embossed metallic surface in contact with a surface of marble or wood, sand or other suitable cutting material being interposed between.

Brant, J. C. "Improvements in laying rails, chairs, and sleepers for the permanent way of railways." This invention consists in the application of cork in various ways to the permanent way of railways; also in using longitudinal and transverse sleepers tied together so as to form a continuous line of way on a solid and equal bearing.

The following is amongst those for which provisional protection has been granted:—

François Coignet, of Rue Hauteville, Paris, France. "Certain improvements in the use and preparation of plastic materials or composition to be used as artificial stone, or as concrete or cement for building and other purposes."

AMERICAN PATENTS.

THE following are selected from lists of recent patents, reported in the Journal of the Franklin Institute of Pennsylvania:—

For an Improvement in Roofing Compositions: James West, Syracuse, N. Y.

Claim.—"The use of lime, in combination with the rubber, gutta percha, and shellac solutions."

For an Improved Mode of Hanging Window Sashes: J. W. Ross, Zanesville, O.

Claim.—"Attaching the straps to the sashes, said straps passing in reverse direction, around pulleys, on a shaft in the style of the casing, the pulley being attached permanently to the shaft, and the pulley placed loosely upon it, and the pulleys being connected and disconnected when desired, the pulley having a pulley attached to it, to which pulley an elastic band is attached, said band being also attached to the sash."

For a Mortising Machine: Loomis E. Payne and Orris Pier, Stowe, Vermont.

Claim.—"A double semi-circular mortise bit, or gauge, arranged so as to clear itself thoroughly in its action; and this, in combination with the double eccentric plate, to regulate the motion to and fro of said mortise bit."

For a Machine for Cutting Double Tenons: C. P. S. Wardwell, Lake Village, New Hampshire.

Claim.—"The combination and arrangement of the intermediate obliquely set or drunken saw, with the clearing or finishing true circular saw for operation together, and whereby the drunken saw not only serves to largely reduce the wood between the tenons, as required, for the completion of the tenons, but to form a wider kerf or pathway for the axle of the finishing saw to admit of the deep insertion of the latter into the wood, and of its operation as a clearer between the double tenons during the continuous progress or feed of the timbers."

Notices of Books.

VARIORUM.

"Lessons in General Knowledge" is an elementary reading-book, by Dr. R. J. Mann (Longman and Co. publishers), intended to serve as a familiar and attractive introduction to the principles of natural science. Special attention has been given to style as well as matter, and the whole is occasionally illustrated by engravings. This appears to be a very good book indeed of its kind, and suitable, not only for children, but for young persons generally, and for not a few who have got beyond juvenility.——Another pamphlet on "Sunday Trading in London, its Causes and its Remedies," has been published by Mr. Rivington, of Waterloo-place, an old advocate of this good cause. In the present effort "the case of the tradesmen" is briefly stated. "A London employer," as the author is, deserves to be heard on this subject.——Two very interesting shilling parts of Longman's "Travellers Library" have just been issued. They are titled, "Sketches of Nature in the Alps," and are translated from the German of Frederick Von Tschudi. The special subjects comprise of course both vegetable and animal as well as mineral existence in the Alps. The firs or pines are a prominent feature in Alpine scenery. The Wettertanne, or Weather-fir, is a very picturesque and well-known element in the landscape, towering upwards in a pyramidal form, and spreading forth its lower arms like umbrellas, made as if for shelter to the Alpine tourist. The Wettertanne grows not unfrequently to a height of 100 or 130 feet, and measures from 4 to 5 feet in diameter at 2 feet from the ground. It lives to a venerable age and grows very slowly. The staple growth of the Alps are the trees of the pine and fir species. The fir (*Fichte*) and red spruce fir (*Rothtanne*) are the chief constituents of the regular forests in the northern and western parts. The larch grows in the lower portion of the Alpine zone, and the *Pinus Cembra* in the upper. The larch is the tree which yields the best turpentine of all the coniferæ.

Reading for the Million.—The recent sale of the copyrights of the well-known collection of works known as *Bentley's Standard Novels*, have afforded Messrs. Routledge an opportunity of carrying out their scheme for issuing the best productions of modern writers at a cheap rate. We go out of our way to mention it. The Bulwer novels, which have been, and are so deservedly popular, will be immediately followed by a succession of able fictions. For this purpose, the copyrights of the sea stories of Captain Marryat and J. F. Cooper have been secured, and those of some of the best works of Albert Smith, G. R. Gleig, Ingoldsby, Maxwell, Mrs. Gore, Lady Scott, and Thomas Hood. The sale, we learn, realised nearly 7,000*l.* and the works to which we have referred are the cream of the collection. The Bulwer Lytton speculation having been carried out with great spirit and gratifying results to public, publisher, and author, we are glad to hear of the extension of the scheme.

Miscellanea.

ARCHITECTURAL INSTITUTE OF SCOTLAND.—The eighth meeting for the session of this Institute was held in George-street Hall, on Monday night last—Mr. Kirk in the chair. The secretary read a paper by Mr. Thomson, of Banchory, on "The Egyptian Obelisks now in Rome," which traced the history of these monuments, and entered into details regarding particular obelisks.

NATIONAL PORTRAIT GALLERY.—Earl Stanhope's motion, "That a humble address be presented to her Majesty, that her Majesty would be graciously pleased to take into her Royal consideration, in connection with the site of the present National Gallery, the practicability and expediency of forming by degrees a gallery of original portraits, such portraits to consist as far as possible of those persons who are most honourably commemorated in British history as warriors or as statesmen, or in arts, in literature, or in science," was agreed to, the words "such portraits to consist as far as possible of the most eminent persons in British history," being subsituted for "those persons who are most honourably commemorated in British history."

INSTITUTION OF CIVIL ENGINEERS OF IRELAND.—The ordinary general meeting of this institution was held on the 12th ult. at their rooms, 41, Upper Sackville-street, Dublin, Mr. Richard Griffith, president, in the chair, when Mr. John Hill, county surveyor, read a paper "On the Maintenance of Macadamised Roads, as exemplified by his Management of the Central District of Roads in Ireland under the Commissioners of Public Works." The charge of the commissioners over the roads in question, and all of a similar class in Ireland, having ceased on the 1st July, 1854, Mr. Hill took occasion to bring forward, among other detail connected with the management pursued, statistical information of the cost of maintenance under that system during each year from 1843 to 1853 inclusive, and contrasted it with the rates at which the contracts had been since let, for five years, under the ordinary operation of the Grand Jury Laws, by which it appeared that an increase of expense had now taken place which varied from 20 to 75 per cent. while the condition of the roads had been seriously deteriorated. In reference to the general question of road maintenance, he attached the greatest importance to timely and energetic work in the early part of winter, and asserted the principle that the object in view should always be attained by measures of a precautionary rather than of a remedial nature. The same principles applied with even greater force to the roadways of greatest traffic, such as those in cities and large towns. A long discussion followed, in which the president and most of the members present took part; and amongst other matters referred to, the relative advantages of pavements and of Macadamised roads for the streets of cities received attention, very varying opinions being expressed. The meeting then adjourned.—*Saunders's Newsletter.*

GAS.—The Liverpool United Gas Company have declared their usual dividend of 5 per cent. for the *half*-year; and the directors have been empowered to borrow 31,400*l.* under the provisions of the Act. ——At the half-yearly meeting of the York Gas Company, a dividend of 6 per cent. free from income-tax, was declared; and the directors were empowered to expend from 8,000*l.* to 10,000*l.* in providing a new gasholder, the business of the company having of late greatly increased.——The town of Honley has been supplied with gasworks, and nearly all the houses are lighted but not the streets as yet.——The works of the Churwell Gas-light Company, which have cost nearly 1,500*l.* are now in full operation, and a dividend of 5 per cent. has been declared, leaving a handsome surplus to be carried over to the next account.

RAILWAY TO PORTSMOUTH DOCKYARD.—Government has at last granted a sum of 70,000*l.* for the construction of a railway, commencing at the terminus of the London and South-Western, and the South Coast, Railways, in Landport, and ending in Portsmouth Dockyard.

THE THAMES AND THE CROWN.—In the latter part of the article on "The Condition of the Thames," page 106, the authorised report of the discussion which you quote contains an attack on the Crown, which is not just. The land between high and low water round the British Islands is the property of the Crown, except in cases where a grant has been made of it, of which there are many instances. This right was confirmed by a decision of the twelve judges, some years since, in the case of the Hull and Selby Railway. The Corporation of London have not, as yet, been able to produce a grant of the land on the shores of the Thames, from any sovereign; so that in this case to which the reporter refers, the Crown really is supporting the rights of the people against the usurpation of the Corporation.

A CONSTANT READER.

THE RELATIONS BETWEEN MASTERS AND WORKMEN.—Mr. Mackinnon lately moved in the House of Commons, for the appointment of a select committee to consider the inconvenience now felt from the want of equitable tribunals by means of which any difference between masters and operatives might be satisfactorily adjusted; and also to ascertain whether the *conseils des prud'hommes* in France had answered the purpose for which they were established. He was not anxious for any particular form of tribunal, nor did he seek to give it power to fix maximum or minimum rates of wages: all he sought was the establishment of equitable tribunals, which should be able to reconcile masters and workmen, and to prevent the recurrence of so tremendous a misfortune as a strike. Sir G. Grey said he thought it desirable that tribunals of the kind suggested should be established, but such tribunals should not regulate wages. The motion was agreed to.

NEWGATE JAIL.—At a meeting of the Court of Aldermen of the City of London last week, Alderman Cubitt brought up the report of the committee on the state of Newgate Jail, and its improvement or removal. The report, after some preliminary remarks, in which it was stated that till some important alteration was made in the physical structure of the interior of the building, Newgate must continue to be a standing reproach to the City of London, proceeded to intimate that a plan was under consideration which would give 120 separate cells at a cost estimated by the City architect at 10,000*l.*; that they had in view another plan of a comprehensive nature for the entire demolition of the courts and of the jail, and the reconstruction of the courts and such a portion of the jail as might suffice for the custody of prisoners while trials were going on, the objects of this plan being to dispense with Newgate as a prison, except only as above stated. A plan had also been submitted to the committee for such additions to the prison at Holloway as would enable it to receive the prisoners now kept at Newgate. The cost of these combined operations, that is, the reconstruction of the Criminal Courts and a portion of Newgate, was estimated by the City architect at 87,000*l.* less the value of a piece of land at the Old Bailey set free, and estimated at 9,000*l.* In working out these plans, the City architect had so arranged as to permit the smaller one to form an integral part of the larger. The report, after some discussion, was received, and referred back to the committee to act therein as they should think fit.

THE "PATHOLOGY OF ENGLISH ART."—At the Liverpool Philomathic Society's, on Wednesday evening in last week, a lecture was delivered by Mr. J. T. Foard, on "The Pathology of English Art; its diseases, —chronic, epidemic, and hereditary." One of the chief pathological states of high art was described, according to the local *Journal*, as "an eruptive disease, recurrent like the measles or small-pox, attacking with fearful violence almost every painter in every stage of national history—its ravages being of the most painful kind." It made its first appearance in this country during the life of Sir Joshua Reynolds, and Sir Joshua himself was attacked by it at the first exhibition of the Royal Academy in 1769, where it broke out in the shape of "Lady Blake as Juno receiving the Cestus from Penus,"—"Miss Morris, as Hope, nursing Love," &c. &c. At present the symptoms assume in general a somewhat milder form, as in "Nymphs Bathing,"—"Nymphs Reclining,"—"Nymphs Surprised," &c. A description of one would serve for all. To convert "Nymphs Bathing" into the "Sirens," or "Venus and her Nymphs," would be merely a matter of repletion. "But if the Choice of Paris were required, the recipe would be as follows:—Take the same three figures: turn the green sea into green fields, the sea-weed into ditches, the shells into sheep, &c.; add an adolescent male figure nude; garnish with extra blue sky and a rocky foreground; serve. Repeat this *ad nauseam*, and you have modern English or nineteenth century classic art." The paper next referred to the "manufacturing" of pictures, which "impaired the function and paralysed the action of one-half of the body corporate of art." A denunciation of the Pre-Raffaellite school concluded the whole. A discussion ensued, and the thanks of the society were awarded to Mr. Foard.

VALUE OF LAND IN THE CITY.—The following tenders were received by the City Commissioners of Sewers, last week, for a plot of ground in Chancery-lane. Frontage, 38 feet; depth, 24 feet:—

	Per Annum.
Haynes and Eyre	£40
Palmer	70
Pursnell	100
Marsh, for the Law Union Assurance	125
Reserved price	140

At which price it was taken by Mr. Marsh, making the price for freehold, at thirty-three years' purchase, 4,620*l.*

STOPPING TRAINS.—It would be a great desideratum in railway travelling if, with the stopping trains, some arrangement could be contrived by which the loss in speed in pulling up to stop, and the loss in speed in starting, could be reduced to a minimum; in other words, if the act of stopping a train should not cause much more loss of time than the mere delay for passengers to alight; and this is now the more necessary since there is such a large body of daily travellers on the metropolitan lines, who are both accommodated and incommoded by a frequent stoppage of trains, and where, from the distribution of passengers at different points, it is necessary that most trains should stop frequently. To a certain extent the arrangement to be proposed is adopted, namely, that of laying the line on an elevation whenever it approaches a station—that each line of rail should have a continuous rise for some distance on both sides of the station, and should arrive at an apex at the proper stopping point. It may be said that an arrangement of the kind would be very inconvenient for fast trains, and would cause delay; but since it is always a desideratum to ensure moderation of speed in passing a station, this is necessarily secured by such an arrangement as is proposed, and with the ordinary stopping trains. The pace is rapidly curtailed by the steep incline in stopping, while the start is accelerated by the descending incline, thereby attaining both the ends desired. To a certain extent this has been adopted, but not regularly, and not sufficiently to prove of general service. You can always detect its existence by the rapid and easy way in which you stop, and equally so start. We have only to wish to have it general, when the permanent way requires alteration, and also in new construction it is worthy of consideration.—H. C.

LONDON BRIDGE.—On reading Mr. Collinson's motion respecting the Southwark and London Bridge Improvements, it occurred to me how easy it would be to alter the present bridge to meet the demands of the increasing traffic, adding but little extra weight and at a trifling cost, compared with the advantages gained. I would remove the present footpath and parapets each side, and erect two rows of iron columns at a sufficient width to allow the heavy portion of traffic, and a foot-path for the drivers, say two feet wide, which would leave sufficient room for two other lines for carriages and the lighter portion of traffic each side of centre line of bridge, thus making six distinct lines of traffic instead of four, and by dividing the different ways by raising one course of stones three inches above the others would prevent confusion, by each entering its proper line. The above-mentioned columns should stand about twenty feet apart, to support the trussed girders longitudinally, which would carry an elevated platform for foot passengers, a sufficient height, say eighteen or twenty feet, to allow for the traffic underneath to be reached by four flights of steps from the present foot-paths, communicating with each other at the ends of the bridge, to allow persons to ascend either side, take their proper side in crossing, and descend the side they may require. The weight of stone removed would nearly equal the weight added, and bear part of the expense: one side could be done at a time, without causing much delay to the traffic, and if skilfully designed would make a useful, ornamental, and noble construction worthy of the name of an—ENGLISHMAN.

FORGING IRON.—Mr. W. Clay has recently patented a method of manufacturing forged iron so as to economize the metal. His claim is for making shafts or other articles, of wrought iron, by piling together suitable lengths, and the employment of a core of sand or charcoal dust, &c., as described.

DESTRUCTION OF BLACK-BEETLES.—Some fifteen years ago, I had the ill-luck to import into my house (I believe from Brighton) a sort of long-bodied beetles, which bred rapidly, and infested for years my kitchen, scullery, bakehouse, &c., and every now and then made their appearance in the better apartments; a nimble gentleman, of near an inch and half long, meeting one occasionally on the stairs or in the passages. I have heard them called "cock-roaches," but whether properly or not, I know not: at all events, they were a serious annoyance. A year or so ago, I saw advertised "Chase's Beetle Poison," at one shilling the box; and as I thought the trial worth making, I got my grocer to procure me four boxes. The contents of two of them I distributed, with an interval of a week or two, in the chief haunts of the beetles. The other two boxes I have still; but a beetle I have not seen now for many months, and I believe them to be totally destroyed. It is right to mention that four young chickens, which had access to the scullery when the poison was there, died, and were thought to have been killed by it; but dogs and cats took no harm—probably did not eat it. As this is a *bonâ fide* communication, intended solely for the benefit of others who may be similiarly annoyed, I inclose you my name and address, which you are at perfect liberty to give to any *bonâ fide* inquirer.—W.

ARCHITECT'S "CLERK."—Your correspondent who has deigned to notice my communication, and whose modesty would not allow him to be "guilty of the rudeness" of punning upon my remarks, must surely know that, though literally the appellation of "clerk" is applicable to a clergyman and a man of letters, yet in modern phraseology this sense of it is obsolete, except indeed a very few instances, such as law-deeds, &c. Who ever hears now-a-days of the use of the term in that sense? for, if so applied, the parson of the parish would be the "parish clerk," and the mayor of a town in the same sense would be the "town clerk!" Let us for a moment suppose this. 1. A clergyman is a clerk: by usage, the man who sits under him and says "Amen" is a clerk. 2. A man of learning and letters: a lawyer must be one; and his boy who copies his letters and runs errands is so designated. 3. One who writes for another, whom *Johnson* also calls a "secretary," and which is the present understood term for such a man. 4. Officers of various boards. Surely your correspondent must know that the various capacities of the last-mentioned qualify their positions, and we know at once by the term what they are—as the "town clerk," "clerk of the peace," "clerk of the Crown," or "clerk of the House of Commons," &c. &c. By these examples we see that the degrees of comparison, and, indeed, the etiquette of modern usage, would not sanction this multifarious term to be applied in its abstract sense; so we use other phrases better adapted to the understanding, and hence the general term "clerk," in its ordinary acceptation, is, "clerk, *s.* a secretary or bookkeeper" (Johnson). The distinguishing feature of this term of my thesis, from its misapplication, is so assimilated with the word "clerk" in its commonest sense; that, there the difficulty lies. Thus we say—an "architect's assistant," who, in no small degree, contributes to the fame of his employer, by his talent and ability, is by usage a clerk; so also is the man who keeps his accounts, and the boy who dusts the office; and, therefore, Mr. Brown or Mr. Jones, head-assistant, who, like myself, may have pretensions to a higher grade, has no word in this huge language of ours with its upwards of *twenty-six thousand* words, to distinguish him from the errand boy. If your correspondent's knowledge of the matter had been greater, he would have attempted, with less indignation, to give an answer to my original question definitely, as to "when the cognomen was first applied," and why? "to one who is neither Clerk of the Peace, Town Clerk, Clerk of the Crown, Clerk of the House of Commons," nor any of "the hundreds of other Clerks" who would look down with —— upon one who is

"*Only* AN ARCHITECT'S ASSISTANT."

TENDERS

For pulling down the old and rebuilding a new branch bank at Leighton Buzzard, Beds, for the London and County Banking Company. Mr. A. Parnell, architect. Quantities supplied:—

Myers	£2,830 15 0
Nash, Leighton Buzzard	2,611 2 3
Brass and Son	2,583 0 0
M'Kenzie	2,510 0 0
Clark, Leighton Buzzard	2,421 2 2
Wilson	2,268 0 4
Woodruff	2,229 15 0
Greig (accepted)	2,170 18 0

For schools and residences, Crosby. Mr. J. P. Jones, architect:—

Thomas	£2,780 0 0
Williams	2,756 0 0
Jones and Co.	2,600 0 0
Harrison (accepted)	2,526 0 0

For two detached houses, Seaforth; same architect—

Cottingham	£1,820 0 0
Williams	1,250 0 0
Harris (accepted)	1,180 0 0

TO CORRESPONDENTS.

"W. B." (thanks!)—"A. W."—"E. A."—"T. E. T." (thanks)—"T. H. W."—"G. M."—"R. R."—"C. P. D." (thanks!)—"W. W."—"E. H."—"C. H." (will appear).—"W. W. P."—"Mr. G."—"A Subscriber," re "closets" (apply to some competent practical man)—"H. H."—"B. B."—"W. K"—"F. W. L."—"B and E."—"J. B. N."—"H. B." St Columb (it depends on the arrangement made in the first instance).—"J. A. P."—"J. P. H."—"J. E." (the subject of varnish, &c for external doors was treated of in our pages some time ago).—"K. C. E." (Mr. Albano).—"F. F. W."—"G. G." St. Helen's.—"G. S."—"W. H. N."—"W. A."—"Sub." (why not hang the doors in four or more leaves?).—"L. N. S."—"A. S."—"E. A. C."—"B. H."

"Books and Addresses."—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *viâ* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

METROPOLIS LOCAL MANAGEMENT ACT.—SAINT LEONARD, SHOREDITCH, Middlesex. The Vestrymen of the Parish of St. Leonard, Shoreditch, in the county of Middlesex, in pursuance of the Act of Parliament 18 and 19 Vic. cap. 120, "For the better Local Management of the Metropolis," will meet in the School-room of the New Tabernacle, Old-street-road, in the said parish, on THURSDAY, the 20th day of MARCH, 1856, at SIX o'clock in the evening, to elect the undermentioned officers, viz.:—

A MEDICAL OFFICER of HEALTH, at a salary of 300*l.* per annum.

A CHIEF SURVEYOR, at a salary of 300*l.* per annum.

An ASSISTANT SURVEYOR, at a salary of 120*l.* per annum, to act under the orders of the Chief Surveyor.

TWO INSPECTORS of NUISANCES, at a salary of 100*l.* each per annum; and

A MESSENGER, at a salary of 1*l.* 5*s.* per week.

The above officers will be required to devote their whole time to the duties of their office, which will be as defined by the Act of Parliament, and from time to time by the orders of the Vestry, except the medical officer, who will be allowed private practice, but must hold no other public appointment in the parish. Candidates are required to send in their applications and testimonials addressed to the Vestry, at the Offices, 37, Hoxton-square, on or before WEDNESDAY, the 19th inst.; and they must also attend the Committee (personally) at the School-room, adjoining the New Tabernacle, in Old-street-road, on THURSDAY, the 13th of MARCH, 1856, at ELEVEN o'clock in the morning. They will also be required to attend a special meeting of the Vestry, to be held at the School-room of the New Tabernacle, in Old-street-road, on WEDNESDAY, the 26th day of MARCH, 1856, at ELEVEN o'clock in the morning. The applications and testimonials of the candidates for the medical officer will be forwarded to the General Board of Health for examination, and if the report from the Board of Health should not be received by the 20th inst. the election of such officer will be deferred, of which due notice will be given. Any further particulars or information may be obtained by application to

Clerk pro tem. to the Vestry.

Offices, 37, Hoxton-square, 6th March, 1856.

THE MERTHYR TYDFIL LOCAL BOARD of HEALTH are desirous of receiving applications for the appointment of SURVEYOR to the said Board. He will be required to give the whole of his time to the Board, receive plans for building, inspect and measure all work done by the Board and their contractors, make out the accounts, and perform the duties required by the Public Health Act. Salary, 150*l.* per annum.—Applications to be addressed to **Mr. JAMES WARD RUSSELL**, Clerk to the said Local Board, on or before SATURDAY, the 15th day of MARCH next.

Merthyr Tydfil, February 28, 1856.

VESTRY of ST. MARY, NEWINGTON, SURREY.—Notice is hereby given, that this Vestry will meet on WEDNESDAY the 12th MARCH next, at SEVEN o'clock in the evening, at the Infant School-room, Queen's Head-row, Newington, to proceed to ELECT a ROAD FOREMAN, to act under and assist the Surveyor of Roads, at wages of 1*l.* 1*s.* per week. Applicants for the office must have a practical knowledge of the making and repair of roads and footpaths, and of paving; the qualities of stone and other materials; and must produce testimonials as to their conduct and efficiency; such testimonials must be sent to the undersigned on or before MONDAY, the 10th MARCH next, and the applicants must personally attend the Board and Paving Committee of the Vestry, at SEVEN o'clock in the evening of that day, at the Vestry room of the parish church, Newington.—Dated 27th February, 1856.

H. and F. CHESTER, Clerks to the Vestry,
1, Church-row, Newington-butts.

WANTED, for a Builder and Contractor's establishment in Liverpool, a FOREMAN, to take the out-door department. No one need apply who is not fully competent to undertake such a situation.—Address, stating wages required and references as to character and ability, to BUILDER care of Mr. H. Greenwood, 16, Cumma-place, Liverpool.

TO PLUMBERS AND GLAZIERS.

WANTED, in a country town, a good PLUMBER and GLAZIER for a constancy.—Apply to WILDER and TANNER, Chelmsford, Essex.

TO ARCHITECTS' ASSISTANTS AND DRAUGHTSMEN.

WANTED, immediately, a good ARCHITECTURAL DRAUGHTSMAN, who is capable of taking off quantities, estimating and measuring off works, has a practical knowledge of business generally, writes a good hand, and of steady habits. Applicants to state the salary.—Apply to Mr JOHN GREEN, Architect, 30 Grey-street, Newcastle-on-Tyne.

Mr. GREEN also has a VACANCY for a respectable Youth as PUPIL.

TO BUILDERS' CLERKS.

WANTED, in a Builder and Contractor's Office, a CLERK, fully qualified for making finished and working drawings, taking out quantities, estimating, measuring up works, and the general routine of a builder's office, and practically acquainted with the building business.—Apply by letter, with full particulars, salary, &c. to A. X. office of "The Builder."

WANTED, a CLERK of WORKS.—Apply to G. H. STOKES, Esq. Solicitor, 18, New-street, Spring gardens

WANTED, a CLERK of the WORKS, to Superintend the Restoration of a Church. Satisfactory references from architects will be required. Apply to Mr. WILLIAM SLATER, 4, Carlton-chambers, Regent-street.

TO BUILDERS.

WANTED, a SITUATION, in a Builder's Office, by a Young Man, who is fully capable of taking out quantities, measuring up works, and the general routine of the office. References unexceptionable.—Address, S. S. 47, Essex-street, Strand.

TO WHARFINGERS AND OTHERS

WANTED, by an intelligent and respectable Young Man, active and confidential EMPLOYMENT, who has a knowledge of bookkeeping, and of the Building and Wharfage businesses. Principals will meet with prompt attention by directing to A. B. Mr. D. White's, 3, Winchester-place, Pentonville-hill.

TO MASTER PAINTERS, BUILDERS, AND OTHERS.

WANTED, by a Young Man, aged 29, EMPLOYMENT as GRAINER, PAINTER, &c. or to superintend work. Has had first rate experience. Specimens on hand. Wages moderate. References given. Address, T. LLOYD, 26, Henry-street, Hampstead-road.

TO CARPENTERS AND BUILDERS.

WANTED, to APPRENTICE a strong, healthy Lad, for about TWO YEARS, where he will have an opportunity of improving himself in the practical part of the business, having followed the same about five years.—Address, J. KERRY, Southgate, Middlesex

TO BUILDERS, CONTRACTORS, &c.

WANTED, a SITUATION, by the Advertiser, who is about to leave a firm of high standing, where he has been engaged in the counting-house above eight years.—Address, T. HORNE, office of "The Builder."

WANTED, by the Advertiser, a SITUATION as SHOP FOREMAN of JOINERS. Has filled a similar situation with one of the principal builders in London for the last twelve years; cause of leaving being the proprietor is retiring from business. Unexceptionable references for character and ability.—Address, A. K. Mr. Grimsdell's, Bell-lane, Spitalfields.

WANTED, by a Gentleman of experience, aged 37, a SITUATION in an Architect and Surveyor's Office, at the West End. Is a first-rate draughtsman, penman, and architectural assistant, and accustomed to the management of other offices. Salary, £100 per annum. References given and required.—Address, ALPHA, office of "The Builder."

WANTED, by a Practical Man, who has been twenty five years in business as a Carpenter and Joiner, EMPLOYMENT in a Builder's Office, or to superintend workmen and to make himself generally useful to his employer; or in a Timber Merchant's establishment. Undeniable references to ability and character, and security, if required. Address by post only) to A. B. Mr. Taiver, Timber Merchant, &c. Bridewharf, Battersea, Surrey.

WANTED, by a Person of considerable experience in all branches connected with buildings, in town or country, a RE-ENGAGEMENT as BUILDER'S FOREMAN or CLERK of WORKS. Good reference as to ability, integrity, &c. can be given. Locality no object.—Address, E. R. 3, Francis-street, Tottenham-court-road.

TO STONE AND RED WARE POTTERS, BRICK AND TILE MAKERS, AND OTHERS.

WANTED, by a thorough practical Man, a SITUATION, to superintend or take the work; can burn as well as make; well understands sanitary pipe making, both salt and other glazes, likewise the brick and tile and fire-clay cutting work, in all its branches, having had some years' experience; is a good accountant, and has a good connection for the sale of stone and red ware, both in London and the country.—Apply to W. W. care of Mr. S. Bishop, 43, Mount-street, Lambeth.

TO ARCHITECTS.

WANTED, by a Gentleman, who has recently completed his articles in the office of a London architect of good standing, a SITUATION as CLERK, for six or twelve months, in a country office. Salary moderate.—Address, E. D. P. 30, Albert-street, Mornington-crescent.

TO ARCHITECTS AND SURVEYORS, OR BUILDERS.

WANTED, by a Young Man, aged 24, a SITUATION as CLERK, in either of the above offices; is a good draughtsman, well acquainted with the quality and prices of materials, measuring up work, and superintending workmen; also a good book-keeper. First-rate references.—Address, J. S. 6, Prospect-place, South-street, Greenwich.

TO CIVIL ENGINEERS, ARCHITECTS, SURVEYORS, &c.

A YOUNG GENTLEMAN, who has studied his profession practically and theoretically, wishes a RE-ENGAGEMENT, at home or abroad. Address S NIP, City News Rooms, 66, Cheapside.

TO MASTER BRICK AND TILE MAKERS.

WANTED, by the Advertiser, a SITUATION as FOREMAN, in the above line. Has a thorough knowledge of the close or Scotch kiln, in all its branches. Good testimonials.—Address, G. H. 4, Glengall-place, Millwall, Poplar, London.

TO ARCHITECTS AND SURVEYORS.

A YOUTH, who has been two and a half years in an architect and surveyor's office, OFFERS his SERVICES where a moderate remuneration would be given in return. Good testimonials as to morals and ability from previous employers.—Address, A. B. Post-office, Worcester.

WANTED, a SITUATION as CLERK, or FOREMAN of WORKS or WHARF; or in any other capacity where perseverance and integrity are essential. First-rate references.—Letters, post-paid, to W. R. 14, Aske terrace, Hoxton.

TO ENGINEERS, CONTRACTORS, AND BUILDERS.

WANTED, by a respectable Young Man (the son of a builder), an ENGAGEMENT as CLERK of WORKS, BUILDER'S FOREMAN, or in any similar capacity. References unexceptionable.—Address, F. P. No. 10, Little Clarendon-street, Somers-town.

CARPENTER AND HOUSE JOINER ON A GENTLEMAN'S ESTATE.

WANTED, a SITUATION as above, by a young Man from the country. He can be well recommended.—Apply to Mr. PEARCEY, Bookseller, 2, Church-street, Rotherhithe, Surrey.

WANTED, by a thorough practical PLUMBER, who understands iron mining, fitting, gas-fitting, zinc working, &c. a SITUATION as FOREMAN, or to MANAGE a BUSINESS; can keep the accounts. Satisfactory references.—Address, PLUMBER, 76, Fore-street, City, London.

TO ENGINEERS, &c.

WANTED, by a Young Man, aged 21, acquainted with mechanical drawing, a SITUATION as IMPROVER in the above trade. A small salary only required.—Address, A. B. care of Mr. Henry, Tailor, 15, Cobourg-street, Cleikenwell.

TO BUILDERS, CARPENTERS, &c.

WANTED, by a Young Man of 20, EMPLOYMENT as IMPROVER, at the bench, or otherwise. Understands taking out quantities, measuring, plain drawing, and book-keeping. Office and bench work combined, if required. With opportunities for improvement, moderate wages accepted. Town or country. In-doors preferred.—Address, SIGMA, Post-office, Tottenham.

TO ARCHITECTS and SURVEYORS, BUILDERS, TIMBER MERCHANTS &c.

WANTED, a SITUATION as CLERK, to either of the above, by a Young Man, aged 25, being well acquainted with the general routine of an Architect's or Builder's office; also measuring up work and keeping accounts, superintending workmen, if required, and a good plain draughtsman. Good references can be given.—Address, R. M. Post-office, 116, Edgware-road, Paddington.

TO ARCHITECTS AND BUILDERS.

WANTED, a SITUATION as CLERK of WORKS, SHOP, or FOREMAN of WORKS, by an experienced practical man, aged 43, with testimonials for services of years, and excellent reference.—Address, J. E. D. 81, Lower Marsh, Lambeth.

TRAVELLER WANTED.—TIMBER TRADE.—Any person having a thorough knowledge of his business, of industrious habits, and if any connection at command the better, will be liberally treated with. Letters can be addressed in the first instance, stating age, previous employment, &c. to X. Y. Z. Messrs. Reynolds and Falconer, 15, Old Broad-street, City.

TO ARCHITECTS.

THE Advertiser, who is a first-rate Draughtsman, and has a thorough knowledge of detail and constructs is open to an ENGAGEMENT. Address, G. G. No 39, Michael's-place, Brompton.

TO BUILDERS AND SURVEYORS.

THE Advertiser is OPEN to a SITUATION in Town or Country, as WALKING FOREMAN, or ASSISTANT in the Office. Is well acquainted with the duties of an office, and can prepare fair and working drawings. If a place of trust be required, security can be given.—Address, J. C. care of Mr. Herman, the Square, High-street, Winchester.

THE FUNNEL FIRE-LIGHTER. — To OWNERS of MACHINERY, FIREWOOD DEALERS, and OTHERS.—WANTED, a person to MANUFACTURE the "FUNNEL FIRE-LIGHTER," for the Patentee. The article is made of firewood, and the chief operations to be performed are sawing, chopping, piercing, and threading. Securing a thorough draft of air through the mass of fuel to be lighted, with sufficient lateral expansion of flame, it is an unfailing fire lighter, needing no tell-tale and requiring no attention after being lighted. It also possesses the valuable property of concentrating the flame which is projected beyond the stove, and thereby making it useful for cookery, &c. the moment the article is lighted. It is also especially safe for children to use, as it throws out no sparks in front; and being cleanly, fashionable, and even elegant to look upon, and capable of being cheaply produced, it promises to light a good proportion of the half-million of fires daily made in London. The patentee is willing to contract with a manufacturer for such a supply of the article as he may need for the consumption of London, and all other places to which he may send the article from London.—Further particulars, specimens of the article, and the method of manufacture, will be shown to bona fide inquirers by Mr. W. H. NEWMAN, 43, Cannon-street-road, Commercial-road East.

TO ARCHITECTS.

THE Advertiser, who has had fifteen years' experience, is desirous of a RE-ENGAGEMENT, in a London Office. Is well acquainted with colouring, perspective, mediæval, and Italian details, and is considered a good draughtsman. References good. Salary moderate.—Address, Q. E. D. 3, Bloomfield-terrace, Pimlico.

TO ARCHITECTS AND SURVEYORS.

THE Advertiser is desirous of a SITUATION in either of the above Offices; is a good plain and perspective draughtsman, and accustomed to assist generally in taking out quantities.—Address, to the care of R. M. 34, Windsor-terrace, City-road.

TO WAREHOUSEMEN, WHARFINGERS, AND OTHERS.

THE Advertiser wishes for a SITUATION in any firm, as FOREMAN, or CLERK, to take orders, and attend to the delivery of goods, or any situation where trust is required. Can write a good hand, and keep accounts. Can have a character for honesty, sobriety, and attention to business.—A letter addressed to F. S. No. 4, King's-terrace, Hammersmith, will be immediately attended to.

TO ARCHITECTS, SURVEYORS, AND BUILDERS.

THE Advertiser, aged 33, is desirous of an ENGAGEMENT. Has had considerable experience in preparing working and finished drawings, estimating, measuring, and superintending works, and can take out the routine generally.—Address, J. K. Mr. Webster's, 8, Sandwich-street, Brunswick-square

TO BUILDERS

THE Advertiser, who is about leaving his situation, wishes for an ENGAGEMENT as SHOP FOREMAN, and well understands setting out hards, and is capable of undertaking any job. Good references given as to ability and sobriety.—Address, J. H. No. 8, York street, Hackney-road.

PLUMBING. — EMPLOYMENT Wanted, by a respectable experienced Man. Does not profess painting and glazing, but willing to make himself useful. Respectable reference.—Address, W. T. No. 4, Warwick-row, Pimlico.

DISCHARGE of DUTIES FAITHFULLY.

Any Builder or Contractor requiring a persevering Young Man of thorough business habits, as TIMEKEEPER or GENERAL FOREMAN, and who understands the executing and measuring of builders' work, will please address EDENDEN, 76, Harley-street.

TO ARCHITECTS.

AN experienced CLERK of WORKS is now at liberty for ENGAGEMENT with any gentleman in the profession.—Address, A. B. care of Mr. D. Carter, No. 1, Providence-place Clarence-road, Kentish-town, London

A YOUTH (16 years old), who can map and copy drawings, put plans on linen, write a good hand, and is accustomed to office business generally, wishes for a SITUATION. Salary, 12*s.* a week.—Address, prepaid, J. COOPER, Post-office, Mount-street, Lambeth.

TO ENGINEERS AND IRON FOUNDERS.

A THOROUGH practical experienced MOULDER in loam and sand castings of every description, wishes an ENGAGEMENT as FOREMAN. He is a good accountant, and quite capable of conducting a foundry on the most approved economical principles. Good reference can be given. Would have no object on to piecework.—Address, MOULDER, Office of "The Builder."

TO BUILDERS AND OTHERS.

A YOUNG MAN, 24 years of age, a competent Builder's Clerk, is open to an ENGAGEMENT. He was brought up to the trade, and has had six years' experience in the office of a great building establishment in London.—Address, Mr. SPENCER, Mr. Beddon, stationer, Worcester-street, Wolverhampton.

TO ARCHITECTS, &c.

AN ASSISTANT, accustomed to prepare finished working and detail drawings, and superintending works, wishes for an ENGAGEMENT, in town, either temporary or permanent.—Address, F. W. No. 8, Farringdon-street.

TO ARCHITECTS, SURVEYORS, &c.

A YOUNG MAN wishes for a RE-ENGAGEMENT in either of the above professional offices. Can draw out plans, elevations, and sections; has a slight knowledge of construction. Is a good penman, and a fair hand at accounts. Address, C. H. Office of "The Builder."

TO BUILDERS, &c.

AN experienced CLERK wishes EMPLOYMENT in an OFFICE, to make finished or working plans, take out quantities, or make estimates; is well acquainted with the general routine of office duties. Salary moderate. Good references.—Address, A. Y. No. 5, Gloucester-street, Regent's-park.

A GOOD THREE-BRANCH HAND wants a constant SITUATION. Understands general repairs in all its branches. First-rate references as to ability, &c.—Address, W. B. S. 33, Victoria-terrace, High-street, St. John's-wood.

TO ENGINEERS AND ARCHITECTS.

A YOUNG MAN, who has had much experience in PLAN DRAWING, is open to an ENGAGEMENT. Has a knowledge of French. For information as to ability and character, apply to F. H. ROUS, Wigton, Cumberland

TO ARCHITECTS.

A GOOD DRAUGHTSMAN, competent to make working, finished, and coloured perspective drawings, desires a RE-ENGAGEMENT, at a moderate salary.—Address, W. W. Office of "The Builder."

AN ARCHITECTURAL DRAUGHTSMAN is desirous of a RE-ENGAGEMENT in Town accustomed to the getting out of perspective, finished, working and detail drawings. Salary moderate.—Address, A. B. 9, Elizabeth-street south, Pimlico.

TO ARCHITECTS, &c.

A YOUNG MAN, with three years' experience in the Office of an Architect, Builder, and Surveyor, in a cathedral town, is desirous of ENGAGING in a similar SITUATION. Can produce satisfactory testimonials of character, with specimens of drawing and writing.—Address, F. S. Office of "The Builder."

TO ARCHITECTS.

AN ARCHITECTURAL COLOURIST of considerable experience, ENGAGES to COLOUR COMPETITION and OTHER DRAWINGS on reasonable terms. Perspective and other drawings put in outline. Lithographs, &c. &c. Drawings coloured, and transmitted to the country. Specimens produced.—Address, B. C. Mrs. Plummer's Library, Theobald's-road, Bedford-row.

A FIRST-RATE and expeditious PLAN DRAUGHTSMAN, ORNAMENTAL WRITER, and COLOURIST, is open to an ENGAGEMENT to make finished plans of town improvements, estates, railways, docks, mines, canals, roads, and progress of every kind. Has been employed by the most eminent engineers, architects, surveyors, and the Government for 18 years.—Apply by letter to R. THEODORE, 4, Trafalgar-square.

A YOUNG MAN, aged 20, from the country, who has had four years' practice at the carpentering and joinery trades in PLACE IS DESIRED IN SOME BUILDER for one or two years, for further INSTRUCTIONS. Can give the highest references.—Apply by letter to J. HURLEY, Beaumont Lodge, near Old Windsor, Berks.

AS CARPENTER.—WANTED, by the Advertiser, aged 40, a SITUATION, as CARPENTER and JOINER, on a gentleman's estate, or in any large establishment.—Can have sixteen years' unexceptionable character.—Address, post-paid, J. W. 5 a, Belvedere-road, Lambeth

PARTNERSHIP.—Capital required, about £2,000.—Any party having this amount at command, and who is either a good draughtsman, &c. or practical builder, may join the advertiser, carrying on business in the Midland counties, wherein a certain independence can be made. Testimonials as to character and general capabilities, will be required.—Address, by letter, to X. Y. H., Bolt-court, Fleet-street, London.

TO the ARCHITECTS of ENGLAND and SCOTLAND.—PARTNERSHIP.—A Married Gentleman, aged 30, who for 16 years has laboriously applied himself to the study of architecture in connection with eminent men and works, and has travelled much abroad, as well as all over England and Wales, and has acquired such facility for designs and rapid means of expressing them, by artistical and practical drawings, as never to have failed in success, is desirous of JOINING his SERVICES to an architect whose practice may be increasing, as to require a Partner to develope it. An enthusiastic admiration of his profession, with great application to the same, would be brought to bear on the services here offered. A library of architectural works, a large household of rich antique furniture, and a collection of photographs and pictures, would be brought to assist in retaining his position as that of a gentleman. Architects replying, to state terms and what works generally comprise their practice. Address, A. B. Z. Wade's Library, 13, High-street, Kensington.

THE PHOTOGRAPHIC SOCIETY'S THIRD ANNUAL EXHIBITION is NOW OPEN, at the Gallery of the Society of Painters in Water Colours, 5, Pall-mall East. Open at TEN. Admission, 1s. Evening, from SEVEN to TEN. Admission, 6d. The Exhibition will be closed at the end of the present month.

SPECIAL NOTICE.

KENT MUTUAL ASSURANCE SOCIETIES.

CHIEF OFFICE,

QUEEN-STREET-PLACE, NEW CANNON-STREET, LONDON.

The united annual incomes exceed 27,000l; and all Profits belong to the Assured.

LIFE.

The next division of Profits will include parties assuring before the 24th March next.

The new business of the last eight months exceeds 5,000l. in Annual Premiums.

FIRE

The Guarantee Fund is being increased to Half-a-Million.

The annual income, since last annual meeting, has increased beyond 5,000l.

GEORGE CUMMING, Manager.

N.B.—Agents are still wanted for some vacant localities.

SIXTH DIVISION OF PROFITS.

CLERICAL, MEDICAL, and GENERAL LIFE ASSURANCE SOCIETY, 99, Great Russell street, Bloomsbury, London.

SPECIAL NOTICE.

All persons who assure on the Participating Scale before June 30th, 1856, will be entitled to a Share of the SIXTH BONUS, which will be declared in the January following

Proposals should be forwarded to the office before June 1st next. The Thirty-first Annual Report just issued can be obtained of the Society's Agents, or of

GEO. H. PINCKARD, Resident Secretary.

SIXTH BONUS

UNION ASSURANCE SOCIETY.—(FIRE—LIFE—ANNUITIES).

Instituted in the reign of Queen Anne, A.D. 1714.

Cornhill, and 70, Baker street, London

Chairman—J. Remington Mills, esq

Deputy-Chairman—Henry Aldwin Soames, esq

James Bodley, esq.	John Paynter, esq.
Thomas Bodley, esq.	John Rogers, esq.
Daniell Britten, esq.	Henry Rutt, esq.
Nicholas Charrington, esq.	George Spencer Smith, esq.
S. Preston Child, esq.	Richd Hor-man Solly, esq.
William Gilpin, esq.	W. Foster White, esq.
Thomas Mills, esq. M.P.	Samuel Wilson, esq. Ald.
John Morley, esq.	Stephen Wilson, esq.

The LIFE BONUS of the year 1853, of four-fifths of the profits of the LIFE DEPARTMENT, has been just declared, and (with the exception of a reserve of nearly 50,000l. to accumulate towards the next Bonus of 1862), is payable upon and with the sum insured, being at the rate of 1l. 6s. per cent for the last seven years, on Policies effected in Great Britain upon the Profit System.

THIS BONUS MAY BE APPLIED EITHER

By having annual premiums reduced for the next seven years, which will in many cases extinguish the same for that period;

Or by adding the amount to the sum insured;

Or the value thereof may be received immediately in money.

The Directors beg to state that, by a recent change in the regulations of the Society, the assured realize the advantages of MUTUAL OFFICES by sharing the entire profits, less one fifth as a small compensation for the necessary guaranteed, and are free from the liabilities incurred by the members of such Societies.

The accumulated invested capital now amounts to upwards of ONE MILLION sterling

THOMAS LEWIS, } Joint Secretaries.
WM. B. LEWIS, }

THE PERMANENT WAY COMPANY, 26, Great George street, Westminster, have now published a Second Edition of their CIRCULAR, which may be had post free upon application. Among other recent important Inventions, the Company beg to call particular attention to Prosser's Patent for Casting Railway Chairs, Pole's Patent Improved Fish Joint, and Dr. Boucherie's improved Process for Preserving Sleepers, Fencing, Telegraph Posts, &c. from decay.—Every information may be had upon application to CHARLES MAY, F.R.S. the Manager; or to WILLIAM HOWDEN, Secretary.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY respectfully solicits the attention of buyers to the further reduction in the price of Yellow Deals, and the very low price of Pine and other Deals, &c. &c.:—

Yellow Deals, from	£21	0 per 120
Do. Battens	12	10 "
Spruce Deals, from	18	0 "
Pine Plank, 12 ft. 3 in. by 11, from	22	10 "
Mahogany in Planks and Boards	6d.	per foot super.

Prepared Flooring, &c. equally low. A list of prices forwarded on receipt of a postage stamp. Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

SEASONED FLOORING.—GEO. NOKES and CO. (late Archbutt and Atkinson), beg to acquaint builders and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash:—

½ inch White, 13s. 6d. per square.		½ inch Yellow, 15s. per square.	
¾ ditto	18s. "	¾ ditto	16s. 6d. "
1 ditto	23s. "	1 ditto	20s. "

Laths, 36s. per load.

Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.

ST. PANCRAS SAW MILLS, Cambridge-street, Old St. Pancras-road

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No. 18, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Sawmills. Goods in Bond for Exportation.

N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned, and ready for use, from ½-inch to 1½-inches thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses. Slating Battens, Pantile Laths, Oak Cills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico, and Sawmill, Planing, and Moulding Mills, King's-road, Chelsea.

OAK SASH-CILLS, QUARTERING, &c. ready cut out to sizes and lengths required, at the lowest price.

Address, E. SIMMS,

SAWING, PLANING, AND MOULDING MILLS, KING'S-ROAD, CHELSEA, AND WILTON-ROAD, PIMLICO.

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shop-fitters to his carefully selected MAHOGANY, suitable for Counter Tops, and to his seasoned Materials for builders, cabinet and blind makers, &c. Delivered, cartage free, to any of the London railway stations, or within three miles from Kennington Church.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

TO BUILDERS, CARPENTERS, &c.

SAMUEL CROWHURST, Jun. begs to call the attention of Builders, Cabinetmakers, &c. to his Stock of seasoned and well-assorted Timber Goods, Deals, and Mahogany, in Logs, Planks, Boards, &c. at prices which will be found equal if not less than any Licensed Country Builders supplied on the most liberal terms. Timber-yard, Hanover-street, Walworth; and Francis-street, Newington, near the Church

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

ACORN TIMBER WHARF and SAW MILLS,

CANAL BRIDGE, OLD KENT-ROAD, LONDON.

A Monthly Price Current forwarded on application.

RICHARD MAY, Proprietor.

STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NO SIZING, and will stand the exposure to the weather. Price 6s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 44, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

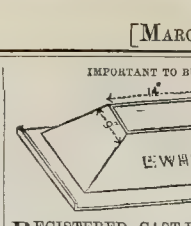
TO TIMBER MERCHANTS and OTHERS. The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of English Timber, &c. Spacious Dry and Drawing Docks, 30 and 10-ton Cranes. Sawpits for converting Timber, &c. Freights paid on delivery.—Apply to G. NOKES and Co. as above.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER CUTTING MILLS, Commercial-road, Lambeth. The proprietors beg to announce to the trade that they have completed their extensive arrangements, and will be happy to execute all orders intrusted to their care with despatch and punctuality.

N.B. All goods sawn at these mills fetched and delivered free of charge.

WINDOW BLINDS.—TYLOR & PAGE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 8d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 3s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application, post free.

IMPORTANT TO BUILDERS.



REGISTERED CAST-IRON CHIMNEY-HOPPER and CHIMNEY-BAR COMBINED, ensuring a perfect formation of the Flue, and rendering smoky chimneys impossible. One trial will cause their adoption in every building. Price from 8s. 6d. each, according to size.

IRON GIRDERS and COLUMNS to MODEL or DRAWING. IRON PIPES and connections for gas, water, and liquid manure.

RAIN-WATER PIPE and EAVE GUTTERS, at wholesale prices. Also, O-G Gutters, Sash-weights, STABLE FITTINGS, pumps, tomb railing, cattle and pig troughs, and COLUMNS with caps and bases, and every kind of builders' castings, in stock, at LYNCH WHITE'S from Wharf, Upper Ground-street, London, near Blackfriars-bridge.

H. DOULTON & CO'S. TERRA-COTTA CHIMNEY-TOPS

Will withstand the action of the Weather and Sea Breezes, and are

QUITE IMPERISHABLE.

Prices not much higher than Cement.

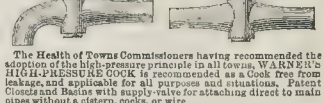
DOULTON & CO.'S TERRA-COTTA POTS, &c.

Erected in London upwards of 20 years since, are now as sharp and perfect as when first manufactured.

Drawings on application to H. DOULTON & CO. High-street, Lambeth.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.

These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

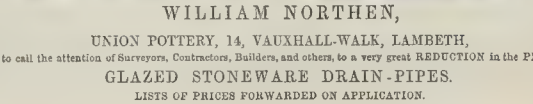
Brass and Iron Founders, Short-street, New-cut, Lambeth.

BRICK, POTTERY, and TILE-YARD TO BE LET, the Stock to be taken at a Valuation.—A desirable opportunity now offers to any person of small capital to take a large BRICK and POTTERY YARD, where any quantity of Bricks and Pipes can be made. The Yard is situated near the important town of Southampton, where there is a constant demand for Bricks, &c. The Clay is very superior, and coals are cheap.—Apply to CHARLES BAKER, Southampton.

TO BRICK-MAKERS, ENGINEERS, and OTHERS.—PATENT TO BE SOLD.—The exclusive right of making PERFORATED BRICKS by hand, with any shape, area, and number of holes, saving 20 per cent. in clay, drying, fuel, and cartage, with other advantages. No infringement on any other Patent.—For particulars apply to Messrs. AVERY, BELFORD, and CO. 32, Essex-street, Strand, London.

BRICK-MAKING by MACHINE.—Awarded the Gold Medal of Honour at the Paris Exhibition. CLAYTON'S PATENT BRICK-MAKING MACHINE, combining his recent improvements. In consequence of the numerous applications to see this machine at work since Tuesday last, H. CLAYTON has arranged to have another of them in operation for public view on Monday and Tuesday next, 10th and 11th March, at the Manufactory, Atlas Works, Upper Park-place, Dorset square, London.—HENRY CLAYTON, Patentee.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.



WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

TATHAM & CO.—No. 14, SOUTH WHARF, PADDINGTON,
BRICK, LIME, and CEMENT MERCHANTS,
SOUTHAM BLUE LIAS LIME DEPOT.

Bath, Portland, Lias, and Roman Cements; Parian and Keene's Cements, Plaster of Paris, Glazed Stoneware Sewage Pipes, Fire Goods, Vitrified Blue Bricks, White Building Bricks, White Enamelled Pans and Traps, and every description of Building Material.

N.B. Lump and Ground BLUE LIAS LIME delivered in boat-loads direct from the Works in Warwickshire, to any part of the river or canal.

SOUTHAM BLUE LIAS LIME DEPOT,
No. 14, SOUTH WHARF, PADDINGTON.

TATHAM & CO. have arranged for a constant supply of the above very superior BLUE LIAS LIME, which for the last two years has been extensively used at most of the large works constructed during that period or now in hand, and any orders they are favoured with will command their best attention.

Boatloads of either Lump or Ground Lime can be delivered direct from the Works in WARWICKSHIRE to any part of the Rivers Thames or Lee, alongside any wharf on canal, or by boat or rail to any part of the kingdom.

PORTLAND CEMENT.—TATHAM & CO. are enabled to offer a very superior quality of this valuable Cement at a moderate price, and all orders addressed to
No. 14, SOUTH WHARF, PADDINGTON,
will receive the best and most prompt attention.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 5, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL. Light and Dark, equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

NOTICE.—M. H. BLANCHARD, 74, Blackfriars-road, London, Manufacturer of PLASTER of PARIS of a superior quality, suitable for Sculpture, Architectural Embellishments, &c.—which will not twist, warp, or give after set, but will retain its hardness and strength.

Superfine, per ton	£7 0 0
Fine	6 0 0
Coarse	2 10 0

Delivered for Cash to any of the Metropolitan Railway Stations, or within the Metropolis.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

PORTLAND and ROMAN CEMENT, TERRA-COTTA POTS, &c.—J. M. BLASHFIELD begs to acquaint the Public that he has entirely CLOSED his Establishment on the Surrey side of the Thames, and that articles of his manufacture can only be obtained at his Works, Mill-wall, Poplar, or at his Warehouse, Pread-street, Paddington.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME.

The LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements, at reduced prices, the material being excavated in its pure and unadulterated state, from quarries on their own property. The Company particularly recommend a trial of their XXXX Bath Cement, as far superior to any article now in the market. These cements can be sent by rail or shipped from their wharf, direct to all parts.—Agents required, and a liberal discount allowed. Orders received by Mr. KIALLMARK, 80, Old Broad-street, City, or by RICHARD WINTER, Cement Works, Dunball, Bridgewater.

BATH CEMENT.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

PORTLAND CEMENT.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. with much pleasure announce to their Friends and the Public, that they have completed the enlargement of their works in order to meet the great increasing demand for their Cement; and are now prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes Cement is applicable.—Orders received at Great Scotland-yard, and at the Works.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.
11, George-yard, Lombard-street, City.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements (read at the Institute of Civil Engineers), to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

HUBBUCK'S PATENT WHITE ZINC PAINT,
The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc can be had for grinding in Oil; also for Plaster Decorations, and may be used with Size, Varnish, &c. Sold by the Wholesale Paint-dealers in Original Packages, each cask stamped—HUBBUCK LONDON PATENT. And when so marked, the quality is guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and 1 Seel street, Liverpool.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that it can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.

JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale Business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of the quality usually made at this works.—Applicd a either at Harwich or to the Agent, GEORGE MORRIS, 20, New Ormond street, Queen-square, London.

P.S. Inland London trade will in future be supplied from Messrs. ROBINS and CO. Scotland-yard, Westminster, instead of Whitefriars.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.

G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.
DAVIES and NORMAN, Agents.
Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.

GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

NOTICE.—BLUE LIAS LIME.—L. B. PEARSE and CO beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.

L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to insure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's-cross.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 20, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, generally to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.

GIBBS, CANNING, and CO.'S BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.
ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.
SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump lime boats at the Works—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants Builders, contractors, and others supplied with every description of building material at the lowest market prices.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non absorbent) STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and flare, bricks, fire-goods, &c. can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.:—Grey Stocks, 26s. per thousand; Grizzles, 29s. per thousand; Rough Stocks, 30s.; Place, 13s. to 15s. per thousand.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable to external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges)
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK PERFORATED BRICKS.—Messrs. J. EASTWOOD and SONS take this opportunity of informing their customers and the trade, that they have made arrangements for the Manufacture of White Suffolk Perforated Bricks. In curing defects common to bricks of this description, care has been bestowed to produce them of a true and perfect shape, of an even and beautiful surface, and free from fire-flaws.—J. EASTWOOD and SONS, Belvedere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS,
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Slippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 5, ADELAIDE-PLACE, London-bridge.

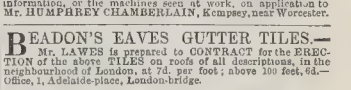
REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.

BRICK MOULDS (improved), Steel-face Stocks and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick Mill Work and Implements.—J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

THE PATENT BRICK-MACHINE COMPANY invite orders for their IMPROVED MACHINES, the only ones that manufacture solid bricks equal to hand-made, will shortly be at work in a field near London, accessible by railway, where it may now be seen with bricks of last season.
H. C. MOUNT, Secretary.
17, King William-street, City, February, 1856.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boy to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856. Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.



BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvefoft, near Rugby; or in London, Gloucester, or Bridgewater.

Price 6d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 91, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "Errors of the Times," page 581, of the Great Exhibition, rank the Manufactories known so long as "The Tilleries," Tunstall, Staffordshire, as the first of the kind in the world.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Baloonies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability, Slabs and Tiles for Fireplaces and Hearths, Covings for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

WARNER'S PATENT VIBRATING STANDARD PUMPS.

—PATENT CANTON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead, or gutta percha or cast iron flanged pipe, as required.	1 10 0
2½ „	long 3 3		1 14 0
3 „	ditto 3 6		2 8 0
3½ „	ditto 3 6		2 12 0
4 „	ditto 3 6		3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot-houses, forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 3s. per doz. painted.
Ditto .... 4s. per doz. galvanized

Upper Ground-street, Blackfriars Bridge, Surrey Side.

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels.

Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

PORTABLE STEAM-ENGINES and PUMPS

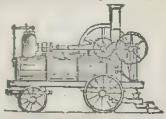
kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

PUMPING and WINDING ENGINE.—

TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medway and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 22, Blackfriars-road.

STEAM PUMPING ENGINES.—

PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.



Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, Southwark, London.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process of metal therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has hereto fore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, or weight, ready or in reels.

TUNED BY MACHINERY.

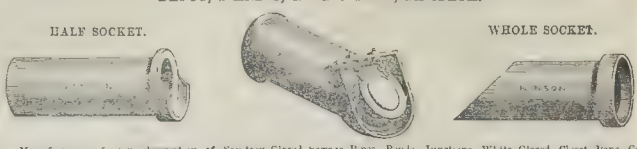
Stocked and unhelved ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system which gives superior tone and facility for ringing.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.



Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Fire-lime Blocks, Fire-Clay, &c.

The Fire-Bricks made from the Clays obtained here have been tested and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

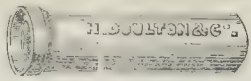
GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

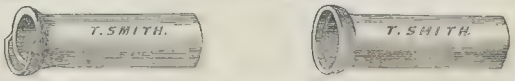
Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing,

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.

AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

Terra-cotta Chimney-pots of various patterns and sizes, also Red Earthenware Drain-pipes, at greatly reduced prices.

AYLESFORD POTTERY COMPANY'S PATENT DRAIN-PIPES.

The above Company respectfully invites the attention of Engineers, Architects, Surveyors, Builders, &c. to an improved Drain-Pipe, whereby all stoppages may be cleared without disturbing the invert of the drain, by simply removing the cover (marked A or B), whichever may be preferred.

Pipes thus constructed may be laid at intervals in a drain of ordinary socket-pipes.

With the great advantage these Pipes offer, they are *cheaper* than any yet submitted to the public.

London Depôt—AYLESFORD WHARF, Belvedere-road, Lambeth.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

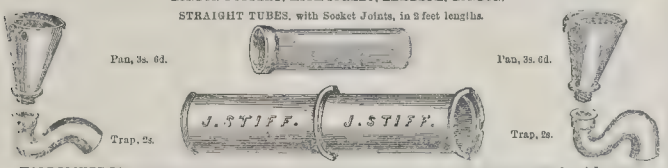
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

Drawings, with Prices, will be forwarded free, on application.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's park Basin.

Manchester Agent—Mr. TODD CARR, Arch 1, Birmingham-street, London-road Station.

Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.

Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

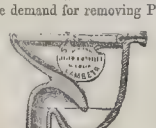
GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

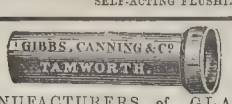
S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.



Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.



MANUFACTURERS of GLAZED STONEWARE PIPES, Bends, Junctions, &c.; also FIRE BRICKS, Vitrified Blue Bricks as used by her Majesty's Commissioners of Sewers, White Fire Clay, Facing Bricks, &c. &c. Agents, CHARLES RICHARDSON, No. 6, South Wharf, Paddington, London.

LYTCHETT POTTERY.—For SALE by PRIVATE CONTRACT, the LEASE and PLANT of the above Premises. The lease consists of about fourteen acres of land and a good cottage. The land contains a large quantity of very superior clay for pottery and fire-goods. The drain-pipes made from the clay are equal, if not superior, to any yet in the market; and the fire-goods will bear comparison with any yet made. The plant comprises three pottery kilns and two brick kilns, with pipe machines, pug-mills, and all other necessary appliances. Lytchett Pottery is 1½ miles from the South-Western Railway, and 3 miles from the port of Poole.—For further particulars, and to view, apply to H. F. FISHER, Blandford.

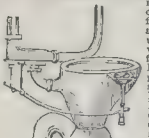
PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex, sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at				3d. per foot.	
4	"	"	"	4d.	"
6	"	"	"	6d.	"
9	"	"	"	9d.	"
12	"	"	"	1s. 3d.	"
15	"	"	"	2s. 6d.	

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in the perfect state in Rome, Babylon, Nineveh, &c. &c.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.



GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 80 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb 11, 1856

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram, fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

TO WATER-CLOSET MAKERS.

WANTED, for Workmen's Cottages, FIFTY CLOSETS of the simplest principle and strongest construction.—Full particulars, with prices, to be sent to Mr. WALTER SCOTT, Architect, Liverpool.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.—This ware, allowed by all to be of the best manufacture, by the unparalleled quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country, an extensive assortment of specimens and patterns comprising all is per foot super, together with every particular of its cost and adaptation, can be obtained of Mr. BURT, 2, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 30, New Bond-street.

SALES BY AUCTION.

TO LAND and BUILDING SOCIETIES and OTHERS.—Votes for the County of Kent.—Eligible Freehold Building Land, land-tax redeemed, near to the entrance-gates of the Royal Arsenal Woolwich.

MESSRS. CHURCH and SON are favoured with instructions to OFFER FOR SALE, by PUBLIC AUCTION, at the BROWN-HALL, William-street, Woolwich, on THURSDAY, MARCH 13, 1856, at THREE for FOUR o'clock in the afternoon, SEVENTY-SEVEN PLOTS of Valuable FREEHOLD BUILDING LAND, land-tax redeemed, most eligibly situated on the high-road, Plumstead, within five minutes' walk of the lower entrance-gates of the Royal Arsenal, and immediately adjoining the level crossing of the North-Kent Railway. This land offers advantages to large and small capitalists rarely to be met with. It forms part of the Goldie farm and orchard, is in a high state of cultivation, and is planted with luxuriant fruit-trees. Each lot will have a frontage on an excellent new road, which it is proposed to extend to Plumstead-common, with a direct communication from Plumstead-road, and I will entitle the purchaser to a vote for the county of Kent. Plans, with particulars and conditions of sale, may be had of Messrs. Wilson and Stevens, 18, London-street, Fenchurch-street; of H. J. Parker, Esq. 16, Austin-friars; at the Mart; and of Messrs. Bruton and Sons, 23, Gresham-street

ESSEX.

MESSRS. BEADEL and SONS are instructed to SELL by AUCTION, at the MART, on TUESDAY, MARCH 25, EIGHT brick-built and tiled COTTAGES, situate on Chadwell-heath, in close proximity to the high-road from London to Romford, let at rents amounting to 73l. 4s. per annum. The benefit of Interest rising from the House Sites and Premises, known as 1, High-street, Whitechapel, held from the Mercers' Company, at 2l. per annum, and let to a most respectable tenant at 80l. per annum; a Policy of Assurance in the Equitable Office, for the sum of 1,000l., effected in the year 1838, upon the life of a healthy aged party.—Particulars and conditions of sale may be obtained of Messrs. Wilson and Stevens, 18, London-street, Fenchurch-street; of H. J. Parker, Esq. 16, Austin-friars; at the Mart; and of Messrs. Bruton and Sons, 23, Gresham street

ESSEX land MIDDLESEX.—Paulatim Lodge, Dagenham.—Valuable Detached Enclosure of Arable Land, and Five Houses in the Baronga-wells road Clerkenwell.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, London, on TUESDAY, MARCH 25, at TWELVE, a very desirable VILLA RESIDENCE, known as Paulatim Lodge, with conservatories, excellent out-buildings, and tastefully laid-out grounds, together with a small pasture adjoining, pleasantly situate on Chadwell-heath, within three miles of the village of Dagenham, two miles from Romford, and three from Ilford, at both of which are stations on the Eastern Counties Railway; a valuable detached enclosure of productive Arable Land, known as Mill Field, containing 5a. 3r. 8p. in the occupation of Mr. Thomas Wane, at 14l. per annum; also, a desirable Leasehold Property, comprising five houses in Oldbarg-gardens, Baronga-wells-road, Clerkenwell, let to respectable tenants at rents amounting to 94l. 10s. per annum. Possession of the residence can be had upon completion of the purchase.—Particulars and conditions may be obtained of Messrs. Paterson and Brandbury, Solicitors, 18, Basinghall-street; at the Auction Mart; and of Messrs. Beadel and Sons, 23, Gresham-street.

Sixth Sale of the Surplus Property belonging to the North London Railway Company, with Votes for the County of Middlesex.

MESSRS. BEADEL and SONS have received instructions from the Directors of the above Company, to SELL by AUCTION, at the MART, on TUESDAY, MARCH 11, at TWO o'clock, in FIVE LOTS, the Valuable Portion of the valuable FREEHOLD SURPLUS PROPERTY adjoining the Railway, Camden-town, comprising several freehold Houses, let on rents amounting to 72l. per annum, and the valuable secured ground rents arising from houses in Brecknock-place, Great and Little Randolph-streets, Grange-street, and Frederick-place. Also Shepherd House, Homerton, and a plot of valuable leasehold building land at Dalston. Particulars may be obtained of Messrs. Tarry, Pearse, and Tarry, Solicitors, Gail-hall-yard, off Messrs. Kenyon and Bonnin, Norwich-road, Camden-town; at the Auction Mart; and of Messrs. Beadel and Sons, 23, Gresham street

Valuable Building Materials of Aberdeen Cottage, Balham, Surrey.

MESSRS. NORTON, HOGGART, and TRIST have received instructions from the Crystal Palace Railway Company to offer for SALE, on the PREMISES, on TUESDAY, MARCH 11, at TWELVE, in lots, with all the slightest reserve, the valuable BUILDING MATERIAL of a spacious residence, offices, &c. situate at Balham, within a few doors of Balham-hill Chapel, with walls and other fences; consisting of good sound timber, slated roofing, boarding, joists, joists, girders, glazed sashes, panelled doors, marble chimney-pieces, lead flats and cisterns, copper hips, ridges, pipes, pumps, and the whole of the valuable fixtures, and a variety of useful materials. A more detailed advertisement will appear early next week.—Catalogues are in preparation, and may shortly be had at the Plough, Clapham; Castle, Tooting; Spread Eagle, Wandsworth; on the Premises; and of Messrs. Norton, Hoggart, and Trist, 69, Old Broad street, Royal Exchange.

PAPER HANGINGS AND CHIMNEY-PIECES.

MR. EDWIN WHITE will SELL by AUCTION unreservedly, at the PUBLIC SALE ROOMS, 276, Bishopsgate-street-without, on WEDNESDAY next, MARCH 12th, at TWELVE for ONE o'clock precisely, seven thousand pieces of French and English PAPER-HANGINGS, consisting of flocks, satins, flatbacks, and others. In some of the most elaborate, artistic, and fanciful designs ever executed; and a number of excellent marble and stone chimney-pieces. View, day prior and morning of sale. Catalogues may be had

TO BUILDERS and OTHERS.—Large quantity of Building Materials for unreserved Sale.

MR. PETER BROAD will SELL by AUCTION, on the PREMISES, at the rear of the Royal Hotel, Shepherd's Bush, on FRIDAY, the 14th day of MARCH, 1856, at TWO o'clock precisely, the remaining STOCK of a BUILDER, including deal and elm boards, frommongery, joiners' benches, a mortising-machine, slate-cutting machine, various tools, large quantity of papier maché ornaments, glass, old lead, scrap iron, short timber, firewood, &c. &c.—On view day prior; catalogues on the Premises; and of the Auctioneer, 29, Poultry

BRIXTON-HILL. Contractors, Plant and Effects, at the Extensive Premises of the Lambeth Waterworks.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors of the late Mr. Nesham to SELL by AUCTION, on the PREMISES of the LAMBETH WATERWORKS, Brixton-hill, on WEDNESDAY, MARCH 19th, at TEN for ELEVEN, in consequence of the completion of the contract, the valuable PLANT and EFFECTS, comprising about 3,500 9-inch bricks, 3,000 feet of bank timber, 25 navvie barrows, 5 wheeling planks, 400 scaffold boards, poles, and putlogs, seven pile-driving engines and monkeys, sundry mills, ladders, screens, brick and dobbin carts, a large quantity of centres, ribs, quartering, firewood, and other effects. May be viewed two days previous, and catalogues had on the Premises; also at the George the Fourth; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

SOUTHALL.—Bricks and Brickmaking Plant.

MESSRS. EVERSFIELD and HORNE beg to announce that they will SELL by AUCTION, at Mr. PEARSE'S BRICKFIELD, near the Station, Southall, on TUESDAY, MARCH 11th, at TWO, about 1,000,000 BRICKS; comprising stocks, place, grizzles, and malm pickings and pantors; also, the plant and implements; 30 ton boat, and other effects.—May be viewed and catalogues had on the Premises; also of T. D. Keighley, Esq. Solicitor, 7, Basinghall street, and of the Auctioneers, 40, Parliament-street, or Coal-Exchange. Trains leave Paddington at 11 30, and 1 30.

SALES BY AUCTION.

EDGEWARE-ROAD. The Stock of a Timber Dealer

MR. LEREW is directed to SELL by AUCTION, on the PREMISES No. 137, Edgeware-road, on MONDAY, MARCH 24th, at TWELVE for ONE, without reserve, 600 yellow pine and white planks, deals, and battens; 1,000 feet of well-seasoned mahogany, dry cut stuff, quartering, prepared floor boards, baths, doors, counting-house fittings, two trucks, &c.—Auction Offices, Cardington-street, Hampstead-road, near the Euston Station.

TO BUILDERS and OTHERS.—Extensive Sale of Timber, Slate, Fittings, &c. Westminster

MR. F. HALL has been favoured with instructions to SELL by AUCTION, on the PREMISES, on THURSDAY, MARCH 13, at TWELVE for ONE, the essential portion of the valuable MATERIALS of Her Majesty's Stationery Offices, Great James-street, Westminster; comprising massive timbers of scantlings, the joists of which are well seasoned, internal and external doors; forty pairs of sashes and frames; clean flooring boards and battens; register and other stoves; wainscoting and partitions; frames, principals, and trusses; girders, stone-paving steps, and landings; a large quantity of excellent brickwood, and various other useful materials and fixtures. May be viewed, and catalogues had on the Premises; and at the Auctioneer's Offices, Chester-street, Kennington.

IN BANKRUPTCY WITHOUT RESERVE TO TIMBER MERCHANTS, SHIP-BUILDERS, BUILDERS, CARPENTERS, &c. &c.

MR. FREEMAN is instructed by the assignee of Messrs. Pearson and Steel (bankrupts), to SELL by AUCTION, on the PREMISES, Norway Wharf, Millwall, Poplar, on TUESDAY, MARCH 11th, at ELEVEN o'clock precisely, all the extensive and valuable STOCK-IN-TRADE, comprising every variety of British and foreign timbers, planks, and cut stuff, Norway and other spruce and pine logs, yellow pine and white spruce deals, boards, battens, battens prepared yellow and white flooring boards, Baltic lath-wood, laths, &c. &c.; also a four wheel phaeton, timber carts, carriages, and other trade implements, cutting-house fittings, &c. &c.—May be viewed two days previous to, and morning of sale, and catalogues had on the Premises, and of the Auctioneer, 3, Crooked-lane, London-bridge.

FREEHOLD GROUND for Building on.—TO BE LET, upon BUILDING LEASES, PLOTS of GROUND, in that healthy locality, Holloway, two or three minutes' walk from the Archway Tavern. Omnibuses every four or five minutes to all parts of London. Situate in St. John's road, where houses let as fast as built.—For particulars, apply to Mr. H. WITHERS, 9, Poultry; or Mr. WILLS, 2, Esplanade, Ealing. The leases direct from the freeholder.

LAND TO BE LET, on Building Leases for 100 years, at the Kilburn-park Estate, Paddington, for the erection of upwards of eighty semi-detached moderate and compact villa residences. Advances of money to parties of respectability if required.—Apply to Mr. J. BLORE, Architect and Surveyor, 8, Michael's-place, Brompton.

FREEHOLD GROUND, Fetter-lane.—The Commissioners of Sewers for the City of London hereby give Notice that they will meet in the GUILDHALL of the said City, on TUESDAY, the 22nd day of APRIL next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking on BUILDING LEASE for eighty years, certain PLOTS of GROUND, situate at the south-east end of Fetter-lane. Further particulars may be had, and a plan seen, on application to Mr. HAWKSLEY, Engineer to the Commissioners at their Offices in the Guildhall. The Commissioners will not be required to accept any proposal unless they shall approve the plan and elevation of the Premises proposed to be built to be submitted to them for approval; and do not bind themselves to accept any proposal unless they shall approve thereof. JOSEPH DAW.

Sewers-office, Guildhall, March 4th, 1856.

SUPERIOR BUILDING LAND TO LET, near Carlton-hill, St. John's Wood, and Kilburn-gate; 110 feet above the Thames: commanding views of Hampstead and Richmond; adapted for detached and semi-detached villas of 60l. to 100l. yearly rental. Leasehold for ninety-five years. Rent, 5s. per foot frontage; average depth, 95 feet.—Address, Mr. BALL, 44, Regent-street, Piccadilly.

STRATFORD, ESSEX.—FREEHOLD LAND within three miles of London, exceptionally free land tax, and free of tithe, TO BE LET on lease for a long term of years, in large or small pieces, suitable for manufactories or building purposes. Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury square, London.

TO BUILDERS

STOKE, next GUILDFORD.—Parties desirous of TENDERING for the ERECTION of SCHOOLS and MASTER'S RESIDENCE, for the above parish, can inspect the plans and specification, and obtain bills of quantities upon the usual terms, at my Office, Guildford, on and after MONDAY, the 10th instant, where said Tenders will be received up to FIVE o'clock, on THURSDAY, the 20th instant. The Committee to act and themselves to accept the lowest or any Tender.

March, 1856. THOS. GOODCHILD, Architect.

TO WHARFINGERS, COAL-MERCHANTS, and OTHERS requiring WATERSIDE PREMISES.—TO BE LET, BEAUFORT WHARF, Carting-lane, Strand. There is water way for craft of large burden, and premises for twenty horses, with roomy lofts, and other out-buildings. There is also a neat dwelling-house and counting-house.—Inquire of Mr. PRESTON, Jun. 10, Wych-street, Drury-lane.

BUILDING LAND TO BE LET, at

HALLSVILLE	Term	1,000 years,	for small cottages.
CANNING TOWN	"	1,000	" for small cottages.
NORWOOD	"	1,000	" for villa residences
STRATFORD	"	100	" for small cottages.
POPLAR	"	98	" for four-rate houses.

Advances 70l. to 100l. at 5 per cent. on each cottage.
Apply to Mr. Wm. ELLISON, Architect, Stainsby-road, Poplar.

Guildhall, London, 28th February, 1856.

THE COMMITTEE for LETTING the BRIDGE-HOUSE ESTATES will meet at Guildhall on FRIDAY, the 14th day of MARCH next, at ONE o'clock precisely, to receive TENDERS for a BUILDING LEASE for Eighty Years of a Plot of Ground on the west side of Old Change, in the City of London. A plan of the ground and conditions for letting may be seen at the Architect's Office, Guildhall.

FERDINAND BRAND, Comptroller.

TO BUILDERS and OTHERS. — An excellent SITE TO BE LET or SOLD, for BUILDING PURPOSES, with a good frontage to Kingsland-road, in a thoroughfare, and in an established neighbourhood, well adapted for shops and dwelling-houses, and workshops. The materials of the present detached premises, if sound, are adapted for any new buildings that may be approved. Money will be advanced if required by the purchaser, or taken to carry out the undertaking, upon a satisfactory arrangement.—Inquire of Messrs. HOWARD and DOLLMAN, Solicitors, 141, Fenchurch-street; Mr. EDWARD LOWTHER, 28, Red Lion-street, Clerkenwell; or of Mr. MURRELL, Auctioneer, 1, Walbrook, City.

TO BUILDERS and OTHERS.—TO BE LET, a most eligible PLOT of FREEHOLD LAND, land-tax redeemed, near Clapham-park, on most advantageous terms, sufficient for about forty-two houses, suitable for fourth-rate houses and shops, with a good corner for a public-house; or the Freehold to be Sold.—For particulars, apply to R. G. care of Mr. Doyle, 4, Maze-pond, Borough.

HARROW.—FREEHOLD LAND.—TO BE SOLD, 100 ACRES, in a ring fence, and several other eligible plots of FREEHOLD LAND, at a moderate price, contiguous to the Harrow Railway Station, surrounded and intersected by capital roads. Residents are entitled to the privileges of the Harrow School, and the London and North-Western Railway Company offer to persons building houses of approved character, worth 25l. per year each, a free first-class pass to and from Harrow station and Euston square, for eleven years. There is an abundant supply of excellent water, and very superior beer is sold on the land.—Apply to WILLIAM B. COOPER, Esq. Solicitor, 8, Vernham buildings, Gray's-inn

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the finest sites for building purposes in the neighbourhood, and a villa on it will meet a ready demand, on account of the situation being lofty, dry, well drained, and exceedingly healthy. Assistance will be afforded to responsible parties. For further particulars, apply to Messrs. J. and C. W. Todd, Milner-street, Brompton, Land Surveyors, Lee, Kent; or Messrs. NELSON and INNES, 5, Whitehall.

ALDERSHOTT CAMP.—PLOTS of LAND TO LET on Building Leases, commanding good frontages and admirable sites, for the permanent barracks now erecting, and near the Queen's pavilion. For particulars apply to Mr. THOMAS WHITE, Jun. near the Alliance Hotel, and opposite the permanent barracks, Aldershott, Hants.

NEW BOND-STREET.—TO BE LET on LEASE, CAPITAL PREMISES, 60 feet deep, in perfect repair, suitable for a Public Institution, Club, Bank, &c. containing elegant suites of rooms on the ground and first floors, and cellarage, with area above.—Apply to Messrs. RUSHWORTH and JARVIS, Auctioneers, Saville row, Regent-street; and 19, Change-alley, Cornhill.

FOUNDLING HOSPITAL.—The Committee of Governors will meet at the Hospital on SATURDAY, the 15th instant, at TEN o'clock, to receive PROPOSALS for a LEASE of PREMISES in Sugar-loaf-court, Gartlick-hill, Upper Thames-street. Plans of the property may be seen, and further particulars obtained, at Mr HENRY CURREY'S Office No. 4, Lancaster-place, Strand.—By order of the Committee,

March, 1856. J. BROWNLOW, Secretary.

FREEHOLD SITE, fit for a PUBLIC BUILDING, about eight miles from London, on the road to Kingston, near two railways. A most healthy spot, with finest views, to secure its extent, with frontage of nearly 1,100 feet. Apply to Mr. ASHPITEL, 5, Crown-court, Old Broad-street, City.

TO BUILDERS and OTHERS. — Some CARCASSES, at HAMMERSMITH, TO BE SOLD, very cheap. A portion of the money for finishing may be had if required. Apply at S. W. JOHNSON'S, Esq. 8, Gray's-inn-square.

TO BE LET, a PLOT of GROUND, averaging about 37 feet by 54 feet, at the rear of Nos 32, 33, and 34, Marker-street, Borough-road, Surrey, suitable for the erection of builders' workshops thereon, or for other purposes.—For particulars apply to Messrs. WILLSHIRE and PARRIS, Architects and Surveyors, 4, Newcastle-place, Lambeth.

WATERSIDE PREMISES, Chancellor-wharf, near the Suggenson-bridge, Hammersmith. TO BE LET, or LEASE TO BE DISPOSED OF.—For terms, apply on the Premises

FREEHOLD LAND TO LET, on Building Leases. The Rev. WILLIAM FORD and Mr. HENRY WEBBER, executors of Richard Barford, Esq. late of Tollington-park, have to offer two valuable PLOTS of FREEHOLD LAND, for building purposes, for a long term of years, in Barford-street, Liverpool-road, Islington. The land-tax is redeemed, and the sewer is made.—For particulars, apply to Mr. HENRY WEBBER, Timber Merchant, 31, Old-street, St. Luke's

FREEHOLD LAND, SHEPHERD'S-BUSH.—TO BE LET, or SOLD, by Private Contract, about THIRTY-SIX ACRES of valuable FREEHOLD BUILDING LAND, land-tax redeemed; most desirably situate, three miles from Hyde-park.—Plans and terms of Mr PETER BROAD, 29, Poultry.

TO BUILDERS, CARPENTERS, AND OTHERS.

TO BE SOLD, the GOODWILL of an old-established BUILDER'S BUSINESS, a few miles from town. The stock may be taken at a valuation. The premises comprise convenient eight-roomed house, yard and workshops, &c. On the most reasonable and liberal terms. Bond fide only. For further particulars and terms, apply to Mr. W. R. GLASIER, Auctioneer, &c. 41, Charing-cross.

PAPER-HANGINGS.—TO BUILDERS, PAINTERS, and the TRADE generally.—THUMBLE and CO Manufacturers, Leeds, beg to call the attention of the trade to their immense STOCK of PAPER-HANGINGS, at No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Bustles, Granites, and Machine Goods. The whole being their own manufacture, can supply on the very best terms.

PAPER-HANGINGS. — JEFFREY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their Patent Flock Paper, as it is the most effective, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls.—Factory, 115, Whitechapel; Show-room, 509, Oxford-street.

TO BUILDERS AND OTHERS.

CHEAP PAPER-HANGINGS. — Builders and Contractors having a quantity of Paper-hanging and Painting to do, are requested to find it advantageous to them, by applying to J. BALDWIN, as he would have no objection in taking house property in payment for the same.—J. BALDWIN and SON, House Painters and Decorators, 72, St. John-street, Clerkenwell.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 29, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is GROSS'S WHOLESALE WAREHOUSE, 24, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX, Brothers & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, March 8, 1856.

The Builder,

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Architect, Engineer, Operative & Artist.

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ROYAL INSTITUTE of BRITISH ARCHITECTS

Incorporated 7th William IV.

16, Grosvenor-street, Grosvenor square, London, Feb. 1856.

Her Majesty having been pleased to grant her gracious permission that the ROYAL MEDAL be conferred on such distinguished architect or man of Science, of any country, as may have designed or executed any building of high merit, or produced a work tending to promote or facilitate the knowledge of Architecture, or the various branches of Science connected therewith, the Council of this Institute will, on 13th January, 1857, to take into consideration the appropriation of the Royal Medal.

Gentlemen desirous to compete for the SILVER MEDALS of the Institute, and the SOANE MEDALIONS, with its travelling fund, to be awarded for Essays, Illustrations, and Designs, may obtain the necessary information on application to the Honorary Secretaries, by letter, prepaid, at the above address.

ROYAL ACADEMY of ARTS, Trafalgar-square.

NOTICE to ARTISTS.—All Works of Painting, Sculpture, Architecture, or Engraving, intended for the ensuing EXHIBITION at the ROYAL ACADEMY, must be sent in on MONDAY, the 7th, or TUESDAY, the 8th of APRIL next, after which time no Work can possibly be received, nor can any Work be received which have already been publicly exhibited.

FRAMES.—All Pictures and Drawings must be in gilt frames. Oil Paintings under glass, and Drawings with wide margins are indispensable. Excessive breadth in frames as well as projecting mouldings may prevent Pictures obtaining the situation they otherwise merit. The other regulations necessary to be observed may be obtained at the Royal Academy.

JOHN PRESCOTT KNIGHT, R.A. Sec.

Every possible care will be taken of Works sent for exhibition, but the Royal Academy will not hold itself accountable in any case of injury or loss, nor can it undertake to pay the carriage of any package.

The prices of Works to be disposed of may be communicated to the Secretary.

BOARD of TRADE DEPARTMENT of SCIENCE and ART.—INSTRUCTION in ART.

TRAINING SCHOOL, MARLBOROUGH HOUSE, PALL-MALL, LONDON.

Art-Superintendent—RICHARD REDGRAVE, Esq. R.A.

Head-Master—R. BURCHETT, Esq.

The Courses of Instruction pursued in the School have for their object the systematic training of teachers, male and female, in the practice of art and in the knowledge of its scientific principles, with the view of qualifying them to impart to others a careful Art-education, to develope its relation to the requirements of trade and manufacture, and its application to the common uses of life. Special courses are arranged in order to qualify School-masters of Parochial and other Schools to teach Elementary Drawing as a part of General Education encurrently with Writing.

The Instruction comprehends the following subjects:—Free-hand, Architectural, and Mechanical Drawing, Practical Geometry and Perspective, Painting in Oil, Tempera and Water Colours, Modelling, Moulding, and Casting. The Classes for Drawing, Painting, and Modelling include Architectural and other Ornament, Flowers, objects of Still-life, &c., the Figure from the Antique and the Life, and the study of Anatomy as applicable to Art. Also, Classes for instruction in the technical processes of China and Enamel Painting, Drawing and Engraving on Wood, and Lithography in Chalk and Colour. The two last classes for female students only.

Hours of Study—Morning, TEN to THREE; Evening, SEVEN to NINE, daily, except Saturdays. Fees 4l. per session, or part of the session. For Evening Classes only, 2l. per session.

The Class for Practical Geometry and Perspective, or that for Moulding and Casting, may be attended separately on payment of a fee of 1l. per session.

Students have full access to the valuable collections of the museum and library, either for consultation or copying, as well as to all the public lectures of the Department.

The school for female students not in training, is at 37, Gower-street, Bedford-square. Superintendent, Mrs. M'Ian. Fees for Session,—Advanced Class, 2l. and 4l.; Elementary Class, 1l. Evening Class, 10s.

Other information may be obtained on application at the Office of the Head Master, Marlborough House, Pall-mall, London.

COMPETITIONS.

TO ARCHITECTS.

MIDDLESEX INDUSTRIAL SCHOOL.—The Committee of Visitors appointed under an Act of the 17th and 18th Vict. cap. clxxix. to provide an Industrial School for the Juvenile Offenders of the County of Middlesex, invite Architects and Others, by PUBLIC COMPETITION, to furnish PLANS and ESTIMATES for such building, to be forwarded, sealed up, and addressed to the Chairman of the said Committee, at the Sessions-House, Clerkenwell, on or before SATURDAY, the 26th day of APRIL, 1856. Each set of plans is to be marked with a motto or device, and the name of the author is not to appear, but to be put in a separate sealed letter, bearing on the outside a corresponding motto or device. A premium of 150l. will be paid for the plan which shall be considered the best, 100l. for the next, and 75l. for the third.—Particulars as to the site, with a printed copy of instructions, and the conditions on which the premiums are offered, may be had upon application to me, at the Sessions House, any day between the hours of ELEVEN and FIVE o'clock.—Dated this 8th March, 1856

CHARLES WRIGHT, Clerk to the Visitors

GRANTHAM BURIAL BOARD.—EXTENSION of TIME for PLANS, &c.—The period for sending in Plans for Chapels, Lodge, and Entrance Gates, is EXTENDED to SATURDAY, 22nd MARCH. Plans are also requested for PLANTING the GROUND and LAYING OUT the ROADS and WALKS therein, two thirds as consecrated, one-third unconsecrated, to be sent in by the same time, for which an additional premium of 5l. is offered. The ground is an oblong square of 220 yards by 131 yards. Entrance west.—By order of the Board,

ROBT. HY. JOHNSTON, Clerk.

Grantham, February 20th, 1856.

GARSTON, near LIVERPOOL.—To ENGINEERS, SURVEYORS, &c.—The Survey for the District of Garston, to which the Public Health Act, 1848, is applied, being now ready, the Local Board of Health for that district are desirous of obtaining PLANS, SPECIFICATIONS, and ESTIMATES, for a system of SEWERAGE for effectually draining the district. Premiums of 70l. and 30l. respectively will be given to the Authors of the Two Plans, &c. &c. most approved of, which Plans, &c. &c. will become the property of the Board. The specification must contain all information regarding materials, expense &c. necessary to practically working of the drainage, and must include, so far as practicable, a scheme for preserving the sewage matter for agricultural or other purposes. Mr. HOPKINS'S Plans of the Parish, on the scale prescribed by the General Board of Health, are in the custody of the Surveyor, Mr. JAMES STANNING, and may be inspected at his house, Mount-pleasant, Aisburth, on application to him. Full information as to the required copies of the general plan, on a scale of two feet to a mile, may be had from the Surveyor. Architects' or contractors will be allowed to be taken from the original plans. Four plans, at least, from as many different bona fide competitors, must be sent in, otherwise the premiums will not be awarded.—The plans, specifications, &c. signed with a motto or device, and accompanied by a letter marked with a similar motto or device, enclosing the name and address of the Author, must be sent (carriage free) to the Office of Mr. J. B. LLOYD, Solicitor, 8, Exchange-alley, Liverpool, on or before the 15th day of MAY next

Dated the 5th day of March, 1856.

TO ARCHITECTS, BUILDERS, and OTHERS.—PREMIUM of 20l. for PLANS of OFFICES. The Directors of the Manchester, Sheffield, and Lincolnshire Railway Company offer a PREMIUM of 20l. for the best PLANS and SPECIFICATIONS for a STACK of OFFICES, to be erected near their docks, at Great Grimsby. The proposed site has a frontage of 100 feet to the Cleethorpes-road, and a depth of 120 feet. The offices are intended to be let, in suites of two or more rooms, to separate firms; and the object in view being to secure economic and convenient accommodation by THE MOST ECONOMICAL EXPENDITURE OF CAPITAL, the Directors will give a preference to the plans which best answer this object. The plans and specifications must be forwarded, under sealed covers, marked "Plans for Offices," to the undersigned, on or before the 7th APRIL next.—Any further information may be obtained, on application to ADAM SMITH, Esq. C.E. Great Grimsby.—By order,

EDWARD ROSS, Secretary.

Manchester, March 11, 1856.

THE BURIAL BOARD of the PARISH of BITCHIN, in the county of Hertford, are desirous of receiving PLANS, DESIGNS, and ESTIMATES, comprising ground-plans, sections, and elevations, for laying out, planting, and fencing a new BURIAL GROUND, with suitable entrance-gates to each end, and for building Two Chapels and a Lodge. The ground is nearly square and level, and contains five acres. The chapels it is proposed to have in the centre, and in one building: the area of the nave of each chapel to be 24 feet by 17 feet, and the chapels to be separated by a wall. The cost of the chapels and cottage not to exceed 1500l. The party whose plans are approved, and with the approval of the Board, to land the ground at 5l. the superintendence of the works. The plans and estimates must be delivered, free of expense, at the Office of the Clerk to the Board, situate at Hitchin aforesaid, on or before the 7th day of April next. Each plan is to be distinguished by a motto and a sealed letter similarly enclosed, containing the author's name and address, to be sent therewith. The Plans to be so delivered themselves to accept any plan, and all those not approved will be returned upon application. CHARLES TIMES, Clerk to the Board.

Hitchin, 14th March, 1856.

CONTRACTS.

TO BUILDERS.

TENDERS WANTED for the BUILDING of TEN HOUSES in Hart's-buildings, Bridge-street, Warrington, on the premises lately occupied by Mr. Joseph Chrimes. Cooper, and Mr. Thomas Leadbetter, Brewer. Plans and specifications to be seen at Mr. JOHN PIERPOINT'S, 27, Horse Market-street, Warrington, and Tenders to be sent, free of expense, to THEOPHILUS TUNSTALL, 27, Rederos-st eet, Liverpool, on or before 20th MARCH.—T. T. will not be bound to accept of the lowest Tender.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives notice that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall-mall, on or before the 20th MARCH next, for the REPAIR of FIRE-PLACES, BUCKETS, and for executing the WORKS and REPAIRS of the Royal Engineer Department in the London District, viz.: LONDON, WINDSOR, CROYDON and CARSHALTON, HOUNSLOW and HAMPTON-COURT; for a period of three years from the 1st of APRIL, 1856, to the 31st MARCH, 1859. Printed schedules and forms of TENDER may be obtained at the Royal Engineers' Office, 11, James street, Pimlico, between the hours of TEN and THREE o'clock from the 1st to the 19th MARCH inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineers' Office, London District,
February 27, 1856.

TO BUILDERS.

PERSONS desirous of TENDERING for ADDITIONS and ALTERATIONS to the FARMHOUSE in the occupation of Mr. W. PARSONS: and new FARM BUILDINGS, at Elsfield, near Oxford, on the estate of Colonel North, M.P., may see the plans and specifications at Mr. W. PARSONS's, Elsfield. The Tenders are to be delivered at the Office of Mr. J. F. CLARK, Architect, Newmarket, on or before SATURDAY, the 22nd day of MARCH; and the lowest or any Tender will not necessarily be accepted.

TO GENERAL CONTRACTORS.

NORTH-COATS INCLOSURE, LINCOLNSHIRE. CONTRACT, No. 1.—The Valuer acting in the matter of the Inclosure of the Fifties or Outmarsh, at North-Coats, in the County of Lincoln, is desirous of receiving TENDERS for the ERECTION of the following WORKS, viz.:—For the FORMATION of about two miles in length of NEW SEA BANK, the EXCAVATION of about three quarters of a mile in length of NEW DRAIN, and the ERECTION of a NEW SEA SLUICE, of brick and stone, with land and sea doors, and all necessary piling and timber breastwork thereto. Plans and specifications of the said works have been prepared by Messrs. MAUGHAN and FOWLER, Architects and Surveyors, Louth, and may be inspected by Contractors, from the 17th to the 22nd day of MARCH, 1856, at their Offices, where all necessary information may be obtained.—Tenders for the whole of the works are to be delivered to them, before TWELVE o'clock on WEDNESDAY, the 26th day of MARCH, 1856, endorsed "Tender for North Coats Sea Work," and addressed to me.

CHARLES NORTH, Valuer.

South Moreby, March 5, 1856.

A good security will be required, and the Valuer will not be required to accept the lowest or any Tender submitted.

SURVEY of TIPTON PARISH.—The Tipton Local Board of Health are prepared to receive TENDERS for the SURVEY and LEVELS of the Parish, the whole of the work to be done in conformity with the requirements of the General Board of Health in London. Conditions may be seen at the Board's Offices, Church-lane, Tipton, on MONDAYS, WEDNESDAYS, and FRIDAYS, between the hours of NINE and ELEVEN a.m. No Tender will be received after MONDAY, the 24th day of MARCH, 1856. The Board do not bind themselves to accept the lowest or any Tender.

GEO. M. WARING, Clerk.

Church-lane, Tipton, Feb. 29, 1856.

SKIRWITH CHURCH.—To BUILDERS. Such persons as may be desirous of TENDERING for the ERECTION of the NEW CHURCH and PARSONAGE HOUSE, at Skirwith, near Penrith, in the county of Cumberland, are informed that the drawings and specifications may be seen at Skirwith Abbey, on application to the Rev. C. PARKER. Bills of quantities and forms of Tender will be furnished to Builders by the Architects, Messrs. FRANCIS, 38, Upper Bedford-place, Russell-square, London, who will also give any further information. The Trustees will not be bound to accept the lowest Tender, and no estimate will be received except up in the Printed Tender supplied by the Architects.—Tenders to be sent in, enclosed "Tender for Works, Skirwith Church, &c." and addressed to Messrs. FRANCIS, 38, Upper Bedford-place, Russell-square, London, on or before SATURDAY, the 29th of MARCH inst.

BOARD of WORKS, POPLAR DISTRICT. The STONE MERCHANTS, MASONS, SCAVENGERS, CARMEN, and OTHERS. The Board of Works for the above district will meet at the Town hall, Poplar, on TUESDAY, the 18th of MARCH instant, at SIX o'clock in the evening precisely, to receive TENDERS, and to CONTRACT.

FIRST.—For the Supply of Aberdeen, Haytor, or Guernsey Granite, Edge-Splayed Kerb, Granite Pitchers dressed for channels and for crossings, for Wooden York, and Broken Stone for Metal.

SECONDLY.—For Masons' Work.

THIRDLY.—For the Supply of Gravel and Flints.

FOURTHLY.—For Horses and Cart Hire.

FIFTHLY.—For the Collection of Dust, Ashes, Rubbish, &c. &c.

The several Contracts are to commence at Lady-day next, and to terminate at Lady-day, 1857. The Contractors will be required to furnish the names of two responsible persons who will be required to enter into bond with them, in the sum of 300l. for the due performance of their Contract, and to pay four per cent. on 5l. on the acceptance of their Tender, for the expense of Contract and bond to be prepared by the said Board. The Board do not bind themselves to accept the lowest or any Tender, and the parties Tendering will be required to be in attendance. Tenders must be delivered (sealed up) upon the forms prepared for that purpose (and none other will be received), on or before the 18th instant, at TWELVE o'clock, after which none will be received.—Further particulars and forms of Tenders can be had on application at the Town hall, Poplar, any day between the hours of TEN, a.m. and FOUR, p.m.

CHARLES C. CEELY, Clerk to the Board.

Town-hall, Poplar, March 7, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

NEWPORT DOCKS.—NOTICE to CONTRACTORS.—The Directors of the Newport Dock Company are desirous of receiving TENDERS for the EXECUTION of the following WORKS:—An EXTENSION of the existing DOCK, ALTERATIONS and ADDITIONS to the present LOCK and ENTRANCE, and the CONSTRUCTION of an AQUEDUCT from the river Ebbw. The plans, sections, specifications, and conditions of the above-named works, and others connected with them, may be seen at the office of JAMES ABERNETHY, Esq., 3, Parliament-street, Westminster, Engineer to the Company, and at the Dock Office, Newport, Monmouthshire, on and after MONDAY, the 10th inst. of whom forms of Tender may be obtained. Sealed Tenders, addressed to the Secretary to the Newport Dock Company, Dock Office, Newport, Monmouthshire, to be sent in or delivered on WEDNESDAY, the 2d of APRIL next.

HENRY R. FORTE, Secretary.

Dock Office, Newport, Monmouthshire, 6th March, 1856.

THE BOARD of WORKS for the LIME-HOUSE DISTRICT: comprising the Parish of St. Anne, Limehouse, the Hamlet of Ratcliff, and the Parishes of St. Paul, Shadwell, and St. John, Wapping, Middlesex—TO PAVIORS and MASONS.—Notice is hereby given, that the Committee for Paving, Lighting, &c. will meet at the Offices of the Board, White Horse-street, Commercial-road East, on MONDAY, the 31st MARCH, 1856, at THREE o'clock in the afternoon, to receive TENDERS from persons willing to CONTRACT for the GENERAL WORKS and REPAIRS to the FOOT and CARRIAGE WAYS of the several streets, courts, alleys, and other places, under the jurisdiction of the said Board, for three years from 4th APRIL next. Further particulars may be known, and printed conditions, schedules of works, and forms of Tender obtained, by parties desiring to Tender for the Works, upon application at the said Offices after the 14th inst. between the hours of TEN and FOUR, upon payment of twenty shillings, which will be returned to each person sending in a Tender. Tenders, sealed up, and endorsed "Tender for Paviors' and Masons' Works," must be delivered at the said Offices not later than ONE o'clock on the said day of MARCH, 1856. The Board do not bind themselves to accept the lowest or any Tender. The security of two responsible persons will be required. No Tender will be received after the time specified, and unless upon the printed form.

By order, THOS. W. RATCLIFF, Clerk to the Board.

7th March, 1856.

THE BOARD of WORKS for the LIME-HOUSE DISTRICT, comprising the Parish of St. Anne, Limehouse, the Hamlet of Ratcliff, and the Parishes of St. Paul, Shadwell, and St. John, Wapping, Middlesex—TO PAVIORS and MASONS.—Notice is hereby given, that the Committee for Paving, Lighting, &c. will meet at the Offices of the Board, White Horse-street, Commercial-road East, on MONDAY, the 31st MARCH, 1856, at THREE o'clock in the afternoon, to receive TENDERS from persons willing to CONTRACT for the GENERAL WORKS and REPAIRS to the FOOT and CARRIAGE WAYS of the several streets, courts, alleys, and other places, under the jurisdiction of the said Board, for three years from 4th APRIL next. Further particulars may be known, and printed conditions, schedules of works, and forms of Tender obtained, by parties desiring to Tender for the Works, upon application at the said Offices after the 14th inst. between the hours of TEN and FOUR, upon payment of twenty shillings, which will be returned to each person sending in a Tender. Tenders, sealed up, and endorsed "Tender for Paviors' and Masons' Works," must be delivered at the said Offices not later than ONE o'clock on the said day of MARCH, 1856. The Board do not bind themselves to accept the lowest or any Tender. The security of two responsible persons will be required. No Tender will be received after the time specified, and unless strictly in accordance with the printed instructions to Tenderers.

THOS. W. RATCLIFF, Clerk to the Board.

7th March, 1856.

TO CONTRACTORS.

THE LOCAL BOARD of HEALTH for the City of BATH, hereby give Notice that they are ready to receive TENDERS from competent Persons who may be willing to undertake all, or any, or either of the following CONTRACTS.

CONTRACT No. 1.—For Pitching and Paving the various Streets in the City of Bath.

CONTRACT No. 2.—For Pitching and Paving the Outpart of the Parish of Walcot in the Borough of Bath.

CONTRACT No. 3.—For Pitching and Paving Widcombe.

CONTRACT No. 4.—For Pitching and Paving Bathwick.

Specifications may be seen and Forms of Tender obtained on application at the Surveyor's Office, on Saturdays, between the hours of TEN and THREE, till the 31st day of MARCH. Tenders must be sent to the undersigned under cover, addressed to the Chairman of the above Board, endorsed "Tender for Pitching and Paving," on or before TEN o'clock in the Morning of the 24th day of MARCH instant. The Committee do not bind themselves to accept the lowest or any Tender. By order of the Board,

THOS. CRUTTWELL, Clerk.

Bath, March 3rd, 1856.

WATERING CONTRACT. — The Board of Works for the Strand District, is desirous of receiving TENDERS for WATERING the several PARISHES in the district, from the 25th day of MARCH instant, to 29th SEPTEMBER next. Tenders for laying of hose, by the week, for the whole period, or any part thereof, and for supplying and keeping in repair pumps, and for the supply of horses for ordinary and occasional use, to be sent in to the undersigned, addressed "Tender for Watering," on or before TUESDAY, the 18th inst., at the Board Room, Parish Buildings, Arundel-street, Strand.

JAMES H. P. LEWIS, Clerk to the Board.

March 13, 1856.

TO BUILDERS.

PERSONS desirous of CONTRACTING for the ERECTION of TWO semi-detached VILLAS, on the [illegible] Estate, near Forest Hill, may inspect the drawings and obtain the conditions of the contract at Ancastel, on and after MONDAY next, the 17th instant. Tenders to be delivered on or before TWELVE o'clock on Thursday, the 27th inst. [illegible] not binding themselves to accept the lowest tender.

[illegible] JOHNSON, Architects.

[illegible]

NOTICE TO BUILDERS.

BERWICK CHURCH, near LEWES.—[illegible] the first Nation[illegible] Contractor for the Rebuilding of the above Church, are requested to send in their Tenders, addressed to the undersigned, on or before the 24th instant, and the five consecutive days. All tenders received after that time will be returned unopened. Tenders must be sent in sealed envelopes, and addressed to the Rev. E. P. LITTLEDALE, Berwick Rectory, Lewes. The Committee do not bind themselves to accept the lowest or any tender. Plans and specifications may be seen at the Rectory, Berwick, on and after Monday next. Contractors are requested to bear in mind that the work is to be finished within six months from the date of the contract.

March 12th, 1856.

TO BUILDERS and OTHERS.—TO BE SOLD, a PROOF IRON DOOR, in frame and iron gate, both fitted with Chubb's locks, stone jambs, &c.; Two pairs of oak [illegible] to the same, glazed and hinged for shutting. Two pairs of oak sashes, complete, also fitted with iron shutters, [illegible] Apply to Messrs. [illegible], Wapping-basin, Hermitage, Wapping, London.

TYERMAN'S PATENT HOOP-IRON BOND.

Adopted by the Honourable Board of Ordnance, the Commissioners of Parks, Palaces, and Public Buildings, &c. &c. &c.

TARIFF OF PRICES.

Beyond the current Prices of Hoop-iron.

Gauge.	In wide.	Per ton of 2240 lbs.
No 16	.. 1½ ..	78. 0d.
15 ..	1½ ..	78. 6d.
15 ..	2 ..	78. 6d.
1 ..	2 ..	88. 6d.
15 ..	2½ ..	98. 6d.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1½ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

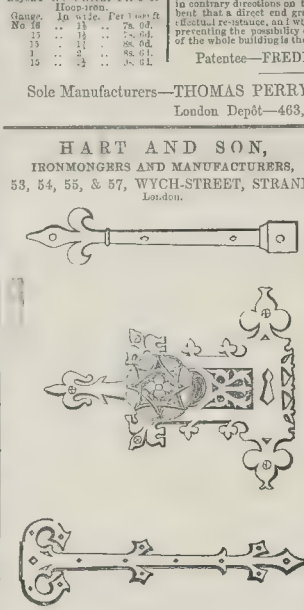
London Depôt—463, OXFORD-STREET.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND,

London.



LOCKS, HINGES, BOLTS, &c.

First-class Prize Medal, Paris Exhibition, 1855.

Illustrated Price-catalogues post-free on application.

KIMBERLEY'S NEW PATENT SCAFFOLDING BRACKET entirely supersedes the old and ever-troublesome cords. They are made of every kind in Wrought Iron are light, very cheap, and it is next to impossible to wear them out. They are greatly admired, and require time only to supplant entirely the usually uncertain cords. Books, with all particulars, be post. The whole Building Trade admit this is an article they have required for the last century.

London Agents:—

Messrs. PUGH & CO. 13, King-street, Snow-hill, London.

Sole Manufacturers—KIMBERLEY'S Patent Door Springs, Skylight screws, Casement Fasteners, Stock Locks, Bench Stops, &c. &c.

MACHINERY for SAWING, PLANING, MOULDING, &c.

SAMUEL WORSSAM and COMPANY have notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machinery for Sawing, Planing, Grooving, and Moulding Wood. They manufacture and have in stock, or can supply at short notice, every description of Machinery that they consider worthy their attention to place before the public, and have had the honour lately of supplying some of the most distinguished engineers and architects in the world with their Machines for home and foreign use.

OLD STOVES and RANGES.—F. EDWARDS, SON, and CO. have constantly on hand a quantity of OLD STOVES and KITCHEN RANGES, in very good condition, which are taken down by them at establishments when they erect new work, and which are to be sold at exceedingly low prices.—Poland-street, Oxford-street.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK and HOT-WATER APPARATUS, with Estimates and Plans for Fixing given.—J. TYLOR and SONS, Manufacturers, Wednesbury, Staffordshire, and 6, Queen-street, London.

CONTRACTORS' WAGGONS and RAILS. MATTHEW T. SHAW has now on hand a quantity of contractors' waggons, of first-rate make, with wrought-iron [illegible] and [illegible] rails, also to the gauge, and [illegible] for plant of every kind.—61, CANNON-STREET.

TWENTY new WAGGONS for PERMANENT WAY.—MATTHEW T. SHAW has the above FOR SALE, made by the first maker, well suited to carry minerals [illegible] Also [illegible] Apply to MATTHEW T. SHAW, 61, CANNON-STREET.

SKAIFE'S GALVANIZING WORKS, Commercial-road, Limehouse, London.

Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where Iron not liable to rust is required.

Patent Galvanized Iron supplied in every form.

Sheets plain and corrugated.—Roofs fixed complete.

J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.

An Allowance to the Trade.

JOHN WALKER, Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor.

IRON MERCHANT, &c.

Offices and Works—Mill-wall, Poplar, London.

A. MOREWOOD and CO. (late Morewood and Rogers),

Dowgate Dock, Upper Thames street, London, and Baskerville Works, Birmingham,

PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,

PLAIN or CORRUGATED, and Curved, of all Gauges.

Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.

Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building, at the

OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

AUSTIN'S IMPERIAL.

PATENT SASH and BLIND LINE can be obtained of all

ROPEMAKERS, IRONMONGERS, FACTORS AND WHOLESALE HOUSES, IN TOWN OR COUNTRY.

Established 1774.

TO ARCHITECTS, BUILDERS, AND THE TRADE.

PATENT PLUMBIC ZINC.

GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No.			
No. 11 gauge weighs about	18 oz.	per foot	square.
12	16	20	
13	14	23	
16	10	36	

Full particulars and the reduced price sent by post on application to

A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

WILLSON and ROBINSON, GALVANIZING and CORRUGATING IRON WORKS, CHURCH-ROW, LIMEHOUSE, LONDON

PATENT GALVANIZING and CORRUGATING IRON WORKS (Improved Process), WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.

GALVANIZED SHEET IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

SAMUEL HEMMING'S PATENT much approved PORTABLE BUILDING and ROOFING MANUFACTORY, REMOVED from BRISTOL to BOW, Near London, close to the Bow Railway station. A large variety of buildings always in view, churches, chapels, shooting boxes, lodges, bazaars, ornamental villas, dwelling-houses, farm buildings, and fire-proof stores. Also, railway stations, trucks, and carriages made to any plan on the shortest notice.

TUPPER and CARR, CORRUGATED IRON MANUFACTURERS, Galvanized and Ungalvanized, Iron Roof Builders, and Electric Telegraph Contractors. Works—BIRMINGHAM and LIMEHOUSE. Offices 4, MANSION HOUSE-PLACE, LONDON. N.B.—Iron of every description galvanized. An allowance to the Trade

JOHN HENDERSON PORTER, ENGINEER AND CONTRACTOR, IRON BUILDING AND ROOFING WORKS, GAS-STREET, BIRMINGHAM.

LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

J. NAYLOR'S IRONMONGERY, NAIL, and METAL WAREHOUSE, 225, Oxford-street, near the Marble Arch.—Builders, Carpenters, Cabinet Makers, Locksmiths, and Bellhangers, supplied at the lowest prices.

FOR SALE, at JACOBS and HYMAN'S IRON WHARF, Thornhill-bridge, Caledonian-road, Kingsgross, Ten Tons of NEW SHEET ZINC, price 24l. per ton; also a quantity of 10-feet iron columns of handsome design, iron girders, eave-runners, French burr stones, steam boilers, several tons of white lead and paint. For sale or hire, a hand roller. Old iron bought at 4l. per ton; old zinc, 14s. per cwt.

N.B.—Old machinery of every description bought.

PATENT HAND-RAILS, WITHOUT HEADING JOINTS.—Established nearly thirty years, and patronized by the most eminent of artists in the kingdom.

N.B. A PORTABLE PULPIT FOR SALE, with hand-rails, &c. complete, convertible into a flight of circular stairs, to economize space. &c. JOHN MELVILLE, 64, Johnstreet, Fitzroy-square, London.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure locks, &c. Manufacturers of the Arnotts improved ventilators. HULETT and CO. 55, High Holborn.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,
LAMBETH POTTERY, HIGH-STREET, LAMBETH,
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

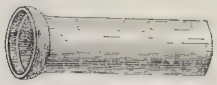
These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pans.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO
HENRY MILLICHAMP,
MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.
BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.
MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.
Terra-cotta Chimney-pots of various patterns and sizes, also Red Earthenware Drain-pipes, at greatly reduced prices.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,
IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

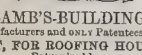
Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.
Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London road Station.
Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.
Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

CHEAP AND DURABLE ROOFING.

By Her Majesty's  Royal Letters Patent.

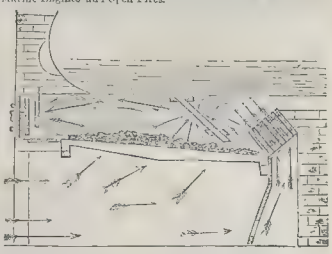
F. McNEILL and CO. of LAMB'S-BUILDINGS, BUNHILL-ROW, LONDON,
Manufacturers and ONLY Patentees of
THE PATENT ASPHALTED FELT, FOR ROOFING HOUSES, VERANDAHS, SHEDS, &c.
Patronized by

HER MAJESTY'S WOODS AND FORESTS,
HER MAJESTY'S COMMISSION OF CUSTOMS,
HONOURABLE EAST-INDIA COMPANY,
HONOURABLE BOARD OF ORDNANCE,
HER MAJESTY'S ESTATE, ISLE OF WIGHT,
ROYAL BOTANICAL GARDENS, REGENT'S PARK,

And by the most eminent members of the Royal Agricultural Societies of England, Scotland, and Ireland; at whose great national shows it has been exhibited, and OBTAINED THE PRIZE, for being the best and cheapest article for roofing; also used for under slates at the Royal Agricultural Society's House, in Hanover-square. Its advantages are lightness, warmth, durability, and economy it is impervious to rain, snow, and frost, and a non-conductor of heat and sound. The Felt can be cut to any length, by 32 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples, with full directions as to its uses and the manner of applying it, with TESTIMONIALS, some of them of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 25 per cent. in fuel is effected. The TRADE are respectfully entreated to send their orders DIRECT to the FACTORY, as the surest means of being supplied with the genuine article, and in lengths best suited to their roofs. They are likewise CAUTIONED AGAINST MISREPRESENTATION, as THE ONLY WORKS in Great Britain where the above roofing is made are F. McNEILL and CO.'s Manufactories, LAMB'S BUILDINGS, BUNHILL-ROW, E.C. Roofs covered with the Felt to be seen at the Factory, also the new Vice-Chancellor's Courts, the passages and offices leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

LESS FUEL, MORE STEAM, NO SMOKE.

GARDNER'S PATENT SMOKE CONSUMER is SELF-ACTING, EASILY FIXED at a SMALL COST, IMPROVES the DRAUGHT, and SAVES FUEL. Applicable to all Furnaces, Boilers, Ovens, Locomotives, Marine Engines and Open Fires.



"Chemical Works, Bow Common, November 9, 1855.
"DEAR SIR,—In answer to your further inquiry concerning the saving of fuel in connexion with the use of your patented apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I beg now to state that we are enabled without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.
"I remain, dear Sir, yours truly,
"To E. V. GARDNER, Esq." "FRED'K. ALLEN.

Apply to the PATENTEE, 21, Norfolk-street, Middlesex Hospital; or to Messrs. BURBIDGE and HEALY, 119, Dorset-street, Fleet-street.

Bakers' Ovens fitted for 5l. license included.

SMOKY CHIMNEYS CURED EFFECTUALLY for TEN SHILLINGS, by SUTER'S PATENT WIND-GUARD.—This Guard allows free egress to the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.

To be had of Ironmongers and Builders; and of the Patentee, at his Office, 65, Fenchurch-street, London.

By Her Majesty's Royal Letters Patent.

DUPREE and CO.'S DEFIANCE WINDGUARD and VENTILATORS, &c. for the perfect cure of Down-draft Smoky Chimneys, suitable for Public and Private Buildings requiring a constant change of air.
Also
SHIP VENTILATORS, requiring no attention, imparting about six times the quantity of fresh air than any other in use.
Also
VENTILATING SKYLIGHTS, for Slate or Tile Roofing, without Paint or Putty.
Prospectuses sent on application.
London Depôt—ESNOUF and MANGER, 141, Minories, City.

VENTILATION.—PURE AIR.

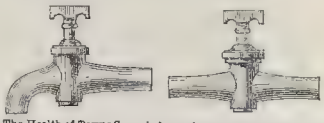
Sheringham's Ventilator for the admission of pure air through an

EXTERNAL WALL.

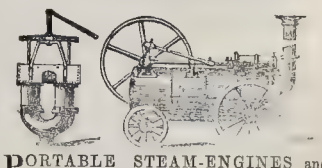
With single pulley, from 6s. each; with leading pulley, from 8s. 6d.
These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.
LEAD, IRON, and TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Cresceut, Jewin-street, London.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 92, Blackfriars-road.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.
Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

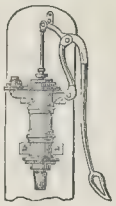
Upper Ground-street, Blackfriars Bridge, Surrey Side.

B. FOWLER & CO.'S PORTABLE PUMPS,
3-inch to 9-inch Barrels,
Plain or Sliding Telescope Suction,
ON HIRE.

SINGLE AND DOUBLE PUMPS,
all sizes,
to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.
WHITEFRIARS-STREET,
Fleet-street.

TO BUILDERS AND PLUMBERS.
The attention of the Trade is called to JOHN WARNER & SONS'
PATENT VIBRATING STANDARD PUMP,
which is recommended for the simplicity of its construction, and the ease with which it works.
By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and gui es are unnecessary, rendering the price considerably less than Pumps made on the old plan.
Beer and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.
JOHN WARNER & SONS,
8, Cresc nt, Jewin-street, London,
Manufacturers and Patentees.



TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

SUPERIOR LAND DRAINAGE.—AGRICULTURAL DRAIN-PIPES of all sizes, and in any quantities, can be SUPPLIED, either by water or land carriage, at a reduced rate, by applying to L. B. PEARSE and CO. Great Northern-wharf, York-road, King's-cross.

COLLIER'S TERRO-METALLIC and RED EARTHENWARE SOCKET DRAIN PIPES, BENDS, JUNCTIONS, and SYPHONS.—This ware, allowed by all to be of the best manufacture, by the unparalleled quality, combined with cheapness, will be found to meet the approbation of consumers.—Sole Agents, L. B. PEARSE and CO. Great Northern wharf, York-road, King's-cross.

CLOSET BASINS, WHITE and BLUE URINALS, &c.
MANUFACTORY—MILLWALL.
DEPOT:
ARTHUR-STREET, NEW OXFORD-STREET.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 6d. "
15	"	"	"	"	2s. 6d. "

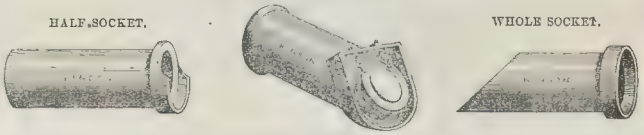
These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The projection round red-ware is over-come by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c &c.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 23, Old Fish-street, near St. Paul's, London. Price for Closet and Apparatus complete, from 23s. and perfect action guaranteed.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his
GLAZED STONEWARE DRAIN-PIPES.
LISTS OF PRICES FORWARDED ON APPLICATION.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.
DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.



Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.
The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.
DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

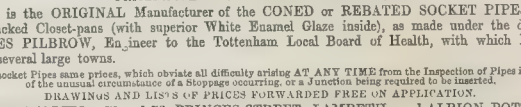
JOHN DOULTON, BROTHERS, AND CO.
LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF
DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.
TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.
HENRY DOULTON AND CO.
Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their
GLAZED STONEWARE DRAIN-PIPES,
Drawings and Prices will be forwarded on application.

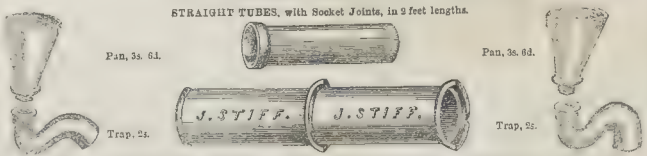
MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



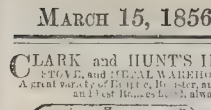
THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.
T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.
N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.
DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.
MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

GREAT REDUCTION IN PRICES.
JAMES STIFF,
MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.
STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.
Drawings, with Prices, will be forwarded free, on application.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 129, Shoreditch. A great variety of Bright, Bronzed, and other Stoves, Fenders and Fire Irons, always in Stock.



Improved Self-acting Cottage Ranges, with Large Oven and Boiler. 40 in. 36 in. 30 inch. 25s. 20s. 17s. 15s. Best Self-acting Ranges with Oven and Back Boiler, Bright Wrought Bars— 24 in. 30 in. 36 in. 42 in. 54s. 58s. 62s. 68s. Strong Elliptic Stoves with Extra Hob and Solid Bars, per in. 2½d

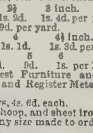
Register Stoves, with Solid Bars, per inch, 3d.
Improved New Pattern Circular Check Register, with strong Large and Ornamental Fronts, 9½ per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 30s. to 50s. each.

Cast Rain-water Pipe { 2 in. 2½ in. 3 inch. 11d. 1s. 2d. 1s. 4d. per yard.
Cast Gutters—4 inch, 9d. per yard.
O G Gutters { 3 in. 4 in. 4½ inch. 1s. 1d. 1s. 3d. per yard.

Patent Lice { 2 in. 3 in. 4 in. 5 in. 6 inch. 4d. 5d. 7d. 9d. 1s. per knot.
6-inch Rd. Ward Mortice, with best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s. per cwt.

Dr. Arnott's Ventilators, 4s. 6d. each.
An extensive stock of bar, rod, hoop, and sheet iron
Brick Moulds kept in stock. Any size made to order.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.
JOHN DALE, 18 and 19, Chiswell-street,
Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of Ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs, 24s. per inch, and upwards.
Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and brie at fittings:—
3 ft., 2l. 10s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3-feet Cottage Ranges, with ovens and back boilers, 38s. each.
3-feet self-acting ditto, ditto, 34s. each.
Air Bricks, 4s. per doz
Best Town Glue, 8d. Ditto, Scotch, 6½ per cwt.
Best Pine Cut Clasp and Hose.

½	¾	1	2	2½	3	3-in. & larger.
10s. 6d.	16s. 6d.	17s. 6d.	15s. 6d.	16s.	14s.	per cwt.

And every material required in the building, bell-hanging, upholstery, and brass-foundry trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter prepaid

THE STATUE and IRON FOUNDRY,
Lower Belgrave-place, Pimlico.—Castings of every description executed at the above Works

IRON FOUNDRY,
HARROW-STREET, LANT-STREET, SOUTHWARK.
W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel and Railing Bars, Panels, Iron Coping, Hot Plates, Tank Plates, Area Gratings, Sash Weights, Fly and other Wheels Rigers, Pinions, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

WANTED, a PAIR of WROUGHT or CAST IRON DOORS, from 6 feet to 10 feet high, and from 3 feet to 9 feet wide.—Full particulars, with price and where to be seen, by letter only, to THOS. HURBUCK and SON, 115 Upper East Smithfield, London

IRONMONGERY.
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.
ANDREW CLARK and COMPANY, PLUMBERS,
THE BEAR GARDEN LEAD WORKS, SOUTHWARK,
Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of
UNITING LEAD TO LEAD WITHOUT SOLDER.
Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.
PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

LOSH, WILSON, and BELL,
NEWCASTLE-ON-TYNE,
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and
STEWART'S PATENT CAN-IRON GAS and WATER PIPES.
Office, No. 7, Size-lane, London.

THE LIZARD SERPENTINE COMPANY
manufacture and sell in block and slab the beautiful stone now raised from the lower beds of their quarries. Chimney-pieces, Columns, Fonts, and ornamental works on view, at 20, Surrey-street, Strand.
HENRY COX, Manager at the Lizard.
F W RUFFLE, Agent in London.

MARBLE.—The Italian Marble Company, Importers of the produce of their own quarries, in the province of Massa Carrari, Italy, beg to inform the general Marble Trade in the United Kingdom that they are prepared to undertake contracts for any quantity of Statuary, Veined, Sicilian, Hardilla, Dove, and other Marbles, in blocks of all dimensions, delivered on shipboard at Leghorn, or in dock, London. A constant stock always on view on the premises, where orders are taken for Carved Slabs, Garden and Hall Statues, Vases, Tazzas, Mortars, Console, Chimney pieces of all classes, Circular Tabletops, Monuments, &c. executed in Italy.—For further particulars, inquire at the office on their Wharf, Thames Bank, Pimlico, adjoining the fleet side of Vauxhall-bridge.
WILLIAM W. BONNIN, Secretary.
Lloyd's Marble Wharf, Thames-bank, Pimlico, Adjoining Vauxhall-bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

MARBLE.—NOTICE.—The ITALIAN MARBLE COMPANY have REMOVED their office from 18, Cumberland-st., Gor. to their WHARF, THAMES-BANK, PIMLICO, a few doors to the east side of Vauxhall-bridge. Please observe the exact address.
WM. W. BONNIN, Secretary.

TO BUILDERS, MASONS, AND OTHERS.
THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Sicilian, dove, black, black and gold, Sienna, St. Anne's, statuary, serpentine, verd antique, &c. Portland, Bath, Caen, and other stone, in blocks, slabs, landing, coping, steps, York landing, granite curb, &c. All goods carefully packed and forwarded to any part of England.—THOMAS JACKSON, Marble and Stone Sawing Mills, Commercial-road, Pimlico, London.

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B. FABBRICOTTI respectfully invites the Gentlemen connected with the Marble Trade to inspect his fresh STOCK, composed of statuary, vein, Sicilian, black and gold, dove, Ravello, Siena, and Bardilla, in all sizes and particulars; calls their attention to a large quantity of his best statuary, sixty blocks, of all sizes, just landed.
Monuments, vases, or busts executed finely executed in Italy
Carrara Wharf, Thames-bank, Pimlico

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

STONE, GRANITE, and MARBLE.—
BRAMLEY FALL, CAEN,
DARLEY DALE, FARLEY DOWN,
HARE HILL, HUDDLESTONE,
PORTLAND, and various Stones, in Block and Slab.
Yorkshire Paving, Landings, Steps, Sills, Sinks, Coping, &c.; Granite Blocks, Trams, Curbs, Pitching, &c.
Valentia Slate Slabs, Grindstones; Mantles, in Blocks and Slabs.
At FREEMAN'S Stone Wharfs, Millbank-street, Westminster, City-road Basin; and Deptford.

STONE! STONE! STONE!—To the Trade, Builders, and Others—The Cheapest place in London for Paving, Sinks, Self-faced Slab, Rare hill Slab, Steps, Landings, Bath Stone, Portland, Granite, Pitching, Curb, and every description of Stone, is at JOHN KNIGHT and SON'S, Devon Wharf, Mile-end.—York Paving, 22s. 6d. per 100 feet; Slab for Hearths, &c. 4l per foot super. Bath Stone, best quality, delivered in any part of London, is. 7½d. per foot. Terms, cash on delivery.

STONE! STONE! STONE!—At Lowest PRICES, all kinds of Stone supplied to any extent. Quarry worked, sawn, or scrabbled to dimensions. Direct to any part by vessel or rail. A single truck load at wholesale prices.
Depôts—Victor a Stone Wharf, Isle of Dogs, and No. 3 Wharf, Great Northern Railway, King's cross.
Grindstones, fire goods, and terra cotta. Special estimates given to supply large contracts.
Address, S. TRICKETT, General Stone Merchant, Victoria Wharf, Isle of Dogs.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—TREGELLES and TAYLOR, 3, Pinner's-court, Old Broad-street. Manager—JAS. J. TRATHAN, Liskeard.
This Granite is selected for the New Westminster-bridge.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace. Supplied by the Hayter Company under Royal Charter.—For terms, apply to Mr. C. GOAD, Hayter Granite Office, 4, Millbank-row, Westminster.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

DARLEY DALE STONE.—This Stone, introduced by Sir Charles Barry at St. Edward's Grammar School, Birmingham, and well known as having been selected for
ST GEORGE'S HALL, LIVERPOOL,
and numerous works, including the Railway Station, Birmingham; Branch Bank, Liverpool; Hexham-bridge; Mr. Beaufoy's Schools, Lambeth; and the Portico and Corn'ce of the Town-hall, Leeds; is kept in considerable quantity at the Darley Dale Stone Wharf, City Basin, London.—Apply to W. and J. FREEMAN, Millbank-street, Westminster, or GEORGE WALL, at the Quarries, near Matlock.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman, Caen, is shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Townhall.

CAEN and AUBIGNY STONE.—GATES and GEORGE (late Luard, Beedham, and Co.), Caen wharf, Rotherhithe, London, General Stone Merchants and Quarrymen, continue to supply from their Wharfs, above, CAEN, AUBIGNY, PORTLAND, and YORKSHIRE STONE.

BATH STONE.—HENRY STONE, QUARRYMASTER, begs to inform Architects, Builders, and others, that he has CONTINUED to supply the best COMB DOWN, HAMPTON DOWN, and BOX GROUND WEATHER STONE. Delivered in the trucks at Box or Bath station on the most reasonable terms. H. S. begs to call particular attention to his Hampton Down Stone, it being of a very fine texture and rich colour, adapted for either external or internal purposes. Ashlar and Sawn Stone cut to order. Carefully shipped in Bristol, and delivered to any part round the coast. Residence, WIDCOMBE, Bath.

YORKSHIRE STONE.
GEO. VINT and BROTHERS, IDLE, near LEEDS,
Beg to inform Architects, Surveyors, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Paving, Bramley Fall, Park Spring, Robin Hood, Hareh ll, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cement. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall-chambers, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

BATH STONE OF BEST QUALITY.
RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

MARKET-WHARF, REGENT'S-PARK-BASIN—WEST-END DEPOT for Yorkshire Paving, Portland and Derby Stone, Flags, Slabs, &c. Bricks, Lime, Cement, Tiles, Plaster of Paris, Scotch Wood Deals, Battens, Mouldings, and other Timber, as cheap as at the Docks. Estimates will be given at the lowest prices. Headstones, Ledgers, Sills, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

FOR MACADAMIZING ROADS.—The HARDEST and PUREST FURNACE STONE. The Proprietor of an extensive Quarry at Dunsmoor Beacon, containing Blue Flint Granite, is now prepared to supply any quantity of Furnace Stone, broken to any size required, and delivered at the Railway Station in Bicester, at 10s. per ton, and upwards. For further particulars apply by letter to Mr. JOHN NEWTON, Norwaywharf, Hertford-road, Kingsland-bridge.—Two Coal Waggons for Sale

SLATE CISTERNS, SINKS, and every description of SLAB-WORK, in Slate, Roofing Slates, or Covering. T. B. HANNAFORD is not only in a position to execute orders to any amount in the shortest time and extremely low prices, but guarantees a finer slate material in all respects similar to the slate now used in fitting up and covering the principal mercantile and Governmental buildings in the City. A priced list sent on application.—TREVALGA WHARF, Ratcliff-cross.

VALENTIA SLATE SLABS.—The Valentia Slate Company beg to call attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, Hospital for Sick Children, the Orphanage Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Hertfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Plymouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; and by Messrs. Sharpe, Tyler, street, and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

LLANGOLLEN SLABS and SLATES.
HOUSE CISTERNS, Sinks, stones, Filters, Lavatories, Mangers, Ridging, Skirting, and Bath Cors.
CISTERNS of LARGE DIMENSIONS for BREWERIES, DISTILLERIES, BLEACHING-HOUSES, and MANURE TANKS.
Cattle-stalls, Pigstyes, and Troughs.
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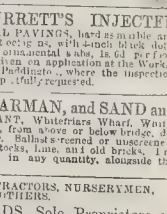

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The Builder.

VOL. XIV.—No. 684.

TO PARIS at this moment all eyes are directed. The world waits on tip-toe to hear the result of the conferences now going on there. Earnest must be the hope of all who have at heart the welfare of their fellow-creatures, that a substantial peace, honourable and remunerative to the allies, may be achieved. Even the probabilities, however, are at present shrouded in mystery; and all the arrangements which have been made give the notion of an elaborate scheme for stock-jobbing purposes. Who will assess the value of one single hour's exclusive knowledge of the decisions of the curtained and guarded conference chamber?

It would be instructive to trace, hereafter, the real names of the large dealers in Government securities, both in England and France, immediately preceding the announcements of the plenipotentiaries. With this, however, beyond the passing remark, we need not interfere. It is not Paris political that immediately concerns us, but Paris monumental, artistic, and sanitary: and our present object is to add to our series of views illustrative of that capital—a view of the east end and south side of the cathedral of Notre Dame.*

We have already referred briefly to the history of Notre Dame.† The chapels about the choir were finished at the end of the thirteenth century or the beginning of the fourteenth. Between the south side of the cathedral and the Seine stood the episcopal palace, a structure of great antiquity. All that remained of it, together with the modern building which had taken the place of the old work, was sacked and destroyed in 1831, and at the present time the new sacristy of the cathedral (shown in our view) and a public garden occupy the site. M. Guilhermy, in his "Itinéraire," from which we are quoting, gives a graphic account of the destruction of the palace. The building, invaded, he says, by a countless and furious mob, was nothing more than a ruin in a few minutes. At one and the same moment they rooted up the railings and the flights of steps, they undermined the walls, they tore off the roof, they threw out of the windows the marbles, woodwork, and furniture of the apartments. A troop of barbarians formed a chain from the library of the palace down to the parapet of the quay: the books and precious MSS. were passed from hand to hand, each tearing them as he would, and the last man pitched them into the river. And all this was done accompanied by fierce songs and frightful howlings!

The enclosure of the choir and absis of the cathedral was reconstructed at intervals between the years 1257 and 1310. The trefoiled niches in the face of the flying buttresses contained statues which all showed traces of colour, and belonged to the fourteenth century. The flying buttresses themselves (rebuilt when the chapels were constructed) are to our eyes heavy and ugly, and seem to want pinnacles at the top. Their ugliness was less observable when they were in their ancient dark coat.

The new works at the cathedral were begun about 1845, in which year the Government were roused to the necessity of maintaining the ancient monuments of the State, and voted a sum of money for the purpose. The superintendence of the restoration was placed in the hands of M. Lassus and M. Viollet-le-Duc, by whom it has been carried out with unremitting attention. The building had been greatly damaged by the men of the preceding century.

The choir of Notre Dame is one of, if not the, earliest specimen of what we should here call Early English. The first stone was laid in the year of the completion of St. Germain des Prés, 1163, and in 1182 the high altar was consecrated.

The general uniformity of style in a building so vast as Notre Dame of Paris, is very striking to an eye accustomed to the varieties observable in most of our cathedrals. Although its erection occupied a considerable period of time, there is a remarkable correspondence in character throughout. The stone of which the building is constructed is from the quarries in the neighbourhood of Paris, the possession of which has tended so much to the elegance of the city. The enormous wooden roof, of oak, which crowns the building, 356 feet (French) in length, is covered, according to M. Guilhermy, with 1,236 sheets of lead, each 10 feet long and 3 feet wide. At the point where the transept crosses the nave there was anciently a spire, also covered with lead, 104 feet high from the ridge of the roof. It fell into decay in 1792, and was removed soon afterwards.

The magnificent rose window in the south transept, seen in the view, is filled with the original stained glass. This is the case, too, with the window in the north transept and the rose window in the west front. The glass is beautiful in colour, and exhibits a multitude of subjects.

The Hôtel de Cluny, on the other side of the Seine, but not far off, contains some of the vestiges of earlier buildings which were found on the site of Notre Dame. The Palais des Thermes, which adjoins the Hôtel de Cluny, is the most ancient monument in Paris, being at least as old as the beginning of the fourth century. Together, they contain a collection of national antiquities of the deepest interest, comprising about 2,600 objects,—sculpture, carving, pictures, glass, jewellery, ivories, decorations, enamels, porcelain, and metal work.

There is nothing more instructive in Paris than this museum, and it is a heavy reproach to those who have the power, that in England, where the number of such works in private hands is so great as it is, there is no similar collection open to the public.

The Hôtel de Cluny is itself a quaint fifteenth-century building, displaying many curious bits, especially the chapel, with its central column, its range of canopied niches, and the staircase in the angle with pierced stone screen around it.

If there had been a national institution of this kind in England, we should probably have retained here the singularly fine gold *retable*, which was given by the Emperor Henry, in 1019, to the cathedral of Basle, and is now in the Hôtel de Cluny. It was hidden in the vault of the cathedral for safety, when the people of Basle adopted the reformed religion, and was afterwards sold for the benefit of the canton. A year or so ago the owner of it sought to sell it to some public institution, and the French Government obtained possession of it. It is an extraordinary relic, whether considered with regard to its date or its intrinsic beauty. The principal feature is an arcade of five openings, the centre higher than the others, with a figure in each. The whole is in low relief, executed in *repoussé* work, sharpened by the graver. The citizens of Basle, who have been spending much money in the restoration of their cathedral, must regret their loss.

Wandering here in the Palace of the Baths, where the Roman emperor Julian resided, and through the museum of the Hôtel de Cluny, the manners, progress, and the achievements in art of the French people, during at least fifteen centuries, are brought vividly before the eyes and mind of the observer.

* See p. 147.

† See p. 537, vol. xiii. and for a view of the ironwork on one of the doors, p. 625, in same volume. For recent notices and views of other buildings in Paris, see pp. 481, 503, 513, 537, 543, &c. same volume; and pp. 1 and 7, present volume.

PARIS NEWS.

Construction of Granaries.—Amongst the practical results of the Paris Universal Exhibition, the introduction of M. Fluent's granaries is not the meanest. Their object is to preserve the corn sound, even in great masses. They are constructed so as to form a division of compartments (*Silos*), all on one line, and occupying the whole height of a building. The grain is passed through hoppers, each being regulated by an especial trap. Towards the end of the silo, the grain does not descend perpendicularly, but is prevented by a number of diaphragms, placed one above another, at an angle of 45 degrees, and extending all the length of the silo. In consequence of this division in small and vertical compartments, the mass of grain becomes divided, and has to glide down in a diagonal line. The interval and the dimensions are thus distributed so as to allow the passing of the grain upon the whole length of the compartment, which passage takes place at a rate made uniform by the equality of friction. At the issue from the vertical silo, the grain is conducted through a spout, when it is seized by an Archimedian screw, at each winding of which there is a little palette, which turns the grain as would a shovel. It is thus conducted into a small reservoir, whence it is reconducted to the top of the granary, above the upper orifice of the vertical silos. Here it is taken hold of by a sieve, which agitates it again, and makes it descend in a sort of rain on the lower mass.

A Marble Company.—There has been formed at Paris a company for working the extensive marble quarries of the Departement de la Sarthe. The value of marble used in Paris for sepulchral monuments, is six millions; while that of the marble used in the whole of France, reaches thirty millions.

Aluminium.—The Annuaire of the Bureau de Longitude, Paris, states the specific gravity of the new metal, as follows:—At the temperature of water of 4 degrees Réaumur, the specific gravity of melted aluminium is 2·56, that of forged (malleated), 2·67; whereas that of gold is 19·36; and that of platinum, 21·53.

Chatelain, Atlas. — *Chronological Atlas of Railroads. Paris,* 1856.—In this deserving work the different periods of French railway construction during the last thirty-two years, are made visible in a series of maps. The first chart depicts the embryo state of French railroads from 1823 to 1839; the second, the state of infancy to the year 1841; and thus successively every period of expansion is laid down. Chart eighth shows the different railways, which, from 1823 to 1856, have been constructed by the different Governments. A general historical Atlas of all the railways in the world will become, by and bye, a desideratum.

INQUIRY INTO THE DESTRUCTION OF COVENT-GARDEN THEATRE.

LITTLE progress has been made towards discovering the cause of the destruction of Covent-garden Theatre. On Tuesday last an inquest was opened before Mr. Bedford, the coroner for Westminster, at the instance of the churchwardens of the parish of St. Paul, Covent-garden, who instructed their vestry-clerk, Mr. Mosley Tayler, to take the requisite steps in the matter. The duties of the coroner in old times included inquiry into the origin of fires; and the revival of this portion of the office (originally made by Mr. Payne, the coroner for the City) has very properly been carried forward in the present most important instance. The walls of the theatre—some of them reaching to the height of 70 or 80 feet—the north wall bounding a thoroughfare, and all the walls endangering the adjacent premises—have become even less secure than when we noticed them last week. If we refer to that immediate evidence—as to *one* of the bearings of inquiries like this which

is being conducted at the Piazza Hotel—it is because such evidence happens to be just now very conclusive to any one who will walk to Bow-street. The provisions of the Building Act were promptly put in force by the police, after an order granted at Bow-street the day after the fire; and Messrs. Holland (under the direction of the surveyor to the commissioners) have now erected scaffolding to the principal walls, and are actively engaged in the work of demolition. Part of Hart-street is covered over by scaffold boards, laid on poles resting at one end on the opposite houses; but as the walls extend to a considerable height above, and are exposed to all the risks of March winds, the work is necessarily conducted under considerable danger, both to the labourers and to the public; and it would seem scarcely possible to get through it without accident.

A paragraph also has appeared in some of the journals, referring to the discovery of a fire in some part of Drury-lane Theatre. It will be recollected that the former theatre of Drury-lane was burnt on February 24, 1809, five months after the loss of Covent-garden, and that the shortness of the interval, with no very conclusive reason as to the origin of the fire in either case, led many to favour the idea of incendiarism. The course of the present inquiry may, perhaps, show that there is no reason for the similar explanation which has been offered, as to the origin of the late fire at Covent-garden. The jury must, however, have better means than are at present afforded them, of comprehending the plan and construction of one of a class of buildings, more than usually difficult to be understood by persons not conversant with matters of a technical and professional description. Mr. Smirke, who was present on Tuesday, with plans, seems disposed to render every assistance in his power: Mr. Albano would, doubtless, do the like; and we venture respectfully to urge, that at the next sitting, every means should be taken in what seems *preliminary* to the consideration of the evidence of those who were at the fire. The expense of a few large diagrams,—showing the plan of the building, the arrangement of the roof, together with the boarded ceiling of the auditory, and that of the chandelier and ventilating shaft—would be well laid out. Also, we may say there are models of the "auditory" obtainable; which, with others—showing the usual position of "flies" and scenery—which might be got, it could not but be useful to have on the table.

We agree, therefore, on general grounds, with the coroner, that such inquiries as that which he is conducting should be commonly made. There can be no doubt that were they so invariably, the number of fires would be at length much diminished. In the case of houses,—materials chosen and put together as though *designed* for burning, and against the use of which it seems at present vain to argue—would be less generally adopted.

The inquest, barely opened on Tuesday, now stands adjourned to Saturday in this week. It can hardly be concluded then, if all important points are entered upon. The witnesses already examined have been three of the four firemen attached to the theatre; Mr. Palmer, the gas-fitter; and Mr. Sloman, the carpenter. The evidence is, as might be expected, in some points conflicting; and, without our making any imputation on that score, evidences the desire of each department of the establishment to throw blame off its own particular shoulders. The firemen considered that the fire must have been the work of an incendiary; though it did not appear that they had sufficient ground for saying so, beyond the absence of other discoverable cause: Mr. Palmer's evidence testified to the management of his own concerns, and the general arrangement of the gas fittings; whilst Mr. Sloman contradicted the other witnesses as to the fact of dangerous escape of gas,—saying that he had been continually drawing the attention of the proprietors to it, and even as recently as the morning of the day on which the ball commenced. It is clear that this point should be narrowly gone through. The firemen will admit that there was no escape beyond what would inevitably be noticed in such cases. Gas in the carpenters' shop had not been in use since the time of preparing for the pantomime at Christmas, when the fittings were first put up: but it did not seem to be left conclusive, whether the connection with the painting-room was broken off subsequently, whether the gas could be turned on by others than Mr. Palmer's men, who ordinarily were called upon to take the duty, and whether if at any time turned on, and afterwards turned off at the stage, enough gas might not remain in the pipes to burn a considerable time if lighted. Besides inquiring a little further into such points, the jury might also desire definite particulars as to the currents of air which it was said would render any accumulation of gas impossible. Scientific evidence, also, as to the circumstances under which explosions of gas take place when mixed with air, would be useful, as well as with regard to the results of an explosion could one occur. It may be only by knowing what *could not* have led to the fire, that the desired result of the inquiry may be got to, or the proper precautions taken in other buildings of the like character.

As regards the idea that the origin of the fire was in some manner connected with the length of time during which the chandelier had been burning, the evidence was contradictory as to the hour at which it was lighted, Mr. Palmer saying that the chandelier was lit at a quarter to twelve at mid-day on the Monday, and not afterwards put completely out, whilst James Castle, the fireman, said that he attended the gas-man who lighted the chandelier between seven and eight o'clock on the night (Tuesday) before the fire. We may state that the reports of the inquest in the daily papers do not tally with each other; and certainly do not agree with our own careful notes on several important points; and this—in addition to the fact that actual discrepancies have not been noticed elsewhere, and require to be cleared up—it is which induces us, even before the termination of the inquiry, to go through the evidence, although points may at first appear to be noticed by us not *immediately* bearing upon construction.

James Castle deposed that he had been in the theatre since one p.m. on the Monday, with the exception of a short interval, up to the time when he first noticed the fire, between four and five o'clock on the Wednesday morning. At the time last mentioned, he and his fellow-servants were on the stage. They had remained below because there they could see all the lights in the house, and danger was apprehended from the number of persons who were smoking. None of the firemen had been into the carpenters' shop for some hours; though at three a.m. on the Wednesday, Wm. Butler had gone up to the "flies." There, no smell of smoke was then discoverable.

The duty of the firemen seems to have been left in great measure to their own discretion, except after the conclusion of performances, when they were expected to go through the house once in every hour. It seems doubtful, however, whether they considered this requirement to extend to the carpenters' shop. To this place any one might have obtained access on the night of the fire. The fire was first discovered by Mr. Palmer, who, on being asked by Castle what "battens" he would have kept burning for the workmen who would shortly arrive, looked up from where he was standing on the stage, a little behind the proscenium, and saw a light through the holes in the floor of the shop above.

It should be understood by those not familiar with the plan of theatres, that the carpenters' shop is a room in the roof, floored on the tie-beams, and that it extends over the whole building,—excepting that one small portion at the stage end is parted off, forming the painting-room. The access to the shop is by stairs from the upper "flies,"—the "flies" being galleries used in working the scenery. The floor of the shop is necessarily ceiled under, in the portion of the house in front of the curtain,—boarding being adopted in the case of the Covent-garden theatre,—whilst over the stage, the flooring is exposed, and is cut through in many places for the passage of ropes and other purposes. Over the chandelier there is an aperture, with a shaft above for ventilation, and through the aperture the chandelier is lighted by a rod, with a long wire at the end, on which a piece of wool soaked in spirits of wine can be fixed.

It had been the practice at Covent-garden—when the 800 burners of the chandelier were lighted,—to extinguish the wool, by plunging it into the spirit, which was contained in a vessel that the gasman carried with him; and then the rod was left hanging down, or resting in the basin of the chandelier,—that is to say, below the ceiling of the house. It seems necessary to ascertain exactly what was done in the present instance. Besides the discrepancy in the evidence, as to the hour of lighting, it has been stated in one account subsequent to the fire, that *naphtha* was used, and that some of this spirit was *poured* over the wool to extinguish it, or try whether it had been extinguished,—one of the men holding his hand beneath. The more concentrated forms of naphtha are so inflammable, that disasters have occurred from the mere opening a bottle in the vicinity of a light. It is quite possible, that further inquiry into the facts might show that any suggestion grounded upon points here referred to, could not be received; but where there is so much difficulty, we should prefer that every view of the case should be looked at, if only to be dismissed.

To return to the evidence of the firemen,—it appeared that when Castle had *his* attention called to the light appearing through the cracks of the floor, he rushed up-stairs, followed by other firemen. The door of the shop was found open,—though Castle speaks positively to having closed it when he was up some hours before,—he supposing himself to have been the last person there. The two first men were met by a gush of dense black smoke. By crawling on their hands and knees, Castle and Butler got in some distance, but not near enough to reach the fire-cock: they were then forced to return. All the men agreed that the focus of the fire, as first seen, was situated at a point on the stage side of the proscenium, and a little to the left of the centre. Here, what was burning was a heap of wood, which had been some time lying thereabouts, and the fire was being communicated to other pieces lying around. Mr. Sloman subsequently contended that any waste pieces and shavings were regularly removed, and could hardly have been in the position indicated; though materials and properties were necessarily in the shop,—but chiefly along the sides. A smell, of a character distinct from that of burning wood, was spoken of by the firemen, who considered it as resembling the smell of charcoal. Perhaps not much importance will be attached to the nicety of definition under such circumstances. It, however seems, that the fire, *as first discovered*, was at a considerable distance from the position of the chandelier. Whether peculiar smell could be caused by anything coming under the head of "properties," or by other matters in the shop, or by the marine glue with which the boarded ceiling was originally put together, might be ascertained. The witnesses agreed that there were *no* flues from the shop, though a contrary statement would be inferred from the reports of the evidence. The glue was heated by means of steam-pipes. There were indeed about seventy flues in the external wall, some of which were in use on the night of the fire: some of these occasionally got on fire, but had not done so recently. That may be one slight ground for inferring that they may have done so in the case in question. The cases which we are continually reporting of fires from flues, at least would show the importance of care in a large building where timber enters so much into the construction.

Castle, proceeding with his evidence, states that he got down to the upper "flies." The flakes of fire then were falling thickly from the floor above him. He charged one of the mains, and the water flowed. There were two of these mains on each floor, supplied from a cistern in or upon the roof; and this there seems no reason to doubt was always kept charged with 18 tons of water. By this time, people below were saving their lives. Castle passed to the next "flies," undid some of the straps of the scene barrels, that the scenes might fall clear of the fire; next had to make for the stage,—where he assisted at the main there, as long as pos-

sible—and when he got outside, the engines in the street were at work.

It may be inferred from the evidence that the period which elapsed from the first discovery of the fire, to the time when the flames obtained complete possession of the building, could not have exceeded half an hour. It has been stated that there was much difficulty in getting some of the 200 people safely out. What would have occurred at an earlier hour of the night, even with the comparatively ample provision for egress which there was at this theatre; and what might be the lamentable extent of a disaster any night at other London theatres? But we ought to have said enough on this head, echoed as our warning has been by others. We merely again allude to the arrangements at Drury-lane, perhaps still the best provided theatre; but where the doors of exit first thought necessary have been reduced in number, and where the paying-places seem to be so devised as to produce the very results which occurred from the same cause in the disastrous case at Glasgow. It is to be recollected that no unusual escape of gas or smell of fire was noticed prior to the discovery of the fire. Wm. Butler speaks positively to there being none at the upper "flies" at three o'clock. Could any escape have taken place in the upper part of the theatre, it is considered that it would unquestionably have been prevented from accumulating in the shop, by the draught which there always was through it, and through the ventilating shaft. The escape which Sloman speaks of, seems to refer to what pervaded the house—the carpenter's shop included. It does not appear that he considered it to proceed in the first instance from the shop. Upon the balance between the statements as to the amount of escape, and scientific questions as to currents of air, the nature of gas-combustion, and the causes and results of explosions, the issue may be found to turn. The ceiling of the auditory, it is affirmed both by Castle and Palmer, could not get greatly heated. The lights were not nearer to it than 10 or 11 feet; the flame could not be turned on to a greater height than about 2½ inches; the chandelier had been kept burning during a greater number of hours than on this occasion; and at certain entertainments, twelve smaller chandeliers of eighty fish-tailed burners each, had been suspended round the large chandelier, and still without overheating. The chandelier, as stated by Palmer, could not be raised or lowered. It was fixed to iron bars, and these could not have got overheated.

We have thus gone through the most important particulars, because we believe it will be found that the branch of the question in which we are more particularly interested—the structural one—will be found to have had some connection with the cause of the fire. It should not be assumed, as some have done, that the want of proper watching by the firemen was, as it were, the cause.

Whether it may be possible to adopt methods of construction less liable to communicate fire,—arising from gas, or whatever else,—we have no immediate means of deciding. No one, however, who saw the building at the time at which we wrote last week, could avoid being struck with the remarkable appearance of the walls, arising from a method of building—now fortunately not in use in the metropolis. In all the walls of the original building, bond timber occurred at distances of nine to twelve courses,—sometimes in pieces of large scantling, at both sides of the wall, bolted through to each other. In some places the timber was burning a week after the date of the fire; and may be, yet. Mr. Albano, on the occasion of the important works which he carried out in 1846-7, found at 13 feet from the foundation, a tier of Memel bond timber,—scantling, twelve by six inches,—introduced in the main walls all round. Externally, there was merely the appearance of shrinkage; but on examination, the timber was found to be quite decayed. Not only this, but four other such tiers,—amounting to above 2,000 feet,—as well as the lintels, which had become decayed, were removed. The bond timber was indeed removed wherever the works then undertaken admitted of it: brick and cement being inserted in short lengths, and stone lintels being laid. Having in 1847, given credit to Mr. Albano for his efforts in this particular, and for the general works carried out under him, we are much surprised that we should be held to have *insinuated* anything to his disparagement, at the very moment when we were really lamenting that more had not been possible to be done for the general security of the building from defects of timber construction. Mr. Albano's work, we need hardly repeat, within the main walls, was, as it were, an entirely new building. New fire-proof staircases were erected; extensive alterations and additions were made in entrances, saloons, offices, and apartments; three tiers of boxes were replaced by six tiers; and a great number of minor improvements were carried out. Although, however, the internal space of the auditory, as well as the width of the proscenium were increased, the original quadrangle encasing this space, if we may so speak, and a great number of the external and cross walls (which may be seen from Bow-street) remained; and these are at this moment, in the dangerous state to which we referred last week.—We believe that at the time the theatre was originally built, concrete was not used by Sir Robert Smirke; and it will be interesting to discover whether the timber substitutes are in the condition in which the other timber was found, which might have led to the ruin of the structure by an agency other than fire. In Mr. Albano's new foundations, stone landings were carefully substituted. A wall at the back of the auditory under the galleries, and the curved portions at the angles, remain,—exhibiting plainly their courses of bricks in cement.

The whole of the iron columns of the boxes are amongst the general wreck, and have been acted upon in extraordinary ways by the fire. The girders are generally cracked or broken.

ON THE MANUFACTURE OF CROWN AND SHEET GLASS.

THE admirable manner in which the curiosities of one great division of the glass manufacture, that of flint glass, have been recorded by an able chronicler,* induces me to confine myself to another and scarcely less interesting branch, the manufacture of blown window glass. The history of this glass is most scanty, when compared with the abundant proofs which Egypt, Greece, and Rome, have left behind, of their daily use of vessels and ornaments of glass, and of the skill of those who fashioned them. The general silence of the ancient writers, and the lack of all allusions to the subject, are sufficiently convincing of their ignorance; and even in the first century of the Christian era, the words of Seneca and Philo might bear a doubtful meaning, but for the evidence of an unimpeachable witness. Pompeii, awakened from a slumber of 1,700 years, has proved the existence of window glass in the days of the early emperors. In a small chamber, attached to the bathing-room of a private dwelling-house, excavated about the year 1763, was found "a window, closed by a movable frame of wood, which, though converted into charcoal, still held, when it was found, four panes of glass about 6 inches square." And, in 1824, in a room connected with the public baths, was discovered "a window 2 feet 6 inches high, and 3 feet wide, in the bronze frame of which were found set four very beautiful panes of glass, fastened by small nuts and screws, very ingeniously contrived, with a view to being able to remove the glass at pleasure." But this disclosure goes no further than to prove the then existence of such glass, and does not interfere with our belief that windows of that age were generally glazed with mica stone, or lapis specularis, obtained chiefly from Cyprus, Spain, and Cappadocia. In the fourth century, Lactantius and St. Jerome allude to window glass, and we hear of glass in churches and public buildings; but then, and long after, in these only. Nearly three centuries later, in 674, the Abbot Benedict, so saith the venerable Bede, sent for artists from beyond seas to glaze the church and monastery of Wearmouth, and York Cathedral was glazed about the same time. In the eleventh and twelfth centuries, glass was generally employed in the windows of the numerous religious edifices which the pious enthusiasm of that period called into existence; but the specimens handed down to us fall so far short of the products of to-day, that we can scarcely believe, what is undoubtedly the fact, that the two are results of processes substantially the same.

White glass, for house windows, was not introduced into England until the close of the twelfth century; but, even as late as the sixteenth century, it had not entirely displaced the imperfect method of transmitting light through oiled paper, linen cloths, and wooden lattices. In the minutes of a survey of Alnwick Castle, made in 1573, the following curious entry occurs:—"And because, throwe extream windes, the glasses of the windowes of this and other my lords castels and houses, here in the country, dooth decay and waste, yt were good the whole leightes of everie windowe, at the departure of his lordshippe from lyinge at anie of his sade castels and houses, and dowring the time of his lordshippes absence, or others lyinge in them, were taken downe and lade up in safetie, and at sooch tyme as other his lordshippe or anie other sholde lie at any of the sade places, the same might then be set up of newe with smale charges to his lordshippe; whereas now the decaye thereof shall be verie costlie and chargeable to be repayred."

Glass was, probably, not applied to the windows of English farm-houses before the reign of James I. It is mentioned, in 1615, in a lease in the parish of Suffolk; but as late as 1661, in Scotland, "the windows of the ordinary country houses were not glazed, and only the upper parts of those of even the king's palace had glass, the lower ones having two wooden shutters, to open at pleasure and admit fresh air."

These scanty supplies were chiefly imported from abroad. The manufacture of blown window glass in England existed in the fifteenth century, and, perhaps, even prior to that period; but the glass then produced was of a very inferior description, and the first works of note established in this country were those of Sir Matthew White Ridley and Co. on the river Tyne, at Newcastle, about the middle of the seventeenth century.

Crown and sheet glass are classed among the simple varieties, and are a compound of silica, soda, and lime, the result of the union of silicic acid with two separate bases. Let us regard, for a moment, each of these silicates apart. Silica and soda may be combined by water or by fire, either by the addition of silicic acid to a boiling solution of caustic alkali, or by mixing the two in a dry state and exposing them to the action of heat. In either case the resulting silicate is soluble, more or less so, according to the greater or less proportion of alkali, but still always soluble. The usefulness of this solubility has, of late years, been much developed. In 1844, Mr. Ransome patented the employment of this glass in the manufacture of artificial stone, by mixing it, when dissolved and evaporated to the consistence of a gum, with sand, limestone, and other substances. And quite recently, Mr. Gossage has substituted it for alkali in the manufacture of soap. Its application to the rendering of wood uninflammable is of much older date. But for window panes, it is of course quite useless. Nor is the simple silicate of lime more practicable. It is the result only of the most intense heat, and assumes the form more of a slag than a glass. But the union of these two silicates produces a hard, cheap, and transparent material, not indeed absolutely insoluble, but capable of resisting the action of water for a very long period.

The principle ingredient of this trio is silica—which, already distinguished as the chief element of the bricks with which we build our houses, is now no less distinguished as the chief element of the glass by which we furnish them with light.

The manufacturer employs silica in the shape of sand, selecting such as the microscope and analysis show to be most suitable for his purpose. Every country in which glass is manufactured abounds in this material. The finest English sands are from Alum Bay, in the Isle of Wight, and Lynn, on the coast of Norfolk. The French obtain a very superior sand from the Forest of

* See Mr. Apsley Pellatt's "Curiosities of Glass Making."

Fontainebleau, in the neighbourhood of Paris, and to the purity of this and their other materials the superior colour of their glass may be partially ascribed.

The next important element is soda, which is preferred for this kind of glass, as a cheaper ingredient, to potash. As the use of soda, in its present form, is a comparatively recent introduction, I was anxious to obtain information as to the steps which led to so important an improvement; and I have to thank M. Bontemps for a valuable communication on the subject. Not more than thirty years have elapsed since crown and sheet glass were manufactured from crude alkali obtained from the ashes of a certain sea-weed, and in this country known by the name of kelp. The preparation of kelp for this purpose employed a large population on the northern shores of Scotland and west of Ireland; and the abandonment of this material plunged whole districts into idleness and misery. This kelp was used in combination simply with sand —the kelp containing soda and potash, and furnishing the lime necessary for the composition of the glass. But the glass thus produced was of very variable character, arising from the uncertain quality of the kelp, and also of a very inferior colour, evidence of which is still to be found in the old windows of ancient houses that have escaped the ravages of improvement.

A similar crude alkali was employed in other countries, under the name of barilla, soda of Alicant, &c. and at Venice, and in the South of France, this was mixed with a natural product called the natron of Egypt, and containing carbonate, sulphate, and muriate of soda.

The discovery of Le Blanc, in 1792, which effected the conversion of common salt into carbonate of soda, was the commencement of a new epoch in the history of this glass. The manufacturers of soap at Marseilles ceased to import the soda of Alicant, and employed this new alkali in its place. Their example was followed by the manufacturers of plate glass; and before long, the employment of the old crude alkali was discontinued also in the preparation of blown window glass, and an improved quality and colour was the result.

The alkali thus substituted was the carbonate of soda of commerce, containing, besides carbonate, a considerable portion of undecomposed sulphate. The further improvement which followed, viz. the substitution of simple sulphate of soda for this carbonate of commerce, was due to the researches of the celebrated Gehlen; but some time elapsed before his ideas were carried out in Germany, and it was not until 1825 that the manufacturers of France, released, through the exertions of M. Clement Desormes, from the absurd veto which the government had pronounced on the sale of sulphate of soda, were enabled to turn their attention to the employment of this cheaper article. They proceeded with caution in the introduction of this new ingredient, first mixing a small quantity of sulphate of soda with a large proportion of carbonate, then half of each, and finally, excluding carbonate, they adopted the sole use of sulphate, to the injury doubtless of the colour of their glass, but gainers by the employment of a cheaper and more manageable material. Where colour, however, is an object, as in the manufacture of plate glass, the exclusive use of carbonate of soda is still retained.

The introduction of carbonate of soda, prepared from salt, into the glass manufacture of England, dates from the year 1831. Proceeding cautiously in the steps of their foreign brethren, the English glass-makers, after they had established the use of carbonate, made trial of the effect of a small quantity of sulphate of soda in a large quantity of carbonate. The carbonate gradually decreased, until at length, in the preparation of blown window glass, sulphate stood alone. But here, as abroad, the manufacturers of plate glass still adhere to the carbonate.

As the use, whether of carbonate or sulphate of soda, involves their preparation from common salt and sulphuric acid, attempts have been made to accomplish the direct union of silica and salt, in the manufacture of window glass, but have hitherto failed of success. The black bottles of Newcastle are made from common rock salt and sand from the bed of the river, with the carbonate of lime of the soap-works, and the tank waste of the alkali-makers; but for all better kinds of glass, the circuitous combination of silica and alkali is still found necessary.

The third element in the composition of this glass is lime, which may be introduced as lime, chalk, or limestone. This renders, as I have stated, the alkaline silicate insoluble; and when rightly balanced by the other ingredients, promotes the fusion of the whole, and improves the quality; but when added in excess, the glass becomes hard and difficult to work, and subject to devitrification.

The three sources, then, from which we obtain silica, soda, and lime, the three great elements of window glass, are sand, salt, and chalk or limestone, and of these nature has provided an exhaustless supply.

But besides these, several other ingredients, in much smaller quantities, enter into the composition of this glass. Alumina is sometimes purposely introduced, and is always accidentally present, brought there by the action of the materials upon the clay of the pots in which they are melted. Alumina, if present in any quantity, is always an undesirable element, as, by increasing the number of silicates, it renders the glass more liable to devitrification, it being well known that the more compound a glass is, the more does it display this tendency. Bottle glass, which contains a greater variety of bases than any other, is of all the most easily devitrified.

Another and an unwelcome element is iron, which is almost always present in the sand, sulphate of soda, and chalk, partly in the state of protoxide, the colourizing effect of which is partially destroyed by the introduction of manganese, the peroxide of manganese and the protoxide of iron each possessing colouring properties, but by their mutual action rendering each other comparatively harmless. The effect of manganese is, however, much interfered with by the carbon, which is necessarily introduced to decompose the sulphate of soda. This carbon, subtracting oxygen from the manganese, prevents its action on the iron.

A little arsenic promotes the decomposition of the other ingredients, and tends to dissipate carbonaceous impurities not otherwise disposed of; but, in excess, it produces a milkiness in the glass, which time will increase.

Lastly, to this farrago of sand, soda, chalk, charcoal, arsenic, and manganese, we add what is abundantly produced in every manufactory of glass, a quantity of waste glass, or cullet, which, being more fusible than the raw materials, facilitates the melting.

The ingredients are mixed in much the same proportions either for crown or sheet glass, with the exception of the lime, of which the nature of the crown glass manipulation requires a smaller quantity.

To lay down any standard proportions is almost impossible, as no two manufacturers use the same, and even in the same works the melting powers of the furnaces may so far differ as to render necessary, for the production of the same glass, variations in the proportions of its elements.

The ingredients, having been thoroughly incorporated together, are, without further preparation, introduced into the pots in which they are to be melted. During the period to which I have referred, when barilla, kelp, and other forms of crude alkali were in use, it was the custom to subject the materials to the preliminary operation of "fritting," or stirring them together under the heat of a reverberatory furnace, thereby effecting partial decomposition, and burning off any carbonaceous impurities; but the introduction of alkali prepared from salt has removed the necessity of this treatment.

The pots are made of the best Stourbridge clay, mixed with about one-fifth of ground potsherds, and are distinguished from flint-glass pots by their greater size, and by the absence of any hood or cover to protect their contents from the fire. Their size has been of late years considerably increased, both in width and height, and a pot whose dimensions would, a few years since, have excited wonder, is now in ordinary use.

These pots are made entirely by hand, no machinery having as yet been invented that can replace that process, slow but sure, by which, bit by bit, the pot is built up. A good pot-maker, with two assistants, can furnish three or four per week. After a careful drying of many months, they are made ready for the furnace by a previous heating in a kiln or pot-arch. Here a small lump of coal, thrown against its side, tests the soundness of the pot. If, when struck, it rings well, its future is promising; but if it returns a dull sound, it will probably be short-lived in the furnace, though now and then such a pot will disappoint the bad opinions formed of it, and turn out a respectable pot after all.

The terrible task of setting these pots in the furnace falls upon the glass-house crew, and the nicety with which these enormous vessels are adjusted in their place, in the teeth of a consuming fire, is, perhaps, that operation which in the many marvels of glass-making would most astonish a stranger to such scenes.

The average duration of the pots when thus fixed is about seven weeks. Some attain the age of ten or twelve, while others, as every manufacturer well knows, terminate their existence prematurely, either from the naturally defective constitution of the pot, or from bad treatment in the pot-arch, or, more frequently, from its having been "starved," exposed, that is, to a current of cold air, in the furnace, through the neglect of the attendant. "Misfortunes never come singly," is an adage applicable to the catastrophes of pots. It was truly remarked to a manufacturer, at a period when such calamities were frequent, "Your pots break, because they break."

The breakage of a pot often disturbs the furnace to such an extent that the breakage of others frequently follows, and many weeks will sometimes elapse before the disorganization thus produced can be rectified. The loss of the pot and the "metal" contained is nothing as compared with the injury which the glass in the surviving pots, and these pots themselves, are apt to sustain.

My limits compel me to forego any description of the furnace in which the pots are placed, or of the process by which the materials are transformed from their primary condition into a molten vitreous mass. Assuming, then, that our pots are full of melted glass, let us take a brief survey of the two methods by which this glass may be brought into the required form.

Crown glass, as the older of the two in this country, must first claim our attention. Upon the surface of the melted glass is a ring of fire-clay, which, when the materials were thrown in, lay at the bottom of the pot, and after the completion of the melting found its way upwards. This ring is of great service, for, floating in the centre of the pot, it prevents the exterior surface of the metal, or melted glass, which becomes stiff and stringy during the long period of working, from mingling with the interior or hotter surface, which thus remains throughout of a suitable consistency. The labour also of the skimmer, whose duty it is to clear the surface of the metal from any scum or dirt that may collect upon it, is considerably diminished by the ring, which, limiting the space from which the glass is drawn, limits also the space which it is necessary to cleanse, and any bubbles or impurities in the glass have a tendency to attach themselves to the ring.

The metal, or melted glass, having been brought by the gradual cooling of the furnace from a state of complete fluidity to a consistence capable of being worked, the gatherer dips the end of his pipe, or hollow rod of iron, into the pot inside the ring; and twirling it round its axis to equalize the thickness of the gathering, he collects upon the end, or nose, as it is technically called, a pear-shaped lump of glass. Resting his pipe upon a stand or horse, he turns it gently round, and allows the surface of the lump to cool, to fit it for a second gathering. The lump completed, the gatherer having cooled his pipe under a trough of water, that he may handle it at any point, proceeds to roll the glass upon a marver, or metallic bed, until it assumes a conical form, the apex of the cone forming the "bullion point." A boy now blows down the pipe while it is still being turned by the gatherer on the marver, and expands the glass into a small globe. Having been heated, it is blown again, and assumes the shape of a

Florence flask, and the future rim of the developed plate is prepared by rolling the piece, near the pipe nose, upon the edge of a marver. Again heated, it is now expanded by the blower into a large globe. During this expansion, it is important to keep the bullion point exactly in the position which it previously occupied, in a line with the axis of the pipe. To effect this, the blower rests his pipe upon an iron support, and while he blows down the pipe and turns it round at the same time, a boy holds against the bullion point a piece of iron terminating in a small cup. Again presented to the fire, by the peculiar manipulation of the workman and the peculiar direction of the flame upon it, the front of the globe is flattened, the possibility of the globe collapsing during this operation being prevented by its rapid revolution round its axis. The piece now resembles somewhat in shape an enormous decanter, with a very flat bottom and a very short neck. The bullion point is still to be seen in the centre of the flat bottom, and its use now becomes manifest. The pipe is laid horizontally upon an iron rest, and a man approaches having in his hand a large rod of iron called a ponty, tipped with a lump of molten glass. Pressing this lump upon an iron point, so as to give it the form of a little cup, he fits it, when thus shaped, on to the bullion point, to which it soon becomes firmly attached. The lump thus formed is called the bull's-eye, or bullion of the developed plate. The incision of a piece of cold iron in the glass round the nose of the pipe, and a smart blow, soon detaches the pipe, which here takes leave of the piece, and after having lain idle a few minutes, till the glass adhering to it has cracked off, it is warmed, and carried back to the pot to repeat its course.

The end of the piece which was next the now detached pipe is called the nose, and gives its name to the furnace or nosehole where this nose is, on account of its thickness, heated almost to melting, with a view to the comiug operation. The glass now undergoes its last and most dreadful torture in the hands of a man who, with a veil before his face, stands in front of a huge circle of flame, into which he thrusts his piece, rapidly meanwhile revolving his ponty. The action of heat and centrifugal force combined is soon visible. The nose of the piece expands, the parts round cannot resist the tendency—the opening grows larger and larger—for a moment, is caught a glimpse of a circle with a double rim; the next moment, before the eyes of the astonished spectator, is whirling a thin transparent circular plate of glass, which, but a few minutes before, was lying in the glass-pot, an undistinguishable portion of the molten mass. Still whirling, the table, as it is now called, is carried off, laid flat upon a support called a whimsey, detached by shears from the ponty, lifted into the annealing kiln upon a fork, and piled upon its edge against the preceding table. The weight of so many tables pressing one against another would cause the hindermost to bend, but this is prevented by the intervention of iron frames or drossers, which divide the tables into sets, the first drosser leaning against the wall of the kiln, the second against the first and so on, and thus rendering each set of tables independent of those behind it for support. As the bull's-eye or centre lump, which the ponty has left behind it, keeps each table from close contact with its neighbours, the air passes freely between them, and the annealing is accomplished with tolerable rapidity, varying from twenty-four to forty-eight hours, according to the number of tables in the kiln. From the kiln the tables are conveyed to the warehouse, having passed, since their first exit from the pot, through the hands of ten distinct workmen.

The above brief and vague description of a marvellous process will, I trust, be intelligible to those who have themselves seen it: to those who have not seen it, no description, however elaborate, no diagrams, however clear, can convey any idea of the perpetual change of form, size, and appearance which the glass exhibits during its growth.*

* The foregoing is a portion of a paper by Mr. Henry Chance, M.A. read at the Society of Arts, on the 13th ult. We shall give the remainder hereafter.

GEOMETRICAL PROPERTIES OF CONIC SECTIONS.

THE ELLIPSE.*

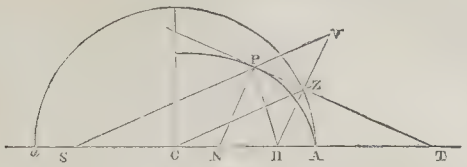

Fig. 4.

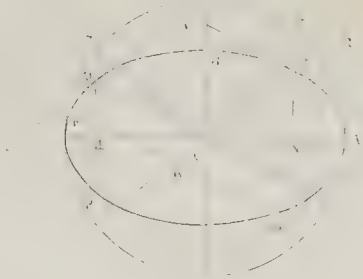

Fig. 5.

THE following is another method of drawing a tangent, and is introduced in order to explain some important properties of the ellipse:—

Let S and H (fig. 4) be the two *foci* of the ellipse, and P any point on the curve. Draw S P and H P, produce S P to V, and make P V = P H. Join V and H, and bisect the line V H in Z; then P Z is the tangent at point P, since it bisects the angle V P H, and one property of the ellipse is, that *the tangent bisects the external angle of the focal distances.* S P and H P are called the *focal distances*, and H P V is the external angle which they make with each other.

Since C S = C H, and H Z = V Z, it follows that, if we join C and Z, the line C Z will be parallel to S V, and will also be equal to half the length of S V, by the sixth book of Euclid. But S V = S P + H P = A*a* = twice C A; therefore C Z = C A, or C Z is a radius of the circumscribed circle; and thence it follows that *the perpendicular* H Z *from the focus* H *upon the tangent meets the tangent in the circumscribed circle.*

Since the tangent P T bisects the angle H P V, it follows that the *Normal* P N (or perpendicular upon the tangent at the point of contact) bisects the angle S P H; therefore the *focal distances make equal angles with the Normal*, at any point of the curve to which they are drawn. Hence it will be evident, that if we have a reflector in the form of an ellipse, and a light is placed at S, all the rays which fall upon the curve will be reflected to H, and *vice versâ* This is why S and H are called the *foci* of the ellipse.

We here presume the reader to be acquainted with the fundamental law of light, that the angle of reflexion equals the angle of incidence.

Hence it will be seen that the elliptic form is a bad one for the contour of a building intended for public speaking; since if a powerful speaker happened to be placed at or near to one focus, the part of the audience near the other focus would be deafened by the noise of the reflected voice.

In the circle, any straight line which passes across it from one point on the curve to another, but does not pass through the centre, is called a *chord*; and if the line passes through the centre, it is called a *diameter* of the circle. The same terms are applied to lines similarly drawn in the ellipse, but with this difference, that whereas the *diameters* of any one circle are all of equal length, those of an ellipse vary in length. The lines P *p* and Q *q* (fig. 5) are diameters of the ellipse.

The term *conjugate diameters* is applied to those which have the following relation to each other:—

Let P *p* be any diameter and P V the tangent at the point P. Draw the diameter Q *q* parallel to the tangent at P, then Q *q* is called the *conjugate diameter* to P *p*, and it has this peculiarity, that the tangent drawn at Q is parallel to the diameter P *p*, and therefore P *p* is the *conjugate diameter* to Q *q*. And since any diameter divides the ellipse into two equal and similar parts, it follows that the tangent at *q* will also be parallel to P *p*, and the tangent at *p* parallel to Q *q*. These diameters, therefore, possess this property, that *the tangents at the extremities of any diameter are parallel to the conjugate diameter.*

If we draw a *chord* F E parallel to Q *q*, we shall find that F E is bisected in K by the diameter P *p*; and if we draw a *chord* parallel to P *p*, it will be bisected by the conjugate diameter Q *q*; one of the properties of *conjugate diameters* being, *that each diameter bisects all the chords parallel to the other.* It will be evident that the major and minor axes are conjugate diameters.

If the tangents at P and Q are produced to meet at V, we have a parallelogram (C V) drawn upon the half conjugate diameters, and it has this remarkable property, that it is equal in area to the rectangle C R drawn upon the semi-axes. Therefore, if we draw the tangents at each extremity of the diameters, it follows that the parallelogram formed by them outside the ellipse is equal to the rectangle upon the major and minor axes. We have, then, this connection between all conjugate diameters of the same ellipse, that *the parallelograms formed by the tangents at the extremities of conjugate diameters are all equal to each other in area.*

There are other peculiarities connected with the conjugate diameters, of which we give the two following:—

If we draw the ordinates N P and M Q, and produce them to meet the circumscribed circle in Y and X, then the ordinate N Y will be equal to C M, and ordinate M X equal to C N.

Lastly, draw the radii C X and C Y: the angle X C Y will always be a right angle.

E. W. TARN.

* See p. 106, *ante.*

THE IRON TRADE.—No change worth notice has taken place of late in this trade, except that there is talk of a probable reduction of price at quarter-day. At all events, there seems to be not the slightest idea of any rise in price being attempted on that occasion. Already, as we before noted, iron is sold considerably below the nominal prices of last quarter-day. Orders meanwhile are withheld in consequence of the rumours of an acknowledged reduction.

STYLE FOR MODERN BUILDINGS.

HAVING read with great interest the letters of Messrs. Petit, Tite, and Scott, I venture to add some remarks that have occurred to me. The subjects discussed are Utilitarianism. Classical and Gothic Architecture, and how far utility is combined with the two latter-named styles. That utility should form the first consideration in architecture no one will deny; but this must be only one point,—the art must be brought to bear upon it before it can be presented to us as a true piece of architecture.

In my walks through London I am continually on the watch to see how far the styles adopted in modern erections fulfil the purposes intended, and I know no recent building that so amply satisfies the utile as the present Palace of Westminster. Striking as the new façade is in Palace-yard, I am aware many objections may be urged against it; but what building is there in London where the windows afford such an abundance of light without detracting from the effect of the building? Let us turn to palaces coeval with it in Pall-mall, some by the same hand. What is the prominent defect in the Reform and Travellers' Clubs, but the size of the windows being too small for our dark climate? Again. Compare the new library at the Carlton with the library of the House of Commons. As to its utility or architectural effect, even descending to minor comforts in modern buildings, it is worth while to visit the smoking-rooms in the two buildings under comparison. Again, let us test these various buildings by originality. Have we never seen the Travellers' Club, the Reform, or Carlton, elsewhere? I recollect being summoned to a meeting at the Carlton, to consider the subject of the rebuilding of the club. On the chimney-piece was placed a print of Sansovino's library, to disarm criticism. The frieze of the Athenæum was designed before the birth of our Saviour: it can hardly be claimed as original or appropriate. But where do we find the new building at Westminster, or a similar façade to that which faces us as we enter Dean's-yard? There is a new club now building in Charles-street. Curiously enough, I opened Gwilt's "Encyclopædia of Architecture," and found the identical cornice at fig. 947. In this building, utility seems to have encumbered it; the bows in either front are disfigurements; and so the architect evidently feels them, more especially in Charles-street: the door also, following convenience, is not in the centre. How much do I feel might have been made of these irregularities in the Gothic style, while the necessary unity that must be observed in the Italian is destroyed! Utility has not altogether been met with at the Exchange: the shops, to serve that purpose, have cut away the granite bases of the columns, and I have been told that the western portico is a recollection of the Temple of Jupiter Stator. I also see the perforated iron gates are glazed.

Let us now turn to church architecture. A chancel is not necessary to a Gothic building, but is to a church, regardless, of style a matter of ecclesiastical propriety. The same may be said of a stone pulpit: it is neither classical nor mediæval; and, if utility is to govern the practice, I prefer a wooden one with the fewest points in contact with the floor, assisting the preacher's voice, as a sounding-board in a piano forte.

I will now turn to engineers' architecture, which is not encumbered with style, but where material may be supposed to be worked up in the most scientific and economical manner. Let us go no further than Camden-town Station. On the left-hand I observe a buttressed building, almost an Early Gothic church; and on the right a large Chapter-house; while, close to the carriage-door, I see a window designed by an architect much in favour of the classical, which I long to chamfer, to make it more useful and mediæval.

While on the subject of the useful, let me draw your attention to a modern application of science to our comforts, viz. gas-lighting. Walk through the Palace of Westminster, and compare the *gasiliers* there in the Gothic style with those in the Italian, in the Carlton Club: look at them with the eye of an artist or an utilitarian.

As to a class of buildings which are now becoming very prominent features in our great town of commerce,—a whole new street in the city is more or less devoted to examples of large warehouses. The architects of these vast houses have taken some pains to make these erections more than utilitarian. Wherein consists the beauty of these buildings, and where are the defects? The cornice forms the prominent feature (the non-essential part): the defect is the glare, if I may use the expression, of the windows, mounting story after story in equal sizes. These defects I attribute as much to the style adopted as the architect; but how easily had the Gothic style—a style so pliant in fenestration—been adopted, could the difficulties have been overcome: the real essential of the building would then have formed real architectural ornaments. It also occurred to me that the winding-staircase which all these buildings contain might be made a very valuable feature to the external wall, or a variety in the line of roof, a point very much wanted in the long, straight streets of modern formation.

Without dogmatising, let the two styles be thoroughly studied, as exhibiting the best means of erecting buildings suitable to our present requirements. I am sure that happier architectural results will be produced by seeking to adapt old forms under new combinations than all the struggling after a new style, which can never be the creation of one mind, but a succession of great minds struggling to mould right principled forms to existing circumstances. I think this the history of architecture teaches us. Though I appear as an advocate of the architecture of the Middle Ages, I strongly recommend all young architects to thoroughly study the Parthenon, should they intend to exclusively practice in the Mediæval style.

AN AMATEUR.

THE SELECTED DESIGNS FOR BARRACKS.

THE area proposed to be occupied by the design for a Cavalry Barrack, marked "Paritur Pax Bello," and submitted by Messrs. T. H. and M. D. Wyatt, is about twenty-two acres. It presents the following leading features:—

The whole barrack-yard is enclosed with a boundary-wall, 12 feet high, having only one principal entrance to the south. It has been thought very important, that for the purposes of inspection, ventilation, and security, no buildings of any kind should be allowed to abut upon the boundary-wall.

The quarters for married officers have been so arranged as to admit of as much privacy and separation from the ordinary working of a barrack as practicable.

The quarters for the unmarried officers have been placed in the two wings looking towards the barrack-parade, and approached only from that quarter.

A racket-court is provided for the use of the officers, immediately adjoining their quarters, with a bath-room and dressing-room.

The "sergeants' quarters" comprise a mess establishment, quarters for the band-master, and a band practice-room; with apartments for schoolmaster and schoolmistress, immediately adjoining the "chapel school."

Distinct accommodation is provided for the staff sergeants, in a central and important part of the barracks.

A powder-magazine and shifting-room are placed immediately in the rear of the sergeants' quarters, and surrounded by a wall, so as to form a magazine-yard.

No real objection is thought to exist to the practice of having the soldiers' dormitories over their stables; a fire-proof floor being constructed between them, impervious to smell, and materially deadening sound. The ventilation of the stables is so contrived as to prevent the vitiated air from passing to the dormitories through the windows. The men of each troop are accommodated in a distant wing over the immediate horses of that troop, and are divided into four dormitories of thirteen each,—a number which it is believed would be more agreeable to the men than if there were only two dormitories and twenty-six men in each: if, however, it shall be considered preferable to have the larger number, nothing will be easier than to have the rooms thus arranged. The ground space allotted to each man is not less than 7 feet by 5 feet. The rooms are all warmed by fireplaces, and average 13 feet 6 inches in height. The four rooms of each troop are approached by a separate stone staircase, and by a gallery or covered passage over the shed at back of stables. These galleries may be entirely enclosed, or only partially so, opposite the door leading into the dormitories, so as to prevent a draught of cold air into the rooms.

Distinct accommodation is provided in a separate part of the barrack for twenty married men; each couple having one room, 14 feet by 12 feet.

A washing establishment, a "drying-room," a ball-court and gymnasium, quoit and skittle grounds, are provided.

The kitchens are so arranged as to serve for dining-rooms, having abundant height and ventilation. The space appropriated to the actual cooking of the provisions is separated by a screen from the place where the men take their meals. One kitchen and dining-room combined is appropriated to each troop, and the tables are so arranged as to permit the men sleeping in each room to have a separate table permanently allotted to them. The kitchens are in buildings detached from those in which the men's sleeping-rooms are situated, but communicating with them all by covered passages.

The library and reading-room are placed in the most central part of the barrack.

The troop horses are arranged on three sides of a square (two troops on each side), and each troop divided into two stables by a broad archway, for facility of ingress and egress. The two stables for each troop contain fifty-four stalls, forty-five for troop horses, and nine for spare standings and utensils, being the proportion required by the report, and making in all 324 standings. Although this accommodation is practically divided into twelve separate stables, giving an average of twenty-seven horses to each, yet for all purposes of access and inspection, it may be said to be one stable. The stalls are 9 feet long by 5 feet 8 inches wide, the passage between the horses' heels being 12 feet.

The stables for the officers' horses are placed in a separate building, of easy access from the quarters of the officers, and sufficiently near the "horse infirmary." Accommodation is provided for fifty horses; with the same proportion of spare stalls and standings for utensils that is suggested in the report for the troop stables.

The establishment for sick horses is placed in the centre of the ground, at the back of the troop stables, and is so arranged that every troop horse can be taken into it under cover. It comprises six stables, with large stalls for sixteen horses, and twenty loose boxes. A surgery and boiler room are provided. It is proposed to cover in with glass a space of 140 feet by 35 feet, for the purpose of exercising the convalescent horses.

Water would be laid on at the door of every stable, in addition to the twelve stone troughs in the barrack-yard, against the walls of the stables.

A riding school, 60 yards by 20 yards, is placed in a position, central to the troop stables, and so arranged that every troop horse may be taken into it under cover. The school will be found abundantly lighted and ventilated, and will be an imposing feature in the establishment. Every soldier in the regiment can also approach it under cover.

Those portions of barrack accommodation devoted to the administration and discipline of the regiment have been placed in immediate contiguity to each other, adjoining the entrance to the barracks, near the officers' quarters, and those appointed to the staff sergeants. An orderly room, a clerk's office, and a court-martial room, are in immediate communication with each other.

The guard-house (adjoining the entrance archway) consists of a guard-room, two small lock-up rooms, one of which communicates with the court-martial room, and two cells for drunk or violent prisoners.

Those parts of a barrack relating to the supply of the regiment are placed adjoining the entrance to the barrack, and in the opposite wing to those just described. The quartermaster's stores and office are entirely distinct from the barrack-master's.

The barrack-serjeant has quarters immediately attached to his stores.

The barrack-master's house would be situated immediately outside the barrack wall, at the S. E. angle, and nearest to his office and stores.

The hospital is placed in the S.E. angle of the barrack-yard, in a cheerful and sunny situation, and away from the noise of the men's quarters. It has been thought better that the invalids should be taken to the hospital, than that the building should be placed in the neighbourhood of the more crowded part of the barrack.

The canteen is situated between the serjeants' quarters and the men's rooms, and it has been thought more likely to tend to cleanliness and order if this building was placed in a somewhat prominent situation rather than at the back of the barrack, and in some out-of-the-way place, as is found in many existing barracks. A covered way connects the men's tap-

room with the ball-court, skittle-ground, and gymnasium, and to all of which there are also entrances distinct from the canteen.

It is not proposed in this design to introduce any other system of warming than by open fire-places.

Of the infantry barrack (Mr. Morgan's design) we will give some particulars next week.

OXFORD ARCHITECTURAL SOCIETY.

At the fifth ordinary meeting of the Society, held on the 27th inst. the Rev. H. B. Walton read a paper on Merton College Chapel, preparatory to a visit of the members of the society to inspect the architectural features of Merton Chapel, as well as the other antiquities of that college. For the sake of illustrating the *historical* interest attaching to architectural studies, the first part of the paper furnished a sketch of the life of Walter de Merton. The effect of his untimely death upon the building of his chapel was next shown, and an architectural history and description of the present structure given. The several dates furnished, according to the report in the *Oxford Herald*, were, the choir 1277, the sacristy 1310 (from the bursars' rolls giving the wages of the workmen employed in that year for digging its foundations), the tower arches 1330, completion of the transepts 1424, when the church was re-dedicated. The architectural features of the chapel were severally alluded to, together with notices of the stained glass, the brasses, &c.

At the following and last meeting for the present term, held on Wednesday, March 5th, Mr. Hingeston, of Exeter College, gave a lecture "On the Perpendicular Style," of which the following is an abstract:—

"Towards the end of the fourteenth century a great change came over the architecture of this country. It began to decline. And this change first manifested itself, as, indeed was likely, in the feature which, more than any other, was characteristic of all styles—*the window*. The graceful, flowing lines of Decorated tracery began gradually to lose their elegance and freedom, and to become more and more rigid and stiff. And this stiffness was not confined to windows, but soon spread over every detail, waving lines being exchanged, whenever possible, for perpendicular ones; hence the very appropriate name assigned to the style by Rickman—'*Perpendicular*.' The date at which this style came into general use was the year 1377, or perhaps a little earlier; but as we have seen was the case with the previous styles, the sign of transition—in this case the Perpendicular line—had appeared some years before. The earliest instance known of a Transitional church is the very remarkable church of Edington, in Wilts, which was consecrated in 1361. It was built by William de Edington, Bishop of Winchester, and some have supposed that his successor in that see, the famous William of Wykeham, taking the idea from Edington's innovations, invented the Perpendicular style. Whether this theory be true or not, of this much at least we are certain, that Wykeham was the greatest architect of his day, and that his own foundation of New College is the earliest pure building of the style. It was begun in 1380, and finished in 1386. But to return to the church of Edington. It is transitional throughout,—not merely showing signs of a change here and there, but begun and finished within the period of transition,—in general design and effect, Decorated,—in detail a remarkable mixture of the two styles between which it stands midway. For instance, the west window, which is large, and of eight lights, appears at a distance to contain Decorated tracery, and the Perpendicular lines are scarcely noticed, though they occur at every opening. This is probably accounted for partly by the fact that not one of the mullions is carried up into the head of the window, and thus, the Perpendicular lines being broken and scattered, the idea of perpendicularity is only imperfectly expressed. The doorway beneath exhibits a still more singular mixture of styles. The arch is segmental, as in ordinary Decorated work, but the upper part, forming a kind of tympanum over two doors, is filled with Perpendicular panelling, and the whole is surmounted by a square hood-moulding, which is of very unusual occurrence in Decorated work, though a similar example occurs in the north aisle of Dorchester Abbey Church. William de Edington began, and Wykeham continued, the alteration of Winchester Cathedral; and although the new works are, of course, in the Perpendicular style, at least those of the former prelate are not wholly free from traces of the preceding style. In 1380, however, we find the new style thoroughly established, and the flowing line of the Decorated period utterly abandoned."

The lecturer then described windows, doorways, buttresses, towers, roofs, and other portions of buildings, and concluded as follows:—"During the sixteenth century, Gothic architecture gradually declined till it became almost extinct—and a semi-Grecian style took its place, in which, nevertheless, Gothic features were occasionally employed, as in the windows in the tower of All Saints' Church, in this city. Sir Christopher Wren's London churches are mostly of this description. The introduction of this debased style took place on the Continent earlier than in England; and, if it be true that the dissolution of the monasteries in this country checked church-building and church-restoration, there can be little doubt that fewer remains of the Middle Ages would have been handed down to us, had they remained. Church-restoration and church-building would have been prosecuted with all the old activity, but in the spirit which originated St. Peter's, at Rome, and replaced old St. Paul's with the present Italian structure. Now that architectural knowledge has attained a high standard among us,—while we rejoice at every new instance of correct and yet conservative restoration, some of us are occasionally heard to express regret that much was done before sufficient knowledge was attained. Had the present zeal for church-restoration sprung up 300 years ago, without doubt many of our great cathedrals would have been irreparably disfigured, and mediæval Oxford itself 'Italianized' throughout! It was remarked at a previous meeting that while the pseudo-classical styles were brought into general use first on the Continent, and afterwards in England, Gothic architecture lingered at Oxford. Wadham College was mentioned as a remarkable example, the chapel of which is well known for its apparently fifteenth century architecture,—and yet it was built in the reign of King James. The hall of Exeter College is of the same date, and equally good: the greater part of Jesus College and the Fellows' Quadrangle at Merton, were also built at a period when Gothic architecture was elsewhere a lost art. I believe the schools are of the same date, and Gothic of a kind, but not, I think, likely to be ever very much admired. I must not forget to mention the famous staircase to the hall at Christ Church, which was built in 1640, and though meagre in some of its details, all must admit that the design and effect are worthy of the fifteenth century."

IRELAND—ITS PROGRESS IN ARCHITECTURE.

To revisit this country after a lapse of twenty-five years is to see all things changed; for the arts of commerce and of agriculture revive under the auspicious influence of benignant government, and of happy vicissitudes. Whithersoever we turn in the counties, quietude reigns; an *improved system of farming* is widely spread, and domiciles of an amended, although perhaps of a more moderate and medium character, have replaced the halls of the old and departed squirearchy. As for the nobility, they rarely dwelt on their fues,—those who erst abode, still remain; but the proportion is too infinitesimal, and too uninfluential, to arrest the onward progress of a movement that is destined to change the tone and character of a whole nation.

Within the period specified a generation has nearly passed away, and with it, old prejudices and habitudes have also disappeared; religious tolerance takes the place of savage animosities; and the onward march of improvement nerves the hand of industry; making desolation productive, and "the wilderness to blossom as a rose."

In the metropolis the improvement is truly astounding: a population of 180,000 inhabitants has been nearly doubled, and the extension of the city increased beyond even the proportionate advance of London. Dublin, always distinguished for her splendid public buildings, unequalled by any other capital for the beauty of her vicinage, has been still further embellished; the churches (St. Patrick's and Christ Church) have been insulated and thrown open; the magnificent Custom-house, the noble courts of law, lately completed, and the Classic Bank need no commentary; the suburbs have been extended in miles of villas; two commodious, and even magnificent, harbours (Queenstown and Howth) have been constructed at convenient distances; the Phœnix-park and its approaches have been improved; the College-park thrown open, its wall replaced by a railing (like Kensington-gardens); and the narrows of streets (such as Holborn-bars and other straits of London) have been expanded to free commerce and daylight.

There exists now, and there must have been always hitherto, a public spirit in this comparatively poor place, far superior to that which condemns London to a filthy river without quays; and to an unembellished city, with all the wealth which boundless commerce can confer. The public buildings of old standing here are far superior (bating only the glorious St. Paul's and the venerable Abbey) to those of Great Britain's capital. There are seven bridges, and only one with a toll! There are two cathedrals with peerless choirs; there are railway stations of more than common pretensions, at fair proximity to the centre; and there have been erected churches of all persuasions, in style and character fully equal to the increase of population, as proportioned with other cities of the empire; but the most palpable improvement effected in Dublin within the period specified is the enlargement of the National University, and the erection of a noble quadrangle, in keeping with the fine façade presented to College-green.

Trinity College, the *alma mater* of Ireland, is now increased in extent, so as to be fully adequate to enrol 3,000 pupils; and the class of education, as now practised therein is such, that the graduates of the University are inferior to those of none other in the world; the curriculum has been enlarged, restrictions in a great measure removed, and the more useful arts are now inculcated,—those arts which fit men for the practice of science in the utilitarian walks. A school of geology has been of late established under the auspices of an able professor, the Rev. Samuel Houghton, and to him is committed the whole charge of that department, in which his acquirements are the more illustrious, for his youth.

To form lecture-rooms for swelling numbers of students, a magnificent structure has been just erected, and is now in progress of completion, in the park, at the rear of the college. This park, central in the town, contains, perhaps, about thirty English acres; it is planted, and is at the same time ornamental to the town, and useful to the college; not, perhaps, so much for the reserve of air which it retains, as for its object as a play-ground. An elevation of the longitudinal front was given in the *Builder*, some time back, as designed by Messrs. Deane, the architects.

This building occupies an area of 160 feet by 85 feet: it consists of a *pian' terreno*, and grand story; and is for effect of style, and for the beauty of finish, as well as for the polished marble columns, and enrichments of the interior, unequalled.

In a paper like the *Builder*, whose province it is to discover talent, and to exhibit it to the credit of the happy possessor, it may not be inadmissible to name the artists to whose skill and assiduity the peculiar excellence of sculptured workmanship is due, and without the knowledge of the individuals, whose names were asked and modestly given, while unconscious of the object of inquiry; the writer takes leave to mention that to one Englishman, Mr. Roe, of Lambeth, assisted by the native talent of three brothers, workmen, the O'Sheas, of Ballyhooly, county Cork, the whole of those most elaborate, and as yet unique, sculptures are owing.

The ornature is for the most part wreathed in foliage—the oak, the ivy, acanthus, shamrock; lilies, lotuses, birds, and, in fact, every variety of wreath—and these so diverse, so diffuse, so graceful, that the very diversity establishes its beauty.

Since this has been done (and it is the work of the last two years), one shop in Dublin has adopted the wreathed arch in the door and windows, and the style bids fair to become popular here—as it must obtain in England, as soon as it becomes known.

In this fine hall, now in course of being roofed in, Irish marble of varied colours, and polished, are used with great effect; although the disposition of the columns (as to colour) does not give complete satisfaction to the writer; nevertheless the lavish enrichments of sculpture within—capping every column, enwreathing every arch—and the commixture of rich colour in the crowning arches, which are groined in encaustic brick,

will present, when complete, an ensemble so gorgeous, as no other example of architecture in this country can approach.

At present the structure is finished to the top course, and the blocking is laid on, to receive the tasteful garniture from the chisels of our Ballyhooly sculptors. It is as yet blank, and it occurs to the writer, who saw a wooden block with the design for the upper cornice *painted thereon*, to suggest a change: that change would be, to substitute for, and instead of, the series of projecting angles, or diamonds (as sketched out), *a bold wreath of oak leaf*, with (if they like it) an acanthus over every blocking or cantilevre. This hint is given with great respect to the architects, and in all the humility of one who has sometimes uttered a crotchet on works in progress. The effect of the lower cornice with the acanthus, in moderate relief, is excellent; and the design would be more consistent with the whole series, by completing the crowning cornice in a foliated pattern.

As for the medallions between the windows in *pietra commessa*—being insertions of the various Irish marbles, polished, and set in Moorish patterns, these being placed on a plain granite paries, are wholly dependent on colour for effect; and it might be well to consider whether blocks of Portland, sculptured with heads (say of philosophers, or even of the senior Board) might not be more apposite. There is no variation in colour in any other part of the exterior: and here, too, wreathed or foliated borders would comport better with the rest.

Of Mr. J. McCurdy's share in the internal arrangement and adaptation of this fine structure, mention has been already made in these pages, though not by Quondam.

FORMS AND MUSICAL PROPERTIES OF BELLS.

During the discussion on the subject of bells at the Institute of British Architects, I have been adding to my stock of information by reading the remarks of those authors, both foreign and English, who have made this subject their especial study. At the discussion on the 11th inst. I fully expected that some one would have spoken more decidedly upon the musical properties of bells, because, as I shall presently show, their nature, to a considerable extent, has been known for centuries. Those who have the slighest ear for music will have observed, that when a bell is struck, a musical *chord* is produced, and not merely a single tone; or in other words, the fundamental tone, its octave, and either its major or minor third, will be distinctly heard. My attention was drawn to this phenomenon by reading Kreuser's "Christliche Kirchenbau," Bonn, 1851; and Heinrich Otte's "Kunst Archäologie" of Germany. Leipzic, 1854. Kreuser remarks that the art of casting bells, and the knowledge of their musical phenomena, were not in an advanced state until the prevalence of pointed architecture in Germany. He quotes the following passage from an old author named Vincent of Beauvais:—"Campana in tribus locis, si pulsetur, tres habere sonos inveniture, in fundo mediocrem, in extremitate subtiliorum, in medio graviorum." Otte remarks, under the article "Glocken," that there is at present very little known about the musical properties of the mediæval bells, although a more extensive knowledge would be of the greatest practical use and interest at the present time. After Otte's attention had been arrested by reading the quotation from Vincent of Beauvais, in Kreuser's book, he examined the tones of several bells of the fourteenth and fifteenth centuries, and found that there are two distinct orders of bells: they are either, according to the present system of musical notation, major or minor bells; that is, such whose middle tone between the octaves is the major third, or such whose middle tone is the minor third. The bellfounders of the present day, he thinks, make major bells only (being a saving of metal), whose proportions are as 5 to 4; whilst the proportions of the great bell at Erfurt, called "Maria Gloriosa," are as 6 to 5, and consequently it is, as Otte believes, a minor bell. The height of the bell is the least term in the proportion, and is always measured on an inclined straight line touching the upper and lower portions of the bell, and therefore not the vertical height. I measured the tenor bell of Holy Trinity Church, Coventry, a few days ago, and found its proportions to be nearly as 5 to 4: it was cast by Park, of London, in 1776. Otte further adds, that chimes composed of major bells, however well the fundamental tones may be in harmony, will nevertheless have a harsh effect on the ear. May not this partly account for the disagreeable effect produced by the Royal-Exchange chimes? Mr. Denison alluded to the great Erfurt bell, the exact dimensions of which I gave to him, as being, according to report, the finest bell in the world. May not its celebrity be owing in a great measure to its proportions, as well as to its material? or, in other words, are not bells which, when struck, produce minor chords to be preferred to those which produce major chords? If so, it follows that the customary proportions, being, I believe, nearly as 5 to 4, are not correct, and that the height should be increased $\frac{1}{5}$th of its entire dimension; that is, taking for granted the proportions given by Otte to be theoretically correct. However, there is still room for a considerable amount of investigation, theoretical as well as experimental, relative to the musical phenomena of bells.

The composition of bell-metal is also a subject not entirely exhausted: it is possible that three of copper and one of tin (the proportions common in Germany) may be the best compound; but there are, I think, reasons for questioning this, especially as regards the material. For instance; sound is not transmitted through all kinds of metals with the same degree of velocity. I learn from "Pouillet's Physics," that the ratios of the velocity of sound in tin, silver, copper, and steel, are as $7\frac{1}{2}$, 9, 12, and $16\frac{1}{2}$, respectively: may we not infer from this, that silver and copper will make a better alloy than tin and copper? if so, the tales we have heard and read about silver in bells must not be altogether neglected as purely mythic. I read in Otte's book, that Charlemagne caused 100lbs. of silver to be used instead of the customary amount of tin in a bronze bell which was made for him by a renowned bell-founder of that age. I think we have no right to suppose that silver was introduced in the alloy from mere fancy. The oldest bell known is that in the Cäcilienkirche, in Cologne: it is called the *Saufang*, and is made of three pieces of wrought-iron plate, rivetted together with copper nails: it is believed to be of the time of Archbishop Cunibert, who lived in the early part of the seventh century. In the first half of the ninth century, Walafried writes about two sorts of bells,—those made of wrought iron and those of cast bronze.

Mr. Denison has omitted in his list of large bells that of Olmütz Cathedral, in Moravia, said to be the largest bell in Germany: it is an old bell, and its weight, according to Otte, is 17 tons 18 cwt.

The question as to the best mode of hanging, which was discussed at length on the 11th instant, at the Institute, is also a knotty subject. Those who paid a tolerable degree of attention to what Mr. Baker and his mathematical friend said, must, I think, have felt very much inclined to adopt their notions: the mathematical formulæ, which were explained as resulting from an investigation of bells in motion under all imaginable conditions, I think fully established, in theory at least, the advantage of hanging large bells *high in the stock*. I fully expected, if there had been anything wrong in the formulæ, that Mr. Denison, with his well-known mathematical acumen, would not have failed to discover it; but all he said was, that there were some inscrutable laws of friction involved, which rendered the theory contradictory and nugatory. I do not think that this subject is so very difficult to settle, even if we throw theory out of the question altogether: for instance, let two bells of equal weight, say two tons each, be hung, one according to Mr. Denison's, or the old method, and one on Mr. Baker's improved principle, and let one man set *both* bells, allowing sufficient time for rest between the two operations, and note the length of time and quantity of exertion required for each: the result, I presume, will prove which is the best mode.

In conclusion, I think no one will for a moment question the fact, that when a bell is in motion, the strain on the bell-frame, and consequently on the tower walls, decreases in proportion, as the bell approaches to a state of equilibrium on its axis.

John Burlison.

INSTITUTION OF CIVIL ENGINEERS.

At the meeting on March 4, Mr. Robert Stephenson, M.P. president, in the chair, the paper read was "On the Causes of Explosions of Steam Boilers," by Mr. William Kemble Hall, United States (America). In the course of it, the writer said, it was reasonable to suppose that the tearing of the boiler into several pieces, which generally accompanied explosions, was caused by a sudden exertion of power, and electricity had been suggested as an agent. But though electrical phenomena might be exhibited by the expansion of a jet of steam, it could not be supposed that a boiler, with its many direct and metallic connections with the earth, could be converted into a reservoir of electricity. If any were generated, it would be instantly conducted away. It had been supposed that the plates exposed to the action of the fire by the falling of the water had become overheated and decomposed. The steam, the oxygen of which had combined with the iron, and the hydrogen formed a gas, that had caused the explosion. But hydrogen would not explode, unless largely mixed with atmospheric air, which could not enter the boiler, except in minute quantities, forced through the feed-pump, in combination with water; and although there was evidence of the absorption of oxygen, in the rusting of the stays and of the interior surface of old boilers, it was too insufficient in extent to warrant the deduction, that there had been an appreciable change in the chemical composition of the steam. It might be possible to produce an external explosion, but not an internal one.

In the explosion at the Consett Ironworks, Gateshead, early in November, it was in evidence that the boiler had been blown out a short time previous, and the valve was not closed. The plates had been heated red hot, and it was supposed that the attendant, who was killed, had discovered the deficiency of water, and had just opened the feed-valve at the instant when the explosion occurred. Now, heat did not lessen the strength of iron up to the temperature of 550 deg.; and had it exceeded that point, in this case, and thus weakened the boiler, the result would merely have been a collapse of the flue. Water was not resolved quickly into steam by a red-hot surface. The excessive heat repelled the particles, and they were slowly evaporated by the communication of heat through the intervening vapour. No great pressure, therefore, could have been generated directly from this source. When heat was applied to steam, the increase of its pressure was governed by the same law that applied to air and all other elastic gases,—an addition of 480 deg. only doubling its pressure. Experiments had conclusively proved the possibility of heating steam in contact with water without also increasing the temperature of the bulk of the water, the upper stratum of which alone became heated by the contact. If, therefore, it was supposed, for example, that the steam had been heated to 435 deg. Fahrenheit, and water suddenly injected into it, the pressure would have been instantly raised to that due to the presence of the water, —determined by the experiments of Arago and Dulong to be 360 lbs. per square inch at that temperature. Or, to use another illustration, while 1,000 deg. of heat applied to steam would but increase its pressure, or volume, about three-fold, the same amount would multiply that of water 1,700 times. This vast increase would certainly be modified by the latent heat absorbed by the water in its conversion into steam, but served to indicate a sudden and local generation of excessive pressure, which might result in explosion.

Experience had proved, that the fusible metal plug, enjoined by law in France, became encrusted by scale, and otherwise rendered inoperative by use, and did not answer the purpose for which it was intended. The softer portions of a compound metal were forced out by the

pressure to which it was subjected, and the remainder, becoming oxidised, did not fuse at the temperature intended. It, moreover, acted merely as a warning, and did not serve to obviate the impending catastrophe.

All the contrivances hitherto adopted for the purpose of providing against explosions were designed to supply water, when that in the boiler had fallen to too low a level, or to open the safety-valve by the pressure of steam, independent of other circumstances. As had been illustrated by the examples alluded to, either of these plans would induce, in many instances, the very accident designed to be avoided. For there seemed every reason to believe that the great majority of explosions were occasioned by the negligence of the attendant, in permitting the level of the water to fall below the flues, exposing the plates to a high temperature, and surcharging the steam with caloric, far exceeding that due to its pressure. In injecting an additional supply of water into the boiler, when in this dangerous condition, it was thrown over the heated plates and into the super-heated steam, and suddenly converted into steam of too high a tension for the boiler; and so instantaneously, moreover, that it operated with all the momentum of a blow.

These considerations led to the conclusion that safety was alone to be attained by opening a water blow-off valve, when the surface of the water had fallen to a perilous extent, for the purpose of first discharging from the boiler the water, which was the more dangerous element, and then the steam; operating, in fact, as a safety-valve, in a more useful but less objectionable position than the present steam-valve situated on the dome. This system had been subjected to trial under heavy pressure, and had been found very successful.

In the discussion it was argued, that Mr. Hall's system, if properly carried out, would be extremely useful, and almost prevent the possibility of danger from explosion; but that it would only be of use when an explosion was almost inevitable, and that as prevention was better than cure, the utmost should first be done to prevent boilers reaching that state, still retaining Mr. Hall's valuable apparatus, in cases of all other means of prevention proving ineffectual. The majority of explosions were stated to arise from the practice of constructing the boilers with the fire-places in the flues, contrary to the system used in Cornwall, where they always arranged to have abundant boiler-room and slow combustion; but where flue firing was used, the boiler surface was too frequently deficient, and the firing rapid and generally forced.

PARIS AND LONDON HOUSES.

THERE seems to be a tendency on the part of the public to decry everything English, as compared with foreign: our mode of government, our laws, habits, manufactures, and now our buildings are depreciated.

Many letters have appeared in the newspapers, principally written by men who, apparently, are not qualified to judge, lauding the Parisian buildings, and speaking of the London system in a tone the spirit of which may at a glance be inferred.

Now, the reason of the street architecture of Paris being so much finer than ours is simply because we don't *want* it, because it won't pay, owing to the difference in our national habits. In Paris, a number of families living in floors over each other, a larger house is required than with us, consequently exterior ornament may be indulged in, as forming a less proportionate part of the total cost of the building, and the greater height of the houses so built gives them a more commanding appearance.

The same difference in our national habits gives an ample compensation for this in our suburbs. A good deal of harmless pleasantry is used in speaking of the ridiculous names given to the cottages, &c. in the suburbs; nevertheless, nothing around Paris can compare with these suburbs. I have lived in *the flats* of Edinburgh and Paris, and my humble opinion is, that it is well for Londoners that their tastes and habits have not induced them to adopt this practice. Imagine the consequences that might arise were the two and a half millions of London cooped up in a space less by one-third than its present site.

The Parisians say our street houses are *très bas:* be it so. Railways and omnibuses are plentiful; and it is better, morally and physically, for the Londoner, or any other inhabitant of a large city, when he has done his day's work, to go to the country or the suburbs, where he escapes the noise and crowds and impure air of the town; and it is no small advantage to a man to have his family removed from the immediate neighbourhood of casinos, dancing saloons, and hells upon earth which I will not name.

Much is said of model lodging-houses for the working classes: the true model lodging-house for them is a cottage *out of* London. Mr. Pearson has shown this to be quite practicable; and I doubt not it will be carried into effect when the railway companies can be moved in the matter. In the City, where the different floors are used as offices, it *pays* to build high houses, and they *are* built in a way equal to or better than anything of the kind in Paris. No sanitary reform can make a town as healthy as the country; as, even were all other sources of danger destroyed or removed by thorough drainage and cleanliness, the air breathed becomes more or less impure, even from the numbers of human beings and cattle crowded together. Therefore, the English system of building is more rational than the French, inasmuch as the health of a man is of more importance than the aspect of his house. Surely those who advocate the system of living in flats forget that families living in Paris die out in the third generation.

But it will justly be answered, "Those suburban streets, cottages, and villas, which you commend so much, are not built in so substantial or tasteful a way as the Parisian houses, even allowing for the difference in size and height of the two styles." Very true; but who is to blame for this? neither the much-blamed speculative builder nor the architect.

As an illustration, allow me to give a case which has occurred several times lately in my experience. Two builders each took a plot of ground to build upon: one built properly: the other built almost entirely with place bricks: his mortar was principally road-sweepings and horse-dung: his timbers were about half the right thickness: everything that did not meet the eye was scamped: but the front of his house was compoed over; his timber was covered with showy decorations, so that his houses looked as well as those of his neighbour. Well, this man who had built his houses at 20 per cent. less than the other, sold them all at a profit; and the other man who was *obliged* to sell at the *same price*, lost money by every house he sold.

Is it not evident that if twenty men are building near each other, eighteen of them honest, and two not,—if those two men *sell* their houses, those who buy them virtually give a premium to dishonesty, and compel the eighteen to sell at too low a price. Had those purchasers gone to a respectable surveyor, and said, "We have been looking at some houses, and wish to purchase, but A wants so-and-so for each of his houses, and B 20 or 10 per cent. less; will you, Mr. C. examine them thoroughly, and see if B has built as well as A?" then, the surveyor would go and do his duty, and I need not add, to the great delight of the honest builder, and *not* of the other; and the purchasers would, by the expenditure of a few guineas, have saved themselves from constantly recurring expenses to keep their cheap houses in repair.

The public don't mind paying the lawyer, but won't pay a surveyor; whereas, the latter is the more important of the two to purchasers of houses, who, by acting so, literally *prevent* builders from building properly.

In short, our *public* buildings, in my opinion, are as good as those of Paris, our architects as talented, our builders know their business as well, and if our street architecture be not so good, it is simply because the public will not *pay* either the architect or builder for building houses to compete with the Parisian ones. It is a mere question of £. s. d.; and I am sorry to see some architects joining in the cry lately raised; and, with, I think, a great want of thought, throwing the censure from the shoulders of the "public" on to those of the architects and builders. I was going to enter further into the question as to *why* the "public" don't *pay*, and yet *grumble*, but will stop, as it is too important and extensive in its bearings to be treated lightly or shortly. J. P. W.

FIBROUS SLABS.

THE dome of the new reading-room at the British Museum, now in course of completion under the direction of Mr. Sydney Smirke, is being lined with slabs or sheets of a fibrous material, for which a patent has been obtained, and which, combining many of the properties of wood, is adapted to almost every purpose to which the various descriptions of wood are applied. It is also applicable to many purposes for which marble, slate, lath and plaster, or internal brickwork, are now used: and the price, we are told, will not average more than one-half the cost of woodwork or other materials now in use.

To render wood available for purposes where the ordinary width of boards (9 to 13 inches) is insufficient, it is requisite to join two or more boards together, by what is technically termed "glueing up," an operation involving much labour, expense, and loss of time, and attended with all the contingent risks of shrinking, expanding, splitting, winding, &c. as well as natural imperfections. This fibrous material can be manufactured in sheets or slabs of any required thickness, length, or width. They are now made in sizes of 13 feet by 7 feet; but these dimensions may be greatly increased.

It appears to be uninflammable; a non-conductor of heat or sound; free from dry-rot, shrinking, expanding, splitting, or winding; easily worked or bent; and is applicable for large panels, ceilings, floors, and partitions.

Each panel at the British Museum, composed of three pieces, is 22 feet long by 11 feet 6 inches wide: and these, in their spherical form, are raised from the ground to a height of 110 feet, and fixed in one piece to the roof.

We have probably said enough to show that this new material deserves the attention of all who are engaged in building operations.

CHURCH-BUILDING AND PROVINCIAL NEWS.

Norwich.—Another side of the tower of the cathedral is now under repair.——The free library is being roofed in, and will, it is expected, be completed in three or four months.——The new workhouse is still under consideration, and the guardians are talking about procuring plans. A site has been purchased, and the land is found to contain excellent brick-earth; but it is not expected, under any circumstances, that the building will be commenced this year.——The consecration of the new cemetery for this city took place on Wednesday in week before last. The new cemetery is situated, on a high table-land, between the Dereham and Earlham roads. The site comprises about thirty-five acres. The present cemetery, however, includes only twenty-three acres; the remainder being let till needed. The approach from the Earlham-road, at about three-quarters of a mile from the city, is by an entrance-gate, of a light and ornamental character, with two side gates; and immediately within the gate is a lodge for the superintendent. At the Dereham-road is another lodge and gates similar to the first. The east side is appropriated to the Established Church; the west to the Dissenting communities. The grounds are ornamented with a variety of trees, and clumps of shrubs. In the centre are two mortuary chapels, similar in design, with the exception of a belfry (not yet finished) to the Episcopal one. They are of red brick, with black brick strings and diapers, and moulded with white brick and Caen stone dressings. Their architectural character is Early English, with apsidal chancels, and lofty entrance-porches, beneath which a hearse can pass. The outside of the chapels, says the *Norfolk Chronicle*, referring to them, is by no means remarkable for beauty or dignity, the unusually steep pitch of the roof giving an

unpleasing effect. Each chapel in the interior is 86 feet long, and 24 wide, and is paved with York flags in the centre, with a 3-feet border of fancy red, white, and black paving-tiles on each side. There are pews, capable of accommodating 100 persons. Behind the reading-desk is a bay, lighted by nine long narrow and lancet-headed lights. The body of the chapel is lighted by ten windows, of a similar character, filled with tinted glass. The wood-work is deal, stained and varnished, and the roof is open, filled in with plaster between the rafters. A small chapel has also been erected on the ground appropriated for the Jews, which, with the lodge entrance-gates, are all built of similar materials to the larger chapels. The designs were furnished by Mr. Benest, the city surveyor, and the buildings were executed by Messrs. Ling and Balls, whose contract amounted to 1,990*l.*

Hempton (Norfolk).—A building, designed as the chancel of a future church, is being erected in this parish, under the superintendence of Mr. J. H. Hakewill, architect. It is in the latest style of Early English work, of faced flints, with Caen stone dressings for plinth, string-course, windows, and buttresses. The internal dimensions are 35 feet 6 inches by 16 feet 6 inches, and it will accommodate 100 persons. The parish, containing nearly 500 persons, has been left entirely unprovided for since the Reformation, when a priory church was demolished, in common with the other buildings of the establishment, and the tithes alienated. Consequently, the building, now in course of erection, will be licensed, in the first instance, for divine service, as it cannot be consecrated without endowment. It is expected that the works will be completed, and the church opened, in June or July.

Braintree.—The church of Braintree, in Essex, stands much in need of repair. Some time since an appeal was made to all disposed to aid in this good work, as it was impossible to raise more than a few hundred pounds in the parish itself. The fabric has been examined by an architect, and the estimated sum requisite amounts to 4,000*l.* Rather more than was anticipated seems to have been subscribed in the parish, where about 850*l.* were realized, and the patron has subscribed 100*l.* the Archbishop of Canterbury and the Bishop of London, 10*l.* each, &c.

Reading.—Finchampstead Church has been reopened, after having been restored and repewed, from designs and under the superintendence of Mr. J. B. Clacy, of Reading. The church now contains about 215 sittings, of which about 140 are free. The nave is open to the roof, showing the oak framing, and having the various arches decorated with scrolls of illuminated texts. The chancel, a circular apse, has an oak panelled ceiling, with carving. The open benches (those in the chancel with ornamented ends) are of a suitable character. The pulpit and reading-desk are of carved oak. The east and two of the north windows are glazed with coloured and ornamental glass.

Shepreth.—In consequence of the church here having been closed by the incumbent, on account of its dilapidation, an archdeacon's court was held, at which the churchwardens were cited to appear. Mr. Bradwell, architect, was examined, and stated that he had inspected the church: it was utterly unsafe for anybody to sit in. The judgment of the court was, that the churchwardens be directed to repair the church forthwith, and pay the expenses of the citation.

Dorchester.—Mr. H. Blaudford has obtained the contract for laying out the ground of the cemetery here, at the sum of 80*l.*

Birmingham.—The foundation-stone of the new vestry-hall for the parish of Edgbaston, about to be erected in New Bridge-street, was laid on Monday before last. The building, which is being erected by Mr. Cresswell, from the designs of Mr. Fiddian, will be of brick, ornamented with Chance's patent basalt dressings, and will comprise a room, 98 feet by 28 feet, in which it is intended to hold all public meetings in connection with the parish, and suitable provision will be made for the accommodation of the out-door poor.

Liverpool.—The consecration of All Souls' Church, Vauxhall-road, took place on Friday in last week. The church is cruciform, the greatest length being 110 feet, and the breadth of the body 42 feet. There are a tower and spire at the south-west corner, the entire height of which is 105 feet, the tower being 50 feet, and the spire 55 feet. There is a gallery at the end of the nave, and a smaller one at the end of each transept. The transept galleries are entered from the outside, by winding stone stairs in turrets. The chancel is lighted from the ceiling: the vestry is on one side of it, and the organ recess on the other. The walls are of rock-faced Woolton stone lined with brick; the tower and spire stone throughout. The general style is Decorated Gothic. The roof is formed of arched principals, covered with cross braids, on which are laid the slates. There are two opposite entrances—one through the tower, and one through the opposite porch. The entire accommodation is 950, of which 646 are free. The whole undertaking comprised the purchase of land, the erection of a church, the erection of suitable schools, and of separate residences for the master and mistress, and the erection of rooms for ragged schools, industrial classes, &c. The erection of the church has been completed, and of the industrial class-rooms underneath it; and the new schools and residences will be proceeded with at once. The outlay necessary for completing the whole undertaking, according to the local *Journal*, will fall very little short of 10,500*l.*——The "Catholic Apostolic," or Irvingite Church, which stood for some time partly erected in Canning-street, from a Gothic design by an amateur architect, who seems, according to the *Journal*, to have been also his own paymaster, has now been nearly completed, by Mr. Trevor Owen, of Birmingham, architect. The edifice is not being completed entirely according to the original intention, but so as to accommodate a larger congregation. The masonry is executed in freestone, from the Stourton-hill quarries. The western entrance has pinnacles, with carved crockets, finials, and bosses; and the southern side is enriched by a small tower in connection with the south transept, surmounted by a lantern and spiril, and four carved pinnacles, finished with stone finials and gilt cross. The tower rises over a baptistry, in which will be a stained window with baptismal subject. There are large traceried windows in each transept and over the west door, which, together with the smaller ones, and the building generally, are executed in the Flamboyant style of architecture, as nearly as circumstances would admit, in accordance with the more expensive richness of the eastern portion. The nave and transepts are covered by an open timber roof, stained and varnished; the windows glazed with mellow tinted glass. The length of the church is 121 feet; the width, 39 feet; and the height, 60 feet. The fittings will be of yellow deal, stained and varnished. The floor will be laid with red and blue hexagonal tiles, but not encaustic. The contractor is Mr. T. Hughes. Mr. B. Brierly executes the stonework. Mr. R. Grey is clerk of the works.——A mural monument in memory of the late Rev. John Johns, minister of the Liverpool Domestic Mission Society, has just been erected in the scene of his public ministrations, to commemorate his services. It is in the Tudor-Gothic style. The designer and sculptor was Mr. M'Bride, of Liverpool. To prevent the eye resting on bare columns, says the *Albion*, the lily is sculptured with the thorn intertwined around the one; the vine, and grape, and wheat around a rustic cross on the other. The epitaph is in old English ecclesiastical and illuminated characters tinted ultramarine blue, with the capitals vermilion.

Birkenhead.—At a public meeting of the ratepayers, recently held, it was unanimously resolved to adopt the Public Libraries' Act of 1855, for this district.

St. Helen's.—The St. Helen's Improvement Commissioners have increased the salary of their surveyor, Mr. McManus, from 150*l.* to 200*l.* per annum.——Baths and washhouses have been long spoken of as being required for St. Helen's. It is to be hoped that, with other sanitary improvements, so desirable a boon will not be long deferred.

Blackburn.—A new Roman Catholic school is to be erected at Over Darwen. The plans and specifications have been prepared by Mr. Birtwistle, of Blackburn, architect, and the contract will be let for immediate execution. The foundation-stone will be laid on Easter Monday. The edifice will be 72 feet long, by 28 feet wide, and will afford accommodation for 250 boys and girls. When completed it will be also used for divine service till a chapel has been erected on a plot of land adjacent.

Barnsley.—Mr. William Shaw, of Stanley-hall, near Wakefield, has given the stone and sand required for the erection of a new church in St. John's district, Barnsley. The stone will be obtained near the site chosen for the erection of the church, namely, on Barebones, and is said to be of durable quality, and the same as that used in building the Independent chapel now in course of erection in this town, to which Mr. Shaw, who is an Independent, contributed largely in material and money. The Ripon Diocesan Church-Building Society have also intimated their willingness to give 460*l.* towards the erection of St. John's church.

Wigan.—On Tuesday before last, Mr. Mangnall, the architect of the new workhouse, visited Wigan, and with Mr. Fairclough, the contractor, proceeded to mark out the ground (the purchase of which is now completed) for the erection of the building. Considerable progress has already been made with the excavations, and it is expected that in the course of a few weeks the foundations will be got in.

Methley.—We have from time to time during the past six years had occasion to notice the works of restoration which have been proceeding gradually (under the direction of Mr. Hugall, of Cheltenham) in Methley Church, Yorkshire. During the last week, according to the *Leeds Intelligencer*, two stained glass memorial windows, by Mr. Wailes, have been inserted in the north side of the nave. The westernmost one is an offering by Mr. Hollings, and contains, in the three lights, groups representing Our Lord's calming the tempest, His healing the blind, and raising the dead. The eastern one, inserted by Mr. Burnley, contains Our Lord's entry into Jerusalem, His purging the Temple, and Mary anointing His feet for His burying. In the tracery of the heads of the two windows are angels with memorial scrolls from the burial service.

Edinburgh.—Trinity College Church is at last, it appears, to rest its old stones at the Calton-hill, on the site of Burns's monument, which is to be removed, to make way for the re-erection of the church, whose numbered stones have been destined for so many different sites, year after year, since the railway authorities had it removed from its own original site, near the north bridge of the city. The Lord Provost has, it may be said, the sole responsibility of the recent rather strange decision, as it was by his casting vote the matter was decided. Why that precise spot on which Burns's monument stands, on the flank of the Calton-hill, should be selected, to the exclusion of all others, we do not know, but there seems to be an opinion in the city that it is *not* a suitable site for a church; and, at any rate, when the monument to a national celebrity, such as Burns, is once erected, there cannot be a greater contempt or insult to his memory than to pitchfork it out of its place, in order to make way for any other project. To talk of procuring a better site, under such circumstances, is a mere blind. Once taken to pieces, it is even a risk whether it ever be re-erected at all. How many years have the stones of Trinity College Church itself been seeking a site, and they are not re-erected even yet! And the difficulty is not likely, we hope, to be got rid of in this way, only by creating another of a similar kind. Mr. George Harvey, R.S.A. suggests a doubt as to the propriety of the site, by recommending the adoption of the Continental plan of indicating the bulk and proportions of the proposed re-erection by means of poles and canvass, or a wooden frame, that the effect may be judged of.

THE PROPOSED NATIONAL PORTRAIT GALLERY.—In reply to the address voted to her Majesty in the House of Lords, relative to the expediency of forming a gallery of national portraits, it has been intimated to their lordships that her Majesty will direct an inquiry to be made as to how the object in view may be best attained.

NOTRE DAME OF PARIS: SOUTH-EAST VIEW.

[See p. 137, in present number.

ARCHITECTS' BENEVOLENT SOCIETY.

THE annual general meeting of this society was held in the rooms of the Institute of Architects, on Wednesday, the 12th instant, when Mr. Sydney Smirke, A.R.A. presided. Mr. John Turner, the honorary secretary, read the report of the council.

"Our annual receipts," the report said, "have been larger; our number of members has become greater; and whilst the amount of relief afforded has been about the same as last year, the sum funded in the name of the society is materially increased. This latter circumstance is due to the great liberality of members during the year in donations, distinct from their annual subscriptions: Mr. Hardwick, Mr. Bryce, of Edinburgh, and Mr. Fuljames, of Gloucester, have each forwarded to us ten guineas. Our kind and zealous friend, and liberal benefactor, Mr. Cockerell, has presented to us five guineas, Sir Robert Smirke, five guineas and a half, both in addition to their former donations; and other donations have also been made to an amount exceeding any one year since the first year of our existence."

The Report further showed that in consequence of the resolution passed at the last meeting, applications had been made to gentlemen in all the largest cities and towns, requesting them to become corresponding members of council, and up to the present time the following twelve gentlemen had accepted the proposal, viz. Messrs. Banks, Wolverhampton; Dobson, Newcastle; Hine, Nottingham; Stevens, Derby; Williams, Liverpool; Holden, jun. Manchester; Lanyon, Belfast; Atkinson, York; Hill, Birmingham; Hayward, Exeter; Fuljames, Gloucester; and Kennedy, Glasgow. The subscriptions for the past year amounted to 147*l.* 17*s.*; the donations to 79*l.* 18*s.* 17*0l.* had been distributed in relief.

Mr. Thomas Little, Mr. Geo. Mair, Mr. Mocatta, Mr. C. C. Nelson, Mr. A. Poynter, Mr. David Moore, Mr. R. Brandon, Mr. W. Papworth, Mr. M. D. Wyatt, and others, were present, and took part in the proceedings.

ELECTION OF DISTRICT SURVEYORS.

AT a meeting of the Metropolitan Board of Works on the 7th inst. the following gentlemen were appointed district surveyors by show of hands; viz.—For Penge, Mr. Nash; Plumstead and Eltham, Mr. Williams; Putney and Roehampton, Mr. Sancton Wood.

The Board have confirmed the decision of the committee as to the district surveyors of Tottenham and Hornsey (p. 121, *ante*); thus justifying the opinion we expressed, on the passing of the Act, in opposition to some authorities.

THE RUINS OF LINDISFARNE, NORTHUMBERLAND.

FEW who have seen the fragment left of this beautiful structure will forget the symmetry of its proportions and its picturesque island situation. Looking at it across the calm sea, in the sunset, at early morning, or in the moonlight, we have often wondered at the skill of those of former times. When the raging storm beat against that dangerous coast, the pure forms of this choice piece of architecture were not less striking, and often have we regretted, that, piece by piece, this venerable ruin was allowed, without a helping hand, to fall to pieces. Even *wanton mischief* has at times been used to effect the destruction of "this thing of beauty." Besides, the island of Lindisfarne is rich in historical and other associations: so is the surrounding neighbourhood; and any of our readers travelling to the north, and who can spare a day, might well employ it by stopping at the station near Bamborough, to visit that grim stronghold of former days; the Farne Islands inhabited by immense flocks of various seabirds; the remains of ecclesiastical buildings, planted there long since, so that the beacon might be lighted to warn, and the band ready to help, the unfortunate mariner who might be here cast ashore. Here are also Grace Darling's lighthouse and the ruins just mentioned.

Those who know Lindisfarne will remember the large zig-zag arch which formed an important feature of the building. This was blown down about two years ago, and the attention of the Duke of Northumberland having been directed to this, we are very glad to learn, that with as little delay as possible, his Grace requested Mr. Salvin to see what could be done under the circumstances. For some time past Mr. Salvin has been at work. He has gathered together the fragments of the arch, and replaced them; strengthened other weak parts, searched the island for scattered fragments, replaced them when possible, and without destroying the appearance of the ruin which renders it so attractive to artists, made it so secure that it is likely to bear up against the fierce winds for some time to come. This is a creditable work, and we hear that it is not the only instance of the care which the duke has taken of the antiquities on his wide domains. Many places have been restored; and when this was not practicable, careful drawings have been made on the spot of such parts as were likely to perish. Mr. J. W. Archer, we understand, is still so engaged.

A MANUFACTORY OF ULTRAMARINE AT NUREMBERG.

THE manufactory belonging to Messrs. Zeltner and Heyne has acquired a European reputation, and sends its produce to all parts of the globe. Its exterior aspect is somewhat imposing, the whole being surrounded by a wall, and one of the buildings looks rather like a fortress, the entire space occupying an area of seven Bavarian acres (*Morgen*). The central building consists of a polygon of twenty-four sides, with ninety-six furnaces, arranged in twelve compartments with as many high chimneys. Thence issue twelve branches of rails to all parts of the manufactory, being provided at the intersecting points with turning platforms. From the upper stories similar rails of wood are laid; the iron rails being 4,500 feet long, the wooden ones a trifle less. If we enter the polygon, which has a diameter of 136 feet, and is surrounded by buildings 300 feet long, and two stories high,—the dim of twilight gives the idea of being in the pit of a mine. All these buildings are vaulted and bombproof. The departments of this manufactory are manifold. In the middle is a building for mechanical contrivances, with two steam-engines; to the east the above polygon; towards the west a high-pressure engine, with a mill and a washing apparatus. The mills have twenty-eight troughs, and are mostly of cast iron; of the two stores one is 300 feet long, and this alone can hold 3,000 to 4,000 cwts. of ultramarine. A swinging rail transfers the colours from one end of the building to the other. Covered passages connect the single buildings, and there are seven large roads and six courts, presenting everywhere a fine perspective. Towards the west is a long row of drying-houses, in which a constant tropical heat is to be maintained, so that winter loses its power in all the vicinity. The merit of the discovery of artificial ultramarine belongs to Professor Gmelin, who died in scanty circumstances. This manufactory arose in 1839, and the proprietors preserve yet the weather-boarded shed in which they began business. The manufactory employs 200 workmen, of whom 180 are married. They have established a sick fund, and a pension fund for widows, orphans, and invalids, as well as a singing chorus. The best blue artificial ultramarine has to pass eighty different processes until it is ready for use, and is now applied to the colouring of cotton and wool-stuffs, tapestry, paper, sealing-wax, &c.; besides its purely artistic use.

AUSTRALIAN NEWS.

AT Sydney, New South Wales, the opening of the Sydney and Parramatta Railway, on the 26th of September last, excited some attention. The principal works on the line were,—750,000 cubic yards of excavation; twenty-seven bridges and fifty culverts; one viaduct over Long Cove Creek, and tunnel at Chippendale; two terminal stations erected, and four intermediate ones, besides workshops and other buildings. The stations are chiefly constructed of timber. The present rolling stock of the line consists of four engines and tenders, from the manufactory of Messrs. Robert Stephenson and Co.

The total revenue at the disposal of the City Commissioners of Sydney for the last year has been 71,998*l.* and their total expenditure 66,538*l.* The commissioners report that during the year ninety streets, comprising a distance of seven miles, had received a share of their attention. Acting on the principle that no street can be properly formed until kerbing and guttering be laid down, they have expended a considerable sum for that purpose, having laid down 10,144 feet of dressed stone kerbing, and 30,030 square feet of draft and axed guttering. There are two inspectors of nuisances. During the year, 500 new buildings have been erected, and fifty-three buildings enlarged. The commissioners beg for a Paving Act, to compel each citizen to pave before his own door. In order to commence a system of sewerage on a sound basis, a trigonometrical survey of the city has been commenced, which will cost 3,000*l.* The commissioners have eked out the supply of water obtainable from the Lachlan Swamp; but they have also made preparations to secure a more permanent supply. They have contracted for 10,000*l.* worth of piping to be laid down in the streets of Sydney, and a quantity of 30-inch main to convey the water from Botany to Sydney. The commissioners have also sought the aid of Dr. Smith, the Professor at the Sydney University, who has reported on the quality of the water, and the action of water on iron. The drawings of the necessary steam-engines were prepared, and the plans and specifications for the work required nearly finished, so that before long the apparatus for supplying Sydney with water will be in working order.

At Melbourne, in Victoria, the golden times are fast becoming "copper" times. Three-roomed stone and brick cottages are now advertised to be let at 8*s.* per week, for which 4*l.* to 6*l.* was once demanded as the weekly rental.

At Adelaide, in South Australia, there is not much new in the building trades. Sawyers, according to the *Adelaide Observer*, have had a good field opened to them, in consequence of a large contract for the supply of red gum timber to the Gawler Town Railway Commissioners having been taken by the River Murray Navigation Company. In accordance with the stipulations, about 2,000 loads must be supplied within twelve months.——A plan of a proposed school-house for sixty children, in the Kondoparinga district, with schoolmaster's residence, drawn by the district chairman (Mr. Scown), was submitted to a meeting held on 17th September last, and being approved of, specifications were requested of the chairman, that tenders might be forthwith advertised for. ——A Wesleyan Chapel is in course of erection at North Adelaide. It is to be in the Gothic style of architecture, with open roof of carved and stained wood, and on the outside supported by flying buttresses. It is intended to contain 1,000 sittings, and, ultimately, by the erection of galleries, to accommodate many more persons. The first cost will be about 6,000*l.* Of this sum about 1,150*l.* had been collected, end of October last, and the foundations were already laid. ——Designs for St. Bartholomew's Church, Norwood, were submitted by Mr. Hargrave, at a meeting reported in the *Adelaide Observer* of 27th October last. It is to consist of a nave measuring 56 feet 6 inches, by 26 feet, with a side-aisle 45 feet by 17 feet, a chancel 16 feet square, and a porch 10 feet by 6 feet; the style to be early English, and the total cost 2,000*l.* At present he proposes to erect only the aisle, which will accommodate 144 persons, and cost, with the necessary fittings, about 450*l.* The designs were approved, and the Building Committee empowered to accept contracts for the erection of such portions of the building as it was proposed to raise, such contracts not to exceed the amount of funds actually subscribed.——A fund was being raised about same time to defray some expenses incurred in the erection of a gallery and an extension of the sittings in All Saints' Church, Hindmarsh. The total cost of the gallery was about 136*l.*

THE PROPOSED ROAD THROUGH ST. JAMES'S-PARK.

THE report of the committee appointed to consider the best means of improving the communication between those parts of the metropolis lying on the north, south, and south-west sides of St. James's-park, has been presented by Sir Benjamin Hall to the House of Commons. The committee report on the several plans,—1st, for opening a road from Pall-mall through the site of the German Chapel, and across the water in the park by a bridge to Birdcage-walk at Queen-square,—2nd, the line through Cleveland-row, and in front of Bridgewater House, into the Green-park, and curving thence by the front of Buckingham Palace to Buckingham-gate, near the Duchy of Cornwall office,—3rd, the road from Waterloo-place southwards to the mall near the Duke of York's Column, and to near Storey's-gate,—4th, the proposed opening from the site of the Globe Insurance Office, in Charing-cross. The committee do not think it desirable to intersect the ornamental gardens of the enclosure, as proposed by the first plan. The expense of the second they find would be no less than 163,250*l.* They therefore recommend, in order to effect a communication between Pall-mall and Pimlico, that so much of the road proposed in plan No. 1 as lies between the entrance to Marlborough House and the mall, be made, and that the line be continued along the road now used on the north side of the mall, to a point marked E at the western end of that road, and thence to Buckingham-gate. The road thus opened might be enclosed, as the drives in Hyde-park are. The probable cost of the opening from Pall-mall, and the necessary works including the taking down and rebuilding the German Chapel, exclusive of purchase of site for the new chapel, would be about 25,000*l.* The committee also recommend that a footbridge be thrown over the water in the enclosure. With regard to a road from Waterloo-place to Storey's-gate, they are of opinion that a line of communication should be made, and that the Duke of York's Column should be removed. The cost of

this line, including the removal and rebuilding of the column would be about 30,000*l.* As regards an opening from the park to Charing-cross, the committee state that they "are not prepared to recommend that such an opening be made at present, but they are of opinion that an opening for carriages should be made from Trafalgar-square to the park."

It thus appears that to a certain extent the plans long since urged in our pages are now likely to be carried out. As for the removal of the Duke of York's Column, we think it would be very desirable to avoid that if possible. Such an opening as that suggested would certainly be a great convenience, and if it could be accomplished by a suggested modification of the plan, without removing the column, good and well; but it seems to be overlooked that the view of the column and steps from the park forms one of the chief features of the locality. Building up and pulling down again, is a dear way of adorning the metropolis.

THE "BUILDER'S" SMOKELESS FIRE.

Your valuable notice of the new mode of making a fire in a common grate, which shall save coal, and consume a greater part of the smoke, only requires universal adoption to become one of the greatest blessings conferred upon us in this smoky—*ergo*, dirty—metropolis. Properly carried out, it would effect a perfect revolution in stoves, chimney-sweeping, fires from foul flues, price of coals and coke, safety from fire by shooting coals, smoky rooms, cinders and dust (the whole of which are nearly consumed), cleaner linen, brighter atmosphere, and sounder lungs. I have ever been a great advocate for giving due credit to Mr. Cutler for his admirable introduction of this principle more than thirty years since, when his patent was crushed by a combination of the trade, who dreaded the success of the patent. His more rational opponents afterwards acknowledged its value; and one stove-maker, who would not join the combination, a few years since, in a work on stoves and chimneys, eulogised the principle, and ignored the decision. His remarks on this crushed patent, the writer fully believes, first led Dr. Arnott to investigate the subject, and to produce the now-called Arnott's self-consuming, smokeless stove; but as simplicity is the greatest charm in all novelties, either patented or not, I conceive the suggested and successful process, applied to the common stove, and immediately at the service of all, without screws and levers, or an expensive smith's, ironmonger's, bricklayer's, or mason's bill, is a most valuable boon to society,—if society will only universally adopt it. I say *if*, for it is proverbial what an obstinate person John Bull is. I think insurance companies should especially request, or specify to this mode, as particularly safe, until some more stringent means be ordered and enforced. Furnace chimneys no longer are permitted to pollute the air, and vomit out their smoke; why, then, should, *in the aggregate, a far greater nuisance*, be for one day permitted to continue, when the public would infinitely gain, in every way, by the change. On seeing the notice in your journal, I at once resolved to try the new method, with, I must say, certain misgivings. With my own hands I adjusted everything, even to the paper at the bottom, and built up to the top bar with coals; then formed a sort of crows'-nest, of paper, shavings, and wood, and covered it lightly over with thin pieces of coal. Judge of my horror, on entering my room the next morning, and finding my servant had taken it all to pieces, and laid the fire in (I shall now call it) the antique way: fortunately, it was not lighted. I therefore had it again pulled to pieces, and replaced as I had laid it, and lighted. The next few minutes were most anxiously passed, fearing I might become the laughing-stock of family, servants, and all. What was my delight, however, when I saw the coals igniting one by one, and in half an hour, without bellows, or clouds of smoke, a most cheerful fire: it was lighted at nine, and by one o'clock it was so fierce, that I was obliged to pour water on it, to keep it down. This occurred after the paper at bottom had become burnt, the draught being greater. I may also add, that I have continued each day the new process, only substituting *sheet iron* at bottom, in place of *paper*. The comfort and cleanliness are beyond all conception, without considering the economy. Fire-irons are scarcely needed, it burning gradually downwards for hours, according to the depth of the stove. The deeper the stove the longer it burns. I have placed a fire-brick at the side of my stove—an ordinary parlour one,—owing to its being wider than its depth. I would strongly urge all persons not only to adopt the process, but to recommend it for general use. E. R.

Some of your readers have adopted with much interest the mode suggested in your publication "How to make a Fire in a common Grate which shall save Half the Coal and burn the Smoke." That mode, although valuable, has objections with some, which supplying a fire with coal under it may not have with others.

If any of your readers could, therefore, show a simple plan, which may be practical, thus to supply coal to a fire in an ordinary parlour-grate, it might furnish the most valuable means to the object suggested—namely, economy and cleanliness,—would prevent the nuisance from smoky chimneys,—as well as greatly oblige one desirous of adopting the best means of making and keeping up a fire. Colchester.

While on the subject of stoves, I may mention that too little attention is paid to the subject both by purchasers and makers. I maintain that no grate ought to be deeper than 5 inches from back to front: let the increase be in length: use nothing of metal but the bars: the covings, back, and sidings should be of fire-brick. Having turned a good deal of my attention to this subject, my experience has brought me to the conclusion that Nicholson's [Leslie's?*] form is the best, having no bottom. I have three of this sort in use, of different sizes. If bottom-grates are used, they should be made very fine. I humbly differ from Dr. Arnott about the height at which a grate should be set. About 4 inches from the ground, I venture to say, will be the most agreeable in use for many reasons which are too long to occupy the space in which valuable matter may be placed. All I add is, try the high grate and one set low.—A. Z.

In your impression of February 2nd you publish an account of a novel method of making fires, viz. by lighting them on the top, and making them burn downwards. Will you allow me to acquaint your readers with an improvement which I have recently effected in the antithetical art of making fires burn *upwards?* In lighting fires by the ordinary means, the wood is placed at or near the bottom of the grate, and the fuel to be lighted is placed upon it. By this means there cannot be a free passage for air through the fuel, and much trouble is occasioned in coaxing the fire to burn up; and frequently it has to be lighted over again. To remedy these evils, I have tied together sticks of wood, and given them the form of a hollow truncated cone or pyramid, five or six inches high. I place this in the fireplace on its broad end, and surround it with the coals and cinders to be lighted, *leaving the aperture at its top uncovered.* On lighting a piece of shaving placed within this simple form the effect is very striking. The air rushes in from below to feed the fire, driving a jet of flame upwards through the neck of the cone, which is immediately available for cooking, &c.; while other portions of flame are driven by the expanding air within the cone, laterally between the sticks, and made to light the coals, &c. W. H. N.

THE STYLE OF MODERN STAINED GLASS.

I trust Mr. Street will pardon my answering him and Mr. Oliphant together, as most conducive to brevity. I am afraid Mr. Street is himself an example of the prejudicial effect he deprecates, of a preponderating study of architecture, in his own case, else he would scarcely have quoted Mr. Ruskin against me. Does he not perceive that the "pretty pictures" Mr. Ruskin so properly condemns as unsuitable to glass are precisely the same which I have myself condemned, in the very discourse to which he takes exception? Mr. Ruskin was talking of the modern German school and its followers. Passing by certain inaccuracies in his statement, there does not seem to be any real difference of opinion between Mr. Ruskin and myself. I, too, quoted the twelfth and thirteenth century windows with admiration; but I moreover asserted that other windows were likewise most beautiful. And when I referred to a class, including such examples as those in the eastern part of Lichfield Cathedral, I am sure that Mr. Street will admit, in common candour, that I had in contemplation works widely different from the modern German; works, in short, which Mr. Ruskin has never condemned; nor, with his just appreciation of tone and colour, is ever, I apprehend, likely to condemn. If Mr. Street would condescend to *read* what I have written on the subject, and refer to the examples I have quoted, he might, perhaps, find the discrepancy between his own views and mine not so great as he imagines; but with that I am not at present concerned. It is true that I have advised the patrons of the art by no means to discard pictures in glass extending beyond the limits of a single light. But I have never advocated an exclusive preference for such designs. I have said, adverting to the great variety of designs in glass, that sometimes one, sometimes another, is preferable. And if I have expatiated at greater length on the merits of the more extended subjects, I have been compelled to do so by the dead set made against them. Mr. Street differs from me in opinion as to the effect of mullions cutting a design. But, when he attempts to undermine my opinion, I must repeat that it is by no means mine alone, but the opinion of a great many living men (to say nothing of antiquity) who have adopted it, certainly without any reference to me. Of these, some are professional artists; others are persons, who, from their attainments and knowledge of art, are quite as capable as any of forming a sound and consistent opinion on the matter. It is not my habit to drag the names of even casual acquaintances into a controversy, so Mr. Street must be content with my word. As for my remarks on Gothic architecture, which Mr. Street deplores, I but expressed my conviction. The old Gothic, which is grand and dignified, and honestly displays all the art of the period, I do admire. But the modern always appears to me more or less affected; to be invariably (I know not whether necessarily) associated with a degree of art far beneath what has been exacted during the last three centuries at the least; and to be apt to contrast but poorly with modern works in the "Pagan" style. The cricum-crankum small-windowed modern mediæval residences at the west end of the Abbey, though built of stone, are inferior, in effect as well as comfort, to the stuccoed mansions in Belgravia and Cubitopolis, which, by the way, shows that there must be something good in the "Pagan" style after all, for composed "Christian" architecture is admitted to be deplorable. Perhaps, if a higher tone is imparted to the painted glass and figure sculpture in Gothic architecture, I may relent; but an enormous reformation will be requisite in both. In conclusion, I assure Mr. Street that I applied the epithet he quotes to some persons who, no doubt, have annoyed him, as well as others, by their consummate ignorance and conceit.

Upon Mr. Oliphant I shall expend but few words. The style of man is shown by the style of his communication. He is unmasked by my having, in consequence of his employment as a draughtsman by some inferior glass painters, unavoidably condemned his own works in condemning theirs. He is moreover bound to endorse the current opinions of "the friends of the movement" whose patronage he is now soliciting on his own account. I am not in the least afraid of any of my arguments being shaken by criticism such as his: and if by attacking me he is likely to gain notoriety, he is quite welcome to do so as often and as fiercely as he likes. C. Winston.

* Mr. Nicholson holds a license from Mr. Leslie.

WORKS OF MODERN PAINTERS IN THE CRYSTAL PALACE.

Mr. Mogford has been engaged by the Crystal Palace Company to collect and superintend a gallery of Modern pictures of all the schools of Europe, to open in the month of May next, in the north wing of the palace, which will be constructed properly for the display of the works.

Five per cent. will be charged on all sales. Pictures previously exhibited are eligible, and every picture (from the space disposable) may be well placed for viewing.

Mr. Mogford will leave London next week for the continent, to collect the foreign pictures.

METROPOLITAN BUILDING ACT.

RUINOUS BUILDINGS IN THE CITY.

At Guildhall, on the 5th instant, Mr. Henry Ernest and Mr. William Miller were summoned before Aldermen Finnis and Cubitt, to show cause why the magistrates should not issue their order to pull down certain premises, situate at 98 and 99, Cheapside, the surveyor to the Commissioners of Sewers having surveyed both houses, and certified that they were in a dangerous condition, and required pulling down.

Mr. Tyrrell, the solicitor to the Commissioners of Sewers, stated that a complaint had been made by the inhabitants of Cheap Ward with regard to the nuisance arising from the hoarding which had been standing in front of the premises in question for the last three years, and the Commissioners had ordered their surveyor to survey the premises, and report thereon. The surveyor's report stated the houses were in a dangerous condition, and, upon the receipt of a certificate to that effect, the Commissioners directed the usual notices to be served upon the defendants, prior to their applying to the magistrates under the Metropolitan Building Act of 1855.

The solicitor who appeared for Mr. Ernest admitted the service of the notices, and said he was willing to consent to an order to pull down the premises in six weeks from the present time.

Mr. Miller admitted the receipt of the usual notices with regard to No. 98, Cheapside, but said he could not enter into any such arrangement as that proposed by Mr. Ernest. He was the occupier of 98, and Mr. Harwood, the freeholder, had promised to let him

have a lease if he would pull down and rebuild the house, which he agreed to do, and had gone to considerable expense in preparing to carry out the condition, when Mr. Ernest stepped in, and, as he supposed, outbid him, for Mr. Harwood granted him (Mr. Ernest) a lease over his (Mr. Miller's) head. Under these circumstances he must leave the Commissioners of Sewers to take what course they thought proper.

Alderman Finnis said it would have been better if Mr. Ernest had been prepared to answer this case as well as the first, for one house could not be taken down without the other, and the expense must eventually fall upon him in both instances.

Mr. Tyrrell suggested that the order should be made the same in both cases.

The magistrates accordingly ordered that the condemned houses should be pulled down, and the hoarding removed within six weeks from the present date.

METROPOLITAN IMPROVEMENTS.

It is rather singular, that while such a vast number of suggestions on the above subject has inundated the new Board of Works since its appointment, they have all had reference exclusively to the construction of additional thoroughfares between the *eastern* and *western* parts of the metropolis. But not a thought has been given to the wretched state of our communications between the *north* and *south*, which call loudly for a portion, at least, of the attention which the authorities have to bestow on metropolitan improvements.

The most urgent want of all, and at the same time the most easily remedied and at the smallest cost, is a good line of street from the broad part of the Strand to Holborn through Lincoln's-inn-fields. It is, in fact, already more than half made. Nothing more is required than the destruction of some worthless old houses in confined courts between the Strand and Carey-street, and the setting back of the few houses on one side of Great Turnstile, to complete the whole line as far as Holborn; and the site of this new street would be so valuable for offices and chambers, that the improved ground-rents would cover the interest of the outlay three times over! For more than thirty years this very opening has been projected by the inhabitants of the neighbourhood, and the public have constantly been led to believe that it was on the point of being carried out. Yet to this day that magnificent area of Lincoln's-inn-fields—the largest open space in the heart of London—is suffered to remain a perfect *cul de sac*, except for pedestrians! The only direct carriage-entrance is from Great Queen-street, and that by a narrow shabby street. From the north there is no approach whatever, except by two courts for foot-passengers. From the east there is only the private gate into Lincoln's-inn-square, which can be shut at pleasure! From the west (besides the narrow approach from Queen-street, already alluded to) there is only an entrance under a dark archway from the purlieus of Clare-market! And from the south there is literally no possibility of reaching the square in a vehicle of any description, except by a tortuous passage through market-sheds and cabbage-carts, surpassing in difficulty the Cretan labyrinth. All this would be in a great measure cured by the new street proposed, but this ought undoubtedly to be followed up by an opening on the north side of Holborn, with a branch to the right leading into Bedford-row, and another to the left into Red Lion-street. The former, by the removal of a very few old buildings to connect Millman-street and New Millman-street, would complete a direct thoroughfare from the Strand to Guildford-street, and thence through Mecklenburgh-square to the upper end of Gray's-inn-lane, and the railway station at King's-cross.

The next thing I would urge is so perfectly simple and easy of accomplishment, that it is a positive reproach to the commissioners who have hitherto had the control of public improvements that it has not been carried into effect long ago. I mean the setting back of some four or five houses at the lower end of St. Martin's-lane to the line of the adjoining buildings. Large sums have been expended to widen the upper end of St. Martin's-lane and form a broad street, crossing Holborn into Bedford-square, and thence in a direct line to the New-road and Euston-square station; but this well-designed plan is entirely spoilt at present by leaving the street quite narrow at the very point where it ought to be broadest, namely, where it approaches the National Gallery and the fine portico of St. Martin's Church.

Another great improvement, and at the same time involving but a very moderate outlay, would be a short street from the top of Bedford-street to the corner of Long-acre and St. Martin's-lane, which would cut through a beggarly neighbourhood, and would amply repay its cost. This street would lead directly into Cranbourn-street, and would soon become the main thoroughfare from the Strand to Coventry-street and Piccadilly, instead of the narrow and intricate passage by Hemming's-row and Green-street.

There is one other plan, which I have suggested on a former occasion, and which I am sure would be an immense improvement, not only as regards public convenience but also architectural effect, namely, a broad and handsome street from Somerset House to the British Museum, falling into the line of Drury-lane just beyond the Olympic Theatre, with a branch eastward into the south-west corner of Lincoln's-inn-fields, and the same branch extended westward into Wellington-street, connecting it with Waterloo-bridge. As this scheme, however, is of somewhat greater magnitude than the others I have pointed out, and is not so immediately pressing, I shall reserve the details for a future communication, in case I should be encouraged to pursue the subject.

A Middlesex Magistrate.

THE SCHOOLMASTER IN NOTTINGHAM.

In one of my peregrinations lately, I found myself in a street in the low part of the town of Nottingham, and my attention was attracted by a new building, apparently intended for scholastic purposes, which became more evident on a minute examination of certain hieroglyphical characters placed on the façade of the building, in encaustic tiles. After some spelling out, rendered a task by the redundance of flourishes, conceived, I suppose, to be "illumination," the following inscription was the result at which I arrived:—

"S. PVTVRS PEROCHIEL SCHOOLS."

Whether the attitude assumed by the unfortunate letters "A" in the second word, is to represent the modes of punishment intended to be inflicted on refractory children, I know not. If some "dame" were to place a card in her window, which stated "Bad spelling taught here," should we wonder at no infants being sent for the benefit of her instructions? Where is the difference between such an advertisement and the public announcement above alluded to? Simply that the one is gazed at and admired because the public cannot make it out, and the other is unfortunately written in too legible characters, and in English.

But seriously, is it not too bad to have such errors made, and those, too, after a party has been employed to see that all is properly executed? Either ignorance or carelessness is surely chargeable on those who superintended the buildings. In conclusion, I would beg most humbly to propose that, if a diploma is to be granted to architects, before they be allowed legally to practise, a printing lesson, in mediæval letters, at least once a week, be made to form a part of their studies.

An Antiquary.

RECENT BUILDING PATENTS.

The following particulars as to patents recently filed, are quoted from the *Engineer*, *Mechanics' Magazine*, and other sources:—

Tabourin, G. A. "A new system of metallic arch, proper for the construction of bridges, arcades, vaults, roofs, and all other such purposes." Patent dated July 4, 1855. (No. 1501). The fractional arches of this system are generally made of cast-iron united together by jointed under-lugs, somewhat like the legs of a pair of compasses, or the parts of a folding foot-rule: a central joint bolt is passed through the under-lugs. Each beam or girder forming a complete arch, is composed of as many fractional arches as may be required to form the total length of the whole beam or arch, the length of each fractional beam or arch having been previously determined. The beams or girders are laid up in parallel lines at a suitable distance from each other, so as to form bridges, vaults, or arcades of the required breadth. They are then united by single bolts passing through the centre of the lugs, which are separated by tubular transoms traversed by the same bolts. One of the principles of the invention is the hinge-like joint of two adjoining arches, which, it is urged, allows of the comparatively easy conveyance of the bridges, and of their being erected or repaired quickly, and with great facility. The system of jointed arches may also, it is said, be employed in construction for the beams of roofs of great length, by merely modifying one of the ends of the first and of the last fractional arches, which should then have a propping face at the lower end, and also a resting face or footing, butting and resting on the top of the wall.

Pym, J. "A new combination of materials suitable for building purposes." Application dated July 7, 1855. (No. 1525.) The patentee adds to five hundred weight of bitumen about five hundred weight of carbonate of lime powder, about one pound of sal-ammoniac, and as much coarse sand or grit as will mix freely with the former materials, when heated in a cauldron. To this is added, as the article may be required to be more or less solid or tenacious, resin, shellac, glue, or pitch, the proportions of which may vary according to the purposes to which the article is to be applied. To add strength to the combination, when used in the manufacture of railway sleepers, or other articles of like character, cocoa-nut fibre, wood shavings, or other fibrous substances, are mixed with it when heated. The material is cast in moulds of the form and size required.

Newton, A. V. "A new manufacture of fire and burglar-proof glass." (A communication.) Patent dated July 9, 1855. (No. 1,535.) The inventor manufactures plates or pieces of glass with a metallic wire cloth or grating contained within the body or thickness thereof, and so incorporated therewith that if the glass be shattered or broken into pieces, the mass will continue to be bound together by the wire-cloth or grating, thus presenting the toughness of an iron grating, with the impassable and transparent qualities of glass.

Flynn, H. E. "Improvements in preventing fire from the over-heating of hot-air flues." Application dated July 9, 1855. (No. 1,531.) This invention consists in "constructing parts, particularly the moveable wheels or slides or valves used to open and close the flues, or all or any part or parts of any safety-valves applied to the 'hot-air flues' or 'caliducts' of amalgams," which fusing at lower temperatures than the brass or other metals, or compounds of metals used in the fixed parts of the said hot-air flues, will melt before the heated air reaches a dangerous temperature.

Adams, J. "Improvements for indicating the time when persons commence and leave their work or calling." Patent dated July 11, 1855. (No. 1,554). According to this invention a series of cells or chambers are caused to revolve regularly by clock-work. These revolving cells are enclosed in a box, in the top of which is an aperture, from which descends a tube. The cells or chambers are by the motion of the clockwork brought successively under the end of the tube, so that a card or ticket put in at the aperture in the top of the box descends by the tube into one or other of the revolving cells or chambers, and thus registers the time at which it was put into the box.

Provisional protection has been granted (2,931) to James Edgar Cook, of Greenock, Renfrew, booking-clerk, for "an improved composition for preserving exposed surfaces, or surfaces liable to deterioration and decay."

THE FALL OF THE STAIRS AT CHELMSFORD SHIRE-HALL.

At the adjourned inquest, reported in the local *Chronicle*, Mr. Thomas Hopper, who has been the county surveyor since 1816, gave evidence, and was of opinion that the accident was caused by the dense pressure of a large mass of persons in motion against the outer rail: the pressure upon the rail acted as a lever upon the stairs. He had never reported to the magistrates that he thought the stairs insecure.

Mr. Seaton (a juryman).—We find the steps cut away 2 inches, and the stairs broke down at the very point where the facing to the steps had been done.

Witness.—It was done in a workmanlike and perfectly secure way: it did not weaken the stairs, as it was done in a scientific way—in a manner that was unexceptional. I give my opinion before God that what was done to these stairs tended rather to strengthen than to weaken them. Mr. Wray did it, and I was satisfied it was done in the most scientific and workmanlike manner.

Mr. James Fenton was examined. He said—I did not know the staircase before it fell, but I examined the ruins on Saturday morning, and I found the landing had separated from the stairs: the steps had been what we call rebated together in the original construction, but were not pinned. He attributed the accident to the landing being insufficient. The whole staircase was on an angle, and the whole of the weight depended on the outer corner of the landing. I have no doubt the landing gave way first, though a person looking on might not perceive it. I have put stairs up only 3 inches thick, and they are standing safe now.

A Juryman.—How was that part rendered weak?

Witness.—By piecing: one-fourth of the section of each step had been taken away. If you cut through the step originally there was an area of 66 inches: out of that there had been 16 inches taken away; but if the landing had not given way, I believe the steps would not have gone: each step in the original construction ought to have been pinned.

After some further evidence and an inspection, the jury returned the following verdict:—"Accidental death, occasioned by weakness in the original construction of the landing at the bottom of the third flight of stairs which fell."

Miscellanea.

Supply of Water to the Town of Neath.—The premium of twenty-five guineas offered some time since by Mr. Wm. Bullock Webster for the best plan of supplying the town of Neath with water, has been awarded to Mr. Egbert Moxham, of this town. Seven plans were sent in, and Mr. R. W. Mylne was selected to examine them and award the premium. In his report, Mr. Mylne says,—"Generally speaking, great care has been evinced by some of the competitors in the preparation of their plans, and in the examination of the capabilities of the sources, and in the detailed arrangements; while others have confined their schemes more to the general distribution in the town, and have omitted altogether provisions for filtration and service reservoirs. After due consideration, I have selected two designs, as in my opinion the best adapted to the requirements, and superior in their engineering character. One is from Mr. Newton, of Swansea, the other from Mr. Moxham, of Neath." After explaining the merits and deficiencies of each scheme, Mr. Mylne, in conclusion, considers Mr Moxham's design as the best of the two, but says there are several points on which improvements should be made before the scheme could be considered complete.

School of Art, Truro.—The ladies of the morning class have presented to the master, Mr. G. R. Gill, a silver-mounted dressing-case, as a mark of their esteem for his manner of conducting their studies. The progress of the class it refers to affords much satisfaction, we are told, to the promoters of the school.

Subtleties of Science in Samples of Sand.—A great impostor, of the name of Simonides, was lately unmasked by Professor Ehrenberg, of Berlin, the celebrated microscopic discoverer of the animalcular or shelly origin of chalk, who, on examining with his microscope a pretended ancient manuscript, "discovered" by Simonides, observed, that the "ancient" ink ran above, not beneath, other ink of professedly less ancient or more modern origin, also traced upon the parchment. The same acute professor has just succeeded in unkennelling a thief of gold coins, abstracted while on their way, in a barrel, by railway, to Berlin. When the specie was abstracted, the barrel was filled with common sand, and Professor Ehrenberg procured specimens of sand from the neighbourhood of every station on the line, and, on microscopically examining the samples, very soon identified the station whence the barrelled sand must have come: the hint was sufficient, and led to the identification of the thief amongst the few *employés* on duty at that particular place and time.

Newcastle-upon-Tyne Society of Antiquaries.—At a recent meeting of this society, a paper, by the Rev. D. H. Haigh, of Erdington, was read "On the inscribed Cross at Bewcastle, in Cumberland," which was declared to be the earliest that we have of Anglo-Saxon times. It is a four-sided column, about 14½ feet high, tapering gently from base to top. At same meeting Dr. Bruce submitted a sketch, by Mr. Dobson, of the proposed adaptation of railway arches and waste ground to the purposes of the museum, and also called attention to a notice of the forthcoming meeting in Edinburgh of the Archæological Institute.

Gas.—The directors of the Lincoln Gas Company are about to have constructed at their works machinery for testing the purity and illuminating power of the gas manufactured by them; and, when completed, a daily register will be kept of the condition of the gas, the accuracy of which, according to the local *Chronicle*, will be tested by one of the first scientific men of the day, to be brought specially to Lincoln for the purpose.——The Southampton company were about to raise the price of their gas from 5s. to 6s. per thousand cubic feet, but at the instance of a deputation of the local Chamber of Commerce, they have consented to take sixpence off the proposed advance in price, and have promised to "reduce still further" when "coals, &c." are reduced in price.——A gas company is about to be established at Gibraltar, under the auspices of the governor.——A prospectus has also been issued of a company for lighting Constantinople with gas. The capital is fixed at 100,000*l.* in 1*l.* shares. The directors, however, have not yet had any privilege conceded to them by the Sultan or his government; nevertheless, it promises well.

"Bolection Work."—In Browne Willis's survey of the Cathedral Church of St. Asaph, 1720. page 5, I find this passage:—"From beyond the stalls up to the altar, and also round the altar, the wall is cover'd with wainscoat, well finished with Bolection work, which is painted, as are also the halls, tho' but poorly." What is the meaning of *bolection* work: I can find it in no dictionary?—A Subscriber.

*** Mouldings which project beyond the surface of a piece of framing are called bolection or bolection mouldings.

The Volcanic Shell.—Although the vocation of your readers,—and it is a noble one,—is to raise up buildings for the comfort and convenience of their fellow-men,—to form princely palaces, with pinnacles standing out in proud relief against the sky,—and to rear cottages, which, in becoming the "homes of the thousands," are yet the grandest effort of their genius,—I trust they will read without impatience a few particulars of a projectile, before whose mighty force the erections of a century would be annihilated in an hour. The "volcanic shell," as many of your readers are probably aware, consists of a hollow sphere of iron furnished with an inner tube of the same metal (forming as it were, an axis to the globe), filled with the powder required to burst the whole, and fitted with an ordinary "fuse." The body of the shell contains a composition which I have designated the "annihilating fluid." Let us suppose this terrible missile to be sent on its errand of destruction against,—say a "man-of-war" of gigantic dimensions,—and as it whistles through the air, and true to the aim of a British gunner, strikes the middle of the quarter-deck,—a moment more, and a fiery shower sets sails, ropes, timbers, all in a blaze; and a few buckets of water are idly scattered about in the vain hope of putting it out. The rest may be imagined. Even if the sea is complaisant enough to extinguish the flames by half-drowning the ship, the crew must be provided with lungs of a very peculiar make if they can "stand" the poisonous vapour produced by the combustion of my "annihilating fluid." Such is the agent of destruction, upon which the "chemist to the Ordnance" has reported favourably, and with which the Board of Ordnance have granted an experiment, to take place at Woolwich, I hope, ere many weeks have passed. In order to test more fully the effect of water upon the *fluid*, the following expedient was devised and carried out, each drop of ignited *fluid* having to pass through from six to nine inches of cold water. I had heard of such a thing as a "storm in a tea-cup," and therefore concluded that there was no reason why a "volcanic shell" should not be exploded in a washing-tub! Accordingly, a good specimen of the above "domestic article" was half sunk in the ground, filled with water, and surrounded by a quantity of dry straw and shavings, and a model-shell, of glass, less than two inches in diameter, was then plunged six inches under the water in the tub. The "subaqueous fuse," communicating with the "bursting charge," was then fired: explosion took place, and a perfect fountain of "liquid fire" soon inflamed the straw, &c. in all places where the latter was not soaked by about 1¼ gallon of water, also dislodged. I fancy these facts require no comment. In conclusion, I beg most emphatically to claim the *priority* and *superiority* of my invention to all others of a professedly similar nature; also that (like the manufacturers of "patent perambulators"), I have no "connection with any other party."—Wentworth Lascelles Scott.

Cambridge Architectural Society.—The last meeting for the Lent Term was held on Wednesday, March 5th. The Rev. G. Williams, Vice-Provost of King's College, one of the vice-presidents, took the chair. A paper was read on the Eucharistic Vestments of the Church by the senior secretary, Mr. S. B. Gould, of Clare College. He described the alb, stole, maniple, dalmatic, tunicle, and chasuble, tracing their history and variations in form from the early period of the Church, and illustrating his remarks by copies of old illuminations and brasses, and by modern examples. A discussion followed, in which the Rev. G. Williams described the richness of the Greek and Russian saccos, and the Rev. W. M. Campion and the Rev. H. R. Bailey took part.

Settlement of Disputes as to Wages, &c.—A memorial has been laid before Sir George Grey, the Home Secretary, by a committee of the National Association of United Trades, for the protection of industry, praying that he would take into consideration the subject of appointing stipendiary magistrates (barristers of five years' standing) in all large towns in the manufacturing and mining districts, and cause all cases of dispute respecting wages, agreements, contracts, hours of labour, quality and quantity of work, and other matters and disputes between masters and workmen, to be brought before these magistrates for adjudication and settlement.

Sale of Navy Timber.—Messrs. Hobbs, of this city, on Friday last, sold some fine navy timber at Stifford's-bridge, to the extent of nearly 1,000*l.* There was a large attendance on the occasion. The oak was particularly fine, as a proof of which it may be stated that some years ago an offer of 100*l.* was made for one of the trees now sold. The choicest lots of oak sold at about 3*s.* per foot; best elm (of which there were some extraordinarily fine specimens), at 1*s.* 6*d.*; fir, about 1*s.* Higher prices would have been obtained but for the distance of the timber from market, and the consequent expense of haulage.—*Worcester Herald.*

The Leeds New Town-hall.—At a meeting of the Leeds town-council, on Wednesday before last, the subject of erecting a tower on the new Town-hall was discussed, and Alderman Hepper asked for a vote of 4,000*l.* for the purpose. Ultimately, upon the resolution going to a division, the numbers in favour of the tower were found to be twenty-seven, and those in opposition only eight. The motion was accordingly carried. No other design for the tower, besides that already illustrated in the *Builder*, has as yet been prepared, but it is said that a new design will be submitted to the council by the architect.

Marylebone Free Library.—We are glad to observe from the annual report just issued that the experience of the past year enables the committee to state that the advantages of the Marylebone Free Library continue to be sought with undiminished interest. The institution now consists of two branches, a library of reference, and a lending library. The number of visitors at the rooms of the institution since its opening, has been 59,531. Of these, somewhat less than half have attended during the past year. The reference department has received during the past year, from various sources, an accession of upwards of 1,000 volumes, rendering nearly 5,000 books now available in this department of the Library. From a list giving the avocations of persons frequenting the rooms during the year 1855, it is satisfactory to observe that among the working men who attended there were of carpenters, plumbers, painters, decorators, and others engaged in building trades, no less than 5,693; and of smiths, brass workers, &c. 1,092.

Bristol and Clifton Graphic Society.—This society gave its first *conversazione* for the present season at the Victoria-rooms, Clifton, on Tuesday evening in last week, when, as on former occasions, a numerous and fashionable company assembled. The exhibition occupied the committee-room, the corridors, and the small ball-room, while a part of the large ball-room was enclosed as a tent and appropriated for refreshments: all the rooms were decorated with foliage and groups of flowering plants in bloom. The octagon walls were covered with sketches by Mr. Eagles, whilst the centre contained a fountain, of large size, contributed by the Coalbrookdale Iron Company.

Geneva: Subalpine Railways.—The Lyonbourg section of the line connecting Geneva and Lyon being near its completion, the easterly portion has been begun, which presents many interesting features. From Seyssel to Bellegarde the line runs along the Rhone, on high earthbanks, through cuttings of mountains, &c. At Bellegarde the valley is arched over by a viaduct of eleven arches, which is a remarkable work. Equally so is the Credo-tunnel, which, when completed, will have a length of 3,912 mètres, being 7 m. high and 8·50 broad. The fusion between this Swiss line-company and the Mediterranean has been lately effected.

Alleged Defect in Reservoir at Malvern.—The alleged unsafe condition of the Wyche reservoir has become a matter of much anxiety to the local commissioners, and a committee was appointed to examine the structure. A report from Mr. Simpson, the engineer, was read at a meeting of the board, in which he pointed out certain alterations necessary to its security, but the commissioners resolved to take the opinion of Mr. Elmslie upon the subject. A communication from Mr. Elmslie was lately given to the effect that Mr. Simpson's proposed plan would weaken the lower part of the tank by throwing the weight of water upon it. Mr. Harper said the report merely told them that they had a reservoir which might be filled, but from which they must take no water or the sides would fall in. He had prepared a plan which he would guarantee would do. It was agreed to adjourn the subject for a week, and in the meantime the committee would take Mr. Harper's proposals into consideration.

Suicide of a Brickmaker.—Mr. William Rhodes, the well-known brickmaker, has committed suicide, after suffering severely from mental depression. An inquest has terminated in the usual verdict of temporary insanity.

Election of Surveyor, Hastings.—On the 7th inst. at Hastings, there were no less than sixty-two candidates for the office of surveyor as lately advertised in this paper. Mr. John Laing, late surveyor, of Great Yarmouth, was unanimously elected.

Scenery at the Haymarket Theatre.—For a very elegant comedy in three acts, by Mr. Bayle Bernard, recently produced at the Haymarket, under the title of "The Evil Genius," three very good scenes have been painted,—one, a room in a villa; another, the gardens before the villa; and a third, the park of a country mansion—the last by Mr. W. Callcott, whose very charming scenery for the introduction of the pantomime deserves even more praise than we have already given it. The comedy is exceedingly well acted, especially by Mr. Buckstone, Miss Reynolds, and Mr. Compton.

SCULPTURE COMPETITIONS.—We understand that the committee of the Baines Testimonial, at Leeds, invited six sculptors to submit, in competition, models for the design, and that three of the sculptors, viz. Mr. P. M'Dowell, R.A.; Mr. Calder Marshall, R.A.; and Mr. J. H. Foley, A.R.A. declined the invitation, informing the committee that the very unsatisfactory manner in which such trials of artistic skill were conducted, precluded their availing themselves of the opportunity offered for the exercise of their art.—— From Liverpool invitations have been sent to twelve eminent sculptors to send in models for a statue of Archdeacon Brooks, to be placed in St. George's Hall. The sum offered for the work is 1,750*l.*

BELLS AT ROTHERHAM.—The company of ringers ask us to say that on Monday, the 3rd inst. was rung for the first time a new peal of six bells, recently hung in the tower of Rawmarsh Church, near Rotherham, Yorkshire, and that they do credit to the founder, Mr. Mears. They were hung by Mr. Hurry.

PORPHYRY SARCOPHAGUS.—A letter from Stockholm says:—"The sarcophagus in porphyry which King Oscar ordered twelve years ago from the mines of Elfdahe, for the mortal remains of his father, Charles XIV. (John Bernadotte) has just been completed, and in a short time will arrive in this city. This magnificent work, not more remarkable for the beauty of the porphyry than for the execution of the *bassi relievi* which ornament it, weighs 75 shippunds (16,000 kilogrammes). The cost of its conveyance to Stockholm will amount to 30,000 f.

WORCESTER SOCIETY OF ARTS.—The members and friends of this society held their annual *soirée* at their rooms in Foregate-street, Worcester, on Thursday evening in last week. Mr. de Foix Durieux read a paper in course of the evening "On the Principles of Art as applied to Drawing, Painting, and incidentally to Architecture."

SLATER AND TALL'S WOOD-WORKING MACHINERY.—Mr. Thomas Slater, opti.ian, who is known for his inventions in connection with the mechanical arrangements of the electric light, and Mr. Joseph Tall, tool-maker, have recently combined their endeavours for the improvement of wood-workers' tools. The particular subject which they have taken in hand is the manufacture of joiners' and carpenters' planes, by the aid of set machinery, in such way that peculiar accuracy in the work is, it is said, secured, in conjunction with great rapidity of production. Messrs. Slater and Tall's invention comprehends, firstly, an arrangement of machinery for cutting the parallel sides of the blocks out of which the planes are to be formed; secondly, machinery for mortising the angular cavity into which the plane-iron is fitted; and thirdly, an improved form of plane-iron. The *Practical Mechanics' Journal*, in describing these inventions in detail, says,—"The whole of these details, and especially the mortising or slotting apparatus, are most ingeniously contrived; and they bear evidence of the bestowal of more than usual care in the perfection of every part."

NEW RIVER COMPANY.—The following is the official statement of the receipts and expenditure of this company during the past year:—Receipts—Water-rents from houses, trades, watering the streets, and water sold in bulk, 150,143*l.* 14s. 8d.; ground-rents and rents from land, &c. 9,123*l.* 1s. 8d.; miscellaneous receipts, 5,532*l.* 13s. 9d.; appropriation from money borrowed on bonds for new works, extensions, &c. 291,815*l.* 17s. 11d.; total, 457,445*l.* 8s. Expenditure—Ordinary expenses of repairing and maintaining the works and collection of revenue, 70,407*l.* 15s. 4d.; interest on money borrowed, 20,991*l.* 14s.; dividends to proprietors, being equal to about 4½ per cent. on the capital, as settled by the Act of 1852, 60,912*l.*; amount carried to contingency fund by way of reserve, 13,288*l.* 9s.; purchase of lands, &c. for new works, improvements on river, pipes, pipe-laying, and other outlay, 291,845*l.* 17s. 11d.; total expenditure, 457,445*l.* 8s. The capital of the company is stated to amount to, inclusive of the additions up to the end of 1853, 2,086,842*l.* 6s. 3d

SCULPTURE AND BUILDERS.—Permit me to draw attention to a great question connected with the progress of sculpture. Is it likely that the present school of carving will improve, as long as builders remain the disposers of it? If the two sister arts, architecture and sculpture, have to assist one another, how can that be done, when a builder stands betwixt them? Under the present system, the architect gives his orders to the builder, by whom the sculptor is employed and rarely or never comes in contact with the architect.—A SCULPTOR.

TENDERS

For the proposed Greyhound Inn, Brook-street, Holborn. Mr. E. Tanson, architect:—

Howard	£3,295 0 0
Holland	2,749 0 0
Thompson	2,630 0 0
Mackenzie	2,600 0 0
Young	2,564 0 0
Ryder (accepted)	2,478 0 0

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"*Cleaning Boards.*"—"J. K. E." asks for a receipt for "cleaning and whitening boards," as nothing has such an unsightly appearance as dirty and bad coloured boards.

"M. O. H." from what is said as to crushing and grinding in the specification of the patent for black paint, the carbon used would appear to be simply the fine dust of charcoal not lamp nor ivory black. It is of course the process rather than the kind of carbon that is patented.—"M. O'K."—"D. M." (can we see any rough view?) "S. W."—"J. B."—"W. T." (we can get no precise information.)—"J. F."—"A. and Sons."—"Rev. C. D. M."—"Delta." (such a wash is to be purchased.—"Foreign Engineer" (unless precautions be observed, iron houses are open to the objections named)—"J. F."—"W. H. T." (no sufficient *external* view has been given)—"P. and D. C."—"S. B."—"Sonm Culque."

E. H."—"W. T." (the French newspapers)—"F. L." (the designs at Lille are, we believe, open to the public)—"H. A. H."—"T. G."—"J. G. S."—"H. H."—"J. G. W."—"Y. Z." (our informant was engaged upon it, and is no doubt correct).

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *via* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

BUILDING LAND.—Some most eligibly situated LAND, TO BE LET on Building Leases, of ninety nine years, in that healthy and increasing locality, West Hum, Essex, four miles from London Bridge, and numerous running near to the place several times a day. The ground-rents very low; and respectable builders might be assisted with loans.—Inquire of Mr. WATSON, No. 14, Upton-row, West Ham, Essex.

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FREEHOLD LAND for SALE.—Valuable LOT for twenty Fronts to Gas Houses for nine or ten shillings per foot, and Corner Houses for more. Roads and Sewers will be made and Houses built and will be included. The land will readily let at 2*l.* 10*s.* per house; money might be obtained on small leases. Lots of 200 feet. For further particulars, apply personally to Messrs. CHARLTON and WALKER, 18, Southampton street, Pentonville.

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TO BUILDERS.

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FREEHOLD GROUND, Fetter-lane.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 25th of APRIL next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking an BUILDING LEASE for eighty years, certain PLOTS of GROUND, situate at the south end of Fetter-lane. Further particulars may be had, and a plan seen, on application to Mr. HAYWOOD, Engineer to the Commissioners, at these Offices in the Guildhall. The Commissioners will require a plan and elevation of the Premises proposed to be built to be submitted to them for approval; and do not bind themselves to accept any proposal unless deemed satisfactory. JOSEPH DAW

Sewers Office, Guildhall, March 4th, 1856.

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FOUNDLING HOSPITAL.—The Committee of Governors will meet at the Hospital on SATURDAY the 15th instant, at Seven o'clock, to receive PROPOSALS for a LEASE of PREMISES in Sugar-loaf court, Gerrard-hill, Upper Thames-street. Plans of the premises, and further particulars obtained at Mr. HENRY O. CLARK'S Office No. 1, Lime-house, Stand.—By order of the Court of Governors, March, 1856. J. BROWNLOW, Secretary.

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N.B. All goods sawn at these mills fetched and delivered free of charge.

FRENCH POLISH and SPIRIT VARNISHES made from Methylated Spirit, 62 over proof.

Best French Polish	6s. 6d.	per gallon.
Spirit Varnish	6s. 6d.	"
White French Polish	10s. 0d.	"
Methylated Finish	6s. 6d.	"

By JAMES SLIPPER, 57, Leather lane, and 14 and 15, Dorrington-street, Holborn, London.

CRYSTAL PALACE.—PICTURE GALLERY.—It is intended to construct in the north wing of the Crystal Palace (at present occupied by the raw produce) a GALLERY for the EXHIBITION and SALE of modern PICTURES of all the schools of Europe. The gallery will open early in the ensuing summer. No charge will be made for exhibition; but it is proposed to charge 5 per cent. on sales. Communications to be addressed to Mr. HENRY MOGFORD, F.S.A. at the Palace, in whose hands the Directors have placed the management of the gallery, and from whom full particulars may be learned. The Directors reserve to themselves a right of selection.—By order.
G. GROVE, Secretary.

THE PHOTOGRAPHIC SOCIETY'S THIRD ANNUAL EXHIBITION is NOW OPEN, at the Gallery of the Society of Painters in Water Colours, Pall-mall East. Open at TEN. Admission 1s. Evenings, from SEVEN to TEN. Admission 6d. The Exhibition will be closed on the 29th instant.

TO ARCHITECTS AND OTHERS.

MR. EDWARD L. PARAIRE is desirous of Meeting Gentlemen who require COLOURED ARCHITECTURAL DRAWINGS. External, Internal, Isometrical Perspectives got up; outlines of same neatly coloured, with background, on terms that will insure approval. Temporary assistance given in getting up Plans, Elevations, Sections, Detail, and Working Drawings.—Mr. E. L. P. makes a consideration in his charge where competition drawings prove unsuccessful.
Address, 8, Rathbone-place.

TO ARCHITECTS.

EXHIBITION and COMPETITION DRAWINGS, coloured or tinted, and superior LITHOGRAPHY, in its various branches, executed by Mr. T. J. RAWLINS, Author of Elementary Drawing Classes, adopted at Marlborough House; Outlines of Sculpture; Modern Architecture, &c. [illegible], University-street, University College, London.

DRAWING, &c.—One Guinea per Quarter. Comprising Architectural, Engineering, Mechanical, Perspective, and Water-Colour Drawing, Taking out Quantities, Measuring Builders' Work, &c. &c. Gentlemen who cannot attend at the Establishment, can be attended at their residence on moderate terms, in any part of town or country, by Mr. SMITH or Mr. LEWIS.—Offices, 24, Guildford-street.

DRAWING CLASSES.—24, Guildford-St. Russell square.—At this Establishment Pupils are thoroughly Instructed in Architectural, Civil Engineering, and Mechanical Drawing; Ornamental, Perspective, and Water-Colour Drawing; Taking out Quantities, Measuring, Estimating, &c. &c.
Terms, One Guinea per Quarter. Prospectuses and full particulars may be had at the Offices.

ARCHITECTURE, CIVIL ENGINEERING, and SURVEYING CLASSES. Established by Messrs. HYDE, SMITH, and LEWIS, Architects, Civil Engineers, Surveyors, &c. For Preparing Gentlemen for Architects, Builders, Engineers, Surveyors, Draughtsmen, Measurers, &c. and for giving EVENING INSTRUCTION in Architectural, Civil Engineering, and Mechanical Drawing; Colouring, Shading and Tinting; Ornamental and Water-Colour Drawing; Perspective, Isometrical, and Geometrical Drawing, Making Finished and Working Drawings; Preparing Specifications, Taking out Quantities, Estimating, Measuring and Valuing Builders' Work, &c. &c. Terms:—Day Pupils, Three Guineas per Quarter. Evening Pupils, One Guinea per Quarter. There are no extras, the terms include the whole of the above, with the use of Drawing Boards, T Squares, Plans, Drawings, Models, &c. Prospectuses and full particulars may be had at the Offices, 24, Guildford-street, Russell-square.

MATHEMATICAL DRAWING INSTRUMENTS.—JOHN ARCHBUTT, 20, Westminster-Bridge-road, Lambeth (near Astley's Theatre), begs to call attention to his Stock of Instruments manufactured by superior workmen. The prices will be found considerably lower than ever charged for articles of similar quality and workmanship. Rules, scales, tapes, &c. at equally low prices. An illustrated price-list will be immediately forwarded, free, on application.
N.B. A few New and Second-hand Levels and Theodolites always for Sale.

A. TRIMEN'S CHURCH and CHAPEL ARCHITECTURE, with more than 1,000 Gothic Mouldings, selected from the best examples this country contains. 5s. and 10s. 6d.
London: LONGMANS and CO.

TO ARTISTS, ENGINEERS, DRAUGHTSMEN, AND OTHERS.

PENCILS.—If you want a really good Pencil, at a moderate price, apply to J. H. WOODLEY, [illegible], Fore-street, City, London. Best Drawing Pencils [illegible] grit, 2s. per dozen; specimen set of five, 1s. or, post free, fourteen stamps. Best Carpenters' Pencils, 1s. per dozen. Woodley's complete Drawing Books [illegible] Sketching Books [illegible] 1s. [illegible] N.B. The Trade and Schools supplied.

TO SURVEYORS and Others engaged under Sir Benjamin Hall's Metropolitan Act, and by Local Boards of Health. JOHN ARCHBUTT, of 20, Westminster-bridge-road, Lambeth, near Astley's Theatre, begs respectfully to call the attention of the above to his stock of new and second-hand THEODOLITES, DUMPY and Y LEVELS, by Rubergall, Jones, Harris, and other eminent makers, varying in prices from six to nineteen guineas. He has also a selection of Box Sextants, Prismatic Compasses, and Telescopes, by Troughton and Simms, Jones, and Schmalcalder; and a variety of Level Staves, Tapes, and Land Chains. N.B.—Communications from the country promptly attended to.

CHAPPUIS'S NEW PATENTS.—GAS and DAYLIGHT REFLECTORS. See Description in Mr. Edmeston's Report at the Architectural Exhibition, in "The Builder," 23rd February, 1856.
Manufactory and Warehouses, 69, Fleet-street.

PORCELAIN LETTERS for SHOP SIGNS. Porcelain and China Lock Furniture and Finger Plates, in great variety. Porcelain Sanitary Stoneware Mortars and Pestles, [illegible] Patent stone and earthenware Jugs, Baths, Tiles, &c. &c. can be had at Messrs. THOMAS, JOHN, and JOS. MAYER'S, China and Earthenware Warehouse, No. 2, [illegible]-lane, Queen-street, London, where an extensive stock [illegible] on hand, of every style of pattern and quality.
Shipping orders executed with care and promptness.

TO ARCHITECTS, Schools of Design, Institutes, and Others. Statues and Busts.—An excellent collection of [illegible] first-class [illegible] TO BE DISPOSED OF on advantageous terms. Apply by letter, to Mr. W. D. CLARKE, 12, Chepstow-place, Camberwell New-road.

GRAVEL.—Wanted, about 100 loads of PRIME STRONG GRAVEL, for a road. Particulars to be sent to Mr. WELCHMAN, 23, Rutland-gate, Hyde-park.

SPECIAL NOTICE.

KENT MUTUAL ASSURANCE SOCIETIES.
CHIEF OFFICES:
QUEEN-STREET-PLACE, NEW CANNON-STREET, LONDON.

The united annual incomes exceed 27,000*l.*; and all Profits belong to the Assured.

LIFE.

The next division of Profits will include parties assuring before the 24th March next.
The new business of the last eight months exceeds 5,000*l.* in Annual Premiums.

FIRE.

The Guarantee Fund is being increased to Half-a-Million.
The annual income, since last annual meeting, has increased beyond 15,000*l.* GEORGE CUMMING, Manager.
N.B. Agents are still wanted for some vacant localities.

SIXTH DIVISION OF PROFITS.

CLERICAL, MEDICAL, and GENERAL LIFE ASSURANCE SOCIETY, 99, Great Russell street, Bloomsbury, London.

SPECIAL NOTICE.

All persons who assure on the Participating Scale before June 30th, 1856, will be entitled to a Share of the SIXTH BONUS, which will be declared in the January following.
Proposals should be forwarded to the office before June 1st next.
The Thirty-first Annual Report just issued can be obtained of the Society's Agents, or of
GEO. H. PINCKARD, Resident Secretary.

SIXTH BONUS.

UNION ASSURANCE SOCIETY.—
(FIRE, LIFE, ANNUITIES.)
Instituted in the reign of Queen Anne, A.D. 1714.
Cornhill, and 70, Baker-street, London.
Chairman—J. Remington Mills, esq.
Deputy-Chairman—Henry Aldwin Soames, esq.

James Bentley, esq.	John Paynter, esq.
Thomas Bodley, esq.	John Rogers, esq.
Daniell Britten, esq.	Henry Rutt, esq.
Nicholas Charrington, esq.	George Spencer Smith, esq.
S. Preston Child, esq.	Richd. Horsman Solly, esq.
William Gilpin, esq.	W. Foster White, esq.
Thomas Mills, esq. M.P.	Samuel Wilson, esq. Ald.
John Morley, esq.	Stephen Wilson, esq.

The LIFE BONUS of the year 1855, of four-fifths of the profits of the LIFE DEPARTMENT, has been just declared, and (with the exception of a reserve of nearly 20,000*l.* to accumulate towards the next Bonus of 1862), is payable upon and with the sum insured, being at the rate of 10*l.* 10s. per cent. for the last seven years, on Policies effected in Great Britain upon the Profit System.

THIS BONUS MAY BE APPLIED EITHER

By having the annual premium reduced for the next seven years, which will in many cases extinguish the same for that period,
Or by adding the amount to the sum insured;
Or the value thereof may be received immediately in money.
The Directors beg to state that, by a recent change in the regulations of this Society, the assured realize the advantages of MUTUAL OFFICES by sharing the entire profits less one fifth (as a small compensation for the necessary guarantee), and are free from the liability incurred by the members of such Societies.
The accumulated invested capital now amounts to upwards of ONE MILLION sterling.
THOMAS LEWIS, } Joint Secretaries.
WM. B. LEWIS, }

LONDON and WESTMINSTER BANK.
Paid-up Capital, 1,000,000*l.*
DIRECTORS:
The Right Hon. the LORD MAYOR.

Henry Bosanquet, esq.	Thomas Farncomb, esq. Aldn.
Henry Buckle, esq.	Charles Gibbes, esq.
Frederick Burmester, esq.	William Haigh, esq.
John Garratt Cattley, esq.	George Hanson, esq.
Thomas Chapman, esq. F.R.S.	J. Lewis Ricardo, esq. M.P.
James Denis de Vitré, esq.	John Stewart, esq.
Joseph Esdaile, esq.	Joshua Walker, esq.

GENERAL MANAGER.
James William Gilbart, F.R.S.

City Office, Lothbury, W. T. Henderson, Manager.
Westminster Branch, 1, St. James's-square, J. W. Weldon, Manager.
Bloomsbury Branch, 214, High Holborn, William Ewins, Manager.
Southwark Branch, 3, Wellington-street, Borough, Edward Kingsford, Manager.
Eastern Branch, 87, High-street, Whitechapel, W. D. Asperne, Manager.
St. Marylebone Branch, 4, Stratford-place, Oxford-street, G. M. Mitchell, Manager.
Temple-Bar Branch, 217, Strand, Charles Ward, Manager.

Current accounts are received on the same principles as those observed by the London bankers. No Christmas boxes or other gratuities are allowed to be taken by the officers of the bank. The bank also takes the agency of Joint Stock Banks, private bankers, and other parties residing at a distance. Cheques on penny stamps may be drawn from any place in the United Kingdom. Strong rooms are provided for the security of deeds and other property lodged by the customers of the bank.

Sums from 10*l.* to 1,000*l.* are received on deposit at the rate of interest to be fixed at the time, and they are repayable upon demand, without notice. If withdrawn within a month, no interest is allowed.

Sums of 1,000*l.* and upwards are also received and receipts, upon such terms as may be agreed upon, with regard to the rate of interest at the time of repayment. Parties may lodge money upon an interest account who have not a current account, and those who have current accounts may transfer any portion of their balance to an interest account.

The rate of interest allowed at present on deposits of 500*l.* and upwards is 5 per cent.

J. W. GILBART, General Manager.

London, January 16, 1856.

The dividend for the past half-year at the rate of 6 per cent. per annum, and a bonus of 5 per cent. on the paid-up capital of the bank, free of income-tax, will be payable on Monday next, the 21st instant.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about [illegible] per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.

½	¾	1	1¼	1½	1¾	2	2¼	2½	2¾	3 in.
9d.	1[illegible]d.	1s. 1d.	1s. [illegible]d.	1s. [illegible]d.	1s. 7d.	1s. [illegible]d.	2s.	2s. 3d.	2s. 6d.	2s. 9d.

Super extra stout quality.

2	2¼	2½	2¾	3 inches.
2s.	2s. 3d.	2s. 6d.	2s. 9d.	3s. per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

1	1¼	1½	2	2¼	2½ inches.
[illegible]d.	10d.	11d.	1s.	1s. [illegible]d.	1s. [illegible]d. per yard.

The hose is Burnettized at an extra charge of [illegible]d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE PACKING, both round and flat, and SOCKET RINGS for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber strips cut to any pattern for [illegible] tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for [illegible].

Vulcanized Rubber in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions, Inflatable Portable Baths, Invalid Cushions, and Articles of the above made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

MESSRS. HOOPER and FRY, INDIA-RUBBER MILLS, MITCHAM, being licensed by Messrs. Macintosh and Co. are prepared to give Estimates for VULCANIZED, CURED, and other INDIA-RUBBER GOODS, including Rail Buffers, Carriage and Engine Springs, Steam and other Packing, Brewers' and other Hose, Gas and other Tubing, Saw, Flour, and Machine Bands, Valves for Pumps and Stationary Engines, Washers, and all Articles of India-rubber. They also invite attention to the very superior and peculiar quality of their Waterproof Garments, Camp Blankets, &c. being free from smell, and permanently flexible in every climate, resisting alike heat at 300 deg. Fahrenheit, or cold at zero, and may be washed in boiling water without injury. HOOPER and FRY, India-rubber Manufacturers, Mitcham; and 16, Walbrook, London.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter: FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT. —Second Testimonial.—"March 10th, 1852.—In reply to your letter received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

TO ENGINEERS, MILL-OWNERS, &c.
N. Woolwich Elastic Steam-packing (Canvas and India-rubber), at 1s. 4½d. per lb.

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H. M.'s Dockyards), having considerably extended their manufacture in order to meet the daily increasing demand upon them for this effective and durable article, are enabled to offer the very best material at the reduced price of 1s. 4½d. per lb. for sheet and rope.

Testimonials may be seen at S. W. SILVER and CO.'s Warehouses, Nos. 3 and 4, Bishopsgate-street (opposite London Tavern), where orders for Steam Packing, also Buffer Springs, Pump Clacks, and the various India-rubber appliances, will meet with prompt attention.

CAUTION.—S. W. S. and Co. have found it necessary to stamp all their manufacture, thus "S. W. SILVER and CO. WORKS, NORTH WOOLWICH."

CHAS. MACINTOSH and CO. Patentees of the VULCANIZED INDIA-RUBBER, and GENERAL MANUFACTURERS of WATERPROOF, AIRPROOF, and ELASTIC RUBBER GOODS beg to inform all persons who desire to correspond with them direct, that their SOLE ESTABLISHMENTS are No. 3, Cannon-street West, London, and Cambridge-street, Manchester. This notice is necessary, as the term Macintosh Depôt, Macintosh Warehouse, &c. is frequently adopted both in London and the country by vendors of India-rubber goods, who deal in articles not of the manufacture of CHAS. MACINTOSH and CO.—Goods manufactured by CHAS. MACINTOSH and CO. are stamped with the name of the firm.

TERRA-COTTA WORKS, Blackfriars-road, London.—The PRIZE MEDAL for MATERIAL and WORKMANSHIP in TERRA-COTTA to M. H. BLANCHARD, late of Coade's Original Works, and successor to them in the manufacture of this invaluable material, that has been so successfully adopted for nearly a century in this country, by our eminent architects and others, in the adornment of our noblest buildings, and is the only tried material that is capable to stand the ravages of time unimpaired. Groups, Statues, Vases, Fountains, and Architectural Embellishments, at prices and quality that will defy competition. A large Stock of newly-designed Chimney Shafts and Pots, to suit the various styles of buildings, at very low prices, and worthy of notice.

BLASHFIELD'S PATENT TERRA-COTTA, Manufactured at Mill-wall, Isle of Dogs.—Capitals, Consoles, Tracery for Parapets, Balusters, String Courses, Friezes, Bas relievi, Vases, Statues, Chimney-shafts, and all other Architectural Ornaments modelled, finished, and burnt, in the best manner, and warranted to stand heat and frost, either in Buff or Red coloured Terra-cotta.—A great variety and large stock may be seen at BLASHFIELD'S Warehouse and Show-rooms, No. 1, Praed-street, Paddington.

THE VIEILLE MONTAGNE ZINC MINING COMPANY'S PURE PATENT WHITE ZINC PAINT is unequalled for permanency of colour, hardness, and brilliancy of surface; it is unaffected by sulphureous or any other vapours or emanations. Being completely innoxious and free from the pernicious effects of white lead, it may be employed in all apartments whilst in use without any inconvenience to the inmates.

The greatest caution is recommended to avoid any spurious compounds that might be sold at cheap rates as Pure Oxide of Zinc. If any adulteration has taken place in the oxide [illegible] of impurity in the material from which those oxides produce it, an imperfect mode of production, or by mixing with [illegible] substances calculated to give it increased weight, it then produces a very inferior material [illegible] and the [illegible] realised by the purchaser [illegible] a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the V M mark in [illegible] by Messrs. BLUNDELL, SPENCE, and CO.; when ground and dry, by Messrs. T. B. MORLEY and CO. and by the Company's Grinding Agents in London, Messrs. CHARLES DEVAUX and CO. Wholesale Agents, [illegible], King William-street, City; at [illegible] the Manufacturers' and Painting Agent, Mr. FREDK. BRADY, [illegible] Works, Newcastle. In Manchester and Liverpool by R. CLAY, [illegible] Mersey-street, who is the acknowledged Painter to the Company for Zinc Paints, and undertakes painting ships, warehouses, dwelling houses, &c. In Leith, by Messrs. R. ANDERSON and CO. Timber-bush; [illegible] by Mr. H. J. BUCHAN. Dry OXIDES and PAINTS, in kegs of 14, 21 and 28 lbs. and upwards, to be had of the Company's Agents in Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and the Isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with Zinc Paint by contract.

For further particulars, apply to the Company's General Agency in London, 12, Manchester Buildings, Westminster.

WINDOW-BLINDS.—J. FULLER, Manufacturer, 20, Charlotte-street, Blackfriars-road. Established, 1850. Venetian Blinds, from 10s. each, or 8d. per foot; Wire ditto, 7s. each, or 1s. 9d. per foot; Holland ditto, from 5s. each, or 5d. per foot. Every other description of Blinds equally low, warranted of the best manufacture. Discount to Builders and the Trade. Fixed complete.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped [illegible]. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application, post free.

CRYSTAL WHITE SHEET GLASS,

FIRST, SECOND, AND THIRD QUALITY,

In Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d to 6d per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds 38s.; 4ths, 30s. Squares, in Boxes of 100 feet each, 3 by 4, to 10 by 8, 1½ d. per foot Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 2½ d. per foot. Crown and Sheet, British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price Lists and Estimates forwarded on application to

ROBERT METTAM, 30, Princes-street, Leicester-square.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that **FOUR-FIFTHS** of the **ROUGH PLATE**, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by **HARTLEY'S PATENT**—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for **RIDGE and FURROW ROOFS**, giving a **SPAN** of **TWELVE FEET**, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders **BLINDS UNNECESSARY**, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

January 1, 1855.

ARCHITECTURAL AND ORNAMENTAL DECORATIONS.

Architects and the Trade are respectfully invited to inspect specimens of the

PATENT VITREOUS MARBLES AND CONSOLIDATED GLASS,

Applicable for Piers, Pilasters, Chimney-pieces, Shop Facias, Table-tops, Panels, &c. &c.

Show-rooms, 40, Broad-street-buildings, City; 4, Russell-place, Fitzroy-square; 112, New-street, Birmingham, &c. &c.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

THE NEW PATENT

INTERLOCKING CURVILINEAR REVOLVING IRON SHUTTER

IS GREATLY SUPERIOR TO ALL OTHERS FOR

LIGHTNESS, STRENGTH, SECURITY, DURABILITY, AND EASE,

AND ALSO MUCH CHEAPER.

MANUFACTURED BY

BUNNETT AND CO. ENGINEERS, FOUNDERS, &c.

ORIGINAL PATENTEES OF REVOLVING IRON SHUTTERS, No. 26, LOMBARD-STREET, LONDON; and DEPTFORD, KENT.

The edges of each lath are accurately turned by powerful PATENTED MACHINERY, and slide endways into each other, FORMING A COMPLETE HINGE THROUGHOUT, interlocking so effectually that no force can separate them; and if made of the best galvanized iron, are almost indestructible.

A CHEAPER MODIFICATION FOR WAREHOUSES, COTTAGES, PORTABLE BUILDINGS, &c. ALSO FOR EXPORTATION.

PATENTEES OF METAL SASH-BARS AND MOULDINGS.

Descriptive Illustrated Prospectuses and all necessary information forwarded on application.

SNOXELL'S

PATENT REVOLVING WOOD AND IRON SHUTTERS,

WITHOUT MACHINERY,

96, REGENT-STREET, AND AT HIS STEAM WORKS, 135, OLD-STREET.

Testimonials from Architects, Bankers, &c. of their security and durability, forwarded.

MANUFACTURER OF METALLIC DRAWN SASH-BARS, STALL-BOARD PLATES, &c.

PATENT METALLIC LAVA.

A printed List of the important Works for Flooring, Roofing, Covering of Arches, &c. &c. executed from 1848 to 1852, with this Material, may be obtained at the Office of

ORSI AND ARMANI.

THEIR PATENT METALLIC LAVA IS FIFTEEN PER CENT. CHEAPER THAN THE GENUINE SEYSSEL ASPHALTE OF MESSRS. O. AND A.

OR THIRTY PER CENT. LOWER THAN ANY OTHER MATERIAL CALLED BITUMEN OR ASPHALT

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

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THE EXCLUSIVE SUPPLY OF SEYSSEL ASPHALTE (FRANGY)

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REDUCTION IN THE PRICE FOR VARIOUS WORKS FIFTEEN PER CENT.

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WORK GUARANTEED FOR THREE YEARS.

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ANCIENT HOUSE FURNITURE

In order to supply the deficiency which has hitherto existed in Furniture suitable for the many Mansions that have been erected or restored in the MEDIÆVAL STYLES, Messrs. GRACE have directed their particular attention to this subject, in addition to their other works, and have prepared appropriate specimens in the various branches of Furnishing.

STUFFS for HANGINGS, in simple Worsted Damask, in Silk; also in Tapestry of Bauderkin.
CARPETS, plain or in rich Velvet pile, with appropriate Borders.
PAPER HANGINGS of various kinds
OAK CABINETS, Buffets, Octagon Library and Occasional Tables, Benches, Chairs, and other useful and appropriate Furniture

The whole of the above-mentioned Furniture, &c. is designed by the late Mr. A. W. PUGIN, Architect.

To render this Furniture generally available, a considerable portion has been arranged in the simplest manner, consistent with its ancient character.

14, Wigmore-street, January, 1856.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 110, Broadwall.

J. FISHER, 70, YORK-ROAD, LAMBETH, formerly shop foreman to Messrs. Lawrence. Shop-front Builder and Manufacturing Joiner. 1¼ and 1½ four-panel doors from 6s. each; 1½ sashes and frames from 7d. per foot; 2 inch ditto from 8½. Windows fitted with Gribon's Patent Hinges for cleaning, painting, &c. All kinds of joiners' work estimated for according to design.—A List of Prices sent on application.

TO ARCHITECTS, BUILDERS, AND OTHERS.

FRANCIS, RICKABY, and DUNN beg to call the attention of the above to their IMPROVED REVOLVING WOOD and IRON SHUTTERS; also, to their extensive assortment of BRASS and other METAL SASH BARS, STALL-BOARD PLATES, &c. F. R. and D. having erected new and powerful machinery for the sole manufacture of the above, are enabled to offer them at a considerable reduction of price.—Prospectuses can be had or forwarded, on application to 84A, Gray's-inn-lane, Holborn.

PATENT and BRITISH PLATE GLASS.—JAMES HETLEY and CO beg to inform Architects, Builders, and the Trade generally, that their new Tariff of Prices for the above will be sent on application; they will also on receipt of particulars, furnish estimates for any description of Glass now manufactured.—Patent Plate, Sheet, Crown, and Ornamental Window Glass Warehouse, 35, Soho-square, London

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 26, Soho square

JAMES PHILLIPS and CO. beg to call the attention of Builders and the Trade to their present LOW PRICES of GLASS for cash.—C C C per crate of 18 tables, 32s.; 16 oz. sheet glass, 3d. per foot; crown and sheet squares, in 100 feet boxes, from 14/0 to 22/14. 2d. per foot; enamelled glass, in crates, 8d. per foot; ground, ditto, 3d. per foot; foreign sheet in cases of 200 feet, 26s. 30s. 40s. and 42s.; 4 patent rough plate tiles, 10s. per doz. Cathedral and stained glass and all the neutral tints.—116, BISHOPSGATE-STREET WITHOUT.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Pipe, White-lead, Lead, Iron and Brass Pumps, Water-closet Cocks and Plumbers' Brasswork, Paints, Colours, Oil, and Turpentines of the finest quality, at wholesale prices. Lists on application at THOS. MILLINGTON'S Warehouse, 87, Bishopsgate-street, London. Established more than 100 years.

By her Majesty's — Royal Letters Patent.

THE ROYAL PATENT DECORATIVE GLASS COMPANY, 21, Castle-street, Southwark-bridge-road. NOTICE of REMOVAL.—REMOVED to No. 12B, CUMBERLAND-MARKET, REGENT'S-PARK, where machinery has been erected to carry on the manufacture of this most important branch of ornamental glass.

Orders can now be executed, with the greatest cheapness and despatch, by EDWARD BAILLIE and CO. 12B, Cumberland-market, and 118, Wardour-street, Soho (successors to M. Toussaint, Cartisser, and Co.)—Specimens of every description of Church Memorial Windows and Decorations, Glass Painting, Staining, and Embossing, may be seen as above. Designs and estimates upon application.—February 26, 1856.

By Royal — Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 296, Oxford street.

REDUCED TARIFF.

CCC CROWN, 18 Tables, per crate, 30s.; H 15 oz. SHEET, 3d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, is. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 5d. and 6d. per foot; FLASHED RUBY, is GROUND SHEET, 3½d. ENAMELLED, 3d. per foot. Sashes primed and glazed, 3d. per foot.

Catalogues free, on application to the Managers, as above.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 313, OXFORD-STREET.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s.; 4ths, 30s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 20 by 14, 2½., ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

G. FARMILOE and SON, 113, St. John-street, West Smithfield.

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT, of the best quality, manufactured on the above works. Also LOCK and LIEN LEAVEN. BRICKS, hand moulded and machine made, for shipment or otherwise. Apply to G. BOOTH, Agent, as above.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This material may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

PORTLAND and BATH CEMENT.— FULLWOOD, THOMPSON, and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

PORTLAND CEMENT WORKS, NORTH-FLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first class quality for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brick-work, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the ability of also being that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements (read at the Institute of Civil Engineers), to be obtained from the Makers, JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME.
The LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements, at reduced prices, the material being excavated in its pure and unadulterated state, from quarries on their own property. The Company particularly recommend a trial of their XXXX Bath Cement, as far superior to any article now in the market. These cements can be sent by rail or shipped from their wharf, direct to all parts.—Agents required, and a liberal discount allowed. Orders received by Mr. KIALLMARK, 80, Old Broad-street, City, or by RICHARD WINTER, Cement Works, Dunball, Bridgewater.

B A T H   C E M E N T.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

P O R T L A N D   C E M E N T.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. with much pleasure announce to their Friends and the Public, that they have completed the enlargement of their works, in order to meet the great increasing demand for their Cement; and are now prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes Cement is applicable.—Orders received at Great Scotland-yard, and at the Works.

NOTICE.—M. H. BLANCHARD, 74, Blackfriars-road, London, Manufacturer of PLASTER of PARIS of a superior quality, suitable for Sculpture, Architectural Embellishments, &c.—will not twist, warp, or give after set, but will retain its hardness and strength.

Superfine, per ton	£7 0 0
Fine	3 0 0
Coarse	2 10 0

Delivered for Cash to any of the Metropolitan Railway Stations, or within the Metropolis.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

PORTLAND and ROMAN CEMENT, TERRA-COTTA POTS, &c.—J. M. BLASHFIELD begs to acquaint the Public that he has entirely CLOSED his Establishment on the Surrey side of the Thames, and that articles of his manufacture can only be obtained at his Works, Mill-wall, Poplar, or at his Warehouse, Praed-street, Paddington.

TATHAM & CO.—No. 14, SOUTH WHARF, PADDINGTON. BRICK, LIME, and CEMENT MERCHANTS, SOUTHAM BLUE LIAS LIME DEPOT.
Bath, Portland, Lias, and Roman Cements; Parian and Keene's Cements, Plaster of Paris, Glazed Stoneware Sewage Pipes, Fire Goods, Vitrified Blue Bricks, White Building Bricks, White Enamelled Pans and Traps, and every description of Building Material.
N.B. Lump and Ground BLUE LIAS LIME delivered in boatloads direct from the Works in Warwickshire, to any part of the river or canal.

SOUTHAM BLUE LIAS LIME DEPOT, No. 14, SOUTH WHARF, PADDINGTON.
TATHAM & CO. have arranged for a constant supply of the above very superior BLUE LIAS LIME, which for the last two years has been extensively used at most of the large works constructed during that period or now in hand, and they are favoured with will command their best attention.
Boatloads of either Lump or Ground Lime can be delivered direct from the Works in WARWICKSHIRE to any part of the Rivers Thames or Lee, alongside any wharf on canal, or by boat or rail to any part of the kingdom.

PORTLAND CEMENT.—TATHAM & CO. are enabled to offer a very superior quality of this valuable Cement at a moderate price, and all orders addressed to No. 14, SOUTH WHARF, PADDINGTON, will receive the best and most prompt attention.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C.J. HILTON, can be had in any quantity, wholesale and retail, at this wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light and Dark, equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, Flue Vases, Roofing, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

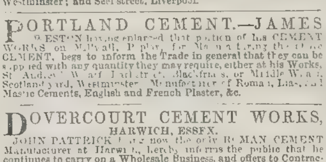
HUBBUCK and SON, the original Manufacturers, are enabled, at a price which has been attended, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor the vapours made acrid upon it. It is entirely free from any poisonous or pernicious property. The direful maladies, paralysis, &c. are entirely obviated, the evil being altogether avoided. The Best ground white Zinc may be had for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Paint Dealers in the usual Packages, each cask stamped HUBBUCK · LONDON PATENT. And when so marked, the quality is guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring. Sold only by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel street, Liverpool.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing PORTLAND CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Lambeth, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.
JOHN PATTRICK, late now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale Business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of superior quality, upon advantageous terms.—Applications may be made at the Agent, GEORGE MORRIS, 14, New Ormond-street, Queen-square, London.
P.S. Inland London trade will in future be supplied from Messrs. ROBINS and CO. Scotland-yard, Westminster, instead of Whitefriars.

TO BUILDERS, CONTRACTORS, SHIPPERS, and Others.
G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.
DAVIES and NORMAN, Agents.
Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.



GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

NOTICE.—BLUE LIAS LIME.— L. B. PEARSE and CO. beg to inform Architects, Engineers, Builders, and Contractors generally, that they have now accepted the AGENCY for the above valuable HYDRAULIC LIME, from the original quarries, Stockton, Warwickshire, and are now supplying direct from the works in their own boats, at a reduced rate.
L. B. PEARSE and CO. beg further to give notice to consumers, that they have erected, at a considerable expense, large buildings and machinery for grinding lime and cement, so as to insure genuine quality and large supply, at their extensive premises, situate on the Great Northern Railway, York-road, King's-cross.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), and NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.
GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 20, 1855.—CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.
GIBBS, CANNING, and CO.'s BLUE VITRIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.
ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.
SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.
CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality (ground and lump) in boats, at the Works. Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREAT NORTHERN WHARF, York-road, King's-cross.—WHITE BRICK and TILE DEPOT.—L. B. PEARSE and CO. Brick, Tile, Lime, and Cement Merchants. Builders, contractors, and others supplied with every description of building material at the lowest market prices.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent) STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pecking, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms, to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and flare, bricks, fire-goods, &c. can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges)
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK PERFORATED BRICKS.—Messrs. J. EASTWOOD and SONS take this opportunity of informing their customers and the trade, that they have made arrangements for the Manufacture of White Suffolk Perforated Bricks. In order to remedy defects in the manufacture of this description, care has been bestowed to produce them of a true and perfect shape, of an even and beautiful surface, and free from fire-flaws.—J. EASTWOOD and SONS, Belvedere-road, Lambeth.

CHEAP WHITE BRICKS for FACING HOUSES.—Beard's Patent. These Bricks are of excellent make and colour, are imperishable from frost.—For particulars, apply PATENT BRICK WORKS, Lower Ferial, Road.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Stocks, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 3, ADELAIDE-PLACE, London-bridge.

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.:—Grey Stocks, 25s. per thousand; Grizzles, 20s. per thousand; Rough Stocks, 21s.; Place, 13s. to 15s. per thousand.—Terms, cash on delivery. Apply to Mr. G. SMEED, Sittingbourne, Kent.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.
Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Orange-walk, near the Rosemary Branch, Hoxton.
N.B. Light coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey canal-bridge, Old Kent-road, Surrey.

TO BRICKLAYERS and BUILDERS.— About 100 or 120 RODS of BRICKWORK TO BE LET, at per Rod. The same to be paid for in bricks, at per thousand; or in carcases of houses, at the price agreed upon.—Apply to Mr. CHAS. MARSHALL, Brickmaker, &c. Wellington street, Kentish town.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.
BRICK MOULDS (improved), Steel-face Stocks and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick Mill Work and Implements.—J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

THE PATENT BRICK-MACHINE COMPANY invite orders for their IMPROVED MACHINES, the only ones that manufacture solid bricks equal to hand-made, will shortly be at work in a field near London, accessible by railway, where it may now be seen with bricks of last season. H. C. MOUNT, Secretary.
37, King William-street, City, February, 1856.

PRIZE BRICK-MAKING MACHINE.— Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and two boys remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey near Worcester.

BEADON'S EAVES GUTTER TILES.— Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES, either old or new, whether of thatch, slate, or tile, and other structures.—The agent, J. B. LAWES, 1, Adelaide-place, London bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the eaves of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvertoft, near Rugby; or in London, Gloucester, or Bridgewater.
Price 1d. per Tile, of about 13 inches long. Stop ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby given, that the LONDON DEPOT for the WARES is REMOVED to No. 21, WHARF, Bankside-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 561, of the Great Exhibition, rank the Manufacturer's goods as being the "best tiles," in Tunstall, Staffordshire, as the best of the kind in the world.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

ST. PANCRAS IRONWORKS,

OLD ST. PANCRAS-ROAD, OPPOSITE THE OLD CHURCH, LONDON.

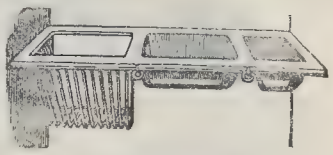
TO ARCHITECTS, ENGINEERS, BUILDERS, AND CONTRACTORS.

HER MAJESTY'S
ROYAL LETTERS PATENT.

FOR IMPROVEMENTS IN THE CONSTRUCTION OF
CORRUGATED IRON BUILDINGS
AND ROOFS,
As erected for and approved of by Government.
FOR ENCLOSURES,
This Patent is as Strong, as Durable, and much Cheaper, than
BRICK WALLS,
And as Portable as HURDLES.

CASTINGS,
HEAVY AND LIGHT,
PLAIN AND ORNAMENTAL.

WROUGHT
IRON-WORK,
AND FORGINGS,
OF
EVERY DESCRIPTION.
SPECIMENS MAY BE SEEN AT THE WORKS.



ENAMELLED MANGERS,
From 17s. 6d.
Patentees of the latest Improvements in Manger and Rack, and Manger, Rack, and Water Trough, approved of by the
ROYAL VETERINARY COLLEGE.
EVERY DESCRIPTION OF STABLE FURNITURE.

IRON ROOFING OF EVERY DESCRIPTION. CORRUGATED IRON, PLAIN OR GALVANIZED, AT PER CWT.

ESTIMATES BY POST, OR ON APPLICATION. PRICES EQUAL TO ALL COMPETITION.

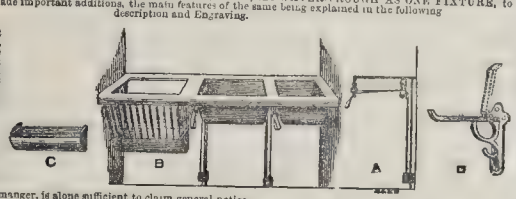
☞ ADDRESS—THE MANAGER OF ST. PANCRAS IRON WORKS, OLD ST. PANCRAS-ROAD, LONDON.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.

COTTAM and HALLEN, of Winsley-street,

Are the original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, to which they have made important additions, the main features of the same being explained in the following description and Engraving.



A represents the Patent Halter-guide and Collar-rein, the ball of which is taken to the back of the manger-works with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety covers; Sanitary Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Preserving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

An extensive Assortment of Patterns for both Plain and Ornamental Castings, and every description of Wrought and Cast-Iron Work for building and other purposes.

Agricultural and Horticultural Implements, Iron Gates, both plain and ornamental; Hurdles, Strain Fencing, &c.

The New Illustrated Catalogue for 1856 gratis on application. Estimates and Designs.

COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

STEVENS AND SON,

ENGINEERS,
IRON AND BRASS FOUNDERS AND MANUFACTURERS;
CONTRACTORS
FOR THE
ERECTION OR ALTERATION OF GAS-WORKS FROM TWENTY LIGHTS UPWARDS,
With Buildings, Mains, Meters, Service-Pipes, Lamp-Posts, Lamps, and Gasfittings
WATERWORKS FOR THE SUPPLY OF TOWNS,
WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.

Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds; these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c.
Gas Cooking Stoves and Ranges on the most improved principles.

GAS-FITTING IN ALL ITS BRANCHES.

GAS CHANDELIERS OF ALL SIZES, IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS.
DEVICES FOR GAS ILLUMINATION.

IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.

These Turnstiles have been selected for the Entrances of the Great Exhibition, New York

PATENTEES OF THE SEMAPHORE RAILWAY SIGNAL.

Signals for communication between Guard and Engine Driver. Railway Stores and Lamps of every description

DARLINGTON WORKS, 16 to 19, SOUTHWARK-BRIDGE ROAD, LONDON.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and vaporizing) with all the improvements, under their Quadruple patents of 1849-51-54 and 1855 including their Gunpowder Proof Solid Lock and Door (without which no safe is secure).

THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.

MILNER'S PHŒNIX 212° SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depôt, 47a, Moorgate-street, City.—Circulars free by post.

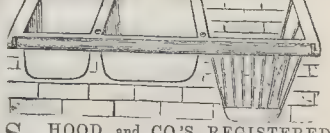
TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c &c.—The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire, Gas Pendants, Brackets, and Joints of all descriptions for gas fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Coffee-pots, Rings and Lacquered Case Tube for Picture Rods Desk Rails, &c. &c.

Superior Rolled Plate for Engravers, Cabinet-makers Fine and Common Brass, Gun Metal, &c. &c.

RICHARD EVERALD'S, Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London

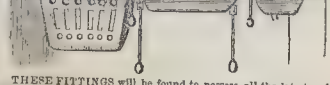
COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Of ornamental hinges, adapted for drawing rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and Jointed ring spring hinges, and superior gate fastenings, at moderate prices. Note, genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

PATRONISED BY H. R. H. PRINCE ALBERT.



S. HOOD and CO.'S REGISTERED STABLE-FITTINGS, with FRONT REVOLVING ROLLER, plain or enamelled
Castings Warehouse removed from 81 to 86, Upper Thames-street

BARTON'S PATENT SAFETY STABLE FITTINGS, and ENAMELLED MANGERS.



THESE FITTINGS will be found to possess all the latest and most important improvements, and are of the best manufacture. All kinds of Stable-furniture in stock. Iron Hurdles. Gates, Fencing, Tomb-railings, &c. New illustrated Catalogues forwarded on receipt of two postage stamps.—JAMES BARTON, Ironfounder, &c. 370, Oxford-street, London.

FIRE-PROOF CONSTRUCTION.—FOX and BARRETT'S PATENT.

This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs or arches, the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

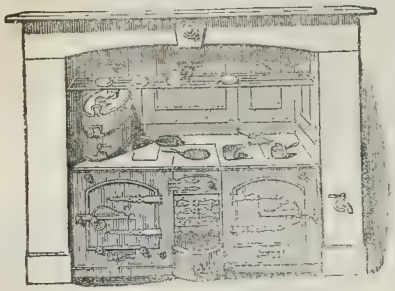
Further information may be obtained of the Proprietor of the patent.—Mr BARRETT, 12 York buildings, Adelphi

CAST STEEL.—Messrs. NAYLOR, VICKERS, and CO. RIVER DON WORKS, SHEFFIELD, are now prepared to execute orders for CAST STEEL, from 4 lbs. to 6,000 lbs. each. Locomotive Crank Axles, Tyre Bars without welding, Shafts, Cranks, Axles, and every description of heavy Forgings in Steel, to pattern.—For further particulars, apply as above.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on hand.—Every article in plain brass, bronzed and lacquered, of the Manufacturers' Catalogue, Complete pattern-book and price list, 10s.—35 and 36, High Holborn.

FLAVEL'S PRIZE KITCHENER.



The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

SOLE AGENTS:

BENHAM AND SONS,
19, WIGMORE-STREET, LONDON;
and at the Crystal Palace, Sydenham.

A

FIRST-CLASS MEDAL

WAS AWARDED TO

F. EDWARDS, SON, and CO.

AT THE

PARIS EXHIBITION,

For the SPECIMENS they exhibited of

DR. ARNOTT'S

SMOKE-CONSUMING GRATE,
AND SMOKE-CONSUMING
COOKING APPARATUS.

F. EDWARDS, SON, and CO. beg to inform the public that their STOCK of GRATES is ENTIRELY REFORMED, and consists SOLELY of GRATES on the SMOKE-CONSUMING PRINCIPLE. A large variety in real Bronze, Ormolu, Steel, and Berlin Black, suitable for Drawing rooms, Dining-rooms, and Libraries, from 7*l.* to 30*l.*

The following are the prices of those for ordinary use:—

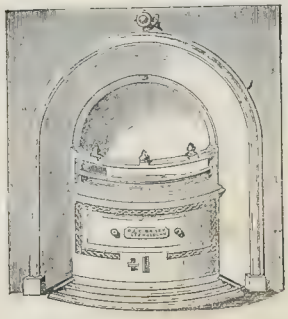
Black Grates, for Parlours, Offices, &c. from 4*l.* to 5*l.* 10*s.*; for Bed-rooms, Offices, &c. from 2*l.* 10*s.*

By the Grates on this principle, as properly constructed by F. Edwards, Son, and Co. smoky chimneys are avoided, an agreeable fire is maintained, with one-half the trouble attending the ordinary grate, and a saving of from forty to fifty per cent. is effected in the consumption of fuel.

PROSPECTUSES, WITH FULL PARTICULARS AND TESTIMONIALS, SENT ON APPLICATION.

To be seen in daily operation at the Show Rooms, 42, Poland-street, Oxford-street, London.

DR. ARNOTT'S SMOKELESS GRATES,



For the manufacture of which D. and E. BAILEY obtained the SILVER MEDAL at the PARIS EXHIBITION. The above excellent invention has been carefully modelled and manufactured by D. and E. BAILEY, 272, Holborn, who having experienced great difficulty in keeping pace with the increased demand for the above Stoves, have now made such arrangements as will enable them to supply their customers with the Smokeless Grates, of ordinary dimensions, from their stock on hand, which consists of various designs in black, bright, and polished steel, richly decorated with ormolu ornaments.

The great advantages of these Stoves over all others are—

1st. The entire absence of smoke.

2nd. An immense saving in fuel.

3rd. A cheerful fire, with simple means for regulating the heat.

4th. Will burn night and day, requiring only to be supplied with fuel twice in twenty-four hours.

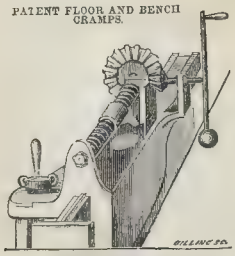
For invalids' bed-rooms, these stoves will be found invaluable.

Prices and Prospectuses may be obtained on application where the Smokeless Grates may be seen in daily use.

D. & E. BAILEY, IRONMONGERS,
272, HOLBORN, LONDON.

WILLIAM BISSELL,

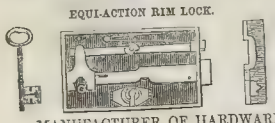
PATENT FLOOR AND BENCH CRAMPS.



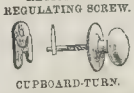
Patentee,

PATENT COMBINED LIFTING-JACK.

EQUI-ACTION RIM LOCK.



REGISTERED REGULATING SCREW.



CUPBOARD-TURN.

EQUI-ACTION MORTISE LOCK.

MANUFACTURER OF HARDWARE, WHOLESALE AND BUILDERS' IRONMONGER,
UNION-STREET, HORSLEY-FIELDS, WOLVERHAMPTON.

ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded if so by post.—DEANE, DRAY, and CO.'s premises to the Monument, London-bridge. Established A.D. 1700.

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails wrought and cut), Copper and Zinc, Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, 4*s.*; and the new registered Venetian Ventilator, so much admired, &c. 6*s.* 6*d.* each.

J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 300 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

JOHN TANN'S new patent RELIANCE LOCK and FIREPROOF SAFES form the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. WATERLOW, Birchin-lane; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and party-walls.

JUDKIN'S IMPROVED GAS REGULATOR has the following advantages to recommend it to the consideration of all gas consumers:—

1st. It can be easily adjusted to supply gas at any required pressure below that of the street.

2nd. When once adjusted, it will admit of NO VARIATION in LIGHTS BURNING, whether they are few or many, whatever the fluctuation of pressure may be.

3rd. The light being purer by perfect combustion, the atmosphere is more healthy and agreeable.

4th. A saving of at least from 25 to 35 per cent. in the consumption of gas is obtained.

Its ADVANTAGES over other REGULATORS are as follow:—

1st. It is more simple in its construction.

2nd. It is more sensitive in its operation, having less friction, as it works only on two steel centres, which are immersed in quicksilver.

3rd. It is not liable to get out of repair, and requires less attention than a meter itself.

N.B. A Testing Apparatus has been fitted up on the premises of the Patentee, 33 and 35, Corporation-street, Manchester, and 98, Fleet-street, London, for the purpose of demonstrating the above-named facts.

ROYAL POLYTECHNIC GAS FIRE. BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation.—To be seen in action at DEFRIES'S Office, 143, Regent-street, London.

CAST-IRON PIPES, IRON-WORK FOR OVENS, &c.

RAIN PIPES, &c.—F. A. TIDDEMAN and CO. St. Ann's Wharf, Earl-street, City, near Blackfriars-bridge, keep a large stock of Rain Pipes, Heads, Shoes, Elbows, &c. half-round and O-G Gutters, Socket Pipes for Water or Gas, Flange Pipes, Hot Water Pipes and Connexions, Sash Weights, and other castings; Iron-work for Bakers' Ovens of every description, fitted complete, to be had in sets or in parts.—Prices equal to all competition. Contracts taken to any extent. Goods landed. A powerful crane.

IRONMONGERY.—Builders and the Trade generally will effect a considerable saving by purchasing of CLUSE and ROSE, Victoria Iron Factory and Stove and Range Manufacturers, 35, City-road, corner of Tabernacle-row.

Present prices for cash:—

BEST CUT CLASP.

16s. 6d.	18s. 3d.	14s. 5d.	14s. per cwt.
1½ in.	2 in.	2½ in.	3 in. and larger.

PATENT SASH LINE.

2s. 3d.	3s. 9d.	4s. 3d.	5s. 6d.	7s. 6d.	9s. per gross.
No. 1	2	3	4	5	6

6 in. Mortise Locks, best Brass Furniture Shifting Spindles, 2s. 6d. each; 6 in. ditto, 3s. each.

Strong Elliptic Stoves, double backs, 2½d. per inch.

Strong Register ditto ditto 3d. ,,

36 in. Self-acting Oven and Boiler Cottage Ranges, complete, 34s. each; 26 in. Self-acting Oven and Boiler Ranges, best wrought bars and wrought fittings, complete, 50s. each.

A large Stock kept of every description of builders' ironmongery; china, glass, and ebony lock furniture and finger-plates. List of prices forwarded by post on application.

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSE, 19, Horseferry-road, and 1, New Peter-street, Westminster. Contractors, Builders, &c. supplied with general Ironmongery at prices equal to all competition.

REDUCED LIST OF PRICES.

Best Cut Clasp and Rose Nails

	1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
	16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.
Best Cut Floor Brads					13s. 6d. and 14s. per cwt.
Best Cut Lath Nails					16s. ,,
Best Zinc Slating Nails					40s. ,,
Best Glues				27s. to 28s.	,,

RAIN WATER CASTINGS, per yard.

Sizes—3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	11d.	1s. 3d.	1s. 4d.	1s. 8d. 2s. 1d.
Half-round Gutters	9d.	8½d.	9d.	1s.	1s. 2d.
O G Gutters			1s.	1s. 1d.	1s. 2d.	1s. 5d.
Ditto, with plain clips cast on			1s. 1d.	1s. 3d.	1s. 4d.	1s. 8d.
Ditto, with iron ditto			1s. 2d.	1s. 3d.	1s. 5d.	1s. 7d.

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

TERMS—NETT CASH.

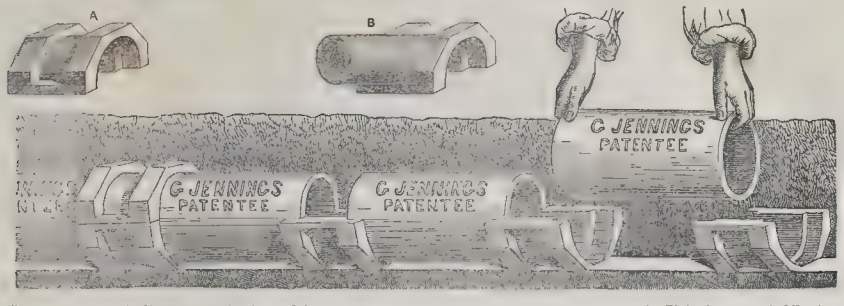
Estimates given for any description of Wrought or Cast Iron Work.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the nobility, clergy, &c. that they supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.

R. S. NEWALL and CO.'s Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world.

OFFICES.—Gateshead-on-Tyne.
130, Strand, London.
67, Hyde-park-street, Glasgow.
27, Dale-street, Manchester.

JENNINGS'S PATENT DRAIN-PIPES.



The above Pipes offer every facility for examination IN CASE OF STOPPAGE, or for the introductions of Junctions, without in any way disturbing the invert or general drain. The Chairs above shown are very strong, with broad bearings, and when laid to the right fall and distance apart, the Rebates have only to be filled with cement or mortar, and the Pipes pressed down to the line of Chair.

It will be thus seen that the laying of the Pipes, and the making of the Joints, is done at once and without trouble: the space between each Pipe allowing the workman to strike up the Joint, and the Superintendent to see that every Pipe is accurately laid and fairly jointed.

A shows one of JENNINGS'S PATENT SADDLES, or COVERS, by means of which examinations of drains are effected. B shows one of the PATENT JUNCTION-COVERS, by which connections are made to finished lines of Pipes—it being only necessary to remove the Plain Cover, or Saddle A, and substitute a Cover or Saddle B, the Junction in it being suited to receive the Branch Pipe.

The Patent Saddles and Covers, A and B, are all MADE TO A GAUGE, suited to every sized Pipes; also with Junctions of any size, and at any angle.

Prices of JENNINGS'S DRAIN-PIPES per foot run, including the Patent Chair and Cover:—4-inch, 6d.; 6-inch, 8d.; 9-inch, 1s. 1½d.; 12-inch, 1s. 10d.; 15-inch, 3s.; 18-inch, 4s.

The favour with which these Pipes have been received will no doubt call forth many imitations. GEORGE JENNINGS would CAUTION those who may wish to make the attempt TO AVOID INFRINGING HIS PATENT, as they will NOT BE ALLOWED TO DO SO WITH IMPUNITY.

JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.

Architects describing this Closet in their specifications will have a permanently good Valve Closet, noiseless, and free from complication. The Patentee has such confidence in its durability and efficiency, that he will guarantee every Closet for seven years.

JENNINGS'S IMPERISHABLE EARTHENWARE CLOSET AND TRAP.

This Closet has a large water surface, has no back to soil, is imperishable in its material, and the Trap and Closet is combined in one piece, suited alike for the palace or the cottage.

JENNINGS'S IMPROVEMENTS IN LIFT AND OTHER PUMPS.

These Pumps would well repay a visit to Jennings's factory, where may be seen Jennings's Lavatories, Urinals, Sluice Valves, Fire and Steam Cocks, of every size; Shop-Shutter Shoes; Gully, Area, and Sink Traps, and other sanitary goods.

Or Illustrations and Prices can be had free by post, if two stamps are enclosed to

GEORGE JENNINGS, SANITARY ENGINEER, 29, GREAT CHARLOTTE-STREET, BLACKFRIARS-ROAD, LONDON.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 84, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE

No. 7.

is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 10 to 200 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stoneware pipes, which they are confident are such as must give great satisfaction, the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, Co. Pans and Traps of the first quality, Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

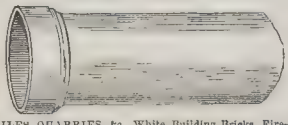
N.B. A small extra charge is made upon goods required to be delivered.—October 11, 1856.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; well-sinking and boring; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

THE FARNLEY IRON COMPANY, WORTLEY, near LEEDS.



Manufacturers of FIRE BRICKS, TILES, QUARRIES, &c., White Building Bricks, Fire-clay CHIMNEY-TOPS, in Norman, Egyptian, Saxon, Tudor, Grecian, Gothic, and Elizabethan styles.

TERRA COTTA

Fountains, Vases, Pedestals, Capitals, Trusses, Brackets, &c., in great variety, which for beauty and elegance of design are unequalled. The designs of Architects modelled with the greatest exactness.

Also of PATENT GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, &c., well adapted for pressure, being made extra pressed under "Spencer's Patent." Superior White Glazed CLOSET PANS, TRAPS, &c.

The Works of the Company are situated in the immediate vicinity of the well known bed of WORTLEY FIRE-CLAY, and their manufacture of BRICKS, for the use of Forges, Gas Companies, Foundries, Potteries, and Glassworks, is confidently recommended for all purposes where extreme heat is required. Their GROUND CLAY is also particularly adapted for the manufacture of CRUCIBLES, MELTING POTS, &c.

OFFICES AND STORES:

LONDON .....No. 14 York-chambers, York-buildings, Adelphi; No. 16, Bath-place, New-road; St. Ann's-wharf, Limehouse.
BIRMINGHAM..No. 7, Easy-row; also 23, Cambridge-street, and Lawley-street.
BRISTOL .....No. 14, Nelson-street.
LIVERPOOL ....No. 9, Russell-street, 23, Renshaw-street, and Shipping-wharf Leeds-street.
NEWCASTLE. ..W. B. Wilkinson and Co. Prudhoe-street.
GRIMSBY.....P. G. Skipworth.
MANCHESTER..No. 46, Travis-street, and 23, 24, and 25, Birmingham-street, London-road.
HULL.....No. 60, Queen-street, and Wellington-street.
BRADFORD ....Horton-road.
LEEDS .....Wellington-street, adjoining the Midland Station; and Shipping-wharf, Victoria-works, Hunslet.
SUNDERLAND..W. B. Wilkinson and Co. Queen-street.
WARE.....G. E. Kins, Stone Merchant.

Where Drawings, with Prices, &c. may be obtained.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c. at the

NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to THE AGENTS:—

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;
Where a large stock is always kept on hand.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during the period supplied DRAIN PIPES, &c. to some of the largest Works in and near London, viz.: the New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

SALES BY AUCTION.

In the Western Suburbs of London and Parish of Kensington, singularly valuable Freehold Lands, offering very choice and beautiful Sites for Building

MESSRS. DANIEL SMITH and SON will (unless an acceptable offer shall be made for the entirety) submit to AUCTION, at the MART, near the Bank of England, on TUESDAY, the 8th of APRIL, 1856, at TWELVE o'clock, in lots of from three to four acres each, presenting beautiful sites for the erection of mansions or villas, about TWENTY ACRES of rich sound FREEHOLD PASTURE LAND, forming one fine undulating inclosure, within a few minutes' walk of the Harrow and Bayswater roads, near several churches, but situate perfectly detached from any houses or other buildings, and commanding some extensive and cheerful scenery. It would be a peculiarly fine spot for any public institution or establishment.—Particulars, with plans, may be had at the Auction Mart; of Messrs. R. M. and F. Lowe, Solicitors, Temple; of Mr. W. Sim, Architect, 39, Elgin-crescent, Notting-hill; and of Messrs. Daniel Smith and Son, Land Agents, in Waterloo-place, Pall-mall, who are fully authorised to treat for the whole or any part thereof. A valuable farm adjoining may be purchased if a large extent should be required.

BRIXTON-HILL.—Contractor's Plant and Effects, at the Reservoir of the Lambeth Waterworks.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors of the late Mr. Neeham to SELL by AUCTION, on the PREMISES of the LAMBETH WATERWORKS COMPANY, Brixton-hill, on WEDNESDAY, MARCH 19th, at TEN for ELEVEN, in consequence of the completion of the contract, the valuable PLANT and EFFECTS, comprising about 3,500 24-inch battens, 2,000 feet of baulk timber, 250 navvie barrows, 50 wheeling planks, 400 scaffold boards, poles, and putlogs, screen pile-driving engine and monkey, pugmills, ladders, screens, brick and dobbin carts, a large quantity of centres, ribs, quartering, firewood, and other effects.—May be viewed two days' previous, and catalogues had on the Premises; also at the George the Fourth; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

BOROUGH-ROAD.—Remaining Stock of Artificial Stone Figures.

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, 742, Borough-road Southwark, on WEDNESDAY, APRIL 2nd, at TEN for ELEVEN, the final portion of the extensive STOCK; comprising fountains, vases, figures, groups (including the large "Laocoon," the only one in existence), and numerous centre-flowers, &c. To be sold without reserve, and will be the last sale this season. May be viewed one week previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

THAMES BANK.—Extensive Sale of Marble Blocks and Slab at Lloyd's Wharf.

MESSRS. EVERSFIELD and HORNE have received instructions to SELL by AUCTION, on the PREMISES, Lloyd's Marble Wharf, foot of Vauxhall-bridge, Thames Bank, on TUESDAY, MARCH 18th, at ONE precisely, about 150 BLOCKS and 300 SLABS of MARBLE, comprising Statuary, Vein, Sicilian, Black and Gold, Dove, and Emperor's Red, of recent importation and choice quality.—May be viewed one week previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

N.B.—Approved bills at six months from purchasers above 30*l*.

EDGEWARE-ROAD.—The Stock of a Timber Dealer.

MR. LEREW is directed to SELL by AUCTION, on the PREMISES, No. 137, Edgeware-road, on MONDAY, MARCH 17th, at TWELVE for ONE, without reserve, 600 yellow pine and white planks, deals, and battens, 2,000 feet wide pine boards, 1,000 feet mahogany, part cut stuff, quartering, prepared floor-boards, lathe, doors, counting-house fittings, &c. To be taken Auction Offices, Cardington-street, Hampstead road, near the Euston Station

OXFORDSHIRE.—Sale of Oak Timber, Whichwood Forest. TO BE SOLD by AUCTION, by

MR. LONG, at the CHURCHILL ARMS INN, ASCOTT-UNDER-WHICHWOOD, on THURSDAY, the 27th day of MARCH, 1856, at TWELVE o'clock, by direction of the Hon. Charles Gore, the commissioner in charge, upwards of 4,000 capital OAK TIMBER TREES, many of which are of large dimensions, in lots suited to the convenience of purchasers. Whichwood Forest is within a short distance of three stationsson the Oxford, Worcester, and Wolverhampton Railway.—The timber may be viewed on application to Mr. Robert Morris, of Ascott; Lydia Green, Woodstock; by whom tickets may be had; as also at the Place of Sale and the Inns in the Neighbourhood; at the Office of Mr. John Clutton, 9, Whitehall-place; and of the Auctioneer, Long-hall, Oxford. Arrangements have been made with the Oxford, Worcester, and Wolverhampton Railway Company, by which the 9h. 40m. a.m. down train from Euston-square, which will arrive at Ascott about Twelve, and the 3h. 10m. p.m. up from Worcester, arriving at Ascott about 6h. 20m. p.m. will stop to set down and take up passengers.

2, ALPHA-STREET, near the Shard Arms, Old Kent-road. TO CARPENTERS, BUILDERS, AND OTHERS.

MR. PEAKE is directed by the Proprietor, who is relinquishing the business, to SELL by AUCTION, on the PREMISES, as above, on THURSDAY, MARCH 20th, 1856, at TWELVE, 1,500 dry, well-seasoned DEALS, PLANKS, and BATTENS, sawn and unsawn, fifteen loads planed rent laths, 2,000 fir pales, quantity of Honduras Mahogany, prepared flooring and match lining boards, oak posts, four cart-horses, erection of sawpits, sheds, and workshops, three ladders, and a variety of useful effects. May be viewed the day previous to the sale, and catalogues obtained at Mr. Peake's Offices, 44, Tooley-street, Southwark.

ESSEX and MIDDLESEX.—Paulatim Lodge, Dagenham.—Valuable Detached Enclosure of Arable Land, and Five Houses in the Basinrce wells road, Clerkenwell.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, London, on TUESDAY, MARCH 25, at TWELVE, a very desirable VILLA RESIDENCE, known as Paulatim Lodge, with conservatory, excellent out-buildings, and tastefully laid-out grounds, together with a small pasture adjoining, pleasantly situate on Crowdle-hatch, three miles from Romford, and two from Ilford, at both of which are stations on the Eastern Counties Railway; a valuable detached range of productive Arable Land, known as Mill Field, containing 3a. 3r. 8p. in the occupation of Mr. Thomas Wade, at 19*l.* per annum: also, a desirable Leasehold Property, comprising Five Houses in Oldham-gardens, Basinrge-wells-road, Clerkenwell, let to respectable tenants at rents amounting to 94*l.* 10*s.* per annum: Possession of the residence can be had upon completion of the purchase. Particulars and conditions may be obtained of Messrs. Davidson and Bradbury, Solicitors, 18, Basinghall-street; at the Auction Mart; and of Messrs. Bridle and Sons, 25, Graham-street.

PETERBOROUGH, NORTHAMPTONSHIRE.—TO IRON MERCHANTS, IRONMONGERS, SMITHS, &c.—TO BE SOLD by AUCTION, by

MR. JOHN FOX, on the PREMISES, Albert place, Peterborough, on WEDNESDAY, the 26th of MARCH, 1856, about forty tons of BAR, HOOP, PLATE, and ROD IRON; quantity of 6 and half-round cast-iron gutters; twenty pairs of cart springs, half-ton patent weighing-machine, quantity of stroke tyre, scrap iron, four-wheel van, dog-cart, iron ploughs, and other effects.—The sale will commence at TWO o'clock.

MORTLAKE near the Station.—Valuable FREEHOLD LAND, in suitable lots, with good frontages, abutting on the Richmond and Windsor Railway; also a secure investment on COPYHOLD BUSINESS PREMISES, in the HIGH-STREET, MORTLAKE, TO BE SOLD by AUCTION, by

MR. PIGGOTT, in APRIL next, unless an acceptable offer be previously made by private contract.—Further particulars will appear in future advertisements.—Auction and Estate Offices, George-street, Richmond.

SALES BY AUCTION.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the assignees of J. Michie, to SELL by AUCTION, on WEDNESDAY, MARCH 19, at ELEVEN, on the PREMISES, Stratford House, Battersea, the TOOLS and STOCK-IN-TRADE of an engineer, one new 8-inch self-acting screw cutting lathe with 20 feet bed, self-acting planing machine, powerful surfacing lathe, 6-in. new horizontal steam engines, of 3, 6, 7, and 14-horse power (nearly complete), one 2-horse steam-engine and boiler, 16 feet shafting and drumg gear, screwing and steel tools, stones, 5 tons of cast and wrought iron, two forges, smiths' tools, vices, useful machinery, five sets of engine patterns and drawings, and other effects.—To be viewed on TUESDAY previous to the sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

ANNUAL TIMBER SALE, AUDLEY END, near SAFFRON WALDEN, ESSEX 170 Oak, Ash, Elm, Birch, Alder Maple Acacia, Lime, and Chesnut Timber Trees (many of which are of good dimensions and excellent quality); 430 capital Larch Firs, well suited for farm buildings and fencing; 130 Scotch and Spruce Firs, 150 Oak Saplings, and a quantity of Firewood, TO BE SOLD by AUCTION, by

MESSRS. NOCKOLDS and KING, upon the PREMISES, at TEN o'clock, on FRIDAY, MARCH 28, 1856.—Catalogues may be had of Mr. Hobson, Audley End, and of Messrs. Nockolds and King, Land Agents, &c. Saffron Walden. Six months' credit will be given, subject to the usual conditions. The whole of the timber is lying in convenient lots and contiguous to good roads, and is within a mile of the Audley End Station, on the Eastern Counties Railway.—The company are requested to meet at the Littlebury Green-road, near Audley End

YARDLEY-STREET AND BAKER-STREET, CLERKENWELL.—To Carpenters, Builders, Cabinet and Pencil Makers, Engineers, and Others. Extensive Salvage and other Stock of a Timber-merchant.

MR. HASLEHAM is instructed to SELL by AUCTION, on the PREMISES, 24, Yardley-street and 48, Baker-street, Bagnigge-wells-road (where a large quantity of the perfect stock has been removed for convenience of sale), on TUESDAY, the 18th of MARCH, 1856, at ELEVEN for TWELVE o'clock, without reserve, comprising—

30,000 feet Spanish Honduras Mahogany.
20,000 square feet Figured Veneering Boards.
5,000 feet Wide Pine.
100 Pencil Cedar Logs.
2,000 feet fine Spanish Veneer Wood.
18,000 feet bead Honduras.
30,000 feet Mahogany, Rosewood, Maple, Oak, and Walnut Veneers.
1,000 Pine Planks, Yellow and Spruce Deals, and Battens.
Spanish and Honduras Logs, Walnut Plank, Sycamore, Birch, Rosewood, Chestnut, and a variety of other Woods. An eight-horse power steam engine, boiler, shafting, lathes, saws, &c.—May be viewed on Monday and morning of Sale. Catalogues to be had on the Premises; and at the Auctioneer's Offices, 7, Clerkswell-green, and 38, Theobald's-road.

PECKHAM. — High-street, opposite the Police-station. — TO BUILDERS, FARMERS, CONTRACTORS and OTHERS Timber Fittings and Building Materials of the South-Sea House, and large Warehouses, pulled down for the City improvements

MESSRS. BARTON and SON will hold a PUBLIC SALE by AUCTION, on MONDAY, MARCH 17, at TWELVE, on the PREMISES, opposite the Police-station, by order of the Contractors, where the materials have been removed to for the convenience of sale, 300 large lots of TIMBER BOARDS, Bricks, Grates, Stoves, Iron, Slates, Tiles, Stores and the usual description of materials such as are now found in large buildings.—May be viewed, and catalogues had at the Red Cow and Blue Bull Public-houses, on the Premises; of the Auctioneers, 7 and 10, Cheltenham-place, Westminster-road, Lambeth.

ROTHERHITHE.—Extensive Waterside Premises, near Thames Tunnel.

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the MART, on WEDNESDAY, MARCH 19, at TWELVE, by order of the Trustee of the Estate of the Captain Andrew King, R.N. a small WHARF, with large DWELLING-HOUSE opposite, being No. 309, Rotherhithe-street; also extensive Premises in front, comprising granaries and malt-houses, capable of stowing 10,000 quarters of corn, of which immediate possession can be had; likewise The Dwelling-House known as No. 308, Rotherhithe-street, let on lease; the whole held for about thirty-eight years unexpired, at a ground-rent of 26*l.* per annum.—May be viewed, and printed particulars had of Messrs. Lee and Meynell, Solicitors, 29, Whitehall-place; and of Messrs. H. Brown and T. A. Roberts, 22, Throgmorton-street.

ISLINGTON.—Brick Carts, Powerful Young Cart Horses, Two Six-Year-old Cobs, Harness, Materials, and Effects, by

MR. RICHARDS, on the PREMISES, Dover-street, Barnsbury-park, near the Caledonian-road, on TUESDAY, MARCH 18, at TWELVE o'clock, by direction of Mr. Harris, Sen. who is retiring from contracting. Six powerful young Cart Horses, Twelve strong one and two-horse Brick Carts, Twelve Sets of Harness, Hurdles, Chaff Machine, Corn Bins, useful Materials, &c. Also, the Lease of the Premises, with stabling for fourteen horses and six cows, held for an unexpired term of thirty-five years, at a low rent.—May be viewed the morning of sale; and catalogues obtained on the Premises; and of the Auctioneer, Tottenham

DEPTFORD-CREEK, NEAR THE SOAPERY.

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BUILDING MATERIALS, LOWER NORWOOD, SURREY

MESSRS. NORTON, HIGGARTH, and TRIST have received instructions from the Crystal Palace Railway Company, to offer for SALE, at the HORNS TAVERN, Lower Norwood, on WEDNESDAY 19th MARCH, at TWELVE, in lots, without reserve, the valuable BUILDING MATERIALS of FOUR DWELLING HOUSES, situate in High-street, Lower Norwood, and SIX HOUSES in the rear, comprising sound brick-work, slated roofs, flooring-boards, joists, girders, sashes, doors, stone-paving, stoves, pipes, fixtures, and other useful materials.—May be viewed on Tuesday preceding the Sale, and catalogues had of the Horns Tavern, Lower Norwood, and of Messrs. Norton, Higgarth, and Trist, 62, Old Broad-street, Royal Exchange

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TO AUCTIONEERS AND SALESMEN

TO BE SOLD, the unexpired LEASE of forty years of the HOLBORN HALL and PREMISES, 148, Holborn-bars; with spacious building ground at the rear.—Inquire on the premises.

FREEHOLD.—WANTED to PURCHASE, a BLOCK of OLD HOUSES or a vacant space of Ground, having a superficies of about 46 yards by 36 yards, to be situate within the four boundaries formed by Great George-street, West minster, on the south, the Parks on the south, Oxford-street on the north, and Regent-street, Charing-cross, and Parliament-street on the east. A Frontage to a main street would be preferred, but it is not absolutely essential.—Particulars to be addressed to Messrs. WATKINS and HOOPER, Solicitors, 11, Sackville-street, Piccadilly

TO PLUMBERS, GLAZIERS, HOUSE-PAINTERS, AND OTHERS.

MR. FRY is instructed to DISPOSE OF, by private contract, the LEASE and GOODWILL of a most compact HOUSE and SHOP, in the above line of business. The premises are situate within seven miles of London, in a greatly increasing neighbourhood. The proprietor entering into another line of business is the only reason for his disposing of them. A lease will be granted for twenty-one years at a rental of 32*l.*; goodwill, fixtures, and stock will not exceed 200*l.* This is an excellent opportunity for a young man entering into business.—For further particulars, apply at the Offices of the Auctioneer, 43, Chiswell-street, Finsbury-square.

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TO CONTRACTORS, BUILDERS, ENGINEERS, CORN-FACTORS, WHARFINGERS, IRONFOUNDERS, &c.

A WHARF TO BE LET, with Dwelling-house, Foreman's House, ten-tall stable, with lofts over, and other buildings, situate upon the Regent's Canal, near King's-cross, and suitable for either of the above-named businesses, or any other requiring large available LAND, opposite the Police-station, by order of the Contractors, where the materials have been removed to for the convenience of sale, 300 large lots of TIMBER BOARDS, Bricks, Grates, Stoves, Iron, Slates, Tiles, Stores and the usual description of materials such as are now found in large buildings.—May be viewed, and catalogues had at the Red Cow and Blue Bull Public-houses, on the Premises; of the Auctioneers, 7 and 10, Cheltenham-place, Westminster-road, Lambeth.

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A WHARF TO BE LET, with Dwelling-house, Foreman's House, ten-tall stable, with lofts over, and other buildings, situate upon the Regent's Canal, near King's-cross, and suitable for either of the above-named businesses, or any other requiring large available LAND, opposite the Police-station, by order of the Contractors, where the materials have been removed to for the convenience of sale, 300 large lots of TIMBER BOARDS, Bricks, Grates, Stoves, Iron, Slates, Tiles, Stores and the usual description of materials such as are now found in large buildings.—May be viewed, and catalogues had at the Red Cow and Blue Bull Public-houses, on the Premises; of the Auctioneers, 7 and 10, Cheltenham-place, Westminster-road, Lambeth.

ROTHERHITHE.—Extensive Waterside Premises, near Thames Tunnel.

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the MART, on WEDNESDAY, MARCH 19, at TWELVE, by order of the Trustee of the Estate of the Captain Andrew King, R.N. a small WHARF, with large DWELLING-HOUSE opposite, being No. 309, Rotherhithe-street; also extensive Premises in front, comprising granaries and malt-houses, capable of stowing 10,000 quarters of corn, of which immediate possession can be had; likewise The Dwelling-House known as No. 308, Rotherhithe-street, let on lease; the whole held for about thirty-eight years unexpired, at a ground-rent of 26*l.* per annum.—May be viewed, and printed particulars had of Messrs. Lee and Meynell, Solicitors, 29, Whitehall-place; and of Messrs. H. Brown and T. A. Roberts, 22, Throgmorton-street.

ISLINGTON.—Brick Carts, Powerful Young Cart Horses, Two Six-Year-old Cobs, Harness, Materials, and Effects, by

MR. RICHARDS, on the PREMISES, Dover-street, Barnsbury-park, near the Caledonian-road, on TUESDAY, MARCH 18, at TWELVE o'clock, by direction of Mr. Harris, Sen. who is retiring from contracting. Six powerful young Cart Horses, Twelve strong one and two-horse Brick Carts, Twelve Sets of Harness, Hurdles, Chaff Machine, Corn Bins, useful Materials, &c. Also, the Lease of the Premises, with stabling for fourteen horses and six cows, held for an unexpired term of thirty-five years, at a low rent.—May be viewed the morning of sale; and catalogues obtained on the Premises; and of the Auctioneer, Tottenham

TO BUILDERS, CARPENTERS, AND OTHERS.

TO BE SOLD, the GOODWILL of an old-established BUILDER'S BUSINESS, a few miles from town. The stock may be taken at a valuation. The premises comprise convenient eight-roomed house, yard and workshops, &c. On lease, the present owner being the freeholder. For further particulars and terms, apply to Mr. W. R. GLASIER, Auctioneer, &c. 41, Charing-cross.

MONUMENTAL BRASSES, in MODERN and MEDIÆVAL STYLES.—MORING, Engraver, Die Sinker, and Heraldic Artist, 44, High Holborn. Designs and estimates supplied.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally. TRUMBLE and CO. Manufacturers, Leeds, beg to call the attention of the trade to their immense STOCK of PAPER-HANGINGS, No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, and Machine Goods. The whole being their own manufacture, can supply on the very best terms.

PAPER-HANGINGS. — JEFFREY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, which in price, style, and colouring, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Genuine Parkesine, an efficient remedy for damp walls. — Factory, 115, Whitechapel; Show-room, 500, Oxford-street.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSSE'S WHOLESALE WAREHOUSE, 22, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, March 15, 1856.

The Builder,

Architect, Engineer, Operative & Artist.

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ROYAL ACADEMY of ARTS, Trafalgar-square.—NOTICE to ARTISTS. All Works of Painting, Sculpture, Architecture, or Engraving, intended for the ensuing EXHIBITION at the ROYAL ACADEMY, must be sent in on MONDAY, the 7th or TUESDAY, the 8th of APRIL next, after which time no Work can possibly be received, nor can any Works be received which have been publicly exhibited.

FRAMES.—All Pictures and Drawings must be in suitable frames. Oil Paintings under glass, and Drawings with wide margins are inadmissible. Excessively breadth in frames as well as projecting mouldings may prevent Pictures containing the admission they may be obtained at the Royal Academy.

JOHN PRESCOTT KNIGHT, R.A. See.

Every possible care will be taken of Works sent for exhibition but the Royal Academy will not hold itself accountable in any case of injury or loss, nor can it undertake to pay the carriage of any package.

The prices of Works to be disposed of may be communicated to the Secretary.

ART UNION of LONDON (by Royal Charter).—Prizeholders select for themselves from the Public Exhibitions. Every subscriber of One Guinea will have besides the chance of a Prize an impression of a plate of Harvest in the Highlands, engraved by J. T. Willmore, A.R.A. from the important and well-known Picture by Sir E. Landseer, R.A. and Sir Augustus Callcott, R.A. The Prints are now ready for delivery.

444 West Strand. GEORGE GODWIN, } Honorary
LEWIS POCOCK, } Secretaries.

ARCHITECTURAL ASSOCIATION, Lyon's-inn Hall, Strand.—There will be NO MEETING on GOOD-FRIDAY. The Class of Design will meet on MARCH 28th. Subject for sketch—"A Belfry for a School."

T. W. GODMAN, }
J. A. BUNKER, } Hon. Secs.

COMPETITIONS.

TO ARCHITECTS.

MIDDLESEX INDUSTRIAL SCHOOL.—The Committee of Visitors appointed under an Act of the 17th and 18th Vict. cap. cix. to provide an Industrial School for the Juvenile Offenders of the County of Middlesex, invite Architects and Others, to PUBLIC COMPETITION, to furnish PLANS and ESTIMATES for such a building, to be forwarded, sealed up, and addressed to the Chairman of the said Committee, at the Sessions-House, Clerkenwell, on or before SATURDAY, the 26th day of APRIL, 1856. Each set of plans is to be marked with a motto or device, and the name of the author is not to appear, but to be put in a separate sealed letter, bearing on the outside a corresponding motto or device. A premium of £150 will be paid for the plan which shall be considered the best, £50 for the next, and £25 for the third.—Particulars as to the site, with a printed copy of instructions, and the conditions on which the premiums are offered, may be had upon application to me, at the Sessions House, any day between the hours of ELEVEN and FIVE o'clock.—Dated this 8th March, 1856.

CHARLES WRIGHT, Clerk to the Visitors

THE BURIAL BOARD of the PARISH of HITCHIN, in the county of Hertford, are desirous of receiving PLANS, DESIGNS, and ESTIMATES, comprising ground-plans, sections, and elevations, for laying out, planting, and fencing a new BURIAL GROUND, with suitable entrance gates at each end, and for building Two Chapels and a Lodge. The ground is nearly square and level, and contains five acres. The area of the interior of each chapel to be 31 feet by 17 feet, and the chapels to be separated by a wall. The cost of the chapels and cottage not to exceed 1,000*l*. The party whose plans are approved, will, at the option of the Board, be paid the sum of 20*l*. or have the superintendence of the works. The plans and estimates must be delivered, free of expense, at the Office of the Clerk to the Board, situate at Hitchin aforesaid, on or before the 7th day of April next. Each plan is to be distinguished by a motto and a sealed letter similarly endorsed, containing the author's name and address, to be sent therewith. The Board do not bind themselves to accept any plan, and all those not approved will be returned upon application. CHARLES TIMES, Clerk to the Board.

N.B. A plan of the ground may be seen, and further particulars obtained, at the Clerk's Office, Hitchin.

Hitchin, March 10th, 1856.

COMPETITIONS.

TO ARCHITECTS, BUILDERS, and OTHERS.—PREMIUM of 30*l*. for PLANS of OFFICES. The Directors of the Manchester, Sheffield, and Lincolnshire Railway Company offer a PREMIUM of 30*l*. for the best PLANS and SPECIFICATIONS for a STACK of OFFICES, to be erected near their docks, at Great Grimsby. The proposed site has a frontage of 160 feet to the Cleethorpe's-road, and a depth of 120 feet. The offices are intended to be let, in suites of two or more rooms, to separate firms: and the object in view being to secure ample and convenient accommodation by THE MOST ECONOMICAL EXPENDITURE OF CAPITAL, the Directors will give a preference to the plans which best answer this object. Each plan must be accompanied by an estimate of the cost. Plans and specifications, which must be accompanied by an estimate of the cost, must be forwarded, under sealed covers, marked "Plans for Offices," to the undersigned, on or before the 14th of APRIL next.—Any further information may be obtained, on application to ADAM SMITH, Esq., C.E. Great Grimsby.

By order,
Manchester, March 11, 1856. EDWARD ROSS, Secretary.

PROPOSED EXTENSION of the CENTRAL BEACH, BLACKPOOL.—To ENGINEERS and CONTRACTORS.—The sum of Ten Pounds is offered for the best approved PLANS and SECTIONS of the above Works, which are to be delivered for the approval of the Commissioners, R. BANKS, Esq., Blackpool, on or before WEDNESDAY, the 2nd of APRIL, 1856.—For particulars, apply to Mr. J. ROSSALL, Mr. W. M. BIRCH, Hotel-keepers, or to Mr. J. MOORE, Chemist, Blackpool.

GARSTON, near LIVERPOOL.—To ENGINEERS, SURVEYORS, &c.—The Survey for the District of Garston, to which the Public Health Act, 1848, is applied, being now ready, the Local Board of Health for that District are desirous of obtaining PLANS, SPECIFICATIONS, and ESTIMATES, for a supply of WATER and GAS for effectually draining the district. Premiums of 70*l*. and 30*l*. respectively will be given to the Authors of the Two Plans, &c. &c. as approved of, which Plans, &c. will become the property of the Board. The specification must contain all information regarding materials, expense &c. necessary to practically working of the drainage, and must include, so far as practicable, a scheme for preserving the Plans of the Parish, on the sale pre cribed by the General Board of Health, are in the custody of the Surveyor, Mr. JAMES ASHURTH, on application to him. But inasmuch as lithographed copies of the general plans, on a scale of two feet to a mile, may be had from the Surveyor, price 15*s*., no charge will be allowed to be taken from the original plans. Four plans, at least, from as many different to wide competitors, must be sent in, otherwise the premiums will not be awarded.—The plans, specifications, &c. signed with a motto or device, and accompanied by a letter similarly with a similar motto or device, enclosing the name and address of the Author, must be sent (carriage free) to the Office of Mr. J. B. LLOYD, Solicitor, 8, Exchange-alley, Liverpool, on or before the Dated the 5th day of March, 1856.

CONTRACTS.

EAST LANCASHIRE RAILWAY.—The Directors are prepared to receive TENDERS for the MAINTENANCE of the PERMANENT WAY and WORKS, also for the formation and laying down of a Second Line of Rails from Stubbins Junction to Rawtenstall, including all the works connected therewith. Specifications and plans may be seen on and after the 21st instant, at the Engineer's Office, Bury Station. Sealed Tenders endorsed "Tenders for Maintenance of Permanent Way and Works," to be addressed to the undersigned, before the 10th day of APRIL next.

By order,
Bury, Lancashire, March 12th, 1856. MYLES FENTON, Secretary.

EAST LANCASHIRE RAILWAY.—The Directors are prepared to receive TENDERS for the MAINTENANCE of the PERMANENT WAY and WORKS, also for the formation and laying down of a Second Line of Rails from Stubbins Junction to Rawtenstall, including all the works connected therewith. Specifications and Plans may be seen on and after the 25th instant, at the Engineer's Office, Bury Station. Sealed Tenders endorsed "Tender for Maintenance of Permanent Way and Works," to be addressed to the undersigned, before the 10th day of APRIL next.—By order,

Bury, Lancashire, March 12th, 1856. MYLES FENTON, Secretary.

MIDDLESEX and ESSEX TURNPIKE-ROADS.—Notice is hereby given, that the Trustees of these Roads are willing to receive PROPOSALS and to CONTRACT for 7 or 8 TONS of NEW BLUE GUERNSEY GRANITE, of the best and hardest quality, broken to a gauge of one inch and one half cube, and to be free from dust, and also for the supply of 40 Tons of the best and hardest extra picked New Blue Guernsey Granite Cube Stones, 4 in. by 9 in.—No Stone to be of a greater length than 14 inches. Such broken granite and likewise the paving stones are to be delivered alongside the Wharf of Messrs. MELSON, adjoining to and on the eastern side of the River Lea, Bow-bridge, within eight weeks from the date of the Tender being accepted. If such broken granite and the paving stones are found to be of the size and of the sort contracted for, and delivered within the above-named period, payment will be made therefor on the 25th of July next. Tenders, sealed, and endorsed "Tender for Road Materials," to be sent to this Office on or before the 17th day of APRIL next, and a sample of each description of stone will be required to be deposited at this Office at the time of delivering in of the Tender. The Trustees do not bind themselves to accept the lowest or any specific Proposal that may be made to them.

GEORGE DACRE, Clerk and Solicitor to the Trustees.
Turnpike Office, Bow, Middlesex, 15th March, 1856.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that the War Department have REJECTED the whole of the TENDERS for the Extension of the Western Heights Barracks at Dover, and that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before WEDNESDAY, the 2nd day of APRIL, 1856, from persons desirous of CONTRACTING for the EXTENSIVE ADDITIONS and ALTERATIONS to the WESTERN HEIGHTS BARRACKS at DOVER. Drawings and specifications of the works to be executed may be seen by persons fully competent to undertake the Royal Engineer Office, Archcliffe Fort, Dover, between the hours of TEN and FOUR o'clock, from MONDAY, the 24th day of March, 1856, to TUESDAY, the 1st day of APRIL, 1856, Sunday excepted. A person belonging to the Royal Engineer Department to TWELVE o'clock, to point out the work and explain the drawings. The party whose Tender may be accepted for the work will be required to enter into a bond, with two sufficient sureties, in the penalty of £2,000, for the due performance of the contract. Parties Tendering will take notice, that the period for completing the work is extended to 31st DECEMBER, 1856.

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, 14th March, 1856.

NOTICE to IRONFOUNDERS and SMITHS.—The Commanding Royal Engineer of the Dover district hereby gives notice that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before MONDAY, the 31st day of MARCH, 1856, from persons desirous of contracting for SUPPLYING ARTICLES of CAST and WROUGHT IRON at the several barracks in the Dover district for the War Department. Specifications of the contract, may be seen by persons fully competent to undertake the supply of the articles, and forms of Tender obtained, at the Royal Engineer Office, Archcliff Fort, Dover, between the hours of TEN and FOUR o'clock, from THURSDAY, the 27th MARCH, to SATURDAY, the 29th APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, for the due performance of the contract. Tenders for the above service to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed "Tender for Iron Work for Dover District."

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, 15th March, 1856.

THE BOARD of WORKS for the LIME-HOUSE DISTRICT, comprising the Parish of St. Anne, Limehouse, the Hamlet of Ratcliff, and the Parishes of St. Paul, Shadwell, and St. John, Wapping, Middlesex.—TAYLORS Paving, Lighting, &c. will meet at the Offices of the Board, White Horse-street, Commercial-road East, on MONDAY, the 31st MARCH, 1856, at THREE o'clock in the afternoon, to receive TENDERS from persons willing to CONTRACT for the GENERAL WORKS and REPAIRS to the FOOT and CARRIAGE-WAYS of the several streets, courts, alleys, and other places, under the jurisdiction of the said Board, for three years, from 4th APRIL, 1856. Further particulars may be had on application to the printed conditions, schedules of works, and forms of Tender obtained, by parties intending to Tender for the Works, upon application at the said offices, after the 24th instant, between the hours of TEN and FOUR, upon payment of twenty shillings, which will be returned to each person sending in a bona fide Tender, sealed up, and endorsed "Tender for Paving," and Materials," must be delivered at the said Office not later than ONE o'clock on the 31st day of MARCH, 1856. The Board do not bind themselves to accept the lowest or any Tender, but will require security of two responsible persons will be required. The Tender will be received after the time specified, and unless accordance with the printed instructions.—By order,

THOS. W. RATCLIFF, Clerk to the Board.

7th March, 1856.

THE BOARD of WORKS for the LIME-HOUSE DISTRICT: comprising the Parish of St. Anne, Limehouse, the Hamlet of Ratcliff, and the Parishes of St. Paul, Shadwell, and St. John, Wapping, Middlesex.—CONTRACT for GUERNSEY GRANITE.—The Board are prepared to receive TENDERS for the supply of 250 Tons of the best and truest BROKEN GUERNSEY GRANITE, to be delivered according to the conditions of the contract, free of all expenses, on the roads and streets of the district. Further particulars may be known, and printed forms of Tender obtained, upon application at the said Offices after the 24th inst. between the hours of TEN and FOUR. Tenders, sealed and endorsed "Tender for Guernsey Granite," must be delivered at the said Offices not later than ONE o'clock on the 31st day of MARCH, 1856. The Board do not bind themselves to accept the lowest or any Tender. No Tender will be received after the time specified, and unless on a printed form.

By order,
7th March, 1856. THOS. W. RATCLIFF, Clerk to the Board.

CHURCH of ST. ANDREW, FULLETBY, Lincolnshire.—Builders willing to TENDER for the new ROOFING, FLOORING, and SEATING, and for the performance of certain other WORKS at the above church, may inspect the plans and specification of the same from the 26th day of MARCH to the 3rd day of APRIL, 1856, at the Carpenters' Arms, Fulletby, or at our offices at Louth.

MAUGHAN and FOWLER, Architects.

Louth, March 18th, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

TO BUILDERS.

THE GUARDIANS of the POOR of the PARISH of ROTHERHITHE are desirous of receiving TENDERS for the ERECTION of a WASHHOUSE, LAUNDRY, and other BUILDINGS, to the Workhouse of the said Parish, the Plans for the Same having been prepared by Mr. GEORGE Lloyd, Architect, of King William-street, London Bridge, on payment of one guinea. Sealed Tenders are to be delivered at the Offices of the Clerk to the Guardians, St. Paul's-churchyard, Rotherhithe, on or before WEDNESDAY, the 26th MARCH inst. The Contractor will be required to give security to the amount of his contract for the due performance of the work, to be completed on or before the 24th JUNE, 1856. The Guardians do not bind themselves to accept the lowest or any Tender.—By order,

ROBERT SHAFTO HAWKS, Clerk.

March 14, 1856.

TENDERS are required for the ERECTION of a WESLEYAN CHAPEL, Lee New Road, with Drawings and specification may be viewed at Mr. TAYLOR'S, Chemist, Blackheath, New Swindon, and at the Offices of J. WILSON, Hall-street, New Swindon, and at the Offices of J. WILSON, Esq. F.S.A. Belmont, Bath. The Committee do not pledge themselves to accept the lowest Tender.

C. TRIMMER, Secretary.

BRIDGWATER, SOMERSET.—Tenders are required from responsible builders for the ERECTION of NEW PREMISES and SCHOOLS, in connection with the Independent Chapel, Friarn-street, Bridgwater. The drawings and specifications may be seen at the Second Schoolroom, on the said premises, on and after MONDAY, the 24th instant, and at the Offices of Mr. TAYLOR, Architect, Bridgwater, where Tenders are required to be delivered, free of expense, to the Secretary of the Building Committee, Mr. G. B. SULLY, Bridgwater, on MONDAY, the 31st instant, before FOUR o'clock, p.m. sealed and indorsed—"Tenders for Premises and Schools." The Committee do not bind themselves to accept the lowest Tender, or any of them if the amounts are unsatisfactory.—The Tender, or any of them if the amounts are unsatisfactory.—The Tender or estimate of quantities have been prepared, and can be had of the architect or secretary on payment of 5s. each. H. J. PAULL, Architect, 10, Adam-street, Adelphi, London.

TO BUILDERS.

PERSONS desirous of CONTRACTING for the ERECTION of TWO semi detached VILLAS, on the Brockley hill-park Estate, near Forest hill, may inspect the drawings and obtain bills of the quantities at the offices of the Architects, on and after MONDAY next, the 17th instant. Tenders to be delivered on or before TWELVE o'clock on THURSDAY, the 3rd of APRIL next. The Architects do not bind themselves to accept the lowest or any Tenders.

MESSRS. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

BOARD of WORKS for ST. SAVIOUR'S DISTRICT.—To SCAVENGERS.—Notice is hereby given, that the Board will meet at the Board-room, on WEDNESDAY, the 26th MARCH instant, at SIX o'clock in the evening, to receive TENDERS for CLEANSING the ROADS, STREETS, LANES, ALLEYS, PASSAGES, and PLACES (and also all the Gully-holes within two divisions of the district of St. Saviour, for the term of three years, determinable at end of first or second years from the 1st of APRIL next. The contractor will be required to enter into a contract, and also with two responsible persons to enter into a bond in the penal sum of £200 for the faithful performance of such contract. The drafts of contract and bond, as formerly used on such occasions, may be seen at the Board-room. Tenders, sealed up and endorsed "Tenders for Cleansing," to be sent in before Half-past Five in the evening of the above-mentioned day; after which time no Tenders will be received. And the persons sending in such Tenders must be in attendance. The Board do not bind themselves to accept any Tender. This contract will not include the removal of the dust. The expenses of the bond only will have to be borne by the contractor. Dated 17th March, 1856.

By order of the Board,

HERBERT STURMY, Clerk.

Board-room, Emerson-street, Bankside, Southwark

BOARD of WORKS for St. SAVIOUR'S DISTRICT.—To DUSTMEN.—Notice is hereby given, that the Board will meet at the Board-room, on WEDNESDAY, the 26th MARCH instant, at SIX o'clock in the evening, to receive TENDERS for REMOVING the DUST ASHES, &c. from each of the houses, &c. within two divisions of the district of St. Saviour, for the term of two years, to be commenced at or as near to the end of first or second year as convenient, and to terminate at the end of first or second year to enter into a contract, and also with two persons as sureties to enter into a bond in the penal sum of £60 for the faithful performance of such contract. The drafts of contract and bond, as well as particulars of the two divisions, and the streets, places, &c. comprised therein, can be inspected and ascertained at the Board-room. The Tenders may be left or sent in by the dustmen themselves, specifying the amount for each and every house, &c. and endorsed "Tender for Dusting, &c." after which time no Tenders will be received and the persons sending in such Tenders must be in attendance. The Board do not bind themselves to accept any Tender. This contract does not include cleansing. The expenses of the bond only will have to be borne by the contractor. Dated 17th March, 1856.

By order of the Board,

HERBERT STURMY, Clerk.

Board-room, Emerson-street, Bankside, Southwark

TO PAVIORS AND OTHERS.

THE VESTRY of the PARISH of ST. GEORGE-THE-MARTYR, Queen's-square, Holborn, will meet at the Vestry-room of St. Andrew's, Charles-street, Old Gravel-lane, on THURSDAY, the 27th MARCH instant, at SIX o'clock p.m. precisely, to receive TENDERS and CONTRACT for PAVING, Bottoming, York-paving, Repairing, and all the unpaved portion of the Churchyard on the said parish, agreeable to a plan deposited at the Vestry Office, between the hours of Ten and Four. The contractor will be required to enter into a written contract, with a bond to two sureties, for the due performance thereof, such bond and contract to be prepared by the clerk at the expense of the Vestry. The Vestry do not bind themselves to accept the lowest or any Tender.

W. L. HOWELL, Clerk.

Vestry Offices, 30, St. George's-street, March 12, 1856.

THE COMMITTEE of MANAGEMENT of the DONCASTER GAS LIGHT COMPANY are prepared to receive TENDERS for the undermentioned CASTINGS:—

Eight Double Flanged Mouthpieces, and one Single Mouthpiece, both Arched to Pipes forty I. in. and under; three Working Pieces, both Arched to Pipes forty I. in. and under; one Work piece.

For particulars apply to Mr. HOOLE, at the Gas Works, April 4, Tenders to be delivered on or before Wednesday, April 9, 1856, addressed to the Chairman, Gas Company, Doncaster, and with the words "Tenders for Castings, &c." written on the outside cover.

TO CONTRACTORS, BUILDERS, AND OTHERS.

CLIFTON UNION.—Persons desirous to OPEN RIGHT for MAKING IMPROVEMENTS in the DRAINAGE of the CLIFTON UNION WORKHOUSE PREMISES, situate at Bishop's Castle, are requested to call at the said premises and receive forms in the Clerk's office for inspection, are requested to send in Tenders, addressed to the Board of Guardians, Bishop's Castle, Salop, on or before the 31st day of MAY next.—By order of the Board,

FREDERIC PARDOE, Clerk.

Bishop's Castle, March 14, 1856.

TO BUILDERS.—PLANS and SPECIFICATIONS of LEBBURY CHURCH, and for REBUILDING a HOUSE, TENANTS WALL, and other WORKS, may be seen at the Offices of Messrs. PRICHARD and PRICE, Architects, Llandaff and Card ff.

CONTRACTS.

THE BOARD of WORKS for the ST. GILES DISTRICT.—The Board of Works for the above district, hereby give notice, that they will be ready at their Office, No. 1, Holborn, on MONDAY, the 24th day of MARCH instant at Half-past Two o'clock in the afternoon, precisely, to treat with parties who may be willing to CONTRACT for the GENERAL WORKS and REPAIRS required within the district. Parties willing to undertake the same are desired to send in Tenders, sealed and endorsed "Tenders for General Works," according to a Schedule of Prices now lying for inspection at the above Office. The contractor will have to give security for the proper performance of the work, and the party whose Tender shall be accepted will be required to provide two responsible sureties for the same. No Tender will be received after the hour and time appointed. The Board do not bind themselves to accept the lowest Tender, but will require to be satisfied as to the responsibility of the party whose Tender shall be accepted.

By order,

ROBERT FLYNN, Clerk.

NEWPORT DOCKS.—NOTICE to CONTRACTORS.—The Directors of the Newport Dock Company are desirous of receiving TENDERS for the EXECUTION of the following WORKS:—An EXTENSION of the existing DOCK, ALTERATIONS and ADDITIONS to the present LOCK GATES, and ENTRANCE, and the CONSTRUCTION of an AQUEDUCT from the river Ebbw. The plans, sections, specifications and conditions of the above-named works and others connected with them, may be seen at the office of JAMES ABERNETHY, Esq. 3, Parliament-street, Westminster, Engineer to the Company, and 3, Parliament-street, Newport, Monmouthshire, on and after the Dock Office, Newport, Monmouthshire, on and after MONDAY, the 24th inst. from whom forms of Tender may be obtained. Sealed Tenders, addressed to the Secretary to the Company, Dock Office, Newport, Monmouthshire, to be sent in on or before WEDNESDAY the 2nd APRIL next.

HENRY PHILLIPPS ROUTE, Secretary.

Dock Office, Newport, Monmouthshire, 6th March, 1856.

SKIRWITH CHURCH.—To BUILDERS. Such persons as may be desirous of TENDERING for the ERECTION of the NEW CHURCH and PARSONAGE-HOUSE, at Skirwith, near Penrith, in the county of Cumberland, are informed that the drawings and specifications may be seen at Mr. Smith's, Penrith, and Tenders may be forwarded to Builders by quantities and forms of Tender may be seen at Skirwith, and at the Architects, Messrs. FERGUSON, 38, Upper Bedford-place, Russell square. Builders who will also give any further information. The Trustees will not be bound to accept the lowest Tender, and no estimate will be received except upon the form of Tender supplied by the Architects. Tenders to be sent in, endorsed "Tender for Works, Skirwith Church &c." and addressed thus:—To Messrs. FRANCIS & Upper Bedford-place, Russell-square, London, on or before SATURDAY, the 29th of MARCH inst.

TO BUILDERS and CONTRACTORS.—Persons willing to submit TENDERS for WORKS to be done in the ERECTION of FARM BUILDINGS and COTTAGES, for James Thorpe, Esq. at COPPINGT N, near Newark-on-Trent, may see drawings and specification, on application at the Offices of Mr. CHARLES BAILY, Architect, Kirk-gate, Newark, Offices of Mr. CHARLES BAILY, Architect, Kirk-gate, Newark, on and after WEDNESDAY, the 26th instant. Tenders to be sent in on and after WEDNESDAY, the 26th instant. Tenders to be sent in to the Architect, on SATURDAY, the 5th day of APRIL, by TWELVE o'clock at noon.

Newark, March 19, 1856.

LILLESHALL CHURCH, SALOP.—Builders are invited to TENDER for the RESTORATION and PARTIAL REBUILDING of the Parish Church of Lilleshall (near Newport, Salop) station on the Shropshire Union Railway.—Plans and specifications can be seen on application to the Rev. H. G. RUNSEY, Vicar, at Lilleshall; or at the Office of the Architect, Mr. GEORGE CAPPER, 3, Old Broad-street, London, on and after MONDAY, the 24th inst. Tenders to be sent to Mr. NORTON, on or before the 1st inst.

TO BUILDERS

BUILDERS desirous of CONTRACTING for the BUILDING of a RECTORY-HOUSE and OFFICES, at SHEEPY, in the county of Leicester, may see the Plans and Drawings at the present Rectory-House, Sheepy, the Plans and Drawings at the present Rectory-House, Sheepy, Atherstone, by FOUR o'clock, on the 5th day of APRIL, 1856. The lowest Tender will not necessarily be accepted. Sheepy is three miles from the Atherstone Station.

TOWN DRAINAGE.—The Nuisance Removal Committee of the Parish of Wadhurst, in the county of Sussex, are desirous of receiving TENDERS for EXECUTING about 500 feet of PLYING the PATH FALLS, and EXECUTING about 500 feet of PIPE and BRICK DRAIN, and about 200 feet of PIPE DRAIN, according to Plans and specification now lying for inspection at the Swan Inn, Wadhurst, of which also a printed form of specifications may be obtained on payment of 2s. 6d. each. Tenders may be sent in, sealed and endorsed "Tenders for Drainage," on or before the 31st, prepaid, on or before TEN o'clock, on MONDAY, the 31st, prepaid, on or before TEN o'clock, on MONDAY, the 31st inst. after which time no Tenders will be received, and the parties must attend at the Committee do not bind themselves to accept the lowest, or any Tender.

EDWD. WATSON SMYTH, Chairman.

Wadhurst, March 19th, 1856.

N.B. The town of Wadhurst is about one mile from the Wadhurst station on the Hastings branch of South Eastern Railway, and about 4 miles from Tunbridge.

Other works of a similar nature, in addition to those contained in the plan and specifications, are in contemplation

EAST DEREHAM, NORFOLK, CORN EXCHANGE.—To BUILDERS and CONTRACTORS.—Builders desirous of Contracting for the ERECTION of the CORN EXCHANGE, at East Dereham may inspect the plans and specifications, and obtain all necessary information with reference to same, at the office of the Architects, Messrs. GOGGS and MANNING, of No. 7, Bedford-street, Strand, on and after MONDAY, the 24th day of MARCH, in town, and at the Corn Exchange, East Dereham, and sent by post so as to reach by the following MONDAY, the morning of WEDNESDAY, the 2nd day of APRIL next. The Directors will not bind themselves to accept the lowest Tender, nor need they apply except to those who are able to give the sufficient security for the due performance of the works.—By order of the Directors,

HENRY R. COOPER, Secretary.

PARISH of ST. MARY ABBOTT'S, KENSINGTON.—WATERING of STREETS. The Vestry of this parish are ready to receive TENDERS, and CONTRACT for the supply of all necessary WATER-CARTS, HORSES, and MEN, for WATERING certain STREETS in the same, at the Vestry Office, for six months next ensuing. The Vestry have divided the parish into two districts, and Tenders will be received for the districts jointly or separately. Form of Tender and Schedule of streets, can be obtained at the Clerk's Office Vestry Hall, where the Tenders, sealed and endorsed, "Tenders for Street Watering," are to be delivered on or before FOUR o'clock on FRIDAY, the 28th day of MARCH instant. The Vestry do not bind themselves to accept the lowest or any Tender. The Contractor or Contractors will be required to enter into a written Contract at his or their own cost and expense.—By order,

EDWARD GREEN, Clerk to the Vestry.

Vestry-hall, Kensington, March 20, 1856.

TO BUILDERS

PERSONS desirous of CONTRACTING for [illegible] to be delivered on the 10th of MARCH next. [illegible] Twitch Paper Company, Mr. JOSEPH PHILLIPS, Lime Burner, Stamford, by TWELVE o'clock on that day. The lowest Tender will not necessarily be accepted. Stamford, March 12th, 1856.

CONTRACTS.

TO CONTRACTORS.

BUILDERS desirous of TENDERING for TWO VILLA RESIDENCES, proposed to be erected in Nottingham park, are invited to view the drawings and specifications at our offices on and after MONDAY next. The lowest Tender not necessarily accepted.

JACKSON and HEAZELL, Architects.

Broml y House, Nottingham, March 19th, 1856.

BOARD of WORKS for the LIME-HOUSE DISTRICT.—Persons desirous of CONTRACTING for WATERING the ROADS, STREETS, &c. in the said District for one year, are requested to send in their Tenders, sealed and endorsed "Tenders for Watering the Roads, Streets, &c." addressed to the Board of Works, Lime-house, on or before TEN o'clock on MONDAY, the 24th instant. Tenders will be received from persons residing in the Parishes of St. Dunstan, Stepney, and Mile-end Old Town, and the Hamlet of Ratcliff, and the Parishes of Shadwell and Wapping. The Board will meet at the Board-room, Lime-house, on MONDAY, the 24th instant, at THREE o'clock, to open the Tenders. The Board do not bind themselves to accept the lowest or any Tender. No Tender will be received after the time specified, nor unless in accordance with the printed instructions.—By order,

THOS. W. RATCLIFF, Clerk.

March 20, 1856.

BRADFORD CORPORATION WATER-WORKS.—To EXCAVATORS, MASONS, and GENERAL CONTRACTORS.—The Waterworks Committee of the Bradford Corporation will meet at their Offices in Bradford, on SATURDAY, the 5th day of APRIL, at THREE o'clock in the afternoon, for the purpose of receiving TENDERS or PROPOSALS for the following Work:

CONTRACT A.—The Excavating, forming, and completing of a Service Reservoir of about eleven acres in extent nearly level, in the township of Heaton and Manningham with the culverts, inlets, and other works connected therewith.

CONTRACT B.—The excavating, forming, and completing of a Millowners' Compensation Reservoir of about thirty acres in extent on the Silsden or Grent Gill Beck near to Cringles, in the township of Silsden, with the bye channels, waste, weir, and other works connected therewith.

Forms and Specifications may be seen, and further information may be had on and after MONDAY, the 24th instant, on application to Mr. JOHN W. LEATHER, Civil Engineer, Leeds. By order,

W. H. HUDSON, Town Clerk.

Bradford, March 12th, 1856.

TO BUILDERS AND CONTRACTORS.

PERSONS desirous of TENDERING for the ERECTION of a new HOUSE and OFFICES, at Ingatestone, Norfolk, may now see the plans and specifications at the Office of G. E. PRITCHETT, Architect, Bishop Stortford, and copies at the Rev. W. BROUGHTON'S, Rectory, Ingatestone, Tenders to be delivered at the Office of the Architect on the 5th of APRIL. The lowest Tender will not necessarily be accepted.

TO ARCHITECTS

LIVERPOOL FREE PUBLIC LIBRARY COMPETITION.—The number of applications for the printed instructions and plan of site has been so great, that the Committee deem it advisable for the purpose of saving time, to extend to the end of the present month the time allowed as to their arrangements. They have therefore issued additional particulars, which have been circulated so far as the addresses are known. Any parties who have not received them will be furnished on application to Mr. J. STUART DALTON, the Library, Duke-street, Liverpool.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses Vases, Balusters, Capitals, Bases and Shafts of Columns, Paving, Garden Pots, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, the Patentee and Sole Manufacturer of Terra-Cotta, at Millwall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington basin.

TERRA-COTTA WORKS, Blackfriars-road, London.—The PRIZE MEDAL for MATERIAL and WORKMANSHIP in TERRA-COTTA to W. H. BLANCHARD, late of Coade's Original Works, and successor to them in the manufacture of the Terra-Cotta Stone, that has been so successfully adopted for nearly a century in this country, by our eminent Public Buildings, architects and others, in the erection of our noblest buildings, and is the only material that is capable to stand the ravages of time unimpaired. Groups, statues, Vases, Fountains, and Architectural Embellishments, of every design and quality that will defy competition. A large Stock of newly designed Chimney Shafts and Pots, to suit the various styles of buildings, at very low prices, and worthy of notice.

THE VIEILLE MONTAGNE ZINC MINING COMPANY'S PURE PATENT WHITE ZINC PAINT is unequalled for permanency of colour, hardness, and brilliancy of surface. It is unaffected by sulphureous or any other noxious or emanations. Being completely innocuous and free from the pernicious effects of white lead, it may be employed in those apartments which it is use without any inconvenience to the inmates.

The greatest caution is recommended to avoid any spurious compounds that might be sold at cheap rates as Pure Oxide of Zinc. If any adulteration has taken place in the oxide, either in consequence of impurity in the materials made use of to produce it, an imperfect mode of calcination, or by mixing with oxide certain substances calculated to give an increased weight, it then produces a very inferior paint, a very superior paint, and the economy realised by the purchasers of such oxides becomes a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the VM mark on the casks, and by Messrs. BLUNDELL, SPENCE, and CO. in bags, ground and dry, by Messrs. T. B. MORLEY and CO. and by the Company's Grinding Agents in London, Messrs. CHARLES TURNER and CO. Wholesale Agents, 62, Rose Whitmore-street, City, as the Sole Manufacturing and Painting Agent, Mr. FREDK. BARBY, Pizzey Works, Newroad, in Manchester and Liverpool by R. CLAY, Mersey-street, road. In Manchester and Liverpool by R. CLAY, Mersey-street, which he has newly erected Paint Works, and undertakes painting ships, warehouses, dwelling-houses, &c. and undertakes painting ships, warehouses, dwelling-houses, &c. In Leith, by Messrs. ANDREW and Co. Timber-bush; and in Southampton, by Mr. H. J. BUCHAN. The OXIDES and PAINTS, in kegs of 14, 21 and 28 lbs. and upwards, to be had of the Company's Agents in Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and Southampton; also in Dublin, the Isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with Zinc Paint by contract.

For further particulars, apply to the Company's General Agency in London, 12, Manchester buildings, Westminster.

LOANS from 25l. to 1,000l. upon approved personal or other security, repayable by easy instalments, extending over a period from 6 months to 3 years, or readily realizable from the SURRENDER of LIFE ASSURANCE POLICIES, INSCRIPTION CERTIFICATES, &c. For specimens, reports, and LIFE ASSURANCE CLASSES. For specimens, reports, and every information it may be desirable to apply at the British Mutual Life Office, 16, New Bridge-street, Blackfriars. Rules 6d. each copy. CHARLES JAMES THICKE, Resident Secretary.

METROPOLITAN LOAN COMPANY, LIMITED, 1, CRAVEN-HILL, HYDE PARK, LONDON.

Loans are advanced in amounts varying from £5 to £50, repayable weekly or otherwise, as may be agreed upon, at a discount of 24 per cent for twenty-five weeks, and for 50 weeks at a discount of 24 per cent. Forms may be had, price 2d. by post, three postage stamps to be enclosed.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—TREGELLES and TAYLOR, 3, Pinner's-court, Old Broad-street. Manager—JAS. J. TRATHAN, Liskeard
This Granite is selected for the New Westminster-bridge.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

ANCASTER STONE, so remarkable for its free working quality, combined with colour and durability. Price, and cost of transit to any part, may be obtained, upon application at Mr. W. THOMPSON'S Office, Elmer-street, Grantham.

DARLEY DALE STONE.—This Stone, introduced by Sir Charles Barry at St. Edward's Grammar School, Birmingham, and well known as having been selected for
ST. GEORGE'S HALL, LIVERPOOL,
and numerous works, including the Railway Station, Birmingham; Borough Bank, Liverpool; Evesham-bridge; Mr. Beaufoy's Schools, Lambeth; and the Portico and Cornice of the Town-hall, Leeds: is kept in considerable quantity at the Darley Dale Stone Wharf, City Basin, London.—Apply to W. and J. FREEMAN, Millbank-street, Westminster; or GEORGE WALL, at the Quarries, near Matlock.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Townhall.

CAEN and AUBIGNY STONE.—GATES and GEORGE (late Luard, Beedham, and Co.), Caen-wharf, Rotherhithe, London, General Stone Merchants and Quarrymen, continue to supply from their Wharf, as above, CAEN, AUBIGNY, PORTLAND, and YORKSHIRE STONE.

BATH STONE.—HENRY STONE, QUARRYMASTER, begs to inform Architects, Builders, and others, that he still continues to supply the best COMB DOWN, HAMPTON DOWN, and BOX GROUND WEATHER STONE. Delivered in the trucks at Box or Bath station on the most reasonable terms. H. S. begs to call particular attention to his Hampton Down Stone, it being of a very fine texture and rich colour, suited for either external or internal purposes. Ashlar and Sawn Range Stone cut to order. Cargoes shipped in Bristol, and delivered to any part round the coast. Residence, WIDCOMBE, Bath.

YORKSHIRE STONE.
GEO. VINT and BROTHERS, IDLE, near LEEDS,
Beg to inform Architects, Surveyors, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Paving, Bramley Fall, Park Spring, Robin Hood, Harehill, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

ROBERT DANIEL, STONE-MERCHANT, Victoria Wharf, Pimlico, London, and Island Wharf, Leeds, begs to inform Contractors, Builders, Masons, and others, that he still continues to supply every description of STONE to any extent at the lowest current prices, comprising Park Spring, Harehill, Potternewton, Robin Hood, Portland, and Caen, in block and slabs of any thickness, Bramley Fall, Yorkshire paving, landings, steps, coping sills, sinks, grindstones, headstones, ledgers, marble slab, granite curb, &c.
Any quantity sent direct by rail to all stations, or by vessel to any port in the kingdom.
A list of prices sent on application.—Address, Victoria Wharf, Pimlico, London.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

BATH STONE OF BEST QUALITY.
RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SCOULES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

TO STONE MERCHANTS and QUARRYMEN WANTED, immediately, by the Corporation of the borough of Folkestone, 24,000 feet super 2½ inch selected YORK PAVING, 4,000 feet run 12 by 6 of granite curb, to be landed at the harbour of Folkestone.—Tenders to be delivered at the Office of Mr. R. S. BRUCKMAN, Town Clerk, Folkestone, to whom application for further particulars.
Folkestone, March 13, 1856. JAMES TOLPUTT, Mayor.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

PARIS EXHIBITION.—ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1848. This beautiful material, handsomer and more durable than marble, is now adapting its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stores for all apartments; plain and exquisitely decorated slabs for the tops of loo tables, chiffoniers, consoles, &c.; baths baptisteries, altar-tablets, pilasters, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

THE SEVRES GLASS COMPANY.
LEGENDRE, TURPIN, AND CLARK'S
Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at
131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

CHEAP, LIGHT, AND DURABLE ROOFING.
CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.
1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 42 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non-conductor.
INODOROUS FELT, for damp walls and for damp floors, under carpets and floor cloths. Price ONE PENNY per Square Foot.
CROGGON and CO.'s PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and
DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing the radiation of Heat, saving 25 per cent. of Fuel, and deadening Sound.
Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

TO ARCHITECTS, BUILDERS, IRONMONGERS, &c.
ENAMELLED SLATE CHIMNEY-PIECES, of elegant designs and superior workmanship, in great variety, at prices from 21s. to 10 guineas. Slate Cisterns made to any size.—J. HOWELL, Manufacturer, 5, Cook's-grounds, King's-road, Chelsea, Middlesex

FOR MACADAMIZING ROADS.—The HARDEST and most DURABLE STONE.—The Proprietor of an extensive Quarry at Duncannon Rock, containing Blue Elvin Granite, is open to contract for to supply any quantity of the above Stone, its durability having been tested, and proved to be 25 per cent. harder than Guernsey Granite.—For further particulars apply by letter to Mr. JOHN NEWTON, Norway-wharf, Hertford-road, Kingsland-basin.—Two Coal Waggons for Sale.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
FROM 3s. 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Poloneeau and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

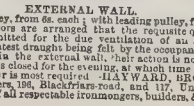
O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, White friars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.
W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 31 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf.
Contractors supplied to any extent.

THE BEST CURE FOR SMOKY CHIMNEYS.
PATRONISED BY HER MOST GRACIOUS MAJESTY.
KITE'S PATENT VENTILATING and SMOKE-CURING CHIMNEY CAPS.—Two hundred on Buckingham Palace; in use also on St. James's Palace, Claremont, Windsor Castle, Government Buildings, &c. Wrought Iron, 21s. Galvanised ditto, 30s.; Cast Iron, 35s. each; the latter as durable as the building itself. The merits of this invention are proved by practical experiments daily at the Royal Polytechnic, the Crystal Palace, and at the Manufactory. Illustrations and testimonials forwarded on receipt of two postage-stamps. Depôt HARTON'S Iron Works, and Manufactory for the Patent Stable Fittings and Enamelled Mangers. Address, JAMES BARTON, 370, Oxford-street, London.

SMOKY CHIMNEYS CURED EFFECTUALLY for FIFTEEN SHILLINGS, by SUTER'S PATENT WIND-GUARD.—This Guard allows free egress to the smoke, prevents the wind blowing down the mouth of the chimney, and is not liable to be injured by the most boisterous weather.
To be had of Ironmongers and Builders; and of the Patentee, at his Office, 65, Fenchurch-street, London.

By Her Majesty's Royal Letters Patent.
DUPREE and CO.'S DEFIANCE WINDGUARD and VENTILATORS, &c. for the perfect cure of Down-draft Smoky Chimneys, suitable for Public and Private Buildings requiring a constant change of air.
Also
SHIP VENTILATORS, requiring no attention, imparting about six times the quantity of fresh air than any other in use.
Also,
VENTILATING ROOFLIGHTS, for Slate or Tile Roofing, without Paint or Putty.
Prospectuses sent on application.
London Depôt—ESNOUF and MANGER, 141, Minories, City.

VENTILATION.—PURE AIR.
Sheringham's Ventilator for the admission of pure air through an

EXTERNAL WALL.
With single pulley, from 6s. each; with leading pulley, from 6s. 6d.
These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draughts being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 126, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

By Her Majesty's Royal Letters Patent.
THE ROYAL PATENT DECORATIVE GLASS COMPANY, 21, Castle-street, Southwark-bridge-road.—NOTICE of REMOVAL.—REMOVED to No. 12a, CUMBERLAND-MARKET, REGENT'S-PARK, where machinery has been erected to carry on the manufacture of this most important branch of ornamental glass.
Orders can now be executed, with the greatest cheapness and despatch, by EDWARD BAILLIE and CO. 12a, Cumberland-market, and 118, Ward-our-street, Soho (successors to M. Tousaint, Cartuser, and Co.).—Specimens of every description of Church Memorial Windows and Decorations, Glass Painting, Staining, and Embossing, may be seen as above. Designs and estimates upon application.—February 30, 1856.

By Royal Letters Patent.
THE COSMOPOLITAN GLASS COMPANY, 296, Oxford-street.
CCC CROWN, 18 Tables, per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3d. ENAMELLED, 9d. per foot. Sashes primed and glazed, 3d. per foot.
Catalogues free, on application to the Managers, as above.

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TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 55, Bish Holborn.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and vaporising) with all the improvements, under their Quadruple patents of 1840-51-54 and 1855, including their Gunpowder Proof Solid Lock and Door (without which no safe is secure.

THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.

MILNER'S PHŒNIX (212°) SAFE-WORKS, LIVERPOOL the most complete and extensive in the world. Show-rooms, 6 and 8, Lord street, Liverpool. London Depôt, 47A, Moorgate-street, City.—Circulars free by post.

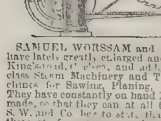
Sold also by HOBBS, ASHLEY, and CO. 87, Cheapside.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c. The Trade supplied on the best terms with House Bells, Zinc Tube, and Copper Wire. Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Cornice-poles, Rings and Lacquered Case Tube for Picture Rods Desk Rails, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at

RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouses, Nos 10, 11, and 12, Charles-street, Long-acre, London.

KIMBERLEY'S NEW PATENT FLOORING CRAMP continues to receive the patronage one and all, of every leading Builder Engineer, and Architect, not only in England, but throughout the world. Its simplicity, power, and economy still remain unquestionable, even by the side of its most important rivals, and the steady annual increase in its sale, is the best proof of it. It is useful in many ways as a cramp, and no limited evidence can be given that it is a most valuable tool, which no Builder should be without.



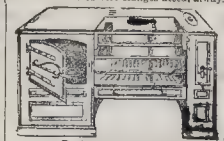
London Agents—Messrs. THOMAS PUGH & CO. Wholesale Ironmongers, 13, King-street, Snow-hill, London.

MACHINERY for SAWING, PLANING, MOULDING, &c.

SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the Kingsland-road, Essex, and add, to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state, that they confine their attention to this sort of machinery, and have by the longest lately and supplying some of the most leading establishments and contractors in the world with their Machines for home and foreign use.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 139, Shoreditch.

A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.



Improved Self-actin Cottage Ranges, with Large Oven and Boiler 20 33 34 36-inch 28s. 30s. 32s. 34s.

Best self-acting Ranges with Oven and Back Boiler, Bright Wrough Bars—

14 16 18 42-inch 54s. 56s. 58s. 60s.

Strong Elliptic Stoves with Extra Back and Solid Bars, per in. 2½d

Register Stoves, with Solid Bars, per inch, 6d.

Improved New Pattern Circular Check Register, with strong Bars and Trivits, 8d. per inch.

Best Solar ditto, with Fire Brick Back, per inch, 10d.

Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe { 2 3 inch. 9d 11d. 1s. 3d. 1s. 4d. per yard.

Cast Gutters—4 inch, 9d. per yard.

O G Gutters { 4 4½ inch. 1s. 1d. 1s. 3d. per yard.

Patent Line { 3 4 5 6 44d. 3d. 7d. 9d. 1s. per knot.

5-inch Rd. Ward Mortise, with best Furniture and Patent Spindles, 3s. 6d. each. Light Elliptic and Register Metal, 14s. per cwt.

Dr. Arnott's Ventilators, 4s. 6d. each.

An extensive stock of bar, rod, hoop, and sheet iron

Brick Moulds kept in stock. Any size made to order.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trade to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, 21d. per inch, and upwards.

Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.

3-feet Cottage Ranges, with ovens and back boilers, 32s. each.

3-feet self-acting ditto, ditto, 34s. each.

Air Bricks, 4s. per doz.

Best Town Glue, 70s. Ditto, Scotch, 64s. per cwt.

Best Fine Cut Clasp and Rose.

½ 1 1½ 2 2½ 3-in. & larger.

16s. 6d. 18s. 6d. 13s 6d. 15s. 6d. 15s. 14s. per cwt.

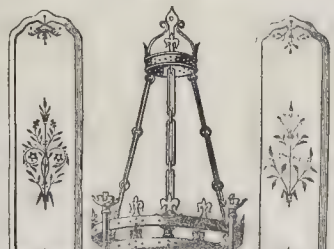
And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND, London.



CORONAS, GAS PENDANTS, &c.

First-class Prize Medal, Paris Exhibition, 1855.

Illustrated Price-catalogues post-free on application.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK.

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

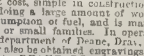
UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, conchhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and dust-excluding sprung hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axle trees, sugar-mills, &c.

ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co's establishment; where may also be obtained engravings with prices, or forwarded free by post.—DEANE DRAY, and CO. opening to the Monument, London-bridge Established A.D. 1700.

HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and Co. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

SKAIFE'S GALVANIZING WORKS, Commercial-road, Limehouse, London.

Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where iron not liable to rust is required.

Patent Galvanized Iron supplied in every form.

Sheets plain and corrugated.—Roofs fixed complete.

J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.

An Allowance to the Trade.

JOHN WALKER, Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor

IRON MERCHANT, &c.

Offices and Works Mill-wall, Poplar, London.

A. MOREWOOD and CO. (late Morewood and Rogers), Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.

PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,

PLAIN or CORRUGATED, and Curved, of all Gauges.

Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.

Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building, at the

OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

AUSTIN'S IMPERIAL

PATENT SASH and BLIND LINE can be obtained of all

ROPEMAKERS, IRONMONGERS, FACTORS, AND WHOLESALE HOUSES, IN TOWN OR COUNTRY.

Established 1774.

TUPPER and CARR, CORRUGATED IRON MANUFACTURERS, Galvanized and Ungalvanized, Iron Roof Builders, and Electric Telegraph Contractors.

Works—BIRMINGHAM and LIMEHOUSE.

Offices—3, MANSION HOUSE-PLACE, LONDON.

N.B.—Iron of every description galvanized. An allowance to the Trade.

JOHN HENDERSON PORTER, ENGINEER AND CONTRACTOR, IRON BUILDING AND ROOFING WORKS, GAS-STREET, BIRMINGHAM.

LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.

PATENT PLUMBIC ZINC. GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No 11 gauge weighs about 18 oz. per foot super.

12 " " 20 "

13 " " 24 "

14 " " 28 "

Full particulars and the reduced price sent by post on application to

A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

WILLSON and ROBINSON, GALVANIZING and CORRUGATING IRON WORKS, CHURCH-ROW, LIMEHOUSE, LONDON.

PATENT GALVANIZING and CORRUGATING IRONWORKS, Improved Process. WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.

GALVANIZED SHEET IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

SAMUEL HEMMING'S PATENT much approved PORTABLE BUILDING and ROOFING MANUFACTORY, REMOVED from BRISTOL to LOW, near London, close to the Bow Railway Station.—A large variety of buildings always on view, of various shapes, showing designs, bazaars, ornamental villas, dwelling-houses, farm buildings, and fire-proof stores. Also, railway stations, trucks, and carriages made to any plan on the shortest notice.

IRONMONGERY.

PFEIL AND STEDALL.

THE LARGEST STOCK AT

THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

Adopted by the Honourable Board of Ordnance, the Commissioners of Parks, Palaces, and Public Buildings, &c. &c. &c.

TARIFF OF PRICES Beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	.. 1¼ ..	7s. 6d.
15	.. 1½ ..	7s. 6d.
15	.. 1¾ ..	8s. 0d.
15	.. 2 ..	8s. 6d.
15	.. 2½ ..	9s. 6d.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it a intervals of 1¼ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

London Depôt—463, OXFORD-STREET.

IMPORTANT INVENTION for HEATING DWELLING-HOUSES and PUBLIC BUILDINGS, recently Patented in France, Belgium, and England, by which a much greater amount of heat is obtained, and a saving of fuel effected. Can be applied to the present stoves. The Patent for France has been disposed of, and the Inventors will treat for the Sale of the English Patent.—Apply to Messrs. CALLEN and CO. 23, Parliament-street, Westminster.

SELLING OFF!—STOCK of RAIN-PIPES, Gutters, Air Bricks, Sash Weights, Stable Fittings, and all kinds of Builder's castings under cost price, at WALMSLEY and CO.'s Warehouse, Paul's Wharf, Upper Thames-street—Two Cuts, Harness, Chaff-machine &c cheap.

TO ARCHITECTS, &c.—T. SMITH, of 14, Queen-street, Oxford-street, begs to call attention to his IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most effectual yet invented. A working model can be seen at the above address, or will be sent for inspection on the shortest notice.

N.B.—Esparagniolette Bolts of a superior quality, at reduced prices

THREE SELF-REGISTERING and TWO large NON-REGISTERING TURN-STILES WANTED, second-hand. Any persons having the above for sale, are requested to send particulars of size, and lowest price, to the Manager of the Royal Surrey Gardens, Walworth.

TO SEWER CONTRACTORS, BUILDERS, and OTHERS.—GULLY GRATES, Side-entrance Flaps, Ventilators, Flushing Boxes, &c from approved patterns; also, Columns, Girders, Story-posts, and other Castings, are promptly supplied, at the lowest remunerative prices, by S. SPANDING, Ironfounder and Smith, 16, Charles-street, Mile-end New Town.

TO GAS AND WATER COMPANIES, ENGINEERS, SURVEYORS, &c.

THE SWANSEA LOCAL BOARD of HEALTH are prepared to DISPOSE OF about 2,000 YARDS of NEW 12 to 18 inch CAST-IRON SOCKET PIPES, together with a number of JUNCTIONS and other CASTINGS. The whole are of the best description, coated by Dr. Angus Smith's patented process, and were supplied by the eminent firm of Cochrane and Co.—For further information, apply to Mr. JOHN NEWTON, Resident Engineer, Guildhall, Swansea.

Swansea, March 18, 1856.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK &c to be had on application. Estimates and Plans for Fixing given. J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

ROYAL POLYTECHNIC GAS FIRE. BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming in private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire. It ventilates at the same time, perfect ventilation.—To be seen in action at DEFRIES'S Office, 145, Regent-street, London.

CAST STEEL.—Messrs. NAYLOR, VICKERS, and CO. RIVER DON WORKS, SHEFFIELD, are now prepared to execute orders for CAST STEEL BELLS, from 40lbs. to 6,000lbs. each, Locomotive Crank Axles, Tyre Bars without welding, Shafts, Cranks, Axles, and every description of heavy forgings in Steel, to pattern.—For further particulars, apply as above.

CORRUGATED IRON.—FOR SALE, about ONE TON, suitable for roofing, &c. Will be sold a bargain to an immediate purchaser.—Address, C. C. Post-office, Charing-cross.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show—every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list, 10s.—55 and 58, High Holborn.

J. NAYLOR'S IRONMONGERY, NAIL, and METAL WAREHOUSE, 253, Oxford-street, near the Marble Arch—Builders, Carpenters, Cabinet-Makers, Locksmiths, and Bellhangers, supplied at the lowest prices.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr Arnott's Ventilator, 3s; and the new registered Venetian Ventilator, so much admired, &c. &c. 6d. each.

J. H. BOOBYER, late STURCH and BOOBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

JOHN TANN'S new patent RELIANCE LOCK and FIREPROOF SAFES form the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. WATERLOW, Birchin-lane; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and party-walls.

JUDKIN'S IMPROVED GAS REGULATOR has the following advantages to recommend it to the consideration of all gas consumers:—

1st. It can be easily adjusted to supply gas at any required pressure below that of the street.

2nd. When once adjusted, it will admit of NO VARIATION in LIGHT or BURNING, whether they are few or many, whatever the fluctuation of pressure may be.

3rd. The light being purer by perfect combustion, the atmosphere is more healthy and agreeable.

4th. A saving of at least from 25 to 35 per cent. in the consumption of gas is obtained.

Its ADVANTAGES over other REGULATORS are as follow:—

1st. It is more simple in its construction.

2nd. It is more sensitive in its operation, having less friction, as it works only on two steel centres, which are immersed in quicksilver.

3rd. It is not liable to get out of repair, and requires less attention than a meter itself.

N.B. A Testing Apparatus has been fitted up on the premises of the Patentee, 33 and 33, Corporation-street, Manchester, and 66, Fleet-street, London, for the purpose of demonstrating the above-named facts.

CHARLES BAKER, Builders' Ironmonger, Nail Factor, Stove and Range Manufacturer (Warehouses, 148 and 149, Borough), begs to offer his reduced List of Prices:—

BEST CUT CLASP NAILS.

1½ in.	1¾ in.	2 in.	2½ in.	3 in. and upwards.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads, 14s. per cwt.
Best Sheet Floor Brads, 14s. per cwt.
Best Cut Lath Nails, 16s. „
Elliptic Stoves, double backs, 2½d. per inch, and upwards.
Register Stoves, from 7s 6d to 16l. per inch.
A good Stock of Berlin Black ditto.

SELF-ACTING COTTAGE RANGES, with CIRCULAR OVENS and BACK BOILERS.

20 in.	23 in.	34 in.	36 in.
32s.	30s.	31s.	31s. 6d.

SELF-ACTING COTTAGE RANGES, OVENS ONLY, 20 inch, 26s. 6d.

SELF-ACTING RANGES, BEST WROUGHT BARS and BRIGHT MOUNTINGS.

2 ft.	3 ft. 3 in.	3 ft. 4 in.	3 ft. 6 in.
56s.	58s.	60s.	60s.

6 in. Two Bolt Rive Locks, 18s. per dozen.
6 in. Brass Follower Mortise Locks, 40s. per dozen.
Baker's Improved Drawbacks, for Glass Doors, &c 3s. 6d. each.
A very extensive Stock of Cabinetmakers' and Builders' Ironmongery, Tools, &c. &c.

IRONMONGERY.—Builders and the Trade generally will effect a considerable saving by purchasing of CLUSE and BOSE, Wolverhampton Factors and Stove and Range Manufacturers, 35, City-road, corner of Tabernacle-row.

Present prices for cash:—

BEST CUT CLASP.

16s. 6d.	15s. 6d.	14s 6d.	14s. per cwt.
1½ in.	2 in.	2½ in.	3 in. and larger.

PATENT SASH LINE.

2s. 3d.	3s. 9d.	4s. 3d.	5s. 6d.	7s. 6d.	9s. per gross.
No. 1	2	3	4	5	6

5 in. Mortise Locks, best Brass Furniture Shifting Spindle 3s. 6d. each; 6 in. ditto, 3s each.
Strong Elliptic Stoves, double backs, 2½d. per inch.
Strong Register ditto „ ditto 5d. „
36 in. Self acting Oven and Boiler Cottage Ranges, complete, 34s each; 36 in. Self-acting Oven and Boiler Ranges, best wrought bars and wrought fittings, complete, 5os. each.
A large Stock kept of every description of builders' ironmongery; china, glass, and ebony lock furniture and finger-plates. List of prices forwarded by post on application.

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSE, 19, Horseferry-road, and 1, New Peter-street, Westminster.—Contractors, Builders, &c. supplied with general Ironmongery at prices equal to all competition.

REDUCED LIST OF PRICES.

Best Cut Clasp and Rose Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 to 6 inch.
16s 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 13s. 6d. and 14s per cwt.
Best Cut Lath Nails ..... 16s. „
Best Zinc Slating Nails ..... 40s. „
Best Glues ..... 47s. to 52s. „

RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	11d.	1s 2d.	1s. 4d.	1s 6d.	2s. 1d.		
Half-round Gutters	8d.		8½d.	9d.	1s.	1s 2d.	
O G Gutters				1s.	1s 1d.	1s 2d.	1s. 5d.
Ditto, with plain clips cast on			1s. 1d.	1s 2d.	1s 4d.	1s 6d.	
Ditto, with ion ditto			1s. 2d.	1s. 3d.	1s 5d.	1s 7d.	

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

TERMS—NETT CASH.

Estimates given for any description of Wrought or Cast Iron Work.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE.

Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and

STEWART'S PATENT CAST-IRON GAS and WATER PIPES.

Office, No 7, Bise-lane, London.

OLD STOVES and RANGES.—F. EDWARDS, SON, and CO. have constantly on hand a quantity of OLD STOVES and KITCHEN RANGES, in very good condition, which are taken down by them at establishments when they erect new work, and which are to be sold at exceedingly low prices. 15, Poland-street, Oxford street.

WARMING and VENTILATION, &c.—Mr. S. EGAN ROSSER, C.E. successor to the late Mr. John Sylvester, has REMOVED to 3, CANNON-ROW, WESTMINSTER, and may be consulted upon all matters connected with warming and ventilation, heat and its applications, drying and dessicating processes, public and washing establishments, horticultural buildings, stoves and cooking apparatus, chimneys, furnaces, flues and fireplaces, gas ventilation, the ventilation of ships, &c &c. Mr R. will be happy to co-operate with architects engaged in the preparation of the plans of buildings, where any arrangements of the above character are required.

February 25th, 1856.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the nobility, clergy, &c. that they supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.

R. S. NEWALL and CO.'s Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world.

OFFICES.—Gateshead-on-Tyne.
139, Strand, London.
97, Hyde-park-street, Glasgow.
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The Builder.

Vol. XIV.—No. 685.

OUR readers know something of the abominations which are shrouded by the houses on the east side of *Gray's-inn-lane*, abominations of the most deadly kind. At all events we spoke loudly enough about them when we began our inquiries into the condition of London dwelling-places, and laid bare a few of the plague-spots and fever-stills of the metropolis. Some may remember the account of Charlotte's-buildings there, and the view we gave of the front rooms of one house with its sixty inhabitants. Bell-court, Fox-court, Baldwin's-gardens, and Tyndall's-buildings, were pointed to; and, remarking on how "few of the countless throngs who flood the paths in Gray's-inn-lane have any knowledge of the hot-beds of disease and vice which exist within a dozen yards of them," we called for the interference of some who had power or influence to cleanse and convert that fearful neighbourhood.

The title of the thoroughfare now filled, from early morning till late night, with the busiest of a busy community, speaks of the country. When we say "Gray's-inn-lane," there is a smell of new hay in the air, and we have a notion of singing-birds.

In Van den Wyngrerde's View of London (1543), it is seen to be truly a lane leading from the Inn northwards to the retired village of St. Pancras, with only one building in the pleasant fields eastwards between that and Ely House, where the strawberries grew. The Londoners found country air there, and men and maids went Maying in the spring time. It was then called Purtpool or Portpool lane, from the manor of that name, through which it passed. It soon, however, took its present title, and in Stow's time was "furnished with fair buildings and many tenements on both the sides, leading to the fields towards Highgate and Hampstead."

The Inn-Walks were much resorted to, and we may see with the mind's eye *Mr.* Francis Bacon superintending the "new rayle and quickset hedges" which were put up there under his direction. From this place (in 1597) he dated the first dedication to his "dear brother" of his admirable Essays, which may be read and re-read throughout a life with pleasure and profit; and here, in the walks he had himself laid out, and the summer-house he had built, he pondered the new *Organum*. Later it was a fashionable resort; and we have Pepys, in 1662, "when church was done," walking "to Graye's Inne, to observe fashions of the ladies, because of" his "wife's making some clothes."

The degradation of the neighbourhood to its present condition is of much more recent date: to trace it is unnecessary: it has now reached its climax, and our appeal in favour of its miserable inhabitants has been heard and responded to.

Lord Shaftesbury's excellent "Society for Improving the Condition of the Labouring Classes" has descended upon an utterly degraded part of it, *Tyndall's-buildings*, and proposes to put it into a proper condition for occupation by human beings,—to serve it, in short, as it served Wild-court, Drury-lane, described in these pages at the time, and we have no doubt with equally good results to the community and to the society itself,—preserving the capital of the poor man (his health), and producing a good return for the capital of the society,—its money.*

Tyndall's-buildings is a court containing twenty-two houses, of which the society have obtained possession of seventeen, including the two shops in Gray's-inn-lane, one on each side of the archway, and will presently have the rest. On next page we give a plan of it. The houses are all front, few of them having even the smallest outlet, and are in the most miserable state of dilapidation. Fig. 1 (page 163) represents the present appearance of the court, and Fig. 2 shows more plainly the aspect of the houses at the end. The shutters and doors are broken: from most of the windows projects a well-known apparatus for drying the day's "wash:" the pavement is broken and out of level, retaining decomposing matter to contaminate the air, while the basement story of nearly all the houses is filled with fœtid refuse, of which it has been the receptacle for years. In some of the houses it would seem scarcely possible that human beings could live: the floors are in holes, the stairs broken down, and the plastering fallen; nevertheless, they are densely peopled, and as much rent is paid for the rooms as ought to obtain for the tenants decent accommodation. In one the roof has fallen in. It was driven in by a tipsy woman one night, who sought to escape over the tiles from her husband. Listen to the conversation, if so it may be called, of those inhabiting it: you will find it in keeping with the disordered, disruptured, disreputable locality: notice the faces that press against the window-pane, or come out into the doorways as a stranger passes round the court: you will find them altogether in accordance,—as the house, so the inmate. Three or four years since, several of the cellars were inhabited, the place was ill-drained, cesspools were in the dark under-parts. The police have since then interfered, and the drainage has been slightly improved. The condition, however, is still bad enough. Take for example one of the houses as a specimen of the rest. Entering the doorway, we were shown a narrow staircase, dark as night, broken and shaky, down which we groped with bent back and much difficulty. At the bottom a glimmering light showed a water-barrel which would hold fifty or sixty gallons at the most. It was at this time not eleven o'clock in the morning, and the water was all gone, and this was not to be wondered at, when we found that this barrel was the only supply furnished for two houses, which, at the lowest calculation, contained a population of 100 persons old and young—this to serve for all purposes of cleanliness and domestic use. In this dim undercroft was also the only convenience provided for the same number of persons, the two as shown in our sketch 3, in close proximity. The smell was abominable. The owners of such places, as we have before observed, say,—"People of this sort are naturally dirty, and it is useless to do anything with them." We would ask in reply, "How is it possible that good habits can be acquired under such circumstances?"

In the basement of one of the houses the water-butt presented the appearance shown in Fig. 4, the remainder of it being sunk in the ground and serving accordingly, when empty, to drain the filthy soil. It was without surprise we heard it asserted in the neighbourhood, that this one house, during the last visitation of the cholera, provided no fewer than nineteen cases of the disease, together with twenty-one cases of fever!

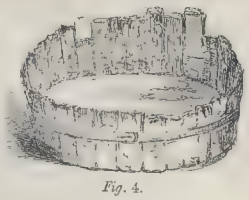


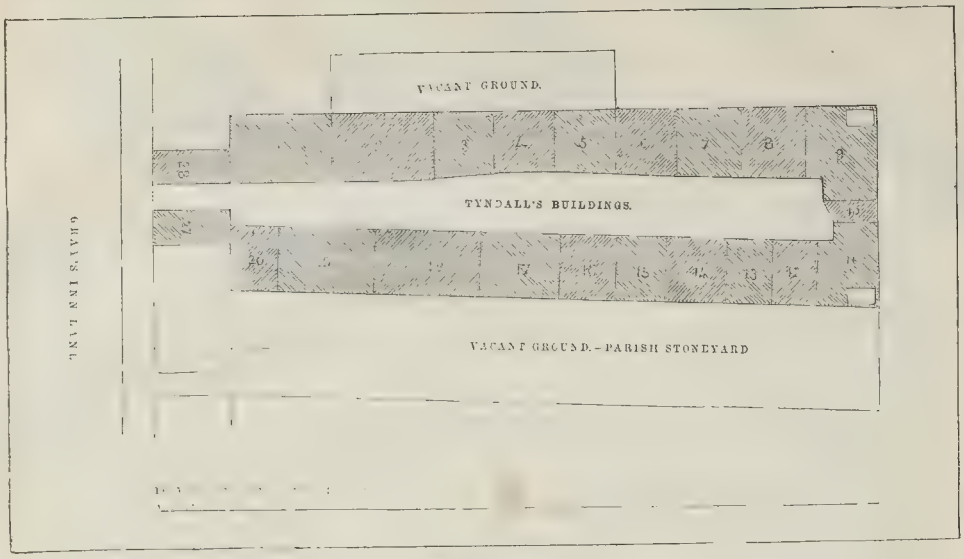
Fig. 4.

Wandering from room to room, we found the usual muddle, filth, and confusion, so painful to witness, and of which it is difficult to give an idea, either with pen or pencil. It is most important, however, that we should work vigorously with both, at this time of high prices, when so many scores of honest working men with families of children are, in order to procure other necessaries of life, obliged to avail themselves of less expensive and less comfortable houses than heretofore, and are sinking daily into those conditions from which, in the present state of things, they seldom rise. If the hovels of the poor such as we have described are allowed to remain in the large towns,—if even these are removed in part, and no proper accommodation provided, the numbers of the "roughs," and such as plague the police and workhouse authorities, must increase. If, however, on the other hand this important affair be taken up manfully, and the poor properly lodged, in conjunction with other steps, we may be saved both danger and expense.

In Tyndall's-buildings, notwithstanding the seeming poverty of the people, they appear to pay their rent regularly. The rooms vary in cost from 1s. 10d. per week to 2s. 3d. averaging say 2s.; so that an eight-roomed house may bring in 41*l.* 12s. per annum, gross. Each room is let separately, and lodges, admittedly, in many cases six or seven persons including children. Under the rose, however, some of the rooms are sub-let, and small as they are, have been made to contain three or four distinct families! The first room we went into at our last visit, 12 feet long and *six* feet wide, lodged six persons. In the second there were three women washing in front of the window, two poor old creatures cowering over a few embers, and four children—to say nothing of the men-folks who were out. There was no furniture whatever beyond the washing-tub and some dirty rags in one corner of the apartment to serve as a bed. In some of the rooms children were padlocked in. One room contained two large bedsteads, put up against the wall, and a bed on the floor, which was occupied. There was a very old woman close to the fire surrounded by a group—such as is often to be met with in these places smoking their pipes and watching the pot upon the fire: a number of pictures were over the fireplace, and not far from them two large slices of dried fish. Before the fire a young child lay in a cradle manufactured out of an orange-chest: in other parts of the room were baskets of oranges, fruits, onions, and other things forming their stock in trade. In the way we see here the unsold fish is stored for use, to the great damage of health. This room is much larger and better furnished than the majority, but we give a sketch of it (fig. 6), to show how full of life the place is.

The garrets, in most instances, are provided with that dangerous sort of gutter previously referred to, which in these neighbourhoods is converted into a poisonous drain: some of the pipes were of course choked, and others broken, producing the effect represented in sketch 5. Some of the inhabitants had shown great ingenuity and industry in fighting against the admission of fresh air, plugging up every rent and cranny. When filled with occupants at night, the atmosphere must be poisonous.

* In a recent report, the Registrar-general says—"Mr. Faulkner, the registrar of the south sub-district of St. Giles's, records two deaths in Wild court, which he calls 'an unusual occurrence' now in that locality. He attributes the remarkable diminution of mortality to sanitary improvements effected in the court. Wild-court (the registrar adds), from being the worst, is now the best court in my district, and is a striking proof how much the health of a neighbourhood may be improved by attention to cleanliness and comfort." As a money investment, we understand it is paying the society 10 per cent.



Plan of Tyndall's-buildings, Gray's-inn-lane.

Fig. 6.—A Room in Tyndall's-buildings.

The first house on the left-hand side, on entering the court, marked in fig. 1, as "The Lodging-house," was known as the Thieves' Kitchen, and was the scene of sad doings. The first act of the society was to get rid of the tenant, and lock up the house. We could tell some strange stories of occurrences in this den; but it is better they should remain amongst "The Mysteries of London."

We have probably said enough to show the present condition of the place: if not, our engravings will supply the deficiency, and will enable our readers hereafter to appreciate the changes about to be made by the society.

A number of workmen are already at work under the able direction of Mr. Baxendell, who endeavours to remove as few of the hard-working and honest tenants as possible: the rooms and staircases will be plastered and whitewashed, ventilation will be provided for, daylight let in where necessary, and a proper supply of water provided; large rooms will be divided by partitions, of such height as not to prevent the circulation of air, and yet afford decent sleeping accommodation for a family; and the cellars will be cleaned. In other words, before the summer comes a set of dens and styes will be transformed into cleanly, orderly, and wholesome dwellings.

The works are being proceeded with as rapidly as possible, but the filthy state of the basements causes considerable delay in the operations. The foul effluvia emitted actually render it impossible for the workmen to proceed for some time after the surface has been broken up, and already three of them have been taken ill. Since the works have been commenced, six cases of fever have occurred, and it is a noteworthy fact that none of these cases occurred in any of the rooms that had been cleansed, nor indeed has there been a single case of sickness there; while in those rooms which have not been purified, sickness is the order of the day. "Educated" men, nevertheless, are still to be found, who pretend to dis-

believe in the effects of sanitary improvements, who will not connect cause and effect, and, if they saw a man put his head under a cart-wheel, and be killed in consequence, would return a verdict, "Died by the Visitation of God."

Tyndall translated the Bible, and the Society for Improving the Labouring Classes are obeying its teaching in translating Tyndall's buildings.

ARCHÆOLOGICAL STUDIES IN JERUSALEM.*

USING the word Archæological in the French sense, I do not propose to treat of the topography of Jerusalem, but to limit my observations to the architecture of the past, in giving you the results of a year and a half's study, to which much might be added by further residence. I accept, without further remark, its traditionary topography, which is that of all ages, and has been well elucidated by the late Dr. Schultz, Prussian Consul, by Mr. Williams, and still better by Professor Willis, a master in archæological analysis.

There are three periods which may have influenced the architecture of Jerusalem, and which your knowledge of history will readily enable you to determine. The first is the *Jewish*, the second the *Byzantine*, and the third that of the Crusaders, or the *Latin* period. I shall make no allusion to the Mahometan specimens of architecture in Jerusalem, as they are not so much connected with our own immediate studies.

With regard to the Jewish period, it is difficult to find anything like ornamentation in the monuments of that time. We judge of western architecture by such marks, but in Jerusalem we are at a loss, though we find here and there a few Egyptian-like features, chiefly in the cornices of tombs, such as those of Zachariah and of Absalom.

I may state here what an ancient Jewish tomb is. The arrangements characterise it more than the detail. A large Jewish tomb consists of a porch from 3 to 6 yards in width, 3 or 4 yards in height, and sunk, to the depth of 2 or 3 yards, in a wall-like face of rock. In the middle of the porch is a very low doorway, something like the opening of a fire-place, through which we creep, and enter the funeral chamber, containing the "*loculi*," or places on which to lay the bodies, as on couches. Jerusalem is surrounded by these tombs. It is the city of the dead, *par excellence*.

To illustrate the small amount of ornamentation existing in works of known Jewish origin, I may state that the two great tombs of Absalom and Zachariah display a mixture of Jewish with the Roman Oriental style: but in a little tomb in the village of Siloam, we find the Jewish characteristic I have mentioned. It is very much like the Syrian example drawn by Mr. Scoles, and illustrated by Professor Willis, in his dissertation on the Holy Sepulchre. It is a monolithic tomb, carved out from the rock, and has no porch: a small vestibule leads from the first doorway to an inner one, inside which is a small room, about 10 feet square, containing a large "*loculus*," where one body could be placed, and on both sides smaller "*loculi*," on which to place the bodies of children, or lamps. In that at Siloam, the cornice consists of a deep fillet, a large cavetto, and a thick orlo.† That is the whole amount of genuine Jewish ornamentation we can find; and it very much resembles Egyptian architecture.

I may here allude to other peculiar arrangements of Jewish architecture—the Pools—which are very prominent features in Palestine; such as those at an hour's distance south of Bethlehem, called the Pools of Solomon, which supplied the whole of Jerusalem with water. Springs and sources of water are very scarce in Palestine, and it only rains in the winter: the winter water must therefore be preserved for the supply of the whole summer, by means of these large pools and cisterns. The Pool of Mamilla is on the west side of Jerusalem, and there is another on the east, near the gate of St. Stephen, just overlooking the valley of Jehosaphat. The pools were not made merely to supply water to the inhabitants of the towns, but for religious purposes. We have the remains of what is known as the Probatic* Pool, and I believe it is such, specially from its position with regard to the Temple. We have other pools in the vicinity of ancient temples, particularly a very large one near the entrance of the temple of the Samaritans, on the top of Mount Gerizim, which is seldom seen by travellers. The Temple of Jerusalem is altogether destroyed, so far as many of the details of such arrangements are concerned, but we can resort to the Temple of the Samaritans, which having been a sort of copy of it, will give us some data which we cannot get at Jerusalem.

I will pass now to constructed monuments, having hitherto dealt only with excavated ones; and in studying these, which give so little ornamental data, we must go deeper into archæological study as architects, and learn to *read a wall*; and to know the masonry, and recognize the different touches of different periods. The mason of one day does not imitate the mason of another, but he gives his own stroke of the chisel in his own particular way: he is not educated to be a good copyist, and it is singular to find how different periods are monumentalized by the stroke of the chisel, as they are in palæography by the stroke of the pen.

In treating of the study of Jewish masonry, I will begin with some data taken on the authority of a Jewish writer, who, though comparatively a modern author, knew what he was about. Rabbi Benjamin, of Tudela, in 1163, speaking of the Tower of David, says, "About 10 yards of the base of this building are very ancient, having been constructed by our ancestors: the remaining part was added by the Mahomedans." This, therefore, is a good specimen of Jewish masonry. The Jewish "Place of Wailing" is mentioned by very early travellers; and Benjamin, of Tudela, says, "In front of it (the cupola of Omar) you see the western wall, one of the walls which formed the Holy of Holies of the ancient temple: it is called the Gate of Mercy, and all Jews resort thither to say their prayers, near the wall of the court-yard." You see here clearly what kind of masonry the Jewish masonry is, as distinguished from later masonry. It consists of stones of 5 or 6 feet high on an average, and sometimes extending (as in the south-west corner of the Temple) to a length of 30 feet. The four edges of the face of each stone are rebated to form rustic joints, but the centre is worked perfectly smooth. This is also the kind of masonry we see in the monuments which we must attribute to the Herodian period. In many of these latter walls, however, the stones, though of the same large size, are perfectly smooth, without rebated rustic joints. Starting from the Place of Wailing on the west of the Temple close and going south, we come to a good piece of masonry,—the arch of the broken bridge spoken of by Dr. Robertson. It is made of very large stones, and, as far as we can conjecture, must be the work of Herod the Great. We see above it masonry of small stones, worked smooth, of the Byzantine period, and above that Mahomedan rusticated masonry. This is in the southern part of the western side of the walls of the Temple close. We have just come to the south-west corner of it; and now, turning to the south side, we begin to find something like architectural ornamentation. It is of the Herodian period, and we may call it of the Roman Oriental style. It is evidently of the same school as the monuments of the Romans in Italy, but differs from them in being overloaded with ornament. About the middle of the southern side of the Temple we have an old gateway (the convent which the Knights Templars built afterwards cuts it completely in half), and the lower course of stones all along the wall show it to have been entirely of Jewish origin. Up to a certain height it is such: above are smaller stones, this part being probably of the time of Justinian; and above that another kind of masonry, which may be attributed to the Mahometans. This was probably the gate of the "*Prostoa*," described by Josephus as added to the Temple by Herod the Great, and which Professor Willis has completely identified from the position of the existing foundations. Going eastward along this southern side, we come to the three arches within the wall, which have been noticed by Williams and other writers. These are plain semicircular arches, evidently of the Byzantine times; yet it is a curious fact, that the western extremity of the series is placed exactly upon a jamb of the Herodian period; and the small size of the stones forming the archivolt compared with the immense size of the stones of the jamb is remarkable. The deep and thick mouldings on the jamb prove this to be an old Herodian doorway, capped by subsequent Byzantine work. The views of Jerusalem which you have seen will enable you to understand me when I speak of the south-eastern corner of the Temple close, which towers above the valley in a marvellous manner. The level of the enclosure is carried on vaultings. These vaultings I have not examined; but, from the report of others, I judge them to rest on piers much older than themselves; and we may suppose the piers to have been also of Herodian work, the vaulting being added afterwards, probably in the period of Justinian. Turning this corner to the eastern side, we come to another ornamented architectural feature, the Golden Gate, which consists of a double archway on piers; the arches ornamented with thick garlands of flowers, &c. We cannot so well describe the internal front, because it is in the "Haram," and we have not access to it. As far as I have seen it from a distance, I believe (and some illustrations from Mr. Catherwood warrant my conjecture) it is very much like the outside of the southern gate. Both fronts seem to be of the Roman Oriental style; but when we look through the loopholes in the exterior face, we see inside some much coarser work of a heavy Byzantine character. At the north-east corner of the Temple close we see the manner in which the old masonry is distinguished from the new. The corners of the close were made more solid than the rest, and much more of the old courses of stone exists there. On the northern side of the Temple close, we have already noticed the Probatic pool; but this, like the other pools, having been restored by the modern Orientals, it is difficult to discern any old masonry in it. Passing on, we come to the north-west corner, which, most likely, is the spot where the tower of Antonia stood. This tower was, to some extent, of the Herodian style, and here probably the second wall of the city terminated eastward. Here we begin to see some traces of masonry jutting out of the general quadrangle.

Where the Prætorium of Pilate is pointed out by tradition, we see the square of an atrium marked out by the rock being trimmed up to the masonry that was afterwards erected upon it; and on the eastern side of the present building there is a large quantity of ancient stones. The north-west corner is made by scooping the rock inside, to bring that point to the general level of the Temple close. Sometimes 20 or 30 feet of the rock is excavated to form the wall, as mentioned by Mr. Bartlett.

Here are the remains of a very ancient wall, which may be near the great stairs mentioned as having connected the tower Antonia with the inclosure, and by which the troops of Titus descended into the Temple area during the assault of the city.

On returning again to the western side of the Temple close, I have to notice two buildings still remaining. The first has the tradition of being the place of the Beautiful Gate; and the second, where the present town-hall of Jerusalem stands, is supposed to be the Chamber of Council of Josephus. These bear more the trace of genuine Roman masonry, the stones being not more than 2 or 3 feet high, and left rough in downright rustic, without any sort of plain face.

Near the north-west corner of the area is the traditional arch of the Ecce Homo. It is at a short distance from the atrium of Pilate, and is also an arch of Roman masonry. The mouldings of it still exist on several voussoirs and on the impost, and they display the plain Roman colonial style.

We see other specimens of Herodian archi-

* Observations made at the Ordinary General Meeting of the Royal Institute of British Architects, February 25th, by Mr. George J. Wigley, associate.

† Torus.

* Sheep Pool.

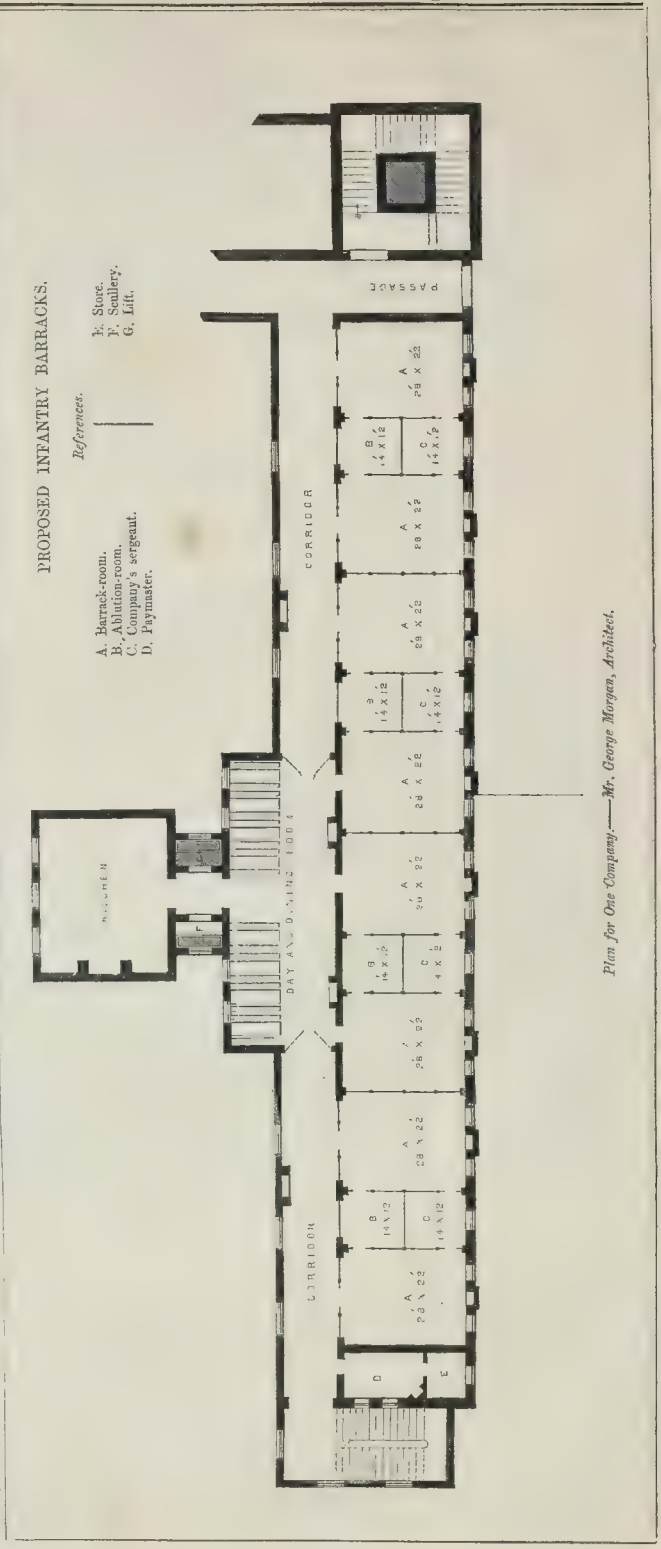
tecture round about the town. At the traditionary spot of the iron gate we have pilasters of Roman work embedded in the wall. The medical man of the Jewish Protestant Mission having restored his house there, has confirmed the fact of there having been some considerable portion of masonry on that spot.

The rock tombs exemplify still better the Herodian school, among the most important of which are the Tombs of the Kings. The monument so called possesses important architectural features, and is one of the noblest royal tombs in the world. There is nothing indeed equal to it in solemnity but the recently formed tomb of Napoleon. It stands in the centre of an open Confession (in the sense we use the term in the Roman basilicas), consisting of a court-yard sunk in the rock. Even that court-yard is divided into an inner and outer space, and is about 50 or 60 feet square. One portion of it consists of an inclined plane, divided from the rest by a wall of rock, and this communicates with the inner court-yard by a round arch, carved in the rock itself. Going northwards down this plane, turning to the left and entering the funeral yard, we have to turn again to the left to be in front of the tombs properly so called, which are on the southern side of the court-yard. They are an amplification of the common kind of ancient Jewish tombs. The porch is adorned with an abundance of carvings in the live rock itself; consisting of a Doric cornice enriched with bands of flowers and fruit. In the centre of the frieze is a bunch of grapes between two crowns, filling the space which would be otherwise occupied by a triglyph and two metopes. I regret to say that the central ornament now exists only in my photograph, an American traveller having knocked it off in order to take it home. There have been many suggestions as to the date of these tombs; a recent French traveller having the presumption to ascribe them to the time of King David. The photograph, however, will not lend itself to such fantastic notions; and in this respect it is the very best safeguard against the over-imaginative views of archæologists. As far as we can judge, it is a tomb of the Herodian period. We know that Herod the Great was buried at Herodium; and we know where all the princes before Herod Agrippa the elder were buried; and the position of this tomb is close to what we believe to be the wall of Agrippa, and to the way which led from Jerusalem to Cesaræa, therefore close to a gate of that wall. The royal caverns are mentioned for the first time by Josephus in connection with the wall of Agrippa: we are therefore amply justified in thinking that it was part and parcel of the general adornment which King Herod Agrippa added to Jerusalem.

Another illustration of the Herodian period is the cornice of the noted tomb of the Judges. This tomb is 3 miles from Jerusalem, and from the gate of the city of Agrippa to that spot there is a long line of rock tombs, forming as magnificent a funeral way as any in the world; quite as fine as the Via Appia, displaying indeed more thought and character, and executed at more expense. Even beyond that distance there are tombs. On one 8 miles from Jerusalem there are some fragments of a Doric cornice. In the famous tomb of Absalom an Egyptian cornice seems to crown the Roman work. Remodelling the monuments of the Jews may be fairly considered as part of the mania of Herod the Great. Indeed, he went to the extent of rebuilding the whole Temple for them. With this last tomb we conclude the series of illustrations of the first or Jewish period.*

BOARD OF HEALTH.—A deputation, appointed by the Associated Registrars' Society, had a long interview on Saturday last with the Hon. Mr. Cowper, the president of the board. The object of the deputation was to point out the onerous duties imposed upon the registrars by the present Vaccination Act, and the new Bill now read a first time; the inadequate remuneration contemplated, and the unsatisfactory mode of obtaining it; and, above all, that the mode of payment is not referable to the competency and exertions of the registrars, but depends upon the caprice, apathy, or downright unwillingness of others.

* To be continued.



THE SELECTED DESIGNS IN THE BARRACK COMPETITION.

WE proceed to give a description of the selected design for Infantry Barracks, by Mr. George Morgan.

The general plan of ground occupied by this design is oblong, the principal buildings, of simple Anglo-Italian character, having frontages to three sides of the parade-ground, which is bounded on its fourth side by the barrack wall, and a supposed road. In this wall are two gateway entrances, the one on the left being the barrack entrance, that on the right an entrance for the officers and their families. Adjoining the barrack entrance are the guard-room and requisite offices. On the same side of the parade as the guard-room, in a retired position, is the hospital, a building two stories in height, and corresponding to the hospital, in architectural elevation: on the opposite side of the parade are the married officers' quarters. The principal frontage of the parade is occupied in the centre by the barrack building, with the chapel in front. To the right of the barrack building are the unmarried officers' quarters, with attached mess-room, &c.; and to the left are the canteen and married privates' quarters, with infant school attached. To the rear of the married privates' quarters is the laundry, &c. The "provost prison," &c. is to the rear of the guard-house.

All the buildings on either side of the barrack building are connected therewith by covered ways, with an iron colonnade towards the parade ground. The laundry is connected with the hospital, and the married private' quarters by covered ways.

The barrack building is three stories in height, presenting in plan about half its frontage to the parade, and then receding at right angles. The centre portion is roofed with a quadrilateral dome. At the external angles ventilating shafts are carried up to some elevation above the general line of roof.

In this building appear to be concentrated on the ground-floor in that portion fronting the parade, and to the rear thereof, the orderly and court-martial rooms, the school or chapel, the majority of the staff sergeants, with their mess-room, &c. The library and reading-room, the band-master's department, the quarter-master's stores, the barrack-master's stores, drill-room, workshops, drying and cleaning sheds, &c. The remainder of the barrack building is devoted to the quarters of the privates, five companies in each wing, viz. one company on the ground-floor, two companies on the first, and two companies on the second floor. Each company is placed in a separate and distinct compartment of the building, and as will be seen by the plan, each has a day-room and kitchen allotted to it. Each squad has its own dormitory and table. In the barrack-rooms, the gallery appropriated to each company is proposed to be divided by wooden, slate, or corrugated iron partitions (between iron columns), to the height of 8 or 9 feet from the floor, the whole of the upper space being left open. An ablution-room is placed between every two squads. In respect to the ventilation and the above salient points of the plan, we quote from a brief recital submitted with the design.

In the barrack-rooms, to facilitate the most important point of ventilation, the gallery appropriated to each company is proposed to be erected in a manner that has been most successful in model lodging-houses. The partitions of the gallery so appropriated are proposed to be iron columns and wooden, slate, or corrugated iron partitions to the height of 8 or 9 feet from the floor, the whole of the upper space being left open. By this means the free circulation of air is obtained, and a direct communication with the ventilating-shaft out of the chamber. It is proposed to supply fresh air by means of flues, also to adopt fire-brick fire-places, supplied by fresh air, and which, when lighted, will circulate a large quantity of warm fresh air. The kitchen-ranges will warm a coil of pipes, for the purpose of heating the corridors. The foul air is proposed to be extracted by the ventilating-shafts through horizontal flues connected therewith.

As to military classification,—To offer minute subdivision throughout the barrack, the battalion in the building is divided into wings, companies, and squads. The right wing is lodged in the right wing; the left, in the left (taking the front of the building as the front of a battalion in line). The companies are placed each in a separate and distinct compartment of the building. All the men of a company are proposed to sleep, dine, or wash on the same floor. Each squad has its own barrack-room and its own table in the dining-room.

To promote and encourage cleanly habits, an ablution-room is planned to every two squads, and the barrack-rooms communicate therewith.

Each company would have a convenient day and dining room, while the whole of the space is not lost, as the corridor is thrown in to make it a suitable size. The men would be in the immediate vicinity of the barrack-rooms.

The kitchen, being centrally situated on the same floor as the barrack-rooms of each company, will offer facilities for the men learning cooking. It is proposed to appropriate a table to each squad, and to give each man a small locker, where he may put by the rations not eaten at any particular meal, instead of carrying them to his barrack-room.

The unmarried officers' quarters and the married privates' building, both approaching the quadrangle in plan, and three stories in height, assimilating in elevation on either side of the barrack building, complete the principal frontage to the parade-ground. The canteen forms one of the sides of the married privates' quadrangle: it contains accommodation for the sergeants and privates, and a bar or shop partitioned off for serving the women, with an entrance from the married privates' building.

In the married officers' quarters separate residences are appropriated for the superior officers, and suites of rooms on the general plan of chambers to the other officers.

Let us add, that the designs have been arranged in Burlington House, Piccadilly, and will be open to the public on Monday next.

REVOLUTIONARY ARCHITECTURAL PRINCIPLES.

SIR,—You were good enough, some time since, to give a place in your valuable columns, to some remarks which I ventured to offer, relative to the building of a National Gallery. I propose now to call attention, in a short series of letters, to certain matters affecting architecture on a larger scale, holding you exempt from participation, of necessity, in the opinions expressed.

I have been long impressed, in common, perhaps, with many of your readers, with an ever-growing sense of the onward progress of a system which has become conventionally known by the name of "Pre-Raffaellitism;" and the ever-growing conviction that it is essentially, and in all its parts and bearings, in the extremest sense of the word, *a revolutionary system*—absolute, uncompromising, assuming exclusive truth, and carrying out its principles without respect of persons, toleration of differences, allowance of infirmities, or calculation of consequences. We have been authoritatively told, that it "consists mainly in the assertion that the principles on which art has been taught for these three hundred years back, are essentially wrong" (Mr. Ruskin's "Edinburgh Lectures," p. 159),—that "all Greek conception is dangerous in proportion to our admiration of it" ("Modern Painters," part i. sec. 1),—that what we have taken for Epic landscapes are, properly speaking, "nonsense pictures" (Ibid. part ii. sec. 1),—that "contemporary portrait is the only true and proper history" ("Edinburgh Lectures," pp. 217, 218),—that the *one principle* is that of "working everything, down to the minutest detail, from nature, and from nature only" (Ibid. pp. 227, 230). These and the like sweeping statements, do not confine themselves to painting; they are but expressions of great radical principles, that are to pervade our artistic, intellectual, social, and moral life. We have been further told, that "Poetry is but higher knowledge, and reality the only genuine romance for full-grown persons" (Ibid. p. 237),—that "the life of imagination is in the discovery of truth" ("Modern Painters," part iii. sec. 2, chap. 3). We find that we must have new systems of metaphysics,—that the expression so long stereotyped, of "the sublime and beautiful," does not mark any "generic distinction" (Ibid.),—and that Burke is amongst "the less accurate thinkers" (Ibid.). Even language is undermined: we are no longer to understand the word "excellent" as we have been used to do, when we speak of "the Queen's most excellent Majesty," or say that—

> "When land is gone, and money spent,
> Then learning is most excellent;"

but are to take it "in the sense of *excelling*" (Ibid. part i.). Other abjurations no less emphatic of things established I will not recapitulate: I desire to call special attention at the present moment to the interests of architecture. We read in the "Edinburgh Lectures" that—

"It is difficult to overstate the enormity of the ignorance which the popular notion implies, 'that the nobility of architecture is in the disposition of masses; that architecture is, in fact, the art of proportion.' . . . Proportion is a principle, not of architecture, but of existence: it is by the laws of proportion that stars shine, mountains stand, and rivers flow. . . . A Gothic Cathedral is properly to be defined as 'a piece of the most magnificent associative sculpture.' . . . Architecture, as distinguished from sculpture, is 'merely the art of designing sculpture for a particular place, and putting it there on the best principles.'" (Pp. 113—115.)

Not to waste curiosity on stars shining by rules of proportion, we see now why St. Paul's, Greenwich Hospital, the interior of St Stephen's Walbrook, the façade of Whitehall, and we might go through a large circuit of other structures, including the Pantheon, the dome of Florence, the temple at Pæstum, and our own Salisbury Cathedral, are *not* striking, noble, or legitimate architecture, because they are not, properly speaking, pediments for "associative sculpture." We see also something of the "enormity of ignorance" that indited the well-known lines—

> "And on thy happy shore a temple still,
> Of small and delicate proportion, keeps
> Upon a mild declivity of hill
> Its memory of thee."
>
> *Childe Harold*, cant. iv.

And still more of that monstrous account, by the acute Forsyth, of Palladio's palaces:—

"Their beauty originates in the design, and is never superinduced by ornament. Their elevations enchant you, not by length and altitude, *nor by the materials and sculpture, but by the consummate felicity of their proportions.*" ("Italy," p. 351.)

The "enormous ignorance" is plain enough. Forsyth and Byron have taken proportion, as all before them have always done, for a sensible quality that charms the eye, irrespective of any other consideration. Mr. Ruskin has utilitarianized—I was going to say Cobdenized—it: made it nothing better nor worse than a mere adaptation of the law of gravity. As for a passage (I think in the "Seven Lamps") where he allows a certain quantity of "*useless wall to complete the cadence*," we must take it as amongst the many which—happily or unhappily—put him at variance with his own principles. It requires no argument to show that if architecture be *not* "the art of proportion," but "merely the art of designing sculpture for a particular place," we can have no need of useless walls to complete cadences. Rather shall we need some feat of logic to defend "associative sculpture" itself from the reach of the principle; for if proportion be but "the law of existence by which mountains stand and rivers flow," I see not how the *πον στω* does not involve all we have to do with proportion, in regard to the figure as well as the place designed for it. But this sounds very like revolutionary language as to higher works than those of man.

It may be that universal instinct has been in "enormous ignorance" since the Tower of Babel; or it may be I have myself mistaken certain expressions of it that have moved my own sympathy; that when, for instance, Mrs. Stowe told us, in her "Sunny Memories,"—"Cathedrals appear to me the most sublime efforts of human genius," and Robert Hall replied to one who asked him what he thought of York Minster,—"York Minster, sir; why, it's enough to soberise a Bacchanalian,"—both one and the other spoke "*merely*" of associative sculpture, and if asked to explain themselves, would have pointed to a parenthetical mitre, or sundry bunches of trefoil or parsley about the walls.

I may certainly have mistaken others; I think I have not mistaken myself. To my own feelings, the roof of Westminster Hall is one of the most impressive objects the whole world of architecture can show us. When I walk beneath it—and I take all possible opportunities of doing so—I can scarce believe that the power of architecture is even in those efforts of associative sculpture, the angel heads that form the hammer-beams. To my perception sculpture has little to do with what, in point of fact, I am never tired of contemplating—the quaint intricacy of constructive strength, the bold but graceful arches, the majestic series, the mysterious recesses, the alternate light and darkness, above all, the stupendous firmament of brooding twilight, of whose solemnities the very angels seem but symbolical interpreters.

But what need of personal experience or illustrative cases? So far there is no enigma: an all-subordinating principle of Pre-Raffaellitism stands out distinct and plain: actual things in their actuality, rather than in the qualities they suggest or develope, are everywhere to be taken for the commanding object, and the imitation of them, religiously scrupulous, as the highest attainment of human art. Originality, invention, abstraction, sublimation—all we have been used to honour as the special prerogative of mind and genius, are out of the question. Fancy itself must turn Quaker, and make plain *matter of fact* its end and object. What wonder if architecture is no longer the disposition of masses, dreamy vistas, majestical pillars, or awful space—but the faithful designing of sculptured objects, and the putting them in their several places in accordance with the laws of gravity.

There *is* enigma; but it is not here. The wonder begins when we turn to other pages of the "Institutes." We have proclaimed a revolution; we have cut down architectural symmetry to the gravitating principle, and made indignant declaration of the "enormous ignorance," that looked beyond. Have we really done, after all, with symmetry? Go to that no less authoritative and far more elaborate work, the "Seven Lamps," just referred to, and you shall find a broad principle, broadly appealed to, as at the very root and base of all architectural practice, which not only assumes "proportion" as a something beyond all mere consideration of stability, but lays down a law to which, both from its significancy and the confidence with which it is quoted, I must challenge the attention of all such lovers of art and architecture—and *something more*—as have yet to be made alive to the revolutionary character of Pre-Raffaelleitism.

When men take up a "Lamp of Beauty," they have got, I suppose, beyond "the laws of gravity." Now if they will but take Mr. Ruskin's Lamp, they will find an order to "knock away a couple of pinnacles at either end of King's College Chapel" enforced by reasoning supposed unanswerable:—

> "*Beasts have four legs.* Yes; but legs of different shapes; and with a head between them. So they have a pair of ears, and perhaps a pair of horns; *but not at both ends.*"—*Seven Lamps*, p. 115.

And the approval of "fine west fronts" with the same confident appeal:—

> "The centre is always the principal mass, both in bulk and interest [query?], and the towers are subordinated to it, *as an animal's horns are to its head.*"—*Ibid.* p. 116.

So as to colour, the appeal stands as no less conclusive:—

> "Single members may sometimes have single colour, *as a bird's head* is sometimes of one colour and its shoulders of another. An *animal is mottled* on its breast and back—rarely on its paws or about its eyes; *so put your variegation* boldly on the flat wall and broad shaft, but be shy of it in the capital and moulding."—*Ibid.* p. 127.

I will not stop to ask whether architecture would not have precisely reversed the rule, nor travel a second time over the sentence I have elsewhere noticed,* on "that Greek fret," its remote resemblance to "crystals of bismuth" notwithstanding, and of a common Tudor ornament, on the simple showing that "*there is no family relationship between portcullis and beetles' wings*;" as also a most eloquent demolition of "Gothic scrolls," on the broad principle that *there are no ribands in nature*; and that even "*grass and sea-weed do not really afford apologetic types.*"

No doubt it is a good rule, this analogy of animal and vegetable nature; it needs no prophetic eye to see how conventionalism must fall before it: were its consequences ever so harmless, it were at least lawful to think a moment before assuming it: as it is, I shall not scruple to try it by an application or two, perhaps not foreseen by all its implicit disciples. Mr. Ruskin has struck out a line: I shall scarce go a step beyond his *formulæ*.

Don't "knock away," then, the "pinnacles of King's College Chapel." Put the chapel on the pinnacles, not the pinnacles on the chapel. "Beasts have legs." Yes; but where do you see beasts with their legs up in the air?

Block up the great west window in those "fine fronts." Animals have heads with horns subordinated? Yes; and eyes too; but where was ever one great eye between the horns?

Away, also, with all windows in nave and transept; but by all means all windows, civil, military, or ecclesiastical, on the ground floor. Where was ever a decent beast with eye either in its sides, or on its basement story? Put your door also in the upper regions: the door is the mouth: was it not the very condemnation of the serpent that it should have its mouth on the ground and lick the dust?

But what mean you by that straight roof? "Animals have dorsal ridges?" Yes; but what animal did you ever see,—horse, ass, ox, camel, dromedary, crocodile, porpoise, with such a ridge as men called architects have contrived to hit on?

Away also with those straight columns. Show me a straight leg in comparative anatomy: stag, stork, dog, hog, dragon-fly,—all have joints, more or less visible; even

> "The elephant hath joints, though not for courtesy."

And, touching columns,—remember that all your noblest buildings have but two. Man is the first of animals, and he is *biped*. The ignoble are centipedes, caterpillars, and such like. Away, therefore, with some nineteen-twentieths of those unseemly columns from the Parthenon.

And—not to ride a principle to death—having brought down the columns to nature, take away the whole of the entablature. It is worse than frightful,—it is wicked. Nature has horizontal strata, no doubt; but where do you find stratified animals' legs, or stratified trunks of trees?

I owe no apology for these instances. They are all, seminally, in the *Novum Organum*. The author betrays no scruples. He says;—"*I know this is heresy; but I never shrink from any conclusion, however contrary to human authority, to which I am led by the observance of natural objects*" (Ibid. p. 127). And here is a Westminster Reviewer, ready to hail all "special merit of recalling to manliness, veracity, and morality, what has been too long given over to dilettantism and conventionalism."*

We are very far even yet from the proper limits of the principle. It has its positive as well as its negative, its retrospective as well as prospective, bearings. If anatomy is to furnish architecture with absolute laws of right and wrong, we might fill a chapter with examples of things heretofore condemned for want of grace, of which it were enough to produce the "apologetic type," to convert them at once to all of comeliness we are entitled to ask for. Certain is it that "Nature's sweetest child" must have committed a grave offence, when he dared to call "the toad, ugly and venomous."

Indeed, I know not how we can limit this analogy to mere questions of beauty, or the want of it. If, short of religiously taking creative arrangement as the "apologetic type," nothing is lovely, nothing symmetrical, nothing legitimate, what can architecture aspire to, save rocky caverns and basaltic columns?

Or, perhaps, seeing all we have dared to call "architecture" is amongst man's "many inventions," why not fall reverently back on that of animals? No invention, discretion, experiment, or failure there—no genius, apprenticeship, or calculation, but one infallible constructive impulse, that goes direct to its purpose, and marks no less directly the hand it comes from. Don't palter, then, with great principles. Make all your practice consistent. Knock away—not a college pinnacle, or a wretched portcullis, but the whole array of man's presumption—Gothic, Roman, Greek, Egyptian, and what not,—and grope your way, in penitential self-denial, amongst beavers' huts, birds' nests, and spiders' webs.

This may sound extreme: I find no measures in Pre-Raffaellitism. It is all in that one undisguisable text—"apologetic type." Leny.

* "Lecture on Art," pp. 26–28. The passages referred to are in the "Seven Lamps," pp. 97, 99, 101.

* "Westminster Review," for January, 1855,—Article on Art.

THE NEW WAR-OFFICE COMPETITION.

The project for the new War Office commends itself to the wise men of our generation. The site is admirable, and with its north and south fronts presents as good an opportunity as the most ambitious architect need desire, on which to exercise his skill and develope his powers of composition.

The selection of competitive architects is judicious, and such as I imagine every unprejudiced member of the profession would have made. The absence of Mr. Cockerell from the list is to be deplored by every lover of Italian architecture, of which he is so great a master; but this is, no doubt, to be attributed to his gradual and voluntary retirement from practice, and not to want of appreciation on the part of the Government.

Let us array in alphabetical order our knights of the T square,—Barry, Hardwick, Pennethorne, Tite, Shaw, Smirke!—all gentlemen of high character, distinguished by their public works and their peculiarities of style.

It is a glorious contest, and I own to an envious wish that I had earned my spurs and was summoned to the tournay: but I will never complain that "honour is given where honour is due." Let this motto rule the decision of the arbiters. The object of this contribution is to ventilate the opinion that the new building must not stop at the Ordnance Office, but must be followed by at least a screen elevation to the old part of that office, and embrace a new front to the recently built wing. The Ordnance, in its best days very "ordinary," has been rendered more unsightly by alterations and incongruous additions. Believe me, it will never do to parade arm-in-arm with the spic and span new War Office on the "shady side of the Mall."

C. F.

LILLE CATHEDRAL COMPETITION.

The competition drawings for the proposed cathedral, in honour of Notre Dame de la Treille, forty-one in number, are now classed, and are exhibited in the large room of the Halle au Blé, a spacious and well-lighted apartment. Many, in fact most of the plans submitted are worthy of note, and must have cost a deal of labour and pains in their preparation. Some of them are accompanied by working drawings of a very elaborate description. Architects from Germany, Holland, Belgium, Switzerland, and England, there vie with their *confrères* of France in doing honour to the call of the commission, and it is with pleasure that we say that the productions of our own countrymen take a very prominent position among the rest.

The exhibition will close on the 25th inst.: the jury will then immediately undertake the duty of selecting the three best from this numerous and beautiful collection of plans.

The jury is composed of,—M. De Contencin: once sub-prefect of Lille, now a chief in the *Ministre des Cultes à Paris; archéologue amateur*. De Caumont, *archéologue amateur*; author of works on archæology. Didron, *archéologue de profession*. D'Anstaing.—This gentleman is a member of the commission for the restoration of Tournay Cathedral, and has written on the subject. Danjoi, *archéologue*. Rev. Père Martin, *archéologue*. Reichemsperger, *archéologue*.

Complaint is made to us from the spot that the list does not include one professional architect.

We understand a Paris architect was invited, but he declined to join the jury.

It seems to be doubted in Lille if the commission will be able to raise the money required for such a building.

MANSFIELD CEMETERY COMPETITION.

In reply to the advertisement of this matter, about forty sets of designs were sent in by the day named: six or eight others came too late to be received. The first premium of 7*l*. was awarded to Messrs. Pritchett and Son, Darlington; the second, of 5*l*. to Messrs. Aickin and Capes, London; the third, of 3*l*. to Mr. C. J. Neale, of Mansfield. The first premium of 10*l*. for laying out the ground was awarded to Mr. C. J. Neale, and the second premium of 5*l*. to Mr. Bakewell, of Nottingham.

LONDON DWELLING-PLACES.

Fig. 1.—*View of Tyndall's-buildings, Gray's-inn-lane, London.*

Fig. 3.

Fig. 5.

Fig. 2.—*The Houses at the end of the Court.* [See p. 157, *ante*.

CHURCH-BUILDING NEWS.

St. Alban's.—An important county movement will be made in the course of this month for the restoration of St. Alban's abbey church. Two objects, says a Herts paper, are in view; the one, the preserving of this interesting monument of antiquity; the other, the placing it in such a state as to make it fit to receive a Bishop of St. Alban's. The Earl of Verulam, lord lieutenant of the county, will, it is said, initiate the movement (subscribing himself 500*l.*), and Lord Robert Cecil, M.P. has undertaken the task of honorary secretary.

Chatteris.—The works connected with the new cemetery for this town have been commenced. The buildings will be of an inexpensive character, carried out under the superintendence of Mr. C. H. Edwards, architect, London. The contractor is Mr. Green, also of London, whose tender for the entire completion of the works was accepted some time ago.

Wells.—The foundation-stone of a new church, dedicated to St. Thomas, was laid at East Wells on Thursday in week before last, by Mrs. Troth Jenkyns, at whose cost the edifice is to be erected, as a memorial of her late husband, the Rev. R. Jenkyns, D.D. late Dean of Wells, and Master of Balliol College, Oxford. The situation of the church is elevated. The edifice will include a nave and north aisle, with north-west porch; chancel ending in a five-sided apse, and transept, the north end of which will form the base of the tower, which, with its octangular spire, will rise to the height of 150 feet. Mr. Teulon is the architect, and Mr. Davies, of Langport, the builder.

Leek.—The foundation-stone of a new Wesleyan Chapel was laid in this town on 29th ult. The projected building is to take the name (Brunswick Chapel) attached to the old one, and will occupy a site in Market-street. The design for the new building is Early English, of the transitional character that prevailed during the reign of Edward I. a peculiarity being that there are no obstructions either to sight or sound. The materials to be used in the erection are pressed bricks, with Hollington stone dressings. The dimensions of the building are as follow:—Length within the walls, exclusive of vestry and orchestra, 60 feet; width, 42 feet; entire length outside of buttresses, including vestry and orchestra, 85 feet; and width, 50 feet. The internal height of the side walls is 31 feet, and the external height 36 feet. The height from the floor to the ceiling is 45 feet, and to the apex of the gable 61 feet. At the east end of the chapel is a vestry, and over this is the orchestra, separated from the chapel by a moulded and enriched pointed arch, extending the whole width of the well between the gallery fronts. The galleries are four seats deep on the sides of the building and eight on the west end. They are supported by clustered cast-iron columns, with vertical bands and carved foliated capitals. The roof is 42 feet in the clear, without any horizontal tie below the elevated straining beam. The entire width is spanned by moulded laminated ribs, springing from stone responds, with moulded caps and corbels. The windows will be glazed with Hartley's diamond plate-glass, in large squares. The chapel will contain about 800 sittings, nearly one-third of which will be free. The whole of the joiners' work will be of red pine deal, stained in imitation of wainscot, and varnished. The building will be heated by hot water, and fresh air will be admitted by flues in the walls, and by flues in connection with the heating apparatus, so disposed as to pass fresh air over the heated surface of the pipes when the apparatus is in action; and in summer for the admission of a current of cold air to any extent required. Lighting is proposed to be effected by sunlights in the ceiling. In connection with these lights will be provided shafts for drawing off vitiated air. The amount of the works contracted for, exclusive of lighting and heating, and boundary railing, is 2,300*l.* The works have been contracted for by Mr. Mathews, except the plumbing, glazing, and painting, for which Messrs. Johnson and Son are the contractors, all of Leek. Mr. Sugden, of Leek, is the architect, under whose direction the works will be carried out.

Smethwick.—On Tuesday before last the place of worship belonging to the Wesleyan denomination, just completed in New-street, Smethwick, was formally opened for divine service. The total estimated cost was 2,600*l.* The accommodation provided is 1,000 sittings, nearly one-third free. The architect was Mr. G. B. Nichols, of West Bromwich, and the builder, Mr. John Harley, of Smethwick.

Coventry.—The following inscription on a brass tablet has been fixed in the wall at the east end of St. Michael's Church:—"The three easternmost windows of this apse have been filled with stained glass, to the glory of Almighty God, and in memory of Adelaide, Queen Dowager, widow of his late Majesty King William IV. The centre window was the gift of the Right Hon. E. Ellice, M.P. as a memorial of his long connection with the city of Coventry as one of its representatives in Parliament.

Bradford.—The directors of the Bradford Cemetery Company are now contemplating the formation of another cemetery on the western side of the borough.

Stockport.—The Borough Cemetery directors having retained the services of Mr. Henry Bowman, of Manchester, architect, to prepare a plan for an episcopal chapel for the cemetery, one has been selected and approved, and placed at the overseers' office for public inspection. The building is an oblong, 46 feet long and 18 feet wide, measured internally, with a high-pitched roof, running unbroken from end to end. It will stand with its length nearly east and west. The end facing the west is flanked by projecting buttresses, and contains the principal entrance doorway; above which, partly in the gable, is a wheel window, under a pointed arch. This front is terminated at the top by a small bell-gable, consisting simply of an arched opening for a bell, covered by a high-pitched gable, from the apex of which rises an ornamental cross finial of iron and copper gilt. In the easterly elevation (which has a buttress on the south similar to those at the west end, the corresponding point on the north being occupied by the wall of the vestry), the chief feature is the large east window of four lights, the head being filled with tracery of circles and cinquefoils. On the south side, which will face the road, the elevation will contain merely four single-light windows, resting on a moulded string course, and each having in the head a trefoil. The north side will be of a similar character to the south. It is proposed to face the whole of the building with wall-stone; and the angles of the buttresses and walls, and door and window openings, will be executed in stone ashlar. The roof will be covered with blue slate, and the ridge ornamented with crested tiles. The building will be warmed by hot-water pipes.

New Brighton.—In the new church here, now nearly completed, three two-light windows in the chancel have just been filled with stained glass. The subjects are embraced in a series of medallions, illustrating various passages from the Life of our Lord, designed and executed by Messrs. Pilkington, of St. Helen's.

Oldbury.—A burial board has been formed at this place, and the present burial-grounds are to be closed by the end of the year. The board has advertised for land for the new cemetery, and have had some eligible offers, but decided upon none at present. There will be the customary mortuary chapels for church and dissent, entrance-lodges, &c. A correspondent says,—The Board of Health will be elected at the close of this month: the contest will be very severe, and entirely of a political character. We trust men who understand the question, and the responsibility of their position, will be returned. The average duration of life in this neighbourhood has been *proved* to be the *lowest* in the kingdom, being but a fraction above 16! The causes are to be found entirely distinct from Messrs. Chance's alkali-works, two miles distant, being in the condition of the "homes" of the thousands of great unwashed, who swarm up from the dark pit's mouth to enter another in which deleterious gases are always abounding, even those hovels which have *proved* to be mere charnel-houses.

Saffron Walden.—On the 10th inst. the Rev. Mr. Clutton (vicar) laid the foundation-stone of the Episcopal Chapel, and on the 12th the Rev. Mr. Gilson (Baptist minister) laid that of the Dissenters' Chapel, in the new cemetery. The designs are by Mr. Pritchett, and will be executed with Kentish rag facings and Bath stone dressings, open timbered high-pitched roof, with tower, surmounted by an octagonal lantern and spire to each.

BELLS AND BELL-HANGING.

I AM not particularly concerned to vindicate the system of hanging large bells, like small ones, with the top no higher than the gudgeons. The point was not first raised by me, but by the Rev. Mr. Taylor; neither has it anything to do with the differences between Mr. Baker's patent plan of hanging bells so that they may be turned in the stock, and my unpatented one, for the same purpose, further than this—that Mr. Baker and his calculating friend at the Institute of Architects evidently set themselves to work to knock up as many of my conclusions as they could, by way of paying me off for having come to the conclusion that his plan will not answer, or at any rate will never be adopted; for which reason only I proposed a different plan of my own.

But I have rather a dislike of being quoted as having talked nonsense; and therefore I beg to disclaim the nonsense which Mr. Burlison has been pleased (I dare say without meaning it) to put into my mouth. He says that the only answer I made to the calculations of Mr. Baker's friend at the Architects' Institute was, "that there were some inscrutable laws of friction involved, which rendered the theory [of the motion of bells according to calculation] contradictory and nugatory." What I did say was, that these calculations were worth nothing for the purpose of proving the advantage of hanging bells high in the stock, for the obvious reason that they did not even profess to take any account of the friction, on which the whole question depends. And I said further, that if they had professed to take account of the friction, I should still receive the conclusions with very little respect, if they were opposed to the unquestionable evidence of experience which Mr. Taylor had given before: not merely because I have a prejudice in favour of experience against theory, but because I know that the best mathematicians have sometimes failed ludicrously when they have tried to solve by theory questions depending on the effects of friction; and I mentioned one very notable instance of the kind.

The cases brought forward in opposition to those of Mr. Taylor proved nothing at all; because it was evident in some of them, and probably in all, that the hanging of the bells mentioned had been in a bad state before they were re-hung and set up higher in their stock. Whereas, in all the cases mentioned by Mr. Taylor, the high-set bell had the advantage of the newest hanging, and therefore of the most perfect state of repair, and yet was not easier to ring up, but harder, and in one case impossible, viz. at York; for it turns out to be perfectly correct, as Mr. Taylor stated a year ago, that that bell has never been rung up to *set* yet,—though he offered to fill it with beer for the ringers when they should set it,—being convinced that they could not. Therefore, the very experiment which Mr. Burlison desires, has been already tried, and tried in the way which is right and conclusive, instead of in that which he suggests, and which would be wrong and inconclusive, as this question has nothing whatever to do with Mr. Baker's mode of hanging. For it is only fair to say, that he can hang his bells as low as he pleases; and the objections which have been made to his plan have also nothing to do with hanging low or hanging high. If the advocates of hanging high will use friction rollers under the gudgeons, then the high hanging will really make a large bell easier to raise. And, of course, it will reduce the swing upon the tower: it did not need much calculation to prove that, which was all that the calculation referred to really did prove on the subject.

As to putting silver into bells, I should be very glad to see anything like real evidence in favour of it; by which I mean something better

than vague stories of an indefinite quantity of silver having been put into some bell which is no longer here to speak for itself. All the evidence I have yet seen rather tends to show that it never was used, except occasionally for fancy; and I have never seen a word of evidence to prove that it would be of any use. It has a quite different effect in alloys from tin. Aluminium seems to me, from a specimen of copper alloy with it that I have seen, very much more likely to answer, as soon as it is cheap enough, in the way of producing a superior effect to tin.

I am not prepared to follow Mr. Burlison into the properties of "major" and "minor" bells; but I am prepared to say that the faults of most modern bells, and particularly the Exchange bells, depend on no such recondite causes as these. And I am now able to add that I have got a bell cast at Messrs. Warner's, from a new *sweep*, one-fourth of the diameter, and one sixty-fourth of the weight of the great Westminster bell, and, therefore, two octaves higher, which sounds the same note, and sounds it well, wherever it is struck—a very unusual thing,—and holds the sound longer than any bell of the size that I have yet seen: the composition is about 13 of copper to 4 of tin *by weight*,—which I mentioned at the Architects' Institute, as then in course of trial—or, as nearly as we can secure it, in the proportion of 6 *atoms* of copper to 1 of tin. If the great bell comes out anything equal to its model, the public will have great reason to be satisfied. It now depends merely on the soundness of the casting.

E. B. DENISON.

INQUIRY INTO THE DESTRUCTION OF COVENT-GARDEN THEATRE.

THE inquiry into the cause of the destruction of Covent-garden Theatre by fire, after a second adjournment, was completed on Wednesday last, at too late an hour for us to offer all the observations on the evidence to which it would lead. The verdict by the jury was, "That the theatre was destroyed on the morning of the 5th of March, but how, or by what means, the fire originated, they had no evidence before them to show." It is possible that no very different conclusion could have been expressed, although a form of words might have been chosen directing attention to some of the deductions which may be made from the experience in this case. Had any proof been required of the extraordinary danger to which theatres are liable, it would be afforded by what has recently occurred; and the pressing necessity of some revision of the methods of construction, and arrangements for working the scenes and machinery, should be now fully established. The jury could not point to any distinct cause of the calamity at Covent-garden, because there were *so many* probabilities to be considered. The fire which lately occurred at Drury-lane Theatre was known when it commenced, to the firemen in attendance; yet with all the vigilance which in that case was shown, the thing appears to have been before their eyes for some hazardous length of time, ere the source of the fire could be detected, and full means taken to stop it. A building must be in a dangerous state, indeed, when its existence—and the lives of an audience—tremble upon the ability of a few men to look in all directions at once over a large and complicated structure, or upon their invariable sobriety. Mr. Braidwood very conclusively showed that it was impossible for men engaged for numerous consecutive hours, to retain the watchfulness that is needed. Fires, he said, were found to occur much more frequently in buildings where the workmen were "hard pressed," than where the ordinary hours of labour were kept; and, without imputing anything to the firemen in the case that called forth the inquiry, where a man had to be kept on duty for so many hours as Castle had been, it could only be inferred that there was no real watching. The position of the owners of the Covent-garden Theatre, who have suffered from the extraordinary demand made upon those whom they had placed in charge, is one that greatly deserves commiseration.

The enormous importance of the fact as to the danger from fire in theatres, especially when in use for entertainments of unusual character, or duration, comes up at every turn of the evidence in this recent, and most disastrous case. When Castle was asked where he had gained the requisite qualifications to perform his duty as a fireman, he replied, pertinently enough, that he gained them at the theatre itself. It appeared from what he said, that fires at Covent-garden, or any other theatre, were matters of constant occurrence; and he even said that during "the great alterations" (necessarily a period of the utmost danger) some fire, or other, broke out generally once in each day.

The questions to which the course of investigation was directed at the recent sittings, were, —as to the chance of ignition to any parts of the theatre or fittings adjacent to gas-lights, or ignition to the gas which escaped in various parts of the house—and which it was supposed might have collected in some place, as in the roof,—as to any result from the occasional use of lighted candles, which use it seems prevailed, in spite of the rules; or from communication by the galvanic wires, which, in Mr. Anderson's experiments, were passed to various parts of the house; from the use of sulphuric acid for the electric-light apparatus and Mr. Anderson's galvanic batteries; from spontaneous combustion as a primary cause, or from incendiarism. We have already pointed out that the last-named cause, was assumed by some, merely because inquiry as to other agencies had not been instituted. The firemen's opinion was given without any real ground on which to rest it. Next as to the lighted candles,—though the placing one on a chair in a common table candlestick, and the use of candles at all may have been highly reprehensible, there does not appear reason to think that in the present case, such a thing led to the fire. As regards the galvanic wires—it was affirmed that they had been removed; and as to the sulphuric acid, the large quantity brought for the purpose of the electric light had been consumed or taken away some weeks previously. Besides, sulphuric acid, though it evolves heat when mixed with water, has not a combustible property in itself. It seems, therefore, that the inquiry is narrowed (much more easily here, than it was at the Piazza Hotel), to the questions as to the gas, and spontaneous combustion.

The danger which there is from the method of lighting the stage is obvious, even to those who have not been behind a *proscenium*. Beyond some slight fencing to the foot-lights, and to the lights at the wings, we believe no very important change, with a view to safety, has been made in this class of contrivances for many years. Fencing to foot-lights, deemed necessary from the lamentable accidents to dancers, is even yet not always used. Would it not be possible to give complete protection, from all causes of accident, by encasing the whole light, as has been done often enough of late for the purpose of ventilation, as in the invention by Faraday? The most fertile source of danger, however, is that which was suggested by one of the witnesses, Benjamin Dalliston—the contrivance called "battens" or "batten-lights." This apparatus is for the purpose of lighting the upper part of the scenery. It consists of a metal tube or barrel drilled with holes as burners, and protected at the back and top by boarding covered with sheet-iron. The whole contrivance is suspended by ropes, running through blocks which are attached to the under side of the floor of the carpenter's shop; and the gas is supplied to it by leather hose. The "borders" or top scenes are very numerous, and hang loose; and a change in the scenery can hardly be effected without one of these borders flapping against the protecting shield, or the flame itself. Whether the "borders" caught fire in the case of Covent-garden, or whether their number merely prevented the fire being seen from below when it broke out, there is no means of deciding. It was, however, proved that the gas was turned "full on" that night, by Mr. Anderson's direction; and it remained so during hours in which, from diminished consumption elsewhere in the metropolis, the full force of the pressure would be exerted, raising the flame to a greater height than usual. One of the witnesses, indeed, appeared to think either that more gas would be evolved than could be immediately consumed, or that the flame itself would be raised to a height which would seem almost marvellous; and he instanced the burning of the Olympic Theatre as having originated from such excessive increase of the gas-flames—also saying that he saw the first outbreak of the fire at Covent-garden from Bow-street, when a clear gassy or smokeless flame was ejected from the ventilator. The same flame was seen by Mr. Sloman from the west side, at about the same hour (twenty minutes past four),—at which time the fire does not seem to have been discovered by the people in the theatre. William Jones, one of Mr. Sloman's men, was actually up in the flies at a quarter past four, yet remarked no fire, or smell of fire. This was ten minutes before he saw a spark fall on the stage—the first indication to him that fire had broken out. But as he went up only to fetch his coat, he may not have observed what was to be seen. The "battens" hypothesis is noticeable in the present individual case, chiefly because it was admitted in some measure by Mr. Braidwood. His evidence in the particular in question, tended to show that the iron afforded no real protection. If the iron became heated, the wood which it covered would become so likewise. Other witnesses had suggested that the flame might pass up the ropes to the floor above.

Now it does seem to us that it would not be difficult to improve upon the arrangement of these "borders" and "battens." The main danger is in the swinging about,—and every now and then, against each other. Surely it would not require great mechanical skill, to devise "battens" which could slide in any required direction; and to have the "borders" stretched — on the same principle as side-scenes. But, beyond the danger from "battens," in other cases we apprehend that there may be much from the ordinary lights of the house. At some places of entertainment, these are placed at too close a distance beneath woodwork. A case was mentioned on Wednesday, where fire had been caused by a light distant 28½ inches. And, it should be recollected that with Argand burners, in consequence of the draft, a greater distance is needed than might suffice with the bat's-wing burner.

The idea of the accumulation of gas in the roof and its ignition was opposed by the scientific evidence, and that of Mr. Braidwood,—from which it seemed that the great draft would prevent accumulation; that, should anything of the kind occur, ignition of the gas could not take place without contact of flame, or of a surface at a white heat; and that, in the event of ignition, that would have been attended with explosion. The roof would have been blown off, and the report would have been heard by the throng below,—we suppose above all the din of the "infernal galop." Mr. Braidwood appeared to consider carefully the gas supposition,—naming the proportions of gas and atmospheric air that went to form an explosive mixture. He also said that the flame emitted from the ventilator, however smokeless, could not be burning gas; because, to make up such a flame (the shaft having been shown by Mr. Albano to be eight feet in diameter) would have required more gas than could have been got from all the pipes in the house. The evidence of Mr. R. Jones, the engineer to the London Gas Company, previously given, had tended to a similar conclusion.

Mr. Braidwood's general opinion, therefore, (stated after having heard the whole evidence), was that no *data* had been elicited for a definite conclusion as to the cause of the conflagration. He could easily suppose that the fire took place in some one of two or three ways. He, however, considered it was probably due to spontaneous combustion. He had been over Drury-lane Theatre; and, from his general impression, he believed it was impossible to say at any time, what there was or was not of an inflammable character in such places as property-rooms and "shops." Presuming the combustible matter existed in the case of Covent-garden,—the generally heated atmosphere of the "shop," the length of time during which the gas had been kept lighted, and the dried state of the materials, would favour the ignition. The smokeless character of the flame seen from the exterior would be the appearance which flame, even of wood, would have where there was strong

draft. We should mention that it had been previously stated by Mr. Thomas Grieve, the scene-painter, that he had always considered the *little property-room* a very dangerous place. Oil was used by the property-men. It was not so much used by scene-painters. He once returned to Covent-garden Theatre, after a long absence, and found in one spot a heap of rubbish, chiefly of sweepings from the painting-room. When the property-man was about to remove it, it began to smoulder and emit heat. Had such rubbish been allowed to lie in any part of the "shop," it would be quite sufficient to lead to the fire, under the circumstances which had been detailed.

To understand the importance of this theory of the cause of the fire, would demand a long statement of many well-ascertained facts as to a curious subject which requires even further investigation. Incendiarism is too diabolical an act to be credited as the cause of fires in every instance; and enough may be stated in few words here to show the importance of the general question, and its application to the present case. Cotton waste, oily rags, tow, and saw-dust may all be placed in such positions, or near such other substances as may cause them to ignite. The result does not occur invariably, as in the better known instances of chemical action; but it occurs positively, in certain cases, which are the source of greater danger because of the uncertainty. Tow is constantly used in theatres for stuffing figures and various other purposes, especially about the pantomime season. Saw-dust, Mr. Braidwood states that he has seen catch fire from the breakage of one of the flasks of Florence oil in the packages used, just at the time when the sun was shining in that direction. It is worth remarking, though perhaps not applying to the present case, that a carpenters' shop is lighted by sky-lights.

It is, as we may call it, the general tendency of things for the carpenters' shop to get crowded with lumber of all kinds. The witnesses in the recent case, differ as to *where* things were left; but enough is learned to show that in the shop and many parts, there was generally a large quantity of combustible material. Every one seems to have noticed something of the sort in newly coming to the place. Mr. Albano fought with the accumulation of shavings in 1846-7; Mr. Sloman found the shop in a disorderly state when he came to his old haunts; Mr. Grieve, ditto; Mr. Braidwood found the like, elsewhere the other day; and we must assume that it is inevitable.

It would, however, have much helped the inquiry, if it had been more clearly shown at what different parts of the house the several rooms called "property-rooms" and "property-shop" were situated—also where on the plan were the partitions spoken of in the general area of the roof, and where the positions designated by the witnesses, for the different benches, properties, frames, and indescribable lumber.

We took occasion last week to urge that plans should be before the jury during this inquiry; and when it was stated, as we understood on Saturday last, that a model was be ng prepared, we hoped that the jury would have the means which, in such cases, are so obviously required of coming to a true decision. It is just as much necessary to use large diagrams at an inquiry of this sort, as at Parliamentary committees. Something of the kind there used, could readily have been prepared; and the excessive loss of time, and confusion of witnesses in their vain efforts to unravel the mysteries of the plan, and to guess at distances, would have been avoided. Mr. Albano's drawings, which were at hand, were not referred to. If facts are to be elicited in such inquiries, the present round-about way of getting at them must be altered.*

NATIONAL INSTITUTION OF FINE ARTS.—The exhibition of this society is now open at the Portland Gallery, in Regent-street, but press of matter prevents us from giving any details in our present number. The exhibition comprises 575 pictures and five pieces of sculpture.

* In answer to an inquiry as to the area covered by Covent-garden Theatre, we may say that we find the *building* measures, on the Bow-street line, 209 feet 3 inches, and on the Hart-street line, 166 feet 4 inches, the projection of the portico not being included. The property includes Princes-place and the Piazza Hotel.

ST. MARYLEBONE EXTRAMURAL CEMETERY, FINCHLEY.

IN consequence of the very great complaints of the wet state of this cemetery, notwithstanding its natural inclination of surface, that the graves were found to fill with water, and, upon heavy rains occurring, the whole became a complete swamp, this led to an examination, when it was discovered that not a drop of water passed out from the main sewers. Subsequently, matters became so much worse that an eminent engineer was called in; when, after making a minute examination, he made a startling report. He condemns the plan adopted as being unscientific and unfit for the end in view, and says that the main sewer has not been put in at the depth contracted for, consequently, the graves cannot be made so deep as they might have been, thus at the outset causing great loss to the parish; that the sewer has sunk in part, and has been constructed in lengths which do not connect at their junctions in a continuous line; that the arterial drains are put in at a depth of several feet less than contracted for, without regard to levels or continuous lines, some up, some down, some falling the wrong way, and with interregnums of from 20 to 50 feet lengths; with other matters almost too monstrous to believe could be the case where two architects, having the constant assistance of a clerk of works, were employed in the supervision. The buildings also were obliged to be altered in order to render them practically useful for their intended purposes. However, as the matter may possibly become a subject for the gentlemen of the law, it is not desirable to offer any remarks by way of criticism upon the result of this business, which my former communication* (never controverted) as to the way in which the competition was conducted, and this particular design selected, referred to, farther than this,—that it is a very sad thing for the profession, and indeed for the parishioners, that committees undertaking the responsibility of making a sound and proper selection, do not call in such professional aid as would at least guard them from adopting crude and ill-considered designs, resulting in loss and vexatious litigation to those whose interest they are delegated to protect, as well as loss and cruel disappointment to competitors pursuing a fair and honourable course. I send you my name. A COMPETITOR.

LOOKER'S HOLLOW BRICKS FOR VENTILATION.

THE arrangement of bricks, proposed by Mr. Looker, already noticed in connection with the late Architectural Exhibition, deserves fuller description. It is designed especially to afford cheap, simple, and effectual ventilation, particularly in the humbler class of dwellings, in accordance with a plan suggested by Mr. Lloyd, and illustrated in our pages.

The hearth has beneath it an air-chamber communicating with the outer air. The jambs are built in with the bricks, which form conduits for the air entering under the hearth. The air is conducted through the bricks from the mantel to the upper part of the room, where it is delivered warm, the warmth being acquired chiefly from the smoke flue, whereby there is an economy of heat, and consequently of fuel. By an arrangement of the same bricks at the back of the fireplace and smoke flue, air-flues are formed, which may be carried to any desired height, and to the right or left, in the same or other rooms. By this means part of the heat of the back of the smoke-flue, instead of being suffered to escape at the chimney-top, may be carried to any room, and be the means of giving warmth and ventilation to rooms not provided with a fireplace.

"RECEIVING HOUSES."

HAVING read in your useful periodical some remarks upon the newly-established cemetery at Woking, as connected with the recently-enacted sanitary laws relating to intramural burials, with the difficulties attending their practical working, I am induced to state a circumstance bearing upon the subject, which is, probably, but one of many of a similar kind, and one which the Woking and other cemetery companies, aided by the clergy and parochial authorities, could easily remedy. A short time since, a poor woman living in a court in the City was prematurely delivered of a still-born child. The body of the child was placed in a box in the room (the only one occupied by the husband, wife, and three children), where it remained upwards of a week, when a disagreeable smell was noticed by persons entering the room: this led the husband to inquire what ought to be done with the body: he was told to take it to the sexton of the parish, who would inter it for him upon the payment of a small fee. The parish burial-ground being closed, the sexton referred him to the churchwarden, the churchwarden consulted one of the guardians, the guardian thought it would be illegal, but said the rector had better be applied to: the rector could not give his consent to the opening of the ground without rendering himself liable to a heavy penalty, which he was unwilling to risk. The poor man was then ordered to carry it to the nearest cemetery he could find, which he did the next day, having to carry his unpleasant burden upwards of 2 miles. Does it not seem desirable that receiving-houses should be established in every parish where the burial-grounds have been closed, as a depository for such births, from whence they might be collected once or twice a week by the various cemetery companies now in existence, and decently and properly interred? Should some such plan be carried into effect, would it not tend to prevent the practice of child-dropping, so frightfully prevalent in some populous districts, and so expensive to parishes, by the calling of coroners' inquests, &c.? It would also assist in the prevention of such a scene as that witnessed on draining some stagnant water by the Eastern Counties Railway Company, where, it has been stated, a number of human bodies were discovered among those of such animals as are generally found in similar receptacles. R. H. N.

* *Vide* vol. xii. page 325.

Notices of Books.

The Drainage of London: A Letter addressed to the Metropolitan Board of Works on the Value of the Sewage, the most economical Mode of disposing of it, &c. By W. W. POCOCK, F.R.I.B.A. &c. Ridgway, Piccadilly. 1856.

MR. POCOCK is a member of "the Board of Works for the Westminster district," and his purpose is to consider whether the projected sewers, at a cost of several millions sterling, to take the sewage into the Thames at Barking Creek, or elsewhere, really be the best mode of expending so large a sum of money.

The author urges, in the outset, that the drainage of the metropolis is the only want of the inhabitants that has been entrusted to public functionaries, and the only want that has not been satisfactorily met. Having taken a step in the right direction, he remarks—

"We must cast about and see, whether the same principle that has covered the sea with our commerce, filled the world with our manufactures and our countrymen, brought the capitals of Europe within whispering distance of each other, netted our land first with canals, and then with railways, crowded our suburbs with houses, and lighted our streets with gas, cannot be brought to bear for the removal of the sewage of our drains, as well as the ashes of our grates and the sweepings of our houses."

With this view the author proposes a scheme for the disposal of the sewage to a company or companies, who shall rid the Londoners of it altogether, for a consideration, and convert it (notwithstanding all that has been said against such schemes) to use for agricultural purposes, by sending it out to the country through pipes, and distributing it to land occupiers, much as the water supply is brought into London, and distributed to house occupiers. The removal of the filth, he conceives, is all that the Metropolitan Board of Works itself has to see to as regards the sewage question, its application or conversion as manure not coming legitimately within their province:

"Nor if it did," continues the author, addressing the Board, "could you possibly effect it so advantageously as a purely commercial and personally interested association. Suppose, then, the sewage collected at the Galleous, your next step towards utilizing it is to offer it to parties willing to operate upon it, for their own benefit. Then why not offer it as it is, and where it is, without expending a penny upon tunnels and arterial sewers, pumps, and flood-gates? And let the contractors, subject to such terms and conditions as you may approve of, take it where they like, and do with it as they like.

The answer will probably be, that no one would take it. But, has it been tried? What terms have been offered? If it is expected that parties should offer to pay for that which is daily paraded as a nuisance, or even remove, without charge, that which we acknowledge it will cost us millions to pass on to our next neighbours, it is not to be wondered at that such hopes are doomed to disappointment. But, if we are willing to pay the interest of the expenditure thus saved, has this ever been made known, or even hinted at?"

It is on some such basis as that here suggested that Mr. Pocock proposes to solve the sewer

problem. He enters into detailed calculations to show how it could probably be done. He makes no doubt but that after a time the sewage would not only pay for removal, but provide for the maintenance of the sewers themselves, if not more.

"Had I been inclined to calculate closely," he remarks in conclusion, "it would have been easy to have shown that the sewage could be removed at such a price as to render it worth the farmer's while to bear the whole of the expense, and even pay the Londoner for it. Thus even supposing the quantity to be not seventy but a hundred million gallons a day and that a ton of water to the farmer was worth a halfpenny, we have the liquid still worth 4d. (or rather 7½d.) per ton, instead of 5d. and allowing 1½d. for distribution, and the carrier 1½d. for interest upon plant; we still have a balance of 1d. (or rather 4½d.) per ton, out of which to pay working expenses and purchase. But this I should regard as an unfair position; and any impression on the part of the agriculturist that it was wished he should confer a boon upon the Londoner, without a corresponding concession on the citizen's part, would greatly tend to prevent the working of the scheme. On the other hand, an impression that he might have the liquid for less than its real worth would promote a more extensive and rapid consumption of it. And the knowledge that the carrier was receiving a sum for removing it, would tend to strengthen such an idea. Besides, it is but fair that we should bear a reasonable proportion of the expense attending what would, under existing circumstances, be a mutual advantage. And the income thus secured would, it is obvious, as a guarantee fund, be an immense advantage to a working company, and would bring into the field competitors who would otherwise not think of entering it."

On the Arrangement, Construction, and Fittings of School-houses. By R. SCOTT BURN. London and Edinburgh: Blackwood. 1856.

THIS is chiefly an abstract, in an available form, of Mr. Barnard's "Practical Illustrations of School Architecture," published in America, and which was reviewed in our columns at considerable length some time ago. It contains many useful hints and details; but it should be pointed out to those who are concerned, that it would be waste of time in any case where assistance from the Committee of the Privy Council on Education is desired, to found plans on those given by Mr. Barnard, as no pecuniary aid is granted unless the plans are in accordance with the arrangement laid down as the best by the Committee of Council.

The Royal Gallery of Art. Edited by S. C. HALL, F.S.A. Parts XIII. XIV. and XV. London: P. and D. Colnaghi; Manchester: Agnew.

OF this very beautiful and valuable work fifteen parts are now issued, the last of them equal, if not superior, to any of the preceding. This contains E. Corbould's "Go, and sin no more" (one of that artist's best works), very well engraved by C. H. Jeens; Harding's view of "Hyde-park in 1851," a pleasant reminiscence of a pleasant time; and "The Madonna," engraved by F. Bal, after Carlo Dolci. We are disposed to fear that the circumstances of the time must tend to lessen the present sale of this work,—a reason, if it be so, why all who really desire to assist the arts should give their aid to the work during its progress. The first volume, containing thirty-six fine engravings, can now be had complete; and we most cordially recommend it.

VARIORUM.

"THINGS not generally known familiarly explained" is "a book for old and young," by Mr. Timbs, the editor of the "Year-Book of Facts," and is published by Mr. Bogue, of Fleet-street. It contains much curious and useful information, scientific, historical, traditionary, and speculative. By the way, is it certain that "The popular superstition of overturning the salt at table being unlucky originated from Leonardo da Vinci's picture of the Last Supper, in which Judas Iscariot is represented as overturning the salt?" This, we should think, must at least be doubtful, considering the deep-seated and prevalent superstitions in regard to salt which pervade the East, and did so long ere da Vinci merely embodied one of them probably in accordance with Eastern ideas while painting an event which occurred in the East. The collection makes a very entertaining and instructive little book.——A new edition of Lockhart's "Ancient Spanish Ballads" has been published by Murray. It contains, in addition to the illustrations by Warren, Harvey, &c. and matter in the first issue, a portrait of the author after Pickersgill, and the sketch of his life, which appeared in the *Times*. It is a charming book for the drawing-room, especially remarkable for the series of elegant borders and coloured title-pages, by Mr. Owen Jones.

Miscellanea.

GUN WADDING THAT WILL NOT BURN A THEATRE.—The great liability of theatres to destruction by fire is a fact that must at the present time be strongly impressed on the public mind, two theatres having been entirely destroyed within a few weeks. That great loss of life has not occurred is almost miraculous: the panic that seized the comparatively few present in the house at Covent-garden shows what might have happened had the fire broken out when the house was full. And now, almost before the ruins of Covent-garden have ceased to smoke, we are startled with the intelligence that Drury-lane has had a narrow escape, and two firemen have received great commendation for arresting the fire in time. The cause of this last-mentioned accident, and also of the destruction of Covent-garden in 1808, has been ascertained, viz. the ignited wadding from firearms; and it requires but little consideration of the contents of a theatre to understand how these apparently insignificant bits of smouldering material may sometimes be lodged in places were ignition will be produced. Now that the military spirit of the nation is roused, no doubt theatricals will for many years comprise more than the usual proportion of warlike scenes, and the danger be consequently increased. The question arises, cannot a wadding be made that will fall merely chared, and not holding fire? I think there is no doubt it can be done, and I would suggest that the various proprietors of theatrical properties, whose interests are involved to the extent of hundreds of thousands, should combine to offer a small premium for a perfectly safe gun wadding, and appoint umpires to test any specimens offered.—J. R.

HOLBORN-HILL. — An excellent opportunity of improving Holborn-hill appears to be at this moment slipping away or neglected, in the way in which the City authorities are proceeding to make the new street from Coppice-row, Clerkenwell, to Holborn-hill. They are now engaged in forming the vaults, and are, it is said, pitching the level of the street too low. If the street, at all events, be formed at the level now being made where the street from Cow-cross to Peter-street is being carried across, and where a sudden descent is being made, the Holborn-hill and other improvements may be for ever precluded. Mr. Goldsworthy has called the attention of the Holborn District Board of Works to this subject. At the place indicated, the street, it is calculated, ought to be carried 6 feet higher than it is, otherwise, a sudden rise must be made in the level at Vine-street. In justice to the City Committee it may be added, that the original commissioners, and not they, are blamed for the manner in which this improvement is being carried out.

PRESENTATION OF THE INSTITUTE OF ARCHITECTS' MEDALS.—At the next meeting of the Institute of British architects, the 31st instant, Earl de Grey, president, will present the Royal medal, the Institute medals, the Soane medallion, and the prize in books, in conformity with the award of the special general meeting, held February 18th, 1856. A paper on the Triumphal Arches of the Romans, with illustrations, by Professor Donaldson, will be read.

SURVEYORS OF HIGHWAYS. — At Worship-street, on the 12th inst. Mr. Charles Fyson, surveyor of highways for the parish of St. Leonard's, Shoreditch, appeared to an adjourned summons, in which he was charged, at the instance of the new vestry appointed under the Metropolis Local Management Act, with having unlawfully refused to permit certain of the inhabitant ratepayers to inspect the books connected with his office, whereby he had rendered himself liable to a penalty of 5*l.* for each default.—Mr. D'Eyncourt said, that although he had no hesitation in pronouncing the conduct of the defendant to be reprehensible, he considered it to be so doubtful whether he could be proceeded against in the character of surveyor of highways, all the duties and liabilities attached to that office being now vested in the district boards or vestries elected under the Metropolis Management Act, that he did not feel justified in imposing a penalty upon him, and must order the summons to be dismissed.

THE TAUNTON SCHOOL OF ART AND SCIENCE.—An impetus was given to the object of establishing a school of science and art for Taunton, by a meeting held last week, when Mr. Cole, the inspector-general of the Department of Science and Art, attended to explain the objects and advantages of Schools of Art. The attendance, according to the local *Courier*, was very numerous, the room being at one time quite crowded; and many artizans, connected in some degree with the production of local art manufactures, interested themselves in the proceedings. Mr. Cole was accompanied by Mr. Wild, the Government assistant-inspector. In the course of his address Mr. Cole said, most of them had more or less, a knowledge of history, and if they looked into history they found that before writing was established, drawing was employed to convey ideas which would now be expressed in writing. Ancient nations used forms to represent the ideas to be conveyed, and the Egyptians particularly represented these by forms rather than by letters. Every ploughman had something to do with things in which his accuracy was desirable: every housemaid in her daily work had to put things to rights: every sempstress should see correctly and know how to cut out a shirt or to make it, to draw a straight line and know whether her work was done right or wrong: every carpenter, every hodman, every mason, every artizan, on whatever he might be employed, had something to do with judging whether he did it right or wrong. What they did in schools of art was to teach them to see with precision, so that they should deal accurately and correctly with what was before them. He was told at Taunton that the committee were somewhat in a dilemma, as they had at present only two schools; but it would be a great pity if Taunton, possessing so many advantages, should lose the opportunity of having a school of art because it cannot get a third school. When he visited their National School, he found there both boys and girls; and though there was no objection to the boys being taught drawing, he was told that there was great prejudice against girls being taught to see correctly. In some places he had met with just the contrary objection:—"We can allow the girls to be taught, there can be no harm in that; but certainly not the boys. We find that if you teach the boys drawing, it makes them impudent!" Now he did not think, from what had been stated to him that day, that it was likely the objection would be persisted in. He had heard with great satisfaction that the committee had collected a subscription, certainly sufficient to start the school exceedingly well.

SCHOOLS AT DEPTFORD.—The schools to the new church, built by Miss Coutts, in the Lewisham-road, which was opened last year, have been completed, and were opened on the 13th by Lord Haddo. Two of the group have only yet been completed, for 200 boys and 180 girls, with class-rooms and residence for the master. The contract was 2,230*l.* and was taken by Mr. Thompson, of Camberwell, and built from the design of Mr. Joseph Peacock. The schools occupy a large site, which was given by the freeholder, and have separate playgrounds and garden in front: the buildings are arranged to form two sides of a quadrangle, with the playgrounds behind.

CHEAP "GENTEEL" DWELLINGS.—In the Court of Common Pleas, a jury has exonerated a Mr. Bartlett, who had given an "I O U" for deposit-money on purchasing "a pretty little estate," consisting of six houses "of a genteel character." He discovered that the character was more "genteel" than substantial, and he declared off the bargain. The seller referred the question to a jury. The jury went over the premises—yea, over the roof; and found the roof give way under their feet; a painful thing for the transient jurymen, but how much more painful for the abiding tenants with the said roof over their heads! Yet the "pretty little estate" at Mile-end, is only a type of innumerable little estates at the end of many a mile about the country. The tenant may perhaps be enjoying domestic bliss, when the middle half of the parlour-wall shall come in by the force of a British gale, and the family shall be panic-stricken with a natural dread lest the whole house should imitate the wall. But in every house of the "genteel estate," fear unsettles the heart of the tenant. . . . . How many a tenant lives in ignorance until his situation is illustrated by a failure in the bricks! How many a tenant dares not bring to the account the landlords to whom he owes rent! How many a tenant, in over-cheapening rents, has brought about the present condition of building! The trade is such that those who build substantially—whose work can defy the rats, the elements, or a dancing-party in any story of the house — find it impracticable to cover their own outlay unless they ask a rent which few will pay; the competition of the market drawing the paterfamilias in search of a house towards those genteel traps which stand by sufferance of wind and weather.—*Spectator.*

RAILWAYS.—The poor West-London Railway can get no award from Mr. Hawkshaw, to whom the settlement of its claims against the London and North-Western Company was referred. Month after month, quarter after quarter, passes, but no award comes. At the half-yearly meeting of the West London, held the other day, it was said the delay "rested with the gentlemen of the long robe. The great difficulty was to make an appointment that would suit the counsel of the London and North-Western Company." Gentlemen, whether of the "long robe" or short robe, have no business to undertake matters they cannot attend to. But what care they? It is only the poor shareholders of a weak company who suffer. The injustice and ill-treatment the West-London Railway shareholders have received from the great companies is unexampled in the whole history of railway *management*; and what a history that is! Mr. Hawkshaw owes it to his own character to insist on an immediate appointment.——The engineering estimate for the proposed deviation of the Crewe and Shrewsbury line of the London and North Western Railway Company is 110,000*l.* and the cost of the authorised works intended to be relinquished under the bill 83,000*l.* making an increased expenditure in relation to that part of the undertaking of 27,000*l.*——The Irish Southern and Western Railways are expending 48,000*l.* on a hotel at Killarney, with the expectation of realising 1,000*l.* a year rent. The Irish Great Western expended 90,000*l.* on a hotel at Galway.

PUBLIC WORKS AND BUILDINGS.—The estimates published on Friday include 195,141*l.* for public buildings and royal palaces; 7,868*l.* for additional works in the south portion of Buckingham Palace, for external enclosures, lighting, and warming; 21,684*l.* for royal parks and pleasure-gardens; 99,383*l.* for the New Houses of Parliament; 207,305*l.* for Holyhead harbour and roads; 233,000*l.* for harbours of refuge; 384*l.* for Port Patrick harbour; 41,221*l.* for public buildings in Ireland; and 19,350*l.* for the harbour of Kingstown. As regards the parks, it is found that to St. James's the Green and Hyde Parks is appropriated 25,631*l.*; to Kensington-gardens, 2,716*l.*; to Chelsea Hospital grounds, 750*l.*; the Regent's Park, 6,601*l.*; to Victoria Park, 4,860*l.*; to Greenwich Park, 2,287*l.*; and to the Royal Botanical and Pleasure-gardens at Kew, 19,078*l.* Under the head of the New Houses of Parliament, Sir C. Barry demands 9,500*l.* for the completion of the Victoria-tower, 7,600*l.* for the clock-tower, and other items, amounting altogether to 52,540*l.*; exclusive of the works not under his direction. 4,000*l.* is to be applied this year to the decoration of the new Palace at Westminster, under the direction of the Fine Arts Commission. The works include Mr. J. Gibson's statue of the Queen and its bas-reliefs, Mr. J. R. Herbert's frescoes in the Peers' robing-room, illustrative of "Justice on earth and its development in law and judgment," and the marble statues of men of eminence (as members of Parliament) in St. Stephen's-hall. The work of Mr. Gibson is nearly completed. Mr. Herbert is about to commence his fresco paintings, and, as regards the statues, commissions for ten, at the cost of 1,200*l.* each for three, and 1,000*l.* each for the other seven, have already been given.

CLEANING BOARDS.—In answer to "J. K. E." allow me to say, that if by the above, *floor boards* are meant, he will find scrubbing them with a mixture made by dissolving unslacked lime in boiling water will have the desired effect. The proportions are, two tablespoonsful to a quart of water. No soap need be used.—REINIGKEIT.

THE OMNIBUS QUESTION.—I have seen the drawing of the vehicle to which was awarded the 100*l.* premium; and I could not fail being much impressed with the justice of the jurors' remarks in reference thereto, and am precisely of their opinion, that it comes far short of the public requirements. For instance, I would suggest the addition of a *hand-rail*, to depend a few inches from the roof, on either side, whereby unfortunate passengers might be saved the imminent risk of crushing the "last Paris fashion," or mutilating some unoffending old gentleman's too-susceptible bunnions, &c. when thrown head-foremost by the conductor into "the repository;" and also that the windows (producing, when in motion, that most indescribable of noises) be made perfectly *secure*, as there can exist no necessity for the opening of same, if ventilation be provided through the open door-window and roof. I might also call attention to the discomfort arising from having to sit bolt upright, with the alternative of a sharp window-beading in close juxtaposition with the spine; and the *ample space* which is provided for travellers if the conveyance chance to be full. But this would be almost as bad as demanding "comfort and consideration" for the public, which I am hardly bold enough to ask for whilst I sign myself OMNIBUS.

DULWICH COLLEGE.—THE ALLEYN GIFT.—Mr. Benjamin Webster is making a good fight to obtain for actors some share of the benevolent bequest of Alleyn, himself an actor, and we sincerely hope he may succeed in his praiseworthy endeavour. All that is asked is—"That one actor and actress be admitted as indoor pensioners; one actor and actress, as outdoor pensioners; and that four children of actors and actresses be placed upon the foundation of the Upper School; that four children of actors and actresses be placed upon the foundation of the Lower School; and that the selection of the most deserving claimants be made by the committees of the Drury-lane, Covent-garden General Theatrical Fund, and the General Dramatic, Equestrian, and Musical Sick Fund Association, as most likely to be acquainted with the merits of the applicants." The resources of the charity have been enormously increased by the erection of the Crystal Palace, and would suffice for all that could be demanded of it. Mr. Webster, at the public meeting which was held on the subject (Mr. C. Dickens in the chair), said to the disgrace of the managers of the college, that in 1843 the tombstone of Edward Alleyn was found in the skittle-alley of the Halfmoon, Dulwich, and the gentleman who made the discovery had called upon them to remove it; but, according to the reports, dated 1844, it had not been done. Would not this be a good moment to establish a General Dramatic Institution, the main object of which should be the elevation of the profession?

THE LECTURES ON PAINTING AT THE ROYAL ACADEMY.—Professor Hart's lectures on painting are being published in full in the *Athenæum*. Four have already appeared, and well deserve the attention of our readers.

THE ALHAMBRA.—The *Literary Gazette* says, Madrid papers inform us of the melancholy fact, that the Alhambra is falling before the destroying hand of time. The inhabitants of Granada were awakened in the dead of the night by a loud crash like a clap of thunder, followed by what seemed an earthquake. Thousands rushed into the streets, and it was soon discovered that the noise proceeded from the fall of one of the largest walls of the Alhambra, that which joins the tower "los Picos," with the gate "de Hierro." A strict examination was made of the ruins, which resulted in the discovery that one of the towers, and the fortress itself, are threatened with a similar fate. Workmen are employed in restoring the palace.

PARIS AND LONDON HOUSES.—There is no denying it,—*space is* a very important element in considering the salubrity of a town. Six-story houses, however, if only occupied by one family, have their faults; and many a medical man could, if he would, tell of lung and heart diseases brought on by the constant running up and down five and six flights of stairs. "J. P. W.'s" observations, therefore, must be taken, even in this sense, with some qualification. The Paris servants have not to run up and down stairs all day long, as the London servants have. Then is it *really* the fault of the public that they live in unhealthy houses? My neighbour, Bridgestream, came to London without ten pounds to bless himself with. He built houses *for sale* and *occupation*, and is now said to be worth 20,000*l.* a year. Everybody knows his houses to be regular lath and plaster compositions—that is, all professional men and tradesmen know it; but Bridgestream was thrown on a taking neighbourhood, and his houses did *sell* and *let*. But what is the effect, now that his fortune is made? Why those who bought his houses, even under professional advice, and only gave for them the sum advised, find out that they had better not have bought them at any price. The builder has made his fortune, and the people suffer.—A VICTIM.

EXPLOSION IN A VAULT.—Allow me to draw your attention to a circumstance which occurred to me a week since. I was requested to inspect an old vault in Holborn, which runs some distance under the road, and to give my opinion as to its safety. Having entered it through a small aperture, accompanied by the occupier of the house, I carefully examined the cracks in the brickwork, and came to an opening in the crown of the arch, which appeared to have been a shaft to admit coals. On holding a lighted candle to its mouth, an explosion immediately took place, which threw me almost senseless to the ground. One side of my face was slightly burned and my hair was singed. I am thankful it was no worse. The cause I cannot exactly account for. There was no smell of gas: the cellar is in use; and I went all round it previously to the explosion. Most probably it was the accumulation of foul air, collected for some time in the shaft, and unable to escape. If you think this little incident worthy of a place in your excellent journal, it may serve as a caution to those whose business calls them to inspect underground works, and may, at the same time, suggest the importance of ventilation there, where it can possibly be done.

JOHN WILLIAMS.

EXHAUSTION OF INDIAN FORESTS.—Almost the last remaining source of supply of timber within British territories is Pegu. There are, it is true, considerable forests of teak still remaining to the westward, within Dr. Gibson's jurisdiction. There are teak "forests" also in Chota Nagpore, but they belong to *quasi* independent chiefs, whose barbarian dread of European intercourse leads them positively to deny the fact. There may be patches also on the frontier to the north-east; but all these sources are too remote and possibly too insignificant for a great commerce. Pegu alone remains; and of Pegu Dr. M'Clelland's report is by no means hopeful. The Burmese Government has overworked the forests: the native squatters have overworked the forests: the British Government has indirectly overworked the forests; and this grand source of wealth stands in need rather of renovation than of further drainage.—*Friend of India.*

RAIN-WATER CISTERN AND LEAD POISON.—A Birmingham correspondent, Mr. W. M. Williams, points attention to a circumstance in respect to which the readers of the *Builder* have been frequently warned, namely, to the risk of the poisonous impregnation of rain-water, held in cisterns, lined with lead, as incidentally (and, doubtless, inadvertently), set forth by our correspondent, Mr. Wylson, while describing his mode of filtering rain-water. As we have more than once suggested, it would be well not only to avoid the use of lead in such cisterns, but also in the gutters, &c. from which the rain-water for domestic use is collected; or, failing the substitution of slate, or other lining in the cistern, and zinc for the gutters, a coating of some cement or mastic, such as was lately suggested in our columns for these same purposes, might be laid over the lead, both of gutters and cistern. The disuse of lead, however, in the cistern and filtering apparatus recommended by Mr. Wylson, does not affect the merits of his plan in the slightest degree, but, on the contrary, would be a decided improvement where the water is wanted for domestic use, in which case, in fact, the use of lead for lining a cistern, as we cannot too often repeat, is positively deleterious and dangerous to life as well as injurious to health.

NEW YORK.—The St. Germain Hotel, lately opened for the reception of guests, forms, according to the *Home Journal*, *a feature* at the junction of the two great thoroughfares, Broadway and the Fifth Avenue. It is six stories in height, presenting three façades of the Composite order, and is an ornament to the park which it overlooks. From the entrance, a grand staircase of white marble leads to the rotunda, or great hall, which is surpassingly beautiful and imposing. The architects, Messrs. Mettauer and Burke; the builders, Messrs. Stewart and Howell, and Van Pelt and Smith and others, deserve credit for carrying out a design so novel. The same paper says,—"The Central Park we are to have—and who is not glad of it? Let the commissioners commence the work at once, and give to the city as soon as possible this magnificent garden, where the rich and the poor, the old and the young, may repair and enjoy its pure air and sunlight."

TENDERS

For the chapels, lodge, entrance-gates, and boundary-walls, for the Folkestone cemetery, advertised for in the *Builder*. Mr. Joseph Messenger, architect:—

Eyre	£2,933	0	0
Ayers	2,437	0	0
Banks	2,428	0	0
Pope	2,360	0	0
Edwards	2,330	0	0
Golder	2,200	0	0
Porter (accepted)	2,148	0	0

For the Regent-street Tabernacle,—Princes-end, Tipton. Mr. Wigginton, architect:—

Phillips, Great Bridge	£1,311	19	0
Dolland, Dudley	1,152	0	0
Peacock, Gornal	1,140	0	0
Cox and Son, Tipton	1,140	0	0

As the trustees wished the whole of the light to be derived from the roof, there was a slight alteration in the plans; the amended tenders for which,—from Messrs. Cox and Peacock, showed a difference of 27*l.*—and the contract fell to Mr. Peacock.

For a proposed building in Lombard-street, for the Royal Insurance Company. Mr. John Belcher, architect. The quantities prepared by Mr. Richard Roberts:—

	For Building.	Party walls	Mahogany in lobbies.	Total.
J. Jay	£4,110	£708	£387	£5,205
Haward and Nixon	4,016	607	273	4,896
Ashby and Sons	3,989	600	335	4,895
Myers	3,840	577	359	4,776
Lucas (Brothers)	3,800	601	350	4,751
Lawrence	3,820	590	320	4,730
Downs	3,756	537	167	4,460
Wilson	3,545	417	258	4,220
Browne	3,517	401	240	4,158

PARTNERSHIPS NEGOTIATED (limited or unlimited) and ACCOUNTS AUDITED, for in-coming and out-going Partners, by Mr THOMAS GERVAS ROBINSON, Public Auditor and Accountant, No. 10, Old Jewry Chambers, City.

PARTNERSHIP, or SALE of an ENGINEERING BUSINESS, in London.—The works are waterside, held on lease an unexpired lease of thirty-five years. The plant is complete and compact, and the tools are modern and admirably fitted. Coming in, good, or part may remain on mortgage.—Apply to Mr. THOMAS GERVAS ROBINSON, No 10, Old Jewry Chambers, City

PARTNER WANTED in a Carpenter's, Builder's, and House Agent's Business. A party with about 150l. Not necessary to have a knowledge of the business. The above is an opening—there being no rent to pay—for a young man of business habits seldom to be met with.—Apply by letter. 88, Berwick-street, Soho.

WANTED, to JOIN in a BUILDER'S BUSINESS, by a party with a small capital, that would engage in conducting the business, being practically master with it in all its details Every information given and required. Address, in first instance, to M. S. 37, East-street, Walworth.

A NEW LIGHT in the SCIENCE of HYDRAULICS.—To CAPITALISTS.—A Plumber and Pumpmaker, the patentee of a gravity force filter pump that is patronized by the Board of Ordnance in the army, and is applicable for ships, deep wells, fire-engines, &c. is in WANT of a person to JOIN him, with a capital of from 300l. to 500l.—Apply, if by letter, to Y. Z. Mr. R. L. Curtis, Surveyor, No. 1, Riches-court, Lime-street, City, where plans and a working model may be seen.

CROYDON, SURREY.—To BRICK-MAKERS, BUILDERS, and OTHERS.—TO BE SOLD, a FREEHOLD BRICKFIELD, situate in the Brighton-road, about a quarter of a mile from the town of Croydon, containing about 3½ acres, abounding with good malm brick earth to the depth of 15 feet. There are also two lime kilns, and a famous supply of chalk for lime-burning, and two cottages, stabling, land, house, &c erected on the premises for the purpose of carrying on the above business.—For further particulars apply to Messrs. GREGSON and SON, Solicitors, Angel-court, Throgmorton-street, City; also to Mr. EDWIN DAVIS, 2, Haling-road, Croydon.

ELIGIBLE INVESTMENTS.—A Valuable Piece of LAND of superior quality, Freehold and tithe free, containing about 25 acres, in excellent cultivation and well adapted for market-gardens, situate near Hounslow, TO BE SOLD by Private Contract. It has many advantages for building.—Apply for particulars to H. FARNELL, Esq. Holland-house, Isleworth, Middlesex

FREEHOLD.—WANTED to PURCHASE, a BLOCK of OLD HOUSES or a vacant space of Ground, having a superficies of about 46 yards by 36 yards, to be situate within the four boundaries formed by Great George-street, Westminster, on the south, the Parks on the west, Oxford-street on the north, and Regent-street, Charing cross, and Parliament-street on the east. A Frontage to a main street would be preferred, but it is not absolutely essential.—Particulars to be addressed to Messrs. WATKINS and HOOPER, Solicitors, 11, Sackville-street, Piccadilly.

CAMDEN-TOWN CEMETERY BUILDING ESTATE.—TO BE LET, on Building Leases, for Ninety-nine Years, very eligible SITES upon the above estate, having good frontages into Camden-street and Bigham-street, and including frontages to the intended street to be called St. Martin's-place, and mews approached from Pratt-street. There is a great demand for private houses of the third rate in this locality, which is enhanced by its near proximity to the Chalk Farm Station of the North London Railway Stations, and the Hampstead road.—Plans may be seen and particulars obtained by application to H. E. KENDALL, Esq. Architect, 17, Suffolk-street, Pall-mall East; or to JOHN DANGERFIELD, Esq. Solicitor, 26, Craven-street, Charing-cross.

STRATFORD, ESSEX.—FREEHOLD LAND within three miles of London, exonerated from land tax, and free of tithe, TO BE LET on lease for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the finest site for building purposes anywhere round London, and good villas are in great demand, on account of the situation being lofty, dry, well drained, and exceedingly healthy. Assistance may be had to responsible parties.—For particulars, apply to Messrs. J. and C. W. TODD, Milner-street, Brompton, London, or Belmont, Lee, Kent; or Messrs. NELSON and INNES, 6, Whitehall-yard, and of Messrs. KIRKMAN and ENGLEHEART, King William-street, City.

BUILDING AGREEMENT TO BE SOLD. To BUILDERS, BUILDING SOCIETIES, and OTHERS. HAVERSTOCK-HILL, HAMPSTEAD-ROAD.—TO BE SOLD, a valuable Building Agreement for a PLOT of FREEHOLD LAND, suitable in one of the healthiest and most commanding positions in London, and only three minutes' walk from the Railway Station, Chalk Farm, whereon is to be built Fifty-six Houses. There is sufficient brick-earth dug and prepared for making at once bricks sufficient for erecting the whole of the houses The Plant necessary for carrying on the works could be had with the brick-earth at a fair valuation, or the holder of the land would make the offered very low price to be agreed upon. For particulars apply to Mr NUTTER, Land Surveyor and Auctioneer, Prince of Wales-road, Haverstock-hill.

MAITLAND-PARK, HAVERSTOCK-HILL, HAMPSTEAD-ROAD, Land tax redeemed.—TO BE LET, upon Building leases, for 99 years, BUILDING SITES upon the above estate. The continued demand for houses in this locality, and the picturesque position of the property, adjoining the grounds of the Orphan Working School, render this a desirable opportunity for builders or gentlemen wishing to erect villas for themselves.—For plan and terms apply to the Secretary of the Orphan Working School, Haverstock-hill: Messrs. TERRELL and CHAMBERLAIN, 30, Basinghall-street; the Architects, Messrs. WEHNERT and ASHDOWN, 43, Charing-cross; or at the Lodge attached to the School.

FREEHOLD LAND, SHEPHERD'S-BUSH.—TO BE LET, or SOLD, by Private Contract, about THIRTY-SIX ACRES of valuable FREEHOLD BUILDING LAND, land-tax redeemed; most desirably situated within 3 miles from Hyde-park.—Plans and terms of Mr. PETER BROAD, 28, Poultry.

FREEHOLD GROUND for Building on.—TO BE LET, upon BUILDING LEASES, PLOTS of GROUND, in that healthy locality, Holloway, two or three minutes' walk from the Archway Tavern. Omnibuses every four or five minutes to all parts of London. Situate in St. John's-road, where houses let as fast as built.—For particulars, apply to Mr. H. WITHERS, 9, Poultry; or Mr. WILLS, 2, Esplanade, Ealing. The leases direct from the freeholder. Money advanced.

FREEHOLD GROUND, Fetter-lane.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 29th of APRIL next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking on BUILDING LEASE, for eighty years, certain PLOTS of GROUND, situate at the south-east end of Fetter-lane. Further particulars may be had, and a plan seen, on application to Mr. HAYWOOD, Engineer to the Commissioners, at these Offices in the Guildhall. The Commissioners will require a plan and elevation of the Premises proposed to be built to be submitted to them for approval; and do not bind themselves to accept any proposal unless deemed advantageous. JOSEPH DAW.
Sewers Office Guildhall, March 4th, 1856.

HARROW.—FREEHOLD LAND.—TO BE SOLD, 100 ACRES, in a ring fence, and several other eligible plots of FREEHOLD LAND, at a moderate price, contiguous to the Harrow Railway Station, surrounded and intersected by capital roads. Residents are entitled to the privileges of the Harrow School, and the London and North Western Railway Company offer to persons building houses of approved elevation, worth 80l. per year each, a free first-class pass between Harrow station and Euston-square, for eleven years. There is an abundant supply of excellent water, and very superior brick-earth on the land.—Apply to WILLIAM B. COOPER, Esq. Solicitor, 3, Verulam-buildings, Gray's-inn.

ELIGIBLE BUILDING LAND TO BE LET, in the very best part of the immediate neighbourhood of Croydon. It is exceedingly dry and nicely timbered, and within ten minutes' walk of either railway station. A very liberal peppercorn term will be granted.—For particulars apply to Mr. T. L. ROBERTSON, 16, High-street, Croydon, Surrey.

TO BUILDERS and OTHERS. — An excellent SITE TO BE LET or SOLD, for BUILDING PURPOSES, with a good double frontage, situate in a leading thoroughfare, and in an established neighbourhood, well adapted for shops and dwelling-houses, and workshops. The materials of the present erections may be used if sound, in erecting any new buildings that may be approved. Money will be advanced if required by the purchaser, or taken to carry out the undertaking, upon a satisfactory arrangement.—Inquire of Messrs. HOWARD and DOLLMAN, Solicitors, 141, Fenchurch-street; Mr. EDWARD LOWTHER, 58, Red Lion-street, Clerkenwell; or of Mr. MORRELL, Auctioneer, 1, Walbrook, City.

FOR SALE.—In the best part of Gray's-inn-road, the extensive FREEHOLD LAND (over an acre) and PREMISES, belonging to the Welsh Charity.—For permission to view the property, and further particulars, apply at the Office of Mr. HENRY CLUTTON, 28, Charles street, St James's-square

FREEHOLD LAND.—Wanted, to Purchase, a piece of Freehold Land, of not less than an acre and a half, having a frontage of 250 feet towards a public road, and within a short distance of the Royal Exchange; it must be in the vicinity of a market, and capable of good drainage.—Address, stating full particulars, containing price, situation, &c. to Mr. HERBERT WILLIAMS, Architect, 21 Great Ormond street, Bloomsbury, on or before the 2nd APRIL next.

WIVELSFIELD, SUSSEX.—TO BE SOLD or LET, PODSTREAM HOUSE, a commodious residence, with good garden, stable, coach-house, and dome very fine old meadow land, capable of being altogether in Pasture. It is situated a mile and a half from Haywards heath railway station. Immediate possession may be had, and further particulars obtained of Mr. JOHN BUTCHER, Ditchling, Sussex, or Mr. TANNER, 86, Fleet-street, London.

TO BE LET, at PLAISTOW, SEMI-DETACHED VILLAS, in the immediate neighbourhood of the Victoria New Docks. Each house contains two parlours and breakfast-room, three bed-rooms, kitchen, scullery, pantries, and watercloset; they are completely fitted up with every convenience, dressers, coppers, water, stoves, and blinds; they are partially grained oak and varnished, and all are papered with the newest patterns; they are ready for immediate occupation, and, in consequence of the failure of the builder, they will be let for the low rent of 22l. per annum. Taxes are very moderate, and railroad and omnibus conveyance within easy distance.—Apply to Messrs. W. G. and E. HABERSHON, Architects, 38, Bloomsbury-square, London; or to Mr. FISHER, Builder, Balaam-street, Plaistow.
N.B.—A railroad is now in course of construction from the Shoreditch and Fenchurch-street stations to Plaistow, which will be opened in a few months. The station will be about a quarter of mile from the above-mentioned houses.

TO SMALL CAPITALISTS.—TO BE SOLD a bargain, the CHOICE of RIGHT of TWO ALLOTMENTS in a Freehold Land Society's Estate at Hornsey, adjoining railway station. The land is eligibly situated for building or other purposes, and will be ready for building immediately on completion of roads and sewers. Average size of plots 25 feet by 75 feet, none of which will exceed 50l and can be held at mortgage if preferred.—Address, A. B. Mr. Chalfont's, 99, Great Tichfield-street, St. Marylebone.

TO BUILDERS.—TO LET, on a rebuilding lease for ninety-nine years, FIVE HOUSES, MELIOR-STREET, WESTON STREET, BOROUGH. They form one corner of the street, with two frontages, about 60 feet each, land-tax redeemed, with a new sewer within ten years. The ground-rent 40l. per annum; the freehold, 800l.—Apply to Mr. BUCKLEY, No. 5, Guildford-street East, Wilmington-square.

ELIGIBLE MANUFACTURING PREMISES, with river frontage, TO BE LET, from year to year, or for a term of years, as may be agreed upon, with immediate possession, the greater portion of those valuable WATERSIDE PREMISES, known as the DON ALKALI WORKS, situate at East Jarrow, near South Shields, in the County of Durham, and within half-a-mile of the Public Docks now in course of construction at Jarrow Slake, on the River Tyne. The premises, which are very extensive, consist of a commodious wharf or quay, adjoining the River Don, navigable for keels and river craft, a lofty chimney and flues communicating, an excellent fresh-water well, two capacious reservoirs for water, numerous range of sheds, warehouses, and other buildings, laboratory, a well-built counting-house and commodious office, and porter's lodge, together with a close of land, cooperage, &c. and have been heretofore used as an Alkali Manufactory and Chemical Works, but are also suitable for an iron-foundry, forge, or other manufacturing business, for which railway communication or shipping facilities are requisite.—For further particulars, apply to Messrs. GRIFFITH and CRIGHTON Solicitors, Newcastle-upon-Tyne; Mr. CROWDY, Solicitor, 17, Serjeant's-inn, Fleet-street, London; ROBERT DAWSON, Esq. or Mr. J. D. LISTER, South Shields; or to Mr. ROBERT WART, East Jarrow, near South Shields, who will show the premises.

TO WHARFINGERS, COAL-MERCHANTS, and OTHERS requiring WATERSIDE PREMISES.—TO BE LET, BEAUFORT WHARF, Carting-lane, Strand. There is water-way for eight barges, landing-stage, stabling for twenty horses, with roomy lofts, and other outbuildings. There is also a neat dwelling-house and counting-house.—Inquire of Mr. PRESTON, Jun. 10, Wych-street, Drury-lane; or Mr. SAUNDERS, Builder, Phœnix-yard, Oxford-street.

OXFORD.—Valuable BUILDING LAND, to be LEASED on a term not exceeding 99 years. It immediately adjoins the City of Oxford, and belongs to the President and Scholars of St. John's College. The land is proposed to be let in large or small quantities, for the erection of private residences, and builders, speculators, and others may obtain allotments on such terms as will insure peculiar advantages, as it is well known that genteel residences are much wanted, and in daily request. It is most healthily situated on a fine bed of gravel, has springs of pure and excellent water, and good bricks may be obtained within a few hundred yards of the site.—For particulars, apply to the Messrs. BECKHAM and CO. 6 and 7, St. Aldate's-street, Oxford.

MILITARY CAMP, ALDERSHOT.—To BUILDERS, HOTEL and SHOPKEEPERS, and OTHERS.—TO BE LET, on building leases, for long terms, at peppercorn rents (with a premium), or at ground rents, very eligible PLOTS of BUILDING-LAND at Aldershot, fronting the high road to Farnham, immediately opposite the Artillery Barracks now in course of erection, comprising the best situation in the locality for an hotel and shops; also several plots for the erection of cottages the demand for houses of every description being so pressing as to insure an unusually high rate of interest for capital expended For terms and particulars apply to Mr. BARRETT, Farnham, Surrey; or to Mr. J. W. PENFOLD, Architect and Surveyor, 3, Charlotte-row, Mansion-house, London.

NORWICH UNION FIRE INSURANCE SOCIETY.—Established 1797. Total Amount Insured, £13,600,000. Insurances may be effected with this Company upon more favourable terms than with other Offices.—For prospectuses, apply to the Society's Offices, Surrey-street, Norwich, and 6, Cre cent, New Bridge-street, Blackfriars, London.

SIXTH DIVISION OF PROFITS.

CLERICAL, MEDICAL, and GENERAL LIFE ASSURANCE SOCIETY, 63, Great Russell street, Bloomsbury, London.

SPECIAL NOTICE.

All persons who assure on the Participating Scale before June 30th, 1856, will be entitled to a Share of the SIXTH BONUS, which will be declared in the January following.
Proposals should be forwarded to the office before June 1st next.
The Thirty-first Annual Report (just issued) can be obtained of the Society's Agents, or of
GEO. H. PINCKARD, Resident Secretary.

THE ASYLUM LIFE ASSURANCE OFFICE, 72, CORNHILL, LONDON.
Established 1824.

Policies on healthy and diseased lives, at home and abroad, for civil, military, and naval employments.
The Office being purely proprietary principles, no partnership among policy-holders is involved.
For prospectuses, proposal papers, &c apply to
MANLEY HOPKINS, Resident Director.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s per foot super. together with every particular of its cost and adaptation, can be obtained of Mr. BURD, 3, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 89, New Bond-street.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—TRUMBLE and CO Manufacturers, Leeds, beg to call the attention of the trade to their immense STOCK of PAPER-HANGINGS, at No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, and Machine Goods. The whole being their own manufacture, can supply on the very best terms.

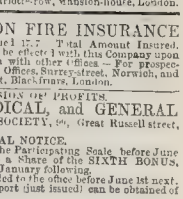
PAPER-HANGINGS. — JEFFREY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, which in price, style, and colouring, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Guide Perchs Paper, an efficient remedy for damp walls. — Factory, 115, Whitechapel; Show room, 509, Oxford street.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find an immense STOCK and all the newest Designs of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 29, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is OLDISS'S WHOLESALE WAREHOUSE, 22, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

SWINTON IRON WORKS, near Rotherham.—TO BE DISPOSED OF, by PRIVATE CONTRACT, all those valuable and extensive IRON WORKS, known as the Swinton Iron Works, five miles from Rotherham, and eleven miles from Sheffield, having a frontage to the River Don Company's Canal, the whole length of the works, with water communication to Rotherham, Sheffield, Doncaster, Hull, &c. &c. and near the Midland and Swinton Railway Stations, on the Midland Railway, and Mexborough, on the South Yorkshire Railway. The works consist of sixteen puddling furnaces, two ball furnaces, two mill furnaces, one annealing furnace, one 30-horse condensing beam-engine, driving plate-mill, and one hammer complete, with stone-built engine-house; large iron cistern, one other portable beam-engine, 14-horse power, driving finishing hammer; one other portable condensing beam-engine, 25-horse power, driving bar-mill, with all wheels, gears, water boshes, loop plates, working tools, in the most complete working order, together with four large cylinder boilers, supplying the whole with steam; two steam-built converting furnaces, in good working order. Smiths' shop, two hearths, two pairs of bellows, with all tools complete; roll turners' shop, with two lathes, one fitted with screw machinery, driven by one 6-horse high-pressure engine, with 8-horse cylinder boiler; foundry, with air furnace, capable of melting 15 tons, two cupolas, cranes, crane and hand ladles, moulding boxes, sand, &c. all complete, with models for all the gear, wheels, &c. in the forge; dry-house, fitting-shop, model-maker's shop, joiners' shop, and carpenters' shop, melting furnace, ten holes; counting-house, three cottages, coal pens, pens for red ore and scrap iron, with coking furnace for foundry, and other warehouses and outbuildings. Also One Close or Parcel of LAND adjoining, comprising about three acres. Also Eighteen stone-built COTTAGES, at High Thorn, in the township of Swinton, and near the works, with a valuable Stone Quarry. Also a large and substantial stone-built HOUSE, at Kilnhurst, close to the railway station, well adapted for an inn, with two cottages, stabling for ten horses, with hay-lofts and carriage-house, so built as to be easily converted into cottages.—To view the Premises, apply to the Manager, Mr. COOK; for further particulars, apply to CARES and CUDWORTH, Solicitors, Leeds.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.



J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.
Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.
TUNED BY MACHINERY.
Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.
MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system which gives superior tone and facility for ringing.

WARNER'S PATENT VIBRATING STANDARD PUMPS. PATENT CAST IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 3	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron	2 8 0
3½ „	ditto 3 6	flanged pipe,	2 12 0
4 „	ditto 3 6	as required.	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 16 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from under-ground tanks, or in hot forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London. Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 32s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels,

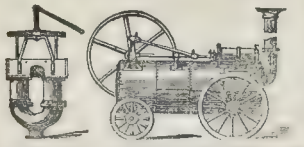
Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

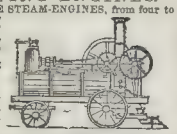
TO BE SOLD, a Portable 9-horse power ENGINE, with boiler attached (Gough's Patent), mounted on frame and railway-wheels; it has till latterly been used at the Grimsby Docks for pile driving and pumping, and is in good condition. Price 80£.—Apply to WM. SISSONS, 8, Station-terrace, Hull.

PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 93, Blackfriars-road.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, Southwark, London.



PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at		3d. per foot.
4	„ „ „ „	4d. „
6	„ „ „ „	6d. „
9	„ „ „ „	9d. „
12	„ „ „ „	1s. 3d. „
15	„ „ „ „	2s. 6d. „

These pipes are made to bear steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is now nearly thus manufacture, and it is well known that roof earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

JOHN DOULTON, BROTHERS, AND CO.
LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF
DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
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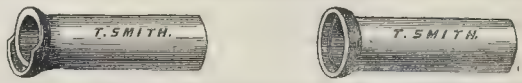
TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.
HENRY DOULTON AND CO.
Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their
GLAZED STONEWARE DRAIN-PIPES,
Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

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JAMES STIFF,
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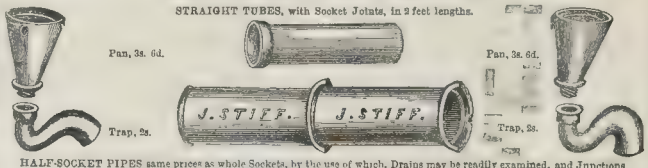
STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.
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WHITE ENAMELLED STONEWARE,
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W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

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The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a cock free from leakage, and applicable for all purposes of draw-taps. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

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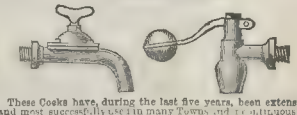

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The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

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Brass and Iron Founders, Short-street, New-cut, Lambeth.

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"Col. N."—"H. W. W."—"F. W. O."—"D. M."—"M. P."—"E. B."—"T. G."—"C. F."—"W. H."—"J. B."—"A subscriber (such a construction of the projecting eaves would not meet the requirements of the Act, unless the consent of the Board of Works were obtained."—"J. W."—"T. P."—"B. H."—"W. R."—"E. B. P."—"Zeta" (will appear).—"W. W."—"G. H."—"J. F."—"R. J. P."—"R. R."—"S."—"C. N."—"C. and B."—"J. H. P."—"W. J."—"C. E."—"W."—"T. M. P."—"H. and C."—"E. T. O."—"E. Y."—"H. J. B."—"J. M."—"W. L. S."—"H. C."—"W. M. M." (thanks).—"Tempora Mutantur."—"S. T."—"H. B." (the plans were sent in with that stipulation)—"J. L."—"F. C. P."—"An Architect" (shall appear)—"Quis"—"Victor."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *viâ* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

JOHN WILLIAM PICKWICK, *alias* CANNADINE, Joiner by Trade, is earnestly requested to RETURN to his WIFE MARY. She is now entitled to money by the death of her parents.—30, Bridge-street, Green Heys, Manchester.

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Town Clerk's Office, 26, Clayton-street, Blackburn,
14th March, 1856.

CLERK WANTED, by an Auctioneer and Surveyor in the country; must be a good accountant, and have first-rate testimonials; state age and salary. One from the country preferred.—Apply to Mr. Tomson, St. Neots, Hunts.

TRAVELLER WANTED.—TIMBER TRADE.—Any person having a thorough knowledge of his business, of industrious habits, and if any connexion accompanied the better, will be liberally treated with. Letters can be addressed in the first instance, stating age, previous employment, &c. to X. Y. Z. Messrs. Reynolds and Falconer, 15, Old Broad-street, City.

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WANTED, a SALESMAN, in a Retail Mahogany, Rosewood, and Fancy Wood Yard; one thoroughly accustomed with selling the above woods in small quantities to cabinet makers. None need apply who have not held a similar situation.—Apply by letter, to A. B. Mr. Alley's, Newsagent, Chiswell street.

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TO ENGINEERS AND FITTERS.

WANTED, a steady Man, to superintend a double-acting STEAM-ENGINE. He must be fully competent to keep the engine in repair, and will be required occ turning and fitting work in general.—Apply, stating wages required, and references, to F. J. UTTING, Eagle Foundry and Saw-Mills, Wisbech.

TO VENEER SAWYERS.

WANTED, a MAN to take charge of a VENEER SAW.—Apply to Mr. S. THORNHAM, Steam Sawing and Planing Mills, Hull.

TO MASONS AND BUILDERS.

WANTED, by a Young Man, who is a Neat Practical DRAUGHTSMAN, and thoroughly understands the duties of office, a RE-ENGAGEMENT as CLERK in the above business. Can have excellent references. Direct, A. B. 57, St. John-street, Smithfield.

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WANTED, constant EMPLOYMENT, by a Young Man, as GRAINER; to fill up time with painting and paper hanging.—Address, R. MAY, 18, Newbam-street, Edgware-rd

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WANTED, in either of the above branches, a CLERKSHIP, by a Practical Man, who has worked several years at the bench and rising; has also been several years in an architect's office, is a good draughtsman and accountant, has been accustomed to Ordnance and Admiralty contracts; by schedule, to drainage and paving, can prepare finished and working drawings and specifications, and cast up quantities, and measure works, &c. Good testimonials and references given. Would have no objection to going abroad.—Address, A. B. care of Mr. Lowe, 7, Royal Exchange

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TO BUILDERS.

WANTED, a SITUATION as Clerk in a Builder's Office, by a young Man, aged 23, being well acquainted with the general routine of an office. Good references can be given.—Address, R. R. 12, Albert-road, Sydenham.

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WANTED, by the Advertiser, aged 22, an ENGAGEMENT in a London office; is a fair architectural draughtsman, conversant with builders' accounts, and the general routine of an office. Amount of salary not so much an object as permanent employment with a respectable firm.—Address, X. Y. Crosby-Hall, City.

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WANTED, a SITUATION as WHARF CLERK. Has held the same in the above business five years, and can be highly recommended.—Address, R. C. 87, York-road, Lambeth.

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WANTED, a SITUATION, as CLERK of WORKS, SHOP or FOREMAN of WORKS, by an experienced, practical Man, many years accustomed to such situations. Testimonials and references unexceptionable.—Address, J. L. 81 Lower-marsh, Lambeth.

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HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead, which it excels in body, not tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Paint-dealers in Original Packages, as each cask stamped—HUBBUCK—LONDON—PAINT. And when so manufactured, the quality is guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs. Warehouse, No. 1, Wharf, Paddington-basin.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.

JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale Business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of best quality upon advantageous terms.—Application either at Harwich or to his Agent, GEORGE MORRIS, 30, New Ormond-street, Queen-square, London.

P.S. Inland London trade will in future be supplied from Messrs. ROBINS and CO. Scotland-yard, Westminster, instead of Whitefriars.

TO BUILDERS, CONTRACTORS, SHIPPERS and Others.

G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.

DAVIES and NORMAN, Agents.

Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.

GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or have same direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 3d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

GREAVES'S BLUE LIAS LIME and CEMENT, 6, South Wharf, Paddington-basin, London, March 1, 1856. CHARLES RICHARDSON hereby informs his friends he has taken another Wharf adjoining, especially to keep a LARGER STOCK of the above valuable HYDRAULIC LIME always on hand, that in future all orders may be punctually attended to. Orders for export, or alongside rivers, canals, or railway stations, should be given a few days before required.

GIBBS, CANNING, and CO.'S PATENTIFIED BRICKS, PIPES, JUNCTIONS, BENDS, and FIRE GOODS.

ROMAN, PORTLAND, PARIAN, ANSTON, and LIAS CEMENTS of the best quality.

SECONDS, PAVIORS', STOCKS, and other BRICKS.

GREAVES'S BLUE LIAS LIME.

CHARLES RICHARDSON,
6, SOUTH WHARF, PADDINGTON.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump lime boats at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works Southam.

NOTICE

STOCKTON FIELD BLUE LIAS LIME WORKS.
NEAR SOUTHAM, WARWICKSHIRE.

CHARLES NELSON begs to inform Engineers, Architects, Contractors, Builders, and the Trade in general, that he is prepared to supply direct from the above Works in his own boats to any part of the Thames, River Lee, on any canal or by rail to any part of the kingdom, large quantities of the above GENUINE HYDRAULIC LIME now so extensively used.

Quality, Weight, and Measure may at all times be strictly relied on, references in proof of the above can be given.

N.B. The Captain of the Boat will always know with him the Grand Junction Canal Note, from which the contractor will be enabled to know exactly what weight of Lime he is paying for.

All orders addressed to the
LONDON DEPOT, 16, SOUTH WHARF, PADDINGTON.
BLYTH, BROTHERS, SOLE AGENTS,
Will be promptly attended to, and any further information can be obtained from them

Merchants and Shippers advantageously supplied. Country and Export Orders will require a few days' notice.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non absorbent) STUCCO CEMENT, STUCCO PAINT. — CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

BRICKS, LIME, WHITING, TILES, FLINTS, GRAVEL, &c.—Messrs. MEESON and CO. supply stocks, pickings, rough stocks, place, red kiln bricks, paviors, &c. &c. on low terms to any part of the Thames, the various canals, the River Lea, &c. or by rail to any station on the Eastern Counties line, or any railway connected with it. Also, flints for building boundary walls, stables, cottages, &c. by using which one-third of the expense may be saved. Also, lime, chalk, chalk rubbish, gravel, loam for foundries, &c. &c. Whiting of the best quality, lime, both white and fare, bricks fire-goods, &c can be obtained at Messrs. MEESON'S Wharf Kilns at Bow-bridge, Stratford, Essex; or from the Works at Gray's, Essex.—Orders, by letter, to Messrs. MEESON and CO. Gray's, Essex, executed with despatch.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY.
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK PERFORATED BRICKS.—Messrs. J. EASTWOOD and SONS take this opportunity of informing their customers and the trade, that they have made arrangements for the Manufacture of White Suffolk Perforated Bricks. In carrying out this common to bricks of this description, care has been bestowed to produce them of a true and perfect shape, of an even and beautiful surface, and free from fire flaws.—J. EASTWOOD and SONS, Belvedere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY
MILLS and PRICE, 5 ADELAIDE-PLACE, London-bridge

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.—Grey Stocks, 25s. per thousand; Grizzles, 20s. per thousand; Rough Stocks, 20s. Place, 13s. to 15s per thousand.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale There bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICKS.—White and Red Facing Bricks, and Hard Clinkers, for paving stables, &c. can be delivered by Thames or Eastern Counties Railway, at 10 per cent. under the usual prices.—Apply to W. and W. WRIGHT, Springfield, Essex

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.

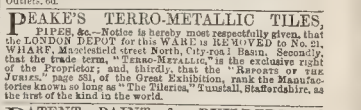
BRICK MOULDS (improved), Steel-face Stocks and Plates, with Screws and Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick Mill Work and Implements.—J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

THE PATENT BRICK-MACHINE COMPANY invite orders for their IMPROVED MACHINES, the only ones that manufacture solid bricks equal to hand-made, will shortly be at work in Gold near London, accessible by railway, where it may now be seen with bricks of last season.—H. C. MOUNT, Secretary.

7, King William street, City, February, 1856.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES to roofs of descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide place, London-bridge.



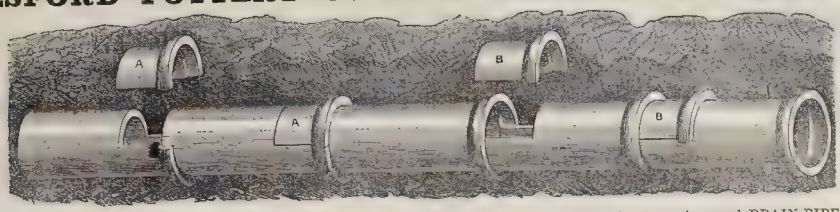
BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES either old or new whether of tiles, slate, or tiled, and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvestoft, near Rugby; or in London, Gloucester, or Bridgewater.

Price 1d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street, City-road, Regent's Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 261, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

PATENT PAINT for BUILDERS and IRONFOUNDERS.—The LONDON PATENT ANTI-OXYDE PAINT has been specially chosen by the Government Engineers as the best, cheapest, and most durable that has ever been discovered.—Address, to Mr. DEANE WALKER, at the Office of the Company, 29, New Bridge-street, Blackfriars, where every information is afforded.

AYLESFORD POTTERY COMPANY'S PATENT DRAIN-PIPES.



THE above Company respectfully invites the attention of Engineers, Architects, Surveyors, Builders, &c. to an improved DRAIN-PIPE, whereby all stoppages may be cleared without disturbing the invert of the drain, by simply removing the cover (marked A or B) whichever may be preferred.

The cover (marked B) may be used in conjunction with whole or half-socket Pipes.

Pipes thus constructed may be laid at intervals in a drain of ordinary Socket-Pipes.

With the great advantage these Pipes offer, they are cheaper than any yet submitted to the public.

London Depôt—AYLESFORD WHARF, Belvedere-road, Lambeth.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CISTERN, complete with Seat and Riser, &c.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.

Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.

Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.

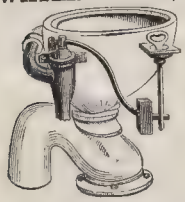
Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS,

LAMBETH POTTERY, LONDON.



DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing,

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.

WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

JOHN BROWN'S PATENT SANITARY WATER-CLOSET.

In presenting this Water-closet to public notice, the Inventor can confidently recommend it as the best of the kind yet offered. It will be seen by the trade and all practical men, to accomplish the desired end the Inventor had in view. His attention has been often called to the ill-constructed usual closet-basin, so repulsive and unpleasant in use. The accompanying design will be seen to conduct instead of repulse, giving room and pleasantness over the ordinary water-closets.

1st. It is not unsightly, and is extremely simple.

2nd. The water has a direct action, will keep it clean, and it is never liable to stop or clog up.

3rd. The trap, &c. stands perfectly above the flow, is easily fixed, and of ready access at any time.

The Patent can be purchased. Tenders will be received for the manufacture of the above by applying, post-paid, to

JOHN BROWN, Plumber, Cheltenham.

WILLIAM GILBERT, Tividale Pottery and Blue Tile Works, near Tipton, Staffordshire.—The BLUE WARE SANITARY PIPES made by W. GILBERT are the only GLAZED pipes of the kind manufactured in England. They are well vitrified, smoothly glazed, and very durable, being subjected to intense heat in the kilns. Being moulded by machinery, they are as smooth and straight as stoneware pipes; and in turn they last longer in the drains a longer than any other material. The body of the pipe is much stronger than the body of the pipe, so as to resist any undue pressure under ground. These pipes are cheaper than stoneware, and may be had in 2 feet lengths, of 2 in. 3 in. 4 in. 6 in. 9 in. 12 in. 15 in. and 18 in. bore,—with all kinds of syphons, junctions, bends, gullies, and sink grates to match. Fire-clay chimney-pots of 100 patterns. Glazed stoneware sewerage pipes, &c. &c. Terra cotta clay brackets, trusses, vases, fountains, busts, statues pedestals, &c

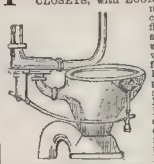
CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London—Price for Closet and Apparatus complete, from 22s. and perfect action guaranteed.

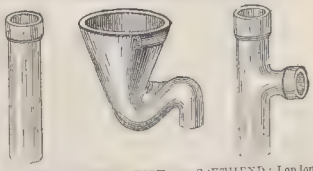


TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, Battersea; DAVID MOON, MAKER. Manufacturer of every article of Leadenhall POTTERY, having now fully received the prize, bronze medal, and honourable mention, for STONEWARE PIPES &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb 11, 1856

SALES BY AUCTION.

In the Western Suburbs of London and Parish of Kensington, singularly valuable Freehold Lands, offering very choice and beautiful Sites for Building.

MESSRS. DANIEL SMITH and SON will (unless an acceptable offer shall be made for the entirety) submit at AUCTION, at the MART, near the Bank of England, on TUESDAY, the 8th of APRIL, 1856, at TWELVE o'clock, in lots of from three to four acres each, presenting beautiful sites for the erection of noble mansions or villas, about TWENTY ACRES of rich sound FREEHOLD PASTURE LAND, forming one fine undulating inclosure, within a few minutes' walk of the Harrow and Hanwell Stations, near several churches, but situate perfectly detached from any houses or other buildings, and commanding some extensive and cheerful scenery. It would be a peculiarly fine spot for any public institution or establishment.—Particulars, with plans, may be had at the Auction Mart; of Messrs. R. M. and F. Lowe, Solicitors, Temple; of Mr. W. Eve, Architect, 59, Eleincrescent, Nottinghill; and of Messrs. Daniel Smith and Son, Land Agents, in Waterloo-place, Pall-mall, who are fully authorised to treat for the whole or any part thereof. A valuable farm and cowhouse may be purchased, if required, at the same time.

BRIXTON-HILL, Contractor's Plant and Lots, at the Reservoir of the Lambeth Waterworks (adjoining from the new road).

MESSRS. EVERSFIELD and HORNE are instructed by the Executors of the late Mr. Nesham to SELL, by AUCTION, on the PREMISES of the LAMBETH WATERWORKS COMPANY, Brixton-hill, on WEDNESDAY, MARCH 26th, at TEN (or ELEVEN, in consequence of the completion of the contract), the valuable PLANT and EFFECTS, comprising about 1 Locomotive, 200 feet of 4 inch timber, 2 trucks, 2 barrows, 2 wheeling planks, 400 scaffold boards, poles, and putlogs, seven pile-driving engines and monkeys, pugmills, buildings, scrapers, brick and plaster carts, harness, quantity of centres, rails, quarter-iron, firewood, and other effects. May be viewed two days' prior to, and catalogues had on the Premises; also at the George Inn, Fourth, and of the Auctioneers, 10, Parliament street, or Coal Exchange.

BOROUGH-ROAD.—Remaining Stock of Artificial Stone Figures.

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, 74, Borough-road, Southwark, on WEDNESDAY, APRIL 2nd, at TEN for ELEVEN, the final portion of the extensive STOCK; comprising fountains, vases, figures, groups (including the large "Dancers," the only one in artificial stone), centre-flowers, &c. To be sold without reserve, and will be the last sale this season. May be viewed one week previous, and catalogues had on the Premises, and of the Auctioneers, 10, Parliament street, or Coal Exchange.

TO MARBLE MASONS AND OTHERS.

MESSRS. EVERSFIELD and HORNE are instructed to announce that the 150 BLOCKS of MARBLE which were withdrawn from their sale on Tuesday last, at Lights Wharf, Thames Bank, Pimlico, will be SOLD by AUCTION (with an assortment of Slabs), on TUESDAY the 15th of APRIL 40, Parliament-street, March 20, 1856.

Building Materials, Westminster.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, Perkin's rents, Great Peter-street, Westminster, on THURSDAY, the 27th of MARCH, at TEN for ELEVEN, the MATERIALS of a HOUSE and STEPS; to clear the ground.—May be viewed, and catalogues had of the Auctioneers, 40, Parliament street, or Coal Exchange.

BANKSIDE. Valuable Stock in Trade and Effects of a Stone-merchant.

MESSRS. EVERSFIELD and HORNE have received instructions from the trustee, Mr. Hy. Booth, to SELL by AUCTION, on the PREMISES, 61 & 62, Bankside, Southwark, on WEDNESDAY next, the 26th, and THURSDAY the 27th of APRIL, valuable STOCK of STONE, comprising several thousand feet of tooled York paving, landings, and sinks, York steps, kerbs, copings, and sinks, Portland, Bath, and Caen stone in block and scantling, granite blocks, pitchings, and kerb; Hare Hill and Robin Hood slab, numerous grindstones, millstones, marble slabs, chimney-pieces, &c. Also the plant and effects, comprising two excellent travelling-cranes, a seven-ton crab crane, four mason's carts, one spring cart, four stone trucks, several hand trucks, trolleys, crab capstan, crab windlass, three powerful cart horses, eight sets of harness, and numerous other effects.—May be viewed two days previous; and catalogues had, on the Premises; and of the Auctioneers, 40, Parliament; or Coal-Exchange.

ESSEX and MIDDLESEX. Paulatim Lodge; Dagenham.—Valuable Detached Enclosure of Arable Land, and Five Houses in the Baniface-wells-road, Clerkenwell.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, London, on TUESDAY, MARCH 25, at TWELVE, a very desirable VILLA RESIDENCE, known as Paulatim Lodge, with conservery, excellent out-buildings, and tastefully laid-out grounds, together with a small pasture adjoining, pleasantly situate on Chadwell heath, within three miles of the Essex of Dagenham, two miles from Romford, and three from Ilford, at both of which are stations on the Eastern Counties Railway; a valuable detached enclosure of prime rich Arable Land, known as Mill Field, containing 3a. 2r. 9p., or thereabouts, the property of Mrs. Thomas Warre, at 1.1 per annum; also, a desirable Leasehold Property, comprising five houses in Oltham gardens, Penruddock-wells-road, Clerkenwell, let to responsible tenants at rents amounting to 42 10s. per annum. Possession of the residence can be had upon completion of the purchase. Particulars and conditions may be obtained of Messrs. Dawson and Bass, Solicitors, 18, Basinghall-street; at the Auction Mart; and of Messrs. Bloxam and Son, 27, Gresham street.

ESSEX.

MESSRS. BEADEL and SONS are instructed to SELL by AUCTION, at the MART, on TUESDAY, MARCH 25, EIGHT valuable FREEHOLD COTTAGES, situate on Chadwell heath, in close proximity to the Ilford-road from London to Romford; let at rents amounting to 38 per annum, the leases having originally been granted for terms of 99 years from the Michaelmas following the year 1852, and the life of a party wall only. Particulars and conditions of Sale may be obtained of Messrs. Mudford and Greening, 10, Austinfriars, at the Mart; and of Messrs. Bloxam and Son, 29, Gresham street.

PETERBOROUGH, NORTHAMPTONSHIRE.—TO IRON MERCHANTS, IRONMONGERS, SMITHS, &c.—TO BE SOLD by AUCTION, by

MR. JOHN FOX, on the PREMISES, Albert place, Peterborough, on WEDNESDAY, the 9th of MARCH, in all at forty tons of BAR, HOOP, PLATE, and ROD IRON; quantity of O G and half-round cast-iron gutters, twenty pairs of cast spring, half-ton patent weighing-machine, quantity of stroke tire, scrap-iron, turned wire, iron safes, iron ploughs, and other effects.—The sale will commence at TWO o'clock.

SOUTHWARK. To BUILDERS, SLATERS, CARPENTERS, BUILDING-MATERIAL DEALERS, and THERS.

MR. PEAKE is favoured with instructions to SELL by AUCTION, on the PREMISES, Rush on-street, Peckham, on THURSDAY, MARCH 27, 1856, at TWELVE, without the least reserve, SIXTY TONS of SLATES, Princesses, Duchesses, Countesses, &c.; also a quantity of loose building materials, comprising deals and battens, sashes, quarter-ing, mahogany shop-front and shutters, joists, quantity of deal boards, one oak posts, scantling and other oak, with a variety of useful materials. May be viewed the morning of sale, and catalogues obtained of J. H. Anthony, Esq. Solicitor, 31, Nicholas-lane; and at Mr. Peake's Offices, 11, Tooley street, and 4, Fer-street, Southwark.

SALES BY AUCTION.

VALUABLE FREEHOLD BUILDING FRONTAGES and PLOTS Land-tax redeemed, Bermondsey, Surrey.

MR. HUMPHREYS will SELL by AUCTION, on MONDAY, APRIL 7th, at TWELVE, at GARRAWAY'S (by order of the executors of the late Mr. George Stevens), in five lots, valuable BUILDING PLOTS in Great Russell street, Riley street, Stevens-street, and Brook-street, Bermondsey, near Harold Chapel, each containing from 105 feet to 156 feet frontage, and areas from 550 to 880 yards, superficial.—Particulars and plans may be had of Mr. Joseph Finton, the executor, 18, Riley-street, Bermondsey; Mr. Phillips, collector to the estate, 168, Bermondsey-street; Mr. Frederick Hatton, Solicitor, 17, Essex-street, Strand; Mr. Brooks Hemerdon, Solicitor, 14, East-India Chambers, Leadenhall-street; at Garraway's; and of the Auctioneer, 61, Lendenhall-street.

ILFORD, ESSEX. Surplus Building Materials

MR. W. H. DEAN, will SELL by AUCTION, on TUESDAY, MARCH 25, 1856, at THREE o'clock precisely, on the PREMISES, adjoining the City of London Cemetery, SURPLUS MATERIALS, comprising planks, boards, battens, about 150 centres, and a quantity of others for arched arches, small Hipples and standards, tubs, mortar-boards, fourteen wheel-barrows, about 20 tons of rag stone, a quantity of Oven stone, York curbstone, glazed drain pipes, &c. May be viewed the day prior to the sale, and catalogues had at the Rising Sun Inn, Ilford road; and of the Auctioneer, Stratford, E. Essex.

PLAISTOW, ESSEX.—Fourteen Plots of Eligible Building Ground.

MR. W. H. DEAN will SELL by AUCTION, on THURSDAY, MARCH 27th, 1856, at the BLACK LION INN, Plaistow, FOURTEEN LOTS of valuable FREEHOLD BUILDING GROUND, exempt from land-tax, and eligibly situate on the Broadway in Plaistow, to Stratford, each having a frontage to that road. May be viewed, and particulars and conditions of sale, with plans, may be had, at the Black Lion Inn, Plaistow; of Mr. Richard Bastard, Solicitor, 7, Bedford, City; and of the Auctioneer, Stratford, Essex.

The Valuable Stock, of Architectural Books, Works on Ornament, Choice Engravings, &c.

SOUTHGATE and BARRETT will SELL by AUCTION, on the PREMISES, 137, Regent-street, on WEDNESDAY, MARCH 26, and four following days (Sunday excepted), at TWELVE for ONE o'clock, in consequence of the retirement of Mr. Remington, a large variety of ENGLISH and FOREIGN HALF-BOUND WORKS of ART, and the ARTS DECORATIVE and ORNAMENTAL, for the use of artists, architects, builders, sculptors, stone-masons, decorators, paper-stainers, calico-printers, calico-printers, jewellers, gold and silversmiths, iron and brass workers; manufacturers in glass, earthenware, carpets, oil-cloth, and furniture; glass and flower painters, schools of design, drawing-masters, and every other branch of trade connected with the arts. Also, the stock of choice English and Foreign Engravings. Catalogues forwarded on receipt of six postage-stamps.

GLOUCESTERSHIRE TO CAPITALISTS, PUBLIC COMPANIES, and OTHERS.—A valuable and most important Freehold Mineral Property, extending in the whole under about 1,200 acres. An especially eligible Investment.

MR. LEITCHILD is instructed by the Mortgagees to OFFER for PUBLIC SALE, at GARRAWAY'S, on WEDNESDAY, APRIL 16th, instead of March 26th, as before advertised at TWELVE for ONE, in seven lots, those exceedingly valuable MINERAL PROPERTIES and COAL MINES, in the Forest of Dean, which are well known as the Engine, the Pingree, the Old Church, the Hills, the Beeches, the Big Hollow, and the Upper Lewdown Coal Mines. The capital collieries are, generally speaking, in full work, and the coal are a short distance from the river Wye, and they are also supplied by a railroad belonging to the proprietors, adjoining to the Severn and Wye Railway. These valuable mines are rich in well-known seams of coal; there exists a considerable demand for both large and small coals, which can be readily worked and sent to all parts of the world. The whole of the collieries are fitted with steam engines, and all with every requisite for working with economy and effect. Also, to the extent of at least 1,000 acres of wood, and timber, of which a considerable quantity is all ready for sale, and can be cut and sent to the railway. The extensive sales contain a number of cottages, farm-houses, and other premises, and are held in perpetuity from the Crown on terms of a small yearly rent, and a royalty of 1s. per ton of coals, and a small sleeping rent, so that they are in full work. Full descriptive particulars and conditions of sale, with plans of each lot, will be issued in due course, and may be had of Messrs. Maskell and Sadler, Solicitors, of Mr. Hornblow, Bromsgrove; or at the Offices of Mr. Leitchild, 102, Moorgate street, E.C., from whom every information may be had; any communication or enquiry for the whole or a portion of the estates to private contract.

A valuable and most important Commercial Property, New Broad-street, City.

MR. LEITCHILD is instructed by the Mortgagees, to SELL by PUBLIC AUCTION, at GARRAWAY'S, on WEDNESDAY, APRIL 16, at TWELVE for ONE, in one lot, those capital PREMISES, 15 and 16, New Broad-street West, which have been recently completed in the soundest and best manner; they possess great advantages in situation, have a very extensive frontage, are lofty and airy, and are fitted up with every comfort and convenience. The premises are of seven inch and superior brickwork, of first rate fixtures and counting-house forty in all, with several cellarages and light access to every room, four strong rooms, water-closets, &c. Also, adjoining and communicating, the spacious and capital PREMISES in St. Mary Aldermary-churchyard, which consist of a respectable family dwelling-house, with excellent domestic accommodations, spacious warehouses, offices, and counting-rooms on the first, second, and third floors, and capital shops and cellars on the ground-floor and the basement. These last named premises have long been in the occupation of the proprietor, Mr. R. T. Johnson, and their rental value, with those of the premises in New Broad-street which are at present in occupation, may be fairly estimated at 1,500 per annum. The entire estate is held from the Mayor, Commonalty, and Citizens of London, for a term of 99 years, from 1853, at a ground rent of 300 per annum. To a bank, public company, merchant, established tradesman, or first class, these premises offer great advantages, as well in their central situation as in the unusual extent of space they occupy. Immediate possession may be had. Particulars and plans may be obtained shortly to be issued, and may be had at Garraway's, of Messrs. Bell and Brandon, Solicitors, Western Hall, Basinhall-street; and at Mr. Leitchild's Offices, 102, Moorgate-street, where cards to view may be obtained.

TO BUILDERS French Paperhangings, direct from Paris; Fancy Decorations and a large assortment of English Papers.

MESSRS. ROBINS will SELL by AUCTION, at their ROOMS in Covent-garden, on THURSDAY, MARCH 27, at TWELVE, FRENCH PAPERHANGINGS, recently imported direct from Paris, new and elegant patterns, panels and flocks, enriched with gold; also fancy decorations for drawing-rooms and borders, and a large assortment of English papers of a superior description, arranged into convenient lots.—On view two days prior, in Covent-garden.

ANNUAL TIMBER SALE, AUDLEY END, near SAFFRON WALDEN, ESSEX.—By order of the Rt. Hon. Lord Braybrooke, Acacia, Lime, and Chestnut Timber Trees (many of which are of good dimensions and excellent quality); 430 capital Larch Firs, well suited for farming purposes and fencing; 250 Scotch and Spruce Firs, 150 oak Saplings, and a quantity of Firewood, TO BE SOLD by AUCTION, by

MESSRS. NOCKOLDS and KING, upon the PREMISES, at TEN o'clock, on FRIDAY, MARCH 28, 1856.—Catalogues may be had of Mr. Hobbins, Audley End; of Messrs. Nockolds and King, Land Agents, &c. Saffron Walden.—The whole of the timber is lying at convenient lots and contiguous to good roads, and within a mile of the Audley End Station, on the Eastern Counties Railway. The company are requested to meet at the Littlebury Green-road, near Audley End.

SALES BY AUCTION.

DUKE-STREET, GROSVENOR-SQUARE.—To IRONMONGERS, BUILDERS, COACH MAKERS, CABINET-MAKERS, SMITHS, and OTHERS.

MR. BILLINGAY will SELL by AUCTION, on the PREMISES, 29, Duke-street, Grosvenor-square, on WEDNESDAY next, MARCH 26th, 1856, and following day, at TWELVE o'clock, without reserve, all the STOCK-IN-TRADE, comprising locks, latches, bolts, hinges, screws, files, rasps, cabinet brass work, sashlines, glass paper, glue, wrought and cut nails, chain cooach bolts, shovels and spades, a variety of iron and steel bars, and sheet-iron, brass, iron, and copper wire, cast rain water pipes, gutters, heads and shoes, various castings, also the trade fixtures, inch ring counters, shelving, drawers, sash cord, &c. Lots may be viewed, and numerous effects.—May be viewed the day prior and on morning of Sale, and catalogues had on the Premises; and at the Offices of Mr. Billingay, Metal Trades Valuer and Auctioneer, 21, Coleman-street, City.

WHICHWOOD FOREST, OXON.—ALTERATION of TIMBER SALE.—The SALE advertised to take place in the Forest, at the Church Arms, Ascot-under-Wychwood, on THURSDAY, 27th of MARCH, is postponed until THURSDAY, 3rd of APRIL, 1856.

OLD FORD-ROAD, BOW.—Materials of Five Houses, Range of Stabling Sheds and 1 Boundary Walls, on the estate of the Conservative Land Society

MR. RICHARDS will SELL by AUCTION, on the PREMISES, in Lots, to be taken down by the purchasers, on THURSDAY, MARCH 27th, at TWELVE o'clock, without reserve, comprising second stock Brickwork, timber, doors, sashes, and glazing, sashes and frames, six pairs of and other doors, parts of ranges, backs of stairs, feather-edge boarding, entrance gates, fencing, quantity of lead in slips, gutters, pumps, and pipes, copper, stoves, 1 hot apparatus, pebble paving, &c. May be viewed the day preceding and morning of sale. Catalogues obtained of Messrs. Bax, 5, Chancery lane, at the Office of the Auctioneer, 31, Norfolk-street, Strand, on the Premises; and of the Auctioneer, Tottenham.

EXCELLENT STOCK OF A FURNISHING IRONMONGER.

MR. ELLIS is directed to SELL by AUCTION, at No. 28, LEADENHALL-STREET, on FRIDAY 28th MARCH, the STOCK of IRONMONGERY, comprising bronze and Berlin black fenders, fancy sets of polished fire-irons, sets of irons, fifty-three sets of cutlery, quantity of brass taps and cocks, an assortment of forty dozen cross garnett, forty-seven grosses of steers assorted, about 1 gross of brass bells, 30 dozen Wilkinson's screwdrivers, 10 bottles, guns, bellows, &c. May be viewed day preceding and morning of sale. Catalogues and on the Premises, and at the Offices of the Auctioneers, 170, Minories, City.

TO BUILDERS, CARPENTERS, AND OTHERS.—TO BE SOLD by AUCTION, by

J. H. GREENACRE, by Order of the Directors of the East Dereham Corn Exchange Company, on THURSDAY the 10th day of APRIL, 1856, at Eleven o'clock in the FORENOON, on the Premises, in lots, the MATERIALS of the Dwelling-house and Shops near the Market-place and in Church-street, in East Dereham; now or late in the occupation of Mr. Barton, Mrs. Tansley, Mr. Neal, Mrs. Catton, and Miss Horsted.—Conditions will be produced at the time of sale.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, more flexible, will wear longer, and is about 20 per cent cheaper than the india-rubber hose pipes. Manufactured only by WAITHMAN & SON, Dereham, Lancaster.

No.	1	1½	2	2½	3
Yard.	11d.	1s.	1s. 3d.	1s. 7d.	1s. 9d.
No.	3½	4	4½	5	6
Yard.	2s.	2s. 3d.	2s. 6d.	2s. 9d.	3 inch.

Super-extra stout quality.

No.	2	3 inches
Yard.	2s. 3d.	2s. 6d.

No. 6. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

No.	1	1½	2	2½	3 inches.
Yard.	9d.	10d.	11d.	1s. 3d.	1s. 6d. per yard.

The hose is Burnetterd at an extra charge of 2d. per yard. Union Joints, Brass Jets, and Jets, are also supplied.

TO ENGINEERS, MACHINE MAKERS, AND OTHERS.

CHARLES MACINTOSH and CO., Patentees and Manufacturers of the VULCANIZED INDIA-RUBBER in all degrees of elasticity, recommend its use as a valuable packing for steam-joints, for hot or cold water, gas, steam, acids, and grease. It is used extensively for valves in pumps and hand engines, railway buffers and springs, washers for sash cisterns, &c. &c. Address as above, and 106, Fenchurch-street, London; and Cambridge street, Manchester.

DURABILITY of GUTTA PERCHA TUBING. Many inquiries having been made as to the durability of Gutta Percha Tubing, the Gutta Percha Company take pleasure in giving publicity to the following letter from SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT.—"Second-street, Ventnor." March 20th, 1856. In reply to your letter, received this morning, respecting the Gutta Percha Tubing of the Company's manufacture, I am glad to say it has given perfectly satisfaction. I have seen it in operation for many years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

TO ENGINEERS, MILL OWNERS, &c.

N. Woolwich Elastic steam-packing Canvas and India rubber).

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich, opposite H. M. Dockyard, having considerably extended their manufacture in order to meet the increasing demand upon them for this effective and durable article, are enabled to offer the very best material at the reduced price of 1s. 4d. per lb. for sheet and rope.

Testimonials may be seen at S. W. SILVER and CO.'s Warehouses, Nos. 3 and 4, Dashwood-street, Finsbury-square, To Engineers, who orders for Steam Packing, &c., Butler Spring Pump Leathers, and the various India-rubber appliances, will meet with prompt attention.

CAUTION.—S. W. S. and Co. have found it necessary to stamp all their manufacture, thus—"S. W. SILVER and CO. WORKS, NORTH WOOLWICH."

BARROWS, LADDERS, &c.—THOMAS ELL, City-road, London—Navvy Barrows, superior make, ash or oak frames, 1 in. elm tops, bolt through frame, iron stays to legs, by the dozen, 1l. 10s. each; hundred, 12l. each. Delivered within ten miles on receipt of payment in advance. A large stock of Ladders on hand, several 30 to 50 rounds, for sale or hire.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Brothers) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," in York-street, in the Parish of St. Paul, Covent-garden, and in the County of Middlesex.—Saturday, March 22, 1856.

The Builder.

Architect, Engineer, Operative & Artist.

VOL. XIV.—No. 686. MARCH 29, 1856. PRICE FOURPENCE Stamped 5d.

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ROYAL ACADEMY of ARTS, Trafalgar-square.—NOTICE to ARTISTS.—All Works of Painting, Sculpture, Architecture, or Engraving, intended for the ensuing EXHIBITION at the ROYAL ACADEMY, must be sent in on MONDAY, the 7th, or TUESDAY, the 8th of APRIL next, after which no such Work can possibly be received, nor can any Works be received which have already been publicly exhibited.

FRAMES.—All Pictures and Drawings must be in gilt frames. Oil Paintings under glass, and Drawings with wide margins are inadmissible. Deceptive breadth in frames as well as projecting mouldings may prevent Pictures obtaining the situation they otherwise merit. The other regulations necessary to be observed may be obtained at the Royal Academy

JOHN PRESCOTT KNIGHT, R.A. Sec.

Every possible care will be taken of Works sent for exhibition, but the Royal Academy will not hold itself accountable in any case of injury or loss, nor can it undertake to pay the carriage of any package

The prices of Works to be disposed of may be communicated to the Secretary.

ART UNION OF LONDON (by Royal Charter). Prizeholders select for themselves from the Public Exhibitions. Every subscriber of One Guinea, will have besides the chance of a Prize, an impression of a plate of Harvest in the Highlands, engraved by J. T. Willmore, A.R.A. from the important and well-known Picture by Sir E. Landseer, R.A. and Sir Augustus Callcott, R.A. Subscription closes on MONDAY next, 31st instant.

GEORGE GODWIN, } Honorary
LEWIS POCOCK, } Secretaries.
444 West Strand.

THE ARCHITECTURAL MUSEUM, CANON-ROW, WESTMINSTER.

SUMMER SESSION, 1856.—The presentation of the prizes for Wood and Stone Carving (value in 1855) will take place on MONDAY, the 7th of APRIL next. Lectures will be delivered on the following MONDAY EVENINGS, APRIL 21, MAY 12 and 27, and JUNE 9 and 23. Hour of admission, SEVEN o'clock. The chair to be taken at EIGHT o'clock. Cards of admission will be presented on application at the Museum; or at the Office of "The Builder." The Annual Conversazione will be held on WEDNESDAY, JULY 2. Prizes of 10l. each for Wrought-iron Work and Stone Carving, will be offered during the present year.—Full particulars may be had at the Museum, on and after MONDAY next, the 31st of MARCH

GEORGE GILBERT SCOTT, Treasurer.
HENRY CLUTTON, Hon. Sec.

COMPETITIONS.

TO ARCHITECTS, &c.

THE SOUTH SHIELDS and WESTOE UNITED BURIAL BOARD are desirous of receiving DESIGNS, SPECIFICATIONS, and ESTIMATES for the following WORKS, connected with the intended New Burial Ground, the extent of which, including the road, is seventeen acres, viz:—Two Chapels (one for burials according to the rites of the Church of England, and the other for burials otherwise than according to those rites), a Superintendent's House and necessary Offices, a small Gatekeeper's Lodge, and Two Gates, the total amount of which is not to exceed 2,200l. Premiums will be given for the two designs which may be most approved of, and be also well adapted for the purpose, viz.—15l. for the first, and 10l. for the second; the plans, specifications, and estimates, for which they are given, to be the property of the Board, but neither of the premiums will be paid, unless a Tender be accepted by the Board for the actual execution of the works, at or within the stipulated sum of 2,200l. Competitors must state the amount of Architect's charges required, over and above the premium, for furnishing all necessary working drawings and superintending the works, if the Board should require their services. A plan of the site may be seen at the Offices of Mr. C. THOMPSON, Borough Surveyor, Central Hall, Chapter-row, South Shields, and the whole of the designs, specifications, and estimates must be sent to me free of expense, sealed and endorsed, but without any name or distinguishing mark, on or before the 10th of April next, enclosing a sealed letter in each case, from the person forwarding it.

By order, THOMAS SALMON, Clerk to the Burial Board.
South Shields, 24th March, 1856.

COMPETITIONS.

GARSTON, near LIVERPOOL.—To ENGINEERS, SURVEYORS, &c.—The Surveyor for the District of Garston, to which the Public Health Act, 1848, is applied, being now vacant, the Local Board of Health for said district are desirous of obtaining PLANS, SPECIFICATIONS, and ESTIMATES, for a system of SEWERAGE for effectually draining the district. Premiums of 7l. and 3l. respectively will be given to the Authors of the Two Plans, &c. &c. in estimation approved of, which Plans, &c. &c. will become the property of the Board. The specification must contain all information regarding materials, expense, &c. necessary to practically working of the drainage, and must include, so far as practicable, a scheme for preserving the sewage matter for agricultural or other purposes. Mr. GOTTOS Plans of the Parish, on the scale pre cribed by the General Board of Health, are in the custody of the Surveyor, Mr. JAMES STANDING, and may be inspected at his house, Mayfield-road, Aigburth, on application to him. But inasmuch as lithographed copies of the general plan, on a scale of two feet to a mile, may be had from the Surveyor (price 10s.), no tracings will be allowed to be taken from the original plans. Four plans, at least, from as many different bonâ fide competitors, must be sent in, otherwise the premiums will not be awarded. The plans, specifications, &c. &c. signed with a motto or device, and accompanied by a letter marked with a similar motto or device, enclosing the name and address of the Author, must be sent (carriage free) to the Office of Mr. J. B. LLOYD, Solicitor, 8, Exchange-alley, Liverpool, on or before the 15th day of MAY next.

Dated the 5th day of March, 1856.

TO ARCHITECTS.

THE Committee of the Independent Chapel, Aylesbury, are desirous of receiving DESIGNS, to comprise plans, specification, and estimate, for a new CHAPEL, to be erected on the site of the existing one, to seat 800 persons, and with a school-room and vestry attached; the whole expense of fittings of chapel, &c not to exceed 1,000l. A premium of 50l. will be given for the most approved design, unless the architect should be employed to carry out the work, the premium will then merge in the commission, the amount of such commission to be stated at the time of sending in the plans. A specification, stating the general mode of construction, the materials to be used, and the manner of finishing, to be sent with the plans, to assist the committee in their decision. Each design to be sent in accompanied with a sealed letter, bearing some motto or device, to distinguish it from others, on or before the 14th of APRIL, 1856, to Mr. JOHN GUNN, Aylesbury, of whom further particulars may be obtained

BARRACK COMMITTEE.—The Designs for Barracks, submitted to the Committee on Barrack Accommodation, are now arranged at BURLINGTON HOUSE, Piccadilly, for the inspection of the public, from Ten A.M. to SIX P.M

BUCKS COUNTY PRISON.—ENGINEER WANTED.—The Visiting Justices of the Prison will receive APPLICATIONS from persons who desire to become candidates for the situation of ENGINEER at the said prison, at a salary of 70l. per annum, with rations and lodging within the prison. The person selected must be a single man, of good character and experience; he will have charge of the ventilating and warming apparatus, the fires, the pumps, cisterns, water-conduits, gas-fittings, locks, taps, bells, and all other apparatus in and about the prison; and he will be responsible for keeping the whole in repair and working condition; and he will be required to comply in all respects with the rules and regulations of the prison. Applications and testimonials, stating age and qualifications, must be sent to me on or before the 19th day of APRIL next; and candidates for the office are not to attend personally until required by the Visiting Justices.

ACTON TINDAL, Clerk of the Peace for Bucks.
Aylesbury, March 24, 1856.

CONTRACTS.

TO IRONFOUNDERS.

TENDERS for WEST HARTLEPOOL MARKETS.—Persons desirous of TENDERING for the necessary IRONWORK required in the ERECTION of COVERED PUBLIC MARKETS, at WEST HARTLEPOOL, may inspect the plans and specifications, at the Commissioners' Office, Athenæum, West Hartlepool, from TUESDAY, the 1st day of APRIL, till MONDAY, the 14th; and copies may also be inspected at the Offices of the Architect, Mr. THOMAS OLIVER, Jun. 66, John-street, Sunderland, and 39, Grey-street, Newcastle, of whom further particulars and quantities may be had on application. Tenders to be delivered at my Office on or before MONDAY, the 14th day of APRIL next, endorsed "Tender for West Hartlepool Markets."—The Commissioners do not pledge themselves to accept the lowest Tender necessarily. By order,

WM. W. BRUNTON,
Clerk to the West Hartlepool Improvement Commissioners.
March 6, 1856.

TO BUILDERS, MASONS, JOINERS, &c.

TENDERS for WEST HARTLEPOOL MARKETS.—Persons desirous of TENDERING for the MASON, BRICKLAYER, and JOINER'S WORK, required in the ERECTION of COVERED PUBLIC MARKETS at WEST HARTLEPOOL, may inspect the plans and specifications at the Commissioners' Office, Athenæum, West Hartlepool, from TUESDAY, the 1st day of APRIL, till MONDAY, the 14th; and copies may also be inspected at the Offices of the Architect, Mr. THOMAS OLIVER, Jun. 66, John-street, Sunderland, and 39, Grey-street, Newcastle, of whom further particulars and quantities may be had on application. Tenders to be delivered at my Office on or before MONDAY, the 14th day of APRIL next, endorsed "Tender for West Hartlepool Markets." The Commissioners do not pledge themselves to accept the lowest Tender necessarily.—By order,

WM. W. BRUNTON,
Clerk to the West Hartlepool Improvement Commissioners.
March 6, 1856.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice that the Right Honourable the Secretary at War will be prepared to receive TENDERS for the Execution of the Works required for the Erection of NEW BARRACKS for FIVE COMPANIES of INFANTRY, and that such TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before TWELVE o'clock at Noon of the 2nd day of APRIL next, and not later.

Printed Forms of Tender, with Plans, Specifications, and Conditions of Contract, may be seen and obtained at the Office of the Director-General of Contracts, Pall-mall, London, on or before MONDAY, the 31st day of MARCH, 1856, from persons desirous of contracting for SUPPLYING CASTINGS of CAST and WROUGHT IRON at the several barracks in the Dover District for the War Department.

Plans, Specifications, and Drawings of the articles to be supplied, with conditions of the Contract, may be seen by persons fully competent to undertake the supply of the same by application at Tender Office, Royal Engineer Office, Arsenal, Fort, Dover, between the hours of TEN and FOUR o'clock, from THURSDAY, the 27th MARCH, to SATURDAY, the 29th APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 2,000l. for the due performance of the contract. Parties Tendering will take notice, that the period for completing the work is extended to 31st DECEMBER, 1856.

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, 19th March, 1856.

NOTICE to IRONFOUNDERS and SMITHS.—The Commanding Royal Engineer of the Dover district hereby gives notice that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before MONDAY, the 14th day of APRIL, 1856, from persons desirous of contracting for SUPPLYING CASTINGS of CAST and WROUGHT IRON at the several barracks in the Dover District for the War Department. Specifications and drawings of the articles to be supplied, with conditions of the contract, may be seen by persons fully competent to undertake the supply of the same by application at Tender Office, Royal Engineer Office, Arsenal, Fort, Dover, between the hours of TEN and FOUR o'clock, from THURSDAY, the 27th MARCH, to SATURDAY, the 29th APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and severally to be bound under a penalty of 500l. for the due performance of the contract. Tenders for the above service to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed "Tender for Stores, Dover District."

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, 19th March, 1856.

LIME TENDERS.—The Phœnix Gaslight and Coke Company are ready to receive TENDERS for the SUPPLY of WHITE FLARE BURNT LIME, for their stations at Bankside, Vauxhall, and Greenwich, until Lady-day in next year. The quantities are about 15,000 yards. The lime is to be fresh burnt from the kiln, unbroken, of the best quality, and to be delivered at the stations in quantities as ordered, not exceeding two yards at a time, or in barge loads of sixty or eighty yards, duly delivered into stations. Instead of white flare burnt, parties may Tender to supply common chalk lime, only taking care to designate it in their Tenders. Payment to be in cash, quarterly, or in coke at the option of the Company on the commencement of each quarter; or parties tendering can offer for payment in cash only or in breeze only. The Tender to state the lowest price at per yard for lime in carts, and also separate price if delivered by barge, and also the price per coke to be taken in exchange. The Tender to be marked with the words "Lime Tender" on the cover, and to be delivered at the Company's Office at Bankside before TWELVE o'clock on the 2nd of APRIL next.

Bankside, March 27, 1856.

BREEZE TENDERS.—The Phœnix Gaslight and Coke Company are ready to receive TENDERS for TAKING AWAY all the SMALL COKE or BREEZE from their Stations. The quantity will be about 2,500 chaldrons each from Bankside and Vauxhall, and 1,500 chaldrons from Greenwich; but parties are at liberty to Tender for any quantity not less than 500 chaldrons, to be cleared away at periods to be fixed by the Company. The Contractor, making a Tender, will thereby bind himself not to leave more than 50 chaldrons on the works at any one time, except at his own risk, upon its sale by the Company, and to pay for the same within one month after each quarter-day. The Tender is to state price per chaldron of 40 bushels, delivered into craft alongside, or into carts. It is also to be marked with the words "Breeze Tender" on the cover, and to be delivered at their Office before TWELVE o'clock on the 2nd of APRIL next.

Bankside, March 27, 1856.

TO CONTRACTORS, BUILDERS, AND OTHERS.

CLUN UNION.—Persons desirous to CONTRACT for MAKING IMPROVEMENTS in the DRAINAGE of the CLUN UNION WORKHOUSE PREMISES situate at Bishop's Castle, in conformity with the plans and specifications now lying in the Clerk's Office for inspection, are requested to send in Tenders, addressed to the Board of Guardians, at the Workhouse, in Bishop's Castle, on or before the 7th day of MAY next. By order of the Board.

FREDERIC PARDOE, Clerk.
Bishop's Castle, March 14, 1856.

TO BUILDERS AND CONTRACTORS.

PERSONS desirous of TENDERING for the ERECTION of a NEW HOUSE and OFFICES, at Ingoldisthorpe, Norfolk, may obtain the plans and specifications at the Office of G. E. PRITCHETT, Architect, Bishop's-stortford, and copies at the Rev. W. COCKETT'S, Rectory, Ingoldesthorpe. Tenders to be delivered at the Office of the Architect on the 5th of APRIL. The lowest Tender will not necessarily be accepted.

[For remainder of Contracts see next page.

CONTRACTS.

WILTON LOCAL BOARD of HEALTH.
The Local Board are prepared to receive TENDERS from competent Persons for the execution of the Works comprised in the following Contracts for the Drainage of the District, viz
CONTRACT No 1.—For excavating and Pipe-laying, to form Main and Collateral Sewers from the Brewery Boundary in Water-park to the Outfall, and for forming such Outfall
CONTRACT No. 2.—For Excavating and Pipe Laying, to form Sewers from the Brewery Boundary, near the Bridge-street, Lime-kiln-lane, and Silver Hill to the Outfall.
Specification may be had on application at the Office of the Surveyor, at Mr. Gowing's, Bridge-street, Wilton, on and after TUESDAY, the 25th day of MARCH, and Tenders to be delivered at the Office of the Surveyor, at Mr. Gowing's, Bridge-street, Wilton, on or before SATURDAY the 12th day of APRIL next.
By order of the Board,
THOS. SHARRING Clerk.
Wilton-house Salisbury, March 17, 1856.

EAST DEREHAM, NORFOLK, CORN-EXCHANGE.—To BUILDERS and CONTRACTORS.—Builders desirous of Contracting for the ERECTION of the CORN EXCHANGE, East Dereham, in accordance with the plans and specifications and drawings to be seen at my Office, Dereham, may obtain the necessary information with reference to the same, at the Office of the Architects, Messrs. J. and M. GOGGS, SWAFFHAM, and after TUESDAY, the 25th day of MARCH, is sent, to the Office of the Surveyor, E. W. FOX, East Dereham, and sent by post as far as Thetford by the morning of WEDNESDAY, the 9th day of APRIL next. The Directors will not bind themselves to accept the lowest Tender, but prefer that party who will be to give good and sufficient security for the due performance of the works.—By order of the Directors,
HENRY R. COPPER, Secretary.

CONTRACT.—REMOVAL of the DUST, &c.—The Parish of St. George, Hanover-square. Such persons as are willing to CONTRACT with the Vestry of the said parish for the REMOVAL of the CINDERS, ASHES, &c. from the 9th of APRIL next until the 25th day of MARCH, 1857, from the streets and places comprised in the several districts of the Inland Revenue Commissioners, Regent-street, Golden-square, and the Pimlico district, and from all other streets and places in the out-wards of the said parish not comprised in the district under the control of the Inland Revenue Commissioners, are required, sealed up, at the Office of the Clerk of the Board-room, Mount-street, on or before TUESDAY, the 8th day of APRIL, 1856. Parties tendering are desired to take notice that all proposals must be made upon printed forms, and in the printed form of Tender. Such proposals must be delivered sealed up before the hour of TEN o'clock. The opening of the Tenders will be done by the contractor, and the Vestry will not be bound to accept the highest or any Tender. By order of the Committee of Works.
THOMAS HASTINGS CHAPPELL, Clerk.

PARISH of ST. MARYLEBONE, March 28th, 1856.—CONTRACT for SEWAGE DRAINPIPES, IRON GULLY GRATES, and other IRON WORKS for SEWERS.—Notice is hereby given, that the several Committees of the Vestry of St. Marylebone will meet at the Court-house of the said Parish, on WEDNESDAY, the 30th day of APRIL, 1856, at the LEVEE of the Vestry, for the purpose of opening TENDERS from persons willing to contract with the said Vestry of St. Marylebone for one year for the supply of Sewage Drain-pipes, Bends, Junctions, Stopped Junctions, Traps, and other Castings for Sewers. The Tenders to be upon the printed forms, and to be sent in, sealed, on or before ELEVEN o'clock on the said 16th day of APRIL. Further particulars may be known, and forms of Tender procured of the Vestry's Surveyor, Mr. ROBERT SCACE, at his draw ng-office at the Court-house, from TWELVE till ONE o'clock. The Vestry do not pledge themselves to accept the lowest Tender. By order,
W. E. GRENWELL, Vestry Clerk.

BOARD of WORKS for the STRAND DISTRICT.—To MASONS, PAVIORS, and OTHERS.—The Board will receive their Offers, 24, Henrietta-street, Covent-garden, on WEDNESDAY, the 9th of APRIL, at SIX o'clock precisely, for the SUPPLY of 1000 cubic yards of new YORKSHIRE and IRISH PAVING, GRANITE KERB CHANNELS, and IRISH LANDINGS, & Also for RESTRAINING and RELAYING the CARRIAGE WAYS and FOOTWAYS within the said District for Three Years from July last. Printed forms of Tender may be obtained at the office of the Board, between TEN and FOUR daily, and Tenders must be delivered, sealed, at the said Offices, before TWO o'clock on the day of meeting. The contractor will be required to enter into a bond, and find two sureties, to secure the due performance thereof, to be prepared at his expense. The Board do not bind themselves to accept the lowest or any Tender.—By order,
JAMES H. F. LEWIS, Clerk to the Board.
24, Henrietta-street, Covent-garden, 25th March, 1856.

BOARD of WORKS for the STRAND DISTRICT. To CONTRACTORS for SEWERS, BUILDERS, MASONS, PAVIORS, and OTHERS.—The Board will receive their Offers, 24, Henrietta-street, Covent-garden, on WEDNESDAY, the 9th day of APRIL next, at SIX o'clock precisely, TENDERS for the SUPPLY of MATERIALS and EXECUTION of JOBBING and MEASURED WORKS required for the SEWERS and DRAINS within the said District, for Three Years, from last January. Printed forms of Tender and Schedules of Prices, upon which the Contract must be taken, and Conditions of Contract, may be obtained at the Office of the Board, between the hours of TEN and FOUR, on payment of Is. 6d.; and no other form of Tender will be signed. Persons intending to tender, must, at the time of delivering their Offers, deposit the Sum of £20 with the Clerk, which will be returned to the unsuccessful Tenderers on the day of meeting. The contractor will be required to enter into a Contract, and find two responsible sureties to execute a joint and several bond for the due performance thereof, to be prepared at his expense. The Board do not bind themselves to accept the lowest or any Tender.—By order,
JAMES H. F. LEWIS, Clerk to the Board.
24, Henrietta-street, Covent-garden, March, 1856.

TO BUILDERS.
PERSONS desirous of CONTRACTING for the ERECTION of a PAPER MILL, to be built near the Hebden Station, on the Leeds and Bradford Railway, may see the plans and specifications at the office of Mr. BRAYSHAW, in Bradford, and tenders addressed to the undersigned, on or before the 5th day of MARCH next, specifying the price for which they will undertake the work, and the time in which they will complete the same, will be received by the Directors of the Hebden Bridge Paper Company. Mr. Brayshaw will give any information required. Tenders must necessarily be accepted.—Stanford, March 19th, 1856.

EAST LANCASHIRE RAILWAY.—The Directors are prepared to receive TENDERS for the MAIN LINE of the DEARNLEY and WORSNOP RAILWAY, also for the formation and laying down of a second Line of Rails from Strines Road Station to Egant Street, and from all the works connected therewith. Specifications and Plans may be seen at the Office of the Engineer, at the Upper Mosley Street Station.
Sealed Tenders, endorsed "Tender for Maintenance of Permanent Way and Works," to be delivered at the Office aforesaid, before the 19th day of April, at Noon.
MYLES FENTON, Secretary.
Bury, Lancashire, March 19th, 1856.

ROAD WATERING.—To CONTRACTORS. TENDERS are required for WATERING certain ROADS (about 18 miles) in the several parishes of Clapham, Putney, Streatham, and Wandsworth; the Contractor finding a sufficient horse and cart, and every other appendage for the distribution. A list of the roads to be watered, may be seen, and printed forms of Tender with the conditions annexed, may be obtained at the Office of Mr. D. W. YOUNG, 1, Thurlow-place, Wandsworth-road to whom Tenders are to be delivered or sent by post before WEDNESDAY, the 2nd APRIL, at Noon. No Tender will necessarily be accepted.

CONTRACTS.

TO BUILDERS, CONTRACTORS, &c.
SEALED TENDERS will be received from competent persons willing to CONTRACT for the EXECUTION of GENERAL WORKS, in the CONVENTUAL Church of the CONVENT (SAINT ALPHONSUS LIGUORI, LIMERICK, agreeably to plans, specifications, and details to be seen at the house of DAVID FITZGERALD, 16, Denmark-street, Limerick, every day from ELEVEN a.m. to FOUR p.m. (Sundays excepted) till the 19th of APRIL next. The Tenders to be addressed to the Rev. Lords BOG-ENOUS, Church of Saint Alphonsus, Limerick, and delivered on or before MONDAY, the 14th of APRIL, after which no offers will be received.—Security for the due performance of the work within a certain period, will be required.—March 24, 1856.

TO MASONS, PAVIORS, &c.
THE BOARD of WORKS for the GREENWICH DISTRICT will meet in the Board-room, Church-street, Greenwich, on WEDNESDAY the 9th of APRIL next, at SEVEN o'clock in the EVENING, to receive TENDERS for PITCHING and LAYING DOWN in any part of the district Cornish granite Kerb, not less than 9 inch by 5 inch, paving in Yorkshire stone and Guestwick flag paving, sett-inch pebble paving and Aberdeen dressed granite paving, also for taking up and repairing and re-paving, and taking up, squaring, and relaying York, Rockdale, or Guestwick stone pavement, when and where required in the district. The prices for the above to include labour, materials, and all other incidental expenses necessary to complete the same; the Contract to be for three years, determinable at the end of the first or second year. Forms of Tender and other particulars may be had on application to the Clerk, at the Board-room, Greenwich, any day between the hours of TEN and FOUR o'clock. All to be delivered to or sealed up, addressed to the Greenwich Board of Works, endorsed "Tender for Paving," and delivered at the Offices of the Board, Church-street, Greenwich, after which no Tender will be received. The Amount of TUESDAY, the 8th of APRIL next, and must contain the names and addresses of two responsible sureties for the fulfilment of Contract.—By order,
Greenwich, 22nd March, 1856. E. W. JAMES, Clerk.

LONDON and NORTH-WESTERN RAILWAY.—To CONTRACTORS and BUILDERS.—The Directors are desirous of receiving TENDERS for the ERECTION of a LOCOMOTIVE ENGINE SHED at WOLVERTON STATION. Parties desirous of Tendering may see the drawings and specification, and also obtain a full quantity estimate, at the Engineer's Office, Euston Station, on MONDAY, 31st inst. between the hours of TEN and FOUR. Tenders, addressed to the undersigned, should be sent in not later than TEN o'clock on THURSDAY, APRIL 10 1856. The Directors do not bind themselves to accept the lowest Tender.
CHARLES F. STEWART, Secretary.
Secretary's Office, Euston Station, March 24, 1856.

ESTABLISHED 1817.
WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSE, 19, Horsferry-road, and 1, New Peter-street, Westminster.—Contractors, Builders, &c. supplied with general Ironmongery at prices equal to Manufacturers.

FURTHER REDUCTION IN PRICES.

Best Cut Clasp and Rose Nails			
1½ in.	2 in.	2½ in.	3 in. to 6 inch.
1s. 6d	1os.	14s. 6d.	14s. per cwt.
Best Cut Floor Brads		22s. 6d. and 13s. 6d.	per cwt.
Best Cut Lath Nails			10s. "
Best Zinc Sating Nails			6s. "
Best Glues		47s. to	53s. "

RAIN WATER CASTINGS per yard.

Sizes—2 in.	2½ in.	3 in.	4 in.	5 in.
Pipes	11d. 1s. 2d.	1s. 4d.	1s. 8d.	2s. 1d.
Half-round Gutters	5d.	7d.	9d.	1s. 2d.
O G Gutters		1s. 1d.	1s. 2d.	1s. 5d.
Ditto, with plain clips cast on		1s. 1d.	1s. 2d.	1s. 4d.
Ditto, with hon clips		1s. 3d.	1s. 4d.	1s. 6d.

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 6d. per dozen.
A large Stock of Elliptic and Register Stoves, and Kitchen Ranges at very reduced prices.

TERMS NETT CASH.
Estimates given for any description of Wrought or Cast Iron Work

CHARLES BAKER, Builders' Ironmonger, Nail Factor, Stove and Range Manufacturer (Warehouses, 148 and 149, Borough), begs to offer his reduced List of Prices:—

BEST CUT CLASP NAILS.

1½ in.	1¾ in.	2 in.	2½ in.	3 in and upwards.
10s. 6d.	10s.	9s.	8s. 6d.	14s. per cwt.

Best Sheet Floor Brads, 14s per cwt.
Best Cut Lath Nails, 10s
Elliptic Stoves, with ovens, 3s. 9d. per inch, and upwards.
Register Stoves, from 3l. to 5l. per inch.
A good Stock of Berlin Black ditto.

SELF-ACTING COTTAGE RANGES, with CIRCULAR OVENS and BAY BOILERS.

2 ft.	2 ft. 6 in.	3 ft.	3 ft. 6 in.
28s.	30s.	33s.	38s. 6d.

SELF-ACTING COTTAGE RANGES, OVENS ONLY, 9 inch, 2s. 6d.

SELF-ACTING RANGES, BEST WROUGHT BARS and BRIGHT MOUNTINGS.

3 ft.	3 ft. 6 in.	4 ft.	4 ft. 6 in.
58s.	62s.	69s.	78s.

6 in. Two Bolt Rim Locks, 18s. per dozen
6 in. Brass Rim Locks, 30s. per dozen.
Baker's Improved Draw-backs for Glass Doors, 4s. 6d. each.
A very extensive Stock of Cabinet-makers' and Builders' Ironmongery, Tools, &c. &c.

CHUBB'S LOCKS, with all the recent improvements; STRONG FIRE-PROOF SAFES, CASH and FIELD SAFES.—Complete lists of prices and prints may be had on application.
CHUBB and SON 57, St. Paul's-churchyard, London; 28, Lord-street, Liverpool; 16, New Market-street, Manchester; and Horsley-fields, Wolverhampton.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOODBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Founder, Nails of all kinds and cuts, Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. &c. &c. each.
J. H. BOODBYER (late STURCH and BOODBYER), established nearly 200 years, for the supply of Goods from the best Manufacturers, at the lowest prices.
14, Stanhope-street, Dare-market, London.

JOHN TANN'S new patent RELIANCE LOCK and FIREPROOF SAFES, have the best and cheapest safe in the world against fire and robbery. Testimonials, to be had of Messrs. WATERLOW, Birchin-lane; and at the Works, Jamaica-road. Hackney-road, Lond n. Iron Doors for strong rooms, party-walls.

WARMING and VENTILATION, &c.—Mr. S. EGAN ROSSER, C.E. successor to the late Mr. John Sylvester, has REMOVED to 6, CANNON-ROW, WESTMINSTER, and may be consulted upon all matters connected with the warming and ventilation, heat and its applications, drying and heating the process, Patent Hot Washing or Ablution Baths, horticultural buildings, stoves and cooking apparatus, chimneys, furnaces, flues and fireplaces, gas ventilation, the ventilation of ships, &c. &c.—Mr. R. will be happy to co-operate with architects engaged in the preparation of the plans of buildings, where any arrangements of the above character are required.
February 24th, 1856.

OLD STOVES and RANGES.—F. EDWARDS, SON, and CO. have constantly on hand a quantity of OLD STOVES and KITCHEN RANGES, in very good condition, which are taken down for them at establishments when they erect new work, and which are to be sold at exceedingly low prices. 42, Poland-street, Oxford-street.

JUDKIN'S IMPROVED GAS REGULATOR is the following advantages to recommend it to the consideration of all gas consumers:—
1st. It can be easily adjusted to supply gas at any required pressure below that of the street.
2nd. When once adjusted, it will admit of NO VARIATION in LIGHTS BURNING, whether they are few or many, whatever the fluctuations of pressure may be.
3rd. The light being purer by perfect combustion, the atmosphere is more healthy and agreeable.
4th. A saving of at least from 25 to 35 per cent in the consumption of gas is effected.
ADVANTAGES over other REGULATORS are as follow:—
1st. It is more simple in its construction.
2nd. It occupies very little space, having less friction, as it works only on two steel centres, which are immersed in quicksilver.
3rd. It is not liable to get out of repair, and requires less attention than a meter itself.
N.B. A Testing Apparatus has been fitted up on the premises of the Patentee, Judkin's Yard, 75, Corporation-street, Manchester, and 64, Fleet-street, London, for the purpose of demonstrating the above-named facts.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Girders, and
STEWART'S PATENT CAST-IRON GAS and WATER PIPES.
Office, No. 7, Sun-lane London.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the public, generally, &c. that they supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.
R. S. NEWALL and CO.'s Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world.
OFFICES.—Gateshead-on-Tyne.
148, Strand, London.
67, Hyde-park, Glasgow.
27, Hanover-street, Manchester.

TO IRONMONGERS, BUILDERS, &c.
PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 65, Fleet-street.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and vaporizing) with all the improvements, under their Quadruple patents of 1853-54 and 1855 including their Gunpowder Proof Solid Lock and Door (without which no safe is secure).
THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.
MILNER'S PHŒNIX 212° SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depôt, 47a, Moorgate-street, City.—Keys free by post.
Sold also by HOBBS, ASHLEY, and CO. 97, Cheapside.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire. Gas Fittings, Brackets, and Pendants of all descriptions for Gas fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Cornice-poles, Rings and Lacquered Case Tube for Picture Rods, Dress Rods, &c. &c.
Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at
RICHARD EVERED'S Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Lone-acre, London.

TO CARPENTERS, CARRIAGE-BUILDERS, and OTHERS.—COULSON'S NEW PATENT PRIZE GOUGES BORING, MORTISING, TENONING, &c. IRREGULAR SHAPES, and SQUARE HOLES at RIGHT ANGLES for boring, mortising, naves, felloes, nest, &c.; bevel well as straight; sets out the mave for any number of mortises required, with accuracy; and is adapted for boring at any angle, as well as vertical, by hand or power. W. C. received a silver medal at the Royal Show, Carlisle, 1855, and also highly commended by the judges, being the completest machine exhibited; is fitted with eight chisels from ¼ in. to 1¼ in.; eight worms, from 5-16ths to 1¼ in.; six drills, from ¼ in. to 1 in.; three-core drifter. A strong improved jack for centring the naves, with circle chisel and three-core drifters. W. C. warrants to send these machines out ready for use, which cannot be equalled for strength, durability, and correctness. Machines may be seen in use.—Full particulars given, and orders executed, on application to Mr. WILLIAM COULSON, 3c., Fetter-lane, E.C.

A CRANE to be SOLD CHEAP, capable of lifting 1½ tons, and in working condition.—Can be seen at Cambridge Wharf, Witten-road, Pimlico.

AUSTINS IMPERIAL
PATENT SASH and BLIND LINE can be obtained of all
ROPEMAKERS, IRONMONGERS, FACTORS, AND WHOLESALE HOUSES, IN TOWN OR COUNTRY.
Established 1774.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fitting them. J. TYLOR and SONS, Manufacturers, Warwick-lane Newgate-street, London.

ROYAL POLYTECHNIC GAS FIRE. BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidental fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation.—To be seen in action at DEFRIES'S Office 143, Regent-street, London.

CAST STEEL.—Messrs. NAYLOR, VICKERS, and CO. RIVER DON WORKS, SHEFFIELD, are now prepared to execute orders for CAST STEEL BELLS, from 40lbs. to 6,000lbs. each, Locomotive Crank Axles, Tyre Bars without welding, Shafts, Cranks, Axles, and every description of heavy forgings in Steel, to pattern.—For further particulars, apply as above.

TO IRONMONGERS AND THE TRADE GENERALLY.
D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern book and price list, 1s.—55 and 56, High Holborn.

J. NAYLOR'S IRONMONGERY, NAIL, and METAL WAREHOUSE, 496, Oxford-street, near the Marble Arch.—Builders, Carpenters, Cabinet Makers, Locksmiths, and Bell-hangers, supplied at the lowest prices.

DOVER GAS-LIGHT COMPANY.—WANTED to PURCHASE a STATION-GOVERNOR, with 10-inch Inlet and outlet, to replace one with 6-inch connections.—the latter to be sold cheap. Persons desirous of supplying the New Governor are requested to send plans and specifications, with the price delivered at Dover, to
March 25, 1856. E. H. JONES, Secretary.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

Adopted by the Honourable Board of Ordnance, the Commissioners of Parks, Palaces, and Public Buildings, &c. &c. &c.

TARIFF OF PRICES Beyond the current Price of Hoop-iron.

Gauge.	In wide.	Per 1,000 ft
No. 18	.. 1¼ ..	7s. 0d.
15	.. 1½ ..	7s. 6d.
16	.. 1¼ ..	8s. 0d.
15	.. 2 ..	8s. 6d.
15	.. 2½ ..	9s. 6d.

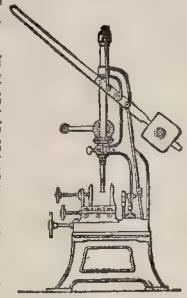
THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it a intervals of 11½ inches on both side alternately, and then sidewise each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent, that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

London Depôt—463, OXFORD-STREET.

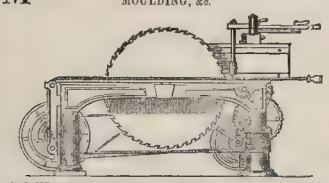
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wheel-sale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines for home and foreign use.

THE STATUE and IRON FOUNDRY,

Lower Belgrave-place, Pimlico.—Castings of every description executed at the above Works.

IRON FOUNDRY,

HARROW-STREET, LANT-STREET, SOUTHWARK.

W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel and Railing Bars, Panels, Iron Copings, Hot Plates, Tank Plates, Area Gratings, Sash Weights, Fly and Other Wheels, Rizzers, Pinions, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK,

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER,

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

COLLINGE'S PATENT HINGES.—

Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

IRONMONGERY.

PFEIL AND STEDALL.

THE LARGEST STOCK AT

THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

TO GAS AND WATER COMPANIES, ENGINEERS, SURVEYORS, &c.

THE SWANSEA LOCAL BOARD of

HEALTH are prepared to DISPOSE OF about 2,000 YARDS of NEW 12 to 16 inch CAST-IRON SOCKET PIPES, together with a number of JUNCTIONS and other CASTINGS. The whole are of the best description, coated by Dr. Angus Smith's patented process, and were supplied by the eminent firm of Cochrane and Co.—For further information, apply to Mr. JOHN NEWTON, Resident Engineer, Guildhall, Swansea.

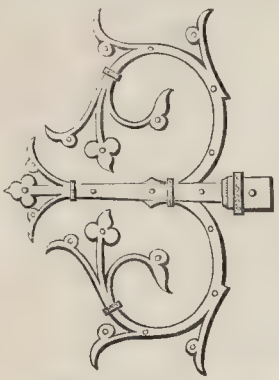
Swansea, March 18, 1856.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND,

London.



CORONAS, GAS PENDANTS, &c.

First-class Prize Medal, Paris Exhibition, 1855.

Illustrated Price-catalogues post free on application.

TUPPER and CARR,

CORRUGATED IRON MANUFACTURERS,

Galvanized and Ungalvanized,

Iron Roof Builders and Electric Telegraph Contractors.

Works—BIRMINGHAM and LIMEHOUSE.

Offices—3, MANSION HOUSE-PLACE, LONDON.

N.B.—Iron of every description galvanized. An allowance to the Trade.

JOHN HENDERSON PORTER,

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IRON BUILDING AND ROOFING WORKS,

GAS-STREET, BIRMINGHAM.

LONDON OFFICE—1, RICHES COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.

PATENT PLUMBIC ZINC.

GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No.		
No. 11 gauge weighs about	18	oz. per foot super.
12	20	"
13	24	"
14	28	"

Full particulars and the reduced price sent by post on application to

A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

SKAIFE'S GALVANIZING WORKS,

Commercial-road, Limehouse, London.

Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where Iron not liable to rust is required.

Patent Galvanized Iron supplied in every form.

Sheets plain and corrugated.—Roofs fixed complete.

J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.

An Allowance to the Trade.

JOHN WALKER,

Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor,

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Offices and Works—Mill-wall, Poplar, London.

A. MOREWOOD and CO. (late Morewood and Rogers),

Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham

PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,

PLAIN or CORRUGATED, and Curved, of all Gauges.

Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.

Also the Patent Galvanized Tinned Iron Pile, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building, at the

OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

WILLSON and ROBINSON, GALVANIZING and CORRUGATING IRON WORKS,

CHURCH-ROW, LIMEHOUSE,

LONDON.

SAMUEL HEMMING'S PATENT much

approved PORTABLE BUILDING and ROOFING MANUFACTORY, REMOVED from BRISTOL to BOW, near London, close to the Bow Railway Station.—A large variety of buildings always on view, churches, chapels, shooting boxes, lodges, bazaars, ornamental villas, dwelling-houses, farm buildings, and fire-proof stores. Also, railway stations, trucks, and carriages made to any plan on the shortest notice.

PATENT GALVANIZING and CORRUGATING IRONWORKS.

Improved Process.

WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.

GALVANIZED SHEETS, PLAIN and WIRE of every description superior in all respects to that produced by any other process, THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

ECONOMIC COOKING-STOVE.—

DEANE, DRAY, and Co. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the store and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and Co. opposite the Monument, London-bridge. Established A.D. 1700.

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road,

Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

FIRE-PROOF CONSTRUCTION.—

FOX and BARRETT'S PATENT.

This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the Kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

Further information may be obtained of the Proprietor of the patent,—Mr. BARRETT, 13, York-buildings, Adelphi.

KIMBERLEY'S NEW PATENT SCAFFOLDING BRACKET entirely supersedes the old and

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London Agents:—

Messrs. PUGH & CO. 13, King-street, Snow-hill, London.

See also KIMBERLEY'S Patent Lining-screws, Skylight screws, Casement Fasteners, Stock Locks, Bench Stops, &c. &c.

TO ARCHITECTS, &c.—T. SMITH, of

14, Queen-street, Oxford-street, begs to call attention to his IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most efficient yet invented. A working model can be seen at the above address, or will be sent for inspection on the shortest notice.

N.B.—Espagnolette Bolts of a superior quality, at reduced prices

CLARK and HUNT'S IRONMONGERY,

STOVE, and METAL WAREHOUSE, 169, Shoreditch.

A great variety of Ellipse, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler,

30 32 34 36-inch,
29s. 30s. 33s. 34s.

Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—

34 36 38 42-inch,
54s. 56s. 58s. 60s.

Strong Ellipse Stoves, with Extra Back and Solid Bars, per in. 3½d.

Register Stoves, with Solid Bars, per inch, 5d.

Improved New Pattern Circular Check Register, with strong Bars and Trivits, 5d. per inch.

Best Soler ditto, with Fire Brick Back, per inch, 10d.

Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe { 2 2½ 3 inch.
11d. 1s. 3d. 1s. 4d. per yard.

Cast Gutters—4 inch, 9d. per yard.

O G Gutters ..... { 4½ inch.
1s. 1d. 1s. 3d. per yard.

Patent Line { 2 3 4 5 6
4½d. 5d. 7d. 9d. 1s. per knot.

6-inch Rd. Ward Mortise, with best Furniture and Patent Spindles, 8s. 6d. each. Light Ellipse and Register Metal, 14s. per cwt.

Dr. Arnott's Ventilators, 4s. 6d. each.

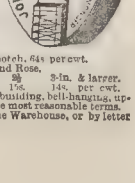
An extensive stock of bar, rod, hoop, and sheet iron.

Brick Moulds kept in stock. Any size made to order.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street,

Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs, 23d. per inch, and upwards.

Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 2l. 10s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.

3-feet Cottage Ranges, with ovens and back boilers, 73s. each.

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Air Bricks, 4s. per doz.

Best Town Glue, 70s. Ditto, Scotch, 64s per cwt.

Best Fine Cut Clasp and Rose.

½	1	2	2½	3	3-in. & larger.
18s. 6d.	16s. 6d.	13s 6d.	12s 6d.	12s.	14s. per cwt.

And every material required in the building, bell-hanging, upholstery, and brass-foundry trades on the most reasonable terms.

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LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality, Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 28, Soho-square.

SUPERIOR BRITISH PLATE-GLASS, at VERY LOW RATES.—The Union Plate-glass Company having recently completed considerable improvements and additions to their works respectfully inform their friends that they are now able to supply orders without delay, and invite the attention of the trade to the low rates at which their now much esteemed manufacture is sold.—Lists of prices may be obtained on application at the Works, Pocket Nook, St. Helen's, Lancashire; the Warehouse, 99, Hatton-garden, London, and 45, Piccadilly, Manchester; Messrs. C. and J. MALLOCH, 20, Turner's-court, Glasgow; Messrs. JOHN DIX and Co., Bath-street, Bristol; Messrs. H SIBTHORPE and SON, Cork-hill, Dublin; Messrs. FORREST and BROMLEY, 32 and 33, Lime-street, Liverpool; Mr. WILLIAM HENRY HOLMES, Westgate-street, Newcastle-on-Tyne.—Rough Plate Glass from ¼ in. to 1 in. thick for windows, roofs, mechanics' shops, market-halls, railway stations, &c.—Beautiful and highly-finished polished plate-glass for shop-fronts and all other glazing purposes, and for silvering.—Superior Silvered Plate-glass Mirrors of all sizes.

By her Majesty's Royal Letters Patent.

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Orders can now be executed, with the greatest cheapness and despatch, by EDWARD BAILIFF and CO. 13a, Cumberland-market, and 118, Wardour-street, Soho (successors to M. Toussaint, Cartisser, and Co.)—Specimens of every description of Church Memorial Windows and Decorations, Glass Painting, Staining, and Embossing, may be seen as above. Designs and estimates upon application.—February 26, 1856.

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 295, Oxford street.
REDUCED TARIFF

CCC CROWN, 18 Tables, per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 2, 3 feet crate, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 41., 4½, and 5d. per foot. PLASHED RUBY, 1s. GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Sashes primed and glazed, 3d. per foot.

Catalogues free, on application to the Managers, as above.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 28s.; 24s., 30s. Squares. in Boxes of 100 feet each, 6 by 4, 10 by 8, 1½d. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 2½d. per foot. Crown and Sheet. British and Patent Plate. HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 31, Princes-street, Leicester-square.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, FOLUTED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—Applications for estimates and lists of prices to, be made at their warehouse, 315, OXFORD-STREET.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 32s., 28s., 24s., 30s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 23 by 14, 2d.; ground-glass, in cases, 2½d. per foot: Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.
G. FARMILOE and SON, 118, St. John-street, West Smithfield.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Pipe, White-lead, Lead, Iron and Brass Pumps, Watercloset Cocks and Plumbers' Ironwork, Paints, Colours, Oils, and Turpentines of the purest quality, at wholesale prices. Lists on application at THOS. MILLINGTON'S Warehouse, 87, Bishopsgate-street, London. Established more than 100 years.

JAMES PHILLIPS and CO. beg to call the attention of Builders and the Trade to their present LOW PRICES of GLASS for cash.—2 C C per crate of 18 tables, 28s.; 16 oz. sheet glass, 2d. per foot: crown and sheet squares, in 100 feet boxes, from 14 to 22 by 14, 3d. per foot; enamelled glass, in crates, 6d. per foot; ground ditto, 4d. per foot; foreign sheet in cases of 200 feet, 36s. 28s. 40s. and 42s.; patent rough plate tiles, 10s. per doz. Cathedral and stained glass, and all the neutral tints.—116, BISHOPSGATE-STREET WITHOUT.

TO ARCHITECTS, BUILDERS, AND OTHERS.
FRANCIS, RICKABY, and DUNN beg to call the attention of the above to their IMPROVED REVOLVING WOOD and IRON SHUTTERS, also, to their extensive assortment of BRASS and other METAL SASH BARS, STALL-BOARD PLATES, &c. F. R. and D. having erected new and powerful machinery for the sole manufacture of the above, are enabled to offer them at a considerable reduction of price. Prospectuses can be had or forwarded, on application to 341, Gray's-inn-lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Blackfriars-road, begs to inform Architects, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 110, Broadwall.

J. FISHER, 70, YORK-ROAD, LAMBETH, formerly shop foreman to Messrs. Lawrence, Shop-front Builder and Manufacturing Joiner, 1¼ and 1½ four-panel doors from 6s. each; 1¼ sashes and frames from 7d. per foot; 2 inch ditto from 8d. Windows fitted with Grabhorn's Patent Hinges for cleaning, painting, &c. All kinds of joiners' work estimated for according to design.—A List of Prices sent on application.

WINDOW-BLINDS. — J. FULLER, Manufacturer, 31, Charlotte-street, Blackfriars-road. Established, 1805.—Venetian Blinds, from 10s. each, or 8d. per foot; Wire ditto, 7s. each, or 1s. 1d. per foot; Holland ditto, from 5s. each, or 8d. per foot. Every other description of Blinds equally low, warranted of the best manufacture. Discount to Builders and the Trade. Fixed complete.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 3s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application, post free.

TO BUILDERS, MASONS, AND OTHERS.
THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Bardilla, dove, black, black and gold, Sienna, St. Ann's, statuary, serpentine, verd antique, &c. Portland, Harehill, Park Spring, and other stone, in blocks, slabs, landings, and headstones. Yorkshire paving, granite curb, &c. All goods carefully packed and forwarded to any part of England.—THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

300 MARBLE CHIMNEY-PIECES, of various designs and colours; also a quantity of stone ones, with about 3,000 feet of Marble Slabs. The slabs and marble chimneys consist of statuary, black and gold, bardilla, black vein, Sicilian, &c. &c. which will be SOLD by AUCTION, on the PREMISES, at the MARBLE SAW-MILLS, Cambridge-heath, Hackney, by Messrs. EVERSFIELD and HORNE, on TUESDAY, the 22nd of APRIL. Catalogues sent, if required.—Now on view.

MARBLE.—The Italian Marble Company, Importers of the produce of their own quarries, in the province of Massa-Carrara, Italy, beg to inform the general Marble Trade in the United Kingdom that they are prepared to undertake contracts for any quantity of Statuary, Veined, Sicilian, Bardilla, Dove, and other Marbles, in blocks of all dimensions, delivered on shipboard at Leghorn, or in dock, London. A constant stock always on view on the premises, where orders are taken for Paving Slabs, Garden and Hall Statues, Vases, Tazzas, Mortars, Consoles, Chimney-pieces of all classes, Circular Tables-tops, Monuments, &c. executed in Italy.—For further particulars, inquire at the Office on their Wharf, Thames Bank, Pimlico, adjoining the east side of Vauxhall-bridge.
WILLIAM W. BONNIN, Secretary.

Lloyd's Marble Wharf, Thames-bank, Pimlico,
Adjoining Vauxhall-bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

MARBLE.—NOTICE.—The ITALIAN MARBLE COMPANY have REMOVED their Office from 18, Canning-street, City, to their WHARF, THAMES BANK, PIMLICO, adjoining the east side of Vauxhall-bridge. Please observe the exact address.
WM. W BONNIN, Secretary.

THE LIZARD SERPENTINE COMPANY manufacture and sell in block and slab the beautiful stone now raised from the largest serpentine quarries, Chimney-pieces, Columns, Fonts, and ornamental works on view, at 20, Surrey-street, Strand.
HENRY COX, Manager at the Lizard.
F. W. RUFFLE, Agent in London.

TO SCULPTORS, BUILDERS, MASONS, &c.
B. FABBRICOTTI respectfully invites the attention of Gentlemen connected with the Marble Trade to inspect his fresh STOCK, composed of statuary, vein, Sicilian, black and gold, dove, Bardilla, Siena, and Breccia, in blocks, and particularly call their attention to a large quantity of his best statuary, sixty blocks, of all sizes, just landed.
Monuments, vases, and statues, finely executed in Italy.
Carrara Wharf, Thames-bank, Pimlico.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

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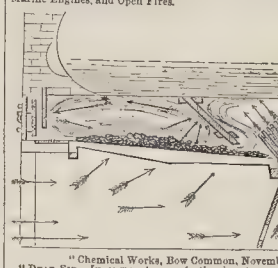

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The Builder.

Vol. XIV.—No. 686.

THE exhibition of the competition drawings for barracks was opened at Burlington House, on Monday last; but as yet, very few persons have availed themselves of the opportunity. We need hardly say now, that we view an exhibition of this kind as full of advantage to the profession. About this element in the vexed subject of competitions there can be no question; and as to the present case, it is seldom that any similar care is taken by a committee in doing what they can do, to ascertain what are their own wants. The committee examined twenty-three witnesses on points connected with defects of the existing barracks; and their report, prior to the competition, appears to have been drawn up with care, and proper apprehension of the desired improvements, and those additions to the accommodation which have been so long demanded on the score of health, decency, and the now-admitted requirements of the soldier in regard to education and harmless recreation. At present, as it was admitted in the House of Commons, a few weeks since, by Lord Palmerston—"there can be no doubt that the barracks in this country are inferior to those of any other country in Europe." He said,—"Wherever you travel on the continent, you find that buildings of this character are more airy and spacious, more judicious in the plan of their construction, and in all respects better adapted for the accommodation of troops than in England." Some of the recently-erected buildings, though probably superior to those of older date, have been found objectionable in points of great importance. At Woolwich, the system of warming and ventilation adopted is called an utter failure. At Devonport, the yard is described as not wide enough for half a battalion, and therefore perfectly useless for the exercise of the troops within the barracks; there is no accommodation for the wives of soldiers, spite of all that has been said of the objectionable character of the present practice; and whether from leakage of the roof (through inattention of the authorities of the Ordnance to the quality of the asphalte) or from condensation of the moisture inside, the construction itself seems to be very defective.

Some of the questions as to accommodation are peculiarly difficult in the case of places of residence for soldiers. It is impolitic wholly to forbid marriages, and yet it seems to be found difficult to properly recognise them. Quoting again from Lord Palmerston's speech, on the 7th inst.:—"Every day we are reminded of the necessity of providing suitable habitations for the civil population," and it cannot be supposed that "these considerations" will not be deemed "of equal importance in the case of our soldiers." The committee, however, do not seem to have seen the possibility of accepting such view of the case; for, though they seek to provide separate accommodation for the soldiers recognised as married, that accommodation does not go beyond a single small room,—though it might have to hold a large family. There is difficulty also in providing for the sergeants (often married men), who require some degree of privacy on all accounts, and who yet must be sufficiently amongst their men in the barrack-rooms to maintain discipline: and this difficulty is one of the points that has not been got over in the plan for infantry barracks which has received the first premium.

We are not aware what length of time the adjudicators gave to the examination of the 114 sets of drawings; but though we have gone through the report and evidence with some degree of care, we confess ourselves utterly unable to vie with the ordinary skill of competition committees in getting through work of this nature, and we propose, therefore, to return to the subject in our next. We may, however, observe that there are some points to which great importance should be attached in comparing the designs; and we are not sure they have been sufficiently considered by the committee. Expense of ground and construction may be thought of secondary importance; but it is not to be disregarded. The selected design for infantry barracks would be extremely costly. The quantity of ground which it covers cannot be less than 35 acres. If such an area is *necessary*, objection falls to the ground; but if otherwise, let it be considered what would be the cost of sites of such extent in the neighbourhood of towns. Extent is also a positive disadvantage in regard to convenience and supervision.

The design which has received the second premium, occupies but half the area of the other, or thereabouts. We are not aware whether the buildings there were deemed more crowded than was desirable; but the plan has some advantages over the first in regard to intercommunication. A principle referred to in the evidence, and different from that shown in the plan which we engraved last week, on which we have received some expressions of opinion, has been adopted; and altogether this second design will deserve careful consideration. It should be remarked that there is no back entrance.

In the first design, the position of the principal gate, towards one end of the ground, is defective as to some results—as the access therefrom to the quartermaster's stores; and that from the barrack-rooms of 500 men, to the parade-ground seems insufficient. Ablution-rooms, we may observe also, should be well lighted.—The design, which has received the third premium is one in which a member of the committee is said to have had some hand. An iron and glass roof is adopted for a covered drill-ground, on to which the barrack-rooms open with galleries. Great care has been taken in the preparation of this large set of drawings. The plan, however, is defective; the distance of the kitchens from some of the rooms being far too great. There are several of the unsuccessful designs which cannot but afford most useful suggestions in points in which some of the premiated designs are deficient; and if those drawings are retained by the committee, some compensation will, we hope, be afforded for the great pains and merit which they display. The *panopticon* principle seems to have been attempted by several of the competitors; but the appearance on the plan is gained in the majority of cases without the reality,—unless it be in the design for the cavalry barracks, to which the third premium was given. Circular forms even have been adopted in some cases, without regard to their convenience for the ordinary movements of troops, in quadrangular masses. External character has not generally received much attention, though there are some important exceptions; and we shall, of course, hold it as indispensable that the future opportunity in this respect shall not be thrown away. Next week we may hope to enter a little more into analysis. Some of the competitors, we may say, are anxious that the names of the authors should be attached to the drawings.

Temple Ruins discovered at Marseilles.—The ruins of the Temple of Diana which was known to have existed at Marseilles have just been discovered by workmen employed in digging the foundation of the new cathedral.

THE LILLE CATHEDRAL COMPETITION.

It is curious to notice the different way in which architects have treated the subject: there is the expression, too, of divers nationalities, interesting to compare, but more than difficult to describe. With two or three *bizarre* exceptions, all are works of merit, and have cost much thought and labour. We will select a few, and endeavour to convey a rough idea of their beauties.

Under the motto, "Tria juncta" (7) eleven drawings, evidently of British origin (and none the worse for that), show a nave with double aisles, absidal chapels round the choir, terminating with an octagon chapel to the patron saint (Notre Dame de la Treille). There is a crypt under the altar. The west entrance is ornamented with statues, and window above. The two towers are octagon in plan, have buttresses with pinnacles, and terminating with open-work stone spires, in the florid style. The whole is a good sample of the work of the thirteenth century, but the open-work seems to partake of the fourteenth; nevertheless, the design is full of merit, and generally admired.

"Dieu en soit garde," is the motto to sixteen drawings: the plan shows the usual arrangement, single aisle on either side of the nave, gallery or triforium over the aisles; those round the choir are double, with chapels. The entrance is by three large deeply-recessed doorways, ornamented with statues in niches, &c. as at Rheims. The general character of the building partakes of Rheims and Amiens cathedrals. Great pains have been bestowed on these drawings: the tracery of choir, with details of the pavement, is a masterpiece—vaulting of deep blue spangled with gold,—and the brilliant way in which the colouring of the rest of the interior is set forth is far beyond what is usual in competition drawings. This design is known to be the work of Leblanc and Raimbaut, architects, at Rheims.

The plan following, motto (222) "Quam dilecta tabernacula," &c. is exemplified in twenty-four drawings. The west or principal front is composed of three ornamental doorways, of good design, with rose window over centre door, flanked by two high square towers of stone and brick, in horizontal courses. The vaulting of the interior is of stone and brick, and the effect produced thereby is good. Windows are lancet-headed. The detail drawings are carefully executed. Several pen-and-ink sketches, of rare ability, display views of the exterior, the organ-loft, and a portion of the cloisters. This design is English.

"L'éclectisme est la plaie de l'art," is the motto to twenty-one drawings, framed and glazed. A handsome plan shows nave with single aisles; double aisles round the choir, with chapel. There is a beauty about this plan obtained by the order and disposition of the parts, that cannot fail of being appreciated. The style chosen is the most simple, and devoid of ornament; nevertheless, it is very effective. The perspective view of the interior clearly shows the arrangements to be of a superior order. The pulpit, confessionals, stalls, &c. are not in character with the rest. Angels, saints, &c. stuck on slender sticks, all alone, do not excite admiration—rather criticism. Still this is one of the best designs submitted—it is the work of Mons. Lassus, the restorer of the Sainte Chapelle, at Paris.

"In Domino confido," marks twelve well-executed drawings: the two towers in west front are square below, octagon above, gradually diminishing, and finished with spires with ornamented bands, large enriched doorways; the numerous buttresses terminating with pinnacles around the sides and east end, complete a very effective exterior. In the interior, the columns support arches, very pointed, rich mouldings; the columns have a massive appearance, so much so, that those at the intersection of the nave with transepts have contracted the open space, and thereby materially interfere with a full view of the choir. This is to be regretted, as the details and general disposition of the plan mark it an able production. This is doubtless English.

"Fœderis Arca" is set forth in twelve drawings; three large recessed doorways, ornamented

with saints, in niches, surmounted by a row of niches containing statues, over which there is a rose window. Square towers, with spire, and small pinnacles at angles, form the principal front. The general effect of the exterior is not happy, although the details are good; the interior is preferable. The drawings of the confessional, screens, stalls, iron work, and the glass windows denote the work of one possessing great acquaintance with church furniture; even the style of the drawings is of the period, and we have no hesitation in ascribing this, too, to England.

"Ad æthera tendens," is on thirty-one drawings, very carefully made, and denoting good taste. The design includes two decorated open-work towers in front, three enriched doorways, with large window over. A very high tower, with pinnacles, &c. &c. rises from the intersection of the nave and transepts.

"Spes" is the motto of six drawings, of a very fine pile, apparently of English invention. There is great beauty in the arrangement of the plan, the chapels round the choir presenting a cluster of buttresses, with pinnacles, externally of good effect. The principal front, with its three doorways, window above, and single tower, although the popular prejudice is in favour of two, is of great beauty, captivates at first sight, and improves upon a more intimate acquaintance. The ornamental open screen in front only which surmounts the body of the nave, is pretty in design, but merely serves to give height; it stands alone, and unfortunately the effect on the longitudinal elevation is that of weakness.

"Zelus domus tuæ comedit me" has eleven drawings to illustrate a peculiar plan. At the intersection of the transepts with nave, an octagon space is shown, the columns rising to the springing of the groining of the roof. Above the arches of the gallery, are niches all round, with statues, which produce a novel and good effect. The high altar is placed at this point, the choir beyond, so that the nave and transepts serve equally for devotional purposes. The altar is raised, the choir more so: the crypt is under the choir, and easy of access. The windows are lancet-headed, single under the arches—in pairs above, with rose window over. The front is also novel in design; an immense arch richly decorated, embraces the whole of the front, between the towers, and encloses the three doorways, and large window of the west end. The towers are of open work tracery.

"In veritate confido," "Dum spiro spero," "Le monument sera l'expression d'une grande pensée d'esthétique catholique," and others, might also be noticed, as possessing merit; but here we must stop. The exhibition is now closed to the public, and the jury have possession of the place: let us hope they will arrive at a wise decision.

THE PROPOSED WAR-OFFICE, PALL-MALL.

This matter does not stand now exactly as our correspondent of last week put it. Professor Cockerell was at first regarded as desiring to quit the profession, and so was not included in the list of invited competitors. Ultimately, however, he was applied to, and accepted the invitation. Mr. Tite has declined, and Mr. George Mair has been added to the list, which now stands thus,—Sir C. Barry, Mr. Cockerell, Mr. P. C. Hardwick, Mr. Mair, Mr. Pennethorne, Mr. Shaw, and Mr. S. Smirke. The designs are to be sent in six weeks after the instructions have been issued. The selected competitor will carry out his design, and receive 5 per cent. commission; and each of the other candidates will receive 100 guineas; all the designs remaining the property of the Government. The idea originated, we believe, with Sir Benjamin Hall, who deserves credit for desiring to render such new buildings as may be required by the Government worthy of the country.*

The Thames Tunnel.—During Passion week, no fewer than 52,611 passengers passed through the tunnel, and paid 219*l.* 4*s.* 3*d.* in tolls.

* A correspondent urges that the matter should be thrown open to public competition.

ARCHÆOLOGICAL STUDIES IN JERUSALEM.*

With the family of Herod the historical importance of Jerusalem ceased for a time, and it was only when Christianity became the religion of the Roman empire that it again rose into importance. From the time of Constantine to that of Heraclius, the whole of Palestine, and especially Jerusalem its capital, might be considered the head quarters of Christianity. It was given up by the Roman emperors to religion, and was covered with churches, monasteries, and convents. The history of that period gives, as the most prominent names in the country, those of Saints Jerome, Eusebius, Paula, Saba, and many others. The monuments of that period, however, are scarce. We have a church in Jerusalem, which, as far as we can conjecture, is of the time of Justinian. The present mosque El Aksa, we are told, was begun by one of the Patriarchs of Jerusalem, and finished by Justinian himself: this was about the middle of the sixth century. I have not been able to enter it, but I believe it has been disfigured by subsequent constructions, both during the Latin and the Mahomedan occupation of Palestine. The only authorities we can follow in the matter are Procopius, and the modern views of Mr. Catherwood. It appears to be of the basilican form, and terminates with a transept: the apse, which has been destroyed, must have been attached to the transept without an intervening choir.

At Bethlehem (six miles from Jerusalem), there is one of the most complete basilicas of the Byzantine times. It is more than 200 feet long, with five naves divided by four rows of columns, directly united by an entablature. It has a very magnificent transept, and terminates in an apse, both at the eastern and at each end of the transept. This church is amply illustrated in the work of Canina, on *Christian Temples*. You will there see what a marvellous instance that church presents of the Greek school of mosaic art, which, however, is of later date than the building. The monuments of this period in the Holy Land may be considered as the cradle of the Romanesque school of Christian architecture; for though I speak of them as Byzantine, these buildings have not what we know architecturally as the Byzantine character of the Romanesque: they possess more of the character of the Roman Basilica, like many existing churches in Constantinople itself. There is at Gaza a church attributed to the Empress Eudoxia. I have not been there, but from the descriptions of it given to me by learned visitors, I believe it to be a work of that period. I may mention also the church of St. John the Baptist, at Damascus, one of the most wonderful monuments of that kind. It is 400 feet long.

Four miles south-west from Jerusalem, we have a most interesting ecclesiological monument (one of the earliest), in a complete tesselated pavement. This is not of the kind we generally see in Romanesque churches, and of which we have a specimen in the sanctuary of Westminster Abbey; but it is made of square pieces of marble, and resembles the specimens found in the Roman baths rather than in churches. This pavement is in the church of the Holy Cross, on a spot which was of no importance before the Christian period: we must, therefore, recognize it as a Christian work, and the emblems introduced in it bear out that view. It follows the shape of the church, which is of the usual Basilican form, consisting of a nave, side aisles, transept and triple apse: in the middle of the transept, under the lantern, is a magnificent wheel of mosaic pattern, 30 feet in diameter, containing all kinds of Early Christian emblems, the lotus, the peacock, the fish, &c. The rest of the pavement which covers the whole church, is simply of white tesseræ, or scored with thin lines of black dadi,† in a lozenge pattern: the pavement of the nave has a border or frame of a guilloche pattern of several bands. This church is mentioned by Sæwulf, an English writer of the twelfth century, in an account of his pilgrimage, as not having been destroyed by the Saracens, while the surrounding buildings and the cells of the monks were laid waste. It is a plain church, having square piers and slightly pointed arches, the apses, as usual in Palestine, being semicircular in plan, and slightly pointed in elevation. It is, in fact, a Transitional church, the pavement being of the Byzantine period, and the building about it of the school which we shall have to examine presently.

A better specimen of the Transitional style, however, is the *Church of the Holy Sepulchre* itself, which we all connect with Jerusalem as its chief monument. In its present state, the Church of the Holy Sepulchre is in arrangement what the Crusaders left it, but the details of the church are not altogether of the time of the Crusades. If we examine its capitals, we see the patchwork it is made up of. In the gallery, above the part known as the Arches of the Virgin, are two rows of pillars, corresponding with each other. Those on the one side consist of Byzantine shafts, fitted more or less to Byzantine caps, but on the other side the pillars are rude imitations, executed in the eleventh century; being probably a restoration by Constantine Monomachus, and showing the period most obviously.

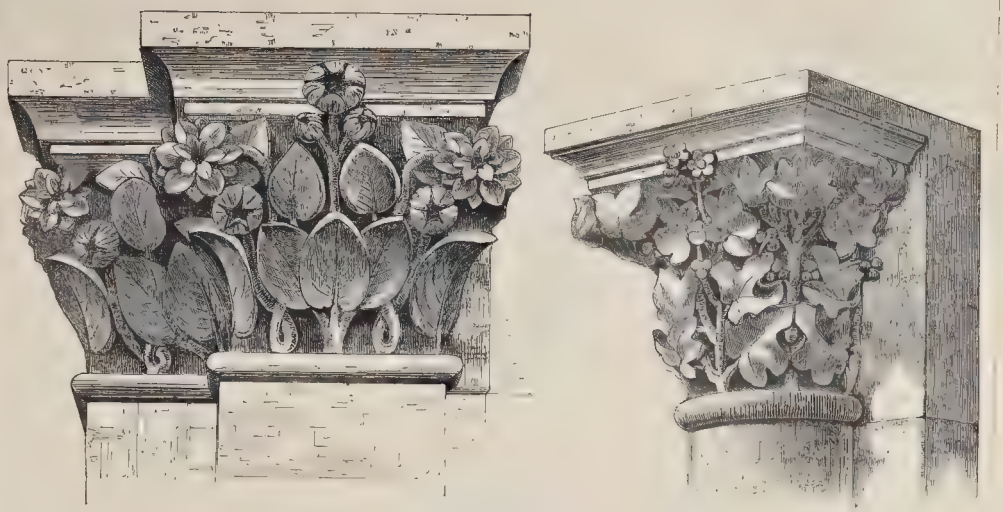
With regard to the primitive shape of the Church of the Holy Sepulchre, I differ from the conclusions of Professor Willis. He starts with the explanation of Eusebius, but he has put forth very mistaken notions in his interpretation. He conjectures that the Emperor Constantine began by placing the Holy Sepulchre in an open court-yard behind the Basilica. Eusebius mentions the sacred cave, or Holy Sepulchre, as the head of the whole work; and he again uses the word in his description of the great apse, which must make us conclude that the sepulchre was the centre of that great apse, which he speaks of as being so much ornamented. That would show us that Constantine built his church on the general form of the Roman Basilica: we should have the apse at the west-end, which was then the altar-end of the church; because in the basilicas the priest had his face towards the people, and to the east. When Eusebius speaks of the Basilica being to the east of the sacred cave, he evidently can only mean the nave and aisles; since he speaks of the magnificent ceiling which Constantine placed over it, as covering the whole of the Basilica, but that could not cover the apse. If he used the word Basilica to mean the nave and aisles in speaking of the ceiling, he might use it in another part in the same sense. The present plan of the church leads us to that conclusion. We know that when buildings are restored, the old foundations are used again in erecting the new building; and the first glance at the plan of the Holy Sepulchre will give us the outline of the basilican form. Professor Willis remarks that the Basilicas at Constantinople are described as dromical, that is to say, having the same outline that the Hippodrome had, a rectangle terminated at one end by a semicircle of the same width. After this church had been destroyed by Chosroes, it was repaired by Modestus, whose means certainly were very limited, and he only rebuilt it in part, and covered over the Holy Sepulchre by completing the circle, one-half of which was traced out already by the great apse. In fact, the remaining part of the circle, which we know to be the present form of the nave of the church of the Holy Sepulchre, is only given by the piers of the central part, and in no way in the general outline or in the aisles.

The holy sanctuaries in this church are, after all, only three in number,—the Holy Sepulchre, the Calvary, and the Prison of our Lord. Now the church consisting of five naves, the Calvary would come exactly in the inner lateral nave on the south, and the Prison of our Lord in the outer lateral nave on the north. I make no allusion to the fourth sanctuary—that of St. Helena, which must have been always a complete church in itself. It has all the parts of a good old Basilica,—nave, aisles, three apses, &c.; the southern apse, on a lower level than the rest, being the spot where the cross was found.

Just at the entrance of the Ethiopian convent, over the subterranean church of St. Helena, I found an arch, nearly complete, of

* The following is the continuation of Mr. Wigley's paper, read at the Institute of Architects, February 25. See p. 159, *ante*.

† Dies.



WORKMEN'S CAPITALS, TRINITY COLLEGE, DUBLIN.

Byzantine character, which, I believe, must be attributed to Constantine, and seems to have been one of the arches of the atrium in front of the basilica. There is only just room for a good-sized atrium between that arch and the remains of columns which still exist, and which have been identified by Dr. Schultz and others, as parts of the propylæum of the atrium of Constantine's church of the Holy Sepulchre. There is only just space again between the arch and the Holy Sepulchre for a good basilica: the Holy Sepulchre, therefore, was inside the church, and indeed the head of the whole work.

Having so far given you an explanation of the church as a Byzantine specimen of the architecture of the Holy Land, I will now refer to it as an example of the Crusaders' period. The Crusaders found it consisting of the round church of the Holy Sepulchre, properly so called, and a few scattered chapels, one covering Calvary, and another the Prison of our Lord. They proceeded to arrange the church after their own ecclesiological fashions, and reversed the sanctuary, placing it towards the east, where the nave of Constantine had stood, and constructing the choir according to the manner of the time, in which the priest turned his back to the people. They afterwards made a transept, the southern end of which is now the generally known façade of the church of the Holy Sepulchre, and used the round church as the nave of the newly-arranged cathedral.

The doorway displays the true features of Pointed architecture. This brings at once to our mind the vexed question of the origin of Gothic architecture. It is remarkable that we are now coming to a full series of Pointed churches, all dating from the three first quarters of the twelfth century. They could not have been built later, since the Latins only occupied Jerusalem from 1099 to 1187.

I am the more convinced that our Western Gothic is derived from the Holy Land, because it is the only country which (at that very period when we all know that fashion grew up) had sufficient influence to introduce Gothic architecture in so many countries at once. The Holy Land was the scene of the "universal exhibition" of the twelfth century for Christendom, and the point where all European nations met on common ground, and formed themselves into one common type, and one common nation. The great results of such a meeting are evident in scientific discoveries. The Assizes of Jerusalem are the first modern code of law in existence; and we may well conclude that in architecture also the Latins devised one common type for themselves. Mr. Thomas Hope, in his Historical Essay on Architecture, has very skilfully delineated the progress of almost every variety of architectural style; but he seems to leave a *lacune* to be filled up between a Byzantine monument which he considers the first of that kind,—the aqueduct of Justinian the Second, where pointed arches were used as a fashion, and the time when they became commonly used in the West. He conjectures that the Mahomedans took their Pointed architecture from the Byzantines, and I agree with him. The Arabs made ample use of it several centuries before it was used in the West. There are several Arab monuments in Damascus and Cairo, which can be traced to the ninth and tenth centuries.

And to corroborate, as it were, my theory, that it was in the Holy Land the western nations became acquainted with the Pointed arch, we see that wherever in other countries the same meeting took place between the Eastern and Western schools, the same effect was produced, namely, the engrafting of the details of the Romanesque schools upon Arabic architecture. We see that in Spain and in Sicily. In Spain there are two distinct styles of Gothic—the northern and the southern, the latter being indigenous, whilst the northern style was introduced from France. In Sicily, where the Normans met the Arabs, they formed the same amalgamation. This was in the century which preceded the twelfth century. But we cannot, with Mr. Gally Knight, trace to Sicily the origin of such a simultaneous school spreading all over the West. Sicily never was a fashionable country; but the Holy Land has been, and it is the only one we can mention as a centre from which such a general fashion could spread all at once. There is, perhaps, one exception to the assertion that all the churches which the Crusaders built were in the Pointed style; but that very exception confirms my views. It is the church commonly called the Church of the Knights of St. John, which is built in the Norman Romanesque style, displaying billet mouldings, and all the other details with which we are familiar. We must reflect that this building, though of *about* the time of the Crusades, must have been erected a little previous to them by the merchants of Amalfi, who founded the hospital, which became the birth-place and head-quarters of the order, about forty years before the Crusades. The merchants came from a part of Italy which was then under the Norman sway. There are some instances of architecture similar to this church in the district of Amalfi itself, and it is no wonder that these people should erect in Jerusalem an isolated instance of their own noble style.

In studying the Jerusalem of the Crusades we are more fortunate than in other archæological investigations, owing to the researches of a friend of mine, M. de Maslaterie, Professor of the Ecole des Chartes, at Paris, who has brought to light a most valuable description of Jerusalem in a Norman Chronicle of the end of the twelfth century. This was published by Comte Beugnot in his edition of the "Assizes of Jerusalem;" and nothing can be more interesting than the fact of our being able to go about Jerusalem with this Chronicle in our hands, identifying almost every spot described in it.*

WORKMEN'S CAPITALS, TRINITY COLLEGE, DUBLIN.

Some mention was made in our pages recently of the capitals arranged and sculptured by the workmen for the new museum at Trinity College, Dublin (p. 143). Let us repeat that to one Englishman, Mr. Roe, of Lambeth, assisted by the native talent of three brothers, workmen, the O'Sheas, of Ballyhooly, county Cork, the whole of these sculptures are owing. "The ornature is for the most part wreathed in foliage—the oak, the ivy, acanthus, shamrock; lilies, lotuses, birds, and, in fact, every variety of wreath—and these so diverse, so diffuse, so graceful, that the very diversity establishes its beauty."

Above we give engravings from photographs of two of the capitals.

REVOLUTIONARY ARCHITECTURAL PRINCIPLES.†

We are told that it is the object of one of Mr. Ruskin's most earnest, elaborate, eloquent, and popular works, to—

"Determine [for every architectural effort] "*constant, general, and irrefragable laws of right*" to "*command an honest architecture.*" We are warned, with all possible solemnity, of the criminality of "the suggesting of a mode of structure other than the true one;" that "that style of building is generally the noblest which discovers to the intelligent eye the great secrets of its structure;" that one of the immoralities of architecture is "*direct falsity of assertion* respecting the nature of material;" that

* The subject was resumed at the next meeting, to which we shall refer.

† See p. 161, *ante*. The editor will please consider himself not necessarily bound to the opinions expressed.

"the moment iron, for instance, in the least degree takes the place of stone, or if it be used to do what wooden beams would have done as well, that instant *the building ceases to be true architecture;*" that "the system of intersectional mouldings has been *the cause of the downfall of Gothic architecture.*" The Lamp concentrates its rays in the general exhortation, "*Do not lie at all.*"

We have here, I presume, a signal specimen of what the Westminster critic calls "restoring to honesty, manliness, and veracity." I trace it beyond critical reviews. It has found its way into professional treatises, and even leading articles of "the leading journal." This last fact is proof enough that it has begun to impregnate the popular mind.

I wonder not: it sounds too honest and straightforward not to produce an effect. I shall be no less honest and straightforward in asking a question or two concerning it. *Will it bear the test?* Is it the expression of sound architectural good sense? or must we reluctantly class it with Puritanism, Fanaticism, Quakerism, or Radicalism? I shall not shrink from the question on the ground of *principles;* but I shall not scruple to put it first on that of *consequences.* What if it involve the annihilation of every existing style which all mankind, its author himself included, are accustomed to take for architecture?

To make our survey complete, we may begin with another sentence, which, though not from the same "Lamp," is no less the utterance of the same authority:—

> "The feeling of the Renaissance is a feeling compounded of insolence, infidelity, sensuality, and shallow pride."—*Pre-Raffaelitism*, p. 27.

There can be no possible doubt of the result of such a sentence on all "constant, general, and irrefragable laws of right." We may say, without a moment's hesitation,—there go, at one dire sweep, the Brunelleschis, Bramantes, Michelangelos, Sansovinos, Sanmicheles, Sangallos, Scamozzis, Fontanas, Palladios, of Italy, the Holbeins of Germany, the Perraults of France, the Inigo Joneses, Christopher Wrens, Vanbrughs, and Chamberses of England; in short, all the great and noble architectural names of at least three centuries, together with all artistic impulses—synchronical, at least, if not actually connected, with the Reformation.

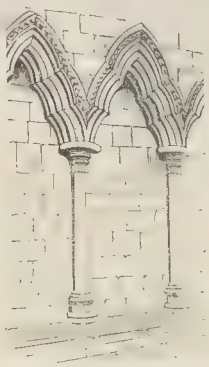
Of what is commonly called Elizabethan we need take no separate account. It was but a phase (I know not who will call it the best or purest) of the resurrection or Reformation impulse: with Mr. Ruskin it is simply hideous.

Let us breathe a moment. We have disposed of modern architecture *in toto.* I say disposed, for none can question as to an "*honest*" use of "irrefragable laws of right." If any think Mr. Ruskin a cold sentimentalist, he has but to hear his exhortation to the "gude folk" of our modern Athens:—"Introduce your Gothic line by line and stone by stone; never mind mixing it with your present architecture" [the very concession shows the total absence of tolerance]; "your existing houses will be none the worse for having little bits of better work in them."—*Edin. Lect.* p. 102.

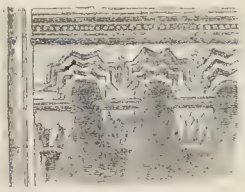
The irrefragable laws do not stop at modern classic. The reader will remember the sentence about "knocking down a couple of pinnacles at either end of King's College Chapel." That order takes us back to the "Seven Lamps;" beneath whose mystic light we stumble on another sentence about "*our detestable Perpendicular*"

There can be no more hesitation as to consequences in this than in the former case. We have seen, in fact, in the preceding letter, how much of the characteristic ornaments and pervading features of this repudiated style are, more or less directly, at variance with the great cardinal principles of nature. The result is plain: we have no need to quote awful records, but may take up our own estimate, and say, "There go our William of Wykehams, our Waynfletes, and our Wolseys," with architectural consequences, "dreadful to hear, and dreadful to tell"—all, I think, but a transept of Winchester Cathedral,—some two-thirds, at least, of Canterbury,—something like the same portion of York,—I know not what not of Gloucester,—the east chapels, certainly, at Peterborough,—to say nothing of such things as King's College Chapel, at Cambridge; St. George's, at Windsor; or Henry the Seventh's, with its flying buttresses, at Westminster.

This looks, indeed, very like "the downfall of Gothic architecture." But this is only the "Perpendicular;" we are but yet at the middle of the fifteenth century. Let us go farther back, to the very purest specimen of Gothic the world can show us,—I mean our own Early English. What I am about to challenge is so critical, that I must present it to the actual sight of the reader. Here is a little fact from Carlisle.



No one will deny that this graceful shaft makes architectural pretension to the support of the superincumbent arches. I call on all the Pre-Raffaellites in the world to deny, if they can, that on the asserted irrefragable principles of constructive honesty, such pretension is nothing more or less than *a downright lie.* The mouldings are built into the wall, and form a part of it; the shaft supports nothing,—in most cases not even its own capital! No need of turning mason to know all this. Here is another specimen, no less familiar to the simplest lover of Gothic architecture.



Thanks to time and Mr. Britton, all may know the "honest architecture" of the monks of Croyland. It is needless to say that this astounding falsehood is no solitary one. Look and listen, and you shall hear its echoes on many a wall. Not an instance of that purest, loveliest—I had almost said holiest of styles—not one of all those beautiful arcades that *characterize Gothic architecture*—not one, certainly, of those innumerable detached shafts that people our Gothic walls, but makes the same precise pretension, and tells—on Mr. Ruskin's "honest architecture" principle—each its separate and emphatic lie. You have but to see Britton or Rickman, and look for Durham, Lincoln, Wells, Peterborough, Salisbury, Exeter, or almost any of our cathedrals, to find sumptuous chapter-houses, majestic towers, and reverend façades literally masked in this system of constructive falsehood. "What might we not say of Byzantine and Lombard churches?"

This of detached shafts: what of shafts *attached?* What must the architectural moralist pronounce of a pillar which is no pillar, but only an edging or moulding in the solid wall? What but an architectural sham is that single elongated column, supporting a vaulted roof? Can it stand a moment before the precept, "*Do not lie at all?*"

Even this, again, as regards the shafts only; but *what of the arch?* We all know the constructive meaning of the word "arch." What shall we say of an arch cut out of a single block? Is that an honest or a lying arch? Is it anything else, on the irrefragable principles, than a barefaced sham—a constructive falsehood? I leave those who "love the studious cloister" to compute the damages.

But look a moment at any Norman wall that comes first to hand. Here is another fact from Carlisle:—

Observe those clusters of shafts, and the arches that spring from them. Will any one be bold enough to tell us that this placing the *main support upon the weaker,* this implying that the inner arch supports the outer, where it has but a parasitic existence, and derives all its stability from the abutment of its impost upon that of the arch that surmounts it, is not an inversion of constructive logic? an arrangement purely hypocritical?—in fact, a lie? But this is just the pervading arrangement of Norman work.

But we have not closed the account: these are lies in stone. What of *arches in wood?* Look at Gothic woodwork; I speak not of this style or that, but of all Gothic work in wood without distinction. Think of a *professing arch cut out of a simple board!* and then go in honest daylight through the first Gothic cathedral within your reach and count the cost. Do not pass unnoticed the baptismal font, though that, of course, is stone,—but look to the organ-loft, rood-screen, or prebendal stalls, you may find of wood. Perhaps the "communion-table" may be an honest "table," and not an "altar." If so, it will be also of wood. Go next to the bishop's throne, casting back, perhaps, an oblique glance at the stone or marble that records a prelate who once sat there. You shall observe that one and all these things are positively *Gothicised by gratuitous arches;* that, in fact, from holy baptism to holy burial, the holy prelate was architecturally ensconced in one continuous system of hypocritical arches and lying pillars.

Could all these things but find a tongue, and be converted to Pre-Raffaellitism, what strange noises would mingle with the "confession" in our cathedral services! If such building is really to be styled "*Christian,*" and held to consistency, would not some poor innocents be tempted to cry, "Save us from our Godfathers!"

I have no heart to go into the multitudinous dishonesties of Mr. Ruskin's special object of delight, the "Flamboyant." Perhaps some future edition of the "Seven Lamps" will explain the moralities of that twisted column, with its belougings, at p. 94 of the first edition. There can, indeed, be few of the "Stones of Venice" but must begin to feel uneasy in their sockets.

But we have not done yet with our own Gothic: here is something no less pervasive and inseparable. We read in the sixth chapter of the second volume of the "Stones of Venice," that the fifth great Gothic element is "*Rigidity,*" and of this element we have the following explanation:—

"I mean not merely stable, but *active* rigidity,

. . . . which gives stiffness to resistance. Egyptian and Greek buildings stand, for the most part, by their own weight and mass. . . . . but in the Gothic vaults and traceries there is a stiffness analogous to that of the bones of a limb, or the fibres of a tree, *an elastic tension.* . . . . . *writhed into every form of nervous entanglement*; but, even when most graceful, never for an instant languid."

No one will dispute, I presume, this account of Gothic architecture, and few, perhaps, but will wonder, after learning that "*repose*" is so indispensable a quality, that "there is *no art, no pursuit whatever, but its results may be classed by this one test alone*,"*—still more, after hearing Laocoon anathematized for want of repose within the group of enormous reptiles, and Michelangelo eulogized for his "quiet treatment of the plague of serpents," to find the stones of a building complacently described as "jutting," "starting," "knitting themselves," and "wreathed into every form of nervous entanglement." (Ibid.)

This, however, is not the point. I suppose it will be granted that stones in a building can only stand, save by virtue (if we may use the word) of iron cramping, or such like disingenuous contrivances, "*by their own weight and mass;*" and that all such words as starting, knitting, writhing, and elastic tension describe just so many qualities as, by their nature, stones cannot have. Shall we, in pity, put out the "Lamp?" Shall we forget the irrefragable precept? Shall we forego "the honest architecture?" or shall we see all "Christian" practice put to shame before the virtuous heathenism of Greece and Egypt? If not, we must resume our formula, and say, "There go," &c.

But, turning now from these and the late catastrophes, what are we to say of Grecian building? Here are no Dædalean artifices, labyrinthine mysteries, false pillars, lying arches, or feats of bravery. The parts, few and simple, invite inquiry. All looks like a mathematical problem, whose very essence is the intrinsic. Yet, beneath that fair exterior, what a mockery of architectural truth! That oblong building is *not* the petrified wooden hut every one of all its members would say it is. The column is *not* a tree, but a succession of marble strata. The echinus is *not* the stump of the branches. The abacus is *not* a tile, nor does it keep the column from rotting. The architrave is *not* an architrave (principal beam), for it is no beam at all; nor are the triglyphs the rafter ends; nor the guttæ wooden pegs, that help to keep them upright. We know, of course, that they are not, just as we know that intersectional mouldings do not intersect, or that "your humble servant" at the end of a letter, does not affect the personal independence of the writer. All this alters not the rule before us, or the "irrefragable principles." The Parthenon is one conglomerate of false construction from top to bottom,—a series of structural lies we need no Vitruvius to lay open.

Now all this is the more remarkable, since it not only includes the principal features in a building, the name of which has been long synonymous with perfection, but characterizes a style *out of which all subsequent architecture has been developed.* There are few things more demonstrable than the genealogy of architecture; and—the use of the arch alone excepted—the precise points of departure, even of the Gothic style. We may add, therefore, to our account of damages, and say, "There go the Parthenon, the Propylæum, the Temple of Theseus, those of Sunium, Pæstum, and every other fragment we honour with the name of Doric; *and there go 'all that it inherits'*"—seeing that all other Classic styles are but modifications, more or less, of the same falsehood. "*Quod non fecerunt Barbari*," as the Italians say, has been done by a single "Lamp."

There remain the Egyptian, Assyrian, Chinese, and the wig-wam; but these are out of our category. Mr. Ruskin has no more affection for these than for the Renaissance, "accursed of deliberate purpose:" his simple advice is, "Stick to your Gothic." The consequences, therefore, are complete. Some may believe him teeming with another architectural universe: we are as yet without the symptoms. For myself, all I can discover at present is a heap of ruins covering the body of Samson, and a Westminster Reviewer scratching on a broken tablet—"To Mr. Ruskin belongs the merit of recalling to manliness, veracity, and morality, pursuits too long given over to Dilettantism and Conventionalism."

We will not end with personal pleasantries: the true conclusion is plain enough. Architecture appeals to æsthetic feelings, and must be read and understood on æsthetic principles. To bring it to the bar of constructive logic, and catechise and sophisticate it with questions of truth and falsehood, is beside the mark. This is just the "*summum jus, summa injuria.*" No doubt, your verdict will be a grave one; it will but bring you within the prohibition, "*Be not righteous overmuch.*" You may not, perhaps, "destroy yourself:" you will most infallibly destroy architecture.

As to "the noblest building" being "that which discovers the secrets of its structure," it may be permitted the most scrupulous amongst us to remember that that noblest of all material fabrics, the human body, does *not* discover, but, on the contrary, conceals its structural peculiarities; nor is there an individual amongst us, save, perhaps, the medical student, who would not stand aghast at the bare suggestion of those "great secrets." We may reverse the aphorism as regards other fabrics, and say, as a general rule, that, in exact proportion as you approach the æsthetic and expressive—in proportion, that is, as you have not to do with a mere utilitarian machine—in the same precise proportion should you rather conceal, disguise, lose sight of, than suggest the mere necessaries of construction, and leave your building to tell of better things.

But we touch here one of the many points at which all I mean by "Pre-Raffaellitism," goes to the extinguishment of all we mean by a "fine art."

I need inform no reader of the "Seven Lamps," that their ingenious author not only does not intend, but does not foresee these consequences. On the contrary, in the very act of stating principles, he endeavours to escape results. This does not, I conceive, affect the issue. The question is not one of personal intention. "Irrefragable rules of right" cannot bend, twist, and snap themselves short at the beck of convenience or of individual humour. If they be *rules of right*, they must be taken "*for good and all.*" The only question as to particular cases is whether they come within the law. For instance, we read—

"I see not how we can help allowing Brunelleschi his iron chain round the dome of Florence; but *we must find a rule that will enable us to stop somewhere.* This rule is, I think, that metals *may be used as a cement*, but *not as a support.*"—*Lamp of Truth*, p. 37, of second edition.

Now is this a rightful treatment of rules of right? *First*, to make a rule that shall give us convenience of license and restraint? *Secondly*, to draw a nice distinction between iron cement and iron support? *Thirdly*, to condemn, in broad, unmitigated terms, all "structural deceit," and then allow an invisible iron chain round the whole of a dome, under the curious title of "cement." What mean we by structural deceit, but "the suggesting a mode of strength and stability other than the true one?" What is the suggested construction of this far-famed dome, but its being supported in mid-air by the scientific employment of solid masonry? Whisper that the whole would tumble to pieces if you did but cut an invisible girdle; and what would be the reply of Mr. Ruskin's irrefragable right?

But "we cannot help allowing" it. Why not? Because the dome would not stand without it. What need, then, for the dome to stand at all, if it can only stand on a structural lie? This is just the sum and substance of the whole matter. "Do not let us lie at all."

But there is a distinction, it seems, between intelligent and non-intelligent spectators.

"The architect is not bound to exhibit structure, nevertheless that building would be generally the most noble which revealed to the *intelligent* eye the great secrets," &c. (p. 32). And again, "There is no deceit, if the weight to be borne is necessarily unknown, to conceal also the means of bearing it, leaving only to be perceived so much of support as is adequate to the weight supposed."—(P. 34.)

No doubt—provided only that the ignorance is absolute and conscious. But what of the different degrees of "supposition" in different spectators? "The weight of a roof is a circumstance of which the spectator generally has no idea: nor is concealment of the support of the external buttress reprehensible so long as the pillars are not sensibly inadequate to it." How far the "*not sensibly inadequate*" can be substantiated for slender shafts seemingly supporting Gothic roofs, I leave to the reader. For myself, I cannot modify rules of architectural right and truthfulness by the supposed intelligence or simplicity of the bystanders. That were a strange rule for *not lying at all*, which excused the deceiving of the simple by the hint that *the knowing ones were in the secret.* Architecture does not profess to speak to architects only: you must have one broad rule for gentle and simple, or you are not "commanding an honest architecture." Either give structural *carte blanche*, "asking no question for conscience sake," or allow no such thing as suggesting, concealing, or otherwise playing with stern realities.

As to the duty of observing architectural morality, I have, of course, no more doubt than as regards morality of any other kind. The question is, what *is* architectural morality?—a question I must reserve to another letter. At present, all I affirm is, that if the "Lamp of Truth" morality be held irrefragable, the result must be the dismemberment of all existing architecture, Gothic and Classic alike, without distinction.

LENY.

* "Modern Painters," part iii. sec. 1, chap. viii.

EXHIBITION OF THE SOCIETY OF BRITISH ARTISTS.

THE present collection in the Suffolk-street Galleries—843 pictures and three pieces of sculpture—would seem to exhibit about the same amount of excellence and of mediocrity as is usually found here. Pictures which show both high purpose and superior technical skill are of course few, but there are many which show hand power with the simple purpose of pleasing, and succeed; and some few which show a noble intention inefficiently set forth. How much might be said as to the choice of a subject by painters;—how much ought to be said. Those who have the power to awaken noble emotions, to make evident great truths, or to pin down faithfully the beautiful aspects of ever-changing nature are but few: let them be honoured when found. All may not wisely attempt these paths, but each may exhibit a good intention, and whispering "*Excelsior*," work on hopefully.

Mr. Hurlstone is strong in the present exhibition: his "Neapolitan Peasant Boy" (313) is particularly good. No. 199, "Tenants of the Forum Romanum" is characteristic: a little more attention to the structures in the background, which are mere caricatures, out of upright, would make it more valuable. The inability on the part of many of our artists to draw buildings upright is very curious. Mr. Pyne has some beautiful Italian landscapes, especially (65) "Il Castello D'Ostia, Campagna di Roma." (38) "Bathing Buffaloes" is disfigured by the straddling man on the left side. The place of honour in the large room is occupied by the best landscape Mr. West has yet painted (244), "Caves in the Lias, South Wales." With attention to truth, it is invested with a sentiment. Opposite to it is a large picture by Mr. J. P. Pettitt, "The Druids' Temple, Cumberland" (130), also a very excellent landscape. "False Security," by G. G. Bullock (174), should have been on the line. The face of the sleeping girl is lovely, and the painting of the flesh excellent. Mr. Gosling has not improved: we prefer his (113), "The By-way," to his larger and more ambitious work, "The Wild Wood." The author of "Modern Painters" says,—"All great art is delicate art, and all coarse art is bad art." Mr. Gosling, Mr. Zeitter, and some others, would scarcely like to be tried by this canon. Mr. Clint has some striking effects of sunlight, and Mr. J. Cobbett has improved by the study, we should think, of French pictures,

—as, for example, in the "Return from a Bal Masqué" (318). Mr. Henzell exhibits several very clever pictures—(159), "On the Welsh Coast," "Drying the Nets" (392), and others. (466) "The Old Avenue" is a charming specimen of Mr. Woolmer's art, more cleanly and carefully painted than usual. It is preferable to his larger work. The Thames is largely indebted to Mr. H. J. Boddington. The sky and middle distance in No. 11 are charmingly painted. He does not, however, confine himself to the Thames. One of his best pictures is "A Summer's Morning—North Wales" (100), and a beautiful picture it is. Mr. Baxter's "Lily" (46), "Autumn" (317), and "Ursula of Valetri" (107), by Buckner, are works to be coveted. Mr. Underhill has stepped out of his usual path, and exhibits, amongst other things, three life-sized figures, under the title of "Music" (48), which has good qualities. Let us further mention for examination (18) "Elizabeth Castle, Jersey Coast," by J. J. Wilson; (25) "The Hay Field," J. J. Hill; Portrait of Sir John M'Neill, J. R. Swinton; (178) "Welsh Children Wool-picking;" and (479) "Home through the Heather," both by E. J. Cobbett; (223) "River Scene," T. F. Wainewright; (275) "Scene near Dolgelly," J. Syer; (403) "The Weald of Sussex—Chanctonbury Downs in the distance," G. Cole: (419) "The Rheinfels," by Nieman; (553) "The Wandering Boy," R. Hollingdale; and some small pictures by T. Roberts. In the Water-colour Rooms we may point out some clever and pleasing views of buildings by J. Dobbin; "Grapes and Quince," by Miss Steedman; (674) from Henry IV. by R. W. Chapman (the mixture of fear and brag well represented); "Abbeville," by S. Read (785), "Lassie at the Burn" (836), by J. Bouvier, sen.; and a likeness by Mrs. Croudace of one to whom the present generation is much indebted, Mrs. Loudon.

Let us add that, at the private view, forty-six pictures were sold, realizing about 1,500*l.*

STYLE FOR MODERN BUILDINGS.

YOUR correspondent who (very unnecessarily) signs himself "An Amateur,"* in his endeavours to draw a comparison favourable to the Gothic style, tells us that there is a club-house being built of Roman architecture, in Regent-street, of which the cornice is just like one he has seen in some Encyclopædia. Is that put forth as a powerful argument against the Classic style? Is there a cornice at the Houses of Parliament, or at any other correct modern Gothic building, which may not find its exact counterpart in many an old building?

But he lays the greatest stress on the superiority of Gothic fenestration over Classic. If there is one point of comparison more than another that suits his argument *least*, he has here hit upon it; for every architect will admit that, in Gothic buildings for domestic purposes, his windows give him most trouble. The stone mullions and tracery are perfectly well adapted to their original purpose of receiving the glass, and giving strength to a large surface of lead lights: and as long as the window is limited to the purpose of giving light, all is well; but we of the nineteenth century have as great a desire for *air* as for *light*, and the consequent necessity for making these glazed windows to open gives us no end of trouble. Sometimes we make the spaces between the mullions open casement-fashion; but casements are unsuited for exposed situations, and rarely keep out wind and rain: most elaborate and expensive expedients are resorted to at the Houses of Parliament; but, even if effective, they are out of the question for ordinary occasions by reason of their costliness. Sometimes sashes hung on lines and pullies occupy the spaces between the mullions: these are perfectly effectual, but they need a wooden-cased frame behind the stone mullions and transoms, thus making the whole masonry of the window little better than a mere sham, obscuring light, and answering no useful purpose; but whatever scheme for glazing is adopted, the tracery head remains a hopeless difficulty: thus, usually, the upper half of every pointed Gothic window is utterly useless as regards *air*.

I should add that the orthodox width between the mullions prevents people from looking out without incurring the risk of grazing off their ears: and as to looking out and enjoying an easy lounge at an open Gothic window, with one's elbows on the cill, the thing is impossible, and not to be done.

I am not about to enter into the controversy as to the relative merits of the case *in re* Classic *v.* Gothic. Much is to be said on both sides, but certainly the "Amateur" must study his Encyclopædia more deeply before he is qualified to take a brief on either side.

AN ARCHITECT.

* See p. 142, *ante*.

THE LATE MR. MACKENZIE, CITY ARCHITECT OF PERTH.

WE regret to record the sudden and unexpected death of an amiable man, and very worthy member of the architectural body,—Mr. Mackenzie, of Perth. Although for some time back he had not been well, still there was nothing that gave his family or physician any uneasiness, but, on the 15th of February, he expired after a few hours' illness at his residence, Bankhead, Perth.

He was for more than thirty years city architect of Perth, and during that long period has designed and executed numerous works throughout the country. In ecclesiastical architecture he has designed and carried out no less than from forty to fifty churches, and in the other branches of the profession his handiwork may be seen in various public buildings, mansion-houses, and villas. In the architecture of the farm he had considerable reputation, and some years ago the Highland Society of Scotland awarded him their medal for his designs in connection with such buildings.

Possessing a thorough practical knowledge, and a clear judgment, he was much sought after when evidence of importance had to be given, either before Parliamentary committees or others, and his loss will be long deplored where his usefulness was so highly appreciated. We believe the business will now be carried on by his son.

ARCHITECTS' COPYRIGHT: COPYISM IN PRESTON.

ALLOW me to bring before the members of the architectural profession an instance of the most flagrant piece of copyism I ever met with. Being in Preston a short time ago, from the frequent "honourable mention" that had been made in the Preston newspapers of a building then in course of erection there, for the purpose of a joint-stock bank, I went to look at it. I at once recognised the design for the front to be as nearly as really possible a *fac simile* of the Imperial Assurance Offices, in London, as published in the eighth volume of the *Builder*, for 1848. On inquiry, I found the thing had been done by a surveyor of the town, entirely without the knowledge of the architect of the Imperial.

No doubt the directors of the bank, in ignorant bliss, are paying for an original, though they get but a copy.

R.

LODGING-HOUSES, VAUXHALL-ROW, LAMBETH.

ERECTED FOR THE DUCHY OF CORNWALL.

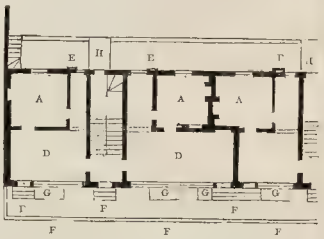
WHILE we would lay bare the miserable condition of the dwelling-places to which the poor of the metropolis are in too many instances condemned, and make evident the evils resulting from it, we at the same time gladly record the endeavours which are being made in various quarters to provide some remedy for the evil.

About two years since, there stood upon the site whereon these new lodging-houses have been erected, twenty houses, each floor of which was occupied by weekly tenants, and, in many cases, whole families were crowded into a single room,—there was no drainage, and the basement stories were little better than cellars.

So soon as the Duchy of Cornwall obtained possession of this property, it was determined thoroughly to repair and remodel the whole; but upon a careful survey being made it was found that its state was not such as to justify any large expenditure upon it, as the object which the Duchy had in view, viz. the improvement of the dwellings of the poor in that densely-populated locality, would even then not have been accomplished, and it was therefore determined to clear the site and erect upon it a range of buildings which would afford the working classes habitations of a character more suitable to their wants; due regard being had to drainage, ventilation, and other social necessities.

The entire frontage of the property is 320 feet. The new dwellings have been arranged in flats, and of various sizes, so as to meet the means and requirements of tenants; there being on the first and second floors nine small sets, with living-room and bed-room, two larger sets, with living-room and two bed-rooms, and three sets with living-room and three bed-rooms,—twenty-eight sets in all. Each set of rooms has a separate water-closet; also a scullery with sink, and water laid on; a dresser and cupboard in the living-room, a coal closet, and a dust-shoot leading to a dust-bin in the back yard. These are shown in our plan.

On the ground-floor there are thirteen shops, ten of them having a parlour attached, and each of the three others having two additional rooms. We here give a plan also of one of these shops.



On the basement story there are thirteen sets of rooms with similar accommodation to the first and second storys, and these are intended to be let with the shops. The average size of the living-rooms is 14 feet 6 inches by 10 feet 6 inches, and of the bed-rooms, 11 feet 6 inches by 10 feet 6 inches. The height of the ground-floor is 11 feet, and of the other three storys, 10 feet. There are seven stone staircases, each serving two sets of apartments on each landing. The buildings are fireproof, according to Messrs. Fox and Barrett's principle.

There are wide areas to the front, over which a terrace, 7 feet in width, extends the whole length of the buildings; also, a continuous area at the back, 6 feet in width, and a spacious general yard in the rear, with carriage-gates in the boundary-walls to admit carts for the removal of dust, &c.

The total number of dwellings is fifty-four, and the cost of the whole was under 12,000*l.*

The plans and specifications were prepared by Messrs. Hunt and Stephenson, under whose superintendence the works have been executed by Mr. Grimsdell.

The outlay altogether, including the value of the site, has been about 16,000*l.* and it is at present uncertain what rental will be obtained; but as the Duchy of Cornwall has a large property in Vauxhall and Kennington, the object has been not so much to seek an investment as to take the lead in improving the dwellings of the poor, in the hope that other owners of property will be induced to follow the example.

His Royal Highness Prince Albert, as president of the council of the Duchy, has shown a lively interest in the progress of the scheme, and suggested many valuable improvements upon the original design.

We may take this opportunity to mention that Mr. Hunt has been appointed government surveyor of works and public buildings (without being required to give up his private practice), in the place of Mr. Inman, resigned.

Reference to Plans.

A. Living-rooms.
B. Bed-rooms.
C. Sculleries with sinks, water, safes, coal-closets, and dust shoots.
D. Shops (ground-floor only).
E. Dust shafts.
F. Steps.
G. Area gratings.
H. Landings across area.

LODGING-HOUSES, VAUXHALL-ROW, LAMBETH, ERECTED FOR THE DUCHY OF CORNWALL.—MESSRS. HUNT AND STEPHENSON, ARCHITECTS.

Plan of One-pair Floor and Two-pair Floor.

CHURCH-BUILDING NEWS.

Little Braxted.—Three tenders for restorations to the parish church having been sent in, that of Mr. Gardner, of Great Coggeshall, being the lowest of the three, was selected. The amount of the tender is 420*l.* The architect employed is Mr. Ewan Christian. About 60*l.* of the requisite cost still remain to be subscribed.

Bristol.—At a meeting of St. Mary Redcliff Vestry held on Tuesday in last week, a letter from the bishop of the diocese was read, in which his lordship says:—"Respecting the present condition of the interior of your noble church, St. Mary Redcliff, I feel more and more uneasy at the imperfect state in which the sittings and accommodation, particularly those destined for the humbler classes of the congregation, still continue. The high pews which used to encumber a large part of the spacious area have given place to far more convenient and appropriate sittings, and this part of the work reflects credit upon the taste and liberality of the parishioners and others; but I grieve to find that the funds are exhausted, and the works stopped at the very point where church accommodation for the families of the poor, and pupils of your schools is most imperatively demanded. It seems to be determined that the two transepts shall be devoted entirely to free sittings for the poor and for the schools, and that the cost of this work, to be performed in the manner agreed upon, would not exceed 300*l.*; a sum which at present there was no prospect of realising. * * * * The object of this letter is to offer you the estimated sum for fitting up the transepts for the poor and the schools, on condition that this work shall be undertaken and completed without the least delay." The Vestry, therefore, resolved unanimously, in compliance with his lordship's expressed wish, that the matter be referred to the Repewing Committee, with a view to the work being proceeded with immediately.

Wrexham.—The erection of a new church in this place is about to be proceeded with immediately, the site being a space of ground in the Hope-road, near to the Militia Barracks, now in course of erection. The contract has been entered into by a Liverpool firm, whose estimate we understand is considerably below the other tenders.——A Catholic chapel is about to be commenced not far from the intended new church; the contractors for the building of this being also from Liverpool.

Stonyhurst.—A large building is about to be erected at Stonyhurst College, consisting of chapels, refectory, &c. to complete the north side of the quadrangle of the establishment. A considerable extent of old buildings are being removed from the intended site of the new erections. The masonry will be done by Messrs. Cooper and Tullis, of Preston.

Glasgow.—The cathedral has now reached nearly a final stage, in its progress towards restoration. All that remains to be done (if not by this time also effected) is the removal of the pulpit, pews, and galleries from the choir, or Inner High Church, and the substitution of stalls and benches in cathedral style. The immense unsightly window, which rose above the rood loft or organ gallery, and which shut in the nave from the choir, has been completely removed, and the "pow-headed" windows, which separated the latter from the Lady Chapel, have also been taken away—and thus the eye can now range over the whole interior from east to west. It is not yet decided whether or not there shall be a temporary moveable screen between the nave and choir, but in the meantime it will be tried without it. The new seating is constructed in the cathedral form. The walls, north and south, are lined with carved stalls, fitted up in divisions or elbow seats. The wood-work to the back is designed and executed in the Gothic style, so as to be in keeping with the general architectural features of the cathedral. The area is fitted up with seats or benches, having carved tops. Irrespective of a small gallery, there is accommodation for about 1,000 sitters. This gallery is erected partially over the rood loft, and projects into the church. The pulpit is reared a few feet nearer the centre of the church than before. It is placed upon a large open platform raised 18 inches from the level of the floor. It rises from an octagon column. The pulpit itself is also an octagon, each compartment being filled in with carved tracery, surmounted by a cornice highly ornamented. It is ascended from behind by a light wainscot stair, with a malleable iron bronzed railing, ornamented with foliage. The pulpit is of oak which formed part of the original structure of the cathedral, about 700 years since. The passages are floored with tile—red, blue, and yellow. These renovations have been worked out from designs by Mr. Mathieson, of the Board of Works; sanctioned and revised by Mr. Burn, as chief architect of the Commissioners of Woods and Forests. These recent improvements, including the heating apparatus, will cost about 4,700*l.* Of this sum the Corporation will pay about 2,300*l.* being the cost of re-seating the church as described. In all, about 16,000*l.* have been expended since the renovation of the cathedral commenced, some fifteen years ago. In its improved form, the cathedral will be opened to the congregation of the Rev. Principal Macfarlan on Sunday next. ——The Pollok-street United Presbyterian Church was opened on Monday before last. The style in which it is built is a mixture of the Italian and Grecian: it is seated for 1,000 persons, and is lighted from a large lantern above. The entrance is by a flight of steps, at the top of which is a spacious lobby, with two stairs leading to the gallery. Besides furnace-room, there are waiting-rooms, &c and adjoining the church a hall capable of holding 200 persons. Mr. J. D. Peddie, of Edinburgh, is the architect.

Omagh.—The Second Presbyterian Church of Omagh, in county Tyrone, Ireland, erected in 1752, having become dilapidated, and too small for the congregation, a committee for considering the subject find it necessary to have a new church erected in its stead, and have removed the old building, and made arrangements for erecting a building of larger dimensions. The foundation-stone of the new church was laid on Friday in week before last. The site is at the west end of the town.

PROVINCIAL NEWS.

Oxford.—The deanery of Christ Church has been in course of alteration and decoration for some months past. The alterations are of an extensive character. The chief of these has been made in the entrace-hall. The oak staircase, erected about twenty years ago, has been adapted to the style of the exterior of the deanery, with newels and balusters, having tracery heads in oak. Between the oak balusters are uprights of iron, terminated by *fleur-de-lis* spear heads, coloured and gilded. On removing a portion of the old wall, towards the close of the alterations, a specimen of the original newel and hand-rail was found, the similarity of which to the new work is considered remarkable. The face of the wall is divided, by oak framing, into panels hung with paper, in which purple and gold are the predominating hues. The timbers of the ceilings, which are exposed to view, are moulded, and rest on a carved cornice. The space between the timbers is covered with a blue ground, upon which is stencilled a device in vermillion and gold. The architraves to the doorways are surmounted by figures in oak representing some of the most eminent deans of Christ Church. The floor is laid with Minton's encaustic tiles, with bands of grey stone, arranged in patterns, and bordered with black marble. The staircase is lighted by means of lamps, supported by lions rampant crowned (the dean's crest), placed on the tops of the newels. The lamps consist of standards of twisted brass and copper, with metal imitations of the convolvulus flowers and leaves, embracing opal glass shades. The picture gallery, opening to the staircase by an archway, presents to view a combination of colour. In the drawing-room two of the original windows in the north front have been reopened, and, with the other parts of the room, have been fitted up with oak. The cornice is moulded, carved and coloured, and heraldic devices are blazoned in the hollow above the cornice. The general ground of the paper is a subdued green, with a regular design in white and gold. The hangings are of crimson velvet, lined with satin of the same hue, and having a border characteristic of the architecture of the room. The dining-room walls are papered to harmonize with the portraits of former deans which adorn its walls. The cornice is tinted in colours, and the frieze decorated by geometrical figures, in various tints and gilding. The sideboard is an architectural work; the carving, like that of the staircase and drawing-room, being an imitation of natural forms, foliage, flowers, and fruits. The minor staircases have been re-arranged, and additional sleeping apartments thereby obtained. The kitchen department has been altered and made complete, and a new larder and servants' hall, with other deficiencies, have been supplied. The hall, picture gallery, and other passages, are warmed by hot water. The works, to the staircase and drawing-room, have been carried out by Messrs. Baker, and the decorations by Messrs. Trollope, of London. The general alterations were made by Mr. Hudson, the sideboard by Mr. Herbert, and the painting by Mr. Hill, all of Oxford. The figures of the deans and the lions were executed by Mr. Phyffers, and the whole of the work has been completed from the designs of Mr. John Billing, of London.

Ryde.—The new pier-head here is to be proceeded with forthwith, so as to be completed by the end of June next. The cost will be upwards of one hundred pounds. The breadth of the pier-head will be about 280 feet, the length being 120 feet, or nearly double the present size.

Westbromwich.—The tender of Mr. J. S. Ferguson, of Nottingham, builder, to erect and complete the new union workhouse for this union, according to the design and specification of the architects, Messrs. Briggs and Evoral, for 13,950*l.* has been accepted. Mr. Ferguson's was the lowest tender, the highest of nine others being 20,830*l.*

Cardiff.—Houses have been rising in the environs of this town of late, according to the local *Guardian*, as if it were by magic. Masons, carpenters, tilers, plasterers, plumbers, glaziers, &c. are busily employed in every quarter. There is so much building going on between the West Bute-dock and the Glamorganshire Canal that there will not be a foot of spare ground left to build upon in the course of a short time. Gaps and vacancies in the new streets are being rapidly filled up, thus giving an appearance of uniformity in the lower part of the town. Two new chapels are in course of erection in London-square, for the Wesleyan and Calvinistic (Whitfield) Methodists. The chapels are built within about a dozen yards of each other. The formation of the Cardiff Boulevards, upwards of a mile in length, is progressing with rapidity on the East-moors: 130 trees are already planted, in double rows: the total number of trees will be 280. Great streets are in contemplation here. The space will be raised up with ballast from the ships, and the road will be made level with the Rhymney Railway; and a bridge carried over the South Wales line, near Adamsdown, to form the principal entrance to the upper part of the town from the eastern side. In the course of a very few years still greater improvements, and an eastern suburb to the Newtown, are expected.

Llandaff.—Workmen have been employed to excavate the ground for the erection of a new college, near Llandaff, for female orphans of the clergy, in connection with Hord's charity, &c. It is said that the building, when completed, will cost 20,000*l.*

Manchester.—A wholesale fish-market is in course of erection here, on a site between Ducie-street, Strangeways, and the Victoria Station at Hunt's-bank. Considerable progress has already been made with the building and its approaches, and it is expected, according to the local *Courier*, that the new market will be finished in about two months. Rails will be laid down to take the fish trucks from the station to the market. The market is being built by Mr. R. Neill, of Strangeways. There will be a row of seven arches to serve as stores for the fish, measuring about 30 feet by 15 feet each, and 12 feet high, with open grating for light and ventilation over

the doors. There will be a covered market in front of these arches, and a large open space for the accommodation of carts, &c. with two entrances from Ducie-street, each 18 feet wide. The market will be erected by the Yorkshire Railway Company, and leased by the market's committee for twenty-one years, at the annual rental of 200*l*.

Keswick.—The ceremony of cutting the first sod of the Keswick Waterworks took place recently, near Ormathwaite, in Underskiddaw, the site of the intended reservoir. Probably by midsummer the waterworks will be in operation. It is intended that cottages, the rent of which is under 5*l*. shall be supplied at a penny a week. The reservoir, when completed, will contain 100,000 gallons.

POPISH PLANS FOR PROTESTANT CHURCHES.

IN your report of the proceedings of the Institute, on the 11th ult. appear Mr. Tite's remarks on the unsuitableness of mediæval architecture for Protestant purposes; and Mr. Scott's long letter in reply. Mr. Scott's mode of dealing with the question reminds me very forcibly of our old town crier, at Chichester, who, on Sunday, assumed the title of "reverend," and held forth to his admiring followers. Our reverend friend, Baxter, not being very well up in his orthography, or always very clear in his thoughts, was in the habit, whenever beset by difficulties of this kind in his pulpit, of laying down his spectacles, and calling out in a stentorian voice to his *locum tenens*, —"Budden, Budden, snuff the candles, and turn them boys out;" the diversion thus effected enabling the preacher to skip over what had puzzled him.

The very important question started by the chairman is treated quite *à la* Baxter. "Mediæval architecture Roman Catholic?" says Mr. Scott. Well, alter that pulpit and shift that reading-desk. By trifles of this character, through nine-tenths of his epistle, he essays to change the current of his readers' thoughts, and at last returns to the charge, in the following terms:—"So we are to go into Italy to learn Protestantism! The Popes, then, were sadly mistaken when they built St. Peter's. Little did they think they were erecting the type of Protestant architecture."

There's many a true word spoken in jest, Mr. Scott. It may be an unpleasant fact, but it is a fact notwithstanding, an indisputable one too, that *all* the early churches, up to the nineteenth century, are purely Protestant in arrangement, and that the chief of these important witnesses for the truth are in the custody of the Pope at Rome. It is a fact, also, that St. Peter's itself, at the head-quarters of Popery, is nearer the Protestant type than any of the mediæval structures. How came this to pass? Why, the reason is clear as crystal—that there was pre-Protestantism at Rome *before* Popery.

Old Rome contained some 400 temples: its people had no conception of religion, except in connection with temple rites and arrangements. Although the Jews had but one temple, yet to them also was that the embodiment of all their ideas of worship. Would, then, Jew or Pagan, in becoming Christian, even so much as dream of giving up the temple type, if their new creed admitted of its retention? That they did give it up, and choose another arrangement (though retaining the same *style* of architecture), as different from that of the temple as a horse from an eagle, is overwhelming proof, that in their opinion, the time for temples with their rites, altars, and priests, had passed away for ever. Call it by what name you will, the primitive Christian Church was nothing but a large room —its old familiar designation was "Conventus," — the meeting-house. The president, elder, or minister, as he was indifferently called, sat on a slightly-raised platform, with a cancelli, or low open railing, on its edge. There was no screen between the elder and his brethren, the people; and in the *midst* of the latter stood the communion-table, which was always of wood and moveable. What an astounding change was this from all previous Jewish or Pagan customs! This change was clearly a sudden disruption of all old thoughts: it was verily a new dispensation; and the architectural arrangements for the old and the new religion thus became, at the very outset, as wide as the poles asunder, old precedents being not merely shaken off, but wrenched off.

The change from primitive Christianity to Popery was, on the contrary, the gradual work of many ages; and it thus happened, that in Italy they continued for nearly 1,000 years to build churches on the original model, though that model was no longer suitable to the religion taught in it; while, away from Italy, in countries of new converts, where no architectural precedents existed to fetter the imagination of the builders, and the architects being then chiefly *priests*, the new churches were arranged to suit the peculiar requirements of the Popish system; and nothing can be more striking than the contrast between the plans of these new structures and of those old ones still in the custody of Rome. The doctrine of Transubstantiation was the chief cause of this extraordinary change of arrangement in ecclesiastical structures. As the Popish view of the Sacrament gained ground, the chancel, or elder's platform, on which the communion-table never was originally placed, became gradually lengthened and separated from the people by screens. The chancel, in fact, was converted into a mock temple, containing, as in the real temple of old, only the priests and the altar; while the nave was made to correspond in use with the temple porticos, in which the people assembled to witness, through the gates of the holy place, the performances of the priests within. A mediæval cathedral is in truth a cross between two opposite systems of arrangement and two different systems of religion.

The doctrine of Transubstantiation cannot, of course, be discussed in your columns; but this much may be said about it, that no antiquarian versed in the architectural history of temples and churches can possibly, if sane and honest, imagine for one moment that the early Christians, if they had had any knowledge of such a doctrine, could by any possibility have given up the temple models, so admirably adapted for its display, or have eschewed altars for wooden tables.

It is now some years since that I made the discovery and announced the fact in your columns,—that there is not a single church in existence, erected before the tenth century, that contains any one original feature characteristic of Romish views. If any one of these old structures now displays a Virgin Mary niche, altar, saint chapel, screen, or chancel, in the modern or Popish acceptation of the term, then I affirm and pledge myself to prove, that all or any of these things are additions of comparatively late date. A Protestant was recently conversing with a Jesuit on the subject of Transubstantiation, who said in reply, "Really, my friend, you have done me a most signal favour: you have so clearly demonstrated the utter absurdity and groundlessness of my views on this doctrine, that my belief in it in future will be an act of the sublimest virtue." I have endeavoured to render this sort of service to those who are building churches for Protestants on Popish plans. I am sadly afraid, however, that the sublimity of their faith may be somewhat tarnished by the great pecuniary advantage to be found at present in its profession. Though objecting to mediæval arrangement, I share in Mr. Scott's admiration of the mediæval style; but it is certainly very provoking to find people so absurd as to call the latter Popish or Protestant: style is but the tongue of architecture, and speaks all creeds. What on earth is there to prevent us from using the one without the other? Does any one doubt this? Then let him study the origin of roast pig. Charles Lamb tells us, that in China, for many years, they kept these animals without any culinary knowledge of their virtues. In course of time a house was burned down, and the owner, poking about among the ruins, thrust his finger into something soft, which proved to be a martyred porker; and on licking the said finger, experienced such a delicious flavour that it inflamed him to madness. Getting another pig into another house, he burned that also to enjoy another feast; and house-burning became the rage to an alarming extent, until the fortunate discovery was made that roast pig could be obtained on easier terms. Like roast pig, mediæval architecture is truly admirable; but we need not, to obtain it, outrage common sense and common honesty, or destroy our common Protestantism by adopting Popish plans, of which the style is but the accidental accessory.

JOHN ELLIOTT.

MEETINGS AND LECTURES.

Norwich School of Art.—A *conversazione*, originating with the students of this school, was held on Tuesday evening in last week, at the apartments of the institution, when upwards of 200 persons attended. Mr. Nursey, the head master of the school, was requested to take the chair, and the meeting was addressed by the Mayor of Norwich, and by Sir S. Bignold, M.P. Mr. Barwell, Mr. Havers (a student), and other gentlemen. The Mayor addressed the students. One mind, he remarked, was improved by the study of geography, another by the study of history, stimulated by laudable emulation and praiseworthy ambition. The day was coming when it would be the pride of statesmen to cultivate the intellectual capacities of the people, to enable them not merely to read, but also to understand and profit from what they read. One of the best schools for students, after they had generally cultivated their mind, was the school of nature. There they had an endless field for study and imitation. There they were interested with the beautiful, charming, and seductive mantle of green, with which they generally were met in the view of a landscape, bringing out the endless variety of colours with which nature was decked. Yet there was no confusion, all was beauty, all was order, and perfection. It was impossible for them to study nature with open eyes and open minds, seeking for information, without improving in their studies. After the *conversazione* was ended, the company adjourned to the exhibition-rooms, where various works of art were collected for the occasion.

Manchester School of Art.—The annual *soirée* given by the students of this school took place in the Town-hall, King-street, on Thursday evening in last week. The room was decorated with art-works of various kinds. The chair was taken by the president, Mr. E. Potter, who addressed the meeting, as also did Mr. Hammersley, the head master, Mr. Salomons, architect, Mr. Robinson (a student), and others. The president, in his address, remarked that the school cost about 1,000*l*. a year to carry it on, and of this sum 700*l*. a year was raised by subscription and Government aid, and only 300*l*. or 400*l*. was received from the students. He regretted that art did not pay for its own education: almost every other business and profession seemed able to educate its pupils so that they might obtain a living, but Art was an exception. The reason was, that the public did not support it as they should. What was wanted was an order for a good 1,000*l* worth of paintings and drawings, so as to encourage and bring out young artists. He believed that an effort would shortly be made in this district upon a very large scale to promote art.—Mr. Salomons, in the course of a few remarks, said that although he had devoted himself to one of the sister branches of art, he had derived immense benefit from the study of the other branches, especially painting. If they referred to the Middle Ages,—to the Italians more particularly,—they found that the great painters, such as Michelangelo and others, were sculptors as well as artists, and he knew that those painters who had studied architecture sometimes found curious mistakes in artists' works who were ignorant of architecture.

Lecture on Scientific Errors at Newcastle.—Dr. E. Lankester recently delivered a lecture on this subject to the Literary and Philosophical Society of Newcastle-upon-Tyne. One of the chief classes of scientific errors treated of related to physiology, and to sanitary science in particular. He could not see any reason why the great masses of the people ought not to live to the age of seventy, as it was never the intention of the Creator that one-half should die while young, as at present. This undoubtedly arose from not knowing the laws of physiology. It had been shown that the mortality of large towns, say, for instance, London, was at the rate of from between thirty-one and thirty-two to every thousand; while in the district of Northumberland it was only fourteen to the thousand, which was an enormous difference. The cause was obvious: it was the existence in large towns of densely-populated lanes and alleys, where ventilation was impeded, and the residents placed altogether in a condition where the laws of life were disobeyed, thus causing suffering, disease, and death. There was no reason why the condition of the people in large towns ought not to be even much healthier than in any of the villages of Northumberland. The lecturer then alluded to the establishment of model lodging-houses as the means of attaining such an end, stating

that already the London model lodging-houses had not only saved hundreds, but thousands of lives. Why did not the several town councils, corporate bodies, and others in authority, take the initiative in the matter? The only ground upon which he excused them was that of ignorance. If it were otherwise, he had no hesitation in saying that their conduct was so culpable and criminal as to justify their being cited before the tribunals of the country and tried for manslaughter. One thing was to him most puzzling, and that was, that while the gaols and prisons of the country were erected upon the best possible models to improve the health of the prisoners, while the diet was selected with the best possible care and skill, so as to prolong life, the great masses of the honest and industrious classes were comparatively neglected in this regard. In allusion to the influence of want of ventilation as a cause of consumption, whether in close lanes and poor dwellings, or in the smothering downs and close curtains of the rich, the lecturer narrated a remarkable instance of great improvement effected in the health of the residents of a village in Switzerland by the alteration of the construction and situation of the cottages, and stated that previous to the change the inhabitants were notorious for dying of consumption, while afterwards it became one of the healthiest villages in the country. The poor could not help themselves in this matter, as they could not pull down and rebuild the dwellings situated in close lanes and alleys, and, therefore, what individuals could not do ought to be set about by communities; that is, either by the government or corporate and other local bodies. It was only by public opinion being brought to bear upon such bodies, that such improvements would be effected, and thus disease would be prevented, health enjoyed, and the lives of the masses prolonged.

Free Lectures to Working Men at Cheltenham.—Dr. E. L. Humphreys, head master of the Grammar School of Cheltenham, last week delivered a lecture in the town-hall of this town, titled, "Religion, Science, and Labour distinct, but never disunited," being the completive lecture of a series given in connection with the Working Men's Improvement Society of Cheltenham, of which the lecturer is president. In the course of his very able and excellent lecture, Mr. Humphreys adduced some of the more striking results of the union of science with labour:—The gas, he remarked, that now lights up our streets with a brightness almost equal to that of the noonday sun—what a contrast does it present to the links of pitch and rosin that cast a murky and uncertain glare upon the footways of Paris and London 200 years ago! Nay, even the very lucifer-matches with which we light our candles, what an advance upon the old, tedious process of flint and steel, which many of us are old enough to remember! Again, the various processes of fixing dyers' colours, of giving to cotton a more explosive power than gunpowder, and those still more important discoveries by which we can purify the air we breathe, and diminish to a marvellous extent the average of human deaths—all these are striking instances of the great results accomplished by the union of science with labour, and they are moreover proofs that we are rapidly approaching, if indeed we have not already entered, that period of wonderful transition, when all nations must speedily acquire the levels due to their several amounts of intellectual—that is, practically intellectual—development; or, in plainer terms, the levels due to the relative proportion of skilled and unskilled, or brute labour, in their respective industries; and this brings me directly to the point upon which I desire just now to fix your attention. Local and physical advantages and peculiarities having now become so much less valuable and important than formerly, it follows that the rivalry for commercial and consequently for political supremacy is a strife between the intellect of one nation and that of another; and that, in such a contest, involving as it does not the mere glory of an intellectual superiority, but the solid substance of wealth and power, the intellectual cultivation alone calculated to be available, must be practical as well as theoretical. While some persons dogmatise in theories, others point triumphantly to the visible and palpable results of practice. But the fact is, that the one is unsatisfactory, and the other wastes its energies, unless they both co-operate in a liberal and friendly alliance. Theory is, in reality, but the rule, of which practice is the example; and accordingly we find that the majorities of the great scientific discoveries, of which our generation seems to be the great and prolific era, have either actually been made by theorists, or suggested by the hints and analogies which theorists have thrown out for the consideration of practical men. Here, again, you see the debt that labour owes to science.

Lecture at Louth on Warming Buildings.—The Rev. G. C. Hodgkinson, head master of the Grammar School at Louth, delivered a lecture on Tuesday in last week, at the school lecture-room, "On the Diffusion of Fresh and Warm Air through Buildings." In treating of the first part, he endeavoured to show the audience that they lived at the bottom of an atmospheric ocean; that the quantity of air expelled from the lungs of an adult was of the same volume as a large orange; and that it contained a quantity of carbonic acid, 14 to 20 cubic inches being expelled in twenty-four hours. He pointed attention to its deleterious effect on the constitution, and advocated the insertion into chimnies of a tube, by which the products of gas-burning might be conveyed away, leaving space in the upper part of the rooms for fresh air. In speaking of fireplaces, the lecturer condemned, erroneously, perhaps, the present fashion of low grates, as being extremely absurd; and recommended fire-brick backs to grates, as economising fuel. Stoves without a flue, so much advertised (self-consuming stoves, as they are attractively but most falsely called), were strongly and most properly characterised as being machines for throwing the most deadly poison into a room. Waste and saving of fuel, warming by hot water, and other cognate subjects, were also discussed, and how to make "fires at half price," as suggested in the *Builder*, was told.

DECORATIVE ART IN SCOTLAND.

HALL OF ST. MARK'S LODGE, BUCHANAN-STREET, GLASGOW.

THIS hall has been of late entirely redecorated and ornamented, and a correspondent praises the harmonious arrangement of colour, and the appropriate sentiment everywhere prevailing. When the lodge acquired their present premises, they threw the front suite of rooms into one, elevating the ceiling by a cove, at the expense of the attic floor, and provided a suitable kitchen, as well as a comfortable dwelling-house for their "Tyler."

The hall, which can accommodate above 100 members at dinner, is said to be arranged on masonic principles. The ceiling is painted in blue, and clouded, and has golden stars of the various constellations: the pateræ and mouldings are hatched in gold, and a trellis ornament introduced, thereby adding height to the ceiling. The cove is flatted a pale cerulean tint, with a spiral ornament at the neck moulding. At either end and sides of the cove are the emblems of their patron and titular saint and various devices understood by the initiated. These are enclosed in scroll, and finished in gold and silver. The cornice is stencilled with tints of pure colour, relieved by burnished gold.

The walls are disposed in panels of deep crimson, broken up by Etruscan brown morocco pilasters and styles, which are again divided by a border or fielding of green, and these panels are distinguished by the national insignia of the thistle, rose, and shamrock, mingled with the masonic star, with ornamented corners at the angles; and the whole are finished in plain and burnished gold, picked in with colour. The different orders of architecture find their place in columns of painted verd-antique marble, with their respective insignia of square and compasses, level and plumb-line. The woodwork of dark oak is inlaid (marqueterie) with characteristic ornament. These decorations were executed by Brother Haire, of the firm of Hugh Bogle and Co.

VANDALS IN THE NORTH.

WE are called upon to remonstrate against the barbarous doings of a contractor in Morayshire, who has had the wretchedly bad feeling to split up a Druidical rocking stone connected with what was ten years since one of the most complete Druidical circles in existence, either in that district or elsewhere. And it is dreaded that the destruction of the rocking-stone is but a prelude to the total extinction of the interesting remains which some years since, as described by the editor of the *Forres Gazette*, comprised an outer circle of twelve great stones, standing in a circumference of 2.0 to 300 feet, an inner circle of nineteen larger stones and forty-one smaller, and two immense boulders on the south side—one a Cromlech or altar-stone, and the other the Logan or rocking-stone, which latter was rhomboidal in shape, broad above and tapering below, and must have weighed from nine to ten tons. It was nicely poised in the usual way on another boulder, which doubtless is about to suffer the fate of its associate of centuries, in order to enable a nineteenth century contractor to complete some hairsplitting, underbidding contract for farm buildings, probably by connivance or suggestion of his employer, the tenant on the land, which belongs to Lord Cawdor, who surely will compel these barbarians to undo what they have done, as far at least as their wit will enable them, although we much fear it is beyond their ability, even by iron clasping, so to set up and balance the Logan again, as to restore its responsiveness to the touch of the finger, which, according to the editor of the paper just named, caused it to vibrate six inches on each side, and continue to do so some five or six and twenty times.

The Moyness temple, as it is called, is not the only Druidical and other antiquity in the same part of Scotland, on which Vandal hands have of late years been laid. Ten of these temples lately existed between Elgin and Nairn, not one of which now remains. Twelve old castles in Moray have been demolished and swept clean away since the beginning of the present century. It is lamentable to think that such an utter want of all taste, feeling, and enlightenment, should still exist in Britain, and that it is not in its northern moiety alone that this is the case.

THE ARCHITECTURAL MUSEUM.

THE lectures for the summer session, 1856, have been arranged for. On April 7th, the presentation of the prizes for stone and wood carving will take place. On the 21st there will be a lecture on brick-work, by Mr. G. Aitchison; May 12th, on decorative painting of the thirteenth, fourteenth, and first half of the fifteenth centuries, by Mr. G. Scharf, jun.; May 26th, on the varieties of stone used for architectural carving, by Mr. C. H. Smith; June 9th, on ornamental lead work, by Mr. W. Burges; June 23rd, on the application of natural foliage to architecture, By Mr. J. K. Colling; and on July 2nd, a *conversazione*.

Prizes of 10*l.* each for stone carving and wrought-iron work will be offered during the present year.

The tail-piece is a representation of the ingenious seal of the museum recently adopted.

PICTORIAL AND OTHER "ENTERTAINMENTS."

The Polytechnic Institution.—Mr. Pepper is unceasing in his endeavours to provide instructive entertainment for the public. He has lately obtained three mirrors of very large size, and by means of the electric light, shows some curious experiments. By one of the batteries used, when we saw the experiments, about 20 feet of platinum wire were made instantaneously redhot. Without jumping to the conclusion that the galvanic arrangements at Coventgarden Opera-house had anything to do with its destruction, we see at any rate a cause for a like catastrophe. The new entertainment of Kenilworth, with a sensibly written version of the story, by Mr. G. Moore, includes several very cleverly painted dissolving views; though some of those that show architecture are quite the reverse. The full value has yet to be given to dissolving views. During Passion Week, Mr. Pepper delivered some illustrated lectures on astronomy, lucid and excellent.

The Panoplicon.—Here, too, an educated eye is wanted to supervise the views, and we should not then have a representation of St. Paul's with a *dome*, in illustrations of "Whittington," and other notable anachronisms in style, observable. However, this is not to depreciate: there are many amusing and pleasant entertainments here well deserving a visit. A commemoration of Haydn is proposed for the 31st, his birthday.

Miss Horton's Illustrations increase in effectiveness and popularity. We cannot speak too strongly of the artistic ability shown by this lady. Some of her impersonations are marvellous.

Great Globe, Leicester-square.—At the Great Globe valuable information is pleasantly furnished to the public. Last year we could watch the siege operations on the plateau of Sebastopol; and Cronstadt and Sweaborg were made familiar to all: now the visitor can travel from England to the Crimea by means of a large diorama, painted by Mr. Marshall, and get instruction as he goes. Amongst the views, some of which, by the way, have been seen before, ar

pictures of Hamburgh, Berlin, Dresden, Prague, Ratisbon, Vienna, Pesth, Buda, and the line of the Danube to Balaclava, and Constantinople. The home route is up the Adriatic to Rome, Venice, the Lago Maggiore, across the Alps by Monte Rosa; the Galleries of Isella and Gondo, Interlachen, the Jungfrau, Geneva, and up the Rhine to Cologne and Dover. The collection of arms and trophies, the models of siege works of Sebastopol, Sweaborg, Cronstadt, and the Baltic, will be made doubly interesting by these pictorial representations; whilst the Great Model of the Earth serves not only to show the special spots of interest, but the world itself, in relation to the great events of our age. This is unquestionably a very valuable exhibition, and we were glad to see it crowded on Easter Monday.

COMPETITIONS.

Liverpool Free Public Library and Museum.—The number of applications for the "instructions and conditions" for the forthcoming competition, designs has been so much beyond what was anticipated, that the committee, to spare, as far as possible, unnecessary expense and labour to the parties competing, have decided that, in the first instance *sketches* of the proposed design shall be submitted, in pencil or ink, slightly tinted, to consist of a plan of each floor, a section, and an elevation of the principal front, or a perspective sketch, if preferred. These are to be drawn to a scale three times the size of the lithographic plan of the land already furnished. These will be taken into consideration by the committee; and, on the principles laid down in the "instructions," they will make a selection of any number not more than twenty nor less than twelve, which they may consider most suitable for the purpose. The authors of those selected will be the only ones entitled to compete for the premiums under the instructions sent out. The plan would have had our unqualified approval if it had been announced in the first instance. As it is, the change will be prejudicial to those who have made progress with their drawings.

Landscape Gardening.—The premium for the best design for laying out ornamental grounds at St. John's-wood, for Mr. Alexander Devaux, has been awarded to Mr. B. P. Wilme, landscape gardener and surveyor.

THE METROPOLITAN BOARD OF WORKS.

A MEETING of this board was held on the 19th inst. at Guildhall, when a deputation from Brompton, consisting of Sir E. Belcher and other residents, waited on the board to present a memorial in reference to the long-wished-for formation of an opening through the north end of Brompton-square, leading to Hyde-park, and where an obviously requisite and useful thoroughfare is unnecessarily blocked up to gratify mere private feeling.

Sir Edward Belcher said he had little, if anything, to add to the memorial, and merely reiterated the inconvenience to which the inhabitants and persons attending All Saints' Church were subjected, in consequence of the very circuitous route by which it was approached. He believed that 150*l.* would accomplish all they desired. They could not now have a carriage-way, as houses were already built in the way; all they wanted was a foot-way. The parish, he had no doubt, were prepared to proceed with the improvement, if the sanction of the board were obtained. The petition was received *nem. con.*

Mr. Seeley's motion as to the permanent situation of the offices of the board was, after some discussion, amended, and agreed to by a majority of 27 to 9. The motion was to the effect that the resolution of the board, on 14th January last, adopting the report of the committee on the site of offices, and referring it back to the committee to prepare plans for the adaptation of the premises in Greek-street, as recommended, and submit such plans to the board for approval, be altered in manner following, viz.—that having reference to the report of the committee as to the site of offices made on 14th January, in which the expediency of enlarging the house in Greek-street is rested on the difficulty of obtaining a site or premises in a more central neighbourhood, it be an instruction to the committee to suspend the adoption of any definite plan for the enlargement of the house in Greek-street, until it has ascertained whether it may not be practicable to obtain a site either near the Sessions House, Clerkenwell, or in Giltspur-street, adjacent to Christ's Hospital, or on the vacant ground in Farringdon-street, or in Bridewell Hospital, or in some equally central situation. The amendment consisted in merely leaving out the names of places, and inserting instead the words, "to a place in some more accessible situation."

On the subject of the Committee of Works, Mr. Wilkinson moved the following resolution:—"That it be referred to the Committee of Works and Improvements to take into consideration and report upon a comprehensive plan for making, widening, and improving streets, roads, and ways, for facilitating the passage and traffic between different parts of the metropolis." Some discussion took place on this subject, in the course of which Mr. Turner moved, as an addition to the resolution, the words, "And also for providing or securing open spaces for the health and recreation, or otherwise, of the inhabitants thereof."

Mr. Leslie objected to the motion, remarking that if they entered into such questions, it was his opinion that the board would fail; that the Act of Parliament had referred to them one great improvement, and had limited the time in which it should be done to sixty months; and five per cent. of that time was gone, while they had not yet got a plan for doing the work required of them, namely, cleansing the Thames; and if the board was to be diverted from its duty by such questions as they had before them, they would fail, and would be putting out an invitation for schemes of improvement all over London, while the great subject for which they had been appointed would slip through their fingers. The first thing they did at every meeting should be to call upon Mr. Bazalgette, their chief engineer, to report as to the progress he had made as to the plans for the improvement of the main sewerage of the metropolis, for nothing would gain them so much approbation from those who sent them there as to be intently devoted to cleansing the magnificent river Thames of the filth and sewage of London. Several other members of the board having expressed their opinion, the amendment of Mr. Turner was carried. Mr. H. L. Taylor then moved, as another amendment, to add the words, "and that it be an instruction to the committee that no schemes be received or entertained by them, unless referred to them by the board." The amendment was adopted, and afterwards was embodied with the original motion, and unanimously agreed to.

A financial statement was then laid before the board, showing a total general balance of 40,037*l.* odds, and some other business was transacted. The board, having sat six hours in all, then adjourned.

ARCHITECTS' CERTIFICATES.

IN a case tried at the Dorset assizes, on March 13, before Mr. Justice Crowder, the plaintiff was James Brown, a working stonemason, at Southampton, and the defendants were John and Robert Coltman, builders and contractors, of Ringwood. In 1853, the defendants contracted to repair and restore Ringwood Church, for the sum of 3,659*l.* and they sublet the brickwork and masonry to the plaintiff, at the sum of 1,765*l.* In the course of the work, it was proposed that the tower should be shored up, and it was agreed to allow plaintiff 50*l.* for that purpose. Upon further examination, it was found that the tower must be taken down entirely and rebuilt, and the plaintiff offered to undertake this work for 900*l.* The defendants declined this offer, but went into details, and agreed to pay plaintiff 751*l.* 11s. 9d. for the work, less the 50*l.* which was to have been paid for trussing. In addition to this, there were some works to be done to the nave arches, for which 151*l.* were allowed. In all, the "extras" amounted to 1,288*l.* 11s. 6d. besides the 1,765*l.*; and of these sums the plaintiff had received rather more than 2,500*l.* leaving 550*l.* 17s. 6d. the amount sued for.

For the defendants, Mr. Sergeant Kinglake objected, that in the contract, the plaintiff was stopped from receiving any instalment on account of the works, until they were certified by Messrs. Francis, the architects, and that any dispute between the parties was to be referred to these gentlemen.

For the plaintiff, it was replied that the clause requiring a certificate applied only to the work originally contracted for, and did not cover "extras."

But it appeared in the contract for the sub-letting it was agreed that the said James Brown shall and will abide, perform, and keep all other covenants, clauses, and agreements contained in the aforesaid indenture entered into between John and Robert Coltman and the churchwardens and overseers of Ringwood, in every respect as if the same were herein repeated.

The judge asked if it was an admitted fact that there was no certificate, and inquired if there was any objection to refer the matter to the architect?

Mr. Slade.—We don't object to anybody else.

The Judge.—And on the other side they object to everybody but Mr. Francis. If you could arrange to refer it, and avoid further litigation, it would be better.

The learned counsel being unable to come to terms, the Judge said—Then I shall decide that it requires the architects' certificate. I think the matter had better be referred to them.

It was then arranged between counsel that plaintiff should be nonsuited,—that the cause should be referred to Mr. Francis, and all matters in difference on the usual terms, with leave reserved to set aside the nonsuit, and enter verdict for such sum as is awarded, if any, with leave also to move the court to decide upon a document dated the 31st October, whether it is a certificate within the agreement, and its effect. Costs of the cause to abide the event.

Notices of Books.

VARIORUM.

THE treatise on Optics, in Dr. Lardner's "Handbook of Natural Philosophy," published by Walton and Maberly, of Paternoster-row, has been issued. Amongst the new matter in this standard and interesting volume, is a section on the Stereoscope, in which the why and wherefore of the startling effects of this new source of amusement are lucidly explained. It has often struck those curious in stereoscopic science, that its handy exhibitions are even more forcible and real-looking in their apparent solidity, than realities themselves. This is actually the case, and is strictly and scientifically explicable. Objects "in the round," or solid objects, when very near to the eye of the spectator but still at visible distance, are seen in two somewhat different aspects by the two eyes, although the two images are resolved into one in vision itself. The right eye sees always a little more of the right side of the object than the left eye does, and *vice versâ*, the left eye always sees a little more of the left side of the object than the right eye does. The eyes, in looking at a solid object placed at hand, in fact, shoot round the corner, as it were, like the Irishman's gun; but as the spectator recedes to a distance from the object, this power diminishes, the "binocular parallax" ceases to be "sensible." When, therefore, as in the stereoscope, the two photographic representations, which respectively correspond to the right and left aspects of the solid body, are so placed, and the light from them so refracted by the lenses, as to represent the object as one at a considerable distance; the "parallax" is more "sensible" than it ought to be; the eyes see, as it were, further to the right and left of the object than if it stood in nature at the representative distance; for the two cameras in which the two "simulacra," if we may so call them, of—say a large building, were struck off, were probably separated from each other by a space of 50 inches or so, while the distance between the two eyes of a human being is only a twentieth part of that space, and yet these two eyes thus obtain all the parallactic advantage, as it were, of being 20 inches apart, in looking right and left at the *distant* edifice. The stereoscopic *effect* of reality in seeing objects "in the round" is thus in fact an exaggeration or intensification of nature, and hence the startling and wonderful appearance of solid reality. The explanations given by Dr. Lardner relate, of course, not only to this exaggeration, but to the entire principle of the stereoscope; but we must refer our readers for farther *light* on this and many other curious and interesting subjects, to the volume itself under notice.——The American "Annual of Scientific Discovery, or Year-Book of Facts in Science and Art, for 1856," (Gould and Lincoln, Boston,) has just been published in this country. This is a valuable work, based on Mr. Timbs's excellent idea. If asked which is best, we should be inclined to say—both. —— Mr. Scharf's paper "Artistic Notes on the Windows of King's College Chapel, Cambridge," read at a meeting of the Archæological Institute, is now published in their journal, with several illustrations.

Miscellanea.

MONUMENT TO TURNER, THE ARTIST.—The vice-chancellor has directed the trust of 1,000*l.* by Mr. Turner, "to erect a monument to his memory in St. Paul's cathedral, among his brothers in art," to be executed by setting apart the sum destined for that specific purpose.

LONDON-BRIDGE.—You will much oblige me by calling "Englishman's" attention to the fact that the alteration he proposes for London-bridge is nearly the same in every feature as those submitted to you by me in February, 1855: your notice of the plan in question will be found in Vol. XIII. p. 60.

M. T. O'KEEFE.

GUN WADDING FOR THE STAGE.—Touching the letter on this subject, we have received several communications. Messrs. Deane have forwarded us a sample of a cheap material, which seems as if it would answer the purpose and is certainly worth inquiring into. Another writer, J. D. P. suggests that the thinnest and most flexible tin or lead might be available.

CLOYNE CATHEDRAL.—At the March meeting of the very active and thriving Archæological Society of Kilkenny and the south-east of Ireland, Mr. E. Fitzgerald, of Youghal, Architect, sent a communication to the Society, the facts stated in which excited the surprise and indignation of the meeting. The communication stated that Cloyne cathedral was at present under the process of partial restoration. New stone mullioned windows of good execution had been inserted into the choir, and a small portion of the galleries which still block out the light and impede the proper ventilation of this part of the church had been taken away; but much still remained to be done in removing excrescences from its interior. "From all appearances," continued Mr. Fitzgerald, "the west end is of the transition period dating towards the close of the twelfth century; yet here the restorers have made a most laboured and successful attempt at placing it before future visitors in the Brummagem or mushroom fashion of the nineteenth century; that is, as far as stucco and cement could do it; for the whole has been completely cemented over, cut stone, mouldings, foliaged capitals and all!! Even the sculptured human heads which formed the terminations of the hood mouldings over the great entrance door were knocked away, and replaced with a pair of bearded casts seemingly made from one mould."

ECONOMIC MUSEUMS: EXHIBITION AT BRUSSELS.—Mr. Twining, the originator of the idea of forming permanent Museums of objects tending towards the improvement of the condition of the working classes in all that relates to their physical and general welfare and comfort, is zealously engaged at present in the promotion of an Economic Exhibition in Belgium, which is to open at Brussels on 25th August next, and in aid of which the Society of Arts, Adelphi, of which Mr. Twining is one of the vice-presidents, has appointed a committee, with whom intending exhibitors can communicate, till 1st June, through the Secretary, Mr. P. Le Neve Foster. The Belgian Exhibition is to be held in connection with the Philanthropic Congress, which meets at Brussels this year, as in 1855 at Paris, where also an Economic Exhibition, it will be remembered, was organized, with the countenance and aid of the French Government. In the present instance also the exhibition will have the support of the Belgian Government, who are to admit its objects duty free unless sold, and to convey them along the state railways under a remission of 50 per cent. on the charges of transport. The products which claim admission to an Economic Exhibition comprise plans, models, materials, and the various processes connected with building; furniture and household utensils; clothing and linen; food, and the various processes involved in its preparation; tools and instruments for handicraft occupations, both industrial and agricultural; worship, physical and moral education, instruction, and recreation. The *Labourers' Friend* publishes lists of various objects in detail, classified under these several heads. The Society of Arts is engaged in forming an English Economic Museum of articles, models, drawings, and publications, tending to promote health, comfort, and economy among the industrial classes, and to illustrate their present condition in various parts of the world. The Library department is intended to be a comprehensive one, for reference, in accordance with the philanthropic objects of the museum itself. The whole scheme merits the general co-operation of all who feel interested in the improvement of the condition of the working classes; and all such friends and promoters of so good a cause may be referred, on the subject, for further information, to Mr. Twining, at the Society of Arts, John-street, Adelphi; or to Dr. Wyld, of Great Cumberland-street; both of which gentlemen also receive contributions in the name of the Council of the Society of Arts.

PROJECTION CASES IN METROPOLIS.—Things about us are subject to constant change,—house property is no exception,—houses that have been used as private dwellings from various causes cease to be desirable as private houses, and are converted into shops, increased space is almost a *sine qua non* in these matters; and where a space or fore-court exists, it becomes very desirable to get this enlargement. The Building Act does not declare such projections to be illegal or contrary to the Act, but simply requires the determination of the "Metropolitan Board of Works" on the matter; *primâ facie*, therefore, it may be assumed that projections are admissable. No clause in the Act declares anything to the contrary.

TEMPORA MUTANTUR.

ALUMINIUM AND THE ELECTRIC LIGHT.—The new metal which excited so much attention lately as a hopeful cheap substitute for silver, has by no means fulfilled the public expectation as yet, mainly from the cost of its production. Still, however, the endeavour to economise the means of its evolution from clay-proper or alumina is being persisted in, and the desire to produce it at a moderate cost has already contributed much towards the cheapening of previous processes, whereby other metalloidal substances, particularly sodium, required to be evolved from their alkaline or earthy oxides. A new step has just been made at Lyons, by Messrs. Lacassagne and Sheers, who have invented a galvanic battery, in which the usual fluids are replaced by anhydrous salts in a state of igneous fusion, and by means of which alumina is reduced into aluminium, while the electric light is evolved in the course of the process. The inventors are also trying their hand at the regulation or steadying of the electric light. M. St. Clair Deville, we observe, has been assisting at a lecture on the subject of aluminium at the London Royal Institution.

EXHIBITION OF INVENTIONS AT SOCIETY OF ARTS.—The eighth exhibition of recent inventions collected by the Society of Arts is now open. It comprises 221 objects, under the heads,—motive machines, including railway mechanism; manufacturing machines and tools; building contrivances and materials; philosophical instruments and naval and military mechanism; agricultural implements and saddlery.

ELECTRO-TELEGRAPHIC PROGRESS.—A charter has been granted by the King of Sweden to an American citizen, Mr. T. P. Shaffeer, to lay down a submarine telegraph wire between the coasts of North America and Norway, within ten years from this time, the capital to be ready within half that period.

THE NEW PARK AT GLASGOW.—The West-end park of this city draws towards completion. The approaches and streets on the north side of the hill are being made, and new terraces and other building works are in course of erection. Full-grown trees are being transplanted by Mr. Barron's process. A handsome weeping elm, thirty years old, and measuring 4 feet 6 inches in circumference at the trunk, has just been successfully removed from the site of the Old Botanic Garden (now being built on). The mass of roots and ball of earth carried along with it measured 10 feet by 8 feet, and 3 feet in depth, and the whole was taken a distance of 1,100 yards in an upright position by a machine drawn by 120 men. The weight thus transported was estimated at about 9 tons.

FALL OF A CHAPEL AT PRESTON.—St. Mary's Catholic Chapel, Friargate-hill, suddenly fell down, and became a mass of ruins, on Thursday in last week. Several workmen have been employed for some time at the building, preparatory to its enlargement. They were about to widen it, and for that purpose intended to take out the side wall. A large quantity of earth had been dug away from the wall, and it is supposed that this weakened it, and was the immediate cause of the destruction of the building. The two gable ends are still standing, but in a dangerous state. Most fortunately, none of the men employed were injured. In a district where so many buildings fall, as in Lancashire, the utmost care and consideration should be given before in any way weakening walls or depriving them of any portion of the support which may be barely sufficient to sustain them.

MASONS' STRIKE AT HAWICK.—The journeymen masons here lately presented a petition to their masters for a half-holiday on Saturday, or for wages at the rate of time and half-time, when obliged to work on Saturday afternoon. The masters readily agreed to the half holiday, on condition that the three hours thrown off were worked up during the week, or a proportionate deduction made from the wages. They would not consent, however, to the extra payment unless for time after SIX P.M. The workmen were not satisfied with these concessions, and have struck work. The masters, who feel annoyed at the sudden stoppage of work without notice, are not likely, it is said, to give in, as building prospects this season are not very promising in Hawick; and certainly they are not likely to be improved by a suicidal act such as this, of the workmen dependant on the promotion of building works.

DEATH FROM FALL OF A CHIMNEY.—Pendleton Priory, recently occupied by Sir Elkanah Armitage, was being demolished, and the chimneys were negligently left till last instead of being removed first: a labourer was on a ladder reared against the wall, when the top part of a stack of chimneys fell upon him, causing his almost instant death. A contractor was also severely injured. The house had been sold by auction, and one of the conditions of sale was that the demolition should proceed "regularly downwards." The accident is attributable to the non-observance of this rule.

CHELMSFORD RAILWAY STATION.—We are informed that the designs for this station have at last been decided on. The present inconvenient structure will be removed, and two additional lines laid: the offices are to be on either side, and a new house for the station-master on the down side will be erected.

RIGHTS OF WAY AT KENSINGTON.—Considerable excitement has recently been manifested in the town of Kensington, in consequence of the stopping up of a footpath opening a way between a large and populous district of the parish and Kensington Gardens. For years the inhabitants had been urging on the Government to concede to them this great public convenience; and, last year, the Office of Woods, so soon as they got possession of the grounds, with great consideration for the comfort of the inhabitants, made a footpath across it, and threw it open for the general benefit. The Board of Ordnance, it is now understood, have again acquired possession, and their first act has been to close the footpath, and to put the Kensington public to great inconvenience.

NORTH LONDON INDUSTRIAL HOME.—In your paper of 8th December last, under the heading, "A Word in Season," you noticed in kindly and very favourable terms the above Institution. I am neither locally nor personally interested in its success, but *homo sum*, &c. &c.; and I am sorry to see an appeal in the *Times* in confirmation of my own fears, that it was going to ruin for want of funds; and it is not the least disagreeable feature in the case, that it is dragging down with it to insolvency one or two of its early supporters, who have become mainly responsible for its debts. It has occurred to me that some of your readers, with a bank-note saved out of a tour, or unexpectedly won in some way, might like to devote it to the good cause.—W. B. R.

AUSTRIAN RAILWAYS.—According to the Vienna correspondence of the *Times*, it appears that the treaty for the sale and concession of the Austrian railways in Italy, to the section of capitalists headed by Messrs. Rothschild, has been definitively arranged. They are to purchase 273 English miles, which are already completed, and to undertake 223 miles which remain to be constructed, in addition to the Central Italian line. The total network to come into their possession will therefore comprise about 680 English miles. The company are to pay for the finished lines 2,400,000*l.* by instalments spread over six years, with 660,000*l.* additional in case the average profits during that time shall exceed 7 per cent. The whole capital required is estimated at 10,000,000*l.* on which the Austrian Government guarantees 5 per cent.

TO CORRESPONDENTS.

"B and B" contrary to our practice. If the letter contains any misstatement, it may be corrected. It is found to, we are told, on Mr. Gotto's report.—"W. W. S."—"A Subscriber."—"C. B. B."—"Bow Bells."—"One"—"W. W."—"J. W."—"C. R. S."—"Rev. J. G."—"B. P. W."—"J. S."—"C. L."—"J. B."—"W. H. T."—"G. S."—"Dr. G."—"G. T. J."—"T. H. H."—"J. L." (thanks).—"F. Y. H." "H. W. B."—"G. T."—"W. B."—"Ogeus" (a communication to head-quarters would be referred to the office of the Company).—"W. D."—"Frank" (the height of St. Paul's from the pavement of the street to the top of the cross is called 4 4 feet).—"H. W." (shall appear).—"J. A. P."—"C and B"—"W. B. R."—"T. M."—"D. C."—"D. N."—"T. T. jun."—"J. M."—"W. H."—"A. M. G."—"H. P."—"J. S."—"E. A. H."—"E. W. C."—"R. W. A."—"J. A."—"J. B. N."—"R. W. R." (is not quite correct: the scale was merely suggested, not stipulated).—"R. W. A." (ditto).

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *vid* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

BOROUGH of READING.—LOCAL BOARD of HEALTH.—Notice is hereby given, that the Local Board of Health for the district of the Borough of Reading, in the county of Berks, require a fit and competent person to execute the duties of SURVEYOR and INSPECTOR of NUISANCES, under the Public Health Act, within the said Borough. The officer to be appointed must possess a thorough and practical acquaintance with works of drainage, sewerage, road-making, and paving; he must be competent to take levels, to prepare plans, sections, drawings, and estimates, and to superintend the execution of all works of the description above referred to, or which may fall within the duties of the office of Surveyor and Inspector of Nuisances, under the Public Health Act, or the Bye-laws of the Local Board. The public lighting of the borough being under the management of the Local Board, the officer will be also required to superintend the same, and to see to the execution of their contracts by the gas companies who supply the gas to the public lamps. The office will be required to devote his whole time to the service of the Local Board. His salary will be 300*l.* per annum, and he will have a convenient residence attached to the store premises of the Local Board, in which he will reside free from rent and taxes. Any further information respecting the duties of the office may be obtained on application to the Clerk to the Local Board. Candidates must send written applications for the office, with testimonials of qualifications and competency and with particulars of age and previous occupation; and all applications must be sent to me, endorsed, "Application for Office of Surveyor, &c." on or before TUESDAY, the 8th day of APRIL next. By order of the Local Board,

THOMAS ROGERS, Clerk.

10, Friar-street, Reading, 20th March, 1856

HOUSE PAINTERS and PAPER-HANGERS WANTED.—Apply to Mr. W. HOLLAND, Decorator, &c. Warwick.

AN ASSISTANT WANTED, in an Architect and surveyor's Office in the country. A young man who has served part of his time, and can produce satisfactory testimonials, stating age, and salary required, Address, A. B. Mr. Johnson's, Bookseller, Wisbech, Cambridgeshire.

SURVEYOR'S ASSISTANT WANTED, capable of making fair and working drawings, taking out quantities, and measuring works.—Direct, stating age and salary required, to X., Mr Higgs's, Library, Richmond, Surrey.

TO PAINTERS AND DECORATORS

WANTED (in consequence of the sudden death of the late foreman), a FOREMAN, who is thoroughly acquainted with the practical parts of the painting and decorative business. He must be of good address, an active man of business, write a good hand, and be competent in measuring, sketching, and estimating. Satisfactory references as to sobriety, honesty, and competency, both practical and theoretical, will be required. No one need apply unless he has previously filled a similar situation.—Applications to be made to Mr H. J. BUCHAN, House Decorator, Southampton, stating age if married, rate of wages required, and full particulars of qualifications.

TO BUILDERS, SURVEYORS, LAND-AGENTS, AND OTHERS

WANTED, by the Advertiser, aged 22, an ENGAGEMENT in a London Office; is a fair architectural draughtsman, conversant with builders' accounts, and the general routine of an office. Amount of salary not so much an object as permanent employment with a respectable firm.—Address, X. Y. Crosby Hall, City.

WANTED, a GOOD SMITH; one who has had experience in fencing, railing, and gate work preferred. None need apply who cannot produce satisfactory references in character.—Address, A. B. Messrs. Saunders, Brothers, Bankers, 104, London-wall, City.

TO PLUMBERS.

WANTED, a Person about 30 or 40 years of age, in the above trade, who thoroughly understands his business, and is willing to take time at other work, at a Plumber and Builder's in the City, requiring a constant hand. A good reference as to competence and sobriety will be required. Wages 6d. per hour for the time actually employed in work. Employment to the amount of 30s. per week will be guaranteed.—Apply by letter to F. G. F. Mr. Sauzé's, No. 47, Aldermanbury, City.

TO UPHOLSTERERS' FOREMEN

WANTED, one who thoroughly understands his business.—Applicants to be made by letter only, giving references as to ability and stating amount of wages required.—Address, Y. Z. Mr. Mabley, 144, Strand.

WANTED, by an Architect in the City, a DRAUGHTSMAN, who has served part or the whole of his time to an Architect. As good opportunities will be afforded for learning a general practice, only a small salary will be given.—Apply by letter, stating last engagement and salary required, to S. E. Office of "The Builder."

WANTED, in the Roman and Portland Cement Works, Faversham, Kent, a Young Man as UNDER FOREMAN. Preference will be given to one who has had some experience in machinery. A reference for character required.—Apply by letter, to Mr. C. J. HILTON, Faversham, Kent; or personally, at 8, Upper Thames-street, City, on Wednesday next, from Three till Five.

TO CLERKS OF WORKS.

WANTED immediately, a CLERK of WORKS to superintend the erection of farm buildings. One who has been engaged on works of a similar nature, and understands getting out working drawings and details would be preferred. Address, stating previous engagements, salary, &c., to E. C. 5, Selwood-terrace, Brompton.

TO PAINTERS, &c.

WANTED, as FOREMAN, twenty miles from London, an intelligent and respectable Man, a good WRITER and GRAINER and capable of managing the hands and books.—Apply by letter, pre-paid, stating wages required, age, reference, and every particular, to A. B. 6 and 7, South-eastern-arcade, London-bridge

TO PLUMBERS, GLAZIERS, &c.

WANTED, a respectable THREE-BRANCH HAND; reference required. Also, a LABOURER, who would make himself generally useful; both for a constancy.—Apply to J. B. 8, Crescent-mews North, Burton crescent.

TO ARCHITECTS, ENGINEERS, &c

WANTED, by a respectable Young Man, a good draughtsman and colourist IMMEDIATE EMPLOYMENT. Salary not an object.—Address, J. T. C. 53, Albert-street, Barnsbury-road, Islington.

TO CARPENTERS AND BUILDERS.

WANTED, to place a strong, healthy LAD, 15 years of age, as an IN DOOR APPRENTICE, to learn the above trade. He has had a fair English education. Some knowledge of drawing, surveying, and levelling, having been for the last year in an Engineer's office. The country preferred.—Address, with full particulars, to A. B. Ingram's News office, 38, Charl s-street, Westminster.

TO MASTER PLUMBERS OR BUILDERS.

WANTED, by a respectable Young Man, a SITUATION as PLUMBER'S ASSISTANT. Wages no object of permanent. Address, W. M. 19, Stockbridge-terrace, Pimlico.

TO ARCHITECTS AND BUILDERS

WANTED, a SITUATION as CLERK of WORKS or FOREMAN of WORKS, by an experienced practical man, having filled similar situations of the kind in some of the largest firms in London. Every satisfactory reference can be given.—Address, J. A. Office of "The Builder."

TO ARCHITECTS AND SURVEYORS.

WANTED, by a respectable Young Man, of business habits, a SITUATION in the Office of one of the above. Is a good draughtsman, colourist, &c., and having been in the profession above seven years, he practically understands the requirements of an Architect's or surveyor's office. The most satisfactory references can be given, and a moderate salary only required. A respectable Builder's Office not objected to.—Address, X. Z. 38, Huntington-street, Barnsbury-park

TO PLUMBERS AND BUILDERS

WANTED, by a Young Man, a SITUATION as PLUMBER; and would fill his time up in the branches connected with the trade, if required. Good reference. Town or country.—Address, H. B. 27, Grafton-street, Blackfriars-road

WANTED, by an active practical Carpenter and Joiner, a SITUATION as an or out-door FOREMAN, or to take charge of Building Works for a gentleman. Town or country.—Address, A. B. 2, Gloucester-terrace, Vauxhall-road, Pimlico.

WANTED, by a Gentleman who is a good and quick DRAUGHTSMAN, a SITUATION in an Architect's office. If required, he can design in the Gothic style, that having been his chief study.—Address, Z. Y. X. Office of "The Builder."

TO ENGINEERS, CONTRACTORS AND OTHERS

WANTED, by a Practical Workman, aged 35, in Fitting or Fixing Iron Roofs, Stone Tanks, Bridges, &c. as CONTRACTOR or SUPERINTENDENT, with good reference and security for any of the above work.—Address, S. W. E. 14, Salisbury-place, Stepney.

TO ARCHITECTS, &c

WANTED, by the Advertiser, a SITUATION as an ARCHITECT'S OFFICE, in either town or country, as JUNIOR ASSISTANT.—Address, M. N. Office of "The Builder."

WANTED, a RE-ENGAGEMENT as Working Shop, or Out-door FOREMAN, by an experienced practical JOINER; well up in all kinds of work; with good testimonials.—Address, A. D. W. 3, Albion-street, South-grove, Bow.

TO BUILDERS AND OTHERS.

WANTED, by a respectable person, a SITUATION as CLERK in an Office, and is fully acquainted with book-keeping, measuring works, estimating, time-keeping, &c. being competent for the same. References will be given by the late employer for his integrity and sobriety. Terms moderate. Would have no objection to partial employment or otherwise in town, or a short distance therefrom.—Apply by letter, prepaid, to JOHN ——, at Mr Miller's, Sadbuer, 6, Bridge-road, Lambeth.

TO CARPENTERS AND BUILDERS.

WANTED, by a Young Man, CONSTANT EMPLOYMENT as Carpenter and Joiner. Is a fair bench hand, but would be for improvement in carpentry and fixing line. Any part of town, or a good country job or shop.—Direct, A. Office of "The Builder."

TO GRAINERS

WANTED, by a Youth, 18 years of age, to ARTICLE HIMSELF to a good GRAINER, at the west end of the town. Has served three years to the trade.—For particulars apply to A. SHIRLEY, Baker, 34, Aylesbury-street, Clerk-well

WANTED, a RE-ENGAGEMENT, as SHOP or OUT-DOOR FOREMAN, by an active Man, who can be well recommended by an architect in London, under whom he has carried out a gentleman's mansion. Has also been employed upon church work, under two of the leading ecclesiastical architects of the present day. Address (pre-paid), to L. S. D. 9, Charlotte-house-lane, London.

TO CARPENTERS AND BUILDERS.

WANTED, by a Young Man, aged 21, a SITUATION as IMPROVER to the BENCH, or as JUNIOR CLERK; has served four years and a half to the trade; steady and respectable. Wages no object. Address, X. Y. 120, Drummond-street, Euston-square

TO ARCHITECTS AND OTHERS.

WANTED, a SITUATION as CLERK of WORKS, by one having a thorough practical knowledge of building, measuring up works &c. Can make working drawings and has had experience in drawing page works.—Address, J. B. 131, Albany road, Kent-road, London

TO BUILDERS AND PLUMBERS.

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COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
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BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and be judge for themselves.

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THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
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BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK PERFORATED BRICKS.—Messrs. J. EASTWOOD and SONS take this opportunity of informing their customers and the trade, that they have made arrangements for the Manufacture of White Suffolk Perforated Bricks. In curing defects common to bricks of this description, care has been taken to produce them of a true and perfect shape, of an even and beautiful surface, and free from fire-flaws.—J. EASTWOOD and SONS, Belvedere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for asphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick making, &c. &c. sent by barge from Messrs. MEEson and GOLDS Wharf, Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or near railway connected with them. Vessels of 300 to 600 tons can load alongside the wharves at Grays, at MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex. The above-named article can be procured, as well as all kinds of fire goods, both Welsh and Newcastle. Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, bags, &c. for exportation.

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BY HER MAJESTY'S ROYAL LETTERS PATENT.

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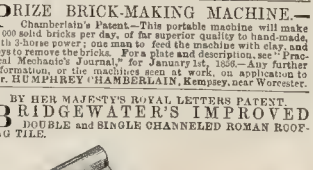

W. BRIDGEWATER begs to call the attention of the trade to his improved and superior method of manufacturing Roofing Tiles, whereby they can be produced cheaper, stronger, lighter, less liable to be damaged by the heat of the kiln in burning, or injured by the effects of the atmosphere; can be made either by Moulding or by Extrusion-pipe Machines, from any description of clay, by the most inexperienced hand, and of larger dimensions than any other method. The fit is so exact that no pointing or mortar is required to be used, consequently, greatly improving the external appearance. Parties desirous of manufacturing the above can be supplied with the necessary apparatus upon applying to the Patentee, at his residence, No. 1, Portland-street, Cheltenham, who will be willing to grant a limited number of licenses for their manufacture on royalty or otherwise.

N.B. By this process the strongest and most tenacious description of clay can be made to produce a very superior Roofing-tile, at a much less cost than by the ordinary way of making.

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PATENT PAINT for BUILDERS and IRONFOUNDERS.—The LONDON PATENT ANTI-OXYDE PAINT has been specially chosen by the Government Engineers as the best, cheapest, and most durable that has ever been discovered. Address to Mr. DEANE WALKER, at the Office of the Company, 28, New Bridge-street, Blackfriars, where every information is afforded.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide place, London-bridge.

BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and complete job is obtained. The invention has been tested by four years' extensive use with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses, is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvetoft, near Rugby; or in Lond.n, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

TO BRICKMAKERS, BUILDERS, &c.—TO BE LET, an extensive BRICK YARD, capable of producing a large quantity of bricks, having four kilns. Three will burn 40,000 each (being arched), and one open will burn 30,000. Also, steam-engine, two boilers with machinery, and patent brick machines for the making of patent steam bricks. There are also sufficient sheds and floors to carry on the making of hand bricks and tiles, with two clay houses and roll ers. Four sheds are fitted. Every requisite in plant, tools, moulds, &c.—For particulars as to terms, apply to Mr. S. CARTLEDGE, at the Brickworks, Mapperley, near Nottingham

TO TILE MANUFACTURERS.—TO BE LET, the OWENSTOWN TILE-YARD, the property of His Grace the Duke of Leinster, situate near Maynooth, eleven miles from Dublin, and a short distance from the Royal Canal. The works include four kilns for burning tiles, four large drying-sheds, a machine-house, forge, pug-mill, tile-making machine, and two burners' cottages, with a small portion of land attached. Good prices are to be obtained in Dublin for the produce of a tile manufactory.—Apply by letter, post-paid, to F. ARTHUR TRENCH, Esq. Newlands, Tallaght, near Dublin.

TO BUILDERS.

A PRACTICAL PERSON is willing to join a BUILDING BUSINESS. Will embark 400l. Respectable reference given and required.—Address, L. R. 3, Bedford-road, Clapham.

PARTNERSHIP.—An Architect and Surveyor, who is desirous of extending his professional engagements, is willing to PURCHASE a SHARE in the Practice of any Gentleman wishing to withdraw from the more arduous duties thereof.—Apply by letter, in the first instance, to S. B. F. care of Mr. Bishop, 11, Red Lion-square.

THE Advertiser, who will shortly conclude his present engagement, is anxious to meet with a gentleman requiring the assistance of an ACTIVE MANAGER, with a view to a PARTNERSHIP, or an efficient, practical, and artistic ASSISTANT. He is thoroughly versed in every minutia of constructive detail, and in the manipulation of all kinds of building material (including iron, in which he has had considerable practice), is a clever artist, excellent in design, detail, and ornamentation, and is thoroughly efficient in land and building surveys, levelling and plotting, setting out and measuring up works, general estimating, and accounts.—Address, X. W. P. 23, Brunswick-street, Islington.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders for post-prompts receive most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

TOTTENHAM.—TO BE LET, a FIELD, containing Six and a half Acres of excellent Malm Brick Earth, situated by the side of the high road, five and a half miles from London. The bricks made in this field have always found a ready sale.—For terms and other particulars, apply to Mr. A. RICHARDS, Auctioneer, Tottenham

TO MANUFACTURERS AND OTHERS REQUIRING WATERSIDE PREMISES

TO BE LET,—LOCKE'S WHARF, Edmonton, on the navigable river Lea, near the Railway Station, and seven miles by road from London. It comprises two acres of ground, having upon it numerous Sheds, four Cottages, and an Extensive Frontage to the river. There being very few houses in the vicinity, no manufactory could be objected to.—For further particulars, apply to Mr. A. RICHARDS, Auctioneer, Tottenham.

TO ARCHITECTS, &c.—TO BE DISPOSED OF, on moderate terms, an OLD-ESTABLISHED PRACTICE, in a fashionable watering-place in the south of England.—Address, DELTA, Ivy House, Albion-place, Southampton.

TO PLUMBERS, PAINTERS, GLAZIERS, and WINDOW-GLASS CUTTERS.—A snug little BUSINESS, in a public thoroughfare, TO BE DISPOSED of very cheap, owing to a death in the family. Established six years. Rent and taxes 28l. per annum.—Apply to M. W. Bridewell Wharf, Blackfriars.

TO PLUMBERS, GLAZIERS, PAINTERS, and PAPER-HANGERS.—(THOMAS COLLINS, deceased, late of Greatbridge, Tipton, in the County of Stafford.) TO BE DISPOSED OF, the BUSINESS in the above branches (carried on by the deceased for upwards of twenty years), together with the new and useful STOCK IN TRADE. The house and premises are well situated, and adapted for the trade, as in the immediate vicinity of a thickly populated district, and adjacent to extensive works of all kinds.—To treat, application is requested to be made to the Executor, Mr. THOMAS CHURCHILL, 1, Princes-end, near Bilston, Staffordshire

NOTICE.—All persons having any demands upon the estate of THOMAS COLLINS, deceased, late of Greatbridge, Tipton, are requested to send in to me their claims and particulars; and all persons indebted to the said Thomas Collins are requested forthwith to pay the same to me. THOMAS CHURCHILL, Princes-end, near Bilston, the Executor.

March 11th, 1856.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.

TUNED BY MACHINERY.

Stocked and wheels ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and hegged on a new system which gives superior tone and facility for ringing

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 4s. per foot superficial together with every particular of its cost and adaptation, can be obtained of Mr. BURT, 9, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—TRUMBLE and CO. Manufacturers, Leeds, beg to call the attention of the trade to their immense STOCK of PAPER-HANGINGS, at No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, and Machine Goods. The whole being their own manufacture, can supply on the very best terms.

PAPER-HANGINGS. — JEFFREY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, which in price, style, and colouring, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls. — Factory, 116, Whitechapel; Show-room, 500, Oxford-street.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSSE'S WHOLESALE WAREHOUSE, 22 GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Casts of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Milkwall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin

THE VIEILLE MONTAGNE ZINC MINING COMPANY'S PURE PATENT WHITE ZINC PAINT is unequalled for permanency of colour, hardness, and brilliancy of surface; it is unaffected by sulphureous or any other vapours or emanations. Being completely innocuous and free from the pernicious effects of white lead, it may be employed in all apartments whilst in use without any inconvenience to the inmates.

The greatest caution is recommended to avoid any spurious compounds that might be sold at cheap rates as Pure Oxide of Zinc. If any adulteration has taken place in the oxide, either in consequence of impurity in the material primarily made use of to produce it, an imperfect mode of production, or by mixing with the oxide certain substances calculated to give it increased weight, it then produces a very inferior instead of a very superior paint, and the economy realised by the purchasers of such oxides becomes a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the VM mark—in Hull by Messrs. BLUNDELL, SPENCE, and CO.; when ground and dry, by Messrs. T. B. MORLEY and CO. and by the Company's Grinding Agents in London, Messrs. CHARLES DEVAUX and CO., Wholesale Agents, 93, King William-street City; and by the Manufacturing and Painting Agent, Mr. FREDK. BRABY, Fitzroy Works, Newroad. In Manchester and Liverpool, by R. CLAY, 8, Mersey-street, who is the acknowledged Painter to the Company for Zinc Paints, and undertakes painting ships, warehouses, dwelling-houses, &c. In Leith, by Messrs. R. ANDERSON and CO. Timber-bush; and in Southampton, by Mr. H. J. BUCHAN. Dry OXIDES and PAINTS, in kegs of 14, 21 and 28 lbs. and upwards, to be had of the Company's Agents in Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and the Isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in Lond.n, who will undertake any description of painting with Zinc Paint by contract.

For further particulars, apply to the Company's General Agency in London, 12, Manchester-buildings, Westminster.

TO BE SOLD very cheap, a powerful HYDRAULIC PRESS, secondhand, in good condition, with 10-inch ram-head and follower, each 4 feet 6 inches by 4 feet 6 inches. Range between head and follower, 5 feet. Also a pair of PUMPS, with hand lever, the plungers 1 inch and 3 inches respectively.—Apply to Mr. FREDERICK RANSOME, Patent Stone Works, Ipswich.

TO WATER COMPANIES AND PLUMBERS

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

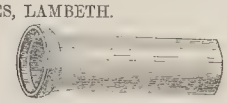
LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with seat and Riser, &c

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the common best description of Chamber-pans.

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels,

Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

TO BUILDERS AND PLUMBERS.

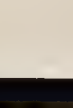
The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,

which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Fire and Water Engines for raising fluids from a depth not exceeding 33 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER and SONS, 8, Crescent, Jewin-street, London, Manufacturers and Patentees.



TO BE DISPOSED OF, SIX PILE-ENGINES, in good condition. May be seen at the Lambeth Water Works, Brixton-hill.—For price, apply to Mr. RIGHARDS, in the ground.

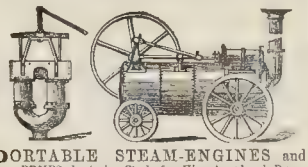
R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.
Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 3s. per doz. painted.
Ditto .... 4s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side.

TO BE SOLD, a Portable 9-horse power ENGINE, with boiler attached (Gough's Patent), mounted on frame and railway-wheels; it has till lately been used at the Grimsby Docks for pile-driving and pumping, and is in good condition. Price 80l.—Apply to WM. SIBSONS, 8, Station-terrace, Hull.

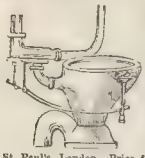
PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 92, Blackfriars-road.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

WILLIAM GILBERT, Tividale Pottery and Blue Tile Works, near Tipton, Staffordshire.—The BLUE WARE SANITARY PIPES made by W. GILBERT are the only GLAZED pipes of the kind manufactured in England. They are well vitrified, smoothly glazed, and very durable, being subjected to intense heat in the kilns. Being moulded by machinery, they are as smooth and straight as stoneware pipes; will bear a greater pressure, and endure in the drains a longer term than any other material. The sockets are deep, and made much stronger than the body of the pipe, so as to resist all unequal pressure under ground. These pipes are cheaper than stoneware, and may be had in 2 feet lengths, of 2 in. 3 in. 4 in. 6 in. 9 in. 12 in. 15 in. and 18 in. bore,—with all kinds of syphons, junctions, bends, gullies, and sink grates to match. Fire-clay chimney-pots of 100 patterns. Glazed stoneware sewerage pipes, &c. &c. Terra-cotta clay brackets, trusses, vases, fountains, busts, statues, pedestals, &c

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 23, Old Fish street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 35s. and perfect action guaranteed.



GREAT REDUCTION in the PRICE of PARRY'S superior STONE-GLAZED DRAIN-PIPES. Manufactory, Church-street, Deptford, Kent.
N.B. All kinds of Red Drain-pipes. Established 1701.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE
No. 7.

is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 208 feet; they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,
THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Cut, Lambeth.
N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction, the price being also lower than many in the trade, viz. 35 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality, Yorkshire Paving, Sinks, Slills, &c., all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.
N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

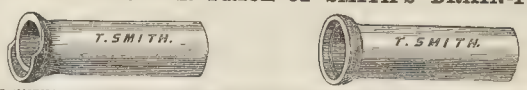
JOHN DOULTON, BROTHERS, AND CO.
LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF
DOULTON'S STONEWARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.
TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.
HENRY DOULTON AND CO.
Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their
GLAZED STONEWARE DRAIN-PIPES,
Drawings and Prices will be forwarded on application.

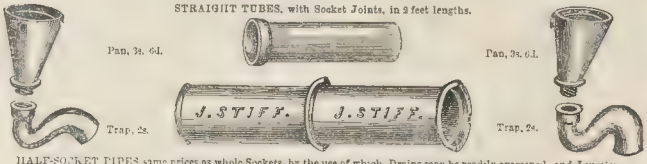
MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.
T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.
N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.
DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.
MANUFACTORIES,—71 and 72, PRINCES STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

GREAT REDUCTION IN PRICES.
JAMES STIFF,
MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES.
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.
STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.
Drawings, with Prices, will be forwarded free, on application.

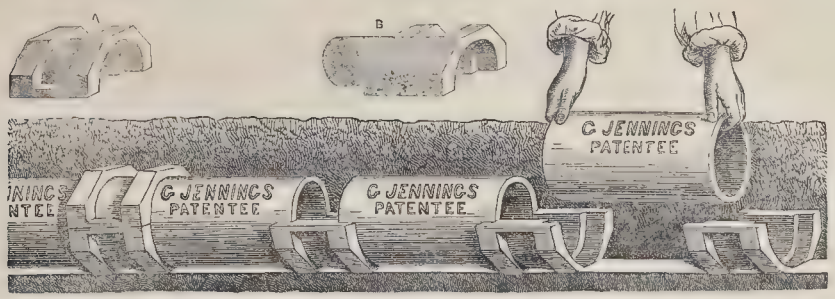
GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his
GLAZED STONEWARE DRAIN-PIPES.
LISTS OF PRICES FORWARDED ON APPLICATION.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.
DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Fireclay Blocks, Tuyeres, Fire-bricks, &c. &c.
The Fire-Bricks made from this Clay at this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.
DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

JENNINGS'S PATENT DRAIN-PIPES.



THE PATENT CHAIRS AND SADDLES above shown are to a line of pipes the SAME SUPPORT AS SLEEPERS TO A LINE OF RAILWAY, the base of each Chair being BROAD and STRONG. The pipes are simple cylinders, of uniform thickness, made without the usual socket; the drying and burning, in consequence, is much more perfect. Pipes thus made and connected will be found to BEAR ANY PRESSURE, and are in no way liable to derangement. The laying of these pipes, and the making of the joints, IS DONE AT ONCE, EACH PIPE BEING BEDDED AS IT IS LAID, and the space between allows the workman to strike up the joint, and the superintendent TO SEE that every pipe is ACCURATELY LAID and PROPERLY JOINTED.

A shows one of JENNINGS'S PATENT SADDLES OR COVERS, by means of which examinations are effected; B shows one of the PATENT JUNCTION COVERS, by which connections are made to finished lines of pipes, it being only necessary AT ANY TIME to remove a PLAIN Cover or Saddle, A, and substitute a Junction Cover, B, the Junction being THE SIZE of the Branch Pipe.

The favour with which these pipes have been received will no doubt give rise to many imitations, as it is much easier to COPY than to INVENT; but GEORGE JENNINGS hopes his sanitary patrons will give HIM CREDIT for being THE FIRST TO SHOW HOW JUNCTIONS MAY BE INTRODUCED, OR EXAMINATIONS MADE, TO FINISHED LINES OF PIPES. These important improvements, as above shown, are PATENTED; and GEORGE JENNINGS would caution those who desire TO PROFIT BY HIS IDEAS, NOT TO INFRINGE HIS PATENT RIGHTS, as they will not be allowed to do so with impunity, although he feels confident the ORIGINAL, for its SIMPLICITY and EFFICIENCY, will be preferred to any copy.

Prices of JENNINGS'S Drain Pipes, per foot run, including the Patent Chair and Saddle, are as follows:—4-inch, 6d.; 6-inch, 8d.; 9-inch, 1s. 1½d.; 12-inch, 1s. 10d.; 15-inch, 3s.; 18-inch, 4s.; with the usual discount to the Trade.

JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.

Architects describing this Closet in their specifications will have a PERMANENTLY GOOD VALVE CLOSET, NOISELESS, and FREE FROM COMPLICATION. The Patentee has such confidence in its DURABILITY and EFFICIENCY, that he will guarantee every Closet for SEVEN YEARS.

JENNINGS'S IMPERISHABLE EARTHENWARE CLOSET AND TRAP.

This Closet has a large water surface, has no back to soil, is imperishable in its material, and the Trap and Closet is combined in one piece, suited alike for the PALACE or the COTTAGE.

JENNINGS'S IMPROVEMENTS IN LIFT AND OTHER PUMPS.

These Pumps would well repay a visit to Jennings's factory, where may be seen Jennings's Lavatories, Urinals, Sluice Valves, Fire and Steam Cocks, of every size; Shop-Shutter Shoes; Gully, Area, and Sink Traps, and other sanitary goods.

Or Illustrations and Prices can be had free by post, if two stamps are enclosed to

GEORGE JENNINGS, SANITARY ENGINEER, 29, GREAT CHARLOTTE-STREET, BLACKFRIARS-ROAD, LONDON.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.
Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.
Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.
Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c at the

NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to THE AGENTS:—

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;

Where a large stock is always kept on hand.

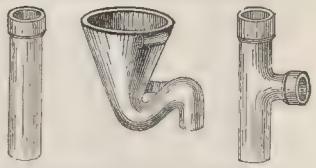
AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly seven years, and having during this period supplied DRAIN PIPES, &c to some of the largest Works in and around London, viz.: The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 80 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 3d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c &c.

UNDERHAY'S PATENT REGULATOR CLOSETS for constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in fixing, and a better flush of water obtained in use.

Fan, Valve, Self-acting, and Servants' Closets, on this principle, may be seen at the Works. They are very cheap, their efficiency is guaranteed. 3,000 of them have been sold, and no instance of failure has occurred.

These Stop-Valves are cheaper, stronger, and more ornamental, than any other. Many thousands are in use, and greatly approved of.

Manufactured by
CHARLES BOTTEN and SON,
Brass Founders, Crawford-passage,
Clerkenwell, London.

SALES BY AUCTION.

In the Western Suburbs of London and Parish of Kensington, singularly valuable Freehold Lands, offering very choice and beautiful Sites for Building

MESSRS. DANIEL SMITH and SON will (unless an acceptable offer shall be made for the entirety subject to Auction) offer the MARYLEBONE PARK Estate, and on TUESDAY, the 8th APRIL, 1856, at TWELVE precisely, in lots of from three to four acres each, presenting beautiful sites for the erection of respectable villas, about TWENTY ACRES of rich and FREEHOLD PASTURE LAND (time to be nine undulating inclosure, within a few minutes' walk of the Harrow and Bayswater roads, where several capital villas have been recently erected detached from any houses or other buildings, and commanding some extensive and cheerful scenery. It would be a peculiarly desirable spot for public institutions, and the Estate is intersected with plans, may be had at the Auction Mart; of Messrs. R. M. and F. Lowe, Solicitors, Temple; of Mr. W. Sim, Architect, 39, Elgin-crescent, Notting-hill; and of Messrs. Smith and Son, Land and Estate Agents, in Waterloo-place, Pall-mall, who are fully authorised to treat for the whole or any part thereof. A valuable farm adjoining may be purchased if a large extent should be required.

BOROUGH-ROAD Repairing Stock of Architectural Stone Effigies

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, The Stone Yard, Workshops, on WEDNESDAY, APRIL 2nd, at TEN for ELEVEN, the first portion of the extensive STOCK; comprising fountains, vases, figures, groups (including the large "Laocoon," the only one in artificial stone), centre flowers, &c. Terms, Cash. The Sale will continue the last sale three days on Monday next, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

BANKSIDE.—Valuable Stock-in-Trade and Effects of a Stone-merchant, Dismantling

MESSRS. EVERSFIELD and HORNE have received instructions from the trustees. Mr. Hy. Rood, to SELL by AUCTION, on the PREMISES, 42, Bankside, Southwark, on WEDNESDAY and THURSDAY, the 9th and 10th APRIL, at TWELVE for ONE each day, the very extensive and valuable STOCK of STONE, comprising nearly thousand feet of tooled York paving flags, landing and York steps, coils, coping, and sundries; Portland and Bagby stone, in block and scantling, granite blocks, pitching, and kerb; Harehill and Rough Rood stone, numerous slabs, landing stones over 12 slabs, chimney-pieces, &c. As the plant and effects, comprising two excellent travelling-cranes, a seven-ton iron crane, four mason's carts, one spring cart, four stone trucks, several hand trucks, trestles, crab chains, hoisting tackle, saw tackle, three powerful cart-horses, eight sets of harness, and numerous other effects. May be viewed two days previous, and catalogues had on the Premises; and of the Auctioneers, 40, Parliament-street, Westminster, or Coal Exchange.

OLD KENT-ROAD—TO BUILDERS, MASONS, PAVIORS, AND OTHERS.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, St. James's-road, Canal bridge, Old Kent-road, on THURSDAY, APRIL 3, 1856, at TEN for ELEVEN, by order of the Executors of Mr. C. Dalton, deceased, the STOCK of STONE and MARBLE; comprising York paving and slab, sawn slab of Harehill and Shipley stone, tooling and hearth stone, granite and Purbeck, worked coils, paving sets, stone troughs and mangers, landing-stones, steps, sills, sawn, and other marble slabs, marble chimney-piece and stone ditto, iron railing cast iron sash frames, about 50 cwt. odd rods of fencing, fire bricks, and other effects. May be viewed one day previous; and catalogues had on the premises, and of the Auctioneers, 40, Parliament-street, Westminster, or Coal Exchange.

VALUABLE FREEHOLD BUILDING FARM, Cottages and Plots. Land to be fenced, Berm orders, Sur-ey.

MR. HUMPHREYS will SELL by AUCTION, on MONDAY, APRIL 7th, at TWELVE, at GARRAWAY'S (by order of the surviving executor of the late Mr. Geo. Stevens), in two lots, valuable BUILDING PLOTS in Great Berm-street, Berm-road, Berm-terrace, and Brook-street, Bermondsey, near the Old Church; each containing from 105 feet to 107 feet frontage, and average from 86 to 90 feet superficial. Parties desirous of viewing the plans may be had of Mr. Joseph Davis, the executor, 25, Riley-street, Russell-street, Bermondsey; Mr. Purnell, collector to the estate, 188, Bermondsey-street; Mr. Frederick Hatton, Solicitor, 17, Essex-street, Strand; Mr. Thos. S. Humphreys, Solicitor, 11, East-India Chambers, Leadenhall-street; at Garraway's; and of the Auctioneer, 61, Leadenhall-street

TO BUILDERS AND OTHERS.—Paper-hangings, Marble Chimney-pieces, Bedsteads, Feathers, Books, and Effects, part sold in consequence of a dissolution of partnership in the firm of Elwood and Co. the well-known paper-hanging manufacturers of Millbank-street, and part by order of the Assignees (under an assignment of a Marble Mason at Pimlico.

MR. EDWIN WHITE will SELL by AUCTION, without reserve, at his spacious ROOMS, 191, high-square-street Without, on WEDNESDAY next, the 2nd of APRIL, at TWELVE for ONE o'clock punctually, a quantity of first-class FRENCH plant imported from Paris under the English Paperhangings, comprising choice flocks, satins, damasks, marbles, chintzes, grounds, and borders, in the most tasteful designs; thirty hand-one St. Ann's, Rouget 19 by 36 inches, and numerous other goods. The sale will take place immediately, and public notice is given that the goods having been imported for Government offices, railway waiting rooms, &c., a quantity of architraves and 9 by 3 mullions, various finishes and effects.—On view the day prior and morning of Sale, with catalogues may be had.

SWINTON IRONWORKS. By

MESSRS. OLIVER and SON, at the PRINCE of WALES' HOTEL, in Masbro', in the County of York, on WEDNESDAY, the 2nd of APRIL, 1856, at FOUR o'clock, in the afternoon (unless disposed of in the meantime by private contract, of which notice will be given), as may be agreed upon at the time of sale, and subject to such conditions as shall be then and there produced, all those valuable and extensive IRONWORKS known as the "Swinton Ironworks," 5 miles from Rotherham and 11 miles from Sheffield, having a wharf and frontage to the River Don Company's Canal, for a short length of the works, with water communication to Rotherham, Sheffield, Doncaster, Hull, &c. and near the Rotherham and Swinton Railroad, consisting of two blast furnaces, four stone boilers, and other requisite iron work for the Railway. The works consist of sixteen puddling furnaces, two ball furnaces, two mill furnaces, one annealing furnace one 30-horse non-condensing beam engine, setting plate mill, and one hammer complete, will stone built engine house, large brick cistern; one other portable beam engine, 14-horse power, driving finishing hammer, and other portable engines, consisting beam engine, 36-horse power, driving bar mill, with all wheels, gears, water Lashes, floor plates, working tools, in the most complete working order; smiths' shop, two hearths, two pairs of bellows, with all tools complete; roll turners' shop, with two lathes, one 21ft. 18-inches machinery, driven by one six-horse high-pressure engine, with a boiler and other lathes. Foundry, with air furnace, capable of melting fifteen tons; two capolo cranes, crane and bull ladels, moulding boxes, sand, &c. all in complete working order for all the gear, wheels, &c. in the forge; dry-house fitting-shop, model-makers' shop, joiners' shop, boat carpenters' shop, melting furnace (ten holes), counting-house, three cottages, coal pens, pens for ore and scrap iron, with coking furnaces (twenty), and other warehouses and out-buildings. Also one close or parcel of Land adjoining, comprising about 3 acres. Also eighteen stone-built cottages, at High Town, in the township of Swinton, and near the works, with a valuable Stone Quarry. Also a large and substantial stone-built House, at Kirk Imps, close to the railway station, well adapted for an inn, with two cottages, stabling for ten horses, with hay-lofts and carriage-house, built as to be easily converted into cottages.—To view the Premises, apply to the Manager, Mr. Coos; for further particulars, apply to Davies and Cudworth, Solicitors, Leeds. N.B. The vendors are still open to sell private, the Premises.

SALES BY AUCTION.

TO BUILDERS, CARPENTERS, AND OTHERS. TO BE SOLD by

J. H. GREENACRE, by Order of the Directors of the East Dereham Corn Exchange Company, on THURSDAY the 10th day of APRIL, 1856, at ELEVEN o'clock in the FORENOON, on the Premises in Lot, the MATERIALS of the Dwelling-house and Shops and Shed in the Market-place and in Church-street, in East Dereham; now or lately in the occupations of Mr. Barton, Mrs. Tuneate, Mr. Neal, Mrs. Catton, and Miss Halsted. Conditions will be produced at the time of sale.

PAUL'S HOUSE, TAUNTON.

MR. KINGSBURY has been instructed to SELL by AUCTION, at PATTISON'S CASTLE HOTEL, Taunton, on TUESDAY, the 8th day of APRIL next, at TWO o'clock in the afternoon, all that excellent FREEHOLD MANSION, called "Paul's House," together with the COTTAGE, and extensive SHRUBBERIES, GARDENS, and GROUNDS adjoining the same, containing by admeasurement 3a. 3r. 14p. in the parish of Bishop's Hull. The mansion is situate in a healthy portion of the town, agreeably secluded in its lawn and shrubberies, and within a few minutes' walk of the market-place. It is replete with spacious entrance and dining rooms, library, breakfast parlour, housekeeper's and butler's rooms, kitchen, laundry, china closets, &c., twelve bed-chambers and dressing rooms, and is amply supplied with every convenience: it has walled gardens, productive of fine vegetables and fruit, stables for two horses, harness-room, coach house, &c.; brewhouse, extra stable, cow houses, piggeries, and all manner of other requisite offices, at a judicious distance, combining, as a whole, most commodious, comfortable, and capable of being at once inhabited, with a trifling outlay. To a person desirous of making a building speculation, the auctioneer begs to call particular attention, as the house is so pleasantly separated from the other portions of the property, and a street carried across the field, forming a double frontage from Tower-lane to Bridge-street opposite the New Shire-hall, and the other building frontage of upwards of 100 yards, facing the Crescent-field, in that most improving part of the town leading towards the village of Bishop's Hull. And in the event of the property not being sold in one lot, it will be offered in smaller portions as above put up into lots, so as to enable any purchaser to buy the building or plantation that may suit his views and means. Further particulars may be had of Messrs. Bevan and Sons, Solicitors, Bristol; of Messrs. Bevan and Sons, Solicitors, Exeter; of Messrs. Bevan and Sons, Solicitors, Hammet-street, Taunton, March 10, 1856

TO TIMBER MERCHANTS, CABINET MAKERS, COACH-MAKERS, BUILDERS, & OTHERS For absolute SALE by AUCTION under an Agreement, on WEDNESDAY, 2nd APRIL (unless previously disposed of), at HALF-PAST TEN for ELEVEN o'clock precisely, in the PREMISES, Old Bethnal Green-road, the entire STOCK IN TRADE of Messrs. R. COLLING and SON, Timber Merchants, consisting of 46,000 Feet of Hoop Iron and Cuba Mahogany, in Planks and Boards, Cedar and Rosewood in Planks and Boards, and Mahogany and Rosewood Veneers, of large quantities of well-grown timber, pure stocks of deals, dealends, battens, and staves, horse, cart, and other gears, to be had on the day previous; and on the morning of sale the premises will be open for inspection, and the Messrs. Colling will be in attendance to show the property. Brokers and Auctioneers, 13, Pioneer-hall, 194, Broad-street, City.

FREEHOLD BUILDING LAND, HOLLOWAY.—TO BE SOLD, or LET, about EIGHTEEN ACRES, in large or small Plots.—Apply to Mr. PEACHEY, 12, Salisbury-square.

FREEHOLD.—WANTED to PURCHASE, a BLOCK of OLD HOUSES or a vacant space of Ground, having a superficies of about 40 yards by 36 yards, to be situate within the four following lines:—Bedford-row, Guilford-street, Wes-minster, on the south, the Parks on the west, Regent-street on the north, and Regent-street, Charing cross, and Parliament-street on the east. A Frontage to Regent-street would be preferred, but it is not absolutely essential. Particulars to be addressed to Messrs. WATKINS and HOOPER, Solicitors, 11, Sackville-street, Piccadilly

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPPEN, Architects, 3, Danes-inn, St. Clement's, Strand.

FREEHOLD GROUND, Fetter-lane.—The Commissioners of Sewers of the City of London hereby give Notice that they will meet at the GUILDHALL, on the 2nd day of APRIL next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking on BUILDING LEASE for eighty years, certain PLOTS of GROUND, situate at the south-east end of Fetter-lane. Further particulars may be had, and a plan seen, on application to Mr. HAYWOOD, Engineer to the Commissioners, at the office in the Guildhall. The Commissioners will require a plan and elevation of the Premises proposed to be built thereon, and if approved of, and do not find themselves bound to accept any proposal unless deemed advantageous. JOSEPH DAW.

Sewers Office, Guildhall, March 4th, 1856.

FREEHOLD or LEASEHOLD GROUND or PREMISES. WANTED, within the boundaries of St. George the Martyr, Southwark, a FREEHOLD or LEASEHOLD SITE, of not less than 50 feet frontage to a public road, and 100 feet.—Part offers of price, dimensions, and situation to be sent in writing to A. B. Post-office, 109, Blackman-street, Borough.

FREEHOLD LAND.—Wanted, to Purchase, a piece of Freehold Land, of not less than an acre and a half, having a frontage to a public road, and not more than a quarter of a mile from the Royal Exchange; it must be in the vicinity of a market, and capable of good drainage.—Address, stating full particulars, quantity, price, situation, &c. to Mr. HERBERT WILLIAMS, Architect, 1 Great Ormond-street, Bloomsbury, on or before the 30th APRIL next

OLD FORD, near VICTORIA-PARK.—FREEHOLD BUILDING GROUND TO BE LET, with liberal cash advances, admirably suited for fourth-rate houses, which are much required in this rapidly increasing neighbourhood, and will be let at a low rent.—Further particulars apply to Mr. OLIO CLARKSON, Surveyor and Land Agent, 48, Peaton-street, Pentonville.

HOLLOWAY.—FREEHOLD BUILDING GROUND TO LET, with liberal cash advances, to respectable Builders, admirably situated for Villa Residences, where are much required in this favourite and healthy locality. The situation is healthy, and the roads and drainage good. For further particulars, apply to Mr. GEORGE CLARKSON, Surveyor and Land Agent, 48, Peaton-street, Pentonville.

TO BUILDERS

FREE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the finest sites for building upon anywhere near London, and the villas are in great demand, on account of the situation being lofty, dry, well drained, and very eminently healthy. Assistance will be afforded to responsible parties.—For particulars, apply to Messrs. J. and C. W. TODD, Milner-street, Brompton, London, or Belmont, Lee, Kent; or Messrs. NELSON and INNES, 6, Whitehall; and of Messrs. KIRKMAN and ENGLEHEART, King William-street, City.

BUILDING AGREEMENT TO BE SOLD. TO BUILDERS, BUILDING SOCIETIES, and OTHERS. HAVERSTOCK-HILL, HAMPSTEAD-ROAD.—TO BE SOLD, a valuable BUILDING LEASE, for forty years, of FREEHOLD LAND, situate in one of the healthiest and most commanding positions in London, and only three minutes' walk from the Railway Station, Chalk Farm, whereon is to be built Fifty-six Houses. There is sufficient brick-earth dug and prepared for making at once bricks sufficient for erecting the whole of the houses. The Plant necessary for carrying on the works could be had with the brick earth at a fair valuation, or the holder of the land would make the bricks at a low price to be agreed upon.—For particulars apply to Mr. NUTTER, Land Surveyor and Auctioneer, Prince of Wales-road, Haverstock Hill.

MAITLAND-PARK, HAVERSTOCK-HILL, HAMPSTEAD-ROAD, Land to be resumed.—TO BE LET, for building leases, for forty years, desirable BUILDING SITES upon the above estate. The continued demand for houses in the locality, and the picturesque position of the property, adjoining the grounds of the Orphan Working School, render this a desirable opportunity for builders or gentlemen wishing to invest well for themselves. For plans and terms apply to the Secretary of the Orphan Working School, 33, Lindsell-hill, Messrs. FERRELL and CHAMBERLAIN, 36, Basinghall-street; the Architects, Messrs. WEIMMER and ASHDOWN, 42, Charing-cross; or at the Lodge attached to the School.

ELIGIBLE BUILDING LAND TO BE LET, on the very best part of the immediate neighbourhood of Forest-hill. The ground is dry and finely timbered, and within ten minutes' walk of either railway station. A liberal peppercorn rent will be granted.—For particulars apply to Mr. T. L. ROBINSON, 16, High-street, Croydon, Surrey.

TO BUILDERS and OTHERS. — An excellent SITE TO BE LET or SOLD, for BUILDING PURPOSES, with a good double frontage, situate in a leading thoroughfare and in an essentially improving neighbourhood, with a lapse of fifty-and-odd most eligible years, and workships. The materials of the present premises may be used if sound, in erecting any new buildings that may be required. Money will be advanced if required by the purchaser, or taken, to carry out the undertaking, upon a satisfactory arrangement.—Inquire of Messrs. HOWARD and DOLLMAN, Solicitors, 4, Bedford-row, Holborn-street; Mr. EDWARD LOWTHER, 28, Red Lion-street, Clerkenwell, or of Mr. MURRELL, Auctioneer, 1, Walbrook, City.

BUILDING LAND TO BE LET, at HALLSVILLE.....Term long years, for small cottages.
CANNING TOWN " 1,000 " for small cottages.
NORWOOD..... " 1,000 " for villa residences.
SPRATFORD..... " 100 " for small cottages.
POPLAR..... " 98 " for fourth-rate houses.
Advances 7½ to 10 per cent. on each cottage.
Apply to Mr. WM. ELLISON, Architect, Stansby-road, Limehouse.

TO LET, Marsh-street, Walthamstow, a SITE of GROUND, whereon is now standing an old house, with large yard at the back, and lofty lime-timbered orchard trees. If the premises are to be arranged, the house will be pulled down; this presents, therefore, an opportunity of building on a site where the plantations and garden-grounds are already formed.—For further particulars apply to Messrs. PANSON, Laurence Pountney-lane, City.

BUILDING LAND near a RAILWAY STATION, where Houses are much wanted. FOUR ACRES with Frontage to the south and west, about a quarter of a mile from Grays Station. The Gas main passes along the south road. Near Lord Hardinge's Palace in the north, and Land adapted for Factories with river frontage, can also be obtained on application to Messrs. WILSON and CO. GRAYS, ESSEX. Bricks, Lime, Poles, &c. are very easily obtainable in this neighbourhood.

AN Architect about to retire wishes to LET his Offices. Address, J. CROSLAND, 1 and 2, Fencourch-street, City.

ELIGIBLE PLOTS of GROUND to be LET for building, at Castlebar-hill, seven miles from London, and ten minutes' walk from the Ealing Station on the Great Western Railway. Parties are to be and of G. LESLIE, Cliff-mall, Hammersmith.

HATFIELD, HERTS.—TO BE LET, very eligible BUILDING LAND, at Hatfield, seventeen miles from London, on the Great Northern Railway, suitable for the erection of villa residences. For further particulars apply to Messrs. GEO. NICHOLSON and SON, Solicitors, 4, Old Palace yard, Westminster.

TO BE LET, at PLAISTOW, SEMI-DETACHED VILLAS, in the immediate neighbourhood of the Victoria Docks. Each house contains two parlours and kitchen, with good cellarage, kitchen, scullery, pantries, and water-closet, they are completely fitted up with every convenience, dressers, soppers, water, stoves, and blind; they are partially stained and varnished, and are planned with the best of patterns; they are ready for immediate occupation, and in consequence of the failure of the builder, they will be let for the low rent of 18l. per annum. Property moderate, and railroad and omnibus conveyance within easy distance.—Apply to Messrs. W. G. and E. HABERSHON, Architects, 38, Bloomsbury-square, London; or to Mr. FISHER, Builder, Balaam-street, Plaistow.

N.B.—A railroad is now in course of construction from the Stratford Station to Plaistow, and the station to Plaistow will be opened in a few months. The station will be about a quarter of a mile from the above mentioned houses.

OXFORD.—Valuable BUILDING LAND, to be LEASED on terms not exceeding 99 years. It immediately adjoins the City of Oxford, and belongs to the President and Scholars of St. John's College. The land is principally suitable for small villas, for the erection of private residences, and builders, speculators, and others, may obtain plots on such terms as will insure peculiar advantages, as it is well known that houses are much wanted, and in daily request. It is most healthily situated on a fine bed of gravel, has springs of pure and excellent water, and good bricks may be obtained within a few hundred yards of the site.—For particulars, apply to Messrs. SECKHAM and CO. 9 and 7, St. Aldate's-street, Oxford.

MILITARY CAMP, ALDERSHOT.—To BUILDERS, HOTEL and SHOPKEEPERS, and OTHERS.—Plots of Land for Villas, for long terms, at peppercorn rents (with a premium), or at ground-rents, very eligible PLOTS of BUILDING-LAND at Aldershot, fronting the Queen's Parade, and other roads recently formed. Barracks now in course of erection, comprising the best situation in the locality for an hotel and shops; also several plots for the erection of lodging-houses and shops opposite the new station buildings, presenting to all are an unusually high rate of interest for capital expended.—For terms and particulars apply to Mr. BARRON, Auctioneer, Surrey-road, Blackfriars; Mr. W. PENDRED, Architect and Surveyor, 2, Charlotte-row, Mansion-house, London.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing office of COX (Brom) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published, by the said Charles Wyman, at the Office of "The Builder," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, March 29, 1856.

The Builder.

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ROYAL ACADEMY of ARTS, Trafalgar-square.—NOTICE to ARTISTS.—All Works of Painting, Sculpture, Architecture, or Engraving, intended for the ensuing EXHIBITION at the ROYAL ACADEMY, must be sent in on MONDAY, the 7th, or TUESDAY, the 8th of APRIL next, after which time no Work can possibly be received, nor can any Works be received which have already been publicly exhibited.

FRAMES.—All Pictures and Drawings must be in gilt frames. Oil Paintings under glass, and Drawings with wire mounts are inadmissible. Excessive breadth in frames as well as projecting mouldings may prevent Pictures obtaining the situation they otherwise merit. The finer resistance necessary to be observed may be obtained at the Royal Academy.

JOHN PRESCOTT KNIGHT, R.A. Sec.

Every possible care will be taken of Works sent for exhibition, but the Royal Academy will not hold itself accountable in any case of injury or loss, nor can it undertake to pay the carriage of any package.

The prices of Works to be disposed of may be communicated to the Secretary.

THE ARCHITECTURAL MUSEUM, CANON-ROW, WESTMINSTER.

SUMMER SESSION, 1856.—On MONDAY next, the 7th of APRIL, the Prizes for Stone and Wood Carving offered in 1855 will be presented to the successful competitors. Hour of admission, SEVEN o'clock. The chair to be taken at EIGHT o'clock. The Committee especially invite the attendance of artworkmen on this occasion. Cards of admission may be had gratis on application at the Museum.

GEORGE GILBERT SCOTT, Treasurer.
HENRY CLUTTON, Hon. Sec.

PRACTICAL GEOLOGY, KING'S COLLEGE, London.—Professor TENNANT, F.G.S. will commence a course of Twelve Lectures on Geology, having reference to the application of the science to Engineering, Mining, Architecture, and Agriculture. The Lectures will commence on WEDNESDAY MORNING, APRIL 9th, at NINE o'clock.—Fee, £1. 11s. 6d.

R. W. JELF, D.D. Principal.

COMPETITIONS.

TO ARCHITECTS, &c.

THE SOUTH SHIELDS and WESTOE UNITED BURIAL BOARD are desirous of receiving DESIGNS, SPECIFICATIONS, and ESTIMATES for the following WORKS, connected with the intended New Burial Ground, the extent of which, including the road, is seventeen acres, viz.:—Two Chapels (one for burials according to the rites of the Church of England, and the other for burials otherwise than according to those rites), a Superintendent's House and necessary Offices, a small Gatekeeper's Lodge and Two Gates, the total amount of which is not to exceed £2,200. Premiums will be given for the two designs which may be most approved of, and be also well adapted for the purpose, viz.—30l. for the first, and 20l. for the second; the plans, specifications, and estimates, for which they are given, to be the property of the Board, but neither of the premiums will be paid, unless a Tender be accepted by the Board, for the actual execution of the works, at or within the stipulated sum of 2,200l. Competitors must state the amount of Architect's charges required, over and above the premium, for furnishing all necessary working drawings and superintending the works, if the Board should require their services. A plan of the site may be seen at the Offices of Mr. C. THOMPSON, Borough Surveyor, Central Hall, Chapter-row, South Shields, and the whole of the designs, specifications, and estimates must be sent to me free of expense, sealed and endorsed, but without any name or distinguishing mark, on or before the 17th of April next, enclosing a sealed letter in each case, from the person forwarding it.

By order, THOMAS SALMON, Clerk to the Burial Board.
South Shields, 30th March, 1856.

COMPETITIONS.

TO ARCHITECTS.

ELIZABETHAN CLOCK-TOWER.—FIVE GUINEAS PREMIUM will be given for the best DESIGN for a SQUARE ELIZABETHAN CLOCK-TOWER, including elevation, plan, vertical section, &c. Materials, Red and White Brick and Flint.—For further particulars apply to Mr. GEORGE BENNETT, Maker of the London-bridge Clock, Greenwich Kent.

DINING-ROOM at CRYSTAL PALACE. WANTED, a DESIGN of an ornamental character internally, and ESTIMATE for a SECOND-CLASS DINING-ROOM, to cover 120 feet by 72 feet clear space on plan, in which light and ventilation must be combined. The two sides and one end to be wood-framing, and one end in brickwork. The lighting by the roof and the brickwork end. The roof to be supported independent of the side-framing. The staircase to the room to descend 8 feet within a space of 16 feet square, at one angle or other to the room. The floor to be 14 inch thick on dwarf walls, and foundations for columns, or roof supports, are to be included. The expense contemplated, about 1,000l. It will be seen if the plan and estimate approved, provided the design can be carried out for the sum named.—Plans, &c. to be delivered on or before SATURDAY, the 12th of APRIL, to Messrs. STAPLES, the Albion, Aldersgate-street.

CONTRACTS.

TO IRONFOUNDERS.

TENDERS for WEST HARTLEPOOL MARKETS.—Persons desirous of TENDERING for the necessary IRONWORK required in the ERECTION of COVERED PUBLIC MARKETS, at WEST HARTLEPOOL, may inspect the plans and specifications, at the Commissioners' Office, Athenæum, West Hartlepool, from MONDAY, the 14th day of APRIL, till MONDAY, the 28th; and copies may also be inspected at the Offices of the Architect, Mr. THOMAS OLIVER, Jun. 68, John-street, Sunderland, and 29, Grey-street, Newcastle, of whom further particulars and quantities may be had on application. Tenders to be delivered at my Offices on or before MONDAY, the 28th day of APRIL next, endorsed "Tender for West Hartlepool Markets." The Commissioners do not pledge themselves to accept the lowest Tender necessarily.—By order,

WM. W. BRUNTON,
Clerk to the West Hartlepool Improvement Commissioners.
March 6, 1856.

TO BUILDERS, MASONS, JOINERS, &c.

TENDERS for WEST HARTLEPOOL MARKETS.—Persons desirous of TENDERING for the MASON, BRICKLAYER, and JOINER'S WORK, required in the ERECTION of COVERED PUBLIC MARKETS at WEST HARTLEPOOL, may inspect the plans and specifications at the Commissioners' Office, Athenæum, West Hartlepool, from MONDAY, the 14th day of APRIL, till MONDAY, the 28th; and copies may also be inspected at the Offices of the Architect, Mr. THOMAS OLIVER, Jun. 68, John-street, Sunderland, and 29, Grey-street, Newcastle, of whom further particulars and quantities may be had on application. Tenders to be delivered at my Offices on or before MONDAY, the 28th day of APRIL next, endorsed "Tender for West Hartlepool Markets." The Commissioners do not pledge themselves to accept the lowest Tender necessarily.—By order,

WM. W. BRUNTON,
Clerk to the West Hartlepool Improvement Commissioners.
March 6, 1856.

WILTON LOCAL BOARD of HEALTH. The Local Board are prepared to receive TENDERS from competent Persons for the execution of the Works comprised in the following Contracts for the Drainage of the District, viz.

CONTRACT No. 1.—For excavating and Pipe Laying, to form Main and Collateral Sewers from the District Boundary in Wilton-park to the Outfall, and for forming such Outfall.

CONTRACT No. 2.—For Excavating and Pipe Laying, to form Main and Collateral Sewers throughout the District.

CONTRACT No. 3.—For Well-sinking and forming Street Gullies.

Specifications, with forms of Tender, may be had of the Clerk on payment of 2s. 6d.; and further particulars will be given on application to the Engineer and Surveyor to the Board. Tenders, addressed to the Chairman of the Board, to be sent in to the Clerk on or before SATURDAY, the 12th APRIL next.

By order of the Board, THOMAS THRING, Clerk.
Wilton, near Salisbury, March 17, 1856.

TO BUILDERS.

PERSONS desirous of CONTRACTING for the ERECTION of the new CHAPEL at HELMSLEY, Bucks, may inspect the plans and specifications, and obtain bills of quantities on payment of one guinea, at the Offices of the Architect, Mr. CHANCELLOR, Chipping-Norton, after MONDAY, the 31st day of APRIL next. Tenders to be delivered at my Offices, Chelmsford, on or before MONDAY, the 28th day of APRIL.—The Directors do not bind themselves to accept the lowest or any Tender.

W. W. DUFFIELD, Secretary.
Chelmsford, March 27, 1856.

GLOUCESTER WATERWORKS.—IRON CASTINGS.—The Gloucester Board of Health are prepared to receive TENDERS for the SUPPLY of about 200 TONS of WATER-PIPES, and other castings for town distribution. Printed specifications and forms of Tender (price 5s.) may be had on application to the undersigned. All Tenders are required to be sent in to the Clerk, under a sealed cover, marked "Tender for Water-pipes and Castings," and addressed to the "Improvement Board of Health," on or before TUESDAY the 29th day of APRIL instant. The Board do not pledge themselves to accept the lowest or any Tender.

R. H. FRYER, Clerk to the Board.
Gloucester, April 2, 1856.

CONTRACTS.

NOTICE to IRONFOUNDERS and SMITHS.—The Commanding Royal Engineer of the Dover district begs leave to give notice that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before MONDAY, the 14th day of APRIL, at 3 o'clock, from persons desirous of contracting for SUPPLYING ARTICLES of CAST and WROUGHT IRON at the several barracks in the Dover district for the War Department. Specifications and drawings of the articles to be supplied, with conditions of the contract, may be seen by persons fully competent to undertake the supply of the articles, and forms of Tender obtained, at the Royal Engineer Office, Archcliff Fort, Dover, between the hours of TEN and FOUR o'clock, from THURSDAY, the 27th of MARCH, to SATURDAY, the 12th APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, in both cases separately to be bound under a penalty of 500l. for the due performance of the contract. Tenders for the above service to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed "Tender for Stores, Dover District."

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, 18th March, 1856.

NOTICE to BUILDERS.—Notice is hereby given, that TENDERS will be received at the Office of the Director-General of Contracts, War Department, Pall-Mall, London, from such persons as may be desirous of entering into a Contract for the ERECTION of a GUARD-HOUSE and CELLS, &c. at Winchester Barracks, in the county of Hants. Plans and specifications may be seen at the Royal Engineer Office, Winchester, where also forms of Tender may be obtained, every day (Sundays excepted), from the 14th until the 22d day of APRIL, 1856. Tenders to be delivered on or before the 28th day of APRIL, 1856. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders. No notice will be taken of any of the Tenders unless made on the printed forms, to be obtained at the Royal Engineer Office, Winchester Barracks.

Royal Engineer Office, Portsmouth, April 1, 1856.

TO CONTRACTORS, BUILDERS, AND OTHERS.

CLUN UNION.—Persons desirous to CONTRACT for MAKING IMPROVEMENTS in the BRAKINGS of the CLUN UNION WORKHOUSE PREMISES, situate at Bishop's Castle, in conformity with the plans and specifications now being in the Clerk's office for inspection, are requested to send in Tenders, addressed to the Board of Guardians, at the Workhouse in Bishop's Castle, on or before the 7th day of MAY next.—By order of the Board,

FREDERIC PARDOE, Clerk.
Bishop's Castle, March 14, 1856.

PARISH of ST. MARYLEBONE, March 29th, 1856.—CONTRACT for SEWAGE DRAINPIPES, IRON GRILLE GRATES, and other IRON-WORKS for SEWERS.—Notice is hereby given, that the Committee of the Vestry of St. Marylebone will meet at the Court-house of the said Parish, on WEDNESDAY, the 16th day of APRIL, 1856, at ELEVEN o'clock in the forenoon, to receive TENDERS from persons willing to contract with the said Vestry of St. Marylebone for one year for the supply of Sewage Drain-pipes, Bends, Junctions, &c. and Iron Grilly Grates and other Ironwork for sewers. The Tenders to be upon the printed forms, and to be sent in, sealed, on or before ELEVEN o'clock on the said 16th day of APRIL. Further particulars may be known, and forms of Tender procured of the Vestry's Surveyor, Mr. ROBERT SCACE, at his dwelling-house at the Court-house, from TWELVE till ONE o'clock. The Vestry do not pledge themselves to accept the lowest Tender.—By order,

W. E. GRENWELL, Vestry Clerk.

EAST LANCASHIRE RAILWAY.—The Directors are prepared to receive TENDERS for the MAINTENANCE of the PERMANENT WAY and WORKS; and for the formation of additional lengths of Line of Rails from Salmon's Junction to Rawtenstall, including all the works connected therewith. Specifications and Plans may be seen on and after MONDAY, the 7th of APRIL, 1856, at the Engineer's Office, Bury Station.—Sealed Tenders, endorsed "Tender for Maintenance of Permanent Way and Works," to be addressed to the undersigned, before the 10th day of APRIL next.—By order,

MILES FENTON, Secretary.
Bury, Lancashire, March 29th, 1856.

TO BUILDERS, &c.

TENDERS are required for ERECTING TWO VILLAS at CASTLENAU, Barnes.—Drawings and specifications may be seen at the Bodenham Arms Tavern, Castlenau, Barnes, on and after MONDAY, the 7th of APRIL, 1856. Tenders to be delivered, or sent, to GEO. GREENHILL, Esq., at Barnes-common, Barnes, S.W. before MONDAY, the 14th of APRIL, for opening on TUESDAY, the 15th, at TEN o'clock a.m. precisely. The lowest Tender not necessarily agreed.

GORDON STANHAM,
Architect, North-end, Hammersmith.

TO BUILDERS AND CONTRACTORS.

MIDLAND COUNTIES INSURANCE COMPANY'S OFFICES, LINCOLN.—Persons willing to CONTRACT with the Directors of the Midland Counties Insurance Company for the ERECTION of their NEW OFFICES, proposed to be built on a site situate in Silver-street and Bank-street, in the City of the said Town, may view the plans and specifications, and obtain further information, relative thereto, on application at the Offices, at WEDNESDAY, the 9th day of APRIL next, until 2nd APRIL next, on which day, or after, by TWELVE o'clock at noon, Tenders are to be delivered at the Company's present Offices, Cornhill, Lincoln, sealed and endorsed "Tenders for Offices," addressed to W. MARRIS, Midland Counties Insurance Company. The Directors do not pledge themselves to accept the lowest Tender.—By order of the Directors,

BENJAMIN and HADLEY, Architects and Surveyors, Broad-gate, Lincoln.

Lincoln, March 25, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

FILEY WATER COMPANY.—CONTRACT for LAYING WATER-PIPES.—The Filey Water Company are prepared to receive TENDERS from parties willing to contract for LAYING about FIVE MILES of WATER PIPE. The specification may be seen at the Office of Mr JOSIAH F. FAIRBANK, of Scarbor ugh, the Company's Engineer on and after MONDAY, 31st MARCH, 1856. A printed copy of the specification, with form of Tender, will be forwarded on receipt of five shillings. Sealed Tenders, addressed to the Directors of the Filey Water Company, and endorsed "Tenders for Pipe Laying," must be for warded on or before the 10th of APRIL, 1856. The Directors do not bind themselves to accept the lowest or any tender.

JOSIAH F. FAIRBANK,
Engineer and Secretary to the Filey Water Company.

Scarborough, 24th March, 1856.

GLASGOW CORPORATION WATER-WORKS.—MUGDOCK RESERVOIR and TUNNEL.—TO CONTRACTORS.—The Committee of Commissioners hereby give Notice that they have POSTPONED their determination upon the TENDERS lodged for No 2, or MUGDOCK CONTRACT, which are in the meantime retained and reserved under seal, for future consideration; and it has been resolved to receive new and revised Tenders from Contractors offering alternatively to execute any one or both of the two parts of the work into which it is divided, viz.—1st, the tunnel for separately by itself, or for that part, as well as by corresponding prices in schedule.—2nd, the one part comprehending the Mugdock Service Reservoir and relative work, and the other the Tunnelling and relative work, conform to specification and schedule—which new and revised Tenders will be considered and disposed of along with the Tenders already lodged, so far as not superseded by the Contractors offering revised Tenders now requested. As formerly advertised the whole work consists, among other things of a Tunnel 2,650 yards in length, and eight feet in diameter, excepting from near the village of Craiglaw to the valley south of Mugdock, near Milngavie, and the formation of a large Reservoir, to be called the Mugdock Service Reservoir with some short Tunnels, and all the masonry, watercourses, diversions of roads &c. &c. connected therewith. The earthwork, puddling and stoning in the embankment, and cutting of the Reservoir, will amount to nearly 500,000 cubic yards. The plans, sections, drawings, and specifications, will be again exhibited for the inspection of intending contractors in the Town-hall, at the Cross of Glasgow (entry by No. 15, Trongate), on and after WEDNESDAY, 2nd day of APRIL next, where copies of the specifications and quantities, and all other requisite information will be obtained, and also from the Subscriber, Mr. BURNET, at his office, City Chambers, Glasgow; and all further information necessary may be obtained from J. F. BATEMAN, Esq. the Engineer, at his offices in Manchester, and from Mr ALFRED MOORE, the Assistant Engineer, at Milngavie, who will accompany Contractors over the ground. Revised Tenders, in the form above required from those who have already tendered, and also new Tenders from other contractors, addressed to the Commissioners, sealed and marked "Tender for Mugdock Contract," must be delivered to the Subscriber at his office, City Chambers, Glasgow on or before THURSDAY, 17th APRIL next. By order of the Committee,

JOHN BURNET, Secretary

Glasgow, 26th March, 1856.

TO BUILDERS

THE UNION BANK of LONDON hereby give Notice, that sealed TENDERS will be received for BUILDING a BRANCH BANK in Fleet-street, the drawings and specification of which may be seen at Mr. ARCHIBALD SMITH'S offices, Mincing-lane, Trinity-square, City, on and after 10th APRIL next. The Tenders to be in one sum for the whole of the works. The quantities will be supplied on the payment of 1l each, and the builder who obtains the contract is to pay the difference of cost to the surveyors. The Tenders to be addressed to the Secretary, Union Bank of London, Princes-street, and sent in or before 4 o'clock P.M. next, and endorsed on the cover, "Tender for Branch Bank, Fleet-street." The Directors do not bind themselves to accept the lowest or any of the Tenders.

TO BUILDERS AND CONTRACTORS.

DUDLEY UNION WORKHOUSE.—Builder and Others are invited to deliver TENDERS for the execution of the several Works required to be done in the ERECTION of a NEW WORKHOUSE, proposed to be built at Shater's End, near Dudley in the parish of Sedgley, in the county of Stafford. The plans and specification may be seen on application at the Architects, Messrs. BIDLAKE & LOVATT, Market place, Wolverhampton. Sealed Tenders to be forwarded, under cover, to THOMAS GRIFFITHS, Esq. Clerk of the Guardians, Dudley, and endorsed "Tender for New Workhouse," and must be received on or before the 1st day of MAY next. A separate estimate to be given for each trade. Further particulars may be made personally to the form lodged with the plans and specifications, to which parties are referred for all further particulars relative to the proposed site. The Board does not pledge themselves to accept the lowest Tender.

CONTRACT.—The VESTRY of the PARISH of ST. GEORGE THE MARTYR, SOUTHWARK, hereby give Notice, that they are ready to receive sealed TENDERS from parties who may be willing to CONTRACT for the GENERAL WORKS and Repairs to Sewers, Roads, Gratings, Gullies, Watercourses, Privies, Flushing and Soil Inlets, during the ensuing year, according to the terms contained in a schedule of prices now lying for inspection at the Clerk's Office. The Contractor will have to sign his name to the said schedule, and the additional prices he may tender to carry out the required works. The said Vestry do not bind themselves to accept the lowest Tender; and the party whose Tender shall be accepted will be required to provide two responsible sureties for the due performance of the said works.—Tenders to be sent in to the Clerk's Office on or before TWELVE o'clock at noon, on TUESDAY, the 8th day of APRIL next; and the parties tendering must attend personally at the meeting of the Vestry, at the Board-room, in the Workhouse, in Mint-street, Southwark, at SIX o'clock in the evening precisely.—By order of the Vestry,

FREDERICA TRITTON, Vestry-clerk.

20, Bridge-house place, Newington-causeway, March 31, 1856.

TO BUILDERS AND OTHERS

THE BURIAL BOARD for the PARISHES of HOLY TRINITY ST. MARY, and ST. LUKE CHELSEA, FORD, in the County of Middlesex, are willing to receive TENDERS for the EXECUTION of the following WORKS, on the land selected as a Burial Ground, for the above parishes, known as Fulham Field, viz.:—

For the Erection of two Chapels, Lodge, and Entrance Gates.
For making the necessary Roads, Paths, and Drains
Also for Enclosing a Portion of the said Ground with an Iron Fence
Also for Enclosing the remainder of the Ground with a Pale Fence.
And for Planting certain Trees within the said Ground

The various plans and specifications may be seen from NINE to FIVE, on MONDAY, 7th APRIL, and three following days, at the Vestry-room, of Holy Trinity Church, adjoining the Office of the Burial Board, WELLCLOSE-square; Bethnal-green Chambers, 8, Stamford-street, Strand. Tenders for the above works are to be sent, under the hands and seals of three of persons, addressed to the Chairman of the Board, at the Vestry-room, aforesaid, on or before the 21st day of APRIL, 1856. The Board are not pledged to accept the lowest or any tender. Signed JOHN BULLEN, Clerk.

Chelsea, U.S.A.W., March 28, 1856.

TO BUILDERS

LLANVRECHVA. — PARSONAGE-HOUSE and OFFICES.—LLANTHEWY-VACH.—RE-[illegible] Wales.—[illegible] Tenders for the [illegible] at the GREEN HOUSE, in the Llanthewy-station, [illegible] on Thursday, the 10th day of April, 1856. Tenders to be sent to either of our offices, as under, on or before the [illegible] April, [illegible] at which point and no other [illegible] Plans, [illegible] Specifications, [illegible] Forms of Tender may be seen and [illegible] at the Llanvrechva Parsonage-house, on Tuesday, the 1st day of April, [illegible] and at our offices, as under, on and after the 3rd day of April, [illegible]

[illegible] HARRIS & SLIDDON.

[illegible]

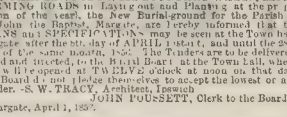
CONTRACTS.

MARGATE CEMETERY, SAINT JOHN THE BAPTIST.—To BUILDERS and CONTRACTORS. Persons desirous of CONTRACTING for the ERECTION of TWO CHAPELS, LODGE, and BOUNDARY-WALLS, and for FORMING ROADS, Planting, and Planting at the per per season of the year, the New Burial-ground for the Parish of St. John the Baptist, Margate, are hereby informed that the PLANS and SPECIFICATIONS may be seen at the Town hall, Margate after the 8th day of APRIL instant, and until the 28th day of the same month, 1856. The Tenders are to be delivered, sealed and directed, to the Burial Board at the Town hall, where they will be opened at TWELVE o'clock at noon on that day. The Board do not pledge themselves to accept the lowest or any Tender.—S. W. TRACY, Architect, Ipswich

JOHN POUSSETT, Clerk to the Board.

Margate, April 1, 1856.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London.



CORONAS, GAS PENDANTS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Illustrated Price-catalogues post-free on application.

TO IRONMONGERS AND THE TRADE GENERALLY.

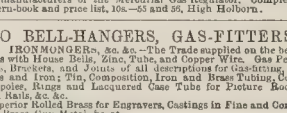
D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show—every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list, 10s.—55 and 56, High Holborn.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire. Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Curtain-poles, Rings and Lacquered Cane Tube for Picture Rods. Desk Rails, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. &c.

RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the Kent-road, Surrey, and fitted them with very extensive and first-class Steam Machinery, and that they are now supplying all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machines either wholly or partly completed of the most approved and short notice supply them. S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the largest and most splendid Steam Engines and Contractors in the world with their Machines for home and foreign use.

TO BE SOLD, a WOOD PLANING-MACHINE to cost no time order, on which planing, grooving, and tonguing and beading can be done at one operation. Application to be made to the BARON BADDE SAW MILLS, Newcastle-upon-Tyne, where the machine may be seen at work daily. As the machine is to be removed shortly, to make room for one more powerful, an early application is requested.

W. and C. BURNUP, Newcastle-upon-Tyne.

SELLING OFF!—STOCK of RAIN-PIPES, Gutters, Air Bricks, Sash Weights, Stable Fittings, and all kinds of Builders' castings, under cost price, at WALMSLEY and CO.'S, Paul's Wharf, Upper Thames-street.—Two Carts, Harness, Chaff-machine, &c. cheap.

N.B.—A few Self-acting Oven and Boiler Ranges to be sold for 25s each.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the nobility, clergy, &c. that they supply Lightning Conductors, with the points and all staples complete for fixing, at one shilling the foot.

R. S. NEWALL and Co.'s Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world

OFFICES.—Gateshead-on-Tyne.
18, Strand, London.
67, Hanover-street, Glasgow.
27, Dale-street, Manchester

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE or GAS, guaranteed to for water; high-pressure steam, &c. Manufacturers of Dr Arnott's improved ventilators.—HULETT and CO. 55, High Holborn.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK.

Sole Manufacturers of Roebuck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and [illegible] OLD LEAD, on the LOWEST TERMS.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron Railway Bars, Forge and Engine Work, Cast-iron Goods, and
STEWART'S PATENT CAST-IRON GAS and WATER PIPES.
Office, No. 7, Rise-lane, London.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of (ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc, Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, so much admired, &c. &c. 6d. each.

J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridges-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior care fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

P. O'CONNOR'S PATENT LEVER HINGE.—The most perfect and simple INVENTION for CLOSING SWING DOORS and GATES yet produced. The motive power being a weighted lever, it may be easily adapted to any size door, and is not liable to get out of repair as spring hinges generally are. May be had from all Ironmongers and Factors; J. CARTLAND and SON, Manufacturers, Birmingham; or from he Patentee, P. O'CONNOR, Ironmonger, Wavertree, Liverpool.

CANNON IRON FOUNDRY, 80, Goswell-street, St. Luke's.—JONES and BLAKTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wheel Plates, &c.

BAKERS' OVEN WORK, Horse Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

FOUNDRY AND IRON WORKS,
85, DRURY-LANE, and CHARLES-STREET, DRURY-LANE.
GLOVER, BROS.,

Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION, either structural or ornamental.

Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathe, and Steam-engine; Range and Hot-plate Metal. An improved Soot Door, adapted for internal work.

A large stock of Rain-water Pipes, Plain and OG Gutters, Air-bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings, Hurdles, &c.

Plain and Ornamental Vases 20 per cent. cheaper than Terra-cotta.

Estimates given for Iron Buildings, Wrought-iron Roofing, Greenhouses, Staircases, Wrought-iron Girders, Fireproof Doors, Book-shelves and Bookcases, Cisterns and Boilers, and every description of ironwork to specification, and the work executed with every attention to quality and despatch.

GLOVERS' IRONWORKS,
183, DRURY-LANE, and CHARLES-STREET.

THE STATUE and IRON FOUNDRY, Lower Belgrave place, Pimlico. Castings of every description executed at the above Works

IRON FOUNDRY, HARROW-STREET, LANT-STREET, SOUTHWARK.
W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel-stairs, Panels, Iron Coping, Hot Plates, Tank Plates, Area Gratings, Sash Weights, Fly and other Wheels, Rollers, Pinions, Engine and Lathe Castings, Forge Backs, Furnace Bars, Rails, Pans, and other castings, to patterns or drawings.

J. NAYLOR'S IRONMONGERY, NAIL, and METAL WAREHOUSE, 255, Oxford-street, near the Marble Arch.—Builders, Carpenters, Cabinet-Makers, Locksmiths, and Bellhangers, supplied at the lowest prices.

CHARLES BAKER, Builders' Ironmonger, Nail Factor, Stove and Range Manufacturer (Warehouses, 148 and 149, Borough), begs to offer his reduced List of Prices:—

BEST CUT CLASP NAILS.

1½ in.	1¾ in.	2 in.	2½ in. and upwards.
10s. 6d.	16s.	18s. 6d	14s. per cwt.

Best Sheet Floor Brads, 14s. per cwt.
Best Cut Lath Nails, 10s. "
Elliptic Stoves, double backs, 2½d. per inch, and upwards.
Register Stoves, from 5½ to 9d. per inch.
A good Stock of Berlin Black ditto

SELF-ACTING COTTAGE RANGES, with CIRCULAR OVENS and BACK BOILERS

30 in.	33 in.	34 in.	36 in.
28s.	30s.	31s.	36s. 6d.

SELF-ACTING COTTAGE RANGES, OVENS ONLY.
30 inch, 26s. 6d.

SELF-ACTING RANGES, BEST WROUGHT BARS and BRIGHT MOUNTINGS.

3 ft.	3 ft. 2 in.	3 ft. 4 in.	3 ft. 6 in.
56s.	58s.	60s.	65s.

6 in. Two Bolt Rim Locks, 9s. per dozen
6 in. Brass Follower Mortise Locks, 40s. per dozen.
Baker's Improved Draw-locks, for Glass Doors, &c. 6½ each.
A very extensive Stock of Cabinet Makers' and Builders' Ironmongery, Tools, &c. &c.

ESTABLISHED 1817

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WARCHOUSE, 19, Horseferry-road, and 1, New-gardens-street, Westminster.—Contractors, Builders, &c. supplied with general Ironmongery at prices equal to all competition

FURTHER REDUCTION IN PRICES.

Best Cut Clasp and Rose Nails

1¼ in.	1½ in.	2 in.	2½ in	3 to 6 inch.
16s 6d.	16s.	15s.	14s. 6d.	14s. per cwt.
Best Cut Floor Brads			12s 6d. and 13s 6d. per cwt.	
Best Cut Lath Nails			10s. "	
Best 4oz Sliding Nails			40s. "	
Best Glues			47s. to 53s. "	

RAIN WATER CASTINGS, per yard.

Sizes ... 9d in. 8 in. 6 in. 5 in. 4 in. 4½ in. 5 in.
Pipes ... 11d. 1s 2d. 1s. 4d. 1s 5d. 2s 1d.
Half-round Gutters ... 8d. 8½d. 9d. 1s 1s 2d.
O G Gutters ... 1s. 1s 1d. 1s 2d. 1s 3d. 1s 5d.
Ditto, with plain clips cast on ... 1s 1d. 1s 2d 1s 4d. 1s 6d.
Ditto, with hoop ditto ... 1s 3d. 1s 3d. 1s 5d. 1s 7d.
Sash Weights, 7s 6d. per cwt.; Air Bricks, 3s 6d. per dozen.

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges at the lowest possible prices.

TERMS NETT CASH.

Estimates given for any description of Wrought or Cast Iron Work

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

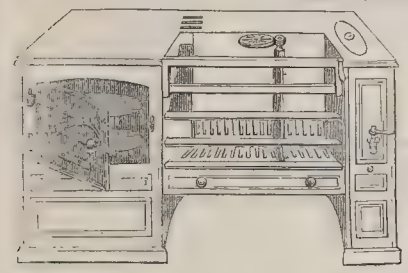
Many roofs covered with zinc thirty-five years ago have never required repairs.

CLARK AND HUNT,

IRONMONGERS, FACTORS, AND GENERAL MERCHANTS,

159, SHOREDITCH.

A LARGE ASSORTMENT OF BAR, SHEET, AND HOOP IRON, RANGE AND STOVE METAL; ALSO A GREAT VARIETY OF ELLIPTIC, REGISTER, COTTAGE, AND OTHER RANGES, FITTED, ALWAYS IN STOCK.



Register Stoves with Solid Bars per inch, 5d.
Improved New Pattern Circular Check Register, with strong Bars and Trivets, 7d. per inch.
Best Solar ditto, with Fender, 8d. per inch, 10d.
Bright Stoves, with Two Fires, 8s. to 10s. each.

	2 in.	2½ in.	3 in.
Cast Rain water Pipe	1s.	1s. 2d.	1s. 4d. per yard

Cast Gutters—4 inch, 9d. per yard.

	4 in.	4½ in.
O-G Gutters	1s. 1d.	1s. 3d. per yard.

2	3	4	5	6	
Patent Line 4d.	4½d.	6d.	8d.	10d.	per knot.

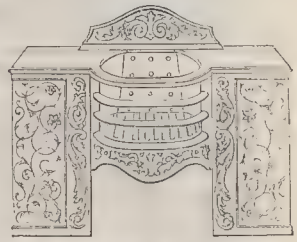
6-inch Rd. Wa-d Mortise with Best Furniture and Patent Spindles, 3s. each. Light Elliptic and Register Metal, 1s. per cwt.

Dr. Arm ft's Ventilators, 1s. 6d. each.
Brick Moulds kept in stock. Anyeize made to order.

Best Cut Clasp and Rose Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 in.	
16s. 6d.	18s. 6d.	19s. 6d.	18s.	14s.	per cwt.

Best Sheet Cut Floor Brads 13s. per cwt.
Best Cut Lath Nails 10s. "



Improved Patent Fine-cast Elliptic Stove, requires no fitting, 2½ l. per inch.

Self-acting Cottage, with Oven and Back Boiler.

30 inches	28s.
32 "	30s.
34 "	32s.
36 "	34s.

Best Self-acting, with Bright Wrought Bars.

34 inches	54s.
36 "	56s.
38 "	58s.
42 "	60s.

Best Japanned Registers, 40s.; Berlin Black, with Bright Mouldings, 60s.; Bright Fronts, with Ormolu Ornaments and Two Sets of Bars, 90s.; Improved Cast Mangers, with Wrought Hay-rack and Water Trough, fitted, 45s.

ST. PANCRAS IRONWORKS,

OLD ST. PANCRAS-ROAD, OPPOSITE THE OLD CHURCH, LONDON.

TO ARCHITECTS, ENGINEERS, BUILDERS, AND CONTRACTORS.

HER MAJESTY'S
ROYAL LETTERS PATENT.

FOR IMPROVEMENTS IN THE CONSTRUCTION OF
CORRUGATED IRON BUILDINGS
AND ROOFS,
As erected for and approved of by Government.
FOR ENCLOSURES,

This Patent is as Strong, as Durable, and much Cheaper, than BRICK WALLS,
And as Portable as HURDLES.

CASTINGS,
HEAVY AND LIGHT,
PLAIN AND ORNAMENTAL.

WROUGHT
IRON-WORK,
AND FORGINGS,
OF
EVERY DESCRIPTION.

SPECIMENS MAY BE SEEN AT THE WORKS.

ENAMELLED MANGERS,
From 17s. 6d.

Patentees of the latest Improvements in Mangers and Hay-racks, and Manger, Rack and Water Trough, approved of by the ROYAL VETERINARY COLLEGE.
EVERY DESCRIPTION OF STABLE FURNITURE.

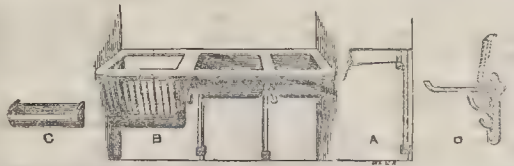
IRON ROOFING OF EVERY DESCRIPTION. CORRUGATED IRON, PLAIN OR GALVANIZED, AT PER CWT.
ESTIMATES BY POST, OR ON APPLICATION. PRICES EQUAL TO ALL COMPETITION.
☞ ADDRESS—THE MANAGER OF ST. PANCRAS IRON WORKS, OLD ST. PANCRAS-ROAD, LONDON.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.

COTTAM and HALLEN, of Winsley-street,

Are the original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, to which they have made important additions, the main features of the same being explained in the following description and Engraving.



A represents the Patent Halter-guide and C-hanger, the fall of which is taken to the back of the manger-works with freedom and one up or down the guide-bar, and is noiseless in its operation, as also a sure prevention against the mischievous horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable.

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety covers; Sanitary Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Preserving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

An extensive Assortment of Patterns for both Plain and Ornamental Castings, and every description of Wrought and Cast-iron Work for building and other purposes.

Agricultural and Horticultural Implements, Iron Gates, both plain and ornamental; Hurdles, Strain Fencing, &c.

The New Illustrated Catalogue for 1856 gratis on application. Estimates and Designs.

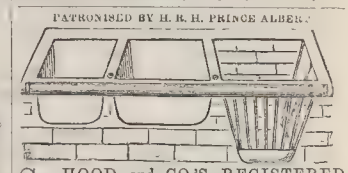
COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

OLD STOVES and RANGES.—F. EDWARDS, SON, and CO. have constantly on hand a quantity of OLD STOVES and KITCHEN RANGES, in very good condition which are taken down by them at establishments when they erect new work, and which are to be sold at exceedingly low prices.—42, Poland-street, Oxford street.

JOHN TANN'S new patent RELIANCE LOCK and FIRE-PROOF SAFES are the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. WATERLOW, Birchin-lane; and at the Works, 1, Hope-street, Hackney road, London. Iron Doors for strong rooms and party-walls.

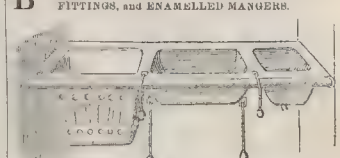
TO ARCHITECTS, &c.—T. SMITH, of 11, Queen-street, Oxford-street, begs to call attention to his IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most efficient yet invented. A working model can be seen at the above address, or will be sent for inspection on the shortest notice.
N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

PATRONISED BY H. R. H. PRINCE ALBERT.



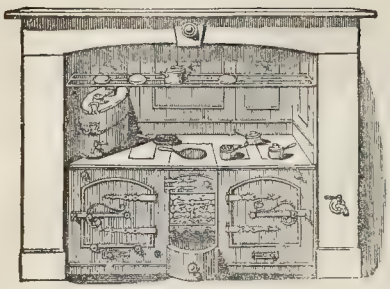
S. HOOD and CO.'S REGISTERED STABLE-FITTINGS, with FRONT REVOLVING ROLLER, plain or enamelled.
Costings Wax house repaired from 8l. to 6s. Upper Thames-street.

BARTON'S PATENT SAFETY STABLE FITTINGS, and ENAMELLED MANGERS.



THESE FITTINGS will be found to possess all the latest and most important improvements and are of the best manufacture. All kinds of Ironfurniture in Stock. Iron Hurdles, Gates, Fencing, Tank Ladders, &c. New illustrated Catalogue forwarded on receipt of two postage stamps. JAMES BARTON, Ironfounder, &c. 379, Oxford-street, London.

FLAVEL'S PRIZE KITCHENER.



The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

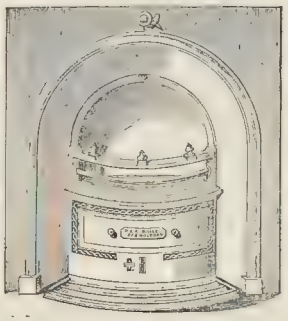
SOLE AGENTS:

BENHAM AND SONS,

19, WIGMORE-STREET, LONDON;

and at the Crystal Palace, Sydenham.

DR. ARNOTT'S SMOKELESS GRATES,



For the manufacture of which D. and E. BAILEY obtained the SILVER MEDAL at the PARIS EXHIBITION. The above excellent invention has been carefully modelled and manufactured by D. and E. BAILEY, 272, Holborn, who having experienced great difficulty in keeping pace with the increased demand for the above Stoves, have now made such arrangements as will enable them to supply their customers with the Smokeless Grates, of ordinary dimensions, from their stock on hand, which consists of various designs in black, bright, and polished steel, richly decorated with ormolu ornaments.

The great advantages of these Stoves over all others are—

1st. The entire absence of smoke.

2nd. An immense saving in fuel.

3rd. A cheerful fire, with simple means for regulating the heat.

4th. Will burn night and day, requiring only to be supplied with fuel twice in twenty-four hours.

For invalids' bed-rooms, these stoves will be found invaluable.

Prices and Prospectuses may be obtained on application where the Smokeless Grates may be seen in daily use.

D. & E. BAILEY, IRONMONGERS,

272, HOLBORN, LONDON.

STEVENS AND SON,

ENGINEERS,

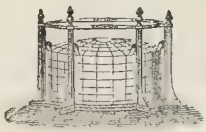
IRON AND BRASS FOUNDERS AND MANUFACTURERS;

CONTRACTORS

FOR THE

ERECTION OR ALTERATION OF GAS-WORKS FROM TWENTY LIGHTS UPWARDS,

With Buildings, Mains, Meters, Service-Pipes, Lamp-Posts, Lamps, and Gasfittings



WATERWORKS FOR THE SUPPLY OF TOWNS,

WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.

Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds; these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c.
Gas Cooking Stoves and Ranges on the most improved principles.

GAS-FITTING IN ALL ITS BRANCHES.

GAS CHANDELIERS OF ALL SIZES, IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS.
DEVICES FOR GAS ILLUMINATION.

IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.

These Turnstiles have been selected for the Entrances of the Great Exhibition, New York.

PATENTEES OF THE SEMAPHORE RAILWAY SIGNAL.

Signals for communication between Guard and Engine Driver. Railway Stores and Lamps of every description.

DARLINGTON WORKS, 16 to 19, SOUTHWARK-BRIDGE ROAD, LONDON.

A

FIRST-CLASS MEDAL

WAS AWARDED TO

F. EDWARDS, SON, and CO.

AT THE

PARIS EXHIBITION,

For the SPECIMENS they exhibited of

DR. ARNOTT'S

AND SMOKE-CONSUMING COOKING APPARATUS.

SMOKE-CONSUMING GRATE,

F. EDWARDS, SON, and CO. beg to inform the public that their STOCK of GRATES is ENTIRELY REFORMED, and consists SOLELY of GRATES on the SMOKE-CONSUMING PRINCIPLE. A large variety in real Bronze, Ormolu, Steel, and Berlin Black, suitable for Drawing-rooms, Dining-rooms, and Libraries, from 7l. to 30l.

The following are the prices of those for ordinary use:—

Black Grates, for Parlours, Offices, &c. from 4l. to 6l. 10s.; for Bed-rooms, Offices, &c. from 2l. 10s.

By the Grates on this principle, as properly constructed by F. Edwards, Son, and Co. smoky chimneys are avoided, an agreeable fire is maintained, with one-half the trouble attending the ordinary grate, and a saving of from forty to fifty per cent. is effected in the consumption of fuel.

PROSPECTUSES, WITH FULL PARTICULARS AND TESTIMONIALS, SENT ON APPLICATION.

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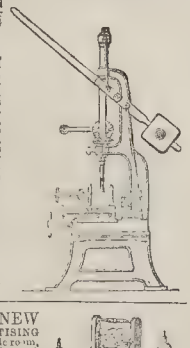

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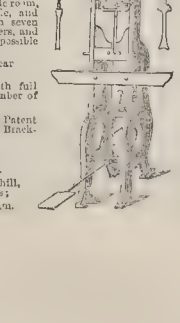

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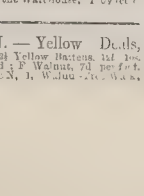

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CHARLES JAMES THICKE, Resident Secretary.

The Builder.

VOL. XIV.—No. 687.

ON Monday, the 31st of March, there was a large attendance of members and visitors at the Institute of British Architects, to witness the presentation of the Royal Medal for Architecture to Mr. Tite, Fellow, M.P. &c. including Sir C. Barry, Professor Donaldson, the Rev. R. Burgess, Messrs. Scoles, C. C. Nelson, Ferrey, Scott, Joseph Clarke, Hardwick, jun., H. Baker, W. P. Griffith, G. Pownall, S. Angell, Mylne, Christian, Bellamy, Penrose, Papworth, Bury, Porter, C. Barry, jun., S. Godwin, Mocatta, G. B. Williams, Garling, Edmeston, S. Wood, E. H. Martineau, J. Turner, Twining, Dr. Dickson, Bardwell, E. T. Parris, J. D. Harding, Lockyer, Cates, Kelsey, &c. &c.

The minutes having been read by Mr. Scoles, honorary secretary, the Fellows proceeded to ballot, and elected Mr. Frederick Marrable as Fellow; and Mr. J. K. Colling, Mr. Ignatius C. Scoles, and Mr. T. Roger Smith, as Associates.

Various donations were announced, including a finely-bound copy of David Roberts's "Egypt and Nubia," in three vols. from Mr. C. C. Nelson (whose liberality was properly eulogized), and the President proceeded to present the prizes adjudged by the Institute, with a few complimentary and congratulatory words to each, namely:—

To Mr. T. A. Britton, for his Essay "On the Timber-growing Countries of Europe and America," the Silver Medal of the Institute.

To Mr. L. R. Roberts, for his Design for a Town Mansion, the Soane Medallion.

To Mr. T. C. Sorby, for his Design for Courts of Law, a Medal of Merit.

To Mr. J. Blake, for his design for a Town Mansion, a Medal of Merit; and

To Mr. C. N. Beazley, student, for his Monthly Sketches, a Prize in Books.

The rewarded designs were exhibited in the meeting-room, and may be spoken of as most creditable to the skill and industry of their several authors.

The president, in addressing Mr. Tite, adverted to the advantages of sound sense and general acquirements, in addition to artistic ability; congratulated him on having gained the suffrages of his architectural brethren; and, with the full concurrence of Her Majesty, presented to him the Royal Medal.

Mr. Tite, in a very feeling speech, acknowledging gratefully the honour conferred upon him, referred to the part he had played in conjunction with the president, in effecting the coalition between the Architectural Society and the Institute.

Professor Donaldson afterwards read an able and interesting paper "On the Triumphal Arches of the Romans," which was illustrated by a number of drawings, and the meeting then adjourned. The paper described a Roman triumphal procession, and showed that the triumphal arch was a record in stone of the incidents and personages of the procession.

Amongst the objects exhibited was a beautifully executed model, by Mr. Thomas D. Dighton, of the buildings in new Victoria-street, Westminster, erected by Mr. Mackenzie.

MONUMENT TO THE LATE MR. PETER NICHOLSON.—The foundation-stone of a monument to be erected at the Carlisle cemetery, to the memory of the late Peter Nicholson, was to be laid on Monday last.

REVIEW OF THE BARRACK COMPETITION DESIGNS.

WE have not allowed a week to pass without giving a large amount of time to the drawings which are now being exhibited at Burlington House; but the present case is one of so extraordinary a nature, that we shall not attempt to prefer a judicial opinion on the whole competition. We must merely speak of impressions whilst travelling through the vast collection of designs, some of them numbering over thirty sheets in a set; and the great majority of the works the result of elaborate study, and affording valuable suggestions.

Whether the judgment of those who have been competitors could in such cases be made available, and would *secure* right decisions, can hardly yet be asserted; but we must say that the present case is peculiarly one that testifies to the view that similar study of the subject to that required in preparing drawings, is essential to the formation of an opinion, and is not easy to be procured in another way. During the last week the collection has been visited both by competitors and persons otherwise interested in the question of barrack-accommodation,—though by fewer in all than might have been expected. When, therefore, we notice persons of the class last mentioned, merely asking to be shown "what has gained the first prize," and then taking their way (though *not* without expressing wonder that so much labour should have been incurred); and when even those who competed are content with giving only an odd hour to the collection; when, in short, we see that the fact of the enormity of the demand made on one side, and the value of the squandered time and money on the other, have to be brought to the very knowledge of *both* parties, we shall not be surprised if we are misconstrued for any course we may take. So long as we have the sense of right, we do not fear animadversion, or even vulgar abuse,—whether we may have to refrain from opinions, or to express them. The letter which we print elsewhere, though written after longer study of the drawings than we had given last week, only corroborates what we then remarked,—or will at least show that we were not singular in the view we took. As to the matter of area of ground, another correspondent, indeed, draws our attention to what he regards as a decision that henceforth barracks will be "not connected with large towns, but detached from them; and that the probability is, that the barracks will be of considerable extent in those positions;" but we do not see that this justifies the extraordinary areas taken by some of the competitors. In the manufacturing districts we apprehend there will remain reasons for not withdrawing the barracks to a great distance; but in any case, were cost of ground not everywhere a consideration, is not the matter of compactness and free communication and supervision also important? The point of *number of stories*, also, is a question of expense, and distance of one part of the barrack from another. However, one of the most matured designs in the whole collection has an area vastly exceeding the thirty-four or thirty-five acres of the successful design.

The committee advertised for plans which should embody the recommendations contained in their report; and the discretionary power to architects, in regard to number and sizes of rooms, was limited to some matters of detail—few in number. The departments to be provided for in the infantry barracks, included the men's quarters; rooms for the married people; residence for the commanding officer, and rooms for the other officers, married and single; officers' mess-room and offices; also, officers' stables; rooms for the staff-sergeants, the ten pay-sergeants of companies, and the forty company-sergeants (or four to each company of 100 men); quarters for the band-master; sergeants' mess-room and offices; a washing-establishment; a drying-room for coats; a regimental library; a reading-room and librarian's quarters; a chapel to serve as school, an infants' school-room, and quarters for schoolmaster and schoolmistress; orderly and court-martial rooms; a band-practice room; a guard-house, near the principal gate, with lock-up and cells; a bakery near the barrack-master's and quarter-master's stores; shops for the master tailor, master shoemaker, and master armourer; also carpenter's and blacksmith's shops near the quarter-master's stores; barrack-master's stores, house for the fire-engine, and quarters for the barrack-sergeant; barrack-master's house just outside the barrack walls; quarter-master's stores; a drill or parade-ground, gravelled, measuring about 250 by 100 yards, or a little over five acres; covered spaces for drill in bad weather; a powder-magazine and shifting-room; a provost prison with twenty cells, and provost-sergeant's quarters; an hospital with its own wash-house, hospital-sergeant's quarters, orderlies' room, and an itch-ward, and a dead-house adjacent; the surgeon's and one of the assistant-surgeons' residences being near to the hospital; a canteen; a racket-court, ball-court, gymnasium, quoit and skittle grounds, and cricket-ground near to the canteen; gas-works (should there be none in the neighbourhood), and many other accessories.

The men's quarters had to be provided with the accommodation for sleeping, eating, and cooking, for ablution, and for cleaning accoutrements, and with other conveniences. Thus—without reference to the stables, riding-school, and particular requirements of cavalry barracks, to which we shall have again to refer—the subject is one that tests to the utmost the knowledge and skill of an architect. In providing the men's quarters, it seems essential—though sufficient stress has hardly been given to it in the report—to arrange the rooms so that the whole regiment may be turned out on the parade-ground at a moment's notice. This, it may be presumed, is a part of military discipline. In some districts of the country, also, as before referred to, where the troops have to be called upon occasionally to preserve the peace, minutes are on that score to be considered. Elongation of the quarters with reference to the parade, as opposed to the grouping them in block, would seem, therefore, the correct principle. At the same time, through-passages must be left for the purposes of the barrack. Further, the regimental strength of 1,000 men is divided into ten companies of 100 men each, and each company into four squads of twenty-five men each, with a sergeant to each squad; and this division and subdivision has to be observed in planning the quarters. It seems also to be admitted as desirable, that each squad should be divided in two dormitories, and Mr. Rawlinson, the author of an elaborate set of drawings marked with a geometrical figure and the motto "Hope," which we have alluded to above, but shall have to look at subsequently, goes so far as to contend for what is in effect a distinct room to each man. The necessity of accommodation for the six married privates of each company at a distance, being admitted, and the sergeant being accommodated so as to ensure him privacy with as little deduction as possible from his present supervision,—the improvements required in the men's department are chiefly greater space and ventilation in the barrack-room, with better provision for cooking and eating, and for ablution and cleaning. Anything that would interfere with the present system of living and sleeping in the same room, seems to be deprecated by most parties. A kitchen, or place where the men could cook and eat in the same room, is, however, not objected to: a distinct day-room is not desired. The dining-room kitchen, it is supposed, would serve for two squads; or the report says, "Should the dining-room be provided in any other manner, there is no reason why each kitchen should not cook the food of two companies; but it is not desirable that it should be used for a larger number, from the difficulty of giving the men their dinners hot, if they have to be carried any distance." This passage seems to have led to the departures from the general view of the committee, which are observable in some of the drawings.

The kitchens, it is laid down, should be in buildings detached, but connected by passages; and in most of the designs they are placed at the back, on the ground-floor, as are also in many cases the ablution-rooms and cleaning-rooms. There appears to us some defect in the instructions on these matters,—one question being whether it is necessary for the soldier to pass to such a distance in cold weather, and sometimes

through the open air, to perform his ablutions, and another, whether one of the reasons which prevailed against the admission of day-rooms, viz. the possibility of mislaying accoutrements, is not equally to be considered where the cleaning-rooms are provided as they are in some of the plans. The other conveniences are properly placed when attached to the departments of the companies, instead of being all together, and in remote positions. The system adopted is that of the trough and sluice, which really does not seem an objectionable one, and has been considered, in such cases, least liable to get out of order. The set of drawings by Mr. Rawlinson (No. 80), however, provides closets or soil-pans, under the idea that any other arrangement would be fatal to health. The alterations which he effected at Scutari were of so important a nature, that in less than a month the deaths were reduced from seventy and upwards a day, to not seventy a week. The diminution of fever cases may have been due to *several* of his alterations; — the supply of fresh air to the wards and corridors; the breaking up and cleansing of the general sewers, by which the foul air was prevented from being returned into the building; and the cleansing and deodorizing of the more foul abominations, which had, we presume, never been provided with any means of sluicing, had doubtless each one an importance, to which attention may well be paid in similar cases at home. The present "conveniences" in barracks are certainly quite sufficient to cause the quantity of sickness—six per cent.—which has to be provided for by the hospital. The soil-pans which are in use at Scutari, we learn, do not get out of order, as was predicted to Mr. Rawlinson; and at the town of Alnwick, in Northumberland, 800 of these "pans" have been fixed, and are said to be in constant order—even especially so with the poor Irish.

The principle in the second premiated design, to which we referred last week, is the provision of day-rooms apart from the kitchens. This, we have said, was advocated by some of the witnesses, but was discountenanced in the Report. The several departments of the barrack are grouped into five blocks of building, each round a quadrangle. Portions of each are, however, of one story only; and the block is generally open at the back, above the ground-story. The masses of the building are effective in grouping. In the central block, the angles are appropriated to the orderly-rooms, non-commissioned officers, residence of the surgeon, the band-master, and other rooms; the general range of ground-story contains day-rooms, and pay-sergeants' rooms, whilst the one-story buildings at the back are appropriated to kitchens, coal-stores, cleansing-sheds and conveniences—yards being attached. The interior court is marked as a gymnasium, to be roofed with iron and glass if required. The dormitories are in two upper floors, with a staircase to each company; but a narrow way through, runs across the rooms from end to end of the range. Bath-rooms and washing-rooms are attached, and the sergeants have separate rooms; many of these, however, having the bath-room between them and the dormitory. In the top story, at the angles, are fencing-rooms. In the main front, in the centre, are the library, and on the top floor, linen-rooms. At the back of the quadrangle, occupying a large space, are the stores and workshops, round a court of their own, and here also are the barrack-sergeant's quarters.—One of the smaller blocks of building at the front—that to the left in looking at the plan—serves for the officers' quarters; the unmarried being next to the parade, and the married on the opposite side,—the commanding officer being, with doubtful advantage, in the most retired quarter. The mess-rooms form the central feature in the front. The barrack-master's house is at the back, in the same block. The stables occupy the back of the square, as in the case of the stores in the larger quadrangle. The space appears to be confined, but they are of one story chiefly.—The corresponding block at the back is the hospital, and that to the right contains the prison, coal-store, magazine-yard, and gas-ometer. The quadrangle to the right, corresponding with the officers' quarters, is for the non-commissioned officers and privates. The chapel-school forms a feature in the centre of the front, corresponding with the officers' mess-rooms: the school-master and school-mistress have rooms at the angles; the back affords space for the canteen, the wash-house, and a swimming-bath; and the children's play-ground occupies the central area. Bowling-green and skittle-grounds are adjacent. The entrance to the barrack is opposite the middle of the parade. The back entrance seems to us to have been an omission by accident. The objections to the plan are very fairly put by our correspondent.

The third premiated design has the parade-ground placed endwise, and of unnecessary dimensions. The main line of buildings opposite the entrance has the dormitories in two upper stories, back and front of a covered space for drill, which is 950 feet long by 80 feet wide, and roofed over with a semicircular ridge-and-furrow roof. The rooms look on to this, with arcades and galleries reached by staircases at intervals; and there are larger archways through, for access to the buildings at the back of the barrack. The ground-level is appropriated to staff-sergeants' residences, stores, and shops; the dining-rooms (each for forty-eight men, with small kitchens) are in the same level; the kitchens for the men living on both sides being alike placed at the back, where also are the various conveniences. The length divides into separate sections for the companies. Rails for the conveyance of stores are contemplated along the drill-ground, and through to the back of the barrack. The officers' quarters are to the left of the grand parade, with mess-rooms in a detached building; and the chapel-school is on the right. At the farther part of the ground are the racket-court, prison, and various stores to the left; married men's quarters, wash-house and bath, in the centre; and the hospital is to the right. Farther beyond the hospital are the girls' and infants' schools,—thus at a distance from the principal school, which is at the front. Whilst praising the effort which is displayed in these drawings, we must say that defects in the planning will be discovered in them. We willingly accede to the architect's wish that we should contradict the report that any member of the committee, or any other hand than his own, had anything to do with the preparation of the design and drawings. It is not difficult to see how the report originated. The report of the committee to Lord Panmure says:—"The committee unanimously selected the plan 'Alpha' for the third place, as possessing merit of arrangement, and exhibiting the application of a glass-roofed covered space for the purposes of drill and recreation." The covered space itself is no doubt treated better than in some designs where a similar expedient has been attempted.

No. 4, with the motto, "What is worth doing, is worth doing well," has a parade-ground endwise; and at its farther end the companies' rooms, five companies at the back, and five at the front, with kitchens and conveniences intermediate, and covered spaces for drill at the ends. The hospital is at one end of the same range, the rooms for married men are at the other, and the prison is at the back. Flanking the parade are the officers' quarters, and stores, grouped in detached blocks.

The design No. 5, "Victoria," is less striking than the preceding, but differs from them, inasmuch as the men's quarters are all placed next the parade,—forming three sides of the quadrangle. The officers' quarters occupy the first portion of the wings,—and the quarters of the married men are at the internal angles. The chapel-school, stores, prison, &c. form a range of detached buildings behind; and the hospital is further back. The companies' quarters consist each of two stories of dormitories, two rooms in each floor, with sergeants' rooms close adjoining. On the ground level, the dining-room, with cooking space attached, together with ablution-rooms, forms a detached building in the middle of a yard. It is reached by a covered way, and adjoining it are cleaning sheds and conveniences.

No. 6,—"Vi et Armis," Mr. Knowles, jun. is one of the designs which are remarkable for their external character. This, in the present case, may be called a castellated version of the style of the building at the end of Chancery-lane. Besides the ordinary parade, there is a space between the first and the grand entrance, so that a façade of some importance is obtained. The lower story has a loggia of arches and columns, and there is a prominent central gateway. This range of buildings forms the officers' quarters. The actual parade-ground is placed endwise, and the men's rooms are opposite the entrance: the hospital is on the left (looking at the plan) and the married men's quarters on the right, with the chapel-school. The companies' rooms are arranged with large open courts. Large spaces in the plan are covered with ridge and furrow roofing.

No. 7,—"Si Fortuna Juvat," Messrs. Aickin and Capes, covering an area measuring 950 feet by 790 feet, with a parade-ground of the proper size, adopts an arrangement, which, though peculiar, escapes many of the disadvantages of other plans where the entrance is at the end. Though the entrance to the parade is placed in the manner stated, the companies' rooms are along one side of the parade; and at the back they have a long covered drill-ground, on the further side of which again are store-shops, and back entrance. The lavatory and kitchen arrangements shown in the detailed drawings, manifest knowledge of this branch of the subject. The canteen, and covered grounds for amusements, staff-sergeants' residences, and stores, are at the right of the entrance and guard-house. Left of the gate is a large cricket-ground, with a covered way round. In the centre of the same side are the officers' quarters, and behind them, across a square, are the mess-rooms and commanding officer's residence, as a detached building. At the end of the parade, opposite the entrance, are the chapel-school, the married men's quarters, the washing department, and the infirmary. The style of the buildings is Gothic, somewhat ornate in character. The plan may not attract attention; but deserves it. Much is provided on a very small space.—In No. 8,—"Ars, armis adjutrix,"—the soldiers' quarters open to a covered drill space, in which are bracketted galleries. The kitchens are grouped all together, and some of them are in consequence at considerable distance from companies.

We have scarcely touched the mass of drawings which there are in this marvellous collection, but are reluctantly compelled to defer the subject. Amongst the works which remain are some of the most elaborate of the sets of drawings, and some plans in which the principle of distribution is that which is generally considered to meet best the peculiarities of the case. That principle, we believe, is involved in the importance of keeping the whole of the quarters bordering upon the parade, and yet of leaving a sufficient number of through-passages. Other plans follow a more concentrated principle of arrangement; and whether these designs were considered wholly out of court, or not, some of them certainly are not devoid of particular advantages which the first are compelled to sacrifice.

The present occasion should be one of great value in settling the initial principles of planning for barrack accommodation. To settle similar points in structural works of other classes, though apparently an indispensable step, is often troublesome from the difficulty which architects and their employers have in comprehending one another. What will here be learnt, and for which ample opportunity should be given by the exhibition of the drawings, will be useful for all time; and though the knowledge may have been obtained at some cost to our profession, we hope it will save much future loss to the country.

THE BARRACKS COMPETITION: STRICTURES BY A COMPETITOR.

Now that the entire collection of designs is formally submitted to the public and all concerned for criticism, would it be out of place for a competitor to offer some remarks upon the decision? I may very likely be actuated by something like envy, however earnest my endeavour may be to judge impartially; but so vast is the maze of drawings offered for examination at Burlington House, and so complex is the subject involved, that it is, perhaps, impossible for any general observer, except it be a compe-

titor, who is necessarily familiar with the problem, to escape bewilderment. I promise to avoid all allusion to my own design (except that I cannot help referring to my abstract principles); and if your readers will accept my permission to make due allowance for the partiality of a defeated candidate, I think I may proceed without further apology. I send you privately my name, and the number of my own design, as a guarantee of good faith; and I leave it to you to inquire into my motives by these means before publishing my remarks.

A Blue Book of 200 folio pages was given to the competitors by way of their instructions, being the Report of a War-office Committee (the judges also in the competition), upon Barrack accommodation, its many defects and many requirements, and the evidence in detail which they had taken upon the subject. In this we possessed such unusually minute and precise data for our guidance (with an order to view any barrack buildings throughout the country), that one's only chance of positive error seemed to be a neglect to study the evidence thoroughly. It was a work of labour and generalization, no doubt, to digest this Blue Book properly, but it was nothing more: the problem became, I think, in all important points, as plain as possible.

Let me confine myself to the infantry barrack in the mean time. Here the Blue Book simply details an array of the many and gross defects of all our present barracks, with suggestions for their remedy. What will "Administrative Reformers" say if I can show that there is but one design (of any importance) in the whole competition which adheres tenaciously to the existing system with all its faults, and that to this design there is deliberately awarded the first premium? If this be really the case, it exhibits our veneration for existing institutions in a form which was scarcely to be looked for.

It will be discovered, on a careful scrutiny, that although the designs now exhibited are supposed to be not arranged in any exact order of merit (except those premiated), yet that the practically sound suggestions are generally to be found towards the beginning of the numerical order, and that vital errors and fantastical ideas become more prevalent as the numbers progress. It appears to me, for instance, that the first great line of demarcation cuts off all plans wherein the erroneous principle of lighting the barrack-room from the *side*, instead of the *end*, is an essential. This line does not leave many designs above it; and in fact, any one who desires to come to a ready conclusion upon the merits of the committee's selection, need not trouble himself with more than the first ten designs in the series.

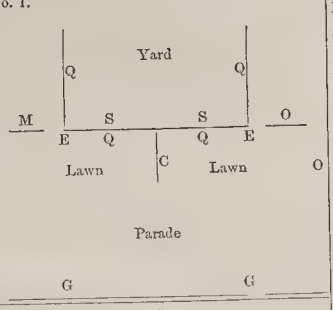
Let it be borne in mind that *the general arrangement of plan* is after all the sole problem: the mere details of structure are any one's work in such a subject as this. And it is worthy of remark, that if the committee had called for general plans alone, with descriptive particulars in writing, they would have saved themselves a good deal of trouble in examining the real merits, and they would have saved the competitors a thousand yards of paper, and more than *one* thousand pounds in money.

The utopian model barrack of the blue book (now, alas! all a dream) was to be merely a common-sense plan of the following divisions,—namely, quarters for ten companies of 100 men, with dining kitchens, washing-rooms, &c. in connection; suitable provision for sergeants and married men; quarters for the officers; chapel-school, library, and orderly rooms; offices (namely, stores, workshops, canteen, bakery, &c.), washhouses and baths, hospital, prison, a parade or drill-ground, and guard-house, and some shelter for drill in bad weather. I wish to compare the first few designs together upon the most important of these subjects.

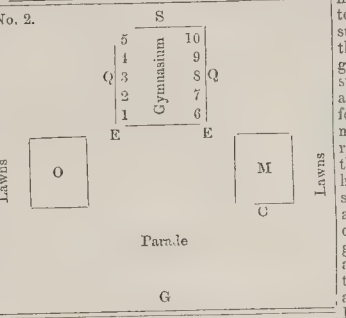
As to the *parade-ground*, the instructions specify the dimensions of 250 by 100 yards, which (allowing for a trifling excess on any account) becomes just *six acres*. If the entire establishment is to be capable of anything like effective individual control (and in all weathers), one might imagine that, with a single item of six acres to begin with, it would be considered desirable to economise space, to beware of unmanageable area. Now the design No. 1 (the first premium plan), and the one which we are to understand will in its essentials be the model for the kingdom), incloses within the barrack-wall positively upwards of *thirty-four acres!* and it cannot possibly be much reduced. No. 2 represents 20 acres, which must be increased to correct a vital error. No. 3 takes 30 acres; No. 4, apparently, as much. In the parade-ground itself, No. 1 gives upwards of *twelve acres*, properly speaking: in No. 2 it is only two-thirds of the required extent; and this, moreover, cannot be cured except through a dilemma of desperate expedients (either by lengthening the parade-ground, so as to lie endwise towards the quarters, or again by widening it so as to separate the blocks of buildings to a most inconvenient extent): in No. 3 the parade-ground occupies 13 acres; and in No. 4, an extravagant quadrangle is reduced to the limit by the impracticable idea of surrounding it with ornamental lawns. But there are several designs which enclose altogether only 17 or 18 acres (which, after all, is a sufficiently large minimum in practice), and afford notwithstanding the most abundant space for every purpose, and with no inferior arrangement of the buildings, I think, but quite the reverse. Take No. 5, for instance, and correct the error of its endwise parade-ground, and you have what I mean. But this design makes no show among the tremendous areas around it, although it actually gives to every man, woman, or child in the barrack a space of 600 feet of ground. It is all very well to handle acres in a plan as if they were dominoes, but think of this,—Lincoln's-inn-fields and Russell-square are as nothing; Colney Hatch, the Houses of Parliament, and the Crystal Palace, are altogether outdone: look at the whole length of Pall-mall from St. James's-street to the Haymarket (nearly one-third of a mile), and the whole breadth from Pall-mall to Jermyn-street (one-sixth of a mile), and you behold the precise dimensions of the enclosure of the model plan to accommodate a single regiment of soldiers. Just look at this in a map of London.

The accompanying sketches will serve to give an idea of the general principles of plan of the first five designs, in order to illustrate the observations which follow. (The sketches are not to scale.)

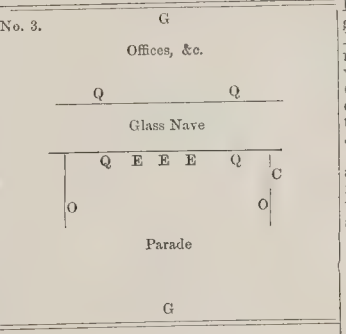
No. 1.



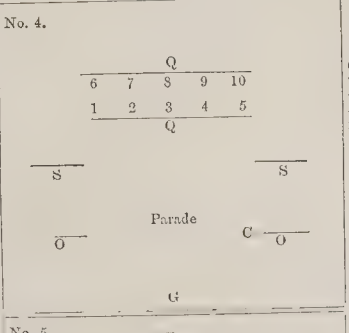
No. 2.



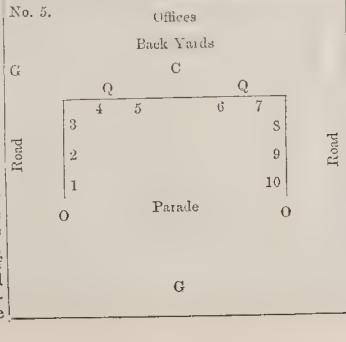
No. 3.



No. 4.



No. 5.



Q. signifies quarters for the men.
M. Married quarters.
O. Offices.
C. Chapel.
E. Entrances to quarters.
S. Stores and other offices.
G. Gates.

The numerals are the order of companies.

In the *Men's Quarters* we have the chief question of the problem. It seems to me that the first desideratum is to dispose the men so that the whole battalion shall turn out on parade with perfect readiness. I think also that the whole of the barrack-rooms should look out upon the parade-ground, if possible. In No. 1, only four of the ten companies so look out; in No. 2, only two I think; in No. 3, we may almost say none; in No. 4, five companies; in No. 5, and many others, *all*. In No. 1, again, the quarters being disposed as a hollow square, with one side towards the parade-ground, the whole of the men have to pass out and in at the two front corners E E: thus 500 men have one single entrance, and 400 of them go up and down one staircase (for the back staircase is of no practical account in most matters). In No. 2 also, although every company has its own staircase, yet there is the serious disadvantage of a common corridor for five companies, and the practical means of entrance and exit are not much better than in the last. In No. 3 the question of access is mainly sacrificed. In No. 5 every company has its own doorway opening directly upon the parade-ground; and No. 4 and many others exhibit modifications of the same sound principle. In No. 1, when the men pour out to parade in 500 at each corner, they actually are separated from the parade-ground by a *lawn* some 50 yards wide, with *roads*, not across, but *round it*. The soldier, who falls in on the extreme flank, in passing from his barrack-room (if this be at the corresponding extremity) to his rank—always expected to be a prompt move-

ment—has to walk *one fifth of a mile*. Nos. 2 and 3 are less objectionable here, but still sufficiently so: whereas, in Nos. 4 and 5, and very many others, but for endwise parades where they occur, every man may be said to step out into his place at once.

As to the details arrangements of the quarters, the three premiated plans present unmistakeable evidence of a most strange and sad system of selection having been resorted to. The blue-book, among other things, alludes to certain various ideas of plan. First, it holds up to reprobation the old "barrack room" system,—whereby the men are put into a long range of rooms opening successively on a corridor at one end, and lighted solely from the other, with a cookery in immediate conjunction, on all floors alike, and some awkward tables in the corridor for their meals. Secondly, it canvasses the "day-room" principle, whereby the barrack-rooms are to become dormitories only, and a distinct day-room is to be provided apart: this, however, the report disapproves of. Thirdly, the glass-roof, or Crystal-Palace principle is vaguely spoken of as available for covered ways, or covered yards, or the like. Fourthly, there is the system recommended by the committee, with improved barrack rooms and conveniences, "dining-kitchens," improved classification, and, for this end (as laid down by Major Jervois himself), separate blocks of buildings complete for the several companies. This last system is the prevailing principle throughout the whole exhibition of designs: in it, the great majority of competitors behold the only key to the problem. But, mark the result: it is wholly set aside: the Crystal-Palace principle—dragged in neck and shoulders as it must be,—is awarded a prize in No. 3: the "day-room" principle, specifically disapproved in the report, is awarded a prize in No. 2; and the one solitary project which offers to conserve the old "barrack-room" system, and perpetuate all its evils, is put in the place of honour, as if to pronounce the whole of this important competition as a failure or a farce. Nos. 1, 2, and 3, instead of representing degrees of practical improvement, are all at utter variance with each other, have nothing in common, are incapable of any amalgamation, and, if my arguments be correct, their defects are essential and vital errors, which cannot be remedied but by the entire abandonment of their fundamental principles of plan.

One more defect of No 1, under this head, is the following:—The men are specified to be quartered either in squads of twenty-four, or half-squads of twelve: the evidence points to the division for twenty four, with an arrangement for subdivision, if desired, for twelve. No. 1 has all its barrack-rooms made for twelve, without the possibility of resorting to the other mode, except by having the rooms lighted from the side, which would put the design at once below the line of merit.

As to the *sergeants' quarters*, the first question is to provide separate rooms for the company sergeants, attached to the several barrack-rooms, but effectually separated for the privacy of the sergeant and his wife, inasmuch as the manners and conversation of the barrack-room are found to be of a strong savour. The old system gives the sergeant and his wife a little corner in the barrack-room within a screen; and this is one of the especial evils denounced by the blue-book. Would it be believed that the only design which retains this arrangement is No 1? The good woman is to have for her new home a compartment (with no observable fireplace, by the by,) enclosed *between* barrack-rooms, surrounded on all sides but one by screen partitions a little higher than her head, and having all the talk of a hundred "single" men floating above that level in full chorus. Or suppose we trace her route in passing from the canteen, for instance, to this agreeable retreat in the further wing. She enters by the corner-hall, where 500 men pass out and in, and where a given proportion of that number are lounging: she passes along a corridor of nearly 500 feet, through stores' departments, and the like, to the other corner-hall of 500 men, or she may here prefer to take the open air through the back yards and racket-court, and pass the eighty conveniences, &c: then she goes up the public staircase, used by 400 men, then passes along the private corridor of 100 men, her company, 226 feet long; then enters, and passes through the barrack-room itself, to which her sanctuary pertains; then, lastly, and no doubt gladly, gains admission to that peaceful enclosure itself, a little out of breath perhaps, and it may happen, occasionally, a little out of countenance. In, perhaps, the majority of designs, the good woman passes quietly, and with perfect facility, to a proper and comfortable room, without meeting (at least in-doors) one man but of her own company, and that only on the staircase: when the door is shut, she and her husband may converse without being overheard: and the worthy sergeant shall have all needful control over the adjoining barrack-room notwithstanding.

In respect of *married quarters*, the instructions direct that the married soldiers, with their families, shall have a location by themselves, apart from the main quarters. Sixty or more soldiers' wives, all clustered together in this way, may become not only a noisy republic, but perhaps an independent one: moreover, this removal of sixty of the soldiers from their companies (to avoid which in many barracks common decency itself is avowedly sacrificed) may prove disadvantageous to discipline. Various attempts are exhibited to overcome these points, but not, I think, in any of the premiated designs.

The *offices*, that is to say, the stores for provisions, clothing, bedding, coals, arms, and accoutrements, the bakery, the canteen for malt liquor and groceries, the workshops for tailors, shoemakers, armourer, carpenter, and blacksmith,—all these for the supply of some 1,200 persons, are not easily disposed of: they are enough to fill a small street of shops, and their convenient arrangement is a most essential question in the problem. Carts are passing to and fro continually: the colonel will not have these cutting up his parade-ground, or appearing there at all: they must come and go without difficulty and without observation, as the butcher, the baker, the milkman, the dustman, come modestly to one's back door. In No. 1, the ground floor of the centre main building is indiscriminately cut up into these offices, intersected by the principal corridor of intercommunication of the building, and approachable, not by any rear access, but from the front gate along the end of the parade, past one of the entrance-halls for 500 and its little crowd, past the canteen and its little crowd, round by the back, into and across the back yards of the men, past the racket-court, and the privies, and so at length to the stores, a route in all of very nearly *half a mile*. In No. 2 it is similar, except that the carts pass by the more elegant route of a sweeping ornamental roadway through extensive lawns. In No. 5 we have the rear gate, the back yards, and the offices in line, "out of the way, but handy."

The *back yards* are the lounging ground of the men (and soldiers are very fond of lounging), and the thoroughfare for the general domestic business of the community: this seems to be an indispensable principle in barrack life. In No. 1 there are no back yards, but the interior of a square, with the privies and urinals in the middle, in clusters of forty, and the only cartway to the offices across their very midst: which is a confused arrangement, if nothing more. No. 2 has no backyards at all: the "Gymnasium," especially if covered, would not answer any such purpose. No. 3 has no back yards, but its great glass nave. No. 4 is also wide of the mark. No. 5, if the side roadways were widened, and the offices somewhat differently arranged, seems to exhibit the proper principle in perfection.

Some other defects in No. 1 may now be briefly noticed. To go from some of the barrack-rooms to the conveniences is a very long walk: to go under cover, in wet weather or at night (for there is no convenience of the sort near the barrack-rooms), is, to and fro, very nearly *one quarter of a mile*. The library, which ought to be cool and retired, and near the school, is on one side, and adjoining one of the quiet and noisy entrances for 500 men. The washhouses are difficult of access from the quarters. There are no baths. The barrack-master's house is within the walls, with a private gate (a most signal mistake), and he has to walk a furlong to reach his stores. There are no covered play-courts. The distance of the further great entrance for 500 men is, from the front gate, *one quarter of a mile*, to which the way beyond to the furthest barrack-rooms makes no inconsiderable addition. The abominable "*tub*" in the barrack-room at night seems to be retained, as the men cannot be expected to go to the urinals in the yards. By the bye, talking of the "tub," there is one design which positively has this refined convenience delineated in the middle of the floor of every room, and marked openly and triumphantly with a "T." it is a cavalry design, and it has the first premium!

The supposed merit of No. 1 appears to me to lie in the following points:—First, there is the close adherence to the old system; secondly, there is the alleged advantage of the principle of screen partitions, stopping short of the ceiling. But here any one who realizes the arrangement must surely perceive (see the plan on page 160, *ante*) that the principle is altogether inapplicable to barrack-rooms with women's apartments, washing-rooms, and corridor, all open to one ceiling, 226 feet long. The barrack-rooms, for instance, 28 feet long, are really lighted by only two windows at one end; for it is very little light that will come over the partition from the corridor, besides that one-third of the suite has not even this. The ventilation over the partitions is a fallacy, except that there will be abundance of draughts, and in winter bitter cold. The fumes of the dinner-tables will pervade the whole area for hours. The washrooms (needlessly numerous) will be dark, close, and offensive to the smell, and this last for the particular benefit of the serjeant's box adjoining. There may be another merit in saving lazy soldiers the trouble of going downstairs to their meals; but great cookeries for 100 men on the third floor above ground, are surely a greater evil in domestic economy.

No. 2, with numerous serious errors in detail, and with a fundamental departure from the instructions in its first principle, is, nevertheless, an able and successful plan, and must take a very high position among those which are beneath the proper line of merit.

No. 3 I cannot help thinking a vagary.

No. 4 brings us to more sound principles of plan, although there are various errors of detail which a more careful study of the blue-book would have prevented.

But in No. 5 (and I know nothing of its authorship) I fancy I perceive the proper solution of the problem. Certain deficiencies I have pointed out above, but all capable of easy remedy; and, although I am quite prepared to find that there are some essential principles which I, the critic, have myself overlooked, yet I feel extremely inclined to assert that there are no faults in this design but such as can be readily overcome without any departure from the model, and that this is not the case with any of the preceding.

No. 6 shows a most elegant plan, but with extravagant space and some of the defects above developed.

Nos. 7 and 8 are like No. 3, —one better, the other worse, but there is a plan attached to No. 8, designated as the embodiment of the suggestions of "an eminent and experienced person," which demands notice. The hand of the amateur is but too plainly discoverable in crude and confused details, but the general principle is the pith of the matter, and this is exactly that of No. 5.

Nos. 9 and 19 are good plans of their kind: but my remarks must be brought to a close.

As will be gathered from what I have said, after several day's attentive study of the designs, my firm opinion is this, that No. 1 is solely remarkable for a repudiation of all improvement upon the old system: that No. 2 is an able design, on a false basis; that No. 3 ought to stand nowhere; and that the really practical designs are altogether neglected. This, of course, is but my own opinion; but I have attempted to set it forth with such particulars as will enable others to judge for themselves.

I sincerely hope that what I have said will not be considered personally offensive by any party concerned. I impute no want of skill,

and no unworthy conduct: I only argue that a most serious mistake has been fallen into. I cannot tell what reasons may have governed the decision, but I think it is to be very much deplored for the public interest.

Allow me to say that I should be sorry indeed if my strictures on Mr. Morgan's design were to be considered a reproach upon his ability: if I were to speak of his cavalry plan, I think it would be very differently indeed.

In this matter it will be granted that I must subscribe myself ANONYMOUS.

ON THE MANUFACTURE OF CROWN AND SHEET GLASS.*

A TABLE of crown glass of to-day would scarcely recognise as of kindred origin a table of the earlier part of the present century. The principle of the process in each case was the same: it is the improvement of minute details that produces so different a result. To Mr. Hartley and Mr. Chance, who, during the years 1832 to 1836, gave to the manufacture of this glass their constant attention, is owing, in a great measure, its present status.

When the tables of crown glass are drawn from the kiln, they are covered with a whitish film or "hum." The history of this hum is curious. It arose, probably, in the first instance, from the deposition of sulphur from the fuel upon the surface of the glass. It thus became associated with the process of annealing, and buyers fancied that the more hum there was upon the glass, the better was the glass annealed. The manufacturers of crown glass, ever ready to accommodate themselves to the fancies of their customers, have taken the trouble to produce an additional hum, by the introduction of sulphur in the kiln. The members, however, of the Glass Jury of the Paris Exhibition, not being in the secret of this hum, stoutly maintained that glass thus clouded must be bad glass, and that the hum was owing to the exudation of the alkali.

In the warehouse, the tables are laid upon a "nest," or cushion, and are divided, by the diamond of the splitter, into two unequal parts, the larger half containing the "bull's-eye." The diameter of the table is measured on the nest, the usual size being now about 54 inches, and weighing 13 lbs. Tables have been made as wide as 70 inches, but the difficulty of manipulation, and the uncertainty of the result, render such sizes too costly to be general.

The splitter carefully examines each table before splitting it, and turns it round till he has brought it into the position in which he may split it to the best advantage, announcing at the same time its quality. The first quality is called "best"—*rara avis in terris*, the next seconds, then thirds, fourths, CC, CCC, or Irish, and tables containing any very glaring defects come under the denomination of "coarse."

These variations in quality depend on the presence or absence, number, and extent of those defects to which, even in the best regulated manufactories, glass is unavoidably liable. Perhaps the glass has been badly melted, and is seedy,—full, that is, of little vesicles, to which the rotary motion has given a circular shape; or, the gatherer may have enclosed air within his "metal," and a gatherer's blister is the result, or a pipe blister, or pipe-scales, or dust from the pipe-nose, or dust from the marver, or dust from the bottoming-hole, or dust from the nose-hole, or dust from the flashing-furnace, or bad bullions, or scratches, or music lines, may disfigure the table; or the glass may be crizzled, or curved, or bent, or hard, or smoky, or small and light,—defects to explain which, would be a long and dreary task. No wonder that tables of the best quality are few and far between, in some manufactories a forlorn hope never to be realised.

The difficulty of obtaining glass free from defects will account for what may at first astonish,—the fact that the value of a table of the highest quality is three times that of the lowest.

The defects enumerated, many as they are, are instantly detected, even through the obscuring hum, by the splitter, who not only can descry faults invisible to ordinary eyes, but can refer each fault to a particular stage of the process, and to a particular cause in that particular stage, and the faults are registered accordingly. The nomenclature of defects is much facilitated by the mapping out of the table into certain ideal divisions, derived from shapes assumed during various periods of the process. The centre lump is termed the bullion: round this lies the bottom; next the bulge; the shoulder; the top, and the rim, or the outermost edge of the circle.

Independently, however, of these defects, there are certain other disadvantages under which even a faultless table of crown-glass must unavoidably labour. The cutting of a circle into rectangular sheets must necessarily be attended with waste, while the bull's-eye confines those sheets to comparatively small sizes. Uniformity of thickness, also, except by the most skilful manipulation, is difficult of attainment. Wavy lines, termed music lines, forming a series of concentric circles round the bull's-eye, and owing to the treatment of the glass upon the marver, were formerly a common defect; but improvements in the process have in a great measure removed them.

On the other hand, extreme brilliancy of surface is a distinguishing characteristic of this glass, ascribed by some to the influence of the marver, by others to the effect of the flashing-furnace.

It is this brilliancy of surface which has enabled crown-glass to maintain in England its position against that formidable rival of which I must now briefly speak.

Imagine, as before, a lump of glass collected upon the end of the gatherer's pipe. For the metallic table or marver is now substituted a block of wood, so hollowed out as to allow the lump, when placed upon it, to be expanded by the blower to the diameter ultimately required. The block, during this operation, is sprinkled with water, to prevent the wood from being burnt, and from scratching the glass. From the block it is carried to the blowing furnace, which is accessible through a number of holes or openings, each hole being allotted to a single blower. In front of the furnace corresponding to each opening, is a stage or frame of wood, erected over a large pit or well about 10 feet deep, and these parallel stages are sufficiently apart to enable each blower to swing his pipe to and fro in a vertical plane, that the glass may run freely out, as the phrase is, to the required length. When the glass has been sufficiently heated in the blowing furnace, it is brought out, and swung round in a vertical plane, and also backwards and forwards; and the blower, at the same time, by blowing down the pipe, constantly keeps the lengthening cylinder full of air.

Uniformity of substance and of diameter is chiefly secured by the skill of the workman, who, when he finds the metal running out too freely, holds the cylinder vertically above his head, still keeping it well filled with air. These operations are continued until the cylinder has reached the length required. The diameter of the cylinder was determined by the wooden block, and remains the same throughout.

The next stage of the process is opening the end of the cylinder. The thinner kinds of glass are all opened by submitting the end of the cylinder to the fire, and at the same time forcing in air through the pipe and stopping up its aperture. The air is expanded by the heat of the fire, and bursts open the cylinder at the end; this being the hottest and most yielding part. The aperture thus made is widened out to the diameter of the cylinder, by subsequently turning the cylinder to and fro with the opening downwards.

The thicker kinds are opened by attaching a lump of hot glass to the end of the cylinder, which thus becomes the hottest and weakest part, and the air forced in by the blower as before bursts it open. The opening is then enlarged by cutting round it with scissors. If opened in the furnace, as in the first case, the ends of the thicker cylinders would be so thinned out that a considerable portion would be wasted.

The cylinder is now laid on a wooden rest, or "chevalet," and is easily detached from the pipe by the application of a piece of cold iron or steel to the neck of the glass near the pipe nose: the neck being hot suddenly contracts externally and breaks away from the cylinder. There still remains the cap or end of the cylinder, which is easily taken off by wrapping round the end of the cylinder a thread of hot glass, removing the thread and applying a piece of cold iron to any point which the thread covered.

On the continent, the operation of heating the glass cylinder is performed in the apertures of the melting furnace; but the obvious advantage of a separate furnace has induced, I believe, one French manufacturer to adopt the English plan, and others will probably follow his example.

The cylinder, as it now lies upon the chevalet, is little more in weight than two-thirds of the lump of glass which the gatherer collected on his pipe. The quantity left upon the pipe nose, with that which formed the cap of the cylinder, are nearly equivalent in weight to one-half the cylinder.

The finished cylinder is now split open by a diamond, which, attached to a long handle, and guided by a wooden rule, is drawn along the inside length of the cylinder, and should pass through or in the neighbourhood of some notable defect or group of defects, if such be present,—for defects thus brought to the edges of the subsequent plate of glass are of lessened injury to its value. An object to be avoided is the black mark which the cylinder sometimes receives from the charring of the wooden "chevalet," on which, while hot, it rested in the glass-house. If the diamond passes, inside the cylinder, over the space occupied by this mark upon the outside, the cylinder will fly to pieces. The reason of this is not difficult to understand. The chevalet prevented, by its non-conducting tendency, that portion of the glass with which it was in contact, from cooling equably with the rest, and the particles at that point remained in a state of tension. A careful blower will never place any large defect in his cylinder in contact with the chevalet, being aware of the probable result.

The use of the diamond in dividing plain surfaces of glass dates from the sixteenth century; but its application to the splitting of cylinders which had not undergone the process of annealing, was introduced not more than twenty years ago by M. Claudet. Previously, all such cylinders were split by a red-hot iron, and, even now, all cylinders of flashed glass, that is, of ordinary sheet glass covered inside with a skin of coloured, are still split in the same fashion.

On the continent, I believe, the diamond is gradually replacing the use of red-hot iron, though the latter is still the method more generally practised.

The cylinder is now ready for the flattener, who, having prepared it by a preliminary warming in the flue, by which it is introduced into his furnace, passes it, by means of a croppie, or iron instrument, on to the flattening stone, from the slight irregularities of whose surface it is protected by a lagre, or sheet of glass, laid upon the stone. Upon this lagre the cylinder, lying with the split uppermost, is soon opened by the flame passing over it, and falls back into a wavy sheet. The flattener now applies another instrument, a polissoir, or rod of iron, furnished at the end with a block of wood, and rubs down the waviness into a flat surface, often, upon a refractory piece, using considerable force. Some cylinders are so distorted in the blowing that no rubbing can flatten them; but all, good, bad, and indifferent, pass through the same treatment. The flattening stone is now moved on wheels to a cooler portion of the furnace, and by the aid of the flattening-fork, delivers its sheet to another stone, called the cooling stone. From this, when sufficiently stiff, it is again lifted, and then piled generally on its edge, in order to be annealed.

Very different, both in process and result, was the manufacture of spread, or German cylinder glass, which preceded the introduction into England of the French system. The cylinder, unskilfully blown, was cut open while hot with a pair of shears, and spread out immediately upon a plate of iron, covered with sand. The thickness of this glass was very irregular, and its surface very coarse.*

* The following is a continuation of Mr. Chance's paper, read at the Society of Arts. See p 141, *ante*.

* To be continued.

DIOCESAN TRADE SCHOOL IN BRISTOL.

LORD GRANVILLE ON EDUCATION.

The old Diocesan School at Bristol has been transformed into a trade school, and Lord Granville, as Lord President of the Council, presided at a meeting to inaugurate it on Friday, the 28th ult. The building has been remodelled. It formerly consisted of two large rooms—upper and lower. These are now partitioned off on the ground-floor—first, into a lecture-room; secondly, into the laboratory referred to, which is furnished and fitted on a plan supplied by Dr. Lyon Playfair; thirdly, an apartment for the lecturer's experiments; fourthly, a lavatory, &c. for the scholars. On the upper story are two large class-rooms, heated and ventilated, and a museum.

At the close of the proceedings, in reply to a vote of thanks, Lord Granville made an excellent address, clear, sensible, and persuasive. In the course of it, the speaker said,—It was certainly a most marvellous thing that the people of this country, while running the race of competition with other nations, should refuse to themselves such an element of success in commercial progress as that of education. What would be said of a strong man who, having to engage with a powerful adversary, should bind up one arm? With respect to the sort of education it was proposed to give, they ought to take great care, and not be the advocates of the theorist against the practical man. That which ought to be done was to give the practical man the advantage which he could obtain by learning something of the principles of the calling in which he was engaged. The ordinary effect of this would be, that they would establish a race of artisans—men who would be better artisans, men who would not only understand their work better, but would be more able to deal with new processes. They would establish a race of artisans who would derive pleasure and gratification from their employments, instead of that deadly weariness illustrated in the case of the man who put an end to his existence in consequence of not being able to work in mere routine. He believed that by these means they would raise the artisan both in his own self-respect and in the respect of his employers, and of all with whom he came in contact. He believed that an inventive genius was to be found in every class of society, and they would give that inventive genius enormous advantages if they trained the mind to learn those principles on which the labour of the artisan was founded. He could illustrate this by means of the steam-engine. Look at the position of one workmen learning that the steam-engine was a mere part of a machine, and compare him with the workman who understood the chemical part of the steam, understood the working of the cold and heat, and who from this knowledge was able to derive gratification and delight. If this argument had force formerly, how strong it must be now that the steam-engine had penetrated every nook and corner of the land. With respect to the school which they had that day met to inaugurate, he rejoiced to find that the boys were there instructed in the ordinary branches of a sound English education. He hoped that in this school special care would be taken to teach the English language—a subject which was too much neglected in every school of every class in this country. He believed there was no advantage which could be given to a man greater than to learn to speak and write his own language grammatically. With respect to the mining school, he (Lord Granville), from being an ironmaster and a colliery-owner, could not but rejoice that this was established in connection with the institution now inaugurated. As an instance of the value of scientific knowledge, he would mention that his colleague the Duke of Argyll had, from his peculiar education, mastered in a great degree all the physical sciences; and, being a Scotchman, he possessed those characteristics described by Mr. Commissioner Hill, and was not likely to let his habits of practical observation be entirely thrown away. Some time since his noble friend was looking at a quantity of refuse thrown away in the working of some metals, and was struck with its appearance. He sent it to a provincial metallurgist, and was told that there was nothing remarkable in it. Not satisfied with that, the Duke of Argyll sent it to the Museum of Practical Geology in London, when it was found that there was 11 per cent. of nickel, a valuable metal, and that every ton of this refuse was worth from 50*l.* to 60*l.* This was an instance of the value of a knowledge of science, and proved that such knowledge was not sufficiently spread all over the country at the present day.

PAYMENT TO ARCHITECTS FOR TAKING OUT QUANTITIES.

WIGAN WORKHOUSE.

There has been a little misunderstanding between the Wigan Board of Guardians and the architect of the proposed new workhouse, Mr. Mangnall, now, however, set right. The Board learnt that Mr. Fairclough, the successful competitor for the works, was to pay the architect 1½ per cent. for taking out the quantities, and that this was included in the amount of his tender, and therefore, of course, coming out of the pockets of the parish, the architect having also received 32 guineas for furnishing bills of quantities to the different competitors; and they considered that as the agreement with Mr. Mangnall that the 5 per cent. he was to receive for his services as architect was to include all travelling and other expenses, it should also include this charge for taking out the quantities. The builder told the Board that if the architect had not taken out the quantities, some other party must have done so, and that the expense would have been charged in the estimate. Mr. Mangnall, in explanation, reminded the Board, that when the appointment was made, he was asked the question, and said that the 5 per cent. would include all services rendered by him as architect; but he also stated that he was in the habit of taking out the quantities, and would do so if the committee wished it. He then informed the committee on what terms those quantities would be furnished, and also explained to them that the successful builder would have to pay for them 1½ per cent. The building committee distinctly understood that, and agreed to it. To show that it was a customary thing, he stated that at Leigh, 1¾ per cent. was paid by the builder; at Burton, 1½ per cent. was paid by the builder; at Warrington, 1¼ per cent. was paid by the builder; at Oldham, 1½ per cent. was paid by the guardians; at Runcorn, 1¼ per cent. was paid by the contractor; at Ashton, 1½ per cent. was paid by the guardians; at Manchester, 1 per cent. was paid by the builder; at Chorlton-upon-Medlock, 1½ per cent. was paid by the builder.

The Chairman said he thought it amounted to the same thing, whether the architect did the work and was paid for it, or whether it was done by another surveyor.

After some discussion, the Board came to a resolution that the explanation was satisfactory.

There were 114 candidates for the office of clerk of the works, and the Board elected Mr. Hugh Hughes.

METROPOLITAN BOARD OF WORKS.

WIDTH OF NEW STREETS, ETC.—BUILDING OVER FORECOURTS.

At a meeting of the Board of Works on the 28th of March, the following bye-laws, made by the Metropolitan Board of Works, at a meeting of the Board, held at the Guildhall, in the city of London, on the 29th of February, 1856, were read, approved of, and ordered:—

"Every new street within the limits of the metropolis, as defined by the said Act (excepting every mews), must be of the width of 40 feet at least; but if the buildings fronting any street be more than 40 feet high from the level of the street, then such street must be of a width equal at least to the height of the buildings above such level.

Every alley and every mews within the limits aforesaid, must be of the width of 20 feet at the least; but if the buildings fronting any alley, or to any mews, be more than 20 feet high from the level of the alley or mews, then such alley or mews must be of a width equal at least to the height of the buildings above such level. And with regard to every such alley, in reference to the entrance thereof, every alley must have two entrances thereto, each being at the least the full width of the alley, and one of the two at the least open from the ground upwards.

And with regard to both such streets and alleys, the aforesaid width is to be ascertained by measuring (at right angles to the course thereof) from front to front of the buildings, on each side of such street or alley.

The word 'streets' to include every square, circus, crescent, street, road, place, row, mews, lane, or place along which carriages can pass, or are intended to pass, and that whether there be or not, in addition to the carriage-way, a footway paved or otherwise.

The word 'alley' to include any court, alley, passage, or other public place, which can be used as a footway only.

In case of any breach of the regulations contained in this bye-law, the offender shall be liable for each offence to a penalty of 40s. and, in case of a continuing offence, the further penalty of 20s. for each day after notice thereof from the Metropolitan Board of Works."

This bye-law has been sanctioned by the Home Secretary, Sir George Grey, and therefore now has all the force of law.

Some applications for permission to erect a building over the forecourt of premises were *refused*.

The memorial from Southwark, respecting street improvements there, together with the report of the Finance Committee in relation thereto, was referred to the Committee of Works and Improvements.

Mr. D'Ifanger gave notice of the following motion:—"That in order to ascertain how far it may be desirable to carry out that portion of sec. 141, which empowers the Board, 'where more than one street in the metropolis is called by the same name, to alter the name of any and all such streets except one,' a letter be addressed to all the vestries and district boards, requesting them to furnish this Board with an alphabetical list of all their streets, &c. and that the consideration of the subject be referred to the committee appointed to confer with vestries and district boards."

PROJECTION CASES IN THE METROPOLIS.

The subject of projections from the street fronts of buildings is one of considerable difficulty under the regulations of the Building Act. I think that the *primâ facie* conclusion to be arrived at is the reverse of that of your correspondent "Tempora Mutantur." The Act provides, sect. 26, clause 5, that "Except in so far as is permitted by this section, in the case of shop-fronts, and with the exception of ..... architectural decorations, no projection shall extend beyond the general line of fronts in any street, except with the permission of the Metropolitan Board of Works." It seems clear, therefore, that without the *special* permission of the Board, projections are *inadmissible*: a strict construction of the Act seems even to prohibit ordinary porticoes, unless they may be considered to come under the denomination of "architectural decorations."

The question as to the power of rebuilding existing projections, particularly in cases of shop-fronts projecting more than 10 inches, is one on which I am aware that there is a difference of opinion. It is very desirable that the whole subject should be well considered and definitely settled, so that the building public may know what they may and may not do.

District Surveyor.

METROPOLITAN BOARD OF WORKS, AND BUILDERS' SHOP-FRONTS.

It is of some importance to householders to consider how far they may be affected prejudicially, or otherwise, by the meaning that may be attached to clause 143, of the Metropolis Local Management Act, giving vestries power to remove projections.

This clause says no "building" shall, without consent, &c. &c. &c. be erected beyond the regular line of the buildings in the street. Clause 119, prevents any actual obstruction being projected on roadways or footpaths.

Is a small addition of 3, 4, or 5 feet to the front of a shop, on its own ground, to be deemed a building within the meaning of this clause,—and as such amenable to its control? How is the regular line of the fronts in an irregular line of street to be determined, some setting back, others breaking forward?

Again, is the filling up of an unoccupied space between fronts already brought out, to be deemed the

erection of buildings,—and are these to be considered as projections extending beyond the regular line of the fronts?

These points are of great importance; and it is highly desirable that the fullest considerations should be given to them, to prevent any undue hardship without countervailing advantages being gained. In London, streets are so irregularly plotted out, and have been so added to and altered, that it would puzzle the whole bench at Westminster to determine what, in the words of the Act, is the "regular line of the buildings in the street." A Householder.

Party Fence or Garden Walls are not regulated by the Metropolitan Building Act, or subject to the supervision of the district surveyor, as was the case under the late Act. There is no restriction as to height or mode of construction, and a man in the New-road pleads that he is only building garden or party fence walls, and that he may build them as high as the houses. The Act is most defective.

A Bewildered One.

INSTITUTION OF CIVIL ENGINEERS.

On the 11th inst. Mr. Robert Stephenson, M.P. in the chair, the discussion was renewed on the paper, "On the Explosions of Steam Boilers," by Mr. William Kemble Hall, and was continued throughout the evening.

A new form of boiler was exhibited, and described as having been recently erected at the works of Messrs. Humphrys, Tennant, and Dykes. The fire-box, of 3 feet diameter, was composed of a series of flanged rings of Low Moor iron, fastened together in such a manner as that the rivets should be surrounded by water, and not be exposed to the action of the fire. The depth of water over the fire-box would be double that over the small iron flues, or tubes, which were 3 inches in diameter. No double thickness of plate was allowed anywhere. It was intended to supply steam of 70 lbs. per inch, and it had been loaded up to 120 lbs. per inch. The shell was much stronger than that of one of the Great Western locomotives; and it was anticipated that the steam might be permitted to accumulate without danger.

When it was remembered that the explosion of a boiler, under a pressure of 140 lbs. per square inch, was nearly identical with that of a 10-inch gun, the effects of such an occurrence were not surprising.

It was reiterated that it was not necessary to have recourse to the spheroidal theory,—to the decomposition of water,—or to any highly scientific arguments, and much less to mysterious or occult causes, for the reasons of explosions. Careful investigation would in general point sufficiently clearly to them, when the reasons were fairly sought for.

It was stated that the observed cases of corrosion of the plates of boilers might be referred to galvanic agency, and instances were given of such effects being produced, when the bilge water was taken up by the feed-pumps and injected into the boilers.

The decomposition of water on heated plates, although admitted to be an interesting chemical study, was now generally rejected, as a practical solution of the question of explosion; and as to the spheroidal theory, any such pressure of steam as must exist within a boiler would practically force the water into absolute contact with the heated surface, and would not permit the globules to be suspended amidst the film of steam, at atmospheric pressure, as in an open crucible, or on a plain heated plate. Therefore that theory must almost be abandoned in practice.

The causes of explosions might, at first sight, appear to be difficult of discovery, but careful investigation generally brought to light evidence of some condition of the boiler under which an accident would be inevitable.

On the 18th, Mr. I. K. Brunel in the chair, the paper read was, "On Improvements in Diving Dresses, and other Apparatus for Working under Water," by Mr. William Heinke.

In tracing the history of diving apparatus and submarine researches, mention was made of one undertaken by one Phipps, a ship carpenter, the son of a blacksmith, at Boston, in America. He devised some modification of the apparatus, which enabled him to operate, in 1687, upon the wreck of a Spanish galleon, lying off the coast of Hispaniola; and, on being assisted with money by the Earl of Albemarle, eventually succeeded in raising property of the value of 300,000*l.* of which his own share amounted to about 20,000*l.* He then continued to engage in similar ventures, so successfully, that he was knighted,—became sheriff of New England,—and founded the noble family now represented by the Marquis of Normanby!

In 1779, Smeaton first used diving-bells for civil engineering operations; and one of his apparatus was stated to be still in existence at Ramsgate harbour. Rennie employed them very extensively, and introduced great modifications in their construction, having them made of cast-iron, with lenses in the top, and using powerful air-pumps. Very extensive submarine works were thus constructed, and difficult repairs were made. Telford also used the diving-bell somewhat extensively; and, up to the present day, Sir John Rennie, at Plymouth, and Mr. Walker, at Alderney and Dover, and other places, had, in common with almost all the other marine civil engineers, employed the diving-bell for their works. Indeed, the contractors for such works now found them so useful, and the men managed them so skilfully, that works heretofore considered almost impracticable were undertaken without hesitation.

SANITARY IMPROVEMENTS IN CHELSEA.

The new Board and their officers appear to be working vigorously with the view of effecting sanitary improvements. Landlords are being called on to fill up cesspools, provide conveniences, to lessen the overcrowding, &c. &c. An extract from a recent report of the Medical Officer of Health, Dr. A. Whyte Barclay, will serve to show the condition of one part of the parish:—"Since your last meeting," he says, "one of the worst districts of the parish has been carefully inspected. It consists of a square of ground, bounded by Turk's-row, Franklin's-row, Queen's-road East, and White Lion-street, nearly every portion of which is covered by miserable houses, ranged in courts and yards, in the closest possible contact; and though most of the houses appear to be of comparatively recent date, they are generally of the worst construction, and in very bad repair. I trust the day is not far distant when the whole of these crowded courts and lanes will be demolished, but in the meantime it is imperative on me to ameliorate, so far as possible, with your assistance, the condition of the inhabitants, and especially in the first instance, to call your attention to such matter as require time for their completion.

I consider that, in many instances, the houses are over crowded, and that if any epidemic should appear in the parish, it would be necessary to take immediate steps for reducing the number of the inhabitants. In the meantime I would recommend notice to be served on the landlords, that over-crowding will not be permitted, specifying only the more glaring examples. In illustration I may cite to you two instances in Bolton's-gardens, in houses consisting of two rooms placed one over the other; that on the ground-floor, measuring about 12 feet by 7 feet and 8 feet in height, the upstairs room having the same dimensions, but being very little over 6 feet in height, which may be roughly estimated at 700 and 550 cubic feet respectively, together 1,250 cubic feet, which is no more than is allowed to one bed in the best ventilated wards of our metropolitan hospitals, and yet these two houses are occupied, the one by eleven, and the other actually by fifteen persons."

The return of mortality made with the report in question (for two weeks ending March 15), is very favourable. The deaths are twenty below those of last year, and eleven below the average of ten years, viz.:—

Deaths in two weeks mentioned	46
Deaths in corresponding weeks of 1855	66
Average mortality in corresponding weeks of ten years	57·1

This is very encouraging, with all allowance for the admitted healthiness of the present year.

CHURCH-BUILDING NEWS.

Rochester.—A new congregational chapel is about to be erected on the piece of vacant land at the top of Star-hill, Rochester, Kent, the foundation-stone of which was to be laid last week. The proposed site is in the centre of a dense population, far removed from the nearest place of worship. The following were the tenders for the erection of the chapel:—

Robins	£568	0	0
Spicer	554	10	0
Naylar	532	0	0
Cotton	529	16	0
Collins	517	0	0
Jennings (accepted)	512	14	0

Marton.—The new church of St. Mark, Marton, was opened on Thursday in last week, when the edifice was consecrated. The first stone of the new edifice was laid about St. Mark's day, in last year. Mr. E. Haycock, jun. of Shrewsbury, was the architect; and Mr. Henry Thomas, of same place, undertook the building, his contract being 650*l.* The church is situated above the Montgomery-road, and forms a conspicuous object for many miles. It consists of a nave, chancel, vestry, and porch, the latter of timber. There is also a turret and spire at the west end of the nave. The interior is fitted up with open moveable seats, which will accommodate 120 adults. The roofs are open-timbered, and, like the rest of the internal woodwork, stained a light colour. Stone from the neighbourhood has been used for the walling, but the dressings are of Grinshill freestone.

Brackenfield.—The chief stone of a new church, to be dedicated to the Trinity, was laid at Brackenfield, Derbyshire, on Monday in last week, by Mrs. Turbutt, wife of Mr. Gladwin Turbutt, of Ogston Hall, adjacent, who presented the site and a subscription of 600*l.* The church about to be erected will be in the Early Decorated style of architecture, and is estimated to cost 1,300*l.*

Whitkirk.—St. Mary's Church, Whitkirk, near Leeds, the interior of which has recently been renovated and improved, was re-opened on Thursday before last. The old lofty pews have been removed, and new deal seats, with tracery bench ends, and low doors, substituted. The pulpit is executed in Caen stone, lined with oak, and is octagonal in plan. The flat plaster ceilings have been taken down, and the old oak roof of the nave, with its moulded longitudinal and transverse ribs, exposed to view, new carved bosses being fixed at the intersections. New roofs have been placed over the chancel and aisles, corresponding in character. The piers and arches have been stripped of thick coats of whitewash, and the stone partly restored to its former colour and sharpness of mouldings and arrisses. The east wall of the chancel, the Ingram chapel, and the vestry have been rebuilt, and windows with rich tracery heads introduced, and a porch to the Ingram chapel provided contiguous to the east end. The west organ gallery has been removed, the organ being now placed in the tower, level with the church floor, and a carved tracery screen erected in front of the tower arch. Carved tracery oak screens have been erected round the Ingram and Waud mortuary chapels. Several of the windows are filled with stained glass. The east window, given by Major Waud, of Manston Hall, represents the Ascension, &c.: the east window of the south aisle, next the Ingram chapel, and the end window in north aisle, are memorial ones presented by Mr. Atkinson and Mr. A. Horsfall. The windows are by Messrs. M. and A. O'Connor. The two windows in the north aisle, given by Mrs. Ingram, of Templenewsam, and the whole of the clerestory window, were filled with stained glass by Mr. Lavers, of London. The chancel roof and east wall have been erected at the expense of the Masters and Fellows of Trinity College, who have also contributed towards the general restoration fund; and the vestry roof and wall, and the east wall and entrance porch to the Ingram chapel, by Admiral Meynell. The repairs and alterations have been carried out under the superintendence and from the designs of Mr. J. Dobson, of Leeds, architect.

Middlesborough.—The foundation-stone of a new Independent chapel was laid here on

Tuesday in last week. The building will cost, when completed, upwards of 2,000*l.* nearly all of which sum (including the sale of the old chapel) is provided for. It will be erected from plans by Mr. Oliver, of Sunderland, the proposed dimensions being 60 feet by 40 feet. The site is immediately opposite Queen's-terrace, near the railway station. The chapel will be built in the plain Italian style of architecture, and will contain seat accommodation for 700 persons.

Edinburgh.—A new church is to be erected at George IV.'s bridge, on the east side next to Merchant-street.

Lochlee.—A meeting of the committee of the congregation of the Free Church, says the *Montrose Review*, met with the Presbytery committee in Brechin, on Tuesday week, to receive estimates for the erection of their new church and manse, according to plans prepared by Messrs. Hay, of Liverpool. The following tenders were accepted:—Mr. Dinnie, Aboyne, for the mason work; Mr. Wm. Black, Brechin, for the carpenter work; Mr. Mackie, Brechin, for the plaster work; and a person from Montrose for the slater work. It was found, on examining the estimates for the manse, plans of which had been prepared by Mr. Greig, of Montrose, that they exceeded the amount the congregation were willing to engage for, and it was agreed to have the plans remodelled.

SCHOOL-BUILDING.

Seacombe (*Liverpool*).—The foundation-stone of new Wesleyan schools at Seacombe was laid on Tuesday before last, by Mr. John Farnworth. The site is on a piece of land at the left side of Brighton-street, midway between Seacombe and Egremont, on which it is said the Wesleyans also contemplate erecting a chapel at some future period. The buildings are to be in the Old English style of architecture, and capable of accommodating about 250 scholars—boys, girls, and infants—and to include a house for a resident master. The architects are Messrs. Hay, of Liverpool; the builder, Mr. H. Fisher, of Birkenhead. The estimated cost is 1,900*l.* towards which Government will grant 735*l.*

Peterborough.—The proposed schools are in a progressive state, and it is expected the foundation-stone of the practising school, which is to serve as the parochial school for the St. Mary's district, will shortly be laid in Touthill-close. The entire plan embraces also a training and a reformatory school; and as Government allows 7*s.* per week for each young culprit, it is supposed the latter will be self-supporting.

Worcester.—The new school-rooms built for St. Nicholas, at the expense of Mr. J. W. Lea, are now nearly completed. The buildings are situated in the Infirmary-walk, where they form a prominent object. There are two large school-rooms, one for boys and the other for girls; and the number that can be accommodated is about eighty of each. The school-rooms are divided from each other by four painted arches and a wood skirting, and are lighted by triplet windows, with stone moulded mullions. Apartments are appropriated for the accommodation of a schoolmistress, and the other arrangements and offices are complete. There are separate entrances for the boys and girls: their playgrounds are also divided. The architect is Mr. Elmslie, of Malvern; the builder and contractor, Mr. Perkins: the masonry is executed by Mr. Warmington. The premises are bounded by a low wall and palisading.

Cheltenham.—New parochial schools are in progress of erection here. The site was formerly occupied by the old parish workhouse. The building, which has been commenced, will be erected under the direction of Mr. D. J. Humphris, the architect. The plans were approved by the Committee of Council, and a grant of 1,030*l.* allowed towards the cost of erection. The building will contain on the ground-floor an infants' school-room, 50 feet by 30 feet, and 15 feet 6 inches high; a class-room, 25 feet by 15 feet; cloak-room, lobby, &c.; and on the upper floor a school-room for girls, 50 feet by 30 feet, with class-room, cloak-room, lobby, &c. of the same size as those below. In connection with the school is a convenient teacher's residence. The building will be erected in brickwork, with freestone window dressings, chimneys, &c. of suitable character, but very plain. The contract is entered into with Mr. Hunt, of this town, builder, at the sum of 1,715*l.*; his tender being the lowest of the three from builders who were invited to estimate for the work. The total outlay will exceed 2,000*l.* including the land. —— The directors of the Cheltenham College have granted their Institution for the sectional and other meetings of the British Association, in August; that building being extensive and well adapted for for the purpose.

STAINED-GLASS WINDOWS.

Culworth Church.—The inhabitants of Culworth, in respect to the memory of the late Rev. J. Spence, as their rector, have agreed to erect a memorial window in the chancel of Culworth church, and a tablet in the school which he built, and for which he left 1,000*l.* as an endowment. A committee has been appointed to receive contributions.

Holy Trinity Church, Coventry. — The east window of Holy Trinity Church, Coventry, in memory of the late Mr. R. S. Cox, has just been erected. It is by Messrs. Heaton and Butler, of London. The lowest row of figures represent—Elijah and the widow woman; Moses smiting the rock; Abraham entertaining three angels; Job comforted; Elisha raising the son of the Shunamite; and Joseph and the Butler and Baker. The figures above represent our Lord and the six works of mercy: "I was an hungered and ye gave me meat," &c. The small figures represent Abraham, Moses, Jacob, Noah, Joshua, Daniel, Joseph, and David. In the centre is an angel holding the symbol of the Trinity. Above are the sacred monograms, "I.H.C."—"I.H.S.;" the symbols of the Holy Spirit and the Christian Faith; and the Palm and Crown of Martyrdom. On a marble tablet will be the inscription. Both St. Michael's and Holy Trinity, Coventry, are now, pretty well adorned with stained-glass windows.

St. Peter's, Rock Ferry (*Liverpool*).—Two memorial stained-glass windows have just been placed in this church. The east, or altar window, is a triplet of the Early English period. Groups fill the centres of each compartment, comprising the following subjects,—The Birth, the Lord's Supper, and the Crucifixion. The designers and artists were Messrs. Forrest and Bromley, of Liverpool. The inscription for the east window is placed on a brass plate, engraved by Mr. Leatherbarrow, adjoining the window.

Glasgow Cathedral.—The Lord Provost of Glasgow is succeeding to his wish, it seems, in getting public-spirited families to undertake the responsibility of each filling in a window of the cathedral with stained glass. There is now no doubt that the whole forty-four windows of the cathedral will be appropriated, and that contributors will be glad to have the opportunity afforded them of decorating their revivified cathedral.

St. Mary's, Whitkirk (*Leeds*).—In connection with other improvements, several stained-glass windows have recently been put up in this edifice: for particulars as to these, we must refer to "Church-building News."

Holy Trinity, Colchester.—Mr. Warrington draws our attention to the circumstance, that a stained glass window, by him lately put up in Holy Trinity Church, Colchester, was inadvertently noticed by us, on 5th ult. under the head of Chelmsford. The window is intended as a monument to the late Miss Corsellis.

PROVINCIAL NEWS.

Chelmsford.—The site of the new corn exchange has been cleared of old buildings. The plans, for which contracts are now, according to the local *Chronicle*, about to be entered upon, are for a building in the Lombardic style, with a somewhat more Palladian cast than that generally adopted. The entrance from the square will be through three arches into a hall, from which three openings, with glazed swing doors, will give access to the exchange. This is to be 100 feet long, by 45 feet wide, and afford accommodation for 100 stands, with twenty-five counting-houses. The separating walls of these will form the main stay of the building, and serve to support seven pairs of perforated arched iron ribs, the apex of which will be 40 feet from the floor of the exchange, and to which will be attached the whole roof with its covering of glass. A ventilating chamber running along the ridge of the roof with ornamental panelled gratings in the ceiling, and smaller gratings in the side walls, are to be the means provided for ventilation, which can be increased or diminished at pleasure. The end of the building is carved for a platform, and near at hand is provided a keeper's room and other conveniences. At the entrance end will be a gallery opening into the market, forming a kind of mezzanine floor to the front building. A large room, applicable for auctions and meetings, and upwards of 40 feet by 20 feet, occupies the first floor of the front building, and faces the square, into which projects a stone balcony. It is proposed to face the front building with stone to the height of the first floor, with yellow stocks and stone dressings above, the whole crowned with a stone cornice and balustrade.

Brentwood.—A proof of the increased value of land in the vicinity of Brentwood was given lately, when a few acres on the Ongar side of the town, submitted to auction, realised the unlooked-for price of 100*l.* per acre. The favourite building ground has been on the opposite side: on the Warley declivities, land, it is said, has frequently exceeded 80*l.* and even 100*l.* an-acre. After a somewhat spirited competition, thirteen acres of land which, a few years ago, were disposed of for 900*l.* were knocked down for 1,240*l.*

Banbury.—The foundations of a wood-turning establishment have just been laid in Banbury. The site is close to the canal, and adjoining the baths. The design of the building and machinery is by Mr. J. W. Wilson, of Neithrop, who is superintending the erection. Mr. A. Kimberley, of this town, is the contractor. The building will be in one story, 70 feet long, and 30 feet wide, and the walls will be 12 feet high: the chimney-shaft will be about 50 feet high; and the walls are said to be of sufficient strength to permit of another story being added when required. With the same view, the roof, which is Queen-trussed, with skylights, has been designed so that it can be lifted off in one piece; and the front and back walls will be left toothed, so that the building may be also extended in length if necessary. The steam-engine is of 14-horse power.

Weymouth.—The directors of the new Weymouth Water Company have let the works about to be erected by contract to Mr. Leather, the contractor of the Portland Breakwater, who, it is calculated, with the large staff of workmen which he has at his command, will complete them so as to supply Melcombe Regis in about three months, and the whole of the borough before the ensuing autumn.

Wolverhampton. — The brass-cock founders lately in the employ of Messrs. Ready and Meynell, of Bilston-street, Wolverhampton, have left their work, in consequence of the introduction of machinery into the manufactory.——The town surveyor, Mr. Henry, has completed his report on the sewerage of this town. The surveyor proposes to construct the sewers sufficiently large to carry off the ordinary rain-water, which will assist in diluting the sewerage and scouring the sewers. The position of the town, on the ridge dividing the basins of the Severn and Trent rivers, affords three out falls, two of which may be ultimately combined. Sewerages immediately will be necessary for 1,150 acres, which will require 14,541 yards of main sewers, estimated to cost 15,549*l.* 13*s.* 8*d.*; 13,336 yards of branch sewers, at a cost of 7,865*l.* 10*s.* 8*d.*; and 52,265 yards of minor sewers, estimated at 19,803*l.* 17*s.* 6*d.* This gives a total of upwards of forty-five miles of sewers. Adding various other expenses, including compensation, land, &c. the total cost is set down at 50,951*l.* 1*s.* 10*d.* Mr. Henry recommended that 10,000*l.* should be expended annually, the money to be borrowed and repaid with the interest in equal annual instalments in thirty years.

Liverpool.—A large block of offices is about to be erected in Old Hall-street, Liverpool, to occupy the vacant space of ground between

George-street and Ormond-street. The principal front in Old Hall-street will consist of a granite basement, supporting the ground story of rusticated stonework, above which the principal story is to be arcaded and enriched with ornamented arch bands in stone, the arches being filled in with carved foliage and lunettes of red and green polished serpentine. Above the top story will be an enriched frieze, with lunettes of red and green serpentine at intervals, upon which will come a bold and effective stone cornice and balustrade. The plain portions of the upper stories will be of red brick. The principal entrance archway will have polished red granite jambs, and the entrance ceiling will be groined and panelled, and supported on detached columns, with polished red granite shafts. The offices will open into long corridors, 12 feet wide, which will be lighted from above by continuous skylights, the light being admitted through the stories by open well-holes. In the centre of the whole building will be an open court-yard, 170 feet by 35 feet, communicating with the front and side entrances, and having two small iron bridges for communication from one side of the building to the other. The frontage in Old Hall-street will be about 145 feet, and the depth of the building 230 feet. There will be between sixty and seventy complete sets of offices. The architect is Mr. James K. Colling, of London.——Eight years ago, according to the local *Journal*, the first portion of the Tower-buildings, Water-street, was erected by Sir Joseph Bailey, M.P. but circumstances occurred to prevent the completion of the whole stack according to the plans of Mr. Picton. The obstruction, however, having been removed, the architect will now proceed to carry out the original design, at a cost to Sir Joseph Bailey of about 20,000*l*. The buildings, which will be erected on the site of the yard occupied until lately by Bailey, Brothers, and Co. will face Water-street, and be named Tower-buildings South. They will contain about twenty suites of offices, and form, says the *Journal*, a handsome feature in the architectural adornments of the town. The style, we believe, will be of the Italian order,—something between the Roman and Venetian style. The brickwork is contracted for by Messrs. Jump and Son, and the masonry by Mr. H. Yates. The clerk of the works is Mr. T. Jones. On Saturday last the first stone of the buildings was laid.——The large floating landing-stage to be placed alongside Prince's-pier, for the accommodation of channel and sea-going steamers, is being rapidly proceeded with by Messrs. Vernon and Sons, the sub-contractors. When all is in readiness for the purpose, says the *Albion*, it is proposed to launch this vast fabric in four portions, which will be floated in succession to its place of destination at the Prince's-pier. The whole will be completed within twelve months; the period fixed by the contract. The stage, which is to be 1,000 feet long, will cost upwards of 140,000*l*. The principle of construction is the same as the landing-stage at George's-pier. The whole weight of the stage, mooring-chains, and bridges, is estimated at 4,500 tons, which, it is calculated, will displace about 160,000 cubic feet of water, while its actual draft of water will not exceed 3 feet.

Masham.—The laying of the foundation-stone of "The Riddell Memorial Mechanics' Institute," at Masham, took place week before last, Admiral Harcourt, of Swinton Park, officiating. The cost of the building is raised by a subscription entered into by the parishioners and friends of the late Rev. Thomas Riddell, M.A. vicar of the parish. The structure is after a design by Messrs. Perkin and Backhouse, of Leeds, architects. It is of the plain Italian style of architecture, and contains a vestibule and staircase, large reading-room, class-rooms, rooms for the librarian and hall-keeper, on the ground-floor; and a lecture-room, ante-room, committee-room, and bed-rooms, on the upper-floor.

Seaham-harbour.—It is said that Lady Londonderry has resolved upon enlarging the works at Seaham Harbour, at an outlay of 100,000*l*. The produce of the tracts of ironstone leased by her ladyship in the Cleveland district is to be brought to Seaham, where blast furnaces are to be erected.

Jedburgh.—Improved dwellings for the labouring classes in the rural districts are now springing up in various localities in this district. Two have recently been erected at Muirhouselaw, the property of Mr. J. Ord. Each cottage, according to the *Kelso Chronicle*, contains two apartments on the ground-floor, and attics above, besides other conveniences. Under the old system of constructing hinds' houses, the whole business of eating, sleeping, and cooking had to be carried on in one room, but the old-fashioned tumble-down cottages are fast disappearing.

St. Helier.—The thorough drainage of the town, says the *Jersey Times*, will very shortly be recommenced, when that portion of King-street from Charing-cross to New-street, and thence up that street to Val-plaisant, will be first undertaken; then Conway-street, Hope-street, Cross-street, and Bond-street. All these streets are thickly-inhabited thoroughfares. The streets already drained have greatly improved the sanitary condition, comfort, and cleanliness of St. Helier.

THE LATE MR. DAVID LAING, ARCHITECT, F.S.A.

We have this week to record the death of Mr. Laing, one of our veteran architects, at the very advanced age of eighty-two. This gentleman was one of the few architects who connected the present race with the past. He was the son of a merchant in the City, and was articled to Sir John Soane, about the time when, on Soane's return from Italy, he undertook the charge of the great works at the Bank.

At the beginning of this century, Mr. Laing published a small work, called "Hints for Dwellings." This book had a ready sale amongst those who began at that time to adorn the neighbourhood of London with those

"Suburban villas, highway-side retreats,
Which dread the encroachments of our growing streets."

About the year 1810 he received the appointment of "Surveyor of Buildings" at the Custom-house, and soon obtained directions to prepare designs for a new Custom-house, on a site west of the old work by Sir Christopher Wren, and between that building and Billingsgate. This edifice was just begun when the fire destroyed the old Custom-house; and about five years afterwards the new building was occupied, with much *éclat* at its opening. What this building then was is shown by the large work published by Taylor, of Holborn, which described its arrangement and construction. A few years after, alas! symptoms of decay showed themselves in the foundation of the building; and after much litigation and anxiety a new foundation was put in, and the whole building rearranged and much altered by Sir R. Smirke. Mr. Peto (the predecessor and uncle of the present baronet of the same name) was the contractor for this building; and the actions for penalties, and consequent vexations to which he was subject from the failure of this foundation, tended, we believe, to shorten his life.

The cause of the failure in question was much canvassed at the time, and it was attributed by many to the decay of the beech piling and planking used as the substratum of the foundation. If this were the cause, we believe neither the architect nor the contractor was really responsible, as that material was used on the recommendation of a very eminent engineer of the day, who was consulted by the Government on that subject, and it was used in spite of the protests of both of the parties who were made liable for the result.

Mr. Kelsey, the well-known surveyor of the Commissioners of Sewers of London; Mr. Lee, the brother of Mr. F. Lee, the painter, and one of the most promising architects of the day, long since dead; Mr. Fowler, Mr. Tite, and Mr. Bellamy, were all pupils of Mr. Laing, and have been happily more fortunate than their kind-hearted master. Mr. Tite laid the foundation of his reputation as joint architect with Mr. Laing of the Church of St. Dunstan-in-the-East, which was re-erected principally from the designs of the former gentleman.

Soon after the accident at the Custom-house, Mr. Laing retired from public life, and his latter days, we have reason to believe, were cheered by the kindness of his former pupils and the profession generally.

STEAM-WASHING ESTABLISHMENT, WELLINGTON BARRACKS.

A new building has been erected in the rear of the Wellington Barracks, St. James's-park, to do the barrack washing of the London district by steam power. The building contains a receiving-room for dirty linen, a washing-room, a drying-room, ironing, mangling, and folding room; clean linen room, engine-room, and boiler-house. The washing-room contains two of Macalpine's patent washing-machines, one dash or rinsing wheel, one hydro-extractor, &c. The process of washing is as follows:—The washing-machines are supplied with a certain quantity of cold water from a tap immediately above them: this water is boiled in about five minutes, by a jet of steam supplied by a pipe in the centre of the machine: the dirty linen is then placed in the machine, which is then started, and revolves horizontally beneath a number of beaters, which are kept moving up and down until the goods are cleansed. The time occupied by this process varies from ten to twenty minutes. The goods are then placed in the rinsing-wheel, and in five minutes are ready for the hydro-extractor, in which they are placed for three minutes; and from thence they are carried into the drying-room, which is heated by steam pipes placed immediately under an open floor. The goods, when dry, are taken to the folding and mangling room; the entire process occupying but a short period of time compared with the old systems of washing, besides the saving effected in soap and labour. The machines are driven by an 8-horse horizontal high-pressure engine, in connection with two steam boilers. The washing-machine, engine, boilers, &c. have been manufactured by Messrs. Manlove and Alliott, of Bloomsgrove Works, Nottingham. Messrs. Bennett and Holdsworth are the contractors for the buildings, under the superintendence of Mr. J. Niblett, of the Royal Engineers department. Ultimately the system here adopted will probably supersede other known processes of washing.

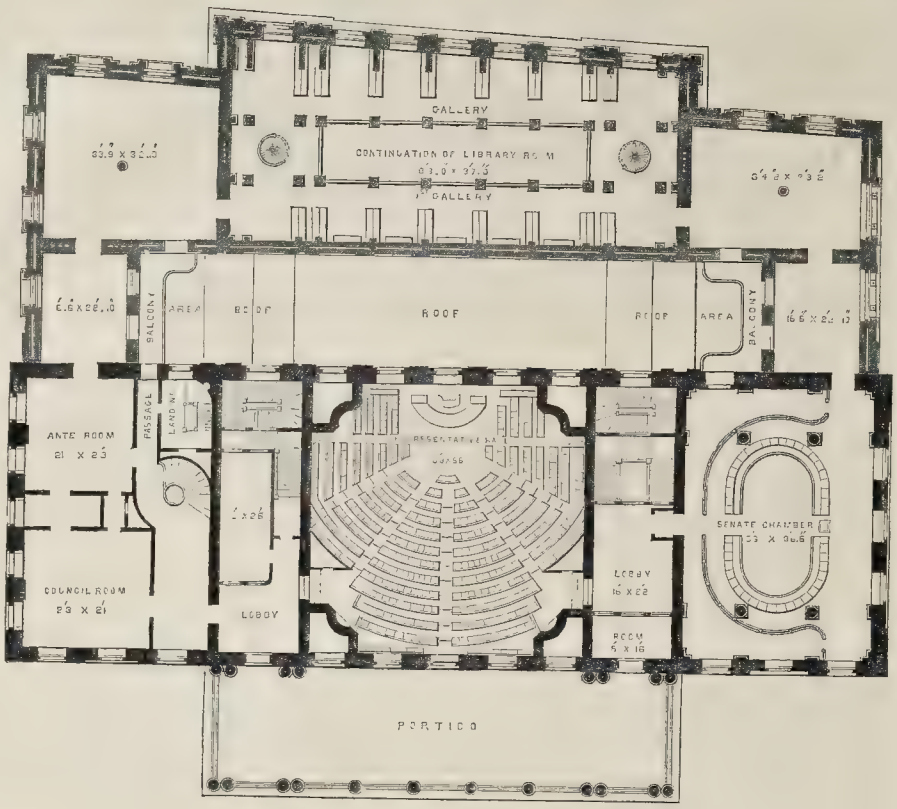
With the aid of two females, 900 large coverlets may be washed in the day. The drying is done at the rate of 200 in two hours. A prison for twenty-two men, and schools for children and adults, are being built, with other works, to afford accommodation for 1,500 men, instead of 900, as at present.

ARCHITECTS AND ENGINEERS' CLUB.

It is manifest that at present students of architecture, engineering, and painting come but seldom into contact with each other. And it appears to me to be at least very desirable that in these, as in the other professions, mind should meet mind. I would suggest, then, an Architects and Engineers' Club, in which the resemblance to the clubs of Pall-mall, &c. should be carried so far as to admit of the members dining there habitually. Those who can afford to dine at the Wellington, dine certainly as gentlemen should—but few are rich enough to do this. A student myself, I have tried very many of the *restaurants* in London, and I can fairly say of them that there is barely one that is respectable: low, hot, crowded rooms, inferior cookery, and dirty dinner-services, render one's dinner a disagreeable necessity rather than a sociable repast Now all this might be easily obviated. By adopting the plan of the *table-d'hôte* or military mess, a commencement might be made. If any *restaurateur* would engage to find a good spacious room, good plate, &c. at a moderate charge, I am certain he would never find his table deserted. Thirty or forty students agreeing to dine regularly at his establishment would well indemnify him for his trouble. Of course, all such schemes as these can have but small beginnings. When the plan of a regular *table-d'hôte* was once fairly started, a club could be formed, each member paying a small annual subscription, which would enable the club to hire one or two rooms, adjoining the dining-room, with an architectural library, and the various professional periodicals regularly supplied.

Of course, I have here merely traced a rough outline, which I leave to be filled up when the plan itself has found sufficient favour to ensure its realization. I could say much more to prove the advantages of such a plan—but space fails. I hope that, if this letter should be so fortunate as to find a place in your columns, it may meet the eyes of some who, possessing the means, may also have the will to start the project.

H. B.



PLAN OF UPPER STORY, STATE-HOUSE, MASSACHUSETTS.

THE STATE HOUSE OF MASSACHUSETTS, U.S.

The State House of Massachusetts, in the city of Boston, the capital, has been recently very much enlarged and altered; and that it may be seen what our Trans-Atlantic brethren are doing in the way of architecture, we give a view of the building, and a plan of the upper floor, containing the Hall of Representatives, 53 feet by 56 feet, the Senate Chamber, 56 feet by 36 feet 6 inches, and the upper part of the Library, 88 feet long, and about 37 feet wide. Under the Hall of Representatives is what is called the "Doric-hall," which is divided longitudinally by two ranges of columns, and extends beneath the part marked "Roof" on our plan, and is terminated with a statue in a niche. The enlargement consists of a central building and two wings, shown in the view. The cupola is part of the old house. It is for the most part a brick building, with a granite basement.

The flooring of the first, second, and third stories of the enlargement is constructed with brick groined arches, supported upon piers projecting from the inside faces of the exterior walls, and upon interior piers and columns, arranged in the several stories. The remainder of the floorings, viz. those of the fourth stories of the wings, are to be constructed with segmental arches of brick, supported by cast-iron beams, spanning the widths of the wings. The two galleries of the library are of cast and wrought iron. All the roofs are of wrought-iron, covered with sheet copper. The staircases are also of iron. The supporting columns of the groined arches in the first, or basement, and in the second stories, are of cast-iron. All the interior columns of the library are also of cast-iron. All the exterior windows, dressings, and their balconies, including the window pedestals and architraves on the outside of the exterior walls, as also the string courses and cornices, mouldings, and balustrades around the roofs, are of cast-iron. The pilasters, with their capitals and bases, of the Corinthian order of the exterior walls facing Mount Vernon-street, are all of cast-iron.

The sashes and frames of all the windows, together with their inside shutters and finish, are of cast and wrought iron. The exterior and interior doors are of wrought-iron, with cast-iron frames and architraves. All the wall pilasters that support groined arches are of brick, and are fitted with cast-iron capitals and bases. The inside architraves of all the windows are of cast-iron. All the exterior walls are built hollow from bottom to top, their entire length.

The architect of the enlargement was Mr. Gridley J. F. Bryant: the contractors were Messrs. Cushing and Mack.

The Legislature of Massachusetts had until 1840 a greater number of members than that of any other State of the Union, but the Senate was then reduced to forty members, and the number of representatives to 356, elected by towns or district for which he desires to vote for six months preceding the election.* Massachusetts sends twelve members to Congress. Boston, the capital, where the means of education are very widely diffused, has been always favourably distinguished by her attention to literature.

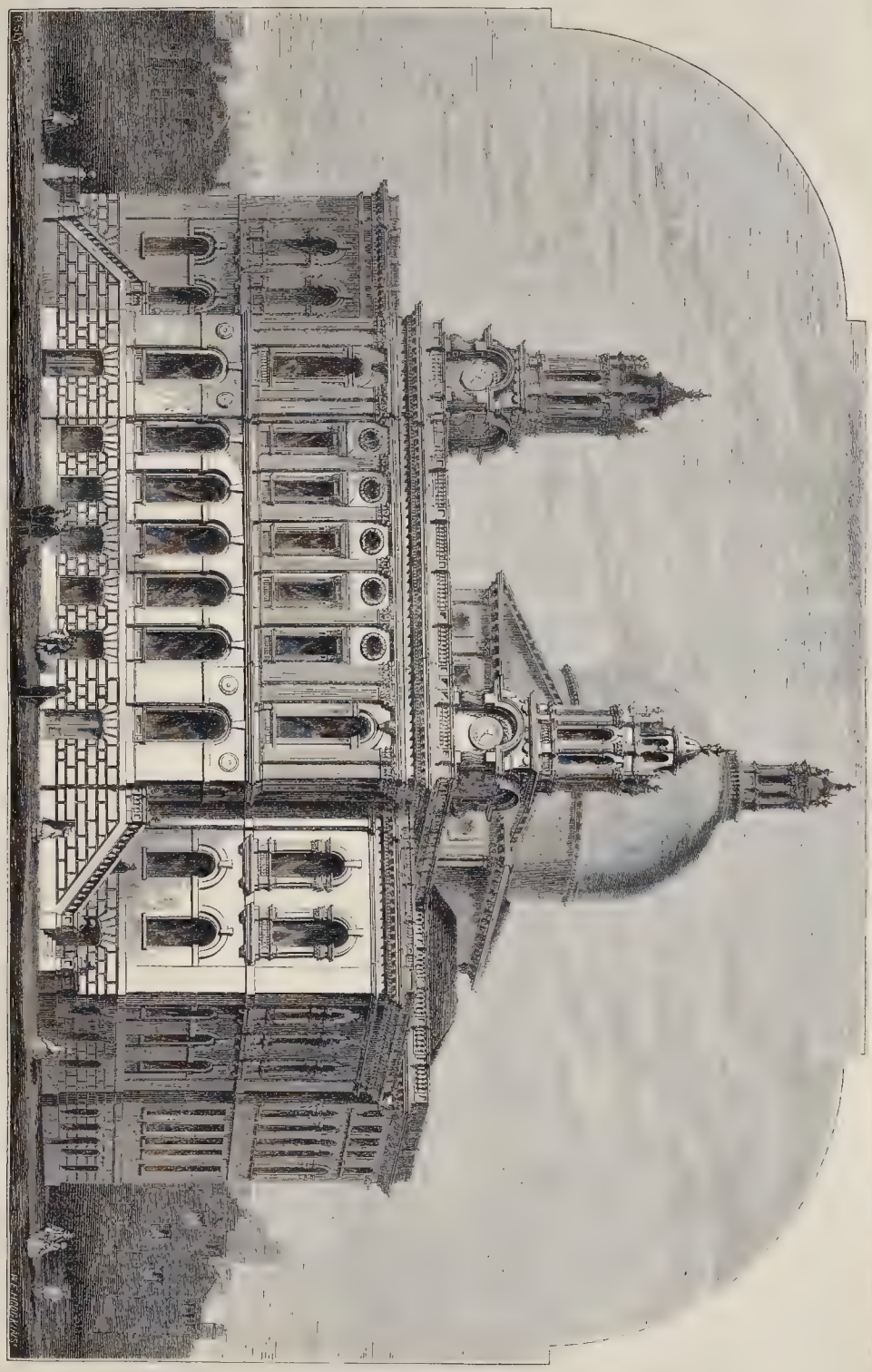
* M'Culloch.

THE PLAN OF THE WAR-OFFICE COMPETITION.

A correspondent says,—"The idea of paying every competitor as proposed in the War Office case—the designs all remaining the property of the party proposing the competition, is not new and did not originate with Sir B. Hall." The scheme described in last week's *Builder*, is that which was acted upon under Professor Hosking's advice in the case of King's College Hospital. The author of the preferred design was employed and paid his 5 per cent. Each of the other competitors (four in number) had eighty guineas, and the designs all remained the property of the Hospital authorities. But the idea was devised, broached, and set forth by the gentleman named, in 1842, in his introductory lecture at King's College, London, on Architecture."

When we said last week, speaking of the matter, that "the idea originated, we believe, with Sir Benjamin Hall, who deserves credit for desiring to render such new buildings as may be required by the Government, worthy of the country," we meant simply the idea of *competition*, not of the manner of competing: our readers are fully aware that the mode has been adopted before.

Bury St. Edmund's Cemetery.—With reference to the time occupied in the works, and the money spent, a writer, "Anti-Humbug," upbraids the burial board with breach of faith towards the other parties who tendered.



THE STATE-HOUSE, MASSACHUSETTS.—Mr. Geidey J. F. Bryant, Architect.

REPORT ON THE BRITISH PORTION OF THE PARIS EXHIBITION.

A long and able report on the British portion of the Paris Universal Exhibition has been addressed by Mr. Cole to Lord Stanley of Alderley, President of the Board of Trade. From this report, which has been published, it appears that, as a whole, the British section, although necessarily much less in quantity, more completely represented the productions of the United Kingdom and its colonies than the Exhibition of 1851. The comprehensiveness of the colonial collections (says the reporter) left little to be desired, and they promise to be of great mutual benefit to the colonies and the mother country. The quality of the machinery displayed was very good; but, owing to the employment of some of the principal machine-makers in preparations for the war, several important kinds of machinery were not represented; and, curious as the fact is, perhaps the weakest of the British portion, considering the real position of its producers with those of the rest of Europe, was the machinery. The principal seats of manufactures were thoroughly well represented, except Leeds, Birmingham, and Belfast. Manchester appeared much more completely represented than in 1851, and its display attracted great attention. Glasgow and Bradford, Sheffield and the Potteries, were thoroughly represented. Nottingham showed well, although not so extensively as might have been wished. Kidderminster well. The glass trade was but partially represented. The furniture, almost wholly from London, was excellent, but not great in quantity. The musical instruments consisted only of a single organ and a few pianofortes. Civil engineering was abundantly illustrated by the best models of the chief works of recent times. The three principal goldsmiths and jewellers made a full display; but the exhibition of watches and clocks and philosophical instruments was less complete than it might have been, several of the chief producers not having exhibited at all.

The number of exhibitors in the industrial branch who finally exhibited was 1,555 from the United Kingdom, and about 1,070 from the British colonies. The number of British exhibitors who demanded space and did not exhibit was 124. The value of the goods sent to the Exhibition was 173,441*l.* exclusive of the goldsmiths' and jewellers' work, which was estimated at 520,186*l.*

The total number of visits to the Paris Exhibition by British subjects was 40,000, of whom 2,768 were persons who obtained workmen's passports from the Foreign-office without payment.

The work of the British portion will be brought to a conclusion with an expenditure not exceeding 40,000*l.* being 20 per cent. less than the sum voted in Parliament (50,000*l.*). This is greatly due to a steady maintenance of the self-supporting principle.

PRIZES FOR WROUGHT IRON-WORK AND STONE CARVING.

THE ARCHITECTURAL MUSEUM.

Prizes are offered to Art-workmen during the present year for the most successful specimens of wrought iron-work and stone carving, under the following conditions, to which we gladly give publicity:—

No. 1. The Committee of the Museum offer a prize of ten pounds for the best specimen of wrought iron-work.

"The example to consist of a complete panel or portion of a screen of the character of the latter part of the thirteenth century.

The specimens to be such as shall not either in bulk or in manipulation be characteristic of wood or stone.

The workmanship to be a combination of bar, flat, or other forms of wrought iron, forged and united by welding, rivetting, or screwing.

The specimens to exhibit the capabilities of hammered iron as a decorative art, combined with architectural fitness and metallic construction."

No. 2. The base of the Cathedral of Amiens is decorated with sculpture, composed of bas-reliefs in quatre-foils, connected by floral ornament. The photograph, No. 1, at the Architectural Museum, exhibits the arrangement clearly.

Mr. Ruskin will give a prize of ten pounds for the best sculpture of a similar quatrefoil, with included bas-relief, and the two floral ornaments which connect it with the quatrefoils on each side.

"The subject of the bas-relief is to be some incident illustrative of the Crimean War, or of national feeling respecting the war.

It must contain not less than two, nor more than twelve human figures, and of the twelve (if so many are admitted), at least six must be diminutive, merely to represent the presence of the army, or of any multitude.

Foliage or architecture must be associated with the figures, but not in large quantity, and is to be quite subordinate to them.

The foliage both in the bas-relief and floral ornament is to be English, not Oriental.* The architecture either Gothic or Modern English,† not Oriental.

The extreme diameter of the quatrefoil, including the external moulding, is to be 2 feet.

No attention will be paid, in adjudging the prize, to delicacy of execution, or quantity of labour; but solely to ingenious disposition of masses, grace of line, and truth of expression.

The name of the principal figure, or names of the principal figures, are to be legibly sculptured under or over each, in the bas-relief.

If horses are introduced, their pace must not be faster than a trot."

The specimens must be sent to the Architectural Museum, free of cost, on or before the 31st of December next.

The presentation of the prizes awarded for last year will take place on Monday, the 7th, inst. at Canon-row.

* "For the reason that the prize is to be given to workmanly invention and skill, not to botanical research, nor architectural information; besides other reasons, too many to state."

† "That is to say, either English cottages or old-fashioned streets; or the pure brick square-windowed house common among us, should the subject require squareness of line; but not Greek or Grecized buildings."

THE IRON TRADE.

The usual assemblage of the ironmasters of South Staffordshire and East Worcestershire, preliminary to the spring quarterly meetings of the trade, was held at Birmingham on 27th ulto. The *Times's* Birmingham correspondent thus speaks of what occurred. "The late questionable state of the iron trade necessarily occupied the attention of the meeting, but comparatively little discussion ensued. It was admitted on all hands that so late as three weeks back considerable depression existed in the iron districts, and that great doubts were entertained as to the possibility of maintaining existing prices: within the last fortnight, however, a marked improvement has occurred, and there are now prospects of renewed prosperity." The meeting resolved unanimously, subject to the approbation of the ensuing quarterly meetings, that the prices fixed in January should be the prices exacted during the quarter. Prices, therefore, now stand nominally as follows:—Bars, 9*l.* per ton; sheets and boiler plates, 10*l.* 10s. per ton; and hoops, 10*l.* per ton. It was stated that there is a better demand for pig iron at improved prices.

In their annual Report of the British Iron Trade, Messrs. Bailey, Toms, and Co. remark, that during the two years of active warfare from which we are emerging, prices have not given way to such an extent as many persons anticipated. The lowest point that rails have touched since the war broke out is 6*l.* 5s. per ton, and Scotch pigs 53s. 6d. per ton.

Their usual table of Exports of Iron for the past year, as compared with the two preceding years, shows the following results, all descriptions being reduced to pig:—

1855.	1854.	1853.
1,619,205 tons.	1,735,136 tons.	1,814,231 tons.

Thus the diminution amounts to about 200,000 tons per annum in the shipments of British Iron to foriegn ports during 1855, as compared with those of 1853. The make of Iron is estimated now at 3,500,000 tons per annum for the United Kingdom. The stocks on hand of pigs in Scotland are estimated to amount to 140,000 tons, and perhaps there are about 20,000 tons of pigs in the North of England. About half the iron produced is now exported, and the remainder used in this country.

The deficiency in American and Canadian orders, has been felt chiefly in the Staffordshire district of late. "This branch of the trade is in an unsatisfactory condition as a whole," remark Messrs. Bailey, Toms, and Co. writing on 28th ulto. or the day after the meeting at Birmingham, and the "marked improvement" of the preceding fortnight notwithstanding.

LIVERPOOL FREE LIBRARY AND MUSEUM.

You justly remarked in last week's *Builder*, the probable increase of trouble which would arise from the late decision of the committee of the "Liverpool Free Library and Museum," requiring architects to first compete by sketches to a small scale. So far from *saving* trouble to me, and doubtless, to many others who have got out their designs to the 1-8th scale, it will cause a great *increase* of labour, necessitating the design being got out afresh.

The arrangement, I think, will fail to give satisfaction to any one. The losing competitors will complain that their designs could not be appreciated at so small a scale, which, while benefiting a bald and meagre design, will make an elaborate one appear confused and heavy-looking; whilst to the competitors in the second trial it will be a *very serious evil*. It will be almost impossible to insure fair play.

The committee will probably talk about the designs between the first and second trial, and ideas will thus get abroad which will benefit some at the expense of others. Moreover, I should not be at all surprised if some one of the second competitors contrived to see the collection of sketches. This sort of thing *has been done*, and may be again. Furthermore, it will become known who the chosen parties are to send in the second time, and although their drawings bear only a motto, they will be known.

Under these circumstances, how little chance of fairness is there? Mr. Picton, doubtless, wishes a fair competition; but he will require to be very much on the alert to insure it.

The committee appear to have been frightened by the number of "instructions" applied for, but unnecessarily: probably not a fourth of the applicants would compete according to first arrangement; but now, probably *all* will, or nearly so.

It appears to me it would be much better to revert to the original intention, and I hope those who desire fair play will write to the secretary on the subject.

A Competitor.

THE TOWER OF LIVERPOOL.

A small fragment of the ancient tower of Liverpool, erected in 1404, by Sir John Stanley, has recently been laid bare, by the excavation of the site for new offices, to complete the modern "Tower-buildings," mentioned elsewhere. The only remnant of the tower is a few yards of wall about 3 feet high, standing about 3 feet below the level of the street. The foundations and size of the tower may, however, be clearly traced by the form of the old foundations, which have been cut across by the present excavation. On the south-east corner formerly stood the main building or tower, having two square bastions to the street, the building having apparently been a square tower, measuring each way about 35 or 40 feet, with a square bastion at each angle about 10 or 12 feet each. From this building a gate formerly spanned the narrow street still called "Tower-garden," which extended probably as far as the churchyard of St. Nicholas. On the south-west of the area, formerly the court-yard, are the foundations of a tower, which old views show as a low square tower next the river side; there being then no building between this tower and the river. On the west side of the court-yard are also traces of foundations, one apparently a gateway. The remains on the east and north sides are obliterated: probably they were only a plain curtain wall. These foundations are cut in the red sandstone rock to the depth of one to three feet, and it is singular that below the foundations of the main tower, and under the few courses of large blocks of yellow sandstone that remain *in situ*, are two narrow transverse trenches, which are filled in with small but good bricks, and appear like the foundations of an older building of brick which had been levelled when the tower was embattled in 1404.

The warehouse that formerly stood on the site of the tower was built without any excavation, and the ground appears to have been levelled with the rubbish from the old tower, as large quantities of mortar and fragments of yellow stone were lying above the old foundations. The tower was owned by the Stanley family, and afterwards was purchased by the corporation of Liverpool, and was used as an assembly-room and gaol: it was taken down in 1820.

BUILDERS' ACTIONS.

FINES FOR NON-COMPLETION OF CONTRACT.

A case of considerable importance to the building profession generally, was tried at the Galway Spring Assizes, on the 19th and 20th of March, 1856, before Mr. Justice Jackson and a common jury.

The case in question was an action brought by the personal representatives of a contractor, to recover the sum of 655*l.* being the amount of fine for non-completion of contract within the time specified.

The contractor, a Mr. Clarke, of Ballinasloe, entered into a contract, on the 31st of March, 1854, with the Town's Commissioners of Athlone (Ireland), to erect a gas manufactory and to light their town with gas.

There was a clause in the terms and conditions of the contract, that the contractor should be liable to a deduction of 5*l.* per diem fine, for every day the works should be incomplete after the 1st of September, 1854. There was also another clause which reserved to the Commissioners the right of ordering additional works or deviations, without vitiating the contract.

The gasworks were not completed before the 10th

of January, 1855, and the Commissioners deducted from the gross amount of the contract 655*l.* for 131 days' fine, at 5*l.* per diem, being the number of days between the 2nd of September, 1854, and the 10th of January, 1855, inclusive.

Evidence was adduced on the part of the contractor, as to alterations and deviations that had taken place during the progress of the works, causing additional works to be performed, which, however, did not exceed in extra cost more than from 100*l.* to 200*l.* The Commissioners' engineer also testified that the works were very creditably executed, and the contract fully carried out, and that the delay arose in a great degree from unforeseen circumstances.

His lordship held that the alterations and deviations were a complete waiver of the 5*l.* per diem penalty, and severely animadverted on the dishonesty of the Commissioners in thus attempting to shield themselves behind such a clause in their contract (seeing that they had suffered no loss by the delay), and thereby deducting the sum of 655*l.* from the payment due to their contractor; and the jury, without a moment's hesitation, returned a verdict in his favour for the full amount claimed, together with the costs of the action.

DESTRUCTION OF THEATRES.

The fate of a theatre is,—to be burned. It seems simply a question of time, as we have often said before.

The theatre of San Pedro di Alcantara, in Rio de Janeiro, has just been burned down for the third time; and the theatres of Bourges and Nantes have also fallen a prey to the flames. Some particulars forwarded to us from Bourges seem to show the probability that spontaneous combustion was the cause. No person had been in the house for several days previously to the conflagration. In six hours after it was discovered, nothing was left but the walls. Fears were entertained for the Hôtel de Ville and other buildings which adjoin it, but these were saved by great exertions. Two inferences, at any rate, are clear. Every theatre should be insulated; and, as it is almost certain to be burned one day, the most ample means of escape for its occupants should be provided.

The Théâtre de la Monnaie, the national opera-house of the Belgians, which was burnt to the ground in 1854, with much the same suddenness and rapidity as Covent-garden Theatre, was re-opened a few days since with great ceremony. The house has been rebuilt at the expense of the townspeople; and praise has been accorded to the architect, M. Poelaert, who in a very short time has restored the edifice to even more than its ancient splendour.

RECENT AMERICAN PATENTS.

The following are quoted from the lists of recent patents published in the Journal of the Franklin Institute of Pennsylvania:—

For an "Improvement in Excavating Machines;" J. J. Savage, City of New York. Claim.—"1st. The connecting of the scoop and staff of excavating-machines, to the swinging-post, by vibratory or oscillating arms or links, or their mechanical equivalents. 2nd. The adjustable broom, in combination with the excavating scoop and staff combined. 3rd. The combination of the vibrating or oscillating connecting arms or bars of the scoop-staff, with the feed-chain, windlass, gearing, and sheeve pulley, for the purpose of automatically feeding the scoop downwards, simultaneously with its forward motion."

For an "Improvement in Street Paving Machines;" Thomas Davidson, Jun. Kensington, Pennsylvania. Claim.—"The rammers operating by the lifting-wheels, in combination with the ratchets and pawls, whereby the machine is moved along, either backwards or forwards, as the rammers perform their work. Also, the arrangement of the gearing, whereby the motive power employed to operate the rammers may, by adjusting the wheel, be employed to drive the machine from place to place when the rammers are not in operation."

For an "Improvement in Machines for Sawing Marble Obelisks;" Abraham Straud, Melton, Pennsylvania. Claim.—"The combination of the divided toggle-jointed shaft, with a hinged or adjustable section of the frame, so that two or more saw-frames hung to or driven by said shaft may be worked in an inclined position to each other, but at right angles to the axis of motion, and so that the shaft saw-gates and their guides, as well as the sectional or hinged frame, may all be adjusted simultaneously and held in adjustment."

For an "Improvement in Rotary Pumps;" Thomas Crane, Fort Atkinson, Wis. Claim.—"The combination of the hinged valve, with the eccentrically moving round piston, when said valve is of the shape, and is so arranged in relation to the pump chamber, the offset chamber, the suction pipe, and the eduction pipe, as to render it impossible for said pipes to be, for an instant, brought into connection with each other, during any portion of the revolution of the piston."

For an "Improvement in Gas Burners;" Charles A. Cummings and Cortland Douglass, New London, Connecticut. Claim.—"The interposition, between two jets or streams of gas issuing from the same burner, of a plate."

A HALO.—GLASS SHADES.

At a *conversazione*, at which art-productions were exhibited, I discovered, accidentally, a mode of forming a halo around the head of a figure, which I think might be turned to account. In order to throw the gas-light upon the pictures and other mural objects advantageously, the rooms, or at least the one in which I found the halo, were lit up with temporary annular pipes, suspended at say 2 feet from the ceiling, and 10 feet from the floor: these rings would be about 4 feet in diameter; and they were perforated for jets perhaps a couple of inches apart, and inside, and somewhat up from them, was an inverted frustum of a cone, of polished tin-plate, for reflecting the light outward, with a downward direction. Below, but eccentrically placed in relation to the circular light, there happened to be a table, on which, with other objects of ceramic art, was a figure in Parian, of an angel or some saint, about a foot and a half high, and enclosed in a glass shade of a cylindrical form, with hemispherical top. I noticed in the dome of the glass, a little above the level of the head of the figure, but over one of the shoulders, the reflection of the circle of jets above; and I perceived that all that was necessary to convert it into a halo of stars to the angel, was the removal of the latter into a central position under the circle,—which, I accordingly obtained, and was attended with the result I anticipated. The halo would be about 1¾-inch in diameter, owing to its near approach to the focal point of the hemispherical portion of the shade. I think it worth while to record the circumstance; because, the effect produced was very pleasing, was something beyond the reach of the sculptor's art, and could easily be repeated. The only limit to the scale of the figure would be the practicable limit as to size in shade-blowing; and the effect might be enhanced, scenically, by placing the figure in a recess, with the actual lights screened from view.

I would conclude with suggesting whether these glass shades might not with advantage be more recognised for their capabilities as architectural features, interiorly, than they are; and with submitting the following questions to the manufacturers: What size of shades are the appliances at present in use adequate to producing? and might not the fan-blast be made available for obtaining shades still larger,—so as to cover statuettes approximating to life-size?

James Wilson.

METROPOLITAN BUILDINGS ACT.

At the Wandsworth Police-court, a few days ago, Mr. William Nevill, a builder, appeared before Mr. Dayman, to answer a summons under the New Building Act, charging him with having unlawfully constructed a flue from a boiler in the washhouse of some premises in the occupation of a female named Grossmith, residing at St. Ann's-road, Wandsworth, without giving two days' notice to the district surveyor, as the law required.

The defendant, who is the owner as well as the builder, pleaded not guilty.

Mr. Hiscocks, the surveyor, said, in February last, the defendant erected a flue from a boiler in the washhouse, and the pipe was carried up against the wall under the plate of the roof. The plate was made of wood, and the pipe was so close to it, that when he examined it, he found the wood quite warm from the heat, and the tenant told him that she was afraid to go to bed for fear of the house being burnt down. He had surveyed the house at the time of its erection, and the flue was not then constructed. The defendant had never given him notice of his intention to construct the flue; besides which, it had not been constructed according to law; that is to say, it was too near the timber of the house.

The defendant said the flue was built four months ago, and was at least 4 inches from the plate.

Mr. Dayman wished to know if the surveyor had any evidence to prove that the flue was built in February, or at any time in this year; for if he had not, the case could not be made out, inasmuch as the old Building Act was repealed by the new one, which only came in force on the 1st of January.

Mr. Hiscocks said he had no evidence, with the exception that, when he examined it in February, the mortar appeared quite fresh, and the whole appearance of it indicated its recent erection. The tenant told him that it had only been built a fortnight.

Mr. Dayman said that evidence was compatible with the statement of the surveyor; but according to Mr. Hiscocks' evidence, he could not tell the exact time the flue was built when he inspected it; and it might have been earlier than he (Mr. Hiscocks) believed, and then, a fortnight before that would bring it very near to December.

The defendant said it was not likely he should build a flue in such a manner as to jeopardise his property.

Mr. Dayman said the case was not made out, and he therefore dismissed the summons.

The correctness of this decision seems to us doubtful.

ARCHITECTURAL INSTITUTE OF SCOTLAND.

On Monday, the 17th ult. in the Scottish Exhibition-rooms, Glasgow, Mr. M'Gaffie delivered a lecture on geometrical stairs. The lecturer pointed out various particulars, in which the construction of wheeling-stairs was often found to be faulty, and suggested plans whereby the evils he described might be obviated. Mr. Lumsden occupied the chair.

At the next meeting, Mr. Rhind in the chair, Mr. Robert Ritchie read a paper on the "Farm Buildings of the Ancients," which he illustrated by plans of the different kinds of farm-buildings used by the Romans, showing the compactness of construction and minuteness of detail attained in them. After describing the farming processes of the Romans, collected from the Roman agricultural writers, Mr. Ritchie exhibited a plan which he had made of a modern farm-steading for a farm of about 500 acres, to show how steam or water power might be applied to various important purposes.

SELF-MOVING WHEEL-CHAIRS, GIGS, DROSKIES, CABS, &c.

We have more than once urged the immense utility to the million of some simple, light vehicle, self-moved, or by means of some spring-power easily wound up, whereby London workmen, tradesmen, clerks, &c. could go about their lawful calling, so as to be enabled to live in the suburbs, and to run along in all directions independent of omnibuses, which, moreover, traverse only the main thoroughfares, and are therefore unsuitable in thousands of instances, even were their fares much cheaper than they are. The idea struck us on seeing a workman bowling along on a small velocipede, with his tools in a box before him, and we are astonished that in these "perambulator" times a simple, cheap, self-moving,—traverser, shall we call it, has not been invented, patented, and already become almost universal, amongst all who do not at least "keep a gig." These reflections have just been resuscitated by a correspondent, "Urgeo," who impressively re-urges much the same ideas, but comes even more closely to the point than we have done, by specifying, as an available motor, the India-rubber "Accumulator," of which we some time since gave an account under the head of "Books." By means of the "accumulator," any one could readily "harness" the moving power of his own little vehicle, if otherwise suitable, and "Urgeo" states that these ingenious instruments (suggested, as may be remembered, from seeing an African negro lift an enormous log of mahogany by help of the resilient force of tree-branches, applied by means of wild vine withes), the "accumulators," are now made of even 100 horse power. The precise form of apparatus suggested by our correspondent is that of a barrel fixed to the axle, and round which the "accumulator" is to work, the wheels, we suppose, being made to rotate by means of cog-wheels communicating the power. It is not intended to dictate to inventors, however, how they ought to accomplish the great end in view: all that is desired is to set their wits to work towards the realization of a handy "traverser," "accumulator," or whatever it may be called, and "Urgeo" suggests that others should contribute their thoughts to the *Builder* on this important subject.

DESECRATED CHAPEL, COW HONEY-BOURNE, GLOUCESTERSHIRE.

Painful as it is at all times to witness an edifice once dedicated to the honour and worship of God, dilapidated and deserted, it becomes especially so when we find it situated in a populous village, and desecrated by being converted into mean cottages, with hovels and pigstics erected against its walls.

How or when the interesting chapel of Cow Honeybourne, near Evesham, became reduced to its present state, is unknown. Rudder's "History of Gloucestershire," published in 1779, states that there was formerly a chapel here belonging to the deanery of

Campden, but that it had been long converted into a poorhouse.

It consists of chancel and nave of the Middle-pointed style, and a Third-pointed western tower. The latter is entire with the exception of roof, floors, and pinnacles. There are some good windows, but blocked up and much mutilated, except the eastern one, the tracery of which is very perfect. On the north side of the chancel is a three-light transomed window, whose mullions and tracery appear to be of different dates, the former being executed in the same kind of stone as the Middle-pointed work, and the latter in the same as the tower. The south doorway is enclosed by a chimney on the outside, and converted into a fireplace.

The plan originally comprised chancel, nave, tower, and *north aisle*. Some piers and other remains of the latter were to be seen a few years since, but not a trace of them now remains, or of the chancel arch. We observed squinches across the angles of the tower, as though a spire had been contemplated, though probably never erected.

These "chapel cottages" are the property of the parish, and will be offered for sale by auction in a week or two. It is earnestly to be wished that some one could be found to purchase and rescue the chapel from the disgraceful state we now see it in. If there are at present obstacles in the way of its being restored to its former sacred use, it would be well adapted for a school. It is within a mile of the Honeybourne station of the Oxford, Worcester, and Wolverhampton Railway. The hon. secretary of the Worcester Architectural Society will gladly answer any inquiries respecting this. The total cost of restoration is estimated at 300*l.* The nave would hold about 150 people. The reserved price for the *chapel-cottages* is 170*l.* If converted into a school-room, and to be used for service as well, it would be most useful, we are told, there being no place in the two parishes where a Sunday-school can be held.

CLEANING AND WHITENING FLOOR-BOARDS.

Let the boards be cleansed as much as possible from all superficially-adhering impurities by sand, soft-water and friction; and afterwards cover the whole surface with a mixture of about three parts of pipe-clay (or any other non-ferruginous clay), and one of commercial "chloride of lime," rubbed up with water to a creamy consistence. This may remain on the wood for from twelve hours to three or four days, according to its previous condition: when at length removed, I think "F. H. E." will thank me for the visible improvement.

Grease of any kind may be extracted from boards by the application of moistened clay,* of the kind before-named, to the contaminated portion of their surface: it should be left in contact with them at least twenty-four hours. A little solution of ammonia, added to a clay, greatly increases its power in this particular; but, as the ammonia quickly volatilizes, it should be added several times each day.

Ink stains and "iron-mould," quickly disappear under a treatment of oxalic acid and water: if a large quantity of ink has been spilt, a previous wetting with solution of sulphuret of ammonium will materially facilitate its removal. Where a poison cannot be used without endangering domestic animals, tartaric acid must be substituted for oxalic, but the former takes a longer time to act.

Soap should never be allowed to touch unpainted woodwork, if it is thought at all desirable to preserve the natural colour of the latter. I am aware that it is used, and very generally, for all that. Its application to boards is a great mistake, as their pores speedily become filled with a kind of glutinous matter (a combination most probably of the excess of alkali in the soap employed with the natural resin of the wood), which obstinately retains any dirt that may be presented to it, London smoke especially. The result is well known—"Please m'm, them stairs look *so* black, they won't come clean nohow!"

To discover whether soap has been recently employed for cleaning (?) a floor, drag a chair upon it a yard or two, and a greasy-looking track will at once show and denounce the evil. To conclude with a succinct maxim,—Either never use soap to your boards, or wax them well, as on the continent: if the last alternative, don't be surprised if your children tumble down. W. L. S.

The Irish make use of freestone, with a hard round wisp of hay: they wet the hay, and dip it in the freestone, and then scrub their floors; then wash it off when dry. If any sand remains from the freestone, it is brushed off with a hard brush. Nothing can equal this. J. B.

* "Fuller's earth," and all other dark-coloured clays, are apt to stain a nicely whitened floor.

AUSTRALIAN AND TASMANIAN NEWS.

The foundation-stone of a new place of worship connected with the Free Presbyterian Church at Gawler Town, Adelaide, was laid in the beginning of November last. The church will be in the Grecian style of architecture, and will have a tower terminating in an octagonal spire. Tower and spire included will be 62 feet in height.

From the estimates for the Department of Public Works published at Adelaide on 10th November last, we quote the following items of information as to professional remuneration:—Salaries: Colonial Architect and Supervisor of Public Works (forage for one horse and) 600*l.*; Assistant Colonial Architect (ditto), 400*l.*; Clerk of Works, first class (ditto), 292*l.*; Draughtsman, second class, 208*l.*; Clerk, third class, 130*l.* Increase under Clerks' Salary Act, 30*l.* Salaries, provisional and temporary.—Superintendent of Works in Encounter Bay District, 200*l.*; occasional Overseers of Works, 600*l.* Allowances.—In lieu of forage for three horses, as above, 163*l.* 16s.

From an advertisement in the *Adelaide Observer*, it appears that a project is on foot for constructing a line of railway from Adelaide to the sea-beach at Glenelg.

The Melbourne Gas Company Directors had taken their last contract for pipe-laying for the city proper by last advices from that quarter. The successful competitor was Mr. Miles. The shops, it was expected, would be lighted up in a very few weeks.

At Sydney, notwithstanding the temporary dulness of the times, there were, during last November, a great number of private buildings going on, especially in the suburbs, nearly all of which were being constructed on a more substantial plan than many of the buildings in the same localities. Among the public buildings which were progressing rapidly was the new Government Printing-office. It will consist partly of stone and partly of brick, and when finished will have rather an ornamental appearance.——The public abattoirs at Glebe Island were to be completed about Christmas. The bridge to be constructed across Darling Harbour will open up a direct communication with the Glebe, and thus facilitate the conveyance of meat to Sydney, whilst the erection of the abattoirs will remove one of the greatest nuisances from the heart of the city, viz. the slaughter-houses.——The Australasian Steam Navigation Company's Works at Pyrmont were being improved by the erection of a large steam saw-mill, with both vertical and circular saws, and capable of sawing logs 70 feet long. The company had also sent home for upwards of 1,500*l.* worth of new machinery of a larger description than they then possessed. Their large patent slip, opened in May last, had been the means of taking up and repairing about forty vessels, some of large tonnage.——Active preparations, according to the *Sydney Herald* of 20th November, were being made for a start with the extension of the line of railway from Parramatta to Liverpool, by the contractor for this line. The distance is about 8½ miles, through a favourable tract of country. The engineering difficulties of this new undertaking being as nothing when compared with those encountered on the Parramatta line, its speedy completion was looked forward to with much confidence. The contract was 76,200*l.*

From Tasmania, or Van Diemen's Land, the only item of news is to the effect that the Hobart-town Gas Company's establishment was being organized, but the erection of the works was not to be commenced till the manager arrived. The company were on the look out for their iron piping and other materials sent out by the *John Bell*, and they were sanguine that the city would be at least partially lighted with gas by May next.

New church schools for Adelaide were projected in November, 1854, and 2,235*l.* have been raised. Lord Digby gave, besides the site, 200*l.* and allows 100*l.* for the old school buildings. The Committee of Privy Council on Education give 1,150*l.*; the National Society, 120*l.*; Winchester College, 50*l.*; and the remainder, upwards of 600*l.* has been raised by subscriptions, chiefly within the town. Mr. Charles Down has taken the contract at 2,060*l.* to be completed by the last day of October next, under a penalty of 5*l.* a day.

The electric telegraph, by last accounts, has just been set agoing, for the first time, in South Australia, Mr. James Macgeorge having commenced the transmission of messages to and from the port.

The whole of the plans, elevations, &c. for the new Houses of Parliament, says the Melbourne or Victoria correspondent of the *Adelaide Observer*, writing end of November last, are now ready, and on inspecting them I am fully satisfied that we shall possess a pile of buildings for legislative purposes on a scale superior to anything that has been hitherto attempted in the colonies. A portion of the extensive pile has been selected for early completion, namely, the chamber and its accessories intended for the accommodation of the Lower House. This is positively to be ready for occupation by the 1st of May. The chamber for the Senate will be proceeded with immediately after, and no delay will occur until the whole edifice is completed. The entire site will be fenced in with corrugated iron, relieved by pillars, before the end of January, and provided with handsome entrance-gates. The site is one of the most elevated contiguous to the city, and its immediate neighbourhood appears destined to be the "west end" of Melbourne.

A log of Western Australia jarrah is attested, in the paper just named, as having been twenty-three years under water in the form of a pile, at Freemantle old jetty, and it is added:—"We have had manifest proofs of the durability of jarrah as applied to naval architecture, public works, and private buildings. Our own gum-trees afford numerous admirable specimens of durable and even beautiful-grained wood; and if it be desirable to purchase from Western Australia, one of the inducements may be the facility of procuring great lengths, as well as timber of undoubted durability."

The value of landed property in Sydney is indicated by a transaction notified in the *Australian and New Zealand Gazette*. At a Government land sale which took place on 27th November, the Sydney Insurance Company purchased the corner allotment of Hunter-street and New Pitt-street, at 101*l.* per foot, being a price unheard-of before in this city, the rate per acre being 70,000*l.* Other lots sold at the same time and in the same line of street, but in less advantageous parts of it—realising from 46*l.* to 75*l.* per foot, and the land disposed of yielding all overhead an average of 42,182*l.* 13s. per acre. When completed, it is added, New Pitt-street will be the finest street in Sydney.

Miscellanea.

Bell-Hanging.—Mr. Denison, if I comprehend his meaning correctly, admits that a bell when hung *high* in the stock, may be more easily *set* than when hung *low*, supposing friction is not taken into consideration. Now we know from experiments that the quantity of friction in such cases is in proportion to the pressure on the *axle*; hence, when a bell is being swung, the friction will be, I presume, increased as the centre of gravity of the bell is removed from the axis: if so, it may be presumed, with some degree of confidence, that if friction were to form an element in the theoretical calculations referred to, the result would still be in favour of the high-*set* bell. The experiment I proposed with reference to two bells, one being hung *high* and the other *low* in the stock, all other conditions being the same, I still think would give a true result. But the experiment on the York bell is far from being conclusive, for we have yet to learn that the York bell *could be set if hung low*. It is true the Erfurt bell has been compared with it; but apart from the reasonable doubts which I have of its *ever* having been set, we are not in possession of all the conditions of both bells, some of which may materially affect the result.—John Burlison.

The Somerset Archæological Society.—The fifth and concluding *conversazione* of the Somersetshire Archæological and Natural History Society took place in the Society's Museum, Taunton, on Monday evening before last, and the proceedings are reported at length in the local *Courier*. Various art-works, including photographs, were exhibited on this occasion, and Mr. Lyte read an interesting paper on photography, in course of which he described his new honey process for keeping the collodion film in a moist state, and so, it was said, preventing its pores from collapsing till the film be brought into use, at any time within a period of four-and-twenty hours, or even for a longer time if a smaller quantity of nitrate of silver be used than in ordinary circumstances. Although this process, however, was published by Mr. Lyte, in June, 1854, there are still doubts as to its utility; but we are glad to hear,—from Mr. Lyte's paper and from his statement that a number of the photographs exhibited were prepared from collodion films which had undergone the honey-moistening process,—that the discoverer continues to have confidence in it.

Gas Fitters' Mutual Association.—The objects of this Association are, to advance the interests of its members by a mutual interchange of opinion; to enable them to obtain the best information on the various projects before the public, and the advantages likely to be gained by the inventions put forward as improvements; to give an impetus to the more extensive consumption of gas-lighting in private houses; to encourage its general adoption for culinary and heating purposes; to acquire information on the simplest and most efficacious modes of ventilation in connection with this mode of lighting; and to disseminate useful information on all matters connected with this subject to its members, and, through them, to the public. With such ends in view we cordially wish it success.

THE SMOKELESS FIRE.—Having done me the honour to insert in your journal of March 15th a few remarks on the new mode of fire-lighting, and its probable consequences, permit me to submit a few extracts bearing on the subject from a work I read with much interest, and to which I referred, viz. "Eckstein on Chimneys," &c. Weale. 1852. The author is now deceased. His father was an eminent painter, and his grandfather, I may remark, sculptor to Frederick the Great of Prussia. Many attempts have been made, with more or less success, to consume the smoke from coal fires. The best grate I ever saw for the purpose, as also for the more perfect combustion of the coal (patented about 1813,—the Cutler Stove), was so constructed that when the bottom (which was a *plain plate*, instead of a *grating*, and which was made to rise and fall by means of a spindle and two chains), was lowered, it formed a box capable of containing a supply of coals for twenty-four hours. The fire being lighted on the top of the coal, the heat caused it to emit the gas, and supply the fire above it, *as oil would a lamp*—thus the gas having to pass the fire previous to its ascending the chimney, the greater part of it was consumed, and very little smoke could pass up the chimney. Desirous to obtain farther information respecting this stove, I called on the patentee to ask him if it was possible in such a grate a fire could be used with economy, which, when burning well, was like a furnace?" [a proof it will suit for kitchens.] He replied that it could, explaining that a large portion of the heat was occasioned by *gas*, which, in a common stove, would go up the chimney. This I readily acknowledged; for when we consider the quantity of inflammable matter which accumulates in a flue, and which is only a very small part compared with what passes off at top, and impregnates the air, we must be sure that *the loss of fuel is immense*, while the combustion of the patent grate was so perfect, that the chimney did not even require sweeping." He adds, "I have seen the same principle applied in a common stove. Mr. Aitkin, secretary to the Society of Arts, used to have a grate in his sitting-room filled with small damp coal, and the fire made at the top, for the purposes of economy, consuming the gas, and requiring little or no attention. He says he had a fire to breakfast by; if he required to use the room in the forenoon, he raised the coals a little, as also at dinner time: towards evening the lower part became ignited, and no more coals were required. The remaining cinders were used next morning to make the fire at the top of the coals." This economical fire is spoken of as "burning gradually downwards, with little consumption, and requiring scarcely any attention." Here, then, is the *Builder's* Smokeless Fire, which, if generally applied, would save at least two million tons of coals per annum, calculating the consumption for the metropolis at five millions, and a fabulous amount in washing, doctors' bills, &c. and might enable us to remove those hideous additions of all sizes and forms to the already ugly million chimney stacks and pots. I may add the old stove maker and author, after fifty years' experience, came to the conclusion that the bottom of every ordinary grate should be *partly* or entirely closed, instead of an open grating.—E. R.

LIGHTING COAL-PITS WITH GAS.—The introduction of gas into the villages of Gildersome and Drighlington, three months ago, has led to the lighting of one of the coal-pits in the neighbourhood. There are at present about a dozen lights burning in a deep pit; and the practice, it is anticipated, will be extensively adopted in the mining districts of the West Riding. Care, of course, will require to be taken against the occurrence of fire-damp, or the natural *gas* of coal-pits themselves. This will probably be effected by the application of the Davy lamp to the gas-lights.

GAS AT STOCKTON.—A new gas company has been formed for Stockton and its neighbourhood, to be incorporated under the Joint Stock Companies Act and the Limited Liabilities Act, with a capital of 6,000*l*. This company proposes to light the town, and to give gas to private consumers at a great reduction in price. This they calculate they will be enabled to do by the saving of parliamentary expenses, in consequence of the powers given by the Act alluded to, and by adopting the modern improvements in the science of gas-making. The works, it is expected, will be in full operation before the autumn. Meantime the Stockton Gas Company have issued a notice that, after the 1st of October next, the price of gas in the borough of Stockton will be reduced from 4s. 6d. to 2s. 6d. per thousand cubic feet.

LUNATIC ASYLUMS IN MIDDLESEX.—Plans by Mr. Harris, for additions and alterations at Hanwell Asylum, to cost 67,300*l*. have been referred back to the Committee of Visitors, to obtain the sanction of the Secretary of State. A proposition, with respect to certain alterations at the Westminster House of Correction, at an outlay of 11,000*l*. is under consideration.

OPENING OF NEW SCHOOLS AT STOCKPORT.—On Good Friday the Hanover Schools, at Lancashire-hill, were inaugurated by a *soirée* and other proceedings, of which a full report appears in the *Stockport Advertiser* of last week, from which the following details, as to the building, are collected. The design was furnished by Mr. J. C. Gilbert, of Nottingham, architect. The building is a simple structure of brick. Messrs. Brown and Rittson, of Stockport, builders, were the contractors, and also provided the whole of the internal fittings. The cost altogether will, it is believed, exceed 3,000*l*.; of which sum about 1,200*l*. is still wanting to liquidate the outlay. The building covers an area of 81 feet 6 inches long by 43 feet broad, or equal to 390 square yards. The height, from the floor of the class-rooms to the apex of the roof, is more than 50 feet; and the accommodation which has been obtained comprises, on the ground-floor, an infant-school, 19 feet 6 inches by 16 feet 9 inches; three class-rooms, each 16 feet 9 inches by 11 feet; and a large one, 22 feet 6 inches by 11 feet 6 inches; all of which rooms are 14 feet in height. The next floor is chiefly occupied by the large hall for assemblies, 72 feet 9 inches by 40 feet, with a gallery at one end, and capable of accommodating 600 children in classes, with their teachers. The height of this room, from the floor to the apex of the roof, is 34 feet. The space in the chapel, immediately beneath the gallery, is used as a communion-pew. The whole is heated by the circulation of hot water, and lighted by gas. No attempt has been made at external decoration; and in the interior the effect is to be attributed solely to the combination of the materials absolutely necessary for the construction. No portion of the building consists of the imitation of any material not actually present.

THE ROYAL SCOTTISH SOCIETY OF ARTS.—The ninth meeting for the session of the Royal Scottish Society of Arts was held in their hall at Edinburgh, on Monday before last, Mr. Elliot in the chair. Mr. Edward Sang laid on the table a gyroscope, presented to Professor Playfair by M. Arago, and read a communication made to the Society about twenty years ago by himself, detailing some experiments made with this instrument, which had lately been attributed to M. Faucault. The communication was referred to a committee. Some account of artistic lithography was then given by Mr. Alex. Macpherson, F.R.S.S.A. A description and drawing of a railway-lighthouse signal, by Mr. Andrew Carrick, Glasgow, were brought before the meeting by the secretary. With the small size of the drawing, and the intricacy of the description, there was a difficulty in understanding Mr. Carrick's scheme completely. Mr. Bouche stated his objections to any self-acting signals. The communication and drawing were referred to a committee.

LODGING-HOUSES, VAUXHALL-ROW, LAMBETH.—With H.R.H. Prince Albert, I have felt "a lively interest" in the above scheme, and I should have been delighted had you been enabled to announce, in the observations on the subject in last week's number of your valuable publication, that occupants had been found for these model dwellings; but I am constrained to remark, that I fear it is to be apprehended the cost of the construction will be found a bar not only to their letting at rents which will afford even a moderate return for the expenditure, but, however philanthropic owners of property may be, no hope is held out to them "to follow an example," where they must in vain expect an ordinary return only for their capital. To the revenue of the Duchy of Cornwall, this is a matter, doubtless, of little consideration; but the less-fortunate owner of property can only be expected to build houses likely to find tenants; and the dwellings in question, though completed months ago, from some cause or other, are, as yet, as you may probably be aware, without an inhabitant. A very large class of the poor can ill afford to spare more for rent than 3s. 6d. or 4s. a week from their hard-gained earnings, and I cannot but think that he will perhaps be the greater benefactor to the poor who shall erect neat and comfortable residences for them, at rents which they are in a situation to pay, and thus save them from being driven to those haunts of misery and wretchedness, the existence of which we all so much deplore.—LAMBETH.

PAINTERS' STRIKES.—The journeymen painters of Glasgow have struck work for an advance of wages. The masters resist the demand, and advertise for good workmen, at 22s. 6d. a week, with constant employment. At Dundee, too, a number of working painters having presented certain demands to their masters, which the latter declined to accede to, are now on strike. Placards are posted by them warning off stranger operatives. One of the demands is said to be, that all hands be paid alike, and other requirements are described as being scarcely less preposterous. The masters are bringing workmen from Glasgow and elsewhere.

NO PAYMENT FOR IMPROPER WORK.—At the Birmingham County Court, March 26, in the case Taylor *v.* Johnson, the plaintiff claimed a sum of 1*l*. 12s. for a cast-iron column supplied to defendant's order. It was made out to the satisfaction of the learned judge (Mr. Dinsdale), that the pillar, when delivered and placed on the site intended for it, had been, by some misconception, as was said, made too large: in place of five inches, six inches and a half was the size sent in. Defendant had offered to take the column if some reduction was made, but plaintiff refused. His honour took a careful review of the evidence on both sides, and gave his verdict for the defendant.

THE CHAPTER-HOUSE OF SALISBURY CATHEDRAL.—The readers of the *Builder* will perhaps be concerned to know that an announcement has been recently made to the public, by a correspondent in one of the Salisbury papers, of the intended "restoration" of the well-known series of sculptures, illustrative of Bible history, on the walls of the cathedral chapter-house of that city. As this course, if adopted, must necessarily destroy the interest which at present attaches to these remains, as relics of Early English art, and render them worthless, both to the architectural student and antiquary of future times; it is sincerely to be hoped that the attention of the public having been called, through the medium of the press, to this important matter, some steps may be immediately taken by those persons interested in the preservation of our national antiquities, or some of the societies which have been established for this purpose, in order to prevent the contemplated step, which, if carried into effect, must destroy for ever the interest which these sculptures at present possess as relics of antiquity.—AN AMATEUR.

THE YORK SCHOOL OF ART.—A meeting of the friends of this institution has just been held. The Rev. Canon Harcourt presided; and a report from the committee was read, which stated that the average number of students did not equal that of preceding years, and that the Government had withdrawn the annual grant of 150*l*. and in lieu of it had granted stipends of 32*l*. to the master, and 10*l*. each to two pupil-teachers, so that virtually the school might be said to be thrown upon its own resources: the school, however, was recovering from its difficulties. From the statements of accounts, it appeared that the expenses during the past year had been 285*l*. and that a balance of 19s. 4d. was due to the treasurer. There were also bills unpaid amounting to 42*l*. 4s. 10d. The report was adopted. A subscription has been commenced for liquidating the debts on the institution.

PROPOSED SUBMARINE TUNNEL UNDER THE MERSEY.—A project for uniting Birkenhead to Liverpool has been recently started. The projector intends the tunnel to be treble-arched, one arch being for a double line of railway; one arch for waggons, carts, and commercial carriages; and one arch for quick-moving vehicles, equestrians, and pedestrians. The scheme is a modification of that proposed by Mr. W. Austin, for a passage under the sea from Dover to Calais. The Mersey tunnel, as proposed and arranged, would be about two miles in length, of which, about three-quarters of a mile would be under the river.

THE BRITISH ENGINEERS' BENEFIT SOCIETY.—The object of this Association of employers and employed, is to direct the attention of workmen to the establishment of a benefit society—to ask them to co-operate in establishing such an institution, and to appoint two or more delegates from each of the factories respectively; to communicate the names and addresses of such delegates to the secretary of the institution, and on the receipt of such communication the secretary be instructed to convene such delegates to confer on the promotion of a trades' benefit society. Among the employers who subscribe to the society are Messrs. Blythe, Derwent Foundry Company; Bryan Donkin and Co.; Easton and Amos; H. and M. D. Grissell; Graham, West and Co.; J. and E. Hall; Maudslay, Sons, and Field; Miller, Ravenhill, and Salkeld; D. Napier and Son; John Penn and Son; Spiller and Taylor; Summers, Day, and Baldock; Samuel, Brothers; George Scott; W. L. Tizard; Lewis Ash, &c. The receipts of the society for the last year amounted to 1,615*l*. odd; the liabilities to 413*l*. odd.

ST. PAUL'S, CLAPHAM.—Schools are to be built in connection with St. Paul's Church, Clapham; Mr. W. W. Gwyther, architect. Tenders on quantities supplied have been received, ranging from Clements, 931*l*. to Cable (accepted), 600*l*.

NEW BARRACKS.—A barrack is to be erected at Kensington to hold 200 infantry and a troop of cavalry, at a cost of 15,300*l*.; and new barracks are to be built in the island of Alderney. The new barracks being erected at Devonport are to accommodate two battalions of infantry, and the new artillery barracks 100 men and 100 horses.—*United Service Gazette.*

South Shields Mechanics' Institution.—The members of the South Shields Mechanics' Institution are about to reconstruct the building. The proposed erection will comprise a library and reading-room, with three class-rooms on the ground floor; while on the upper floor there will be a lecture-room, 52 feet by 28 feet, with a retiring room. The stairs leading to the lecture-room are contained in a tower at the north-west angle. The upper part of the tower contains an apartment for the reception of the telescope presented by Dr. Winterbottom. The building will be of brick, with dressings and decorations of coloured bricks to the doors and windows. Mr. R. Lamb, of South Shields, is the architect.

Inauguration of the Royston Institute.—Two years ago, the committee of the Royston Mechanics' Institute appealed to the public to assist them in raising a fund for the purpose of erecting a lecture-hall a museum, a library, and rooms for reading and class instruction. The project has been realized, and Royston has what no other town in Hertfordshire possesses—a spacious building, exclusively devoted to art, science, and literature. The building stands at a short distance from the town, on the Newmarket-road, and in the county of Cambridge. It has been erected in the plainest style, of white brick, and constructed more with a view to usefulness than beauty. The building consists of two floors—the museum, two reading-rooms, the library, and the rooms for class instruction, being upon the ground-floor, while the lecture-hall, which is 60 feet by 30 feet, and 20 feet high, occupies the whole of the upper story. The walls are sprinkled with white and black upon a green ground, and this colouring gives a light and airy, although rather cold aspect to the interior of the building. The hall is lighted with a large sunburner, depending from the centre of the roof, and consisting of seven clusters of nine burners each. The cost of the erection of the building was 1,600*l.* of which sum, 1,000*l.* has been already raised by donations, leaving a balance due of 600*l.* which has been advanced by the trustees and the committee. It is expected that by means of rentals, subscriptions, and the profits of entertainments given in the hall, sufficient funds will be raised not only to pay the interest on the debt, but gradually to liquidate it. On Tuesday before last, a meeting was held in the lecture-hall, for the purpose of publicly inaugurating the new building. The Earl of Hardwicke presided. A full report of the meeting appears in the *Herts Mercury* of last week.

New Road from Edinburgh to Portobello.—The Marquis of Abercorn, it is said, has purchased for 1,200*l.* the houses and ground to the south of the lane leading to Duddingston from the Queen's-park. Government has already agreed to give 2,570*l.* for the construction of a drive to Duddingston from St. Leonards, and the object of the marquis is to secure a continuation of that drive to Portobello.

Statue of Watt for Manchester.—A subscription has been commenced in Manchester for the erection of a bronze statue to the illustrious James Watt. A cast from a statue already in existence is what is intended, and it is to be placed in front of the Royal Infirmary, as a fellow to that of Dalton. It is calculated that a sum of 1,100*l.* will suffice. Upwards of 700*l.* have already been subscribed.

Manchester and Salford Sanitary Association.—Mr. T. Turner, F.R.C.S., delivered a lecture on "Good living, in its physical and moral aspects," on Tuesday evening before last, in Salford, under the auspices of the Salford committee of the above association. Mr. Alderman Agnew presided. The lecturer expressed the satisfaction he felt when taking part in the Sanitary Association lectures: their influence, he said, was proving most beneficial among the various classes of society. The invariably large attendance proved the conviction among the working classes, that the more educated were becoming increasingly interested in their welfare, and were seriously attempting the impartment of vital physical and moral truths. He held it as an axiom, that there was no such thing as "individual" happiness. The happiness of every member of the human family was dependent on the happiness of his fellows: herein, then, the selfish might discover a reason for endeavouring to promote the general good. Good living was often understood to mean only good eating and good drinking; but "good living" was not to be thus limited. To live well, is to live healthily, to live in obedience to the laws of God and man.—Mr. Powlson announced that the next lecture, to be delivered in the Town Hall, on Tuesday, April 1st, by the Rev. Canon Stowell, would close the present winter's session in Salford.

A T-square.—Messrs. Stanley and Robinson, of Great Turnstile, Holborn, have sent us a T-square, which appears to possess some advantages over the squares in general. The blade is screwed on to the face of the stock, and so allows the set square to pass freely to the extent of the board.

The Lewisham District Surveyorship.—For the information of those who are interested in the case, The Queen *v.* Badger, which ended in the restitution of Mr. Badger to his office as district-surveyor of Lewisham, we may mention that it is reported in full, with the judgments of the judges, in the *Law Times* of the 15th ult.

Partial Fall of a Warehouse.—A portion of a paper-mill, in Cottage-row, Bermondsey-road, fell to the ground last week. From twenty to thirty women and girls were on the premises at the time, but were not hurt, the wall having fallen outwards, owing to the pressure of some bags placed against it.

Proposed New Concert-room.—It is stated that a capital of 40,000*l.* is about to be raised in shares, with a view of building a vast concert-room between Vine-street and Air-street, Piccadilly, so arranged as to have entrances from both the latter thoroughfares, and likewise from the Quadrant. Messrs. Cramer and Co. it is added, are likely to take the affair in hand. The piece of ground in question has been on the eve of appropriation so often during the last year or two, that people will place little faith in the report.

Camberwell New Cemetery.—A correspondent comments on the way in which the earth-work there is being done, but he makes assertions to which we cannot give publicity without proof.

"The Churches of Essex."—Mr. G. Buckler announces a work under this title, wherein the buildings will be architecturally described and illustrated. The churches of Essex are curious specimens of architecture, of great antiquity, and distinguished by peculiar features from those of other counties. The object of this work is to preserve a record of these ancient buildings, by minutely describing them, and illustrating the description by drawings of such details and peculiarities of construction as may prove useful to the architectural student, and of interest to the general reader. Plans will be given to exemplify any unusual arrangement in the parts of the several structures.

To Cure Damp Walls.—We find the following in the newspapers:—Boil two quarts of tar, with two ounces of kitchen grease, for a quarter of an hour, in an iron pot. Add some of this tar to a mixture of slaked lime and powdered glass, which have passed through a flour-sieve, and been completely dried over the fire in an iron pot, in the proportion of two parts of lime and one of glass, till the mixture becomes of the consistence of thin plaster. The cement must be used immediately after being mixed, and therefore it is proper not to mix more of it than will cost one square foot of wall, since it quickly becomes too hard for use; and care must be taken to prevent any moisture from mixing with the cement. For a wall merely damp, a coating one-eighth of an inch thick is sufficient; but if the wall is wet, there must be a second coat. Plaster made of lime, hair, and plaster of Paris, may afterwards be laid on as a cement. The cement above described will unite the parts of Portland stone or marble, so as to make them as durable as they were prior to the fracture.

TO CORRESPONDENTS.

"G. H." (Bickfield, Wellington-street, Strand).—"Justitia."—"Omnibus Passenger"—"R. K."—"R. K."—"H. B" (we are forced to decline advising).—"Constant Reader" (the wheel is in the front).—"P. E. M."—"W. T."—"A Competitor" (N B Seven so stated).—"Zeta" (is in type).—"G. H" (ditto)—"W. F." Preston (ditto).—"Bells" (ditto).—"Mr. B."—"J. S. W."—"J. P."—"N. G."—"Tallatio" "W. H."—"Verax."—"W. L. S."—"A. B."—"H. L." (thanks).—"G. B."—"T. E. D."—"J. G."—"W. P."—"F. Y."—"J. P. J."—"H. H. F."—"B. F."—"A."—"Architect."—"H. B."—"Householder."—"J. G. S" (drawing is left at office, with thanks).—"H. F. L."—"Engineer."—"H. B." Dunfermline (drawings so marked, "*A Tenant*," are in the rooms).—"Fairplay."

Books and Addresses.—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor;" all other communications should be addressed to the Editor, and not to the Publisher.

NOTICE.

From and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *viâ* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

SEWERS OFFICE, GUILDHALL, April 1 1856.

THE COMMISSIONERS of SEWERS of the City of London hereby give Notice that they will, on TUESDAY, the 15th of APRIL inst. meet to elect one additional INSPECTOR. Candidates must be fully 21, and not exceed 30 years of age. Their testimonials as to previous occupation and character, and certificate of birth, must be sent in addressed to the undersigned on or before SATURDAY, the 12th inst. and they will have to attend a committee for examination on MONDAY, the 14th inst. Salary, 1*l.* 4*s.* They must have been accustomed to works of building, and understand building materials; be able to measure superficies, and square up and abstract dimensions, and must write a fair hand. The person elected must give up his whole time to the duties of the office. By the City of London Sewers Act, 1848, each inspector is required to reside within the district to which he is appointed.

JOSEPH DAW, Principal Clerk.

BOROUGH of READING.—LOCAL BOARD of HEALTH.—Notice is hereby given, that the Local Board of Health for the district of the Borough of Reading, in the county of Berks, require a skilful and competent person to execute the duties of SURVEYOR and INSPECTOR of NUISANCES, under the Public Health Act, within the said Borough. The officer to be appointed must possess a thorough and practical acquaintance with works of drainage, sewerage, road-making, and paving; he must be competent to take levels, to prepare plans, sections, drawings and estimates, and to superintend the execution of all works of the description above referred to, or which may fall within the duties of the office of Surveyor and Inspector of Nuisances, under the Public Health Act, or the Bye-laws of the Local Board. The public lighting of the borough being under the management of the Local Board, the officer will be also required to superintend the same, and to see to the execution of their contracts by the gas companies who supply the gas to the public lamps. The office will be required to devote his whole time to the service of the Local Board. His salary will be 200*l.* per annum, and he will have a convenient residence attached to the store premises of the Local Board, in which he will reside free of rent and taxes. Any further information respecting the duties of the office may be obtained on application to the Clerk to the Local Board. Candidates must send written applications for the office, with testimonials of qualifications and competency, and with particulars of age and previous occupation; and all applications must be sent to me, endorsed, "Application for Office of Surveyor, &c." on or before TUESDAY, the 8th day of APRIL next.—By order of the Local Board,

THOMAS ROGERS, Clerk.

10, Friar-street, Reading, 20th March, 1856.

A SURVEYOR, engaged on a large estate, in one of the most flourishing parts near Town, would take a PUPIL, who would receive instruction and real practical experience in the supervision and measuring of works. A young man of good connexions would also find his very advantageous to him, as a first-rate house agency and other business connected with house property. Address, A. Y. at Cuthbert's, Stationer, 13, Queen's-terrace, Queen-road.

APPRENTICE WANTED (In-door), to a CARPENTER and BUILDER. Term, five years. Premium, 5*l.* with a liberal scale of remuneration. Address, X L. Mr. Hawkins, Ironmonger, Bishopsgate-street Without.

ARTICLED PUPIL.—An ARCHITECT and SURVEYOR, in practice in London and its neighbourhood, wishes to take a second ARTICLED PUPIL. With a youth of good education and having a taste for the profession a moderate premium would be asked.—Address, E. A. B. Post-office, Leadenhall-street, City.

TO BUILDERS' CLERKS

WANTED, by a London Firm, an experienced Person, thoroughly conversant with the duties of a BUILDER'S OFFICE, and proficient in measuring artificers' work of every branch. Address, stating age, particulars, and salary required, to X. M. Office of "The Builder."

WANTED, a good DRAUGHTSMAN, who understands perspective. State last employment and terms.—Address, A. M. Office of "The Builder."

TO PAINTERS.

WANTED, a Leading Hand, who has been used to a West-end Jobbing Business.—Apply by letter, stating where last employed, wages required, &c. to B. C. 5, Curzon-street, Mayfair.

WANTED, a competent ASSISTANT, who is a good surveyor, leveller, and draughtsman.—Address, stating terms, where last employed, and age, with references, to A B Office of "The Builder."

TO PAINTERS AND DECORATORS.

WANTED (in consequence of the sudden death of the late foreman), a FOREMAN, who is thoroughly acquainted with the practical parts of the painting and decorative business. He must be of good address, an active man of business, write a good hand, and be competent in measuring, abstracting, and estimating. Satisfactory references as to sobriety, honesty and competency, both practical and theoretical, will be required. No one need apply unless he has previously filled a similar situation.—Application to be made to Mr. H. J. BUCHAN, House Decorator, Southampton, stating age, if married, rate of wages required, and full particulars of qualifications.

WANTED, a CLERK of WORKS, qualified to superintend the erection of a gas works.—Applications by letter, stating former occupation, salary required, and with copies of testimonials, to be addressed to Mr. BIRKEN, the Solicitor, at the Stockton Gas Consumers' Company's Office limited), 191, High-street, Stockton-on-Tees.

TO WOOD ENGRAVERS.

WANTED, TWO or THREE first-class WOOD ENGRAVERS. Those who have been accustomed to execute after Leitch and Birket Foster will be preferred.—Apply by letter, enclosing proofs (which will be returned), and stating terms, to Messrs. A. and J. MACPHERSON, 13, Royal Exchange, Edinburgh.

TO BUILDERS' CLERKS.

WANTED, in a Builder and Contractor's office in the country, a CLERK, fairly qualified to prepare drawings, take out quantities, measure-turn-in works, and the general routine of a builder's office. One who has had a similar situation with a London builder preferred.—Apply by letter, stating age, where last employed, and salary required, to R. S. Office of "The Builder."

TO BUILDERS.

WANTED, a SITUATION as CLERK in a BUILDER'S OFFICE, by a young man who has filled a similar situation with London builders for some years. References unexceptionable.—Address, X Y 151, Minories, City.

TO CARPENTERS.

WANTED, to ARTICLE HIMSELF to the above Trade, a Young Man, aged 20; has been in a gentleman's family six years, with a good character.—Apply, G. H. 14 King-street Louisa-sare.

TO CABINETMAKERS AND UPHOLSTERERS.

WANTED, a SITUATION, by a practical Man, who has had from eight to nine years experience as manager of extensive cabinet works, has been accustomed to make working drawings, also costs of furniture, and keep the books in connexion with the manufacturing department. Satisfactory references will be given.—Address, A B 23, Albany-street, Regent's-park.

TO ARCHITECTS AND BUILDERS.

WANTED, by the Advertiser, who has served three years in London at the bench, and two years in office and buildings, a SITUATION, where he would have an opportunity of learning the general routine of office work, surveying &c.; he has a good draughtsman. A moderate salary only expected.—Further particulars and references may be obtained on application to L. B J. Cowing's Library, Chipping Barnet, Hertford-shire.

WANTED, by a good DRAUGHTSMAN, an APPOINTMENT. Is very expert in plans of every kind, plan writing, tinting, &c. &c. and clear drawing of every variety. Has served for eighteen years past by eminent engineers, on various of the Government roads, laying out railways, estates, town improvements, &c. &c.—Apply by letter to R. THEODORE, 1, Paul's Last-yard, Cannon-street.

WANTED, a SITUATION as BUILDER'S FOREMAN, or CLERK of WORKS. — Address, A. J. Office of "The Builder."

WANTED, by a steady Man, 36 years of age, a SITUATION as PLUMBER, GLAZIER, and PAINTER. Can be well recommended.—Address, W. S. 19, Green-street, Stepney.

TO ARCHITECTS, SURVEYORS, AND BUILDERS.
WANTED, by the Advertiser, a RE-ENGAGEMENT in either of the above Offices. He is a good draughtsman, accountant, can take out quantities, superintend and measure works, and perform the duties usually required. Apply, L. E. F. 14, Arlington-street, Camden-town.

TO ARCHITECTS AND SURVEYORS.
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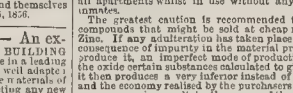
The greatest caution is recommended to avoid any spurious compounds that might be sold at cheap rates as Pure Oxide of Zinc. If any adulteration has taken place in the oxide, either in consequence of impurity in the material primarily made use of to produce it, an imperfect mode of production, or by mixing with the oxide certain substances calculated to give it increased weight, it then produces a very inferior instead of a very superior paint, and the economy realised by the purchasers of such oxides becomes a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the VM mark—in Hull by Messrs. BLUNDELL, SPENCE, and CO.; when ground and dry, by Messrs. T. B. MORLEY and CO. and by the Company's Grinding Agents in London, Messrs. CHARLES DEVAUX and CO. Wholesale Agents, 62, King William-street, City; and by the Manufacturing and Painting Agent, Mr. FREDK. BRADY, Pitsroy Works, Newroad. In Manchester and Liverpool, by R. CLAY, 8, Mersey-street, who is the acknowledged Painter to the Company for Zinc Paints, and undertakes painting ships, warehouses, dwelling-houses, &c. In Leith, by Messrs. R. ANDERSON and CO. Timber-brush, and in Southampton, by Mr. H. J. BUCHAN. Dry OXIDES and PAINTS, in kegs of 14, 21, and 28 lbs. and upwards, to be had of the Company's Agents in Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and the isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with Zinc Paint by contract.

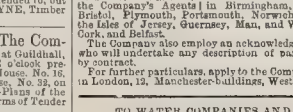
For further particulars, apply to the Company's General Agency in London, 12, Manchester-buildings, Westminster.

TO WATER COMPANIES AND PLUMBERS.
HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.
LEAD, IRON, and TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

PRIZE MEDAL, CLASS 2.
HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,
Brass and Iron Founders, Short-street, New-cut, Lambeth.

TAR.—20,000 GALLONS of COAL-TAR TO BE DISPOSED OF, at the GASWORKS, CROYDON. Offers for purchase, at per gallon, and for not less than 5,000 gallons in one offer, to be sent, on or before TUESDAY, the 8th of APRIL, addressed, "The Manager, Gasworks, Croydon." The purchasers to find casks, and labour in filling and conveyance for removal.

ROYAL POLYTECHNIC.—Patron, H.R.H. PRINCE ALBERT. — Entirely new, grand, historical, romantic, and musical entertainment, entitled "Kenilworth, and the Visit of Queen Elizabeth to the Earl of Leicester," with splendid Dioramic Illustrations; the Grand Hall of Kenilworth by Messrs. Carpenter and Westley. This entertainment, written by E. Moore, Esq. will be given every morning at 3.45, and evening at 8.45, by F. L. Horne, Esq. who, with the Misses Mascall, will sing the vocal illustrations. Also, a series of splendid Dioramic Pictures of the total Destruction of Covent-garden Theatre, mornings at 2 evenings at 7.45. Positively the last week of the War Views, which are going to the Theatre of San Carlos, Lisbon; daily at 1.30 and 7.30.—Monday Evening Lecture, by J. H. Pepper, Esq. at 8, on Air and Water.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.
H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 149, Fleet-street, London. These Pencils are prepared in various degrees of hardness and shades.

H H H for drawing on wood.	F F light and shading.
H H for architectural use.	F for general use.
H B for engineering.	B black for shading.
H for sketching.	B B ditto ditto.
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M medium.	B B B B ditto ditto.

Sold by all the principal Stationers in town or country.

WINDOW-BLINDS.—J. FULLER, Manufacturer, 29, Charlotte-street, Blackfriars road. Established 1830.—Venetian Blinds, from 10s. each, or 8d. per foot; Wire ditto, 7s. each, or 1s. 9d. per foot; Holland ditto, from 5s. each, or 5d. per foot. Every other description of Blinds equally low, warranted of the best manufacture. Discount to Builders and the Trade. Fixed complete.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 8d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; patent blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application, post free.

PAPER-HANGINGS. — JEFFREY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, which in price, style, and colouring, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls.—Factory, 115, Whitechapel; Show-room, 500, Oxford-street.

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The Company offers—
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For Prospectuses and Forms of Proposal, apply at the Offices as above, or to any of the Company's Agents.
ROBERT TUCKER, Secretary.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.

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Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and peculiar to a new system which gives superior tone and facility for ringing.

H. DOULTON & CO'S.
TERRA-COTTA CHIMNEY-TOPS
Will withstand the action of the Weather and Sea Breezes, and are
QUITE IMPERISHABLE.
Prices not much higher than Cement.
DOULTON & CO.'S
TERRA-COTTA POTS, &c.
Erected in London upwards of 20 years since, are now as sharp and perfect as when first manufactured.
Drawings on application to
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TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

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JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

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January 1, 1856.

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Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality, Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

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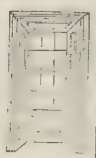

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INTERLOCKING CURVILINEAR REVOLVING IRON SHUTTER

IS GREATLY SUPERIOR TO ALL OTHERS FOR

LIGHTNESS, STRENGTH, SECURITY, DURABILITY, AND EASE,

AND ALSO MUCH CHEAPER.

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ORIGINAL PATENTEES OF REVOLVING IRON SHUTTERS, No. 26, LOMBARD-STREET, LONDON; and DEPTFORD, KENT.

The edges of each lath are accurately turned by powerful PATENTED MACHINERY, and slide endways into each other, FORMING A COMPLETE HINGE THROUGHOUT, interlocking so effectually that no force can separate them; and if made of the best galvanized iron, are almost indestructible.

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WITHOUT MACHINERY,

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Orders can now be executed with the greatest cheapness and despatch, by EDWARD BAILDON and CO. late Palmer and Baildon, and 18, Ward-street, Soho, successors to M. Toussaint, Cartisser, and Co.—Specimens of every description of Church Memorial Windows and Decorative Glass Painting, Staining, and Embossing, may be seen as above. Designs and estimates upon application.—February 20, 1856.

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JELLY and WARNER, Managers.

CCC CROWN, 14 Tables per crate, 24s.; 16 15 oz SHEET, 3d per foot; FOREIGN SHEET, 200 feet open, 4s. per case; CROWN or SHEET SQUARES, 10 feet boxes, 4d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d and PERFORATED VENTILATING GLASS, 1s 6d per foot; CRYSTAL SHEET GLASS 11d, 6d and 8d per foot; FLASHED RUBY, CROWN SHEET, 4d; ENAMELLED, 8d per foot; Tiles and Slates ornamental, 1s 2d per foot. BELL'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

Catalogues and Prospectuses free

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 30, Soho-square.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Case of 100 feet and under, suitable for Pictures, in Lengths of 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, and 200 feet, assorted sizes. Belgian Sheet Glass, in Cases of 200 feet each, 26s. 3 feet by 2 feet, 30s. 4 feet by 2 feet. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 3d. per foot. Larger sizes up to 24 by 14, 24d. per foot. Grand Cases, in Cases, 21 per foot. Crown and Sheet, Rough Plate, Ribbed Plate, HARTLEY'S Patent Rough Plate, Polished and Enamelled Slates, Stained Glass, Glass Slates, &c. &c. Price Lists and Samples forwarded on application to ROBERT WITTAM, 39, Princes-street, Leicester-square.

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CRYSTAL SHEET GLASS, first, second, [illegible] produces and superior glasses, from 24 to 61 feet per foot; Belgian sheet glass, in cases 200 feet each, 24ins. by 18ins.; 30ins. by 24ins.; squares in boxes, 100 feet each, 24 by 18 [illegible] Dalston, 14, [illegible] Place, Bishopsgate-street, [illegible] Wharf, [illegible] Street, &c. G. FARMILOE and SON, [illegible] Shoreditch.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rough, and Large Glass of all qualities. Sheet Iron, White Lead, Colours, Oils, and Painters' Materials. Closet Cocks and Pumps. Brussels, Paris, Chemical, Oil, and Turpentine Casks. [illegible] application at PHILLIPS, MILLINGTON'S Warehouse, 87, Bishopsgate-street, London. Established more than 100 years.

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J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Seymour-street, South-bank, Lisson-grove, St. John's-wood, &c. Wells's red materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock. Price and specification, a full list of prices will be returned.—No. 8, Bishop's Terrace, Lisson-grove, Broad-road.

J. FISHER, 70, YORK-ROAD, LAMBETH, formerly shop foreman to Messrs. Lawrence. Shop-front from 6s. each, 14 sashes and frames from 2d per foot; French doors from 8d. Windows different [illegible] Gibbon's Patent Joints for cleaning, painting, &c. All kinds of joinery work estimated for accordingly. Terms—Cash. Lists of Prices sent on application.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique [illegible] and [illegible] of Floors [illegible] extensively used in Paris and [illegible] continental cities, is now introduced [illegible] and [illegible] ment of specimens and patterns [illegible] together with every particular as to cost and [illegible] obtained of Mr. BURT, 2, Charlotte-row, Mansion-House, [illegible] Messrs. ARROWSMITH and CO., 60, New Bond-street.

11, George-yard, Lombard-street, City

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements used at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

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Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.

GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND CEMENT.
CHARLES NELSON, having completed his works for the manufacture of the above Cement, can supply Contractors, Builders, &c. with a very superior article. The manufacturing department being under his own immediate superintendence, he can confidently recommend it for all works in which Portland Cement is used, and only requires a trial to insure approbation.

Orders, addressed to
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will meet with immediate attention.
Manufactory—Emscote Mills, Warwick.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT Messrs. ROBINS and Co. to whom the PRIZE MEDAL was AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, not adulterated by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

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14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
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PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by M. BLASHFIELD, at Millwall, Isle of Dogs.
Warehouse, No 1, Wharf, Paddington-basin.

DAMP WALLS.

STENT'S COMPOSITION FOR PREPARING NEWLY-PLASTERED OR DAMP WALLS FOR PAPERING,

is the result of practical experiments and long experience; it is unfailing in its application. Entire houses have been papered a few days after plastering. In repairs of old plastering it is invaluable. A moderate room can be papered for 2s. 6d.

Prepared only by W. J. STENT, Warminster.

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HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. These direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil; also for Plaster Decorations, and where it is used with Size, Varnish, &c. Sold by the Wholesale Paint-dealers in Original Packages, each cask stamped—HUBBUCK—LONDON—PATENT. And when so marked, the quality is guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.

JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale Business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of best quality upon advantageous terms. Application either at Harwich or to his Agent, GEORGE MORRIS, 20, New Ormond street, Queen-square, London.

P.S. Inland London trade will in future be supplied from Messrs. ROBINS and Co Scotland-yard, Westminster, instead of Whitefriars.

FRONTS of HOUSES.—GREENE and CO'S PORTLAND CEMENT WASH will not vegetate, and equal to Oil Paint for durability. In cake of 1 cwt. for 10s.

DAMP WALLS—GREENE and CO'S OXIDE SOLUTION PAINT, a guaranteed remedy, sold in quantities to cover 200 square feet, for 12s.—To be had only of the Inventors, GREENE and CO. 22, Norfolk-street, Islington.

BLUE LIAS LIME.—CHARLES NELSON begs to inform Engineers, Architects, Contractors, Builders, and the Trade in general, that he is prepared to supply direct from the Works in his own boats to any part of the Thames, River Lee, on any canal or by rail to all parts of the kingdom, large quantities of the above GENUINE HYDRAULIC LIME now so extensively used.

Quality, Weight, and Measure may at all times be strictly relied on, references in proof of the above can be given.

N.B. The Captain of the Boat will always bring with him the Grand Junction Canal Note, from which the contractor will be enable to know exactly what weight of Lime he is paying for

All orders addressed to the—
LONDON DEPOT, 16, SOUTH WHARF, PADDINGTON.
BLYTH, BROTHERS, SOLE AGENTS,
Will be promptly attended to, and any further information can be obtained from them

Works Stockton field, near Southam, Warwickshire.

PLASTER of PARIS.—MESSRS. BLYTH, BROTHERS, beg to acquaint the trade, that they have made a considerable reduction in price; the quality they are now manufacturing cannot fail to give entire satisfaction. Samples and prices forwarded to any part of England, or the metropolis. No extra charge made to any wharf or railway station in London. Any further information can be obtained at their Works, Baldwin's-place, Gray's-inn lane, Holborn; or at the Blue Lias Lime Depôt, 16, South Wharf, Paddington

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality ground and lump into boats, at the Works. Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works Southam

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

BRICKS.—White and Red Facing Bricks, and Hard Clinkers, for paving stables, &c. can be delivered by Thames or Eastern Counties Railway, at 10 per cent. under the usual prices.—Apply to W. and W. WRIGHT, Springfield, Essex

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.

BRICK MOULDS (improved), Steel-face Stocks and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick Mill Work and Implements. J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

BROWN'S WELLS BRICKFIELD, FINCHLEY, near the three Cemeteries. TO BE LET, upon very moderate terms the above FIELD, containing 5½ acres of good brick earth. For terms and other particulars, apply to Mr. A. RICHARDS, Auctioneer, Tottenham.

BRICKS.—FOR SALE, CLAMP, STOCK, and PLACE BRICKS, delivered at King's-cross or any other station on the Great Northern Railway.—Apply to Mr MESSENGER, Greenwood Brickfield, three-quarters of a mile from Barnet station

IMPROVED BRICK and QUARRY-PRESSING MACHINES, made by THOMAS PORTER, LONDON-ROAD, Leicester.—T. P. begs to inform Architects, Builders, Brickmakers, and Others, that he is now engaged in making very superior PORTABLE BRICK-PRESSING MACHINES, at considerably reduced prices. The boxes are lined with brass.

For design of Press, refer to "The Builder," January 12, 1856.

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.—Grey Stocks, 25s. per thousand; Grizzles, 10s. per thousand; Rough Stocks, 20s.; Place, 13s. to 15s. per thousand.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 8 ADELAIDE-PLACE London-bridge.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.

Malm Place half-washed Stocks, and Place Bricks, also on sale These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantity.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal Bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK PERFORATED BRICKS.—Messrs. J. EASTWOOD and SONS take this opportunity of informing their customers and the trade, that they have made arrangements for the Manufacture of White Suffolk Perforated Bricks. In curing defects common to bricks of this description, care has been bestowed to produce them of a true and perfect shape, of an even and beautiful surface, and free from fire-flawe.—J. EASTWOOD and SONS, Belvidere-road, Lambeth

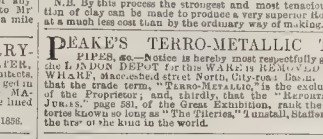
BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, White Sand for sulphuric acid, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. Sent in barge from Messrs MEESON and CO'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Essex Counties lines, or any railway connected with them. Vessels of 300 to 600 tons load alongside the said wharves at Grays, at MEESON and CO'S wharf and kilns, Bow-bridge, Stratford, Essex. The above-named article can also be procured, as well as all kinds of fire goods both Welsh and Newcastle), Fire-clay, Flare-burnt Lime, and Marble and Tower Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.

General Office—No. 12, GEORGE-YARD, LOMBARD-STREET. Letters addressed to Grays, Essex, will meet with immediate attention.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For plate and description see "Practical Mechanic's Journal," for January 1st, 1856.—For further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BY HER MAJESTY'S ROYAL LETTERS PATENT.

BRIDGEWATER'S IMPROVED DOUBLE and SINGLE CHANNELED ROMAN ROOFING TILE.



W. BRIDGEWATER begs to call the attention of the trade to his improved and superior method of manufacturing Roofing Tiles, whereby they can be produced cheaper, stronger, lighter, less liable to be damaged by the heat of the kiln in burning, or injured by the effects of the atmosphere, can be made either by Moulding or by Drain-tile Machines, from any description of clay, by the most inexperienced hand, and of larger dimensions than any other method. The fit is so exact that no pointing or mortar is required to be used, consequently, greatly increasing the external appearance. Parties desirous of manufacturing the above can be supplied with the necessary apparatus upon applying to the Patentee, at his residence, No. 1, Portland-street, Cheltenham, who will be willing to grant a limited number of licenses for their manufacture on royalty or otherwise.

N.B. By this process the strongest and most tenacious description of clay can be made to produce a very superior flooring-tile, at a much less cost than by the ordinary way of making.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for the WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "Honours of the Jurors," page 581, of the Great Exhibition, rank the Manufactories known so long as "The Potteries," Tunstall, Staffordshire, as the first of the kind in the world.

PATENT PAINT for BUILDERS and IRONFOUNDERS.—The LONDON PATENT ANTI-OXYDE PAINT has been specially chosen by the Government Engineers as the best, cheapest, and most durable that has ever been discovered. Address to Mr. DEANE WALKER, at the Office of the Company, 20, New Bridge-street, Blackfriars, where very information is afforded.

THE AINSLIE COMPANIES and PORTER'S PATENT BRICK and PIPE MACHINES, manufactured by Porter, Hunde, and Porter, Engineers Carlisle.

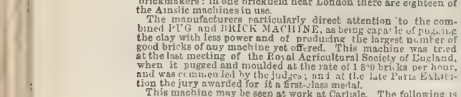
The manufacturers invite attention to their machines for making solid and other Bricks, Quarls, Tiles, Cornices, Socket and Plain Pipes, &c. which they recommend as best adapted for producing good bricks or pipes where quantity is an object.

These machines produce articles superior to any hitherto made by other methods; they are simple in their construction, and not liable to get out of order. They are being largely adopted by brickmakers: in one brickfield near London there are eighteen of the Ainslie machines in use.

The manufacturers particularly direct attention to the combined PUG and BRICK MACHINE, as being capable of passing the clay with less power and of producing the largest number of good bricks of any machine yet offered. This machine was tried at the last meeting of the Royal Agricultural Society of England, when it pugged and moulded at the rate of 1,800 bricks per hour, and was examined by the Judges, one of the late Paris Exhibition the jury awarded for it a first-class medal.

This machine may be seen at work at Carlisle. The following is from the *Times* of July 16, 1855:—"A very high opinion was formed of the value of this machine by those who witnessed its performances to-day."

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide place, London-bridge.



BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES either old or new, whether of thatch, slate, or tile, and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by FOUR YEARS' EXPERIENCE, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It clears and preserves the premises all drip. It meets the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability, Slabs and Tiles for Fireplaces and Hearths, Copings for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Cellars, and Kitchen Ranges, may be had in great variety at their Warehouse, 6, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

TO ENGINEERS, MACHINE MAKERS, AND OTHERS.

CHARLES MACINTOSH and CO. Patentees and Manufacturers of the VULCANIZED INDIA-RUBBER in all degrees of elasticity, recommend this material as capable of sustaining the action of hot or cold water, gas, steam, acids and grease. It is used extensively for valves in marine and land engines, railway buffers and springs, washers for piped joints, hose and pipes, also for gas and other Lamps, alkali cisterns, &c. &c. Articles, moulded or otherwise, made to any size or figure.—Address, 3, Cannon-street West, London; and Cambridge street, Manchester.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, SHEETS, and MOULDED GOODS, for Hydraulic Purposes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions, and Solid Strips cut to any required length or thickness.

Driving-bresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions in plain: Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.						
½	¾	1	1¼	1½	2	3 in.
9d.	11d.	1s. 3d.	1s. 5d.	1s. 7½.	1s. 9d.	2s. 3d. per yard.

Super-extra stout quality.					
2	2½	3	3½	4	5 inches
2s.	2s. 3d.	2s. 6d.	2s. 9d.	3s.	per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

¾	1	1¼	1½	2	2½	3 inches
6d.	8d.	10d.	1s.	1s. 3d.	1s. 6d.	per yard

The hose is Burnetized at an extra charge of 2d. per yard. Union Joints, Branch Pipes, and Jets are also supplied.

DURABILITY of GUTTA PERCHA TUBING. Many inquiries having been made as to the durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in having to reply to it by the following letter:—"SIR RALPH CARR HARVIS, Bart., M.P.S., to the GUTTA PERCHA COMPANY.—Special Testimonial. "March 16th, 1852. In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers admirably. Many Builders and other persons have already examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is fast adopted generally in the houses of that town (Newcastle)."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES.
18, WHARF ROAD, CITY-ROAD, LONDON.

TO ENGINEERS, MILL OWNERS, &c.
N. Woolwich Elastic Steam-packing Canvas and India-rubber), of the best quality.

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H. M.'s Dockyards), having considerably extended their manufactures in order to meet the increasing demand upon them for their Steam-packing, would intimate that orders are punctually executed at the lowest prices, and that prompt delivery in London, if required, may be relied on.

Specimens may be seen at S. W. SILVER and Co.'s Warehouses, Nos. 3 and 4, Bishopsgate-street (opposite London Tavern), where orders for Steam Packing, also Buffer Springs, Pump Clacks, and Discharge Buckets for dredging machines, may be left, or addressed to the Works, North Woolwich.

SILVER and Co. have on hand a large stock of Canvas and India-rubber, of all the manufactures, thus—"S. W. SILVER and Co. North Woolwich."

MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.

THOMAS JACKSON begs to draw the attention of the public to the most extensive stock of Marble Chimney Pieces in the Metropolis; consisting of a selection of upwards of two hundred and manufactured by steam power from the finest Italian and other marble, and the utmost care and attention to the details and finish so necessary in good marble work. The Stock consists of elegant Drawing-Room Chimney-Pieces in Statuary Marble: bold, massive Chimney-Pieces, in Black, Black and Gold, Sardilla, Sienna, Verd Antique, Brocatella, Dove, St Anne's, and Serpentine Marble, suitable for Dining-Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Emperor's Red and Amber Marble, for Boudoirs, Breakfast Rooms, best and secondary Bed-Rooms, &c.; also, Monuments, Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the most classical designs, and in all the varieties of the finest Italian and Brit sh Marble, at the lowest remunerative prices.

MARBLE.—The Italian Marble Company, Importers of the produce of their own quarries in the province of Massa Carrara, Italy, beg to inform the general Marble Trade in the United Kingdom that they are prepared to undertake contracts for any quantity of Statuary, Veined, Sienna, Bardilla Dove, and other Marbles, in blocks of all dimensions delivered on shipboard at Leghorn, or in dock, London. A constant stock always on view on the premises, where orders are taken for Panels, Slabs, Sanded and Gilt Slates, Vases, Tazzas, Mortars, Consoles, Chimney pieces of all classes, Circular Tables, Mummers, &c. executed in Italy. For further particulars, inquire at the Office on the Q Wharf, Thames Bank, Pimlico, adjoining the east side of Vauxhall bridge.

WILLIAM W. BONNIN, Secretary.

ITALIAN and GALWAY MARBLE QUARRIES.—Depôt, WHITEHALL WHARF, Parliament street, Westminster.—Mr FRANKLIN begs to invite Sculptors, Marble Masons, Builders, &c. to inspect his extensive STOCK of Italian, Irish, and Foreign MARBLES, which he is constantly importing in blocks and slabs, consisting of upwards of twenty different varieties, which he is enabled to offer at very reduced rates. Several large blocks of statuary, suitable for sculpture, &c. now landing.

THE LIZARD SERPENTINE COMPANY manufacture and sell in block and slab the beautiful stone now raised from the lower beds of their quarries. Chimney-pieces, Columns, Fonts, and ornamental works on view, at 21, Surrey-street, Strand.

HENRY COX, Manager at the Lizard
F. W. RUFFLE, Agent in London.

Lloyd's Marble Wharf, Thames-bank, Pimlico, Adjoining Vauxhall bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

TO SCULPTORS BUILDERS, MASONS, &c.

B. FABBRICOTTI respectfully invites the Gentlemen connected with the Marble Trade to inspect his fresh STOCK, consisting of statuary, vein Sienna, black and gold, dove, Bardilla, Sienna, and Breccia, in blocks, and particularly call their attention to a large quantity of his best statuary, sixty by sixty, full dove, just landed.

Monuments, vases, and statues, finely executed in Italy.
Carrara Wharf, Thames-bank, Pimlico.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Cathedral, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab in hand, suitable for shelves.

ROBERT DANIEL, STONE-MERCHANT, VICTORIA WHARF, PIMLICO, LONDON, AND ISLAND WHARF, JERSEY.

Every description of STONE prepared and applied in any quantity direct from the Quarries by rail to all stations, or vessel to any port in the kingdom, on the lowest current prices. Competing all kinds of BERKSHIRE STONE in block and slabs of any thickness, paving, landings, steps, coping, sills, sinks, headstones, grindstones, &c.

PORTLAND STONE, CAEN, AUBIGNY, and BATH, in BLOCK.
A list of prices sent on application.

STONE, GRANITE, and MARBLE.—
BRAMLEY FALL, CAEN,
DARLEY DALE, FARLEY DOWN,
BARE HILL, HUDDLESTONE,
PORTLAND, and other STONE,
In Blocks and Slabs,
Yorkshire Paving, Landings, Steps, Sills, Sinks, Coping, &c.;
Granite Blocks, Trams, Curbs, Pitching, &c.
Valentia Slate Slabs, Grindstones;
Marbles, in Blocks and Slabs.
At FREEMAN'S Stone Wharfs, Millbank-street, Westminster: City-road Basin; and Deptford.

STONE! STONE! STONE!—To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Surface Slab, Granite Pitching and Curb, Guernsey Paving Road Materials, and every other description of stone, at JOHN KNIGHT and SON'S, Devon Wharf, Mile-end. York tooled paving, 3s. 6d. per ton feet; slab for the 10, per foot sup.; slab for chimney-pieces, 4d. per foot sup.; 8 by 3 window-sills, 6d. per foot run; 13 by 3 coping, 8d. per foot run; box chimnies (any opening), 8s. 6d. each Terms cash on delivery.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab, Marble mortars, &c.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London, Agent—BRIDGES and TAYLOR, 3, Pinner's court, Old Broad-street. Manager—J. H. TREMAYNE, Liskeard
This Granite is selected for the New Westminster-bridge.

GRANITE.—King William and Nelson Monuments, Tombs, and Crosses of the Royal Exchange, and Corner stones of the Royal Victoria Docks, executed by the Granite Company under Royal Charter. For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4 Millbank-row, Westminster.

TO ROAD-TRUST SURVEYORS and ROAD CONTRACTORS.—FOR SALE, 1,000 Cubic Yards of BROKEN BOMBAY and PORT PHILIP BLUE GRANITE, two-thirds of which is best Bombay, and one-third sound Port Philip.—Apply to Mr. CHARLES ROSS, 2, Stepney-causeway, Ratcliff.

BANGOR WHARF, King's-road-bridge, Chelsea.—STRINGFELLOW and POPE have WORKS, Rawlings's, for all the sizes of Welsh slates, and Blue and Green slates, laths, plaster, Roman, Portland, and Keene's cements, Hardwick's lime, and Bramley Fall stone, Portland stone, Welsh rag-stone, Welsh lime, and Welsh slabs, of every description, wholesale and retail, at the lowest prices. Orders by post, or at the Wharf, punctually attended to. Estimates given for any quantity of slates, wanted, and carts.

YORKSHIRE STONE.—THOMAS [illegible] Merchant, [illegible] Yorkshire [illegible] Paving, Landings, Steps, Curb, Sills, Sinks, Copings, Chimney-pieces, Grindstones, Troughs, Tombs, Tablets, Pedestals, Monuments, Headstones, Kerbing, Flagging, Pitching, Walling, Rubble, Road Materials, &c. [illegible] Pimlico-wharf, Chelsea.

DARLEY DALE STONE.—This Stone, introduced by Sir Charles Barry at St. Edward's Grammar School, Birmingham, and well known as having been selected for

ST. GEORGE'S HALL, LIVERPOOL,

and numerous works, including the Railway Station, Birmingham, Borough Bank, Liverpool; Evesham-bridge; Mr. Beaufoy's Schools, Lambeth; and the Portico and Cornice of the Town-hall, Leeds; is kept in considerable quantity at the Darley Dale Stone Wharf, City Basin, London.—Apply to W. and J. FREEMAN, Millbank-street, Westminster; or GEORGE WALL, at the Quarries, near Matlock.

YORKSHIRE STONE.

GEO. VINT and BROTHERS, IDLE, near LEEDS,

Beg to inform Architects, Surveyors, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Paving, Bramley Fall, Park Spring, Robin Hood, Harehill, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and durable material, at prices not exceeding the ordinary cements. Full particulars forwarded on application to Mr. FRED RANSOME, Whitch Wharf, Cannon-row, Westminster; or at Patent Stone Works, Ipswich.

ANCASTER STONE, so remarkable for its free working quality, combined with colour and durability. Price, and cost of transit to any part, may be obtained, on application at Mr. W. THOMPSON'S office, Elmer street, Grantham.

CAEN and AUBIGNY STONE.—P. POUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Townhall.

CAEN and AUBIGNY STONE.—GATES and GEORGE (late Laurd, Bellham, and Co.), Caen wharf, Rotherhithe, London, General Stone Merchants and Quarrymen, Sole agents for the sale of Caen stone, CAEN, AUBIGNY, PORTLAND, and YORKSHIRE STONE.

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.

List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Bath Stone, Granite, Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SCOLES and WOOD are to the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Estimates, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

AT a MEETING of STONE-MERCHANTS, held at the Dusty Miller Inn, Hipperholme near Halifax, Yorkshire, on Tuesday, March 25th, 1856, at 4 o'clock, it was unanimously agreed that an ADVANCE on TOOLED FLAGS should take place on the 1st of APRIL, 1856.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, Artillery Barracks, Aldgate, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors for Bedfordshire and Hertfordshire Breweries, the Race Stand at Brighton, Pavements, &c. and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-rd., where terms may be obtained.

PARIS EXHIBITION. — ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS: Mr. MAGNUS is the only exhibitor whose productions received this double honour. He received the Prize Medal at the Exhibition of 1851, and the Medal of the Society of Arts in 1846. This beautiful material, unsurpassed in its durable than marble, is now finding its way into palaces, and is in common use for the vestibules and halls of the largest and most splendid of our public buildings, as well as into the humbler residences. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be specially specified. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be specially specified. Among the chief are chimney-pieces and other metal stoves for all apartments, plain and exquisitely decorated slabs for the tops of loo tables, chiffoniers, console tables, &c.; tables for dining-rooms, breakfast, bagatelle, and other tables, bedsteads, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Barrington-place, Pimlico.

N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

TO ARCHITECTS, BUILDERS, IRONMONGERS, &c.

ENAMELLED SLATE CHIMNEY-PIECES, of elegant patterns and choice workmanship, decorated with figures from the Antique. Also Chimney-pieces, Tablets, Brackets, &c. J. HOWELL, Manufacturer, 3, Cadogan-place, Sloane-street, Chelsea, Middlesex.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in Stables, &c.

CONTRACTS for the above WORK REGULARLY UNDERTAKEN. Estimates for Asphalte floors, with instructions for same at the Office, No. 21, Poultry, City. Also, Portland and Roman Cements, Bricks, Tiles, Pipes, Plaster of Paris, Lime, Hair, &c. Inquiries for PURE COAL TAR HALF-A-CROWN LIMMER Sinks in Hand.

ASPHALTE.—To CONTRACTORS, BUILDERS, and OTHERS.—TO BE DISPOSED OF, by PRIVATE CONTRACT, a quantity of the above-named article. For terms of sample, apply to Mr. PLANTON, 93, Upper Thames-street.

O. M'CARTHY, CARMAN, and SAND and GRAVEL MERCHANT, Wharfage, Wandsworth, Surrey. Gravel Pits—Putney, Sand from above, below, and Bagshot Heath. Gravel delivered at any part of London, by the yard or per barge. Stocks, lime, and old bricks, &c. Gravel delivered per barge, in any quantity, above or below Battersea.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.

W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS [illegible] at the Wharf.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS and BUILDERS.

GREAT REDUCTION in the PRICE of DRAIN-PIPES.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A liberal discount to the trade.

A large assortment of goods constantly on sale.

The clay obtained from the pits on the island of Brankesea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Brankesea Island, Poole, Dorset.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

TO BE SOLD, a Portable 9-horse power ENGINE, with boiler attached (Gough's Patent), mounted on frame and railway-wheels; it has till latterly been used at the Grimsby Docks for pile driving and pumping, and is in good condition. Price 80*l*.—Apply to WM. SISSONS, 8, Station-terrace, Hull.

PUMPING and WINDING ENGINE.—TO BE LET on HIRE, or for SALE, a nearly new strong and simple PUMPING and WINDING STEAM ENGINE, of 10-horse power, by Medwin and Hall, with a pair of 10-inch pumps and all the driving gear complete. The contractor for whom it was fitted up will make a considerable sacrifice on the cost price, or let the whole on hire.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, 93, Blackfriars-road.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, Southwark, London.

WARNER'S PATENT VIBRATING STANDARD PUMPS. PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 3	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron	2 3 0
3½ „	ditto 3 6	flange pipe,	2 12 0
4 „	ditto 3 6	as required,	3 3 0
2½ „	short, with 13 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks or in cases of forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels,

Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells. PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to 6 double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

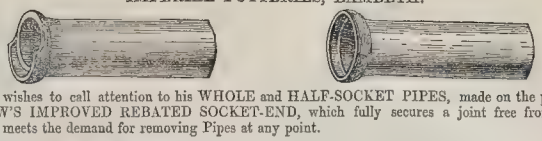
Iron Pails 3*s.* per doz. painted. Ditto .... 4*s.* per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5*s.* 6*d.* each; if fitted with PATENT AIR-TIGHT VALVES, 1*s.* 6*d.* each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.
Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.
Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.
Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire clay, and they having worked the same for upwards of thirty years can furnish first-class references.

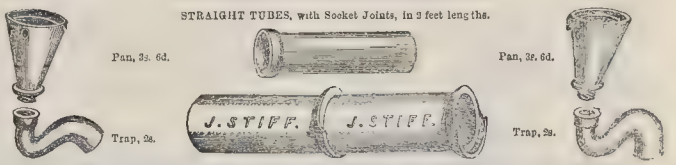
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

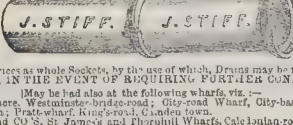


HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

[May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Deadhead-wharf, Bermondsey; Danvers wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs COLLS, NIABBELT, and CO'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensburne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.
Drawings, with Prices, will be forwarded free, on application.

THE FARNLEY IRON COMPANY, WORTLEY, near LEEDS.



Manufacturers of FIRE BRICKS, TILES, QUARRIES, &c., White Building Bricks, Fire-clay CHIMNEY-TOPS, in Norman, Egyptian, Saxon, Tudor, Grecian, Gothic, and Elizabethan styles.

TERRA COTTA

Fountains, Vases, Pedestals, Capitals, Trusses, Brackets, &c., in great variety, which for beauty and elegance of design are unequalled. The designs of Architects modelled with the greatest exactness.

Also of PATENT GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, &c., well adapted for pressure, being made extra pressed under "Spencer's Patent." Superior White Glazed CLOSET PANS, TRAPS, &c.

The Works of the Company are situated in the immediate vicinity of the well-known bed of WORTLEY FIRE-CLAY, and their manufacture of BRICKS, for the use of Forges, Gas Companies, Foundries, Potteries, and Glassworks, is confidently recommended for all purposes where extreme heat is required. Their GROUND CLAY is also particularly adapted for the manufacture of CRUCIBLES, MELTING POTS, &c.

OFFICES AND STORES:

LONDON .....No. 14 York-chambers, York-buildings, Adelphi; No. 16, Bath-place, New-road; St. Anne's-wharf, Limehouse.
BIRMINGHAM..No. 7, Easy-row; also 22, Cambridge-street, and Lawley-street.
BRISTOL .....No. 14, Nelson-street.
LIVERPOOL ....No. 9, Russell-street, 83, Renshaw-street, and Shipping wharf Leeds-street.
NEWCASTLE. ..W. B. Wilkinson and Co. Prudhoe-street.
GRIMSBY.....P. G. Skipworth.
MANCHESTER..No. 45, Travis-street, and 23, 24, and 25, Birmingham-street, London-road.
HULL.....No. 60, Queen-street, and Wellington-street.
BRADFORD .....Horton-road.
LEEDS .....Wellington-street, adjoining the Midland Station; and Shipping-wharf, Victoria-works, Hunslet;
SUNDERLAND..W. B. Wilkinson and Co. Queen-street.
WARE.....G. E. Kins, Stone Merchant.

Where Drawings, with Prices, &c. may be obtained.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 3 lbs. to the square of 100 feet, the cost of carriage is small.—6th. It is separate, metal, or tiles, it is a most effective Lightning Conductor.

INODOROUS FELT, for damp walls and for damp floors, under carpets and floor cloths. Price ONE PENNY per Square Foot.

CROGGON and CO.'S PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing the radiation of Heat, saving 25 per cent. of Fuel, and fewer repairs needed.

Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

VENTILATION.—PURE AIR.

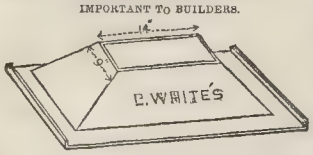
Sheringham's Ventilator for the admission of pure air through an

EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 8s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

IMPORTANT TO BUILDERS.



REGISTERED CAST-IRON CHIMNEY-HOPPER and CHIMNEY-BAR COMBINED, ensuring a perfect formation of the Flue, and rendering smoky chimneys impossible. One trial will cause their adoption in every building.

Price from 8s. 6d. each, according to size.

IRON GIRDERS and COLUMNS to MODEL or DRAWING.

IRON PIPES and connections for gas, water, and liquid manure.

RAIN-WATER PIPE and EAVE GUTTERS, at wholesale prices. Also, O-G Gutters, Sash-weights, STABLE FITTINGS, pumps, tomb railing, cattle and pig troughs, and COLUMNS with caps and bases, and every kind of builders' castings, in stock, at LYNCH WHITE'S Iron Wharf, Upper Ground street, London, near Blackfriars-bridge.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

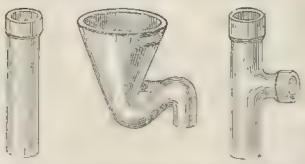
GREAT REDUCTION in the PRICE of PARRY'S superior STONE-GLAZED DRAIN-PIPES.—Manufactory, Church-street, Deptford, Kent.

N.B. All kinds of Red Drain-pipes. Established 1701.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction, the price being much lower than many in the trade, viz. 25 per cent. discount off the list for cash Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 80, Bankside. DAVID MORGAN, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to purchasers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4½ "
6	"	"	"	"	6½ "
9	"	"	"	"	9½ "
12	"	"	"	"	13 "
15	"	"	"	"	18 "
18	"	"	"	"	24 "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

BY HER MAJESTY'S ROYAL LETTERS PATENT, APRIL 27, 1855.

JAS. LEWIS'S PATENT STENCH-TRAP.

FOR STREET USE.

Price, with Gutter Plate, 16 inches by 12 inches, each 22s.; weigh about 2 cwt. Larger sizes made, if required.

FOR AREAS, &c.

Price, with Back Plate, 6 inches by 7 inches, each 6s.

FOR CHURCHES, YARDS, &c.

10 inches by 8 inches, each 10s.

The above articles are protected for the Patentee by the British Government, on account of their construction, for the advantages they possess, being a perfect trap for preventing smell proceeding from itself or the drain, should there be water or not in the pan. When stench-traps are put down generally speaking no attention is ever paid to them afterwards—this renders them useless. The above, therefore, are a desideratum, as they require no attention. It is well known when cholera has visited this country, it commences and leaves most those places where the air is vitiated by obnoxious gases proceeding from drains, &c.

Any inhabitant suffering any inconvenience, is entitled, by the Sanitary Act to lay complaint before the public or private authorities of the property, to lay down stench-traps where they are required. Any persons interested in this advertisement would be kind enough to write to the patentee for drawings and testimonials. Please order from any respectable ironmonger, contractor, or the Patentee, JAMES LEWIS, Ironfounder, Abergavenny. Specimens to be seen in the Court of Inventions, Crystal Palace, Sydenham.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S,

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.

HALF-SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE; and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.

THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

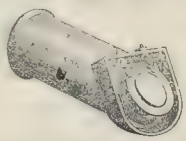
MANUFACTORIES,—71 and 72, PRINCES STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

EXTENSIVE REDUCTION IN PRICES.

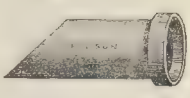
KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.



WHOLE SOCKET.



Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire-Tiles, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

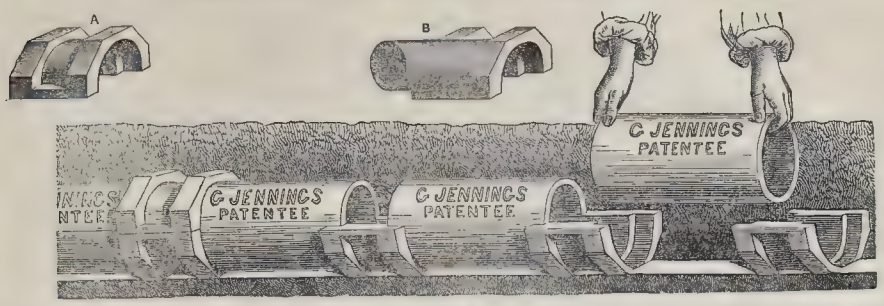
AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

JENNINGS'S PATENT DRAIN-PIPES.



THE PATENT CHAIRS AND SADDLES above shown are to a line of pipes the SAME SUPPORT AS SLEEPERS TO A LINE OF RAILWAY, the base of each Chair being BROAD and STRONG. The pipes are simple cylinders, of uniform thickness, made without the usual socket; the drying and burning, in consequence, is much more perfect. Pipes thus made and connected will be found to BEAR ANY PRESSURE, and are in no way liable to derangement. The laying of these pipes, and the making of the joints, IS DONE AT ONCE, EACH PIPE BEING BEDDED AS IT IS LAID, and the space between allows the workman to strike up the joint, and the superintendent TO SEE that every pipe is ACCURATELY LAID and PROPERLY JOINTED.

A shows one of JENNINGS'S PATENT SADDLES OR COVERS, by means of which examinations are effected; B shows one of the PATENT JUNCTION COVERS, by which connections are made to finished lines of pipes, it being only necessary AT ANY TIME to remove a PLAIN Cover or Saddle, A, and substitute a Junction Cover, B, the Junction being THE SIZE of the Branch Pipe.

The favour with which these pipes have been received will no doubt give rise to many imitations, as it is much easier to COPY than to INVENT; but GEORGE JENNINGS hopes his sanitary patrons will give HIM CREDIT for being THE FIRST TO SHOW HOW JUNCTIONS MAY BE INTRODUCED, OR EXAMINATIONS MADE, TO FINISHED LINES OF PIPES. These important improvements, as above shown, are PATENTED; and GEORGE JENNINGS would caution those who desire TO PROFIT BY HIS IDEAS, NOT TO INFRINGE HIS PATENT RIGHTS, as they will not be allowed to do so with impunity, although he feels confident the ORIGINAL, for its SIMPLICITY and EFFICIENCY, will be preferred to any copy.

Prices of JENNINGS'S Drain Pipes, per foot run, including the Patent Chair and Saddle, are as follows:—4-inch, 6d.; 6-inch, 8d.; 9-inch, 1s. 1½d.; 12-inch, 1s. 10d.; 15-inch, 3s.; 18-inch, 4s.; with the usual discount to the Trade.

JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.

Architects describing this Closet in their specifications will have a PERMANENTLY GOOD VALVE CLOSET, NOISELESS, and FREE FROM COMPLICATION. The Patentee has such confidence in its DURABILITY and EFFICIENCY, that he will guarantee every Closet for SEVEN YEARS.

JENNINGS'S IMPERISHABLE EARTHENWARE CLOSET AND TRAP.

This Closet has a large water surface, has no back to soil, is imperishable in its material, and the Trap and Closet is combined in one piece, suited alike for the PALACE or the COTTAGE.

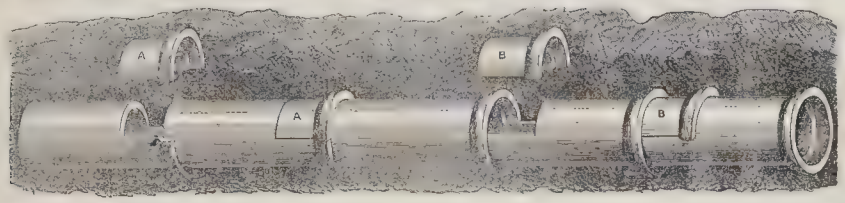
JENNINGS'S IMPROVEMENTS IN LIFT AND OTHER PUMPS.

These Pumps would well repay a visit to Jennings's factory, where may be seen Jennings's Lavatories, Urinals, Sluice Valves, Fire and Steam Cocks, of every size; Shop-Shutter Shoes; Gully, Area, and Sink Traps, and other sanitary goods.

Or Illustrations and Prices can be had free by post, if two stamps are enclosed to

GEORGE JENNINGS, SANITARY ENGINEER, 29, GREAT CHARLOTTE STREET, BLACKFRIARS-ROAD, LONDON.

AYLESFORD POTTERY COMPANY'S PATENT DRAIN-PIPES.



The above Company respectfully invites the attention of Engineers, Architects, Surveyors, Builders, &c. to an improved DRAIN-PIPE, whereby al stoppages may be cleared without disturbing the invert of the drain, by simply removing the cover (marked A or B) whichever may be preferred.

The cover (marked B) may be used in conjunction with whole or half-socket Pipes.

Pipes thus constructed may be laid at intervals in a drain of ordinary Socket-Pipes.

With the great advantage these Pipes offer, they are cheaper than any yet submitted to the public.

London Depôt—AYLESFORD WHARF, Belvedere-road, Lambeth.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

Terra-cotta Chimney-pots of various patterns and sizes, also Red Earthenware Drain pipes, at greatly reduced prices.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from £2 2s. and perfect action guaranteed.

SALES BY AUCTION.

In the Western Suburbs of London and Parish of Kensington singularly valuable Freehold Lands, offering very choice and beautiful Sites for Building.

MESSRS. DANIEL SMITH and SON will (unless an acceptable offer shall be made for the entirety) submit to AUCTION, at the MART, near the Bank of England, on TUESDAY, the 8th of APRIL, 185[illegible], at TWELVE o'clock, in lots of from three to four acres each, presenting beautiful sites for the erection of mansions or villas, about TWENTY ACRES of rich sound FREEHOLD PASTURE LAND, forming one fine undulating inclosure, within a few minutes' walk of the Harrow and Bayswater roads, near several churches, but situate perfectly detached from any houses or other buildings, and commanding some extensive and cheerful scenery. It would be a peculiarly fine spot for any public institution or establishment.—Particulars, with plans, may be had at the Auction Mart; of Messrs. R. M. and F. LOWE, Solicitors, Temple; of Mr. W. SIM, Architect, 59, Elgin-crescent, Notting-hill; and of Messrs. DANIEL SMITH and SON, Land Agents, in Waterloo-place, Pall-mall, who are fully authorised to treat for the whole or any part thereof. A valuable farm adjoining may be purchased if a large extent should be required.

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300 Marble Chimney-pieces and 3,000 feet of Slab.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, Cambridge-heath Saw-mills, Hackney-road, on TUESDAY, APRIL 22, at TEN for ELEVEN, 300 MARBLE CHIMNEY PIECES, in every variety of design and colour, and a quantity of box-stone chimneys. Also 3,000 feet of STATUARY, black and gold Bardilla, black vein and Sicilian slab.—May be viewed, and catalogues had four days' previous, on the Premises; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

BANKSIDE.—Valuable Stock-in-Trade, Cranes, Travellers, Implements, and Effects of a Stone-merchant.

MESSRS. EVERSFIELD and HORNE respectfully announce that this important SALE will take place on the PREMISES, 12, Bankside, Southwark, in the following order, viz.:—WEDNESDAY, APRIL 9, at ONE precisely, 10,000 feet of tooled, self-faced, and rubbed pavings and slab, 160 landings, from 3 to 6 inches in thickness, 120 York steps, 200 cills, 2,000 feet of coping, 100 sinks, numerous blocks and scantling of Portland and Gazeby stone, granite, Rockhill grindstones, &c. THURSDAY, APRIL 10, at ONE precisely, 15,000 feet of tooled paving, 2,000 feet of Rockhill paving, 80 landings of large dimensions, 100 steps, 80 blocks of Portland, 60 blocks Gazeby, 150 tons of pitching, millstones, grindstones, &c. &c. FRIDAY, APRIL 11, at TEN for ELEVEN, precisely, 8,000 feet of paving, 20 large landings, 200 tons granite pitching, half-sovereigns and cubes, 100 blocks Portland granite, Green Moor and Gazeby marble chimney-pieces and slab, a marble monument, numerous steps, cills, coping, sinks, octagon paving, grindstones, millstones, and Harehill slab. Also the valuable plant; consisting of two excellent travelling-cranes, with the jennies and stout framework; a seven-ton iron crane on the wharf; four mason's carts, a spring cart, four stone trucks, hand trucks, trolleys, hoisting jacks, three powerful cart-horses, harness, and other effects; the whole of which are arranged in suitable lots, and are to be sold without reserve, by order of the Trustee, Mr. Henry Booth.—Catalogues will be forwarded, post free, or may be had on the Premises, and of the Auctioneers, 40, Parliament street, or Coal-Exchange.

PAUL'S HOUSE, TAUNTON.

MR. KINGSBURY has been instructed to SELL by AUCTION, at PATTISON'S CASTLE HOTEL, Taunton, on TUESDAY, the 8th day of APRIL next, at TWO o'clock in the afternoon, all that excellent FREEHOLD MANSION, called "Paul's House," together with the COTTAGE and extensive SHRUBBERIES, GARDENS, and GROUNDS adjoining the same, containing by admeasurement 2a. 3r. 14p. in the parish of Bishop's Hull. The mansion is situate in a healthy portion of the town, agreeably secluded in its lawn and shrubberies, and within five minutes' walk of the market and churches. It is provided with spacious drawing and dining rooms, boudoir, library, breakfast-parlour, housekeeper's and butler's rooms, kitchen, laundry, china closets, &c.; twelve bed-chambers and dressing-rooms, and is amply supplied with every convenience; extensive walled gardens, stabling with loose boxes for three horses, harness-room, coach-house, &c.: brewhouse, extra stable, cow-houses, piggeries, and various other offices, are placed at a judicious distance, combining, as a whole, most essential comforts, and capable of being at once inhabited, with a trifling outlay. To a person desirous of making a building speculation, the auctioneer begs to call particular attention, as the house and garden can be separated from the other portions of the property, and a street carried across the field, forming a double frontage from Tower-lane to the garden-gate opposite the New Shire-halls; and also another building frontage of upwards of 100 yards, facing the Crescent-field, in that most improving part of the town leading towards the village of Bishop's Hull. And in the event of the property not being sold in one lot, it will be immediately afterwards put up in two lots, so as to enable any purchaser to buy the building portion distinct from that part which should go with the present house.—For viewing the property, and for lithographed plans, application may be made to the Auctioneer, 10, Hammet-street, Taunton (at whose office a plan for laying out the ground for building sites may also be inspected), and all further particulars may be obtained from him; or from Mr. WINSLOW JONES, Solicitor, Exeter.

Hammet-street, Taunton, March 10, 1855.

The British Sperm Candle Company's Works, Fairfield-road, Bow, Middlesex.

MESSRS. ELLIS and SON have been favoured with instructions by the Directors of the British Sperm Candle Company to SELL by AUCTION, in the month of MAY, in one lot (unless an acceptable offer be previously made by private contract), the extensive and admirably adapted PREMISES, the [illegible] erected within the last [illegible] years at an expenditure of nearly [illegible], and the Goodwill of this important undertaking. It may be necessary in explanation to state that the Company was formed for the manufacture of stearic and composite candles: that an article has been produced of unrivalled quality, and a valuable and extensive connection formed throughout the kingdom and the colonies, creating a demand that the Company were unable to meet from an inadequate capital, which alone has compelled its dissolution, and the necessity for the present sale: thus offering to capitalists an opportunity of entering upon an established undertaking that must yield the most liberal profits. The whole of the plant and works are in complete working condition: they have been constructed upon the most approved principles, embodying all modern scientific improvements, regulated by a practical knowledge of the object in view, which is evident in the masterly arrangement of the whole of the works. The heating processes throughout the manufacture, and the chief part of the mechanical operations, are performed by steam. The present plant is equal to the working of about sixty tons of candles per week; but the premises would admit of a considerable extension of the manufacture by a small addition to the plant, which will doubtless be called for by the increased demand that will arise from the reduced price of the raw material. The premises [illegible] are within five minutes' walk of the Bow Station, and occupy an area of upwards of four acres, are held by lease for about eighty-six years, at a ground-rent of 60l. per annum, with power to redeem the same, making the property freehold. Further [illegible] and orders to view may be obtained on application to Messrs. ELLIS and SON, Auctioneers and Estate Agents, [illegible], Fenchurch-street.

VALUABLE FREEHOLD BUILDING FRONTAGES and PLOTS, Land-tax redeemed, Bermondsey, Surrey.

MR. HUMPHREYS will SELL by AUCTION on MONDAY, APRIL 7th, at TWELVE at GARRAWAY'S (by order of the surviving executor of the late Mr. George Stevens), in five lots, valuable BUILDING PLOTS in Great Russell-street, Riley-street, [illegible], and Blick-street, Bermondsey, near the Old Church; each containing from 105 feet to [illegible] feet frontage, and areas from [illegible] to [illegible] yards [illegible]. Particulars and plans may be had of Mr. J[illegible] FISHER, the executor, 15, Riley-street, Russell-street, Bermondsey; Mr. PHILLIPS, collector to the estate, 166, Bermondsey-street; Mr. FREDERICK HAYNES, Solicitor, 17, Essex-street, Strand; Mr. THOMAS HUMPHREYS, Solicitor, 14, Fast-Indian Chambers, Leadenhall-street; at Garraway's; and of the Auctioneer, 61, Leadenhall-street.

SALES BY AUCTION.

TO COACHSMITHS, BUILDERS' SMITHS, IRONMONGERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on the PREMISES, George street, Oxford-street, TUESDAY, APRIL 15, at ELEVEN, in lots, without reserve, [illegible] IRON and STEEL and IRONMONGERY, including 50 tons S C bars, 2 tons [illegible], [illegible] tons [illegible] spring steel, 5 tons cast and shear steel, 2 tons bolts and nuts, 100 gross coach bolts assorted, [illegible] dozen files, 100 [illegible] wrought and cut nails, 2[illegible] bags horse nails, [illegible] gross wood screws, 5 tons coil, crane and skid chain, 2 tons [illegible], washers, and bolt rings, double-purchase crab, several pairs of blocks with iron and brass sheaves, [illegible], [illegible] hammers, spades and shovels, and a general assortment of ironmongery.—To be viewed on MONDAY previous to the sale, when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

ASHLEY-GREEN, midway between Chesham and Berkhamstead.

MR. W. BROWN has received directions to SELL by AUCTION, at the CROWN INN, Chesham, on TUESDAY, APRIL 15th, 1855, at ONE [illegible], [illegible] fine Oak, Elm, Ash, Beech, and Cherry TREES, many of large dimensions, the oak standing and the remainder felled and lying upon Flamstead Farm, in the occupation of Mr. [illegible], and in the woods adjoining, most conveniently situate in the vicinity of good roads, about two and a half miles from the Grand Junction Canal and Railway Station at Berkhamstead, and about three miles from Chesham. Credit will be given for three and six months, subject to the usual conditions.—To be viewed by applying to CHARLES ALLEN, the woodman, upon the estate, of whom catalogues may be obtained; [illegible] Hotel, Tring Station; King's Arms, Berkhamstead; [illegible] Crown, Hemel Hempstead; Place of Sale; and at the Offices of Mr. W. BROWN, Land Agent, Tring.

STARCH-GREEN, MIDDLESEX. To Builders, Bricklayers, and Others.—TO BE SOLD by AUCTION, by

MR. JOHN JACOBS, on the PREMISES, Hewlett's Brickfields, on WEDNESDAY, APRIL 16th, 1855, at TWELVE o'clock, 1,000,000 good STOCK BRICKS, in lots of 10,000 and 20,000 each; the whole of which must be positively sold without reserve, in consequence of the field having to be cleared by the end of May. Starch-green is bounded by good roads, and situated in the parish of Hammersmith, within a few hundred yards of the Uxbridge-road, and about one mile distant from Kensington, Notting-hill, Bayswater, &c.—May be viewed by applying to Mr. HEWLETT, at Starch-green, of whom catalogues may be had; and of the Auctioneer, [illegible], Bevis Marks, St. Mary Axe, City.

BUILDING MATERIALS of Five Houses, City-road.

MR. W. R. GLASIER will SELL by AUCTION, on the PREMISES, on WEDNESDAY, APRIL 16th, at TWELVE for ONE o'clock, by direction of the Corporation of the Orphan Working School, the BUILDING MATERIALS of five houses, situate and being Nos. 1[illegible], 17, 18, 1[illegible] and 2[illegible] Anderson's-buildings, City-road, comprising [illegible] stock and other bricks, lead gutters and pipes, timber in joists, rafters, &c. flooring, doors, sashes, and frames, iron railing, stone coping, Yorkshire and other paving, pan and plain tiles, fixtures and fittings.—May be viewed the day prior and morning of sale, and catalogues had of Messrs. WHARTON and [illegible], Architects, 42, Charing-cross; at the Sportsman, City-road; at Garraway's; and of the Auctioneer, 41, Charing-cross.

SECOND PORTION.—TO RETAIL TIMBER MERCHANTS, CONTRACTORS, BUILDERS, SAW-MILL PROPRIETORS, AND OTHERS.

MESSRS. DAVIES and VIGERS are instructed by Mr. Samuel Grandfield (who is retiring from business) to SELL by AUCTION, on the PREMISES, Bell-lane, Spitalfields, on MONDAY, APRIL 14, and following days, at TWELVE for ONE, without reserve, the second portion of the well-seasoned and valuable STOCK and PLANT as a Builder and Contractor; comprising 2[illegible] feet of Spanish and Honduras mahogany, cut from two to five years, from logs of great breadth and width suitable for counter tops, along Dutch sawn Riga [illegible], thoroughly seasoned, first quality, pink [illegible] Wainscot, prepared floor battens and a large and useful assortment of [illegible], stock of ironmongery, wrought iron box girders, [illegible] columns; plate, crown, and sheet glass, lead and paint [illegible], colours, oils, turps, cans, implements and fittings; plumbers', painters', glaziers', and plasterers' shops; fifty carpenters' [illegible] iron cramps, together with numerous items of valuable and useful property, forming the stock and fittings of a large and well-regulated builder's establishment.—To be viewed two days prior to the sale. Catalogues to be had on the Premises, of Messrs. WATKINGTON and BEETSON, New City Chambers, Bishopsgate-street; and at the Auctioneers' Offices, [illegible], Frederick's-place, Old Jewry.

BASINGHALL-STREET.—Building Materials of Weavers' Hall and Houses adjoining.

PULLEN and SON are favoured with instructions to SELL by AUCTION, on the PREMISES, on WEDNESDAY, APRIL 16th, at TWELVE, in lots, all the valuable BUILDING MATERIALS, FIXTURES, and FITTINGS-UP of Weavers' Hall, and two houses adjoining, in Basinghall-street, belonging to the Worshipful Company of Weavers, comprising good sound brickwork, plain tiles and [illegible], capital oak and fir timber in roofs, and [illegible] of [illegible] floors, tenting of lead [illegible], gutters, and pipes, useful sashes, doors, wainscot [illegible], marble chimney pieces, carved oak panels and mouldings, [illegible] paving, [illegible] and partitions, book-cases, stoves, ranges, coppers, cisterns, and various useful fixtures and fittings-up.—May be viewed the day previous, and catalogues had of C. J. Cooper, Esq. Architect, 17, Gracechurch-street, and of PULLEN and SON, [illegible], Fore-street, Cripplegate.

SOMERS-TOWN.—TO BUILDERS, PIANO-FORTE AND CABINET MAKERS, AND OTHERS.

MR. LEREW will SELL by AUCTION, on the PREMISES, No. 42, [illegible], Somers-town, on THURSDAY, APRIL [illegible], at ELEVEN for TWELVE, [illegible] 2[illegible] yellow and white [illegible] plank, deals, and battens, [illegible] feet [illegible] of yellow and white flooring, [illegible] scantling, dry cut stuff, doors, [illegible] boards and ends, ladders, and numerous other useful effects.—May be viewed the day prior and catalogues had on the Premises; and of the Auctioneer, Cardington-street, Hampstead-road.

TO BRICKMAKERS, BUILDERS, and OTHERS.—Horses, Carts, [illegible] and Effects.

MESSRS. VENTOM and SON are instructed by the Executors of the late Mr. W[illegible] to SELL by AUCTION, at the BRICKFIELDS, [illegible], on MONDAY, APRIL [illegible], at ELEVEN [illegible], [illegible], wheeling planks and plates, [illegible] & [illegible].—May be viewed on SATURDAY previous to the sale. Catalogues had on the Premises, at the [illegible] Arms, [illegible]-street, Clerkenwell; and of the Auctioneers, 7, Ale-court, Throgmorton-street.

OLD FORD, near VICTORIA-PARK.— FREEHOLD BUILDING GROUND TO BE LET, with liberal cash advances, admirably suited for building [illegible] houses, which are much required in this rapidly improving [illegible] neighbourhood, which are and [illegible].—For further particulars apply to Mr. GEO. CLARKSON, Surveyor and Land Agent, 48, Penton-street, Pentonville.

HOLLOWAY.—FREEHOLD BUILDING GROUND TO LET, with liberal cash advances, to respectable builders, admirably situated [illegible] which are much required in this [illegible] neighbourhood [illegible].—For further particulars, apply to Mr. GEORGE CLARKSON, Surveyor and Land Agent, 48, Penton-street, Pentonville.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 1, Dane's-inn, St. Clement's, Strand.

FREEHOLD GROUND, Fetter-lane.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the [illegible]th of APRIL next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking on BUILDING LEASE for eighty years, certain PLOTS of GROUND, situate at the south-west end of Fetter-lane. Further particulars may be had, and a plan seen, on application to Mr. HAYWOOD, Engineer to the Commissioners, at their offices in the Guildhall. The Commissioners will require a plan and elevation of the Premises proposed to be built to be submitted to them for approval, and do not bind themselves to accept any [illegible] JOSEPH DAW.

Sewers' Office, Guildhall, March [illegible], 1855.

FREEHOLD LAND TO BE LET, on Building Lease.—To the [illegible] Mr. Henry WEBB, [illegible], [illegible] LOTS of FREEHOLD LAND [illegible], Islington, [illegible].—For particulars apply to Mr. HENRY WEBBER, Timber Merchant, 31, Old-street, St. Luke's.

FREEHOLD BUILDING LAND.—FOR SALE, TEN ACRES, having upwards of 1,400 feet of frontage to [illegible] roads, [illegible] Forest-gate Station, Stratford, Essex, [illegible] Fenchurch-street and Stratford Stations; also between Eleven and Twelve Acres, having [illegible] feet of frontage to good newly made roads, by 230 feet deep, near the Carshalton Station of the Epsom Railway, [illegible] miles from London.—Apply to Mr. D. B. SLADEN, Surveyor, 18, King-street, Cheapside.

FREEHOLD LAND TO BE LET, at a low ground-rent for [illegible] Years, or Sold, land-tax redeemed, situate in [illegible]-street, Walthamstow, with three prominent frontages. Ends of [illegible] feet, and [illegible] frontage, 1[illegible]5 feet.—One other [illegible], side [illegible], at a [illegible] which has been much wanted in that neighbourhood.—Elevations [illegible] may be seen, and particulars known, by letter, stating [illegible], to Mr. TEMPLE, 2[illegible], Margaret-street, Cavendish-square.

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES TO BE LET for detached or semi-detached villas, on the [illegible] Estate. This estate [illegible] for building purposes at [illegible] villas are in great demand, on account of the [illegible] being lofty, dry, well drained, and exceedingly healthy. Assistance will be afforded to responsible parties.—For particulars, apply to Messrs. J. and W. TODD, Milner-street, Brompton, London, or Belmont, Lee, Kent; or Messrs. NELSON and INNES, 6, Whitehall; and of Messrs. KIRKMAN and ENGLEHEART, King William-street, City.

BUILDING AGREEMENT TO BE SOLD. To BUILDERS, BUILDING SOCIETIES, and OTHERS. HAVERSTOCK HILL, HAMPSTEAD-ROAD.—TO BE SOLD, a valuable Building Agreement for a PLOT of FREEHOLD LAND, situate in one of the best, healthiest and most commanding positions in London, and only three minutes' walk from the Railway Station, Chalk Farm, whereon is to be built Fifty-six Houses. There is sufficient brick-earth dug and prepared for making at once bricks sufficient for completing the whole of the houses. The Plant necessary for carrying on the works could be had with the brick-earth at a fair valuation, or the holder of the land would make the bricks at a low price to be agreed upon.—For particulars apply to Mr. NUTTALL, Land Surveyor and Auctioneer, Prince of Wales-road, Haverstock-hill.

MAITLAND-PARK, HAVERSTOCK- HILL, HAMPSTEAD-ROAD. Land-tax redeemed.—TO BE LET, on building leases, for 99 years, desirable BUILDING SITES upon the above estate. The continued demand for houses in this locality, and the picturesque position of the property adjoining the grounds of the Orphan Working School, render this a desirable opportunity for builders or gentlemen wishing to erect villas for themselves.—For plans and terms apply to the Secretary of the Orphan Working School, 32, Ludgate-hill; Messrs. TERRELL and CHAMBERLAIN, [illegible], Basinghall-street; the Architects, Messrs. WEHNERT and ASHDOWN, 43, Charing-cross; or at the Lodge attached to the School.

ELIGIBLE BUILDING LAND TO BE LET, in the very best part of the immediate neighbourhood [illegible] dry and [illegible] timbered, and within ten minutes' walk of either railway station. A very liberal [illegible] term will be granted.—For particulars apply to Mr. T. L. ROBINSON, 2[illegible], High-street, Croydon, Surrey.

TO LET, Marsh-street, Walthamstow, a SITE of GROUND [illegible] with large walled [illegible] garden, and handsomely-timbered shrubberies. [illegible] down [illegible].—For further particulars apply to Messrs. PANSON, Laurence Pountney-lane, City.

BUILDING LAND near a RAILWAY STATION, where Houses are much wanted. FOUR ACRES with Frontage [illegible] quarter of a mile from [illegible] south from the [illegible] Land [illegible] for Factories with river frontage, can also be obtained on application to Messrs. MEESON and [illegible], ESSEX. Bricks, Lime, Plants, &c. [illegible] in this neighbourhood.

LAND.—FOR SALE, a small FREEHOLD PARK, containing fifty acres, well studded with oak timber, and enclosed with park paling, [illegible] on an eminence commanding views of great beauty [illegible], [illegible] and two north-west from the Romford Station. Well adapted for a cemetery.—For particulars apply to Mr. E. SAGE, Furze House, near Romford.

OXFORD.—Valuable BUILDING LAND, to be LEASED on a term not exceeding [illegible] years. It immediately adjoins the City of Oxford, and belongs to the President and Scholars of St. John's College. The land is proposed to be let in large or small quantities, for the erection of private residences, and builders, speculators, and others may obtain allotments on such terms as will insure peculiar advantages, as it is well known that genteel residences are much wanted, and in every respect it is most healthily situated on a fine bed of gravel, has springs of pure and excellent water, and good bricks may be obtained within a few hundred yards of the site.—For particulars, apply to Messrs. SECKHAM and CO., [illegible] 7, St. Aldate's-street, Oxford.

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The Builder,

Architect, Engineer, Operative & Artist.

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THE ARCHITECTURAL MUSEUM, CANON-ROW, WESTMINSTER.

PRIZES of TEN POUNDS each, will be awarded to Art-Workmen, during the present year, for the most successful specimens of WROUGHT IRON WORK and STONE CARVING.—Prospectuses, &c. may be had at the Rooms of the Museum, and at the Office of "The Builder."

GEORGE GILBERT SCOTT, Treasurer.
HENRY CLUTTON, Hon. Sec.

April 10, 1856.

ARCHITECTURAL ASSOCIATION.—At the next Ordinary Meeting, APRIL 18th, Mr. G. J. WIGLEY will conclude his "Archæological Notes on Jerusalem." The Class of Design will meet APRIL 25th,—subject for sketch, "Entrance Gateway to a Cemetery."

T. W. GOODMAN, } Honorary
J. A. BUNKER, } Secretaries.

Lyon's Inn Hall, Strand.

NOTICE is hereby given, that a GENERAL QUARTERLY MEETING of Members of the INSTITUTION of BUILDERS' FOREMEN and CLERKS of WORKS will take place on WEDNESDAY EVENING next, at the BAY-TREE TAVERN, St. Swithin's-lane, for the purpose of transacting the usual quarterly business. W. ALLARD, Secretary.

COMPETITIONS.

RICKMANSWORTH CEMETERY. — To ARCHITECTS The Burial Board for this Parish are desirous of receiving Plans and Drawings for TWO CHAPELS and SEXTON'S HOUSE, &c. &c. under the Burial Act. The site of the cemetery, with the buildings thereon, will not exceed two acres. The plans and drawings to be sent in on or before FRIDAY, the 18th APRIL instant on which day the Board meet), addressed "To the Clerk to the Burial Board, Rickmansworth." The Board do not pledge themselves to defray any expenses incurred in the preparation and submission of the plans and drawings, nor to accept any one plan or drawing in particular.—Rickmansworth, April 5, 1856

TO ARCHITECTS, LANDSCAPE GARDENERS, AND OTHERS.

SCARBOROUGH PUBLIC BURIAL-GROUND.—The Scarborough Burial Board is desirous of receiving Designs, Ground Plans, Sections, Elevations, Specifications, and detailed Estimates for the LAYING-OUT as a PUBLIC BURIAL-GROUND the land selected for the site, containing ten acres, and for erecting thereon two chapels, with lodges and entrance-gates. The whole cost of buildings and entrance-gates not to exceed 2,000*l*. The plan and levels of the ground may be inspected at the Office of the Board, Town Hall, Scarborough, and Premiums of 15*l* and 10*l* will be awarded to the two designs respectively which the Board may consider as being first and second as regards merit under the circumstances. Neither of the premiums will be paid unless a Tender be accepted by the Board for the actual execution of the works at or within the stipulated sum of 2,000*l*. The designs and estimates, with motto, and a sealed letter similarly endorsed, containing the author's name and address, are to be sent "To the Scarborough Burial Board, under cover to their clerks, on or before the 14th day of MAY, 1856.

JOHN COOK, } Joint Clerks to the
J. P. MOODY, } Burial Board.

Town Hall, Scarborough, April 5th, 1856.

LIVERPOOL EXCHANGE. — The Committee of the Proprietors of the Liverpool Exchange being desirous of EXTENDING the ACCOMMODATION of the NEWS-ROOM, and of improving the arrangement of the present Offices in the Buildings, are willing to receive DESIGNS in PENCIL to effect those purposes. If more than five designs be furnished, the Committee will select that number, for the authors to perfect each a set of plans, accompanied with an estimate of the cost, for each of which 20*l* will be given. Should any one plan in whole or in part be adopted, and acted upon, the designer will be preferred in carrying out the work. To be delivered on or before the 19th of MAY, to Mr. J. H. YOUNGHUSBAND, Secretary and Treasurer, from whom any further information may be obtained.

COMPETITIONS.

BLANDFORD UNION.—To ARCHITECTS BUILDERS, &c.—The Guardians of the Blandford Poor-law Union solicit PLANS for the ERECTION of a NEW WORKHOUSE capable of containing 250 inmates, with every necessary office required by the Poor-law Board. The ground on which the building is to be erected measures about 460 feet by 200. A plan of the ground if required may be obtained on application to the clerk on payment of 5*s*. The drawer of the plan approved by the guardians if sanctioned by the Poor law Board, will receive a premium of 10*l* provided he should not afterwards become the contractor for the works. Plans must be sent, free of carriage, to the Office of the Clerk, on or before the 3rd MAY.—By order of the Board,

Blandford, April 8, 1856.

TO ARCHITECTS.

THE COMMITTEE of the CONGREGATIONAL CHAPEL, DORCHESTER, are desirous of receiving DESIGNS, to comprise plans, specifications, and estimates for a NEW CHAPEL, to be erected in South-street (the land has a frontage of 92 feet bounded by houses on each side, tapering back to 42 feet,—118 feet long), to seat 820 persons on the ground-floor, and 100 in an end gallery, with a SCHOOL-ROOM and VESTRY attached: the whole expense of fittings of Chapel, &c. not to exceed 1,800*l*. Access to the school-room by a passage from the front. The neighbouring wall being high, the side-lights must be more than a usual height from the floor. The side-walls may be plain, as they will be hidden from the street by the adjoining houses. A premium of 10*l* will be given for the most approved design, unless the Architect shall be employed to carry out the work, the premium will then merge in the commission: the amount of such commission to be stated at the time of sending in the plan. A specification, stating the general mode of construction, the materials to be used, and the manner of finishing, to be sent with the plans to assist the comittee in their decision. Each design to be sent in accompanied with a sealed letter, bearing same motto or device, to distinguish it from others, on or before the 5th of MAY next, to M. PEVENSHI, Esq. Dorchester, of whom further particulars may be obtained.

TO ARCHITECTS.

ELIZABETHAN CLOCK-TOWER.—FIVE GUINEAS PREMIUM will be given for the best DESIGN for a SQUARE ELIZABETHAN CLOCK-TOWER, including elevation, plan, vertical section &c. Materials, Red and White Brick and Flint. For further particulars apply to Mr. GEORGE BENNETT, Maker of the London-bridge Clock, Greenwich, Kent.

CONTRACTS.

TO BUILDERS AND CONTRACTORS.

MIDLAND COUNTIES INSURANCE COMPANY'S OFFICES, LINCOLN.—Persons willing to CONTRACT with the Directors of the Midland Counties Insurance Company for the ERECTION of their NEW OFFICES, proposed to be built on a site situate in Silver street and Bank-street, in the City of Lincoln, may view the drawings and specifications, and obtain other information relating thereto, on application at our Offices after WEDNESDAY, the 9th day of APRIL next, until 23rd APRIL next, on which latter day, by TWELVE o'clock at noon, Tenders are to be delivered at the Company's present Offices, Cornhill, Lincoln, sealed and endorsed "Tenders for Offices" &c. addressed to WILLIAM ANDREW, Esq. Secretary. The Directors do not pledge themselves to accept the lowest Tender.—By order of the Directors.

BELLAMY and HANBY, Architects and Surveyors,
30, Broad-gate, Lincoln.

Lincoln, March 25, 1856.

TO GENERAL CONTRACTORS.

MARSH CHAPEL and GRAINTHORPE INCLOSURE, LINCOLNSHIRE.—The Valuer acting in the matter of the Inclosure of the Out Marsh and Fifty Lands at Marsh Chapel and Grainthorpe, in the county of Lincoln, is desirous of receiving TENDERS for the execution of the following WORKS:—viz.

CONTRACT No. 1.—For the construction of One Mile and Fifty Chains in length of New Sea Bank, and the excavation of Sixty Chains in length of new Drains.

CONTRACT No. 2.—For the erection of a New Sea Sluice of Brick and Stone, with Land and Sea Doors, to flow Waterway, with all necessary Piling, &c.

Plans and specifications of the above works have been prepared, and may now be inspected at the Contractors, until the 14th of this month, at Mr. LEWIN'S, the Witham Office, Boston, of whom all necessary information may be obtained. Separate Tenders for the above works are to be delivered to me, at my residence, before TWELVE o'clock on TUESDAY, the 29th instant.

SAML. VESSEY, Valuer.

Manor-house, Halton Holegate, Spilsby.

Ample security will be required, and the valuer will not be bound to accept the lowest Tenders submitted.

Grainthorpe Bank is available for small craft, at spring tides, to within 150 yards of the New Sea Sluice.

TO BUILDERS, PAINTERS, AND OTHERS.

THE CHURCHWARDENS of CHRIST-CHURCH will meet at the Vicarage, Watney-street, Commercial-road East, on MONDAY, APRIL 21st, at SIX o'clock precisely in the evening, to open TENDERS for REPAIRING and REPAINTING the said CHURCH and VICARAGE, specification of which can be seen at the Vicarage, between the hours of TEN and FOUR, at which time further particulars obtained at the Office of Mr. ANDREW WILSON, Architect, 34, Canon-street-road, St. George's in the East. The party contracting will, if required, be bound to enter into a written contract and bond at his own expense, with two sufficient sureties, to be approved of by the said Churchwardens, for the due and punctual performance of the works under the several terms, conditions, and stipulations contained in the specification. The Churchwardens do not bind themselves to accept the lowest Tender, or hold themselves liable to any charge connected with the preparation of the estimate.

CONTRACTS.

NOTICE to IRONFOUNDERS and SMITHS.—The Commanding Royal Engineer of the Dover district hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before MONDAY, the 14th day of APRIL, 1856, from persons desirous of contracting for SUPPLYING ARTICLES of CAST and WROUGHT IRON at the several barracks in the Dover district for the War Department. Specifications and drawings of the articles to be supplied, with conditions of the contract, may be seen by persons fully competent to undertake the supply of the articles, and forms of Tender obtained, at the Royal Engineer Office, Archcliff Fort, Dover, between the hours of TEN and FOUR o'clock, from THURSDAY, the 27th MARCH, to SATURDAY, the 12th APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work, will be required to enter into a bond, with two eligible securities, jointly and separately to be bound under a penalty of 500*l*. for the due performance of the contract. Tenders for the above service to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed "Tender for Stores, Dover District."

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, 19th March, 1856.

NOTICE to BUILDERS.—Notice is hereby given, that TENDERS will be received at the office of the Director-General of Contracts, War Department, Pall-Mall, London, from such persons as may be desirous of undertaking a Contract for the ERECTION of a GUARD HOUSE and CELLS, &c. at Winchester Barracks, in the county of Hants. Plans and specifications may be seen at the Royal Engineer Office, Winchester, where also forms of Tender may be obtained, every day (Sundays excepted), from the 10th until the 26th day of APRIL, 1856. Tenders to be delivered on or before the 28th day of APRIL, 1856. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders. No notice will be taken of any of the Tenders unless made on the printed forms, to be obtained at the Royal Engineer Office, Winchester Barracks.

Royal Engineer Office, Portsmouth, April 1, 1856.

NOTICE to BUILDERS and CONTRACTORS—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice that Sealed TENDERS will be received at the office of the Director-General of Contracts, Pall Mall, London, on or before THURSDAY, the 1st day of MAY, 1856 from Persons desirous of CONTRACTING for LAYING NEW BOARDED FLOORS and GALVANIZED IRON PLATE CEILINGS at WALMER BARRACKS. A specification of the works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Barracks, Walmer, between the hours of TEN and FOUR o'clock, from MONDAY, the 14th of APRIL, to WEDNESDAY, the 30th of APRIL, 1856, both days inclusive. The party whose Tender may be accepted for the work, will be required to enter into a bond, with two eligible Securities, jointly and separately, to be bound under a penalty of 100*l*. for the due performance of the Contract. Tenders for the above work to be addressed to the Director-General of Contracts, Pall Mall, London, and endorsed "Tender for Work at Walmer Barracks."

N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, 7th April 1856.

TO BUILDERS AND CONTRACTORS.

NOTICE is hereby given, that TENDERS will be received by the Director-General of Contracts, War Department, Pall Mall, London on or before SATURDAY, the 10th day of May next, from Persons desirous of CONTRACTING with the War Department for ERECTING SOLDIERS' BARRACK ROOMS over the Stables, South Square, Brompton Barracks, Chatham. Plans and specifications of the work are to be seen, and Forms of Tender obtained on application at the Royal Engineer Office, Chatham, between the hours of TEN and FOUR, till the 9th of May next, Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately bound under a penalty of £3,000 for the due performance of the contract. Tenders to be addressed to "The Director-General of Contracts, War Department, Pall Mall, London," and to be delivered in envelopes endorsed, "Tenders for Works at Brompton Barracks, Chatham." No Tender can be admitted after the said 10th day of MAY, next.

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

TO BUILDERS AND CONTRACTORS.

DUDLEY UNION WORKHOUSE.—Builders and Others are invited to deliver TENDERS for the execution of the several Works required to be done in the ERECTION of a NEW WORKHOUSE, prop sed to be built at Shavers' End, near Dudley, in the parish of Sedgley, in the county of Stafford. The plans and specification may be seen on application to the Architects, Messrs. HILDRAKE and LOVATT, Market-place, Wolverhampton to whom Tenders to be forwarded, under cover, to THOMAS SHUTHONS, Esq. (Clerk of the Court) Bank, Dudley, and endorsed "Tender for New Workhouse," and must be received on or before the 1st day of MAY next. A separate estimate to be given for the School Building. Each Tender must be made agreeably to the form to go with the plans and specifications, to which parties are referred for all further particulars relative to the proposed contract. The Guardians do not pledge themselves to accept the lowest Tender.

TO CONTRACTORS, BUILDERS, AND OTHERS

CLUN UNION.—Persons desirous to CONTRACT for MAKING IMPROVEMENTS in the DRAINAGE of the CLUN UNION WORKHOUSE PREMISES, situate at Bishop's Castle, in conformity with the plans and specifications now lying in the Clerk's office for inspection, are requested to send in Tenders, addressed to the Board of Guardians at the Workhouse, in Bishop's Castle, on or before the 5th day of MAY next. By order of the Board,

FREDERIC PARDOE, Clerk.

Bishop's Castle, March 14, 1856.

[*For remainder of Contracts see next page.*

CONTRACTS.

HASTINGS MUNICIPAL BURIAL BOARD.—To CONTRACTORS and BUILDERS.—The Council of Hastings give Notice, that they are prepared to receive TENDERS from competent persons for the ERECTION of TWO CHAPELS, TWO LODGES, RECEIVING-HOUSE, FRONT WALL, GATES, PIERS, and other WORKS, at the New Burial Ground near Ore Church, Hastings. The plans, drawings and specification may be seen on and after the 15th day of APRIL instant, at the office of the Town Clerk, High-street, Hastings, between the hours of TEN A.M. and FOUR P.M. where Tenders, only on the printed form supplied by the Council, are to be delivered on or before TWELVE of the clock at noon of TUESDAY, the 29th day of APRIL instant, properties according to the conditions will be required. The Council do not bind themselves to accept the lowest or any Tender.—By the Council.

JOHN G. SHORTER, Town Clerk.

Hastings, April 8, 1856.

GLASGOW CORPORATION WATER-WORKS.—MUGDOCK RESERVOIR and TUNNEL.—To CONTRACTORS.—The Committee of Commissioners hereby give Notice that they have POSTPONED their intention to open the TENDERS lodged for No. 2, or MUGDOCK CONTRACT, which are in the meantime retained and preserved under seal, for future consideration; and it has been resolved to receive new and revised Tenders from Contractors, offering alternatively to execute and complete the said Contract in two separate portions, the one part comprehending the Mugdock Service Reservoir and relative work, and the other the Tunnelling and relative work, conform to specification and schedule, which new and revised Tenders will be considered and disposed of along with the Tenders already lodged, so far as not superseded by the lodgment of the revised Tenders now requested. As formerly advertised, the whole work consists, among other things, of a Tunnel 3,840 yards in length, and eight feet in diameter, extending from near the village of Strathblane to the valley south of Mugdock, near Milngavie, and the formation of a large Reservoir, to be called the Mugdock Service Reservoir with some short Tunnels, and all the masonry watercourses, divormans of paths, &c. &c. connected therewith. The earthwork, puddling and stoning in the embankment, and cuttings of the Reservoir, will amount to nearly 500,000 cubic yards. The plans, sections, drawings, and specification, will be again exhibited for the inspection of intending contractors in the Town-hall, at the Cross of Glasgow, entry No. 12, Trongate, on and after WEDNESDAY, 2nd day of APRIL next, where copies of the specification and plans, and all other requisite information will be obtained; and also from the Subscriber, Mr. BURNET, at his office, City Chambers, Glasgow; and all further information necessary may be obtained from J. F. BATEMAN, Esq. the Engineer, at his offices in Manchester, and from Mr. ALFRED MOORE, the Assistant Engineer, at Milngavie, who will accompany Contractors over the ground.—Revised Tenders, in the form above required from the few who have already tendered, and also new Tenders from other contractors, addressed to the Commissioners, sealed and marked "Tender for Mugdock Contract," must be delivered to the Subscriber at his said office, City Chambers, Glasgow, on or before THURSDAY, 17th APRIL next.

By order of the Committee,

JOHN BURNET, Secretary.

Glasgow, 26th March, 1856.

GLOUCESTER WATERWORKS.—IRON CASTINGS.—The Gloucester Board of Health are prepared to receive TENDERS for the SUPPLY of about 250 TONS of WATER-PIPES, and other castings for town distribution. Printed specifications and forms of Tender (price 5s.) may be had on application to the undersigned. All Tenders are required to be sent in to the Clerk, under a sealed cover, marked "Tender for Water-pipes and Castings," and addressed to "The Gloucester Board of Health," on or before TUESDAY, the 15th day of APRIL instant. The Board do not pledge themselves to accept the lowest or any Tender. K. H. FRYER, Clerk to the Board.

Gloucester, April 2, 1856.

TO CONTRACTORS AND BUILDERS.

SURREY HOUSE OF CORRECTION, WANDSWORTH-COMMON.—The Visiting Magistrates of this Prison purpose Extending the Accommodation for Female Prisoners, and making certain Alterations in the Residences of some of the Officers; the specifications, and conditions may be seen at the Sessions House, Newington from the 10th to the 20th inst. The Visiting Magistrates will meet at the said Sessions House on TUESDAY, the 29th inst. at the hour of 12 o'clock, for the purpose of opening such TENDERS for the execution of the work as may then and there be presented to them.—Further information, and the plans and specification may be obtained upon application to Mr. HILL, Architect, at 27, King street, Cheapside, or Christ Church-buildings, Birmingham. The Visiting Magistrates do not bind themselves to accept the lowest or any Tender. Every contractor applying for a copy of the bills of quantities will be required to deposit the sum of £2 which will be returned in all cases in which a Tender has been delivered.

(Signed) WORONZOW GREIG, Clerk of the Peace.

Office of the Clerk of the Peace, North-street, Lambeth, April 10th, 1856.

TO PAINTERS and OTHERS.—TO BE REPAIRED, for the Freeholder, the HOUSE No. 74, WARDOUR-STREET, according to a specification to be seen on the Premises on MONDAY, APRIL 14th, and Two following Days. Tenders to be delivered on or before FRIDAY, 18th APRIL, at the Office of Mr. LOCKYER, Southampton-street, Fitzroy-sq. are. The advertiser will not be bound to accept the lowest Tender.

TO CONTRACTORS, MASONS, PAVIORS, AND OTHERS

ROAD MATERIALS, &c. PARISH of ST. MARY, LAMBETH.—The Vestry of the said Parish, hereby give notice, that they will meet at the Vestry hall, Kennington-green, on THURSDAY, the 17th day of APRIL instant, at SEVEN of the clock in the evening precisely, to receive TENDERS for the SUPPLY of GUERNSEY BROKEN GRANITE, CLEAN BROKEN FLINTS, PIT GRAVEL, &c to be delivered on the roads in such parcels, and through such wharf, as ordered, clear of any coarse [illegible]. Also to receive TENDERS for the performance of "LUMPS" and PAVIORS' WORKS. Persons disposed to contract, must send in tenders, sealed and indorsed, "Tender for ——," describing the nature thereof, before TWO of the clock, on the day of meeting. Such Tender must contain the names and address of two persons as sureties, for due performance of the Contract. The Contract will be prepared at the expence of the Vestry. Printed Tenders only will be received, and the Vestry do not pledge themselves to accept the lowest or any Tender. The only form of Tender which will be received, with other requisite particulars, may be obtained on application to the Clerk. By order,

THOMAS ROFFEY, Clerk to the Vestry.

Office, Vestry-hall, Kennington, Ap. 11 10, 1856.

CONTRACT for DAY and JOBBING WORKS.—The Vestry of the Parish of Saint John, Hampstead, hereby give notice, that they are ready to receive TENDERS from parties who may be willing to CONTRACT, until Michaelmas, 1857, for the EXECUTION of DAY and JOBBING WORKS in the said Parish, at or under, or above a schedule of prices, which, together with the form of Tender and Contract, may be seen, or copies thereof be purchased, at the Office of the Surveyor of the Vestry, on MONDAY next, the 14th of APRIL and on every subsequent day, between the hours of TEN and FOUR, up to the day and hour fixed for sending in Tenders. The Vestry do not bind themselves to accept the lowest Tender. Security will be required, and the contractor, or his authorised agent, must reside at Hampstead during the continuance of the Contract. Tenders in the form, and agreeably to the instructions contained in the scale of prices, must be sent or delivered to the Vestry Clerk, on or before TWELVE o'clock at noon, at latest, on FRIDAY, the 18th day of APRIL instant; and the parties tendering must attend personally, or by some authorised agent, at the meeting of the Vestry, at the Board-room, in the Workhouse, on the same day, at HALF-PAST SEVEN o'clock in the evening precisely.

By order of the Vestry,

THOMAS TOLLER, Vestry Clerk.

Vestry and Surveyor's Office, Workhouse, New-end, Hampstead, April 7, 1856.

CONTRACTS.

TO BUILDERS.

PERSONS desirous of TENDERING for the ERECTION of a SCHOOL and MASTER'S RESIDENCE at Croydon, near Accrington, Lancashire, will be ready, on or after THURSDAY, and specification at the Hardwicke Arms Inn, Accrington, or at the office of Mr. J. F. CLARK, Architect, Newmarket. Tenders are to be delivered on or before the 24th of APRIL next, and the lowest or any will not necessarily be accepted.

MORTGAGES of ROCHESTER-BRIDGE ESTATES. LOAN REQUIRED.—The Wardens and Assistants of Rochester-bridge will be ready, on or after THURSDAY, the 15th day of MAY, 1856, at their Audit Chamber at Rochester, in Kent, to open and consider TENDERS or PROPOSALS from persons willing to advance FIVE THOUSAND POUNDS, or any part thereof, in sums of not less than one hundred pounds each, to be secured with interest (payable half-yearly) by transferable mortgage of the Estates properties of the Bridge Corporation, under the regulations and provisions of the Rochester-bridge Acts 1846 and 1856 affecting such loans and the repayment thereof. All sums so advanced are to be paid within one week next after the acceptance of the proposal shall have been notified to the party making the same. Further particulars and extracts from the Acts may be observed on application at the Office. Proposals in sealed envelopes, marked "Tender for Mortgage," stating the amount offered to be advanced and the rate of interest required, may be sent to me at any time previous to SEVEN o'clock in the Forenoon of the said 15th day of MAY, 1856.

By order of the Wardens and Assistants,

The Precinct, Rochester, 4th April, 1856. GEORGE ERSELL, Bridge Clerk.

PARISH of SAINT PANCRAS, in the County of MIDDLESEX.—DEPARTMENT of WORKS.—CONTRACT for REMOVING DUST.—To DUSTMEN, SCAVENGERS, &c.—The Highways, Sewers, and Public Works Committee of the Vestry of the Parish of Saint Pancras, in the county of Middlesex, will meet at the Office of the Board of Works, No. 10, Edward-street, Hampstead road, on FRIDAY, the 18th day of APRIL instant, at HALF-PAST THREE o'clock in the Afternoon, to receive TENDERS from persons willing to CONTRACT for the REMOVAL of the COAL-ASHES, DUST, &c from the Houses and Yards of the several Streets, Squares, Courts, and other places within certain portions of the said parish of St. Pancras, from the 24th day of APRIL ins ant. up to, and inclusive of, the 30th day of SEPTEMBER, 1856, pursuant to the terms of draf contracts to be seen daily, between the hours of TEN in the forenoon and FOUR p.m. at the Office of the Chief Surveyor, 10, Edward-street, Hampstead-road. Sealed Tenders to be sent in, signed by the proposed Contractor, with the names and description of two sufficient sureties for the performance of his Contract, to my office by or before TWELVE o'clock at noon, on the said FRIDAY, the 18th day of APRIL. The Vestry do not bind themselves to accept any Tender. No Tender will be received or accepted unless made out on one of the printed forms.—Further particulars, with the form of Tender can be obtained at the Office of the Chief Surveyor, 10, Edward street, Hampstead road, where also plans and descriptions of the several portions of the parish can be inspected.—By order,

G. W. F COOK, Vestry Clerk.

Vestry Offices, King's-road, Pancras-road, April 3, 1856.

MARGATE CEMETERY, SAINT JOHN THE BAPTIST.—To BUILDERS and CONTRACTORS. Persons desirous of CONTRACTING for the ERECTION of TWO CHAPELS, LODGE, and BOUNDARY-WALLS, and for FORMING ROADS and PLANTATIONS in the New Burial-ground of the Parish of St. John the Baptist, Margate, are hereby informed that the PLANS and SPECIFICATIONS may be seen at the Town Hall, Margate, until the 8th day of APRIL instant, and until the 28th day of the same month, 1856. The Tenders are to be delivered, sealed and directed, to the Burial Board at the Town Hall, where they will be opened at TWELVE o'clock at noon on that day. The Board do not pledge themselves to accept the lowest or any Tender.—S. W. TRACY, Architect, Ipswich.

JOHN POUNSETT, Clerk to the Board.

Margate, April 1, 1856.

TO BUILDERS

THE COMMITTEE for the ENLARGEMENT of CHRIST CHURCH, PORTSWOOD, are prepared to receive TENDERS for the above-mentioned object. Plans and specifications to be seen at the Offices of Messrs. ELLIOTT and MASON, Architects, 64, Moorland-place, Southampton. Tenders to be sent in, sealed, and directed to Rev. G. S. FITZGERALD, Hamble, Southampton, by TEN o'clock on MONDAY, APRIL 28th, when they will be opened by the Committee. The Committee do not pledge themselves to take the lowest Tender.

April 9th, 1856.

TO BUILDERS

THE UNION BANK of LONDON hereby give Notice, that sealed TENDERS will be received for BUILDING a BRANCH BANK in Fleet-street, the drawings and specification of which may be seen at Mr. AITCHISON'S Offices, Munsey-court, Trinity-square, City, on and after 9th APRIL next. The Tenders to be in one sum for the whole of the works. The quantities will be supplied on the payment of £1 each, and the builder who obtains the contract is to pay the difference of cost to the surveyors. The Tenders to be addressed to the Secretary, Union Bank of London, Fleet-street, and sent in before 30th APRIL next, and endorsed on the outside, "Tender for Branch Bank, Fleet-street." The Directors do not bind themselves to accept the lowest or any of the Tenders.

EAST LANCASHIRE RAILWAY.—The Directors are prepared to receive TENDERS for the MAINTENANCE of the PERMANENT WAY and WORKS, also for the formation and laying down a Second Line of Rails from Stubbins Junction to Rawtenstall, including all the works connected therewith. Specifications and Plans may be seen on and after the 26th instant, at the Company's Station, Bury Station. —Sealed Tenders, endorsed "Tender for Maintenance of Permanent Way and Works," to be addressed to the undersigned, before the 19th day of APRIL next.—By order,

MYLES FENTON, Secretary.

Bury, Lancashire, March 19th, 1856.

TO STEAM-ENGINE MAKERS.

THE TOWN COUNCIL of the BOROUGH of BRIDGNORTH (as Local Board of Health) are prepared to receive TENDERS from persons willing to make and erect an additional CONDENSING STEAM-ENGINE, PUMPS, &c. at their Water-Works, in the Lower Town, Bridgnorth.—Specifications and conditions of Contract, may be obtained by payment of 5s. Drawings and plans inspected, and further particulars had, by application at the Office of J. PILBROW, C.E. Tottenham Engineer to the Board). Sealed Tenders, endorsed "Tenders for Steam-Engine," and addressed to the Local Board of Health, Bridgnorth, Salop, must be sent on or before THURSDAY, the 1st day of MAY next.

Bridgnorth, April 5, 1856 By order of the Board.

THE CONSERVATIVE LAND SOCIETY.

TRUSTEES.

Lord Viscount Kaneleigh.
The Hon. Col Lowther, M.P.
Sir Archibald Edmonstone, Bart. C. B. Hamilton, M.P.
J. C. Cobbold, esq. M.P.

To ROAD CONTRACTORS &c. The Executive Committee are prepared to receive TENDERS for CONSTRUCTING the ROADS and DRAINS on the HACKNEY ESTATE. The drawings and specification may be seen at the Offices of the Surveyor, Mr. GEORGE MORGAN, on and after WEDNESDAY, APRIL 16th, between the hours of ELEVEN and TWO. Tenders are to be sent on or before TWELVE o'clock on FRIDAY, APRIL 25th, addressed to the Surveyor, and endorsed "Tender for Roads, &c. Hackney Estate." The Executive Committee do not bind themselves to accept the lowest or any Tender

CHARLES LEWIS GRUNEISEN.

33, Norfolk-street, April 10, 1856.

CONTRACTS.

TO BUILDERS.

PERSONS desirous of giving TENDERS for the REPAIRS of CHANCELS of Churches, at the following places, in the County of Somerset, are requested to common, make their names and references, to Mr. CHRISTIAN, Architect, 10, Whitehall-place, London, on or before the 19th instant:—At Mark and Wedmore, near Highbridge and Glastonbury; and at Cudworth, near Ilminster and Crewkerne.

JOHN WALKER, Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor,

IRON MERCHANT, &c.

Offices and Works—Mill-wall, Poplar, London.

A. MOREWOOD and CO. (late Morewood and Rogers),
Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham,
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Iron Work.
OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

WILLSON and ROBINSON, GALVANIZING and CORRUGATING IRON WORKS, CHURCH-ROW, LIMEHOUSE, LONDON.

SAMUEL HEMMING'S PATENT much approved PORTABLE BUILDING and ROOFING MANUFACTORY, REMOVED from BRISTOL to BOW, near London, close to the Bow Railway Station.—A large variety of buildings always on view, churches, chapels, shooting boxes, lodges, bazaars, ornamental villas, dwelling-houses, farm buildings, and fire-proof stores. Also, railway stations, trucks, and carriages made to any plan on the shortest notice.

PATENT GALVANIZING and CORRUGATING IRONWORKS (improved Process).
WORKS—GLASS-HOUSE YARD, opposite the Entrance to GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

TUPPER and CARR, CORRUGATED IRON MANUFACTURERS, Galvanized and Ungalvanized, Iron Roof Builders, and Electro-Telegraph Contractors. Works, BIRMINGHAM and LIMEHOUSE. Offices—MANSION HOUSE-PLACE, LONDON. N.B. Iron of every description galvanized. An allowance to the Trade.

JOHN HENDERSON PORTER, ENGINEER AND CONTRACTOR, IRON BUILDING AND ROOFING WORKS, GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.

PATENT PLUMBIC ZINC. GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about	18 oz.	per foot super.	
12	"	20	"
13	"	23	"
14	"	26	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

SKAIFE'S GALVANIZING WORKS, Commercial-road, Limehouse, London.
Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where iron not liable to rust is required.
Patent Galvanized Iron supplied in every form.
Sheets plain and corrugated.—Roofs fixed complete.
J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.
An Allowance to the Trade.

AUSTIN'S IMPERIAL PATENT SASH and BLIND LINE can be obtained of all ROPEMAKERS, IRONMONGERS, FACTORS, AND WHOLESALE HOUSES IN TOWN OR COUNTRY.
Established 1774.

FENDERS, STOVES, and FIRE-IRONS.—Buyers of the above are requested, before finally deciding to visit WILLIAM S. BURTON'S SHOW-ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, FIRE-IRONS, and GENERAL IRONMONGERY as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with bronzed ornaments and two sets of bars, 2l. 14s. to 6l. 10s.; ditto, with ormolu ornaments and two sets of bars, 5l. 10s. to 12l. 12s.; bronzed fenders complete, with standards, from 7s. to 3l.; steel fenders, from 2l. 12s. to 6l.; ditto, with rich ormolu ornaments, from 3l. 12s. to 7l. 7s.; fire irons, from 1s. 9d. the set to 2l. 4s. Sylvester and all other patent stoves, with radiating hearth plates. All which he is enabled to sell at these very reduced charges.

Firstly—From the frequency and extent of his purchases; and Secondly—From those purchases being made exclusively for cash.

The alterations and additions to these extensive premises already by far the largest in Europe), which occupied the whole of last year, are of such a character that the entire of EIGHT HOUSES is devoted to the display of the most magnificent stock of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel Silver, Plated Goods, Baths, Brushes and Turnery, Lamps and Gasaliers, Iron and Brass Bedsteads and Bedding), so arranged in Sixteen Large Show-rooms, as to afford to parties furnishing facilities in the selection of goods that cannot be hoped for elsewhere.

Illustrated catalogues sent per post free.

39, OXFORD-STREET; 1, 1a, 2, and 3, NEWMAN-STREET; 4, 5, and 6, PERRY'S PLACE.—Established 1820.

RANGES.—THE PATENT WORCESTERSHIRE RANGE, Manufactured exclusively by JONES, ROWE, and PERRINS, Worcester. Also to be obtained through the agency of any respectable ironmonger.

"A more economical arrangement for fuel, in the accomplishment of a great deal by small means, or a more compact contrivance for cooking at once all the courses necessary for a dinner, was probably never seen."—*Worcester Herald*, March 15, 1856.

Illustrations of Ranges forwarded upon application.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES

Beyond the current Price of Hoop-iron.

Gauge.	In wide.	Per 1,000 ft.
No 16 ..	1½ ..	7s. 0d.
15 ..	1¾ ..	7s. 6d.
14 ..	2½ ..	8s. 0d.
13 ..	3 ..	8s. 6d.
12 ..	3½ ..	9s. 6d.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it a intervals of 1½ inches on both side alternately, and turning one side of each notch in succession the contrary directions to the reverse sides of the iron, thus forming reversed claws, which are so bent that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

London Depôt—463, EARL-STREET, BLACKFRIARS.

FIRE-PROOF CONSTRUCTION.—

FOX and BARRETT'S PATENT.

This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desiderata of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

Further information may be obtained of the Proprietor of the patent,—Mr BARRETT, 13, York-buildings, Adelphi.

CAST-IRON PIPES, IRON-WORK FOR OVENS, &c.

RAIN PIPES, &c. — F. A. TIDDEMAN

and CO. St. Ann's Wharf, Earl-street, City, near Blackfriars-bridge, keep a large stock of Rain Pipes, Heads, Shoes, Elbows, &c. half-round and O-G Gutters, Socket Pipes for Water or Gas, Flange Pipes, Hot Water Pipes and Connections, Sash Weights, and other castings; Iron work for Bakers' Ovens of every description, fitted complete, to be had in sets or in parts.—Prices equal to all competition. Contracts taken to any extent. Goods landed. A powerful crane.

A PRIZE MEDAL for SUPERIOR LOCKS

was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc), Patent Locks of all descriptions, China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, so much admired, &c. 6s. 6d. each.

J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 30 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

COLLINGE'S PATENT HINGES.—

Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental Hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

THE STATUE and IRON FOUNDRY,

Lower Belgrave-place, Pimlico.—Castings of every description executed at the above Works.

IRON FOUNDRY,

HARROW-STREET, LANT-STREET, SOUTHWARK.

W. R. BARTLETT, manufacturer of Girders, Columns, Cast-levers, Newel and Railing Bars, Panels, Iron Coping, Hot Plates, Tank Plates, Area Gratings, Sash Weights, Fly and other Wheels Pinions, Engine and Lathe Centres, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street,

Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, 2½d. per inch, and upwards.

Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.

3-feet Cottage Ranges, with ovens and back boilers, 23s. each.

3-feet self-setting ditto, ditto, 34s. each.

Air Bricks, 4s. per doz.

Best Town Glue, 50s. Ditto, Scotch, 64s per cwt.

Best Fine Cut Clasp and Rose.

½	¾	1	1½	2	3-in. & larger.
10s. 6d.	12s. 6d.	15s. 6d.	15s. 6d.	15s.	14s. per cwt.

And every material required in the building, hall-hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid

TO BELL-HANGERS, GAS-FITTERS,

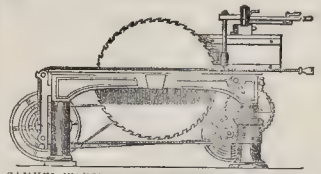
IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire. Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Cornice-poles, Rings and Lacquered Case Tube for Picture Rods Desk Rails, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at

RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

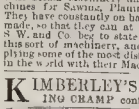
MACHINERY for SAWING, PLANING

MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood made, so that they can at all times on short notice supply them S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines for home and foreign use.

KIMBERLEY'S NEW PATENT FLOOR-

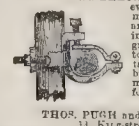


ING CRAMP continues to receive the patronage one and all, of every leading Builder Engineer, and Architect, not only in England, but through out the world. Its simplicity, power, and economy still remain unquestionable, even by the side of its most important rivals, and the speedy, general manner in the sale, is the best proof of it. It is useful in many ways as a cramp, and unlimited evidence can be given that it is a most valuable tool, which no Builder should be without.

London Agents—Messrs. THOMAS PUGH & CO Wholesale Ironmongers, 13 King-street, Snow-hill, London.

KIMBERLEY'S NEW PATENT SCAF-

FOLDING BRACKET entirely supersedes the old and ever-troublesome cords. They are made of every kind as Wrought Iron are light, very cheap, and it is next to impossible to wear them out. They are greatly admired, and require time only to supplant entirely the usually uncertain cords. Bodies, with all particulars, by post. The whole Building Trade admit this is an article they have required for the last century.



THOS. PUGH and CO. Wholesale Ironmongers, 14, King-street, Snow-hill, London

See also KIMBERLEY'S Patent Door Springs, Skylight Screws, Casement Fasteners, Stock Locks, Bench Stops, &c. &c.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY,

PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK.

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS

LIGHTNING CONDUCTORS.—

R. S NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the nobility, clergy, &c. that they supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.

R. S. NEWALL and CO.'s Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world.

OFFICES.—Gateshead-on-Tyne.
194, Strand, London.
67, Hyde-park-street, Glasgow.
27, Dale-street, Manchester

TO ARCHITECTS, &c.—T. SMITH, of

14, Queen street, Oxford-street, begs to call attention to his IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most efficient yet invented. A working model can be seen at the above address, or will be sent for inspection on the shortest notice.

N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

ECONOMIC COOKING-STOVE.—

DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and CO. opening to the Monument, London-bridge. Established A.D. 1700.

BATHS and HOT-WATER APPARATUS.

J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fixing given.—J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

ROYAL POLYTECHNIC GAS FIRE.

BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation. To be seen in action at DEFRIES'S Office 145, Regent-street, London.

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road,

Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

CHARLES BAKER, Builders' Ironmonger,

Nail Factor, Stove and Range Manufacturer (Warehouses, 148 and 149, Borough), begs to offer his reduced List of Prices:—

BEST CUT CLASP NAILS.

1½ in.	1¾ in.	2 in.	2½ in.	3 in. and upwards.
16s. 6d.	16s.	15s.	16s 6d.	14s. per cwt.

Best Sheet Floor Brads, 14s. per cwt.

Best Cut Lath Nails, 16s. ditto.

Elliptic Stoves, double backs, 2½d. per inch, and upwards.

Register Stoves, from 5d. to 10d. per inch.

A good Stock of Berlin Black ditto.

SELF-ACTING COTTAGE RANGES, with CIRCULAR OVENS and BACK BOILERS.

30 in.	32 in.	34 in.	36 in.
28s.	30s.	31s.	31s. 6d.

SELF-ACTING COTTAGE RANGES, OVENS ONLY, 30 inch, 26s. 6d.

SELF-ACTING RANGES, BEST WROUGHT BARS and BRIGHT MOUNTINGS.

3 ft.	3 ft. 3 in.	3 ft. 6 in.	3 ft. 6 in.
56s.	58s.	60s.	60s.

6 in. Two Bolt Rim Locks, 18s. per dozen

6 in. Brass Drawer Locks, 36s. per dozen.

Baker's Improved Drawbacks, for Glass Doors, 2s. 3s. 6d. each.

A very extensive stock of Cabinetmakers' and Builders' Ironmongery, Tools, &c. &c.

ESTABLISHED 1817

WILLIAM HARMER'S SMITHS'

WORK STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSE, 19, Horseferry-road, and 1, New Peter-street, Westminster.—Contractors, Builders, &c. supplied with general Ironmongery at prices equal to all competition.

FURTHER REDUCTION IN PRICES.

	Best Cut Clasp and Rose Nails				
	1¼ in.	1½ in.	1¾ in.	2 in.	2½ to 6 inch.
	16s 6d	16s.	15s.	14s 6d.	14s per cwt.
Best Cut Floor Brads					12s 6d. and 13s 6d. per cwt.
Best Cut Lath Nails					16s. "
Best Zinc Slating Nails					40s. "
Best Glues				47s. to 53s.	"

RAIN WATER CASTINGS per yard.

Sizes	3 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	11d.	1s. 3d.	1s. 4d.	1s. 8d.	2s. 1d.	2s. 8d.	
Half-round Gutters			2s.	2s 4d.	2s. 8d.	3s.	3s. 8d.
O G Gutters				1s.	1s. 3d.	1s. 8d.	1s. 8d.
Ditto, with plain clips cast on			1s. 3d.	1s. 3d	1s. 4d.	1s 6d.	
Ditto, with iron ditto			1s 6d.	1s 9d.	1s. 3d.	1s. 6d.	1s. 7d.

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 6d. per dozen.

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

TERMS—NETT CASH.

Estimates given for any description of Wrought or Cast Iron Work

IRONMONGERY.

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THE LARGEST STOCK AT

THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

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RESISTING SAFES non-conducting and vaporizing) with all the improvements, under their Quadruple patents of 1850-51-54 and 1855 including their Gunpowder Proof Solid Lock and Door (without which no safe is secure).

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MILNER'S PHŒNIX (2128) SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depôt, 47a, Moorgate-street, City. Circulars free by post.

Sold also by HOBBS, ASHLEY, and CO. 97, Cheapside.

J. NAYLOR'S IRONMONGERY, NAIL,

and METAL WAREHOUSE, 385, Oxford-street, near the Marble Arch—Builders, Carpenters, Cabinet-Makers, Locksmiths, and Bellhangers, supplied at the lowest prices.

LOSH, WILSON, and BELL,

NEWCASTLE-ON-TYNE.

Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and STEWART'S PATENT CAST-IRON GAS and WATER PIPES.

Office, No 7, Sise-lane, London.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED

TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 55, High Holborn.

JOHN TANN'S new patent RELIANCE

LOCK and FIRE-PROOF SAFES form the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. WATERLOW, Birchin-lane; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and party-walls.

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53, 54, 55, & 57, WYCH-STREET, STRAND,
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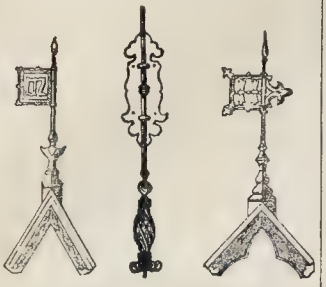

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First-class Prize Medal, Paris Exhibition, 1855.
Illustrated Price-catalogues post-free on application.

SAWING MACHINERY for SALE.—A TIMBER FRAME, to cut bulk, 2 feet 6 inches square; also a DEAL SAWING FRAME, to cut wide plank, 28 inches.—May be seen at College Wharf saw mills, Belvedere-road, Lambeth.

WIRE (SUSPENSION) TRAMWAY.—To CONTRACTORS, OWNERS of QUARRIES, MINES, &c.—The patentees of the Wire Tramway for Propelling Cars or Waggons by their Own Weight, beg to call attention to the great saving of labour, &c. this invention secures in the construction of earthworks, cuttings, embankments, quarries, mines, or any other works where weights are required to be transported from one point to another, and where, from the nature of the locality, and consequent expense, a permanent tramway is impracticable. The patentees are willing to grant licenses for the working of the above invention, and the use of all drawings, plans, &c. necessary for the erection of the apparatus would be furnished free of charge. Terms and further particulars may be had on application to Mr. J. C. SANDLAND, No 39, Cornhill, London.—500 yards of this tramway have been erected in her Majesty's Arsenal at Woolwich, and approved of by the committee of selection.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show—every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list, 10s.—35 and 36, High Holborn.

TO BE SOLD, a Great Bargain, a Circular Ornamental IRON STAIRCASE, complete, rising 11 feet from room to room.—Can be seen between the hours of ten and four, at No. 7, Salisbury-street, Strand.

CHUBB'S LOCKS, with all the recent improvements; STRONG FIRE-PROOF SAFES, CASH and DEED BOXES.—Complete lists of sizes and prices may be had on application.
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TO BANKERS and OTHERS.—TO BE DISPOSED OF, FOUR perfectly new GALVANIZED WROUGHT-IRON SAFES, 3 feet high, 3 feet wide, and 1 foot 6 inches deep, with folding doors fitted with Chubb's patent locks. The interior is divided into eighteen compartments, adapted for the reception of deeds, securities, or other papers. These safes are part of a number made for a Banking Company for the above purpose, and are found to be more than they require. They will therefore be disposed of at a low rate. They are well adapted as a secure depository for plate.—Apply to Mr. B. PITT, 3, Windsor-terrace, Vauxhall-road, Pimlico.

SELLING OFF!—STOCK of RAIN-PIPES, Gutters, Air Bricks, Sash Weights, Stable Fittings, and all kinds of Builders' castings, under cost price, at WALMSLEY and CO.'S, Paul's Wharf, Upper Thames-street.—Two Carts, Harness, Chaff-machine, &c. cheap.
N.B.—A few Self-acting Ranges to be sold for 27s. each.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 189, Shoreditch.
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler
30 32 34 36-inch
28s. 30s. 32s. 34s.
Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—
34 36 38 42-inch
54s. 56s. 58s. 60s.
Strong Elliptic Stoves with Extra Back and Solid Bars, per in. 3½d.
Register Stoves, with Solid Bars, per inch, 5d.
Improved New Pattern Circular Cheek Register, with strong Bars and Trivets, 6d. per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2	2½	3 inch.
	11d.	1s. 3d.	1s. 6d. per yard.
Cast Gutters—4 inch, 9d. per yard.			
O G Gutters			4½ inch.
		1s. 1d.	1s. 3d. per yard.
	3	4	5	6
Patent Line	4d.	4½d.	6d.	8d. per knot.

6-inch Rd. Ward Mortice, with Best Furniture and Patent Spindles, 3s. each. Light Elliptic and Register Metal, 14s. per cwt.
Dr. Arnott's Ventilators, 4s. 6d. each.
Brick Moulds kept in stock. Any size made to order.
Best Cut Clasp and Rose Nails.

1½ in.	1¼ in.	2 in.	2½ in.	3 in.
16s. 6d.	16s. 6d.	15s. 6d.	15s.	14s. per cwt.

Best Sheet Cut Floor Brads..... 15s. per cwt.
Best Cut Lath Nails..... 16s. "

TO SCULPTORS, BUILDERS, MASONS, &c.
B. FABBRICOTTI respectfully invites the Gentlemen connected with the Marble Trade to inspect his fresh STOCK, composed of statuary, vein, Sicilian, black and gold, dove, Bardilla, Siena, and Breccia, in blocks, and particularly calls their attention to a large quantity of his best statuary, sixty blocks, of all sizes, just landed.
Monuments, vases, and statues, finely executed in Italy.
Carrara Wharf, Thames-bank, Pimlico.

MARBLE.—The Italian Marble Company, Importers of the produce of their own quarries, in the province of Massa-Carrara, Italy, beg to inform the general Marble Trade in the United Kingdom that they are prepared to undertake contracts for any quantity of Statuary, Veined, Sicilian, Bardilla, Dove, and other Marbles, in blocks of all dimensions, delivered on shipboard at Leghorn, or in dock, London. A constant stock always on view on the premises, where orders are taken for Paving Slabs, Garden and Hall Statues, Vases, Tazzas, Mortars, Consoles, Chimney-pieces of all classes, Circular Table-tops, Monuments, &c. executed in Italy.—For further particulars, inquire at the Office on their Wharf, Thames Bank, Pimlico, adjoining the east side of Vauxhall-bridge.
WILLIAM W BONNIN, Secretary.
Lloyd's Marble Wharf, Thames-bank, Pimlico, Adjoining Vauxhall-bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Siena, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

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THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Bardilla, dove, black, black and gold, Sienna, St. Ann's, statuary, serpentine, verd antique, &c. Portland, Harehill, Park Spring, and other stone, in blocks, slabs, landings, and headstones. Yorkshire paving, granite curb, &c. All goods carefully packed and forwarded to any part of England.—THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

THE LIZARD SERPENTINE COMPANY manufacture and sell in block and slab the beautiful stone now raised from the lower beds of their quarries. Chimney-pieces, Columns, Fonts, and ornamental works on view, at 30, Surrey-street, Strand.
HENRY COX, Manager at the Lizard.
F. W. RUFFLE, Agent in London.

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BRAMLEY FALL, CAEN,
DARLEY DALE, FARLEY DOWN,
HARE HILL, HUDDLESTONE,
PORTLAND, and various Stones, in Block and Slab.
Yorkshire Paving, Landings, Steps, Sills, Sinks, Coping, &c.; Granite Blocks, Trams, Curbs, Pitching, &c.
Valentia Slate Slabs, Grindstones;
Marbles, in Blocks and Slabs,
At FREEMAN'S Stone Wharfs, Millbank-street, Westminster; City-road Basin; and Deptford.

STONE! STONE! STONE! — To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Self-face Slab, Granite Pitching and Curb, Guernsey broken Road Materials, and every other description of stone, at JOHN KNIGHT and SON'S, Devon Wharf, Mile-end. York tooled paving, 38s. 6d. per 100 feet; slab for hearths, 4d. per foot sup.; slab for chimney-pieces, 3½d. per foot sup.; 8 by 3 window-sills, 6d. per foot run; 15 by 3 coping, 8d. per foot run; box chimnies (any opening), 8s. 6d. each. Terms cash on delivery.

STONE! STONE! STONE!—At Lowest PRICES, all kinds of Stone supplied to any extent. Quarry worked, sawn, or scribbled to dimensions. Direct to any part by vessel or rail. A single truck load at wholesale prices.
Depôts—Victoria Stone Wharf, Isle of Dogs, and No. 3 Wharf, Great Northern Railway, King's-cross.
Grindstones, fire goods, and terra cotta. Special estimates given to supply large contracts.
Address, J. THICKETT, General Stone Merchant, Victoria Wharf, Isle of Dogs.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab, Marble mortars, &c.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—THOMAS and TAYLOR, 3, Pinner's-court, Old Broad-street. Manager—R. S. J. TRATHAN, Liskeard
This Granite is selected for the New Westminster-bridge.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

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And HARE HILL, LEEDS.
Every description of STONE and GRANITE supplied in any quantity direct from the Quarries, by Rail to all Stations, or by vessel to any Port in the Kingdom, at the lowest current prices, comprising all kinds of YORKSHIRE STONE in block and slabs of any thickness, Paving, Landings, Steps, Coping, Sills, Sinks, Headstones, Grindstones, &c.
PORTLAND, CAEN, AUBIGNY, and BATH, in BLOCK.
A list of prices sent on application.

DARLEY DALE STONE.—This Stone, introduced by Sir Charles Barry at St. Edward's Grammar School, Birmingham, and well known as having been selected for
ST. GEORGE'S HALL, LIVERPOOL,
and numerous works, including the Railway Station, Birmingham; Borough Bank, Liverpool; Essex-bridge; Mr. Beaufoy's Schools, Lambeth; and the Portico and Cornice of the Town-hall, Leeds; is kept in considerable quantity at the Darley Dale Stone Wharf, City Basin, London.—Apply to W and J. FREEMAN, Millbank-street, Westminster; or GEORGE WALL, at the Quarries, near Matlock.

YORKSHIRE STONE.
GEO. VINT and BROTHERS, IDLE, near LEEDS,
Beg to inform Architects, Surveyors, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Paving, Bramley Fall, Park Spring, Robin Hood, Harehill, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 346, High-street, Southwark, near the Townhall.

CAEN and AUBIGNY STONE.—GATES and GEORGE (late Luard, Beedham, and Co.), Caen-wharf, Rotherhithe, London, General Stone Merchants and Quarrymen, continue to supply from their Wharf, as above, CAEN, AUBIGNY, PORTLAND, and YORKSHIRE STONE.

A TA MEETING of STONE-MERCHANTS, held at the Dusty Miller Inn, Hipperholme near Halifax, Yorkshire, on Easter Tuesday, March 25th, 1856, it was unanimously agreed that an ADVANCE on TOOLED FLAGS should take place on the 1st of APRIL, 1856.

BATH STONE OF BEST QUALITY.
RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SOULES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of every large dimensions and of superior quality They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

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N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

LLANGOLLEN SLABS and SLATES.
HOUSE CISTERNS, Sink-stones, Filters, Larders, Mangers, Ridging, Skirting, and Rough Corf.
CISTERNS of LARGE DIMENSIONS for BREWERIES, DISTILLERIES, BLEACHING-HOUSES, and MANURE-TANKS.
Cattle-stalls, Pigstyes, and Troughs.
Paving for Railway Stations, Malt-houses, Breweries, Balconies, Conservatories, and Factories.
CHIMNEY-PIECES, Baths, Tombstones, Pedestals, Washing-tables, Urinals, and every other Article of Slabwork, PLAIN or ENAMELLED.
Self-faced Flags for Barns, Outhouses, or Street Paving.
In Stock at Paddington, SEVERAL FINE SLABS of 70 SUPERFICIAL FEET each.
LLANGOLLEN FLAG AND SLATE COMPANY,
PENTREFELIN WHARF, LLANGOLLEN,
AND 4 WHARF, SOUTH WHARF-ROAD, PADDINGTON.

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ENAMELLED SLATE CHIMNEY-PIECES, of elegant designs and superior workmanship, in great variety, at prices from 30s. to 5 guineas. Slate Cisterns made to any size.—J. HOWELL, Manufacturer, 3, Cook's-grounds, King's-road, Chelsea, Middlesex.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
FROM 2s. 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Poloneeau and Limmer Asphalte Office, 2, Drummond's-chambers, 14, Fish-street-hill, London.
N.B Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

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W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 33, Wharf-road, City-road, to 3, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel For terms, &c. apply at the Wharf
Contractors supplied to any extent.

TO ROAD TRUST SURVEYORS AND ROAD CONTRACTORS.
FOR SALE, about 1,000 cubic yards broken BOMBAY and PORT PHILLIP BLUE GRANITE, two-thirds of which is best Bombay and one-third sound Port Phillip.—Apply to Mr. CHARLES ROSS, 2, Stepney-causeway, Ratcliff.

CROGGON and COMPANY, Manufacturers of PATENT ASPHALTE ROOFING, BOILER, RAILWAY, SHEATHING and INDOROUS FELT.
For Damp Walls, and Lining Iron Houses,
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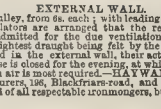
VENTILATION.—PURE AIR.
Sheringham's Ventilator for the admission of pure air through an



EXTERNAL WALL.
With single pulley, from 6s. each; with leading pulley, from 8s. 6d.
These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

TUDDENHAM, IPSWICH, BRICK AND TILE WORKS.

EXPOSITION UNIVERSELLE
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Medaille de 2me Classe awarded to James Luff, for Specimens of Ornamental Bricks and Tiles.

JAMES LUFF

Begs to inform Architects and Builders that he MANUFACTURES all KINDS of ORNAMENTAL BRICKS and TILES, Red and White, for Chimney Shafts, Ridge Crests, Cornices, and Mouldings.

Also, all KINDS of ORNAMENTAL VASES, CHIMNEY-POTS, MALT-KILN TILES, DRAINING-PIPES, and TILES of every description.

N.B. Builders furnishing detailed drawings can have all sorts of Ornamental Designs executed.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that **FOUR-FIFTHS** of the **ROUGH PLATE**, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

January 1, 1855. *** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

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LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

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HIGGS & CULLINGFORD,

IMPORTERS,
59, DAVIES-STREET,
BERKELEY-SQUARE.

SOLID PARQUET,

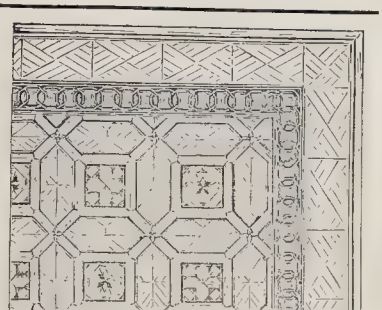
FOR THE

FLOORS OF DINING-ROOMS, HALLS, BALL-ROOMS, AND PUBLIC OFFICES.

This Flooring is made of the best desiccated Hard Woods, is solid throughout, and tongued together. Supplied in Slabs ready to lay down, with tongues complete, in Wainscot, at One Shilling per foot.

No Sub-floor required.

Patterns may be seen, and, on application, Lithographs and Prices will be sent.



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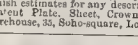
By Royal  Letters Patent.

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The Builder.

Vol. XIV.—No. 688.

THE notices we have already given of the Barrack Competition Exhibition at Burlington House have brought us letters sufficient to fill the whole of our present number. To print them is manifestly impossible. We are, however, anxious to pay every attention to the points which have been laid before us; but shall have better opportunity for doing so after the interval of another week. We referred to the elaborate character of the drawings generally, and to the more than ordinary advantage offered through the opportunity of the study and comparison of so many different projects for the same work—one of great extent and comprehensiveness. The particulars and specifications sent with the several designs, since we wrote have been placed in the rooms, and afford us double ground for our opinion. For the success of the original object, and the interests of all concerned, the exhibition should be kept open as long as possible. Scarcely any department of professional practice is there, whence an individual may not receive some new light; and the remark will apply to the inferior class of the designs, as to what may be considered best. Whether the Government will need to go from England for a design for their proposed offices, "in order that we may at last have *some* building worthy of the metropolis," we will not at present consider; but we have abundant testimony now to what we have often asserted, that in the profession (taking it with all the demerits ascribed to the general body) there is no lack of skill, scientific knowledge, or artistic ability. What is needed in a pursuit like that of architecture, involving so many apparently opposite qualifications, is precisely that sort of interchange for which there is the opportunity in the present case—though we wish it could be afforded at less cost to individuals, as well as with less danger of injustice.

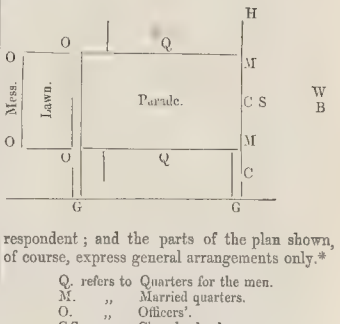
It is indeed *painful* to us to see the amount of labour which is incurred, from planning and calculating down to mounting and straining—and the positive money outlay—and to note the merit of many matters of detail, in cases where we detect an error in the very first conception of plan. And it is not always clear from the report what degree of latitude was permitted, or what attention was to be paid to any different impression deduced from the evidence. To the competitors who were concerned in the strictures of our correspondent last week, it is at present due to state this. Remarks that we make now can apply only to arrangements for a similar object in future. For, it seems to us that the plan of collecting evidence in cases of such a nature has many advantages. Any competitor, however, should feel free to digest evidence, so that he might give form to his own ideas, rather than to the conclusions of a committee. The whole evidence here was printed, and the existing barracks were thrown open; but, on the other hand, the leaving some *minor* points in express terms, to the discretion of architects, was liable to induce the inference that no discretion could be allowed generally. Thus, in the majority of cases, apprehension has been felt about departing from the terms of the report: in other cases the report has been even *blindly* followed; and there are few designs where the judgment has been allowed entire play. It is not absolutely necessary to detach the ablution-rooms and other adjuncts to great distances, and there might be ways of arranging kitchens other than what is known at the barracks at Birr. The permission which some of the competitors conceived they had as to distinct day-rooms, and the provision of kitchens detached, has led to the arrangement of plans, where dinners would have to be carried some seventy or eighty feet,—"by a *covered* passage," indeed,—but otherwise through the open air. These errors would hardly have occurred where *architects* were free to act. Again, the views of certain authorities as to peculiar and incorrigible habits in the soldier, are very difficult for the civilian to reconcile with what he hears about discipline. In other cases, the requirement of the cricket-ground has hampered the designer. It would have been better to assume this as to be provided outside the walls,—as it surely must be in expensive sites, and might be in all; at least the comparison of the designs would have been facilitated by uniformity of views taken of the indispensable barrack-building area.

The design No. 7, with the motto "In Omnia Paratus," shown in an effective set of drawings, has the entrance in the centre of the side of the parade-ground, with the men's quarters along the opposite side, and the officers' rooms at each end. Behind the men's quarters are large recreation-courts, with the married quarters, schools, &c. at one end, and the hospital at the other, the stores being along the back. The decorative character of the design is given by the general use of arcades on the two stories, the materials being red brick and stone. The parade-ground is extended by lawns. There are large archways of entrance, and through the range of the men's quarters.

In No. 10, with the motto, "Victoria," in a wreath, by Messrs. J. T. Wood and R. Pope, the arrangement of the men's quarters, parade-ground, and entrance, is similar; but the officers' quarters are placed along the entrance side, with a space along that side intervening. The chapel-school is at one end of the parade, and a large covered drill-shed at the other. The various stores are at the back,—the married quarters being to the extreme left (looking at that part of the plan), and the hospital to the right. The plan of the men's quarters corresponds with what has been adopted in the majority of the designs. The range of building is in two stories; each company has separate stairs; and four rooms for twelve men each, and lighted from the ends, are on each floor. The rooms are back and front, with open courts between. The serjeants' rooms are adjacent, being in this case placed across a passage, an arrangement which the plan would allow to be modified. A dining-room, separate kitchen, ablution-rooms, and cleaning-rooms, are beyond open courts at the back, and are one story in height. There are broad ways through the line of quarters at two places. This design is of plain Italian character. A second design is carefully studied in the Gothic style. The hospital in the former case has open galleries on both floors, all round.

No. 11, "Nec Aspera Terrent," appears also to comprise more than one general design. The plan has the chapel at one end of the parade, and the hospital at the other; the officers' quarters, gate, married privates, washhouse, and prison, are along the front; and the men's quarters are at the opposite side of the parade, with the orderly-rooms in the centre. At the back are yards attached to the stores, canteen, amusement courts, and (what is to be found in other designs in the collection) a circular bath, on the principle of that suggested and lately illustrated in our pages. There is a large covered space for drill at one end of the ground, and a gymnasium near the hospital. The range of building forming the men's quarters is in three stories, and is thus arranged. A corridor, 16 feet wide, with skylight roof and ventilators, runs from end to end of the building, the full height. At the level of the several floors, openings being left in each, galleries are formed. Each company has two dining-rooms on the ground-floor,—the end of the room being parted off as a cooking-place. The ground-floor back is occupied by the barrack-master's stores, cleaning-rooms, &c. On each of the two floors above are four rooms, for twelve men each, with ablution-rooms and serjeants' rooms. There is some little defect in the position of some of the latter rooms as to inspection. The principal design, of good Italian character, is well treated; and two views of the parade-ground, in pencil, have the buildings outlined in masterly style.

No. 12, "Ne Jacto," looks as if it had come from the same drawing-board as design No. 80, upstairs; but it is on a much smaller area of ground, and makes no pretension whatever to decorative character. We counted thirty-four drawings, and all were most carefully executed—full tables of scantlings being added. If any importance is to be given to the principles which have been set forth in our pages, the design deserves some attention. The company's quarters are in detached blocks,—five on each side of the parade-ground. The latter is of the specified size,—250 by 100 yards,—but added to one end, before the officers' quarters, is a lawn. But we may as well adopt the convenient explanatory method used by our correspondent last week. The principal letters of reference are as those used by our correspondent; and the parts of the plan shown, of course, express general arrangements only.*



Q. refers to Quarters for the men.
M. ,, Married quarters.
O. ,, Officers'.
C S. ,, Chapel-school.
C. ,, Canteen
S. ,, Stores and other offices.
G. ,, Gates.
H. ,, Hospital.
W B. ,, Washhouse and baths.

The detached buildings, or men's quarters, are shown with four different arrangements for each. In all, the entrance is either at the side, or at the back; and this is, perhaps, a defect. Most of the walls are proposed to be built with cavities; and generally both the drawings and specification show that the construction has received great attention. In some of the plans the infant schools are placed at a distance from the principal school building,—though near to the married quarters. Here these several departments, with the library and the washhouse, are adjoining each other.

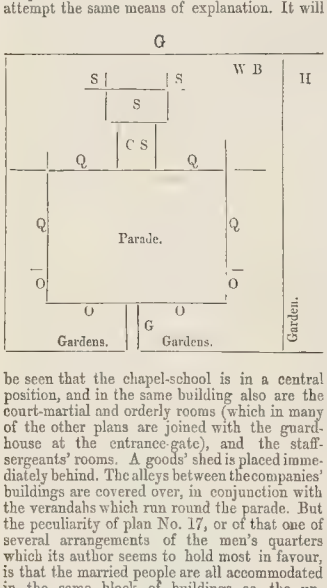
No. 15, "Sevastopol," has a plan wholly different to any of those preceding. Let the reader suppose a circle as the centre of a build-

* By an error of the press last week, in the reference to the plan, the word appended to O. was printed without the letter R. The reference should have read,—O Officers. Our own statement as to the back-yards of Design 2 was correct. Our correspondent was in error in saying there were none. He did not include the rear blocks of building; and the numbers of the Companies seem to have been misplaced. Of course, the plans are given to explain general distribution only; and many buildings are omitted.

ing, inscribed in a square of somewhat larger diameter (if we may so apply the terms), and round the square a covered space 43 feet wide, with galleries of communication at the heights of different floors, along it. Suppose the covered space to be prolonged to form eight arms. The latter are appropriated to various purposes, dormitories included,—the sergeants' rooms being at the angles, or intersections. The central circular space forms a general kitchen; the space between that and the square is appropriated to washhouses and stores; and in the space of 43 feet are dining-tables. The whole forms the centre building of the barrack. Round it are grouped the hospital and the residences of the married soldiers, married officers, and unmarried officers; and a parade is provided in front of all.

In No. 16, "Pro Aris et Focis," though rectangular forms are adopted, the kitchens are similarly placed, or all together, in the centre, with a lofty smoke-flue; the barrack-rooms come next, and the other buildings are at each end.

In No. 17, "Con Amore," we have a plan much resembling No. 12,—though each one has its peculiar advantages. The author of the present design—Mr. Kerr,—though he exhibits few drawings, has shown by his written particulars and specification that he has gone very carefully into the subject. Taking the parade-ground as the basis of his design, he also groups the officers' and men's quarters round it; also placing the latter in detached blocks, so as to get isolation of the companies and the advantage of frequent through-passages. Otherwise, his plan differs from No. 12;—but we had better attempt the same means of explanation. It will



be seen that the chapel-school is in a central position, and in the same building also are the court-martial and orderly rooms (which in many of the other plans are joined with the guard-house at the entrance-gate), and the staff-sergeants' rooms. A goods' shed is placed immediately behind. The alleys between the companies' buildings are covered over, in conjunction with the verandahs which run round the parade. But the peculiarity of plan No. 17, or of that one of several arrangements of the men's quarters which its author seems to hold most in favour, is that the married people are all accommodated in the same block of buildings as the unmarried of the same company,—though of course with proper separation and distinct entrance. He is led to this view by the arguments which there are against placing any of the privates in a building detached from their companies,—arguments which were apparent in the evidence of Col. Wood and Lord Cardigan, and indeed of others. The wives of the company and pay-sergeants are unavoidably accommodated in the same building; and Mr. Kerr thinks that this rather strengthens the argument against removing the others. He, therefore, in one of his arrangements, has the six rooms for married privates, with the pay-sergeants' rooms, and spare rooms for staff-sergeants, on the ground-floor, with a small yard alongside the alley, from which is the entrance to this quarter; whilst the entrance for the unmarried (and, of course, unavoidably also for the company sergeants) is in the centre of the block, or directly from the parade. The latter entrance is by an arcade, through which access is gained to a covered yard, and through that to the two dining-kitchens, and attached cookeries, and round to the conveniences. The staircase ascends from the arcade; and also leading out of it are, on one side, an ablution-room, and on the other a cleaning-room. His other plans are based on the supposition that the recommendation as to married quarters in the report might after all be carried out,—and which quarters he would have then to provide somewhere else. The chief difficulty in the working of the first plan would arise from the distance that the married women would be from the spot where the author of the design has to place the general wash-house—which, in other plans, is appropriately attached to the married quarters. And he is hardly correct that the distance might be traversed without inconvenience. We do not lay much stress upon a slight gap in the covered way which he contemplates for the whole distance; but the position of the doorways to the yards would be objectionable: these, however, might be altered. The suggestion which we would venture to throw out, is, whether a small wash-house might not be combined with each company's buildings. Much may be done with the heat of a single kitchen fire,—as indeed is shown in the design, No. 7, mentioned in our last. The barrack-rooms in design 17, with the arrangement described, are provided on two upper floors. There are two rooms on each floor, or each room for one squad. The rooms have the windows and fire-places at the ends, and have a removable division running partly across, midway in the length. The entrance is from a wide corridor (which is at the top of the stairs, and gives access also to the serjeants' rooms) in the centre; and on the opposite side is a large window in a recess—where also are appropriately placed a closet and other convenience for night use. In his elaborate essay accompanying the design, Mr. Kerr sets forth the principle, that whilst buildings such as industrial schools, workhouses, asylums, and the like, require to be treated each as a household, a barrack is not at all of that character, but is rather a military *village*. The hospital, we should say, he has wholly apart, and occupying a strip of ground at one end of the general plan, and it is made accessible from the back-yard rather than from the parade-ground. Small apartments for female nurses are preferred to barrack-rooms and "orderlies." It seems to us that some credit is due to Mr. Kerr for the clear basis on which he has placed the subject. There are points in which his plan and No. 12, each have peculiar advantages; and both plans deserve the careful consideration of the committee. Both appear to be practicable with small outlay.

No. 18, "Pax in Bello," with the entrance at one end of the parade, and five companies on each side, has the barrack-rooms all on the ground-floor,—the dining-rooms being ranged at intervals along the fronts, and the kitchens some distance in the rear.

In No. 19, "Utilitas,"—a Gothic design,—the entrances are placed at the angles, at one end of the ground. The roadways leading from them into the parade-ground, twist about in their course,—but as a similar arrangement practically results from the position of the guard-house opposite the gate, in the third premiated design, we presume that military authorities entertain no objections. The kitchens in this plan are arranged in two stories. We are ourselves not aware of any valid objection to the similar arrangement so much commented upon in the first premiated design.

No. 20, with a horse-shoe and the motto "In Spe," in the general outline is an attempt at symbolism. The outline of the plan in the present case is a pentagon, with a projection from one angle for parade-ground. In the latter are the chapel, canteen, and guard-house, and the general area has the mess-house in the centre, with the officers' and men's quarters grouped about in detached buildings, joined by covered ways. "The projectors of this plan," we quote their very words, "submit that as most armies, being divided into fifties or hundreds, a pentagon or decagon are figures best adapted for a model barracks of infantry." We fear we could find other cases where the shadow has been grasped to the loss of the substance.

No. 21, bearing a penny postage-stamp, has the appearance of a careful set of drawings,—portions which are shown in perspective being designed in an effective version of the Italian style, and nicely drawn. The plan, however, has some radical errors. The entrance is at one end of the ground into a fore court, with covered way round; and opposite are the officers' quarters—the parade being beyond. To get from the court to the parade, unless the troops went under the verandah, and round by one of the ends of the officers' quarters, they would have to go through the central cortile, where the openings between the piers do not seem to exceed 6 feet.

The only note which we have made as to the design No. 22, marked with a device and the name "Hiram," is that the author advocates the glazing of the windows with polished plate glass. No. 25, "Dum Spiro Spero," errs by providing a parade-ground of as many feet as there are required yards; whilst No. 29 puts the company sergeants eight in the same room, instead of adjoining their respective squads. It is saddening to see the waste of the labour of months, from the omission of an hour's reading and thought.

No. 26, "Argonaut," has the barrack-rooms arranged in two principal buildings, each on cruciform plan, the chapel being intermediate.

In No. 30, "Comfort," the plan absorbs a large area, a cricket-ground being placed in advance of the officers' quarters, which are to the front end of the parade. The school is at the opposite end, with the hospital behind, and the men's quarters are at the sides. No guard-house is placed at the gate: and the omission of a ready access to the hospital, according to the arrangement of walls and openings shown, is an important one. Errors of plan continue to force themselves on our notice as we pass on. Even in No. 31, "Numero, Pondere, Mensura," Messrs. G. and H. S. Legg, after passing through the gate near one end you have the choice of the road which takes you round a long journey by the backs of the officers' quarters, and seems to end "nowhere;" or you may jostle through the thickly-set columns of the verandah, as the direct route. The main quadrangle does not seem to be intended for parade, but is laid out with lawns, the men's quarters looking towards it; the officers' quarters being at one end, and the school and stores at the other. Behind the latter is the actual parade: but we should fear that, presuming the troops to get formed within it, to find the man who could lead them from it, would be about as difficult as the great duke said it was to meet with generals who knew how to get a few thousand men well out of Hyde-park. The cricket-ground is advisedly made *accessory* to this plan. It may be our duty to specify defects,—even where works have otherwise high merit,—but judging from some of the designs in the present exhibition, it might be more difficult to make good plans when unrestricted to ground, than under the ordinary circumstances. The sudden possession of riches has turned the heads of some of our friends. Ground and money *à discrétion*, and a level stage:—never did such unlooked-for strokes of fortune (or of fate) concur to bewilder the British architect. Need we whisper to all who habitually blame this restriction, or that lack of advantages, that *limited* means are often those of which the best use is made,—that not all is gold that glitters, or—

"A certain truth which many buy too dear,"—

that true *economy*, as understood from the days of Vitruvius to 1856, is a quality in all good *art*, and irrespective of the money paid. It is simply a doing the most with the materials which there may be—whether called poor or costly,—and letting no opportunities be lost.

The design, No. 34, "Britannia," has the several buildings arranged on the plan, with particular attention to symmetry. The main entrance is, as in most cases, in the middle of one side of the parade, the men's quarters being along the opposite side of it,—the stores at one end, and the officers' quarters at the other. The usual appurtenances of the men's quarters are at the back, where also are the married men's quarters and the hospital, in

corresponding blocks of building. The infants' school is placed near to the married people, and thus detached from the principal school, which is near to the parade. The men's quarters are planned on a principle somewhat different to what is found in any of the other designs. Thus, a corridor, the full height of the building, runs along the centre, and is lighted from the top. This is used, on the ground level, as a dormitory, and is bounded by dormitories on each side, two floors in height; and outside there are day-rooms, in two stories. The cooking places must be 80 feet or more, distant from the day-rooms.

No. 35, "Competitor," Mr. H. H. Fulton, provides kitchens in the basement, but is chiefly remarkable for its fireproof construction, and for the attention which has been paid to the warming and ventilation. The latter is partly maintained through channels left in the boxed girders, and through the cavities of the hollow-brick arches. The fresh air is admitted at the upper part of the room, and the exhausting force is obtained by the heat of the kitchen flues, which are formed with iron withes.

No. 36, with the motto "Excelsior" in a trefoil, Mr. C. F. Hayward, has the parade towards the further side of the ground, with the officers' quarters at one end, and the hospital and chapel at the other; and has the prison, orderly-rooms, stores, washhouses, and canteen, and two entrances along the front, and the intermediate ground occupied by the men's quarters. These last form two rows of detached buildings (along with staff-sergeants' and married people's quarters), the longitudinal space between the rows being covered with a light iron roof. The company sergeant has two rooms, and is conveniently located for inspection at the angle formed by the meeting of two barrack-rooms. The decorative design externally is Italian in style; but the bossed and rusticated work has considerable novelty: and the whole possesses what modern architecture sometimes stands much in need of—to wit, *character*. The entrance-gateways, and all other portions display taste.

No. 45, by Joshua Constable, a clerk of works at one of the encampments in Ireland, provides as parades two similar spaces, one gravelled and the other with grass,—the latter serving also for a cricket-ground. Together, these may measure 1,400 feet by 600 to 700 feet. The buildings are widely detached: but the plan is chiefly remarkable, as compared with others, from its being designed with a view to defence,—all the faces of the walls being disposed so that they might receive a raking fire from other parts.

We have still many designs in this large collection unnamed. We must, however, hope on another occasion, to speak of some of the most deserving. Where there is so much, it is difficult to gather a moderate proportion of the features of the several productions, or to deduce at once all the results of the reflections upon the subject of barrack accommodation which are embodied in the designs, or of which the present exhibition has been the occasion.

But pending the settlement of what principle of arrangement should be acted upon in building,—let us set down a few points which have impressed themselves upon us.

To learn the exercise of a soldier, space is required, and this should be inclosed from the public gaze. Men must be lodged and fed, and means of privacy, decency, comfort, and health should be secured. So long as we must have men to bear arms, we ought to see to it, for our own sakes, that they are not morally vitiated. Now, men cannot eat, drink, undress, and sleep in common without contamination. One black sheep, &c.—a little leaven, &c. Barrack-rooms at present are vitiating to the last degree, as one foul-mouthed fellow can taint the hearing of a hundred or more men, day or night. There is no escape. All over the country there is a movement in favour of improved dwellings for labourers, the great improvement being isolation in the dormitaries. Prisoners have their separate cells: why should soldiers be compelled to herd day and night in one room? There is no more degrading practice than that of sending men in crowds to obey the calls of nature; but to compel them also to traverse long distances is physically most injurious, as it induces neglect. Any medical man will say how injurious to health this is. One of the greatest comforts of British civilization is a clean water-closet, close to ordinary living-rooms. Now, if the poorest person in any community can have this convenience, there is no reason why it should be denied to the soldier. Then as to barrack sewers and drains. All sewers and drains should be external, that is, they must not be beneath nor within the main walls of the living-rooms, nor cross under floors. Many barracks, asylums, union workhouses, and large schools, are situate over sewers, drains, and cesspools: the consequences are, a vitiated atmosphere at all times, and disease in excess. If full examination of all barracks in which British troops are quartered were ordered, and a truthful report drawn up, the world would be startled at the horrible revelations made. There are barracks in which the soldiers are never healthy, and hospitals in which the sick never get well. The Mayor of Portsmouth said once, in open court, at an inquiry in Portsmouth, that he had that day declined an invitation to dinner from one of the dockyard officials, as he never went without being made unwell by the barrack smell. The Town Clerk said, "I know where you mean, and have also, on more than one occasion, declined invitations for the same reason."

There are barracks in the colonies so fatal that officers make their wills, and men give up hope of life, when they are ordered to the stations, where places have been built by contract, the contractors finding site and building,—the site being a swamp—because the land was cheap.

An examination of the Continental barrack accommodation would show Great Britain and France to be behind all other nations;—the Turk and Russian ranking first: the barracks of these two nations are extensive in plan, grand in design, and most convenient in arrangement. The buildings generally form hollow squares, and are two or more stories in height. The great barrack at Scutari, which the British now use as an hospital, is three and four stories high. There is a corridor running all round on the inside, glazed: rooms open out of this corridor: the privies are at the inner angles. In the centre is an elevated water-tank, with fountains. Each side of this square is some 2,000 feet long. The corridor is about 18 feet wide, and each story about 15 feet in height. The barracks at Kulali are on the same plan, but here there is no corridor, but a central open space from floor to roof, with side galleries; no separate rooms. Most of the large barracks in Turkey are modern, and were built by the late Sultan. German architects were, we believe, employed. We have reason to know that should Government ask for a report from the Sanitary Commissioners lately in the Crimea, plans would be given, as also plans and details of huts, tents, &c. Why, then, is it not asked for? The French overcrowd most sadly, and neglect all sanitary arrangements: water is used sparingly, and ventilation is not thought of. The result is well known.

REVOLUTIONARY ARCHITECTURAL PRINCIPLES.*

It is some relief, whilst continuing our colloquy with Pre-Raffaellitism, to escape, though but for a moment, a direct personal conflict. I said that the "leading journal" had begun to swell the chorus: here is the passage referred to; it relates immediately to Regent and Oxford streets:—

"But a worse fault is the *falsehood* of all the decoration. It is all paint and plaster: below are good bricks. . . . . Compare the fronts of these houses with the backs: *the front is all smiles and hypocrisy—the back tells the ugly truth that the greatness is got up for show.*"—*Times* for Dec. 26, 1855.

There is no mistaking the relationship, though there may be the authorship, of this passage; nor can I hesitate to join issue with the principle it proceeds on.

Let me free myself, however, from misapprehension. That consistency is an architectural virtue, and that there is a positive beauty in intrinsicalness, is not disputed. Whether the streets, therefore, here referred to are, in these respects, in good taste, is not my question. It may be simply preposterous to build rows of shops like rows of palaces; or it may be that such building is but an exhibition of our national character—a telling all whom it concerns that we have brought society to a state of fusion; that we make a glory of our trade and commerce; that we profess to be the "nation of shopkeepers" our neighbours call us. On these matters I make no assertion: still less shall I attempt to extenuate such enormities as ponderous columns reared on panes of glass. I address myself exclusively to the principle of the passage.

Now every one knows that truth and falsehood are not in verbal expressions, but in what is intended to be understood by them. Micaiah said to Ahab, "*Go and prosper;*" yet Ahab was not deceived, nor was Micaiah a lying prophet. Is there deception in the case before us? Did the builder employ brick, and charge for stone? Does the spectator believe in stone?—was it meant that he should do so when he looks on brick? If neither, where is the falsehood? Let us take care we are not ourselves calling things by their wrong names. "*He that excuseth the wicked, and he that condemneth the just, they both are an abomination to the Lord.*"

But let us go a little further. Irrespective of deceptive falsehood, is there immorality of any kind in concealing "the ugly truth?" in covering the inferior with a more agreeable or becoming material? If so, then, how did Solomon overlay with gold "*the altar which was of cedar,*" and "*the cherubim,*" which were of "*olive-tree;*" and even "*the floor,*" which was, as we should say, *of deal?* And why did Bezaliel, "filled with the spirit of God," overlay "*the ark of shittim wood*" and "*the boards*" with gold?—(Exodus xxxvii. and xxxviii.)

There is a further word about "*front and back.*" Is this also a criminal question? Is there to be no longer distinction between "*comely and uncomely parts?*" It needs no words to show how much of the interest of architecture is in the answer,—how things would infallibly range themselves under the alternative of either making the back like the front, or else the front like the back. But what a requirement! How would either of the inmates of those houses be astonished were he denied the liberty of distinguishing between the every-day "parlour" and the more sumptuous "drawing-room;" or his blushing partner, challenged, on her way to an evening party, with having, beneath that specious velvet, some such ugly fact as a flannel petticoat?

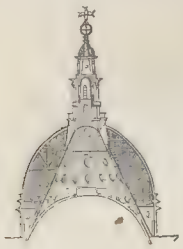
I am not trifling with serious questions. Go again to that stateliest fabric before referred to. "*Your bodies are the temples of the Holy Ghost.*" By what economy are their vital processes concealed even from our own observance? Shall we call that fair skin a deceitful mask? With permission of the courteous "Westminster," *I* want to secure for "manliness, veracity, and morality," things that may be in no small danger of "dilettantism and conventionalism."

And I am not quite sure that it is art alone that is in jeopardy. I will not go into homilies: we have proof enough in human experience that scrupulosity may damage conscience, as superstition may destroy true godliness. Sanctimoniousness, sentimentality, "voluntary humility," asceticism, and fantastic morals have been ever so many loop-holes for religious feeling. There is something more than accidental connection between the straining at the "gnat," and the swallowing "the camel."

We have, in sooth, battles enough to fight without taking every ant-hill for an "earth-work," or invoking thunderbolts on moles and cobwebs. Still less need we call on architecture to assume the name of "Christian," and then turn false witness against its neighbour. Poor Pugin allowed himself a seeming triumph I hope he lived to repent of. There is an exhibition of the dome of St. Paul's that disgraces his book "On the True Principles of Christian Architecture," of which I trace the influence in the article before us; and which, as a sample of other things, it is high time to strip of authority it is not entitled to. That there may be no mis-

* See p. 171, *ante*.

conception, I give, as in a former case, ocular demonstration. Here is Pugin's section:—



The case is very simple: the external dome is not the only one; nor the one that supports the lantern. It were almost enough to add,—Who ever said it was? Yet this is to be written down a case of meretricious, false construction,—"a fictitious dome,—*not the dome of the cathedral, but a mere construction for effect,—a mere imposing show, constructed at vast expense, without any legitimate reason.*"—P. 9.

Now, it may be slowness of apprehension; it is not, I trust, querulousness, much less moral obliquity, if I venture to express serious doubts as to the grounds of this judicial verdict. On what principles is the giving to a metropolitan church an amount of external dignity beyond internal requirements, to be put without the pale of all legitimate reasons? And how long have Englishmen been,—or when and why should they begin to be,—ashamed, that the most conspicuous, magnificent, and attractive object that (bitherto, at least) has met the eye and given notice of their metropolis, should be that unrivalled dome which connects the name of London with that of the Apostle of us Gentiles? and how long has architecture been under vow of turning ascetic and abjuring "effect?" I might ask, who but a Puritan, a Papist, or an architectural fanatic, can look up at that glorious dome, lifting above the smoke and din of our monstrous capital the golden emblem of man's salvation, and pronounce the words, "fictitious,"—"mere imposing show," and "without a legitimate reason"?

Let us take bigotry in its own trap. If this dome is fictitious, and not the dome of the cathedral, because there is another dome seen, *though not exclusively*, from within, the crime must, of course, be incomparably more flagrant in all the thousand mediæval spires for whose "Christian" imitation we are to abjure these "pagan" domes. That magnificent lantern of St. Paul's does actually glorify the interior dome. What will be said of gigantic pyramids raised, "at vast expense," on lofty towers for no such purpose,—constructions so far from being the spires of their respective churches, that they are inaccessible, internally, to the scrutiny of a solitary jack-daw?

But our answer is not complete. Here is another section faithfully reduced, from Britton's "Salisbury."

I wonder who ever thought, before the days of Pugin and Pre-Raffaellitism, of charging Gothic architecture with double dealing, because it gave to Salisbury a double roof? and who would have expected to find Pugin's charge adopted ("Seven Lamps," note 8), by one who, treating of "Christian architecture," complacently calls the inner roof the "roof proper," and the outer one "the roof mask?"*

But here is something else. Our leading article speaks of "front and back"—fronts "*for show,*" *open to ugly betrayal behind.* Well; but look again at the Salisbury section, and you will find there also some "truth," we must call "ugly" on the same principle. The different tints distinguish between the front as it would present itself on the stranger's approach, and the actual building that front professed to represent. I leave the reader to say how much of *this* "greatness is got up for show."

For myself, I can affirm that though Salisbury front may be defective as compared with others,—wanting in majesty, grace, or the impress of a pervading thought,—it is a fair front notwithstanding; and, what is to our point, a virtuous front, for it is really and truly a *frontispiece:* it does not content itself, with a mere utilitarian terminating of the premises; but presents, not very skilfully perhaps, a surface of otherwise "useless wall," to intone what I trust may never be deemed a useless "cadence."

The pure legitimacy of all this I will not stop to argue further. It is unnecessary, of course, to multiply such cases; it is enough that these two pair off together. Let us have no more sweeping questions of "Christian and Pagan" turning, on palpable violations of common justice and common sense.

I cannot, however, leave the leading article without a word of further notice. There is something about *columns,* "regiments of pillars," "uselessness of Corinthian columns stuck on fronts," and "a tendency to profuse expenditure resulting in abominable ostentation," on which, though very far from denying all the premises or all the conclusions, or dissenting from much that is, to my apprehension, sound and valuable in the article, I must yet offer a remark or two. It brings us, in fact, face to face with a true counting-house maxim we are now systematically threatened with. I mean that all use of columns, save for what, on the very straightest principles, are for actual use, is wasteful, vicious, illegitimate, and inadmissible. I remember an encomium on a certain work of Sir Charles Barry, that it presented a *palatian* front without the employment of a single column.

Now, I hesitate not to call this a revolutionary and destructive principle, subversive of everything that makes architecture a fine art, and no less at variance with those great beneficent laws on which the Almighty architect has built the universe.

I will not stop to utilitarianize the column itself. It is true that it can scarcely ever be utterly useless. At the lowest calculation, it is a virtual buttress, and adds stability: perhaps our modern walls are not too strong. All this, however, I disdain to argue. Once admit the dictatorship of utilitarianism, and you have got to engineering, carpentering, bricklaying: you have done with art. There is, I know, the implicit common phrase of "*useful and ornamental.*" To that phrase, in its common usage, I, for one, cannot consent to subscribe. Between what is simply necessary to human existence, and what is but desirable for its accommodation, there is, of course, an absolute, essential distinction. Between things that, short of being thus necessary, are thus desirable, there are, of course, distinctions also, but of degree only, and not essential and absolute. If the word "*useful*" stand for anything short of what is necessary, then its distinction from "the ornamental" is therefore but one of degree only. The absolute contrast between the two is, I take it, a false contrast, like the contrast, no less common, between "sacred and profane history." All history, not fabulous, is the record of actions within the economy of God's moral government: what part of that record can be surrendered as profane? So "useful" means, I suppose, conducive to a proper end and purpose: if then, comeliness, befittingness, accordance with the great instinctive sympathies God has made us of—accordance with the great master-outlines and indelible emblazonry of his own workmanship, be, as I suppose they are, conducive to a proper end and purpose (and this is what I mean by ornament — all besides or beyond it is but disfigurement), where can you draw an absolute line between the useful and the ornamental? Who will say that ugliness is not an inconvenience? Or what would be thought of him who reading, "*Truly the light is good, and a pleasant thing it is to behold the sun,*" should straight say, "*Amen;* for light and heat give us corn and cabbage?"

I dare not trust myself on this topic, I have such a sense of the impiety and barbarity, as well as beggarliness of utilitarianism, as might tempt a volume rather than a parenthesis. Let me add one word of caution against "sophists, economists, and calculators." *Look well before you, ere you admit general principles.* "No columns save for actual use:" carry out the rule, and put down the consequence. Not a Norman tower or wall can, of course, abide it; nor an Early English arcade; nor anything Byzantine or Romanesque; nor, I had almost said, a single façade of all that architecture we shall ask leave of no man living to call Classical, and rejoice in. But this is nothing. If no pillars, then no pilasters; if none to support a needless cornice, then none to stand dummy beside a window; if no pilasters to windows, then none, of course, of those purely gratuitous pediments above them. What will you make of your façade? or of your principle? Take, if you please, the park front of Barry's, just referred to; there is not a single member that gives grace, or anything else that makes it palatian, which is not, in all other respects, as pure a gratuity as the columns you have repudiated. Let us understand where we are, and what we are doing. If "principles" are to be anything better than nine-pins, let us know with some distinctness what all these things are to come to—whether architecture is to continue its place and standing as a fine art—whether Apollo himself is to be put on this "prisoner's fare" of bread and water; to be brought forward from time to time, as before a set of hungry shareholders, with a sort of balance-sheet, from which all that does not go to swell the dividend is to be struck out and disallowed. If not, it is high time for the "*principiis obsta.*"

Leny.

* Stones of Venice, vol. i. chap. xiii.; vol. ii. chap. vi.

GOVERNMENT CONTRACTS.

Our attention is drawn to this subject by the publication of a tract, printed by Levey, Robson, and Franklyn, of Fetter-lane, London, titled "Considerations on the New System of Government Contracts," in which the author, "a Septuagenarian who carried 'Brown Bess' fifty-three years ago, and who has also had his share of mercantile experience and of contracts, with both our own and the French Governments," adduces strong reasons why the present demoralizing system of Government contracts should be put an end to. Nor does he show much favour to the system of monopoly and centralization, by means of which the cheap contract system is likely to be superseded by Government manufactories, in which "Peter Dicks" of office under a new form may idle away their earlier years, and pension off their later.

To craving for cheap things the public is indebted for that learned and ingenious science of sham which is now being exposed by our analytical chemists, and our microscopic examinators. To it also is the Government indebted for mortars that would need no shells were they only explodible amongst the enemy, and not amongst ourselves; for spades that crumple up, and picks that fly off at a tangent; for clothing full of "shoddy," and for preserved meat-tins full of something worse. The Government ought to abolish the cheap contract system as soon as possible, and, by offering a fair and moderate price for a good article, set an example of respect for integrity in manufacturing and mercantile transactions. It is well known that men who respect their own character and the reputation of their manufactures actually stand aloof from Government contracts. This is an ominous and most serious aspect of affairs. We talk of the corruption of Russian officials, and the worthlessness of Russian Government supplies; let us

NEW INDEPENDENT CHAPEL, OFFORD-ROAD, ISLINGTON.——Messrs. Lander and Bedells, Architects.

look to our own short-comings. The repentance of the Government, should they turn over a new leaf, and adopt the best means of procuring first-rate supplies, and, at the same time, of cultivating the *conscience* of those they deal with, may be the turning point of national repentance, and the means of rapidly putting an end to the science of sham; for thus the public will very soon be induced to open *their* eyes to the only way of obtaining genuine articles of consumption, namely, by ceasing to run after cheap bargains, and by permanently and for ever associating the "cheap" with the "nasty." But so long as the Government set the example they do in ferretting out the cheap, and hence in obtaining its natural correlative, not only will the nation be likely to persist in the same absurd course, but the character and status of our national manufactures will continue to fall deeper and deeper into the mire of universal disrepute, till at length the commercial and manufacturing greatness of Britain will be a thing of the past, and her name but a byeword of reproach.

As to timber and deals, the author of the pamphlet writes,—"On these I will say but little: the general respectability of the trade is undoubted. Still, no one who has visited Aldershott and Shorncliffe, or seen the frames, &c. of huts sent to the Crimea or Heligoland, can doubt but that, in some way or other, Norwegian and Canadian spruce of indifferent quality have found their way there instead of 'Onega.'

That Government should have advertised for the Onega deals of Russia when war had stopped their import, or that they should have overlooked altogether the much lower-priced and much superior article for hutting,—the *yellow pine* of Canada, is surprising. It is well known that their attention was called to these matters; but 'Gallio cared for none of these things,' nor did they hesitate to allow a Member of Parliament to become contractor!

It is a fact that, for exposed buildings, the yellow pine of Canada is superior to all others. It resists the warping by sun, as it resists leaking by rain: it is much more free from knot-holes, much lighter for transport, and easier to work. Of these qualities the Americans take advantage, in using it for the beautiful and water-tight decks of their splendid passenger-ships." The pamphlet is calculated to do good.

NEW INDEPENDENT CHAPEL, ISLINGTON.

The above chapel, designed by Messrs. Lander and Bedells, of Chancery-lane, is about to be erected in the Offord-road, Islington, by that portion of the congregation who seceded from the Rev. E. Davies's Chapel, in the Caledonian-road, and who have since that time assembled in Twyford-Hall, Caledonian-road. It is in the Gothic style, in the form of an octagon, and is to be built of brick, with stone dressings. It is calculated to seat about 800 adults and 200 children. There will be vestries, class-rooms, and other conveniences underneath, together with a spacious school-room, capable of accommodating at least 500 children. The cost of the whole, including lighting, warming, and ventilation, will be about 3,000*l*. We are asked to say that subscriptions will be thankfully received by Mr. G. Cuthbertson, of Wharf-road, King's-cross, for the committee appointed for carrying out the erection of the proposed building.

ON THE MANUFACTURE OF CROWN AND SHEET GLASS.*

To return to our flattened sheets. The sheets, when annealed, are drawn from the kiln and carried to the warehouse, where they undergo examination.

Sheet glass, blown by a less complex process than crown, is liable in the glass-house to a less number of defects, but the after process of flattening often makes up the deficiency; and the manner in which a sheet, spared by one process, is disfigured by another, is sometimes curiously provoking. Standing before the table of the "assorter," your eye lights upon a piece which, blown under an evil star, has imbibed in the glass-house every possible defect. The founder, skimmer, gatherer, and blower, have all stamped their brand upon it. It is seedy,—the vesicles, which were in the crown tables rounded by the rotary motion of the piece, here elongated by the extension of the cylinder: it is stony,—disfigured with stony droppings from the furnace; stringy,—thin threads of glass meandering over its surface; "ambitty,"—covered with stony speckles, symptoms of incipient devitrification; conspicuous with gatherers' blisters and blisters from the pipe,—badly gathered; badly blown,—thin here, thick there, and grooved with a row of scratches; and on this abortion the flattener chances to have exerted his most exquisite skill: it has passed through his hands unscathed, flat as a polished mirror, yet, from its previous defects, entirely worthless. Next comes before you a piece whose beginning was miraculous,—no seed, no blisters: it prospered under the hands of the gatherer and blower, and left the glass-house a perfect cylinder. But the croppie of the flattener marked it; the fire scalded it; dust fell upon the lagre, and dirtied it; scraps from the edges of the preceding cylinder stayed upon the lagre, and stuck to it; the stone scratched it; and the heat of the annealing chamber bent it. Such are the difficulties to which every cylinder is subject—those of the glass-house, and those of the flattening-kiln. Not all, however, are such as these: there are good as well as bad, but the good are generally in the minority.

The qualities range thus—best, seconds, thirds, fourths, and H, the latter standing for horticultural, and including all coarse glass, such as may be applied to horticultural purposes. The difficulty of escape from defects renders the best quality, as in crown-glass, three times as costly as the common. The expense of production to the manufacturer is in each case the same; the materials, the labour, the fuel, the same for each. Success, therefore, clearly hinges on the proportion of good glass which a manufacturer can obtain. The six qualities of sheet-glass may each consist of six different thicknesses, forming thus, in all, thirty-six varieties.

When this manufacture was new in England, the size usually blown was 36 inches long, and 20 wide. The usual size now is 47 inches long by 32 wide, and cylinders are occasionally blown 77 inches long, but large sizes and heavy weights are accomplished only by workmen of the first class. A sheet of this latter size, containing twenty-one ounces to the foot, would require for its formation a lump of glass upon the gatherer's pipe, of no less than 38 lbs. in weight.

The size which sheet-glass can thus reach is obviously a great advantage, and adapts it to many purposes from which the limited dimensions of crown are excluded. It was this glass

* See p. 185, *ante*.

that covered the Great Exhibition in 1851. A cylinder was blown to cut, as the phrase is, 49 inches by 30: this was sub-divided into three panes of 49 inches by 10. About 300,000 of these, extending over a million square feet, and weighing upwards of 400 tons, were the work of a few weeks, and this without absorbing or disturbing the ordinary produce of the manufacturer. The energy of the glaziers was equal to their task: 18,392 panes were fixed in the roof in one week, by eighty men, 108 panes being accomplished by one man in a single day.

But sheet-glass has its faults as well as its virtues: it is devoid of that brilliancy of surface for which crown is so remarkable. It is subject, also, to undulations on the surface, the precise origin of which it is difficult to explain. Mr. Shaw, in his admirable lecture on the glass manufacture, as illustrated by the Great Exhibition, speaking of this defect, says, "When the divided cylinder is softened by heat, and either allowed to flatten by its own weight, or flattened by the workmen, the concave interior of the cylinder has to expand, and the convex exterior to contract, as the curved surface becomes plane. Were this contraction and expansion to take place uniformly throughout the glass, the undulation in question would not occur, but since one part invariably yields somewhat more readily than another, perfect flatness cannot be attained."

It is, however, more probable that this undulation is produced in the operation of blowing, and is due to the double movement of the particles of glass which accompanies the formation of every cylinder, the one movement being parallel to the axis of the cylinder, and the other in planes at right angles to that axis.

Having thus briefly described the two distinct processes which converge in one result, a sheet of window-glass, I shall now notice the circumstances under which these two processes have attained their present position, and I shall here avail myself of the valuable information which M. Bontemps has provided.

We have no evidence whatever by which to determine the relative antiquity of these two processes. The cylindrical process is the only one mentioned by Theophilus in the thirteenth century, and this method was adopted by the Venetians, as the more uniform thickness which resulted from it insured, in their coloured glasses, a greater uniformity of colour. But in France, England, and the north of Germany, the cylindrical process fell gradually into disuse, as the demand for coloured glass diminished, and at length in these countries the rotary principle exclusively prevailed, but it was so imperfectly carried out, that the tables seldom exceeded 30 inches in diameter, and were of very variable thickness.

Bohemia, however, still retained the cylindrical process which she had learnt from Venice, and with such success that when the French were in need of large and good glass, they imported it from Bohemia.

Thus it was until the commencement of the eighteenth century. Then a French officer, M. Drolenvaux, formed the project of introducing the Bohemian method into France. He constructed a company, brought workmen from Bohemia, and established a manufactory at Lettenbach, in 1730, with great success.

From this resulted, in France, Belgium, and the north of Holland, where the style of building required panes of large size, the abandonment of the rotary principle and the adoption of the cylindrical; and towards the close of the last century, a manufactory, near Abbeville, in Normandy, one in Hanover, and two others near Bamberg and Aschaffenburgh, were the last in which the rotary method was employed.

The last of these, that near Aschaffenburgh, was visited by a glass manufacturer in 1844, and he was much surprised at the very slow and unsystematic manner of proceeding which prevailed there. The gatherers held in their mouths a piece of pasteboard, turned up so as to protect their faces. The nose of the glass, after it had left the pipe and was attached to the ponty, was helped open with a piece of wood, and, after the table had been formed, it was laid upon a bed of small coal or coke and the ponty detached. The table was then piled in the annealing kiln.

In England, the manufacture of crown glass maintained its position, notwithstanding its abandonment abroad, and attained to such superiority over the spread or broad glass, to the rudeness of which I have alluded, that the former was used for all houses of the better class, while the latter was confined to poorer dwellings.

The inferiority of this spread glass, manufactured on the German principle, but by no means so good as the German glass, tended to prejudice the public against all glass manufactured on the cylindrical principle. This prejudice was, however, gradually overcome by the establishment in England of the manufacture of cylindrical glass, according to the process which I have already detailed, introduced from France, and from which resulted a glass which entirely displaced the manufacture of spread glass.

The introduction of this new manufacture was due to Mr. Chance and Mr. Hartley, who, on visiting, in 1830, the works of M. Bontemps, near Paris, were much struck with the advantages of the glass made on this principle, and, having secured the co-operation of M. Bontemps, they commenced the process at their own works in the autumn of 1832. So great, however, were the difficulties to be overcome, that it was not till 1838 that the manufacture of this glass was completely established. Since that time there has been great progress; and the sheet glass now manufactured in this country, though inferior in colour, is in other points generally superior to that of the foreign teachers.

A further development of the sheet-glass manufacture in England was the process of grinding and polishing this glass by machinery, whereby a new branch of manufacture was established, which has furnished glass peculiarly applicable for purposes for which none previously existed.

A fitting companion for this, though not within the limits of blown window-glass, is the remarkable invention of Mr. Hartley, by which glass, conveyed directly from the glass pot to a table, is rolled into sheets without employing in each operation more glass than is wanted for each plate of glass, however small it may be. This glass is admirably adapted for those purposes in which translucency only is required.

The greatest stimulus, however, that has been given to the crown and sheet glass manufacture was the abolition of the duty in 1845. That abolition has produced a somewhat paradoxical result. While the quantity of glass made has increased in the proportion of three to one, the number of manufacturing firms has diminished in the proportion of one to two. In 1844 there were fourteen companies engaged in the manufacture. In 1846 and 1847, following the repeal of the duty, the number had increased to twenty-four. The glass trade, after the removal of the heavy burden imposed upon it, seemed to offer a fair opening for money seeking investment. The demand for glass was so great that the manufacturers were in despair. Glasshouses sprang up like mushrooms. Joint-stock companies were established to satisfy the universal craving for window-panes. And what was the result? Of the four-and-twenty companies existing in the year 1847, there were left, in 1854, but ten. At this time there are but seven in the whole United Kingdom. Two, established in Ireland, have ceased to exist. In Scotland, the Dumbarton Works, once famous, were closed, in 1831, by the death of the partners, afterwards reopened, and again closed. The seven now existing are all English.

I turn, in conclusion, from this somewhat melancholy picture to a more cheering subject, the great ends which, from small beginnings, this manufacture has accomplished. The glazier of Pompeii little dreamt that the time would come when the substance that he handled, then so rare, would minister through the world to the health and pleasure of mankind; that beneath it trees would flourish, transported from a foreign soil; and that, cheaper than wood itself, it would combine with iron to form the largest building on the earth. But from Pompeii to the Crystal Palace there has been a progress of nearly twenty centuries, and a still greater progress in action than in time. That progress has been marked by no sudden revolutions, such as have distinguished the development of other efforts of mankind. The problem of blowing glass into a sheet admits of limited solutions, a cylinder or a sphere. Through one or other of these forms the first blown sheet cannot but have passed, and through one or other all pass now. But the progress has been none the less for lack of revolutionising discoveries. Minute and apparently unimportant changes, perceptible only to those near at hand, have in silence done their work.

Still, the development both of its processes and its applications is incomplete. Sir Joseph Paxton's glass arcade, stretching over the streets of London, and Dr. Sleigh's city of glass, in which invalids will inhale the gentle air of Madeira,—these are faint foreshadowings of the destiny of this wonderful substance.

And, perhaps, the day may come when some future chronicler of glass shall smile at the barbarians of the nineteenth century, who could not make window-glass without defects, and shall exhibit those defects as the curiosities of a bygone age.

THE CHURCH OF STE. CLOTILDE, PARIS.

The scaffolding which surrounded the principal entrance of the new church of Ste. Clotilde has been removed within the last few days and has exposed to view one of the best portions of the building. We use it as the occasion to give an engraving of the exterior of the church from a drawing made on the spot for the purpose. A sketch of one of the smaller entrances will be found in our 12th volume, p. 602. The church is situated in the Rue St. Dominique, not far from the Chamber of Deputies, or, as it is now called, of the *Corps Législatif*. It has been about ten years in progress, and has cost a very large sum of money. The sculptor has been allowed to exercise his skill: the windows are filled with stained glass; and the walls and vaults of the chapels are decorated with colours and gilding. There is a largeness about its proportions which is striking in a modern work of pointed architecture, but many of the details are pinched and mean, and the foliage in parts is poorly carved. The triforium is flat and ugly. A large number of artists have been employed both in the carvings and the glass, and a varied feeling is of course observable. One series of the windows, ten in number, was designed by M. Galimard and executed by M. Lusson, of Metz. Some of the French critics, after praising the work of M. Lusson in several respects, and acknowledging that most of the windows are harmonious in colour, complain that the drawings have not been followed so accurately, especially in the heads, as they should have been, and urge that artists should themselves become glass-painters for the execution of such works.

The church of Ste. Clotilde must be regarded as the largest and most important modern work of Gothic art in France, and will probably prove

"The fruitful mother of a hundred more."

PROJECTION CASES IN THE METROPOLIS.

Your correspondent, "District Surveyor," prejudges the case. The Board of Works have the power to grant permission, and no clause in either the Building Act, or the Metropolis Local Management, says such works may not be executed. Not only is it not so said, but, in addition, it is distinctly stated that, subject to the consent and approbation of the Board of Works, such works *may* be carried out, consequently a *primâ-facie* case exists of their admissibility. But, after all, the word "projection" is the word to be defined, as also is the word "building," and also the words "regular line of the buildings." Strange to say that none of these important points are to be found in the interpretation clauses of the Act. Consequently every individual may form his own—possibly very inaccurate—conclusions on the matter. But one point only is clear, that every case must stand on its own merits, as every one would be modified by the particular circumstance. What are, and what are not, "projections,"—and what are, and what are not, "buildings," must be defined. It is needless to say that what really infringes on, alters, or varies a line of street should be strenuously resisted, but a line may be improved by a filling in of spaces between buildings that have for many years been brought forward and existed as buildings.

Tempora Mutantur.

THE CHURCH OF STE. CLOTILDE, PARIS.

PROVINCIAL NEWS.

Lynn.—The new workhouse, according to the *Norfolk Chronicle*, will be fit for habitation by Midsummer. On Friday in last week the tenders for gas-fittings were opened, and that of Messrs. Wheeler, of Nottingham, for 127*l.* being the lowest, was accepted. The others were 143*l.* 158*l.* 210*l.* and (on a different plan) 257*l.*

Cradley.—The new National School-rooms, erected here, from the designs and under the direction of Mr. F. S. Smith, of Stourbridge, architect, have been opened.

Ripley.—New National Schools have been erected here at the expense of the Butterley Ironworks Company. There are two school-rooms, capable of accommodating 300 children, and having a class-room and teachers' residence attached to each. They are warmed by hot water, and ventilated by a patent process. The architect was Mr. H. I. Stevens, of Derby, and the cost of the whole upwards of 2,300*l.* The two school-rooms are each 54 feet by 18 feet, and separated by a wooden partition easily removable, so as to form together a room of 54 feet by 36 feet. The class-rooms are 18 feet square, with fire-places and ovens to warm the children's dinners. The whole is supplied with gas from the Butterley Ironworks. A new kind of desk has been introduced into the schools, so constructed as to form either table, desk, or bench, with little trouble. The schools were opened on Friday before last.

Preston.—On Thursday in last week, the foundation stone of a new cotton spinning-mill was laid for Mr. T. C. Hincksman, in Crott-street, near the Maudlands railway station. The stone was laid by Mrs. Hincksman, and a bottle placed under it contained the names (amongst others) of the different contractors, viz. Messrs. Watson and Alsup, engineers; Messrs. Cooper and Tullis, masons and bricklayers; and Mr. Tomlinson, joiner. The mill, when completed, will be 125 feet in length, 93 feet in breadth, and four stories high.

Dundee.—The new Royal Exchange here, in West Panmure-street, was inaugurated on Tuesday in last week. Its erection was set about some three years since, according to the *Warder*, the funds being raised in shares by leading members of the Dundee Chamber of Commerce. Competition designs were asked from several architects of repute. Of those sent in two were understood to divide approval equally, but it was deemed advisable to obtain a design from Mr. Bryce, of Edinburgh. This was accordingly done (after remunerating the authors of the designs referred to); and the plans of Mr. Bryce have now been carried into effect. The style of the building is that particular phase of Gothic which prevailed on the continent about the middle of the fifteenth century, as in the Hôtels de Ville, of Brussels, Louvain, Ghent, &c.: these Mr. Bryce has taken as the type of this Exchange. The main building abuts on Panmure-street, a wing containing the offices being thrown back at the west end, so as to form, with the end of the front building, two sides of a small square or place: it is in contemplation to finish by the erection of similar offices, at some future time, on the west side of this square. Seven tall windows light the hall. Over the cornice is a range of dormer windows. The tower is carried up one stage above the hall, and is of a very plain character, considering the work on the rest of the façade. It is terminated with a carved parapet and flat roof. The hall occupies the whole of the upper floor of the front building, its internal dimensions being about 77 feet by 34 feet. The timbers of the roof are ornamentally treated and open to the ridge. There are seven main couples springing off corbels halfway down the walls, with arches and purlins transversely and longitudinally springing from pendents. The roof timbers are painted dark oak, with the bolt-heads, pendeats, &c. gilded. The walls are painted a uniform stone colour.

Montrose.—The project for the erection of markets for garden and dairy produce, and a hall for the accommodation of 1,000 to 1,200 persons, has now been finally resolved on by the town-council, in consequence of an offer by Mr. Mitchell to relieve the council of the front site, and erect on it a building in continuation of his present erections, and by the exertions of the friends of the temperance movement, who, according to the local *Review*, are to make arrangement for erecting the contemplated public hall, at an expense of 900*l.* or 1,000*l.* with galleries, ante-rooms, &c. This hall would also serve the purpose of a corn exchange on Fridays. The markets will be put up by the council at a cost of 1,150*l.* These will have a spacious entrance from High-street for passengers, and a wide street passage from Baltic-street.

CHURCH-BUILDING NEWS.

Coggeshall.—The restoration of Coggeshall church, commenced in 1851, has been progressing, but much, it is stated, yet remains to be done. The nave and aisles, south chancel and tower, have been restored at a cost of 2,921*l.* 5s. 9d.; in addition to which, from private benevolence, the south porch door and font have been renovated. To complete the work, by restoring the north chancel aisle and entirely re-seating the church, 1,600*l.* are required.

East Grafton.—A memorial window has lately been placed in the church of St. Nicholas, East Grafton (by subscription of parishioners in the district), to the memory of the late Marquis of Ailesbury.

Doncaster.—Since the destruction of the parish church, rendering the opening of St. George's Chapel and the Townhall as places of Divine worship indispensable, the accommodation at Christ Church has been found inadequate. Hence it has been deemed advisable, says the local *Gazette*, to remove the vestries on each side of the communion-rails. This will give eight additional stalls, affording at the same time an improvement in internal arrangement. A new vestry is in course of erection on the north of the church, and in keeping with the exterior of the building. The work was let to the Messrs. Anelay, builders, and has been completed.

Loversall.—The church of Loversall has now been pretty fully restored. Exteriorly, the nave and south aisle have been replaced by new masonry, faced with Ancaster stone. The old windows have given place to cusped ones, filled with cathedral glass, and the terminations show figure carving. The north wall has been relieved of its unsightly buttresses. The south door has been covered externally with English oak and ornamental iron hinges, and panelled interior. Entering by the west door, the most prominent features are the stained-glass east window, and the raised roof of the nave resting upon open rafters. The former internal arrangement has been superseded by open stalls through the entire church. The screen which hid the interior from view on entering is cast aside, thus leaving the west door free from impediment, and converting it into the principal entrance. The flooring which came to the tower arch has been removed, bringing into prominence the west window, till now obstructed. The piers and arches separating the nave from the south aisle alone remain of the former structure. They are octagonal columns, with plain mouldings of the thirteenth century. The masonry above them has been replaced, but the columns are merely renovated. Excepting the chancel, the floor has been laid with Minton and Co.'s patent tiles. Entering by the south door, the memorial window of the Fenton family is prominent. It occupies the centre window of the north wall of the nave, and is of the Cusped or Pointed style, in lieu of the flat-headed and ill-shaped windows formerly occupying that side of the edifice. The chief subjects depicted are "Christ Healing the Dumb," and "The Last Supper." The relatives of the late Rev. Luke Willey have erected a mural monument near the Fenton window. Mr. Athron, of Doncaster, took the contract for the masonry work; Mr. Race, of Balby, for the woodwork; and Mr. Walker, of Doncaster, for the plumbing. Mr. Wailes, of Newcastle-upon-Tyne, is the designer and executor of the Fenton memorial; and Messrs. Anelay furnished the Willey tablet. The incumbent has contributed 150*l.* towards the repairs, and rather more than an equal amount has been subscribed by parishioners and friends. The cost, however, will probably be about 600*l.* A portion of the stone required for the repair has been presented by Mr. G. Savile Foljambe, of Osberton Hall, from his quarries at Warmsworth. Accommodation for about 150 persons is now afforded. The restoration has been completed under the direction of Mr. Scott.

Stockport.—The Tenders for the erection of the Cemetery Episcopal Chapel were examined on Saturday last. Several were sent in, but that of Messrs. J. and J. Longson, builders, for 690*l.* was accepted.

Ormiston.—The foundation-stone of a new church for the parish of Ormiston, in the south of Scotland, was laid on 28th ult. The church is erected by the Earl of Hopetoun, sole heritor of the parish.

THE LATE MR. JOSEPH NEELD, OF CHIPPENHAM.

At the last meeting of the Institute of Architects, Mr. James Thomson communicated the death of Mr. Joseph Neeld, M.P. who was an Honorary Fellow, and drew attention with justice to the improvements made by Mr. Neeld in the homes of his tenantry at Grittleton. Mr. Britton, in his "Autobiography," which is now fast approaching towards completion, gives some account of Grittleton and of its owner.

Speaking of the changes observable there since he first knew the neighbourhood, Mr. Britton says:—

"These important and commendable improvements have been gradually made within the last twenty-seven years, by Mr. Neeld, one of the members for the borough of Chippenham, who purchased the manorial estates of Grittleton from Colonel Houlton in 1828. Since that year he has bought other land in the same parish, with lands, manors, and advowsons in adjoining parishes, and thus created a domain of large extent, and placed the whole under one system of general amelioration and good cultivation. It is generally known that Mr. Neeld came into possession of great wealth on the demise of his maternal great-uncle, the late Philip Rundell, esq. of Ludgate-street, London, an eminent goldsmith, who died at the advanced age of 81, on the 17th February, 1827. After many munificent presents, during his long and money-saving life, he bequeathed, by will, the very large sum of five hundred thousand pounds and upwards to be distributed to his nephews and nieces, to personal friends, and to public charities. The residue of his fortune was given to his 'great nephew and esteemed friend, Joseph Neeld, esq. the younger.' This item was presumed to amount to at least eight hundred and ninety thousand pounds. The personal effects were sworn to exceed one million of money, the utmost limit to which the scale of probate duty extends."

A spacious mansion for Mr. Neeld, designed by Mr. Thomson, of which we gave a view some time since, is still in progress of erection, and was intended to receive a fine collection of works of art.

THE NEW WAR-OFFICE.

Sir Benjamin Hall proposes, and wisely too, to move, shortly, for the appointment of a select committee to consider the expediency of obtaining a site for the concentration of all the Government offices in the neighbourhood of Downing-street; and if that committee should be of opinion that this is an advisable course, and the House of Commons should sanction it, he would then, he says, be prepared to give notice in the autumn for the purpose of acquiring the property, by the introduction of a Bill. He proposes then to go still further, and says that as the buildings to be erected on that site would be of a grand and national character, the designs ought to be thrown open for public competition, not merely by the architects of the United Kingdom, but of the whole world, in order that we might have some public buildings at least which would be worthy of the metropolis.

Such is the present state of matters in respect to the Government offices; but, whatever be the result, the erection of a new War-office appears to be resolved upon, and, failing the more complete scheme, it may be erected in Pall-mall, on the site of Buckingham House and adjoining premises, between that and the Ordnance-office. Sir Benjamin also states that he is prepared to lay before Parliament a plan for taking the ground bounded by George-street, Downing-street, Parliament-street, and St. James's-park, but that this can only be obtained in the usual way, by notice being given in the autumn and the introduction of a Bill in

the spring. It is for their lordships of the War Department to say whether they can wait for their new office till the new site be purchased; and, any way, Sir Benjamin puts it as a question whether so large a department should be permanently fixed in Pall-mall, on a restricted site and so far from the other offices.

COMPETITIONS.

St. Aloysius's Schools, Ushaw, near Durham.—Some time since, Dr. Newsham, the president of Ushaw College, desired Messrs. Joseph and Charles Hansom, and Mr. E. W. Pugin, to send in competing drawings for a school to contain upwards of one hundred students: the latter gentleman was the successful competitor. The building is of a three-sided quadrangle form, the offices forming a quadrangle behind. The arrangements include chapel, study, class-rooms, dormitories, &c. The communication between the present college is effected by means of the museum (which is intended to be 160 feet in length), and a small cloister. An infirmary will be built between the old and new college, with direct and separate communication from each. This is complete in itself, independent of the rest of the establishment. The quantities have been taken out by Mr. Eyre, of Liverpool, and the plans are now in the hands of the contractors. The 12th inst. is the day appointed for the delivery of the tenders.

Grantham Cemetery.—About seventy designs from various architects were sent in. It appears that the choice has fallen upon a design by Mr. Browning, of Stamford.

Luton New National Schools.—The designs submitted were nineteen in number, and two were chosen for consideration, of which one bearing the motto "Fides" was finally selected. Mr. John Cumberland, of Luton, is the architect. The proposed buildings consist of a school for 300 boys and one for 250 infants, a residence for the master and another for the mistress, with proper offices to the schools and residences. The total cost is not to exceed 1,800*l*. Mr. Cumberland's design is estimated to come somewhat under that amount.

REFORMATORY AND INDUSTRIAL SCHOOLS.

The benevolent movement in favour of juvenile Reformatories and Industrial Schools is extending rapidly throughout the whole country, and new buildings are arising in various districts, in which to carry out the philanthropic objects of the movement.

The chief stone of the Warwickshire Reformatory Institution was laid by Lady Leigh, on Wednesday in week before last, near the village of Weston, on a site of 13 acres, which, with two other pieces of land, comprising in all about ninety acres, will be used for the purposes of the institution. The building will be erected under the superintendence of Mr. Hill, the county architect. It will be of brick, of the plainest possible character, and is to consist of a school-room, to be used as a chapel, and of dormitories, workshops, a residence for the master, domestic offices, cooking kitchen, wash-houses, &c. The site is on a hill, high and dry. It is said that Lady Leigh intends to form a committee to establish a Girls' Reformatory near Coventry.

The first stone of the Castle Howard Reformatory was laid on Monday in week before last by Lady Mary Labouchere, a sister of the Earl of Carlisle, on whose estate the building is to be erected. This institution, we understand, will be capable of receiving from forty to fifty boys, and the building committee hope to have it opened before the end of the year. They have, it is said, already made provisional arrangements for the care of thirteen juvenile offenders, nine of whom will be received into the buildings near Castle Howard, kindly placed by Lord Carlisle at the disposal of the committee for temporary occupation, and the remaining four, by agreement with Mr. T. B. L. Baker, the well-known and successful founder of the Reformatory School at Hardwick Court, Gloucestershire, will be sent to that institution.

At Manchester, on Wednesday week, a meeting of city magistrates, convened by a mayoral circular, was held, to consider the desirability of establishing Juvenile Reformatories in this district. In a discussion which took place, a strong sentiment seemed to be entertained generally, that there was a necessity for something being done, but that from the nature and magnitude of the evil to be dealt with, it could not be grappled with effectually by any voluntary effort, and that to be efficiently done it must be done by the State. It was resolved to urge upon Government and upon Parliament, the necessity of giving, by an Act to be passed during the present Session, the same facilities for the erection and maintenance of such institutions as now exist for the erection and maintenance of prisons. A committee, consisting of the mayor and other gentlemen, was appointed to take the requisite steps for furthering the objects of the meeting.

A proposal has been made by the magistrates of Salop to join those of Herefordshire, in the establishment of a Reformatory for juvenile offenders. The Herefordshire Bench, however, are not at present prepared to entertain the offer.

At Hull, on Wednesday in week before last, the chief stone of Ragged and Industrial Schools, was laid by the Earl of Shaftesbury, in the presence of a large concourse of spectators. The site of the building is a plot of ground, approaching a triangular shape, containing 1,650 square yards, situate between Marlborough-terrace and Norfolk-street. The master's residence will be on the western side of the ground, adjoining houses erected by Mr. Turpin, and will be separated from the school buildings by the road for the entrance of the girls, and the playground to be appropriated to their use. The playgrounds are separated by the schools and dormitories. The principal buildings, according to the *Hull Packet*, will comprise—on the ground-floor — industrial rooms, 28 feet by 29 feet; and 27 feet by 16 feet; committee room, 18 feet by 11¼ feet; kitchen and scullery, each 15 feet by 15 feet; boys' and girls' bath rooms, each 15 feet by 15 feet; and on the first floor, boys' school-room, 37 feet by 28 feet; girls' school-room, 25 feet by 28 feet; and boys' and girls' dormitories, 30¾ feet by 15 feet each; with all other necessary appurtenances. The upper school-rooms are capable of being thrown into one when occasion requires it, and can then be used as a "Ragged Church" for preaching, &c. The building will be in the style of the Tudor period, with stone dressings to the quoins, windows, and door openings, &c. There will be a bell turret; and provision is also made for a clock. The elementary schools will accommodate 150 children, and the industrial rooms about 100 additional pupils. The dormitories are constructed for twenty persons. The contracts for the new buildings are not yet let. The architect is Mr. William Botterill, of Hull.

RESTORATION OF THE ABBEY OF ST. ALBAN.

An influential and numerous meeting of the nobility, gentry, and clergy of Herts, was held at the Town-hall, St. Alban's, on Thursday in last week, "to consider the best means of restoring and upholding the Abbey Church of St. Alban's, and of obtaining for it the dignity of a cathedral." The chair was taken by the Earl of Verulam, and the meeting was addressed by the chairman, and by the Marquis of Salisbury, Lord Robert Grosvenor, Archdeacon Grant, Mr. Puller, Lord Robert Cecil, and other gentlemen, all of whom supported the object of the meeting: at the close, subscriptions to the extent of 4,205*l*. were announced. The *Herts Mercury* of last week gives a full report of the proceedings, and also of the report on the state and capabilities of the church, drawn up at the Lord Lieutenant's request by Mr. G. G. Scott, architect. The report states that the plan of the church being substantially like that of most of our cathedrals, there can be no reason why it should not be as well suited to its purpose as they, but that the reporter would wish to see it much more so, and thinks this also can be effected; but, executed on a scale becoming the dignity of the church, the cost of rendering it fit for cathedral uses would, in his opinion, come to from 12,000*l*. to 13,000*l*.; besides which other works are suggested, which would cost about 5,000*l*. or 5,500*l*. In respect to the first or most essential order of alterations, the reporter says: "The refittings would consist of a new altar-table of suitable design, with proper coverings and appurtenances; an episcopal throne of becoming dignity; canopied stalls for the dean, sub-dean, and chapter, with desks and subsellæ in front and all requisite provision for the vicars choral and choristers; a low choir screen of open metal-work across the eastern arch of the tower, and all the minor requirements of choral arrangement; a new organ, so placed and constructed as to be an ornament rather than an obstruction, and conveniently arranged both for the choir and the congregation; and a handsome new pulpit (perhaps of Purbeck marble); and oak seats throughout the part to be occupied by the congregation, with requisite screens to sever this from the parts not so used. All these should be executed in a style proportioned to the magnificence of the building, their details perhaps agreeing in character with the style of the choir itself. The pavements of all these portions should be proportioned in richness to their position; but in no case interfere with any ancient sepulchral stones, which must be carefully preserved *in situ*."

The repairs immediately connected with these alterations must be considerable and of the most delicate character, every touch being thoroughly considered, and of these Mr. Scott gives some slight details by way of example, particularly as relates to the projecting pilasters of the Norman piers, and to questions of decoration. Spacious vestries also would require to be erected for the chapter and choir on the site of the ancient vestries. The second-class of works recommended comprises the general restoration of the interior of the choir, the complete repair of the aisle roofs of the nave and other roofs, and of the foundations, particularly of the nave aisles, drainage of the edifice, and other works. A third-class of restorations is also slightly indicated, but "no attempt should be made to *smarten* up the old Norman structure." Dr. Nicholson is of course exerting himself on the subject.

METROPOLITAN BOARD OF WORKS.

A special meeting of this Board was held on 4th inst. when Mr. Bazalgette read his report on the sewage interception and main drainage of the districts south of the Thames. As to the merits of the scheme, we shall be better able to judge when the report is printed, as it has been ordered to be. Meantime, we may quote the following preliminary remarks, and also a paragraph as to the estimated cost of the various works:—"The Board will probably remember that in 1853, pursuant to directions by the then Metropolitan Commissioners of Sewers, designs for intercepting sewers on the south side of the river were prepared by me. The plan now submitted for your consideration will be found to resemble in its main features the former scheme: it therefore becomes necessary to recapitulate several of the leading considerations referred to in my report of 1853, and in the joint report by Mr. Haywood and myself upon the northern drainage in 1854, whilst I have at the same time endeavoured to take advantage of all the information gained in the subsequent preparation of the northern drainage scheme, and to profit by the experience of the last three years. The modifications now introduced will, I trust, be regarded by you as improvements.

The estimated cost of the works herein recommended will be as follows:—

ESTIMATE.

High level sewer, from Clapham to Deptford, and branch	£199,226
Extension from Deptford to Plumstead...	155,550
Low level sewer, from Putney to Deptford, and branch	209,000
Reservoir and land for pumping stations	103,140
Engine-houses, engines, pumps, &c.	164,780
	£831,696"

Having resolved that the report be received, and printed as soon as possible, the Board proceeded to other business, amongst which was a communication signed "Lionel Gisborne," accompanying plans and papers, on the Thames embankment (from London-bridge to Westminster-bridge, it was alleged), to which the chairman said Mr. Bazalgette and he attached some importance, and which was referred to the works committee by a large majority. It was then resolved, "That it be referred to the Improvement Committee to consider and report to this Board whether any alteration ought to be made in the level between Holborn-hill and Skinner-street, before the corporation commence letting their vacant ground on building leases, it being apparent, from the state of forwardness of Victoria-street, that no time should be lost in coming to a decision on this long-needed improvement."

ROCHESTER NEW BRIDGE.

It is expected that the new bridge at Rochester will be opened in June next; and it it intended that the demolition of the old one shall be commenced on the day of opening. The design of the new bridge, as we have before noted, is by Sir William Cubitt. It is to stand directly in a line with the high streets of the two towns. The main bridge is of cast-iron, measuring in length about 485 feet by 40 feet wide, and is composed of three arches, namely, two side arches of 140 feet span each, and one centre one of 170 feet span; the rise on the raised side of the former being 14 feet and the latter 17 feet. Each arch consists of eight main ribs, which in the smaller arches are cast in five pieces, and in the larger one in six. The ends of all these castings are planed by machinery made expressly for the purpose. The spandrils of the arches are fitted in with ornamental cast-iron work, which serves to carry the covering-plates of the roadway. The whole is surmounted by a heavy moulded cast-iron cornice and parapet railing, the former intersected with the moulded stonework of the piers and abutments. The roadway and footpaths are carried entirely by cast-iron

plates, bolted to the tops of the spandril castings. These plates are overlaid with planking, upon which granite pitching is placed. This superstructure has been contracted for by Messrs. Cochrane and Co. of Woodside, near Dudley. The total weight of cast iron is 2,500 tons, and about two-thirds is already fixed in the place. The foundations upon which the superstructure is being erected have been completed by other contractors. They are formed of cast-iron hollow cylinders, sunk through the bed of the river on to the rock, filled with concrete and brickwork, and bound together by cast-iron curtain-plate and covering-plates, on which the masonry of the piers and abutments is placed. The centre arch is still at Woodside, together with the skeleton of a swing-bridge, with a clear opening of 50 feet, and forming a fourth arch of the Rochester-bridge. This bridge consists of six wrought girders, carried by and turning upon a cast-iron roller-path, 30 feet in diameter, and thirty cast-iron rollers. The gearing is so arranged that a very small force will be required to open and close the bridge, although its total weight with roadway complete will exceed 300 tons. The whole of the works of the bridge have, since their commencement, been under the superintendence of Mr. John Wright, the resident engineer.

ARCHITECTS AND CORPORATE BODIES.

I VENTURE to draw the attention of architects and builders to the following facts, in the hope that in dealing with municipal corporations they will take care that their contracts are sealed with the corporate seal, otherwise they may find that the law provides them no remedy for recovering amounts due to them.

In the year 1854, in consequence of an advertisement for plans, sections, elevations, and estimates for a new town-hall and other buildings in the borough of Preston, I became a competitor for the same, and obtained the first premium of 100 guineas, mine being deemed the best plans. The plans became the property of the council, but they were considered too expensive, and the building committee decided upon postponing the building and having a less expensive plan.

Subsequently, by letter from the town clerk of Preston (which embodied resolutions passed at a meeting of the council on the 2nd October, 1854), I was requested to prepare a design for the erection of buildings at an expense of about 16,000*l.* In consequence of this letter, and of instructions from the building committee as to the mode of carrying the resolutions into effect, I incurred considerable expense in preparing working drawings and specifications, and by taking journeys to attend committees in Preston, on request almost invariably by letter from the town-clerk, as well as journeys to London to consult Mr. Barrett in reference to fire-proof floors, and to give him the requisite information to enable him to prepare his specifications.

I subsequently furnished the committee with a design, and a statement containing several estimates. On the 2nd of January, 1855, I received a letter from the town clerk, stating that the council had determined to carry out my plan No. 1, so far as some old buildings were concerned, the cost of which I had estimated at 9,500*l.*; and afterwards I was requested to meet the building committee, and in the meantime to inform the town clerk what my rate of charges would be for carrying out the work. I accordingly informed the town clerk what my charges would be. The council on the 16th January, 1855, decided upon additional buildings, which increased the cost to 12,000*l.*; and afterwards the building committee gave me instructions for constructing the whole of the floors fireproof, and for putting in plate-glass windows, iron shutters, warming and ventilating apparatus, and certain fixtures and gas apparatus; thereby increasing the cost very considerably.

In accordance with the instructions of the building committee, I prepared the whole of the plans, sections, and drawings, and quantities of the different works. The total amount at which I estimated the works (with the extras) could be completed, was 16,151*l.* The total amount at which they were contracted for was 15,536*l.* Being less than my estimate by the sum of 615*l.*

On the ground that the estimates were so much more than the council expected, they subsequently declined to proceed with the erection of the buildings. I believe that the reason the council complained of the expense was, that the building committee never explained to the council that they had requested me to make any extras, such as fireproof floors, &c. which were, of course, very serious items of expense.

I afterwards sent in my bill for the work I had performed, and as the corporation declined to pay it, I commenced an action to recover the amount. In that action the corporation pleaded that they had never bound themselves to perform the agreements by any contract under seal. There being, therefore, no contract under seal, I was advised that the corporation could not be compelled to pay me the amount of my bill. In consequence of this *legal* difficulty I was induced to accept from the corporation the sum of 330*l.* in discharge of my claim of 875*l.* 10s. 3d. Had I persisted in going on with the action, the result would, no doubt, have been, that I should have been nonsuited, or, in other words, that I had no ground of action, simply because the agreement being with a corporate body was not under seal. After this I might, indeed, have gone to a Court of Error, where, to say the best, it was very doubtful whether the doctrine that corporate bodies can contract under *seal only*, would not have been upheld. Had I adopted this course, the expense would have been enormous; and you therefore cannot wonder that, with almost the certainty of losing the trial, and consequently of having very large costs to pay, I was induced to accept a sum of money, which, after deducting interest on the amount laid out by me, and the costs which I had incurred, did not cover the amount I had actually expended on behalf of the corporation. The offer to compromise the action proceeded from the corporation, and not from myself; and this, in my opinion, affords strong testimony that the corporation considered that I was in justice entitled to remuneration. If my services had been rendered to an individual instead of to a corporate body, no doubt the law would have enabled me to recover the whole of my charges; and it appears to me a great violation of right that in such a case there should be any distinction between individuals and corporate bodies.

In future I shall of course take care not to lose the power of enforcing my just claims by inattention to legal technicalities; and I hope that your readers may also be warned from the difficulty into which I have fallen.

WILLIAM HILL, Architect.

IRON CHURCHES.

AT committee meetings of the Ecclesiological Society, held on March 11th and 12th, 1856, at Arklow House, Mr. Beresford Hope in the chair, Mr. Slater, in presenting the finished engravings of the plates for the concluding number of the *Instrumenta Ecclesiastica*, informed the committee, that in compliance with their request he had obtained an estimate by Messrs. Skidmore, for executing the designs in wrought and cast iron; and one from Messrs. Troughton and Bevan, for executing them in cast iron;—the first, 2,500*l.*; the second, 2,150*l.* Messrs. Skidmore further said, "We will undertake to make a church capable of holding 800, with enrichment equal to a church costing in stone 7,000*l.* for one-third less than this amount. If iron is to be considered a material of our age and locality, and to be used as our forefathers used every material of their day, giving it its natural expression, adding art and beauty to the constructive form, it would be unlike their actions, and unworthy of ourselves, to use a new (for considering the facility of its production in this day, and its great and extending use, it may fairly be ranked as a new) material, only as a cheap expedient, instead of giving to it that development in Christian art, of which it is so capable. In furtherance of these views, we would suggest the use of geometrical forms of iron (the constructive supports of the walls), filled in with marble of various colours: as also carving or ceramic art for the same purpose. The interior would afford ample scope for carrying out that floral treatment so much used in the fourteenth century. The iron also would require coating with pigments to preserve its surface, and would form a ready means of illumination; the renewed use of crystals and gems, as in ancient metal work; the use of enamels, which present facilities would permit to a greater extent, even than in ancient work; the covering wall-surfaces with tapestry, having historical subjects, reredos of brass, or silver and brass combined,—are also objects to be aimed at."

THE FITZROY DRY DOCK AT PORT JACKSON, NEW SOUTH WALES.

THE graving establishments of Port Jackson consist of the Waterview Dry Dock and the Australasian Steam Navigation Company's Patent Slip, both for some time finished and open, and the Fitzroy Dry Dock, which is rapidly approaching to completion. The Fitzroy Dry Dock is situated on the south-east of Cockatoo Island, to the westward of the harbour of Sydney, at the commencement of the Parramatta river. The basin of the dock has been excavated out of compact sandstone and hard shale. The original surface of the island at the point selected for this work had 40 feet of sandstone above high-water mark, which had first to be cleared away: 3,000,000 cubic feet, or 200,000 tons, of stone have thus been removed. A considerable portion has been cut and employed to line the lower portion of the dock, which is excavated out of hard shale. The floor of the dock is formed of massive blocks of stone, each three to six tons in weight. They are so cut as to form an inverted arch of 72 feet radius. The altar stones, or steps along the sides of the dock, are of the same massive description; each stone forming two steps, of a foot tread. The piers between which the caisson rests have two sills, 20 feet apart, to which are bolted, with 1½ inch copper bolts, the timbers, 12 by 12, to form a surface against which the caisson presses when the water is pumped out of the dock,—the pressure caused by the water outside being calculated to be equal to about 400 tons distributed over the surface. The *Sydney Morning Herald* gives the following comparison of the dimensions of the Fitzroy Dock with those of the new "South Inlet" Dock at Portsmouth, together with the cost of each:—

	South Inlet Gov. Dock, Portsmouth.			Fitzroy Gov. Dock, Sydney.	
	Ft.	in.		Ft.	in.
Extreme length	335	0	...	336	0
Length of the floor	302	0	...	300	0
Extreme breadth	80	9	...	79	0
Extreme depth	29	0	...	27	0
Depth of water at spring tides	23	0	...	21	9
Width at entrance	70	0	...	60	0

The South Inlet was completed in ten years at a cost of 120,000*l.* "The Fitzroy," adds the *Herald*, "will have taken about eight years when finished, at a cost to the colony of say 55,000*l.*; although the real value of the work which has been done up to the present time has been (after careful allowance for the difference between forced and free labour) estimated at 100,000*l.*" Capt. K. Gother Mann and Mr. James Henry Thomas (the latter officer, brother of Mr. Cave Thomas, the artist, having prepared the designs for the whole of the extensive plant of machinery, and for the additional buildings, &c. now in course of completion) are carrying out this important work by help of forced labour, in most respects of the worst kind.

Notices of Books.

On Agricultural Chemistry, and the Nature and Properties of Peruvian Guano. By J. C. NESBIT, F.G.S. &c. Fourth edition. London: Longman and Co.

IT should be unnecessary now to urge the importance of applying science to agriculture, and promoting that great development of its products, the foundations of which are now being laid by engineers, chemists, and other men of science. The fourth edition of a work on agricultural chemistry, by the principal of the Agricultural and Chemical College, Kennington, carries its own recommendation on the face of it. The volume is composed of lectures delivered at various farmers' clubs and agricultural meetings during the last few years, and its main object is to render more familiar and popular the science of agricultural chemistry, and to divest it as much as possible of dry details and technicalities. A farmer is a manufacturer, and must study processes.

Miscellanea Graphica: a Collection of Ancient Mediæval and Renaissance Remains in the possession of Lord Londesborough. Illustrated by FREDERICK W. FAIRHOLT, F. S. A. London: Chapman and Hall, Piccadilly.

THE many valuable and rare antiquities in the collections to which Lord and Lady Londesborough have devoted no small amount of money and care, are being elegantly illustrated by the careful pencil of Mr. Fairholt. Amongst the Nos. of the "Miscellanea Graphica" now before us are a great variety of curiosities, such as bells, drinking-cups, altar furniture, ivory carvings, bronzes, jewelry, enamelled plaques, watches, warlike instruments and armour, implements of punishment, gold ornaments, stirrups, &c. &c. Many of the illustrations are illuminated in gold and colours, such as a morse of fourteenth century, two plaques of thirteenth century, altar furniture, Merovingian and other ornaments, &c. Perhaps one of the most interesting of the objects illustrated in the few Nos. referred to is the Bell of St. Mura. This curious relic is engraved the full size of the original. It is remarkable as a work of art, as well as for its venerable antiquity and the superstitious regard in which it has long been held by the Irish. Its legendary history narrates how it came down from heaven, ringing all the way, and how the tongue re-

turned to the skies. It never was used, therefore, as a bell, so far as tradition indicates, but was turned into a medicinal drinking-cup. For centuries the famous abbey of Fahan, near Innishowen (county Donegal), was noted as its depositary. The material of this little bell is bronze, and its form is quadrangular, like other Irish bells of the seventh century. It is ornamentally encased; but by the accidental removal of one portion of the outer casing, a series of earlier enrichments were discovered beneath, and probably of ninth century workmanship. The portion disclosed consists of a tracery of Runic knots, wrought in brass, and firmly attached to the bell by a thin plate of gold. The exterior ornaments consist of a series of detached silver plates of various sizes, diversely embossed in a style of the eleventh century. The centre is adorned with a large crystal, and smaller gems have at one time been set in other vacant sockets round it; only one, of amber, remaining. The gold setting of other stones also appears on it. The best workmanship has been devoted to these decorations. The illustrations in this valuable and interesting work are interspersed with descriptive letterpress. The whole work is in the quarto form.

VARIORUM.

In "A Plan for the better Management of Railroads," by Mr. F. Chaplin, published by Effingham Wilson, of the Royal Exchange, London, some wholesome advice is offered to railway directors on the true nature of their *premises*, as simply those of great carriers and trading companies. The author, however, is of opinion that railways will never *pay*, nor will they ever be fairly tried, till they come under the management of "men who, at least in their corporate capacity, have nothing else to do."——A third edition of Quested's "Art of Land Surveying, explained by short and easy Rules, particularly adapted for the use of Schools, and so arranged as to be also useful to Farmers, Stewards, and Others," has been issued by Relfe, Brothers, of 150, Aldersgate-street, London. As before noted, this is a good little book of its kind.——A sixpenny pamphlet has been published by Johnson, of St. Martin's-lane, Charing-cross, the title of which will sufficiently explain its objects. It is titled, "A few Lines to Railway Companies and the Public, suggesting a Plan for the better Management of Railway Trains, and on the Means of communicating between Guards and Engine-drivers for the prevention of Accidents, containing a Description of a new Air-whistle, and of a simple Plan to indicate to Engine-drivers the accidental Separation of a Portion of a Train, carrying out a Suggestion in Captain Galton's Report on Railway Accidents, 1855." Flags and whistles have been over and over again suggested for the purposes indicated.——Messrs. Longman and Co. have issued a shilling pamphlet, giving a description of "the Globotype Telegraph, a recording instrument, by which small coloured balls are released, one by one, and made to pass over a series of inclined planes by the force of their own gravity." The inventor is Mr. D. M'Callum, of Stonehouse, Devon. He purposes the substitution of these recording balls for the needle which does not record, and states that the working of his instrument can be learned by a boy in half a minute, that the glass balls are practically everlasting, that no paper and pencils are requisite, no uncertain movements of needles to be watched, and no clock-work to be wound up, for recording messages, and yet that they *are* recorded in visible, tangible characters, which any one may read.——"The Half-holiday Question considered, with some Thoughts on the Instructive and Healthful Recreations of the Industrial Classes," is the title of a sixpenny pamphlet by Mr. John Lilwall, the honorary secretary of the Early Closing Association (Kent, Paternoster-row, and others) in which the author offers various suggestions with reference to the very desirable object of converting Saturday into a half-holiday, or rather of restoring it as such, for in former days the Saturday afternoon was a very general half-holiday both with young and old, as it ought still to be. Gymnastics, concerts, and various other recreations are among the holiday pastimes suggested, not for behoof of the poorer orders of work-people alone, but of employers as well as employed, and, indeed, of the great body of the industrial classes.

Miscellanea.

Gun-wadding for the Stage.—We have had various communications on this subject since our last, but the subject is not one for *us* to enlarge much farther on. There are two of these communications, however, to which we must allude. Mr. T. E. Dunn suggests wads cut from woven or compressed Asbestos, and remarks of very thin metallic gun-wadding, that it would be liable to melt, and adhere to the interior of the barrel. Mr. Wentworth L. Scott informs us that he finds by experiment that thin metallic gun-wadding not only melts, but is even apt to ignite combustible matter, such as touch-paper, when fired, and that he has prepared two kinds of wadding, one which will not easily take fire, and the other so highly combustible that it is entirely consumed in its passage along the gun-barrel. The latter of these he has found to be the most effectual. The idea is both an original and a good one. Continued practice, our correspondent says, has showed the impossibility of igniting a combustible target even at 5 feet with this wadding.

Californian Trees.—A gentleman travelling in California and adjacent parts, sends an account to an American paper of an extraordinary grove of trees, growing at an elevation of 4,500 feet above the level of the sea. This Mammoth Tree Grove, as it is called, contains in its valley eighty-five monster trees, in an area of fifty acres. On the body of the "Big Tree" there is a house 14 feet by 80 feet, which contains two fine alley bowling-alleys. The stump of the tree is intended for a ball room! I measured the stump myself at a distance of 8 feet from the ground, and found it to be 26 feet in diameter at the narrowest place. This tree is not the largest tree in the grove, but it is the largest perfect one. It is 95 feet in circumference, and measured, after it was cut down, 300 feet in length, the stump standing 8 feet high. It is estimated by the grains of the stump to be 3,000 years old. Five men were occupied twenty-five days in felling it (which was done by boring), and three weeks to strip off its bark to the height of 52 feet. The "Miner's Cabin" is 80 feet in circumference, and nearly 300 feet high: it is open in front about 17 feet. The "Husband and Wife" are about 250 feet high, and each 60 feet in circumference. They seem very affectionate, leaning toward each other at the top. The "Family Group" consists of twenty-six trees, the father, mother, and twenty-four children. The father, from appearance, was blown down many years ago. This tree measures 110 feet in circumference, and the supposed height while standing was 450 feet: the remaining length where it was broken off by falling against another tree, is 300 feet. It is hollow the entire length, and large enough to ride into on horseback! The "Hercules" is 350 feet high and 107 feet in circumference: this is the largest standing tree in the grove, and would make 725,000 feet of lumber. It, like many other large trees is imperfect, being burned on one side 8 feet. The "Horseback Ride" is an old fallen hollow trunk of 250 feet in length: it is separated into two parts. The space ridden through is 75 feet in length, and 12 feet diameter in the clear. It is the intention of the proprietors of this grove to make it one of the most agreeable summer resorts to be found in the State, and from the manner in which they have commenced, adds the traveller, I have no doubt that all who visit the place will find their words true. A specimen of these mammoth trees is now in London, at the Philharmonic Rooms, Regent-street.

The Nicholson Memorial at Carlisle.—The first practical step towards the completion of the monument intended to be erected to the memory of the late Mr. Peter Nicholson, was taken on Monday before last, when the foundation-stone was laid at the Cemetery, in presence of the committee appointed by the subscribers to carry out the details of the work, and of other friends and admirers of the late Mr. Nicholson. The site selected is nearly mid-way between the two new chapels, and is one of the most elevated portions of the cemetery. The monument itself is to be a triangular column of 35 feet in height, built of freestone, with ornamental mouldings; one side of the base representing a joiner's square, a compass, and a plummet line—symbolical emblems of the profession of the deceased. It is from a design by Mr. Billings, and is in course of erection by Mr. Carruthers, of Carlisle, marble-mason. The ceremony of laying the stone was performed by Mr. Robert Cowen, chairman of the committee, who afterwards gave an outline of the career of the late Mr. Nicholson, reported at length, with other proceedings, in the *Carlisle Journal* of last week.

Assyrian Antiquities.—A whole ship's cargo of Assyrian sculpture has just been received at the British Museum, and will shortly be exhibited. This sculpture is of somewhat later date than that already in England, and shows a decided advance in art. Some animals are very beautifully represented, and there are some new and graceful examples of ornamentation. The archæologist will be surprised to see some well-defined, lancet-shaped arches, and other architectural details of interest.

The Museum of Science and Art at Brompton.—The iron structure now in course of erection on the land of the Royal Commissioners, between the Kensington-road and Old Brompton-road, is beginning to make a show. We reserve particulars until it is a little more advanced.

Camberwell new Cemetery.—The contractor denies the imputation sought to be fixed by the correspondent whose statement we refused to insert last week; and refers to the architect to the cemetery, under whose certificates of conformity to the contract the various sums of money have been paid to him.

The Painters' Strike in Glasgow.—This strike is at an end—a compromise having been effected. The men relaxed in their demands, and the masters consented to a certain advance in the rate of wages.

Sir Charles Eastlake and the Paul Veronese.—On the vote of 17,639*l.* being moved for the expenses of the National Gallery, various members of the Commons proceeded to abuse Sir Charles Eastlake and Mr. Otto Mündler in strong set terms for purchasing, or at least paying so much for, "The Adoration of the Magi," by Paul Veronese; and a formidable array of newspapers, journals, magazines, and reviews, were quoted or referred to in support of the view taken. Several communications were forwarded to ourselves, but we refrained from printing them, because we really have some confidence in Sir Charles Eastlake, and would not set our own opinions as to the soundness of such communications in competition with his, at all events considering the implied object of displacing him from his office. An amendment that the vote be reduced by 650*l.* the item for travelling expenses, was rejected by a majority of 152 to 72, and the vote then agreed to.

The Clapham Athenæum.—On the 27th ult. Mr. James Hopgood, as vice-president of this thriving institution, received the members and many friends at his residence, Clapham-common, where he had gathered together numerous objects of interest for their amusement, and catered hospitably.

Artists' and Amateurs' Conversazione.—The last *conversazione* will be held on Thursday, the 17th instant, at Willis's rooms, St. James's, when a good exhibition of works is expected. The preceding meetings have been very interesting.

The Public Education Department.—This establishment has been revised recently, but the increase is only apparent. Additional clerks have been added to the staff in lieu of clerks hired from Messrs. Vachers. The London establishment now consists of a secretary with a salary of 1,200*l.*; two assistant secretaries, 1,800*l.*; eight examiners, aggregate salaries, 2,605*l.*; five clerks, aggregate salaries, 923*l.*; thirty-four assistant clerks, at salaries from 80*l.* to 250*l.*; an advising counsel, 360*l.*; an architect, 400*l.*; forty-one inspectors, at salaries from 200*l.* to 600*l.* and with allowances for personal expenses and cost of travelling.—*Civil Service Gazette.*

St. Martin's-in-the-Fields Reading-room for the Working Classes.—On the evening of the 8th instant Viscount Ingestre gave a lecture on "Travels in the United States, Cuba, and Mexico," which his lordship had visited in 1853. The lecture was calculated to afford much instruction to its hearers, and from the pleasant tone and manner in which it was delivered, much amusement also. At the conclusion a vote of thanks was proposed by a working man, and duly acknowledged by the lecturer, who expressed his warm interest in the success of such institutions as that which he had that night attended.

The Regent-circus.—A correspondent suggests that "Regent-circus North," in Oxford-street, should be called "Oxford-circus." Some alteration is certainly very desirable.

Annual Votes for Public Works, &c.—In committee of supply the following amongst other sums have been voted:—For palaces, parks, and public buildings, 195,000*l.* For the general management of the department of science and art and the schools in connection with the geological department, 64,635*l.* For the Board of Public Works, 22,500*l.* Towards expenses of New Houses of Parliament, 83,680*l.* Towards cost of harbour of refuge at Holyhead, 207,305*l.* (a further sum of 265,000*l.* required), Towards harbours of refuge generally, 233,000*l.* For expenses at Port Patrick harbour, 384,000*l.* Expenses of Department of Public Works in Ireland, 41,221*l.*

THE COPPER TRADE.—The produce of copper ore sales by public ticketing, for the four quarters ending March, 1856, amount to,—Cornwall and Devon, 203,277 tons, realizing 1,293,972*l.* 1s.; Swansea—Foreign and Irish, 49,364 tons, realizing 746,748*l.* 16s. 6d.—Total, 252,641 tons, 2,040,720*l.* 17s. 6d.—a sum considerably beyond that of many preceding years, and accounted for by the unprecedented demand for the metal, and the unusually buoyant market price, which has been kept almost stationary for nearly four years.

GAS.—At the half-yearly meeting of the Lincoln Gas Company, the usual dividend of 10 per cent. was declared, and the progress made in improving the works was said to be satisfactory. ——An advertisement of the United Bristol Company announces a reduction in the price of gas to 4s. per 1,000 cubic feet—to take effect from the 1st of January last.—— At the third general annual meeting of the shareholders of the Southwell Gas Light and Coke Company, a dividend of five per cent. (free from income tax) was declared.

THE CAMBRIDGE LUNATIC ASYLUM.—At the Cambridge Sessions the other day, the Committee of Visitors reported that the tenders for the erection of the proposed lunatic asylum, including lodge and farm buildings, were as follow:—Mr. Wm. Higgs, Westminster, 44,082*l.*; Mr. Wm. Hill, Whitechapel, 40,491*l.*; Messrs. Marriot and Taylor, Coventry, 39,975*l.*; Messrs. C. C. and A. Dennett, Nottingham, 39,530*l.*; Mr. Wm. Webster, Wyberton, Boston, 34,619*l.* The tender of Mr. Webster was accepted by the committee for the sum of 34,619*l.* which was to include every expense; but at a subsequent meeting of the committee it was satisfactorily explained that certain items had been omitted from his tender to the amount of 2,699*l.* and the committee, considering that, with the addition of the above sum, Mr. Webster's tender would still be the lowest, and also be within the estimate, deemed it advisable to add such sum of 2,699*l.* to the original tender, thereby increasing it to the sum of 37,318*l.* The committee reported the result of proceedings taken by Messrs. Kendall and Co. already referred to in our pages. In order to prevent further proceedings, the committee directed the clerk to pay the amount of the judgment and plaintiffs' costs, and the same, which amounted to 1,029*l.* 14s. had been paid. It was further reported that Mr. Percy, the surveyor who took out the quantities under Messrs. Kendall and Co.'s plan, had offered to take the sum of 450*l.* in full discharge of his claim; and the visitors, in order to prevent litigation, had directed that sum to be paid. It appeared that the law-suit had cost them 2,400*l.*!

ANCIENT REMAINS IN THE CRIMEA.—On Thursday evening week Lieutenant-colonel Munro delivered a lecture at the Bristol Philosophical Institution on the subject of the remains of an ancient building, supposed to be a temple, discovered near the British head-quarters in the Crimea. It was an oblong walled enclosure, measuring 150 feet by 93 feet, and it had at one end a circular form. Its walls, which were 10 feet in thickness, comprised a cyclopean wall and an inner wrought wall. After some days they found a well, having on its walls traces of some painting, which was not sufficiently perfect to be made out. They then came to a stone having grooves in it, as if for a liquid to run off, and which he felt satisfied had been a sacrificial stone. They also found sixteen vessels, all having different capitals, and in all of which were different descriptions of soil, a few bones, and some charcoal. The gallant colonel then proceeded to discuss the probable date of the temple, which he himself believed might have been dedicated to Diana, and whose date he ascribed, from the coins and other evidences, to from 350 to 450 B.C. He exhibited grotesque fragments of incense vessels, iron remains of spear tops, and other matters, and also an exceedingly graceful Grecian female head in terra cotta, which Mr. Hawkins, of the British Museum, and others who had seen it, had pronounced to be one of the most beautiful specimens of ancient Grecian art in Europe, if not in the world.

LEITH DRAINAGE: ARCHÆOLOGICAL DISCOVERY.—The drainage contractor, in "Timber Bush," last week, came on a strong piece of masonry, conjectured to be part of the old fortified wall of Leith. It is 18 feet thick. On cutting it through there has been discovered a passage running along, near the centre of the wall, 2 feet 10 inches broad, and 6 feet 2 inches in depth. Should this passage continue along the whole of the old wall—which runs in a direction from Assembly-street to abont the Bush Entry—and be found entire, it may be used for drainage, saving several hundred pounds.

ART IN MANCHESTER.—A proposal is before the public in Manchester for a grand International Exhibition of pictures, sculptures, glass, engravings, and other works of art. The scheme includes the erection of a Crystal Palace and a world-wide agency. The means proposed are a large guarantee fund.

THE PLYMOUTH ROYAL HOTEL AND ITS ARCHITECT.—At a recent dinner in the Royal Hotel, the Mayor, Mr. Kelly, who presided, in one of the speeches which he made on the occasion, as an illustration of the contracted views of the corporation of the days when the Royal Hotel was built, referred to a story current to the effect that some gentlemen connected with that corporation, in returning from a social party one evening, had removed the stakes which had been placed to mark out the line of building on the George's-place side some distance backwards, and that to that circumstance was due the width of the space between the porticoes of the hotel and George's-place! This was reported in the newspapers, and so came under the notice of Mrs. Foulston, the widow of the late Mr. John Foulston, the architect by whom the hotel and theatre, and many other public buildings in that neighbourhood, were designed. Mrs. Foulston, regarding the absurd story as detrimental to her husband's reputation for taste and judgment, has published a letter denying its truth. Mrs. Foulston farther writes:—"The weight of iron in that theatre is immense. It was so constructed as to render it secure from fire; and how necessary such a precaution is in building theatres, the events of the last fifty years fully prove; during which period almost every theatre in London, and many in the country, have been burnt down once, if not twice, and what a large sum of money it has saved the corporation in insurance, and for which Mr. Foulston never received thanks in his lifetime, or a monument afterwards, though he has certainly been a real benefactor to Plymouth. I feel assured that the few who are now living, and who can remember Plymouth forty-five years ago, will readily admit that the town is much indebted to the refined and architectural taste of my lamented husband."

NOTES AND QUERIES.—1. What would be the expense of fitting up a slate bath in all dwelling and lodging-houses? 2. Why are our barracks without baths and washhouses? and of (what is of far more importance) a gymnastic ground, like the one at the Cadet's College, at Woolwich.—N.B. The French showed themselves more agile and nimble in the Crimea than our soldiers, owing, no doubt, to the early, constant, and steady training of gymnastics in that country.—J. B. N.

COMMERCIAL VALUE OF GAS REFUSE. — The "Journal of Gas Lighting" says,—Nothing, perhaps, is more remarkable in the history of gas lighting than the amazingly small advantage which this art has hitherto derived from the resources of practical chemistry. In the application of mechanics, and in the expositions of science, there have been, indeed, no lack of inventors and instructors; but, nevertheless, if we look anywhere in our gas establishments for the methodical employment of that routine of operations by which, in the chemical arts, a profit is drawn from mere waste refuse, we shall look in vain. In this respect, matters remain as they were in the earlier eras of Murdoch, Watt, Clegg, and Lowe: then, as now, the only saleable products from a gas-work consisted of coke, gas, tar, and liquor. We will not enter into an analysis of the circumstances which may have retarded the development of this particular industry, though, no doubt, much of it has been due to the benumbing agency of what are called "patents," but which ought, in reality, to be called "pretensions." It is enough, however, that at the present moment there is nothing either of the one or the other kind which stands in the way of a gas company sincerely desirous of carrying the manufacture of gas ont to that economical point at which the greatest amount of profit is obtained at the least cost. If we admit a large outlay for labour, wear and tear, investment of capital, &c. there is, nevertheless, an obvious and certain source of profit, sufficient to make a perceptible difference in the dividend of our metropolitan companies, and fully justify us in the assertion, that practical chemistry has not yet fulfilled its task towards this important branch of industry.

ARCHITECTURAL MUSEUM.—The prizes for carving were presented on Monday last, but we must postpone notice of the meeting.

MAJOLICA WARE.—This ware is named from the fact that painted pottery first came into Italy through the expedition against Majorca, in the twelfth century, when Moorish pottery formed part of the spoils. What we now know as Majolica ware proper belongs mainly to the fifteenth and sixteenth centuries. The earlier specimens of it are called Mezza-Majolica. Majolica is sometimes termed Raffaelle ware, but improperly so: Raffaelle may have painted some of these pieces with his own hands, and his compositions are found upon many of them; still, the best works in this manufacture were not produced till after the death of Raffaelle. The Bernal Collection, dispersed in 1855, contained about 400 pieces of Majolica ware, which cost Mr. Bernal less than 1,000*l.* but realised at the sale 7,000*l.*—*From Timbs's "Things not generally known."*

THE CUSTOM-HOUSE, LONDON.—With reference to the Custom-house, was it not proved at the trial, that piles were charged as 30 feet long, only entering the ground 3 feet? Was it not proved that even then the *piers* were not built *over* these piles? I would not speak ill of the dead, but if the truth for that sake is to be avoided, how can we obtain history? Scarlet (Lord Abinger) was concerned in the Custom-house trial: see what he said in Lord Byron's trial on "The Vision of Judgment!"—A. B.

FATAL FALL OF A FLOOR AT CORK.—Last week, at a "wake" in "Penrose-square,"—a kind of court or lane off Duncan-street, in the "Marsh," at least fifty persons, assembled in one room of a miserable dwelling, were precipitated, by the fall of the floor, not only to the story beneath, but through that also, to the ground-floor, carrying the second-floor with its occupants along with it, and burying also those of the ground-floor beneath both of those above. In course of the next two hours eighteen killed and sixteen wounded were dragged out.

TENDERS

For two houses on the Brockley-hill Park-estate. Messrs. Morgan and Phipson, architects. The quantities supplied by Mr. Morris Evans:—

Foster	£2,463	0	0
Barrett	2,177	0	0
Day and Co.	1,950	0	0
Rolfe	1,792	0	0
Robinson	1,789	0	0
Todd	1,748	0	0
Simmonds	1,498	10	0
Cowley	1,354	0	0

For alterations and additions to a House in Grosvenor-place. Mr. E. I'Anson, architect:—

Lucas, Brothers	£2,870	0	0
Holland and Son	2,799	0	0
W. Cubitt	2,624	0	0
Mackenzie	2,373	0	0
Watts and Son	2,156	0	0

For an addition to a house and stable, for Mr. J. Store, Enfield. Mr. J. Gould, architect:—

Hill (London)	£1,080	0	0
Wood (ditto)	1,069	0	0
Goffe (Cheshunt)	1,024	0	0
Cushing (Enfield)	992	0	0
Patman and Co. (ditto)	967	0	0

For the erection of three houses in Westminster. Mr. James Howell, architect:—

	For Two Houses in Vincent-square.	One House in Fynnes-street.	Total.
Mackenzie	£1,319 0	£537 0	£1,856 0
King and Son	1,270 0	525 0	1,795 0
Wilkinson	1,235 0	547 0	1,782 0
Smith	1,165 0	572 0	1,737 0
Pink	1,179 0	489 0	1,668 0
Baker and Wardell	1,150 0	480 0	1,630 0
Edser	1,100 0	487 10	1,587 10

For additional warehouses for Messrs. Bousfield, 126, Houndsditch. Mr. James Harrison, architect. The quantities prepared by Mr. W. J. Gardiner:—

	For Building.	If Brickwork in Cement.	Total.
Pipers	£2,149	£76	£2,225
Brass	2,038	74	2,112
R. Lawrence	1,970	59	2,029
Browne	1,857	85	1,942

TO CORRESPONDENTS.

"*Whitewash.*"—"W. S." says:—I am about to get rid of the whitewash off the mullions, arches, &c. in an old church. Is there any speedier or better method of doing so than scraping? Is there no chemical fluid that would act upon the whitewash without injuring the stone?

"*Bats.*"—"A Churchwarden" desires to know "the best manner to clear out a host of bats, which have for some years past set led in the roof of a church," and produce much annoyance.

"The New Fibrous Material" (we cannot answer any further inquiries on this matter. The patentees must take their own course to make their locality known)—"F. D."—"J. D. E."—"T. H. H." (we are forced to postpone)—"Palmam qui meruit ferat"—"Philanthropist"—"D. H."—"H. C."—"A. J. H"—"H. L."—"J. H. T."—"N. G."—"C. C. N."—"G. R. C."—"P. E. and Co."—"J. A."—"R. R."—"I hate a Man who Grumbles"—"G. L. T."—"No. 3"—"Old Soldier"—"J. G" (under our limit)—"S. W." (ditto)—"One of the Competitors" (ditto)—"Potter" (arrangement has already been alluded to)—"Straightforward"—"C. F. H."—"J. B." Oswestry (will find his name in our last number)—"J. H."—"Mr. P."—"W. P."—"F. C. P."—"W. T."—"J. W. F."—"G. H."—"Philo-Scientiæ"—"J. L." Lille (let us hear from you)—"Mr. H."—"A Surveyor"—"Constant Reader" (the term mineral applies to any inorganic substance found in the earth)—"C. M."—"L. and M."—"Old Architect"—"F. W. P."—"B. S. R." (thanks)—"Mr. C." (thanks)—"G. C." (we have nothing to do with the work in question)—"J. R."—"F. W. S."—"S. R."—"Verax"—"Verbum sat"—"C. C. C."—"Fairplay"—"W. C. T."—"W. D." (does not solve the difficulty)—"J. G. R."—"E. B. D."—"Messrs. M. and F."—"J. A." (thanks)—"Bells" (several articles are unavoidably postponed).

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *vid* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

TO DRAUGHTSMEN.

AN Architect wishes for an ASSISTANT, who must be a neat and thoroughly practical draughtsman, experienced also in writing specifications, and taking out quantities. Salary, 100l per annum. Apply by letter, giving references as to character and ability, to T. W. Box No. 516, Post-office, Manchester.

BRICK, TILE, and PIPE TRADE.—WANTED, a LONDON TRAVELLER, well acquainted with the above trades, and who can make himself generally useful. Apply by letter, addressed to A. B. care of Messrs. Grover and Coare, King's Bench-walk, Temple, stating last engagement, qualification, and references.

STOREKEEPER WANTED.—Required by a METROPOLITAN GAS COMPANY, a STOREKEEPER and COKE CLERK, possessing great energy, activity, and a general knowledge of business. He must be a good accountant. Security for 500l required. Salary, 140l. per annum. Office hours from a quarter to six A.M. until five P.M. Applicants, stating age, all particulars of present and former engagements (none others will be noticed), to be addressed (before Ten o'clock on Monday morning), to STOREKEEPER, care of Abbott, Barton, and Co., Advertising Agents, 2, Upper Wellington-street, Strand.

SURVEYOR and INSPECTOR of NUISANCES.—WANTED, by the City of Durham Local Board of Health, a SURVEYOR and INSPECTOR of NUISANCES, who will be required to devote the whole of his time to the duties of the office, at a salary of 100l per annum. Written applications, stating age, qualifications, and last employment of applicants, together with testimonials and specimen plans, sections, &c. must be delivered at the office of the Board, No. 33, Claypath, Durham, on or before the 21st day of APRIL inst.—
By order,
WILLIAM MARSHALL, Clerk.
Durham, 2nd April, 1856.

THE METROPOLITAN BUILDING ACT, 1855 (Sec. 23).—The Institute of British Architects hereby give Notice, that an EXAMINATION of persons desirous of obtaining a Certificate of Competency to perform the duties of DISTRICT SURVEYOR, will take place at the ROOMS of the INSTITUTE, No. 18, Grosvenor-street, Grosvenor-square, on TUESDAY, the 29th day of APRIL instant, at TWO o'clock p.m. Persons desirous to be examined must, on or before FRIDAY, the 25th of APRIL instant, send an application, which must be accompanied by a statement, according to a form to be previously obtained at the Rooms of the Institute.
J. J. SCOLES, } Hon. Secs.
April 7th, 1856. C. C. NELSON. }

TO MASONS, BRICKLAYERS, AND OTHERS.

WANTED, a competent person as CLERK of WORKS, to superintend and take charge of the Excavation and Erection of two large Brick Gas-holder Tanks, at Sheffield. A liberal remuneration will be given to one who has had experience in such work, and none other need apply.—Applications, with testimonials, to be sent to Mr. E. UNWIN, Gas-Light Office, Sheffield.—April 8, 1856.

TO ARCHITECTURAL MODELLERS, DRAUGHTSMEN, &c.

WANTED, a respectable Man to assist in the MAKE of TERRA COTTA WORKS of ART and ARCHITECTURAL MODELS, in a Gallery at the West end of London. He must be competent to make sketches of patterns and acquainted with architectural details. Hours of attendance from Half-past Eight until Seven in the Evening.—Apply by Letter only, stating Age, Qualifications, and Salary required, to J. M BLASHFIELD, Terra Cotta Works, Mill Wall, Poplar.

TO CARVERS AND GILDERS.

WANTED IMMEDIATELY, a GILDER, who is thoroughly acquainted with the practical parts of the Gilding business. He must be of good address, an active man of business Satisfactory references as to sobriety, honesty, and competence, will be required. Good wages will be given.—Apply to E. QUARM, Painter and Gilder, High-street, Lincoln.

WANTED, a FOREMAN of PAINTERS. One accustomed to superintend work, both glazing and painting. Reference as to character and ability required.—Apply, J. W. jun. 12a, Earl-street, Westminster.

WANTED, a CLERK and BOOKKEEPER for a BUILDER'S OFFICE. He must write a good plain hand, and give good references for honesty, sobriety, &c.—Address, by letter only, stating salary required, to A. B. C. care of Mr. D. Wilkinson, Architect and Surveyor, 7, Dudley-place, Harrow-road.

TO RAILWAY CONTRACTORS.

WANTED, a CONTRACTOR who is capable of undertaking a large CONTRACT for RAILWAY WORKS upon the continent. The most satisfactory references will be required.—Address, post-paid, A. B. Civil Engineer, City News-rooms, Cornhill.

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WANTED, a SITUATION as CLERK in a BUILDER'S OFFICE, by a young man who has filled a similar situation with London builders for some years. References unexceptionable.—Address, X Y 151, Minories City.

WANTED, by a good DRAUGHTSMAN, an APPOINTMENT. Is very expert in plans of every kind, plan writing, tinting, colouring, and linear drawing of every variety. Engraved for eighteen years past by eminent engineers, surveyors, and the Government, executing various plans of estates, towns, railways, docks, &c.—Apply by letter to R. THEODORE, 4, Trafalgar-square, Charing-cross.

WANTED, a SITUATION as SHOP FOREMAN of JOINERS, with good reference. Age 30. Address, T. H. B. 84, Upper Ebury-street, Pimlico.

WANTED, by a Young Man, who has had experience in Large Steam-engines connected with Mills, Pumps, &c. for many years, at one of the largest mills in London, a SITUATION to take charge of a Steam Engine at some Works in the Country or near Town. If not wanted entirely in the machinery department, he has no objection to assist in the office or yard Testimonials of the highest character can be had.—Address, T. S. at Mr. Shaw's, 46, Hart-street, Covent-garden, London.

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WANTED, by a Young Man, aged 24, a SITUATION as CLERK to a BUILDER. Has been with an architect; well acquainted with the trade; will work and yard, book-keeping, and builders' accounts generally. Also measuring up works, &c. and a good draughtsman. Good references can be given.—Address, W. J. 6, Prospect-place, South-street, Greenwich

WANTS EMPLOYMENT as PLUMBER'S LABOURER, a handy man. Can well assist a plumber, do painting, glazing, and various jobbing in the trade; will work at either occasionally, and not take less than six months' work. Wages, 21s. per week.—Address, T. SMITH, 38, Orcus-street Paddington.

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WANTED, by a Young Man, aged 32, having a good knowledge of gas, steam, and water fittings, EMPLOYMENT as SHOPMAN, or in any way that he can make himself useful. Good character and security. No objection to partial employment.—Address, A. B. 20, Smith-street, Northampton-square, Clerkenwell.

TO ARCHITECTS, SURVEYORS, AND BUILDERS.

WANTED, by a Man aged 24, a SITUATION; he is a fair draughtsman and good accountant, of steady and industrious habits, and some practical knowledge Salary not so much an object as an opportunity of increased experience in good work.—Address, O. G. Office of "The Builder."

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WANTED, by a Young Man, a SITUATION in either of the above BUSINESSES. Has been employed on a public work as Clerk, &c. for a year and a half, under an eminent London contractor, from whom he can produce a good testimonial.—Address, T. T. Mr. Dyer's, 181, Oxford street.

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WANTED, by a GOOD GRAINER and WHITER, a PERMANENT SITUATION, in town or country. Brought up to the business. Will occupy spare time with painting, &c.—Address, H. H. 47, Bell-yard, Temple-bar, City.

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THE Advertiser, who is a quick and expeditious DRAUGHTSMAN, a good designer, and has a thorough knowledge of detail and construction is open to an ENGAGEMENT. — Address, G. G. No. 39, Michael's-place, Brompton.

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TO MASTER PLUMBERS, PAINTERS, AND GLAZIERS.

THE Advertiser wishes a SITUATION in the above branches as IMPROVER. Has had good practice in the trade.—For further particulars, direct to A. B. No. 4, Northampton-place, Upper Holloway, Islington.

RESIDENT ENGINEER.—A Gentleman of some years' experience in engineering, and who for the last four years has been engaged upon sewerage and waterworks, under one of the most eminent engineers of the day, is open to an ENGAGEMENT as above, or on any works, either at home or abroad, where a thoroughly practical knowledge of engineering can be made available. References of the first order.—Address, C. W. care of Messrs. Hooper and Cull, 10, Lombard-street, City.

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A PRACTICAL CLERK of WORKS, well experienced in the superintendence of large works, in open to an ENGAGEMENT, either at home or abroad. Can speak French and German. — Address, W. C. 13, Fendall-street, Bermondsey, London.

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A THOROUGHLY QUALIFIED ARCHITECT and Surveyor's Assistant is desirous of an ENGAGEMENT as CLERK of WORKS where experience in the profession, combined with practical knowledge, would be thought an advantage. Excellent testimonials as to ability, &c. Salary moderate.—Address A. B. 34, Queen-street, Neath, Glamorganshire.

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AN ASSISTANT, of great experience in getting up working, detail, finished, and perspective drawings, who is likewise a good colourist, and can assist in taking out quantities, desires an ENGAGEMENT.—Address, B. B. 17, Berkeley Villas, Loughborough park, Brixton.

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A GENTLEMAN is desirous of an ENGAGEMENT with an Architect, in good practice, where he might in a short time become a PARTNER by PURCHASE. He has had some years' experience in town and country, is a quick draughtsman, understands perspective and design, and is of good business habits. Address, R. A. 56, Amwell street, Myddleton-square, Islington, London.

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A STEADY, active Man, aged 26 years, wishes to obtain constant EMPLOYMENT as CARPENTER, JOINER, or FIXER. Has had eleven years' experience, worked in London two years, is a good scholar, &c. Wages not such an object as constant employment.—Address, F. K. L. care of Mr. Stuart, Bookseller, &c. Farnham, Surrey.

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TO LIME, TILE, BRICK, AND CEMENT MERCHANTS.

A YOUNG MAN, aged 26, who has had nine years' experience in the above trades, desires EMPLOYMENT. He is capable of keeping books by double entry, and is used to collecting satisfactory references as to ability, integrity, &c. can be given.—Address, prepaid, to W. H. Palmer's Library, 27, Lamb's-conduit-street.

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A PRACTICAL MAN, aged 32, of steady and industrious habits is in WANT of a SITUATION with either of the above. He is a good draughtsman and accountant, and has had the entire management of buildings of magnitude.—Address, by letter only, to C. A. F. care of Mr. Bayley, Printer, Cross, Oswestry.

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A N experienced CLERK, who has practised as a Surveyor, wishes an ENGAGEMENT in an office to take out quantities, make plans, estimates, &c.; is well acquainted with the routine of a builder's office. Salary moderate. Good references. - Address, R. S. 5, Gloucester-street, Park-street, Camden-town.

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A S CLERK of WORKS.—WANTED, by a practical Man, a RE-ENGAGEMENT. Satisfactory references from architects will be given.—Address, T. B. Office of "The Builder."

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A YOUNG MAN from the country, aged 22, wishes to obtain a SITUATION as IMPROVER, in the PLUMBING and PAINTING Business.—Address A. L. 4, Edward-square Mews, Kensington.

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A GOOD SECOND-HAND CONDENSING BEAM ENGINE, of from Twenty to Thirty Horse Power. State size of cylinder, air pump, and price.—Apply to Mr. MILLAR, Engineer, Borough-road, Southwark. Also, a Twenty to Thirty Horse CORNISH or ELEPHANT BOILER.

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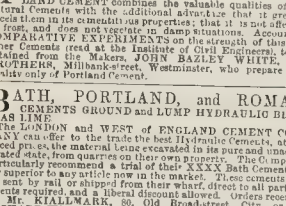

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Woolwich-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias, that he is prepared to deliver the best quality of ground and lump, into boats at the Works. Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works Southam.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent) STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road, Office, 4, George-yard, Lombard-street.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD HOXTON.

BRICK MOULDS (improved), Steel-face Stocks and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. Reference to where in use. Brick Mill Work and Implements.—J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.—Grey Stocks, 25s. per thousand; Grizzles, 20s. per thousand. Rough Stocks, 20s.; Place, 12s. to 18s. per thousand.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

THE BEST HERTFORDSHIRE MALM STOCKS;

THE BEST WHITE SUFFOLK and RED FACINGS: WHITE SUFFOLK PICKED PURE GLAZED BRICKS; DEEP-RED RUBBING BRICKS.

Also COWLEY and KENT STOCKS, in any quantities.

J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY

(Within a short distance of the five bridges).

THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.

Also, STOCKS, of FIRST QUALITY.

J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for whitewash, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 200 to 300 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods, both Welsh and Newcastle, Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation

General Office—No. 12, GEORGE-YARD, LOMBARD-STREET. Letters addressed to Grays, Essex, will meet with immediate attention.

WHITE SUFFOLK and RED FACING BRICKS.

COWLEY, KENT, and ESSEX BRICKS.

Also Yellow and Pale Malm Seconds, Cutters, Paviors,

KENTISH RAG-STONE of the FINEST QUALITY.

MILLS and PRICE, 8, ADELAIDE-PLACE, London bridge.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hours walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.

Main Place half-washed Stocks, and Place Bricks, also on sale. These bricks are good, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Likewise delivered, Pit Sand of a) proved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BROWN'S WELLS BRICKFIELD, PINCHLEY, near the three Cemeteries.—TO BE LET, upon very moderate terms the above FIELD, containing 9½ acres of good brick earth.—For terms and other particulars, apply to Mr. A. RICHARDS, Auctioneer, Tottenham.

TOTTENHAM.—TO BE LET, a FIELD, containing Six and a half Acres of excellent Main Brick Earth, situated by the side of the high road, five and a half miles from London. The bricks made in this field have always found a ready sale.—For terms and other particulars, apply to Mr. A. RICHARDS, Auctioneer, Tottenham.

BRICKS WANTED.—100,000 of GREY STOCKS, alongside the Canal Wharf, Kingsland-road Basin. Cash payment.—Address, W. Z. Office of "The Builder."

NEW BRICKS for SALE, DELIVERED ON THE FIELD.

Place.	Grizzles.	Stocks.	Malms
18s.	22s.	30s.	36s. and 45s. per 1,000.

DELIVERED AT CROYDON RAILWAY STATION.

Place.	Grizzles.	Stocks.	Malms.
22s.	25s.	29s.	39s and 48s. per 1,000.

For further particulars, apply to Mr. S. DARNELL, Brickfield, St. James's-road, Croydon

IMPROVED BRICK and QUARRY-PRESSING MACHINES, made by THOMAS PORTER, LONDON-ROAD, Leicester.—"P. begs to inform Architects, Builders, Brickmakers, and Others, that he is now engaged in making and selling his PORTABLE BRICK-PRESSING MACHINES, at considerably reduced prices. The boxes are lined with brass.

For design of Press, refer to "The Builder," January 19, 1856.

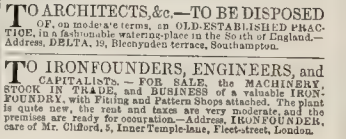
PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with those employed for PORTABLE BRICK-PRESSING MACHINES, at considerably reduced prices. The boxes are lined with brass.

For design of Press, refer to "The Builder," January 19, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPÔT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REWARD OF THE JURIES," page 681. of the Great Exhibition, rank the Manufactories known so long as "The Piteries," Tunstall, Stafford-shire, as the first of the kind in the world.

PATENT PAINT for BUILDERS and IRONFOUNDERS. The LONDON PATENT ANTI-OXYDE PAINT has been specially chosen by the Government Engineers as the best, cheapest, and most durable that has ever been discovered.—Address to Mr. DEANE WALKER, at the Office of the Company, 29, New Bridge-street, Blackfriars, where very information is afforded.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.



BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the last tile is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses; it is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvetoft, near Rugby; or in London, Gloucester, or Bridgewater.

Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

TO ARCHITECTS, &c.—TO BE DISPOSED OF, on moderate terms, an OLD-ESTABLISHED PRACTICE, in a fashionable watering-place in the South of England.—Address, DELTA, 19, Bleinyoden terrace, Southampton.

TO IRONFOUNDERS, ENGINEERS, and CAPITALISTS.—FOR SALE, the MACHINERY, STOCK IN TRADE, and BUSINESS of a valuable IRONFOUNDERY, with Fitting and Pattern Shops attached. The plant is quite new, the rent and taxes are very moderate, and the premises are ready for occupation.—Address, IRONFOUNDER, care of Mr. Clifford, 2, Inner Temple-lane, Fleet-street, London.

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the finest sites for building purposes anywhere round London, and good villas are in great demand, on account of the situation being lofty, dry, well drained, and exceedingly healthy. Assistance will be afforded to responsible parties.—For particulars, apply to Messrs. J. and C. W. TODD, Milner-street, Brompton, London, or Belmont, Lee, Kent; or Messrs. NELSON and INNES, 6, Whitehall, and of Messrs. KIRKMAN and ENGLEHEART, King William-street, City.

OXFORD.—Valuable BUILDING LAND, to be LEASED on a term not exceeding 99 years. It immediately adjoins the City of Oxford, and belongs to the President and Scholars of St. John's College. The land is proposed to be let in large or small quantities, for the erection of private residences, and builders, speculators, and others may obtain allotments on such terms as will insure peculiar advantages, as it is well known that genteel residences are much wanted, and in daily request. It is most healthily situated on a fine bed of gravel, has springs of pure and excellent water, and good bricks may be obtained within a few hundred yards of the site.—For particulars, apply to Messrs. BECKHAM and CO. 6 and 7, St. Aldate's-street, Oxford.

LEASEHOLDS.—TO BE SOLD, by Private Contract, a very desirable LEASEHOLD ESTATE, consisting of first-class private dwelling-houses, held direct from the freeholder for a long term at low ground-rents, delightfully situated within three miles of the City.—Apply for particulars to Mr. CHARLES STROUDHILL, Solicitor, 7, Coleman-street, London.

£400 for 12s. per week, and no interest to pay.—The ALLIANCE BUILDING SOCIETY is formed for the purpose of advancing sums not exceeding the above amount, without interest, for the purposes mentioned in its prospectuses, &c.—early rights to which may be secured on or before TUESDAY next. Surveyors and others desirous of furnishing the Society with plans for building, may obtain every information as to the Society's intended mode of operations, by applying to Mr. W. F. SCALES, High-street, Shoreditch.

J. W. BROOKS, Secretary
Subscription Office,—St. Thomas's National Schools, New Charles-street, Hackney-road.

TO BUILDERS and OTHERS. — An excellent SITE TO BE LET or SOLD, for BUILDING PURPOSES, with a good double frontage, situate in a leading thoroughfare, and in an established neighbourhood, well adapted for shops and dwelling-houses, and workshops. The materials of the present erections may be used if sound, in erecting any new buildings that may be approved. Money will be advanced if required by the purchaser, or taken to carry out the undertaking, upon a satisfactory arrangement.—Inquire of Messrs. HOWARD and DOLLMAN, Solicitors, 141, Fenchurch-street; Mr. EDWARD LOWTHER, 38, Red Lion-street, Clerkenwell; or of Mr. MURRELL, Auctioneer, 1, Walbrook, City.

TO ARCHITECTS and OTHERS.—TWO GOOD SETS of CHAMBERS to LET. Gas and other conveniences laid on.—30, Southampton-street, Strand.

WATERSIDE PREMISES.—Wharf, with use of Crane, excellent Suite of Offices, Roomy Dwelling-House, Two Large Warehouses, and Stores; and well situated in the heart of London, TO BE LET at a moderate rent.—Apply at 70, Bankside, Southwark.

TO BUILDERS.—WANTED, in a thoroughfare between Cheapside and the river, a strong LIGHT WAREHOUSE, with crane at top, and loopholes to each floor with dwelling attached, or containing rooms which might be converted into one. The Advertiser will be happy to treat with any person willing to build or alter premises to suit him.—Address, post-paid, to G. Messrs. Dando and Todhunter, Stationers, Gresham-street, City.

WAREHOUSE PREMISES WANTED, in or near the City, suitable for a wholesale and manufacturing vinegar and wine trade. Must have spacious cellarage and basement, with warehouse, yard, office, and stable. Easy of access, and in good repair.—Address, A. B. care of Mr. J. Child, Builder, 34, Shoemaker-row, Doctors'-commons.

TO CARPENTERS and OTHERS.—A rare opportunity for a young beginner, a very excellent but small BUSINESS, to be DISPOSED OF, immediately, through the decease of the proprietor. A good workshop, benches, and all necessaries for carrying on the trade, complete. Rent very low; coming in easy.—For particulars, apply to Mr. JNO. LAKE, Barking, Essex.

TO STAIRCASE HANDS.
WANTED TO LET, piece-work, several FLIGHTS of contingued RAIL STAIRS.—Apply to J. and J. COLEMAN, Builders, New Weston-street, Southwark.

NOTICE. — To BUILDERS, CONTRACTORS, and OTHERS.—WILLIAM MARSHALL begs to inform the trade generally, that he has about 10,000 feet of well-seasoned WAINSCOT, in all thicknesses, and at the lowest cash price. Also a very fine Stock of WALNUT, ROSEWOOD, and MAHOGANY, in plank, board, and veneer, at his Timber-yard, Vincent-street, Old-street-road.

GREAT REDUCTION. — Yellow Deals, 3s. 6d.; Pine Plank, 3s. 9d.; 2½ Yellow Battens, 12l. 10s. per 120—12 feet; 1-inch Mahogany, 6d.; F Walnut, 7d. per foot. Cartage free in Town.—T. FORMAN, 1, Walnut-Tree-Walk, Lambeth.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned, and ready for use, from ¾-inch to 1½-inches thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Planks, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shop-fitters to his carefully selected MAHOGANY, suitable for Counter Tops, and for his seasoned Materials for builders, cabinet and blind makers, &c. Delivered, cartage free, to any of the London railway stations, or within three miles from Kennington Church.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

TO BUILDERS, CARPENTERS, &c.
SAMUEL CROWHURST, Jun. begs to call the attention of Builders, Cabinetmakers, &c. to his Stock of seasoned and well-assorted Timber Goods, Deals, and Mahogany, in Logs, Planks, Boards, &c. at prices which will be found equal if not less than any advertised. Country Builders supplied on the most liberal terms.—Timber-yard, Hanover-street, Walworth; and Francis-street, Newington, near the Church.

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

GREAT REDUCTION of PRICES.—SAMUEL PUTNEY respectfully solicits the attention of buyers to the great reduction in the price of Yellow Deals, and the very low prices of Pine and other Deals, &c. &c.:—

Yellow Deals, from	£21	0 per 190
Do. Battens	13	10 "
Spruce Deals, from	18	0 "
Pine Plank, 12 ft. 3 in. by 11, from	22	10 "

Prepared Flooring, &c. equally low. A list of prices forwarded on receipt of a postage stamp.—Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

SEASONED FLOORING.—GEO. NOKES and CO. (late Archbutt and Atkinson), beg to acquaint builders and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on hand, at the following reduced prices, for cash:—

½ inch White,	13s. 6d. per square.	½ inch Yellow,	15s. per square.
¾ ditto	16s. "	¾ ditto	16s. 6d. "
1 ditto	18s. "	1 ditto	20s. "

Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.
ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road.

TO BUILDERS AND OTHERS.
AT the LOWEST PRICES.—TIMBER, DEALS, MAHOGANY, and WAINSCOT. A large assortment of seasoned prepared FLOORING and MATCH-BOARDING of all descriptions. Also an extensive stock of Dry White Yellow, and Pine Cut Stuff, Slating Battens, Pantile Laths, Oak Plank, Sash Cills, &c. Timber of all kinds, Planks, Deals and Battens, fetched from the docks, sawn by patent machinery in the best manner, and delivered at the shortest notice.—THOMAS JACKSON, Sawing and Planing Mills, Commercial-road, Pimlico, London.

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No. 18, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Saw-mills. Goods in Bond for Exportation.
N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

METROPOLITAN PATENT WOOD PAVING.—WILLIAM BASTABLE and CO. beg to state that they are prepared to execute orders for Paving Railway Stations, Workshop, Wharfs, Gateways, Porticoes, Stables, Forges, Nave and Aisle of Churches, and School-rooms.
Office, Belgrave Works, Thames Bank, Pimlico.

MOULDINGS BY MACHINERY, Capping, Sash Bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to
E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S-ROAD, CHELSEA.
AND WILTON-ROAD, PIMLICO.

TO BUILDERS, COACH-MAKERS, DECORATORS, and PAINTERS, &c. &c.
CHAS. W. NOBLE (late A. and F. Strong), VARNISH MANUFACTURER, continues to supply every description of Varnishes and Colours, of the very best quality, and at the lowest prices. The Varnishes manufactured by Noble and Hood the test of many a century, made of pure materials, insuring that desideratum in varnish—body, polish, and finish,—for which his predecessors have been so long and so favourably known.
*** Methylated Spirit Varnishes, Polishes, &c.; also Noble's Enamel Paper Varnish, for decorators, &c. Coach-painters' and Lithographic Colours.
N.B.—Merchants and shippers will find an advantage in exporting Noble's Varnishes.
Manufactory—MITCHAM, Surrey.
Wholesale and Retail Warehouse—117, LONG ACRE, London

TO TIMBER MERCHANTS and OTHERS. The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of English Timber, &c. Spacious Dry and Drawing Docks, 30 and 10-ton Cranes, Sawpits for converting Timber, &c. Freights paid on delivery.—Apply to G. NOKES and Co. as above.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER-CUTTING MILLS, Commercial-road, Lambeth.—The proprietors beg to announce to the trade that they have completed their extensive arrangements, and will be happy to execute all orders intrusted to their care with despatch and punctuality.
N.B. All goods sawn at these mills fetched and delivered free of charge.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.
STEPHENS' DYES or STAINS for WOOD. The following extract from a letter the Proprietor has obtained leave to make public:—" Northgate, Colchester, Feb. 5, 1855.—Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant,
" SAMUEL GRIMES, Builder.
" To Mr. Henry Stephens, 54, Stamford-street, London."
Samples and prospectuses free to any part of the kingdom.

TIMBER SAWING-MILLS, Belvedere-road, Lambeth.—ROBINSON and BARTRAM respectfully inform their friends in the Timber and Building Trades, that they have now completed their New Mill for Sawing, Building, and other Timber, and will be glad to receive their favours in this department of sawing. Full particulars will be forwarded on application, per post or otherwise. Timber up to 55 feet long, can be cut at these mills.—N.B. A powerful Crane for landing timber on to carriages, at 1s. 3d. per load.

NEW KENT-ROAD SAW-MILLS, half-way between Surrey Docks and West-end.—Messrs. TAYLOR and BUCKLEY beg to inform Timber Merchants, Box Makers, and Others, that having made large additions to their machinery, they are in a position to execute orders on the shortest notice. Extensive premises for piling goods. List of prices will be forwarded upon application.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.
Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.
Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.
N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

CHAS. MACINTOSH and CO. Patentees of the VULCANIZED INDIA-RUBBER, and GENERAL MANUFACTURERS of WATERPROOF, AIRPROOF, and ELASTIC RUBBER GOODS beg to inform all persons who desire to correspond with them direct, that their SOLE ESTABLISHMENTS are No. 3, Cannon-street West, London, and Cambridge-street, Manchester. This notice is necessary, as the term Macintosh Depôt, Macintosh Warehouse, &c. is frequently adopted both in London and the country by vendors of India-rubber goods, who deal in articles not of the manufacture of CHAS. MACINTOSH and CO. — Goods manufactured by CHAS. MACINTOSH and CO. are stamped with the name of the firm.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.						
½	¾	1	1½	2	2½	3 in.
9d.	11d.	1s.1d.	1s.3d.	1s.5d.	1s.7d.	1s.9d.	2s.	2s.3d.	2s.6d.	2s.9d.

Super-extra stout quality.

2	2½	3	3½	4 inches.
2s.	2s.3d.	2s.6d.	2s.9d.	3s. per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

½	¾	1	1½	2 inches.
9d.	10d.	11d.	1s.	1s.3d.	1s.6d. per yard.

The Hose is Burnettized at an extra charge of 3d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., YENTNOR, ISLE of WIGHT.—Second Testimonial.—" March 10th, 1856.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."
N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.
THE GUTTA PERCHA COMPANY, PATENTEES,
18, WHARF-ROAD, CITY-ROAD, LONDON.

TO ENGINEERS, MILL-OWNERS, &c.
N. Woolwich Elastic Steam-packing (Canvas and India-rubber), at 1s. 4d. per lb.

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H. M.'s Dockyards), having considerably extended their manufacture in order to meet the daily increasing demand upon them for this effective and durable article, are enabled to offer the very best materials at the reduced price of 1s. 4½d. per lb. delivered in London, for sheet and rope
Testimonials may be seen at S. W. SILVER and CO.'s Warehouses, Nos. 3 and 4, Bishopsgate-street (opposite London Tavern), where orders for Steam Packing, also Buffer Springs, Pump Clacks, and the various India-rubber appliances, will meet with prompt attention.
CAUTION.—S. W. S. and Co. have found it necessary to stamp all their manufacture, thus—" S. W. SILVER and CO. WORKS, NORTH WOOLWICH."

MONEY on LOAN, at 3l. per Cent. per Annum.—ARNEWAY'S CHARITY.—NOTICE IS HEREBY GIVEN, that the Trustees of this Charity are enabled to lend out the Trust Moneys to poor occupiers or traders, resident within the City and Liberty of Westminster, that is to say, within the parishes of St. Margaret and St. John the Evangelist, St. Anne, Soho, St. Clement Danes, St. George, Hanover-square, St. James, St. Martin-in-the-Fields, St. Mary-le-Strand, and St. Paul, Covent-garden. The amount of each loan is not to exceed 100l. is to clear interest after the rate of 3l. per cent. per annum, and is to be secured by the bond of the borrower, with two sureties. Forms of Application, and all necessary information, may be obtained by applying personally, between the hours of Ten and Three o'clock in the day, at the office of the Clerk and Solicitor to the Trustees, No. 14, Great Queen-street, St. James's Park.
By order, EDWARD S. STEPHENSON,
Clerk and Solicitor to the Trustees.
NOTE.—The Trustees meet on the second Wednesday in every month, to consider such applications for loans as have been sent in one clear week at the least before the first day of the month.—The sureties must be unexceptionable

DOUCEUR 100l.—A Gentleman, aged 30, of active and business-like habits, an architect, and first-rate draughtsman, possessing a thorough practical knowledge of building, together with a general knowledge of civil engineering, desires an APPOINTMENT, where he can be actively engaged (under a principal), on Government or Railway Works. To any party legally procuring the advertiser a permanent appointment as above, he will be happy to present the sum of 100l. Reference will be given and required.—Apply by letter, stating full particulars, post-paid, to W. F. S, Albert-terrace, Old Kent-road, London

ROYAL POLYTECHNIC.—Patron, H.R.H. PRINCE ALBERT.—Entirely new, grand, historical, romantic, and musical entertainment, entitled "Kenilworth, and the Visit of Queen Elizabeth to the Earl of Leicester," with splendid Dioramic Illustrations; the Grand Hall of Kenilworth by Messrs. Carpenter and Westley. This entertainment, written by G. Moore, Esq. will be given every morning at 3·45, and evening at 8·45, by F. L. Horne, Esq. who, with the Misses Mascall, will sing the vocal illustrations. Also, a series of splendid Dioramic Pictures of the total Destruction of Covent-garden Theatre, mornings at 2, evenings at 7·45. New Lecture and Experiments by J. H. Pepper, esq. with the Electric Light and three enormous Concave Mirrors, showing their optical and color-ific effects. Original Entertainment by Mr. Matthews, entitled A Peep at Ancient and Modern Magic. 3,000 Models and Works of Art on view, with a good collection of Russian Trophies, and a Russian Carriage, brought from Balaklava by Capt. Barclay, in the *Monarch*, as the identical Carriage of Prince Menschikoff, captured at the Battle of the Alma. Admission to the whole, 1s.; children and schools, half-price. Open from 12 till 5, or from 7 till 10.

TO BUILDERS.
LATHS for SALE.—100 loads of the best PETERSBURG LATHS for sale. Price 33s. cash.—Inquire of JOHN NEWTON, Hertford-road, Kingsland-basin.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.
J. W. & SONS having of late devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.
Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.
TUNED BY MACHINERY.
Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.
MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system which gives superior tone and facility for ringing.

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels.

Plain or Sliding Telescope Suction,

ON HIRE.

SINGLE AND DOUBLE PUMPS, all sizes, to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.

WHITEFRIARS-STREET, Fleet-street.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 42s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

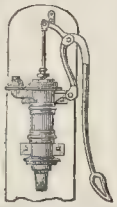
TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,

which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 32 feet; also, Garden Engines constructed on the same principle.



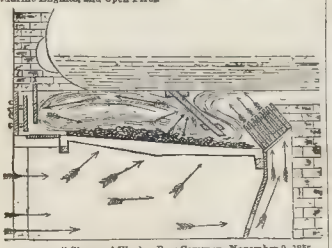
JOHN WARNER & SONS, 8, Crescent, Jewin-street, London, Manufacturers and Patentees.

STEAM-ENGINE and BOILER, a Bargain. A nearly new high-pressure STEAM-ENGINE, four-horse power, with metallic pistons and wrought-iron crank, and shaft and heavy fly-wheel and riggers, and wrought-iron boiler and force-pump, &c. &c. complete. Can be seen at work.—Apply by letter, to J. PRIME, 17, Vauxhall Bridge-road.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

LESS FUEL, MORE STEAM, NO SMOKE.

GARDNER'S PATENT SMOKE CONSUMER is SELF-ACTING, EASILY FIXED at a SMALL COST, IMPROVES the DRAUGHT, and SAVES FUEL. Applicable to all Furnaces, Boilers, Ovens, Locomotives, Marine Engines, and Open Fires.



"Chemical Works, Bow Common, November 9, 1855.

"DEAR SIR,—In answer to your further inquiry concerning the saving of fuel in connexion with the use of your patented apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I beg now to state that we are enabled without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.

"I remain, dear Sir, yours truly,
"FRED'K. ALLEN.

"To E. V. GARDNER, Esq."

Apply to the PATENTEE, 21, Norfolk-street, Middlesex Hospital; or to Messrs. BURRIDGE and HEALY, 128, Dorset-street, Fleet-street; or Z. D. BERRY, Albion Works, Victoria-road, Pimlico.

Bakers' Ovens fitted for St. license included.

PREVENTION of SMOKE in FURNACES and ECONOMISING FUEL.—W. SMITH, PRACTICAL ENGINEER, 28, Margaret-street, Cavendish-square, continues to fit complete Apparatus on the most improved principles.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.

GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.

SPIGOT.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

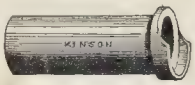
OFFICES: HIGH-STREET, LAMBETH, LONDON.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.



WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of closet-pan

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

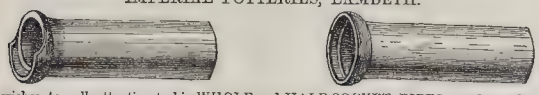
TO BUILDERS and OTHERS.—2,000 yards of ROAD GRIT (has been lying in heap five years) TO BE HAD GRATIS, to clear the Premises.—Apply at Cooper's-yard, King-street, Union-street, opposite the National Schools, Borough-road.

WANTED, the ARMS of his IMPERIAL MAJESTY, NAPOLEON III. Emperor of the French, about 3 feet or 4 feet in height, to stand upon a mahogany case; consequently must be of light material.—Apply to J. and J. COLEMAN, Builders, New Weston-street, Southwark.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

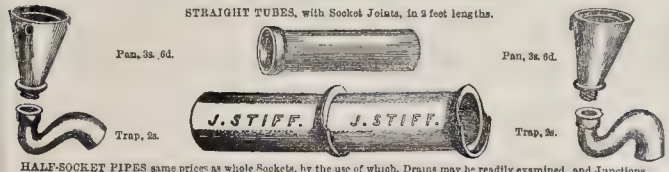
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

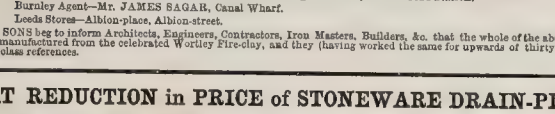
Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.
Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.
Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.
Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.



WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c. at the

NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to

THE AGENTS:—

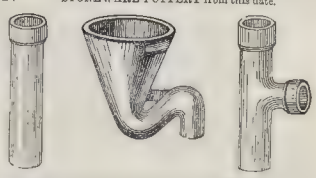
Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;

Where a large stock is always kept on hand.

GREAT REDUCTION in the PRICE of PARRY'S superior STONE-GLAZED DRAIN-PIPES.—Manufactory, Church-street, Deptford, Kent.
N.B. All kinds of Red Drain-pipes.—Established 1701.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are compelled to make such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.
N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 80 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. Feb 11, 1856.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

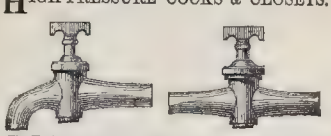
PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 23, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE No. 7.

Is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet; they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,
THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Cut, Lambeth.
N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.
LEAD, IRON, and TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 113, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

SALES BY AUCTION.

SECOND PORTION.—TO RETAIL TIMBER MERCHANTS, CONTRACTORS, BUILDERS, SAW-MILL PROPRIETORS, AND OTHERS.

MESSRS. DAVIS and VIGERS are instructed by Mr. Samuel Grimsdell (on his retiring from business) to SELL by AUCTION, on the PREMISES, Bell-lane, Spitalfields, on MONDAY, APRIL 14, and following days at TWELVE for ONE, without reserve, the second portion of his well-seasoned and valuable STOCK and PLANT as Builder and Contractor; comprising 30,000 feet of Spanish and Honduras mahogany, cut from two to five years (some of great length and width, suitable for cabinet work); long Dutch cornice, Riga timber; thoroughly seasoned, first quality; picked Wyburgh prepared floor battens, and a large and useful assortment of dry cut stuff, stock of ironmongery, wrought-iron box girders, and cast iron columns; plate, crown, and other glass; sheet and pipe lead; colours, oils, turps, casp, implements and fittings; plumbers', painters', glaziers', and plasterers' shops; fifty carpenters' benches, iron cramps, together with numerous items for inside and use full property, forming the stock and fittings of a large and well-regulated builder's establishment.—To be viewed two days prior to the sale. Catalogues to be had on the Premises; of Messrs. WARRINGTON and JEFFSON, New City Chambers, Bishopsgate-street; and at the Auctioneers' Offices, 3, Frederick's place, Old Jewry.

TO COACHSMITHS, BUILDERS, SMITHS, IRONMONGERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on the PREMISES, George-street, Oxford-street, on TUESDAY, the 15th of APRIL, and following day, at ELEVEN, in lots, without reserve, 18 Tons IRON and STEEL, of IRON MONGER, including 25 tons S C bars, 2 tons Staffordshire bars, 6 tons Turton spring steel, 5 tons cast and shear steel, 2 tons coach bolts and nuts, 100 gross coach bolts assorted, 100 dozen files, 100 kegs wrought and cut nails, 20 bags horse nails, 500 gross wood screws, 5 tons coil, crane and skid chain, 2 tons barrel, washers, and bolt rings, double-purchase crab, several pairs of blocks with iron and brass sheaves, black and bright staple vices, anvils, hammers, spades and shovels, 2 tons wire, 100 gross washers, powerful draught horse, chaise and harness, and a general assortment of ironmongery.—To be viewed on MONDAY previous to the sale, when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Bolsterstreet, Vere-st.

BASINGHALL-STREET.—Building Materials of Weavers' Hall.

PULLEN and SON are favoured with instructions to SELL by AUCTION, on the PREMISES, on WEDNESDAY, APRIL 16th, at TWELVE, in lots, all the valuable BUILDING MATERIALS, FIXTURES, and FITTINGS-UP of Weavers' Hall, and two houses adjoining in Basinghall-street, belonging to the Worshipful Company of Weavers, comprising good sound brickwork, plain tiles and slates, capital oak and fir timber in roofs, and 130 square of boarded and timber floors, ten tons of lead, in large flats, gutters, and pipes, useful sashes, doors, wainscoting, marble chimney-pieces, carved oak panels and mouldings, stone paving, office desks and partitions, book cases, stoves, ranges, coppers, cisterns, and various useful fixtures and fittings-up.—May be viewed the day previous, and catalogues had of C. J. CONNETT, Esq. Architect, 17, Gracechurch-street, and of PULLEN and SON, 80, Fore-street, Cripplegate.

STARCH-GREEN, MIDDLESEX. To Builders, Bricklayers, and others.—TO BE SOLD by AUCTION, by

MR. JOHN JACOBS, on the PREMISES, Hewlett's Brickfields, on WEDNESDAY, APRIL 16th, 1856, at TWELVE o'clock, 1,000,000 good STOCK BRICKS, in lots of 10,000 and 20,000, the whole of which will be positively sold without reserve, in consequence of the field having to be cleared by the end of May. Starch-green is bounded by good roads, and situated in the parish of Hammersmith, within a few hundred yards of the Uxbridge-road, and about one mile distant from Kensington, Notting-hill, Bayswater, &c.—May be viewed by applying to Mr. HEWLETT, at Starch-green, of whom catalogues may be had; and of the Auctioneer, 25, Bevis marks, St. Mary-axe, City.

BUILDING MATERIALS of Five Houses, City-road.

MR. W. R. GLASIER will SELL by AUCTION, on the PREMISES, on WEDNESDAY, APRIL 16th, at TWELVE for ONE o'clock, by direction of the Corporation of the Asylum Working School, the BUILDING MATERIALS of five houses, situate and being Nos. 16, 17, 18, 19, and 20, Anderson's-buildings, City-road, comprising about 100,000 stock and other bricks, lead gutters and pipes, timber in flats, rafters, &c. flooring, doors, sashes, and frames, iron railing, stone coping, Yorkshire and other paving and plain tiles, fixtures, and fittings. May be viewed the day prior and morning of sale, and catalogues had of Messrs. WILSON and ASHLIN, Arch tects, 42, Charing-cross; of the Asylum Working School, 32, Ludgate-hill; at the Sportsman, City-road; at Garraway's; and of the Auctioneer, 41, Charing-cross.

IN BANKRUPTCY. Brentford. To Millers, Seed Crushers, Timber Merchants, and others requiring Waterside Premises and Steam Power.

MR. J. J. CLEMMANS has received instructions from the assignees of Messrs. Popkiss and Co. to SELL by AUCTION, upon the PREMISES, Ham Wharf, Hamroad, Brentford End Isaac, on TUESDAY, APRIL 15, at ONE for TWO, the extensive LEASEHOLD PREMISES, GRANARY, and BUILDINGS, held for a term of forty years, at the low rent of £45 per year, situate as above, and contiguous to the Great Junction Canal, and the intended railway; together with the nearly new 20-horse power horizontal steam engine, and wrought-iron cylindrical boiler, three pairs of mill stones and hutings, a circular sash saw and bench, patent dressing and plan tiles, fixtures, and machinery, with the latest improvements, in good working order, in one lot, and the loose articles, comprising three large wrought-iron cisterns, a Winchurst's Weighing Machine, sixty corn sacks, and other effects, in lots immediately after. The premises and machinery may be viewed, and particulars and catalogue had, at the Auction Rooms, at 20, Great Tower-street, Castle Taverns, Mark-lane; King's Arms, Uxbridge; Falcon, High Wycombe; Three Pigeons, Brentford; of E. W. Edwards, Esq. Official Assignee, Basinghall-street; of Messrs. GRANARY, and Gronge Brown, Esq. Solicitor, Finsbury-place North, and at the Offices of the Auctioneer, Holywell-row, Finsbury-square.

TO BUILDERS AND OTHERS.—PADDINGTON.

MR. DAVID ALLAN RAMSAY will SELL by AUCTION, on the PREMISES, Praed's-wharf, Harrow-road, on MONDAY, APRIL 21, at TWELVE, a quantity of BUILDER'S MATERIALS, comprising sash, four-panel and other doors, glazed and in the sashes, casements, floor boards, carpenter's bench, sash frames, capital builder's cart, &c.; ironmongery, consisting of bell-pulls, window brackets, mattress springs, japanned hat and coat hooks, iron mortice, stone and rim locks, bolts, hinges, brass rim, ring, bell-traps, glass paper, copper wire, brass cupboard knobs, unions, washers and waste, street-door latches, bolts, nails, glass in boxes, handrail screws, and a general assortment, furniture, viz. japanned black, china finger plates, stair rods, drab wood board, and fittings of a glass-cutter's shop, office furniture, &c.—May be viewed one day prior to and morning of sale, and catalogues obtained of D. A. RAMSAY, Auctioneer and Estate Agent, 79, King William-street, City.

AT GARRAWAY'S COFFEE-HOUSE, Change Alley, Cornhill, on FRIDAY, APRIL 18, 1856, at FOUR o'clock precisely,

400 Loads Dantzic Fir Timber.
450 Loads Swedish Timber.
15,000 Quebec and Lower Port Spruce Deals and Battens.
10,000 Quebec Floated Yellow Pine Deals.
1,000 Nenzel Planks.
15,000 Swedish Deals and Battens.
10,000 Gothenburg ditto.
With other goods.

Further particulars and catalogues in due time
CHURCHILL, MACMILLAN, and CO.
Wood Brokers, 24, Cannon-street.

SALES BY AUCTION.

NOTICE.—To CABINET-MAKERS, MAHOGANY and TIMBER MERCHANTS, &c. The next Liverpool SALE by AUCTION of MAHOGANY and other FURNITURE WOODS, Baltic and American WHITE WOODS, &c. will take place on FRIDAY morning, the 25th APRIL, 1856, at ELEVEN o'clock precisely, in the BROKER'S SHEDS, Brunswick and Toxteth Docks, Liverpool.—Catalogues, containing full descriptive particulars, may be had on application to EDWARD CHALONER, Mahogany and Timber Measurer and Broker, No. 6, East Side Queen's Dock, Liverpool.

SOMERS-TOWN.—TO BUILDERS, PIANOFORTE AND CABINET MAKERS, AND OTHERS.

MR. LEREW will SELL by AUCTION, on the PREMISES, No. 42, Union-street, Somers-town, on THURSDAY, APRIL 17th, at ELEVEN for TWELVE, about 2,000 yellow, white, and pine planks, deals, and battens, 2,000 feet wide pine board, 100 squares of yellow and white flooring, mahogany, 100 staves, 5,000 feet seasoning, dry cut stuff, doors, lenth marry scaff-id-poles, boards and cords, ladders, and much other useful stuff. May be viewed the day prior, and catalogues had on the Premises; and of the Auctioneer, Cardington-street, Hampstead-road.

TO NOBLEMEN, GENTLEMEN, ARCHITECTS, BUILDERS, LANDSCAPE GARDENERS, AND OTHERS. Second Annual Sale of the valuable and beautiful Materials manufactured of Roseone's Patent Siliceous Stone.

MESSRS. MANSELL and ELLIOTT are favoured with instructions from the Directors of the Company, to SELL by AUCTION, on the PREMISES, Whitehall Wharf, Cannon-row, Westminster, on TUESDAY, MAY 13th, 1856, and two following days, at TWELVE for ONE o'clock precisely, in lots adapted for private purchasers, the trade, and shippers, a well-selected assortment from the extensive stock at Ipswich of ITEMS adapted for ornamenting ecclesiastical buildings, mansions, and cottages, designed in the various styles of architecture by first-rate artists, including plain and elaborately-worked altar-pieces screens, chimney-pieces, basso and alto relievos, pillars, pilasters, entablatures complete, capitals, cups, vases, cornices, mouldings, porch and window dressings and architraves, brackets, trusses, enriched and plain balustrading, gate and other piers, pedestals in great variety, terminals, sablar quoins, copings, and string courses. The garden decorations comprise fountains, shell and rock work, figures, vases, tazzas, flower stands and boxes, fern tazzas, sun-dial pedestals, and terrace balustrading. The miscellaneous articles consist of coats of arms, turrets, pinnacles, fonts, mural tablets, tombs, and every item that can be made in wrought or sculptured stone. Messrs. MANSELL and ELLIOTT beg to draw especial attention to this important sale, for the Patent Siliceous Stone is superior, in appearance and durability, to any other stone, being unaffected by weather or age; and as its extraordinary capabilities of application are too numerous to particularise in an advertisement, they invite an inspection of the materials. The whole may be viewed three days prior to the sale, and catalogues had fourteen days prior) on the Premises, and at the Offices of Messrs. MANSELL and ELLIOTT, Auctioneers and Valuers, Belgrave square (corner of Chelsea-place), and 13, Birchin-lane, Cornhill, from which plates of designs may be had

CASEWICK, near STAMFORD.—To Ship Builders, Government Contractors, and Others.—TO BE SOLD by AUCTION, by

MESSRS. RICHARDSON, on THURSDAY, the 17th of APRIL, 1856, SIXTY OAK TREES, of extraordinary large size, some containing upwards of 300 cubic feet, with lop, top, and bark. The Auctioneers particularly call the attention of purchasers of large timber to the above important Sale, the timber not only being very large, but of superior quality. Six months' credit on approved joint security, or the usual discount for money. Casewick is situated about one mile from the Tallington Station on the Great Northern line of railway, and about two miles from Uffington Station on the Midland line. The Company are requested to meet the Auctioneers at Casewick Lodge at ELEVEN o'clock, and proceed to Sale.

TO BUILDERS, WHEELWRIGHTS, COACHMAKERS, AND OTHERS.

MR. F. HALL will SELL by AUCTION, on TUESDAY, APRIL 15, at ONE for TWO, on the PREMISES, Chester-gardens, Walcot-place, Lambeth, a large quantity of excellent NEW ASH TIMBER, in planks, shafts, &c. oak spokes and felloes, and a few second-hand carriages, one open 3-seat timber carriages. Also an assortment of new and old BUILDING MATERIALS, comprising yellow deals and scantlings, pine planks and battens, sashes, frames, with plate glass doors and partitions, excellent yellow timber, iron columns and tee rescue and other stores, bricks, tiles, stone, and various other effects.—May be viewed the day prior and on the Premises; and of the Auctioneer, Chester-street, Kennington.

DEPTFORD, KENT.—TO BE SOLD, pursuant to an Order of the High Court of Chancery, made in a cause "Robinson v. Makepiece," with the approbation of the Judge to whose Court this Cause is attached, by

MR. NOBLE, at the DOVER CASTLE TAVERN, BROADWAY, Deptford, on THURSDAY, APRIL 17th, 1856, at FOUR o'clock in the Afternoon, a compact LEASEHOLD ESTATE, comprising five brick-built Dwelling-houses, situate in Victory-street, Deptford, and numbered 20, 21, 22, 23, and 24; together with an improved Ground-rent of £2 per annum upon two houses in Cannon-street adjoining. May be viewed by leave of the tenants; and particulars and conditions may be had six days prior to the sale, of JOHN DOWSES, Esq. Solicitor, No. 1, Three Kings' Court, Lombard-street, and Bromley, Kent; Messrs. PARKER and SONS, Solicitors, Lewisham, Kent; JOHN MORTIMER, Esq. Solicitor, 18, Clifford's Inn; at the Place of Sale; and Taverns in the neighbourhood; and at Mr. NOBLE'S Offices, 18, Bucklersbury, and Greenwich.

Another part of the remaining portion of Messrs. Erwood and Co.'s varied Stock of Modern English Paper-hangings, comprising handsome Parlour and Chamber Damasks, good Marbles, Granites, and Grounds, removed from 16, Wellington-road, Cheapside, in consequence of the dissolution of partnership, a parcel of extremely elegant French Hangings and Decorations, consisting of small Flocks, rich Satins, and Golds, lately received from Paris; a few Marble Chimney-pieces; and several lots of Painters' and Plasterers' Brushes, will be SOLD by AUCTION, without reservation, by

MR. EDWIN WHITE, at his commodious ROOMS, 17a, BISHOPSGATE-STREET WITHOUT, on THURSDAY next, APRIL the 17th at TWELVE PRECISELY precisely. May be viewed and catalogues had the day prior and morning of sale.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

FREEHOLD LAND.—TO BE SOLD, about 60 Acres of valuable FREEHOLD LAND in Streatham parish, adjoining the property of Dulwich College, among the most eligible building sites.—Apply to F. B. NEWMAN, Esq. Architect, 12, Furnival's-inn.

FREEHOLD BUILDING LAND, TO BE LET, within four miles of Oxford-street, and four hundred feet above the level of the Thames, tithe free, and the land-tax redeemed. It lies on the western slope of a hill, is well sheltered from the east, and commands a beautiful and extensive view. It is close to a church and a free grammar school. It has a frontage of 320 feet to a high-road, and a depth of 200 feet. It is well stocked with fruit-trees, and ornamental trees of every growth, and is peculiarly eligible for the erection of detached or semi-detached villas, which are in great demand. About 200,000 good stock bricks are on the ground.—Apply to P. T. HARDIN, Esq. 12, Clement's-inn, Strand; or W. UNWIN, Esq. 23, Hardwood-square.

FREEHOLD BUILDING LAND.—FOR SALE, TEN ACRES, having upwards of 4,400 feet of frontage to good roads, close to Forest-gate Station, Stratford, Essex, four miles from Fenchurch-street and Shoreditch Stations; price 5,000. Also between Eleven and Twelve Acres, having upwards of 2,000 feet of frontage to good roads, near the Carshalton Station of the Epsom Railway, eleven miles from London; price 2,200.—Apply to D. B. SLADEN, Esq. Solicitor, 38, King-street, Cheapside.

FREEHOLD ESTATE at HACKNEY, near the Railway Station, where trains and other conveyances start for the City every quarter of an hour. TO BE LET, in plots averaging 130 feet deep, on building leases for ninety years, landtax redeemed. The roads and sewers are wholly completed, and the property situate on a gravel soil, in a most eligible position for villas, family residences, and shops.—For terms and particulars apply to Mr. HERING, Architect, 23, Duke-street, Portland-place; or Messrs. GRAY and SON, Estate Agents, Church-street, Hackney.

FREEHOLD GROUND, Fetter-lane.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet at the GUILDHALL of the said City, on TUESDAY, the 29th of APRIL next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking on BUILDING LEASE for eighty years, certain PLOTS of GROUND, situate at the south-east end of Fetter-lane. Further particulars may be had, and a plan also, on application to Mr. HAYWOOD, Engineer to the Commissioners, at these Offices in the Guildhall. The Commissioners will require a plan and elevation of the premises proposed to be built to be submitted to them for approval; and do not bind themselves to accept any proposal unless deemed advantageous. JOSEPH DAW.
Sewers Office, Guildhall, March 4th, 1856.

BUILDING LAND at ACTON, near the Railway Station, in a fine open and healthy situation, and plenty of fine water.—Apply to W. F. LOW, Esq. 67, Wimpole-street, Cavendish-square.

BUILDING GROUND TO LET.—Several Plots of Ground TO LET, in Kentish-town. Money advanced if required.—Apply to Mr. TAYLOR, Surveyor, No. 21, Lincoln's-inn-fields.

TO BE SOLD, with immediate possession, the remaining portion of a valuable PLOT of GROUND, sufficient to build two houses or villas, each house having a frontage of 25 feet, forming the best part of a fine wide street, thoroughly drained with a large new sewer, each end of the street leading to a great thoroughfare, where omnibuses pass to London every few minutes (the other part of the ground, to build sixty houses upon, was let in twelve months). It is held upon lease from the copyholder for ninety-nine years from October, 1854, and will be sold upon the following most advantageous terms: one-third of the purchase-money to be paid down immediately, and the remainder in two years.—For further particulars apply to Mr. MAYNARD, Plumber, Shepherd's-bush, Hammersmith, Middlesex.

TO CAPITALISTS, BUILDERS, RAILWAY CARRIERS, AND OTHERS.

CITY of LONDON.—Valuable and extensive FREEHOLD PLOT of GROUND, in the OLD BAILEY, TO BE LET, on a building lease, land-tax redeemed. The ground, now the site of the New Inn, has a frontage to the Old Bailey, with several returns thereof, and occupies an area of nearly 18,000 square feet, which may be increased, if required, to nearly 20,000 square feet. The premises are admirably adapted for an hotel, tavern, coffee-house, warehouses, or other buildings, on a large and comprehensive scale.—Plans of the property may be seen, and further particulars obtained, by application to the Governor-house of St. Bartholomew's Hospital, Smithfield; or to Mr. HENRY CURREY, Architect, No. 4, Lancaster-place, Strand.

£45 RENT.—MANUFACTURING PREMISES TO BE LET at UXBRIDGE.—These premises were built for engineering purposes, and well lighted. The shop is about 60 feet long, by 30 feet wide, with a large yard in front, an iron gate to the road. Dwelling-house adjoins. The railway station is behind, and the canal from Birmingham to London passes in front, presenting an excellent opening for an engineer or an agricultural implement maker. For further particulars, apply to Mr. JOHN GORDON, 3, Railway-place, Fenchurch-street.

DOWGATE-HILL IMPROVEMENT.—TO BE LET, by Tender, in two lots, on a building lease for eighty years, this desirable frontage, Lot 1, being adapted for a public-house, and Lot 2 for the erection of offices, or otherwise.—For plans, particulars, and form of Tender, apply at the Offices of Mr. D. A. CORBETT, Architect and Surveyor, 57, Fenchurch-street, City. Tenders will be opened at Peterchall, on the 25th day of APRIL, 1856, at TWELVE o'clock precisely.

CAMDEN-TOWN CEMETERY BUILDING ESTATE.—TO BE LET, on Building Leases, for Ninety-nine Years, a valuable PIECE of LAND, upon the above estate, having good frontages to Camden-street and Bayham-street, and include large frontages to an intended street, to be called Matthias-place, and more approached from Pratt-street. There is a great demand for private houses of the third-rate in this locality, which is enhanced by its near proximity to the North-Western and North London Railway Stations, and Hampstead-road.—Plans may be seen and particulars obtained by application to H. E. KENDALL, Esq. Architect, 70, Suffolk-street, Pall-mall East; or to JOHN DANGERFIELD, Esq. Solicitor, 24, Craven-street, Charing-cross.

ELIGIBLE BUILDING LAND TO BE LET, in the very best part of the immediate neighbourhood of Croydon. It is exceedingly dry and finely timbered, and within ten minutes' walk of either railway station. A very liberal peppercorn term will be granted.—Particulars apply to Mr. T. L. ROBINSON, 16, High-street, Croydon, Surrey.

BUILDING LAND near a RAILWAY STATION, where houses are much wanted. FOUR ACRES with Frontage to the south and west, about a quarter of a mile from Grays Station. The Gas main passes along the soil in front of the whole. Water laid on to the south, and land adapted for Factories with river frontage, can also be obtained on application to Messrs. MELSON and CO. GRAYS, Essex. Bricks, Lime, Rents, &c. are very easily obtainable in this neighbourhood.

LAND.—FOR SALE, a small FREEHOLD PARK, containing fifty acres, well studded with oak timber, and enclosed with park rails, situate on an eminence commanding views of great beauty over four counties, with good roads and excellent water, situate eleven miles from London and one mile from the Romford station. Well adapted for a cemetery. For particulars apply to Mr. E. SAGE, Furze House, near Romford.

STRATFORD, ESSEX. — FREEHOLD LAND within three miles of London, exonerated from land-tax, and free of tithe, TO BE LET, on lease, for a long term of years, in large or small plots, suitable for manufactories or building purposes. Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

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The Builder.

A JOURNAL FOR THE Architect, Engineer, Operatives & Artist.

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THE NEW SOCIETY of PAINTERS in WATER-COLOURS will open their TWENTY-SECOND ANNUAL EXHIBITION, at their Gallery, 53, Pall-mall, near St. James's Palace, from Nine till dusk. Admission, 1s.
JAMES FAHEY, Secretary.

EVENING LECTURES to WORKING MEN, at the MUSEUM of PRACTICAL GEOLOGY, Jermyn-street, being the third of these courses for the present session. SIX LECTURES on METALS, by Dr. PERCY, F.R.S., to be commenced on TUESDAY, APRIL 22nd, at EIGHT o'clock, p.m. Each Course to be obtained at the Museum, by working men only, on MONDAY, APRIL 21st, from TEN to FIVE o'clock, upon payment of a registration fee of 6d. for the whole course
TRENHAM REEKS, Registrar.

THE ARCHITECTURAL MUSEUM, CANON-ROW, WESTMINSTER.
On MONDAY next, APRIL 21st, a LECTURE on BRICK-WORK will be delivered by GEORGE AITCHISON, Jun. Esq. Hour of admission, SEVEN o'clock. The chair to be taken at EIGHT o'clock.—Cards of admission may be had at the Rooms of the Museum, and at the Office of "The Builder."
GEORGE GILBERT SCOTT, Treasurer.
HENRY CLUTTON, Hon. Sec.

April 18, 1856.

THE METROPOLITAN BUILDING ACT, 1855 (Sec. 39).—The Institute of British Architects hereby give Notice, that an EXAMINATION of persons desirous of obtaining a Certificate of Competency to perform the duties of DISTRICT SURVEYOR, will take place at the ROOMS of the INSTITUTE, No. 16, Grosvenor-street, Grosvenor-square, on TUESDAY, the 29th day of APRIL instant, at TWO o'clock p.m. Persons desirous to be examined must, on or before FRIDAY, the 25th of APRIL instant, send an application, which must be accompanied by a statement, according to a form to be previously obtained at the Rooms of the Institute.
J. J. SCOLES, } Hon. Secs.
C. C. NELSON, }

April 7th, 1856.

COMPETITIONS.

TO ARCHITECTS, LANDSCAPE GARDENERS, AND OTHERS.

SCARBOROUGH PUBLIC BURIAL-GROUND.—The Scarborough Burial Board is desirous of receiving Designs, Ground Plans, Sections, Elevations, Specifications, and detailed Estimates for the LAYING-OUT as a PUBLIC BURIAL-GROUND the land selected for the site, containing ten acres, and for erecting thereon two chapels, with lodges and entrance-gates. The whole cost of buildings and entrance-gates not to exceed 9,000l. The plan and levels of the ground may be inspected at the Office of the Board, Town Hall, Scarborough, and Premiums of 15l. and 10l. will be awarded to the two designs respectively which the Board may consider as being first and second as regards merit under the circumstances. Neither of the premiums will be paid unless a Tender be accepted by the Board for the actual execution of the works at or within the stipulated sum of 9,000l. The designs and estimates, with motto, and a sealed letter similarly endorsed, containing the author's name and address, are to be sent "To the Scarborough Burial Board," under cover to their clerks, on or before the 14th day of MAY, 1856.
JOHN COOK, } Joint Clerks to the
J. J. P. MOODY, } Burial Board.

Town Hall, Scarborough, April 5th, 1856.

LIVERPOOL EXCHANGE.—The Committee of the Proprietors of the Liverpool Exchange being desirous of EXTENDING the ACCOMMODATION of the NEWS-ROOM, and of improving the arrangement of the present Offices in the Buildings, are willing to receive DESIGNS in PENCIL to effect those purposes. If more than five designs be furnished, the Committee will select that number, for the authors to perfect each a set of plans, accompanied with an estimate of the cost, for each of which 20l. will be given. Should any one plan in whole or in part be adopted, and acted upon, the designer will be preferred in carrying out the work. To be delivered on or before the 15th of MAY, to Mr. J. H. YOUNGHUSBAND, Secretary and Treasurer, from whom any further information may be obtained.

BLANDFORD UNION.—To ARCHITECTS, BUILDERS, &c.—The Guardians of the Blandford Poor-law Union solicit PLANS for the ERECTION of a NEW WORKHOUSE, capable of containing 250 inmates, with every necessary office required by the Poor-law Board. The ground on which the building is to be erected measures about 460 feet by 300. A plan of the ground if required may be obtained by application to the Clerk on payment of 5s. The drawer of the plan approved by the guardians, if sanctioned by the Poor law Board, will receive a premium of 10l. provided he should not afterwards be employed on or in the execution of the work.—Plans must be sent, free of carriage, to the Office of the Clerk, on or before the 3rd MAY.—By order of the Board.
W. H. ATKINSON, Clerk.

Blandford, April 5, 1856.

TO ARCHITECTS AND DRAUGHTSMEN.

A DESIGN is WANTED for a Suburban RESIDENCE, in the country, to contain five principal and three secondary bedrooms, morning, drawing, and dining-rooms, the latter about 24 by 18. The situation is elevated, facing the south. View also east and west; entrance to the west. The usual building materials, brick, chalk, and flint. Designs for elevations with the ground and chamber plan only required. Intended outlay, from 1,200l. to 1,400l. Grecian or Italian style preferred. A premium of three guineas will be given for an approved plan. Those not approved of will be returned on application.—Designs to be sent to Mr. W. H. STEARS, Engineer, 38, Moorgate-street, London.

CONTRACTS.

TO BUILDERS.—Sealed TENDERS, in one specific sum, will be received by the Director-General of Contracts, Pall-mall, London, on or before the 16th day of MAY, 1856, at NOON, for the following SERVICES, at BULL POINT, near Devonport, viz. :—

1. Building a Case-Store, Barrel-Store, Breaking-up-House, Tanks, Privies, &c.
2. Lengthening the Siding of Railroad outside the Magazine Inclosure.
3. Building Cottages for Two Foremen and Five Labourers.
4. Building a Store for Planks, Store for Flannel Cartridges, Foreman's Office, and Printing-press Room, &c.

Detailed specifications of the above four services, with every requisite information, may be obtained at the Royal Engineer Office, Bull Point, daily (Sundays excepted), between the hours of TEN and FOUR o'clock, from the 28th of APRIL to the 14th of MAY, 1856, both days inclusive.
Royal Engineers' Office, Devonport, April 10, 1856.

TO BUILDERS AND CONTRACTORS.

NOTICE is hereby given, that TENDERS will be received by the Director-General of Contracts, War Department, Pall Mall, London, on or before SATURDAY, the 10th day of May next, from Persons desirous of CONTRACTING with the War Department for ERECTING SOLDIERS' BARRACK ROOMS over the Stables, North Square, Brompton Barracks, Chatham. Plans and Specifications of the work are to be seen and Forms of Tender obtained on application at the Royal Engineer Office, Chatham, between the hours of Ten and Four, till the 9th of May next, Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound under a penalty of £3,000 for the due performance of the contract. Tenders to be addressed to "The Director-General of Contracts, War Department, Pall Mall, London," and to be delivered free, endorsed, "Tenders for Works at Brompton Barracks, Chatham." No Tender can be admitted after the said 10th day of MAY, 1856.
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

TO BUILDERS AND OTHERS.

SEALED TENDERS for the following SERVICES at DEVONPORT, viz. :—

1. Building Counterscarp of the New Bastion on the right of the Lines, Temporary Bridge, &c. &c.
2. Continuing the Escarp of the Lines from Stoke Entrance-gate to the right shoulder of the Flat Bastion;

For specific sums, will be received by the Director-General of Contracts, Pall-mall, London, on or before the 5th of MAY, 1856. Detailed specifications of the above two Services, and every requisite information, may be obtained at the Royal Engineer Office, Devonport, daily (Sundays excepted), between the hours of TEN and FOUR o'clock, from the 25th of APRIL to the 3rd of MAY, both days inclusive.
Royal Engineer Office, Devonport, 12th April, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover district hereby gives Notice that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall-mall, London, on or before THURSDAY, the 1st MAY, 1856, from persons desirous of CONTRACTING for RENEWING FLOORS, CEILINGS, STAIRS, &c. at Canterbury Barracks. Drawings and specifications of the works to be executed, may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Canterbury Barracks, between the hours of TEN and FOUR o'clock, from TUESDAY, the 22nd of APRIL, to WEDNESDAY, the 30th APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work, will be required to enter into a bond, with two eligible securities, jointly and severally, to be bound under a penalty of 500l. for the due performance of the contract. Tenders for the above work, to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed "Tender for Floors, &c. at Canterbury Barracks."
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, 7th April, 1856.

CONTRACTS.

NOTICE to BUILDERS.—Notice is hereby given, that TENDERS will be received at the Office of the Director-General of Contracts, War Department, Pall-Mall, London, from such persons as may be desirous of entering into a Contract for the ERECTION of a GUARD HOUSE and CELLS, &c. at Winchester Barracks, in the county of Hants. Plans and specifications may be seen at the Royal Engineer Office, Winchester, where also forms of Tender may be obtained, every day (Sundays excepted), from the 14th until the 26th day of APRIL, 1856. Tenders to be delivered on or before the 28th day of APRIL, 1856. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders. No notice will be taken of any of the Tenders unless made on the printed forms, to be obtained at the Royal Engineer Office, Winchester Barracks.
Royal Engineer Office, Portsmouth, April 1, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice that Sealed TENDERS will be received at the office of the Director-General of Contracts, Pall Mall, London, on or before THURSDAY, the 1st day of MAY, 1856, from Persons desirous of CONTRACTING for LAYING NEW BOARDED FLOORS and GALVANIZED IRON PLATE CEILINGS at WALMER BARRACKS. A specification of the works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, South Barracks, Walmer, between the hours of TEN and FOUR o'clock, from MONDAY, the 14th of APRIL, to WEDNESDAY, the 30th of APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work, will be required to enter into a bond, with two eligible Securities, jointly and separately, to be bound under a penalty of 150l. for the due performance of the Contract. Tenders for the above work to be addressed to the Director-General of Contracts, Pall Mall, London, and endorsed "Tender for Work at Walmer Barracks."
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, 5th April, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 1st MAY, 1856, from persons desirous of CONTRACTING for SLATING and LEAD WORK at Canterbury Barracks. Drawings and specifications of the works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Canterbury Barracks, between the hours of TEN and FOUR o'clock, from TUESDAY, the 15th of APRIL, to WEDNESDAY, the 30th of APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 300l. for the due performance of the contract. Tenders for the above work, to be addressed to the Director General of Contracts, Pall-mall, London, and endorsed, "Tender for Slating and Lead Work, &c. at Canterbury Barracks."
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, 7th April, 1856.

NOTICE to BUILDERS, CONTRACTORS, IRONFOUNDERS, &c.—The Commanding Royal Engineer of the Yorkshire District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 8th of MAY, 1856, from persons desirous of CONTRACTING for the undermentioned WORKS, at the places named, viz. :—

YORK BARRACKS.—Taking off the present Roof of Riding School, and erecting over the same a New Wrought-Iron Roof.

LEEDS BARRACKS.—Taking Down present Old Fitments &c. and Repewing with Iron Ones in Three Officers' and Nine Troop Stables; also, Repaving, with Granite, Two Troop Stables.

Specifications of the works to be performed, and forms of Tender obtained at the Royal Engineer Office, No. 5, New Walk-terrace, York, between the hours of TEN and FOUR o'clock, from MONDAY, the 21st of APRIL, to WEDNESDAY, the 7th of MAY, 1856.
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, 5, New Walk-terrace, York, 19th April, 1856.

NOTICE to BUILDERS and CONTRACTORS.—CONTRACT for COMPLETING the BOUNDARY WALL and DRAINAGE of the GOVERNMENT PROPERTY, in the rear of Blue-town, Sheerness. The Commanding Royal Engineer gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before MONDAY, the 28th instant, from such persons as may be desirous of CONTRACTING for the COMPLETION of the BOUNDARY WALL, and the DRAINAGE of the GOVERNMENT PROPERTY, in the rear of Blue-town, Sheerness. The plans may be seen, and printed specifications and form of Tender obtained, by persons fully competent to undertake the work (none others need apply), at this Office, between the hours of TEN and FOUR o'clock, from TUESDAY, the 15th of APRIL, 1856, to SATURDAY, the 26th of APRIL, 1856, Sundays excepted. The party whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound, under a penalty of 400l. for the due performance of Contract. Tenders for the above works to be addressed to "The Director-General of Contracts, Pall-mall, London," and endorsed "Tender for Boundary Wall and Drainage, Sheerness."
N.B. The War Department reserves to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Sheerness, 14th April, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

TO CONTRACTORS AND BUILDERS.

SURREY HOUSE of CORRECTION, WANDSWORTH-COMMON.—The Visiting Magistrates of this Prison purpose Extending the Accommodation for Female Prisoners, and making certain Alterations in the Residences of some of the Officers. Plans, specifications, and conditions may be seen at the Sessions House, Newington from the 16th to the 20th inst. The Visiting Magistrates will meet at the said Sessions House on TUESDAY, the 29th inst. at the hour of TWO o'clock, for the purpose of opening such TENDERS for the execution of the work as may then and there be presented in pursuance of the Parliamentary Standing Orders. Further information, and the bills of quantities, may be obtained upon application to Mr HILL, Architect at 27, King street Cheapside, or Clerk of Church Buildings, Birmingham. The Visiting Magistrates do not bind themselves to accept the lowest or any Tender. Every contractor applying for a copy of the bills of quantities will be required to deposit the sum of £5, which will be returned in all cases in which a Tender has been delivered.

(Signed) WORONZ W GREIG, Clerk of the Peace.

Office of the Clerk of the Peace, Northstreet, Lambeth, April 10th, 1856.

MORTGAGES of ROCHESTER-BRIDGE ESTATES.—LOAN REQUIRED.—The Wardens and Assistants of Rochester bridge will be ready on THURSDAY, the 15th inst. (MAY), at the Audit Chamber at Rochester, in Kent, to open and consider TENDERS for LOANS from persons willing to advance TEN THOUSAND POUNDS, or any part thereof, in sums of not less than one hundred pounds each, to be secured by interest-bearing bonds, and by a first legal mortgage of the estates proper to the Bridge Corporation, under the regulations and provisions of the Rochester bridge Acts 1813 and 1833 affecting such loans and the repayment thereof, and so as the advances are to be paid within one week next after the acceptance of the proposal shall have been notified to the party making the same. Further particulars and extracts from the Acts may be obtained on application to me. Proposals in sealed envelopes, marked "Tender for Mortgage," stating the amount offered to be advanced and the rate of interest required, to be sent to me at any time previous to ELEVEN o'clock in the Forenoon of the said 15th day of MAY, 1856

By order of the Wardens and Assistants,

GEORGE FSSELL, Bridge Clerk.

The Precept, Rochester, 4th April, 1856.

MARGATE CEMETERY, SAINT JOHN THE BAPTIST. To BUILDERS and CONTRACTORS. Persons desirous of CONTRACTING for the ERECTION of TWO CHAPELS, LODGE, and BOUNDARY-WALLS, and for FORMING ROADS and LAYING out the New Burial ground for the Parish of St. John the Baptist, Margate, are hereby informed that the PLANS and SPECIFICATIONS may be seen at the Townhall, Margate, after the 8th day of APRIL instant, and until the 28th day of the same month, 1856. The Tenders are to be delivered, sealed and directed, to the Burial Board at the Town hall, where they will be opened at TWELVE o'clock at noon on that day. The Board do not pledge themselves to accept the lowest or any Tender.—S. W. TRACY, Architect, Ipswich.

JOHN POUSSETT, Clerk to the Board.

Margate, April 1, 1856.

TO STEAM-ENGINE MAKERS.

THE TOWN COUNCIL of the BOROUGH of BRIDGNORTH (as Local Board of Health) are prepared to receive TENDERS from persons willing to make and erect an additional CONDENSING STEAM ENGINE, PUMPS, &c. and other Water Works in the Lower Town, Bridgnorth, in accordance and conditions of Contract, now being open for payment of 2s. Drawings and plans inspected, and further particulars had, by application at the Office of J. PILBROW, C.E. Rotherham (Engineer to the Board). Sealed Tenders, endorsed "Tenders for Steam-Engine," and addressed to the Local Board of Health, Bridgnorth, Salop, must be sent on or before THURSDAY, the 1st day of MAY next.

Bridgnorth, April 3 1856. By order of the Board

AMBERGATE, NOTTINGHAM, and BOSTON, and EASTERN JUNCTION RAILWAY and CANAL.—EXTENSION LINE, COLWICK to NOTTINGHAM. CONTRACTS for RAILS, CHAIRS and SLEEPERS. Notice is hereby given, that the Directors of the above Company will meet at their Offices St. Peter's-gate, Nottingham, on MONDAY, the 28th day of APRIL instant, at TWO o'clock in the afternoon, to receive TENDERS for 700 TONS of RAILS, 30 TONS of CHAIRS, and 5,500 SLEEPERS. Further particulars may be obtained with form of Tender, on application to Mr UNDERWOOD, the Engineer, at the Offices of the said Company, on or after MONDAY the 21st day of APRIL instant.—All Tenders must be upon the printed form sealed, and addressed to the Secretary, and must be received at the Office aforesaid on the 28th day of APRIL.—By order,

JNO. GOUGH, Secretary.

Company's Offices, Nottingham, April 9, 1856.

TO BUILDERS, IRONFOUNDERS, AND OTHERS.

PERSONS willing to CONTRACT for the CONSTRUCTION of RESERVOIRS for WATER, at the Kent County Lunatic Asylum, and for the ERECTION of WORKS, near Farleigh Lock, to receive Masonwork for raising, and for Cast-iron Pipes, for conveying Water from the Medway to the Asylum, may see plans and specifications of the works required to be done, at the Office of Messrs. EASTON and AMOS, Civil Engineers, Grove, Southwark; or at the Office of the County Surveyor, in Maidstone, every day, between the hours of TEN and FOUR o'clock, to whom Tenders, sealed up, and addressed "Tender for Water works," at the Office of WM. BEALE Esq Solicitor, Maidstone, on or before TEN o'clock in the morning of MONDAY, the 28th day of APRIL instant. The Visitors do not engage to accept the lowest Tender.

WILLIAM BEALE, Clerk to the Visitors.

Maidstone, April 15, 1856.

AMMONIA.—The PHŒNIX GAS-LIGHT and COKE COMPANY are ready to receive TENDERS for 1,000 TONS of AMMONIACAL LIQUOR, from their Stations at Brunswick, Greenwich, and Vauxhall. The quantity made at present is a barge load, or fifty butts, per winter day, and it will probably be materially increased, and punctuality in the clearance is of vital importance. The particulars of the contract may be seen at the Office. The price to be stated in so many Imperial gallons. Sealed Tenders, with the words "Ammonia Tender" written on the cover, to be left at the Office, 1, Ivy Street, South-bank, on WEDNESDAY, 30th APRIL, before TWELVE o'clock.

N.B.—The Board do not pledge themselves to accept the Lowest Tender

MANSFIELD CEMETERY. — The Burial Board for the Parish of Mansfield, in the County of Nottingham, are prepared to receive TENDERS for the ERECTION of TWO CHAPELS, with VESTRIES and TOWER, TWO LODGES, with ENTRANCE GATES, on their new Burial ground, at Mansfield aforesaid; and the TENDERS for the ERECTION of a WALL, to enclose the said ground. The plans may be seen, and printed copies of the specification, quantities, and form of Tender, obtained at my office, in Mansfield, on and after the 18th instant, and until the evening of SATURDAY, the 3rd day of MAY next. Tenders to be sent to me on or before the 6th day of MAY next. Any further information may be obtained from me or from Messrs. PRITCHETT and SONS, Architects, to the said Board, Darlington.

By order of the said Board,

RICHARD JOS. PARSONS, Clerk.

Mansfield, April 17, 1856.

TENDERS for the ERECTION of SCHOOLS. The Directors of the Railway Benefit Company are desirous of receiving TENDERS for the ERECTION of SCHOOLS, about to be built by the Company at Ridgmont, in Bedfordshire, near Merthyr Tydfil. The drawings and specifications may be seen after the 20th instant, either at the Company's Offices, 25, Lombard-street, London, or at Ridgmont. Tenders, addressed to the Secretary, at the London Offices, not later than the 30th MAY next.

Laurence Pountney lane, 11th April, 1856.

CONTRACTS.

TO BUILDERS AND CONTRACTORS.

DUDLEY UNION WORKHOUSE.—Builders and Others are invited to deliver TENDERS for the execution of the several Works required to be done in the ERECTION of a NEW WORKHOUSE, proposed to be built at Shaver's End, near Dudley in the parish of Sedgley, in the county of Stafford. The plans and specification may be seen on application to the Architects, Messrs. HILLARD and LOVATT, Market-place Wednesbury. Sealed Tenders to be forwarded under cover to THOMAS SHORTHOUSE, Esq. Clerk of the Guardians, Dudley and endorsed "Tender for New Workhouse," and must be received on or before the 1st day of MAY next. A separate estimate to be given for the School Building.—The Tenders must be made according to the form issued with the plans and specifications, to which parties are referred for all further particulars relating to the proposed contract. The Guardians do not pledge themselves to accept the lowest Tender.

CHORLEY IMPROVEMENT.—CEMETERY.—To BUILDERS and CONTRACTORS.—The Chorley Commissioners acting under "The Chorley Improvement Act, 1853," hereby give Notice, that they are prepared to receive TENDERS for the ERECTION of THREE CEMETERY CHAPELS and ENTRANCE LODGE. The drawings and specifications may be seen, and one further information obtained, at the Office of Mr. JAMES DERHAM, Surveyor to the Commissioners, on and after FRIDAY the 25th instant. Sealed Tenders to be delivered at my Office, High-street, Chorley, on TUESDAY, the 6th of MAY next, addressed "Tender for Cemetery Chapels and Lodge."

RICHARD JACKSON, Clerk to the Commissioners.

Chorley, April 11, 1856.

TO BUILDERS

PERSONS desirous of CONTRACTING for the ERECTION of the NEW CORN EXCHANGE, Chelmsford may inspect the plans and specifications, and the bills of quantities, on payment of one guinea, at the Offices of the Architect, Mr. CHANCELLOR, Chelmsford, on and after MONDAY, the 21st day of APRIL next. Tenders are to be delivered at my Offices, Chelmsford, on or before MONDAY, the 28th day of APRIL. The Directors do not bind themselves to accept the lowest or any Tender

W. W DUFFIELD, Secretary.

Chelmsford, March 27, 1856.

TO BRICKLAYERS AND OTHERS

THE VESTRY of the Parish of ST. LUKE, CHELSEA, will meet on TUESDAY, the 29th inst at the Manor House, Kings-road, Chelsea, at EIGHT o'clock in the forenoon to receive TENDERS from persons willing to contract, for twelve months for the EXECUTION of WORKS connected with the SEWERS and DRAINS, according to a schedule of prices now lying at my office Copies of the schedule, and of the proposed form of Tender, may be had upon payment of ten shillings, to be returned to parties tendering. The Vestry do not bind themselves to accept the lowest or any Tender. Parties tendering must be prepared to execute and pay for a contract, and to provide sureties for the performance of the same, if called upon by the Vestry. Tenders must be on the printed forms, and be left at my Office, on or before the 28th inst.—By order,

CHARLES BAKER, Vestry Clerk

Offices, Manor House, King's-road, Chelsea, April, 1856.

LEICESTER CORN EXCHANGE and MARKET HOUSE. To BUILDERS. Parties desirous of CONTRACTING for the EXECUTION of the WORK connected with the above, may inspect the drawings and specifications at Mr. BRIDGEWATER'S Stationer, Hotel-street, Leicester, from MONDAY, APRIL 21st to SATURDAY, the 26th inst. As each part will be required to make their tenders separately, to the new Hall, Market-place, Leicester, will attend to give any explanation required on the latter day, by ELEVEN o'clock. Tenders are to be sent in, and sent to the Committee at Mr. T. CHAPMAN BROWNE'S, Bookseller, Bible and Crown, Market-place Leicester.

BOARD of WORKS for the HOLBORN DISTRICT.—To CONTRACTORS for SEWERS, BUILDERS, and OTHERS.—The Board will meet at the Workhouse, in Little Gray's-inn-lane, on MONDAY, the 28th day of APRIL next, at TWO o'clock in the afternoon precisely, to receive TENDERS for the SUPPLY of MATERIALS, and the Execution of Jobbing and Measured Works, required for the Sewers and Drains within the District, during the ensuing Year, to be entered into until Midsummer-day, 1857. Printed forms of Tenders and schedules of prices, upon which the Tenders must be delivered, sealed up, addressed, and endorsed, at the Office of the Clerk between the hours of TEN and FOUR, on payment of ten shillings, and no other forms of Tender will be accepted. Tenders must be delivered, sealed up, at the Office of the Clerk directed and endorsed, "Tender for Sewers Work," before TWO o'clock p.m. on the day of meeting. The contractor will be required to enter into a contract, and find two responsible sureties to execute a bond with him, for the due performance thereof, to be prepared at his expense. The Board do not bind themselves to accept the lowest or any Tender.

S. W. HOPWOOD, Clerk to the Board.

Office 47, Chancery-lane, April, 1856.

HASTINGS MUNICIPAL BURIAL BOARD.—To CONTRACTORS and BUILDERS.—The Council of Hastings give Notice, that they are prepared to receive TENDERS from competent persons for the ERECTION of TWO CHAPELS, TWO LODGES, RECEIVING HOUSE, FRONT WALL GATES, PIERS, and other WORKS, at the New Burial Ground near the Church, Hastings. The plans, drawings, and specification may be seen on and after the 14th day of APRIL instant, at the Office of the Town Clerk, High street, Hastings, between the hours of TEN and FOUR p.m. where Tenders, only on the printed form supplied by the Council, are to be delivered on or before TWELVE o'clock at noon, on TUESDAY, the 29th day of APRIL next, duly signed, and agreeable to the conditions will be received. The Council do not bind themselves to accept the lowest or any Tender.—By the Council.

JOHN G. SHORTER, Town Clerk.

Hastings, April 8, 1856.

BOARD of WORKS for the LIMEHOUSE DISTRICT, comprising the parish of Limehouse, the hamlet of Ratcliff, and the parishes of Shadwell and Wapping.—JOBBING CONTRACT for WORKS to SEWERS.—Notice is hereby given, that the Sewers Committee will meet at the Offices of the Board, White Horse street, Commercial-road East, on MONDAY, the 5th MAY next, to receive TENDERS from persons willing to contract for the JOBBING WORKS and REPAIRS of the SEWERS, DRAINS &c. under the jurisdiction of the Board, up to Midsummer, 1857. Further particulars may be known and printed conditions, schedules of prices, and forms of Tender obtained by parties intending to Tender for the works, upon application at the said Offices, on and after the 28th APRIL instant, between the hours of TEN and FOUR, upon payment of two shillings, which will be returned to each person sending in a Tender. Tenders, sealed up, and endorsed, "Tender for Jobbing Works to Sewers, &c." must be delivered at the said Offices not later than TWO o'clock on 5th MAY, 1856. The Board do not bind themselves to accept the lowest or any Tender. The security of two responsible persons will be required. No Tender will be received after the time specified, and unless strictly in accordance with the printed instructions.

THOS. W. RATCLIFF, Clerk to the Board.

17th April, 1856.

TO CONTRACTORS BUILDERS AND OTHERS.

CLUN UNION.—Persons desirous to CONTRACT for MAKING IMPROVEMENTS in the DRAINAGE of the CLUN UNION WORKHOUSE PREMISES, STORAGE of RAIN WATER, in CONNECTION with the PUMP, and specifications now lying in the Clerk's office for inspection, are requested to send in Tenders, addressed to the Board of Guardians at the Workhouse, in Bishop's Castle, on or before the 7th day of MAY next—By order of the Board.

FREDERIC PARDOE, Clerk.

Bishop's Castle, March 14, 1856.

CONTRACTS.

WORTHING SEWERAGE.—To CONTRACTORS for SEWERAGE WORKS.—The WORTHING LOCAL BOARD of HEALTH are prepared to receive TENDERS for the COMPLETION of the SEWERS of their district (and other Works, as specified). The plans and specifications may be seen at the Offices of Mr. DENNETT, Solicitor, Clerk to the Board, No. 5, Bedford-row, Worthing, on and after MONDAY, the 14th instant, between the hours of TEN and FOUR. Duplicate forms of Tender will also be supplied, price five shillings, and full information will be given as to the works and material, by CHARLES RIDD, resident Surveyor to the Board, or by ROBERT RAWLINSON, Civil Engineer 34, Parliament-street, Westminster. Sealed Tenders (properly endorsed) are to be delivered at the Offices of Mr. DENNETT, not later than TWELVE o'clock on THURSDAY, the 1st day of MAY next. The Board do not bind themselves to accept the lowest or any Tender.—By order,

WM. HUGH DENNETT, Clerk to the Board.

Worthing, April 12 1856

TO BUILDERS AND CONTRACTORS

MIDLAND COUNTIES INSURANCE COMPANY'S OFFICES, LINCOLN.—Persons willing to CONTRACT with the Directors of the Midland Counties Insurance Company for the ERECTION of their NEW OFFICES, proposed to be built on a piece of ground situate in Silver-street and Bank-street, in the City of Lincoln, may view the drawings and specifications, and obtain other information relating thereto, on application at our Offices after MONDAY, the 14th day of APRIL next, until 23rd APRIL next, on which latter day, by TWELVE o'clock at noon, Tenders are to be delivered at the Company's present Offices, Cross-Keys, Lincoln, addressed "Tenders for Offices," &c addressed to WILLIAM ANDREW, Esq Secretary. The Directors do not pledge themselves to accept the lowest Tender.—By order of the Directors,

BELLAMY and HARDY, Architects and Surveyors, 39, Broad gate, Lincoln.

Lincoln, March 28, 1856.

THE LOCAL BOARD of HEALTH for the DISTRICT of CROYDON are desirous of receiving TENDERS for underneath-named WORKS:—

For PROVIDING and LAYING about 3,640 Feet of 12-inch STONEWARE DRAIN-PIPES in the Wellesley-road, Croydon, the depths varying from 9 to 30 feet; and for laying about 600 feet of 9-inch Pipes in connection therewith, at depths varying from 8 to 13 feet (the 9-inch pipes to be provided by the Board).

Also, separate Tenders for providing and laying about 1,250 feet of 12-inch Stoneware Drain-pipes in the Windmill-road and Whitehorse-road, Croydon, at depths varying from 11 to 16 feet.

The whole to be executed in accordance with specifications and drawings which may be seen at the Office of Mr. THOMAS COX, at the Town-hall, Croydon, on and after the 24th inst. Tenders to be sent in on the 28th inst.

By order of the Board, HENRY RICHARDS, Clerk.

Croydon, 17th April, 1856.

GREAT BARTON CHURCH, SUFFOLK.

TO BUILDERS and WOOD CARVERS.—Persons willing to TENDER for the RESTORATION of the MASONRY and RE-PLACING of the RETURNED CARVED OAK BENCHES, PULPIT, DESK, and other WORKS at the above church, may inspect the plans and specification at my Office, No. 9, Whiting-street, Bury St. Edmunds. Tenders are to be sent to the Churchwardens of Great Barton, near Bury St. Edmunds, on or before WEDNESDAY, APRIL 30th, 1856, sealed and endorsed "Tender for Work at Great Barton Church." The Churchwardens do not bind themselves to accept the lowest Tender.

Bury St. Edmunds, April 15th, 1856. JOHNSON, Architect.

AMBERGATE, NOTTINGHAM, and BOSTON and EASTERN JUNCTION RAILWAY and CANAL EXTENSION LINE, COLWICK to NOTTINGHAM.

CONTRACTS for WORKS.—Notice is hereby given that the Directors of the above Company will meet at their Offices, St. Peter's-gate, Nottingham, on MONDAY, the 28th day of APRIL instant, at ONE o'clock in the afternoon, to receive TENDERS for the following WORKS:—

CONTRACT No. 3.—For the making that part of the line commencing at the termination of Contract No. 2, on the west side of New Trent-lane, in a field numbered 18 on the Parliamentary plan, in the parish of Sneinton, in the county of Nottingham, and terminating in a field numbered 86, on the west side of Old Trent-lane, in the aforesaid parish of Sneinton, about 2 furlongs, including the earthworks, bridge, retaining walls, and other works relating thereto.

CONTRACT No. 4.—For the making that part of the line commencing on the east side of Old Trent-lane aforesaid, in a field numbered 64, in the parish of Sneinton, and terminating by a junction with the present line of the Ambergate Railway near to the crossing of the road from Colwick to Carlton. Length about 2 miles and 5 chains, including all the earthworks, bridges, culverts, railroad, and other works for completing the same.

Plans, drawings, and specification may be seen, and further particulars obtained, on application to Mr. UNDERWOOD, the Engineer, at the Offices of the said Company, on and after WEDNESDAY, the 16th day of APRIL instant. All tenders must be made upon printed forms, sealed and addressed to the Secretary. No Tender will be received after TWELVE o'clock at noon, on MONDAY, the 28th inst. day of APRIL.

By order of the Directors, JNO. GOUGH, Secretary.

Company's Offices, Nottingham, 9th April, 1856.

TO SCAVENGERS AND OTHERS

THE COMMISSIONERS of SEWERS of the CITY of LONDON hereby give Notice, that they will meet in the Guildhall of the said City, on TUESDAY, the 20th day of MAY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for CLEANSING the WHEELS and REMOVING DUST, &c. from the houses of this City, for the term of one year from Midsummer-day next, agreeably to the provisions of a specification of which may be had upon application at this Office. The Commissioners will also at the same time receive PROPOSALS for WASHING certain of the STREETS of the said City twice a day, agreeably to a specification to be seen at this Office. The City is divided, for the purposes of these proposals, into Districts, for each of which the surveyor will be required to enter into Bond, with two approved sureties, for the due performance of his contract. The Commissioners do not pledge themselves to accept the lowest Tender, nor any, unless their terms are fully satisfactory. Tenders will be received after TWELVE o'clock on the day of treaty, nor will any Tender be received which does not contain a declaration of the Bank of England note, as an evidence that the same is made bonâ fide; which sum will be immediately returned to each person whose tender is not accepted; and will be retained in the other cases until the contract and bond are duly executed.

JOSEPH DAW, Principal Clerk.

Sewers Office, Guildhall, April 8, 1856.

OLD STOVES and RANGES.—F. EDWARDS, SON, and CO. have constantly on hand a quantity of OLD STOVES and KITCHEN RANGES, in very good condition, which are fitted up with the improvements when they first leave the Works, and which are to be sold at exceedingly low prices.—42, Poland-street, Oxford-street.

IRONMONGERY.

PFEIL AND STEDALL.

THE LARGEST STOCK AT

THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES Beyond the current Price of Hoop-iron.

Gauge.	In wide.	Per 100 ft.
No. 16 ..	1¼ ..	7s. 0d.
15 ..	1½ ..	7s. 6d.
15 ..	1¾ ..	8s. 0d.
16 ..	2 ..	8s. 6d.
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THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11½ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reverse claws, which have so great a bend that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

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1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 13s. 6d. and 13s. 6d. per cwt.
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O G Gutters 1s. 1s. 1d. 1s. 2d. 1s. 5d
Ditto, with plain slips cast on .... 1s. 1d. 1s. 2d. 1s. 4d. 1s. 6d.
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Nail Factor, Stove and Range Manufacturer (Warehouses, 148 and 149, Borough), begs to offer his reduced List of Prices:

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Register Stoves, from 5-1 to 40 inch, per inch.
A good Stock of Berlin Black ditto.

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28s.	30s.	31s.	31s. 6d.

SELF-ACTING COTTAGE RANGES, OVENS ONLY, 30 inch, 26s. 6d

SELF-ACTING RANGES, BEST WROUGHT BARS and BRIGHT MOUNTINGS.

3 ft.	3 ft. 2 in.	3 ft. 4 in.	3 ft. 6 in.
56s.	58s.	60s.	65s.

4 in. Two Bolt Rim Locks, 18s. per dozen
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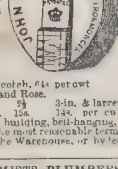

Elliptic Stoves, double backs, 2½d. per inch, and upwards.
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3-feet Cottage Ranges, with ovens and back boilers, 2l. 2s. each.
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Best Town tube, &c. Ditto, Scotch, 64s per cwt
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Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

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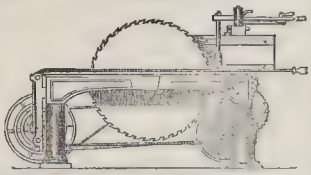

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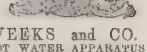
HEATING BY  HOT WATER.

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GREAT REDUCTION IN PRICE.

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No 11 gauge weighs about 18 oz. per foot super.

12	"	"	20	"
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14	"	"	26	"

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Sheets plain and corrugated Roofs fixed complete.

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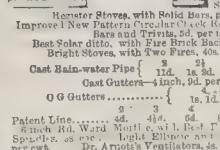
A great variety of Ellipse, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.



Improved Self-acting Cottage Ranges, with Oven and Boiler

24	26	28	30	32	34 inch.
58s.	60s.	63s.	68s.	73s.	80s.

Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars

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53s.	56s.	58s.	63s.	68s.	80s.

Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 2½d.

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1½ in.	1¾ in.	2 in.	2½ in.	3 in.
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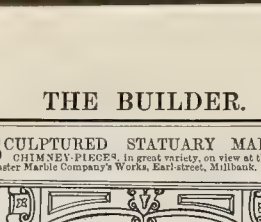

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B. FABBRICOTTI respectfully invites the attention of Gentlemen connected with the Marble Trade to inspect his fresh STOCK, composed of statuary, vein, Sicilian, black and gold, dove, Bardilla, Siena, and Breccia, in blocks, and particularly call their attention to a large quantity of his best statuary, sixty blocks, of all sizes, just landed.
Monuments, vases, and statues, finely executed in Italy.
Carrara Wharf, Thames-bank, Pimlico.

MARBLE.—The Italian Marble Company, Importers of the produce of their own quarries, in the province of Massa-Carrara, Italy, beg to inform the general Marble Trade in the United Kingdom that they are prepared to undertake contracts for any quantity of Statuary, Veined, Sicilian, Bardilla, Dove, and other Marbles, in blocks of all dimensions delivered on shipboard at Leghorn, or in dock, London. A constant stock always on view on the premises, where orders are taken for Paving Slabs, Garden and Hall Statues, Vases, Tazzas, Mortars, Consoles, Chimney-pieces of all classes, Circular Tabletops, Monuments, &c. executed in Italy, or for further particulars, inquire at the Office on their Wharf, Thames Bank, Pimlico, adjoining the east side of Vauxhall-bridge.
WILLIAM W. BONNIN, Secretary.

Lloyd's Marble Wharf, Thames-bank, Pimlico, Adjoining Vauxhall-bridge.
ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

TO BUILDERS, SCAGLIOLA WORKERS, GLASS STAINERS AND OTHERS
WANTED, FOUR COLUMNS, either in Marble, Scagliola, or Wood, with Ionic Capitals and Bases of Stone or Marble. Full height, 10 feet 1 inch, or thereabouts. If in scagliola or wood to represent serpentine marble. Also wanted, a dome light, to be about 9 feet 3 inches by 7 feet, with painted for stained glass, representing a classic subject. Lowest price, full description, or for further particulars, apply to J. LATTIMER and SON, Architects and Surveyors, Stratford-on-Avon.

BANGOR WHARF, King's-road-bridge, Camden-town.—STRINGFIELD and COOPER, late W. W. Rawlins, beg to call the attention of Builders and others to their stock of Bangor slates, laths, plaster, Roman, Portland, and Keene's cement, blue lias, Dorking, and chalk lime, plasterers' hair, Yorkshire plain, pan, and ridge tiles, glazed sewer pipes, closet-pans, and traps, Welsh fire-bricks, gravel and shells for garden paths, ballast, sand, &c. Materials landed, wharfed, and carted.

LANCASTER STONE, so remarkable for its free working quality, combined with colour and durability. Price, and cost of transit for any quantity by steamers, upon application at Mr. W. THOMPSON'S Office, Elmer-street, Grantham.

ROBERT DANIEL, STONE-MERCHANT, VICTORIA WHARF, PIMLICO, LONDON,
And ISLAND WHARF, LEEDS.
Every description of STONE and GRANITE supplied in any quantity direct from the Quarries, by Rail to all Stations, or by vessel to any Port in the Kingdom, at the lowest current prices: comprising all kinds of YORKSHIRE STONE in block and slabs of any thickness, Paving, Landings, Steps, Coping, Sills, Sinks, Headstones, Grindstones, &c
PORTLAND, CAEN, AUBIGNY, and BATH, in BLOCK.
A list of prices sent on application.

STONE, GRANITE, and MARBLE.—BRAMLEY FALL, CAEN,
DARLEY DALE, FARLEY DOWN,
HARE HILL, HUDDLESTONE,
PORTLAND, and various other Stones in Block and Slab.
Yorkshire Paving, Landings, Steps, Sills, Sinks, Coping, &c.; Granite Blocks, Trams, Curbs, Pitching, &c.
Valentia Slate Slabs, Grindstones;
Marbles, in Blocks and Slabs,
At FREEMAN'S Stone Wharfs, Millbank-street, Westminster; City-road Basin; and Deptford.

TO ROAD TRUST SURVEYORS AND ROAD CONTRACTORS.
FOR SALE, about 1,000 cubic yards broken BOMBAY and PORT PHILLIP BLUE GRANITE, two-thirds of which is best Bombay and one-third sound Port Phillip —Apply to Mr. CHARLES ROSS, 2, Stepney-causeway, Ratcliff.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—TREGELLES and TAYLOR, 3, Pinner's-court, Old Broad-street. Manager JAS. J. TRATHAN, Liskeard.
This Granite is selected for the New Westminster-bridge.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

STONE! STONE! STONE! — To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Setf-face Slab, Granite Pitching and Curb, Guernsey Broken Road Materials, and every other description of stone, at J. JOHN KNIGHT and SON'S, Devon Wharf, Mile-end. York tooled paving, 3s. 6d. per 100 feet; slab for hearths, 4d. per foot sup.; slab for chimney-pieces, 3d. per foot sup.; 8 by 3 window-sills, 6d. per foot run; 13 by 3 coping, 8d. per foot run; arch over chimnies (any opening), 8s. 6d. each. Terms cash on delivery.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab, Marble mortars, &c.

DARLEY DALE STONE.—This Stone, introduced by Sir Charles Barry at St. Edward's Grammar School, Birmingham, and well known as having been selected for
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and numerous works, including the Railway Station, Birmingham; Borough Bank, Liverpool; Evesham-bridge; Mr. Beaufoy's Schools, Lambeth; and the Portico and Cornice of the Town-hall, Leeds; is kept in considerable quantity at the Darley Dale Stone Wharf, Cut Bank, London. Apply to W. and J. FREEMAN, Millbank-street, Westminster; or GEORGE WALL, at the Quarries, near Matlock.

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"This stone when better known, must come into extensive use; I should think it exceedingly suitable for the London market."
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GEO. VINT and BROTHERS, QUARRIES, near LEEDS,
Beg to inform Architects, Builders, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Farnley, Bramley Fall, Park Spring, Robin Hood, Harehill, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

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BATH STONE OF BEST QUALITY.
RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS,
BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SCULES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors for Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Bailey and Sons; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

PARIS EXHIBITION. — ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1848. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of loo-tables, chiffoniers, consoles, &c.; baths, baptistries, altar-tablets, pilasters, columns, vases, pedestals, sand-boxes; water-closets; bagatelle tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slabs may be procured from a single article to the most extensive contracts, for home and abroad.

TO ARCHITECTS, BUILDERS, IRONMONGERS, &c.
ENAMELLED SLATE CHIMNEY-PIECES, of elegant designs and superior workmanship, in great variety, at prices from 21s. to 10 guineas. Slate Cisterns made to any size.—J. HOWELL, Manufacturer, 5, Cook's-grounds, King's-road, Chelsea, Middlesex.

GREEN SLATE.—The Green Slate produced from the Tyn-y-Werglodd Quarries, has been pronounced superior in colour, grain, and cleavage, to any hitherto used. Blue and Purple Slate of the best description.—Apply to Mr. OGILVIE, 1, Cushion-court, Old Broad-street, where samples may be seen; or to Mr. JENNINGS, Pen-y-Groes, near Carnarvon.

POLISHED SLATE BOX CHIMNEY-PIECES, beautifully moulded and trussed.—T. B. HANNAFORD has had a large consignment of the above from an extensive quarry, which having obtained under peculiar circumstances, he can offer at less than two-thirds the usual prices. For Bangor Slate Cisterns, and other Slab-work, Roofing Slates or covering, his tariff (which can be had on application) will be found to command universal attention.—Trevalga-wharf, Ratcliffe-cross

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BASTERNE BITUMEN.—The continual failures occurring in Asphalte and Bitumen Works, through spurious and worthless materials being used, has induced H. BURGESS to accept the AGENCY for the BASTERNE BITUMEN, that excellent article which has proved itself, after so many years' trial, to be superior to any other now in use, and the only article thoroughly adapted for roofs, terraces, &c as it is not affected by the changes of temperature such works are invariably subject to. The pavement of Trafalgar-square, London, has been laid many years with it, and can be viewed at all times.—Estimates given, and works executed, in all parts of the country, by H. BURGESS, Clough-bridge, Rotherhithe, London.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations, FROM 2s. 9d. PER SQUARE YARD. Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it. Apply to JOHN PILKINGTON, Poloneeau and Limmer Asphalte Office, Monument chambers, 14, Fish-street-hill, London. N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

O. McCARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, White friars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

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W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf. Contractors supplied to any extent.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected Stock of the various descriptions of Deals, commencing at this following low prices:—

Yellow Deals, from	£20	0 per 120
Spruce ditto, from	18	0 "
Yellow Battens	10	10 "
Dry Pine Plank, from	21	0 "

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a postage stamp.—N.B. All orders goods delivered within two miles free of cartage.—Borough-road, Southwark, and Elm-street, Gray's-inn lane.

NOTICE.—To BUILDERS, CONTRACTORS, and OTHERS.—WILLIAM MARSHALL begs to inform the trade generally, that he has about 10,000 feet of well-seasoned WAINSCOT, in all thicknesses, and at the lowest cash price. Also a very fine Stock of WALNUT, ROSEWOOD, and MAHOGANY, in plank, board, and veneer, at his Timber-yard, Vincent-street, Old-street-road.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of its kind ever established, a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned, and ready for use, from ¼-inch to 1½-inches thick, in Wainscot, Yellow Deal, Oak, or Pitch Pine. Also Deals, in all thicknesses. Slating Battens, Pantile Laths, Oak Cills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shop-fitters to his carefully seasoned MAHOGANY, suitable for Counter Tops, and to his seasoned Materials for builders, cabinet and blind makers, &c. Delivered, cartage free, to any of the London railway stations, or within three miles from Kennington Church.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry Flooring at low prices.—Southwark-bridge Wharf, Bankside.

TO BUILDERS, CARPENTERS, &c.

SAMUEL CROWHURST, Jun. begs to call the attention of Builders, Cabinetmakers, &c. to his Stock of seasoned and well-assorted Timber Goods, Deals, and Mahogany, in logs, Planks, Boards, &c. at prices which cannot be found equal if not less than any advertised. Country Builders supplied on the most liberal terms.—Timber-yard, Hanover-street, Walworth; and Francis-street, Newington, near the Church

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

ACORN TIMBER WHARF and SAW MILLS, CANAL BRIDGE, OLD KENT-ROAD, LONDON. A Monthly Price Current forwarded on application. RICHARD MAY, Proprietor.

SEASONED FLOORING.—GEO. NOKES and CO (late Archbutt and Atkinson), beg to acquaint builders and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash:—

¾ inch White, 15s. 6d. per square.			¾ inch Yellow, 1os. per square.		
1 ditto	15s.	"	1 ditto	16s. 6d.	"
1 ditto	18s.	"	1 ditto	20s.	"

Laths, 36s. per load. Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.

ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road.

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No 18, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Saw-mills. Goods in Bond for Exportation. N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

TO TIMBER MERCHANTS.—WANTED, some prime clean 1¼-inch YELLOW BATTEN FLOORING, or 2¼-inch Yellow Battens capable of producing the same.—Particulars to be sent to Mr. WELCHMAN, 33, Rutland-gate, Hyde-park.

GREAT REDUCTION.—Yellow Deals, 3s. 6d.; Spruce, 3s.; Pine Plank, 3s. 9d.; 2¾ Yellow Battens, 12l. 10s. per 120 12 feet; Mahogany, 6d. per foot. Cartage free to any part of town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth-walk.

METROPOLITAN PATENT WOOD PAVING.—WILLIAM BASTABLE and CO. beg to state that they are prepared to execute orders for Paving Railway Stations, Workshop, Wharfs, Gateways, Porticoes, Stables, Forges, Nave and Aisle of Churches, and School-rooms. Office, Belgrave Works, Thames Bank, Pimlico.

MOULDINGS BY MACHINERY. Capping, Sash Bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country.—A Pattern List sent on application to E. SIMMS, SAWING, PLANING, AND MOULDING MILLS, KING'S ROAD, CHELSEA, AND WILTON-ROAD, PIMLICO.

TO BUILDERS, COACH-MAKERS, DECORATORS, HOUSE-PAINTERS, &c. &c.

CHAS. W. NOBLE (late A. and F. Strong), VARNISH MANUFACTURER, continues to supply every description of Varnishes and Colours, of the very best quality, and at the lowest prices. The Varnishes manufactured by Noble have stood the test of nearly a century, made of pure materials, insuring that desideratum in varnish—body, polish, and finish,—for which his predecessors have been so long and so far famed.

*** Methylated Spirit Varnishes, Polishes, &c.; also Noble's Enamel Paper Varnish, for decorators, &c. Coach-painters' and Lithographic Colours.

N.B.—Merchants and shippers will find an advantage in exporting Noble's Varnishes. Manufactory—MITCHAM, Surrey. Wholesale and Retail Warehouse—117, LONG ACRE, London.

STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NO SIZING, and will stand the exposure to the weather. Price 6s. per gallon. Varnishes for the trade, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

TO PAINTERS, BUILDERS, &c.—LOVETT, FRANK, and SON, 14, Borough, London-bridge, opposite the Brighton and South-Eastern Railway Stations, quote their present prices for cash:—Linseed oil, 2s. 8d.; boiled, 3s.; turpentine, 2s. 8d.; oak varnish, 7s. 6d. per gallon; genuine white lead, 33s.; seconds, ditto, 31s.; best town glue, 43s. per cwt.; colours, brushes, &c equally low.

TO TIMBER MERCHANTS and OTHERS. The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for land no all sorts of English Timber, &c. Spacious Dry and Drawing Docks, 30 and 10-ton Cranes, Sawpits for converting Timber, &c. Freights paid on delivery.—Apply to G. NOKES and CO. as above.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER-CUTTING MILLS, Commercial-road, Lambeth.—The proprietors beg to announce to the trade that they have completed their extensive arrangements, and will be happy to execute all orders intrusted to their care with despatch and punctuality. N.B. All goods sawn at these mills fetched and delivered free of charge.

TIMBER SAWING-MILLS, Belvedere-road, Lambeth.—ROBINSON and BARTRAM respectfully inform their friends in the Timber and Building Trades, that they have now completed their New Mill for Sawing building and other Timber, and will be glad to receive their favours in this department of sawing. Full particulars will be forwarded on application, per post or otherwise. Timber up to 55 feet long can be cut at these mills.—N.B. A powerful Crane for landing timber on to carriages, at 1s. 3d. per load.

NEW KENT-ROAD SAW-MILLS, half-way between Surrey Docks and West-end.—Messrs. TAYLOR and BUCKLEY beg to inform Timber Merchants, Builders, and Others, that a wing made large additions to their machinery, they are in a position to execute orders on the shortest notice. Extensive premises for piling goods. List of prices will be forwarded upon application.

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THE RIGHT HON. THE LORD HIGH CHANCELLOR.
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Date of Policy....	18th March, 1845	24th April, 1845	7th Nov. 1845
Age at Entry	30.	42	51
Annual Premium	£23 7 6	£35 16 8	£49 8 4
Sum Assured	1,000 0 0	1,000 0 0	1,000 0 0
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Forms of Proposal, Prospectuses, and every information, may be had upon written or personal application to the Office.

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THE LONDON and WESTMINSTER BANK issues CIRCULAR NOTES of 10l. each, payable at every important place in Europe. These notes are issued without charge, and they are cashed abroad free of commission. The Bank also issues, free of charge, Letters of Credit on all the principal cities and towns in Europe. The Letters of Credit are issued only at the Head Office in Lothbury. The Circular Notes may be obtained at the Head Office in Lothbury, or at any of the Branches, viz.—
Westminster Branch, 1, St. James's-square.
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The rate of interest allowed on deposits of 500l and upwards, at the Bank or any of its Branches, is now 5 per cent.
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THE MINERS' ELECTRO-CHEMICAL REDUCTION COMPANY.
For the Reduction and Separation of Metals from their Ores.
By her Majesty's Royal Letters Patent.
On the "Cost-book System."
Capital, 30,000l. in 10,000 shares of 3l. each. Deposit, 1l. per share.

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This Company proposes to work Wagstaffe and Perkins' Patent for extracting and separating the various metals from ores by chemical agency.

The Company's process gives the metals separately as a small cost; while the sulphur, arsenic, and other valuable properties are preserved for commercial purposes.

With a small outlay of capital, for the erection of model works; say 5,000l. for illustration and reducing English and Foreign ores at a royalty per ton, a large income will be produced. For example, offers, after testing the process, have been made from foreign mines, to consign 3,000 tons of copper ore annually, and to pay 8l. per ton for reduction, which, after deducting say 1,000l. for expenses, would leave 4,000l. profit to the Company, increasing the value of the metal; also giving the other properties to the consignee, and about 1,000 tons of extra sulphuric acid. Thus giving the Shareholders 80 per cent. on their capital, independent of the main and vast revenue which will accrue, without outlay, by granting licences to mining companies, for reducing ores at their mines.

A portion of the capital is already subscribed for, and application for Shares must be accompanied with the bankers' receipt for the deposit of 10s. per Share, and may be addressed to the Solicitor or Manager, from whom detailed prospectuses may be obtained.

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Loans are advanced in amounts varying from 10l. 10s. to 100l. repayable weekly or otherwise, as may be agreed upon, at a discount of 3l. per cent. for twenty-five weeks, and for 50 weeks at 5 per cent.—Forms may be had, price 2d.; if by post, three postage stamps to be enclosed. ROBERT NORTON, Secretary.

LOANS from 25l. to 1,000l. upon approved personal or other security, repayable by easy instalments, extending over any period not exceeding fifty months, are readily OBTAINABLE from the BRITISH MUTUAL SUBSCRIPTION LOAN ASSURANCE CLASSES. Prospectuses, reports, and every information may be obtained on application at the British Mutual Life Office, 17, New Bridge-street, Blackfriars. Rules 6d. each copy. 3s. per page.
CHARLES JAMES THICKE, Resident Secretary.

TO ENGINEERS, MACHINE MAKERS, AND OTHERS.
CHARLES MACINTOSH and CO. Patentees and Manufacturers of the VULCANIZED INDIA-RUBBER in all degrees of elasticity, recommend this material as capable of sustaining the action of hot or cold water, gas, steam, acids and grease. It is used extensively for valves in marine and land engines, railway buffers and springs, washers for pipe joints, hose and tubing; also for gas-holders, acid pumps, alkali cisterns, &c. &c. Articles, moulded or otherwise, made to any size or figure.—Address, 3, Cannon-street West, London; and Cambridge-street, Manchester.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bentham, Lancaster.

No.	1 quality, inches diameter, and price per yard.						
¾	1	1¼	1½	2	2½	3	3 in
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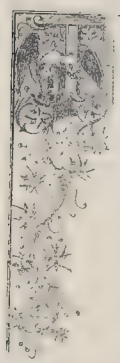
The Builder.

Vol. XIV.—No. 689.



JUDGING from the expressions of those who were assembled at the Architectural Museum on the 8th inst. to assist at the presentation of the prizes for stone and wood carving, it would seem that the importance of enabling the workman to individualize himself is becoming more generally felt than was, even lately, the case, and that there is reason to hope he will gradually obtain those opportunities of cultivating his mind and his eye which have long been possessed by the workmen of foreign countries, and have given them immense advantages. "If we would elevate the English workman," says Mr. M. D. Wyatt, in his lately published "Report on Furniture and Decoration in the late Paris Universal Exhibition" (re-urging opinions we have advocated for years), "we must recognize some other stimulant to his energies than beer; we must provide museums for him, where, as at Marlborough House, he may see what others have done before him, and better than him, in his own trade; we must get some free libraries, where he may be able to go and improve himself; we must put some better and more ideal monuments than we already have into our public streets, spending more money upon their art, and less upon the quantity of materials of which they are made; we must, in short, educate his eye, and, through his eye, his mind, by giving him access to the best models of fine and industrial art. Providing libraries to which access can be obtained during portions of the day only by payment, or by making previous formal application, and museums and galleries open from ten till four three days in the week, is a complete mockery to the artizan. If such places cannot be opened on a Sunday, either some arrangements must be made for lighting them up in the evenings, and opening them till dark in the summer, or we must be content with the very limited development of his manufacturing capabilities which now falls to the lot of the British workman."

Our artizans are as open to instruction and cultivation as those of other countries—as eager for both—and will make as good a return for the pains bestowed; but they have not had fair play: acquirement and improvement have been rendered impossible, and great wonder has been expressed that they had not acquired. In the Report to which we have just now referred,—a report full of knowledge and sound criticism, and which we cannot too strongly recommend to all our readers,*—where, speaking of the remarkable cabinet of the style of Louis XIV. manufactured by Messrs. Jackson and Graham, and rewarded with a gold medal of honour, the reporter gives a list of those who have co-operated in its execution,—and how does this list begin? Thus:—

"*Designer.*—M. Eugene Prignot, who has now been principal designer to the firm for six years.

Modellers.—M. Carrier, who modelled the caryatides; M. Protat, who modelled the figures on the top of the glass frame, and some other portions; M. Phenix, who modelled nearly the whole of the flowers and ornaments." And one of the carvers is Claudio Colombo. Under the circumstances, it may be "a subject for congratulation, rather than for carping or regret, that foreigners of such talent as is possessed by Messrs. Prignot, Carrier, Protat, Phenix, and Colombo should be at work amongst us;" but surely it is none that manufacturers should be obliged to go abroad for art-workmen, as they continue to assert they are.

Again, when certain plaques of porcelain were required, by the manufacturers last named, to be painted with figures and amorini, for the furniture they were preparing, it was not thought possible to have them successfully painted on the china in England, so the slabs were sent to the royal manufactory at Sèvres. There, however, the artists were so overtaxed to prepare for their own display in the Great Exhibition, that, after keeping the slabs three months, they were at a late period returned untouched. It is true, in this dilemma, they were sent to Mr. Minton, of Stoke-upon-Trent, who had engaged four students, partly educated in the art schools at the Potteries, and partly at Marlborough House, by one of whom, Mr. Grey, these plaques were painted in a style of excellence that leaves little room for regret that they were returned from Sèvres: but even then they were designed by French artists!

Surely this is all very disgraceful to our rulers;—not exactly to those of the present day, because machinery is now in motion which is gradually putting us into a better position; but to those who went before.

Even now, however, they show strangely at times the opinion they entertain of the value of art in manufacture. We will take one example, and that shall be the huge building of iron and glass which is being erected at this moment for *the Royal Commissioners of* 1851, on the Kensington Gore estate, and is intended for the exhibition of the Marlborough House collections—the Trade Collection, presented to the Royal Commission by various exhibitors, at the close of the Great Exhibition of 1851; the Patent Museum; the Educational Museum; and the Museum of Animal Produce, formed at the Society of Arts, in conjunction with the Royal Commission. It is 266 feet long, 126 feet wide, and is in three equal spans, covered by three elliptical roofs, all at the same height from the ground, like three huge boilers placed side by side. The shell is formed of flat iron uprights, filled in with boarding. Messrs. Young and Co. who are the contractors for the works, claim in the newspapers the exclusive credit of the design: Sir William Cubitt overlooks them, and there is a resident engineer acting on behalf of the commissioners. Of the construction we say nothing, we shall give our readers some sections and a plan in another number; nor of the effect of the interior just now, and the probable want of light in great part of it: our immediate object is to direct the attention of the commissioners, before it be too late, to the exterior, which, if carried out in accordance with the drawing, will discredit all who are concerned in it, and be an eyesore and injury, so long as it remains. Its ugliness is unmitigated: never was a beautiful sward, where the daisies blossom and trees and shrubs put forth their leaves and branches and flowers in forms of beauty unapproachable by man, so vilely disfigured. We know nothing with which to compare it. Railway sheds and locomotive depôts have often some little bit of art or taste about them, but here there is nothing: up one side and down the other, all is blank and offensive. No squatter in the Back-woods, no New Zealand savage, would erect a structure so utterly and indefensibly ugly. If the Marlborough House authorities retain their Chamber of Horrors,—their examples of "what to avoid," when they get into their new quarters,—Mr. Cole's first act must be to have a model made of this Museum itself. Seriously and earnestly, we do hope that the Royal Commissioners will call in some artist to their aid, and endeavour to improve the appearance of this ugly result of the '51 Exhibition, whether it is to be called "temporary" or not.

Our Government generally, now that peace is restored, must turn their attention to its arts, and should grudge no money, spare no pains, in the work of education and refinement. It will pay even financially. Ask our Manchester people what they expend in France for patterns: learn the statistics of the Paris trade in paper-hangings, bronzes, and jewellery. Why, it has been shown that last year Paris alone occupied nearly 30,000 workmen in cabinet-making, and produced work worth about three and a quarter millions sterling, and that about one-third of all that is made in France is for exportation. Many things go to produce superiority. The workmen of France in a department of manufactures where they beat us industrially, "are intelligent, quick-sighted, clean-handed, and for the most part they work in light, cheerful ateliers, with flowers, or casts, or engravings about them. The value of such premises, commercially, says the reporter, is not yet half sufficiently appreciated in this country."

It is not, indeed. "Don't talk such nonsense to me," says many a Mr. Bull even now: "flowers and engravings for workmen, indeed! why, *I* do without flowers and engravings—never think of having such things; and why should they have them?" Fortunately, Mr. Bull, some of your children are wiser than you, and are beginning to see the Usefulness of the Beautiful.

Let us go back to the meeting, which has induced these observations.

It was the first meeting for the present session, and was held on the evening of Monday, the 7th instant, at the Museum in Canon-row, Westminster, for the special purpose of presenting the prizes for carving in stone and wood to artist-workmen, announced last year. These are the first prizes which have been offered in connection with this Institution, and great interest was evinced on the occasion of their presentation. The meeting was very fully attended, and many ladies were present The chair was occupied by Professor Cockerell, R.A. who was supported by Mr. A. B. Beresford Hope, Mr. Ruskin, Mr. G. G. Scott, Mr. Clutton, Sir Walter James, Mr. Hardwick, Mr. Clarke, Mr. Christian, Mr. Raphael Brandon, Mr. Burges, Rev. Dr. Biber, Rev. Charles Boutell, &c. &c. The first prize, for stone carving, the sum of five guineas, being the gift of Mr. Ruskin, was by that gentleman presented, with an appropriate address, to Mr. William Sandilands. The subject which had been named for competition was a capital, to be enriched with foliage, figures, flowers, and animals. Mr. Sandilands' design exhibited originality, coupled with singular spirit and freedom of execution. The first prize, for wood carving, also the sum of five guineas, the gift of the Museum Committee, was presented by the chairman to Mr. John Baldwin, for a wreath of holly, boldly cut in relief upon a panel. The chairman also presented second prizes, contributed by a member of the committee, to Messrs. George Galpin and William Forsyth, for some very clever carving in stone and wood. It was announced that attested certificates of their having severally received these prizes would be also presented by the committee to the successful candidates.

The important position now occupied by the Architectural Museum, its special value to

* Printed by Geo. E. Eyre and William Spottiswoode, for her Majesty's Stationery Office; together with Reports on the General Management by Henry Cole, C.B previously mentioned, on the Fine Arts Arrangements, by R. Redgrave, R.A.; on the Industrial Arrangements, by Richard Thompson; on Birmingham Manufactures, by George Wallis; a very elaborate series of experiments on various Colonial Woods, by Captain Fowke, showing some remarkable results, &c. &c. Mr. Wallis's Report contains much that deserves consideration.

architectural workmen and students, and the great advantages to be derived from the system of offering prizes for competition in works in stone, wood, and metal, were set forth in a series of able addresses from the chairman, Mr. G. G. Scott, Mr. A. B. Beresford Hope, Sir Walter James, Rev. Dr. Biber, and Mr. Digby Wyatt.

Mr. Beresford Hope said he felt a peculiar pleasure and interest in then addressing the meeting, because he had been present at the meeting a year before, at which the idea of such prizes for artizans was first started, and that was itself the proposal of a working man, thrown out at the meeting in question, and cheerfully and immediately taken up by the committee of the museum. Thanks to the liberality of the committee, of Mr. Ruskin, and of Mr. Godwin, the idea was thrown into a tangible form, and the present gathering now saw the results, in the admirable and spirited carvings before it. The speaker then dilated upon the working men's position rightly understood being in reality that of the artist within the limits of his proper employment. The meeting had heard some true observations that evening upon the foolishness of spending money on ugly nicknacks—whose next possessor would probably sell them,—rather than on permanent works of artistic beauty. This was undoubted: but, on the other hand, it would be a great mistake to neglect design in any accessory of furniture. The same feeling of beauty which leads to the cultivation of architectural art, leads equally to gracefulness of form being sought in all objects of manufacture; and if it were neglected in these, it was impossible to expect it in the former. Services of plate are necessities of the time, and, therefore, they may just as well be graceful in their design. So treated, they will not cost more than if they were clumsy and ungainly. In fact, the same rule applied to such things which existed in regard to houses, and so on, all of which might in the course of things probably come into the market sooner or later; but yet a house did not the sooner slip out of its owner's hands because it was the work of a Cockerell or a Scott, than because it was one of those in Baker-street or Upper Harley-street. He had a few days before been visiting Minton's manufactory, and had observed the carefulness with which every leaf was modelled after nature in his porcelain. So extensive was the field into which the artisan might carry the art feeling, if rightly directed. Of the natural capacity for art which existed in many minds, he had a striking instance to show that night, in a miniature group in alabaster (which he exhibited), being a copy of Mr. Lough's "Mourners," executed by a lad of eighteen, in a remote village in Derbyshire, who had never seen a work of art in his life, and had only a knife and two small chisels to work it with. For his model the youth had only a wretched woodcut of the original in a periodical, which merely gave one side, so that he had to supply the other from his own imagination. In conclusion, he had only to say, "Forwards, and God speed them."

Mr. Digby Wyatt observed that the monuments of ancient days, both classical and mediæval, had derived much of their beauty, and of the peculiar technical excellence manifested in their construction, from the concentration in one individual of the capacities of the designer and the chief worker,—the real "magister operum," or "master of the works." In periods when one type of form alone was dominant, and when each generation was content to tread with but little deviation in the footsteps of its predecessor, such a harmonious union of qualities was both possible and indispensable to success. In the present day the case was quite different,—the identity of the workman was, to a great extent, lost sight of in the general arrangements made with contractors and builders; while the necessity of studying how to supply the wants, real and factitious, of a complicated social and intellectual system, left the architect but little time to himself to become technically or practically informed, either as to the details of skilful workmanship, or the individual capabilities of those cultivated artisans who had qualified themselves to occupy a neutral ground between the domain of the mechanic and that of the regularly educated artist. Mr. Wyatt hailed, therefore, with great pleasure, and with confident anticipations of present and future usefulness, the tendency in which the council of the Architectural Museum were so zealously moving. In drawing together, and, as it were, into one focus, the employer, the designer, and the producer, they were, he conceived, serving the best interests of art, and supplying the best antidote that could be devised for the estrangement of classes, ends, and aims, incident to the adoption of that rigid division of labour no doubt to a great extent indispensable to our present national, social, and commercial position. Much as the architect no doubt had to learn from the workman, the latter was no less likely to benefit from increased opportunities of contact. Nothing was more painful than to see labour thrown away: it was like human life squandered; and yet how constantly did they recognise the skill of the workman misapplied; nature imitated conventionally where a more truthful rendering would have been far more appropriate and beautiful; or the most graceful imitation of her exquisite forms spoilt for want of a little knowledge of the laws of symmetrical arrangement, and the proper introduction of those architectural forms which gave order and regularity to what, without them, could but assume a vague and purposeless aspect.

The speaker drew attention to the excellent working of the system adopted for developing the powers of the workman in the Government drawing-school in the parish of St. Martin, probably the most important locality in Paris. In that district the artists and "fabricants" of various trades had elected themselves into committees, the duty of which was to attend by turns in the evenings, and to point out both to the masters of the school, and to the students frequenting it, the especial requirements they desired to see supplied by the course of study they might be enabled to point out. Thus, a master who might allow his apprentices to attend the school of an evening, would have an opportunity of educating them as it were to his hand: thus the artist or designer would know exactly whom to point out as most eligible to carry into execution any composition he might make; and thus the workman would rise in his own self-respect, and in the esteem of his employer, while at the same time he would learn to understand the business, on his perfection in the higher branches of which his ultimate success in life would obviously mainly depend. The consequences of such a practice of technical instruction, and such a drawing together of master, artist, and workman, were excellently illustrated in the late Exposition at Paris, of which, no doubt, many then present had been careful students. It must have been impossible for any such to avoid recognising the fact, that technical dexterity had never reached a higher pitch than it had now attained; and that if our productions were not all that they should be, the blame could not, with justice, be saddled upon the shoulders of the operative. Whenever his intellectual necessities and cravings should be rightly understood and fittingly supplied in this country, and not until then, could a just and rational hope be entertained, that a pure and self-consistent style of art would be inaugurated amongst us.

The Rev. Charles Boutell, as acting chairman of the committee, then read the list of the lectures to be delivered during the present session, and he also announced that a prize of ten guineas would be given for stone carving by Mr. Ruskin, and a similar prize of ten guineas for wrought iron by the committee of the museum, at the opening of the first session of next year.

An art-workman (Mr. Ash, a worker in brass and iron) then spoke rather strongly against the form in which the subject for the prize for wrought iron was set forth. He reprobated strongly its being described as in the style of the latter part of the thirteenth century, as tending to fetter the invention of the competitors. He said that Mr. Ruskin had made *his* a subject of the nineteenth century by prescribing subjects illustrative of the Crimean war, and had also stated that possibly the works of the competitors might be used in conjunction as the monument of some of those who had fallen in that war, and he (Mr. Ash) suggested that the iron screen might form a grille round such a monument, but if so, it should be a work, not of the thirteenth, but of the nineteenth century.

Mr. Hope then explained what he imagined was the meaning of the committee in this condition, viz. that as the end of the thirteenth century was preeminently a period in which ornamental wrought-iron work had been practised successfully, and on true principles, this was chosen as giving merely a guiding type, but that the work should be (subject to such a leading idea) worked out by reference to nature, whose types are happily the same in the nineteenth as in the thirteenth century, and that it should practically be a work purely of the nineteenth century, though reference had, to keep the competitors to a leading idea, been made to the period of the best specimens of ancient work of the same kind. Sir Walter James made some remarks on the same subject, and Mr. Ruskin made an interesting speech on the influence of the works of former ages on those of our own.

Mr. Cockerell also made some remarks on *authority* in matters of art, and its great importance, so long as we remained without a distinctive style of our own; but added, that we are on the look out for the advent of that great genius who is to generate such a style.

Mr. Digby Wyatt, following on the same subject, observed, that the barest allusion to an original "art of the nineteenth century" was a trumpet call to those who, like himself, lived in the day dream that such a consummation might some day be realised. He confessed, however, that while he recognised, in the very discords which raged between the partizans of ancient styles, and more especially in the infinite multiplication around us through photography, engraving, casting, &c. of models of every conceivable kind, the advent of an eclectic style, he could scarcely yet anticipate an original one. It was a popular fallacy to imagine that any one, though even a heaven-born genius, could awaken humanity to new life. Great revolutions in liberty, letters, or art, had been invariably wrought by the momentum of great instincts of mankind. The genius who embodied in new forms the exigencies of a great movement, floated rather upon the breast of the wave than stirred its resistless force to motion. He confessed that he could not as yet recognise symptoms of that great movement which he had no doubt would sooner or later modify the architecture, if not any of the other arts, of this country. He believed, however, that the only way in which successful novelty could be now achieved was not to neglect the past, but rather to study its elements more profoundly; to distil its spirit, and to throw away the exhausted residuum. The artist's path was clear: he had firstly to know; secondly, to equal; and thirdly, to surpass antiquity: that done, the Future might take care of itself.

Mr. Scott afterwards briefly stated that the views of the committee had been fully expressed by Mr. Hope; that they had only named an ancient type as a means of keeping the competitors together, as, if they were all working in different directions, and with different aims, it would be most difficult to compare their works; but that, subject to such a guiding idea, each might strike out as boldly in his own line as he might think fit. Mr. Scott also announced that Mr. Hope had offered a second prize for ironwork, and subsequently proposed a vote of thanks to the chairman, in very complimentary terms.

Mr. Cockerell responded to this in a very feeling and interesting speech, taking occasion, from what Mr. Scott had said, to claim for the artist and the artificer a high rank among those to whom honour is due—a position fairly ranking with the statesman and the general—and quoted "the noble words of Isaiah," which rank together in the same sentence the captain, the honourable man, the counsellor, the cunning artificer, and the eloquent orator. This led him to compare the honour due to the artist with that paid to the Crimean heroes (a subject of such painful interest, that he was unable to proceed with it). He concluded by expressing his thanks to the committee for inviting him, and his hope that he might on a future occasion form one of their body, a wish which was responded to by acclamation by all of the committee present.

The meeting concluded with a vote of thanks to the donors of the prizes.

This may be considered the most successful, and also the most promising meeting which has been held at the Architectural Museum. It can scarcely fail to stimulate the committee to even greater exertions; while, on the other hand, it affords conclusive proof that those exertions are appreciated, and will be productive of the most important results. This museum ought to rank with our national institutions: and, indeed, its public utility and value have been recognised by the Government in a grant of 100*l.* as a subscription for the current year. It is to be hoped that this grant may be, not only continued, but increased; and that more extended means may enable the committee to develope the full capabilities of their museum.

OLD LONDON.

THE OXFORD ARMS INN.

The Oxford Arms Inn, in Warwick-lane, Newgate-street, London, is one of the best specimens of the old London inns now remaining in the metropolis. It is situate at the end of a narrow street called Oxford Arms-passage, going out of the west side of Warwick-lane, and southward of Warwick-square and the old College of Physicians.

At the end of Oxford Arms passage you observe a red brick pedimented façade of the period of Charles II. surmounting a gateway leading into the inn-yard, which has on three of its sides two rows of wooden galleries, with exterior staircases leading to the chambers on each floor, the fourth side being occupied by stabling built against part of old London-wall.

This house was an inn by the sign of the Oxford Arms before the Fire of London, in which it must have been consumed, but it appears to have been rebuilt on the model of the former building, and but for some modern vehicles

OLD LONDON: THE OXFORD ARMS INN, WARWICK-LANE.

standing in the yard, one might not unreasonably expect to meet there a band of the Nevill's men-at-arms in their red coats, embroidered front and back with the bear and ragged staff, and to get as much meat as one could prick and carry away on a long dagger.

Mr. Peter Cunningham has collected in his "Handbook of London" nearly all that is to be found about this place. He notices a bas-relief of Guy Earl of Warwick, with the date 1668 upon it, at the corner of Newgate-street and Warwick-lane, but some think the figure might as well represent a celebrated carcase-butcher in the neighbouring market of Newgate. Mr. Allen ("History of London," vol. iii. p. 571) says that it represents Richard Nevill, the king-maker. The sculpture was restored in 1817 by J. Deykes, architect, as appears by an inscription upon it.

Stow says,—"Then is Eldenese-lane, which stretcheth north to the high-street of Newgate-market: the same is now called Warwick-lane, of an ancient house there built by an Earl of Warwick, and was since called Warwick-inn.

It is in record called a messuage in Eldenese-lane, in the parish of St. Sepulchre. In the 28th of Henry VI. Cicille, Duchess of Warwick, possessed it."—See Cal. Inq. post mortem, 28 Hen. VI. p. 241.

Four years previously, Henry Beauchamp, Duke of Warwick, husband of Cecilia, had died, seized of an inn, with six houses, sixteen shops, and one toft, in Gledenes-lane, in the parish of St. Sepulchre.—Cal. Inq. post mortem, 24 Hen. VI. p. 228.

And a few years earlier, Richard Beauchamp, Earl of Warwick, father of Duke Henry, had died, seized of the same, in the seventeenth year of the same reign.—Cal. Inq. post mortem, 17 Hen. VI. p. 191.

Stow also says,—"I read that in the 36th Henry VI. the greater estates of the realm being called up to London, Richard Nevill, Earl of Warwick (the king maker), came with 600 men, all in red jackets, embroidered with ragged staves before and behind, and was lodged in Warwick-lane, in whose house there was often six oxen eaten at a breakfast, and every tavern was full of his meat; for he that had any acquaintance in that house, might have there as much of sodden and roast meat as he could prick and carry on a long dagger."

Of the Oxford Arms Inn, the Handbook gives us an advertisement from the *London Gazette* of March, 1672-3, No. 762: "These are to give notice, that Edward Bartlett, Oxford carrier, hath removed his inn, in London, from the Swan, at Holborn-bridge, to the Oxford Arms, in Warwick-lane, where he did inn before the fire; his coaches and waggons going forth on their usual days,—Mondays, Wednesdays, and Fridays. He hath also a hearse, with all things convenient, to carry a corpse to any part of England."

The Handbook says, too, that at the Oxford Arms, in Warwick-lane, lived John Roberts, the bookseller, from whose shop issued the majority of the squibs and libels on Pope.

The Oxford Arms was not, however, part of the Earl of Warwick's house; as it belongs, and has belonged of old time to the Dean and Chapter of St. Paul's. It is now and has been for many years past occupied by Mr. Edward Sherman, the veteran coach proprietor, who is also the spirited builder and worthy landlord of the Queen's Hotel, formerly the Bull and Mouth, in St. Martin's-le-grand. The houses of the Canons Residentiary of St. Paul's adjoin the Oxford Arms on the south, and part of London Wall is still remaining in the court-yard of those houses. There is a door from the Oxford Arms leading into one of the back yards of the residentiary houses, which is said to have been found useful during the riots of 1780, for facilitating the escape of Roman Catholics, who then frequented the Oxford Arms, from the fury of the mob, by enabling them to pass into the residentiary houses; for which reason, as is said, by a clause always inserted in the leases of the Oxford Arms, that door is forbidden to be closed up.

THE CONDITION OF DUBLIN.

Entering this city by the regular approach, which is now limited to one station, the traveller is struck with the wondrous beauty of all that meets his eye, until he is housed at the Shelburne or the Gresham, or some other of the fine hotels which await him with open portals.

At first, on nearing land, the hills of Howth and the Dublin range form a fine amphitheatre, encircling a rich, undulating, and verdant plain central within which is situated the ancient capital, Eblana.

There are, it is true, two harbours, Howth, eight miles distant, and Kingstown, seven miles, both having railroads; but the latter is by far the most capacious and the more easily made. These facilities, and the beauties of the adjacent country, vicinal to the scenic perfections of the county of Wicklow, have planted at that locality a large town and population. Thence, to Dublin, a continuous succession of towns or villas occupy the expanse, which, thirty years back, was but pasture or rocky down.

On other sides, too, the suburbs have been extended for miles; in the direction of Rathmines, fully a mile and a half, and about a mile towards Donnybrook; both situated southward, as far as the brook dignified by the title of the river Dodder. Beyond this, again, the whole rolling plain to the mountain foot is studded with villas, numerous enough to accommodate a redoubled population.

Nothing can be more captivating, at a first view on a fine day, than the aspect of all that is described,—the teeming shops and fine terraces of Kingstown, the justly-placed, well-shrubbed, solid-built, oft-recurring villas, the glorious sea, and land views, and not least, the genial air.

So, on passing the great leading thoroughfares, the eye is fascinated by squares of extent not to be equalled in any city; causeways, open, garnished with bordering shops; emporiums of commerce, buildings judiciously placed (a rare accident in capitals), and a river unequalled anywhere for its quay-walls of granite.

Such is the impression made by a first day's experience. Afterwards, the wanderer having seen the principal points, searches further: he penetrates into the back settlements of trade, into the Liberty, formerly the seat of manufacture, famous for the production of the texture called "poplin." Here vanish all the visions inspired by the first aspect and impressions. Houses, once occupied by merchants, factors, and negociators, are in a miserable state of decadence. Ware and store houses, dwellings and stables—all are in a tottering, decaying condition. Streets, lanes, courts of dwellings hitherto occupied by the working classes, keep pace with the sinking state of the factories which fed them: still tenanted, they are unglazed in many cases; but in all, the resort of a race unsustained by the continuous exertion and returns of industrial art. The old iron and material booths look more rusty, and the rag-shops more ragged than ever. Dublin is no longer a manufacturing town. They make and mend boots and shoes, it is true; but their chief supplies in these commodities are deduced from Nottingham; so of ready-made clothes, of earthenware, of china and glass, of cloth,—nay, their very fuel: these are chiefly drawn from England, whilst Ireland teems with coal, wool, flax, and all the primary elements of industry! Departed is the busy manufactory, and with it the wealth deducible therefrom,—even the linen factory, once notorious for its grand civic hall, as also for the independence of its numerous factors:—this trade has been transferred to the flourishing commercial town of Belfast, and the building is now occupied as barracks. Those good houses in neighbouring streets, formerly the residences of factors, places where many large fortunes have been amassed, are consigned to residentiary pauperism in single chambers.

It is thus that the bye streets, not twenty years back respectably inhabited, are descending also in the scale: the north-west limb may be said to be palsied! Dorset-street and Summerhill, even yet good streets, are shifted to minor trades and pursuits: the south-west quarter is visibly decaying; but the Liberty, the heritage of the great Earl of Meath, is wholly collapsed.

There are, it is true, still some extensive trading firms scattered throughout this modern Palmyra,—Darcy's Brewery, Busby's Distillery, and some few others of minor note,—but the throwsters are gone, the shuttle still, and devastation, only, *looming* in the distance.

As amongst such a population there must be a considerable provision trade, so the system of mutual supply goes on; but the grand relique of trading interest exists here chiefly in providing the world without in that matchless beverage, "Dublin stout:"—whether it be the excellence of the water (deduced from a mountain brook called the Tongue), or the superior skill of Messrs. Guinness, or Manders, or D'Arcy, or whether Irish malt or Irish barley be the better ingredients, deponent knoweth not; but every one knows that the foregoing, together with whiskey and provisions, forms the staple of this land of plenty. That plenty is reduplicated by improved agriculture and by amended habitudes, by encouragement to the labourer, and by the new lights thrown upon occupancy interests. If the emigration of idle and untaught hordes have lightened the burthen of poor-rates; the immigration of independent proprietors and yeomen has conduced in the highest degree to increase the productiveness of the land, and to advance the condition of the inhabitants.

As to the country, poverty (that is, pauperism) is on the wane; not so in Dublin: there the deserted houses, late the hive of industry, are filled in by the evicted tribes: each cell, however chill and tottering, is a "*refugium peccatorum;*" and the luckless denizens of town have imposed upon them the onus of contributing to the rate in aid. In one poorhouse only there are 3,000 paupers! These are maintained at a cost of 3s. 6d. per head per week.

To an Irish pauper such a resort is no purgatory—quite the reverse: it is a sort of settlement for declining life, a species of ultimate independence. Here the corporation manages such matters: they are omnipotent in Dublin as in London; and, although such illustrious bodies cannot be corrupt, it is objected that while the rates are unreasonably heavy—about 30 per cent. on the rental—the poor are not properly employed to clean the streets—streets perhaps the most beautiful (as to the open causeways and tasteful shops) in the world; but certainly as dirty as Pera or Constantinople itself could give in evidence. These streets are in reality either two inches deep in mud, or so dusty that at times it is penal to walk through them.

There are two causes for the rapid decline of the city—a decline visible in its best quarters. For instance, in Mountjoy-square (noble houses) the rent has come down one-half: a house there, equal to 200*l.* or even 300*l.* in London, may be had for 70*l.*; in Harcourt-street, still finer mansions, for 50*l.*; and so on throughout all the palatial ranges of the departed nobility and gentry. The rates on such houses would exceed 50 per cent. on the rental. Still there is a more operative stimulus to the evacuation of town houses to be found in the now fashionable practice of living out of town, in the truly beautiful and picturesque suburbs which encircle Dublin on all sides, but mostly on the south—Roebuck, Dundrum, Rathfarnham, and chiefly Kingstown, Dalkey, Killiney, and the all-glorious Bray and Enniskerry.

Hitherward, the *Railway* and the open sea (called here, poetically, the Salt Water) lure away the wealthy as well as the small capitalist and the man of business,—as, near London, the first and second stations are thronged with villas; the main streets here are thronged with gaiety, and the shops stored with plenty; but as there is no commerce to sustain the centre, so the deserted houses sink in value, and fail in the structure. What fills London, from the provinces and from the whole world—namely, the railway—empties and impoverishes Dublin.

What then is to be done with tumbling dwellings, and stables, and factories? Are they to be left to the progress of galloping decay, or are the materials of no use?

Many fabrics there, are propped up, as to the walls, by large timbers standing out in the streets, and bearing against second or third stories; the roofs, &c. having fallen in!

These are facts for the Corporation, or the Earl of Meath, or whom it may concern; but they are facts. Could not some utilitarian cosmopolite suggest a remedy?

As to trades, it is, perhaps, too much to say there are none prosperous, save those of the producers of beer and strong drinks, alcohol, &c. There is a trade in this great cattle-producing country which still flourishes, and has always prospered: it is the horse trade. Long celebrated for a hardy and powerful breed of hunters and of hacks, Ireland has supplied the English market, and mounted the cavalry. The marts in this way are numerous and respectable,—as to extent and amount of business, far exceeding even the London repositories. There are few that attempt any external show; their object being to give ample space and good keep, for which the abundance and excellence of forage affords great facility: Clarendon's, with riding-school; Ferrall's, a dealer and livery man, being also a veterinary surgeon; Dawson, of Stephen's-green: but there are of other small dealers, a host, for horses are exhaustless as dealers. Thus the verdure of the Emerald Isle (and in reality it is so) is turned into money, for grass is also flesh.

In proof of the spirit of Irish enterprise and skill, it must not be omitted to state, that there is one great manufacturing house in this slumbering metropolis, which despite of many disadvantages, carries on trade in a material not considered indigenous to the soil of Ireland, or which, if latent therein, has been as yet unwrought, namely, in iron and coal.

Mr. Richard Turner, of Hammersmith, on the Rock-road, imports his iron and coal from England; maintains a foundry and forges there, which occupy an area of 6 acres, together with another of two acres in the city; employs very numerous hands, and has successfully competed with the Titanic furnaces of manufacturing Birmingham.

The merits of these *transmarine* foundries, have been evidenced by works which have only to be named—the Kew Conservatory, and the Victoria Regia House, erected in 1847 and 1852—the Liverpool railway station (400 feet by 180 feet span).

Lord Faversham's conservatory at Duncombe-park, Yorkshire; Lord Aberdeen's ranges at Haddo House; and numerous others in England, Scotland, and Wales; all attest the genius, perseverance, and merits of the spirited conductor of these works:—by him the elaboration of grand and colossal designs was first carried out in Dublin.

There it was that the conception of a *transept* for the Crystal Palace first originated; for Mr. Richard Turner's was the only design, of 200 in competition, which comprised that grand desideratum in the structure!

The successful plan and model of the Great Birmingham Station, was also sent in by Mr. Turner. He *obtained the prize* for the conception, but the completion of the work was given to a great English firm!

"Sic vos non vobis mellificatis apes."

Let us hope hereafter for competitions open to all subjects of Great Britain; and as Ireland possesses fields rich in products, and redolent of genius, for "a fair field and no favour."

As for the relinquished mansions of the nobility, they are converted chiefly into public institutions. The Lord Chancellor's, Stephen's-green, is a museum, with noble geological collections: Back Whaley's Palace (same place) is a Roman Catholic college: the Duke of Leinster's is the present Dublin Society's Museum,—and a splendid one too: Lord Moira's is a poor-house! Lord Powerscourt's,—first the Stamp-office, now Messrs. Ferrier's millinery magazine, on a gigantic scale; and so on of the rest.

The doctors, who seem to subsist chiefly on the school for medicine and surgery, have succeeded the gentry and nobility in the principal squares,—the lawyers taking also a fair share; and so the gradation and alternation goes on.

But for the Lord Lieutenant and the army, what would become of Dublin? It is too dreadful to contemplate! Sometimes there are vaticinations, to the effect that the mimic Regal Court is to be transferred, if not abated. What then would become of the heart of Ireland, or to what purpose might the Castle be converted? When the *Rook moves*, the game is in danger; but these bodings are baseless. To abolish the Vice-Regal Court would be to scathe the whole social fabric; and there never was a nobleman invested with that office who gave more complete satisfaction, and made himself more universally popular, than Lord Carlisle.

QUONDAM.

SOME NOTES ON THE INTERIOR DECORATIONS OF ENGLISH HOUSES.

The importance of improving the style and condition of the houses in use, of both the rich and poor, is so evident, that it requires little apology for collecting a few particulars in connection with them, from the pages of the past, and comparing, so far as their internal fittings are concerned, the taste and arrangement in fashion then and at present. This sort of inquiry is necessary, in order that we may be able to appreciate an advancement, and also lest we fail to give sufficient credit to those who have gone before.

Not to dive too deeply into times of remote antiquity, we may remark, that before the advancement of civilization had led to the construction of suitable dwellings, the love of art, more or less possessed by all, was shown in the curious and often rich and beautiful adornments of the person,—amongst the various tribes of Indians, the arrangement of colours,—the skilful application of materials often causing both pleasure and surprise.*

The cover of walls and frameworks of wood, the protection of roofs, and other means of shelter, soon diverted the adornments of the person to the various portions of the house, &c.: the woven webs, the paint, once used only for dress, have evidently, at early periods of most nations, been applied to render more sightly their primitive homes.

Amongst the Egyptians the weavers' art had been long known before the days of the pro-

* Some specimens of different kinds of work lately brought from the Arctic regions, and exhibited at the Polytechnic Institution, were so beautifully wrought, that they excited the wonder of many who had thought the people of those climes were mere savages.

phet Isaiah, for we find it said in the 19th chapter of that book, after mentioning that various things shall perish, "Moreover, they that work in fine flax, and they that weave net-works, shall be confounded."

In Ezekiel, chapter xxvii. verse 7,—"Fine linen with broidered work from Egypt was that which thou spreadest forth to be thy sail: blue and purple from the Isles of Elishah, was that which covered thee."

Solomon, when building the temple, had made for him a "vail of blue, and purple, and crimson, and fine linen, and wrought cherubim thereon."

In Proverbs, chapter vii. verse 9, is the following:—"I have decked my bed with coverings of tapestry, with carved *works*, and with fine linen of Egypt."

Without entering into further particulars of the house fittings of ancient people, we will endeavour to give some notes of the interior of the houses of the Anglo-Saxons.

The buildings, probably, were of small size, and mostly of wood. The open or horn-filled windows, the imperfect carpenter's work, the pinning, &c. of the timber, and other defects, would soon show the necessity for some kind of hangings to keep out blasts of wind and harsh weather: we find, therefore, that at an early date the Anglo-Saxons used fixed and other hangings, some with the figures of golden birds in needle-work, some woven and some plain. Mention is made of a *vail* or drapery partition of this period, on which was the destruction of Troy: this was the gift of a royal personage. It was customary in those times for ladies of rank to work records of the actions of their husbands with their needle, and leave them at their death as heir-looms to their families. In the absence of books and other amusements familiar now, many an hour has been pleasantly whiled away in such works. Hangings, stained with purple and other tints were commonly in use, the more elaborately wrought being kept for high days and festivals, as too precious for general wear.

The elaborate patterns in the Anglo-Saxon stonework, and the rich colours of their illuminations, were imitated in the dwellings, the trinkets, and the dresses of the ladies. Plain colours, we are told, were not in favour: in the rooms of the Anglo-Saxons were ornamented footstools, and costly tables of silver and gilding. Ethelwold, in Edgar's reign, is said to have possessed a table of silver of the value of 300*l.* The graceful shape and gay colours of the ladies' dresses of that time must have been in rare harmony with the matters adjoining. The bedsteads were much carved, and, as we see by examining the book illuminations, hung with embroidered curtains: so valuable were many of these that they were left from father to son for several generations. In the chambers were mirrors of silver, candlesticks and lamps of various sorts, of bone, silver, gilt, &c.: they had hand-bells and other luxuries which we scarcely give them the credit of possessing. The beds were covered with different materials, sometimes with goat's skin, bear's skin, &c. They had golden and other drinking-cups, horns richly chased; glass and earthenware vessels. They had also the wholesome luxury of the warm bath. "Their use," says Sharon Turner, in his admirable 'History of the Anglo-Saxons,' "seems to have been very common, for a nun is mentioned, who, as an act of voluntary mortification, used the warm bath only on festivals." Not to go to bed (a warm and soft one), but to lie on the floor, or not to use the warm bath was considered, by our Saxon ancestors, who lived more than 1,000 years ago, as a severe penance. Considering the immense masses of dwellings in England at the present time in which no provision has been made for a warm, or any other bath, it cannot be said that we have improved in this respect so much as we ought to have done.

In Greek, Roman, Egyptian, and Assyrian wall-hangings, we find representations of remarkable historical and other transactions.

Part of the ceremony of the coronation of Canute and his queen is painted at the beginning of a manuscript of the period, formerly belonging to Hyde Abbey, and which was probably executed by direction of the king.

Henry III. is known to have issued directions for the execution of several artistic works, for the adornment of both ecclesiastical and domestic edifices. Although it is not mentioned what were the subjects which that monarch ordered to be painted in his queen's chamber at Winchester, yet in other instances the subjects have been explicitly mentioned.

The carved history of Edward the Confessor and also a painted history (the former still in existence in Westminster Abbey, the latter, except a small portion, destroyed), and the carved pillars of Ely Cathedral, are of this king's time. He also caused to be executed the histories of the two royal saints Edmund and Edward, which were painted in his round chapel at Woodstock; the history of the Crusade, in the king's great chamber in the Tower of London, and in a low room near his *Jewry* at Westminster, which last room, on account of its being so decorated, was thenceforth to be called the Antioch chamber. The story of Edward the Confessor taking off his ring and giving it to a poor stranger, was painted in St. John's Chapel, in the Tower of London, and in the queen's chapel, at Winchester.

Langton, Bishop of Lichfield, caused the coronation, marriages, wars, and funeral of Edward I. to be painted in the hall of his episcopal palace. The story of Guy, Earl of Warwick, was wrought in a suit of arras, and presented by King Richard II. to his half-brother, Thomas, Earl of Surrey.

May we suggest that the Anglo-Saxon period of English history affords some excellent subjects for our painters, and has not been much worked?

In many instances we have, in the illuminations of this time, pictures of events which had probably been witnessed by the artists, and rendered by them with fidelity, and as well as the knowledge of perspective and composition would allow; and however imperfect the art of this period may be, it cannot be doubted that modern painters will find in these ancient works the details of the dresses, of the ladies, the robes and head-dresses of kings, priests, and peasants, as truly marked as they are in those on the walls of Egyptian temples, or on the wondrous carved chronicles which have recently been brought to light by the exertions of Mr. Layard and others.

The conquest of England by William the Norman, together with the circumstance which led thereto, was, by command of Queen Matilda, represented in painting, and afterwards by her own hands, and with the assistance of the ladies of her court, worked in arras, and presented to the cathedral of Bayeux, where it is still preserved.

During the struggles between the Normans and the Anglo-Saxons, it is probable that the interior decorations of the English dwellings became much plainer: the substantial and increased size of the various new buildings would also to some extent help to produce this effect. In the thirteenth century a revival took place in England in the use of colour and decoration, partly caused by the accounts the Crusaders brought of the coverings of the walls of the Oriental buildings. The English and French, like the Flemings at an early period, were distinguished for the excellence of their tapestry, which met with a ready market abroad. The foreign demand, and also that caused by the increasing wealth of the citizens, would naturally lead to the production (on a large scale) of those artistic wall coverings. The most ancient tapestries were worked in narrow strips on frames by hand. In course of time the ingenuity of the manufacturers devised the means for weaving their pictures and diaper patterns on a large scale.

The introduction of carved panels and other woodwork, corresponding in design with the various changes of the architecture, added much to the good appearance and comfort of the old English dwellings. Engravings of these, arranged according to their proper dates, have been published by Pugin and others; and we may mention that a most useful collection of casts, &c. of wood panels (formerly Mr. Cottingham's), is now arranged for the use of students in the Architectural Museum, Cannon-row, Westminster.

The relics which we still possess of the ornamented work in use in England in the twelfth, thirteenth, and fourteenth centuries, enable us to form some notion of the elaborate details and richness of the decoration of the interior of the English houses at that time. Nor were the tapestry and embroidery confined to the nobility and gentry, as is shown by the displays made by the citizens of their household stuffs from their windows and on the house-fronts on great occasions. Notwithstanding all this finery, the sanitary state of affairs will not bear thinking of, and we fear that, owing to the want of drainage, the dampness of the houses must have been a cause for general complaint, and too serious to be dispelled by even the large fires of wood so commonly in use. This opinion is to a certain extent confirmed by mention, by the old writers, of the framework of the arras or tapestry at a distance from the walls.

In Shakspeare's play of *Hamlet*, a noise is heard behind the arras. Sir John Falstaff speaks of "behind the arras."

Besides the tapestry of the walls, a covering of embossed gilt and coloured leather-work was much in use, which was probably introduced by the Crusaders, who had witnessed the Oriental practice of covering walls, &c. with prepared skins. Such hangings were for a long time manufactured to a considerable extent at Venice and Cordova. At East Ham, in Essex, not very far from the famous old Greenstead Church, is a house of old date, with a tower something like that still left at Canonbury, Islington, which is said to have been the place of residence of Anne Boleyn, during the time of probation before her marriage with Henry VIII. tradition mentioning that from a window of this tower the unfortunate lady was pleased to have a view of the courtly lodging of Henry at Greenwich. Be that as it may, there was in this house a chamber covered with leather-work, finely gilt and ornamented. The proprietor of the place at that time having an eye to the value of the *bullion* contained in this interesting fragment of old art, had it taken down, and sent to a man accustomed to melt such matters, and from the ashes was collected about 80*l.* or 90*l.* worth of gold. Some fine specimens of this sort of decoration still fortunately remain *unmelted*.

CHURCH-BUILDING NEWS.

Canterbury.—A cemetery is on the *tapis* for this city.

Glastonbury.—In the parish church of St. John the Baptist, on Easter Sunday, a new stone pulpit, the gift of Lady Charlotte Neville Grenville, was uncovered, and used for the first time. It is constructed of Painswick stone, carved in six Gothic panels, each panel containing two niches, and each niche a sculptured figure of one of the Apostles. The design was furnished by Mr. Scott, from portions of an old stone pulpit recently discovered in the church, and has been executed by Messrs. W. and F. Merrick. The pulpit has been fitted with a brass desk, presented by Mr. T. Porch Porch. A new font of Painswick stone, similar to the mutilated one now in use, is about being presented by the Misses Neville. For the restoration of this church a committee has been appointed, who invite contributions in aid of the undertaking.

Liverpool.—The chief stone of the new Roman Catholic church of St. Vincent of Paul was laid on Tuesday before last, in St. James-street, Liverpool. The plan is of an oblong form, to suit the requirements of the ground, and is composed of a chancel, 27 feet long by 24 feet deep; two side chapels, 24 feet long and 12 feet wide, which will eventually be separated from the chancel by an open metal screen; and a nave divided from the above by three Painswick stone arches. The nave is composed of six bays, and measures 96 feet in length by 60 feet in width, and 62 feet in height. The style of the building is Early Decorated. The external wrought work is to be picked out of the Stourton-hill Quarry, and the walling stone is from Upholland. The internal masonry will be executed in Painswick and Caen stone. The church will seat 1,000 persons, with standing room for 500 more. The contract is taken by Messrs. Haigh and Sale, of

Liverpool, and amounts to 6,700*l.* The church has been designed by Mr. E. W. Pugin, and Mr. Eyre is engaged under him to superintend and direct its execution.

Broughton (*Manchester*).—Broughton Independent Church, as designed and now in course of erection, is a structure in the Middle Pointed style, the mouldings and tracery partaking of the characteristics of the former half of the fourteenth century. It is cruciform in plan, with a tower at one angle, surmounted by an octagonal lantern, which is terminated by a spire. At the corresponding angle is a porch. The front window occupies the entire gable: its tracery, it is expected, will be filled with stained glass. The transepts have also large windows. The carved work is to be out of Ancaster stone. Iron is used in place of stone in the nave arches, which are carried up above the galleries as a clerestory to support the roof, which has curved centre and principals, and by this arrangement is reduced into three spans transversely. The stone is built to form a contrast throughout—brown parpoint walling and white Ancaster and Yorkshire tire dressings. The work is being carried out by Mr. T. George, of Ashton-under-Lyne; under the direction of Mr. Thomas Oliver, of Sunderland, architect.

Rawmarsh (*Rotherham*).—The village church of Rawmarsh has recently undergone various repairs and alterations. A tower, 50 feet in height, has been added to the building, with a peal of bells supplied by Messrs. Mears. A new roof has also been given to the edifice. The alterations and repairs have cost upwards of 800*l.* of which 186*l.* remain to be subscribed. Mr. Chadwick, of Masborough, was the contractor for the roof and masonry, and Mr. Ludlam for the woodwork.

Alderley.—A chancel in the Decorated style has been added to the old church at Alderley, the gift of Lord Stanley. The architects employed were Messrs. Cuffley and Starkey, of Manchester, and the stained-glass windows were the work of Messrs. R. B. Edmondson and Son, of Manchester.

Bilton.—The church of Bilton, erected by the liberality of Mr. William Sheepshanks, was opened on Sunday before last, by the Rev. T. Sheepshanks, the incumbent. The church has been erected from designs furnished by Mr. Scott. The general style of architecture adopted is Early English. In the clerestory the architect has substituted a double window of a later period for the single lancets of the nave and chancel. The walls of the interior are limestone. The roof of the nave is of open timber-work. The chancel has also a timber roof, a principal feature being that the ribs spring from the corbels and intersect each other, somewhat like a groined ceiling. The pulpit is of white limestone, and is of an octagon form. The organ will be completed shortly by Messrs. Hill, of London. The whole of the chancel windows are to be of stained glass. At present only the east end has been filled: this portion has been executed by Mr. J. C. Crace, of London. The subjects of the medallions introduced into the east window are incidents in the life of Christ: the rest of the windows will be completed early in summer. The total length of the church is about 77 feet, the chancel being 34 feet long by 20 feet wide.

Great Glemham.—Last year attention was directed to the dilapidated and dangerous state of Great Glemham Church, and a proposition then made of securing the roof by tying it together by iron rods. This scheme has been abandoned, and Messrs. Morgan and Phipson have been consulted, who recommend that the roof should be restored to its original stability by the means successfully adopted at Woolpit, Cotton, and other churches, where the roofs had spread in the same manner. The architects likewise propose to pull down and rebuild the south aisle, the foundation of which has given way, which failure is one of the main causes of the present ruinous state of the church. Messrs. Morgan and Phipson have been entrusted with the work of restoration.

Glasgow.—The cathedral, High Church, or "Hee Kirk," as it is vulgarly called, in Glasgow, was reopened on Sunday before last for public worship by the Very Reverend Principal Macfarlan. The alterations are all nearly completed.

LILLE CATHEDRAL COMPETITION.

We are glad to be able to announce that England has taken the honours in this competition. At a public meeting held on Sunday last, the mayor in the chair, it was announced that the first prize had been awarded to Messrs. Henry Clutton (Charles-street) and William Burges, motto "Fœderis arca" and the second to Mr. Street, of Oxford, motto "Quam dilecta tabernacula, &c." The third prize was awarded to M. Lassus, of Paris. All these designs are included in the nine we selected for notice, and are described, briefly, on p. 169.

At the appointed time, the Mayor, the authorities, the Commission, promoters of the work, and the Jury, took their seats at the tribune provided for them. This was the signal for the "Orphéonistes Lillois" to inaugurate the proceedings by singing the beautiful chorus of Soubre, "Elevez-vous! voix de mon ame."

The Préfet testified his sympathy with the cause by being present, although too unwell to speak his sentiments. M. de Contencin, Directeur des Cultes, President of the Jury, then rose, and explained to the meeting the causes which had led to the project of erecting a cathedral at Lille. He complimented the Commission on the happy idea which they had carried out, of appealing for designs to architects of all nations, and on the brilliant manner in which their call had been responded to.

M. Kolb-Bernard, President of the Commission, replied; after which, a hymn, in honour of Notre Dame de la Treille and St. Pierre, was sung, the words and music composed expressly for the occasion.

M. D'Anstaing, member of the Jury, then read their report, which was of some length, and expatiated on the beauty and skill displayed in the plans on which they had been called to pronounce their opinion.

The mottoes or titles to the works, which had been selected by the jury for the different class of prizes awarded, were then read; after which M. le Comte de Caulincourt, Secretary to the Commission, laid on the table the letters of the different candidates, the seals of which were then publicly broken, and disclosed their names and address. The following is the list, in addition to those already named:—"Honourable mention," to "Dum spiro spero," Mr. Jas. Lendon Pealey, Birmingham. —"Le Monument sera l'Expression d'une grande Pensée," M. Chas. Arendt de Greeweumacker, Luxembourg. — "I. H. S." M. Johan Muller, Cologne. — "Sancta Maria sine labe concepta," M. Auguste Hostmar, Carlsrue. — "Excelsior," Mr. John Robinson, London. — "Soli Deo Gloria," M. Ferdinand Sdaler, Zurich.—"Rosace symbolique," M. Ferdinand Kerchnez, Vienna.—"Nisi Dominus," Mr. Geo. Goldie, Sheffield. — "Si parva licet," M. Adhelmar Bouet, Caen.

Special mention was made of the two last on this list. The Jury regretted not having the means of awarding to them a medal.

Silver medals were awarded to the following:—1. "In veritate confido," Messrs. Isaac Olden and Son, Manchester.—2. "Spes," Mr. C. Brodrick, Leeds.—3. "Ad æthera tendens," Messrs. George Evans and Richard Poplarel, London.—4. "Deus adjuvet," M. Leroy, Lille.

Gold Medals.—1. "Dieu en soit garde," Messrs. Leblanc and Rimbaux, Rheims.—2. "Zelus domus tuæ comedit me," M. de Curte, Ghent.—3. "O clemens, O pia," M. Vincent Stratz, Cologne.

Thus it will be seen that out of ten prizes, five have been carried off by Englishmen.

Of the forty-one drawings sent in, twenty-two were at once put aside by the umpires, either for want of merit or excess in cost.

The exhibition of the designs excited the greatest interest in Lille. On the Sunday previously to its closing, the crowd of persons to view them was so great that it was necessary to form *en queue* to get admission.

The indifference shown in London to the exhibition of the designs for barracks now open, contrasts very strikingly with this.

Accumulator for Organ-bellows. — Against the notice in your recent number, p. 194, headed "Self-moving Wheel-chairs, &c." I wrote this query, —"Could not this (the Accumulator), be applied to the bellows of an organ?" and as your correspondent "Urgeo,"—and you seem to assent,—suggests "that others should contribute their thoughts to the *Builder* on this important subject," I venture to send you my thoughts towards obtaining a handy "traverser," "accumulator," or whatever it may be called, for the use of organ-players, instead of the present clumsy laborious working of a foot-iron, or an assistant; thus making an organ as independent an instrument as a pianoforte.—An Old Subscriber.

THE BARRACK COMPETITION.

Pressure of matter this week compels us to postpone the continuation of our notices of the exhibition of competition designs now open at Burlington House. We do this the more reluctantly, as we continue to receive numerous opinions as to the importance of this competition in reference to the public and professional interest which the question of competitions involves, and because there is really more for us to take notice of, than it is possible to report upon during the time that the exhibition is open. We had written some observations, which we hoped would draw the attention of the profession to the opportunity, even more directly than it has been drawn, and lamenting that at the close of the exhibition, results which might have been made of great value in the profession, and for general progress of art, would be utterly lost for any object worthy of such enormous labour and expense. One of our correspondents, "J. E." seeing the matter in the same light, observes that "it would take any man a month fairly to examine and weigh the real merits of the immense mass of designs," and thinks that as these designs have been taken possession of by the Government, it could not be asking too much of the Government that they should publish outline plans to one small scale of each design, with the written observations and specifications of the several competitors. Something certainly should be done. We append one of the letters which we have received, adverting to the same general subject:—

As one of the competitors in this case, allow me to express my unfeigned satisfaction with your excellent article in this week's *Builder*. You say rightly, that the exhibition at Burlington House ought to remain open as long as possible; and I trust, with you, that her Majesty's Government, if it do really retain all these costly drawings—useless now to their respective authors—will accord them some graceful (and I may say grateful) recognition of their having "done the state some service." I am sure that not the mere hope of pecuniary gain alone, but a wide prevalence of the maxim,

"——— Non tam turpe fuit vinci
Quam contendisse decorem,

must have existed amongst our British architects on this occasion; since in all my experience I have never known a competition so liberally responded to. How true are your remarks about the vast expense incurred in the mounting, the straining, &c.! Would that such things could all straightway be blown to the winds in future competitions, as I see they have already been by the Liverpool Library Committee!

A Barrack Competitor.

THE PEERS' OFFICES, HOUSES OF PARLIAMENT.

Sir Charles Barry's great work is approaching towards completion: the whole outline of the clock-tower is now seen, and the Victoria Tower is finished to the top of the parapet and foot of the turrets. These latter, however, will be 70 feet in height; and there will further be a flagstaff of great elevation, to bear aloft the banner of England when the monarch is present. The whole front from St. Stephen's Porch to Victoria Tower is appropriated for offices of the House of Peers, including peers' private entrance and staircase, committee-rooms, waiting-rooms, and the numerous other apartments required.

It also includes a large room to be called the Peers' Robing-room, which is to be decorated in fresco by Mr. Herbert, R.A. This is lighted from the top, and fitted up in oak, as is the case with the other apartments. The frescoes will be eight in number, of large size,—the subjects scriptural. The Cloak-room and Peers' Staircase are nearly finished, and promise well.

Our engraving represents the centre of this range of offices, with the peers' entrance. It is executed in Anston stone, mainly, as we are informed, from the quarries of Mr. Wright. Mr. Jay is the contractor. The pedestals on the top of the porch will support lamps, but these are not yet fixed.

Accident at the Lyceum Theatre. — Last Saturday, the men at work outside the theatre attached a ladder to the Bath stone balustrade, above the main cornice of the wing, on the south side of the portico. The stone balustrade appears to have been much decayed, and the result was that when a man stepped on it, it fell to the ground, fortunately without causing loss of life. It is desirable that the rest of the stonework should be examined.

THE PEERS' ENTRANCE, HOUSES OF PARLIAMENT.—Sir Charles Barry, R.A. Architect.

LET EACH DO SOMETHING.

WITH all our boasted philanthrophy, I do not think we cut much of a figure in comparison with America, as we have had some seven or eight centuries of comparative civilization to complete our institutions in, yet they are equal or before us in the number and quality of their institutions (slavery excepted). What a number of wealthy persons die every year in this country without having done any apparent good to society, although the ignorance and vice that prevail is visible to all, and the want of means to extend the useful institutions of the country makes a great increase of prisons and the asylums for the vicious and depraved necessary. To hoard the wealth that would do so much good, if properly employed, is not according to our religion, or our ideas of a truly great and generous nation. England had a long start of America, and had great wealth, and many public institutions, before she was born; but without we make great efforts to improve the condition of our people, we shall be left far behind by our young and spirited rival. There are plenty of wealthy people throughout the country, who are almost living for themselves alone: were they to "pluck up a spirit, and come out," they might set the "builder" to work in erecting churches, schools, and the many other institutions that require to be multiplied to make this country what we might aspire to be—the greatest on earth in works of charity and love. G. H.

FOREIGN ART INTELLIGENCE.

Paris: new Bridge Constructions.—In 1854 and 1855 four bridges have been either built or rebuilt in the French capital. On the *Pont d'Austerlitz*, whose breadth and solidity did not tally with the increased traffic, the iron spans have been replaced by stone arches, the piles alone having been preserved; and by means of an augmentation of thickness, guaranteed by the solidity of the foundation, it has been possible to enlarge the roadway to 18 *mètres*, and preserve the *trottoirs* on each side, being 3·50 *mètres* broad, and furnished with an elegant iron railing. The old *Bridge d'Arcole* was but a small passage suspended between the Place de l'Hôtel de Ville and the Ile de la Cité. The late improvements of the Rue Rivoli, &c. have induced the authorities to replace it by a larger construction. It is built, according to the system of the engineer, M. Audry, with arches of very slight elevation. This construction has borne an experimental weight of 800,000 kilogrammes, and has cost 1,150,000 francs.——The suspension-bridge of the Invalides was by its ephemeral construction a source of disquietude on every public occasion. These dangers have disappeared through the work of Messrs. Galissière and Michal, engineers of the State. Four arches, built of stone of 30 feet span, placed on the piles of the old bridge, form now a roadway 16 *mètres* in breadth, furnished with cast-iron parapets, which will cost 800,000 francs. On the projection of the pile of the middle are two statues of Victory.——The *Pont d'Alma* has been projected by the necessity of a communication around that part of the Champs Elysées, which surrounds Le Cours la Reine and the *terrein* of Chaillot, and which will soon be covered by new buildings in continuity with the Faubourg St. Germain, by various transections projected across the Gros-Caillou. This bridge, built entirely of masonry, presents three arches of from 39 to 43 *mètres* span, and has cost 1,700,000 francs.

A Document of the Life of Raffaelle.—At one of the late sales of MSS. at Paris, which contained also autographs of Lorenzo il Magnifico, Michelangelo, Benvenuto Cellini, &c. the *original* of that famous letter was sold, by which "Joanna Feltria de Ruvere Ducissa Soræ et Urbis Prefectissima," introduces Raffaelle Sanzi, then twenty-one years of age, to the Gonfaloniere and head of the republic of Florence, Pier Soderini (1st October, 1504). Many have been the controversies about the authenticity of this letter, in which men like Bottari, Pungileoni, Rumohr, and Passavant (Life of Raffaelle) have taken a part. Pungileoni objects to its authenticity, because (according to his reading) the father of Raffaelle, Giovanni Sanzi, is mentioned as alive, who had died ten years previous. It is strange that the source whence this interesting MS. came was not stated at the auction, neither the person who bought it, for 200 francs.

German National Museum.—This well-promising establishment has just published the first volume of its Memoirs, "Denkschriften." After the good example set by the republican cities of Frankfort, Hamburg, &c. other similar contributions are flocking in, so much so, that additional buildings have been hired, until the Charterhouse (*Karthause*), granted by the King of Bavaria, be ready for the general reception of the German Museum.

PROVINCIAL NEWS.

Hove (*Brighton*).—A new town-hall has been erected at Hove, for the Brunswick-square and Terrace district of Brighton. The new building, as described in the local *Herald*, is of three stories, having a frontage of about 56 feet in width, with an elevation of 60 feet. The *façade* is of stone, and the windows, from their number, constitute one of the chief features of the structure. It contains the usual accommodation for police, magisterial, and commissioners' business, to which the first, second, and third stories are respectively devoted. Mr. Fabian was the builder.

Woolwich.—A Government contract has been entered into by Messrs. Lucas, Brothers, for the erection of a new cannon foundry and boring mill, on a site between the two foundries already in progress in the Arsenal-grounds at Woolwich. The *façade* of the foundry is to be of various-coloured bricks, in a sort of modern Elizabethan style. The extreme length of the frontage, which is to be flanked by two wings running north and south, will be 360 feet. In addition to these works, the same builders are engaged in raising some other extensive buildings at Woolwich, all of which are in a progressive state. The paper factory is nearly complete. The shell foundry and laboratory saw-mills are also proceeding rapidly towards completion. The whole line of wharfage fronting the storehouse is being renewed and strengthened with large blocks of stone shipped from the Portland quarries.

Therfield.—The new national school, erected under the superintendence of the architect, Mr. Nash, was opened on 4th inst.

Lynn.—That portion of the harbour quay works which belongs to the corporation is now making considerable progress, and the remainder, under the control of the Select Trustees of the Harbour, will soon be commenced, as the great difficulty—that of providing the necessary funds—has, according to the *Norfolk Chronicle*, been surmounted. This section of the work is estimated to cost 7,000*l.*

Liverpool.—A meeting of subscribers to the Wellington Testimonial was called on Monday before last, in the Town-hall, when it was stated that the amount subscribed was 5,893*l.* 16s. 6d. all except 161*l.* 1s. collected. The interest amounted to 551*l.* 2s. 8d. and the balance to 6,275*l.* 10s. A column, as first intended, would cost 10,000*l.* or 12,000*l.*; and the question was what was to be done. Mr. Charles Turner thought a column could be erected for 7,000*l.*; and if the money was left at interest for a time a sufficient sum would be realised. He made a motion to that effect. Mr. William Rathbone and Mr. James Aikin preferred an equestrian statue, and Mr. Aikin made a motion to that effect. Mr. George Arkle observed that there was no site in Liverpool for a column. Mr. Torr objected to an equestrian statue, as there was no English artist could model a horse. Ultimately, Mr. Aikin withdrew his motion, and Mr. Turner's was adopted.——"It is gratifying," remarks the *Journal*, in allusion to improvements in the London-road, "to perceive the great progress making in the architectural improvement in our shops and the general requirement of a better class of premises in some of our streets. We are no longer confined to Church-street and Bold-street for elegant premises. The fine stack of shops recently erected in the London-road, extending from Norton-street to Burgess-street, may justly be classed amongst the first of the kind in the town, and the business of this street is rapidly increasing."

Manchester.—A group of colossal sculpture, comprising the royal arms in the centre, and seated figures of Commerce and Manufacture on either side, has been erected above the circular end of the Royal Exchange here. The workmanship is by Mr. Thomas, of London, sculptor, and the design is the joint production of Mr. Thomas and Messrs. Mills and Murgatroyd, the architects. The group measures 15 feet high by about twice that width. It is executed in Portland stone. The royal arms are sculptured in deep relief, and are ornamented with festoons of fruit, flowers, and foliage. The dimensions of this portion of the group are 15 feet 3 inches high by 15 feet 6 inches broad. The original weight of the block of stone for this portion of the group was seven tons: its present weight is five tons: the weight of the whole group is about twenty tons.

CEMETERIES.

A CORRESPONDENT says,—I read with much interest and pleasure the recent articles on cemeteries in the *Builder*, and was glad to see Mr. Walker's name kept up as the pioneer. There is in the British Museum, however, a much older one,—a letter addressed to King George III. by Wm. Hawes, M.D. the founder of the Royal Humane Society, on the subject, in which I think he shows the melancholy consequences of burying in churches, &c. It was Mr. Benjamin Hawes who, after a walk with the late Dr. Valpy, of Reading, over Père-la-Chaise, Paris, nearly twenty years ago, resolved to endeavour to take up the subject, and ultimately established the London and Highgate and Nunhead cemeteries; upon which Shillibeer, the first introducer of omnibuses, took out a patent for his one-horse hearse for a body and four or six mourners, which has led very much to the reduction of funeral charges; and making no extra charge for the distance, he promoted cemetery interments very much. At Nunhead there is a reception-room on the Frankfort plan, but as it deprives undertakers of a fee for what they call a deposit-room till the funeral, not one body has been sent to it.

BELLS AND BELL-HANGING.

THE remarks of Mr. Denison, in your number for March 22, on the calculations which I had the honour of submitting to the Institute of British Architects, compel me to request the favour of the insertion of a few lines.

It is scarcely necessary to notice Mr. Denison's assertion, that Mr. Baker and I "set ourselves to work to knock up as many of his conclusions as we could, by way of paying him off for having come to the conclusion that Mr. Baker's plan will not answer." This kind of argument is unworthy of Mr. Denison, and will have no weight with any one.

Mr. Denison goes on to state, that my calculations did not even profess to take any account of the friction, on which the whole question (with regard to hanging bells high in the stock) depends. This statement is in one sense true, but leads, by implication, to a supposition which would be untrue.

It is necessary for me to observe, that the object of my calculations had no direct reference to this point. The question I was investigating was the nature and amount of the strains on the bolt or bolts, and on the gudgeons supporting a large bell in motion, and the dimensions requisite for a single bolt supporting the bell in the mode patented by Mr. Baker. These strains depend on the form, weight, and velocity of the moving bodies, and are practically independent of friction. Friction was, therefore, properly left out of consideration in the determination of them. But, inasmuch as the amount of friction, *ceteris paribus*, varies directly with the resultant strain on the gudgeons, results which indicated that this strain was diminished by hanging the bell high in the stock, proved incidentally that the friction was also diminished in the same manner. Friction, therefore, was taken into account in drawing this conclusion from the calculations, though not in the calculations themselves.

Although it may be true, as stated by Mr. Denison, that the friction of a complex train of wheels was one calculated erroneously by the Astronomer Royal, I think most practical mechanicians will be startled at his conclusion that questions of friction are altogether beyond the powers of calculation, and will not be easily persuaded to believe that the friction resulting from the rotation of a single body on a single axis is governed by recondite and inscrutable laws.

With regard to facts, after every allowance for disturbing causes, those adduced by Mr. Baker remain

strong enough to confirm completely the conclusions of theory; and to allow Mr. Denison's objections to prevail would be tantamount to refusing to admit any evidence against his conclusions. The single fact stated by Mr. Taylor is insufficient to bear down this evidence, supported as it is by the almost unanimous opinion of practical ringers on the subject. It naturally suggests itself that there may be some mistake, or that causes may have been at work in this particular instance with which we have not been made acquainted. For example, an alteration in the diameter of the gudgeons would alter the amount of friction to an extent which might more than counterbalance the gain accruing from raising the bell in the stock. The York Bell is no instance against hanging a bell high in the stock; for although it has not been *set*, Messrs. Mears state that it has been *rung up to set* with ease. Those who are familiar with ringing know that when this is the case it is not the fault of the bell or any difficulty in *raising* it that prevents its being set.

It is clear, however, that no mode of settling the question, which is a not unimportant one, would be so satisfactory as that suggested by Mr. Burlison of a fair trial of two precisely similar bells, hung on the two different systems.

This experiment may easily be made, and will not require to be mixed up with the practical testing of Mr. Baker's patent principle, which, as Mr. Denison correctly explains, has nothing whatever to do with the advantages or disadvantages of hanging bells high on the stock. R. C. Nichols.

If Mr. Burlison will devote himself for half-an-hour to the turning of a grindstone of a ton weight (which will be about 5 feet wide and 9 inches thick), stopping it at every turn, and then look at a man ringing a decently-hung bell of the same weight, he will, perhaps, understand more than he does at present about the different effects of the friction on the axis, according as it is near to or far from the centre of gravity; and be able to form some kind of guess why a heavy bell is harder to set when it is hung a good way below its top than when it is all below the stock or gudgeons.

I have something else to do than to write answers to all the suggestions, doubts, and hypotheses of persons who have read just enough about bells to be able to pour out such articles by the dozen; and therefore I shall take leave of this subject with a remark which was accidentally omitted in my former letter, viz.—that as long as I have known anything about bell-ringing (which is now above twenty years), I have observed that long or tall bells, of what may be called the foreign proportions, are almost always inferior to the shorter ones of the usual English shape. Most of the best bells that I have seen are no higher from the mouth to the corner of the crown than three-fourths of the diameter, and some scarcely above two-thirds; so much so, that I always expect to find a bell sound a bad one if I see it is as high as the five-sixths, or even four-fifths of the diameter, which Mr. Burlison recommended on the ground that it is the height of most of the foreign bells, many of which, I understand, are as bad as I should expect them to be from their shape.

I need hardly add, that with short bells there is less excuse than with long ones, for hanging them high in the stock, on the grindstone plan, which is of comparatively modern introduction, like some other ingenious devices for making peals of bells as ineffective as possible. E. B. Denison.

INSTITUTION OF CIVIL ENGINEERS.

At the meeting on April 1, the discussion, being renewed, on Mr. Heinke's Paper "On Improvements in Diving Dresses and other Apparatus for working under Water," was continued throughout the evening.

The extensive use now making of the diving-dress, in the construction of the piers at Portland Breakwater, under Mr. Rendel, was mentioned: the water there being very clear, the divers work with great ease and certainty. Numerous diagrams were exhibited of the various improvements introduced by Mr. J. Bethell, and it was stated, that in consequence of the occurrence of so many accidents to divers, when using the open helmet, his attention had been directed to the subject, and he, in 1834-5, devised the tight-closed dress, attached to the helmet, and joined together at the waist by a brass girdle and screws, causing the air to escape from it by means of a ventilating pipe, from the top of the helmet, so as to get rid of all the respired and foul air; and thus keeping the diver constantly supplied with pure air.

There were also exhibited several drawings, showing how dock walls and stone piers could be built and repaired under water, by using the diving dress, and rocks could be blasted with gunpowder, fired either by the fuse in the ordinary manner, or by means of the galvanic apparatus.

Reference was made to several papers connected with the subject read at the Institution. The first was on April 10th, 1838, by Colonel Pasley, "On the Application of Bickford's Fuzes for Blasting under Water," in which that system was exclusively recommended for submarine blasting. In the discussion upon that paper, Mr. Bethell mentioned the experiments he had tried on the ignition of powder by the voltaic pile: he was requested to give an account of them at the next meeting, which request he complied with on the 24th April, 1838, exhibiting the experiments before the members at the meeting. It was then stated that Mr. Bethell's attention had been directed to the subject since 1834, whilst engaged on experiments connected with his diving-dresses. The merit of the introduction of the system of using the voltaic battery for the ignition of gunpowder in blasting under water had been claimed for Mr. Bethell; but this claim was contested, inasmuch as it was stated that Professor Daniell had mentioned the subject in his lectures at the Royal Institution long anterior to 1838; also that Colonel Pasley had his attention drawn to the applicability of the voltaic battery for exploding mines, by reading of a bridge having been so destroyed by an engineer officer in the Russian service, in presence of the emperor: the precise date of this occurrence was not stated. At all events, to Colonel Pasley belonged the merit of the first application of the system on a large scale and in a practical form.

NEW IRON DRILL-SHED, WOOLWICH.

The inconvenience of exercising men in the open air either during the severe cold of winter or heats of summer has been wisely obviated by erecting a spacious iron building 150 feet long and 80 feet span, lighted and ventilated at the top. The corrugated iron roofing is carried on T and rod-iron principals placed on iron columns, which latter are fixed on brickwork, and bolted through to iron plates *beneath* the concrete over which the columns stand, thus lessening the possibility of any accident happening from the action of the wind on so large and exposed a surface of roofing.

This work has been executed by Messrs. H. and M. Grissell, from drawings by Mr. Stent, and under the superintendence of Mr. Rees, clerk of works to the Royal Engineers' department.

METROPOLITAN BOARD OF WORKS.

At the meeting on Friday, the 11th, a deputation from the Board of Works of St. Saviour's District and the Directors of the South-Eastern and Brighton Railway Companies, on the subject of a line of street from the Borough High-street to the west end of town, came before the general Board, but no advance in the matter was made.

Embankment of the Thames.

A memorial from the promoters of an undertaking "for the Formation of an Embankment on the North Side of the Thames, between Southwark and Westminster Bridges, and for the Construction of a Railway and other Works," was received, and, after some opposition, referred to the Board of Works.

The Construction of Public Buildings.

A report from the Committee on Duties under the Building Act, containing the following recommendations, was adopted, viz.,—

"That in any case in which a disagreement shall arise between the district surveyor and the builder or building surveyor, under the provisions contained in the 30th section of the Metropolitan Building Act, as to the mode of constructing any public building upon which the determination of this Board becomes necessary, the question shall be brought before the Board by a memorial setting forth the facts of the case, accompanied by plans and explanations, upon the receipt of which the superintending architect shall communicate with the other party, and require him to furnish similar information in support of his case; and when the same shall have been received, the whole matter shall be laid before the Board, before whom the parties shall be required to appear, and, if deemed necessary, with witnesses."

The following is the clause of the Building Act referred to:—

"Clause 30. Notwithstanding anything herein contained, every public building, including the walls, roofs, floors, galleries, and staircases, shall be constructed in such manner as may be approved by the district surveyor, or, in the event of disagreement, may be determined by the Metropolitan Board; and, save in so far as respects the rules of construction, every public building shall throughout this Act be deemed to be included in the term building, and be subject to all the provisions of this Act, in the same manner as if it were a building erected for a purpose other than a public purpose."

An application from Mr. E. Murray, for permission to erect six buildings in Rope-yard Rails, Woolwich, beyond the regular line of fronts of the houses in the street, was refused.

Reports by the Superintending Architect.

An application made by Mr. Rodda, for the approval of the construction of eaves to two houses in Marquis-road, Islington, was granted.

Mr. Cook, of 7, Loughborough-place, Brixton, received the sanction of the Court to make a projection, not exceeding 14 feet in height, over the forecourt of his premises in that place.

Leave was given to Mr. Fuller to construct eaves to his house in Park-village East, under certain regulations pointed out by the superintending architect.

An application from Mr. Hemming, for the approval of the erection of a temporary iron church for St. Pancras, was, after some discussion, received, and the application granted.*

Assessment of the Metropolitan Districts.

On the motion of Mr. Seeley, it was resolved,—"That in order to make provision for the proper carrying into effect the 144th clause of the Metropolis Local Management Act, it be referred to the Finance Committee to prepare and lay before this Board an estimate of the several sums which it will be necessary yearly to assess upon each parish or district in the metropolis, in order to realise a stated income of 100,000*l.* per annum, to be applied to the purposes described in the said 144th clause; and also an estimate of the rate which will be required to raise such sum, supposing that the whole metropolis be rated in one and the same proportion."

CHELMSFORD.

The Shire-hall.—At the Essex Quarterly Sessions last week, reports from the Shire-hall committee and the county surveyor as to the late accident were read, and, after some discussion, the committee was continued; and it was referred to that committee to consider and carry out the work for which estimates were ordered by the late committee, and such other works as they might deem immediately necessary. The surveyor, in his report, stated that the building, notwithstanding numerous alterations, cutting walls, &c. was in a sound and trustworthy state.

The Chelmsford and Essex Museum.—A *conversazione* was held at the Museum on Tuesday evening before last, and was largely and respectably attended. A lecture "On Pottery and China" was delivered by the Rev. C. A. St. John Mildmay. The resources of the Museum were reinforced by various additions, including a fresh-water vivarium, photographs and stereoscopes, &c. The lecture and other proceedings are reported at some length in last week's local *Chronicle*.

The new Railway Station.—The works for the new station commenced, under the direction of Mr. Bruff, engineer to the company, on Monday before last, Mr. Jay, the contractor, undertaking to complete the same by the end of June, under heavy penalties in case of default. The design is Italian, and includes a campanile.

COMPETITIONS.

Dorset.—I beg to direct your notice to an advertisement in the *Dorset Chronicle*, which accompanies this, soliciting plans from "architects, builders, &c." for the erection of a new workhouse at Blandford, in this county, which is unique in its utter stupidity.

Beginning with the above quoted heading, it goes on to say, a plan of the ground may be had "on payment of 5*s.*:" "the drawer of the plan" approved, will receive the munificent sum of "10*l.*—provided he should not afterwards become *the contractor* for the work;" and ends, by allowing from the 5th instant to the 3rd of May, for the preparations of designs for a workhouse capable of containing 250 inmates!

Architects, turn your gaze westward to the wilds of Dorset, for there, at Blandford (be that name for ever famous!), is "the unfound paradise of your despair."

T-e-n P-o-u-n-d-s—Ten Pounds!—that is the talisman that the wise men of Blandford invariably use when they invoke the genius of architecture: they used it with success (of a certain kind) in the cemetery competition already ventilated in the pages of the *Builder*: they used it when they longed to erect on the bleakest down in the county, the Farquharson testimonial column, 100 feet high, of solid stone, for the very adequate sum of 1,500*l.*; and, would it be believed, the wicked lure evoked some three-and-fifty designs: one or two very *stingant* ones came fluttering even from that *gim of the say, ould Ireland!* But, lucky men of Blandford, the column was decided *not* to be

* It has been intimated to us that some of the district surveyors have received back their "returns" from the superintending architect's department, for amendment on trivial grounds. We feel quite sure that Mr. Marrable needs but the suggestion to show due consideration for the time of these gentlemen.

built, so all discrepancies of cash in hand, and probable cost, were and are forgotten.

Now again, a third time, oh architects! ten pounds float before your enraptured—your fascinated gaze! Rush eagerly towards the prize, and prove yourselves the men that Blandfordian committees think you,—mere layers of bricks and mortar, or poor half-starved office lads, exclaiming, as you pawn your coats to obtain the requisite preliminary crown, "Our poverty, but not our will consents."

"A DWELLER AMONG THE GENTILES."

Aberystwyth Clock-Tower.—We hoped we had heard the last of this ill-managed affair,—but, lo! fresh letters from architects who sent plans and are unable to get them back again, or to learn if they ever came before the committee,—the latter declaring they returned all the plans, forty-five in number, last April. Comment is useless.

Blackpool Beach Improvements.—Last week the committee met at the Albion Hotel, Blackpool, to select the best plan, and award the premium of 10*l.* to the successful competitor. There were six plans, and the committee selected that by Mr. Henry Worthington, painter, of Blackpool.

Rugby Town-hall Company.—The successful competitors were Messrs. Clarke and Worthington, of London, and Mr. Edward Murray, of Coventry.

HOUSES IN MELBOURNE.

A LEGAL friend, writing from Melbourne, says.—"Money is scarce here: indeed, I may say that it is sometimes not to be seen, so that we have to take law out in beans, bacon, coals, and cabbages, instead of money; and I assure you that these articles are sometimes a great treat here. Wages of all kinds have gone down very much lately. Carpenters and joiners now get from 10s. 6d. to 15s. per day, according to their ability; bricklayers about 12s. 6d. per day, plasterers about the same, and all other skilled workmen in about the same ratio. But rent has fallen very much. An artisan can get a very tidy cottage for about 7s. a week, and, with the exception of bread and potatoes, all other articles of consumption are about the same price as in England,—some a little more, others less. I am much puzzling myself how I can possibly make my house cool. I wish the *Builder* could give me a hint. It is one of Manning's panelled houses, the sides of the rooms only eight feet high. I have made the centre of the ceilings much higher by carrying it up to the rafters and plastering them, and I have also plastered the whole of the outside of the house. The roof is of inch board covered with tin tiles; but when we have our hot days (about 110° in the sun) the heat inside is terrible: our dining-room is often above 90°. If any thing could be suggested I would try it; but I am afraid there is nothing but a two-feet brick wall, with rooms twelve or fourteen feet high, and upper stories to the houses, will keep the sitting-rooms cool. Our evenings are generally comfortable, but the days are terrible. The great heat also plays great havoc with the gutters,—ridge and valley gutters: they are constantly cracking, and then comes a sudden tropical shower (no joke about it), and we are all swimming inside. My house, being a large one, has three roofs, so that there are two valleys, which are constantly serving us as I have told you. I wish something could be suggested. I think I saw in the *Builder* some time ago, a plan for plastering ceilings and walls on wire net-work instead of laths, as a preventive against fire. Do you think it would answer? If so, this is the place where it might be tried, as fires are not uncommon here, and a fire does not stop at one house, but generally clears a row. Can any thing be done to render the wood less liable to ignite than at present? The insurance here is something frightful: they charge 50s. per cent. on all wooden buildings, so that my house and furniture, which cost me altogether nearly 2,000*l.* would be 50*l.* a year,—a large sum;—if the house is not detached, then about 15s. per cent. more! 'Freemasonry' does not thrive well here. There are several lodges, but they are mostly Scotch and Jews' lodges: indeed, I do not know of one purely English lodge.'"

Contracts for the erection of the new Houses of Parliament had been called for, by last advices; and it was made imperative that the portion of the work more immediately required should be completed by the 1st day of May next. The part of the building for which tenders had been called was the place of meeting for the Legislative Assembly, which comprises a chamber 71 feet by 39 feet, with division-lobbies, speakers' and members' rooms, and other erections. The designs for the building were prepared by Mr. Kemp, of the firm of Knight, Kemp, and Kerr, architects, under the direction of the Colonial Engineer, Captain Pasley. The style is Modern Roman; and the whole building, when complete, will cover an area of 305 feet by 250 feet. The grand façade will front Spring-street, and will be 60 feet in height. The building will stand back about 100 feet from Spring-street, the ground on which it stands being enclosed in a curve from the corner of Nicholson-street, thus throwing a bold area into Spring-street, to give additional prominence to the building. The whole will be made, as far as possible, fireproof. All elaboration has been postponed, though it is not intended to do anything in a merely temporary style. The side-walls of the Chamber will be divided into compartments, by Ionic columns, and coupled columns of the same order are ranged along the ends. The space between the pilasters will form panels, in which the heroes of our colonial history will find fitting places for their portraits.

DOINGS AT BEDLAM.

*"Bethlehemi ad portas tollit 'dupla columna.'"**

MR. EDITOR,—How happens it that you have not noticed yourself, or called the attention of your professional readers, to the vigorous tall shoot which has sprung up, within the last six months, from that magnificent specimen of the *"Domei-flora Lauriensis,"*† standing in the garden of Bethlehem Hospital. This young plant has now attained its full height, and, if not cut off untimely, will soon expand into blossom. Upon this event, the Governors of the Hospital will give another public breakfast, as upon the occasion of their planting the original stem. Let us hope that the expectations hereof will not all end in smoke.

Yours truly, SYDDIE DE CHIMLIE.

Cobblers'-hall, April 1st, 1856.

P.S.—It is much to be desired that the cultivation of this splendid plant may be continued, regardless of expense, under the present skilful management: there will then remain a probability of our soon seeing another tall sprout rising up in front of the Hospital, or, perhaps, the young plant transplanted to the centre of the lawn in front of the Hospital.

*** We have reason to believe that the tall shaft alluded to is part of the scheme of a warming and ventilating engineer, and was strongly objected to by the architect previously to its erection. We are told that, on the report and at the recommendation of the architect, it is proposed either to lower or remove it.

THE NEW ROMAN CATHOLIC UNIVERSITY CHURCH AT DUBLIN.

THE new University Church is on the eve of completion. The site, near the University House in the centre of the city, being surrounded by houses, and restricted in area, it was resolved to devote the funds chiefly to the interior conformation and adornment of the edifice. The idea of the whole was based on the plan of the Early Italian basilicas. Internally, the main body or nave is 100 feet long by 36 broad (the utmost width of the ground); the height is 40 feet. The "west end" opens by a double colonnade on an ante-church of 20 feet by 35: above this is a gallery or triforium, which extends 25 feet into the western end of the church itself, built on arches and columns of the light and dark Armagh marbles, those of Kilkenny, King's County, &c. The ante-church is approached by an arthex or entrance-hall of large dimensions, extending to the porch in Stephen's-green. The two sacristies are at the eastern end. The architect had to avail himself of every inch of ground, and to make the best of difficulties unavoidable from the position. The lower part of the interior walls is to be covered with marbles of various colours to the height of 15 feet. These are all from Irish quarries. Each side will contain nine large arch-shaped panels, subdivided into rectangular panels, the lunettes containing a series of seven small arches filled with decorations of the mosaic character on gold inlaid grounds. The centre of these contains a saint's figure between sitting angels, and emblematic foliations of various kinds; the meaning of the whole bearing on the present or prospective interests of the University; as, for instance, one of such divisions will contain St. Patrick, the Apostle of Ireland: on the other side are to be sitting angels, bearing the crown, &c. These will be separated by palm-trees in mosaic, while the angels of the lunette present the oak or emblematic vine, sheltering the birds or beasts of the forest. Others will be devoted to St. Thomas of Aquinum, St. Gregory, St. Fiaker, St. Antony of Padua, St. Thomas of Canterbury, St. Laurence O'Toole, St. Bridget, &c. &c. The enclosing arched panel-frame rests on columnar panels, the former being of Cork red, and the columnar portion of Galway-green, with capital of alabaster, but the whole in intarsiature, as the entire wall decorations are surface work. The square intercolumnar panels will be of the King's County and various Armagh grays and browns, divided by Kilkenny black: above the whole will be rectangular panels of Armagh and Galway marbles. The triforium or gallery rests on shafts cut out of monolithic blocks of Armagh, King's County, Kilkenny, and other marbles: most of them are ready for erection.

Above the marbles will run a series of paintings in the fresco manner, which have been executed, or are in course of execution still, at Rome, under the direction of Signor Ferdinando Platneo. These will represent SS. Peter and Paul, and their lives, each in a series of separate compositions, running from end to end of the church. The windows are lifted above these, on one level close under the roof, and filled with white glass, arranged in "bull's-eyes," or lenses, "to impart a jewelly richness to the glass, without either impeding the light or interfering with the effect of highly-coloured pictures and rich marbles below." The roof was made flat, in the old Italian mode, and Mr. Pollen has painted it with flat designs.

The altar is to be of Derbyshire fluor-spar crystals, and alabaster, with enamel paintings in the centre panels. The jewelly surface of this front will accord with the precious materials of which the walls of the church are to consist; and these are all of them, with but few exceptions, national productions. The builder is Mr. J. P. Beardwood, of Dublin, who has executed the windows as well as the masonry, and has undertaken besides the cutting and polishing of a portion of the marbles—those from Connemara. The architect, painter, and decorator, is the lecturer on fine arts to the University. The general proportions were given by the rector, who is founder of the church.

There will be seats for above a thousand of the public, and a limited number of single seats to be secured by the year.

THE ROADS THROUGH ST. JAMES'S-PARK.

WE shall know before long how many of the committee's recommendations are proposed to be carried out. We are glad to find our objection to the removal of the Duke of York's Column is agreed in on all hands. A correspondent, who points out that the greatest amount of obstruction to traffic in the streets of the capital arises from crossings, and that the proposed new road will increase the amount of cross-traffic where Parliament-street and Bridge-street intersect each other, especially if a new thoroughfare is opened through Southwark, writes as follows:—With an entrance at each side of the Duke of York's Column from the West-end, let a broad elevated roadway or promenade be made across St. James's-park, in front of the Horse-guards, with a branch turning to the left through Downing-street, over Parliament-street, and along the terrace close to the Duke of Buccleuch's mansion to the river, giving that mansion, the Terrace, and Downing-street a double entrance; one to the new road above, and another to Parliament-street below. After getting to the river let it either cross directly by a new bridge for the Surrey side, or turn to the right for Westminster-bridge, increasing the width of that bridge and street on the opposite side to meet the increase of traffic. Next lengthen George-street, removing the gate forward, so as to continue the level of the street to the lodge, from whence it would incline, as it now does, along Birdcage-walk; and from between the lodge and the present gate let a broad roadway be made, ascending to opposite Downing-street, where it would meet the promenade. Let there also be a road below, as now proposed, from Stable-yard, St. James's.

The arches over the different roads and streets may be of metal, with stairs leading up from the roads and streets below at the piers.

Miscellanea.

GUN-WADDING FOR THE STAGE.—We still continue to receive communications on this subject, notwithstanding the hint in our last. One or two of these, however, we must notice. Mr. C. F. Dennet forwards us specimens of an invention of his, as a blank cartridge, consisting, he remarks, simply of a *"cork,* powder and metallic foil," which has been tried and found to be effectual. In reference to Mr. Dunn's suggestion of woven or compressed asbestos, Messrs. Deane, Dray, and Co. remind us that the wadding sent us by them some weeks before Mr. Dunn's suggestion appeared, noticed by us on 29th March, was compressed asbestos; but they forget that they did not authorise us to state what it was composed of, but simply alluded to it as a cheap incombustible material. It can be supplied, it seems, at eighteenpence a pound. Our correspondence on this subject must here close.

* First line of a description of the two celebrated statues by Cibber, which stood on the portals of old Bethlehem Hospital.

† President of Bethlehem Hospital, Sir Peter Lauric.

Archæological Institute.—At the meeting, on April 4th, Mr. Impey communicated some notes "On Antiquities found in Dunster-court, Throgmorton-street."—Mr. Scharf gave an account of the painted glass in Fairford Church, Gloucestershire. After investigating the traditions connected with the church, he spoke of the disappointment he felt in the glass upon first inspection, as far as design and execution are concerned. The great west window, devoted exclusively to a representation of the Last Judgment, was, notwithstanding, worth an express visit, if only on account of the exquisite beauty of its colour and arrangement. He mentioned that, at the desire of the congregation, a colossal figure of St. Christopher was recently *scraped off* from the north wall facing the south porch. The church has been repaired by Mr. Loughborough Pearson.—Mr. J. M. Kemble read a paper "On a particular class of Funeral Urns, made in the form of Dwellings."—Mr. Winston described some scarcely known glass in North Moreton Church, Berks, near Wallingford, of the commencement of the reign of Edward II.

A School for Kensington Potteries.—Endeavours are being made to provide Infant and Ragged Schools for the Norland and Potteries District. Our readers are aware of the condition of this locality, and will see at once the desirability of the object in view. Plans have been furnished by Mr. W. Sim, as honorary architect, and the committee are offered a suitable piece of ground to build on at a moderate ground-rent. The amount required for the proposed building is about 600*l.* and the committee earnestly solicit donations; the sum already subscribed and promised amounting only to 245*l.* Mr. Edward Jennings, of 29, Clarendon-road, would give any information required.

The Guild of St. Alban.—Reference was made in our articles on Woking to the Guild of St. Alban, who bury there. We understand that this guild has members in other parts of the country besides London, and at Tamworth a college is being erected (for which Mr. Dudley Male supplied the design) for some of its objects, viz. education of orphans, and a place of retirement for clergy and laymen of the Church of England. A site has been obtained overlooking Tamworth, and formerly the site of a leper hospital, the chapel of which still remains, though it has been used for years past, the chancel as a cottage, and the nave as a cart-shed. A part of the proposed building has been erected.

Buenos Ayres Gas Works.—We learn that the new gas company displays a remarkable activity. Already the mains are laid in a great number of streets, and in many others the trenches are ready for the pipes, which are laid along the sides of the foot-path. The length of different sized mains already laid in the streets amounts to the total of 6,200 yards lineal. The erection of the retort-house, coal-stores, purifying-house, &c. is completed, except the iron roofs, which are now being proceeded with. One of the two large gasholder tanks is entirely finished: the other will be completed in a few days. The retorts are upon the ground, and the furnaces are in a state of forwardness. The gas company have contracted to supply the apparatus and gas for lighting the new theatre, now in course of erection, by means of 1,200 burners. Mr. Wm. Bragge, C.E. is the engineer for the company, and Messrs. Edward T. Bellhouse and Co. of Manchester, are the contractors for the entire works.

Cork School of Art.—There are thirty engineers on the books of this institution, eight carpenters, four cabinetmakers, besides carvers, gilders, modellers, photographers, lithographers, japanners, decorators, house painters, &c. There are four architects, six builders, and ten female teachers. All these are rendering themselves more expert in a trade, or qualifying themselves for a profession. There are about seventy-five, out of 156, to whom the knowledge taught in the school is a matter of the very first moment, as a means of self-elevation and progress.

Glasgow Model Lodging-houses.—The annual meeting of the friends of this institution was held on Monday in last week, the Lord Provost in the chair. The report congratulated the meeting on the continued success of the present lodging-house, although the numbers for this year are somewhat fewer than that of last, which was 45,260, and for this year 43,108. There had hardly been a case of sickness during the year among the lodgers, and this notwithstanding of from fifty to sixty being permanent during the whole year. The institution had not only been self-supporting, but there was a balance of 107*l.* 11s. 4½d. The directors have had laid before them by the Building Committee plans of a new and large model lodging-house, which they expect, when carried out and completed in the new buildings in Carrick-street and Macalpine-street, will prove among the best suited for the purpose of any in the kingdom. The work has been estimated for, it is said, by competent tradesmen.

Ventilation and Window Lights.—The Rev. M. Mitchell, in his report to the Committee of Council on Education, says, on the subject of ventilation and window lights,—"I am persuaded, my Lords, that too much attention cannot be paid to the ventilation of rooms, and their method of lighting; and have constantly to complain of the sensation produced in buildings with high pitched roofs, combined as they generally are with diamond-shaped window-glass. These rooms are mostly ill-ventilated, and the subject seems to be so little understood, that even the plans most highly recommended too frequently fail of success. It is a curious fact that, of the pupil-teachers and mistresses who have failed in health, all, with but one exception, have taught in schools thus constructed."

The Steam-hammer.—A five-ton hammer, of an improved construction, has been in operation for nearly twelve months, at the Bowling Iron Company's Works, partly employed in forging wrought-iron plates for floating batteries. The main feature in this invention, it is said, consists in its having the steam cylinder placed at the back of the hammer-block, where it is bolted between the vertical cheeks of the standards, thus forming a substantial connection and support to the main framing, and effecting an important reduction in the height of the machine, by which means the lateral stiffness is so much increased as to render the use of props and stays unnecessary. In this way the hammer-block can be made of any available length, thereby securing ample length of guiding surface, without increasing the height of the framing.

Discovery of Roman Remains at Barton-upon-Trent.—In a field belonging to the incumbent, the Rev. Mr. Wintour, where other remains have from time to time turned up, the parish clerk, while ploughing last week, struck upon a pavement of geometrical design, in red, white, and blue, and of diced tile mosaic work, "as fresh and beautiful," says the *Notts Guardian*, "as the day when it was laid down, or as we now behold the entrance court of the Roman villa at Sydenham Palace." The area uncovered forms an oblong rectangle, 15 feet by 10 feet, and so placed that the house-front to which the pavement belonged must have faced the south. The centre part, within a brilliant bordering of scroll and other work, is occupied with a great variety of geometrical figures, such as squares inserted diagonally within squares, others of chequered pattern, others trapezial, and all centered in a large ellipse. It is worth noting for behoof of future discoverers, that the field containing this pavement has long displayed the outline and area of this very pavement in the form of a square patch of defective vegetation, in the midst of richer crops; and there are other patches of a similar kind in the same ground.

Fire at Vauxhall Railway Station.—Every building and office belonging to the railway station at Vauxhall has been destroyed by fire, which broke out on Sunday evening last. The station building was upwards of 150 feet long, and 60 feet wide, and was composed entirely of wood, canvass, and paper. The amount and value of property wasted by fire in this country would astonish the population, were it correctly estimated once or twice a year. At present, fires are unusually numerous throughout the whole country, and what is singular, in the majority of instances, the precise cause or origin of the fire is unknown. Has the remarkable prevalence of ozone or electrified oxygen in the atmosphere ever since its equally remarkable deficiency in the cholera season anything to do with it, as at least a predisposing cause?

A People's Park for Wolverhampton.—A public meeting of the working classes of Wolverhampton was held last week, to take preliminary measures for the establishment of a "People's Park and Pleasure Grounds." A committee for the promotion of this object has been appointed. It is proposed to purchase twenty acres of land at a cost of 2,400*l.* and to fence, drain, plant, form walks, seats, and otherwise embellish the park, at a cost of 2,500*l.* more.

Coating Metallic Surfaces with Aluminium.—Mr. J. G. Taylor, of Glasgow, has specified a patent relating to the use of aluminium for coating or plating metallic surfaces, either by the action of galvanism, or by the old system of plating with sheets. It may be also applied for preserving ships' sheathing, as well as for protecting a great variety of metallic surfaces liable to injury from the atmosphere, from gases, liquids, or direct chemical action.

Kirkstall Abbey.—We hear that the Earl of Cardigan, to whom Kirkstall belongs, has appointed Mr. Bloxham to take an architectural survey of the ruins, and within the last few days has intrusted the care of the abbey and precincts to a committee of five gentlemen of the neighbourhood, who hold it under lease for the express purpose of protecting what remains.

Birmingham School of Art.—The modelling classes of the Birmingham School of Art, which have for the past nine months been closed, were reopened on Monday last, under the superintendence of Mr. C. Henry Whitaker, whom the committee have appointed.

The Glass-blowers of Lancashire.—A correspondent of a Liverpool paper says;—"The glass-blowers and gatherers are the worst paid of any men in Lancashire. For many months past their wages have not averaged 14s. a week, and this pitiful sum is principally earned by nightwork. The writer of this was present, on Friday night last, when one of the blowers—a steady, hard-working, sober man—brought home to his wife 10s. for a whole week's work. This man has a wife and family to support by his own industry. The worst feature in the case is, that he has been obliged to work without intermission twenty-four hours at pot-setting, pot-arching, &c. which, properly speaking, is the work of a bricklayer, and for which he has not received one farthing, nor is he likely to have anything."—*Preston Guardian.*

Survey of Tipton: Differences.—Last week, according to the *Wolverhampton Chronicle*, the Board of Health proceeded to the business of the evening, namely, the acceptance of one of the tenders for the surveying and levelling of the parish, which were nineteen in number, ranging from 1,275*l.* to 125*l.*! Ten of the tenders were reserved for further consideration. It was stated that the district to be surveyed for the general plan comprised about 2,300 acres, and 5,300 houses and buildings, besides collieries, ironworks, &c. and contains a population of upwards of 25,000. Two plans would be required—a general plan of the whole parish or district, under the jurisdiction of the Local Board, to a scale of two feet to the mile; and detailed plans of such portions of the parish as shall be required by the Local Board of Health (comprising in the whole about fifty separate sheets), to the scale of 10 feet to the mile, or an inch to 44 feet. The ten tenders selected out of the nineteen were those of Mr. Charles Round, of Tipton, 970*l.* in eighteen months; Messrs. Peacock and Cotterell, of Tipton, for 900*l.* in fifteen months; Mr. W. Fereday, of Wolverhampton, 793*l.* in fifteen months; Mr. G. M. Mills (no residence given), 600*l.* in nine months; Mr. Harkness, Westminster, 600*l.* no time mentioned; Messrs. Hesketh, Homfray, and Homfray, of Westminster, 567*l.* in nine months; Mr. J. A. Bone, of Maidstone, 455*l.* in six months; Mr. M'Cleary, of Cheltenham, 428*l.* in twelve months; Messrs. Mitchell and Fawcett, of Sheffield, 250*l.*; and Mr. J. G. B. Marshall, of Westminster, 231*l.* Messrs. Peacock and Cotterell's tender was ultimately accepted.

Steam Carriages for Common Roads.—A correspondent, "C. C. C." asks "why the many attempts made to run steam carriages on common roads, have *all* failed." Perhaps some correspondent who knows more of this particular subject than we happen to do, may reply to the question. Our correspondent at same time makes a suggestion interrogatively,—"Whether a mode of applying steam or other motive power to carriages intended for roads and streets, by which the pressure would be taken off the wheels, and a direct pulling or pushing action obtained, would be likely to obviate difficulties." A steam carriage was recently invented which was designed to obviate certain difficulties, by carrying along with it its own railway, laying it down and lifting it up as it progressed. What has become of this project, or whether it is still "on the cards," we know not. Steam power, we may here incidentally note, would by no means be desirable as the motor of those simple and inexpensive self-moving vehicles suggested in our pages, for behoof of workmen, clerks, shopmen, and others, with small means, and resident at a distance from their respective occupations.

The Iron Trade.—The quarterly meetings have all been held without any alteration in the nominal prices. The trade, it is alleged, is looking up, particularly since the announcement of peace.

New Entrance to Regent's-park.—It is officially announced that the new entrance to the Regent's-park from Charles-street, Portland-town, will be opened to the public on the 1st of May.

Glaze of Silica over Soft Stone Carvings.—"A Builder" asks "if the new solution of silica would do as a substitute for paint upon stone, and, if so, how it is prepared." His object, however, appears to be not so much to obtain an opaque paint as a clear or transparent glaze. He is aware of the existence of artificial means of hardening stone (such as carved Caen stone chimney-pieces, for instance, which cannot be used unless either glazed, hardened, or painted in some way), but he is inclined to think that if solution of silica would give a glaze to the stone it would better meet the requirements of builders, and enable them to obtain handsome carved stone chimney-pieces at the price of shabby marble ones.

ALARM OF FIRE AT DRURY-LANE THEATRE AGAIN.—Late on Saturday night last, or early on Sunday morning rather, an outcry arose that Drury-lane Theatre was on fire, and the engines were promptly on the scene of alarm. The firemen of the establishment, however, managed, it is said, to subdue the fire ere any great damage was done, the only part burnt through the surface of the woodwork being a beam under the bridge of the first tier of flies. The strangest circumstance of all in connection with the alarm was the fact, that it was one of Phillips's fire annihilators which was alleged to have caused the mischief by exploding while some experiments were being tried with it, in order to test its merits as a fire annihilator, by comparison with the hose of the ordinary firemen, who were not only brought into requisition at the same time in an experimental endeavour to put out the gas burning in the battens over the stage at the end of the performance, but were actually called upon to undo the mischief supposed to have been done by the fire annihilator, the funnel or head of which was blown up in a heated state into the flies, where it lodged under the bridge of the stage, while another part of it knocked down a man, and was projected 35 feet beyond him. The machine, it is said, then threw up such a body of fire, that every one in the theatre apprehended its entire destruction. Several persons were injured, but no other harm was done. Mr. Phillips, the inventor of the fire annihilator, we observe, repudiates the machines made by the company.

THE PROPOSED MONUMENT TO SIR HUGH MIDDLETON.—We learn that the improvement in Claremont-square, Pentonville, is now completed without anything effectual being done towards the erection of a monument to a public benefactor such as Sir Hugh Middleton was. It can never be too late, however, to do such an act of justice to his memory; and we still hope that a memorial of the beneficent founder of the New River Waterworks will ere long be erected in an appropriate locality.

THE HORTICULTURAL SHOW GARDENS AT CHISWICK. — We are glad to hear that a strenuous endeavour is, after all, to be made to retain these delightful réunions of the Horticultural Society of London. Earl Grey's motion in the Society on 31st March last, that the council be authorized to terminate the tenancy of the garden, concluded with a proviso or qualification to the effect that this should be done as soon as possible, "unless such a sum as the council may require for maintaining the garden shall have been subscribed before May 1st." Now many of the members are sanguine in their hopes, that by a general effort and a new organization of the garden, admitting a new class of subscribers, and giving greater importance to the meetings in Regent-street, the exhibitions at Chiswick may be made as popular and profitable as ever they were; and it appears a subscription has been opened for donations which shall only be called for should something like the requisite sum (5,000*l.*) be subscribed. Nearly 600*l.* were thus already offered, up to 7th inst. and it is to be hoped that much more has by this time flowed in; that good use will be made of the short time that still remains between this and 1st May; and that Mr. Booth, the Society's librarian, at 21, Regent-street, will have a busy time of it till then in receiving and acknowledging the requisite offers of conditional subscription. Of the 600*l.* alluded to, the Dukes of Devonshire and Northumberland are each down for 100*l.*

SURREY ARCHÆOLOGICAL SOCIETY.—The Duke of Cambridge has accepted the office of patron of this society.

THE APPROACHES TO NEW RECORD OFFICE.—The house at the corner of Carey-street and Bell-yard is worth sketching: it is twisted and bulged in every direction, and is out of the perpendicular 9 or 12 inches, overhanging the public way. It cannot be less than 200 years old, and has been long since vamped up and covered with that most *charitable* material *compo* to hide its faults. It has for some time past been a law stationer's, but is now vacant, probably from being thought dangerous to live in. As the street is here a most inconvenient narrow gut, and a new line of street is contemplated from the new Record Office and Rolls Court, it behoves the authorities whom it may concern to purchase the property (if not already done), and not wait till a new house is built, for which they would have to pay a large sum as compared with the present. Many similar opportunities are not profited by, as, for instance, two or three years ago, at the corner of Queen-street and Drury-lane, where a vacant piece of ground and two or three miserable little shops might have been obtained, but now a public-house has been newly built, and thus the improvement of that awkward corner, obstructing the great thoroughfare between Long-acre and Queen-street, has been lost. Many more similar cases might be mentioned.

VERBUM SAT.

A NEW DISTRICT CHURCH FOR ST. MARYLEBONE.—The rector of St. Marylebone and some of his influential parishioners announce that they have secured an offer of ground, formerly the site of Calmel-buildings, and a house in Orchard-street, for the erection of a new church, and they are now actively engaged in arrangements for procuring funds to carry the object into effect. Subscriptions are being received by Sir Samuel Scott and Co. of Cavendish-square; and communications by the rector, at 11, Upper Wimpole-street.

ARCHÆOLOGICAL REMAINS AT LOCH SPYNIE.—Some interesting remains, according to the *Elgin Courant*, have recently been uncovered by the margin of Loch Spynie, at Salterhill. These remains are of black oak, and are supposed to have comprised four conduits opening into an oblong tank, lined and floored with oak. The tank is supposed to have been a reservoir for collecting water from the loch for the manufacture of salt.

DRAINAGE OF LONDON.—Apparently not aware that a similar suggestion has already appeared in our pages, "C. F." proposes,—"To place the sewer in the bed of the river, which is still public property, and where any required depth can be had, so that the existing sewers may, with slight alteration at their outlet, be conveyed to it. If this principle be adopted, it might be carried out in various ways, and it is not desired to encumber this statement with unnecessary details, but having regard to the qualifications already stated, the following plan is suggested;—that an iron sewer or sewers should be made, in lengths, furnished with proper inlets, similar to those in drain pipes. Whether one sewer in the centre of the stream would serve for both banks, or whether two sewers of less capacity would be preferable, it is not necessary now to assert: it is suggested that the form for such sewer should be that of the letter D, with the flat side uppermost, thus, ⊔; that the conducting channels from the existing sewers should also be of iron; and where several sewers now enter the river near together, a junction might be formed before entering the main sewer: it is believed that by deepening the bed of the river, where necessary, with dredging-machines, the greater part of the sewer could be laid with comparative ease. Experience has proved that constructions of iron can be brought within closer calculation, both as to cost and time of completion, than those of other materials, and iron mains have been already laid across the Thames by the water companies." Of some of his general observations we may avail ourselves hereafter.

SMITHFIELD.—"W. D." proposes that the present site of Smithfield-market should be open to Charter-house-square, by pulling down one row of houses, which would give the largest area in London, at trifling expense, to the great benefit of the whole of the inhabitants.

A HINT FOR WORKMEN IN POOR HEALTH, who have to rise early, and to walk any great distance before breakfast:—Into the bottom of a tumbler or sugar-basin put the yolks of two eggs (when they are cheap), and mill them up into a froth, with some powdered lump sugar or brown sugar: then fill the tumbler or basin with *boiling* coffee, and you will have a "before breakfast" fit for a king, and on the strength of which you may defy *malaria*, or a *ten* miles' walk. I write this for the "delicate," as health is everything with them, for themselves and families; and it is far better than taking the morning dram or glass of beer; and it is a cheaper and far better tonic than can be purchased at the doctor's shop. Engineers on railways agree that coffee is the very best thing to take early in the morning. Plumbers and painters should drink "pure unadulterated" milk.—PHILO.

TENDERS

For building a rectory-house at Sheepy, in the county of Leicester. Mr. R. Jennings, architect. The old materials to be the property of the contractors:—

	With Hollington stone dressings and hammer-dressed facings.	With Hollington stone dressings and patent pressed bricks from Lichfield.
Johnson, Leicester	£2,670 0 0	£2,635 0 0
T. and G. Harrold, Hinckley	2,428 10 0	2,428 16 0
Lilleys and Elliott, Measham	2,186 0 0	2,138 0 0
Fox and Brothers, Atherstone	2,027 0 0	1,987 0 0
Haddon and Potter, do. (accepted)	1,794 0 8	1,817 16 8

For building the carcase of a new house at Orchard-leigh Park, for Wm. Duckworth, Esq. Mr. T. H. Wyatt, architect:—

Trapp and Harris, Warminster	£10,312 0 0
Wilcox, Bristol	10,250 0 0
Davis, Frome	10,190 0 0
Brown and Sons, Frome	10,122 0 0
Jones, Bradford (accepted)	9,714 0 0

For building a factory for Messrs. Hobbs and Co American lock-makers, in Arlington-street, New North-road. Messrs. Cadogan, architects. Quantities supplied:—

Devereux and Son	£2,288 0 0
Sanders and Woolcott	2,200 0 0
Macey	2,023 0 0
Pritchard and Co.	2,000 0 0
Lawrence and Son	1,924 0 0
Lucas, Brothers	1,896 0 0
Jay (accepted)	1,844 0 0

For nine houses at Notting-hill:—

Starkie	£7,069 10 0
Lawrence	6,855 0 0
Rider	6,680 0 0
Wheeler	6,000 0 0
Snell	4,970 0 0

For warehouses and stables for Mr. George Middleton in Norton-folgate. Mr. William Reddall, architect:—

Scott and Cornwall	£1,209 0 0
J. Pritchard and Son	1,145 0 0
Pritchard and Sons	1,108 0 0
Burton	1,073 0 0
Wheen	1,015 0 0
Green	1,013 0 0
Johnson	973 0 0

TO CORRESPONDENTS.

NOTE.—Various statements having reached us as to the difficulty of procuring copies of the *Builder* in some parts of the kingdom—more particularly in Ireland,—it is proposed to parties desiring to subcribe, that on the transmission of a post-office order, or postage stamps, addressed "Office of the *Builder*, No. 1, York-street, Covent-garden, London," the *Builder* will be forwarded to them on the day of publication.

Terms, for One Year	£1	1	8
,, ,, Half-year	0	10	10
,, ,, Quarter-year	0	5	5

"J. F. F."—"J. D." (we cannot interfere between Mr. Cubitt's representatives and his tenants).—"N. 31."—"W. R. W."—"W. H. V. B."—"Paving Surveyor" (we are forced to decline giving prices).—"J. B. P."—"J. G."—"C. W."—"E. T. B."—"B. R. J." (we are unable to advise).—"W. T."—"J. T."—"J. L."—"H. R."—"J. A."—"S. S."—"C. P."—"G. W. B."—"W. B. B."—"W. S."—"S. T."—"C. B."—"Mr. N."—"F. C. P."—"W. C. T."—"Quondam."—"C. B. A."—"G. G. S."—"F. G."—"Mr. R."—"W. Y."—"R. J."—"M. D. W."—"J. R."—"A. B. H."—"T. M."—"B. W."—"F. G. S."—"R. B."—"W. R."—"J. M."—"C. W."—"T. L. D."—"J. B. N."—"W. M. B." (Hy)—"L. and B."—"Analyst"—"A Competitor" (mem. thirteen so signed).—"W. B."—"A Protestant."—"C. S."—"W."—"Col. N." (parcel has arrived).—"J. D. P."—"M. J. L."—"C. F." (next week).

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—**All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor;" all other communications should be addressed to the EDITOR, and not to the Publisher.**

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *viâ* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

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By order. WILLIAM MARSHALL, Clerk.
Durham, 2nd April, 1856.

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WANTED, a CONTRACTOR who is capable of undertaking a large CONTRACT for RAILWAY WORKS upon the Continent. The most satisfactory references will be required.—Address, post-paid, A. B. Civil Engineer, City News-rooms, Cheapside

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WANTED, by a Young Man, an ENGAGEMENT in a LAND AGENT and SURVEYOR'S OFFICE as DRAUGHTSMAN.—Address, X Y. 12, Church-street, Camberwell.

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HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by a process which is patented, to supply their Pure White Zinc Paint at the price of White Lead. Neither exposure to heat, nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil; also for Plaster decorations, and where it is used with Size. Sold by the Wholesale Paint-dealers in Original Packages, each cask stamped—HUBBUCK, LONDON—PATENT. And when so marked, the quality is guaranteed. Full particulars may be had of THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brick-work, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

FRONTS of HOUSES. — GREENE and CO.'S PORTLAND CEMENT WASH will not vegetate, and equal to Oil Paint for durability. In casks of 1 cwt. for 10s.
DAMP WALLS GREENE and CO.'S OXIDE SOLUTION PAINT, a guaranteed remedy, sold in quantities to cover 300 square feet, for 12s.—To be had only of the Inventors, GREENE and CO. 22, Norfolk-street, Islington.

BLUE LIAS LIME.—CHARLES NELSON begs to inform Engineers, Architects, Contractors, Builders, and the Trade in general, that he is prepared to supply direct from the Works in his own boats to any part of the Thames, River Lee, on any canal or by rail to all parts of the kingdom, large quantities of the above GENUINE HYDRAULIC LIME now so extensively used.
Quality, Weight, and Measure may at all times be strictly relied on, references in proof of the above can be given.
N.B. The Captain of the Boat will always bring with him the Grand Junction Canal Note, from which the contractor will be enabled to know exactly what weight of Lime he is paying for.
All orders addressed to the—
LONDON DEPOT, 16, SOUTH WHARF, PADDINGTON.
BLYTH, BROTHERS, SOLE AGENTS.
Will be promptly attended to, and any further information can be obtained from them
Works, Stockton-field, near Southam, Warwickshire.

PLASTER of PARIS.—MESSRS. BLYTH, BROTHERS beg to acquaint the trade, that they have made a considerable reduction in price; the quality they are now manufacturing cannot fail to give entire satisfaction. Samples and prices forwarded to any part of England, or the metropolis. No extra charge made to any wharf or railway station in London. Any further information can be obtained at their Works, Baldwin's-place, Gray's-inn-lane, Holborn; or at the Blue Lias Lime Depôt, 16, South Wharf, Paddington.

GREAVES'S BLUE LIAS LIME, PORTLAND, BATH, and LIAS CEMENTS, at Hanbury, Stockton, and Wilmcote, Warwickshire.—Messrs. GREAVES and KIRKHAW beg leave to inform Engineers, Architects, Contractors, and the trade, that they have completed their works on the Great Western Railway, at Hanbury, they are now prepared to supply any quantity of the above articles, and to deliver to any part of the country, by railway or canal.—Offices, Warwick.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 3d. per ton.
Barges loaded in the Regent's Canal basins.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump into boats, at the Works. Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.:—Grey Stocks, 23s. per thousand; Grizzles, 30s. per thousand; Rough Stocks, 26s.; Place, 13s. to 18s. per thousand.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at FADDY'S Brick-fields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.
Malm Pale, half-washed Stocks, and Place Bricks, also on sale These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brick-fields, Grange-walk, near the Rosemary Branch, Islington.
N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubble, for brick making, Flints for building and pottery work, Foundry Loam, Whole Whiting, Whiting Sand for whitening, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick making, &c. &c. sent up barge from Messrs. MEEson and CO.'s Wharf at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 300 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle), Fire-clay, Flare-burnt Lime, and Marble and Pemper Lime, and here lime is packed in hogsheads, casks, jars, &c. for exportation.
General Office—No. 12, GEORGE-YARD, LOMBARD-STREET. Letters addressed to Grays Essex, will meet with immediate attention.

WHITE SUFFOLK and RED FACING BRICKS
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 3, ADELAIDE-PLACE, London-bridge.

IMPROVED BRICK and QUARRY-PRESSING MACHINES, made by THOMAS PORTER, LONDON-ROAD, Leicester.—T. P. begs to inform Architects, Builders, Brickmakers, and Others, that he is now engaged in making very superior PORTABLE BRICK-PRESSING MACHINES, at considerably reduced prices. The boxes are lined with brass.
For design of Press, refer to "The Builder," January 12, 1856.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of fine superior quality to hand-made, with 4-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1-4, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BRICK and PIPE MACHINES, manufactured by PORTER, HINDE, and PORTER, Engineers, Carlisle. The manufacturers invite attention to PORTER'S and THE AINSLIE CO.'S PATENT MACHINES for making solid and other Bricks, Quarls, Tiles, Cornices, Socket and Plain Pipes, &c. which they recommend as best adapted for producing good bricks or pipes where quantity is an object.
These machines produce articles superior to any hitherto made by other methods; they are simple in their construction, and not liable to get out of order. They are being largely adopted by brickmakers in one brickfield near London there are eighteen of the Ainslie machines in use.
The manufacturers particularly direct attention to the combined PUG and BRICK MACHINE, as being capable of pugging the clay with less power and of producing the largest number of good bricks of any machine yet offered. This machine was tried at the last meeting of the Royal Agricultural Society of England, when it pugged and moulded at the rate of 1,800 bricks per hour, and was commended by the judges; and at the late Paris Exhibition the jury awarded for it a first-class medal.
This machine may be seen at work at Carlisle. The following is from the *Times* of July 26, 1855:—"A very high opinion was formed of the value of this machine by those who witnessed its performances to-day."

BRICKFIELD, near the three cemeteries, Brown's Wells, Finchley.—TO BE LET, upon very moderate terms the above FIELD, containing 8½ acres of good brick earth. For terms and other particulars, apply to Mr. A. RICHARDS, Auctioneer, Tottenham.

BRICKFIELD TO BE LET at TOTTENHAM, containing 8½ acres of excellent malm earth, situated by the side of the Ware road, 4½ miles from London. The bricks made in this field have always found a ready sale.—For terms and other particulars, apply to Mr. A. RICHARDS, Auctioneer, Tottenham.

TO STONE-PIPE POTTERS AND OTHERS.
WANTED to PURCHASE, a PIPE-MACHINE, with Dies, complete, to make up to 12 inches; also, a PUG-MILL. Any one having the same to dispose of, may hear of a purchaser, by stating full particulars as to price and maker's name, to C. FOX, 46, Great Prescot-street, Goodman's-fields, London.

POTTERY for FRANCE.—A Gentleman who has lately become the owner of a field of very fine POTTER'S CLAY, at Folkestone, recently discovered, wishes to DISPOSE OF the whole or any part of the earth may be had of Mr HOLLINSHED, 11, North-bank, Regent's park.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street, North City-road Basin. Secondly, that the trade term, "Terro-Metallic," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 581, of the last Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES, either old or new, whether of thatch, slate, or tile), and other structures. Sole agent, J. B. LAWES, 1, Adelaide-place, London-bridge. Having been app inted by the Patentee SOLE AGENT for the SALE of the ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the latter is made to form a cheap and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the roofs of houses. It is cheap and permanent, and removes all drip. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvertoft, near Rugby; or in London, Gloucester, or Bridgewater.
Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

TUDDENHAM, IPSWICH, BRICK AND TILE WORKS.

EXPOSITION UNIVERSELLE
de 1855.

Medaille de 2me Classe awarded to JAMES LUFF, for Specimens of Ornamental Bricks and Tiles.

JAMES LUFF

Begs to inform Architects and Builders that he MANUFACTURES all KINDS of ORNAMENTAL BRICKS and TILES, Red and White, for Chimney Shafts, Ridge Crests, Cornices, and Mouldings.

Also, all KINDS of ORNAMENTAL VASES, CHIMNEY-POTS, MALT-KILN TILES, DRAINING-PIPES, and TILES of every description.

N.B. Builders furnishing detailed drawings can have all sorts of Ornamental Designs executed.

LOOKER'S PATENT IMPERISHABLE GROUND INDICATORS.

A

Considerable difficulty has arisen among the various Burial Boards, appointed under the New Burial Acts, as to the best and most economical method of marking the different grave spaces, in the Cemeteries that have already been opened.

This apparent want has suggested the idea of EARTHENWARE MARKS, or INDICATORS, of the form shown in the accompanying Engravings.

A is a sketch of the Patent Indicator, and B represents it as fixed in the ground.

The Indicators are made hollow, in well-burnt red or other pottery, with a thick sloping top, on which are impressed any letters or numbers that may be required. The lower part of the Indicator has openings, which give it a firm hold in the ground.

The advantages which these Marks possess need scarcely be mentioned. They will remain in the ground for centuries, unaffected by damp or change of atmosphere; and the figures, &c. being impressed, are as durable as the Indicator itself. They occupy but little space, while a broad view is presented of the impression on the top. And the expense of these Indicators is not a third of that of Marks made in other perishable materials.

The Patent Indicator can be made of any shape or size applicable to every purpose for which a mark in the ground may be necessary.

*** *A limited number of Licenses will be granted to respectable Manufacturers.*

B

Further Particulars and Prices may be obtained, and Specimens seen, on application to

BENJAMIN LOOKER, JUN.
INVENTOR, PATENTEE, AND MANUFACTURER, KINGSTON-ON-THAMES.

FOR SALE, remarkably cheap, a SET of superior FORCE-PUMPS, containing Two Barrels 15½ inches diameter, fitted up complete, with air-vessels, brass valves, plungers, rods, &c. capable of throwing several thousand gallons of water.—For particulars apply to CHRISTIAN and SON, Ironmongers, Deal, Kent.

B. FOWLER & CO.'S PORTABLE PUMPS,

3-inch to 9-inch Barrels,
Plain or Sliding Telescope Suction,
ON HIRE.

SINGLE AND DOUBLE PUMPS,
all sizes,
to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.
WHITEFRIARS-STREET,
Fleet-street.

R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

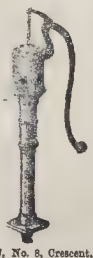
Iron Pails 32s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in. short	1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „ long	3	3 gutta percha	1 14 0
3 „ ditto	3	6 or cast iron	2 8 0
3½ „ ditto	3	6 flanged pipe,	2 12 0
4 „ ditto	3	6 as required.	3 3 0
2½ „ short, with 15 feet of lead pipe attached, ready for fixing			2 14 0
2½ in. long ditto ditto			2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.



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ORSI AND ARMANI.

THE EXCLUSIVE SUPPLY OF SEYSSEL ASPHALTE (FRANGY)

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REDUCTION IN THE PRICE FOR VARIOUS WORKS FIFTEEN PER CENT.

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WORK GUARANTEED FOR THREE YEARS.

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PATENT METALLIC LAVA.

A printed List of the important Works for Flooring, Roofing, Covering of Arches, &c. &c. executed from 1848 to 1852, with this Material, may be obtained at the Office of

ORSI AND ARMANI.

THEIR PATENT METALLIC LAVA IS FIFTEEN PER CENT. CHEAPER THAN THE GENUINE SEYSSEL ASPHALTE OF MESSRS. O. AND A.

OR THIRTY PER CENT. LOWER THAN ANY OTHER MATERIAL CALLED BITUMEN OR ASPHALTE

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 42 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non-conductor.

INODOROUS FELT, for damp walls and for damp floors, under carpets and floor cloths. Price ONE PENNY per Square Foot.

CROGGON and CO.'S PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing the radiation of Heat, saving 25 per cent. of Fuel, and deadening Sound.

Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.

GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Cloe-et-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 296, Oxford street.

HELY and WARING, Managers.

COC CROWN, 18 Tables, per crate, 20s.; H 15 oz. SHEET, 2d per foot; FOREIGN SHEET, 300 feet cases, 24s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s GROUND SHEET, 3d ENAMELLED, 8d per foot. Tiles and Slabs from 6d each. Sashes primed and glazed, 3d per foot. HELY'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

Catalogues and Prospectuses free.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belvan sheet glass, in cases 200 feet each, 1sts, 2nds, 3rds; 4ths, 5ths; squares, in boxes, 100 feet each 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 24 by 14, 2d.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

G. FARMILOE and SON, 118, St John-street, West Smithfield

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse 318, OXFORD STREET.

JAMES PHILLIPS and CO. beg to call the attention of Builders and the Trade to their present LOW PRICES of GLASS for cash.—7 0 C per crate of 18 tables, 29s.; 16 oz. sheet glass, 2½ per foot, crown and sheet squares, in 100 feet boxes, from 1410 to 2214, 2d. per foot; enamelled glass, in crates, 6d. per foot; ground, ditto, 3½d. per foot; foreign sheet, in cases of 200 feet, 36s. 38s. 40s. and 42s.; ½ patent rough plate tiles 20s. per doz. Cathedral and stained glass and all the neutral tints. 106 BISHOPSGATE-STREET WITHOUT.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200 and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 1sts, 38s.; 2 hs, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½d. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3½d. per foot. Crown and Sheet British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester square.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Pipe, White lead, Iron and Brass Pumps, Water-closet Cocks and Plumbers' Brasswork, Paints, Colours, Oil, and Turpentines of the finest quality, at wholesale prices. Lists on application at THOS. MILLINGTON'S Warehouse, 87, Bishopsgate-street London. Established more than 100 years.

TO ARCHITECTS, BUILDERS, AND DECORATORS.

STAINED GLASS WORKS, 1, Arlington-street, Camden-town. Designs and estimates furnished for every description of painted, stained, and embossed glass, on application to W. M. BELL, Glass Painter, as above.

Manufacturer of white enamelled letters for street names, &c.

ORNAMENTAL WINDOW-GLASS.—The Trade is respectfully informed that engine-turned and other patterns of ENAMELLED GLASS, hitherto supplied through Mr. CHARLES LONG, may now be had direct from the Works of W. H. JAMES, inventor and sole producer, 37, High-street, Camden-town, London.

WINDOW GLASS, flattened sheet, in cases of 100 and 300 feet, various sizes, one-eighth inch thick, of very superior quality. The trade supplied, by S. E. PACK BARBER and CO. Merchants, 35, West-street, Smithfield.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES on application to the SOHO PLATE-GLASS COMPANY, 20, Soho-square

TO ARCHITECTS, BUILDERS, AND OTHERS.

FRANCIS, RICKABY, and DUNN beg to call the attention of the above to their IMPROVED REVOLVING WOOD and IRON SHUTTERS; also, to their extensive assortment of BRASS and other METAL SASH BARS, STALLBOARD PLATES, &c. F. R. and D. having erected new and powerful machinery for the sole manufacture of the above, are enabled to offer them at a considerable reduction of price.—Prospectuses can be had or forwarded, on application to 34, Gray's-inn lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshop, 110, Broadwall.

J. FISHER, 70, YORK-ROAD, LAMBETH, formerly shop foreman to Messrs Lawrence, Shop-front Builder and Manufacturing Joiner to the Trade, 1½ and 1¼ four-panel doors from 6s. each; 1½ sashes and frames from 7d. per foot; 2 inch ditto from 8d. Windows fitted with Gribbon's Patent Hinges for cleaning, painting, &c. All kinds of joiners' work estimated for according to design.—A list of Prices sent on application.

A. The Union Joint. B. The Joint as applied to connect the Pipe and Basin.

SPRATT'S REGISTERED FLEXIBLE JOINT, which supersedes the ordinary clumsy and inferior method of making the connection with the lavatory pipe and Water Closet Basin. The advantages derived by using this Joint, consist of the certainty of making a sound joint. The connection is easily made in a few minutes' time. Should the basin ever require removal, the joint will remain perfectly intact, an advantage invaluable where the closet is fixed on an upper floor, thereby preventing injury to the ceiling below. THOMAS SPRATT, Builder and Engineer, Vassall-road, Kennington.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

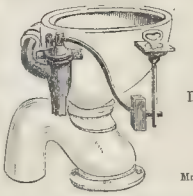
W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS,

LAMBETH POTTERY, LONDON.



DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.

AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

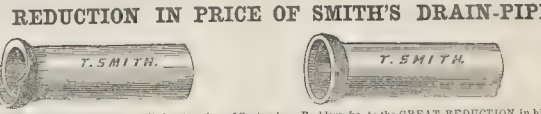
MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality, Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country. An extensive assortment of specimens and patterns may be seen at 15 per foot super, together with every particular of its cost and adaptation, can be obtained of Mr. BOYCE, 2, Charlotte-row, Mansion House; or of Messrs ARROWSMITH and CO. 80, New Bond-street.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS, NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.
Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.
Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.
Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

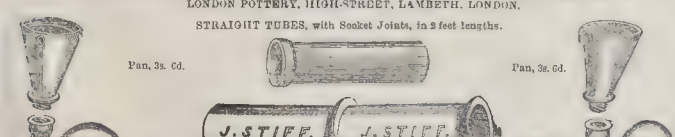
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES.

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz:—
Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Denyers wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION in the PRICE of PAREY'S superior STONE GLAZED DRAIN-PIPES.—Manufactory, Church-street, Deptford, Kent.
N.B. All kinds of Red Drain-pipes.—Established 1701.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.
N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 80 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES

3 inch bore, in 2 ft. 6 in. lengths, at					3d.	per foot.
4	"	"	"	"	4d.	"
6	"	"	"	"	6d.	"
9	"	"	"	"	9d.	"
12	"	"	"	"	1s. 3d.	"
15	"	"	"	"	2s. 6d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by the manufacture, and it is well known, that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing, with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 23s. and perfect action guaranteed.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.
LEAD, IRON, and TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.

These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.
The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.
Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.
THOMAS LAMBERT and SON,
Brass and Iron Founders, Short street, New-cut, Lambeth.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE, also TY BAILS cheap on the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 11, Fore-street, City. Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

SALES BY AUCTION.

TO BUILDERS AND OTHERS.—PADDINGTON.

MR. DAVID ALLAN RAMSAY will SELL by AUCTION, on the PREMISES, Irongate-wharf, Praed-street, on MONDAY, APRIL 21, at TWELVE, a quantity of BUILDER'S MATERIALS, comprising sash, four-panel oak board and other doors, slate and marble chimney-pieces, ornaments, floor boards, carpenter's bench, sash frames, capital builder's cart, &c.; ironmongery, consisting of bell-pulls, window-brackets, mattress springs, japanned hat and coat hooks, iron, mortice, stock and other locks, brass and iron butts, brass rings, bell-trass, glass paper, copper wire, brass cupboard knobs, unions, washers and waste, street-door latches, bolts, nails, glass in boxes, handrail screws, china and oak door, furniture, oak white and black, china finger-plates, stoves, ranges, deal window boards, and fittings of a glass-cutter's shop, office furniture, &c.—May be viewed one day prior to the day of sale, and catalogues obtained of Mr. D. A. RAMSAY, Auctioneer and Estate Agent, 79, King William-street, City.

Materials of Nine Houses, Great Portland-street.

MR. GEORGE BERRY will SELL by AUCTION, on the PREMISES, on WEDNESDAY, APRIL 23, at TWELVE for ONE o'clock, the whole of the useful MATERIALS in Nos 2, 3, and 4 Rutland-mews-lane, and Nos. 1 to 6, Milton-buildings; comprising stout rafters, joists, tiles, lead gutters, doors, sashes, partitions, about 400,000 bricks, paving, steps, gratings, &c.—May be viewed the day previous and morning of sale, and catalogues had on the Premises, and of the Auctioneer, 8, Motcombe-street, Belgrave-square.

Important to Small Capitalists.

MR. W. F. HAMMOND will SELL by AUCTION, at the MART, on the 29th APRIL, 1856, at TWELVE for ONE precisely, the following fine properties: No. 29, Compton-street, Brunswick-square, lease 49 years; No. 27, Storey-street, Caledonian-road, lease 88 years; No. 26, Elizabeth-terrace, Caversham-square, lease 50 years; Nos. 8 and 10, Little Europa-place, Battersea-bridge, lease 35 years; Nos. 7, 8, 9, and 10, Ashmole-place, and stabling at Kennington, lease 70 years; and Twenty-three Lots of Freehold Building Sites, at Highgate and Norwood. The conditions provide to allow part of the purchase-money to remain on mortgage. Particulars and conditions of sale to be had of EDWARD CLARKE, Esq., Solicitor, 29, Bedford-row; at the Auction Mart; and at the Auctioneer's Offices, 3, Carey-street, Lincoln's-inn.

2,000,000 of sound, well-made, full-sized, Stock and other Bricks, the Wash, Chalk, and Rag Mills, prepared Brick-earth, Soil-gravel, and Implements. By order of the Executors of Mr. Samuel Emsley, deceased, in lots without reserve.

MR. MOORE will SELL by AUCTION, on the PREMISES, Globe Town Brick-field, Globe-road, near the Victoria-park contiguous to the Mile-end and Cambridge-road Stations of the Eastern Counties Railway and the Regent's-canal, on THURSDAY, APRIL 24, at ELEVEN for TWELVE, about 2,000,000 sound STOCKS, washed MALMS SECONDS, and other BRICKS, a wash-mill, chalk-mill, and three pug-mills, with gear, all in good working order, wheelbarrows, planks, and 1,000 pumps, spouts, hurdles, and 1,000 000 of prepared brick-earth, part washed, 500 chaldrons of soil, 1,000 yards of hoarding, sand, and ballast, erection of sidings, and effects. May be viewed two days prior and morning of Sale; and catalogues had, at the Rising Sun, Greyhound, and City of Paris Taverns, near the field; and at the Auctioneer's Offices, Mile-end-road.

ABSOLUTE SALE—Freehold Ground Rents, Houses, and Building Ground, York-road, Battersea.

MR. W. R. GLASIER is favoured with instructions from the Executors to SELL by AUCTION, at GARRAWAYS, on WEDNESDAY, APRIL 30, at TWELVE for ONE, in lots, without the slightest reserve, the REMAINING PORTION of the ESTATE of the late Mr. George Carter, comprising valuable freehold ground-rents, amounting to 37l. 3s. per annum, amply secured upon and arising from twenty-three houses, situate in Ann-street, George-street, and York road. Also, the following Freehold Houses, viz.:—A well situate house, near Plough-lane, late in the occupation of the deceased; two houses adjoining; ten cottages and blacksmith's shop, at rear of Edmond's-place; and two houses in Hope-street,—let to weekly tenants (except the first-mentioned House, which is in hand), at rents amounting to 137. 16s. per annum. Together with about Two Acres of valuable Freehold Building Land, divided into plots to suit the convenience of all classes of purchasers.—The houses may be viewed by permission of the tenants, and particulars, with plans, had of Mr. FREEMAN, Esq. Solicitor, 31, Bucklersbury; of Mr. EDWIN CARTER, York-road, Battersea; at Garraway's; and of the Auctioneer, 41, Charing-cross.

IN BANKRUPTCY.—LIMEHOUSE.—To Builders, Carpenters, and Others.—TO BE SOLD by AUCTION, by

MR. SITGRAVE, on the PREMISES, Regent's Canal Bank, Rhode's-well-road, Limehouse (near the Edinburgh Castle Tavern), on WEDNESDAY, APRIL 23rd, 1856, at TWELVE o'clock, by direction of the assignees of George William Rhode, the STOCK IN TRADE of a BUILDER, comprising 25,000 feet run of 8-inch to 4-inch Cut Stuff, 19 to 30 feet lengths; 2,600 feet fir scantling, 40 8-feet 3-inch yellow deals, scaffold poles, boards, laths, cords, pulleys, work-benches, ladders, ironmongery, brass work, sash-weights, scale beam planks and weights, York and Portland stone, bricks, slates, tiles, and a variety of useful materials, suitable for building or repairs. May be viewed one day preceding the Sale, and catalogues had of WILLIAM PENNELL, Esq. Official Assignee, 3, Guildhall chambers, Basinghall-street; of Messrs. J. and C. CHOLE, Solicitors, 48, Lime-street; at the Britannia Tavern, Limehouse; New Globe, Mile-end; and of the Auctioneer, at his Rooms and Offices, 93, Leadenhall-street.

FREEHOLD BUILDING GROUND, NOTTING-HILL.

MR. ALLEN DAVIS will SELL by AUCTION, at the MART, on THURSDAY, 8th of MAY, 1856, at TWELVE, in four lots, a valuable PLOT of FREEHOLD GROUND, having three frontages, to Mortimer-terrace, Latymer-road, and Clifton-place, close to the Church, leading from Royal-crescent, Notting-hill, divided into four plots, and suitable to the erection of moderate-sized h uses, and presents an opportunity for profitable building leases, or for investment of ready money. Printed particulars may be had at the Bank of Messrs. directly facing the ground, of Messrs. STEVENS and SUMMERS, Solicitors, 5, New Bridge-street, Blackfriars; and of Mr. ALLEN DAVIS, 11, Old Jewry-chambers, and at the Mart.

TO FOUNDERS, ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Assignees of R. Polslase, a Bankrupt, to SELL by AUCTION, on TUESDAY, APRIL 29, 1856, at ELEVEN o'clock, at the FOUNDRY, 161 Essex-road, Black friars, in lots, without reserve, the PLANT and IMPLEMENTS of a Shed Foundry; 16-horse-power horizontal steam-engine and boiler, one beam steam-engine for drilling-machines, 100 feet shafting, Lloyd's patent fan, four wrought-iron cupolas, the brick and iron erection of six drying stoves; 900 pair shell boxes, from 6 to 12 inches; 30 tons assorted steels, 20 tons Scotch pig-iron, 30 tons cold blast pig-iron, 50 tons it ken cast iron, new fire bricks, smith's forge and tools, patent weighing-machine, three carts, harness, stable utensils; the temporary corrugated iron roof, 150 feet long by 63 feet wide, and numerous other effects. To be viewed on Monday previous to the sale, when catalogues may be had on the Premises; of Mr. HERBERT, Solicitor, Old Jewry; and of Messrs. FULLER and HORSEY, Billiter-street, City.

HACKNEY.—Extensive Sale of Marble Chimney-Pieces and Slabs.

MESSRS. EVERSFIELD and HORNE beg to call the attention of Builders and Others to their SALE by AUCTION, next TUESDAY, APRIL 22, at the CAMBRIDGE-HEATH SAW-MILLS, HACKNEY, of THREE HUNDRED MARBLE CHIMNEY-PIECES, besides an assortment of STONE ditto. The former are of superior workmanship, and include a large variety of style in statuary, vein, Sicilian, Sienna, black, black and gold, Bardilla, Dove, and other marble. Also about 3,000 feet of slab, of the above varieties.—The whole now on view, and omnibuses from the City pass the premises every ten minutes. On account of the number of lots, the Sale will commence at TEN for ELEVEN.—40, Parliament-street.

SALES BY AUCTION.

SURPLUS LANDS of the South-Eastern Railway Company, on the Minster and Deal Branch.

MR. MARSH has been favoured with instructions from the Directors of the South-Eastern Railway Company, to SELL by AUCTION, at the FOUNTAIN HOTEL, Canterbury, on SATURDAY, APRIL 26, at TWO for THREE o'clock in the afternoon, a portion of the SURPLUS PROPERTY belonging to the Company on the Minster and Deal Branch, comprising rich and productive FREEHOLD MEADOW LAND, at the Minster Station, very eligible closes of freehold accommodation Meadow and Garden-Ground, adjoining the town and borough of Sandwich; freehold Arable Land, near the town of Deal; and various pieces of Meadow and Pasture Land in the parishes of North and Woodnesborough, in the county of Kent. The whole of which is freehold, and each lot will confer a vote for the county.—May be viewed, and particulars, with conditions of sale, obtained at the Fountain Hotel, Canterbury; and at various Stations on the Minster and Deal Branch; at the Canterbury, Ashford, and Ramsgate Stations; of Mr. EDWARD RYDE, Surveyor to the Company, at his Offices, London-bridge Terminus; and at Mr. MARSH'S Offices, 2, Charlotte-row, Mansion House, London, or will be forwarded on application.

FREEHOLD BUILDING LAND, HOLLOWAY.—TO BE SOLD, or LET, about EIGHTEEN ACRES, in large or small Plots.—Apply to Mr. PEACHEY, 17, Salisbury-square.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-inn, St. Clement's, Strand.

FREEHOLD LAND.—TO BE SOLD, about 60 Acres of valuable FREEHOLD LAND in Streetham parish, adjoining the property of Dulwich College, offering the most eligible building sites.—Apply to F. B. NEWMAN, Esq. Architect, 12, Furnival's-inn.

FREEHOLD GROUND, Fetter-lane.—The Commissioners of Sewers of the City of London hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 29th of APRIL next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for taking on BUILDING LEASE, for eighty years, certain PLOTS of GROUND, situate at the south-east end of Fetter-lane. Further particulars may be had, and a plan seen, on application to Mr. HAYWARD, Engineer to the Commissioners, at their Offices in the Guildhall. The Commissioners will require a plan and elevation of the Premises proposed to be built to be submitted to them for approval; and do not bind themselves to accept any proposal unless deemed advantageous. JOSEPH DAW.

Sewers Office, Guildhall, March 4th, 1856.

FREEHOLD ESTATE at HACKNEY, near the Railway Station, where trains and other conveyances start for the City every quarter of an hour.—TO BE LET, in plots averaging 150 feet deep, on building leases for ninety years, land-tax redeemed. The roads and sewers are wholly completed, and the property situate on a fine gravel soil, in a most eligible position for villas, family residences, and shops.—For terms and particulars apply to Mr. HERING, Architect, 38, Duke-street, Portland-place; or Messrs. GRAY and SON, Estate Agents, Church-street, Hackney.

FREEHOLD BUILDING LAND for 100 HOUSES TO LET or SELL, at Bognor, Sussex, in the Town and facing the Sea. The air, neatness, respectability, good roads and drainage, its proximity to Alnwick, Arundel Castle, Goodwood, Chichester, and the Isle of Wight, make it the most eligible watering-place on the coast for genteel families.—Apply to Mr. TATE, Bognor, Sussex; or 18, Warwick-street, Golden-square, London.

FREEHOLD BUILDING LAND wanted, to purchase or lease, in the neighbourhood of Lee or Lewisham.—Particulars to be sent to Mr. BARLOW, 11, Portman-street, Portman-square.

FREEHOLD GROUND WANTED.—WANTED, a PLOT of GROUND, about 120 feet by 100 feet, in an eligible situation, within two miles north of University College, London.—Direct, stating terms, &c. to Messrs. COLLS, Builders, Camberwell, Surrey.

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the finest sites for building purposes anywhere round London, and good villas are in great demand, on account of the situation being lofty, dry, well drained, and exceedingly healthy. Assistance will be afforded to responsible parties.—For particulars, apply to Messrs. T. and C. W. TODD, Milner-street, Brompton, London, or Belmont, Lee, Kent; or Messrs. NEELSON and INNES, 6, Whitehall; and of Messrs. KIRKMAN and ENGLEHEART, King William-street, City.

OXFORD.—Valuable BUILDING LAND, to be LEASED on a term not exceeding 99 years. It immediately adjoins the City of Oxford, and belongs to the President and Scholars of St. John's College. The land is proposed to be let in large or small quantities, for the erection of private residences, and builders, speculators, and others may obtain allotments on such terms as will insure peculiar advantages, as it is well known that genteel residences are much wanted, and in daily request. It is most healthily situated on a fine bed of gravel, has springs of pure and excellent water, and good bricks may be obtained within a few hundred yards of the site.—For particulars, apply to Messrs. SECKHAM and CO. 6 and 7, St. Aldate's-street, Oxford.

LEASEHOLDS.—TO BE SOLD, by Private Contract, a very desirable LEASEHOLD ESTATE, consisting of first-class private dwelling-houses, held direct from the freeholder for a long term at low ground-rents, delightfully situated within three miles of the City.—Apply for particulars to Mr CHARLES STROUGHILL, Solicitor, 7, Coleman-street, London.

TO BUILDERS and OTHERS. — An excellent SITE TO BE LET or SOLD, for BUILDING PURPOSES, with a good double frontage, situate in a leading thoroughfare, and in an eligible neighbourhood, well adapted for shops and dwelling-houses, and workshops. The materials of the present erections may be used if sound, in erecting any new buildings that may be approved. Money will be advanced if required by the purchaser, or taken to carry out the undertaking, upon a satisfactory arrangement.—Apply for terms of Messrs. HOWARD and DOLLMAN, Solicitors, 141, Fenchurch-street; Mr. EDWARD LOWTHER, 58, Red Lion-street, Clerkenwell; or of Mr. MURRELL, Auctioneer, 1, Walbrook, City.

CAMDEN-TOWN CEMETERY BUILDING ESTATE.—TO BE LET, on Building Leases, for Ninety-nine Years, very eligible SITES upon the above estate, having good frontages into Camden-street and Bayham-street, and including frontages to an intended street, to be called St. Martin's-place, and mews approached from Pratt-street. There is a great demand for private houses of the third-rate in this locality, which is enhanced by its near proximity to the North-Western and North-London Railway Stations, and the Hampstead-road.—Plans may be seen and particulars obtained by application to H. E. KENDALL, Esq. Architect, 17, Suffolk-street, Pall-mall East; or to JOHN DANGERFIELD, Esq. Solicitor, 36, Craven-street, Charing-cross.

TO CAPITALISTS, BUILDERS, RAILWAY CARRIERS, AND OTHERS.

CITY of LONDON.—Valuable and extensive FREEHOLD PLOT of GROUND, in the OLD BAILEY, TO BE LET, on a building lease, land-tax redeemed. The ground, now the site of the New Inn, has a frontage to the Old Bailey, with access from Fleet-lane, and occupies an area of nearly 18,000 square feet, which may be increased, if required, to nearly 25,000 square feet. The premises are admirably adapted for an hotel, chambers, warehouses, club-houses, or other buildings, on a large and comprehensive scale.—Plans of the property may be seen, and further particulars obtained, by application to the Counting-house of St. Thomas's Hospital, Southwark; or to Mr. HENRY CURREY, Architect, No. 4, Lancaster-place, Strand.

£45 RENT.—MANUFACTURING PREMISES TO BE LET at UXBRIDGE.—These premises were built for engineering purposes, and well lighted. The shop is about 80 feet long, by 30 feet wide, with a large yard in front, and an eight-roomed dwelling-house adjoining. The railway station is behind, and the canal from Birmingham to London passes in front, presenting an excellent opening for an engineer or an agricultural implement maker.—For further part culars, apply to Mr. JOHN GORDON, 5, Railway-place, Fenchurch-street.

DOWGATE-HILL IMPROVEMENT.—TO BE LET, by Tender, in two lots, on a building lease for eighty years, this desirable frontage, Lot 1, being adapted for a public-house, and Lot 2 for the erection of offices, or otherwise.—For plans, particulars, and form of Tender, apply at the Office of Mr. D. A. GOBBETT, Architect and Surveyor, 37, Fenchurch-street, City. Tenders will be opened at Jerusalem-hall, on the 25th day of APRIL, 1856, at TWELVE o'clock precisely.

BUILDING LAND near a RAILWAY STATION, where Houses are much wanted. FOUR ACRES with Frontage to the south and west, about a quarter of a mile from Grays Station. The Gas main passes along the south front. Other Land with good frontage to the south, and Land adapted for Factories with river frontage, can also be obtained on application to Messrs. MEESON and CO. Grays, Essex. Bricks, Lime, Flints, &c. are very easily obtainable in this neighbourhood.

ELIGIBLE PLOTS of GROUND TO BE LET for building, at Castlebear-hill, seven miles from London, and ten minutes' walk from the Ealing station on the Great Western Railway.—Particulars to be had of G. LESLIE, Upper Mall, Hammersmith.

OLD FORD, near VICTORIA-PARK.—Valuable FREEHOLD BUILDING GROUND TO LET, with Eligible Frontages and advances, admirably situated for fourth-rate houses which are much required in this rapidly-improving neighbourhood, and which let and sell rapidly.—For further particulars apply to Mr. GEO. CLARKSON, Surveyor and Land Agent, 48, Fenton-street, Pentonville.

HOLLOWAY.—Valuable BUILDING GROUND TO LET, with liberal cash advances, to respectable builders, admirably situated for good Villa Residences, which are much required in this favourite and highly respectable locality. The situation is most healthy, possesses beautiful and commanding views, and the access to all parts of London easy. Property in this neighbourhood lets and sells rapidly.—For further particulars, apply to Mr. GEO. CLARKSON, Surveyor and Land Agent, 48, Fenton-street, Pentonville.

TO CARPENTERS AND BUILDERS.

FOR SALE, at a low price, several well-built SIX-ROOMED CARCASSES, near Victoria-park, in a rapidly-improving neighbourhood, where houses of this class are much required, and which let and sell rapidly. To respectable men, cash will be given in exchange for them. Term, 100 years. Ground-rent moderate.—For further particulars apply to Mr. GEO. CLARKSON, Surveyor and Land Agent, 48, Fenton-street, Pentonville.

TO CAPITALISTS, &c.—WESTON-SUPER-MARE, SOMERSET. Important and valuable FREEHOLD LAND for building, in the very centre of the town, and facing the sea, there being a ample space (nearly four acres) for the erection of 80 or 100 houses.—Plans and further particulars of B. GUY PHILLIPS, Esq. Weston-super-Mare.

TO BUILDERS and OTHERS.—SURBITON-HILL, near KINGSTON STATION.—TO BE LET, on Building Lease, for 99 years, with power to purchase the Freehold within a limited period, or SOLD, GROUND for FOUR to 6 HOUSES in front of the road, and room for about Thirty Cottages in Fair Ground, including ground, all for which there is a great demand.—Apply to Mr. HOPKINS, Victoria Inn, Surbiton; or Upper Berkeley-street, Portman-square.

BUILDING LAND at ACTON, near the Railway Station, in a fine open and healthy situation, and plenty of fine water.—Apply to W. F. L. W, Esq. 67, Wimpole-street, Cavendish-square.

TO ENGINEERS, WHEELWRIGHTS, SMITHS, and OTHERS, requiring extensive manufacturing or warehouse premises, suitable alike for investment or occupation, a FREEHOLD ESTATE (near the Eastern Counties Railway Terminus, in Shoreditch), consisting of extensive manufacturing premises, dwelling-house, two cottages, workshops about 100 feet long, large yard, building, &c. TO BE LET or SOLD.—Apply to Mr. TURNBULL, Surveyor, No. 48, Worship-street, Finsbury.

STRATFORD, ESSEX.—Freehold Land within three miles of London, exonerated from land-tax, and free of tithe, TO BE LET on lease for a long term of years, in large or small parcels, for the erection of villas or building purposes. Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

MANUFACTURING PREMISES WANTED, comprising about 6,000 feet area of workshops, within two miles of the City. Address letters, post-paid, A. B. 3 Cromer-terrace, Grange-road, Dalston.

OFFICES, WESTMINSTER.—TO BE LET, a capital GROUND FLOOR SUITE of OFFICES, adapted either for professional men, law stationers, or lithographers.—Apply at No. 60, King-street, Parliament-street.

HOUSES of PARLIAMENT OFFICES, Parliament-street.—TO BE LET, capital LIGHT CHAMBERS; new, and built for professional use.—Apply at No. 60, King-street, Parliament-street.

PREMISES WANTED in the CITY.—The CLOTHWORKERS' COMPANY, being about to re-build their Hall in Mincing-lane, REQUIRE TEMPORARY PREMISES for a term of two or three years, for the purpose of conducting the general affairs of the Company, and depositing furniture, &c.—Descriptive particulars and terms to be forwarded in writing, previous to the 23rd instant, to R. B. TOWSE, Clerk to the Company.—April, 1856.

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The Builder.

AN ILLUSTRATED WEEKLY PERIODICAL FOR THE Architect, Engineer, Operatives & Artist.

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WILL OPEN MONDAY next, the 28th, SOCIETY of PAINTERS in WATER COLOURS, the FIFTY-SECOND ANNUAL EXHIBITION, at their Gallery, 5, Pall-mall East (close to Trafalgar square). Admittance 1s.; Catalogue 6d. JOSEPH J. JENKINS, Secretary.

ART-UNION of LONDON.—The Annual General MEETING, to receive the Council's Report and to distribute the amount subscribed for the purchase of works of art, will be held at the THEATRE ROYAL, HAYMARKET (by the kind permission of J. B. Buckstone, Esq.), on TUESDAY, 29th instant, at ELEVEN for TWELVE o'clock. The Right Hon. Lord MONTEAGLE, President, in the Chair. The receipt for the current year will procure admission for member and friends. GEORGE GODWIN, } Hon. Secs.
LEWIS POCOCK, }
444, West Strand, April.

COMPETITIONS.

TO ARCHITECTS, LANDSCAPE GARDENERS, AND OTHERS.

SCARBOROUGH PUBLIC BURIAL-GROUND.—The Scarborough Burial Board is desirous of receiving Designs, Ground Plans, Sections, Elevations, Specifications, and detailed Estimates for the LAYING-OUT as a PUBLIC BURIAL-GROUND the land selected for the site, containing ten acres, and for erecting thereon two chapels, with lodges and entrance-gates. The whole cost of buildings and entrance-gates not to exceed 2,000*l*. The plan and levels of the ground may be inspected at the Office of the Board, Town Hall, Scarborough, and Premiums of 15*l*. and 10*l*. will be awarded to the two designs respectively which the Board may consider as being first and second as regards merit under the circumstances. Neither of the premiums will be paid unless a Tender be accepted by the Board for the actual execution of the works at or within the stipulated sum of 2,000*l*. The designs and estimates, with motto, and a sealed letter similarly endorsed, containing the author's name and address, are to be sent "To the Scarborough Burial Board," under cover to their clerks, on or before the 14th day of MAY, 1856.
JOHN COOK, } Joint Clerks to the
J. J. P. MOODY, } Burial Board.
Town Hall, Scarborough, April 8th, 1856.

NEW WORKHOUSE for the CITY and COUNTY of NORWICH.—To ARCHITECTS.—The Guardians of the Poor of the Norwich Corporation are desirous of being furnished with PLANS, ESTIMATES, and GENERAL SPECIFICATIONS for the ERECTION of a NEW WORKHOUSE for the City and County of Norwich, on a site near the north entrance to the new cemetery, to contain 1,300 inmates. A lithographed plan of the site, with sections, together with instructions to architects as to the wards, rooms, and offices required, and all other particulars, may be had on written application to me on and after MONDAY, the 28th day of APRIL instant. The maximum sum proposed to be expended in the building is 30,000*l*. The plans, &c. are required to be sent by post, addressed to me, on or before TUESDAY, the 13th day of JULY next.
By order of the said corporation.
Norwich, April 17, 1856. E. C. BAILEY, Clerk.

CONTRACTS.

TO BUILDERS AND OTHERS.

EALING.—A small VILLA and GARDEN-WALLS to be built near the old church. Plans and specification to be seen on WEDNESDAY, APRIL 30, and three following days, at Mr. WHITTINGHAM'S, Elm Cottage, near the new church, Ealing. The quantities supplied. The lowest Tender not necessarily accepted. Tenders to be sent to the Architect on or before MAY 8.
G. GORDON STANHAM, Architect.
St. Alban's Cottage, North end, near Hammersmith-gate.

CONTRACTS.

BOARD of WORKS for the LIMEHOUSE DISTRICT, comprising the parish of Limehouse, the hamlet of Ratcliff, and the parishes of Shadwell and Wapping.—JOBBING CONTRACT for WORKS to SEWERS.—Notice is hereby given, that the Sewers Committee will meet at the Offices of the Board, White Horse-street, Commercial-road East, on MONDAY, the 5th MAY next, to receive TENDERS from persons willing to contract for the JOBBING WORKS and REPAIRS to the SEWERS, DRAINS, &c. under the jurisdiction of the Board, up to Midsummer, 1857. Further particulars may be known, and printed conditions, schedules of works, and forms of Tender obtained by parties it tending to Tender for the works, upon application at the said offices, on and after the 28th APRIL instant, between the hours of TEN and FOUR, upon payment of twenty shillings, which will be returned to each person sending in a Tender. Tenders, sealed up, and endorsed, "Tender for Jobbing Works to Sewers, &c." must be delivered at the said Offices not later than TWO o'clock on 5th MAY, 1856. The Board do not bind themselves to accept the lowest or any Tender. The security of two responsible persons will be required. No Tender will be received after the time specified, and unless strictly in accordance with the printed instructions.—By order,
THOS. W. RATCLIFF, Clerk to the Board.
17th April, 1856.

TO CONTRACTORS, BUILDERS, AND OTHERS.

CLUN UNION. — Persons desirous to CONTRACT for MAKING IMPROVEMENTS in the DRAINAGE of the CLUN UNION WORKHOUSE PREMISES, situate at Bishop's Castle, in conformity with the plans and specifications now lying in the Clerk's office for inspection, are requested to send in Tenders, addressed to the Board of Guardians, at the Workhouse, in Bishop's Castle, on or before the 7th day of MAY next.—By order of the Board.
FREDERIC PARDOE, Clerk.
Bishop's Castle, March 14, 1856.

TO BUILDERS.—Sealed TENDERS, in one specific sum, will be received by the Director-General of Contracts, Pall-mall, London, on or before the 16th day of MAY, 1856, at NOON, for the following SERVICES, at BULL POINT, near Devonport, viz.:—
1. Building a Case-Store, Barrel-Store, Breaking-up-House, Tanks, Privies, &c.
2. Lengthening the Siding of Railroad outside the Magazine Inclosure.
3. Building Cottages for Two Foremen and Five Labourers.
4. Building a Store for Planks, Store for Flannel Cartridges, Foreman's Office, and Printing-press Room, &c.

Detailed specifications of the above four Services, with every requisite information, may be obtained at the Royal Engineer Office, Bull Point, daily (Sundays excepted), between the hours of TEN and FOUR o'clock, from the 26th of APRIL to the 14th of MAY, 1856, both days inclusive.
Royal Engineers' Office, Devonport, April 10, 1856.

TO BUILDERS AND CONTRACTORS

NOTICE is hereby given, that TENDERS will be received by the Director-General of Contracts, War Department, Pall Mall, London, on or before SATURDAY, the 10th day of May next, from Persons desirous of CONTRACTING with the War Department for ERECTING SOLDIERS' BARRACK ROOMS over the Stables, North Square, Brompton Barracks, Chatham. Plans and Specifications of the work are to be seen and Forms of Tender obtained on application at the Royal Engineer Office, Chatham, between the hours of Ten and Four, till the 9th of May next, Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound under a penalty of £1000 for the due performance of the contract. Tenders to be addressed to "The Director-General of Contracts, War Department, Pall Mall, London," and to be delivered free, endorsed, "Tenders for Works at Brompton Barracks, Chatham." No Tender can be admitted after the hour of 10th day of MAY, 1856.
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

TO BUILDERS AND OTHERS.

SEALED TENDERS for the following SERVICES at DEVONPORT, viz.:—
1. Building Counterscarp of the New Bastion on the right of the Lines, Temporary Bridge, &c. &c.
2. Conducting the Escarp of the Lines from Stoke Entrance-gate to the right shoulder of the Flat Bastion:

For specific sums, will be received by the Director-General of Contracts, Pall-mall, London, on or before the 5th of MAY, 1856. Detailed specifications of the above two Services, and every requisite information, may be obtained at the Royal Engineer Office, Devonport, daily (Sundays excepted), between the hours of TEN and FOUR o'clock, from the 25th of APRIL to the 3rd of MAY, both days inclusive.
Royal Engineer Office, Devonport, 19th April, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover district hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 24th day of APRIL, 1856, from persons desirous of CONTRACTING for RENEWING FLOORS, CEILINGS, STAIRS, &c. at Canterbury Barracks. Drawings and specifications of the works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Canterbury Barracks, between the hours of TEN and FOUR o'clock, from THURSDAY, the 17th APRIL, to WEDNESDAY, the 30th APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 50*l*. for the due performance of the contract. Tenders for the above work, to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed "Tender for Floors, &c. at Canterbury Barracks."
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, 7th April, 1856.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 1st day of MAY, 1856, from Persons desirous of CONTRACTING for LAYING NEW BOARDED FLOORS and GALVANIZED IRON PLATE CEILINGS at WALMER BARRACKS.—A specification of the works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, South Barracks, Walmer, between the hours of TEN and FOUR o'clock, from MONDAY, the 14th of APRIL, to WEDNESDAY, the 30th of APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work, will be required to enter into a bond, with two eligible Securities, jointly and separately, to be bound under a penalty of 150*l*. for the due performance of the Contract. Tenders for the above work to be addressed to the Director-General of Contracts, Pall Mall, London, and endorsed "Tender for Work at Walmer Barracks."
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, 5th April, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 1st of MAY, 1856, from persons desirous of CONTRACTING for RENEWING SLATING and LEAD WORK, &c. at Canterbury Barracks. Drawings and specifications of the works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Canterbury Barracks, between the hours of TEN and FOUR o'clock, from TUESDAY, the 15th of APRIL, to WEDNESDAY, the 30th of APRIL, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 300*l*. for the due performance of the contract. Tenders for the above work, to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed, "Tender for Slating and Lead Work, &c. at Canterbury Barracks."
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, 7th April, 1856.

NOTICE to BUILDERS, CONTRACTORS, IRONFOUNDERS, &c.—The Commanding Royal Engineer of the Yorkshire District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 8th of MAY, 1856, from persons fully competent and desirous of CONTRACTING for the undermentioned WORKS, at the places named, viz.:—
YORK BARRACKS.—Taking off the present Roof of Riding School, and erecting over the same a New Wrought-Iron Roof.
LEEDS BARRACKS.—Taking Down present Old Fitments &c. and Renewing with Iron Ones in Three Officers' and Nine Troop Stables; also, Repaving, with Granite, Two Troop Stables.

Specifications of the works to be performed, and forms of Tender obtained at the Royal Engineer Office, No. 5, New Walk-terrace, York, between the hours of TEN and FOUR o'clock, from MONDAY, the 31st of APRIL, to WEDNESDAY, the 7th of MAY, 1856.
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, 5, New Walk-terrace, York, 19th April, 1856.

ORDNANCE CONTRACT.—To BUILDERS and CONTRACTORS.—Sealed TENDERS will be received by the Director General of Contracts, War Department, Pall-mall, London, until TWELVE o'clock on MONDAY, the 5th MAY next, from parties willing to CONTRACT for the ERECTION of a GUARD-HOUSE and PORTER'S LODGE for the Pavilion at the Camp, Aldershot, within five weeks from the date of acceptance of Tender. Plans may be seen, and specifications and forms of Tender obtained, on application to Mr. BAKER, Clerk of Works, at the Royal Engineer Office, Camp, Aldershott. The Tender to be endorsed, "Tender for Guard-house and Porter's Lodge, Pavilion, Aldershott." The War Department reserves the right of rejecting the whole or any of the Tender.
Royal Engineer Office, Aldershott, April 21, 1856.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director General of Contracts, War Department, Pall-mall, London, until TWELVE o'clock on TUESDAY, the 6th day of MAY next, from persons desirous of CONTRACTING for CONSTRUCTING a NEW SOLDIERS' PRIVY, and a CULVERT to the Soldiers' Bathing-pond, near St. Mary's Barracks, Chatham.—Plans and specifications of the work are to be seen, and forms of Tender obtained, on application at the Royal Engineer Office, Chatham, between the hours of TEN and FOUR o'clock, from the 12th of MAY next, Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound under a penalty of 150*l*. for the due performance of the Contract. Tenders to be addressed to "The Director General of Contracts, War Department, Pall-mall, London," and to be delivered free, endorsed, "Tender for Works at St. Mary's Barracks, Chatham." No Tender can be admitted after the 13th day of MAY, 1856.
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Chatham, April 22, 1856.

[*For remainder of Contracts see next page.*

CONTRACTS.

TO BUILDERS AND OTHERS.

NOTICE is hereby given, that Plans and Specifications for ENLARGING, REPAIRING and otherwise altering the parish CHURCH of ST. JAMES, QUEDGELEY, in the county of Gloucester, and the Schools connected therewith, will lie for inspection at the Diocesan Registry Office, Ulaisters, Gloucester, on the 8th of MAY, and five following days; and all persons wishing to CONTRACT for the same are desired to send in sealed TENDERS, directed to J. CURTI HAYWARD, Esq Quedgeley House, near Gloucester, on or before the 17th of MAY. The lowest Tender will not necessarily be accepted. The contractor will be expected, at his own expense, to enter into the usual legal bond, with two good and approved sureties.

TO BUILDERS AND CONTRACTORS

DUDLEY UNION WORKHOUSE.—Builder and Others are invited to deliver TENDERS for the ERECTION of a NEW WORKHOUSE, proposed to be built at Shaver's End, near Dudley, in the parish of Sedgley, in the county of Stafford. The plans and specification may be seen on application from Mr. Joseph Moore, BIRLASTON, Dudley Market place, Wednesday next. Each Tender must be delivered sealed, addressed to THOMAS SMITH, Esq., Clerk to the Board of Guardians, Dudley, and endorsed "Tender for New Workhouse," and must be received on or before the 1st day of MAY next. A separate estimate for the Boundary Fences and Roads must be made agreeably to the form lodged with the plan and specifications, to which reference is to be had for all further particulars. The Board do not bind themselves to accept the lowest Tender.

By order of the Committee,

J. GALPIN, Surveyor.

KNOTTINGLEY GAS COMPANY.—To IRONFOUNDERS, BUILDERS, and OTHERS.—Persons desirous of TENDERING for the CONSTRUCTION of a GASOMETER, and the IRONWORK required by them in the erection of GASWORKS, and also for the delivery of about 170 TONS CAST METAL MAIN. The whole may be tendered for in one sum, or in the following lots, viz.:—The whole of the buildings, walls and tanks, the whole of the cast iron work in apparatus, or the supplying and delivery of the mains.—Drawings, specifications, and forms of Contract, on application to the Secretary; and any further information had by applying to Mr WM WILSON Gas Engineer, Castleford. Sealed Tenders, addressed to J. CARTER, Esq. Knottingley, and endorsed "Tenders for Gasworks," will be received not later than the 10th of MAY next. The Directors do not pledge themselves to accept the lowest or any Tender.

W. S. HEPWORTH, Secretary.

Knottingley, April 21, 1856

TO SCAVENGERS AND OTHERS

THE COMMISSIONERS of SEWERS of the CITY of LONDON hereby give Notice, that they will meet at Guildhall, London, on TUESDAY, the 6th day of MAY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for CLEANSING the STREETS and REMOVING DUST, &c. from the houses of this City, for the term of one year from Midsummer next, agreeably to the provisions of a specification, a copy of which may be had upon application at the Office of the Commissioners of Sewers, Guildhall; and also to receive PROPOSALS for WATERING certain of the STREETS of the said City twice a day, agreeably to a specification to be seen at the Office aforesaid. Each person tendering for either of the above contracts must sign and seal his Proposal, and must deliver the same, addressed to the Commissioners of Sewers, at the Guildhall aforesaid, on or before the hour appointed for the opening thereof, and must attend personally, or by some person duly authorized by him in writing, at the time and place appointed for opening the Proposals, to make such offer as he may think proper; but no Proposal will be considered unless the person making the same shall have delivered with his Proposal a Bank of England note, or an undoubted Bond, for the sum of £200, as a security for the due performance of the Contract, which sum will be immediately returned to each person whose Tender is not accepted; and will be returned in the other cases until the contracts are duly entered into.

JOSEPH DAW, Principal Clerk.

Sewers Office, Guildhall, April 16, 1856

MANCHESTER and SALFORD BATHS and LAUNDRIES COMPANY.—To MECHANICAL ENGINEERS, CONTRACTORS, &c.—The Directors hereby give notice that they intend to erect NINE SETS of NEW BATHS and WASH-HOUSE APPARATUS, with the Boiler, Engine, Pumps, Machinery, Steam Washing Apparatus, Drying Closets, Lavatories, and other Fittings, and will be ready to receive TENDERS for the same, and for the Buildings, Fittings, and Fixtures connected therewith, at the Office of Mr. WORTHINGTON, Architect to the Company, 54, Ridgefield, Manchester, on or before FRIDAY, MAY 9, at 11 o'clock. Tenders to be sent in by that time, and the Directors will meet on the following day, FRIDAY, MAY 9, at 12 o'clock, to open and consider the Tenders.

By order of the Board,

JOHN ELLMAN, Secretary.

Manchester, April 5, 1856.

WORTHING SEWERAGE.—To CONTRACTORS for SEWERAGE WORKS.—The WORTHING LOCAL BOARD of HEALTH are prepared to receive TENDERS for the COMPLETION of the SEWERS of the said Town, and WORKS connected therewith. Plans and specifications may be seen at the Offices of Mr. DENNETT, Solicitor, Clerk to the Board, No. 5, Bedford row, Worthing, on and after MONDAY, the 21st Instant, between the hours of 10 and FOUR. Duplicate forms of Tender will also be supplied, price 2s. each, and full particulars will be given, and the works pointed out on the ground, by Mr. HENRY ROBERTS, C.E., Resident Engineer, 3, Victoria-place, Pimlico, London, to whom application may be made. Each Tender must be delivered, sealed up, addressed to the Board, at the Office of Mr. DENNETT, aforesaid, on or before MONDAY, the 5th day of MAY next, and endorsed "Tender for Sewerage Works," and must be accompanied by a Deposit of £100 in money or approved Bankers' Bills, as a guarantee of the bona fides of the Tender. The Board do not bind themselves to accept the lowest Tender.

WM. HIGH DENNETT, Clerk to the Board.

Worthing, April 12, 1856.

CONTRACT for REMOVING DUST, &c.—The Vestry of the Parish of Saint John, Hampstead, are prepared to receive TENDERS from persons who may be willing to enter into CONTRACT for the REMOVAL from the Houses and Premises, Dust, Ashes, Cinders, Rubbish, Soil, and Refuse, from the Areas, Houses, Privies, and other ways, roads, streets, squares, mews, courts, and other places within the limits of the Parish of Saint John's Wood, West End, and Kilburn District; and within the limits of District No. 2, called the North East or Hampstead District, from the date of the Contract to the 24th day of JUNE, 1857, agreeably to the specifications to be delivered to Tenderers and subject to the conditions of Tenders to be had at the Vestry Office, at the Workhouse, New Road, Hampstead. The Vestry do not bind themselves to accept the lowest or any Tender. Tenders must be delivered in the printed form, to be obtained at the Surveyor's Office, sealed up, and addressed to the Vestry of St. John Hampstead, and endorsed "Tender for Dusting, District No. 1," or "District No. 2" (as the case may be), and must state the names and description of two sufficient Sureties for the due performance of the Contract, as directed to the Vestry of St. John Hampstead, indorsed "Tender for Dusting, District No. 1," or "District No. 2" (as the case may be), are to be sent or delivered to the Vestry Clerk, at his Office at Hampstead Workhouse, not later than TWELVE o'clock at NOON, on FRIDAY the 2nd of MAY, 1856, as forms to tender must attend personally at the Vestry Room of the Workhouse, precisely at 11 minutes past SEVEN o'clock in the EVENING of the same day.

By order, THOMAS TOLLER, Vestry Clerk.

CONTRACTS.

TO BUILDERS.

PERSONS desirous of CONTRACTING for TAKING DOWN and REBUILDING the PARISH CHURCH of KILBY, in the county of Leicester, may see the drawings and specifications at the office of Mr. HENRY GODDARD the Architect, Bowling-green-street, Leicester, from MONDAY, the 28th inst. until TUESDAY, the 5th of MAY. The Committee do not bind themselves to accept the lowest Tender.

April 22 1856

TO BUILDERS

PERSONS desirous of TENDERING for a VILLA, or VILLAS, to be erected on the "Gold Tops," Newport, may see the plans and learn about it the Offices of the Architects, Messrs WIGG and HABERSHON, Bloomsbury-square, London; or Kingshillfield, Newport, on or after TUESDAY next. Also for a HOUSE, to be erected in Stow-hill, Newport. Drawings and specification may be seen as above. Tenders will be opened at Newport, on THURSDAY, the 8th of MAY, at TEN o'clock precisely.

N B The Architects do not bind themselves to accept the lowest, nor any of the Tenders, in either case

TO CONTRACTORS

TENDERS are WANTED for the CONSTRUCTION of a GRAVING-DOCK, with TIDAL BASIN and WHARFS, upon the lands of Meadowside, near Govan, for Messrs TODD and M'GREGOR, according to plans and specifications, which will be open to view, at the Works at Partick, after the 1st of MAY. Further particulars may be obtained from the Engineers, Messrs. BELL and MILLAR, at their Office, 81 Vincent place, and from the person who will be in charge at the Works at Partick. Tenders to be sent out addressed to Messrs TODD and M'GREGOR, at their Office in Glasgow, on or before the 16th day of MAY. The lowest offer, or any of the offers, may not be accepted.

CHORLEY IMPROVEMENT.—CEMETERY. To BUILDERS and CONTRACTORS. The Chorley Commissioners, acting under "The Chorley Improvement Act, 1851," hereby give Notice, that they are prepared to receive TENDERS for the ERECTION of the CHAPELS and ENTRANCE LODGE. The drawings and specifications may be seen, and further information had, at the office of Mr JAMES DERHAM, Surveyor to the Commissioners, Chorley, on and after FRIDAY, the 25th instant.—Sealed Tenders, addressed to [illegible] Chorley, to be delivered at the Town Hall, Chorley, on or before TUESDAY, the 6th day of MAY next, at TWELVE o'clock at noon precisely, will be received by the Chairman of the Cemetery Committee, and endorsed, "Tender for Cemetery Chapels and Lodge."

RICHARD JACKSON, Clerk to the Commissioners.

Chorley, April 15, 1856

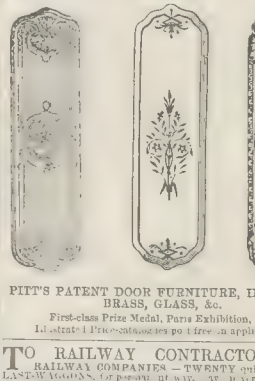
CONTRACT for SLOPPING.—The Vestry of the parish of St. John, Hampstead, hereby give notice that they are ready to receive TENDERS from parties who may be willing to CONTRACT for the REMOVAL of all SOIL, Slush, Snow, Ice, Straw, Litter, Refuse, Slop, Dust, Mud, and other matter from which they may be sought to be otherwise separated together upon or in the carriage ways and footways in the several streets, roads squares, mews, courts, and other public passages or places within the limits of District No. 1 in the said parish, called the South-west or St. John's Wood, West end, and Kilburn District; and within the limits of District No. 2, called the North-east or Hampstead District, from the date of the Contract to the 24th day of JUNE, 1857, agreeably to the Specification and Forms of Tender and Contract to be seen and had between the hours of TEN and FOUR, at the Surveyor's Office, at the Workhouse, New Road. The Vestry do not bind themselves to accept the lowest or any Tender. No Tender for less than either the Districts, or their parts from to the Parish of the Surveyor's Office, and the proposed Contractor and certain sufficient names and description of two sufficient securities for the due performance of the Contract, addressed to the Vestry of St. John's Hampstead, indorsed "Tender for Slopping, "District No. 1," or "District No. 2" (as the case may be), are to be sent or delivered to the Vestry Clerk at his office at Hampstead Workhouse, not later than TWELVE o'clock at noon on FRIDAY, the 2nd of MAY, 1856; and parties tendering must attend personally at the Vestry to be held at the Workhouse, precisely at half-past SEVEN o'clock in the evening of the same day.—By Order. THOMAS TOLLER, Vestry Clerk.

WANTED, Five or Six Second-hand DOUBLE-PURCHASE CRABS, equal to four tons.—Address RANDELL and SAUNDERS, Bath-Stone Office, Corsham, Wilts

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND, London.



PITT'S PATENT DOOR FURNITURE, IN CHINA, BRASS, GLASS, &c.

First-class Prize Medal, Paris Exhibition, 1855.

Illustrated Price-catalogues post free on application.

TO RAILWAY CONTRACTORS and RAILWAY COMPANIES.—TWENTY quite new BALLAST-WAGONS, for passing over permanent way, to be seen at the Great Northern Railway Goods-yard, Maiden-lane, Kings-cross. Contractors' Ballast-Waggons, side and end tops, with woodwork complete; 80 Sets Cast-iron Wheels and Wrought Axles, pedestals, tip gear, straps, bolts, &c. the ironwork complete for wood waggons.—Apply to MATTHEW T. SHAW, Railway Carriage Inspector, at Railway, Ballast and Stores 64, Cannon-street, City.

ROYAL POLYTECHNIC GAS FIRE. BACHHOFFNER and DEFRIES'S PATENT. The public are respectfully informed that arrangements have been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and discomfort from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation. To be seen in action at DEFRIES'S Office, 145, Regent-street, London.

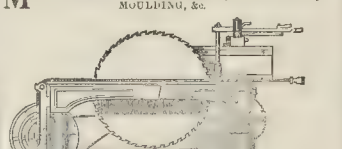
ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co.'s establishment, where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and CO. opening to the Monument, London-bridge. Established A.D 1700.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fixing given. J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be efficiently warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Tenoning, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they continue their attention to this sort of machinery, and have had the honour to supply some of the most eminent railway companies and contractors in the world with their Machines for home and foreign use.

STEAM FRET-CUTTING WORKS.—To BUILDERS, CARPENTERS, CARVERS, CABINET and PIANOFORTE MAKERS, and CHAIRS-MENDY and Co. Established twelve years, Rotherham-street-road. Every description of fret and other open work cut in a superior style, with or without the aid of shaping. Barrel patterns for founders, devices for illuminations, &c. cut in any thickness.

TO BE SOLD, a WOOD PLANING-MACHINE, in good working order, capable of planing, tenoning, grooving, and rebating boards, &c. Application to be made to Mr. BRIAN BURDON, SAW MILLS, Newcastle upon-Tyne, where the machine may be seen at work daily. As the premises are required immediately, to make room for one more powerful, an early application is requested.

W. and C. BURNUP, Newcastle upon-Tyne.

TO STONEMASONS, BUILDERS, and OTHERS.—A TRAVELLER for SALE, complete, nearly new, 13½ feet long, 41 feet wide, and 10 feet high. Near Stratford, Essex; with about Thirty Loads of Timber in Frame.—For further particulars apply at the premises, THOMAS GEORGE and SON, Timber Merchants, Stratford, Essex.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES non-conducting and vaporized with all the improvements, under their Quadruple Patents of 1853-54 and 1855, and held on their Gunpowder Proof Solid Lock and Door cushion, with Outside Fastenings.

THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.

MILNER'S PHŒNIX SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depôt, 27A, Moorgate-street, City. Circulars free by post.

Sold also by HOBBS, ASHLEY, and CO. 97, Cheapside.

CHARLES BAKER, Builders' Ironmonger, Nail Factor, Stove and Range Manufacturer (Warehouses, 45 and 148, Borough), begs to offer his reduced List of Prices:—

BEST CUT CLASP NAILS.

1½ in.	1¾ in.	2 in.	2½ in.	3 in. and upwards.
10s. 6d.	10s.	9s.	8s.	11s. per cwt.

Best Steel Pin or Brass, 14s per cwt.
Best Cut Lath Nails, 8s
Edgate Sash Line, 3d. per inch, and upwards.
Lacquered Fenders, from 7d. to 5l. per inch.
A good Stock of Berlin Black ditto.

SELF-ACTING COTTAGE RANGES, with CIRCULAR OVENS and BACK BOILERS

30 in.	33 in.	36 in.	36 in.
28s.	30s.	32s.	34s. 6d

SELF-ACTING COTTAGE RANGES, OVENS ONLY, Each, 28s. 6d

SELF-ACTING RANGES, BEST WROUGHT BARS and BRIGHT MOUNTINGS.

3 ft.	3 ft. 2 in.	3 ft. 4 in.	3 ft. 6 in.
56s.	60s.	64s.	68s.

6 in. Two Bolt Rim Locks, 18s. per dozen.
6 in. Brass Follower Mortise Locks, 30s. per dozen.
Baker's Improved Kitchen Ranges, for Coals or Coal and Wood, each.
A very extensive Stock of Cabinetmakers' and Builders' Ironmongery, Tools, &c. &c.

ESTABLISHED 1817

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and GLASS WAREHOUSES, 10, Horseferry-road, near New Peter-street, Westminster

GREAT REDUCTION IN PRICES

RAIN WATER CASTINGS, per yard.

Sizes—3 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	1s. 1d.	1s. 1½d.	1s. 3d.	1s. 7½d.	1s. 10½d.	2s. 4d.
Half-round Gutters	1s. 3d.	1s. 6d.	1s. 9d.	2s. 3d.	2s. 6d.	3s. 3d.
O G Gutters	1s. 6d.	1s. 9d.	2s. 1d.	2s. 6d.	2s. 9d.	3s. 6d.
Ditto, with plain ears to each	1s. 9d.	2s. 1d.	2s. 4d.	2s. 9d.	3s. 3d.	4s. 3d.
Ditto, with box clips ditto	2s. 3d.	2s. 6d.	2s. 9d.	3s. 3d.	3s. 6d.	4s. 6d.

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.

Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
10s 6d.	10s.	9s.	8s. 6d.	14s. per cwt.

Best Cut Flooring Brads ..... 12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails ..... 16s. 6d. "
Best Zinc Slating Nails ..... 40s. "
Best Glazing ..... 47s. to 50s. "

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges at the lowest wholesale prices.

Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES

Beyond the current Price of Hoop-Iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1½	7s. 6d.
15	1½	7s. 6d.
15	1¾	8s. 9d.
15	2	9s. 6d.
15	2½	0s. 6d.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11¼ inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming projected claws, which are so bent, that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become when built into the brickwork, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

London Depôt—EARL-STREET, BLACKFRIARS.

IRONMONGERY.

PFEIL AND STEDALL.

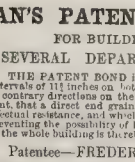
THE LARGEST STOCK AT

THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs, 2½d. per inch, and upwards.

Register Stoves, 5d. 6d. 7d. 8d. and 9d per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.

3-feet Cottage Ranges, with ovens and back boilers 52s. each

3-feet self-acting ditto, ditto, 34s. each

Air Bricks, 4s per doz.

Best Town Give 7s. Ditto, Scotch, 6d. per cwt

Best Pure Cut Clasp and Rose.

1½	1¾	2	2½	3-in. & larger.
15s. 6d.	16s. 6d.	18s. 6d.	24s.	28s. per cwt.

And every material required in the building, bell hanging, cabinet, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK,

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS

J. NAYLOR'S IRONMONGERY, NAIL, and METAL WAREHOUSE, 265, Oxford-street, near the Marble Arch—Builders, Carpenters, Cabinet-Makers, Locksmiths, and Bellhangers, supplied at the lowest prices.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the nobility, clergy, &c. that they supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.

R. S. NEWALL and Co's Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world

OFFICES, Gateshead-on-Tyne.
126, Strand, London.
67, Hyde-park-street, Glasgow.
27, Dale-street, Manchester.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 159, Shoreditch. A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Register Stoves, with Solid Bars, per inch, 5d.

Improved New Pattern Circular Check Register, with strong Bars and Twists, 8d. per inch.

Best Solar ditto, with Fire Brick Back, per inch, 10d.

Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe { 2 inch. 11d. 1s. 3d. | 3 inch. 1s. 4d. per yard.

Cast Gutters—4 inch, 9d. per yard.

O G Gutters { 3 inch. 1s. 1d. | 4½ inch. 1s. 3d. per yard.

2	3	4	5	6
4d.	5d.	6d.	8d.	10d. per knot

6-inch Rd. Ward Mortise, with Best Furniture and Patent Spindles, 3s. each. Light Elliptic and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.

Brick Moulds kept in stock. Any size made to order.

Best Cut Clasp and Rose Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 in.
16s. 6d.	16s. 6d.	15s. 6d.	15s.	14s. per cwt.

Best Sheet Cut Floor Brads..... 18s. per cwt.

Best Cut Lath Nails..... 16s. "

FIRE-PROOF CONSTRUCTION.—FOX and BARRETT'S PATENT.

This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

Further information may be obtained of the Proprietor of the patent,—Mr BARRETT, 12, York-buildings, Adelphi

CHUBB'S LOCKS, with all the recent improvements; STRONG FIRE-PROOF SAFES, CASH and DEED BOXES—Complete lists of sizes and prices may be had on application

CHUBB and SON, 57, St. Paul's-churchyard, London; 28, Lord-street, Liverpool; 16, Market-street, Manchester; and Horsley-fields, Wolverhampton.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles, Dr. Arnott's Ventilators, &c.; and the new registered Venetian Ventilator, so much admired, &c. &c. &c. each.

J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 300 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

JOHN TANN'S new patent RELIANCE LOCK and FIRE-PROOF SAFES (on the best and cheapest safe in the world against fire and robbery. Test houses to be had on application

Messrs. WATERLOW, Birchin-lane; at the Warehouse, 30, Walbrook, City; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and party-walls

THE LOCKS made under the Patents of Messrs. WILLIAM SIMSON, Banker, Edinburgh, and JAMES GIBBONS, Jun. Wverhampton, contain:—1. Double Set of Bolts and Levers, which cross and hold each other. 2. A Block curtain, grooved on both sides to fit wards. 3. A Detent, preventing the lift of the levers from being felt; the whole combination forming a perfect security against forcing and picking. Manufactured by JAMES SIMSON, Jun. Wverhampton

Sold by MORLTON and LANGLEY, London and Wolverhampton, and all the trade.

FOUNDRY AND IRON WORKS,

85, DRURY LANE, and CHARLES-STREET, DRURY-LANE

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The Builder.

Vol. XIV.—No. 690.

WE find our short notices of the designs for barracks, exhibiting at Burlington House, are absorbing a large share of our space; but we need not extenuate the course we are taking, in that particular,—considering the importance of the subject in points to which we have referred.

Indeed, to state the truth, though we will not deprecate any amount of expectation from us in matters of which it is our business to be cognizant, there are subjects too extensive to be grasped and condensed, in two or three numbers of a periodical: and when we say that the entire range of practical architecture might be considered to be entered upon in the consideration of the barrack competition designs, we express pretty accurately the view which any one will come to, who can devote the necessary time to the drawings and specifications. Our chief reason for this preface to continuation of our notices, and for previous remarks of a similar nature, is that we may draw the really active attention of the profession to the gravity of the case,—as bearing upon the question of competitions, professional and public interest, and the future of our art. Waiving the question whether it is possible for some eight or ten individuals—we will say honourably disposed—chiefly unfamiliar with the language of plans and sections—in the course of a short period (days or months), to adjudicate upon a question of architecture,—or just referring to what seems to be little considered,—viz. that such adjudication demands, not merely good faith, and freedom from bias, time, and technical skill; but a power of judgment and grasp which is irrespective of other mental advantages, and is seldom met with, in questions professional or otherwise; — we say, leaving all these matters to be pondered on,—we would ask meanwhile can nothing be done to make such a mass of results of labour and thought as that now collected at Burlington House, mutually useful amongst architects, and directly subservient to progress? Truly, at length, exhibitions of competition drawings are sometimes opened; but, it would require many months, and we are bound to say more regard for the sake of such an opportunity than the profession are now evincing, to derive any great advantage, comparatively, from such a case as the present. If there is one point more than another that would seem to have had sufficient advocacy of late, it is this,—that association, and the combination of many minds, are essential to both particular and general success. Yet the practice of architecture, where, more than elsewhere, the individual should be all absorbent of external impressions, is to be a pursuit exceptional in its nature. An "Institute," and an "Association" may be excellent,—but by no means all that we require. In a few days (or perhaps after this week), the results of months of labour by a round hundred of architects, will be jammed amongst the lumber of the Ordnance Office; and probably, with some very trifling exceptions, as much lost for any public or professional advantage, as if the competition had never occurred. We could refer to several questions in which light would be derived from the materials now at Burlington House; and books of reference which would be of great service to the profession, could be compiled, with time and opportunity. As it is—passing over mere pecuniary considerations, — what proportionate gain is there from so vast an outlay of time and thought? Clearly, we here have an element in the competition question which deserves more attention than seems to be given to it.*

It appears from a report of the meetings of the committee on the subject of adjudication of the premiums, that the designs were first "classified and arranged by a professional gentleman employed for the purpose." Considering that there are some leading points of principle, on which military authorities alone can decide, we should have been glad to know what principle was adopted in this classification. On it, obviously, the decision must have in great measure depended. Indeed, the first selection of eight designs for infantry barracks was made by the committee (to which Colonel the Hon. A. Gordon and Mr. Donaldson had been added) at their first sitting.†

There is, however, some appearance of classification in the circumstance that many of the designs in the later rooms are less striking, and perhaps less worthy of attention than some which we have had to notice. But, the first that we come to, No. 48, with the motto "Κυδος" is meritorious in the contrivance of structural details, which have received considerable attention. The drawings also are executed with great nicety and elaboration. In the plan the parade is placed across one end of the ground,—the officers' quarters being on one of the longer sides of the parade. Behind these, the companies' quarters form a square group of buildings round the canteen,—the stores being at the back in the same group, and the chapel school in advance in front. Farther back in the ground are the married privates' quarters, and the washhouse,—the hospital is at one side of the ground, and the prison at the other; and at the extreme end is the back gate. The principle of distribution is, it will appear, different to that of most of the other designs noticed, and on some of the grounds which have been stated through our medium, would be held objectionable. The stores are perhaps convenient for the men's quarters; but seem difficult of access.—The companies' quarters form five blocks of building, for 200 men each. The ground story is mainly filled by four parade courts, with piers and openings to the exterior and to the central corridor,—the former openings showing segmental heads. It is proposed to glaze in part, and to adapt canvas blinds to the centre of the opening.—Small spaces are provided for tools, cricket-bats, &c. and the conveniences are placed at the ends. The stairs in the middle are in double flights —ascending and descending,—oak treads and risers leaded, with iron nosings, being proposed. These staircases, and those generally in this design, are open in the upper flights, after the plan adopted by Mr. Roberts in the dwellings of the Society for the Improvement of the Labouring Classes,—the landing serves for the "cleaning" space. The dormitories are arranged on two floors, with twelve men in each room, the sergeants' room being between two dormitories. The men's rooms are heated by an open grate in the centre of the floor. Openings in the partition walls next the corridor are left for ventilation, —a subject which throughout has received much attention. The officers' quarters have an open arcade on the ground story, and a verandah of ironwork to the two upper floors. The cooking-places attached to the dining-kitchens of the men's quarters, each serving for fifty men, seem small, — measuring but 12 feet 6 inches by 6 feet 6 inches. This kind of error is made in many other designs. Such errors have originated in the misconception as to the manner of carrying out the spirit of the report as to day rooms. There are two entrance-gates near together, — the barrack-master's house, to which the guard-house, further on, is attached, being placed between, and forming a marked architectural feature, with columns. The general style of the buildings is plain, but good; and well adapted to works of this kind.

No. 49. — "Fiat," has the buildings designed in the Gothic style, and in good plain character. — No. 50, "Britannia," Messrs. Horace Jones and James, shown by a large model, as well as drawings, has the parade in front; the chapel-school, library, and a covered drill-court in the centre, and the companies in cruciform blocks of building, — five on each side, grouped round the kitchens, or radiating from a centre.—There is one whimsical-looking design in the room we are now in, with a number of circular buildings, apparently attached to a corridor, or covered way, surrounding the parade.

No. 51.—"Spero" has the buildings in detached blocks round the parade; and there may be designs in the last room of the *suite* on the ground-floor, which would be deserving of examination. In many cases, however, the buildings are too much crowded together. But there are useful hints as to certain contrivances,—as in the design marked "Cordon," by Mr. Thorold. One plan which seemed to call for attention, was that of No. 68, with the motto, "Desideratum," which is shown in two drawings, with the elevations upon their corresponding parts of the ground plan. The design is remarkable for the space which it affords for recreation, although the ground seems to be about the same as in the design No. 1, or about thirty-five acres. The principal peculiarity of the plan, however, is in the arrangement of the men's quarters. The parade-ground being placed endwise—with the chapel-school, married privates' quarters, and washhouse along the left and officers' quarters to the right—the end is occupied by the canteen building, with the stores and orderly rooms, which form a centre from which radiate passages communicating with the companies' buildings. These last-mentioned quarters appear to be of one story only; and each building forms a block of triangular shape surrounding an open yard, the intermediate spaces being filled by covered drill-grounds. The hospital and cricket-ground are at the further end of the plan. The houses of the commanding officer and barrack-master are placed on the angles of the ground in front. The officers' quarters form a quadrangle with gardens, in the centre of which is a circular

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* One amongst many writers says, "One of my assistants has made some additions in the men's quarters in the barrack-designs for the infantry barracks, from which it is to be gathered that the architects have leaned to the provision of a house for every company of a hundred men. Each house to be of two stories; each room to contain a squad or quarter company; that the quarters should be contiguous to the parade; and that the privies should be near to the habitations. I send you these particulars to show that it is perfectly practicable to take the opinions of the whole body of competitors (as expressed in their works) on the governing features of the subject, and whether finally adopted or not, I cannot but think that previous to any executive measure the authorities ought to obtain such a view of the tendency of professional study."—Anonymous."

† Besides the three designs ultimately selected, there were,—No. 4,—"What is worth doing is worth doing well;" No. 5, "Vicino in;" No. 6, "Vi et armis;" No. 8, "Ars armis adjutrix;" and No. 9, "In Omnia Paratus." Estimates appear to have been obtained for the three chosen designs (for infantry and cavalry barracks) only; and it is not very apparent how the committee *could* "give some weight in their final decision, to the element of expense," under the particular course they adopted. The designs for infantry barracks, with 10 per cent. for contingencies, and irrespective of land, were estimated for by Messrs. Hunt and Stephenson at these amounts:—

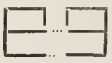
No. 1 ..... £14,956
" 2 201,201
" 3 213,104

We believe that the excess of cost of No. 2, as compared with No. 1, is attributed to extra convenience which is provided. The items do not include the fittings of kitchens and washhouses, nor gas-fittings; but do include the gas-works shown in designs Nos 2 and 3. Approval was expressed by the committee of the design marked "Victoria," for "the mode in which the arrangements for the accommodation of a company of soldiers are distributed,"—indeed, at one time, this design had been fixed upon for the third place. How far the matter of the parade-ground and relative position of the companies may have been considered in the classification, does not appear.

swimming-bath of the kind so often referred to in our pages.

A few of the designs in the room upstairs deserve attention,—though all except one or two, are painfully prominent on account of the bad taste of their decorative features. In No. 74, "Excelsior," Mr. R. W. Armstrong, there is a covered drill-ground intersecting the parade,—an arrangement which, we fear, would be held objectionable. The officers' quarters are along one side of the parade, and the men's quarters with the chapel-school in the centre, are opposite; the hospital is at one end, and the married privates' quarters are at the other. The canteen is at the back of the men's quarters, with large racket and ball courts adjacent,—and the stores are in the same part of the plan. The barrack-rooms are for twenty-four men each; and two rooms are planned side by side, with windows in the division wall as well as the external side-walls, and the fire-places also in the division. This arrangement would involve loss of space, and does not seem to agree with the best opinions on the subject. The general opinion as to the advantage of dormitories lighted from the ends seems to have prevailed with the committee.—No. 75,—with the motto "Hope" (not to be confounded with another set with the same motto)—has the entrance at one end of the parade, with the hospital opposite, the officers' quarters at the left side, and at the right side the orderly-rooms, chapel-school and stores in the centre, and a group of five companies' quarters on each side of it. These quarters are grouped round five dining-rooms, a chimney-shaft rising from the midst. The other buildings are further to the right.

No. 80, with the motto "Hope," and a geometrical figure, is one to which we have several times referred,—as its general distribution and many of its chief features are grounded on principles on which the experience of its author gives him every claim to be heard. For, far from erring, as some of the competitors have done, by following the letter of the report, the author in the present case, Mr. R. Rawlinson, goes greatly beyond anything that has been contemplated as yet in barrack accommodation. He appears to start with the principle that ample area for exercise and recreation is one of the first provisions to be contemplated in a barrack; and though he admits that one-fourth of the area which he has shown might, by increasing the number of stories and other modifications, be made to answer the purpose where ground was expensive, that which he puts forth as the model plan in the present case—where there was no particular restriction as to site—covers an area which we find amounts to little short of 70 acres. However, he gives to each man a separate sleeping-closet, and to each twelve men a separate day-room, with cupboards, one to each three men. The various quarters occupy the sides of what we may call a quadrangle, divided, however, into parts, or having a general arrangement, which may be represented thus,—



where the horizontal projections in the middle would represent the positions of buildings appropriated to the stores, orderly-rooms, and other purposes,—the officers' quarters taking up the line at the foot; or what is the front of that part of the barrack. The dormitories and day-rooms themselves, in two stories, are entered from a wide corridor, having open arches next the quadrangle; and at regular distances blocks of building occur, containing the lavatories (three basins to each twenty-four men) and the other conveniences, which last he has had the courage to devise on a principle very different to what was recognized by some of the chief witnesses before the committee. To the arguments on this subject we have already referred in more than one of our notices, and need only admit now, that much of the evidence to which we allude appears to have been given without full consideration of the subject. The very provision of what is contended for would go far to alter the habits of soldiers, though these are viewed as incorrigible.

The group of buildings we are noticing encloses, in fact, several quadrangles. Of these, half of the area—as shown in the figure above, and entered through gates—is the ordinary drill-ground, or barrack square; and beyond this is the "esplanade," leading up to the chapel-school, and flanked by two enclosed and covered areas marked in the figure,—one being the regimental covered drill-ground, and the other to be used by the officers. The sergeants are not placed with the men, but have rooms in a separate part of the barrack range, and with their own staircase. The men's kitchens are four in number, two on each side of the building, each kitchen serving for 250 men. The distance to which many of the men would have to carry their dinners, through open corridors, surely involves what is not consistent with the completeness which the plan attempts generally.—But in noticing this central group of buildings we have referred to a comparatively small portion of the plan and arrangements. In advance of the officers' quarters a "grand parade" is shown,—this being reached from the exterior of the barrack by two entrances. Considering the publicity which we have given to "strictures" on some of the plans, we ought to say that the direction of roads as laid down is not that which would be most convenient in the working of the establishment.—The barrack-master's house is near to one of the gates, with the barrack stores adjacent; the guard-room being at the other gate, and the officers' stables at the same end of the grand parade. The entrance to the barrack square before mentioned through the officers' quarters, is by gates, flanked by lofty turrets. At the opposite end, or beyond the "esplanade" and chapel-school, is yet another large quadrangle. On one side of it are the hospital buildings, which themselves comprise the sides of two squares, and have their own garden attached. On the opposite side are the quarters for the married, which, with the washhouses and baths, and the gas-works, also surround a large square. Still farther on, extending across the plan, or more than 1,200 feet in length, is the "recreation-ground." At the extreme end of the plan is placed the canteen, that spot distant from the barrack-rooms being advisedly chosen, on the ground that though the canteen might be properly placed near to the recreation-ground, it should not stand forth as a constant temptation to the soldier. It will be recollected we have noticed plans, and one just recently, where the same feature is made the very centre of the barrack system. The question here involved is just one of many about which no definite conclusion arrived at has been mentioned; but, such matters should be considered by those who are in a position to form opinions, since they govern the icnographic distribution. Until the authorities settle such points in their own minds, the architect may follow the letter of the instructions as to details, but will miss the important principle which is what should be exemplified in a model barrack. At one angle of the recreation-ground is a large plunge-bath; the water from which, it is presumed, might be used to flush the sewers. The temperature of the water would be raised, if required, by a hot-water or steam pipe from the boiler of the wash-house—which, however, is at some distance—the plunge-bath being uncovered. The sewerage and drainage have received careful attention. Land-drains are shown over the whole site; there are surface-drains for the courts, and larger sewers where required, with man-holes and inspection-places at the different junctions. The pipe-sewers are specified to be jointed with asphalte. Flushing-chambers are provided where required, and the head of the sewerage arrangement is supposed to be so placed that the water from the bath could be immediately turned in at that highest point, from which also a pipe is conducted to the chimney-shaft of the wash-house, in order to secure ventilation. Covered ways of communication are of course added in many parts of the ground. In the buildings, fire-proof construction is proposed. Attached to the room of each married private, are a lobby, scullery, and water-closet. The hospital, the author of the design has provided, taking the number of sick upon the estimate of the report but he prominently advances, that if the other parts of his scheme were carried out, no such accommodation in the hospital would be required. The general grouping in the design is effective: the decoration is in great part by bands of red brick. The estimate for the *buildings* is set down at 100,000*l.*—but surely this must be too little,—leaving the enclosing of the ground out of consideration. The latter item must be a serious one in all cases,—the authorities requiring a brick wall 12 feet in height.

Were the principle of distribution which we have so often referred to (viz. where the companies' quarters surround the parade, leaving frequent through-passages) to be taken as established, it will be seen that Mr. Rawlinson's plan would not strictly meet that principle. We have not been able to see whether the principle—which is at least an obvious one—has been considered by the committee,—but it is clear that some general *data* might be laid down for future use, with the assistance which is now at hand. In other points—matters of detail—the design before us could be improved upon. But the main distinctive feature of the plan, the provision of large area for military exercises and recreation, and of particular arrangements and contrivances which in all dwellings are now deemed essential to good morals and health—is one the importance of which should be well weighed by those with whom the decision as to the principle to be acted upon in building will rest. Mr. Rawlinson's conclusions are the result of some knowledge of the fatal defects which have been allowed to exist at home, and of the more advanced position of the subject in some foreign countries. Barracks, in Russia, form the chief of the later buildings and not long ago we referred in these pages to the book of designs by the architect, Rusca, as illustrating the importance of those buildings in the recent history of architecture. We have it certainly in our power to improve upon those structures, both in external character and in sanitary details. Whether Mr. Rawlinson is right in providing a palace and park for him who chooses the profession of arms, we cannot say,—though, indeed, who with such inducements, would *not* be a soldier? The real point is, that so long as there must be a military profession, and so long as the soldier is that expensive article which he has been represented to be, it is wise and economical to attend to his comforts and wants, so that he shall be efficient should the necessity arise, and that he shall not meanwhile be noxious as a citizen. It is difficult to say precisely where economical expenditure passes to extravagance; as it is difficult to say where what is lost in convenience, is not sufficiently compensated for by the increase of area. Nevertheless, principles which are put forth in these plans may be worthy of attention, and may indicate that to which we may perhaps come. Let us add that Mr. Rawlinson's drawings, amounting to thirty-two in number, are executed with remarkable care and completeness.

Amongst the other designs is No. 84, "Ad astra," in which the beds are ranged along a covered space, in galleries, partly supported by cantilevers, and partly hung from the roof. The latter arrangement, without our saying anything about the plan, is most objectionable structurally.—In No. 88, "Vivi tu," by Messrs. Moseley, though the general plan is, we think, questionable, there is merit in the structural arrangements, and in the provision for ventilation. Closets here also are deemed requisite for night use; and the barrack-room fire-places are placed in the centre of the room.

Although we have been entering but slightly into the question of merits; and, though nearly all the works which we have noticed have sufficient in them not to require praise from us, or to be defended by their authors, the publicity which we have given to certain comments upon the successful designs, renders it necessary that we should select those cases for some remarks which appear due to their authors. It is especially due to Mr. Morgan, to make record of one or two points.

First,—As to the arrangement of the kitchen and dining-room—the report is not clear on that

point, but hints at a compromise; and this is what has been accepted. 2ndly,—As to married women in the barrack building—we are told that no difficulty is apprehended on that score, and that all women will be removed,—even at the risk of removing the sergeant also. The restriction as to the married to a company, is framed as though all were of the same rank. 3rdly,—There are advantages in placing the entrance to the barrack at the side,—since there is less waste of the parade-ground. The distance which a cart would have to traverse is not deemed material; whilst the central position of the stores is of great advantage. 4thly,—The arrangement chosen for the "conveniences" is excusable, following the letter of the report.—From Messrs. Lockwood and Mawson we received a long communication, and in our last we corrected some of the statements of our correspondent to which it referred. Far from assuming unlimited area, our correspondents did rather the reverse: they show that one gate may really answer the purpose, and is found even best in establishments occupying considerable area. In one of these cases, 4,000 persons, they state, pass the single gateway six times a day, without confusion. An alteration of the plan, so as to make the companies face the parade-ground, would be attended with disadvantages: the position being now good with reference to the situation of the stores. At the same time, the plan would admit of an extension of the front, though the breaking up the present short lines of communication would not be desirable. They argue that the intention was to leave the decision as to day-rooms with the architects; and we have shown that we favour that view of the instructions.

The author of design No. 3 points out in a letter that four of the companies in his design look to the grand parade, and every company has access to the covered drill-ground, from which there are large archways to the front. The drill-ground itself seems to be considered fairly deserving of some credit at our hands, and this without reference to the general plan, we are happy to give. Amongst our other correspondents, the author of design No. 30, "Comfort," points out that the main entrance is that which is at the side of his plan, and has a guard-house. The entrance leads directly into a road, which runs round the chief buildings, bounded by the barrack-wall. Such a road might be added in other cases with advantage. We repeat that the merits of these and other designs must be judged by *data*, which the military authorities are those who should settle. That the committee omitted to do this in several essential points, whilst they gave very precise instructions where they were hardly needed, is now becoming apparent. Their report fell into the general error of "instructions;" and by advertising for plans which should "embody the recommendations contained in their report," they prevented many of the competitors from making suggestions, and could not take them when made, except by an act of injustice. We are quite accustomed to this feature in the working of the competition system, and which effectually shuts out any advantage anticipated from it; but it is one the importance of which is singularly ill-apprehended, generally.

In an ensuing number we shall speak of the designs for cavalry barracks. A few words now on a point of justice.

When Government advertised for plans for barracks, and offered premiums, they stipulated, it is true, that they should retain the whole of the drawings sent in. Let us look at the bargain:—

PREMIUMS PAID.

		£	s.	d.
Infantry barracks:—	1st.	£150	0	0
,,	2nd.	100	0	0
,,	3rd.	50	0	0
Cavalry barracks:—	1st.	150	0	0
,,	2nd.	100	0	0
,,	3rd.	50	0	0
Total sum paid ...		£600	0	0

There are 114 sets of drawings; and, if we take 50*l.* per set, which will be a low figure, the account will stand as follows:—

	£	s.	d.
114 sets of barrack plans at 50*l.* per set.....	5,700	0	0
Premiums paid for same	600	0	0
	£5,100	0	0

In other words, the architects who have entered into competition give 5,100*l.* to the country, exclusive of professional knowledge. And the sum of 50*l.* does not represent more than one-third the actual money-cost paid to assistants for some single sets of the plans.

Will no member move in the House that, as Government wish to retain the whole of the drawings, and may use the ideas embodied in the same, Government shall pay for them? A committee of three architects, or, say a committee of members acquainted with such matters, might examine and assess the value of each set of plans, and pay the architects accordingly. Let the committee be composed of Tite, Stephenson, and W. Cubitt, and let any person who declines the award take back his plans. Lord Panmure may object and say—"No, gentlemen,—a bargain is a bargain." No doubt this may be retorted—and what then? Is there no answer? Is there no liberal interpretation? It would be a sad world if all acted on Shylock's principles. A great nation can afford to be generous; and it must be remembered that generosity is something added to justice. It may be said to Government,—"If ye are barely just, what are ye more than others?" To use the property of men who are citizens, without payment, is gross injustice; and we can only reiterate to Government,—Either pay for the drawings or return them.

REVOLUTIONARY ARCHITECTURAL PRINCIPLES.*

The notice of columns in my last letter was, in some respects, a digression: I return to architectural morals, as to which here is another statement we must not receive save under protest:—

"The Gothic builder added a love of fact, which is never found in the South. Both Greek and Roman used conventional foliage. . . . . The Gothic sculptor received these types . . . . he saw there was *no veracity* in them . . . . cautiously he put more nature into his work, until at last it was *all true* . . . . it was *extreme love of truth* prevailing over his sense of beauty . . . . *the intense love of veracity which influenced the Gothic design.*"—*Stones of Venice*, vol. ii. chap. vi.

I take this to be but another phase of what we have been looking at. To my own sense and love of art the matter is simply this:—The Greek, running ever into abstract principles, takes certain natural objects, and conventionalizes them: the Goth, ruder and more imaginative, falls in love of the actual leaf, and works it into his building, as though it grew there—*which it did not:* anon comes one with Seven wonderful Lamps, and pronounces the word "veracity:" shall we admit the word as a pure poetic license?

But there is something else. Pre-Raffaellitism has made, it seems, discoveries undreamt of in theology:—

"As the Book of Job was inspired chiefly for the purpose of teaching us the value of natural history" (Edin. Lect. p. 145), so "all the Book of Genesis has a profound symbolical as well as literal meaning. When it is said, 'I have given thee every green herb for meat,' it is not merely the nourishment of the body, but the food of the soul that is intended" (Stones of Venice, vol. ii. chap. 6); and this, it seems, "*the great Gothic spirit revealed by the workman's chisel.*"

Wonderful! Those bits of trefoil and parsley! Not, as we ignorantly thought, for ornament only, but a sort of sacramental food for spirits. How sad that the Greek, so near the truth, should have lost it by the vain deceit of conventionalizing instead of copying them!

It is true that this "intense love of veracity" commits something very like suicide:—

"Where an idea would have been by a Roman or Byzantine symbolically represented, the Gothic mind realizes it to the utmost. For instance, the purgatorial fire is represented in the Romanesque mosaic of Torcello as a red stream longitudinally striped, like a riband, descending out of the throne of Christ, and gradually extending itself to envelope the wicked . . . . but the Gothic workman makes his fire as like real fire as he can," and thus "the *Romanesque builder told more truth;* the other, seizing on a surface truth instead of an inner one; yet all this in the noble Goth is but too hasty a love of the truth."—*Ibid.*

On this part of the business I will not repeat my doubts. As to the question of architectural ornaments in the abstract, or rather as to the principle on which they should be regarded and used by us, I have a very decided conviction. When I look on the various objects of "associative sculpture," I cannot restrain an involuntary shock at the thought of their systematically assuming a realistic character. What! those bunches of leaves, called corbels, for support of groined arches and pendant roofs? Those bishops' heads for dripstone terminations? Those canonized saints, wedged and jammed by dozens round the vaulting of a doorway? Are not all such things pure conventionalities? Does not common sense as well as artistic feeling demand that they shall wear the ostensible semblance, stamp, and livery of conventionalism?

At the best, they are licentious enough. I should have thought it impossible for the fondest lover of Gothic,—though it were myself, who love it, only not exclusively, with all my heart,—to avoid a latent feeling that they *are* licentious. Confession might, I fear, go further,—they are too often "*stuck in,*" without rhyme or reason. Taking them, however, with all their faults, I should have just come to this conclusion,—keep them as enrichments, lying lovingly about a building—suggesting poetic ideas congenial (would it were always thus) with the object and character—but only suggesting them—and they do their work. Carry them further, make them what Mr. Ruskin would have them, and they are monstrous: you have arrived at a point at which Realism outwits itself; for surely *in proportion as figures look like real figures, your building must look unlike a real building.*

I need scarcely observe on the architectural sculpture of the Greeks; all that comes within the principle I contend for,—all, that is, which formed an integral portion of the structure, was conventionalized. The Parthenon sculpture is in a different category: the bas-reliefs were an historic picture that was no structural member of the building. The metopes were alike pictures of events that were articles in the national faith,—pictures let in to fill what, structurally speaking, were hollow spaces, not, like corbels, gargoyles, and dripstone terminations, organic part and parcel of the substantial fabric. Of the frontal figures that filled the pediments I need of course say nothing; they were not, as it is intimated in "Modern Painters" and the "Edinburgh Lectures," *eyes*, any more than the statue of Minerva within. Yet even these, one and all, were idealized.

Our author would reverse all this. He takes that gutter ornament—the lion's head, which so amusingly inaugurates his "Edinburgh Lectures," and pronounces it nondescript, substituting the *vera icon*, the very absolute personification of an actual lion (I beg his pardon, he could not get a lion, so he got a tiger)—as if, when Architecture availed herself of such accessories, she was under law to *realise what could never be real.* Can he be surprised if some one answer, in terms emphatic as his own,—*This is not truth, but barbarism!* Surely if it must come to this, we must have all the abominations of painted sculpture? yes, rather let us cashier sculpture altogether, and get actual heads, pickled and preserved, only not tatooed, after the fashion of New Zealanders.

Short of this, the case seems clear enough. Mr. Ruskin has let loose his indignant adjectives against the arabesque of the Villa Madama: let us try the case on the morality principle. Those grotesques say each, "I am no reality, but an artistic phantasy:" here we have a bit of cornice that says as plain as stone or marble can say anything, "I am a real tiger." Which has the most of—"veracity?"

We are reminded in the "Stones of Venice" (vol. ii. chap. vi.), of a similar case in the Cathedral of Bourges, where the "intense love of veracity" has prompted the *fac simile* colouring of a wreath of foliage round the doorway—a

* See pp. 161, 171, and 203, *ante.*

piece of morality Mr. Ruskin has pronounced excessive, but which I venture to call spurious.

So much for truthfulness. As to the artistic part of the business, there need be, theoretically at least, no difficulty. I am not pleading for that amazingly mournful absurdity in the Edinburgh frontispiece; nor for coarse, crude, slovenly, unintelligent ornamentation of any kind. I state a broad principle: *we are not to convert a religious building into a hortus siccus, a gallery of portraits, or a museum of comparative anatomy.* "The right thing in the right place:" what place can a bull's head have in a marble building, save as symbolised and symbolical? Let art and nature have their proper places: the one gives the *idea* of a thing—the other the thing itself. Do not tumble into a clumsy mingling of the two, and call it "*truth.*" If you use natural objects for ornament, let them be congenial, cognate, and illustrative; but whatever of truth you give them, let it be essentially abstract, not individual truth—ideal, not actual truth. Give them the sentiment, rather than the resemblance, of what they stand for. Throw what you please, or can, of thought, feeling, skill, scientific knowledge into the work; but *let it be seen, from first to last, that these things are architectural symbols,* not a mockery of what they come from. This is art in its highest sense; all below it is the art of savages. Pantheism may plead for it, but not religion,—not philosophy,—not artistic instinct,—not common sense.

I will not follow out my painful protest into all the principles of architectural morals asserted in the works I have been engaged with. But what are we to say of such passages as the following:—

> "The Greek sculptor could neither bear to confess his own feebleness, nor to tell the faults of the forms that he portrayed. But the Christian workman, believing that all is finally to work together for good, freely confesses both."—*Stones of Venice,* vol. ii. chap. vi.

Surely, if the love of ideal beauty is to be identical with pride, and the semi-barbarous *primâ-facie* copying of nature with humility, we must have a new vocabulary of morals as well as art. No wonder, if it be thus, that the "elastic tension" and "rigidity" of Gothic stones, and "*the pleasure in dwelling upon the crabbed, perverse, and morose animation of plants that have known little kindness from earth or heaven,*" should form so distinct a feature in "Christian architecture," nor that it should come from "that strength of will, independence of character, impatience of undue control, and *general tendency to set the individual reason against authority* which, in the northern tribes, has opposed itself throughout all ages to the languid submission in the southern, of thought to tradition."—(*Ibid*).

The only difficulty is the rigidity of fact—the "crabbed, morose, and perverse" consciousness that those Gothic stones were shaped by hands never a cubit's length from the priestly thumb-screw; and that the resurrection of "manly thought," and the dethronement of "tradition," were just synchronical—perhaps something more—with the adoption of that special style we must now attribute to "a feeling compounded of indolence, infidelity, sensuality, and hollow pride."

But a truce: I have no taste for blowing up sheds and sentry-boxes when the fortress, as I take it, is fairly gone. Nor would I touch, for mere wanton "practice," a single fibre of that architecture as to whose alleged moralities I have been compelled to appeal to truth and fact. I love it: I love those who reared it, and those who write and labour to perpetuate it. I have no sort of sympathy for architectural Quakerism: I have an indestructible reverence for artistic fancy, and can say, in soberest truthfulness, with gentle Irmingard:—

> "For every soul is akin to me
> That dwells in the land of mystery."

But when I sit down to a philosophical treatise—a treatise that is to revolutionize the art of centuries, and "establish irrefragable laws of right,"—though I would never pluck the wings of fancy, nor set a seal on eloquent lips, I cannot forget that *truth*—one and indivisible—is, then, the very object we have before us:—it is neither in my temper, my power, nor my duty to take some lamp of Aladdin for a star of the firmament.

If the author I am speaking of would but give his pure Gothic nature, like the architects we both so highly estimate, fair play;—if, discarding theory, rule, consistency, as they did, he would just revel, uncontentiously, in one beautiful image after another, at the simple bidding of artistic impulse,—there is no man living would more heartily rejoice in his own "*florid Gothic*" than myself. It is my misfortune that he must be ever going on to theorize, systematize, revolutionize, anathematize,—and what is worse, all in unmitigated black and white,—

> "Buttress and buttress alternately,
> Seem carved of ebon and ivory,"—

no middle tint, no middle object, no blending, no brotherhood: *this* structure unlike the one the poet sings of, is never seen in tender moonlight,—its black and white are *moral:* "right" everywhere side by side with "wrong,"—felicity with downright crime,—approval and condemnation alternately, each the other's echo. I open my heart to diverse sympathies; and a voice cries, "*Under which king, Bezonian? Speak or die.*"

All this might be, of course, a stern necessity; and, being fairly proved, acquiesced in accordingly. Unhappily the case is reversed. The necessity is on the other side. I *cannot* surrender half my being to a simple order to do so. I *must* at least, know "the reason why." By some inexorable law, whether of self-preservation or a sense of justice, I am thrown back on the stern authority of simple facts. Such facts are, in almost every case, fatal to the system I am called to swear by: but with the aggravation that the spell is in almost every instance the most infallibly broken beneath some such solemn words as "Christian humility," "honest architecture," or "intense love of veracity."

LENY.

A FEW THOUGHTS ON ARCHITECTURE.

ARCHITECTURE is the art of embodying ideas peculiar in themselves, yet, in the nature of their operation, analogous to those thoughts which find their utterance or embodiment in the works of the poet or the musician, the painter or the sculptor. It is an art of more refined abstraction than any of these, seeing that in it, the analogy of mental or moral expression is less obvious. But in proportion as the language of architecture is the more mystic and obscure, so perhaps an acquaintance with the truths which it unfolds imposes upon the mind deeper emotions. By the language of architecture I would not be understood as conveying the idea of a vulgar symbolism, but the expression of abstract ideas by form, colour, and disposition.

If, then, this, the most intellectual of all the arts, be granted to be, in common with other arts, an exponent of the mind; how necessary that, in order to become a true art, reason should assert her sway over the vagaries of fancy, or the ravings of a disordered imagination.

Fitness of expression, an adaptability to the purpose for which a work is designed, is the leading principle to be kept in view, a departure from which strikes at the root of all true art. Combination and treatment are the two other elements or principles essential to the production of an architectural work.

The language of architecture should be disposed in such a manner as that no sentiment is misplaced, and that no feeble and incongruous ideas conspire to provoke a sense of the absurd, where dignity and respect should have found their full expression.

Although it would be futile to attempt to systematize the "language of architecture,"—although "mind" is ever universal and unique, yet it is ever varying and differently complexioned in individuals. I may, perhaps, be allowed to suggest that the following may be legitimate architectural expressions.

The column, whether cylindrical, clustered, or of angular form, expresses that stability and firmness without which the most brilliant qualities of mind are of little use for the great purposes of being,—the arch, that expansion or compass which connects or embraces within its mighty grasp the most remote ideas, bearing a superincumbent weight of masonry, which serves to strengthen and consolidate the whole. The hemispherical and cylindrical forms are expressive of universality and dignity. Pyramidal and conical forms embody the idea of the soul's aspirings grounded on solidity and truth. Curvilinear forms express those meanderings of the mind through which fancy delights to float, drifted by the gentle current of its stream. Apart from the main features of an architectural work, every minor one may be made æsthetic and typical of some element in the universal mind, of a nature befitting the medium through which it is expressed.

Colour, as subservient to form, in itself, and in its combinations, contributes materially to its full expression and development. Without colour, form is the cold intellectual expression, unsoftened by the "genial current of the soul." Colour is to form what grace of diction is to the speaker: it is the impassioned eloquence, the heart-stirring appeal, the persuasive force which attracts mind to mind.

The laws which govern form apply also to the application of colour. Positive colours, as a general rule, appear best adapted to those portions which express strength, whilst neutrals or positive colours, modified in intensity, befit the dependent portions, or the superincumbent surfaces. It may still, however, be questionable if "intensity" be not the law; and if as harmonious a combination may not result from the above order being reversed, those features which are essentially ornamental, as bas-reliefs and the like, should have the same aids to effect from colour, as their relief and chiaroscuro give them, independently of its application. A salient object requires intense or positive treatment, a "surface" subdued or negative treatment.

Finally, if colour be applied, the language, the expression, the work itself remains the same, except that an additional force is received, and the work rendered complete by enlisting into its service this one of the principal elements of the beautiful.

ZETA.

EXAMPLES OF ENGLISH IRONWORK.

SEVENTEENTH AND EIGHTEENTH CENTURY.

WHEN travelling, particularly in the southern counties of England, you find many picturesque and well-designed iron gateways, leading at times to avenues of lofty trees, beyond which you get peeps of substantial houses, built with light red bricks and dressings of white stone: sometimes the handy work of the skilful smith is met with on pleasant terraces, and in front of the quaint old-fashioned hostelries in the villages and by the road side, relieved against the clear sky or green background. Fixed in the sketch-book, they serve, in addition to their usefulness, to preserve the memory of many pleasant scenes and circumstances.

One of the adjoining examples of hand wrought-iron is in front of the Jolly Farmer's Inn at Farnham, the house in which Cobbett, the political writer, was born. He lies buried, by the way, in the graveyard of the old church close by. Those who are able to enjoy a walk of eight or nine miles may take the railway to the ancient town of Farnham, visit the church, the portions of the castle still remaining, and the fine park, plentifully stocked with deer, and after looking over the wide extent of the hop-gardens to the Waverley-hills, inquire the way to Cæsar's camp,—as a piece of high land, about two miles and a half from Farnham is called. Few wilder scenes are to be met with near London than the site of this encampment, round which Aldershott and other heaths extend for several miles. The earthworks in Cæsar's camp are of great magnitude, and many of British formation. There are several barrows close at hand, and on the land below traces of a dyke are visible, leading over the Beacon-hill to the Aldershott camp. There are also some Roman encampments in good preservation, and several barrows of both circular and oblong shape. Passing through the camp, a road leads over heath, amidst forests of fir-trees, to the Farnborough-station, where, if it chances to be evening, the traveller may hear the nightingales

EXAMPLES OF ENGLISH IRONWORK: SEVENTEENTH AND EIGHTEENTH CENTURY.

singing in the wood behind the church while he is waiting for the train.

In addition to the example engraved, there are several other nice bits of old ironwork still left at Farnham; but within the last dozen years much has been removed. This is generally the case in other neighbourhoods; and it is to be feared that, before long, specimens of such work will be very scarce;—the more to be regretted, since what is substituted is always less tasteful and artistic.

In Tottenham and the neighbourhood there are still some good specimens of this kind of work; also on the road from London to Epsom, in the gardens of Vane-House, and other parts of Hampstead, Kensington, and other suburbs of London; but in the old parts of the metropolis, where formerly wrought iron was extensively in use, very little is left. Of the many hundreds of signs, both of the tradesmen's shops and the inns, which, in most instances, were supported by flowing patterns in ironwork, not half a dozen remain: one of these, at the Magpie and Horseshoe, may still be seen in Fetter-lane.

In some of the City churches, the ironwork on the churchwardens' pew, the chains to which

the chandeliers are suspended, and other bits, are worthy of notice. The gateway of the choir of St. Paul's Cathedral is of good design and execution; but, out of doors, the most remarkable examples are the gates of the Temple-gardens and at Gray's-inn: these are, as will be seen by reference to the engraving, of nearly the same date.

PURIFCATION OF SEWER RIVERS.

Some very important experiments have been made at Manchester, at the instance of the active and useful "Manchester and Salford Sanitary Association," and a report of them is now printed in the form of "A Minute of Committee on the Practicability of Purifying the Water flowing from the River Medlock into the Duke of Bridgewater's Canal," of which we shall endeavour briefly to give an account.

The committee state in the outset, that the urgent importance of removing, or at least diminishing the nuisance of the sewer river of Manchester, has for some time engaged their attention. To this end the direction and superintendence of experiments suggested by Mr. Cawley, and involving chemical and analytical questions, were entrusted by a sub-committee to Mr. Crace Calvert, Dr. R. A. Smith, and Mr. McDougall.

The object of the experiments was not to purify the canal, but to obtain data from which to determine whether or not the water it receives from the Medlock could be purified in its course as a stream. Hence the results, however valuable, in a practical point of view, must be regarded as only preliminary to more extensive operations.

Two reports were presented to the committee, one from Dr. R. A. Smith and Mr. McDougall conjointly; the other from Mr. Crace Calvert alone. It was found in course of the experiments by these gentlemen, that when lime is thrown into the river Medlock, it produces "curdling," which results from the formation of a very flocculent precipitate. This precipitate is formed by the combination of the lime with the carbonic acid, organic matter, and other substances held in solution and suspension in the water. It separates into large and distinct portions, which subside very rapidly. Careful observations, repeatedly made, showed that the precipitate falls at the rate of about 1 foot in 8 minutes, or about 1½ inch per minute.

The water of the Medlock, as is well known, is of a dark bluish tinge, somewhat resembling ink at a distance, and ceases to be transparent when more than an inch deep. The clarified water is transparent through several feet, and when standing in a glass, cannot be perceived to be impure.

The value of lime in purifying the water is said to be clearly demonstrated, for it not only removes the dirty black matter in suspension, and consequently clarifies the water, but it also removes the greater portion of organic matter in solution; the quantity of which, separated by the lime, is 59·02 per cent. taking the average of the five experiments.

The minimum amount of lime which, under suitable arrangements, would precipitate the extraneous matters in the Medlock, at per million gallons, is thus given as a mean from different experiments:—"3¾ cwt. of lime will purify 1,000,000 gallons of the Medlock water."

The cost of applying the lime process would be as follows:—

For lime, at 3¾ cwt. per million gallons of water; fifty million gallons of water per week require 9 tons 7½ cwt. of lime.
9 tons 7½ cwt. at 10s. 6d. per ton = 4*l.* 18s. 5¼d. the cost per week.
And therefore 255*l.* 18s. 9d. a-year, the cost of lime.

If the purification should be accomplished by lime only, the cost, exclusive of labour and wear and tear of apparatus, would therefore not exceed 256*l.* a-year.

If, however, some additional disinfecting agent should be required in proportion of 2½ per cent. of the lime, — that is about 12 tons — an additional expense would be incurred, amounting to nearly 100*l.* a-year; but this, under the improved arrangements contemplated, might not be required, or if required, not in so large an amount.

The commercial value of the deposit after the application of lime has also been investigated.

Dr. Smith and Mr. McDougall state, that "the precipitate has a certain value as a manure; although not a great one. It may be advantageously used near the banks of the canal, but at the distance of even a few miles, it could not be used economically by farmers, as it would not bear the cost of transport.

Mr. Calvert remarks—"Although this deposit cannot be considered as a valuable manure, still it might be employed in many cases with advantage; and if we consider the Medlock as a highway of Manchester, its refuse is superior to ordinary street sweepings."

Upon the whole, however, no great commercial value can be attributed to this deposit. The conclusions deduced from the whole series of investigations are:—

1. That the water received into the Bridgewater Canal can be purified by the application of lime.
2. That this can be accomplished at an annual cost of from 300*l.* to 400*l.*
3. That the deposit will have some commercial value as a manure, although not a very great one.

NEW WATER-COLOUR SOCIETY.

The works of the New Water-Colour Society, 349 in number, now in Pall Mall, form a very interesting exhibition, better as a whole, we should say, than has been seen there for some time past. Mr. L. Haghe comes out in great force, exhibiting, in addition to some smaller works, three beautiful pictures, side by side, "An Incident in the Antechamber of the Tribunal of the Inquisition" (50); "Venice, il Molo" (55); and "Town Hall of Oudenarde; Meeting of the Corporations" (64), the best of the three. In the view of Venice, the effect of sunlight is wonderfully shown; but the pyramidal form given to buildings on the island is not agreeable. In Mr. Henry Warren's largest picture, "Rebekah first sees Isaac" (77), the air and light are treated with great skill and good effect: the whole result is very successful. "Ye Lymnere hys Dreame" (211), is full of cleverness, but wants a central and leading incident. In the foreground will be recognised the Princess Royal, engaged on the clever picture contributed by her to the Amateur Exhibition. His 232 is a charming specimen of his skill in treating female figures. "Propertia da Rossi," by W. H Kearney, is amongst the best pictures in the room, and we would mention with commendation (179), "Waiting for the Ferry," J. H. Mole; (202), "Dorah," J. Absolon; (206), "The Avenue at Hurstmonceux," J. W. Whymper; (218), "Old Lime-kiln," D. H. McKewan; (225), "From Don Giovanni," E. H. Wehnert; (313), "Boys Fishing," Robert Carrick; (35), "Landscape and Sheep," C. H. Weigall; (237), "Glen Tilt," W. Bennett; and (263), "Bristol, from Brandon-hill," by Jas. Fahey.

Mr. Edmund Warren has some landscapes of very great beauty, (228), "Goodrich Castle, on the Wye," and (262), "The Wye at New Weir," notwithstanding a violent contrast of colour in the water of the latter which is not quite understandable. A little picture by Miss Farmer (137), "Castle Building," deserves a better place than has been given to it.

PROVINCIAL NEWS.

Wisbech.—The first stone of the new bridge at Wisbech was laid on the 11th inst. by the Mayor. Mr. J. M. Rendel, F.R.S. is the engineer; and Mr. J. T. Leather, the contractor.

Eye.—The plans for the new corn exchange, &c. by Mr. J. Brown, of Norwich, architect, are to be carried out as soon as possible. The roof will be glass, with an ornamental dome and cupola in the centre. The outlay will be from 800*l.* to 1,000*l.* It will be attached to the old Town-hall in front. One gentleman has contributed 400*l.* towards its erection.

Norwich.—The statue of Nelson, by Milne, which about eighteen months since was placed in front of the Guildhall, in the Market-place, has been removed by order of the Committee to the Close, in front of the Grammar School. It is placed on the same pedestal.

Bugley (Wilts).—The committee of the Wilts Reformatory School have selected a site for their intended buildings, at a village named Bugley, within two miles of the Warminster station. The necessary erections have been contracted for at 800*l.* There will be a further sum of 500*l.* required for the plant, furniture, stock, and implements. The subscriptions at present amount to 1,000*l.*

Newport (Wales).—A great extension of the Newport docks is about to be made. The space lying between the lines of railway on the east and west sides of what is termed and known as "the Feeder," and between the present dock and the termination of the Monmouthshire canal, an area of about 8 acres, is to be converted into a dock, which will be nearly double the size of the present dock, and with which it will be connected by an open channel wide enough to pass the largest vessels. It will have a uniform water-depth of 28 feet. The old dock will be improved. Considerable improvements will be made at the river entrance. It is intended to open and close the dock gates, work the coal drops, and do sundry other things now requiring manual labour, by means of hydraulic power. The required supply of water will be obtained from the Ebbw river, by a culvert some two miles in length. The works will be carried out on the plans and under the superintendence of Mr. Abernethy, C.E.

Bednall (Staffordshire.)—The ceremony of laying the first stone of the Acton Trussell and Bednall Parochial Schools, to be erected at Bednall, near Stafford, according to the local *Advertiser*, was performed on Tuesday before last, by Lady Hatherton. The schools will be built on land adjoining Bednall churchyard, and there will also be a house for the master and mistress. The architect is Mr. Ward, of Stafford, and the erection has been undertaken by the workmen of Lord Hatherton; Mr. Cope, of Penkridge, to whom the contract had been given, having left the neighbourhood.

Hartlepool.—The opening of the third or Swainson Dock, at West Hartlepool, is fixed for 2nd June. The works (with the exception of the timber pond, which it is not intended to finish before the opening) are rapidly approaching completion. It is stated that the services of a marine painter have been secured to sketch the opening ceremony, with a view to the production of a picture commemorative of the event.

Kinnaird.—Extensive improvements have been carrying on by the Earl of Southesk for nearly two years past, on his "policy" grounds and mansion at Kinnaird, according to the *Brechin Advertiser*. From plans by Mr. Beattie, of Aberdeen, a curving embankment has been thrown across the marsh hollow, to accumulate the waters of Wimplet "burn," forming a lake of great extent, with deep sweeping indentations or bays among the wooded banks, seen from the castle, in glimpses through the foliage. It will serve for skating or curling bonspiels in winter, and fishing or sailing in summer. Spacious winding new approaches are laid out by Mr. C. H. Inglis, and are now forming. The rebuilding of the mansion is progressing: its architecture has something of the French chateau style about it. From its centre rises the principal tower: from a platform on its top an extensive view of the rich scenery around is obtained, the tower rising to a height of 120 feet. At each angle of the main building rises a tower with high-pitched roofs and turrets, with corbelled windows and balconies, the compartments between filled up with ornamented windows and pediments, and with tympanums, enriched with sculpture of deer, fruit, and flowers, introduced over the several openings. There are numerous panels in various parts of the building, for the reception of the arms and crests of the family, from the thirteenth century up to the present time. The principal entrance is to be from the north front, where a carriage porch is being erected, while the west and south fronts will be inclosed with terrace walls and conservatory, communicating with the house by a private entrance from the principal floor. Mr. Bryce, of Edinburgh, is the architect; and Mr. Morrison, the builder.

CONGREGATIONAL CHAPEL, FOREST-GATE, ESSEX.——Mr. Robert Kerr, Architect

NEW CONGREGATIONAL CHAPEL AT FOREST-GATE, ESSEX.

Our engraving represents an example, just completed, from the designs of Mr. Kerr, of a style of ornamental brickwork of the architect's own introduction, and which, some of our readers may recollect, was illustrated by him by means of several designs and drawings of executed works in the last Architectural Exhibition. The purpose of the style is to produce an ornate effect, stately rather than picturesque, in unmixed brickwork, simple in construction, and economical in cost. Instead of employing brick as an inferior material to fill in between stone dressings, he uses a superior brickwork as the dressings to an inferior brickwork as the filling in,—Suffolk whites in this instance to second yellow Malms; and by the introduction of one pattern of moulded bricks (namely, the cavetto or quarter-round hollow), various string courses, caps, bases, and cornices, are readily produced, and more particularly a main block cornice, which in stone would involve considerable expense. The window and door openings are formed with a simple-moulded architrave brick, having the same cavetto as the chief feature. The only stone required is for steps, sills, copings, key blocks of arches, and the like. All openings are arched, and the walls generally are divided into bays by broad buttresses or piers of slight projection. In the tower and belfry the buttress of greater projection is also introduced. The whole of the facing works into the usual courses of ordinary brickwork. The author acknowledges the fact, that there are occasional "straight joints;" but he contends that as these go no further than the facing, or half a brick deep, there results no sort of practical objection. It need scarcely be observed that in forming the angles of cornices, and otherwise throughout the ornamental work, cement and extra hoop iron require to be used; and, unless the mortar be unusually good, the whole of the larger cornices and arches are built in cement. The style here exhibited is of Italian character; but we are referred to a specimen of what can be accomplished in Gothic architecture upon a corresponding system in the church at Thorpe, near Norwich, built by Messrs. Brown and Kerr some years ago, where brick dressings and Kentish rag-stone are employed in the Norman style with considerable ornament.

The chapel now illustrated accommodates 300 persons on the ground area only, with a small children's gallery for 70 over the entrance-porch in front. The total cost was 1,270*l.* exclusive of warming and gas-fittings. There are a vestry and schoolroom in the rear, and enclosing walls and railing. The tower is not a

part of the original design, but an adjunct now about to be erected to receive a clock. It costs 140*l.*

In the interior a corresponding style of design is carried out. The roof exhibits open timber-work in character, and the pulpit occupies a small platform in an arched recess. The walls and ceiling are finished in decided colours, and the pewing is twice varnished on the deal with a stain. The windows are glazed with diamond rough plate in large squares, so that no blinds are needed, nor shutters for protection.

Mr. Samuel Gurney, who resides in the neighbourhood, presented the site freehold, together with a liberal donation towards the building: he also now presents a striking turret-clock, at the cost of 100*l.* and an additional donation towards the expense of the tower. The funds generally have been raised by private subscription, under the management of Mr. Jabez Legg, of Stratford. The builder is Mr. James Morter, of Stratford.

FOREIGN ART INTELLIGENCE.

Antwerp.—In one of the lofts of the City-house of Antwerp, a gilt iron statuette, 22 centimetres high, has been discovered. It represents Salvius Brabo, who holds in his hand the cut-off hand of the Antwerp giant, with his foot resting on armour. The execution is said to be so superior, that connoisseurs attribute it to the famous Antwerp smith, Quentin Matsys, or one of his school.

Athens.—This ancient metropolis is undergoing great improvements. According to a plan officially settled, new streets are pierced, and houses which have been permitted to stand in the way hitherto, are being demolished, and the streets are to be macadamised. The great canal, north of the city, which extends from the palace to the outskirts of the town, and which is destined to receive the waters of the Lykabetus during heavy rains, has been arched over, by which one of the finest streets of Athens will be obtained. A commission has been sent off to Modon, assisted by the great prison reformer, M. Appert, for correcting there the plan of a building according to the ideas of M. Appert. According to his system, the only punishment inflicted on those guilty of crime is a training to a *continuous* and *increasing* occupation and work.

The Rhine Fall, near Schaffhausen—will be soon arched over, a short distance above the cataract, by a stone bridge, for the passing of the railway trains, and the cellars of the castle of Laufen, which tower above the left bank of the Rhine, have been excavated for a tunnel through which the trains will pass after having crossed the river.

INSTITUTION OF CIVIL ENGINEERS.

ON April 8th, the paper read was "On Steep Gradients of Railways, and the Locomotives employed," by Mr. Charles R. Drysdale.

The object of the paper was to compare the results of some of the performances of locomotives, of various construction, and of stationary steam-engines working ropes, and also the atmospheric system; to examine these results; and, from them, to determine the most economical and best manner of effecting the passage of mountain chains by railway lines.

A history of the construction of the Semmering and Giovi Passes was first given, with the nature of the curves, gradients, &c. The locomotives of the Semmering and Giovi were described. Some English steep inclines were then referred to, and the duties of the Semmering and Giovi engines were compared with the English engines, for evaporating power; for horse-power per cubic foot of water evaporated; and for weight drawn, in proportion to the weight of locomotive.

The following summary of results was given:

Semmering Locomotives.—Total H.P. exerted = 380 H.P.; to lift the train = 285 tons; H.P. per ton of motor = 5·2 tons. Economically (irrespective of speed), 1 lb. wood raised 82,208 lbs. 1 foot high.

Giovi Locomotives.—Total H.P. exerted = 444 H.P.; per ton of motor = 5·9 H.P.; economically (irrespective of speed), 1 lb. coke raised 169,600 lbs. 1 foot high.

Glasgow Stationary Engine—Total H.P. to raise the train = 452 H.P. without the H.P. to lift the rope; economically, 1 lb. of slack raised 45,700 lbs. 1 foot high, irrespective of speed.

St. Germain's Atmospheric System.—1 lb. coal raised 22,063 lbs. 1 foot high, irrespective of speed.

These results, as compared with the alleged duty of the Cornish Boiler, 1,000,000 lbs. 1 foot high, were still far below laboratory duties.

On the 15th the discussion upon Mr. Drysdale's paper was continued.

CHURCH-BUILDING NEWS.

Mollington.—This church, which has recently undergone considerable restoration and repair, was reopened by the Bishop of Oxford on the 1st of April. A new aisle has been built upon the site of the old one: the arches have been opened, and their columns and mouldings scraped: an unsightly gallery, which projected in front of the tower arch, has been removed, and the tower thrown open to the nave: the pews have been swept away, and open benches substituted: a pulpit of carved oak with pierced panels, on a stone base, the gift of Mrs. Hardy; a prayer-desk, the offering of Miss Holbech; and an eagle lectern, all carved by Mr. Bonham, of Wardington, from designs by the architect, Mr. White, of London, have been added. The windows of the aisle and tower have been filled with stained glass, the general design being a border of mosaic, inclosing pale green quarries ornamented by foliage patterns in outline, painted by the Misses Cowper and Miss Harris of Wardington. A noticeable feature in the church, remarks the *Banbury Guardian*, is the ornamentation of the arches by lines of colour in patterns, according to ancient practice. The eastern end of the chancel has been raised, and paved with red and pattern tiles, and a new communion-table of mediæval form set up. The exterior of the church has been generally repaired, and the porch newly roofed with Stonesfield slates in place of the former blue ones. The expense of the restoration has been about 450*l.*

Chevening.—The church of Chevening, which has been undergoing repairs and alterations, was reopened on Wednesday before last for divine service. The principal alteration has been repewing and the removal of a gallery. The amount laid out exceeds 1,000*l.* raised mainly by voluntary contributions, Earl Stanhope and Mr. F. Perkins being the largest contributors.

Croydon.—An appeal for funds to complete the new church of St. Peter, Croydon, is being made by the incumbent. A tower, spire, and peal of bells is what is required to complete Mr. Scott's design.

Cardiff.—The new church of All Saints, Newtown, Cardiff, erected at the sole cost of Lady Bute, was opened on Thursday before last, according to the local *Guardian*. The church is in the Transition style, and built of Newbridge stone, with Bath stone dressings. There is but little of an ornamental character about the exterior. There is a tower erected at the south-west corner, in which is the principal entrance to the nave and gallery. The tower is square and Norman in its style up to the belfry, and is surmounted by an octagonal spire of the Early English period,—the height of both tower and steeple being 105 feet. A spire, it seems, was not contemplated in the original plan of elevation, but the Marchioness of Bute subsequently determined on its erection, as a memorial of the late Mr. Tyndall Bruce, one of the young marquis's trustees. The church consists of a nave, 80 feet long and 34 feet wide, with semicircular apse at the east end, 25 feet wide and 16 feet deep. The windows in the side walls are plain Norman arched, filled with diagonal cross-lined glass instead of lead frames. There are three windows in the apse glazed in the same style, with coloured glass. There is a light gallery, in keeping with the general character of the church, at the west end, 34 feet wide and 15 feet 6 inches deep. The roof is open-framed, of deal, stained in imitation of oak. The gallery, pulpit, and reading-desk, and the pews, are painted and varnished in dark oak. There is a Bath-stone pedestal font, of octagonal form, within the entrance from the tower. The pillars which support the arch of the apse are finished with carved capitals in white stone. The communion-rails are bronzed, and Norman in style. The building was designed by Mr. Roos, architect to the Marquis of Bute; and the work executed in all its details under the superintendence of Mr. Griffiths, builder. The church will accommodate about 800 persons.

Nottingham.—St. Mark's Church, in the outlying district of St. Mary's parish, was consecrated on 8th inst. The church is a plain building, seated to hold about 1,150—more than half of the sittings (low-backed pews, divided by open woodwork, painted oak colour) being free. The building occupies an elevated site in the line of Sanday-lane, facing down William-street, in the centre of the densest and most rapidly-extending population of Nottingham. The area of the edifice is divided into a nave and two side aisles; the chancel being formed in a sort of recess at the eastern extremity of the oblong interior. Two rows of octagonal piers, sustaining groined arches, run down the middle of the church, dividing its nave and aisles. There are two galleries at the sides, supported against the middles of the piers. The large eastern window is divided by a transom, and exhibits five under and five upper elongated lights, with pointed arches. The four windows on either side are similarly divided each into three under and three upper lights. The church has angular turrets or minarets, but no tower.

Coventry. — Trinity Church, Coventry, is undergoing some restoration. A stone pulpit and carved oak seats or modern pews are being added to it. The light has once more been permitted to descend through the central tower; but the polychromatic restorations are said to be deficient in balance and harmony.

Manchester.—Nineteen new church districts are to be formed in the extensive parish of Manchester. At a meeting last week of the committee for promoting the erection of a new church in the populous district of Cheetwood, the architect, Mr. Crowther, submitted a plan and elevation of the new church, which will be plain, but architectural, costing when complete (exclusive of the spire), about 4,300*l.* and accommodating 700 persons. The subscriptions at present promised amount only to 1,800*l.* It was resolved to proceed at once to the erection of that end of the church which abuts upon Waterloo-road, namely, the chancel, chancel aisles (including vestry and organ-room), and two bays of the nave and aisles, which can be furnished at the back with plain brickwork, and extended at any time to complete the plan. The committee, however, are sanguine in expecting, as the work goes on, sufficient funds to enable them to carry it out before the end of next year. A building sub-committee was appointed to superintend the erection. A sum of 700*l.* will be still required for that part of the church which is intended to be first erected.

Darlington.—The design for the chapels for the new burial-ground selected by the Burial Board is, it appears, objected to by the Bishop of Durham, on account of the distance between them being only 16 feet. The same design, as remarked by the *Darlington Times*, has been carried out by the same architect in the dioceses of Lincoln and Ely.

St. Andrews.—The Commissioners of Woods and Forests, according to the *Fife Herald*, have agreed to build a sea wall in front of the cathedral ruins of St. Andrews, at the spot where the sea has been encroaching rapidly for some years past. The town council have agreed, in terms of a request from Mr. Leslie, the Government engineer, to be at the expense of filling up the space behind the wall. The estimates for the work are already given in.

THE READING SURVEYORSHIP.—The Local Board of Health having advertised for a surveyor and inspector of nuisances, had ninety-seven applications, from which forty, and latterly five, were selected by a sub-committee, and the Board ultimately elected Mr. Joseph Gilbert Blair Marshall to the vacant office. Mr. E. Rutledge, of Dover, was the next candidate on the list.

STAINED GLASS.

Holy Trinity Church, Hull.—A proposition is made to fill with stained glass the side windows of the nave of this church, as memorials of inhabitants of Hull, whose bodies lie buried within the church or its graveyard. The scheme proposed is somewhat as follows:—An entire window, or a single light, may form a memorial. In the latter case five memorials may be included in one window. Each light shall contain a figure and a subject beneath it, with an appropriate inscription. At the north side of the church the lights would contain, in consecutive order, figures of Adam, Noah, the patriarchs, kings, and prophets—the subjects beneath illustrating the Fall of Man, the consequences of such fall, and his promised redemption—all types of the New Testament. At the south side would be figures of our Lord, the Evangelists, Apostles, St. John the Baptist, St. Stephen, and all New Testament characters; with groups illustrating all the most prominent incidents in our Lord's life. In the heads of the several windows, on both sides, angels bearing scrolls, with appropriate texts, would fill the several lights. Each window will cost 300*l.* or each light separately, with a proportion of the tracery, 60*l.* One light is offered by Mr. Leng, of Hull, as a commencement. Mr. J. W. Hugall, of Cheltenham, has designed a window in accordance with this scheme, and Mr. Wailes, of Newcastle, has been called upon to provide the glass for the design, which has been exhibited.

St. Martin's, Brighouse.—A stained-glass memorial window has been put up in the church of St. Martin, Brighouse, near Halifax, at the expense of the children of the late Mr. John Brooke. The window is the work of Mr. Francis Barnett, of Edinburgh. The subject of the window comprises effigies of the four Evangelists, and the Apostles Peter and Paul, with scriptural medallions.

Glasgow Cathedral.— Mr. Ballantine, of Edinburgh, says the local *Herald*, has been commissioned by Government to make a design for stained glass for the large east window of this cathedral, to be one of a series of illustrations of Bible history from the Creation till the Ascension—an idea which the magnitude of the cathedral affords ample scope for effectively carrying out.

Roman Catholic Church, Barntown (Ireland).—A stained-glass window has been placed over "the altar of the Immaculate Conception," in this church, at the expense of Mr. and Mrs. Connel, of Bettyville. The Virgin, in one compartment, is represented standing, with the moon beneath her feet, and a circle of stars around her head, her hands crossed over the breast in the act of adoration. Over her head is a scroll with the inscription, "Sancta Maria, sine labe concepta, ora pro nobis,"—and underneath her feet the words "Orate pro bono statu Francisi et Margaritæ Connell." The other compartment is filled by a figure of St. Alphonsus M. Liguori (founder of the Order of the Redeemer, and patron saint of the church), in the act of preaching. The artist was Mr. Casey, of Dublin, and the window was erected by Mr. Michael Hughes, of Wexford.

THE LEPERS' BATH, AT BATH.

WOOD, THE ARCHITECT.

During recent alterations at the Springs in Bath, a structure, built by Wood, called the Lepers' Bath, has been brought to light. Mr. Charles Empson has been drawing the attention of his fellow-citizens to it, and writes us expressions of his admiration for the genius of the architect. Mr. Empson says,—"It is to be regretted that we Bathonians have so scandalously neglected the memory of Wood. In advocating, some years ago, some memorial as a record of our gratitude to him, it was remarked by one of the wisest of our friends that Wood no more required a monument in Bath than Sir Christopher Wren did in St. Paul's. There is, however, some justice done to Sir Christopher in London, even by the celebrated tablet which tells the stranger 'to look around him.' In Bath we have no such inscription to rescue Wood's name from oblivion, by keeping it in our thoughts 'familiar as household words.'

It will not escape the observation of those who visit the Lepers' Bath, that the heart of that man must have been noble who could thus dedicate his finest talents to the decoration of a bath devoted to the exclusive service of lepers. The bath is 19 feet 10 inches square, 4 feet 6 inches deep. It is filled every morning at six o'clock by the natural springs, and at 117 degrees Fahren.; and after being used by those who choose to pay sixpence for the luxury until twelve o'clock, the water is withdrawn and the bath made as clean as a drawing-room.

The afternoon, therefore, is the proper time for strangers to visit this choice specimen of architecture—this perfect gem, as we have heard it termed by many distinguished persons. The walls are grey, of uniform tint. Bold mouldings and cornices support balustrades, separated by sunk panels, and supporting an entablature which demands especial attention. From each corner, supported by rings, through which the folds pass, are folds of drapery, bearing pendants of sculptured foliage, fruit, and flowers, in the boldest relief, and chiselled from the solid stone. It is possible to name the fruit and flowers—melons, grapes, peaches, pomegranates, roses, sun-flowers, lilies, acanthi, and other less familiar plants—not, indeed, botanically correct, but artistically treated—not conventionally, but grand in manner, and perfectly original in adaptation and arrangement.

To the architect Wood we are indebted for the grandeur of our domestic architecture, which, by the energy of a master mind, assumes, in combination, palatial dignity.

Those who are familiar with that beautiful fabric, the Exchange, at Bristol, will recognise in the Lepers' Bath the same rules prevailing—simplicity and grandeur."

METROPOLITAN BUILDING ACT.

The Office and Duties of a District Surveyor. By William Leverton Donaldson. London: Shaw and Sons, Fetter-lane. 1856.

The Metropolitan Building Act, with Notes, Glossary of Architectural Terms, and full Index. By H. W. Woolrych, Serjeant-at-Law. London: Stevens and Norton. 1856.

In the little pamphlet mentioned above, Mr. William Donaldson has set forth, in a plain and perspicacious manner, what is required of a district surveyor by the Act, and how he is to do it. It will be found useful moreover, not only by district surveyors, but by all concerned in building operations within the limits of the Act: indeed, if the surveyors themselves were to circulate it extensively amongst builders, it would be a wise expenditure of money. There is a tendency on the part of jobbing builders and others to proceed without giving notice to the district surveyor, which ought to be checked. A heavy penalty will probably be enforced in a few cases presently, by way of warning.

Mr. William Donaldson, as Solicitor to the Institute of Architects, and acting in that capacity, too, for several of the district surveyors, has been led to direct his attention specially to the Act. We should hesitate, therefore, before questioning his opinion. One observation, however, in his pamphlet, would seem to deserve a little further consideration. He says, with respect to "public buildings" and the Board of Works,—"it would seem, by the first schedule, Miscellaneous, rule 3; and part 1, rule 8, that their sanction must be obtained as to the construction of the walls." The first schedule regulates the thickness of walls of dwelling-houses and warehouses, and rule 3 certainly says,—"Buildings to which the preceding rules are inapplicable require the special sanction of the Metropolitan Board of Works." But this first schedule contains various general rules, besides rules for thickness, and which would be applicable to public buildings; while section 30 distinctly says,—"Every public building shall be constructed in such manner as may be approved by the district surveyor, or, *in the event of disagreement, may* be determined by the Metropolitan Board." We commend the point to the consideration of the lawyers: it ought to be settled at once. By the way, we understand the Board of Works have reversed their original decision as to the late district surveyors of Tottenham and Hornsey, and declared that the surveyors do not hold office under the present Act.

Mr. Woolrych's edition of the Act appears to be a very good one, and has many notes and references. We should advise the author, however, for his next issue, either to get his "Glossary of Architectural Terms" revised by some one who understands the matter, or omit it altogether.

Take two or three examples. "Bond timber—pieces of timber fastened together by tenanting!" "Breast of a chimney—the forepart under the mantel or chimney-piece!" &c. &c. Mere nonsense.

COMPETITIONS.

South Shields and Westoe Cemetery. — The first premium of 30*l.* has been awarded to Mr. R. Lamb, architect, South Shields, for designs of chapels, lodges and gates. The chapels are in the decorated Gothic style, with an open tower and spire, 80 feet high. Each chapel will be similar in appearance and arrangement, and will seat about 100 persons, and will have a reception or lich house to contain eight coffins.

Liverpool Museum and Library.—Before your next publication, the designs for the above will be in the hands of the committee, and a "goodish few," I expect, will be received. A word or two now about the competition will probably be of use. I am not sure that the mode of selecting twelve or twenty, and asking them to compete again, will be found to answer. It seems to me that drawings to a small scale will show a man's *design* just as well as to a large scale: the latter gives the details properly, but the proportion and general idea are the same in either case. I believe it will appear very plainly in the first competition who will be successful in the second; and if so, the other eleven or nineteen architects will have all their trouble for nothing: each will *fancy* he has a good chance, but the committee themselves will *know* to the contrary. I therefore suggest through your columns, that those who by their sketches are *certain of a chance* in the second competition—even if there are only three of them—shall be selected as Class 1; and that those who show that they have *no* further *chance*, and had, therefore, better not trouble further in the matter, should be selected as Class No. 2; any member of Class 2, however, being allowed to compete a second time *if* he felt any desire to do so. Unless some such mode be adopted, fancy the feelings of at least a dozen architects who had tried "hard," in the second competition, when told afterwards that the committee were perfectly aware that they had not had the least chance of success, but that their names had been added to the list merely to make up the number.

A Competitor.

THE LILLE COMPETITION.

In your notice of the "Lille Cathedral Competition," you conclude by drawing a comparison between the interest taken in the exhibition of the designs of Lille and that of the barrack designs in London. Now, sir, there are hundreds of students in architecture and construction who would be but too glad to study the barrack plans, but are prevented from want of opportunity, being engaged all day and every day. The exhibition at Lille was crowded *on Sunday*, and so would a similar one be in London, if the prejudices of a certain class did not induce them to do their utmost to deprive the artisan of all chances of improvement.

J. M.

In our report of the awards in the Lille Cathedral Competition, one or two of the English names were misstated, — not to be wondered at, coming, as they did, through a foreign country. The third silver medal was awarded to George Evans and Richard Popplewell Pullan; motto, "Ad Æthera Tendens." The name of the author of the design, "Dum Spiro Spero," to which honourable mention was awarded, should stand, James Lyndon Pedley, instead of Pealey.

A Block in the Crystal Palace.—A huge framework of wood, said to be for the core of a model of the monument designed by Baron Marochetti, for Scutari, is now being erected in the middle of the nave, close to the central transept, and will serve to cut off the view in a very undesirable manner. What is Mr. Fergusson about to suffer such an obstruction to be put up? We hope it is not too late even now to move it to some less objectionable site. There cannot be two opinions upon the subject.

ST. SAVIOUR'S CHURCH, PADDINGTON.

THE new district church of St. Saviour, erected in Warwick-road West, Maida-hill, on a site appropriated by the trustees of the Paddington estate for this purpose, was consecrated on Saturday, the 12th of April, by the Bishop of Oxford.

The church is a large edifice, containing accommodation for 1,670 persons. It consists of a nave, 106 feet long, 56 feet 6 inches wide, covered by a roof in a single span, and galleries on three sides. A tower, 21 feet square, forms the principal entrance, and a chancel, 20 feet in depth is projected at the eastern end of the church. The staircases to the galleries are also, at this end of the church, in transept-like projections.

The style of architecture is the Decorated English, carried out in Kentish rag and Bath stone. There are two ranges of windows on each side: the lower ones, two-light square-headed, give light to the aisle seats: the upper ones are three-light, pointed: both are filled in with flowing tracery. The roof is a semi-hexagon, boarded and ribbed in panels, and divided into bays by six moulded trusses, springing by arched ribs from massive stone corbels: the spandrils of the trusses are filled in with tracery.

As the body of the church presents few of the usual architectural features of attraction, such as columns, arches, or transepts, the chief interest has been thrown into the chancel, which is richly decorated. The windows are here filled with painted glass; the reredos, consisting of five canopied niches in Caen stone, supported on banded columns of serpentine marble, is filled in with glazed gilt and coloured tiles and paintings: the decalogue tablets are illuminated on gold ground: the boarded ceiling of the chancel is light blue, powdered with gold stars, and the arched ribs are diapered or scrolled with illuminated decorations; the paving is laid with encaustic tiles, and the general effect of colour is increased by scrolls containing texts from Scripture, painted on various parts of the walls.

The reading-desk and pulpit are carved in oak, and supported on Caen stone sculptured bases. At the angles of each are statuettes of the apostles.

The church has been erected by the exertions of Mr. H. W. Schneider, of Sussex-gardens, chiefly at the cost of the incumbent and his friends. A grant of 2,000*l.* was made by the parish, on condition of 500 sittings, being free, and the Bishop of London, with his usual munificence, subscribed 500*l.* The contract for the works was accepted at 11,000*l.* but the upper part of the tower has not yet been built. The east window, of painted glass, is the gift of Mr. Schneider.

The building has been executed from the designs, and under the superintendence, of Mr. Thomas Little, of Northumberland-street, Marylebone. The builders were Messrs. Pollock and McLennan, of Osnaburgh-street. The chancel fittings, pulpit, and font, were well executed by Mr. W. Farmer, of Westminster-bridge-road; and the painted glass and decorations by Messrs. Gibbs, of the New-road. Mr. Bosward was clerk of the works. The church was completed within twelve months from laying the foundations.

ROMAN CATHOLIC UNIVERSITY CHURCH, DUBLIN.

THERE are in that fine city buildings of majestic proportions, admirable for integral completeness, and position, perfect without and within: the Custom-House, the Bank, and the Four Courts, are of the number. They have been the ornament, and not a little the boast of the country, even before the Union; yet nobody knows the names of the architects!

The *Builder* will take care that no such ingratitude to genius shall ever occur again.

An article in the number of this day (19th April), headed as above, describing a church, not as it is, but as it is intended to be, leads the writer to remark, that having heard in Dublin much of University Church, and *its costly interior*, he was induced to go and view it on *the 10th inst.!* He was courteously admitted to the house, which had been a splendid private mansion (Mr. Whaley's), occupying the central position on the south side of St. Stephen's-green, open in front to a square,—*a mile in the circuit*,—and having at the rise large grounds; in addition to which, the next house and grounds have been lately purchased, and added as dormitories, &c.,—the whole giving a frontage of at least 200 feet.

The new chapel, *prospectively* described, is built close up to the rear of both houses, and, like many others in Dublin, exhibits *without* only plain brick walls, which shorten the daylight of the adjacent dwellings *within*; an unfinished aisle, 100 feet long, by only 36 feet wide, and (as I could judge) about 50 feet high; the whole unfinished, save that *small* windows were inserted, on both sides, at a height of over 30 feet, ranging throughout the length!

To narrow the width, there are stalls with heavy arches and spindle shafts, along one side, and a gallery in the same style at one end; the walls being plastered to the height of 15 feet, to receive, as I was informed, incrustations of Irish marbles.

The windows, being of the plainest fabric in iron, are filled in with pellucid quarries, having nodules, or *bulls'*-eyes; and, being dim enough, may shed a religious light within, when the marbles and alabaster, and promised "jewels," are there.

The ceiling is, as my informant told me, finished: it is flat—yes, and very flat. Only fancy a surface, 100 feet by 36 feet, streaked across at intervals of (say) 20 feet, with small beams; or rather (say) with large joists. These are smeared with deep colours,—red, blue, yellow!—no cornice,—no ornamentation; but only the most flagrant colours!

I could not smother my indignation; and observed that I had seen a fair-booth more appropriately and more tastefully ornamented: in comparison with it, Monsieur Jullien's Salle de Ballet was a gorgeous pavilion! The reply was, that "the design originated with the principal." I only added, "I am glad of it, for it would be a disgrace to an architect, and is no credit to the University."

If it is desired to give a description of works in progress, let some artist sketch the superb Gothic arcades of the unfinished Dominican Church in Dominick-street: that would be a picture worthy of the *Builder* and of the architect. But let us have no more of that which *is to be*, but is not: all the wealth and all the pomp of the University, when realized, never can make the University Chapel anything but a cell long drawn out; nor can the pealing organ, when finished and fitted, be better employed than on a "Miserere," for a "jubilate" would be wholly out of place there. AMBULANS.

LANDLORD AND TENANT.

BURT *v.* HASLETT.—RIGHT OF A TENANT TO REMOVE A PLATE-GLASS FRONT.

THIS case had been referred to arbitration, with power to the arbitrator to raise any question for the opinion of the Court. He accordingly stated a special case at the Court of Common Pleas, April 22nd, of which the following are the principal facts:—The plaintiff owned a shop at Woolwich, which was let to the defendant. There was a common glass window in it, but the defendant removed it, and substituted a plate-glass front, which was not fastened to the premises with nails or screws, but was only kept in its place by wedges. When the defendant left the premises, he removed the plate-glass front and put the old one in again. There was a covenant that he should yield up all windows, fittings, improvements, &c. at the end of the tenancy, and under these circumstances, the question for the Court was, whether the defendant had a right to remove the plate-glass front.

Mr. Turner appeared for the plaintiff, and Mr. Joyce for the defendant.

The Chief Justice thought that the plaintiff was entitled to the judgment of the Court, as this was a window belonging to the house, and, therefore, the defendant had no right to remove it.

Judgment for the plaintiff.

THE PROPOSED MEMORIAL OF THE GREAT EXHIBITION OF 1851.

AT the close of the Great Exhibition of 1851, and a few days before the close of the civic reign of Lord Mayor Challis, the public were invited by him to be present at a meeting at the Mansion-house, to consider the most appropriate manner of perpetuating the remembrance of that wonderful gathering from all nations, in Hyde-park, which, originating with Prince Albert, in the first instance, had been so felicitously carried out, and brought at length to so successful a termination, principally through the exertions and influence of his Royal Highness.

The subject was thoroughly ventilated and discussed at that meeting, and although many came prepared to object to a proposal, at one time contemplated, to erect a statue of Prince Albert on the site, in Hyde-park, where the Great Exhibition had stood, nevertheless, when it was finally resolved that, in place of such statue, a first-class group of sculpture, or other appropriate artistic embodiment of the sentiment, to be handed down to posterity, should be adopted as the memorial,—having at the same time some reference or connecting link with the Prince Consort, as the founder of the Great Exhibition, the project was then warmly taken up by the public.

Having been present at that meeting, I remember well that a very considerable sum of money was subscribed in the room; and when, afterwards, as a member of the Society of Arts, I paid my own subscription to the memorial fund into the hands of the treasurer, Mr. Alderman Challis, I ascertained that several thousand pounds had been collected from the public for the purposes of the memorial.

Now, the object of my addressing you is to ascertain if anything has been done with the money subscribed, and if so, what? More than four years have elapsed since the fund was accumulated, and the interest upon it even must have considerably augmented its original amount. In the meanwhile, the green sward has quietly grown over the spot in Hyde-park where the Palace of Industry had stood, without, however, that memorial, in historical record of its brief though important existence, having, up to the present time, been placed there, in accordance with the anticipations, and, indeed, contributions of the subscribers, or any explanations been given to them why the matter has not been carried out. I remember at the time hearing that certain interviews had taken place with Prince Albert, to ascertain his more immediate wishes in the carrying out of the intention of the subscribers, and that his Royal Highness had expressed a desire to found some scholarships or prizes, in art-manufactures, with a portion of the money collected. Nothing, however, has since been reported to the subscribers, and I therefore conclude that nothing has been done; and as I now consider it is quite time, if nothing *is* intended to be done with reference to fulfilling the intention of the subscribers to a memorial of the Great Exhibition of 1851, that the treasurer should return to them the amounts of their subscriptions, deducting the expenses incurred, I have troubled you, therefore, with this communication, hoping its insertion. MEMBER OF THE SOCIETY OF ARTS.

THE CITY.

IN Lombard-street, a capital stone front has been put up under Mr. I'Anson, for the Colonial Life Office. It is six stories in height above the pavement, including the mezzanine story and rooms in the roof, and has five windows in front. It has porphyry pillars and facings on the ground story. The treatment of the down-pipes from the gutters deserves notice. ——Repairs are going on to the upper part of the steeple of Bow Church.——At St. Michael's, Cornhill, various works are being performed, and some colourings inside are talked of. The tower of this church has been thrown open to Cornhill.

THE WAY THROUGH ST. JAMES'S-PARK.

RESPECTED FRIEND,—Manifold are the plans for thoroughfares suggested to be opened into the park called St. James's. Long since I gave thee my notions of the useful in this respect. Now we have projects for sundry inroads,—one at the palace of our Queen, nearly opposite the street called after the same saint; one at Spring-gardens; and one other at the end of Regent-street.

Now, it beseemeth me that, as an entrance, that beside Marlborough-House (almost continuous from the street of James) would be most direct, the aperture being already made; and that, as an exit, that other, in a right line with the Mall, tending towards Trafalgar-square and the Strand, would be easiest of access, and also more beneficial to commercial people and others; whereas the proposed descent by the lofty column, whilst it did violence to existing architectural arrangements, which are (as to this metropolis) passing well, would offer far greater advantages to counterpoise the wholesale demolition involved in the plan.

From Marlborough-House to Pimlico, the spacious *central* Mall road, now open there, offers the coveted desideratum of the most direct route, from Pall-mall to the Strand on one hand, and to Belgravia upon the other.

It may be alleged by fanciful projectors of great bridges over artificial waters, and of wide extended pavements across the pleasing greensward,—my ways are not thy ways. Neither are they: I wish for that which is useful to the generation, for that which is shortest, and for that which can be effected with the least cost.

Who could think of taking down a great monument, for the purpose of setting up the idol in another locality? or of disturbing the legalized quietude of lessees dwelling in those lofty terraces, when better approaches, in every sense, may be had without molestation to any inhabitant!

The palace of our gracious Queen would still stand off at the distance of 200 feet from the road, having ingress by the lodge gate opposite the office ascribed to the Duchy of Cornwall. The loyalty of her people could never be obnoxious to that lady at so respectful a distance.

Should it be intended to accommodate the British public by removing the painful restrictions to free intercourse now existing, then the right course would be to cut the causeway in a direct line with the central Mall walk; and this would pass directly

across Spring-gardens, and issue into Charing-cross, directly opposite the statue. The opening there would include the present short street (next Drummonds'), and with the sites of the bootmaker's, the insurance-office, and the tobacconist's, give a causeway of 90 feet across. On the opposite side, the Record Office and Mr. Wilkins's would have to be removed, together with part of Lady Guest's garden. Thus a grand esplanade would disclose a view of Buckingham Palace from Charing-cross!

Those *noble residents* who are objectors to any public road, ought to recollect that all who have the *Royal privilege* are now entitled to ride or drive along the Mall, and that it is not for them to restrict the prerogatives of the Crown. The universal public have already the right of footway: it is for Royalty, in humanity or mercy, or even for expediency, to extend these rights.

Already is there much of the verdure of the park sacrificed to gravel-walks and esplanade: not one other turf ought now to be displaced: with what remaineth, and the way now sought, the dwellers in London would consider themselves in clover, together with

EDITH GOING.

THE CUSTOM-HOUSE OF LONDON.

As I was personally engaged in superintending the works at the Custom-house under the late Mr. Laing, and was examined as a witness on the trial, I think it but just to correct the statement of your correspondent, "A. B." in the *Builder* of the 12th instant. The piling was an extra work, and paid for according to quantity. It was done under the direction of a foreman (Stephen Mullins), appointed by the architect, who measured each pile before it was driven, and if not used entirely, the residue was also measured, and only the difference was charged or allowed. Thus it was the builder's interest to drive them as far as possible, but he had no discretion in the matter. Upon clearing the ground after the failure, it was found that many of the piles were stuck into the old camp shotting that was buried, or were stopped by masses of stone wall, or other obstructions, showing plainly the unsuitableness of this mode of forming a foundation on that site, but it was done by the advice of an engineer, and not of the architect.

The *immediate* cause of the failure was the piling to one of the piers being one-half out of place (not under the pier), and consequently having only half bearing; also, the ground having been excavated to admit the piles and recently filled in: the slipping away of the pier was thus facilitated, and it sunk at once into the hole so prepared for it.

The blunder was the joint act of the clerk of the works and foreman, in setting out the pier; but the responsibility undoubtedly devolved upon their respective principals.

The penal consequences were necessarily heavy; but the *moral stigma* which was thrown upon the unfortunate parties I have ever considered to be most cruel and unjust.

CHAS. FOWLER, Architect.

THE METROPOLITAN BOARD OF WORKS.

At a meeting of the board last week, besides some other and minor business, the following was gone into:—

Reports by the Superintending Architect.

1. On the application of Mr. Hemming for the approval of a temporary iron church for Newington. Agreed to.

2. That Mr. Covell's application for sanction to make a projection beyond the regular line of fronts of buildings, at Sydenham, be not complied with.—Agreed to.

3. The matter of disagreement between Mr. Horace Jones and Mr. George Porter, D.S. in the case of the Music Hall, Royal Surrey-gardens, was ordered to be laid before a full board by the superintending architect on a convenient day.

4. The application of Mr. Felgate for consent of the Board to build beyond the regular line of fronts of buildings in Crombies-row, Commercial-road East, was granted.

Proposed Thoroughfares.

Mr. Burslem called attention to a communication from Mr. Alfred Beaumont, containing suggestions "for thoroughfares through the metropolis and St. James's and Hyde Parks."

It appeared from the statements of the applicant, that that part of the proposal submitted to the Board suggesting sundry alterations in St. James's-park and its approaches, was submitted to his Royal Highness Prince Albert some few years since, when the author had the honour of forwarding a copy of his explanatory views, having been informed that the plans had been approved of by his Royal Highness. The applicant in his memorial stated, "that the attention of the Government and the Commissioners of the Board of Works being now occupied in reconsidering this subject, he was anxious to bring forward his original suggestions, with two others for similar improvements in Hyde-park, and along the north bank of the Thames."

Main Drainage South of the Thames.

Mr. Carpmael moved that the report of the engineer on the sewage interception and main drainage of the districts south of the Thames be taken into consideration by a committee of the whole Board, on Wednesday, the 30th day of April. Mr. Savage seconded the motion. An amendment was then moved by Mr. Leslie, and seconded by Mr. A. Wright, to the effect that the discussion upon the motion in committee be open to the public. Upwards of an hour was consumed in the conversation upon this subject, and eventually the motion for "closed doors" was carried.

A motion by Mr. Few as to calling for essays on the application of London sewage to agricultural purposes, was postponed; and a memorial by Mr. W. Morris, as to the manufacture of sewage into agricultural manure, withdrawn.

Miscellanea.

NORWICH ARCHÆOLOGICAL SOCIETY.—The general meeting of the members of this society was held on Thursday in last week, at the Guildhall, Norwich. The financial statement showed a balance in hand of 17*l.* 3s. 6d. against 52*l.* 15s. 1d. last year. Mr. Daveney, in alluding to the figure of "Snap," which occupied the upper part of a closet in the Guildhall, mentioned that a similar custom to that prevalent in this city, of perambulating the town with "Snap," existed in some parts of the Continent, where a figure precisely similar to the time-honoured "Snap," and called by the same name, was used. The Rev. J. Gunn said he had just visited Martham Church, which he was happy to say was undergoing a complete restoration. The company shortly afterwards adjourned to St. Andrew's Hall, where a paper on that building and its adjacent antiquities was read by Mr. Harrod.

CHELMSFORD ARCHÆOLOGICAL SOCIETY.—At a meeting held at Coggeshall, on the 10th instant, the Rev. E. L. Cutts read a paper on the Early History of Coggeshall; the mention made of it in Domesday Book; the foundation of the Abbey of Coggeshall, in 1139, by Queen Matilda (wife of King Stephen); and subsequent grants by other monarchs. He expressed his belief that the monks of Coggeshall were among the first who made bricks in Great Britain—about the end of the twelfth or beginning of the thirteenth century; and exhibited some specimens of moulded bricks found in an ancient brick-kiln recently discovered near Coggeshall. Mr. Cutts next called attention to a number of documents relating to the trade of the town, including the minute-book of the old company of fullers, baymakers, and weavers; and read a programme of a pageant exhibited by the weavers of Coggeshall in 1791, which was no doubt a restoration of a much more ancient festival. The party then proceeded on a tour of inspection to the points of interest in the neighbourhood.

EASTBOURNE.—Works are going on to prepare for the coming season in this flourishing and improving bathing-place. A paved connection has been made between the Marine-parade and the Grand-parade, which was much needed, and some of the unfinished houses are being proceeded with. The cost of the gas, 6s. 8d. per 1,000 feet, is much complained of here, and no wonder. The company should be wise in time, and by a proper reduction, calculated to increase the consumption, prevent the likelihood of competition. The charges for water, also, are very excessive.

THE PROPOSED ROADS THROUGH ST. JAMES'S-PARK.—Sir Benjamin Hall has announced, in the House of Commons, that he proposes (avoiding the removal of the Duke of York's column as very objectionable) to make, first, a road commencing in Pall-mall, passing through the German Chapel, and proceeding along the paved road into the Mall, thence passing in front of the palace and running out by Buckingham-gate; and, secondly, a road for the convenience of pedestrians, to run over the ornamental water by means of a bridge. He is prepared, the estimates being granted this week, to press forward the works with the greatest possible despatch.

ROAD-MAKING FOR THE DOCTORS.—May I call your attention to the material used for forming the new roads in and about Camden-town, which is a layer of oyster-shells. After rain the moisture swells the animal matter, and then the sun coming hot upon it excites a fermentation, emitting offensive smells, and producing illnesses, such as low fevers, &c. Please to say something about the practice, for a road is now forming from King's-road through the Agar Estate, apparently in the same manner.

AN INHABITANT.

ACCIDENTS.—A poor fellow was literally sawn to pieces and killed on Friday week, at Ardwick, Manchester. He was in the employ of Messrs. Bennett, timber merchants, Hyde road, and had the charge of the circular saw, which can be oiled and greased only when it is in motion, and it was while so engaged that poor "Israel Riley" slipped and fell upon the saw. It took off one of his legs, cut open his side, and threw him forward in this horribly mutilated condition. He lived only a few minutes.——At Keswick, on 15th inst. a ladder, left standing against the front of a shop in the market-place, and not properly secured, was blown down by the wind, and fell upon a little girl who was passing at the time, inflicting upon her very serious injuries, including a dangerous fracture of the skull.——On Thursday morning before last a fatal accident, according to the *Cambrian*, of Swansea, occurred at the Tondu works. Three workmen were lying down at the forge, when a sheet of iron, weighing about 3 cwt. put up for the purpose of protection against the wind and rain, fell down upon them. One was killed, and the arm of another injured.——On the 7th inst. says the *Chelmsford Chronicle*, whilst a man was at work on the Loughton and Woodford Railway, now in course of construction, a slip of earth of about nine tons fell and buried him beneath it. He sustained several severe injuries, including a fractured thigh and injury to the back.

MONUMENT AT ST. PAUL'S, TO THE DUKE OF WELLINGTON.—In reply to Viscount Chelsea, in the Commons, on the 18th inst. Sir B. Hall said that if the disposal of the 25,000*l.* balance of 80,000*l.* voted for the Duke's funeral were placed, by the Chancellor of the Exchequer, under his control, he would not rest satisfied with the two designs for a monument sent in by Mr. Baily and Mr. Foley at the time when these gentlemen and Mr. Gibson and Baron Marochetti were asked to compete, but would call in the aid of a greater number of artists of the highest eminence in this country, in order to see whether the genius of the country could produce some monument worthy of the memory of so great a man.

GAS.—The Doncaster Gasworks committee have received tenders for fire-retorts and iron castings. A considerable difference in price existed. Mr. Ingham (of Wortley's) offer to supply fire-retorts and to deliver them at the Doncaster Station, was accepted. For iron castings there were eight tenders, varying, from highest to lowest, as much as 120*l.* Messrs. I. and J. Cliffe, of Bradford, received the contract. The committee also agreed, in order to carry on improvements, to borrow 1,000*l.*——The gas-consumers of Willenhall having failed to obtain a reduction of the price of gas charged by the local company, have resolved to form a gas-consumers' company, with 5*l.* shares, and have already subscribed 2,000*l.* for that purpose. They feel assured that if gas can be procured in other towns at from 3s. to 4s. per 1,000 feet, Willenhall, with all its facilities for obtaining at the lowest price the necessaries for its production, can be supplied on the same terms, by which the consumption will be nearly doubled, and thus render it a useful as well as profitable investment."——A rival to the Boghead cannel, according to the *Journal of Gas Lighting*, has just been discovered in the United States. The newly-discovered deposit is situate near the banks of the Ohio, in Breckenridge County, State of Kentucky. A sample sent to this country produced, it is said, at the rate of about 11,000 feet of gas per ton, of a quality 15 per cent. superior to Boghead cannel gas, one cubic foot per hour giving a light equal to ten standard sperm candles.

THE PROPOSED CRYSTAL PALACE FOR MANCHESTER.—The magnificent scheme of a Crystal Palace, as large as the one at Sydenham, as a permanent repository for works of art, is still contemplated. A number of gentlemen who formed themselves into a committee, have, says the local *Courier*, secured a guarantee fund of 40,000*l.* which must be regarded as a promising beginning, seeing that no appeal has been yet made to the public. The scheme is expected to be not only self-supporting but profitable, pecuniarily, as well as intellectually.

"DOINGS AT BEDLAM."—Will you permit me to explain, in reference to your comment on the humorous letter of "Syddie de Chimlie," that the "scheme" of which the tall shaft forms part, has for its principal object the removal of the nuisance of *down* smoke to which the fireplaces of all the rooms in the principal part of the building are subjected from the proximity of the dome. A tall shaft, however elegant in itself, may be considered objectionable in the immediate vicinity of the dome; but even a "big chimney" will probably be thought less unsightly than some fifty chimney-pots, each 40 feet high, with all manner of cowls, elbows, and grotesque terminations, such as disfigure most of our public buildings.—THE WARMING AND VENTILATING ENGINEER.

*** Nevertheless, the shaft might be in the right place, and of accordant character.

East-Indian Railways.—On the 9th inst. a large party of professional friends invited Mr. James Berkley, the Chief Resident Engineer of the Great Indian Peninsula Railway Company, to an entertainment at the Albion, to do honour to his past services in India, and to bid him farewell, before returning to his arduous post. Mr. Robert Stephenson, who was in the chair, in paying tribute to Mr. Berkley, said,—"A favourite expression of my father's, in his early career, was—'I can engineer matter very well, but my great difficulty is in engineering men.' Mr. Berkley has, I am happy to say, succeeded not only in engineering matter in a foreign country, with few available resources for railway operations, but he has also been eminently successful in that more difficult task of engineering men. No small tribute to his talents and his temper." Mr. Berkley, in the course of his reply, stated that they had laid out 1,450 miles of main line in India, the whole of which extent had been sanctioned by the British Government, and that 800 miles, including the Ghaut inclines, had been conceded to the Peninsular Railway Company for immediate construction. They had finished say 90 miles of railway, and 220 miles more were actively progressing.

Strikes.—About twenty of the masons employed by Messrs. Dickson and Co. of Swansea, in walling at their works in the Float, struck on Friday last, and refused to resume unless they received an advance of 6d. per day. The average rate of wages now given at these works is 4s. 3d. a day—the general rate of wages in the town about 3s. 6d. a day. The contractors have refused the demand of the men, and the works being thus stopped, they have been compelled to discharge all the quarrymen and excavators, amounting to upwards of 300. The Harbour Trustees have consented to the delay of the works, till a satisfactory termination has been come to between the employers and the employed. Messrs. Dickson and Co. have advertised for a new staff of workmen.——The navvies employed on the Dalmelliugton Railway, in the west of Scotland, lately struck work for the abolition of the truck system carried on by the contractor, and for an alteration in their pay-days. Intimation was given them that such terms would not be agreed to. On Monday before last a number of them returned to their work, and the rest followed their example on Tuesday.——The Thurso quarrymen, considering their present wages too low, have abandoned work, till steps be taken for their better remuneration. Upwards of 100 men from all the quarries in the Hill of Forss, says the *John O'Groat Journal*, "have been parading our streets with a piper at their head. The employers have not as yet agreed to the wages asked, which cannot be termed other than reasonable, being only 1s. additional per week, making in full 12s.—little enough for such a hard-working class of men." Little enough, truly! It is to be hoped the masters will end the dispute by conceding their workmen's request.

British Archæological Association.—April 9.—Annual General Meeting.—S. R. Solly, V.P. in the chair.—The auditors' report and balance-sheet were delivered in by Mr. Turner, from which it appeared that 23*l*. 13s. 2½d. had been during the past year expended beyond the receipts; but that 109 members were in arrear. Forty-nine associates had withdrawn, and forty-eight new ones had been elected. The society had lost four members by death,—R. J. Smith, esq.; Rev. J. J. Ellis, M.A.; Stephen Jackson, esq. M.A.; and W. D. Saull,—of whom the treasurer read obituary notices. General votes of thanks were passed to the president, officers, and council of the past year, and a ballot taken for the ensuing one, when the following were returned.—President—The Earl of Perth and Melfort. Vice-Presidents—Sir F. Dwarris; G. Godwin; J. Heywood, M.P.; J. Lee; LL.D.; J. A. Moore; T. J. Pettigrew; S. R. Solly, M.A.; and Sir J. G. Wilkinson, D.C.L. Treasurer—T. J. Pettigrew. Secretaries—J. R. Planché, *Rouge Croix*; and H. S. Cuming. Secretary for Foreign Correspondence—W. Beattie, M.D. Palæographer—W. H. Black. Curator and Librarian—G. N. Wright. Draughtsman—H. C. Pidgeon. Council—G. Ade; W. F. Ainsworth; A. Ashpitel; T. Brewer; G. A. Cape; Rev. J. E. Cox; F. H. Davis; N. Gould; R. Horman-Fisher; G. V. Irving; W. C. Marshall, R.A.; W. Meyrick; D. Roberts, R.A.; Capt. A. C. Tupper; J. Turner; W. Wansey; and J. Woods. Auditors—C. A. Elliott and A. Thompson.

Painters' Estimates.—Please insert the following tenders given in for the repairing and painting Christ Church, Watney-street, Commercial-road East, and the vicarage:—

Cutler	£660	0	0
Henner	475	0	0
Wood	463	0	0
Taylor	338	0	0
Thornhill (accepted)	309	0	0
Thorpe	209	0	0

S.

Public Free Library for Marylebone.—The experiment of a free library has been tried in this parish for above two years, and has, with very limited means, produced most beneficial and satisfactory results. This Institution, formed previously to the passing of the "Public Libraries Act," cannot now be expected to continue. Its present voluntary support is altogether inefficient and inadequate; and it is the conviction of its present supporters that, since free libraries are authorized by the Legislature, a public library should be established and maintained by a public rate. Endeavours are being made to effect this, and will, it is to be hoped, succeed.

Majolica.—In your issue of the 12th, you quote from Timbs's "Things not generally known," some account of the Mojolica, or as it is frequently called, Raffaelle ware. Perhaps a few notes thereupon may be acceptable. The person who first brought this art to a certain degree of perfection, seems to have been one Orazio Foutana, of Castel Durante. The designs had previously been rude, but Duke Guid' Ubaldo, taking an interest in the manufacture, insisted on better designs being copied, and from his own store gave some of those by Raffaelle, which previously were not generally known. It is, however, very questionable whether it was Raffaelle Sanzio, from whom the term Raffaelle ware was taken, for he appears never to have been connected with the manufacture. The name was more probably derived from Raffaelle Ciarla. He is known to have been one of the most celebrated painters of this ware, and was moreover selected by the duke already mentioned to convey specimens to Spain for presentation to the court.—W.

The Ruined Church of Cow Honeybourne, Evesham.—The sale of parish property at Cow Honeybourne, took place at Evesham, on Monday last, when the lot of six cottages, occupying the site of the church, and including the tower, were purchased for 170*l*. by Mr. C. G. H. St. Pattrick, of Worcester, treasurer to the Diocesan Architectural Society. It is hoped that an appeal may be successfully made to churchmen to provide funds to meet a liability which ought not to rest upon a few individuals.

Fall of a Surveyor into an Old Coal-pit.—An extraordinary, but happily, not a fatal accident lately occurred at Bilston, to Mr. Simcox, of Birmingham, who, while walking about near the railway station, suddenly fell into an old coal-pit, some thirty or forty fathoms deep. He fortunately caught hold of a chain which happened to hang down into the pit, but could not reascend, and on the contrary slipped farther and farther towards the bottom, in the horrible uncertainty as to whether the chain went even half so far. It did, however, most fortunately, reach the bottom, but there Mr. Simcox fell so stunned and injured as to become insensible. On recovering, he could think of no way of saving himself from a lingering and dreadful death, but to shake the chain to and fro, in the almost hopeless chance of some one passing the deserted pit. Thus occupied, with intervals of exhaustion, no less than three days and nights passed, when happily a boatman on the canal at a little distance, observed the swinging of the chain, and knowing the pit to be an unused one, rightly concluded that some one had fallen into it. The joy of poor Mr. Simcox may be conceived on finding that his forlorn hope had proved effectual. He was carefully drawn up in a state of great exhaustion, and conveyed home. The neglect shown in leaving such pits open is infamous, and most criminal. By a singular coincidence, a man who fell into another pit about the same time, also caught hold of the chain or rope, and saved his life at the cost of similar injury to his hands and knees.

The Chester Water Works.—These works are in an advanced state of progress, enough being done to give 600,000 gallons of water daily, and in a short time, when the whole is finished, upwards of a million gallons of filtered water can be daily supplied to the town. At present three filter-beds are in use, but a fourth is in course of construction; and two engines of 25-horse power each are employed (one at the river), to drive the water into the receiving tank, capable of holding 450,000 gallons, from which it flows into the filter-beds, where, on a bed of sand and stones, 5 feet thick, it undergoes purification. Another 25-horse power engine is then employed to force the water up into a tank built in a tower 144 feet above the level of the river, and holding 222,000 gallons, from which it descends into another tank, from which it flows into the town without further mechanical force, as the tower through which it has previously to ascend is 50 feet above the average height of the buildings to be supplied. From the 15th of March, according to the local *Chronicle*, water has been supplied to the town north and south of the Cross, and in a few weeks more mains and branch pipes will be laid so that a continuous and plentiful supply of pure, wholesome water may be obtained in every house.

Drainage of London.—The plans for the general drainage of the metropolis are approaching maturity; and as permanent establishments for pumping are contemplated for both sides of the Thames, probably from different levels, I beg to offer a suggestion of some novelty, but which, I think, would be productive of a large economy. It is the purchase of one line of arches in the Thames Tunnel, by means of which the whole of the sewage might be brought to one side of the river, and one establishment only be necessary for raising it. The arches are 16 feet in height, and there is consequently capacity enough; and as to the consent of the shareholders of the tunnel, I can answer for several equally interested in that abortive undertaking, with, sir, your obedient servant,

One who wants to make a good thing out of a bad one.

TENDERS

For building a house, offices, and stables, at Weybridge, for Mr. C. Buxton. Mr. Barnes, of Ipswich, architect:—

Patrick and Son	£5,482	0	0
Piper and Son	5,100	0	0
R. Watts and Sons	5,082	0	0

For a house in Little Carter-lane, City, for Mr. Lunniss. Mr. Hudson, architect:—

Clemments	£1,175	0	0
Landsey	988	0	0
Lawrence and Sons	884	0	0
Gammon	973	0	0
Pritchard	956	0	0
Raby	832	0	0
Warlbutton	790	0	0

TO CORRESPONDENTS.

Note.—Various statements having reached us as to the difficulty of procuring copies of the *Builder* in some parts of the kingdom—more particularly in Ireland,—it is proposed to parties desiring to subscribe, that on the transmission of a post-office order, or postage stamps, addressed "Office of the *Builder*, No. 1, York-street, Covent-garden, London," the *Builder* will be forwarded to them on the day of publication.

Terms, for One Year	£1	1	8
" " Half-year	0	10	10
" " Quarter-year	0	5	5

"*Iron and Water.*"—An "Old Subscriber" says,—"I have concern with many iron pumps, and also pipes, for the conveyance of water. In the majority of instances they answer well, but in some cases, doubtless from some property peculiar to the water there, they in render the water unhealthy, injurious to clothes, and almost useless. I should be very grateful for any hint which may be useful on the subject."

"J. R."—"T. L."—"Constant Reader of the *Builder*."—"Mr. M."—"J. M. M."—"A. T." (it is not proposed to insert the report in question).—"J. L. P."—"S. T."—"J. T."—"M. P." (it is not necessary).—"H and R."—"F. B. U." (the marble work is not yet done).—"Veritas."—"H. G."—"J. B. N."—"C. C. C."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

NOTICE.

From and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *viâ* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

A DRAUGHTSMAN WANTED, in the country, who can prepare under direction a general and detail drawings for buildings, take out quantities and survey and level, he must also be able to make drawings for castings and wrought-iron work. Salary, 2*l*. per week.—Address, H. C. Office of "The Builder."

BOROUGH of WARRINGTON NEW CEMETERY.—WANTED, by the Corporation of Warrington, a competent PERSON, to take the appointment of CLERK of the WORKS. The person appointed must be capable of setting out and superintending the whole of the works, consisting of drainage, road-making, erection of chapels, lodges, &c. to take levels, and otherwise carry out the instructions of the Cemetery Committee. The salary will be Two Guineas per week. Applications, stating last employment, and accompanied with testimonials, must be sent in, addressed to the Chairman of the Cemetery Committee, on or before the 3rd day of MAY next.

By order, JOHN FITCHETT MARSH, Town Clerk.

Warrington, April 21, 1856.

TOWN TRAVELLER.—A Company, manufacturing Chimney-pieces and Decorative Work for churches and first-class buildings of a very superior class are open to make an ENGAGEMENT with a TOWN TRAVELLER having connexion among architects and first-class builders. A liberal commission will be given.—Address, by letter only, post-paid, T.T. 4, Trafalgar-square.

TO PATTERN MAKERS.—WANTED, a good WORKMAN. A steady, industrious Man, who thoroughly understands his business, may depend upon a permanent situation.—Apply to Messrs. GRAFTON and HOOD, Eagle Foundry, Oxford.

TO DECORATIVE PAINTERS.—A CONSTANT EMPLOYMENT will be given to a DECORATIVE ARTIST, who is a good Designer and Draughtsman, and thoroughly competent to execute decorative works. Specimens to be forwarded forthwith, and application made to Mr. H. J. BEDHAN, House Decorator, Southampton, stating rate of salary required, age, if married; together with particulars of qualification. Satisfactory references will be required as to character.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank street, Westminster, who prepare one quality only of Portland Cement.

BATH, PORTLAND, and ROMAN CEMENTS GROUND and LUMP HYDRAULIC BLUE LIAS LIME.
The LONDON and WEST of ENGLAND CEMENT COMPANY can offer to the trade the best Hydraulic Cements, at reduced prices, the material being excavated in its pure and unadulterated state, from quarries on their own property. The Company particularly recommend a trial of their XXXX Bath Cement, as far superior to any article now in the market. These cements can be sent by rail or shipp d from their wharf, direct to all parts. Agents required, and a liberal discount allowed. Orders received by Mr. KIALLMARK, 80, Old Broad-street, City, or by RICHARD WINTER, Cement Works, Dunball, Bridgwater.

TO BUILDERS, CONTRACTORS, SHIPPERS and others.
G. BURGE, JUN, ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.
DAVIES and NORMAN, Agents.
Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. &c. of superior quality, and at reasonable prices.

GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND CEMENT.
CHARLES NELSON, having completed his works for the manufacture of the above Cement, can supply Contractors, Builders, &c. with a very superior article. The manufacturing department being under his own immediate superintendence, he can confidently recommend it for all works in which Portland Cement is used, and only requires a trial to insure approbation.
Orders addressed to
London Depôt, 16, South Wharf, Paddington,
BLYTH, BROTHERS, Sole Agents,
will meet with immediate attention.
Manufactory—Emscote Mills, Warwick.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. M BLASHFIELD, at Millwall, Isle of Dogs, Warehouse, No. 1, Wharf, Paddington-basin.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL — Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Maulc, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

11, George-yard, Lombard street, City

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccos dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank street, Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no coal-burning—sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and 1 Sea-street, Liverpool

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 5, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead, whilst the consumption of material is less than for one coat. It dries very fast and hard.
HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three-fourths the price.
HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and iron exposed to salt water; neither blue water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, stamped, HUBBUCK, London, PATENT; and when so marked the quality is guaranteed.
HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber coated with this Enamel is not attacked by the worm, neither do barnacles attach to it.
Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.
OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

FREEN and CO.'S PORTLAND CEMENT and LIME WORKS, WOULDHAM, near Rochester.—These Works having obtained Letters Patent for the Manufacture of Cement, by which very great and important advantages are obtained over the old method of manufacture, insuring at once uniformity of colour and quality. Merchants, Contractors, and Builders are informed that they can now be supplied with any quantity, either for home or foreign markets, for wholesale orders, on advantageous terms.—Samples and prices forwarded, on application at the Works; or to Mr. W. C. ATKINSON, 56, Moorgate street, City; from whom also testimonials from eminent engineers as to quality may be obtained.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.
JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale Business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of the best quality upon advantageous terms.—Application either at Harwich or at his Agent, GEORGE HORKES, 20, New Ormond street, Queen-square, London.
P.S. Inland London trade will in future be supplied from Messrs. ROBINS and CO. Scotland-yard, Westminster, instead of Whitefriars.

FRONTS of HOUSES. — GREENE and CO.'S PORTLAND CEMENT WASH will not vegetate, and equal to Oil Paint for durability. In casks of 1 cwt. for 10s.
DAMP WALLS.—GREENE and CO.'S OXIDE SOLUTION PAINT, a guaranteed remedy, sold in quantities to cover 200 square feet, for 13s.—To be had only of the Inventors, GREENE and CO. 22, Norfolk-street, Islington.

BLUE LIAS LIME.—CHARLES NELSON begs to inform Engineers, Architects, Contractors, Builders, and the Trade in general, that he is prepared to supply direct from the Works in his own boats any part of the Thames, River Lee, on any canal or by rail to all parts of the kingdom, large quantities of the above GENUINE HYDRAULIC LIME now so extensively used.
Quality, Weight, and Measure may at all times be strictly relied on, references in proof of the above can be given.
N.B. The Captain of the Boat will always bring with him the Grand Junction Canal Note, from which the contractor will be enabled to know exactly what weight of Lime he is paying for.
All orders addressed to the—
LONDON DEPOT, 16, SOUTH WHARF, PADDINGTON.
BLYTH, BROTHERS, SOLE AGENTS,
Will be promptly attended to, and any further information can be obtained from them.
Works, Stockton-field, near Southam, Warwickshire.

PLASTER of PARIS.—MESSRS. BLYTH, BROTHERS, beg to acquaint the trade, that they have made a considerable reduction in price; the quality they are now manufacturing cannot fail to give entire satisfaction. Samples and prices forwarded to any part of England, or the metropolis. No extra charge made to any wharf or railway station in London. Any further information can be obtained at their Works, Baldwin's-place, Gray's-inn-lane, Holborn; or at the Blue Lias Lime Depôt, 16, South Wharf, Paddington.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 6d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

BLUE LIAS LIME.—Messrs. GREAVES and KIRKSHAW having completed their Works on the Birmingham and Oxford line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime. Portland, Bath, and Lias Cement. Works, at Harbury, Stockton, and Wilmcote. Office, at Warwick

GREAVES'S BLUE LIAS LIME.—The above Lime supplied direct from the works to wharfs alongside the rivers or canals, railway stations, or vessels in the docks. A large supply always in stock. CHARLES RICHARDSON, Brick, Lime, and Cement Merchant, 3 and 6, South Wharf, Paddington.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (durable monochrome STUCCO) CEMENT, STUCCO PAINT. — CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS. BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.—Grey Stocks, 22s. per thousand; Grizzles, 20s. per thousand; Rough Stocks, 20s.; Place, 13s. to 16s. per thousand.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICKFIELD TO BE LET at TOTTENHAM, containing 64 acres of excellent malm earth, situated by the side of the high road, 7½ miles from London. The bricks made in this field have always found a ready sale.—For terms and other particulars, apply to Mr. A. RICHARDS, Auctioneer, Tottenham.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.
Malm Place half washed Stocks and Place Bricks, also on sale These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton
N.B. Light-coloured Pit Sand of approved quality constantly on sale in any reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for whitelime, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent for barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can lend alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named article can also be procured, as well as all kinds of fire goods both Welsh and Newcastle. Fire-clay, Place burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.
General Office—No. 12, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY
MILLS and PRICE, 5 ADELAIDE-PLACE London-bridge

BEST HEREFORDSHIRE MALM SECONDS AND CUTTERS ALWAYS ON HAND.
MILLS AND PRICE, 5, ADELAIDE-PLACE,
LONDON BRIDGE;
AND CROWN WHARF, GREAT SOUTHLAND-YARD.

BRICKS, of first-rate quality and good colour, TO BE SOLD for CASH; suitable for fortifications, work where great strength is required.—Apply to Mr. W. SMITH, Brick-wharf, Grosvenor road, Thames-bank, near Pimlico Pier.

FIRE BRICKS, Stock Bricks, Fire Tiles, and Iron Roofing for Sale, at the Gas Works, School-house-lane, Ratcliff.

IMPROVED BRICK and QUARRY PRESSING MACHINES, made by THOMAS PORTER, LONDON-ROAD, Leicester.—T. P. begs to inform Architects, Builders, Brickmakers, and Others, that he is now engaged in making very superior PORTABLE BRICK-PRESSING MACHINES, at considerably reduced prices. The boxes are lined with brass
For design of Press, refer to "The Builder," January 12, 1856.

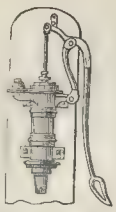
PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boy to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 15, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BRICK and PIPE MACHINES, manufactured by PORTER, HINDE, and PORTER, Engineers, Carlisle. The manufacturers invite attention to PORTER'S and THE AINSLIE CO.'S PATENT MACHINES for making solid and other Bricks, Quarls, Tiles, Cornices, Socket and Plain Pipes, &c. which they recommend as best adapted for producing good bricks or pipes where quantity is an object.
These machines produce articles superior to any hitherto made by other methods; they are simple in their construction, and not liable to get out of order. They are being largely adopted by brickmakers: in one brickfield near London there are eighteen of the Ainslie machines in use.
The manufacturers particularly direct attention to the combined PIPE and BRICK MACHINE, for the purpose of purging the clay with less power and of producing the largest number of good bricks of any machine yet offered. This machine was tried at the last meeting of the Royal Agricultural Society of England, when it purged and moulded at the rate of 1,800 bricks per hour, and was commended by the judges; and at the late Paris Exhibition the jury awarded for it a first-class medal.
This machine may be seen at work at Carlisle. The following is from the *Times* of July 26, 1855:—"A very high opinion was formed of the value of this machine by those who witnessed its performance yesterday."

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT EAVES GUTTER TILES, for ROOFS of HOUSES (either old or new, whether of thatch, slate, or tile), and other structures. Robert Mr. LAWES, 1, Adelaide-place, London-bridge. Having been appointed by the Patentee SOLE AGENT for the SALE of this ARTICLE, I beg to call attention to its merits. By a peculiarity of construction, the gutter tile is made to form a sharp and lasting water-trough; and by means of an open and angular half-joint for the reception of cement, a solid and compact gutter is obtained. The invention has been tested by four years' extensive use, with unfailing success. It supersedes the present expensive and imperfect modes of conducting rain from the tile to the eave. It is cheap and permanent, and removes all dirt. It merits the attention of the landlord, the agriculturist, the owner of house property, the philanthropist, and the economist. Delivered free on rail or canal, at the works, Yelvertoft, near Rugby; or in London, Gloucester, or Bridgewater.
Price 4d. per Tile, of about 13 inches long. Stop-ends and Outlets, 6d.

TO BUILDERS AND PLUMBERS.
The attention of the Trade is called to
JOHN WARNER & SONS'
PATENT VIBRATING
STANDARD PUMP,
which is recommended for the simplicity of its construction, and the ease with which it works.
By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.
Beer and Water Engines for raising fluids from a depth not exceeding 25 feet; also, Gas Lon Engines constructed on the same principle.
JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.



B. FOWLER & CO.'S
PORTABLE PUMPS,
3-inch to 9-inch Barrels,
Plain or Sliding Telescope Suction,
ON HIRE.

SINGLE AND DOUBLE PUMPS,
all sizes,
to any depth, for Hand or Steam Power.

Patent Double-action and General Pump-makers, Builders' Smiths, &c.
WHITEFRIARS-STREET,
Fleet-street.

R. RICHARDS and CO.
PUMP MANUFACTURERS
and ENGINEERS,
Pumps in Wrought and Cast Iron and Brass, turned by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.
Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pail- 2 s per doz. painted.
Ditto .... 4ss per doz. galvanized

Upper Ground-street, Blackfriars Bridge, Surrey Side.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side.

PARSEY'S REVOLVING STEAM-ENGINES (the accomplishment of circular motion) are superior to all others, as PUMPS, being all metal, with at leather or packing, are equally good for hot or cold liquors, and are not liable to choke. A vast improvement, where pumping and drainage are required.—To be seen at Mr. PARSEY'S Depôt, Great Scotland-yard.

STEAM-ENGINES—Stationary and Portable.—To CONTRACTORS.—Messrs. MEDWIN and HALL, Engineers, 92, Blackfriars road, have a large stock of stationary and portable STEAM ENGINES, strong and simple, built and second-hand, of various useful powers, either for SALE, or TO BE LET on HIRE, by the day, week, or any time required, and are ready for immediate delivery.—May be seen at the above address.
N.B. Several SETS of PUMPS TO BE LET, with driving gear

STEAM POWER.—TO BE LET, a spacious FLOOR, with a 2-horse power STEAM ENGINE, in best-rate condition.—Apply to Messrs. DAVIES and CO. 100, Long-acre

TO WATER COMPANIES AND PLUMBERS
HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of such high pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closet and Basin with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.
LEAD, IRON, and TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

CHAS. MACINTOSH and CO. Patentees of the VULCANIZED INDIA-RUBBER, and GENERAL MANUFACTURERS of WATERPROOF, AIRPROOF, and ELASTIC RUBBER GOODS beg to inform all persons who desire to correspond with them direct, that their SOLE ESTABLISHMENTS are No. 3, Cannon-street West, London, and Cambridge-street, Manchester. This notice is necessary, as the term Macintosh Depôt, Macintosh Warehouse, &c. is frequently adopted both in London and the country by vendors of India-rubber goods, who deal in articles not of the manufacture of CHAS. MACINTOSH and CO.—Goods manufactured by CHAS. MACINTOSH and CO. are stamped with the name of the firm.

AYLESFORD POTTERY COMPANY,
BELVEDERE-ROAD, LAMBETH.
MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.
The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—offer their goods to Contractors the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

EXTENSIVE REDUCTION IN PRICES.
KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.
DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Bricks, Tiles, Fire Bricks, &c.
The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.
DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his
GLAZED STONEWARE DRAIN-PIPES.
LISTS OF PRICES FORWARDED ON APPLICATION.

REDUCTION IN THE PRICE OF
CLOSET-PANS.

DOULTON AND WATTS,
LAMBETH POTTERY, HIGH-STREET, LAMBETH,
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to
5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of earthen-ware.

THE BRANKSEA POTTERY,
NEAR POOLE, DORSET.

GREAT REDUCTION IN PRICES OF DRAIN-PIPES.
TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.
THE BRANKSEA POTTERY AND CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.
N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.
The clay obtained from the pits on the island of Brankseasea is of the finest quality, and the goods are manufactured by men of long experience in the trade, and the Company [illegible]. The Agent, Mr. [illegible], will be found to [illegible] with the best goods [illegible] part of the [illegible].
A list of prices [illegible] application to Mr. T. G. BECK, at NEW WHARF, No. 1, Little Angel-street, Lubourne-road, New Kent-road, or to Mr. R. PETTS, at the Works, Brankseasea Island, Poole, Dorset.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Directors of the Company have pleasure in submitting the following Testimonial from SIR RAYMOND JARVIS, Bart., A.C.S., ISLE of WIGHT.
"Second Testimonial. March 14th, 1852. In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers well. Many Builders and other persons have lately examined the Tubing laid down in the Pump Service, first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."
N.B. From this Testimonial it will be seen that the Sir RAYMOND JARVIS of the ISLE of WIGHT has no effect on Gutta Percha Tubing.
THE GUTTA PERCHA COMPANY, PATENTEES,
18, WHARF-ROAD, CITY-ROAD, LONDON.

TO ENGINEERS, MILL-OWNERS, &c.
N. Woolwich Elastic Steam Packing (Cuttas and India-rubber), at 1s. 4½d. per lb.

S. W. SILVER and CO. INDIA-RUBBER WORKS, North Woolwich (opposite H. M.'s Dockyards), having considerably extended their manufactures in order to meet the daily increasing demand upon them for this effective and durable article, are enabled to offer the very best material at the reduced price of 1s. 4½d. per lb. delivered in London, for sheet and rope.
Testimonials may be seen at S. W. SILVER and CO.'s Warehouse, No. 5, and 1, High-street, Shoreditch, London Terminus, where orders for Steam Packing, Rubber Springs, Pump Valves, and the various India-rubber appliances, will meet with prompt attention.
CAUTION.—S. W. S. and Co. have found it necessary to stamp all their manufacture, thus "S. W. SILVER and CO. WORKS, NORTH WOOLWICH."

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE, CLOTH WASHERS, STEAM PACKING, LATH RINGS, CUT RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Rubber Cords of all sizes of [illegible] Cushions and Rubber Strips cut to any pattern for bagatelle tables.
Driving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.
Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Boats, Imperial Cushions, and Articles of this kind made to any pattern or size.
N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LEAF HANCOCK, Goswell-mews, Goswell-road, London.

TO MOULD MAKERS.—WANTED, MOULDS for ORNAMENTAL CHIMNEY-SHAFTS, and other Brickwork. Apply at LOOMES and CO'S, Whitteseas, Peterborough.

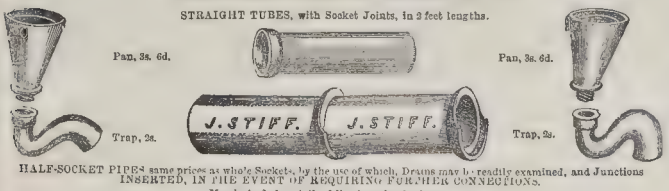
TO ARCHITECTS, BUILDERS, AND THE TRADE IN GENERAL.
J. M. CASENTINI, FIGURE and ARCHITECTURAL MODELLER, and CARVER, &c. &c. most respectfully returns thanks to his friends for past favours, and has the pleasure of stating that he has opened his [illegible] of ornamental masonry, terra cotta, [illegible] material for [illegible], [illegible] ceilings, cornices, [illegible] every description. J. M. C. further begs to state that any order he may be favoured with will be executed with despatch and economy.—N.B. Contracts given for the restoration of old work, in any part of [illegible]. Models executed to order, or from Architectural designs as given, and cast in any of the patent cements. 43, Harcourt Buildings, Westminster-road.

GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

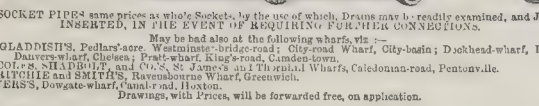


HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz :—
Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, SEABROOK, and COLES, St. James's and Thrandal Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.
Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,
IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET-PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

WILLIAM INGHAM AND SONS,

WORTLEY FIRE-BRICK, GAS RETORT, SANITARY PIPE, AND TERRA-COTTA WORKS,
NEAR LEEDS, YORKSHIRE,

Manufacturers of Glazed Sanitary and Water Pipes, from 2 to 36 inches diameter; Invert Blocks for Sewer Bottoms, Closet-pans, Fire-clay Gas Retorts, Fire Bricks, Chimney Tops, Crucibles, and a variety of Articles in Terra-cotta.

N.B. Superior Fire-clay, for Glass-house Pots and Crucibles.

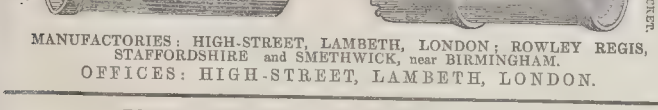
London Agents—Messrs. CHADWICK and AKEROYD, Willington Stone-wharf, Regent's-park Basin.
Manchester Agent—Mr. TODD CARR, Arch 14, Birmingham-street, London-road Station.
Burnley Agent—Mr. JAMES SAGAR, Canal Wharf.
Leeds Stores—Albion-place, Albion-street.

W. I. & SONS beg to inform Architects, Engineers, Contractors, Iron Masters, Builders, &c. that the whole of the above-named Articles are manufactured from the celebrated Wortley Fire-clay, and they (having worked the same for upwards of thirty years) can furnish first-class references.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

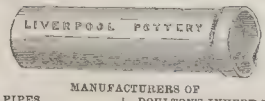
Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their GLAZED STONEWARE DRAIN-PIPES,
Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.



MANUFACTURERS OF
DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.
TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE

No. 7.

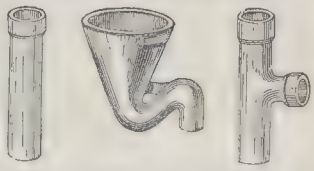
Is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,
THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Cut, Lambeth.
N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d each.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.
DEPOT:
ARTHUR-STREET, NEW OXFORD-STREET.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Slills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.
N.B. A small extra charge is made upon goods required to be delivered. October 1, 1855.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 81 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to counties and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. Feb. 11, 1856.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

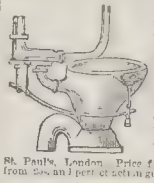
3 inch bore, in 3 ft. 6 in. lengths, at				3d. per foot.	
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 3d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that red earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Acts HIGH and LOW PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London. Price for Closet and Apparatus complete, from £6 and upwards, each guaranteed.



WANTED to PURCHASE, a STEAM-HAMMER, of about 10 or 12 cwt. Full particulars, with lowest price, to BARRETT, EXALL, and ANDREWES, Reading.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

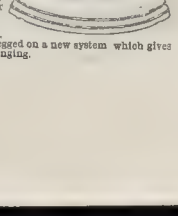
J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently introduced and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superb tone, true in form, and at less cost than has heretofore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weights, singly or in peals.

TUNED BY MACHINERY.

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system which gives superior tone and facility for ringing.



SALES BY AUCTION.

FREEHOLD BUILDING GROUND, NOTTING HILL

MR. ALLEN DAVIS will SELL by AUCTION, at the MART, on THURSDAY, 8th of MAY, 1856, at TWELVE, in four lots, a valuable PLOT of FREEHOLD GROUND having three frontages, to Mortimer-terrace, Lee-terrace, and Clifton-terrace, close to St. Ann's-road, leading from Royal-crescent, Notting hill, divided into four plots, and suitable to the erection of moderate-sized houses, and presents an opportunity, by granting building leases, of creating freehold ground-rents.—Printed particulars may be had at the Rose and Crown, directly facing the ground of Messrs. Sturtevant and Summers, Solicitors, 5, New Bridge-street, Blackfriars; and of Mr. ALLEN DAVIS, 11, Old Jewry chambers, and at the Mart.

TO FOUNDERS, ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Assignees of R. Poldsee, a Bankrupt, to SELL by AUCTION, on TUESDAY, APRIL 29, 1856, at ELEVEN o'clock, at the FOUNDRY, old Bridge House, Block Friars, in lots, as it may receive, the PLANT and MILL WORKS of a Shell Foundry; 16-horse power horizontal steam-engine and boiler, one beam steam-engine, three drilling-machines, 100 feet shafting, Lloyd's patent fan, four wrought-iron cupolas, the brick and iron erection of six drying stoves; 300 cast shell-cases, from 6 to 13 inches; 300 tons rejected shells, 60 tons Scotch pig-iron, 30 tons cold blast pig-iron, 90 tons broken cast iron, 8,000 new fire-bricks, smith's forge and tools, patent wheelbarrow and three carts, harness, stable utensils; the temporary corrugated iron roof, 150 feet 1 inch by 57 feet wide, and numerous effects.—To be viewed on Monday previous to the sale, when catalogues may be had on the Premises; of Mr. ASHLEY, Solicitor, Old Jewry; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO NOBLEMEN, GENTLEMEN, ARCHITECTS, BUILDERS, LANDSCAPE GARDENERS, AND OTHERS. — Second Annual Sale of the valuable and beautiful Materials manufactured by Bonsome's Patent Stone Company.

MESSRS. MANSELL and ELLIOTT are favoured with instructions from the Directors of the Company, to SELL by AUCTION, on the PREMISES, Whitehall Wharf, Cannon-row, Westminster, on FRIDAY, MAY 16th, 1856, and two following days, at TWELVE for ONE o'clock precisely, in lots adapted for private purchasers, the trade, and shippers, a well-selected assortment from the extensive stock at Ipswich) of ITEMS adapted for ornamenting ecclesiastical buildings, mansions, and cottages, designed in the various styles of architecture by first-rate artists, including plain and elaborately-worked altar-pieces, screens, chimney-pieces, basso and alto relievos, pillars, pilasters, entablatures complete, capitals, caps, bases, cornices, mouldings, porch and window dressings and architraves, brackets, trusses, enriched and plain balustrading, gate and other piers, pedestals in great variety, terminals, sablar quoins, copings, and string courses. The garden decorations comprise fountains, shell and rock work, figures, vases, tazzas, flower stands and boxes fern tazzas, sundial pedestals, and terrace balustrading. The miscellaneous articles consist of coats of arms, turrets, pinnacles, fonts, mural tablets, tombs, and every item that can be made in wrought or sculptured stone. Messrs. MANSELL and ELLIOTT beg to draw especial attention to this important sale, for the Patent Stone for Stone is superior, in appearance and durability, to any other stone, being unaffected by weather or age; and as its extraordinary capabilities of application are too numerous to particularise in an advertisement, they invite an inspection of the material. The whole may be viewed three days prior to the sale, and catalogues had fourteen days prior) on the Premises, and at the Offices of Messrs. MANSELL and ELLIOTT, Auctioneers, 191, Piccadilly, Regrave square (corner of Halkeu-place), and 12, Birchin-lane, Cornhill, from whom plates of designs may be had.

ABSOLUTE SALE.—Freehold Ground Rents, Houses, and Building Ground, York road, Battersea.

MR. W. R. GLASIER is favoured with instructions from the Executors to SELL by AUCTION, at GARRAWAY'S, on TUESDAY, MAY 13th, at TWELVE for ONE, in lots, without the slightest reserve, the REMAINING PORTION of the ESTATE of the late Mr. George Carter, comprising valuable freehold ground-rents, amounting to 37l. 3s. per annum, amply secured upon and arising from twenty-three houses, situate in Ann-street, George-street, and York road. Also, the following FREEHOLD Houses, being well-situate house, near Plough-lane, late in the occupation of the deceased; two cottages adoining; ten cottages and blacksmith's shop, at rear of Edmond's place; and nine houses in Ann-street, let to weekly tenants except the first mentioned house, which is in hand at rents amounting to 127. 16s. per annum. Together with about Two Acres of Freehold Building Land, divided into plots to suit the convenience of all classes of purchasers.—The houses may be viewed by permission of the tenants, and particulars, with plans, had of C. E. FREEMAN, Esq. Solicitor, 11, Buckingham-street; of Mr. EDWIN CARTER, York-road, Battersea; of Mr. W. EWSON, Farringdon-market; at Garraway's; and of the Auctioneer, 41, Charlinc-cross.

SOUTHWARK. — To BUILDERS, PLEASURE GROUND KEEPERS, PLASTERERS, GAS-FITTERS, and OTHERS. For SALE by AUCTION, by

MR. SAMUEL BRETT, at the PREMISES, 4, Belvidere-place, Borough-road, on WEDNESDAY, MAY 7, 1856, at TWELVE o'clock, by order of the proprietor, 1,000 CHIMNEY POTS, of various sizes, patterns, and make, and will comprise about 70 Earthenware Pots, Pedestals, other shafts, 30 12-in. balls and stands, 2 18-in. balls and stands, 50 feet of hard-cemented coping, models of the Roman Arts, &c., for basement screens, &c. large and small stands, fonts and pilaster caps, trusses, balusters, fountain and gas figures, large and small casts of the Royal arms, 15 centre flowers 20 pairs of lizards, vases, several vases, pedestals and stands, wreaths, flower-cups, scrolls, pine apples, and a large variety of Castings in good stand ng material. SAMUEL BRETT, Auctioneer, Valuer, Contractor, and General Business Agent, 94, Southwark-bridge-road.

TO BUILDERS, CARPENTERS, AND OTHERS.

MR. LEREW will SELL by AUCTION, on the PREMISES, No. 43, Union-street, Somers-town, on MONDAY, the 28th MAY, at ELEVEN for TWELVE o'clock, 1,500 YELLOW and WHITE PLANKS, DEALS, and BATTENS, 7,000 feet of wide pine board, 110 squares of yellow and white flooring, 500 feet of mahogany, 2 stuff doors, and sundry useful stock.—May be viewed the Saturday prior, and catalogues had, on the Premises; and of the Auctioneer, 2, Carlton-terrace, Hampstead road.

BELGRAVIA.—To Builders. Three capital first-rate unfinished Residences, with shops and dwellings adjoining.

MR. ROBINS is instructed by the Mortgagee, with full power of sale, to SELL by AUCTION, at the MART, on THURSDAY, MAY 1, at TWELVE, in three lots, THREE capital and substantial CARCASSES, intended for residences of a superior character, being Nos. 9, 10, and 11, Warwick-square, a locality fast progressing in public favour, and may be considered one of the most attractive portions of the fashionable Belgravia, in close proximity to the Houses of Parliament. The residences will offer accommodation for families of the first respectability, with conveniences and stabling at the rear, and an ornamental pleasure garden in front. They are held for 75 years, at low ground-rents, and suggest a strong temptation to purchasers to complete them with the view of permanent first-class investment. Particulars may be had at the Auctioneer's Offices, Hanson and Donree, Solicitors, Hart-street, Bloomsbury; at the Auction Mart; and at Mr. Robins's Offices, Covent-garden.—N.B. The greater part of the purchase-money may remain on mortgage for a term of years.

TO BUILDERS.—French Paperhangings direct from Paris Fancy Decorations, and Superior assortment of English Papers

MESSRS. ROBINS will SELL by AUCTION, at their ROOMS, in Coventgarden, on TUESDAY next, APRIL 29, at TWELVE, FRENCH PAPER-HANGINGS, recently imported direct from Paris, new and elegant patterns in satins and silks, enriched with gold, also fancy decorations for drawing-rooms and boudoirs, and a large assortment of English papers of a superior description, arranged into convenient lots. On view two days prior to sale in Covent-garden.

SALES BY AUCTION.

Second Portion of the important Collection of beautiful Sculptures and other valuable Works in Marble, Bronze, Stone, Terra Cotta, an extensive variety of choice Chimney-pieces of Italian, French, and Elizabethan designs, choice specimens of Scagliola, &c. of Messrs. Browne and Co at their Galleries, in University-street, by whose direction

MESSRS. RUSHWORTH and JARVIS will SELL by AUCTION, at the GALLERIES, in University-street, near Fitzroy square, on TUESDAY, MAY 6, an 11-fil wing day in consequence of the previous day having been disposed off, the very celebrated COLLECTION of SCULPTURES, in marble, including classical figures, groups, vases, therms, pedestals and fountains, valuable Statues, Busts, and chimney-pieces, of the most approved designs, in Italian, French, English, and other marbles, many of which are beautifully sculptured by first-rate artists; also ornamental pedestals, candelabras, mosaics, pietra dura, and marble slabs, and various works in scagliola for which this establishment has been so long famous The stock will be arranged in lots suitable for the decoration of first-class mansions, terraces, gardens and pleasure grounds of the nobility and gentry.—Catalogues will be ready four days prior to the Sale, and may be had on the Premises; and of Messrs. Rushworth and Jarvis, Saville-row Regent-street, and 19, Change-alley, Cornhill.—The Third Sale will take place on the 3rd and 4th of JUNE

VALUABLE SITE FOR BUILDING. — ISLEWORTH and WOODLANDS, adjoining the magnificent Estate of Spring Grove.

MESSRS. M. ADAMS and SON will SELL by AUCTION, at the RAILWAY STATION INN, Isleworth, on FRIDAY, MAY 16, at THREE for FOUR o'clock, a most desirable PIECE of LAND, adjoining the mansion and grounds known as Heddon House, containing 2 roods 34 poles, specially adapted for the erection of a first-class villa, or a pair of semi-detached villas, perfectly inclosed by walls covered with choice fruit-trees, embracing all the advantages of retirement, with the convenience of proximity to the village of Isleworth, within ten minutes' walk of the railway station, and in the immediate neighbourhood of the world famed Richmond-hill and Hampton-court. Also three valuable PLOTS of BUILDING LAND, in the delightful spot, Woodlands adjacent to Isleworth and Spring-grove Railway Station.—Particulars and conditions of sale may be had fourteen days prior to the day of sale; at the Railway Station Inn, and Northumberland Arms Inn, Isleworth; Mr. HISCOCK, Castle-terrace, Richmond; HENRY FARNELL, Esq. Solicitor, Isleworth; Messrs. HEATHCOTE and TWEEDIE, Solicitors, 64, Lincoln's-inn-fields; Wm. C. KITCHENER, Esq Solicitor, Newmarket; Messrs. ALDRIDGE and BROMLEY, 1, South-square, Gray's-inn, and of the Auctioneers, Messrs. ADAMS and SON, Isleworth.

BLOOMSBURY-SQUARE.—Building Materials.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, former of Bloomsbury-square and Vernon-place, on WEDNESDAY, APRIL 30th, at TEN for ELEVEN, the MATERIALS and FITTINGS of a dwelling house, offices, and stabling, of the usual description.—May be viewed on day previous, and catalogues had on the Premises, and of the Auctioneers, 46, Parliament-street, or Coal Exchange

PIMLICO.—Superior Statuary and other Chimney-Pieces.

MESSRS. EVERSFIELD and HORNE announce that they are instructed to SELL by AUCTION, at the MARBLE SHOW-ROOMS, Belgrave-place, Pimlico, in MAY, an assortment of CHIMNEY-PIECES of superior workmanship, in marble and stone; catalogues of which will shortly be ready, and will be forwarded, post free, on application to the Auctioneers, 46, Parliament-street, Westminster.

HATTON-GARDEN.—Peremptory Sale of the Plant and Effects of a Builder and Sewer Contractor; and Lease of the Premises.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, Bleeding Hart yard, Charles-street, Hatton-garden on TUESDAY, MAY 20th, the valuable PLANT and EFFECTS, consisting of a large quantity of timber, deals, and battens, 3 inch and 4 inch scantlings, scaffold boards and poles, ladders, struts, crosses and trestles, drain and sewer entires, blocking pieces, paling-boards, and workbenches, 2 capital screw-jacks, 2 sets of timber dumpers, 2 sets of gully-gratings, navvic barrows and boots, trolleys, iron wheelingplates, paving to let, set paving, and useful timber and iron work of various descriptions; also, the valuable effects of the contractor, harness, carpenters', and smith's tools, two portable carpenters' houses, office fittings, and numerous other effects At the same time, the Lease of the Premises, 30 feet by 70 feet by 9 feet high, one day previous, and catalogues had on the Premises, and of the Auctioneers, 46, Parliament-street, or Coal Exchange

VOTES FOR MIDDLESEX, KENT, and SURREY. - Freehold Plots of Building Land

MR. TINDALL will SELL by AUCTION, on WEDNESDAY, MAY 14th, at the AUCTION MART, opposite the Bank of England, several PLOTS of FREEHOLD LAND, for the erection of first-class villa residences, being portions of the Estate so admired by the National Conservative, and Free-trade Freehold Land Societies, within easy access of town, either by railway, steamboat, or omnibus. Also, a valuable PLOT at CAMBERWELL, for the erection of a first-class PUBLIC HOUSE (license certain).—Printed particulars and conditions of Sale may be had ten days before the Sale, of the Solicitors, Messrs. HAY and HAY, 3, Old Jewry chambers, Bread-street; and of the Auctioneer (where the plans of the estate may be seen), at the St. John's-wood Estate Offices, 28, Portland-terrace, Regent's park, near St. John's-wood Chapel.

CHELTENHAM. Valuable Premises and Building Land in the town, entirely freehold

MESSRS. BEADEL and SONS have received instructions from the Mortgagees in possession, to SELL by AUCTION, at the PLOUGH HOTEL, Cheltenham, on THURSDAY, MAY 22nd, at TWO for THREE o'clock, the MONTPELLIER BATHS, the Bakery, Shops, Mill, Manufacturing Premises, and several valuable Plots of Building Land. Lot 1 will comprise the extensive and valuable range of premises situate at the corner of Montpellier-walk and Clarence-street, with a commanding frontage of 235 feet; this block of building includes the Montpellier Baths and dwelling-house, in the occupation of Mr. Rock, who is under notice to quit at Michaelmas next, the bakery, with shops, ovens, fittings, &c.; the mill, with machinery driving two pair of stones, and the premises at present used as the manufactory for Cheltenham salts; the fittings to the baths, the 14-horse power high-pressure engine, the evaporating pans, and all the machinery and fixtures attached to the premises belonging to the vendors will be included in the purchase. The remaining lots will consist of freehold and copyhold building land conveniently divided for the erection of villas or other residences, frontine the Malvern-road, close to Christ Church, and will shortly be offered with great advantage to purchasers. Further particulars, with conditions of sale and lithographic plans, may be obtained fourteen days prior to the sale) of Messrs. J. C. and H. Beadel, solicitors, New Bank-buildings, and at the Globe Insurance-office, Cornhill, London; of Messrs. Winter, Barrow, and Bell, Cheltenham; at the Place of Sale; and of Messrs. BEADEL and SONS, 25, Gresham-street, London.

HAMMERSMITH.—A large quantity of Excellent Building Materials, TO BUILDERS, PERSONS REPAIRING, and OTHERS

MR. F. HALL will SELL by AUCTION, on TUESDAY, APRIL 29th, 1856, and following day, at TWELVE for ONE, on the SITE of the OLD WORKHOUSE, Black-street, Hammersmith, near the Jolly Gardeners, a large quantity of very excellent BUILDING MATERIALS, comprising excellent long fir joists, clean yellow floor-boards, long fir plates, sound rafters, slates, tiles, lead flashing, sheet and other irons, shop-fronts, pan and plain tiles, large iron columns, iron palisading, capital York paving, slates, register and other stoves, stone hearths, marble chimney-pieces, several thousand capital stock bricks, and various other useful effects. To be sold without the least reserve. To be viewed two days previous, and catalogues had on the Premises; at the Jolly Gardeners; and of Mr. F. HALL, Building Material and General Auctioneer, Chester-street, Kennington.

SALES BY AUCTION.

To BUILDERS and OTHERS.—Kensington-park, contiguous to Kensington gardens the Parks, &c.

MR. D. A. RAMSAY will SELL by AUCTION, at the MART, on MONDAY, MAY 5, at TWELVE, in two lots, by order of the Mortgagee, under full powers of sale, a very eligible LEASEHOLD ESTATE, comprising five private residences, nearly finished, of a uniform and neat elevation, agreeably situate, and being Nos. 8, 9, 10, 11, and 16, Portland road North, immediately in the rear of Clarendon-road, the principal thoroughfare through the much admired and tastefully arranged Kensington-park. When completed and finished, the property is estimated to produce 160l. per annum, which is held on very long terms at low ground-rents. May be viewed, and particulars obtained of WILLIAM PALMER, Esq. Solicitor, 7, George street, East square, at the Mart; and of Mr. D. A. RAMSAY, Auctioneer and Estate Agent, 79, King William-street, City.

TO BUILDERS AND OTHERS.—2,000 Plank Deals, Battens, and Pine Plank, small quantity of Ironmongery, Floor-boards, &c.

MR. D. A. RAMSAY has received instructions from Mr. W. SIMS, to SELL by AUCTION, at IRONGATE WHARF, Paddington, on WEDNESDAY, MAY 7th, at TWELVE, (clear of all charges and allowances made),

700 Pieces Pine Plank (Sagnenay),
200 Yellow Battens (Dutch),
1,000 Plank Deals and Battens (Red Pine),
1,100 White Battens (Quebec).

A small quantity of ironmongery, floor-boards, and effects.—May be viewed two days previously, and on the morning of sale, and particulars obtained of Mr. Sims, Solicitor, No. 3, George-street, Euston-square; and of Mr. D. A. RAMSAY, Auctioneer, No. 79, King William-street, City.

WEST-END and CRYSTAL PALACE RAILWAY.—Surplus Materials and Contractor's Plant, the Property of R. Barnes, Esq. to clear the ground in consequence of the completion of the Streatham Tunnel

PULLEN and SON are directed to SELL by AUCTION, on the PREMISES adjoining the Streatham Tunnel, entrance Palace-road, Streatham hill-station, the highroad from Tulse Hill to Norwood), on THURSDAY, MAY 8, at TWELVE, in lots, the valuable SURPLUS MATERIALS, Plant, and Effects, comprising about 1,000 feet of Timber in balk, and useful scantlings, 2,500 feet run of deals and battens, 33 framed ribs, 24 feet span for tunnelling, with all the iron-work complete, 3,000 feet of galvanized iron tubes, a Parkinson's patent watermetre, blocks, and falls, wire screens, a quantity of felt, 7 tons of wrought iron, in straps, plates, and bolts; 100,000 new bricks, brick-making implements and plant, pug-mill, crushing and oil-bearing harrows, moulds, wheeling planks, iron plates and pumps trolly wheels and axles, a 6-in. wheel stone truck 13 feet long, 3 brick-carts, and 3 light carts, erection and fittings up of workmen's cottages, stables, workshops, sheds, &c. and a variety of useful materials, implements, and effects. May be viewed on Wednesday and morning of Sale; catalogues had on the Premises, at the Crown and Sceptre, Brixton-hill (opposite Palace-road), at Mr. Barnes's office, 15, Parliament-street, and of PULLEN and SON, 80, Fore-street, Cripplegate.

TO PLUMBERS, PAINTERS, GAS-FITTERS, &c.

TO BE LET, with immediate possession, an old-established BUSINESS in the above line, situated eight miles from London. There is a good house, with spacious workshops attached. The present proprietor retiring. Coming in, from 1,000l. to 1,200l. For cards, apply at 548, New Oxford-street.

TO SCULPTORS, STATUARIES, MARBLE MASONS, and OTHERS.—A good opportunity is offered to enter upon an old-established business, as the proprietor wishes to retire. Every information will be given. The business has been carried on successfully for forty-four years.—Apply to Mr. PHILLIPS, 2, Fore-street, Cripplegate.

N.B.—A large number of Marble Chimney-pieces, Tables, other work, and Stock, offered for Sale, below the trade prices. Also, either together or separately, a Stone-wharf, Stock, Shops, and Premises.

TO PLUMBERS, GLAZIERS, HYDRAULIC ENGINEERS, &c.—TO BE DISPOSED OF, in consequence of the death of the proprietor, a long-established and important town, a very first-rate BUSINESS in the above line. The trade is of the highest character; the premises are new, and admirably adapted; the stock and plant unexceptionable; and the incoming will be made as reasonable as possible. None but principals will be treated with. Apply, by letter only, to P. care of Mr. Peach, 8, Bridge street, Bath.

TO PLUMBERS, PAINTERS, and GLAZIERS.—TO BE DISPOSED OF, with immediate possession, a BUSINESS in the above branches, at the west-end of town, on reasonable terms, as the present occupier is leaving on account of ill-health.—can be proved.—Apply personally, or by letter, post-paid, of J. L. 27, Mount-street, Grosvenor-square

TO GAS-FITTERS and SMITHS.—GAS-FITTER, SMITH, and BELL-HANGER'S BUSINESS, TO BE DISPOSED OF, of long standing years, near Oxford-street. The Stock and Fixtures to be Sold for 35l.—For particulars inquire at 61, Castle-street East, Oxford-street.

TO ARCHITECTS, STONE MERCHANTS, BUILDERS, &c.—TO BE DISPOSED OF, by Private Contract, an old-established BUSINESS, with first-rate connection, near Bath, consequent upon the death of the proprietor.—For particulars, apply to W. NOCKELLS, Esq. 34, Jermyn-street, St. James's, London; or to B. PENNIGER, Esq. Chippingham, Wilts.

TO BE LET, WHARF PREMISES in Regent's-canal, in one of the greatest thoroughfares round London; with commanding frontage to the canal; they fitted for the corn trade, with granary-sheds, lofts, 4 horse stable, steam-engine, boiler, and shed erected, and ready for four barges

To Builders.—100 loads of Petershurgh Laths for sale, cash price 9s.

Apply to Mr. JOHN NEWTON, Norway Wharf, Hertford-road, Kingsland Basin.

TO OWNERS of FREEHOLD LAND in the Parish of Chelsea, in the County of Middlesex.—The VESTRY of the PARISH of CHELSEA, are desirous of obtaining, either by purchase, or at a rent charge, a PIECE of FREEHOLD LAND, within the said parish, suitable for the erection of a watering-place for the use of the inhabitants. TENDERS, accompanied in each case by a plan, drawn to a scale of 1-16th of an inch to a foot, stating the situation, dimensions, and terms, should be sent to me at my Office, on or before WEDNESDAY, the 7th day of MAY next. The Vestry do not bind themselves to accept any of the proposals.—By order,

CHARLES LAHEE, Vestry Clerk.

Offices, Manor House, King's-road, April 23rd, 1856

PREMISES WANTED in the CITY.—The Globe Marine Insurance Company, Limited, established 1807, 10, Lombard-street, and 1, Birchin-lane, require TEMPORARY PREMISES for a term of two or three years, for the purpose of conducting the general affairs of the Company, and depositing furniture, &c.—Descriptive particulars and terms may be forwarded in writing, to

April, 1856. R. B. TOWSE, Clerk to the Company.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, April 26, 1856.

The Builder.

A JOURNAL FOR THE

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ROYAL ACADEMY of ARTS, Trafalgar-square. The EXHIBITION of the ROYAL ACADEMY of ARTS will OPEN on MONDAY next, the 5th inst. at TWELVE o'clock. Admission, One Shilling; Catalogues, One Shilling. JOHN PRESCOTT KNIGHT, R.A. Secretary.

THE NEW SOCIETY of PAINTERS in WATER-COLOURS.—The TWENTY SECOND ANNUAL EXHIBITION is NOW OPEN at their Gallery, 51, Pall-mall (near St. James's-palace daily from Nine till dusk. Admission 1s.; Season-tickets, 5s. JAS. FAHEY, Secretary.

THE ARCHITECTURAL MUSEUM, CANON-ROW, WESTMINSTER.
A COURSE of SIX ELEMENTARY CLASS-LECTURES upon "HERALDRY AS APPLIED TO ARCHITECTURE," will be given at the Museum, commencing on the Evening of MONDAY, MAY 5th, and continued on the evening of each alternate Monday, by the Rev. CHARLES BOUTELL, M.A. To commence at Eight o'clock precisely.—Admission free.

COMPETITIONS.

NEW WORKHOUSE for the CITY and COUNTY of NORWICH.—To ARCHITECTS.—The Guardians of the Poor of the Norwich Corporation are desirous of being furnished with PLANS, ESTIMATES, and GENERAL SPECIFICATIONS for the ERECTION of a NEW WORKHOUSE for the City and County of Norwich, on a site near the north entrance to the new cemetery, to contain 1,200 inmates. A lithographed plan of the site, with sections, together with instructions to architects as to the wards, rooms and offices required, and all other particulars, may be had on written application to me on and after MONDAY, the 28th day of APRIL instant. The maximum sum proposed to be expended in the building is 20,000*l.* The plans, &c. are required to be sent by post, addressed to me, on or before TUESDAY, the 15th day of JULY next. Premiums will be given for the best and second best plans.
By order of the said corporation.
Norwich, April 17, 1856. E. C. BAILEY, Clerk.

TO ARCHITECTS AND BUILDERS.
THE SHAREHOLDERS of the BISHOPS STORTFORD PROPRIETARY SCHOOL having determined on the ERECTION of a RESIDENCE for one of their Masters, with suitable accommodation for Twenty-five Boarders (in a piece of land adjoining the present school premises), PLANS, ELEVATIONS, and other drawings for each house, with a specification and estimate, are hereby solicited, such estimate not to exceed 900*l.* The plans, drawings, and estimate are to be delivered on or before the 12th of MAY, addressed to the Honorary Secretary, Mr. J. B. MULLINGER, Bishops Stortford, of whom further particulars may be obtained. A premium of 5*l.* will be awarded to the author of the adopted plan.

CONTRACTS.

TO BUILDERS.

PERSONS desirous of submitting TENDERS for the ERECTION of the proposed FEMALE TRAINING-SCHOOL, Mount Pleasant, Liverpool, may obtain permission to see the plans and specification thereof, which will be open for their inspection from FRIDAY, the 2nd, till SATURDAY, the 10th of MAY, both inclusive, by applying at 98, Mount Pleasant, Liverpool; or at our Office, 4, Park-place, Clifton, Bristol. The Tenders to be sent in on or before THREE P.M. on MONDAY, the 12th MAY, addressed to Miss LESCHER, 98, Mount Pleasant, Liverpool, and endorsed, "Tender for Training-School." No pledge is given to accept the lowest or any other Tender. J. and C. HANSOM, Architects.
Clifton, April 29, 1856.

CONTRACTS.

TO CONTRACTORS, BUILDERS, AND OTHERS.
CLUN UNION.—Persons desirous to CONTRACT for MAKING IMPROVEMENTS in the DRAINAGE of the CLUN UNION WORKHOUSE PREMISES situate at Bishop's Castle, in conformity with the plans and specifications now lying in the CLERK'S office for inspection, are requested to send in Tenders, addressed to the Board of Guardians, at the Workhouse, in Bishop's Castle, on or before the 7th day of MAY next.—By order of the Board,
FREDERIC PARDOE, Clerk.
Bishop's Castle, March 14, 1856.

TO BUILDERS.—Sealed TENDERS, in one specific sum, will be received by the Director General of Contracts, Pall-mall, London, on or before the 16th day of MAY, 1856, at NOON, for the following SERVICES, at BULL POINT, near Devonport, viz.:
1. Building a Case Store, Barrel-Store, Breaking-up-House, Tanks, Privies, &c.
2. Lengthening the Siding of Railroad outside the Magazine Inclosure.
3. Building Cottages for Two Foremen and Five Labourers.
4. Building a store for Planks, Store for Flannel Cartridges, Foreman's Office, and Printing-press Room, &c.

Detailed specifications of the above four Services, with every requisite information, may be obtained at the Royal Engineer Office, Bull Point, daily (Sundays excepted), between the hours of TEN and FOUR o'clock, from the 28th of APRIL to the 14th of MAY, 1856, both days inclusive.
Royal Engineers' Office, Devonport, April 10, 1856.

TO BUILDERS AND OTHERS.
SEALED TENDERS for the following SERVICES at DEVONPORT, viz.—
1. Building Counterscarp at the New Bastion on the right of the Lines, Temporary Bridge, &c. &c.
2. Continuing the Escarp of the Lines from Stoke Entrance-gate to the right shoulder of the Flat Bastion;

For specific sums, will be received by the Director General of Contracts, Pall-mall, London, on or before the 5th of MAY, 1856. Detailed specifications of the above two Services, and every requisite information, may be obtained at the Royal Engineer Office Devonport, daily (Sundays excepted), between the hours of TEN and FOUR o'clock, from the 28th of APRIL to the 3rd of MAY, both days inclusive.
Royal Engineer Office, Devonport, 12th April, 1856.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director General of Contracts, War Department, Pall-mall, London, on or before TUESDAY, the 13th day of MAY next, from persons desirous of CONTRACTING with the War Department, for CONSTRUCTING a NEW SOLDIERS' PRIVY, and a CULVERT to the Soldiers' Barrack-road, near St. Mary's Barracks, Chatham. Plans and specifications of the works are to be seen and forms of Tender obtained, on application at the Royal Engineer Office, Chatham, between the hours of TEN and FOUR, till the 12th of MAY next, Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities jointly and separately to be bound under a penalty of 150*l.* for the due performance of the Contract. Tenders to be addressed to "The Director General of Contracts, War Department, Pall-mall, London," and to be delivered free, endorsed, "Tender for Works near Saint Mary's Barracks, Chatham." No Tender can be admitted after the said 13th day of MAY, 1856.
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Chatham, April 22, 1856.

ROYAL ENGINEER CONTRACT.—WAR DEPARTMENT.—The War Department being about to enter into CONTRACTS for the following Trades at Woolwich, Purfleet, and Shoeburyness, from the date of the acceptance of the Tenders, to the 31st MARCH, 1859, viz.:—
CARPENTERS.
BRICKLAYERS.
PLASTERERS.
PLUMBERS.
PAINTERS, GLAZIERS, and PAPER-HANGERS.
PAVIORS.
SLATERS.
SMITHS and IRONMONGERS.
MASONS.
UPHOLSTERERS.
GAS FITTERS.

Such persons as may wish to tender for the same may obtain schedules by applying to the Clerk of the Works, at the Royal Engineer Office, Grand Depôt, Woolwich, on or before the 23rd MAY, 1856, after which date no schedules will be issued. It must be understood that although each party tenders and specifies the per-centage on each trade separately, yet there will be only one Contract for each Station, embracing all the several trades.

TO BUILDERS AND CONTRACTORS.
NOTICE is hereby given, that TENDERS will be received by the Director General of Contracts, War Department, Pall Mall, London, on or before MONDAY, the 12th day of MAY next, from persons desirous of contracting with the War Department for RENEWING TWO DRAWBRIDGES at Chatham Lines. Plans and specifications of the work are to be seen, and forms of Tender obtained, on application at the Royal Engineer Office, Chatham, between the hours of TEN and FOUR, till the 10th of May next, Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible Securities, jointly and separately to be bound under a penalty of 300*l.* for the due performance of the contract. Tenders to be addressed to "The Director General of Contracts, War Department, Pall Mall, London," and to be delivered free, endorsed, "Tender for Works at Chatham Lines." No Tender can be admitted after the said 12th day of MAY, 1856. N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Chatham, 29th April, 1856.

CONTRACTS.

TO SCAVENGERS AND OTHERS.
THE COMMISSIONERS of SEWERS of the CITY of LONDON hereby give Notice, that they will meet in the Guildhall of the said City, on TUESDAY, the 20th day of MAY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for CLEANSING the STREETS and REMOVING DUST, &c. from the houses of this City, for the term of one year from Midsummer-day next, agreeably to the provisions of a specification, a copy of which may be had upon application at this Office. The Commissioners will also at the same time receive PROPOSALS for WATERING certain of the STREETS of the said City twice a day, agreeably to a specification to be seen at this Office. The City is divided, for the purposes of these contracts, into six divisions. Each contractor will be required to enter into bond, with two approved sureties, for the due performance of his contract. The Commissioners do not pledge themselves to accept the lowest Tender, nor any, unless deemed satisfactory. No Tender will be received after TWELVE o'clock on the day of treaty, nor will any Tender be read which does not contain an inclosure of a 20*l.* Bank of England note, as an earnest that the same is made bond fide, which sum will be immediately returned to each person whose Tender is not accepted; and will be returned in the other cases until the contract and bond are duly executed.
JOSEPH DAW, Principal Clerk.
Sewers Office, Guildhall, April 16, 1856.

MANCHESTER and SALFORD BATHS and LAUNDRIES COMPANY.—To MECHANICAL ENGINEERS, CONTRACTORS, &c.—The Directors hereby give notice, that they are prepared to receive TENDERS for the ENGINEERING WORKS connected with the SALFORD BATHS, including Pipes, Bath-valves, Wastes, Stop-taps, Water-closets, Urinals, &c. &c.—Plans and specifications of the same may be seen at the office of Mr. WORTHINGTON, Architect to the Company, 54, King-street, Manchester, on and after FRIDAY, MAY 2nd, and all Tenders to be delivered at his Office on or before FRIDAY, MAY 9th.—By order of the Directors,
HUGH FLEMING, Secretary.
5, York-chambers, April 24, 1856.

TO GENERAL CONTRACTORS.
MARSH CHAPEL and GRAINTHORPE INCLOSURE, LINCOLNSHIRE. The Valuer acting in the matter of the Inclosure of the Outmarsh and Fitty lands at Marsh Chapel and Grainthorpe, in the County of Lincoln, is desirous of receiving TENDERS for the Execution of the following Works; viz.:—
TO EXCAVATORS, CONTRACT No. I.
For the Construction of One Mile and 50 chains in length of New Sea Bank, and the Excavation of 60 chains in length of New Drains.
TO SLUICE BUILDERS, CONTRACT No. II.
For the Erection of a New Sea Sluice of Brick and Stone, with land and sea doors, 16 feet waterway, with all the necessary Piling, &c.
Plans and Specifications of the above Works may now be inspected by Contractors, &c. until the 30th day of MAY next, at Mr. LEWINS, the Witham Office, Boston, of whom all necessary information may be obtained. Separate Tenders for the above two Contracts are to be delivered to me at my residence, before TWELVE o'clock on MONDAY the 9th day of MAY next. SAMUEL VESSEY, Valuer.
Manor House, Halton, Spilsby, April 28th, 1856.
Ample Security will be required, and the Valuer will not be bound to accept the lowest Tenders submitted, but will have the option of accepting any offer for Contract not entirely separate and distinct from any offer for Contract No. 2, and does not mean Grainthorpe Haven is navigable for small craft at Spring tides, to within 12 yards of the new Sea Sluice and Bank.

CONTRACTS for GUERNSEY and other GRANITES, and for KENTISH RAG STONE. PARISH of ST. PANCRAS, in the County of Middlesex. DEPARTMENT of WORKS.—Notice is hereby given, that the Highways, Sewers, and Public Works Committee of the Vestry of the Parish of St. Pancras, in the county of Middlesex, will meet at the Office of the Department of Works, Pratt-street, Hampstead-road, on FRIDAY, the 9th day of MAY next, at half-past THREE o'clock in the afternoon, to receive TENDERS for CONTRACTS to SUPPLY the said Vestry with the following MATERIALS, viz., "Broken," "Ring Small," and in Lump, viz.:—Blue Guernsey, Granite, Crohy Granite, Markfield Granite, and Kentish Rag Stone, all of the best and hardest description; to be delivered alongside the Wharf adjoining to, and alongside of, the Regent's Canal, at Camden-town, near Ball-bury street Bridge. Sealed Tenders to be sent in, signed by the proposed Contractor, with the names and description of two good and sufficient sureties for the performance of his Contract, to the Office of the Department of Works, by or before TWELVE o'clock at noon, on the said FRIDAY, the 9th day of MAY next, and a sample of each description of stone to be deposited at the Office at the same time. The Vestry do not bind themselves to accept the lowest, or any Tender. No Tender will be received or accepted unless made out on one of the printed forms, which, with further particulars, can be obtained on application to the Chief Surveyor, at his Office, as under. By order,
G. W. F. COOK, Vestry Clerk.
Department of Works, Edward-street, Hampstead-road, April 28, 1856.

BOROUGH of STOCKPORT.—To CONTRACTORS and BRIDGE-BUILDERS.—The Council of the Borough of Stockport are desirous of obtaining TENDERS for the ERECTION of a STONE, or STONE and BRICK, BRIDGE, of three arches, over the river Mersey, between Heaton-lane and Chester-gate, in the Borough of Stockport, together with the approaches thereto. The plans, &c. may be inspected at the Offices of Messrs. CAWLEY and RADFORD, Civil Engineers, 64, John Dalton-street, Manchester, on and after MONDAY, the 5th day of MAY next; and sealed Tenders must be delivered at the Court-house, Stockport, addressed to the Chairman of the Municipal Tolls Committee, on or before MONDAY, the 19th MAY next. JOHN VAUGHAN, Town-clerk.
Court-house, Stockport, April 29, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

TO BUILDERS.—TENDERS are invited for the ERECTION of a CONCERT ROOM at the RISING SUN TAVERN, opposite the Barracks, Knightsbridge. The Plans and Specifications may be seen on the Premises; and after TUESDAY, 6th inst. The Proprietor does not bind himself to accept the lowest Tender.

MANAGER'S HOUSE and OFFICES, BLAENAVON WORKS.—To BUILDERS and CONTRACTORS.—Parties desirous of TENDERING for the ERECTION of a DWELLING-HOUSE and OFFICES for the Manager of the Blaenavon Company may inspect the Drawings and Specifications at the Offices of the Architect on and after WEDNESDAY, the 7th instant.—Tenders to be left or delivered before SIX p.m. on WEDNESDAY, the 21st instant.—The Directors of the Company do not bind themselves to accept the lowest Tender or any Tender.

R. G. THOMAS, Architect and Engineer.
Newport, Monmouthshire.

N.B. Quantities will be furnished.

NEW BAPTIST CHAPEL, NEWPORT.—To BUILDERS and CONTRACTORS.—Parties desirous of TENDERING for the ERECTION of a NEW CHAPEL for the Congregation of English Baptists at Newport, Monmouthshire, may inspect the Drawings and Specifications at the Offices of the undersigned, on and after THURSDAY, the 8th instant. Tenders to be delivered before SIX p.m. on THURSDAY, the 22nd instant. The Committee do not bind themselves to accept the lowest Tender.

R. G. THOMAS, Architect, Newport, Monmouthshire.

N.B. Quantities will be furnished.

BRAINTREE CEMETERY.—The Burial Board for the parish of Braintree, in the county of Essex, are prepared to receive TENDERS from persons willing to contract for the ERECTION of FENCES at their new Burial ground in Braintree:—

No. 1.—The front fence, to be a brick retaining wall, with wrought-iron palisading upon it.

No. 2.—The division fence, to be a continuous wrought-iron fence, with gates.

The whole to be completed by the 1st of JUNE next. Specifications, drawings, and forms of contract may be seen at my Office, or at the Office of JOHN JOHNSON, Esq. S, Whiting-street, Bury St. Edmunds. Sealed Tenders for either or both of the above works to be delivered to me at or before TWELVE o'clock at noon on the 7th day of MAY next. The contractor to find sufficient sureties if required. The Board do not bind themselves to accept the lowest or any Tender.—By order of the Board.

Braintree, April 30th, 1856. A. CUNNINGTON, Clerk.

TO BUILDERS AND CONTRACTORS.

LOUGHBOROUGH CEMETERY WORKS.—The Burial Board for the Parish of Loughborough, in the County of Leicester, are prepared to receive TENDERS for the several works (which will be divided into sections), required to be done in the ERECTION of two CHAPELS (connected with tower and spire), lodge and other buildings, &c. Also for the formation of roads, walks, flowering, and surface draining.—The plans and specifications may be seen at the Offices of the architects, Messrs. BELLAMY and HARDY, 36, Boosdgate, Lincoln, and after the 5th day of MAY next, until the 16th day of MAY inclusive; and the said drawings and specifications may be viewed on and after the 17th day of MAY, until the 27th day of MAY inclusive, at the Offices of Messrs. H. and W. H. TOONE, Solicitors, Loughborough, where sealed Tenders, are to be delivered addressed to the Chairman of the Board, not later than the 28th day of MAY, endorsed "Tender for Cemetery Works." The Board do not bind themselves to accept the lowest Tender.—By order,

W. H. TOONE, Clerk to the Burial Board.

Loughborough, April 28, 1856.

TO CONTRACTORS FOR SEWERS, BUILDERS, AND OTHERS.

THE VESTRY of the PARISH of ST MARTIN-IN-THE-FIELDS will meet on THURSDAY, the 8th of MAY next, to receive TENDERS for the SUPPLY of MATERIALS and the EXECUTION of such new and measured WORKS, required for the Sewers and Drains within this parish. Printed forms of Tenders, and schedules of prices upon which the Tenders must be based, and the conditions of contract, may be obtained of Mr BURSTALL, Surveyor to the Vestry, at his Office, No. 15, Castle-street, Leicester-square, on and after the 2nd of MAY, between the hours of TEN and FOUR, on payment of 5s to be returned to parties tendering, on the delivery of such Tender and Tender sealed Tenders must be delivered (sealed up) at the Vestry office, endorsed "Tender for Sewers Work," before FOUR o'clock p.m. on the day of meeting. The contractor will be required to execute a contract, and two responsible sureties to execute a bond with him, for the due performance thereof, to be prepared at his expense. The Vestry do not bind themselves to accept the lowest or any Tender.

J. DANGERFIELD, Vestry Clerk.

Vestry-house, St. Martin's-place, April, 1856.

TO PAINTERS AND OTHERS.

WORK required to be done at the Theatre Royal, Drury-lane: Painting, Whitewashing, Colouring, &c. A specification of the work required (prepared by Messrs. NELSON and INNES, Architects) can be seen on day on application to Mr. FREDERICKS, at the *Sunday Times* Office, 103, Fleet-street.

TO BUILDERS AND OTHERS.

NOTICE is hereby given, that Plans and Specifications for ENLARGING, REPAIRING, and otherwise altering the parish CHURCH of ST. JAMES, QUEDGELEY, in the county of Gloucester, and in the diocese of Gloucester, will be for inspection at the Diocesan Registry Office, Gloucester, on the 5th of MAY, and five following days; and all persons willing to CONTRACT for the same must send in sealed TENDERS, addressed to CURTIS HAYWARD, Esq. Quedgeley House, near Gloucester, on or before the 17th of MAY. The lowest Tender will not necessarily be so opted. The contractor will be expected, at his own expense, to enter into the usual legal bond, with two good and approved sureties.

TO BUILDERS.

SUCH Bricklayers, Masons, Plasterers, Carpenters and Joiners, Plumbers, Glaziers, Slaters, and Painters as are willing to TENDER for the ERECTION of a DWELLING-HOUSE on the Driffield Estate, the Wolds, York, may step at the drawings and specifications at our Offices from the 8th to the 15th inst. inclusive. Sealed Tenders are to be delivered to the undersigned, addressed to the Board at FIVE p.m. Security will be required for the due performance of the Works, and it is expected that tenderers will attend at the exact time. Under Schedules of Quantities may be obtained on application, and offers to Supply Bricks, &c. to the Contractor will be received by JOSEPH ROWNTREE and JOSEPH SPEAS.

J. B. and WM. ATKINSON, Architects.

16, Micklegate, York, 3rd May, 1856.

NORTH AYLESFORD UNION.—To BUILDERS.—The Guardians of the North Aylesford Union are desirous of receiving TENDERS for the ERECTION of a new INFIRMARY and other BUILDINGS, and for making roads and paths as may be required to be set out on the Union Workhouse Estate. All Tenders must be addressed, free of carriage, to the Union Workhouse aforesaid, and endorsed "Tender for Works at the North Aylesford Union Workhouse," at ELEVEN o'clock in the forenoon of THURSDAY, the 29th day of MAY next, at which time the Tenders will be opened, and parties on their behalf, must be in attendance. The plans and specifications may be inspected at the Union Rooms, and copies and particulars may be obtained from Mr. MARTIN BUILDER, Architect, Maidstone. The bills of quantities and form of Tender are to be obtained at the Union Rooms, and are to be delivered with each copy. The Guardians will not be bound to accept the lowest or any Tender, and security will not be required for the performance of the Works by the person whose Tender may be accepted by the Board.

J. S. BULLARD, Clerk to the Board of Guardians.

Star-hill, Rochester, 30th April, 1856.

CONTRACTS.

TO BUILDERS.

PERSONS willing to CONTRACT for the ERECTION of a new WING to the mansion of Sir Henry G. Cotterell, Bart., may see the drawings and specification on and after MONDAY the 5th inst. by applying to Mr. WILSON, as above, orders to be sent in on or before TUESDAY, MAY 20. The proprietor does not bind himself to accept the lowest or any Tender, for which any allowance is made for Estimates.

Garrons, near Hereford, May 1st, 1856.

GREAT WESTERN RAILWAY MAINTENANCE.—The Directors of the Great Western Railway Company will receive TENDERS for the MAINTENANCE of WAY, for a term of years, on the following portions of their lines, viz.:—

BRISTOL CONTRACT.—Extending from Reading to Bristol, and including the line from Didcot to Oxford, and the West and Somerset lines, from Chippenham to Frome, Warminster and Radstock, a total length of about 125 miles.

SWINDON CONTRACT.—Extending from Swindon to Tetbury-road, and from Kemble to Cirencester, a total length of about 18½ miles

WOLVERHAMPTON CONTRACT.—Extending from Birmingham to Priestfield Junction, a length of about 10 miles.

Specifications may be seen, and further information obtained, at the Company's Offices, Paddington, on and after MONDAY, the 5th MAY next. The Tenders must be addressed to the Directors, and delivered at the Secretary's Office, Paddington, before TWELVE o'clock, on WEDNESDAY, the 4th JUNE next.—April, 1856.

LONDON and NORTH-WESTERN RAILWAY.—To CONTRACTORS. The Directors of the London and North-Western Railway Company are prepared to receive TENDERS for the CONSTRUCTION of the BRANCH RAILWAY from Watford to St. Albans. Parties desirous of tendering may see the drawings, and obtain a statement of the quantities, at the Engineer's Office, on MONDAY, MAY 5, between the hours of TEN and FOUR o'clock. Sealed Tenders, addressed to the Secretary at this Office, to be sent in, on or before WEDNESDAY, MAY 14, at TEN o'clock a.m. The Directors do not bind themselves to accept the lowest Tender.—By order,

CHAS. D. NEWART, Secretary.

Secretary's Office, Euston Station, April 25, 1856.

WEST HARTLEPOOL MARKET.—EXTENSION of TIME.—Notice is hereby given, that the time within which Tenders for these works will be received is extended to MONDAY, the 5th MAY next, at noon.—By order,

W. W. BRUNTON, Clerk to the Commissioners.

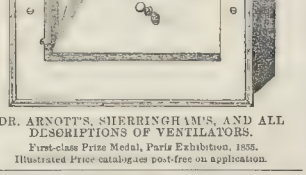
April 24, 1856.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND,

London.

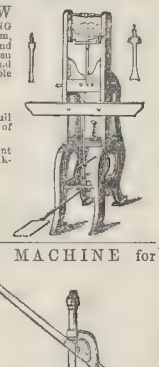


DR. ARNOTT'S, SHERRINGHAM'S, AND ALL DESCRIPTIONS OF VENTILATORS.

First-class Prize Medal, Paris Exhibition, 1855.

Illustrated Price catalogues post-free on application.

KIMBERLEY'S NEW PATENT MORTISING MACHINE occupies but little room, is most simple and durable, and complete within itself, with seven chisels and large gear drivers, and never a screw, is almost impossible of injury or derangement.



Thousands who use it bear witness to it

A Book sent by post, with full particulars, and a great number of testimonials.

See, also, Kimberley's Patent Flooring Cramps, Scaffolding Brackets, Door springs, &c. &c.

London Agents—

Messrs. PUGH & CO.

No. 13, King-street, Snow-hill, Wholesale Ironmongers;

or the Works, Birmingham.

NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.

House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co.'s Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 28, Wallingstreet, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate sets of work, by one machine; and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery constructed for

KITCHEN RANGES.—The IMPROVED PATENT LEAMINGTON KITCHINER, with large Hot-plate Hobs or Sink Ovens, &c.—For these Ranges, &c., apply to CHARLES S. LOWNDES, Manufacturer, Emscott Foundry, Leamington, or to Messrs. SLACK, Ironmongers, 308, Strand, London, where one may be seen in operation.

GAS COOKING-STOVES, for large or small establishments.—DEANE, DRAY, and CO. 1, Arthur-street East, London-bridge.

Testimonial respecting the Crystal Palace Kitchen, as fitted by DEANE, DRAY, and CO.

8, Ridgmount place, Hampstead, March 9th, 1855.

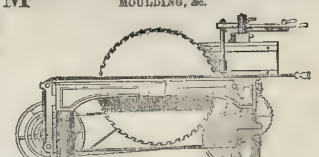
Gentlemen,—I have great pleasure in bearing testimony to the capabilities of your extraordinary Gas Cooking Apparatus, being the largest and most perfect yet in use. Suitable for hotels, mansions, clubhouses, private houses, and the army; having cooked in one day 1,000 fowls, and many cwts. of ham, beef, veal, mutton, lamb, tongue, &c.; roasting in one department a baron of beef weighing 350lbs. in nine hours, fifty-three minutes, presented by J. Banister, esq. Threadneedle-street, to the directors, for the banquet given to the foreign ministers. They have been in full operation for ten months, and are now in as perfect order as when first finished. They have not cost one shilling for repairs.

I am, Gentlemen, yours respectfully,

EDWARD HORNE.

Messrs. Deane, Dray, and Co.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines for home and foreign use.

FENDERS, STOVES, and FIRE-IRONS.—Buyers of the above are requested, before finally deciding to visit WILLIAM S. BURTON'S SHOW-ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, FIRE IRONS, and GENERAL IRONMONGERY as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with bronzed ornaments and two sets of bars, 2l. 15s. to 6l. 10s.; ditto, with ormolu ornaments and two sets of bars, 3l. 10s. to 12l. 12s.; bronzed fenders complete, with standards, from 7s. to 3l.; steel fenders, from 2l. 12s. to 6l.; ditto, with rich ormolu ornaments, from 2l. 12s. to 7l. 7s.; fire irons, from 1s. 9d. the set to 4l. 4s. Sylvester and all other patent stoves, with radiating hot plates. All which he is enabled to sell at these very reduced charges.

Firstly, From the frequency and extent of his purchases; and Secondly, From those purchases being made exclusively for cash.

GASELIERS in GLASS or METAL.—The increased and increasing use of gas in private houses has induced WILLIAM S. BURTON to collect from the various manufacturers in metal and glass all that is new and choice in BRACKETS, PENDANTS, and CHANDELIERS, adapted to offices, passages, and dwelling-rooms, as well as to have some designed expressly for him; these are ON SHOW over his SIXTEEN LARGE ROOMS, and present, for novelty, variety, and purity of taste, an unrivalled assortment. They are marked in plain figures, at prices proportionate with those which have tended to make his establishment the largest and most remarkable in the kingdom—19, Oxford-street; 1, 1a, 2, 3, Newman-street; 4, 5, and 6, Perry's-place.—Established 1820.

OLD STOVES and RANGES.—T. EDWARDS, SON, and CO. have constantly on hand a quantity of OLD STOVES and KITCHEN RANGES, in very good condition, which are taken down by them at establishments when they erect new work and which are to be sold at exceedingly low prices. 41, Poland-street, Oxford street.

TO RAILWAY CONTRACTORS and RAILWAY COMPANIES.—TWENTY quite new RAILWAY-WAGGONS, for permanent way, have never been in use, precisely as those of the Great Northern Railway Company, well suited for mineral purposes; 400 Contractors' Earth-Waggons, side and end pipe, with woodwork complete; 80 Sets Cast-iron Wheels and Wrought Axles, pedestals, tip gear, straps, bolts, &c. the ironwork complete for waggons.—Apply to MATTHEW T. SHAW, Contractor for every description of Railway Plant and Stores, 64, Cannon-street, City.

RAILS.—CONTRACTORS' FLAT BOTTOM.—MATTHEW T. SHAW has 170 TONS for SALE, 40 lbs. to the yard.—Contractor for Railway Plant and Stores of every description, 64, Cannon-street.

TO RAILWAY CONTRACTORS.—TEMPORARY SLEEPERS for SALE.—The advertiser can cut down a large number of Scotch Fir Temporary Sleepers, and deliver them upon a rail, upon receiving a remunerative offer from a contractor of respectability.—Address, A. B. Post-office, Cambridge

JOHN TANN'S new patent RELIANCE LOCK and FIRE-PROOF SAFES form the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. Wadsworth, Brothers, at their Warehouse, 20 WALBROOK, CITY; and at the Works, 1, Hope street, Hackney road, London. Iron Doors for strong rooms and party-walls.

THE LOCKS made under the Patents of Messrs. WILLIAM SIMSON, Banker, Edinburgh, and JAMES GIBBONS, Jun. Wolverhampton, contain:—1. Double set of Bits and Levers, which cross and hold each other. 2. A Block-cramp, grooved on both sides to fit wards. 3. A Detent, preventing the lift of the levers from being felt; the whole combination forming a perfect security against forcing and picking.—Manufactured by JAMES GIBBONS, Jun. Wolverhampton. Sold by MORETON and LANGLEY, London and Wolverhampton; and all Ironmongers.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails wrought and cut, Copper and Zinc, Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, 4 inch, 3s. 6d.; 5 inch, 4s. 6d.; 6 inch, 5s. 6d. each.

J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 300 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope street, Clare-market, London.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

ST. PANCRAS IRONWORKS,

OLD ST. PANCRAS-ROAD, OPPOSITE THE OLD CHURCH, LONDON.

TO ARCHITECTS, ENGINEERS, BUILDERS, AND CONTRACTORS.

HER MAJESTY'S
ROYAL LETTERS PATENT.

FOR IMPROVEMENTS IN THE CONSTRUCTION OF
CORRUGATED IRON BUILDINGS
AND ROOFS,
As erected for and approved of by Government.
FOR ENCLOSURES,
This Patent is as Strong, as Durable, and much Cheaper, than
BRICK WALLS,
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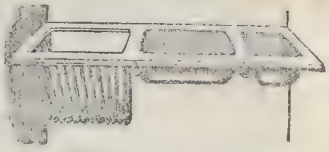
CASTINGS,
HEAVY AND LIGHT,
PLAIN AND ORNAMENTAL.

WROUGHT
IRON-WORK,
AND FORGINGS,
OF
EVERY DESCRIPTION.
SPECIMENS MAY BE SEEN AT THE WORKS.



ENAMELLED MANGERS,
From 17s. 6d.
Patentees of the latest Improvements in Manger and Rack, and Manger, Rack, and Water Trough, approved of by the
ROYAL VETERINARY COLLEGE
EVERY DESCRIPTION OF STABLE FURNITURE.

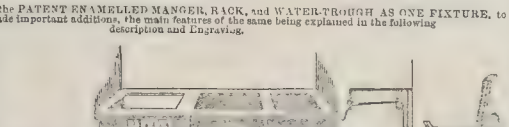
IRON ROOFING OF EVERY DESCRIPTION. CORRUGATED IRON, PLAIN OR GALVANIZED, AT PER CWT.
ESTIMATES BY POST, OR ON APPLICATION. PRICES EQUAL TO ALL COMPETITION.
☞ ADDRESS—THE MANAGER OF ST. PANCRAS IRON WORKS, OLD ST. PANCRAS-ROAD, LONDON.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.

COTTAM and HALLEN, of Winsley-street,

Are the original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, to which they have made important additions, the main features of the same being explained in the following description and Engraving.



A represents the Patent Halter-guide and Collar-rein, the ball of which is taken to the back of the manger-works with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable.

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety covers; Sanitary Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Preserving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

An extensive Assortment of Patterns for both Plain and Ornamental Castings, and every description of Wrought and Cast-iron Work for building and other purposes.

Agricultural and Horticultural Implements, Iron Gates, both plain and ornamental; Hurdles, Strain Fencing, &c.

The New Illustrated Catalogue for 1856 gratis on application. Estimates and Designs.

COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES
Beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No 16	1¼	7s. 0d.
15	1½	7s. 6d.
15	1¾	8s. 0d.
15	2	8s. 6d.
15	2½	9s. 6d.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 12 inches on both sides alternately, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming reversed claws, which are so bent, that a direct end grain of the iron is presented longitudinally, offering most powerful and effectual resistance, and which become, when built into the brick work, embedded in the structure, preventing the possibility of longitudinal escape, and a complete and permanent bonding together of the whole building is thereby obtained.

Patentee—FREDERICK TYERMAN, Architect, 44, Weymouth-street.

Sole Manufacturers—THOMAS PERRY and SONS, Government Contractors, Bilston.

London Depôt—EARL-STREET, BLACKFRIARS.

FLAVEL'S PRIZE KITCHENER.

The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

SOLE AGENTS:
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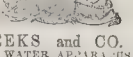
19, WIGMORE-STREET, LONDON;
and at the Crystal Palace, Sydenham.

ROYAL POLYTECHNIC GAS FIRE.—BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation.—To be seen in action at DEFRIES'S Office, 144, Regent-street, London.

ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence the IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the Kitchen and Fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and CO. (opening to the Monument), London-bridge. Established A.D. 1700.

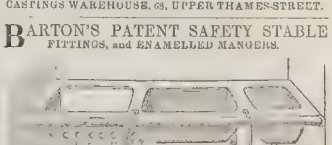
BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. (1856) sent on application. Estimates and Plans for fixing given. J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

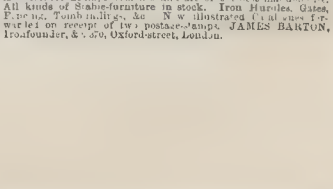
J. NAYLOR'S IRONMONGERY, NAIL, and METAL WAREHOUSE, 253, Oxford-street, near the Marble Arch, for Builders, Carpenters, Cabinet Makers, Locksmiths, and Bell Hangers, supplied at the lowest prices.

PATRONISED BY H. R. H. PRINCE ALBERT.



S. HOOD and CO.'S REGISTERED STABLE-FITTINGS, with FRONT REVOLVING ROLLER, plain or enamelled. GIRDERS (cast and wrought-iron), COLUMNS, Sash-Weights, Rain-Pipes, Eave-Gutters, Varnish in order, Ornamental Hat and Hook-plates, Coffin and other Furniture, and all Castings connected with Builders, Ironmongery, and Engineering. CASTINGS WAREHOUSE, 68, UPPER THAMES-STREET.

BARTON'S PATENT SAFETY STABLE FITTINGS, and ENAMELLED MANGERS.



THESE FITTINGS will be found to possess all the latest and most important improvements and are of the best manufacture. All kinds of Stable-furniture in stock. Iron Hurdles, Gates, Fencing, Tombstailings, &c. New illustrated Catalogues forwarded on receipt of two postage-stamps. JAMES BARTON, Ironfounder, &c., 370, Oxford-street, London.

DR. ARNOTT'S SMOKELESS GRATES,

For the manufacture of which D. and E. BAILEY obtained the SILVER MEDAL at the PARIS EXHIBITION. The above excellent invention has been carefully modelled and manufactured by D. and E. BAILEY, 272, Holborn, who having experienced great difficulty in keeping pace with the increased demand for the above Stoves, have now made such arrangements as will enable them to supply their customers with the Smokeless Grates, of ordinary dimensions, from their stock on hand, which consists of various designs in black, bright, and polished steel, richly decorated with ormolu ornaments.

The great advantages of these Stoves over all others are—

1st. The entire absence of smoke.
2nd. An immense saving in fuel.
3rd. A cheerful fire, with simple means for regulating the heat.
4th. Will burn night and day, requiring only to be supplied with fuel twice in twenty-four hours.

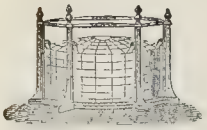
For invalids' bed-rooms, these stoves will be found invaluable.

Prices and Prospectuses may be obtained on application where the Smokeless Grates may be seen in daily use.

D. & E. BAILEY, IRONMONGERS,
272, HOLBORN, LONDON.

STEVENS AND SON,

ENGINEERS,
IRON AND BRASS FOUNDERS AND MANUFACTURERS;
CONTRACTORS
FOR THE
ERECTION OR ALTERATION OF GAS-WORKS FROM TWENTY LIGHTS UPWARDS,
With Buildings, Mains, Meters, Service-Pipes, Lamp-Posts, Lamps, and Gasfittings.
WATERWORKS FOR THE SUPPLY OF TOWNS,
WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.



Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds; these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c.
Gas Cooking Stoves and Ranges on the most improved principles.
GAS-FITTING IN ALL ITS BRANCHES.
GAS CHANDELIERS OF ALL SIZES, IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS.
DEVICES FOR GAS ILLUMINATION.
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And by the most eminent members of the Royal Agricultural Societies of England, Scotland, and Ireland; at whose great national shows it has been exhibited, and OBTAINED THE PRIZE, for being the best and cheapest article for roofing; also used for under slates at the Royal Agricultural Society's House, in Hanover-square. Its advantages are lightness, warmth, durability, and economy. It is impervious to rain, snow, and frost, and a non-conductor of heat and sound. The Felt can be cut to any length, by 32 inches wide. The price is only ONE PENNY PER SQUARE FOOT, (nails, &c.), with full directions as to its uses and the manner of applying it, with TESTIMONIALS, some of them of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 25 per cent. in fuel is effected. The TRADE are respectfully enjoined to send their orders DIRECT to the FACTORY, as the surest means of being supplied with the genuine article, and in lengths best suited to their roofs. They are likewise CAUTIONED AGAINST MISREPRESENTATION, as THEY ONLY WORKS in Great Britain where the above roofing is made are F. McNEILL and CO.'s Manufactories, LAMB'S-BUILDINGS, BUNHILL-ROW. Roofs covered with the Felt to be seen at the Factory, also the new Vice-Chancellor's Courts, the passages and offices leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

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HARROW-STREET, LANT-STREET, SOUTHWARK.
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PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
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GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
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GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.			
12	"	20	"
13	"	24	"
14	"	26	"

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Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where Iron not liable to rust is required.
Patent Galvanized Iron supplied in every form.
Sheets plain and corrugated.—Roofs fixed complete.
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Elliptic Stoves, double backs, 5½d. per inch, and upwards.
Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings—
3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3-feet Cottage Ranges, with ovens and back boilers, 33s. each.
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Best Town Glue, 8d. Ditto, Scotch, 6d. per cwt.
Best Pine Cut Clasp and Rose.

1½	1¾	2	2½	2¾	3-in. & larger.
16s. 6d.	16s. 6d.	18s. 6d.	18s. 6d.	13s.	14s. per cwt.

And every material required in the building, bell-hanging, upholstery, and brass-foundry trades on the most reasonable terms.
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ANDREW CLARK and COMPANY,
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THE BEAR GARDEN LEAD WORKS, SOUTHWARK.
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UNITING LEAD TO LEAD WITHOUT SOLDER.
Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.
PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

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GREAT REDUCTION IN PRICES.
RAIN WATER CASTINGS, per yard.

Sizes—3 in	3½ in	3 in.	3½ in.	4 in.	4½ in	5 in
Pipes	10½d.	1s. 1d.	1s. 3d.	1s 7d.	1s. 10d.	2s. 4d. 2s. 8d.
Half-round Gutters	7½d.	8d.	10d.	1s.	1s.	1s. 2d.
O G Gutters		1s. 0d	1s. 1d	1s. 2d.	1s. 4d	
Ditto, with plain clips cast on		1s. 1d.	1s. 3d.	1s. 4d.	1s. 6d.	
Ditto, with iron clips ditto		2s. 2d.	2s. 3d.	2s. 6d.	2s. 7d.	2s. 7d.

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Best Cut Clasp Nails.			
1½ in.	1¼ in.	¾ in.	3 to 6 inch.
10s 6d.	10s.	14s. 6d.	14s. per cwt.
Best Cut Floor Brads			12s. 6d. to 13s. 6d. per cwt.
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Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

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THE LARGEST STOCK AT
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Improved Self-acting Cottage Ranges, with Large Oven and Boiler

30	32	34	36-inch
28s.	30s.	32s.	34s.

Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—

34	36	38	42-inch
53s.	56s.	58s.	64s.

Strong Elliptic Stoves with Extra Back and Solid Bars, per in 2½d
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Improved New Pattern Circular Check Register, with strong Bars and Trivits, 8d. per inch.
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Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2	2½	3 inch.
	1d.	1s. 0d.	1s. 2d. per yard.
Cast Gutters—4 inch, 9d. per yard.			
O G Gutters	4		4½ inch.
	1s. 1d.		1s. 3d. per yard.

2	3	4	5
Patent Line	4d.	4½d.	6d. 8d. 10d. per knot.

6-inch Rd. Ward Mortice, with Best Furniture and Patent Spindles, 3s. each Light Elliptic and Register Metal, 1s. per cwt. Dr. Arnott's Ventilators, 3s. 6d. each.
Brick Moulds kept in stock. Any size made to order.
Best Cut Clasp and Rose Nails.

1½ in.	1¼ in.	2 in.	2½ in.	3 in.
10s. 6d.	10s. 6d.	13s. 6d.	15s.	14s. per cwt.

Best Sheet Cut Floor Brads 13s. per cwt.
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STEWART'S PATENT CAST-IRON GAS and WATER PIPES
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The Trade supplied.

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Monuments, vases, and statues, finely executed in Italy.
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"This stone when better known must come into extensive use; I should think it exceedingly suitable for the London market."—C. L. Dolman, Esq.
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By order,
G. GROVE, Secretary.

Crystal Palace, April 19, 1856.

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The Supplement will consist of from Twelve to Fifteen Parts, at 1s. uniform with the "Builder's Practical Director," each containing eight pages of letterpress and four plates of designs and working details, together with woodcuts, and will be published Fortnightly.

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THE FREEMASONS' MAGAZINE and MASONIC MIRROR for MAY, 1856, is now ready. Price 1s.

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The Builder.

VOL. XIV.—No. 691.

EARLY seven years ago we pointed out the great capabilities of the port of Poole, in Dorsetshire, referred to the enormous deposits of clay in the neighbourhood which supply both the Staffordshire and the London Potteries, and ventured to predict that in a short time Poole would be the site of many manufactories. "The harbour," we said, "is an extensive estuary of about sixty miles in circumference. The quays are large, with the advantage that vessels lie afloat at all times of the tide. The dues are nominal. The neighbourhood abounds in clay and stone, the former forming the chief ingredient used in the Staffordshire Potteries, and *supplying London with the entire* material used in the numerous potteries springing up in that locality;"—and further remarked,—"It certainly appears strange that efforts have not been sooner made to develop the resources of this country; and it can only be accounted for from the want of enterprise in the county of Dorset. It is said that Sir John Guest has lately become possessor of the greater part of the country near the port; and, if so, it may be prophesied that its resources will very soon be developed."

The *Poole Herald*, not long ago, showed, in a series of intelligent and interesting articles, how fully our prediction had been fulfilled. Few believed in the probability at the time; and, at this moment, there are *six* potteries established in the neighbourhood,—some unfinished, and two in full work! A spirit of enterprise was engendered, and the resources of Poole are about to be developed in earnest.

The Bourne Valley Pottery, although not the first place in the neighbourhood where drain-pipes were manufactured, is the first where the trade was successfully prosecuted to any extent. It was commenced on the 20th of March, 1853, and the first kiln of goods burnt in June following. The land owned by the proprietors, in extent, is about 6,000 acres, mostly covered with heath and fir-trees, and lies on the right of the road from Bourne to Poole. The first "hole" was opened in September, 1852, from which was taken 10,000 tons of various qualities of clay. The works are impelled by steam power, and the financial results are said to be very satisfactory.

At the entrance to the town by Hamworthy, the owners of the Poole "Architectural Pottery," to whom we shall return hereafter, have erected some excellent structures; and more recently still a large pile of building known as the "Kinson Clay Works" has been put up on the side of the hill about two miles from the town on the Ringwood road. This building is 100 feet long by 90 feet wide, two stories high, and is lighted by 100 windows. The shaft is nearly 70 feet high, and as the works stand on an elevated site they are observable several miles to the south-east by the traveller on the Southampton and Dorchester Railway. This establishment is surrounded by upwards of twenty acres of heath land, which contains a depth of 40 feet of fine clay. It is intended to use the top clay in the manufacture of sanitary-pipes and fire-bricks, and large quantities of the lower portion or best clay will be shipped for Staffordshire for the manufacture of the best porcelain ware. The clay is generally obtainable with but little difficulty. The top soil or rubble, which in some places is only 4 or 5 feet, is removed in railway-trucks, and conveyed off on a tram-way, and deposited at a distance to fill up a flat or bottom. The clay which is then found is admirably adapted for sanitary-pipes and fire-bricks; and this being removed, 25 or 30 feet of prime clay for the manufacture of the best ware are obtainable. An engine of twenty-horse power has been erected. The six kilns of which the building now consists will shortly be increased to twelve, and two additional wings are to be built.

The importance to the potteries of obtaining large supplies of coal cheap will doubtless lead to a development of the railway system,—that is, if the Poole people are wise.

The improvement of Branksea Island is greatly owing to Colonel Waugh, and there extensive potteries are nearly completed. The large pottery is 118 feet long by 70 feet wide: in building it upwards of 300,000 bricks were used, all of which were made on the island. The builder is Mr. Wheeler, of South Avon. The engine by Wentworth and Sons, Wandsworth, is of 14-horse power, and the shaft when completed will be nearly 70 feet high. This pottery is nearly half a mile from the water-side, where, for the convenience of vessels, a pier has been carried out some way into the sea, and for the greater facilities of transporting clay from the pits and the conveyance of coal from the vessels to the kilns, a tram-way has been laid down. About 200 yards from the large pottery is a smaller one about 50 feet long by 25 feet wide, with a large store or shed at either end. Here drain and sewer-pipes have already been burnt and shipped.

The clay on the island in some places is 70 feet deep, and the quality various—some of it fit for fire-bricks, tiles, and sewer-pipes, some for terra-cotta ornaments, and the finer sorts of ware. Such as can be profitably manufactured will pass into the potteries, and the better quality will be sent to the North.

The Architectural Pottery Company, already mentioned, have submitted to us specimens of their productions in the shape of glazed-coloured bricks and varied pavement tiles, produced at moderate cost. The principals in this company, it appears, manufactured some of the glazed bricks employed in Prince Albert's model cottages put up in Hyde-park, in 1851; and having, as they believe, improved and cheapened the processes, have now erected the manufactory we spoke of at Poole.

The ordinary colour is an agreeable buff; but they make French white, blue, green, marone, in short, any colour for ornamental purposes; and the glaze is flattened so as not to be offensive, while it serves to keep the walls dry, and is cleansed by a shower of rain. Taste being brought to bear on the combination of the colours, very agreeable results might be produced, and street architecture much improved. The company propose, too, to manufacture arch bricks and moulded bricks of various sorts for buildings of an ornamental character. They must take care to have proper artistical direction in what they do in this way. Willing to aid in the introduction of good new materials for taste to work upon, we throw out an intimation which has been conveyed to us, that if any architect of reputation be about to put up a building in a good part of the metropolis, and is willing to face it with these new bricks, the company, if the design meet their approval, will place bricks at his disposal for the purpose,—their object, of course, being publicity.

We made one safe prediction as to Poole, and were not deceived; and we will now venture on a second with less certain data before us? In those immense beds of clay which underlie the district sleeps, confined by potent spells, a valuable material, not affected by the atmosphere, so malleable and ductile that it may be converted into the finest wire and thinnest sheets,—peculiarly sonorous when struck, and of beautiful colour,—in short, the metal aluminium. When the secret by which to free this from its earthy bonds is made cheap and accessible, the Poole Bank of Deposit will be a good one to draw upon.

THE ART-UNION OF LONDON.

THE annual meeting of the Art-Union of London, for the reception of the council's report, and the distribution of the amount subscribed for the purchase of works of art, took place on Tuesday, the 29th of April, at the Haymarket Theatre, by the kind permission of Mr. Buckstone.

Lord Monteagle, the president, on taking the chair, referred to the comparative thinness of the house, in consequence of the proclamation of peace at the same moment, and said that the incident which kept them away was not so foreign to the question of the fine arts as might have been imagined, and those who were engaged in cheering the heralds of peace at Charing-cross were welcoming an event which was of the highest importance to the future progress of art in this country. His first duty would be to ask Mr. Godwin to read the report.

[Before this was done, however, the procession having passed, the theatre became full. The Lord Mayor, who is a member of the council, expressed his regret, in a note, that he was unable to attend, his presence being required at the proclamation.]

The Honorary Secretary then read the following

REPORT.

THE Council of the Art-Union of London beg leave to report that the subscription for the present year, slightly affected, but not to the extent anticipated, by the increased calls on the public consequent on the war, amounts to the sum of 13,960*l.* 16*s.* The Council could doubtless have increased this sum very considerably if they had thought themselves justified in offering to the local agents a larger commission than they now receive, and in expending more money on advertisements of various kinds, and schemes to obtain greater publicity; but they feel that they would not be adhering to those principles on which the society was established, if they added very materially to that proportionate amount of expenses which the annual account printed for every subscriber sets forth in detail, or imported into this institution the feelings and machinery of a keen trade competition.

The termination of the war, on terms honourable to the Allies, advantageous to the world, and calculated to give good assurance for the future, will be a subject for congratulation to all friends of the arts of peace and of social progress, and will enable our Legislature to turn their attention to the advancement of those arts, and to the education of the people. Prosecuted at an enormous cost of money and life, the war has, nevertheless, done service by inducing the exhibition of the noblest qualities which exalt human nature, and awakening the heart of the whole world to the genuine admiration of them.

The subscribers for the current year have received their impressions from the engraving after Landseer and Callcott's "Harvest in the Highlands," a fine print, worth double the amount of the subscription, irrespective of the chance of a prize.

Each subscriber for the ensuing year will receive two engravings,—"The Piper," engraved by Mr. E. Goodall, from the picture by Mr. Frederick Goodall, A.R.A. and "The Clemency of Cœur de Lion," engraved by Mr. Shenton, from the picture by Mr. Cross. The latter, it will be remembered, was one of the rewarded results of the competition organised by the Government in 1847, when they sought to evoke the talent of the country for the embellishment of the New Houses of Parliament, the great work of our colleague Sir Charles Barry. The adornment of the Houses of Parliament, is the first and only instance in our time of an endeavour of this kind on the part of the English Government to aid the higher branches of art, and we may hope that this edifice will become a school of great value. It ought not to remain a single instance, if it be desired to advance the artistic education of the masses, and give our artists the advantages possessed by those of foreign countries. Compare the course pursued in France in this respect. Look into the galleries of the Louvre: every ceiling is covered with the work of a French artist; for the new buildings hundreds of statues have been obtained from their

best sculptors. The Hôtel de Ville glitters with colours and gold throughout its mazy length of apartments; the walls of every church afford a field for the development of the talents of their rising artists, and for the reward of those whose fame is already established. In all the provinces of France the same course is pursued where opportunities occur, and a public collection of pictures in each town operates in the same way for the support and development of artists, while it quietly exerts its elevating influence on the populations, and plays its part in the great work of national education.

The establishment of public galleries in our provinces for the reception of works of modern art, purchased by the governing body of the town, or presented by individuals or the state, would have a great effect on the style of our painters, and materially influence them in the choice of subjects. We shall all agree that it is most desirable artists should be led to direct their attention to the higher purposes of art; that, not contenting themselves with striving simply to please, they should find it their part to impress, to teach, and to elevate,—to set forth important truths and awaken noble feelings.

The formation in the metropolis of a portrait gallery of historical and remarkable persons, as proposed on the motion of the Earl of Stanhope, will be regarded as an important step in a right direction.

As regards our own operations: for a future year a series of wood engravings, from the best works of deceased British artists, under the superintendence of Mr. W. J. Linton, is in the course of production, and promises to form a work of much beauty. The council have concluded an arrangement with the members of the Etching Club, including Messrs. Redgrave, Creswick, Horsley, Cope, Taylor, &c. for a volume of etchings, to be appropriated hereafter; and they have farther to announce, that some very important works have been put into the hands of engravers for ensuing years. Mr. Ward's engraving, "Tyndale translating the Bible," after Mr. A. Johnstone, is completed: impressions will be appropriated to-day.

Mr. Edward Wyon's statuette, "The Stepping-Stones," has been produced in porcelain statuary by Messrs. Copeland: and of this, too, examples will be allotted to-day.

The bronzes of "The Duke of Wellington entering Madrid," produced by Messrs. Elkington, are now in the course of delivery; and the ornamental vase has been executed in cast-iron by the Coalbrookdale Company: examples of both will be included in the present distribution, together with bronzes of "The Queen on Horseback."

The list of local honorary secretaries and agents has been increased, especially in distant parts, including Amsterdam, the Hague, Stutgard, Frankfort, and St. Helena.

From America a considerable number of subscribers has been received, mainly through the exertions of Mr. Dennett, who has sent 350 names from Boston alone. The council but give expression to the general feeling when they repeat an earnest hope that no misunderstanding may interfere with such relationships as these between the two countries.

The retiring members of council are the Rev. Mr. Coleridge, Mr. Macdonald, Sir Wm. Herries, and Mr. Sydney Smirke; and in their place Mr. W. G. Taunton, Mr. Fras. Bennoch, Mr. J. R. Soden, and Mr. Herbert Minton, have been elected.

The reserved fund now amounts to the sum of 6,958*l.*

The statement of receipts and expenditure is as follows:—

Amount subscribed	£13,960	16 0
Pictures and other prizes	£6,031	0 0
Cost of engraving	4,694	7 5
Printing and other expenses, with a reserve of 2½ per cent. required by charter	3,235	8 7
	£13,960	16 0

The accounts have been audited as usual by two members of the general body of subscribers, Mr. Atkinson and Mr. Hensman, to whom thanks are due, and three members of the finance committee.

The sum set apart for prizes, to be selected by the prizeholders themselves, will thus be allotted, viz.:—

27	works, at	£10 each.
30	,,	15 ,,
24	,,	20 ,,
30	,,	25 ,,
20	,,	35 ,,
10	,,	50 ,,
10	,,	60 ,,
4	,,	75 ,,
3	,,	100 ,,
1	,,	150 ,,
1	,,	200 ,,

To these are added:—

11 Bronzes of "Her Majesty on Horseback."
5 Bronzes in relief of "The Duke of Wellington entering Madrid."
30 Vases in iron.
20 Porcelain Statuettes, "The Stepping-Stones."
50 Porcelain Statuettes, "The Dancing Girl reposing."
34 Porcelain Busts of Clytie.
40 Silver Medals of Flaxman; and
30 Silver Medals of the late Sir Jno. Vanbrugh.
500 Impressions of the Lithograph, "The Supper Scene;" and
250 of the Mezzotint of "Tyndale translating the Bible."

Making in all 1,130 prizes.

The bronzes, porcelain statuettes, and medals, will be allotted to the first 220 names drawn consecutively at the close of the general distribution. The mezzotints and lithographs will be allotted to names standing one-hundredth in the list preceding and succeeding that of each of the first 375 prizeholders, determined as above stated; with a proviso that a prize has not fallen to that number to-day — in that case the prize will pass to the next succeeding name. Notice will be sent to those entitled to the bronzes, statuettes, medals, and prints in the course of two or three days. The other prizeholders will be informed of the result by to-night's post.

The prizeholders of last year purchased from the various exhibitions of the season 187 works of art, to the following amounts, irrespective of the sums added by the prizeholders themselves:—

From the Royal Academy	£1,975	0	0
The National Institution of Fine Arts	1,771	10	0
Society of British Artists	1,340	0	0
British Institution	430	0	0
Water-Colour Society	415	0	0
And New Water-Colour Society	388	10	0

These works were exhibited, with the kind permission of the Society of British artists, to large numbers of persons in the Suffolk-street Gallery. It has become unnecessary to say that although the collection was also open for a time to the public without charge or limitation, not the slightest impropriety or misadventure occurred. With reference to the selection of works of art by prizeholders in the present and future distributions, your council have to state that, listening to representations made to them from Scotland and Ireland, the Exhibitions of the Royal Scottish Academy and the Royal Hibernian Academy have been added to the list of those from which, under stated conditions, works may be taken by prizeholders.

The arrangement made last year that every member who shall have subscribed for ten consecutive years, and shall not have gained a prize of any kind in that period, shall be entitled to one of the porcelain busts of Clytie, appears to have given very general satisfaction, and will be continued in operation,—the result of which, of course, will be that every subscriber will obtain a prize, at any rate, once in ten years.

For the illustration of the present report, it is proposed to make trial of the capabilities of the new process termed photo-galvanography, the leading feature of which is the production from a photograph of an engraved surface suitable for printing from, by which means impressions may be obtained with rapidity and of one uniform colour. Every discovery by which beautiful works may be readily and cheaply produced and multiplied, deserves our attention.

The council would gladly avail themselves of the art of chromo-lithography, and distribute amongst the subscribers *fac-similes* of pictures in colours, but up to this time they have not found a specimen which has altogether met their views for that purpose.

During the past year numerous requests for the loan of the bronzes produced by the Art-Union were received from educational societies and mechanics' institutions in various parts of the country, and were acceded to whenever practicable.

The exhibition of our bronzes at the Paris Universal Exhibition, served to remove some erroneous impressions in respect of the position of this branch of art amongst us which existed there, and was rewarded with a medal by the jury. The manufacture of cabinet bronzes in England is still very limited, and employs but a small number of persons. Very admirable works, however, are produced; and it offers a wide field for the exercise of art-industry. In Paris, the manufacture of bronzes constitutes a very important branch of art-trade.

The Paris Universal Exhibition proved how much our manufacturers are impeded by the want of artistic skill on the part of our artisans, and afforded the strongest reasons, in a commercial point of view, for making a knowledge of art general. In our cabinet work, carpets, paper-hangings,—in whatever involved design, the indifference that has been shown to the cultivation of the English artisan made itself apparent. If the Manchester manufacturers were to tell us what they expend annually in France for designs, and we were to learn the statistics of the Paris trade in the branches we have already mentioned, to say nothing of ormolu, lamps, and jewellery, we should see that attention in this respect will pay even financially. It has been shown in a recent Report to the Committee of Privy Council for Trade, that the more elaborate technical processes of fine carving, incrusting in mosaic, marquetry, buhl, etched metal, engraved ivory, elaborate fret-cutting, and many other processes taxing art-labour, are now scarcely attempted in English cabinet-work. And as the reporter says: "When we consider how sadly unmindful we have been for the last three generations of national education, industrial and artistic, how can we wonder that such defects should make themselves apparent, when we publicly enter the lists with other countries, whose more parental governments have opened free schools for workmen, free public libraries, free museums, and other institutions open to artisans on days and at times when their habits and means enable them to avail themselves of the opportunities offered for self improvement?" No means should be neglected to educate the public eye, and it should be remembered, as we have often before urged, that every ugly carpet laid down, every ill-proportioned and unsightly building set up, aids in preventing the acquirement of a pure taste, and is an injury to the community at large. The Fine Art section of the Universal Exhibition served to show that art was not limited to any clime, and enabled the student to weigh the various merits and defects of the modern schools of painting.

The English school extorted admiration at all hands in many important particulars; its deficiencies where they exist, were seen to be mainly attributable to a circumstance already briefly alluded to,—the want of opportunity for the development of historical art on a large scale. From the trying ordeal to which it was subjected it came out unscathed.

In another quarter, and one particular branch of art, namely, architecture, it is a subject for congratulation, that in open competition with foreign artists at Hamburgh, and, more recently still, at Lille, our countrymen have been pronounced the victors.

The establishment of the Architectural Museum at Canon-row, Westminster, and the award of prizes there to art-workmen, should not pass unnoticed, as tending to the great end we have in view. The Museum of Art at Marlborough House, in connection with the Government "Department of Art and Science," is taking important dimensions, and will not fail to produce admirable results. Marlborough House has now become mainly a training-school for masters and mistresses, district schools being established in connection with it in various parts of the metropolis; and it will interest all who are anxious to open fresh fields for the worthy employment of females, to hear, that even in such branches as geometry and perspective, required in the prescribed course of examination equally for both sexes, the female teachers in training, take, as a general rule, higher marks than the male.

Some branches of art at present altogether neglected in this country, as, for example, cameo-cutting and mosaic work, seem specially adapted for the female hand and mind, and would, doubtless, be carried to considerable perfection if the public favour could be obtained for them.

In conclusion, and to return more immediately to ourselves, the beneficial effects of the Art-Union of London, and other kindred institutions, must not be estimated only by what they accomplish at present. Their influence on the future is still more important, and holds out higher encouragement to art and those who labour to advance it. The common mind at home and in our colonies, is becoming imbued with a love of art never before felt; the results of which will be more strikingly apparent in the next generation; when, not merely a few wealthy individuals or occasional associations, will be its patrons, but the gratification of a taste for refined art will be a necessity of the general body of the people. Thus a more elevated class of subjects, and more independence of mind in the treatment of these will characterize the artists of that day, when sure that their productions will be properly appreciated, and meet their due reward. For though we know that genius will ever struggle on, and even continue to utter the cry "*Excelsior*" when sinking, overwhelmed by the snows and chilling atmosphere of that higher region where he had hoped to bask in perpetual sunshine; this swelling of the already long list of the "inheritors of unfulfilled renown" is most likely to be averted by an enlarged and appreciative public. The power of the magician augments, as the circle in which he operates is widened;—for, as Goethe well remarks,—

> "In a contracted sphere a noble man
> Cannot develope all his mental powers.
> On him his country and the world must work."

You, and every one who now aids in advancing the great objects of these societies, thus confer a widely-spreading benefit, realizing the sentiment that

"Self-love and social is the same."

The Chairman, in moving the adoption of the Report, addressed the meeting at some length, and praised the council of the Art-Union, who through sunshine and in storm, through evil report and good report, had always disinterestedly performed their duty to the institution, and now presented a report with which the subscribers could not fail to be highly gratified. After some pertinent allusions to the completion of peace, and the good effect this must have on the progress of art throughout the world, the noble lord expressed his entire satisfaction in the progress of the Art-Union, which he considered had done more for the fine arts in a national point of view than kings, lords, and commons had collectively done.

Professor Hosking seconded the motion, with a few pithy observations, and it was carried unanimously.

Mr. Bennoch, F.S.A. moved, in a pleasant speech, and Mr. Hurlstone seconded, a vote of thanks to the council, and especially to the honorary secretaries, to which Mr. Lewis Pocock and Mr. Godwin replied, the latter remarking incidentally on the ill-treatment British sculptors had experienced at the Paris Exhibition, and expressing a hope that they were not about to receive a similar affront at the hands of their own Government!

The services of Mr. T. S. Watson, B.A. assistant secretary, were acknowledged. Warm thanks were voted to Mr. Buckstone, for affording the use of the theatre, and Miss Roney and Miss Eleanor Robarts having consented to draw the prizes, the distribution commenced, Capt. Shea and Mr. Erskine Cooper, acting as scrutineers. Lord Monteagle having left the chair, it was taken by William Herbert, esq. and thanks were voted to the president, and others who had assisted.

The following is a list of the principal prize-holders:—

200*l.*—Scott, James, Wath, Rotherham.

150*l.*—Keetly, R. Grimsby.

100*l.*—Bradshaw, J. jun. Leeds; Bontoft, J. Boston; Robinson, R. St. Helen's, Liverpool.

75*l.*—Ellison, R. Lincoln; Estcourt, —— Newport, I.W.; Fairhurst, E. Ormskirk; Hindley, C. 134, Oxford-street.

60*l.*—Baker, W. P. Plymouth; Bannister, S. S. Bloomfield; Benham, J. L. Wigmore-st.; Bolton, C. 9, Newington-place; Clark, Rev. J. C. Chertsey; Evans, G. F. Hobart Town; Hill, T. W. Oswestry; Monteith, Dr. New Zealand; Westley, F. C. Cheltenham; Wigglesworth, Mrs. Boston, U.S.

50*l.*—Abraham, S. 5, Lisle-street; Blanchett, G. King-William-street; Fell, Alfred, Nelson, New Zealand; Freer, Colonel, Leamington; Kane, J. Mohill; Murdock, D. Falkirk; Pearce, Rev. T. Morden; Pilcher, Miss J. Hythe; Rawlings, R. Whitchurch, Hants; Smith, T. L. 23, Doddington-grove.

38*l.*—Abbott, F. G. Southampton-buildings; Albro, D. Halifax, N.S.; Bristow, W. Greenwich; Childs, George, Winchmore-hill; Coe, Rev. C. C. Leicester; Curling, John, Palace-yard; Dutton, T. Streatham-common; Duncan, W. Liverpool; Ferguson, F. Glasgow; Green, W. Stafford; Gwynn, Burnham, Maldon; Hardwick, R. Briggate, Leeds; Heywood, Dr. Worcester, U.S.; Hoest, A. F. Copenhagen; Jeffrey, W. Charles-street, Hampstead-road; Mitcheson, W. Sunderland; Reckless, —Nottingham; Reeler, J. H. Cape Town; Street, G. E. Oxford; Watson, G. St. Mildred's-court.

25*l.*—Armstrong, Mrs. W. C. Dublin; Boddington, R. Ditchling; Bragington, G. Torrington; Campbell, W. Port Elizabeth; Charrington, N. Leytonstone; Clifton, W. Lynn; Dalton, T. M. Cardiff; Dolland, G. jun. St. Paul's-churchyard; Dumble, Mrs. B. Bath; Dunford, R. Oborn, Sherbourne; Dunsterville, Gl. Port Egmont; Fox, H. Wood-lane, Falmouth; Good, J. H. jun. Hatton-garden; Graves, Mrs. Henry, Pall-mall; Hart, J. B. Woodbridge; Hayes, W. Halesowen; Herring, T. J. Roxburgh, U.S.; Hoby, Geo. Mount-street; Hylyn, H. Old Broad-street; Lawley, S. Birmingham; Manger, John Guernsey; Naish, J. F. Midhurst; Richardson, — Shipston; Sands, Geo. Listowel; Shepbard, M. Upper Tulse-hill; Sybray, C. Matlock; Simpson, W. B. Barnsley; Taylor, C. Port Elizabeth; Warren, H. G. 35, Gloster-street; Wood, John, 22, Watling-street.

20*l.*—Baines, J. 17, Oxford-street; Bowen, D. Alfreton; Bradford, F. A. Boston, U.S.; Brompton, J. Stoke Newington; Carr, C. 34, Goodge-street; Clarke, L. Portland Bay; Coleridge, Rev. E. Eton; Curre, E. Chepstow; Cuthbertson, Rev. W. Westbromwich; Farren, W. H. Euston Station; Grant, Jas. Boston; Harriman, B. C. Melbourne; Hodges, Jas. 29, Wych-st.; Horrex, F. Swaffham; Marshall, R. Muswell-hill; Nicholson, W. Sunderland; Reveley, W. J. Newcastle; Roberts, D. Pontypridd; Sabine, W. 54, Old Broad-st.; Stevenson, John W. Boston; Stokes, Lieut. Grimsby; Sullivan, Miss, Hampstead; Vyse, H. Wood-street; West, Hon. Wm. Port Lewis.

15*l.*—Acland, Miss L. D. Kellerton; Andrew, John, Boston, U.S.; Armitage, W. Barnsley; Beaman, Mrs. Paddington; Belcher, Miss L. M. Liverpool; Biddulph, T. T. Shadwell; Bedell, C. Mark-lane; Bolton, Right Hon. Lord Bedale; De Pass, John, Adelaide; Firbank and Son, Gateshead; Gray, Mrs. R. Birkenhead; Hargreaves, G. Grimsby; Hester, S. 4, St. Aldates, Oxford; Hinds, G. M. Queen-street, Ramsgate; Jessell, ——, Savile-row; Lark, Mrs. 22, Dawson-place; Longman, C. King's Langley; M'Lintock, Loch Inch; Massey, John, Tipperary; Mayne, R. 34, Pembroke-square; Norris, G. P. Cornwall; Oliver, T. Childoakford; Paterson, J. Belfast; Russell, Miss M. W. Clifton; Salmon, J. West Hartlepool; Trevor, J. Whitefriars, Chester; Tritton, J. M. Nimar, E.I.; Walker, L. Stockport; Wheeman, R. Brentford; Wilks, T. West Smithfield.

10*l.*—Arnold, E. Melbourne; Bearn, J. Northampton; Binnie, A. 31, Old Bond-street; Birrell, W. Glasgow; Bryant, F. 32, Leadenhall-st.; Byerly, D.D. Boston, U.S.; Dewsbury, P. R. Tring; Fraser, Mrs. Isle of Skye; Halse, W. New Plymouth, N.Z.; Hanson, J. C. Adelaide; Harvey, A. E. Philadelphia; Hale, W. Brixton; Jackson, Miss, Chester; Kitson, James, Leeds; Lyon, T. Glasgow; Oakley, J. J. 13, Little Stanhope-street; Richardson, J. Thorne; Rickards, S. Shalimar; Rogers, T. A. 23, Endsleigh-street; Simons, F. Brixton; Sinclair, R. C. Edgbaston; Snowball, Mrs. Christchurch; Settinius, J. L. Cincinnati; Stewart, Mrs. Richmond; Syrett, H. Ramsgate; Waldron, T. 8, Henrietta-street; Westley, W. 24, Regent-street.

A Bronze Statuette of Her Majesty on Horseback.—Ball, H. M. Barton; Graves, Mrs. H. Pall-mall; M'Gregor, Mrs. Liverpool; Marsh, J. Dudley; Oxley, H. Leeds; Postlethwaite, T. Liverpool; Priestly, E. R. Paisley; Stevenson, R. J. Newmarket; Stubbs, Miss, Islington; Valentine, W. Albany-street; Whitchurch, M. Melton.

A Bronze of "The Duke of Wellington's Entry into Madrid."—Cuming, W. R. Jersey; Graves, A. Pall-mall; Joyner, Mrs. Faringdon; Mackintosh, A. Bridge-street, Lambeth; Morrison, W. S. *Daily News.*

A Porcelain Statuette "The Stepping-Stones."—Redborough, A. Southampton; Christie, A. Glasgow; Cross, R. Clifton; Cunliffe, Capt. E. Preston; Dawson, John, Ampthill-square; Furnell, James, Tulse-hill; Gritten, A. 9, King-street; Harriss, J. 16, Upper Gloucester-place; Hood, R. L. Hobart Town; Kenderson, A. Falkirk; Lewis, J. Hackney; McKenzie, E. Henley-on-Thames; Mister, J. Worcester; Noble, R. Halifax, N.S.; Patten, Miss W. Warrington; Passard, Rev. H. J. Shipton; Rushbrook, Capt. Bury St. Edmund's; Swallwell, G. C. Malton; Wyllie, D. Aberdeen; Younger, Mrs. J. St. John's-lane.

A Porcelain Statuette, "The Dancing Girl reposing."—Bangs, J. L. Boston, U.S.; Bollingbrook, H. Norwich; Brassey, Mrs. Lowndes-square; Carlisle, F. Graham's-town; Clapham, C. 2, Charlotte-street; Clarke, W. Leamington; Cole, W. Birkenhead; Elliott, Dr. Radford; Farrance, H. 64, Red Lion-street; Garrett, Mrs. T. Christchurch; Gould, Mrs. Birhthorpe; Graham, T. H. Taunton; Hall, N. Newgate-street; Harris, G. Commercial-road East; Haughton, Miss C. West Derby; Hayward, J. Exeter; Hill, A. Bristol; Hornby, G. G. Liverpool; Jameson, J. A. East Ellar; Kay, E. Bury; Kennedy, J. E. 5, Alexander-square; Lamb, Lieut. P. per Thacker; Lumsden, D. Denburn; Matthews, Hon. T. M. Nassau; Messenger, R. Gresham-street; Milward, G. Lechlade; Moore, H. Kirkby Lonsdale; Morris, John, Cardiff; Morris, Com. C. Washington; Nicholls, J. B. Parliament-street; Palmer, H. D. Yarmouth; Piggot, H. Chelmsford; Pratt, M. Lombard-street; Powell, J. B. Clifton; Rogers, J. B. Geelong; Robinson, Miss S. Broughton; S. N. per C. Bishop, Burton; Sharp, T. K. Torksey; Sladden, C. Herne Bay; Smith, George, Finsbury-square; Smith, T. Levenshulme; Sopwith, T. Newcastle-on-Tyne; Squire, W. H. Liverpool; Sullivan, F. D. Limerick; Swire, Geo. Brixton; Thomson, Miss, Adderbury; Wall, J. Bridgnorth; Walker, R. Bermondsey; Williams, G. Tooley-street; Wilson, E. 17, Hamilton-street.

A Porcelain Bust of "Clytie."—Allers, W. Old Norfolk-street; Bailey, W. jun. Portobello; Brace, H. Y. Whittington Club; Boddington, J. H. Edgbaston; Bradbeer, B. M. Lowestoft; Brutchell, H. Thomastown; Clark, R. P. Bunker-hill; Cooper, Mrs. Leek; Cooper, J. Kentish-town; Darling, J. Dunfermline; Dent, Mrs. Wolverhampton; Forrest, W. T. Greenhithe; Faith, Mrs. Tulse-hill; Hull, E. Cape-town; Hunt, S. Stockport; Inderwick, A. Michael's-grove; Milman, W. H. jun. Dalston; Muggeridge, J. Tottenham-court-road; Ormson, H. Chelsea; Page, H. King William-street; Pallister, W. H. Halifax, N.S.; Piggott, Mrs. H. Harwich, Bolton; Pugh, T. E. Theobald's-road; Richardson, J. Alnwick; Roberts, E. W. Old Kent-road; Rollinson, T. Ripon; Short, W. W. Chelsea; Smollett, Miss, Peckham; Stevens, N. Threadneedle-street; Thomas, B. W. Launceston; Tucker, H. Gresham-street; Walters, G. Liverpool; Welbourne, E. Launceston; Williams, J. Worcester.

A Vase Modelled from an Antique Design.—Allen, A. Oporto; Andrews, J. Tring; Barclay, J. Dundonald; Barraud, C. D. Wellington; Betts, G. W. Spalding; Bonney, C. Hobart-town; Bowering, S. Dacca; Bull, W. B. Newport Pagnell; Burness, Jas. Edinburgh; Brown, J. B. Windsor; Cumming, J. J. South Shields; Haggard, W. D. Brighton; Harnett, W. C. Great St. Helen's; Hughes, T. Reigate; Jupp, A. Old Brentford; Kilgour, A. Dunfermline; Macnaghton, J. Manchester; Menzies, Mrs. Edinburgh; Must, T. Portland Bay; Neeles, R. Cork; Northumberland, Duke of; Savill, R. Euston-station; Stanhope, Hon. R. Spring-gardens; Stegman, Rev. W. Capetown; Sullivan, J. jun. Malta; Taylor, W. Middlesborough; Welling, W. Euston-station; Welsby, W. Ormskirk; Yale, B. B. Boston, U.S.; Yeames, Miss, Gosport.

A Medal of Flaxman.—Arbuthnot, Mrs. J. Peterhead; Barrett, H. C. Nottingham; Brooke, W. H. Huddersfield; Browning, Rev. W. T. Banbury; Burton, W. T. Oxford-street; Carter, F. Manchester; Clifton, W. jun. Lynn; Coates, G. Edgware-road; Crompton, C. Leeds; Evans, G. jun. Hobart-town; Flashman, G. Dover; Gilson, R. Rotherham; Graves, Mrs. H. Pall-mall; Grainger, R. Glasgow; Hargreaves, T. Barnsley; Hepworth, Mrs. Knutsford; Hollingshed, H. B. Blackburn; Kirby, F. W. New Finchley-road; Kirk, J. L. Leeds; Knight, J. H. Scarborough; Knowles, J. Lancaster; Lee, F. R., R.A. Cockspur-street; Mackintosh, L. J. Lambeth; Malcolm, W. H. Belfast; Marsden, R. A. Bank of England; Pannett, P. S. Church Sutton; Penry, W. A. Halifax, U.S.; Perks, A. Burton-on-Trent; Piggot, H. Chelmsford; Smith, A. Cairns-cross; Sopwith, T. Newcastle; Southcott, G. Ottery; Ward, R. Leominster; W. H. T. 6, Tavistock-square; Webber, Mrs. W. Totness; Willich, C. M. Suffolk-street; Wyse, Mrs. C. J. Wicks, H. R. Chelsea; Yarker, Rev. J. Isleworth; Yarrow, E. W. Crosby-square.

A Medal of Sir John Vanbrugh.—Adams, H. L. Manchester; Adelaide, No. 14; Agnew, W. Manchester; Anderson, J. Glasgow; Best, Captain H. R. Brompton; Bolton, Islington; Buckland, Rev. J. R. Hobart-town; Cambridge, H.R.H. the Duchess of; Chester, F. Manchester; Cope, H. G. George-court; Corbett, F. Walworth; Derbyshire, S. Manchester; Davis, R. *Daily News*; Fellowes, Mrs. Eynsford; Graham, T. H. Taunton; Greenhill, E. jun. Great Knight Rider-street; Hind, W. N. Hartlepool; Jackson, A. T. Paris; James, W. Hobart-town; Jenner, Geo. Sevenoaks; Jones, W. Bankside; Metcalf, Mrs. Croukbe; Moon, E. Portland Bay; O'Brien, O. Dublin; Schofield, J. Grafton-place; Thomas, J. Halifax; Wade, C. Stowmarket; Walker, Mrs. W. Welchpool; Ward, R. A. Maidenhead; Wilkinson, M. Sheffield.

ON THE TRIUMPHAL ARCHES OF THE ROMANS.*

HAVING been invited by my colleagues, the honorary Secretaries, to bring before the attention of members this evening some topic connected with our art, I felt that, however unworthy to address this assembly on such an occasion, I could not resist the application.

On thinking over various subjects which presented themselves, it occurred to me that Triumphal Arches form a class of monument rarely receiving the attention it deserves, and that there is much to learn and consider as to their origin, destination, and appropriateness, when considered as works of art; and that perhaps the subject is not altogether inapt on the present occasion,† when a professional brother receives from the hands of your lordship, as the organ of the sovereign and his fellow labourers in art, the highest distinction that can crown a life of earnest and zealous cultivation of a pursuit which it is the object of this Institution to promote. He has this evening come to receive the honours of an ovation, of a triumph, the congratulations of his compeers, a brilliant and lasting testimonial, which must gild his future years. And although an arch of stone, of marble, or of bronze, be not erected, as they were of old, to record the bloody victories of the Roman warrior, yet he is enabled to say with the poet,—

"Exegi monumentum ære perennius."

Before we proceed to examine the varieties and decorations of the triumphal arches presented to observation in the illustrations, it will assist our full appreciation of their arrangement and embellishments, if we are acquainted with all the particulars of the processions which the arches were intended to embody and commemorate.

Triumphal processions were of very early origin; and although writers are not agreed as to the precise conqueror by whom they were instituted, yet most appear to consider that Romulus was the first, who thus celebrated his victory over King Acron, whom he slew, and whose armour he deposited in the Temple of Feretrian Jove in the Capitol, being the first to dedicate such trophies as "spolia opima." From his time to that of Vespasian and Titus there were no less than 130 triumphs, yet so jealous had the Romans been lest these ceremonies should be too easily decreed, that it was a law that no triumph should be allowed unless 5,000 of the enemy had been slain in one battle, and this was required to be verified on oath by the general.

The conqueror having written to demand of the senate a triumph for himself and army, the proposition was scrupulously examined, to ascertain if any objections existed to granting it, and none could receive the distinction unless he were dictator, consul, or prætor. And these triumphs might be of two kinds; the principal one, when the imperator passed in procession in a chariot through the city, or an ovation when he triumphed only on foot or on horseback, or with his troops proceeded to the Temple of Jupiter Latialis, on the Alban Mount, a few miles from Rome. In the meantime the general, with his cohorts, awaited the decision of the senate outside the Porta Capena, and in the plain under the Jamiculum hill, between the Vatican and the present Castle of S. Angelo. As soon as the permission was conceded, sacrifices were offered to Mars, Juno, and Jupiter, by himself if he had the dignity of the pontificate; if not, by the pontifex maximus. He then robed himself in his triumphal habit, assumed the laurel crown, and with the palm branch in his hand, distributed honours and rewards to his brave companions in arms. To some he gave collars or rings, to others consecrated spears, and money, and ornaments; to these

* Read by Professor Donaldson, Hon. Sec. Foreign Corresponding, at the Ordinary General Meeting of the Royal Institute of British Architects, March 31, 1856, already referred to, the Earl of Ellesmere, President, in the chair.

† The presentation of the Royal Medal to Mr. Tite, V.P. M.P.

golden crowns, to those silver ones. If any had first mounted the enemy's walls he had the mural crown. If he had seized a castle, the castellated one. If he had distinguished himself on board the vessels, a rostral crown; or had he performed any brilliant feat as a cavalry soldier, the equestrian crown. Each had his appropriate reward; and bucklers, cuirasses, helmets, shields, swords, or greaves, sumptuously carved by the most eminent artists, or most elaborately decorated, were profusely given, not only to individuals, but to cohorts and legions, as standards or portions of the spoils taken in the war. Nor were the people forgotten. To propitiate their good will, abundant largesses were distributed profusely right and left.

All the temples were thrown open, and the several porticoes, theatres, fora, and other public buildings, were hung with festoons and all sorts of ornaments. The houses and palaces on every side were decorated with hangings and tapestries, and every thing that could contribute to the splendour of the festival, which was that of the people, as much as of the general and his army, and a source of joy to every rank and grade.

The procession, passing through the triumphal gate, was met by the senate, and accompanied by that august body over the triumphal bridge along the triumphal way, past the Circus Agonalis, the Theatre of Pompey, the Circus Flaminius, the Portico of Octavia, the Theatre of Marcellus, the Circus Maximus, after which it fell into the Via Appia, under the arches into the Via Sacra, along which it proceeded through the Forum Romanum, and then ascended the Capitol to the Temple of Jupiter. This circuitous route was no doubt adopted in order to afford to all the opportunity of witnessing the magnificent cortege, and allow of a greater display of the objects which swelled the lengthened procession.

The conqueror rode in a chariot, which was round in the form of a castle, and in the earlier periods was drawn by white horses. Pompey, or Camillus, was the first to substitute elephants.* Eliogabalus introduced tigers and lions, to imitate the triumphs of Bacchus and Mars; and Aurelian was drawn by stags.

If the general had children, they sometimes were with him in his chariot; or, if he had several grown up, they accompanied him on horseback. Appius Claudius had his sister Claudia, the vestal virgin, with him when he triumphed.

The description given by Plutarch of the triumph of Paulus Æmilius is so graphic and minute, and illustrates so fully the actual circumstances of this pomp, that we shall now adopt his words in order to convey an adequate idea of the splendour of that festival, which exceeded any that had hitherto been given, and does not seem to have been surpassed in after-times. "The triumph is said to have been ordered after this manner. In every theatre, or, as they call it, circus (where equestrian games used to be held), in the forum, and other parts of the city, which were convenient for seeing the procession, the people erected scaffolds, and on the day of the triumph were all dressed in white. The temples were set open, adorned with garlands, and smoking with incense. Many lictors, and other officers, compelled the crowd to make way, and opened a clear passage. The triumph took up three days. On the first, which was scarcely sufficient for the show, were exhibited the images, paintings, and colossal statues, taken from the enemy, and now carried in 250 chariots. Next day, the richest and most beautiful of the Macedonian arms were brought up in a great number of waggons. These glittered with new furbished brass and polished steel, and though they were piled with art and judgment, yet seemed to be thrown together promiscuously; helmets being placed upon shields, breastplates upon greaves, Cretan targets, Thracian bucklers and quivers of arrows huddled among the horses' bits; with the points of naked swords and long pikes appearing through on every side. All these arms were tied together with just such a liberty, that room was left for them to clatter as they were drawn along; and the clank of them was so harsh and terrible, that they were not seen without dread, though among the spoils of the conquered. After the carriages, loaded with arms, walked 3,000 men, who carried the silver money in 750 vessels, each of which contained three talents, and was borne by four men. Others brought bowls, horns, goblets, and cups, all of silver, disposed in such order as would make the best show, and valuable not only for their size, but for the depth of the basso relievo. On the third day, early in the morning, first came up the trumpets, not with such airs as are used in a procession of solemn entry, but with such as the Romans sound when they animate their troops to the charge. These were followed by 120 fat oxen, with their horns gilded, and set off with ribbons and garlands. The young men, who led these victims, were girded with belts of curious workmanship; and after them came the boys, who carried the gold and silver vessels for the sacrifice. Next went the persons with the gold coin, in vessels which held three talents each, like those that contained the silver, and which were to the number of seventy-seven. Then followed those that bore the consecrated bowl of ten talents weight, which Æmilius had caused to be made of gold, and adorned with precious stones; and those that exposed to view the cups of Antigonus of Seleucus, and such as were of the make of the famed artist, Shericles, together with the gold plate that had been used at Perseus's table. Immediately after was to be seen the chariot of that prince, with his armour upon it, and his diadem upon that: at a little distance his children were led captive, attended by a great number of governors, masters, and preceptors, all in tears, who stretched out their hands by way of supplication to the spectators, and taught the children to do the same. There were two sons and one daughter, all so young that they were not much affected with the greatness of their misfortunes. This insensibility of theirs made the change of their condition more pitiable, insomuch that Perseus passed on almost without notice, so fixed were the eyes of the Romans upon the children from pity of their fate, that many of them shed tears, and none tasted the joy of the triumph without a mixture of pain, till they were gone by. Behind the children and their train walked Perseus himself, clad all in black, and wearing sandals of the fashion of his country. He had the appearance of a man that was overwhelmed with terror, and whose reason was almost staggered with the weight of his misfortunes. He was followed by a great number of friends and favourites, whose countenances were oppressed with sorrow, and who, by fixing their weeping eyes continually upon their prince, testified to the spectators that it was his lot which they lamented, and that they were regardless of their own. He had sent to Æmilius, to desire that he might be excused from being led in triumph, and being made a public spectacle. But Æmilius, despising his cowardice and attachment to life, by way of derision, it seems, sent by word, 'That it had been in his power to prevent it, and still was if he were so disposed,' hinting that he should prefer death to disgrace. But he had not the courage to strike the blow, and the vigour of his mind being destroyed by vain hopes, he became a part of his own spoils. Next were carried 400 coronets of gold, which the cities had sent to Æmilius, along with their embassies, as compliments on his victory. Then came the consul himself, riding in a magnificent chariot; a man, exclusive of the pomp of power, worthy to be seen and admired; but his good mien was now set off with a purple robe interwoven with gold, and he held a branch of laurel in his right hand. The whole army likewise carried boughs of laurel; and, divided into bands and companies, followed the general's chariot; some singing satirical songs usual on such occasions, and some chanting odes of victory, and the glorious exploits of Æmilius, who was revered and admired by all, and whom no good man could envy."—*Langhorne.*

It seems to be admitted that triumphal arches are of Roman origin; for we have no instances of such edifices in Greece before the Roman dominion. It may be presumed, that they may have first derived their form from the temporary erections, of a rustic character, which may have been constructed to greet the conquerors as they approached the capital; or possibly were merely a more ambitious development of the rude city gates which were probably decorated temporarily, and called "arcus subitanei" for the occasions when the army returned after a victory. Fabrizzi, in his *Roma*, enlarges upon the subject, and considers that probably the arch of Romulus was of brick. Even now some are of stone, as that of Gallienus at Rome; but of course the most important are of marble, as those of Septimius Severus, and Constantine. Some presented only one opening, with an attached column at each outer angle, as that at Susa and the one at Aosta. An example of a central archway flanked on each side by two columns is frequent, as in the arch of Titus at Rome, and in that at Pola in Istria: others had two openings of like size, which also served, like the Porta S. Maria Maggiore at Rome, as city gates, and this arrangement was peculiarly adapted for the purpose to prevent confusion in those entering or going from the city. Another class consisted of three archways, a central or larger one, and two smaller side ones, as in the arches of Septimius Severus and Constantine at Rome. That city was not the only one which had triumphal arches in the centre of the city; for at Palmyra and Antiocheia is one in the middle of the grand colonnade or avenue, which traverses the centre of these towns. Fourteen arches are enumerated by topographers as having been at Rome, from the description of historians and P. Victor. Of those which remain, the first erected to any emperor was that to Titus. They were, however, frequent wherever the Roman rule prevailed, for we find them in every province in Western Spain, along the coast of Africa to the south in Egypt, to the east in Syria, and northward in Gaul. They also formed important features in many public edifices, as in the Circi, each of which had two or three, and in the fora also as at Pompeii. The via triumphalis and via sacra at Rome had a succession of them.

The Romans seem to have used the utmost license in regard to the decorations of these monuments, which, as being objects of show rather than of use, might admit of some caprice, and not be bound down to the severe canons of the art. It would appear that the composite order owed its origin to them, as affording greater opportunity for the accumulation of enrichment; but, although it is considered to be of a more elaborate and elegant character than the Corinthian, yet in truth it departs from the grace of the latter, and is heavier instead of being lighter in its proportions. The capital is obviously so, when we consider the heavy volutes of the Ionic being substituted for the caulicoli of the Corinthian. The pedestal under the columns is a peculiar feature of the triumphal arch, as also the attic above the entablature, which gives increased altitude to the mass, and tends to upraise the glorious groups of sculptures, which surmounted the whole as a crowning galaxy of splendour. Nor did the ancients consider themselves confined to any one order, for we find at Arsinoe in Egypt the Doric. This presents a tetrastyle frontispiece surmounted by a pediment, and having in front of the pilasters on each side superposed Corinthian columns and entablature of less size. In others the Corinthian or composite is indifferently adopted; but the most remarkable license occurs in the arch at Aosta, which has columns of the Corinthian order surmounted by a Doric entablature, a contrast which recals the trite remark of Horace as being applicable to architects, "quidlibet audendi."

The sculptures which adorn them are remarkable and valuable, as they hand down to us many of the incidents of the wars, which they were intended to commemorate; or circumstances in the life of the Emperor, whose memory they were proposed to honour. The arch of Titus bears even now the full-sized representation of the seven-branched candlestick and other trophies of the Jewish war. It also gives the apotheosis of the Emperor upborne to heaven on an eagle's wings. The sculptures, which crown the attic, must have been most profuse and sumptuous, consisting of the conqueror borne in his triumphal chariot, attended

* A medal of Domitian shows a triumphal arch surmounted by two chariots, back to back each drawn by four elephants, and each containing the emperor. Alluded to in the 63nd Ep. of Martial.

"Hic gemini currus nunc erant elephanta frequentem."

by Victories, and his family on horseback, flanked by trophies and warriors, forming together a numerous retinue of attendants. These probably were most frequently of bronze, possibly gilt; and the whole surface presented an elaborate profusion of sculptured embellishments. The soffits of the arches were richly coffered: the panels were filled with continuous scrolls; the friezes with processions: the spandrils to the central arch were enriched with figures of Fame proclaiming the glories of the conqueror, and the very keystones themselves were emblematically carved with winged victories.

But it appears that they were also of marble; for Pliny, I. 36, c. 5, mentions the triumphal arch erected by Augustus to Octavius, surmounted by a chariot with four horses, on which the figures of Apollo and Diana were seated, all carved by Lysias out of one block of marble, and highly praised for its excellence and great artistic merit. In fact, a triumphal arch without these full groups of figures would have been considered deficient in its chief purpose and decoration. The arch of Nero (on a coin) with its pendant festoon shows how these monuments were decorated on festive occasions.

It is remarkable that Vitruvius never alludes to triumphal arches. We may thence infer that few existed at his time, and these were not considered a special class of edifices, and had not the peculiar characteristics, particularly of the composite order, by which they were subsequently distinguished.*

THE CONDITION OF DUBLIN.

SINCE the commencement of this century, when the Irish Parliament was transferred to London, very few public buildings have been added to those which grace this metropolis; and *none* have been since erected by the nobility, whose civic palaces, inferior not even to those of London, have been nearly all sold, or appropriated to public or to commercial uses.

As in other cities and towns, railroads here have occasioned the construction of various stations at the termini; the Drogheda, the Kingstown, the Dundrum, the Great Western, and the South Western; all of which have commodious and appropriate offices; but the last, situate at King's-bridge, near Phœnix-park, and Kilmainham, presents an elevation of more than ordinary taste and pretensions.

It would appear that these vast arteries of traffic, contrary to the effect observable in London, have drawn away from the metropolis the stream of life, and spread it over the general system.

Little else has been added to the remarkable edifices, if we except some Roman Catholic churches: of these several have been raised within the period specified. The Cathedral, still incomplete as to the exterior, in Marlborough-street; the church of St. Andeon, in High-street; the Jesuits' church, in Gardiner-street—a magnificent building; the church of Rathmines, a vast pile, finished internally; St. Andeon's church, Westland-row—a fine structure; St. Paul's, Arran-quay—a classic example, in granite; the church of St. Francis, Merchants'-quay; and that of St. Lawrence O'Toole, near the Custom House;—to these may be added, a most tasteful and massive Presbyterian church, on Ormond-quay, near Essex-bridge; the front elevation (in the line of houses) presenting a pleasing portico and lofty columns in granite.

A strange difference of taste is observable in all the new places of worship of this country,—that so few are designed in that order of architecture so appropriate to the sacred temple,—the Gothic: those of the olden time,—Christchurch, and the colossal St. Patrick's were altered, or rather thrown open and improved,—want unity as to the new portions, which are of a plain, and rather *embattled* character;—the interior of St Patrick's, which is really a stupendous evidence of the Gothic, being in a state of palpable decline; the stone pillars, being in some instances *out of the perpendicular;* and the whole of it, columns, capitals, and all, incrusted with manyfold coats of exfoliating whitewash!

The powerful and sweet-pealing organ, taken from the Spanish Armada—*the incomparable choir*—the lofty aisle long drawn out, and graced on either hand with four ranges of three-tiered windows, most elaborately finished, after the fashion of monastic times; the Friars' walks (with the aforesaid crooked miniature columns), the halo of remote antiquity with which the whole pile is invested, make this church, when lighted up, a place most suitable for solemnity and deep meditation, and inspire the visitant with regret that our ancestors having done so much, our Dean and Chapter do so little.

As to the palaces of the traditional nobility, these are for the most part occupied for public uses or mercantile pursuits. One of them, Lord Powerscourt's town mansion, was several years back bought by a prosperous Scotch house (Messrs. Ferrier, Pollock, and Co. wholesale haberdashers). This building, nothing inferior to Burlington House, now presents an accumulation of merchandise surpassed by no London house, and is certainly larger and more commodious than any house in the great metropolis of trade. The front is majestic, and built of granite; and a large court-yard occupies the centre, which is accessible on three sides. Its warerooms, extending the whole length of every side, consist of four ranges, exceeding 100 feet in length, repeated on the first-floor, with a basement used as stores, and packing repositories, which employ sixty hands.

Great as is the foregoing wholesale establishment, there are in Dublin five other houses of business, as much larger as this surpasses the London establishments of a similar nature.

The magnitude of the buildings, the numerous hands therein employed, the endless variety of business carried on,—such as silks, cottons, broad cloths, hosiery, haberdashery, shoemaking, tailoring, hat trade, watch and clocks, furniture, jewellery, &c. strike the beholder with wonder at the enterprise which called such emporiums into being; but far more, at the skill and management requisite to keep the whole in action, so as to make the adventure remunerative.

Londoners, who have seen Shoolbred's, or Cook's, or Leaf's, would stand amazed at the gigantic Irish bazaars. The array is dazzling, and the intercourse after noontide like a fair; but little is known across Channel of such marvellous magazines. It is not usual to ascribe to the Irish character, aptitude for business, on such a scale; nor indeed is the genius of the nation considered commercial to any extent. This is an error, for any existing opportunities are never suffered to lie dormant or untried. But Ireland is not a manufacturing country: those elements which exist there are made available,—as in the instance of shoes, very large quantities of which are annually sent off to supply the London and other markets, and more particularly of ladies' wear. A brief description of five leviathan houses of trade may suffice to prove that if the Irish were ever unsuited to business, that character is wholly changed.

1st. Messrs. Todd, Burns, and Co. in Mary-street, not a quarter of a mile from the General Post-office. This monster pile covers an area of 117 feet frontage by 169 feet in depth, having an elaborate frontage on two sides. It consists of two immense ranges of open floors (the entrance and first floors), the basement being also used as storage and packing warehouses. There are 280 hands employed, all of whom diet in the house, and over 200 have sleeping apartments. This is chiefly a retail establishment.

2nd. Messrs. Cannock, White, and Co. in Henry-street, near the Post-office, an edifice also of considerable architectural pretensions, occupying an area of 210 feet by 130 feet, consisting, like the foregoing, of five stories, and carried up to a height of 70 feet: the first and entrance floors being thrown into four aisles, are arranged in nearly a similar manner: 280 hands are dieted and lodged here, the accommodations being scrupulously regarded,—lighting, ventilation, and the accessories of comfort carried out, even to the establishment of a library and reading-room, and the cares of the house extending to the appointment of a physician, with a sanitarium for such as are incapacitated by temporary illness. Each *employé* pays 10s. a-year to the library, and the firm adds an equal amount to its consolidation.

3rd. Messrs. McBirney, Colles, and Co. on Aston's-quay, near Carlisle-bridge, about 400 yards from the Post-office,—an enormous building, 100 feet frontage by 93 feet deep, employing 180 hands, most of them, as before, lodged on the premises: to describe the details of this house would be to repeat what was said of the preceding,—only that it was the first established of all the great retail establishments.

4th. Messrs. M'Swiney, Delaney, and Co. Lower Sackville-street, opposite the Post-office. This is, indeed, a magnificent erection in granite. It was designed and planned by Mr. Wm. Caldbeck, of Harcourt-street, and does credit to his taste and skill. The interior is truly gorgeous, in the most refined and elaborate arrangement and finish. Suited to the objects of a temple, it would be requisite to give a photographic picture of the interior to convey any idea of the richness and beauty of the achievement: like the foregoing colossal establishments, every variety of manufacture shines throughout the whole *enceinte*, which is the more imposing, as the entire interior is exhibited at one *coup d'œil*. At first a grand vestibule reveals a sweeping colonnade surmounted by galleries. An opening through the centre discloses an extended aisle ranging between other galleries, the space covered being 180 feet in depth by 93 feet frontage, and the height being carried to 80 feet!

This bazaar employs 200 hands, of whom 180 are lodged and dieted on the premises. The business is chiefly retail, save in shoes, wherein a large trade is carried on with England—that manufacture, under the encouragement of the proprietors, being wholly Irish.

Then, lastly, comes a firm of even greater magnitude, as being principally a wholesale house, the Messrs. Pim, Brothers, of George-street, occupying the whole site of the old barrack for a regiment, with rear towards the Castle. This, the concluding wonder of modern commerce, seems to be conducted with a quietude and freedom from bustle that, considering its dimensions and importance, is a marvel of admiration. 225 hands are employed herein, the great majority dwelling in the house.

With these evidences of indomitable energy before us, who can say that the Irish are not a business people? In comparison with these, the largest houses of London are but miniatures; yet when we regard the amount of trade monopolised by so few men of talent and skill, and cast a glance over the bye-streets of Dublin; when we see whole ranges, once prosperous in the various lines of shopkeeping, now reduced to lodging-houses for the working classes, it naturally occurs to the mind that so great a concentration of capital cannot be wholesome for the many.

The system pursued, of selling at a fixed price, and the great facility afforded to the simplest child, or most inexpert adult, of purchasing every article at a moderate rate,—these may bring to the inhabitants of the provinces advantages not to be disregarded. Do these advantages compensate for the extinction or limita-

* Consult also Bergier, Histoire des Grands Chemins d l'Empire Romain, 4t . Paris, 1622—Piranesi sopra gli Archi Sparsi in Italia -Panvinius (O Amplissimi Cras-sioni Trionfi, etc Antw—Rossini Gli Archi Trionfali, onorarii e funebri degli an tichi Romani, &c. fol. Roma, 1836.

TRIUMPHAL ARCHES.

In Rome.

Arcus Claudii Drusi,		Arcus	Neron's in Capitolino Monte,
,,	Constantini,	,,	Octavii,
,,	Dolabellæ et Silani,	,,	De' Pantani,
,,	Domitiani,	,,	S. Laurentii,
,,	Fabiani et Allobrox in sacrâ Viâ,	,,	S. Sebastiani aut Porta Capena,
,,	Gallieni (Lapideus),	,,	Septimii Severi.
,,	Gordiani,	,,	in Foro Boario,
,,	Gratiani, Valentiniani, et Theodosii,	,,	Tiberii,
,,	Jani Quadrifrontis,	,,	Titi.
,,	Marci Aurelii et Lucii Veri (in Corso),		

In Italy.

Ancona,	Benevento,	Spes,
Aosta,	Rimini,	Verona (2).

In the Provinces.

Pola in Istria	Antiochein,	Antinoe, Egypt,
Athens (?)	Palmyra,	Africa (various).

In France.

Arles,	Cavaillon,	Postumi,
Autun,	S. Chamas (Pons),	S Remy,
Carpentras,	Orange (Charii),	Reims.

N.B.—Where the proper ascriptions of the arches have been recognized, the original name is given, but in other cases the usual modern name is preserved to insure the identity.

tion of general trade? That is a question which time only can solve: if it is beneficial, the system will survive; if not, and that the appropriation be an evil, it will work its own cure.

In a city so well constructed, a vicinage so lovely, a climate so genial, endowed with a good port and harbours, and above all, with a population so intellectual, it is difficult to account for the progressive decline of much that was but recently independent and respectable. Streets, lanes, and squares—whole quarters or districts, have fallen off, and become either tenantless, or occupied by a pauper immigration. The leading streets (and they are few) do certainly keep up their pristine respectability: they are even improved; but the back settlements are *withered*; they are truly consigned to the departed emigrant, or to the evicted cottager, now a participator in contributions wrung from struggling industry.

Decaying at heart, Dublin is extending in the limbs: no symptom of waste or decay is observable in the main thoroughfares; none in the approaches, six miles off. At Kingstown, all that is luxurious is displayed by the purveyors to the human appetite; all that is fascinating to the taste; so in the main conduits, the shops discover a richness, a fulness, a display of elegance, that might argue redundancy of wealth and circumstance, amongst the felicitous dwellers in a land of picture and plenty. How fallacious would be the inference! The city is declining—its commerce is gone.

A region commanding advantages of position hardly to be equally by any other country—landscape of the most pleasing aspect, undulating plains, ever-green hills, backed by purple mountains, and the oft-recurring seas—that such a land should be *chosen*; that it should be as it is, studded with villas, ranging widely throughout the expanse of the country, is but a natural consequence; but that a city so placed should dwindle from year to year, this is hard to explain, and must remain a paradox, until the *march of peace* may explicate the problem.

Strange though it may appear, yet it is fact, that the vicinage of Dublin is more densely studded with villas, yes, and with more important country-seats, than is even the county of Middlesex. Most of the suburban districts, at two, three, and four miles, are planted on every 10 acres, with respectable and even imposing rural mansions. This species of settlement has steadily advanced, year by year, until a circuit, represented by a diameter of 15 miles, has been parcelled out, planted, and improved to the highest degree.

There is a fault, and one obvious to the eye of any foreign visitant: it forces itself upon the pedestrian, or those borne on by the popular vehicle the "*low-backed* car;" but it is painful, more particularly in a scope of country affording views of transcendental beauty: it is the horrid custom of encircling every charming retiro with a massive wall of native granite, with a wall often 10 feet high; and though here prolific nature may clothe the wall with ivy, still it bars the view.

Surely the placid state of the country, the improved social condition of Ireland, the universal peace of the world, the advance of intelligence, ought to guarantee security to the retired gentry and squirearchy of renovated Ireland!

Still all the suburbs, really the most beautiful of this charming county, are disfigured by those senseless boundaries and inclosures, despoiling those within, depriving those without, of the enchantment which nature has so lavishly expended upon the adornment of Erin.

Would that stone walls were condemned by an edict of Parliament; and that the *neat rustic* and unobtrusive wooden paling were substituted for the revolting bastions that mar and embitter the wanderer's excursion around Dublin. Send the stone to build a pier, at the *too neglected harbour of Dublin* (a quay wall parallel to the Pidgeon-House wall); to build a Temple of Peace, if you please *(hic murus ahæneus esto)*; but clear them off—the county of Dublin needs only to be seen!

So much for the county—what of the city?—who can account for its desertion, for the tenantless stores, houses, and mansions,—for the wasted and mouldering condition of once busy, populous Dublin?

The poor-rates are increasing year by year: they seem destined to be the doom of the capital, for houses may now be had at rentals not much in excess of taxes,—that is to say, in parts of the city which have long ceased to be either mercantile or fashionable. QUONDAM.

THE BARRACK COMPETITION:

ANOTHER QUESTION RAISED.

THE "Strictures by a Competitor," which you were pleased to publish from my hand, have now been open to criticism for a month; and, as your editorial observations on the question involved are now drawn to a close, together with their embodiment of explanations offered in reply to me, perhaps you will allow me a spare column for the exercise of the accuser's right of reply.

I will admit that the adjudication of the committee has been conducted no doubt in the most approved official manner, and with the most gentlemanly views; but whether the result is characterised by *practical business-like judgment*, so as to be a benefit to the public interest, and a satisfactory return for the unprecedented expenditure of care and cost which an educated and honourable profession have (with something like magnanimity, I think) bestowed upon the problem, is after all the only question to be regarded. Without being one to join indiscriminately in the popular cry against official mismanagement, I cannot help thinking that if we, the competitors, had thought over the view of this competition which I am about to state, we should have been less precipitate in rushing as we did into these now celebrated lists.

Barracks have hitherto been a province of the Royal Engineers. In the present day the science of architectural organisation, or the plan of buildings, has in England attained such efficiency, that the official routine of such a department as the Royal Engineers, in such a subject as this, must of necessity become decidedly behind the age. This is a mere axiomatic fact: I cast no reflections upon anybody. Accordingly it is resolved, official and military dignity being waived, that an appeal shall be made to the civilian profession of architects to supply that practical skill in which the very appeal itself implies the military service of the Royal Engineers to be found deficient, as we should expect. But who are to be the judges of that skill? Here official routine asserts its sway again: the office of the Royal Engineers must furnish the judges. Certain other gentlemen will be associated with them, of course; but these must be kindred spirits,—official men of another department,—colonels of regiments. If such a committee leave the actual decision of the competition, by preliminary "classification and arrangement," in the sole hands of no doubt one of the Royal Engineers,—if they then, *at their first sitting*, make a selection of eight designs from out of that bewildering display which we see at Burlington House,—if the ultimate adjudication of merit is a mere adoption of the only plan which adheres to the old system of the Royal Engineers (this I must still maintain to be the case), who can wonder at it? This is the *beau ideal* of an official process,—eminently gentlemanly, but utterly impracticable. If the Government intended really to ask the English architects for something better than a mere military department could supply, the judges of merit ought to have been chosen from the class appealed *to*, not the class appealed *from*. They ought to have been architects, with Royal Engineers and regimental officers and the like to assist when required; and there cannot be a doubt that our profession comprehends many men who, with reasonable preparation, could have accomplished the task most honourably for all. If, on the other hand, the intention of the Government was merely to collect a mass of various ideas for digestion and absorption at leisure in the Royal Engineer's office, then the act is best undescribed. The retention of all the designs, it must be owned, may not unreasonably point to this theory.

The use of Professor Donaldson's name, as having been merely "added to the committee," I would respectfully say is not calculated to add to his credit. If he is prepared distinctly to avow a full participation in the whole process of judgment, then many of us will be sufficiently surprised. If, on the other hand, his place at the board was of a different character, the expression used is at least not a very explicit one. The Great Barracks Competition will be historical ground for the next half-century.

I could not expect my interpretations of the principles of the premiated designs to be entirely free from error, but I would submit that I stand uncontradicted on every one of my criticisms which have any real importance; and this makes the matter worse than it ought to be. Mark the imperfections * charged against the design selected for adoption. * * *

I do not censure the committee, but if the fault, as I fear, is only in *routine*, this, however, makes it all the more immoveable, and all the more provoking;—a sad end, if it be so, to our expenditure of 5,000*l.*—an estimate, by the bye, which by my reckoning would not cover more than actual outlay, with, for one's own time, mere draughtsman's fare.

My objections to Nos. 2 and 3 did not need to be so pointed as those I had to urge against No. 1, for I regard this one as virtually the only selected design, especially as the other two are altogether incapable of any amalgamation with it. And universally my strictures were not so set forth as to reflect upon the skill of the designers, but upon the decision of the judges. Mr. Morgan's design itself I make no doubt is in many respects an able production, although, as I think, like the other two, on a fallacious basis, which, however, may be called a matter of intellectual accident, rather than a matter of deliberate skill. The gravamen of my complaint is simply this,—that the committee have clung to the old system of the Royal Engineers through thick and thin, and despite of whatever faults not its own it might happen to be associated with. And what I now add to this is the reflection that, all things considered, I wonder we did not foresee such a result as inevitable.

I think it would not be too much to ask that the author of the Barracks Committee's "Blue Book" should now draw up a detailed report upon the principles of the committee's selection of designs for publication. Perhaps such an account of the question might satisfy us all: at any rate, the profession of English architects occupies at the present day so honourable a position in the world's regard, as to entitle us to any satisfaction of such a kind that can be afforded.

Every one must agree with you, that the Royal Engineers ought not to possess themselves of all our designs, for leisurely digestion and application, without any sort of remuneration being offered for our trouble and expense. The Government which can afford to throw away half a million in a month or two in the single form of horses dying by the hundred, in the act of eating each other's tails amidst the snow, ought not to refuse at least 1,000*l.* as an acknowledgment of the unexampled exertions of this competition. I cannot venture to say that every design of the hundred and odd ought to be paid for; but every design not returned, and every design of available merit, ought to be paid for. And lastly, the judges of available merit ought not to be the Royal Engineers. These are the very class of persons whose own deficiencies in this very question form the basis of the application to a class more skilful.

Lastly, if my argument be sound, there follows this corollary,—that henceforward the building of barracks ought to be taken out of the hands of military designers of fortifications, and committed to the more suitable charge of every-day designers of houses. It is but an old case in a new form. Our public "services" are giving way everywhere to private contractors, and the next time we fight our new friend the czar we shall not starve our horses and men by a "department," but feed them by a contract, and perhaps destroy a fort also by an agreement under seal for so much money (the lowest tender), with the period of accomplishment fixed to a day, instead of bombarding it in vain with our own ships, and then dis-

* It is unnecessary to repeat these.—ED.

missing the admiral. By that time there will be an end of captains and majors building barracks, and then, and not till then, they will be better built. ANONYMOUS.

As a competitor both for the infantry and cavalry barracks, I should expect that if the war department appropriate any ideas of mine, they would pay me for the same: they can afford to be just, and even a little generous; and as to the retention of all the designs, if they are not strictly entitled to use the ideas contained therein, they may as well return them to their authors.

One thing is certain, that whilst taking care that no injustice is done to the successful competitors, the Government should take the present opportunity to arrange a good design, in all its details, for barracks generally, and for which they have now such ample materials in their possession. COMPETITOR.

CHURCH-BUILDING NEWS.

Hitchin.—The new Independent Chapel here was opened on 13th ult. The expenditure, including the purchase and cleaning out of property for a frontage and site, is about 2,150*l.* Of this sum 1,733*l.* odds have been realized. The chapel is in the Italian style of architecture, and is of white brick with stone dressings. The pulpit and supports of the galleries are of oak, the pews and the gallery-timbers of deal stained and varnished to imitate new wainscot. The gallery-front is painted and grained in harmony with the other parts of the interior. The dimensions are 65 feet by 41 feet.

Redditch. — The cost of the building of St. Stephen's Church, Redditch, has been 7,016*l.* 16s. 2d. including commission to the architect and salary to the clerk of the works. The entire outlay has been 7,462*l.* 7s. 5d. The great east window is a county memorial to the late Hon. R. H. Clive, who was a subscriber to the funds for building the church. The east window of the south aisle, "The Good Samaritan," is a memorial to the late Mr. William Bartleet and his wife, put up by their children. The south chancel window, "The Condemnation and Stoning of St. Stephen," is the gift of the present Hon. Robert Windsor Clive. The altar-cloth was presented by Lady Harriet Clive, and the font by Mrs. Mackarness.

Dorchester.—The ceremony of consecrating the Episcopal portion of the new cemetery for Dorchester, according to the *Dorset Chronicle*, took place on Thursday before last. The cemetery is enclosed with a brick wall, 6 feet high, with piers, capped with Portland-stone, at intervals of about 20 feet. The designs for the chapels were furnished by Mr. G. Gregory, of Dorchester. The works have been carried out by Mr. Edward Mondey. The grounds are being laid out by Mr. Blandford, of Blandford, from the design of Mr. Page, of Southampton. The cemetery is entered by a pair of iron gates, on the south side of which is situated the lodge for the sexton. It is a cottage of one story, and built in a style similar to the chapels. The cost of the whole, when completed, will be about 3,860*l.* The expenses have been incurred in the following manner:—Purchase of land, including costs of conveyance, mortgage, &c. 1,235*l.*; building the chapels and lodge, 1,485*l.*; extras and fixtures for ditto, 45*l.*; building wall, 475*l.*; costs of laying out the ground, 130*l.*; cost of planting, 75*l.*; surveyor, 100*l.*; clerk's salary (two years), 100*l.*; expenses of consecration, 50*l.*; printing, advertising, seal, &c. 45*l.*; sundries, 120*l.*; total, 3,860*l.*

Bristol.—The new church erected in the City Jail by Mr. Gardner, the governor, was opened on Thursday in last week.

Swansea.—The new cemetery for Swansea is in progress. It is situated about one mile from the town, and will cover a space of about 16 acres, part of the estate of Danygraig. When completed, the cemetery will be divided and surrounded by a wall 9 feet high. About the centre of the ground will be erected the two chapels. That for the Established Church will be a Gothic ecclesiastical building, and the Dissenters' will be in the Norman style, both from designs furnished by Mr. Wm. Richards. In addition to the chapels, there will be erected a receiving-house, in plain Gothic, and a cottage, built in the Early English style. The entrance will be from the Port Tennant road through a portion of the private embowered walk which leads to Danygraig House.

Oldbury.—The vestry have resolved to purchase 10 acres of land for a burial ground, at Nine-fields, near Rood-end, for 2,500*l.* and also ground for approaches. They have not yet sanctioned the laying out of the ground or erection of necessary buildings.

Liverpool.—The foundation-stone of a new Presbyterian church was laid on Wednesday in last week, in Belvidere-road, Prince's-park, at the end of Whitfield-street. The edifice will be in the form of a parallelogram, 88 feet in length, by 45 feet in width, exclusive of a vestry on the north side, and a porch on the south side, united to a spirelet, rising to the height of about 90 feet, surmounted with a gilt cross. The church is arranged to accommodate 620 persons. The design, which is Gothic, was furnished by Messrs. Hay. The walls are all to be faced with Yorkshire stone, and the dressings of fine grained yellow stone from Mr. Wells's quarry, near Wrexham. The timber is all to be varnished, and the whole cost as contracted for amounts to 1,624*l.*

Rochdale.—The foundation-stone of a Gothic Unitarian chapel was laid in Blackwater-street, Rochdale, on Wednesday in last week. The chapel is to be 66 feet long, and 34 feet wide, and is expected to cost 2,000*l.* The architect is Mr. Henry Bowman, of Manchester.

Halifax.—The ceremony of consecrating the parochial burial-ground of All Souls', Haley-hill, Halifax, and laying the corner stone of a new church adjoining, dedicated by the name of All Souls, took place last week. The burial-ground, the land for which was given by Mr. E. Akroyd, and which has been laid out and arranged at his expense, is situated on the left-hand side of the old Bradford-road, from which it is separated by the Haley-hill Allotment-gardens. It contains nearly 3 acres of ground, and has been laid out by Mr. Mallinson, of the firm of Mallinson and Healey, architects, in parallelograms, with a broad terrace walk in the upper part of the ground, on which the chapel has been erected. This is a structure in the Early English style of architecture. The windows are filled in with stained glass, from the works of Mr. Hedgland, of London. The masonry was done by Messrs. Cordingly, of Ringby, and the wood work by Mr. Bedford. The site, which has been given by Mr. Akroyd, is situated on the right-hand side of the old Bradford-road, at Haley-hill, within view of the works of the founder. The designs for it have been prepared by Mr. Scott, and it will cost from 15,000*l.* to 20,000*l.* The designs are founded on the style of the latter quarter of the thirteenth century. The plan consists of a chancel, with side chapels, aisles, nave with aisles, and south transepts (not of the full height of the nave), a tower at the west end of the north aisle, and a south porch. The accommodation provided is for somewhat more than 800 persons. The extreme dimensions are about 130 feet in length by 80 feet in width. There is, besides the south porch, a large western doorway, which is treated in a manner unusual in English churches, though frequent in France, the doorway being made very lofty, and the tympanum being filled in with sculpture. The space surrounding the doorway is enriched by diaper work. The window over it is of five lights with simple tracery. The clerestory, internally, will form a continuous arcade, and will be encircled with shafts of polished marble, as will also some other of the internal parts. The tower will be about 106 feet high. If surmounted by a spire, the whole will be about 220 feet in height. The south porch is rough within and without, with stone. The side windows of the aisles and chancel, and those terminating the transepts, are respectively three, four, and five lights.

Cadeby.—The church of St. John the Evangelist, at Cadeby, near Doncaster, is now on the point of completion. It stands on the right of the road leading from Cadeby to Melton. The approach is by a gentle ascent from the highway. Mr. Scott is the architect. The style employed is the Early Decorated. The stone used is white limestone, and was found upon the estate. The roof, overlaid with green Westmoreland slate, surmounted by a bell turret, spans both the nave and aisles, and the monotony which might be anticipated from so large a surface, is broken by the intersections of the porch roof. The porch is of rich design, with a deeply-recessed arch standing out in bold relief from its green foil. The capitals of the doorway and side are carved. The nave arcade is supported by round columns. In the sculpture of the capitals the maple leaf predominates. The sculptor is Mr. Harmar. Some sculptures of angels playing upon musical instruments, which are introduced at the intersections of the mouldings of the arches, are the work of Mr. J. B. Philip, who is executing the sculpture at St. George's church, in this town. The chancel is lighted by a window of three lights, with circular head capped with trefoils, filled with tracery, the design of which is a copy of the old Norbury window, by Mr. Powell, of London. The west end is lighted by two windows of two lights each, surmounted by a circular window: they are filled with Powell's patent glass. Sir Joseph Copley, according to the local *Gazette*, intends fitting the east and west windows with stained glass. A stone font is placed near the porch. There are oak stalls in the body of the church, as also in the chancel, the latter having carved poppy-head ends. The floor of the chancel is laid with Minton & Co.'s encaustic tiles; and the floor of the nave is covered with the patent tiles from the manufactory of the same firm. The pulpit and reading-desk are of oak, from the designs of the architect, and have been executed by Mr. Webster, of Boston, as also are the chancel fittings and altar rail. The interior roof is entirely composed of oak rafters, stencilled between the timbers. Mr. Haden, of Trowbridge, has put down an apparatus, combining the hot-air and hot-water principles, for the heating of the church. Messrs. Mears, of London, have furnished the two bells in the turret: the weight of each is about 4 cwt. The dimensions of the interior are as follow:—The length of the nave 34 feet 7 inches, width 16 feet; length of the chancel, 23 feet; width of aisles, 8 feet; height of caps of piers, 12 feet; pitch of the roof, 31 feet. Messrs. Bradley and Boddy, of this town, have been engaged to lay out the church-yard according to the plan and design of Mr. S. Appleby, of Balby. The church is approached by a terrace of five steps. Sir Joseph Copley has had the family vault constructed outside the church, on the south side. The cost of the edifice will exceed 5,000*l.* a sum entirely given by Sir Joseph Copley.

PROVINCIAL NEWS.

Spalding.—Workmen employed in taking down old buildings in Double-street have discovered several blocks of stone richly carved; some with busts representing kings and queens. It is thought they were formerly part of the old abbey.

Wisbech.—The new bridge, the foundation-stone of which was laid on the 11th ult. will be 156 feet in length, 40 feet in width, and the sides 8 feet high. It will be balanced for opening on a pivot placed at one third its length, or at 52 feet from the land end, and 104 feet from the longer extremity. The shorter end will be provided with rollers, and will be weighted to about 120 tons, to maintain its equilibrium. The pivot will comprise a large piston, fitting water-tight into a cylinder, in which, when necessary to open the bridge, water will be pumped, so as slightly to raise the superincumbent mass, and enable it to be turned with ease. When the bridge is closed and at rest, the water may be let out, and it will repose on its usual bearings. Its cost will be about 13,000*l.* On 11th April, 1855, the foundation-stone of the old bridge was discovered, and it was conspicuously placed at the laying of the first stone of the new bridge.

Lynn.—The committee superintending the Boal-quay works have accepted the tender of the Kirkstall Forge Company, Leeds, for two steam cranes, at 900*l.* each, complete, and one ten-ton hand-crane, complete, at 390*l.* The

only other tenders were Messrs. Grissell, ten-ton crane complete, 646*l.*; or for one on their own models, 417*l.* 10s.; Butterly Iron Works, Derbyshire, ten-ton crane (exclusive of foundations), 400*l.*; five-ton ditto, 260*l.* Mr. Jos. Glynn, according to the *Norfolk Chronicle*, is the engineer consulted by the committee in this matter, and the works are to be in accordance with his designs.

Bedford.—The first stone of the new building for the Bedford Working-men's Institute was laid by the Duchess of Bedford, on Wednesday in last week. The site is in Harpur-street. Mr. Porter, of London, is the architect. The building will be of red brick, with stone facings; the style of architecture, Domestic Gothic. It will contain, on the ground-floor, reading-room, coffee-room, class-room, and apartments for the porter; and on the floor above a public room, the whole extent of the building, 46 feet by 30 feet.

Stratford-on-Avon.—The opening of the new Corn Exchange here took place on Wednesday before last. Mr. C. Lucy presided. The building was designed by Mr. E. Gibbs, of Stratford, architect. The contractor for its erection was Mr. E. Chesterman, of Stratford-on-Avon. In front is a plain façade of brick with stone dressings and five windows of plate-glass. There are two rooms on the ground-floor, and a large upper room, approached by a flight of iron stairs. The exchange, which is 80 feet long, and of proportionate width, is lighted by a glass roof, having glass externally, to preserve ventilation. The western end has a balcony for an orchestra, and the room is capable of holding 700 people. The entire cost of the building was 1,700*l.*

Dudley.—The tenders for the second set of designs for the new workhouse were to be delivered on the 1st May, and considered by the Board at their ordinary meeting, on Friday, the 2nd. Each builder, in this case, has been compelled to take out his own quantities, or employ his own surveyor. In the first case they were supplied by the surveyor appointed by the builders and architect, and it is not yet settled who is to pay for them, as the guardians refuse to know anything of it.

Willenhall.—A site for new gasworks has been agreed on by the company recently formed.

——The surveyor to the local Board of Health reported last week that during the past year 174 buildings of all descriptions had been sanctioned. Two of them were places of worship, namely, St. Ann's Chapel and the Roman Catholic Chapel: 164 were dwellings, and the remaining eight were outbuildings. Five only of the dwellings were of a superior class: 159 were cottages for working people. The estimated cost of the whole buildings was 25,000*l.*

Preston.—The foundation-stone of a new cotton factory was laid in Ribbleton-lane here, on Tuesday in last week. The new building will be 170 feet long by 74 feet wide, and four stories high; in addition to which there will be the usual warehouses, engine and boiler house, &c. The whole of the contracts for the erection of the buildings have been taken by Mr. Richard Aughton, of this town, builder.

Holmfirth.—The foundation-stone of five almshouses, in commemoration of the great flood of 1852, by the bursting of the Bilberry reservoir, and of the national feeling and charity displayed on the occasion, was laid on Monday in last week, by the Freemasons of the district. The almshouses are in the Gothic style of fourteenth century. They are situate on the slope of a hill, a little out of the town, on the road leading to New-mill.

Leeds.—A meeting of the trustees of the Leeds Grammar School and of the parents of scholars was held at the school on Monday before last, to consider the propriety of erecting a more commodious building than the present school in North-street. Resolutions favourable to the object in view were passed, and steps are to be forthwith taken to set on foot a public subscription, in aid of the proposed movement.

Shields.—A site near the Townhall has been chosen for the erection of a new Mechanics' Institute for North Shields.

Tynemouth.—The projected works, for the erection of the north pier and the extensive Admiralty changes, are making progress. The Government works are so far advanced as to show the alterations contemplated. From the land side of the castle, commencing at the Haven and continuing onward round its base towards the range of high rocks fronting the Short Sands, there will be dug a wide and deep moat, which is to be constantly supplied with water from the sea. From the sides of the moat, adjoining the castle, steep and extensive slopes will be run up to its walls; and, to complete the design, the castle itself will be entered by a draw-bridge. These changes, along with others, alleged to be necessary for putting the castle in a complete state of defence against a siege, are said to be in "the ancient and exploded style of defensive warfare."

Edinburgh.—Of late a large body of men have been engaged in forming the new road from Abbey-hill through the gardens to the front of Holyrood Palace. The road is to be continued, also, through the gardens to the south of the palace, entering the park near the foot of the Radical-road. The first portion of the road is expected to be completed before her Majesty's Commissioner to the ensuing General Assembly takes up his residence in the palace.

PROJECTED BUILDINGS IN THE METROPOLIS.

SEC. 143, LOCAL MANAGEMENT ACT.

THE houses in Tanner's-buildings, St. Luke's, Old-street, have gardens in front of them. On these gardens some buildings have been recently erected and completed, in opposition to the representations of the parish surveyor. The subject was on Tuesday last brought under consideration of the vestry, when it was resolved, "That certain buildings having been erected beyond the regular line of buildings in Tanner's-buildings, within the parish of St. Luke, without the consent in writing of the Metropolitan Board of Works, and contrary to the 143rd section of the Act 18 and 19 Vict. cap. 120, the surveyor is ordered and hereby authorized forthwith to demolish the same, and recover the expenses incurred from the owner of the premises."

EFFECT OF COLOUR UPON HEALTH.

THE Rev. Mr. Mitchell, in his report to the Committee of Council on Education, states as his opinion that the ill-health of pupil-teachers and mistresses of schools is caused by bad ventilation and small windows. I perfectly agree with Mr. Mitchell's observations so far as they go, but I believe there is another cause which assists powerfully in producing ill-health in schools, and induces to melancholy, which I believe has escaped Mr. Mitchell's observations, as well as every other writer on the subject. From several years' observations in rooms of various sizes, used as manufacturing rooms, and occupied by females for twelve hours per day, I found that the workers who occupied those rooms which had large windows with large panes of glass in the four sides of the room, so that the sun's rays penetrated through the room during the whole day, were much more healthy than the workers who occupied rooms lighted from one side only, or rooms lighted through very small panes of glass. I observed another very singular fact, viz. that the workers who occupied one room were very cheerful and healthy, while the occupiers of another similar room, who were employed on the same kind of work, were all inclined to melancholy, and complained of pains in the forehead and eyes and were often ill and unable to work. Upon examining the rooms in question, I found they were both equally well ventilated and lighted I could not discover anything about the drainage of the premises that could affect the one room more than the other; but I observed that the room occupied by the cheerful workers was wholly whitewashed, and the room occupied by the melancholy workers was coloured with *yellow ochre*. I had the yellow ochre all washed off, and the walls and ceiling whitewashed. The workers ever after felt more cheerful and healthy. After making this discovery, I extended my observations to a number of smaller rooms and garrets, and found, without exception, that the occupiers of the white rooms were much more healthy than the occupiers of the yellow or buff-coloured rooms, and wherever I succeeded in inducing the occupiers of the yellow rooms to change the colour for whitewash, I always found a corresponding improvement in the health and spirits of the occupiers. From these observations, I would respectfully drop a hint to the authorities of schools, asylums, and hospitals, to eschew yellow, buff, or anything approaching to yellow, as the ground colour of the interior of their buildings.

Things not generally appreciated about a house:—1. The benefit of thorough drainage and water supply. 2. The benefits of good heating and ventilation. 3. The benefits of proper colour. WILLIAM BURNS.

ECCLESIOLOGICAL SOCIETY.

THE anniversary meeting of this society was held on the 23rd instant, at the Architectural Museum, in Canon-row. The chair was taken by Mr. Beresford Hope, and the proceedings opened by the secretary, the Rev. B. Webb, reading an interesting report from the committee.

The report was unanimously adopted, after some conversation upon the importance of photography as a means of recording the original features of buildings, which might be obliterated by restoration or rebuilding, and some congratulatory remarks on the Lille competition, where, as we have already stated, the first two prizes for the proposed cathedral were won by English architects.

Mr. H. Clutton read a paper on the Sainte Chapelle of Paris, and similar chapels in France, compared with St. Stephen's Chapel at Westminster. Mr. M. D. Wyatt, visitor, delivered an address upon Christian sculpture, illustrated by a selection of the Arundel Society's casts of ivories. The speaker traced out the Byzantine, the Latin, and the Irish elements of the revival of mediæval sculpture, and showed the superiority of the Italian school, especially that of Pisa, over the works of England or France. He urged strongly the necessity for an extensive revival of this art in the decoration of our religious edifices, and expressed his confidence that the suspicions with which it was regarded would soon disappear, and then the best models would be found in Italy. This address gave rise to a conversation, in which the chairman, Mr. Scott, the Rev. B. Webb, Mr. Dickinson, the Rev. W. Scott, Sir Charles Anderson, and others took part. The causes of the present state of sculpture were discussed, and it was agreed that there was a wide opening for reform, and that it was the duty of all who felt an interest in the revival of religious art to encourage it.

Mr. Skidmore then read a paper upon the practicability of applying iron to the construction and decoration of religious buildings in a far bolder and more artistic manner than has yet been adopted, with reference to the designs for an iron church, recently mentioned in our pages. In course of an animated conversation afterwards, the impression that the expansion and contraction of iron would render its practical use in large buildings unadvisable was removed.

FIBRE GILDING.

A VERY interesting paper was read on 16th ult. at the Society of Arts, Adelphi, on "Thread and Fibre Gilding," by Mr. Francis Bennoch, the inventor of a new process, by which the more tedious and expensive processes of India and Europe are in a measure superseded.

Mr. Bennoch introduced his subject with a historical sketch of fibre plating, or the covering or entwining of threads of silk or cotton with gold or silver flattened threads; and a description of the processes by which, in India, an ingot of gold or silver is gradually lengthened out, by passing it through orifices of smaller and smaller diameter, till the bar assumes the form of a delicate thread, many miles it may be in length, and which is then laid over a rotating thread of silk or cotton, the whole work being done by hand, with the aid of the simplest possible machinery. He also described the more elaborate and rapid European processes, in imitation of the Indian, and pointed out the

difficulties in the way of still greater improvements and economizations of these processes; concluding the whole with an account of the new invention, by means of which threads are simply *gilded* with the ordinary gold-beater's leaf. This is done by winding the threads in close array, but single file, round rollers, after passing through a glutinous liquor, and then laying over the surface leaves of gold, which are then burnished, so that one side of each thread is completely gilded; and on reversing the side by winding the thread on a second cylinder, the process is just repeated, and the whole thread is then completely gilded. This may be done with copper-leaf, as well as with gold or silver, and the copper thread is said to be scarcely distinguishable from the golden, except, doubtless, in its liability more easily to tarnish. The threads thus gilded may then, of course, be woven into cloth of gold or silver, or into gold or silver lace, in the usual way. This ingenious new process is likely to open up an important trade with the Eastern nations, who delight in sumptuous apparel, and perhaps to induce a similar taste to some extent in the west,—at least amongst the female sex. As regards cost, the new thread of gold is, size for size, considerably dearer than the ordinary gold thread; but, as it measures a much greater length for the weight, it virtually becomes, for weaving purposes, very much cheaper. Mr. Bennoch anticipates a still greater improvement some of these days by help of electro-gilding.

THE GREAT DRAINAGE QUESTION.

IN reference to the remarks of "C. D." in a former number, on the above question, a correspondent sends us a copy of a letter which he addressed in August last to Mr. Richard Jebb, chairman of the late Commissioners of Sewers, embodying a plan which first suggested itself to him in the Christmas preceding:—

"The plan is to lay one or more plate-iron tubes in the bed of the river Thames, at or near the centre of the stream, to receive the contents of all the sewers on both sides of the river. These would be concentrated on as few points as might be found practicable, and connected with the main tube by iron pipes similar to those which have been laid down to near low-water mark just above Hungerford-bridge. An even bed for the tube would be prepared by deepening or filling in the bed of the river by dredging-machines, with the aid of diving-bells of large size. The tube would be constructed of iron-plates of the largest size that could be made and conveniently managed, joined together by flanges fastened by bolts with nuts and keys—except the bottom-plates, where the flanges would offer an obstruction to the passage of the sewage. The flanges of the top plates would be *within* the tube, to avoid the risk of their being caught by the anchors of vessels in the river. It would, perhaps, be advisable to fix a convex shape to the top and sides, to resist the pressure of the water from without.

A shelf or gangway for a man to pass along would project from each side of the tube within, for inspection or for any necessary repairs, and there might be thick glass plates at convenient distances to admit light. Access to the interior would be gained by perpendicular shafts at the bridges, and to project above high-water mark, forming small towers in the river below London-bridge."

* * * *

LONDON PROMENADES.*

UNDER this title it has been suggested that it is very desirable that the farther destruction of the few suburban roads remaining about the metropolis should be checked, and that they might be made useful for public exercise and enjoyment, like the Boulevards of Paris. This is a subject in which we have taken a strong interest, although we had become almost hopeless of anything effectual being done. The creation of a new Board of Metropolitan Management, however, and the fact that this Board has already refused leave to cover the ground in front of some houses in White Conduit-street and Chapel-street, establishes the invaluable principle for which we have so long contended, and leads us to hope that it will not be long ere something positively, as well as negatively, promotive of the views of Mr. Moore shall have been done. This gentleman, in the tract under notice, thus illustrates his ideas:—

"The line of road I take to illustrate my views reaches from Tottenham Court-road to the Angel at Islington, a distance of nearly two miles: it possesses the various features I have described—inferior shops, sheds, lumber-yards, tavern-yards (for they cannot be called gardens), and already a short portion has become a street, while the remaining gardens are fast disappearing. The width from house to house varies from 150 to 160 feet, of which the carriage-way occupies about 40 feet, and with the foot pavements, generally 58 feet, for the public roadways, leaving from 46 to 51 feet on each side for gardens; and, as the present road is found ample for the traffic, the gardens, shops, and yards could be purchased, planted with rows of trees, and thrown open to the public like the Parisian Boulevards; or, a better arrangement, as I think, the pavement could be placed next to the areas of the house, the carriage-way divided for the east and west traffic, which would render it less dangerous and more convenient for the public. By this plan, similar to that adopted in the squares, a belt of nearly two miles in length, and from 70 to 80 feet in width, only divided by the necessary crossings, would be formed, and could be planted with a centre avenue of trees of 30 feet wide, with two side avenues, making a healthy and cheerful promenade."

* London Promenades; or, Suggestions for Preserving and Improving the Suburban Roads. By J. B. Moore. Kenny, 414, Strand. 1856.

ST. LUKE'S TEMPORARY CHURCH, CAMDEN-ROAD, HOLLOWAY.

A TEMPORARY church has been erected in the Camden-road, near the City Prison, Holloway (under the sanction of the Board of Works) by a committee of the parishioners. The building is in form a rotunda, 84 feet in diameter and 50 feet high from the floor to the underside of the bell-turret. The floor rises from the centre, and the interior is fitted with pews to accommodate 1,000 persons. The roof is one span, composed of twenty-four principals, framed and braced together, covered in with boards felted on the outside, surmounted by a bell-turret containing a bell from the foundry of Messrs. Warner and Sons. The church is lighted by eight side windows and a circular skylight surrounding the bell-turret.

The organ has been erected by Messrs. Jones and Son, of West Brompton, and the church will be opened for public worship on Sunday, 4th May, with three services. The Rev. H. Hampton, M.A. from Liverpool, is the incumbent.

The building was constructed by Mr. John Blizard, of Cheltenham, contractor for wood buildings; has been erected in the short space of two months and two weeks; and will be paid for, we are told, by the pewrents only.

The above church has been erected as a precursor to a permanent church, to be built on ground adjoining, which has been given by Mr. Poynder, and contributions have been made to the amount of 1,800*l*. The committee entertain hopes that in a short time the inhabitants and donors to such objects will respond to their requirements, and enable them to proceed with the building by their donations.

THE ARCHITECT'S DAY OF REST.

NOTHING would seem farther apart from the distinct scientific objects and special purpose of the *Builder* than that its pages should be the medium of the agitation of such a question as the secularization of the Sabbath, which is a religious and not a scientific topic. I observe, therefore, with deep regret, that a correspondent, "J. M." in your last number, urges the encroachment upon that day, which has been emphatically called the working-man's "chartered right," *the day of rest*, as a panacea for the spare attendance of visitors at the exhibition of the bar-rack drawings, as they cannot otherwise be visited by those *employed every day and all day*. This defiance of public feelings had, I thought, been set at rest by the recent overwhelming majority of the House of Commons on the question; but in your columns it is sought thus insidiously to be revived. Would it not have been more becoming in "J. M." to suggest that the hours of exhibition might be extended to sunset or dusk, or earlier in the morning, if he prefer it? Surely his day of work, or that of others generally, is not so long as to absorb *every hour* of the afternoon. Why should he wish to impose upon the porters and attendants the irksome sacrifice of *their* day of rest for his benefit and gratification? May they not have one day to devote to their wives and children, and the sacred observances of the Sunday? If a man rises early on a week day, say at six, and when required, which will rarely be the case, be ready to work on till twelve, he will never find that the abnegation of work on a Sunday, or abstinence from other occupations than those of a religious or family nature, will make him lose any opportunity of instruction or pleasure on the other days; nay, he will, by such rest, be refreshed and strengthened for his employments during the week.

Let one exhibition be opened on the Sunday, and you must open all, and then let "J. M." consider how many porters, attendants, superintendents, and other numerous classes must give up their rest to gratify those who seek study or such pleasures on that day.

Can one day in seven be too much to rest the wearied mind, harassed by the cares and trials of the other six,—to raise the thoughts from earth to heaven, and lead man to study his own passions, temper, and thoughts, and enable him, by God's grace, to improve and prepare himself for a future state, the proper end and aim, after all, of every rational creature?

Let us not be shamed by the contrast of the earnest and faithful manner in which our Jewish brethren regard its sacredness, or we may have applied to us the spirit of Shylock's exclamation, and lead them to say—"See how these Christians love their Sabbath."

I hope that "J. M." will view in its proper light this friendly protest against his suggested desecration of a day, intended by Almighty wisdom, and set apart to render him and me wiser and better men.

THOS. L. DONALDSON.

HOW TO MAKE LONDON HEALTHY AND CLEAN.

ONE of the provisions in the Metropolitan Local Management Act compels owners of house property to provide water to every house, not only for domestic but also for cleansing purposes, and unless some more efficient and cheap mode be adopted than by the present water supply, owners of house property will find the supply of water for cleansing purposes a very serious and expensive question.

It would appear, therefore, that one of the first works that the Board of Works has to do is to provide London with water not merely for drinking and cooking and other domestic purposes, because the present companies can, or ought to do that; but water for cleansing and watering the streets, and all those purposes for which the Act under which the Board is constituted, makes water supply necessary. The present water companies cannot accomplish this, because water carefully filtered and prepared for drinking is too costly to be used in large quantities for cleansing.

I therefore propose that pure sea water should be brought to London and used where necessary for cleansing purposes. And if the Board of Works have too much on hand to accomplish this, I will undertake to find responsible men who would construct a canal on the north side of the Thames by which pure sea water shall, at each tide, be received into reservoirs at a sufficient elevation above London to supply every house in the metropolis, and in such quantity that every street, court, and alley could be washed each day with it.

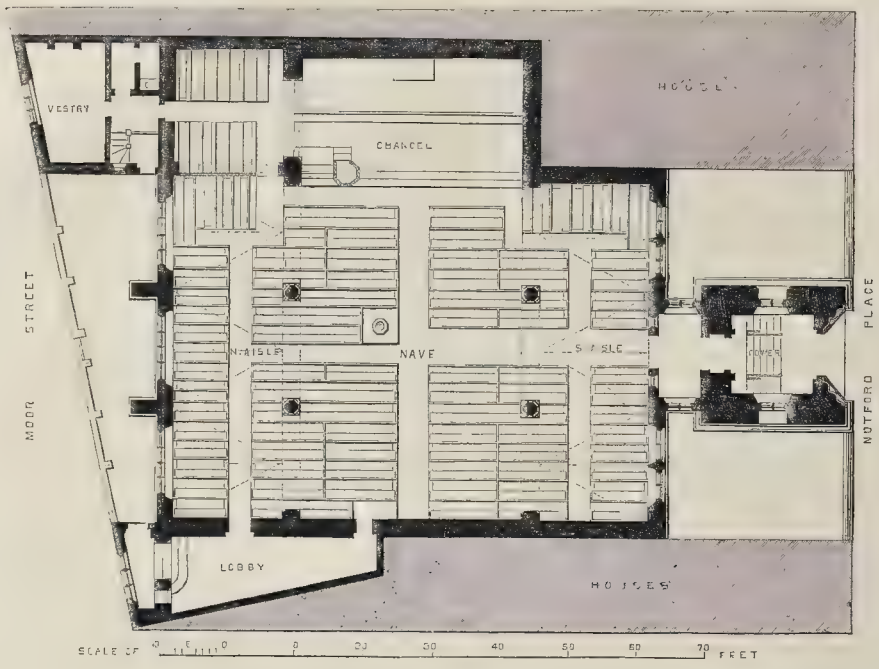
The parks might have lakes of sea water as well as fresh: the zoological gardens might have sea water for such of its inhabitants as require it: fountains of salt water might be placed, at pleasure, throughout the metropolis: the baths and washhouses could be supplied with it; and the celebrated Charing-cross fountains might then send forth pure and refreshing sea water, instead of hot water from the baths and washhouses, as at present; and, by pipes under the Thames, the south side of London might be supplied as well as the north.

The whole of this work can be accomplished, and paid for, by a rate of one penny in the pound on the property in the metropolis, and water direct from the sea may flow throughout London within eighteen months after Parliament shall pass an Act giving powers to a company to levy such a rate, and take the necessary lands under the usual powers.

Several parishes are at present in great difficulty to carry out the sanitary provisions of the Metropolitan Local Management Act for want of water supply. To carry out that Act, an almost unlimited supply of water must be had, and where can it be had better than from the sea? FRANCIS FULLER.

PROPOSED WIDENING OF STREETS.—The Board of Works for the Holborn district have agreed to memorialise the Metropolitan Board of Works in favour of the removal of Middle-row, Holborn, and the widening of Gray's-Inn-lane, the north end of Chancery-lane, and the south end of Leather-lane, leading into Holborn.

A STRIKE.—The ship-painters of Liverpool have been on strike since the 7th ult. claiming wages at 5*s.* instead of 4*s.* 4*d.* a day. Some of the masters have given the advance.



PLAN OF ST. LUKE'S CHURCH, NUTFORD-PLACE.

ST. LUKE'S CHURCH, NUTFORD-PLACE.

On the the Thanksgiving-day, Nov. 19, 1849, the Rev. John Hampden Gurney proposed, in his sermon, preached in St. Mary's Church, Marylebone, the erection of a seemly church as a thank-offering for the exemption from cholera, where, at the time fifty in a thousand was the rate of mortality in some parishes, only two in a thousand suffered. "I should deceive you," he said, "if I led you to think that less than 10,000*l.* will build such a sanctuary as ought to be built here. I should not please you, I am sure, if I proposed to cheapen and vulgarize so good a work. We have no building in the district, at present, consecrated to God's service, which is not a discredit to the taste of English churchmen; and without valuing external decorations and seemly architecture too highly,—acknowledging that the humblest loft and poorest barn are most precious in God's sight when there are living spiritual worshippers within who shall sing their song of praise in coming centuries with the angelic host,—we do say that, for our own comfort and the credit of our neighbourhood, we desire to see a temple amongst us which shall be something better than an unsightly pile of brick." He would like to call it, too, after "Luke, the beloved Physician," to proclaim the fact that it was the "St. Mary's thank-offering for God's great mercy in sparing us during a time of pestilence." A large sum of money was raised nobly; one anonymous friend giving his 1,000*l.* and another his 2,000*l.* Mr. Ewan Christian was appointed architect: the church was built; and, on the 3rd of July in last year, consecrated. It was intended chiefly for working men, by crowds of whom, we are glad to hear, it is constantly attended. The site is a peculiar one, as the plan will show, hemmed in both at the east and west ends by buildings, and bounded by Nutford-place on the south, and Moore-street on the north. The whole of the site is 6 feet below Nutford-place, but level with Moore-street; hence the reason for placing the floor half-way between each level, saving cost and giving fair play to the population on each side. Light is obtained from three large windows on the north side; and the freedom from glare, attained thereby, is remarkably pleasant. As there is a gallery on the south side, there are two tiers of windows,—one above, the other below.

The clear width of the church, nave, and aisles, is 70 feet, and the greatest length, including the chancel, 66 feet. The walls are of ragstone and hassock, with ragstone quoins; the windows and other dressings, and the internal masonry, of Bath stone. The internal fittings are of stained deal. Mr. Myers was the builder; Mr. J. Henry Christian, the clerk of the works. The ornamental writing was done by James West.

The following are the details of the cost of the church:—

Site*	£6,028	0	0
Building, including everything except writing	6,472	19	0
Ornamental writing	80	0	0
Heating and gas-fitting	183	16	0
Organ	250	0	0
Bells	400	0	0
Clock	178	0	0
Legal expenses and printing	190	0	0
Total	£13,782	15	0

"We were resolved from the first," says Mr. Gurney, "that we would have nothing mean or shabby in our Memorial Church; and we were equally determined not to sacrifice *utility* in the large sense of the term,—that is, convenient seeing and hearing for the whole congregation,—to other men's fancies and conventionalisms."

Both intentions appear to have been satisfactorily carried out.

* Lord Portman gave his reversionary interest in the freehold, but there were intermediate parties to be satisfied.

ST. JAMES'S CANAL AND SERPENTINE FERRIES.

Sir,—I'm an old tar, and have been captain of the fore-top; but having left a leg in Sebastopol, a little easy duty would come very handy, if a few coppers might be thereby added to my pension.

There is an old seaman (called the "Commodore"—I b'lieve it's brevet rank,) who plies across St. James's pond: he gives satisfaction, and is content with the profits of his crossing—which would be frequented by *ten times* the numbers now using it, if there were a direct path across the Park, with *a gate in Birdcage Walk*, opposite Marlbro' House.

Since there's no public desire shown for a bridge (and what Briton would go by land when he could travel, in the natural way, by water?), would it not be a handsome way of pensioning off three others of my messmates, to appoint a pair of wherries at each station?

In the long range of the Serpentine, a ferry just opposite the Receiving-house, would be yet more frequented. How many youths and maidens would cross the water, just to get accustomed to sea-sickness, and to learn naval tactics?—rowing in particular! Having each of us a pair of arms, we could manage the sculls with one leg: and, in these times of peace and steam-tugs, I don't see how else the national character is to be kept afloat.

The particular ferries I mention are much required for convenience in traversing the Parks, not to speak of the moral training in seamanship during rough weather, when we might teach youngsters how Britannia rules the waves!

Should the Ranger not object to the appointment of a Commodore aboard of a gunboat on the inland waters of the royal domains, we might have a pennon afloat there, and on occasions of public festivals save the twenty-one pateraras at the Admiralty all the trouble of a *feu de joie*, which we could blaze away in the true style, and upon the proper element.

"Will Capstan."

Leaving Work without Notice.—A painter, named Madden, was lately summoned before the Edinburgh Justices, at the instance of his master, for leaving his service without notice, and found liable, by the presiding Justices, in 5*l.* damages.

ST. LUKE'S CHURCH, NUTFORD-PLACE, EDGEWARE-ROAD.—Mr. Ewan Christian, Architect.

SHAKSPEARE'S "WINTER'S TALE," AT THE PRINCESS'S THEATRE.

THE choice of the "Winter's Tale" as the subject for his annual revival at the Princess's Theatre by Mr. C. Kean, was happily made; as the strong contrast in style between the architecture of Henry VIII. and the severe but not less picturesque styles of the countries and period to which the touching story of the sorrows of Leontes and Hermione is referred, is well calculated to increase the public zest for scenic propriety, so strongly evinced in the former and preceding revivals, as also to illustrate the respective capacity for scenic and costumic effect of the classic and mediæval eras.

The chronological contradictions abounding in the play rendered it impossible to combine period and decoration with anything like truth or satisfaction; therefore, to solve the difficulty, that epoch has been chosen to which the main incident upon which the story turns can with most justice be assigned, namely, the period when the Oracle of Delphi was in the zenith of its fame.

At that period, Syracuse had attained a degree of magnificence rivalling that of Athens itself. A few words will recall the rapid progress of the Greek colonies in the island of Sicily. In 729 B.C. the Dorian state of Corinth founded Syracuse, which soon became, and long continued, the capital of Sicily, extending its dominions gradually over all the south coasts of the island. In 671 B.C. the Messenians, driven from the Peloponnesus by the Spartans, besieged Zancle on the straits of Rhegium, took it, and established a permanent settlement there, changing its name to Messene,—a name which may still be recognized after a lapse of twenty-five centuries. The Rhodians of Doric race built Gela, and Gela founded Agrigentum,—soon the second city in the island. Ionian colonies from Eubœa built Naxus, Catana, and Egesta, but never rivalled the fame of the Dorians in that island.

The invasion of Syracuse by the Carthaginians, their signal defeat by Gelon, with the slaughter of 150,000 of their troops, are not amongst the least of their exploits. The remnant, made captives, were employed in beautifying Syracuse and Agrigentum, producing those monuments of art which, in the time of Cicero, were held to rank amongst the treasures of antiquity. This period of refinement in art, and eminence in wealth and power, has been happily chosen by Mr. Kean for the display of a perfection in scenic art, and gorgeousness of costume, which far surpasses even his former efforts; and honoured by the presence of royalty on the first night, and the enthusiastic plaudits of an audience which filled every available part of the theatre, he must have felt that his enterprise, skill, and outlay, were properly appreciated.

For Bohemia, the country wherein a portion of the story alternates, but which presents no kind of historical connection with Greece, nor any architectural interest at the period embraced,—a substitute has been found in Bithynia, a name metrically parallel, and a province of Asia Minor, affording in its Phrygian pastoral costume another opportunity for effect, by its contrast with that of the polished inhabitants of the Greek city.

The scholar will recollect that Bithynia was the scene of a portion of the sufferings of Xenophon and the remains of the Greek contingent, in their retreat from Babylonia, after the defeat of the expedition of Cyrus against Artaxerxes.

For the architectural portion of this revival, Mr. Kean acknowledges the services of Mr. Godwin; a reason why the writer of this notice usurps a post not properly his own. To George Scharf, Esq. F.S.A. Mr. Kean gives his acknowledgments for the greatest possible assistance in important suggestions of details. The vegetation peculiar to Bithynia is from his drawings taken on the spot. His acknowledgments as regards the music are given to James A. Davies, Esq. Lecturer upon Ancient Music.

In the getting up of this play the utmost nicety of detail has been observed, whether of architecture or of costume; every group has its authority, every posture its type. Not a movement, not a step, but the student of the classic will recognise its propriety, yet the severe lines of Greek art seem picturesque to a degree, so well are they balanced; from the well-known outline of the temple to the contour of the drinking cup, all is correct. And the very ornament on the border of the waiting-woman's dress resolves itself into a fret or a scroll.

The first scene includes a restoration of the Temple of Minerva, at Syracuse (restored), painted by Telbin. The fine proportions of the peripteral temple are most effectively shown, standing, as it does, on the highest portion of the island. The roof of the Temple of Diana appears beyond, and part of that of Juno Olympia to the extreme right.

Scene 2 is the banqueting-room in the palace, a vast apartment of admirable design. Upon a raised dais recline upon *triclinia* the two kings, the queen, and attendants. Statues of females, called *Canephoræ*, standing upon stylobata, support a broken entablature, which surrounds the room and supports a coffered ceiling. These Canephoræ are so called from the *κανεον*, or *canistrum*, which they carry on their heads. In this *canistrum*, or circular basket, the sacrificial cake, chaplet, knife, and frankincense were deposited at a sacrifice, and carried on the head of a virgin, more especially at Athens.

> "Illa forte die castæ de more puellæ,
> Vertice supposito festas in Palladis arces,
> Pura coronatis portabant sacra canistris."

In the Panathenaia, the Dionysia and other public festivals, two virgins of the first Athenian families were appointed to the office.

The interiors throughout the piece are delicately polychromatized: mouldings, coffers, soffits, triglyphs, and capitals are picked out with discretion, and the plain portions of wall hung with tapestry. Upon the triclinia (*τρεις κλινη*,), or couches for three, in attitudes of studied art, recline or sit the royal party: their dresses are admirable studies of Greek costume, and of costly material; chaplets encircle their heads. The dress of *Polixenes* is of more Eastern character, but less effeminate. The gradation of rank of lords, ladies, and attendants is nicely defined.

In the heroic ages the Greeks sat. Homer mentions three kinds of seat the *ἑιφρος*, for two; the *θρονος*, on which they sat upright with the feet on a stool; and the *κλισμος*, on which they lay back at an angle. For their mode of reclining, see Potter. Recumbent figures in the antique, are considered to be *εταίραι*, or courtesans, as modest women only sat.

In this scene occurs the Pyrrhic dance, a warlike dance of youthful warriors armed with buckler and sword, who execute a kind of mimic fight, giving and receiving blows with rhythmical precision, and emitting from their shields a martial accompaniment to the music of their flutes,—a general name with the Greeks for all wind instruments of one tube only, of whatever material composed. According to Hase, the Pythian flutes more resembled our trumpets.

This dance at the Princess's Theatre is really a masterpiece of art. The combinations are admirable, and the wedge form amongst others assumed by them gives an imposing notion of the force of the Greek phalanx under such a disposition.

In Act 2 we have the Court of the Gynæconitis, or women's apartments. This scene, drawn in angular perspective, and capitally painted, discloses an open quadrangle or court, surrounded on three sides by porticos, but closed on the fourth. In the men's quarters, the portico continued round all four sides. Homer's descriptions of the Greek house are too scant to be of much service, our first precise information dating about the period of the Peloponnesian war. The two grand divisions were the *ανδρονιτις* for men, and the *γυναικωνιτις* for women. The description of Vitruvius is doubtless substantially correct.

The next scene shows one of the Latomiæ of Syracuse, and is interesting as being formed upon the same principle as the cavern still existing, supposed to have been used by the tyrant Dionysius for the purpose of concentrating sound upon one point as a tympanum for detective purposes, and thence called his "ear." The serpentine form of the passage is well expressed.

In the scene, entitled a "Room in the Palace," a distant prospect of great topographical interest is displayed. The tapestries in the chamber display mythological designs from vases discovered in the south of Italy.

Act 3, is entirely devoted to the trial enacted in the theatre of Syracuse. The effect of a vast semicircle containing a countless multitude of spectators, growing fainter in distance as they recede, still rising in height as they approach the external wall, which finishes against the clear blue sky in an open colonnade, is a happy effort. The work of Professor Donaldson, on the "Theatre of the Greeks," supplies a mine of information on the subject to those who will seek it there.

It is in this scene that the answer of the Delphic oracle to the jealous Leontes, is declared with all the circumstance of pomp its reputation at that period called forth. The guardian deity of the Doric race was Apollo, and the most celebrated of his oracles, that of Delphi. A cleft in Mount Parnassus was the seat of the oracle. Its responses were delivered by a woman called Pythia (from *πυθεσθαι*, to consult), who, after having washed her body, and especially her hair, in the fountain Castalis, seated herself on a sacred tripod, on which was a lid of a circular figure, and thence delivered her answers. The first temple constructed over this chasm was destroyed by fire; the second, whose front was of Parian marble, was raised by the Alcmœonidæ, an Athenian family. In the innermost sanctuary (the *αὐτον*), was the statue of the Deity; before it the altar, with eternal fire fed from fir-wood. The Pythia, or *προφητις*, was always a native of Delphi, and when once in the service of the oracle, never left it. For ages the answers were delivered in Greek hexameters. At first one Pythia sufficed, then two; and a third was added in case of necessity. But in the time of Plutarch, the oracle had lost so much of its importance, that one Pythia sufficed.

In the theatre scene, the ark or chest in which the answer of the oracle is conveyed from Delphi, is derived from an Egyptian example, and a Pompeian painting. The panels are ornamented with devices from some newly discovered coins of Delphi, and the inscriptions are the recorded sayings of the seven wise men of Greece.

In Act 4 occurs the allegory by which Shakspeare thought it necessary to explain the jump of sixteen years in his history. Modern authors are not so conscientious. Luna, in her car, accompanied by the stars personified, sinks before the approach of Phœbus. Chronus or Time, surmounting the globe, describes the events of the sixteen years supposed to have elapsed. Phœbus ascends in the Chariot of the Sun. The apotheosis of Marguerite in "Faust, and the dream of Queen Catherine in "Henry the Eighth," are totally eclipsed by the splendour and perfection of this marvellous production of artistic skill and mechanical contrivance.

The *locale* is now changed to Bithynia. A clever interior, in somewhat of a Persepolitan style, introduces one to Asia Minor. Square columns with bold capitals, formed of pairs of animals and other features denoting Assyrian type, tell their own tale and invite attention.

After this follows a pastoral scene of great beauty, affording a distant view of the city of Nicæa, on the Lake Ascania. Nothing can be conceived more rural. The Phrygian dresses of Florizel and Perdita, as shepherd and shepherdess,—the sheep adorned with ribands, and adding the "drowsy tinklings" of their bells to the distant music of the pipe, the invariable Hermes crowned with flowers, without whose presence no pastoral scene could be complete, the green sward decked with flowers, and the sky above bright and blue as Phrygian sky should ever be, and, beyond all, the beautiful and extended prospect of the distant lake and city, form a tableau not easily rivalled. This peaceful scene is, however, soon disturbed by the entrance of a crowd of villagers, shepherds, rustics, of every description of character and costume, preceded by twelve men clad as satyrs, when one of the most wonderful dances is performed by a crowd numbering over 200 that probably ever was attempted upon any stage.

The festivals of Bacchus or Dionysus—called Bacchanalia or Dionysia,—were characterised by the most boisterous mirth, drunkenness, and noise. Virgins bearing poles surmounted by the *φαλλος*, called thence *φαλλοφοροι*, crowned with ivy; then followed the *ιθυφαλλοι*, wearing gloves of flowers; after them the *λικνοφεροι*, who carried the *λικνον*, or musical van, whence the god was also called *λικνιτης*; and every variety of dress and movement contributed to these indescribable orgies.

Some put on the skins of fawns, others carried thyrsi, drums, fifes, and flutes, &c. shouting "Evoe Bacche! Io Bacche! Evoe!"

Act 5th restores us to Sicily. The first scene represents the garden of the palace of Leontes, and is adapted from a drawing found at Herculaneum.

It is singular that Syracuse was the only place where the papyrus was indigenous, whence its representation becomes a point of interest.

The tombs of Syracuse restored form a scene of great beauty. The hour is sunset, and the effect is remarkably good. The excavations in the rock between the ancient theatre and the heights of Epipolæ are selected for this restoration: small porticos adorn the entrances. The inscription "ΤΑΦΟΣ ΒΑΣΙΛΙΚΟΣ," attests the rank of the occupants of one of them. The inscribed stile, and the column entwined with rich fillets, mark the honours of the wealthy: small plots of flowers, and stakes tied with ribands, indicate the graves of the lowly.

The last scene of the play is described as "the Peristyle of Paulina's house, with part of the sculpture gallery." A spacious quadrangle surrounded by a Doric colonade, faces the stage in parallel perspective. In the centre stands a mausoleum of elegant design. The touching incident of the unveiling the supposed statue of Hermione to the heart-broken Leontes, here takes place; the solemn procession by torch-light, the crowd of courtiers hushed to silence, and the light thrown upon the figure of Hermione alone, make a fitting finish to the series of tableaux of which this representation may be truly said to consist.

For Mr. and Mrs. Kean, it will suffice to say that they sustained admirably their long-tried reputation. Without the additional attractions conferred by lavish expenditure with taste and judgment, the result of which has been described, their acting alone would suffice to secure a run for the revival. An analysis of the costumes would scarcely be within

our province; but they well deserve a patient investigation, being taken from the best available authorities. Hope's Costume of the Ancients supplied many costumes, but in every instance the original sources whence they were derived have been referred to. The vast number of painted vases yearly exhumed in Italy, supply much information.

In the production of the scenery, Mr. Grieve has outdone himself, and due praise must be given to Mr. Lloyd, Mr. Gordon, and his other assistants.

A. F. Ashton.

LONDON LOCALITIES IN THE SEVENTEENTH CENTURY.

RED LION FIELDS.—LAMB'S CONDUIT FIELDS.

We are indebted to Mr. Robert Lemon, of the Record Office, for some extracts from minutes of Privy Council, which serve to illustrate the growth of London:—

25th *July*, 1683.—"Upon reading this day at the Board, the humble petition of Emanuel Gomez and William Shepheard, praying liberty to make shew of the Royall Sport of Bull-hunting, on horseback, after the Spanish and Portugall manner, in Lamb's Conduit fields, according to the Lycence formerly granted them, by his Majesty, which they, in obedience to his Maties Commands signifyed unto them by the Right Honble the Earle of Craven, forbore to putt in execution till his Maties further plensure to them in that behalfe: His Majesty was pleased to order, that free Liberty and Lycence be, and it is hereby given to the sayd Emanuel Gomez, and William Shepheard, to show their sayd sport of Bull-Hunting, on Horsebacke in Lamb's Conduit fields as aforesayd, when and as often as they shall think fitt, pursuant to his Maties sayd Lycence; Notwithstanding any Orders or Comands from his Ma^ty to ye coutrary; whereof all persons are to take notice, and permit the same accordingly."

Again:—

24th *July*, 1684.—"His Majesties Justices of the Peace, for the County of Middlesex, having this day represented to his Ma^ty in Councill, That the Grand Jury at the last Generall Quarter Sessions, held for the sayd County, Did present their sence of many great inconveniences occasioned through the late increasse of Buildings in the said County, neer the City of London, and their apprehension of further inconveniences by reason of more buildings in the like manner intended and began; Desiring the Court humbly to represent the same unto his Ma^ty on the behalfe of the said County, and that they the said Justices are of the same opinion with the said Grand Jury of the Inconveniencey from the increase of Buildings and particularly from those lately begun by Dr Nicholas Barebone, in Red Lion fields, by the stopping of severall highways which have been there, time out of mind, and which will not only choake up the air upon Gray's Inn, and destroy the rents of the poor of St. Clements, lying upon that part of St. Andrews, Holbourne towards the fields, But very much annoy all the buildings in and about Bloomsbury, to the prejudice of divers persons of honour and Quality, as well as other his Ma^tys Subjects there Inhabiting, and to the Annoyance of his Maties Private highway through the fields, the said Dr Barebone having already made severall Lay Stalls there, of Garbage, and Offalls, from severall Marketts, sufficient to endanger the bringing of a Plague into the Neighbourood.—And the said Justices further informing his Ma^ty that the said Barebone did of late, and particularly upon the 11th day of June last, march about the fields in the head of two hundred men, shouting and hallowing within the hearing of Grays Inn, and waving their hatts as by way of Challenge to the Gentlemen of the Society to come out and encounter them, the said Barebone himself Exhorting them that they should not be discouraged for he would back them with a thousand the next morning. And whereas Andrew Lawrence Esqre Surveyor of his Ma^tys highwayes did likewise by his humble Petition this day read at the Board, represent to his Ma^ty that his Ma^ty and his Royall Predecessors time out of mind, have had a private way on the backside of Holbourne and Grays Inn, and soe through Finsbury fields to Kingsland, for his Ma^tys passage to New Market, which said way, with the Gates and Bridges are maintained at his Ma^tys charge, And that now the said Dr Barebone having taken Red Lion fields purposing to Build the same, hath browne downe the Bankes and filled up the Ditch, in severall places adjoyning the sayd way, and carryed through the Gates many loads of Bricks, Lime, and Sand, to the great damage of the way, and that he threatnes to breake downe the Gates, & to arrest the Gate keepers if they obstruct the same, And therefore the said Justices of the Peace & the said Mr Lawrence respectively praying that his Ma^ty would be pleased to interpose his Royall authority for the puting of a timely stop to the said Buildings in the consequence whereof soe many of his Ma^ts Loyall and Dutifull Subjects are concerned, and for the preservation of his Just and Ancient right in the aforesaid way;—Upon consideration whereof, It was ordered by his Ma^ty in Councill, That Sir Robert Sawyer, Knt. his Ma^tys Attorney Generall, doe consider of, and pursue the best & most effectuall meanes that may be used in Law, for preventing the said Buildings in the Red Lion fields, and for preserving his M^atys said private way on the backside of Holbourne and Grays Inn, as aforesaid, from being abused or encroached upon. And it was further Ordered that Mr Attorney Generall doe likewise prosecute the said Dr Nicholas Barebone and the rest of the Rioters, for the Riot committed by them on the 11th day of June last, above mentioned."

Dr. Barebone, however, brought actions against those who interfered with him, for we find under the following date:—

3rd *October*, 1684.—"Upon the humble Petition of Edward Guise, Esqre, one of his Ma^tys Justices of the Peace, for the County of Middlesex, this day read at the Board, Complayning that he hath lately had severall vexatious and malicious actions brought against him, and severall Constables (who acted by his Authority) at the suit of divers persons employed by Dr Barebones, and by his promotion, upon no other cause, then for the Petitioner's granting Warrants by directions of his Ma^tys Attorney Generall to suppresse the said Dr Barebone and his men from committing any insolencys in their late riotous meetings in Red Lion Fields, and to prevent them from annoying his Ma^tys Subjects, And therefore Praying, that the said Actions may be defended by Mr Burton at his Ma^tys charge: It was Ordered by his Ma^ty in Councill, That it be and it is hereby referred to the Rt. Hono^ble the Lords Commissioners of his Ma^tys Treasury, to give such Order for the Petitioners Indempnity in this matter, as their Lordships shall judge meet."

CELLAR DWELLINGS.

Many evils are increased by simple thoughtlessness. In the basements of some houses you may see the only window, not 3 feet wide or more than 9 inches above the footpath, covered up by an iron grating, placed in many cases not more than 6 or 7 inches from the front of the building.

Hundreds of people live below the surface of the London streets, in rooms to which such apertures afford the only means of light and ventilation. Small as is the limit here for light, that necessary of life, it is still further curtailed by bars of iron, as strong as, and more closely set than, to any cell in Newgate.

Some would refuse to believe how many are born and die in these underground dens, into which a ray of sunlight can scarcely struggle. Here and in the garrets is to be found the largest amount of poverty. In addition to the want of light and air, these places are in most instances intolerably damp. The back-kitchen is generally used by the numerous tenants in the house for washing, &c.: in many the cesspool-closet and dust-heap are placed; and in eight cases out of ten the contents of the closet are passed under these places in badly-formed drains, that allow the poisonous gases to spread around.

We have already directed attention to the condition of many of the underground cellars of London. Our readers will remember the letter of a gas-inspector, printed in our pages some time since, in which he described the extent of the dangerous accumulations he had met with in many hundred instances. A systematic and general clearing of the undercrofts of London would add considerably to the wholesomeness of parts of the metropolis.

INSTITUTION OF CIVIL ENGINEERS.

At the meeting held April 22nd, Mr. John Hawkshaw, vice-president, in the chair, the Paper read, was "On the Junction of the Atlantic and Pacific Oceans, and the Practicability of a Ship Canal, without Locks, by the Valley of the Atrato," by Mr. F. M. Kelley, U.S. (America.)

It was stated, that the consideration of this subject had become urgent, and the adoption of some definite plan indispensable, in consequence of the commercial activity which had resulted from the discovery of gold in California and in Australia, and the rapid development of trade throughout the whole of the Pacific.

The route more especially advocated in the Paper would commence on the Atlantic side, at the estuary of the Atrato. It was then proposed to follow the Truando for thirty-six miles, deepening and widening its channel, where required, to a point named Townsend Junction. Up to this point, the works required would be very simple, as the banks were principally levels, formed of sedimentary deposit, and the soil of the bed of the river was of the same character. From Townsend Junction, an open cut was contemplated for a distance of thirteen miles. It was then proposed to tunnel through the base of the ridge, a length of 3½ miles. A double tunnel was recommended, as the width (200 feet) would require a single arch of too great a height: the division into two arches would also have the advantage of precluding any possibility of collision. The height proposed (120 feet) would be sufficient to allow of the passage of the largest vessels, by merely lowering their top-masts. From the tunnel to the Pacific, a distance of eight miles, the canal would follow the valley of a small stream, and debouch into Kelley's Inlet.

A summary of the estimated cost of the canal, including the works of every kind throughout its whole length, with lighthouses, piers, depôts, &c.—as also the execution, medical, and commissary departments, was annexed to the Paper. The total, including all contingencies, was fixed at 145,407,042 dollars, or 30,000,000*l.* In constructing the canal of a width sufficient for the passage of one ship at a time, the estimate would be reduced nearly one-half.

COMPENSATION CASE.

ST. JOHN'S NATIONAL SCHOOLS, WALHAM-GREEN, AND CHELSEA WATER-WORKS COMPANY.

On the 15th instant, Mr. Under-Sheriff Burchell, and a common jury, sat at the Swan Inn, Walham-green, to assess the compensation due to the trustees of St. John's National Schools, for that the schools had been injuriously affected by works done by the Chelsea Water-Works Company, in pursuance of their Act.

Mr. Maclure, surveyor, on part of trustees, said that the road in front of the St. John's schools had been raised 16 inches above its original level by the company, in laying their large pipes for supplying London with water. The floor of the schools was formerly 4 inches above the road and footpath, but now the road was 12 inches above the schools. The effect had been to block up the doorways of the porches, which abutted on the footpath, and to render the schools damp and unwholesome. Alterations had been made by the company, with the view of remedying the inconvenience, but were wholly inefficacious. He considered that the schools were undoubtedly injuriously affected by raising the road. He saw no other mode of restoring the property to its original value, except by rebuilding the schools, or raising them in all parts to the same level relatively to the present road as they were to the former. He had made an estimate, and found, that to raise the buildings 16 inches, would cost 314*l.* and thought that the trustees would have to pay 25*l.* for rent of other premises while the works of restoration were being done. These two sums together made 339*l.* which was the amount the trustees claimed from the company.

Mr. Bean, surveyor to the Fulham District Board, concurred in the evidence of Mr. Maclure; and Mr. Burge, medical officer of health of the district, and Mr. H. P. Ree, M.R.C.S. considered that the schools had been rendered damp by raising the road, and that the health of the children must suffer therefrom.

For the company, Mr. Butt, Q.C. called Mr. Lee, surveyor to the company, who said that he considered the main building of the schools had not been in the

least affected by the works of the company. There was a space, or area, of 4 feet between the building and the footpath, and if there was proper drainage, there could be no damp. He admitted that the porches which abutted on the footpath were damp, but said that they might be pulled down and built elsewhere.

The jury, after a short deliberation, returned a verdict for the claimants with 200*l.* damages.

SPECULATIVE BUILDERS.

INSOLVENT DEBTORS' COURT.

A CASE came lately before Mr. Commissioner Phillips, in which a creditor opposed, as he stated, to expose before the public the system on which speculative builders worked. The case elicited facts showing that the insolvent had, with a little capital of about 160*l.* taken a plot of ground, and erected several houses, which cost him about 1,800*l.* and the owner of the land, who had advanced money to the insolvent on mortgage, had obtained possession of the property for his debt of 1,320*l.*

The complainant wished it to be known that it was a system by which tradesmen were deprived of their goods. The owner of property generally let a slice of ground to a poor man, and afterwards recovered the same, covered with houses, at a small sum. In this case the insolvent had been a journeyman carpenter, and the landlord had got all the work and materials of the creditors, leaving nothing for any one.

Creditor: I only want to expose the system. It is very much carried on.

Mr. Commissioner Phillips thought there was nothing to prevent the insolvent from naming a day for the final order. He had a capital when he began, and as to exposing the system, all he could say was, that if creditors supplied materials to men who took land on such terms, they had only to thank themselves. Let tradesmen make inquiries before they supplied goods, and then, if they were deceived, this Court would protect them. A day was named, with protection, for the final order.

Notices of Books.

VARIORUM.

THE last number of the *Journal of the British Archæological Association*, March 31st, contains, *inter alia*, a very valuable and interesting paper, by Sir Gardner Wilkinson, on an Etruscan tomb at Cervetri, the ancient Cære. It was a custom of the Etruscans to suspend against the walls various objects which had belonged to the deceased, or were provided by the family. In the tomb described and illustrated, *fac similes* of these objects are made in bas-relief on the wall; and, being painted, explain the appearance they presented in ancient times. The custom of painting their large tombs was general in Etruria. "As in all early styles, the primaries, blue, red, and yellow, predominate, together with black and white; the secondary colours being fewer and less dominant, and green being sparingly used in order to light up its companions, but not in masses, which are the sign of an artificial and perverted taste."——A fourth edition of "A Catechism of the Steam-engine, in its various Applications to Mines, Mills, Steam Navigation, Railways, and Agriculture; with Practical Instructions for the Manufacture and Management of Engines of every Class," by Mr. John Bourne, consulting engineer, has been issued by Messrs. Longman and Co. This edition of a very useful work for the student, the practical engineer, and the general reader, is greatly enlarged and improved, and is illustrated by eighty-nine wood engravings. It may be regarded as an introduction as well as a supplement to the quarto treatise by the same author, which we have also before favourably noticed.——In the April number of the *Edinburgh Review* (Longman), and in the March number of the *Quarterly* (Murray) are reviews of Mr. Ruskin's works, both of them objectory, and indeed too abusive; but it must be admitted that Mr. Ruskin, by his own outrageous abuse of modern painters, has himself called forth these reflexes of his own exaggerated criticism and undue severity. It would be well were critics to temper the biting acridity of their sarcasms with a little of the milk of human kindness; but we suppose the reviewers regarded Mr. Ruskin either as a poacher on their own rough manors, or as himself fair game to all comers in the slashing line. The quarterlies under notice contain some interesting and able articles; but perhaps the only one to which we need here specially allude is that, in the *Quarterly*, on the Great Eastern steamship, and titled, "The Triton and the Minnows." We some time since illustrated the dimensions of the leviathan in course of construction at Mr. Scott Russell's, by comparison with a London square. In much the same way, the reviewer endeavours to give an adequate idea of its huge dimensions. It is said that ten water-tight bulk-heads, 60 feet apart, divide the ship transversely: whilst two longitudinal iron walls, 36 feet apart, traverse 350 feet of her length. If we could take Mivart's Hotel, and drop it into one of these; take Farance's, and drop it into the second; take Morley's, at Charing-cross, and fit it into a third; and adjust the Great-Western Hotel, at Paddington, and the Great Northern, at King's-cross, into compartments four and five, we should get some faint idea of the accommodation to be afforded. Each compartment will be a distinct hotel, with its splendid saloons, upper and lower, of 60 feet in length, its bedrooms, its kitchen, and its bar. The "big ship" is destined, be it remembered, to carry 800 first-class, 2,000 second-class, and 1,200 third-class passengers; making a total of 4,000 guests, independent of the crew. The total length of the vessel will be 692 feet. To make the capacity of these figures better understood, it is remarked that neither Grosvenor nor Belgrave-square could take the Great Eastern in: Berkeley-square would barely admit her, and when rigged her mizen-boom would project some distance up Davies-street, whilst her bowsprit, if she had one, would hang a long way over the Marquis of Lansdowne's garden. She is the eighth of a mile in length, and consequently four turns up and down her deck will afford the passengers a walk of a mile. Her width is 83 feet, the width of Pall-mall. Across her paddle-boxes her breadth is 114 feet; and if she had to steam up Portland-place, she would scrape the houses on each side. This floating town will be propelled by three powers—paddle, screw, and sail. There is to be a gas manufactory on board, and the gas will be laid on to all parts of the ship, while at the mastbead will be fixed the electric light.——In "Observations on Hop Drying," by Mr. S. E. Rosser, C.E. (Richards, Great Queen-street), we have some professional advice as to the construction of hop-kilns, with an account of an improved stove and evaporator, to which old kilns can be adapted, little alteration, it is said, being necessary. The tract itself comprises an attempt to reduce the different modes of hop drying now in use to a general system, as well as a description of the new and economical apparatus alluded to.——Mr. J. B. Lawes, F.R.S. the well-known agricultural chemist and F.C.S. with Dr. J. H. Gilbert, F.C.S. have reprinted, from the *Journal of Agriculture*, a "Reply to Baron Liebig's Principles of Agricultural Chemistry" (Clowes, printer), in which the authors state as their final conclusion, that, "in a word, in the existing condition of British agriculture, a full production of the saleable cereal grains, with other exportable produce, is only attainable, whether by manures, fallow, or rotation, provided there be an accumulation of available nitrogen within the soil itself." It is very desirable, with reference to the sanitary question as to town sewage and its uses, that agricultural chemists should come to some common understanding on the subject of manures, and their applicabilities to soils. Liebig is a very great authority, but he was admittedly at one time wrong in his conclusions on agricultural subjects, and it is quite possible that others may share the truth even with him.——A copy of the "Catalogue of the Compositors' Library, 3, Raquet-court, Fleet-street," has been forwarded to us. From statistical information accompanying it, we are glad to notice that this library now numbers 2,500 volumes; that of these, H.R.H. the Prince Consort contributed 163 volumes of the works of the best English authors; and that many literary gentlemen and others are evincing an earnest interest in the success of this praiseworthy undertaking. The library was opened as a lending library on 10th September, 1855, and to 22nd March, 1856, the number of persons who borrowed books was 1,350, and the number of volumes in the hands of members at the latter date was 860, one volume only being allowed to each member at a time. A series of rules, we observe, have been printed by an arbitration committee for the settlement of disputes between the compositors of London and their employers, the object being to avoid referring trade disputes to courts of law. The compositors are thus setting a very commendable example in various ways to other classes of their industrial brethren, and we wish them all success in their endeavours.

Miscellanea.

MIDDLESEX REFORMATORY SCHOOLS.—The designs in competition having been sent in, as we are told, we have received two letters, pointing out asserted connections between some of the magistrates and one or more of the competitors. The committee would save themselves much animadversion by naming, say three professional men, to make the selection. We understand that forty-one designs have been received.

STATUES AND MONUMENTS.—A resident at Washington (U.S.), who is a native of Greenock, has contributed an inscribed block of Seneca freestone towards the monument to James Watt, projected at Greenock. ——The Nelson marble statue at Norwich has been removed from its former position in the Market-place, and set up in front of the Grammar School, within the railings of the Upper Close-square. It seems to be sadly in want of a proper pedestal, which might be had for 150*l.* or less. Mr. Milnes, the sculptor of the statue, is said to be satisfied with its change of position.——It is proposed to erect a monument to John Wesley at Epworth, his birthplace. Subscriptions have been opened and a design suggested, comprising a statue 7 feet 9 inches in height, on a square stone basement 9 feet in height, and covered by a Gothic floriated canopy 25 feet in height to the apex of the arch.——The *Liverpool Journal* states that Mr. Spence, of Rome, has been selected to prepare a statue of the late Archdeacon Brooks.——There is some probability that a statue to the great navigator Vasco da Gama, to Camoens, and to the discoverer of Brazil, Nuno Alves Cabral, will be erected in Lisbon.

THE TRAVELLING STAGE AND CRANE: PATENT REFUSED.—On a motion in Chancery for a month's further time to enrol the specification of Adamson's patent, for the construction of piers by travelling stage and crane, the judge decided that in a case such as this, where an invention had suggested itself by degrees in the progress of works at Hartlepool, worked day after day in the presence of hundreds or thousands of persons, and where no intention of making it the subject of a patent occurred to the mind of either of the contending persons, Mr. Adamson and Mr. Robinson, except as an after-thought, he could not grant protection under the Great Seal, and therefore dismissed the petition with costs.

GAS AT DONCASTER.—From evidence given before a Committee of the House of Commons, and particulars added by the local *Gazette*, it appears that in winter 100,000 cubic feet of gas were produced at the Doncaster Gas Works every 24 hours from thirty retorts; that in the summer months only nine retorts were kept at work; and that 14,000,000 feet at 4s. 2d., 4,329,000 at 2s. 6d., 2,000,000 for public lamps, in addition to a leakage of 2,500,000, were annually made; and the quantity of coal consumed was 3,100 tons, averaging, with freightage, 10s. per ton. The works have nine miles of piping, embracing an area of six miles. The *Gazette* complains of the immense difference in price between 2s. 6d. to large consumers and 4s. 2d. to small.

THE OLD WATER-COLOUR GALLERY.—The members of the old society make an excellent show this season. There are 300 works, nearly all excellent in their way; and the number of little tickets put up on the private view day showed how they were appreciated. Messrs. John Gilbert, John F. Lewis, Naftel, Carl Haag, W. Collingwood, F. W. Burton, T. M. Richardson, and Miss Gillies, call loudest for praise.

UMBRELLA RECEPTACLE FOR PUBLIC VEHICLES. —Mr. Tyerman's patent vehicle umbrella receptacle is a new arrangement whereby the discomfort of wet umbrellas in omnibuses, railway carriages, &c. may be obviated. The omnibus receptacle is fitted on the interior of the omnibus door, and is simple enough as well as convenient, and in view of the passengers, each of whom, nevertheless, would require to keep a sharp look-out against London thieves, whether "known to the police" or more private professionals. It is proposed, however, as an additional check, that a ticket be appended to each, and that the conductor give up the article ticketted only to the duplicate ticket-holder.

Builders' Plans.—At the Bridgewater County Court, on 21st ult. an action was brought by Mr. T. Hutchings, a builder, against the Rev. G. Branston, a Methodist minister, to recover 15*l.* for preparing plans and specifications for a chapel, vestry, school-room, and cottage, at Pawlett, to cost in all about 455*l.*—the chapel itself to cost 310*l.* odd. The plans and specifications were prepared in the beginning of 1854. There not being sufficient funds at the time, and, indeed, 200*l.* being considered to be the extent of what could be collected for the purpose, no use was made of the plans, &c. at that time; and afterwards the plaintiff was "excommunicated" by the defendant, who refused payment of the plaintiff's demand, on the ground that the committee and not he was liable if the plaintiff's demand was a just one, but that the plaintiff never expected to be paid for them till he was excommunicated, although he, doubtless, anticipated that the contract would be carried out by him as builder. After the plaintiff was excommunicated, another builder, Mr. Keitch, was employed to build the chapel, which he did for 175*l.* with the addition of a gallery and accommodation for 180 persons. Under these circumstances, the plaintiff raised the present action. Among the evidence led, was that of Mr. Knowles, a surveyor, who deposed that a fair cost for preparing the plans, &c. would be 11*l.* 5*s.* the usual charge being 2½ per cent. on the amount, and the plaintiff stated that he would be perfectly satisfied with this sum, although due for the chapel alone. The judge, after hearing the evidence, said the principal point lay in the contract entered into between the parties. On the one hand, it might be consistent that the plans and specifications were expected to be paid for; and on the other, that the plaintiff being a member of their body, they should invite him to inspect the ground for friendly purposes. The minister was not the person to go about and obtain orders—his position excluded him from that—and therefore it was not likely that he would pledge himself as the responsible party in the case. From the evidence, it appeared when the plans were refused there was nothing said by the plaintiff that he expected to be paid for them, and nothing whatever was heard of the present claim until very recently. If the plaintiff was unable to make out his case more satisfactorily, then there must, under the present circumstances, be a verdict for the defendant. Verdict accordingly.

Oxford Architectural Society.—At the first meeting of this society for the present term, held on the 23rd ult. Mr. Parker read an elementary lecture on the Mediæval Architecture of the north of France, and especially of Normandy. He observed that between the Roman Period and the eleventh century there were very few buildings of any importance. An attempt was made by Charlemagne to revive the art in his time, and of this Germigny is a curious example, drawings of which were shown. He then described the abbey church of Cerisy, which had a flat timber roof: it was built by the father of the Conqueror; then the two abbey churches at Caen, and several others in that neighbourhood, and several drawings of some bases at Caen, identical with some of those in the crypt of Worcester Cathedral; described the remarkable series of early vaulting in Caen and its neighbourhood, and briefly mentioned the churches of Paris of that period—then Sens and Soissons, Eu and Coutances, Amiens and Mont S. Michel—then Santa Chapelle and the churches of Rouen. He pointed out the chief differences between French and English Gothic, and entered a little into the question of priority of dates, considering that in some things one country was in advance a few years, and in other things the other country, but that there was seldom a difference of more than ten years on either side.

Baths and Washhouses for West London.—At a Court of Common Council on 24th ult. an attempt was made to induce the court to agree to the recommendation of the Coal, Corn, and Finance Committee, on a petition of the West London Union guardians, that baths and washhouses be erected on a portion of the west side of Farringdon Market. The proposal was negatived by a majority of fifteen.

Northampton Architectural Society. — A Committee Meeting of the Architectural Society of the Archdeaconry of Northampton, was held on 14th ult. when a letter was read from the Rev. G. Curtis, chaplain at Constantinople, asking the opinion of the committee as to the style they would recommend for the new church about to be erected at Pera. After a long discussion it was resolved, that a building in Anglican style, with a spire, to contrast with the domes and minarets around it, and in the Early Pointed style, with lancet windows, would be the most appropriate. It was resolved, on an invitation from the St. Alban's Architectural Society, to hold the spring meeting at St. Alban's, on 17th June, being St. Alban's day. After some other proceedings the meeting separated.

The New National Gallery at Old Brompton. —In reply to a question in the House of Commons last week, the Premier announced that the Government had definitively resolved to remove the national pictures from Charing Cross to Old Brompton, so soon as arrangements could be made. Plans and estimates would be called for, and when these and the best mode in which the ground could be prepared for the purpose were decided on, the subject would be brought under the consideration of the House.

Electro-telegraphic Progress.—A submarine line has been laid across the Humber, as part of a direct telegraphic communication between Hull and London, by way of Grimsby and Peterborough. The cable, which is nearly two miles in length, weighs fully four tons. A second cable for the purpose of a direct communication with Grimsby is contemplated, as well as similar direct wires to Manchester and other towns.——The 4 000 miles of telegraph in India already constructed have cost 200,000*l.* or 20 lacs of rupees. The monthly expenditure amounts to 25,000 rupees. The monthly receipts, official messages included, have just reached that figure. One-third of all the messages are sent by natives, who have a strange fancy for this method of communication. It is said to be a fact, absurd as it may seem, that they prefer it to the post as a depository of secrets.

Society of Arts' Examinations and Certificates.—The published schedule of the subjects of examination for candidates from Institutions associated with the Society of Arts presents a fair field for competitive trial, while securing sufficiency of qualification in candidates. The certificates are to be of three classes, the first of which are only to be awarded to a high degree of excellence. Besides writing and spelling, the subjects of examination are arithmetic and geometry, mechanics, chemistry, physiology, botany, agriculture, geography, English history, English literature, and composition, Roman history, Latin, French, German, drawing. A list of books on each subject is appended, but they are merely recommended as useful manuals, the examiners being prepared to recognise knowledge however obtained. Several prizes, founded by members of the Society of Arts, are announced for excellence in particular departments. Candidates who pass the examination with distinction, will be recommended to the Civil Service Commissioners for appointments in those branches of the Civil Service where intimation has been given that the certificates of the Society of Arts will be regarded as testimonials worthy of credit. Many mercantile firms and public establishments, as well as members of Parliament and men of eminence in various respects, a list of whose names has been published by the Society of Arts, have also expressed their readiness to promote the success of the plan of examination by favourably considering the applications of candidates for employment who have passed honourably through this ordeal.

School of Art, Durham.—The annual report shows that the Durham School of Art has now been in operation for three years, and that the classes have been regularly and numerously attended. An additional class for ladies, in the afternoon, has been formed, and the attendance at this class is rapidly improving. The total receipts from the fees at the central school have amounted to 120*l.* 1*s.*; showing an increase of 21*l.* 10*s.* 6*d.* compared with the previous year. The morning class is at present attended by 25 students, the afternoon class by 11, and the evening class by 43. The committee, however, feel it necessary to appeal to the inhabitants of Durham, to learn whether the School of Art shall be maintained in an efficient condition by their assistance and co-operation.

Steam-carriages on Common Roads.—Amongst the communications received in reply to "C. C. C.'s" query, one correspondent, under the signature of "High Pressure," says that the chief cause of the failure of these carriages was their weight,—Hancock's, one of the most successful, weighing about a ton per horse-power; but that since the weight of the locomotive has been reduced to less than 120 lbs. per horse-power, and that there is every probability that if now tried again, with the improvements resulting (in the railway locomotive) mainly from the former abortive experiments in common road steam-carriages, they would not only be successful as a mechanical problem, but would yield a large return for capital employed. Another correspondent, Mr. H. Gardner, refers "C. C. C." to the *Mechanic's Magazine*, about the year 1835, for a reply to his question. This correspondent also states that the endless railway-engine to which we alluded is "still on the cards," and may be seen at Messrs. Boydell & Co.'s works at Camden Town; but that it is only employed in agricultural operations at present, although it was successfully used in bringing up guns for the Naval Brigade at Sebastopol, and met with the approval of the commander-in-chief there, Sir William Codrington.

Proposed Memorial of '51.—I am very pleased to see the letter of a "Member of the Society of Arts" on the subject of the proposed memorial of the Great Exhibition of 1851. A member of the Society of Arts myself, and feeling a great interest in the proposal, I had subscribed a small sum, and have long wondered what had become of the large amount which I heard had been collected.—L.

Strike of the Carpenters and Joiners employed at the Surrey Gardens. On Thursday in last week, at dinner-time, the carpenters and joiners in the employment of Messrs. Scott and Cornwall, the contractors for building the music-hall and making alterations at the Surrey Gardens, struck for an addition of sixpence, requiring 5*s.* 6*d.* per day.

Coating Metallic Surfaces with Aluminium. —A correspondent "Veritas" states that the patent for this process, alluded to in our No. of 19th ult. was "still-born," and that the only patent now extant for making Aluminium, and for plating therewith in this country, belongs to other persons altogether.

Digging Machine. — Experiments were tried recently, in the Park of Neuilly, with a newly-invented machine, moved by steam-power, and mounted on four rollers, which serve as wheels. In the back part of the machine are placed nine powerful levers which rise and fall alternately, and send into the ground, to the depth of about 15 inches, a double row of pickaxes in the form of hoes. It is calculated that this machine will dig and turn over a surface of fifty yards in less than ten minutes, or two and a half acres of ground in about thirty hours, supposing that the machine does not get out of order. The engine is of eight-horse power. *Galignani.*

Foolscap.—Everybody says *Notes and Queries*) knows what "foolscap" paper is; but they would be puzzled to tell how it came to bear that singular cognomen. When Charles I. found his revenues short, he granted certain privileges, amounting to monopolies, and among these was the manufacture of paper, the exclusive right of which was sold to certain parties, who grew rich, and enriched the government at the expense of those who were obliged to use paper. At this time all English paper bore in water-marks the royal arms. The Parliament under Cromwell made jests of this law in every conceivable manner, and, among other indignities to the memory of Charles, it was ordered that the royal arms be removed from the paper, and the fool's cap and bells be substituted. These were also removed when the Rump Parliament was prorogued, but paper of the size of the Parliament's journals still bears the name of "foolscap."

The best Obstruction to Robbers.—An experienced burglar (a ticket-of-leave convict) has confessed that, for a street-door, a chain is a more perplexing obstruction than locks, bolts, or bars: both at windows and doors bells are a serious disturbance; but, worst of all, is a little yelping dog (being little, the easier hid under the bed or drawers), that does not attack intruders, but runs away barking. This should increase our affection for the dog, which is the only animal that leaves and forsakes his own kind voluntarily to follow man. It is true, and the truth should bind man to be the dog's protector and friend—and, let me add, "not to tax him so highly."—I.

Birkenhead Graving Docks and Ship-Building Yards.—There is a great quantity of building work going on at Birkenhead. The *Liverpool Journal* in an article on this subject gives the following list of the contracts entered into, and the value of work done in two years:—

Mr. Laird's original contract ...	£35,000	
,, workshops	7,000	
,, machinery and plant, say	15,000	
Value of Monk's Ferry land ...	10,000	
		£67,000
Messrs. Clayton and M'Keverigan's original estimate	£18,000	
,, workshops	4,000	
,, machinery and plant	9,000	
Value of adjoining premises.....	12,000	
		43,000
Messrs. Clover and Royle's original estimate	£18,000	
,, workshops	4,000	
,, machinery and plant	9,000	
		31,000
		£141,000
Corporation work next to Mr. Laird's.....	£8,000	
Railway company	3,000	
Mr. Price's executors	3,000	
Woodside commissioners.....	10,000	
		24,000
Amount of work done between Woodside and Birkenhead ferries, inclusive, in two years		£165,000

SALE OF HOUSE, LOMBARD-STREET. — On the 24th, Mr. T. S. Smith sold, at the Mart, the freehold business premises, 45, Lombard-street, let on lease which expires in about four years, for 110*l.* per annum. The house is in a bad condition. It sold for 3,470*l.* about 31½ years' purchase.

TENDERS

For new merchants' offices, Old Hall-street, Liverpool. Mr. J. K. Colling, architect. The quantities supplied by Mr. Edward Manfred and Mr. James Marsland :—

J. and W. Walker	£56,770	0	0
Kilpin and Montgomery	56,0 0	0	0
John Johnson	51,381	0	0
Jones and Jump	49,689	0	0
Haigh and Co.	49,299	0	0
J. H. Mullins	48,500	0	0
Jas. Burroughs	47,997	0	0
Holme and Nicoll (accepted)	46,285	0	0
John Ladd	45,800	0	0

For farm-buildings and bailiff's-house, at Coddington, Nottinghamshire. Mr. Baily, architect, Newark. The quantities supplied by Mr. C. Poland :—

Saunderson and Kendall, Market-Rasen	£2,065	0	0
Staniland, Newark	2,010	0	0
Stredder, London	2,000	0	0
Pretwell, Newark	1,989	0	0
Marshall and Henderson, Newark	1,912	0	0
Palmer, Lowdham	1,865	0	0

For farm-houses, Bow-road. Mr. C. Martin, architect :—

Cott	£3,600	0	0
Brown and Co.	3,497	0	0
Blackburn	3,360	0	0
T. Wood and Son, Hoxton	3,328	0	0
Watts	3,130	0	0
Hedges	3,095	0	0
M. A. Wood and Sons	3,055	0	0

For building two houses at Englefield-road, Islington, for Captain Sparrow. Mr. Knightley, architect :—

Sands and Emery	£1,215	0	0
Coleman	1,117	0	0
Nash	1,097	0	0
M. A. Wood and Sons	1,085	0	0
Battenbury	1,079	0	0
Walberton	988	0	0

For building, at Hastings, two cemetery chapels, with waiting and robing rooms attached, two lodges, receiving-house, front wall, and entrance-gates, &c. Mr. Henry Carpenter, of Hastings, architect :—

Pattendew, Hastings	£2,830	0	0
Burchell, ditto	2,714	0	0
Coussens, ditto	2,701	6	0
Philcox, Brighton	2,533	0	0
Smith, ditto	2,145	0	0

For additions and alterations to house at Clapham-common, for Mr. Thomas Hepburn. Mr. Joseph Gale, architect :—

Brown	£1,125	0	0
Jno. Loat	1,080	0	0
Dean	1,074	0	0
Wells (accepted)	996	0	0

For building two chapels, entrance-lodge, &c. for Westbury Cemetery. Mr. Edward G. Bruton, Oxford, architect :—

	For Chapels, Lodge, Entrance-gates, Roads, &c	Add for Moving Earth, &c.	Boundary Wall, &c.
	£. s. d	£. s. d.	£. s. d.
W. Smith, Trowbridge	3 236 19 3	313 0 0	676 0 9
Rogers & Rawlings, ditto	3,050 0 0	170 0 0	1,170 0 0
Davis, Frome (accepted for buildings)	2,855 0 0	165 10 0	1,534 10 0
Long, jun. Bradford	2,540 0 0	160 0 0	471 18 10

TO CORRESPONDENTS.

NOTE.—Various statements having reached us as to the difficulty of procuring copies of the *Builder* in some parts of the kingdom—more particularly in Ireland,—it is proposed to parties desiring to subcribe, that on the transmission of a post-office order, or postage stamps, addressed "Office of the *Builder*, No. 1, York-street, Covent-garden, London," the *Builder* will be forwarded to them on the day of publication.

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" " Quarter-year 0 5 5

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"*Books and Addresses*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

NOTICE.

FROM and after the 1st January, 1856, the *entire postage* upon all newspapers sent to France, and Foreign countries *vid* France, must be prepaid: the stamped copy of the paper is of no avail.

ADVERTISEMENTS.

TO BUILDERS.

A BUILDER WANTED, to Erect several FOUR-ROOMED COTTAGES, at Brompton. Old Bricks (except facings, and sound old timber may be used. This will only suit those who have such materials on hand.—Direct, T. T. 8, Church-street, Lambeth-road.

TO GAS ENGINEERS

REQUIRED by the SWANSEA GAS-LIGHT COMPANY, a PRACTICAL GAS ENGINEER, to take the Management and Superintendence of their Works. Application with references as to carability, &c. and amount of salary required, to be forwarded to the Directors at their Offices, Gas Station, Swansea.

TO DECORATIVE PAINTERS.—CONSTANT EMPLOYMENT will be given to a DECORATIVE ARTIST, who is a good Paperer and Draughtsman, and thoroughly competent to execute decorative works. Specimens to be forwarded forthwith, and application made to Mr H. J. BUCHAN, House Decorator, Southampton, stating rat of salary required, age, if married; together with particulars of qualification. Satisfactory references will be required as to character.

TO HOUSE PAINTERS AND PAPER-HANGERS.

WANTED immediately, two good WORKMEN, to finish a Parsonage house in the country. One must be a good grainer, the other a good plain painter, with a knowledge of paper-hanging. References will be required. Apply to Mr. ROBERT ELLIS, Builder, &c. Fleet, near Wisbech.

TO CARPENTERS

WANTED, an experienced Man in the above line for a constant SITUATION. None need apply except they have worked in the principal wood building firms in London.—Apply by letter only, stating terms, &c. to T. P. 15, St. Andrew's-street, St. Martin's-lane.

WANTED, a RE-ENGAGEMENT, by an experienced active Man, as SHOP or OUT-DOOR FOREMAN, or to take the Management of a Steam Saw-mill. Would have no objection to go in the country. Testimonials unexceptionable.—Address, P. E. C. 31, Lyon-street, Caledonian-road.

TO UPHOLSTERERS, PAPER HANGERS &c.

WANTED, a good UPHOLSTERER, who is a first-rate Paper-hanger and Polisher. Constant employment and liberal wages will be given to a steady industrious man. Apply by letter, or personally, to C J LEA, Decorator and Upholsterer, High-street, Lutterworth.

TO GAS ENGINEERS AND MANAGERS OF GAS WORKS.

WANTED, a Gentleman fully qualified to SUPERINTEND the ERECTION of WORKS and carry on the MANUFACTURE of GAS, to go abroad for three years certain. None need apply who cannot produce the most unexceptionable testimonials.—For further particulars apply to Messrs. WM. BIRD and CO. Lawrence Pountney-hill, Cannon-street.

WANTED, for a London Office, an ARCHITECTURAL DRAUGHTSMAN and BUILDING SURVEYOR. He must be an active person, and thoroughly qualified to make finished and working drawings and sections and to measure work take out quantities, and prepare estimates. Salary, 100*l.* per annum with an allowance when from home on business. No one need apply who each cannot and qualifications will bear the strictest inquiry.—Address, stating age and references, to C. R. Messrs. Waterlow and Sons', Parliament-street, London. Any one having had experience in farm buildings and country work preferred.

WANTED, a WRITER, GRAINER, &c. for a constancy.—Apply to W. H. PURKISS, Decorator, Upper Sydenham.

TO BUILDERS AND PLUMBERS.

WANTED, by a respectable young Man, a SITUATION as PLUMBER, who will fill up his time in painting if required. No objection to town or country.—Address, post-paid, to A. B. No 62, East-street, Marylebone, London.

WANTED, by a respectable Young Man, a SITUATION as PLUMBER, PAINTER, and GLAZIER. A good reference can be given if required.—Address, J. H. Mr. Wade's Library, High street, Knightsbridge.

TO BUILDERS, ARCHITECTS, and ENGINEERS.

WANTED, a SITUATION as FOREMAN of BRICKLAYERS, GENERAL FOREMAN, or CLERK of the WORKS, by an experienced active man, aged 30. Can make working drawings, set out and measure works. Accustomed to extensive works, both architectural and engineering. Unexceptionable testimonials.—Address, P. A. Post-office, the Bridge, Putney, Surrey.

TO BUILDERS.

WANTED, a SITUATION as CLERK in a BUILDER'S OFFICE, by a Young Man, aged 23, well acquainted with the general routine of an Office. Good references can be given.—Address, A. B. Office of "The Builder."

TO MASTER BRICK AND TILE MAKERS.

WANTED, by a Young Man, aged 30, who thoroughly understands his business in all parts, a SITUATION as FOREMAN, SETTER, and BURNER, or odd ware maker, or to contract for the work. No objection to go abroad. Address, L. M. No. 8, Church-street, Manor-place, Walworth.

TO CARPENTERS AND BUILDERS.

WANTED, by a steady, active Young Man, a SITUATION as IMPROVER in Carpenter and Joiner's Shop. Wages not so much an object.—Address, H. C 11, Walnut-tree-walk, Lambeth, London.

WANTED, a RE-ENGAGEMENT as WORKING SHOP FOREMAN of JOINERS, by an experienced Man, aged 35, which good testimonials.—Address, C. W. Mr. Morris's, Baker, Brighton terrace, Rhodeswell-road, Stepney.

TO MASTER PAINTERS RESIDING A FEW MILES FROM TOWN.

WANTED, EMPLOYMENT, by a Youth aged 17, who has served four years to the trade, and can do good work.—Address, T. R. 77, Bayham-street, Camden-town, London.

WANTED, by a Young Man of sober and industrious habits, whose apprenticeship has just expired, a SITUATION as JOINER.—Address, W. H. 28, High-street, Camden-town.

TO PLUMBERS, &c.

WANTED, a steady and active Young Man, about the age of 25, who thoroughly understands the PLUMBING BUSINESS and fixing of Water-closet Apparatus. He must be a good workman, and will be required to fill up his time in glazing and painting and to work the usual hours of other mechanics.—Apply by letter only, prepaid, to D. J. W. 26, Chapel-street, Pentonville, stating where last employed, and wages required.

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WANTED, by a Young Man, a SITUATION as PLUMBER, PAINTER, and GLAZIER; understands jobbing, bell-hanging, and gas-fitting. First-rate references.—Addr ss, W. H. 76 Hatton-garden.

TO CARPENTERS AND BUILDERS.

WANTED, by a steady, active Young Man, aged 23, a SITUATION as IMPROVER, in a carpenter's and joiner's shop. Wages not so much an object.—Address, E. D. No 3, William-street North, Stepney, London.

TO ARCHITECTS, BUILDERS, &c.

WANTED, a SITUATION in an Architect's or Builder's Office, by a respectable young man, who has some knowledge of the business. Salary not so much an object as a permanent situation.—Address, W. D. 109, High-street, Marylebone.

TO TOWN OR COUNTRY CARPENTERS AND BUILDERS.

WANTED, by a Young Man, a Carpenter and Joiner, and good Staircase Hand, a permanent SITUATION; wages not so much an object as permanency. Country preferred.—Address, C. W. B. 60, Upper Bemerton-street, Caledonian road, Islington.

TO BUILDERS AND THE TRADE.

WANTED, by a thorough practical Plumber, Glazier, and Painter in all its branches, and of considerable experience in business, a permanent SITUATION of trust, such as his testimonials will recommend and qualifications secure.—Address, LEAD, 13, Paddington-street, Marylebone.

TO SURVEYORS, BUILDERS CONTRACTORS &c.

WANTED, a RE-ENGAGEMENT as DRAUGHTSMAN and GENERAL ASSISTANT. Aged 31. Testimonials from some of the most eminent firms can be given.—Address, J. M. 13, Lower Calthorpe-street, Gray's-inn-road.

TO ENGINEERS AND CONTRACTORS

WANTED, a SITUATION as CLERK of WORKS, or GENERAL FOREMAN, by an experienced, energetic person, who is just completing a bridge of some magnitude a screw pile structure; is well acquainted with the different branches of works, drawing, measurement, setting out works, and lifting materials.—Address, ALEXANDER, Post-office, Fulham.

TO BUILDERS.

WANTED, a RE-ENGAGEMENT, either in town or country, by a Young Man, well acquainted with general office work, and has a good knowledge of drawing. Terms moderate.—Address, A. V. Post-office, Twickenham, Middlesex.

WANTED, by a Person of long practical experience in the construction and superintendence of railways, churches, and other public buildings, an APPOINTMENT under an architect, builder or private party. Will be at liberty in a week. The best reference given from former employers and standing buildings. No objection to the country or to go abroad.—Address, CALEDONIA, Post-office, Tenbury, Worcestershire.

WANTED, by a practical middle-aged Man, a SITUATION as CLERK of WORKS, or GENERAL FOREMAN. Is well acquainted with the various trades in building.—Address, C R, Post-office, Isleworth, Middlesex.

WANTED, by a Young Gentleman who has just completed a similar engagement, a SITUATION in an ARCHITECT'S OFFICE as JUNIOR ASSISTANT. Improvement being the object, a small salary will be accepted.—Address, A. B. 7, Great College-street, Westminster.

CARPENTER.

WANTED, by a Young Man, a SITUATION as IMPROVER.—Address, J. BILHAM, 25, Paradise street, Lambeth-walk.

TO ARCHITECTS.

WANTED, a SITUATION, as CLERK of WORKS (country preferred), by a thoroughly experienced Person, who is a good draughtsman, and has some knowledge of surveying, levelling, &c.—Address, A. Y. U. Mrs Noble, Bookseller, Hull.

TO ARCHITECTURAL MODELLERS, CARVERS, &c.

WANTED, by a Young Man, who is a good draughtsman, an ENGAGEMENT in Town.—Address, A. D. 2, Sheraline, Baldwick hill, Bath.

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THE Advertiser will shortly be disengaged. He for many years conducted the business of a Builder in good practice; afterwards Practical Assistant to an Architect in London, and has filled the office of Clerk of Works on a nobleman's estate. Most unexceptionable references.—Address, G. F. No. 9, Marsden-terrace, Maiden-road, Haverstock-hill.

TO ARCHITECTS, SURVEYORS, AND OTHERS.

THE Advertiser, who completes an engagement on the 3rd instant with an Architect, is OPEN to an offer of ENGAGEMENT in an Office as above. Can set out fair and working drawings; assist in taking out quantities, measure artificers' works, &c. Salary moderate.—Address, 17, Pickering-terrace, Westbourne-park.

TO BUILDERS, SURVEYORS, LAND AND ESTATE AGENTS &c.

THE Advertiser, aged 23, of steady, active, and business habits, is desirous of an ENGAGEMENT in the office of either of the above (town or country); is a good penman and correspondent, well versed in accounts, able to assist in preparing plans, &c.; has been accustomed to workmen, and has likewise had experience in the superintendence of buildings. Salary moderate. Reference to a London building firm of note.—Address, N. D. C. 45, Great Russell-street, Northampton.

A YOUTH, respectably educated, wishes for a SITUATION in a BUILDER'S or DECORATOR'S OFFICE. Has good ideas of drawing, and writes a good hand. Reference can be given from his last office.—Address, E. W. H. 7 South Wharf-road, Islington.

TO ARCHITECTS.

A RESPECTABLE PRACTICAL MAN wishes for a RE-ENGAGEMENT as CLERK of WORKS. Address, A. A. Office of "The Builder."

TO ARCHITECTS, &c.

A GOOD DRAUGHTSMAN is open to an ENGAGEMENT; he has had experience in the Classic and Gothic styles and is accustomed to make out fair, perspective, and working drawings. Good references. Salary moderate.—Address, A. D. C. (care of) Mr. Daniel Betts, 13, Cook's-court, Lincoln's-inn.

TO SURVEYORS BUILDERS, AND OTHERS.

AN experienced Middle-aged Man, accustomed to measuring, estimating, and taking out quantities, book-keeping, and superintending works, is desirous of an ENGAGEMENT, either in the metropolis or Liverpool. Testimonials can be given at both places.—Address, Z. Z. Office of "The Builder."

AN ARCHITECTURAL DRAUGHTSMAN, accustomed to prepare finished, working and detail drawings, take out quantities, and measure artificers' work, is desirous of a RE-ENGAGEMENT, either in an OFFICE or as CLERK of WORKS. Excellent testimonials and references. Salary moderate.—Address, A. B. No. 34, Queen-street, Neath, Glamorgan-shire.

TO ARCHITECTS, SURVEYORS, AND BUILDERS.

A YOUNG MAN is desirous of an ENGAGEMENT as CLERK of WORKS or BUILDER'S FOREMAN.—Good references.—Address H. P., 29, Wilmington-square.

TO ARCHITECTS, &c.

AN Artistic Colourist, Draughtsman, and Designer, OFFERS his SERVICES to the preparation of Perspective Views, with landscape and figures, also in general drawing, on moderate terms.—Address A. Z 61, Denbigh-street, Belgravia.

TO ARCHITECTS.

AN ASSISTANT desires an ENGAGEMENT in a good office. Is accustomed to get up general and competition drawings, perspectives, details, and specifications.—Address, KELSON, 18, Old Market-street, Bristol.

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A GENTLEMAN of experience, possessing a thorough practical knowledge of surveying, building brick-making and general management of house property, is desirous of an ENGAGEMENT in a London firm, with a view to a partnership or otherwise. Has been building and brickmaking on his own account for some years, and has had the management of one of the largest estates in the vicinity of London, now nearly covered and was previously engaged in one of the first building firms in London. Is well known to the leading houses in the trade.—Address, AGENT, Office of "The Builder."

AS FOREMAN of MASONS, an experienced Man, who has executed some of the largest and heaviest Public Works in London and the Provinces, and is practically acquainted with the management of a general yard. Unexceptionable reference. Town or Country.—Address to JONES, No. 15, Ann's-place, Tower street, Waterloo road, London

TO WATERWORKS AND SEWERAGE ENGINEERS.

AN ASSISTANT (aged 31) WANTS an ENGAGEMENT. Has recently superintended the construction of main sewers and other works in a midland town. Understands machinery.—Address, A. M. Z Davies's Newspaper Office, Edgware road

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A GOOD DRAUGHTSMAN, possessing a knowledge of colouring, and competent to make working finished, and perspective drawings, desires a RE-ENGAGEMENT at a moderate salary.—Address, X. X. X. Office of "The Builder."

TO BUILDERS, &c.

AN experienced SURVEYING CLERK wishes EMPLOYMENT in an office, either temporary or permanent, to take out quantities, make plans, cast accounts, &c. is well acquainted with the routine of a builder's office. Salary moderate. Good references.—Address, SURVEYOR, 5, Gloucester-street Regent's park

TO BUILDERS, SURVEYORS, &c.

A SITUATION of responsibility and trust, in town or country, is REQUIRED by a Young Man about 27, educated as an architect and surveyor, and who has been for some years in business as a builder. Is fully qualified to take the management of either of the above businesses.—Apply by letter, to C. A. Mr. Creswick's, John street, Oxford-street, London.

TO ARCHITECTS.

AN Ecclesiastical Draughtsman, competent to design, get out, and colour, finished or working drawings, or perspectives, and has considerable experience in dom site work, and the usual routine of an Architect's office, and was with a well-known Architect in London for seven years, wishes for an ENGAGEMENT.—Address, F R. Lansdown Hotel, Cheltenham

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A FIRST-RATE DRAUGHTSMAN, accustomed to prepare finished, working and detail drawings, wishes for a RE-ENGAGEMENT, either temporary or permanent; would not object to an engagement for three or four days a week, or would prepare drawings at home from rough sketches.—Address, S. W. 278, High Holborn

A NEAT and clean DRAUGHTSMAN, who also is a Land Surveyor and Levelling, is desirous of a SITUATION, at a moderate salary. Good references.—Address, A. B. 24, Murray-street, New North-road, Hoxton.

TO ARCHITECTS.

A DRAUGHTSMAN, who has just completed a twelvemonth's engagement as manasiur clerk to an eminent provincial firm, is desirous of an ENGAGEMENT; is competent to prepare competition, perspective, working, and detail drawings, and can assist in carrying the operations in town and country. Salary, 2l. 2s. per week.—Address, ARCHITECT, Post-office, Norwich.

AN ARCHITECT and LAND SURVEYOR in a rapidly increasing town in the south of England, is desirous of taking a gentleman as a PARTNER, who thoroughly understands and can take the management of the architectural portion of the profession. The average income for the last four years has been 925l and is rapidly increasing. Apply, by letter only, to A. B. care of Mr. Andrews, 1, Brook-street, Bond-street, London

A PARTNERSHIP.—A Gentleman is desirous of PURCHASING a SHARE in the PRACTICE of a well-established ARCHITECT and SURVEYOR.—Address, E. F. G. Office of "The Builder."

TO ENGINEERS, ARCHITECTS, PLUMBERS, AND OTHERS.

THE Advertiser wishes for some one with capital, to assist him in bringing out a most valuable INVENTION, which ... from its great utility and cheapness, must be adopted by every house for water supply; and by distillers, breweries, dye merchants, chemists, and others. For particulars, apply to Messrs. WRIGHT, 10, Alfred-place, Newington-causeway London.

TO ARCHITECTS, SURVEYORS, CHURCHWARDENS, &c.—S. TAYLOR, GENERAL HOUSE DECORATOR, of No. 1 and 2, Albany-place, Kentish-town road, having repaired and re-decorated St Pancras Church, New-road, and St Mary's Church, Bow road, by Contract, is without to give ESTIMATES for decorating all Description of Churches, Chapels, Public Buildings, and every description of House Property.

SUPERIOR BUILDING LAND to LET, near Carlton-hill, St. John's-wood, and Kilburn-gate and railway station, 130 feet above the Thames, commanding views of Hampstead, suited for good class villas of 60l. to 120l. yearly value Leasehold for 55 years. Rents from 3s. 6d. to 4s. per foot frontage Address, Mr. BALL, 43, Regent-street, Piccadilly.

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VALUABLE BUILDING LAND, on a fine healthy eminence, commanding beautiful scenery, surrounded by open heaths and other plantations, and within a few minutes' walk of a convenient railway station, less than twenty miles south-west of London. A long term (about eighty years) will be granted in one or more leases, the whole contents being fifteen acres.—JOHN DAWSON, Land Agent and Auctioneer, Marlborough-chambers, 49, Pall-mall

WATERSIDE PREMISES. — WHARF, with use of crane, excellent suite of offices, roomy dwelling house, two large warehouses, and store yard, well situate in the heart of London, TO BE LET, at a moderate rent.—Apply at 79, Bankside, Southwark.

TO BUILDERS AND OTHERS.

TWO CARCASSES of VILLAS to be FINISHED, at Brook-green, Hammersmith. Specification and drawings to be seen at No. 10, Marlborough Cottages, near door to the carcasses to be completed, in and after FRIDAY, the 2nd instant. Tenders to be sent to the Architect's office on or before the 10th instant. The lowest Tender not necessarily accepted.—GORDON STANHAM, Architect, St. Alban's Cottage, North end Hammersmith.

SURBITON-HILL.—TO BE SOLD, a piece of FREEHOLD BUILDING GROUND, close to the new church, and near the Kingston Railway station, containing a frontage of 54 feet by a depth of about 160 feet.—Apply at the Offices of Messrs. WILKSHIRE and PARRIS, Surveyors, 3, Wokingham place, Lambeth.

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TO BE LET, WHARF PREMISES in Regent's-canal, in one of the greatest thoroughfares round London; with counting-house, parlour, and shop fitted for the corn trade, with granary, loft, horse stable, steam-engine, boiler, and shaft erected, and daily for four barges

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TO OWNERS of FREEHOLD LAND in the Parish of Chelsea, in the County of Middlesex.—The VESTRY of the Parish of ST. LUKE, CHELSEA, are desirous of obtaining, either by purchase, or at a rent charge, a PIECE of FREEHOLD LAND, within the said parish, suitable for the erection of a vestry-hall and offices thereon. TENDERS, accompanied in each case by a plan drawn to a scale of 1 inch of an inch to a foot, stating the situation, dimensions, and terms, should be sent in to me at my Office, on or before WEDNESDAY, the 7th day of MAY next. The Vestry do not bind themselves to accept any of the proposals. By order

CHARLES LAHEE, Vestry Clerk.

Offices, Manor House, King's-road, April 23rd, 1856.

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This private estate has been laid out for building purposes anywhere round London, and good villas are in great demand, on account of the situation being lofty, dry, well drained, and extremely healthy. Immediate possession will be afforded to responsible parties.—For particulars, apply to Messrs. J. and J. W. TODD, Milner-street, Brompton, London, or Belmont, Lee, Kent; or Messrs. NELSON and HINES, 6, Whitehall; and of Messrs KIRKMAN and ENGLEHEART, King William-street, City.

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TO BUILDERS.—FREEHOLD BUILDING LAND TO BE LET on LEASE, for a Term of 999 Years, at Kew and Harrow, Stratford, Mitcham, Wimbledon, Chertsey, Ash, near Aldershott Camp, and Hertford Copyhold. Cash advanced, if required.—Apply to Messrs. BLAKE and KNOW, Solicitors, 22, College-hill, Cannon street, London.

TO BUILDERS AND CAPITALISTS.

GROUND TO BE LET for Building Purposes, near to Belle Vue Farm.—For particulars, apply Messrs. LOGIES and DEAN, Civil Engineers and Estate Agents, 21 & 24, St. Geo ge's-place, Hyde Park-corner.

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TO SURVEYORS, AUCTIONEERS, &c.—LAND to LET, very eligibly situated at Norwood, near the Palace, with roads and sewers already made. The owner is open to treat with a respectable surveyor who possesses the means, and likewise has a good letting connection with builders, &c.—Address, W. R 11, Upper Baker-street, Regent's-park.

BUILDING LAND, very eligible, roads and footpaths made and gravelled, centre of an old neighbourhood. Term, 100 years. Right to purchase freehold. Moderate ground-rent. Situation, High-road, Angel, Edmonton. Other Freehold Land, front of Tottenham-green, opposite Trinity Church. Also Land at Stoat's Nest Station, 2,000 feet frontage to high road, rear abutting on South Eastern and Brighton Railway, and near the junction with the new Caterham line. Moderate sized houses in great demand.—Applications to Mr. SCOTT, Clayhill, Enfield Middlesex

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TO BUILDERS and OTHERS. — TO BE LET, on building lease for eighty years, or the FREEHOLD TO BE SOLD, by Tender, the valuable and extensive PREMISES, No. 17, GREAT PRESCOTT-STREET, WHITECHAPEL, and any information required may be obtained on application to Messrs. SMITH and WILLIAMS, Architects, Prescott's place, Old Jewry, at whose Office the Tenders are to be delivered, sealed and endorsed, stating the exact outlay and use of premises, on or before MONDAY, 19th MAY next. The highest or any of the Tenders will not necessarily be accepted. If desired the house and premises adjoining, and being No. 15, in the occupation of Mr. Moses, may be included in the Tender.

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At the Office, No. 33, NORFOLK-STREET, Strand, on SATURDAY, at NOON, MAY the 10th, the THIRTY-FOURTH DRAWING for RIGHTS of CHOICE on the following ESTATES will take place. Interest at 5 per cent. per annum, payable half-yearly, is allowed on all completed shares, and on payments in advance, for not less than twelve months. Large sheds for making tiles and red-ware; dwelling-house, stables, &c. The whole in complete order, and now in operation.—For immediate sale, apply to Mr F. SCHULZ, Solicitor, 4, Dyer's-buildings, Holborn, London.

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Annual Premium	£22 7 6	£15 16 8	£49 8 4
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Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.
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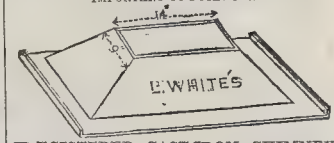
BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

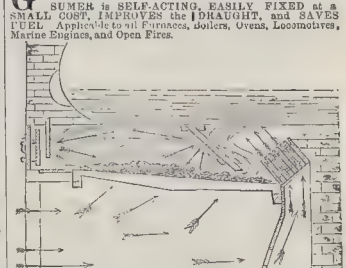
BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 6d. per foot. This charge to include tiles delivered in Agar's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

IMPORTANT TO BUILDERS.



REGISTERED CAST-IRON CHIMNEY-HOPPER and CHIMNEY-BAR COMBINED, ensuring a perfect formation of the Flue, and rendering smoky chimneys impossible. One trial will cause their adoption in every building. Price from 8s. 6d. each, according to size.
IRON GIRDERS and COLUMNS to MODEL or DRAWING.
IRON PIPES and connections for gas, water, and liquid manure.
RAIN-WATER PIPE and EAVE GUTTERS, at wholesale prices. Also, Odd Gutters, Stock-weights, STABLE FITTINGS, pumps, tomb railing, cattle and pig troughs, and COLUMNS with caps and bases, and every kind of builders' castings, in stock, at LYNCH WHITES' Iron Wharf, Upper Ground-street, London, near Blackfriars-bridge.

LESS FUEL, MORE STEAM, NO SMOKE.
GARDNER'S PATENT SMOKE CONSUMER is SELF-ACTING, EASILY FIXED at a SMALL COST, IMPROVES the DRAUGHT, and SAVES FUEL. Applicable to all Furnaces, Boilers, Ovens, Locomotives, Marine Engines, and Open Fires.



"Chemical Works, Bow Common, November 9, 1855.
"DEAR SIR,—In answer to your further inquiry concerning the saving of fuel in connection with the use of your patented apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I beg now to state that we are enabled without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.
"I remain, dear Sir, yours truly,
"To E. V. GARDNER, Esq." "FRED'K. ALLEN.
Apply to the PATENTEE, 24, Norfolk-street, Middlesex Hospital; or to Messrs. BURDIDGE and HEALY, 128, Dorset-street, Fleet-street; or Z. D. BERRY, Albion Works, Victoria-road, Pimlico. Bakers' ovens fitted for sole license included.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.
H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 149, Fleet-street, London.
These Pencils are prepared in various degrees of hardness and shades.

H H H for drawing on wood.	F F light and shading.
H H H for architectural use.	F for general use.
H H for engineering.	H black for shading.
H for sketching.	BB ditto ditto.
H B hard and black for drawing.	BBB ditto ditto.
M medium.	BBBB ditto ditto.

Sold by all the principal Stationers in town or country.

H. DOULTON & CO'S.
TERRA-COTTA CHIMNEY-TOPS
Will withstand the action of the Weather and Sea Breezes, and are
QUITE IMPERISHABLE.
Prices not much higher than Cement.
DOULTON & CO.'S
TERRA-COTTA POTS, &c.
Erected in London upwards of 20 years since, are now as sharp and perfect as when first manufactured.
Drawings on application to
H. DOULTON & CO. High-street, Lambeth.

TARPAULINS for COVERING ROOFS during Repairs, SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

TO BUILDERS, CONTRACTORS, SHIPPERS and Others.
G. BURGE, JUN. ROMAN and PORTLAND CEMENT MANUFACTURER, Crown Wharf, Great Scotland-yard, Westminster.
DAVIES and NORMAN, Agents.
Cements, Plaster, Lime, Bricks and Tiles, Sand, Fire Goods, &c. of superior quality, and at reasonable prices.

GLAZED STONEWARE DRAIN-PIPES, CLOSET-PANS, &c.
IN EVERY VARIETY.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.
JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, hereby informs the public that he continues to carry on a Wholesale business, and offers to Contractors, Builders, &c. by the freight or half freight, ROMAN CEMENT of best quality upon advantageous terms. Application either at Harwich or to his Agent, GEORGE MORRIS, 20, New Ormond street, Queen-square, London
P.S. Inland London trade will in future be supplied from Messrs. ROBINS and CO. Scotland-yard, Westminster, instead of Whitefriars.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at the Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND CEMENT. CHARLES NELSON, having completed his works for the manufacture of the above Cement, can supply Contractors, Builders, &c. with a very superior article. The manufacturing department being under his own immediate superintendence, he can confidently recommend it for all works in which Portland Cement is used, and only requires a trial to insure approbation.
Orders, addressed to
London Depôt, 16, South Wharf, Paddington,
BLYTH, BROTHERS, Sole Agents,
will meet with immediate attention
Manufactory—Ernesole Mills, Warwick.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland yard and at the Works.

PORTLAND and BATH CEMENTS.
TATHAM and CO
14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO
14, South Wharf, Paddington.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall Isle of Dogs.
Warehouse, No. 1, Wharf, Paddington-basin.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames street, London; or at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing quantity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Lath, Sashes, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

11 George-yard, Lombard-street, City.
ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the best quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise. Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccos dry quickly, will not be painted upon within a few days. Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank street, Westminster

ATKINSON'S CEMENT, so long known and esteemed in London for plastering surfaces, is a quick-setting Cement, that requires no colouring. Address Messrs. JOHN BAZLEY WHITE and BROTHERS, 36, Millbank street, Westminster; and Seel street, Liverpool.

DAMP WALLS.
STENT'S COMPOSITION FOR PREPARING NEWLY-PLASTERED OR DAMP WALLS FOR PAPERING,
Is the result of practical experiments and long experience; it is unfailing in its application. Entire houses have been papered a few days after plastering In repairs of old plastering it is invaluable A moderate room can be papered for 8s. 6d.
London Agents: Messrs. GEO. and THOS. WALLIS, 64, Long-acre. Agent for Ireland: Mr. S. BOYD, 46, Marr-street, Dublin.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead, whilst the consumption of material is less than for one coat. It dries very fast and hard.
HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three-fourths the price.
HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and Iron exposed to salt water; neither bilge water, nor noxious vapours from cargo or bunkers, or funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages stamped, Hubbuck's Patent; and when so marked the quality is guaranteed.
HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the Bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber sheathing boats framed and copper sheathed may be painted with this paint, neither do the nails attach to it.
Full particulars of THOMAS HUBBUCK and SON, Portland Varnish Works, opposite the London Docks, London.
OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STUNGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is best adapted at these works with especial reference to its destination, whether for shoeing, brickwork, locks for breakwaters, tidal work, or otherwise.—London Wharf, Belvidere road, Lambeth.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company carry out their recognised the best quality of their Bath Cement for all masonic purposes, decorations, &c. as having all the qualities requisite for an interior cement, and for being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 80, Old Broad-street, London, to Mr. M. MENENT, 4, Cope-lane-place, Cheapside; or to Mr. TENEWELL, the Depôt, 4, North Wharf road, Paddington; or to the Works, Dunball, Bridgewater.

PORTLAND and ROMAN CEMENTS.—T. H. BINSTEAD, WILLIS, and CO.'s MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works, Mr. THOMAS WEEKES.

FREEN and CO.'S PORTLAND CEMENT and LIME WORKS, WOULDHAM, near Rochester.—These Works having obtained Letters Patent for the Manufacture of Cement, by which very great and important advantages are obtained over the old method of manufacture, insuring at once uniformity of colour and quality, Merchants, Contractors, and Builders are informed that they can now be supplied with any quantity, either for home or foreign markets, for which liberal orders on advantageous terms.—Samples and prices forwarded on application at the Works; or to Mr. W. C. ATKINSON, 62, Moorgate street, City; from whom also testimonials from eminent engineers as to quality may be obtained

FRONTS of HOUSES. — GREENE and CO.'S PORTLAND CEMENT WASH will not roughen, and does not Peel or Flake like Paint. In cases of Cement for the DAMP WALLS GREENE and CO.'S OXIDE SOLUTION PAINT, a guaranteed remedy, sold in quantities to cover 300 square feet, for 12s.—To be had only of the Inventors, GREENE and CO. 22, Norfolk-street, Islington

BLUE LIAS LIME.—CHARLES NELSON begs to inform Engineers, Architects, Contractors, Builders, and the Trade in general, that he is prepared to supply direct from the Works all towns and places on any part of the Thames, Rye, Lee, or any canal or railway, or rail to all parts of the kingdom, large quantities of the above GENUINE HYDRAULIC LIME now extensively used
Quality, Weight, and Measure may at all times be strictly relied on, reference in proof of the above can be given.
N.B. The Captain of the Boat will always bring with him the Grand Junction Canal Note, from which the contractor will be enabled to know exactly what weight of Lime he is paying for
All orders addressed to the
LONDON DEPOT, 16 SOUTH WHARF, PADDINGTON.
BLYTH, BROTHERS, SOLE AGENTS,
Will be promptly attended to, and any further information can be obtained from them
Works, Stockton field, near Southam, Warwickshire.

PLASTER of PARIS.—MESSRS. BLYTH, BROTHERS beg to acquaint the trade, that they have made a considerable reduction in price; the quality they are now manufacturing cannot fail to give entire satisfaction. Samples and prices forwarded to any part of England, or the metropolis. No extra charge made to any wharf or railway station on board. Any quantity unforthcoming can be obtained at their Works, Baldwin's-place, Gray's-inn-lane, Holborn; or at the Blue Lias Lime Depôt, 16, South Wharf, Paddington.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side); 7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 8d. per ton.
Small ditto, ditto, 6d. per ton.
Barges loaded in a few minutes.
Woodham-hall Grey Stone Lime Works, on the Medway, near Rochester.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Brentford and Oxford line of the Great Western Railway, at Hanwell, are now prepared to supply LIME and GROUND LIME of the best quality, direct from the kilns, to all the stations on the Great Western Railway.—Greaves's Blue Lias Lime, Portland, Roman, and Lias Cements. Works at Hanwell; Stocks in, and Wholesale Office, at Warwick.

GREAVES'S BLUE LIAS LIME.—The above Lime supplied direct from the works to wharfs along side the rivers or canals, railway stations, or vessels in the docks. A large supply always in stock. CHARLES RICHARDSON, Brick, Lime, and Cement Merchant, 3 and 6, South Wharfs, Paddington

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parts requiring a reliable Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality Ground and Lump into boats, at the Works. Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent) STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Canal Bridge, Old Kent-road. Office, 1, George-yard, Lombard-street.

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.—Grey Stocks, 22s. per thousand; Grizzles, 28s. per thousand; Rough Stocks, 20s.; Place, 13s. to 15s. per thousand.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings of good and sound quality, constantly on sale at H. DODD'S Brick-fields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests architects to favour him with a visit, in order to inspect his stock and to judge for themselves.
Malm Place-built and washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brick-fields, Grange-walk, near the Rosemary Branch, Hoxton
N.B. Light-coloured Brick Sand of a proved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Plinths for building and pottery work, Foundry Loam, Whiting, White Sand for whitening, Hard Drawn Pipes, Patent Drain Pipes, Gas Sett for brick making, &c. &c. sold by barge from Messrs. MEE-ON and CO.'S wharf at Grays, Essex, to any part of the Thames, for various coals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 800 tons can load alongside the wharves at Grays. At MEE-ON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named article can also be procured, as well as all kinds of fire goods, both Welsh and Newcastle. Fire-clay, Flare-burnt Lime, and Marble and Tenner Lime; and here lime is packed in hogs-heads, casks, jars, &c. for exportation
General Office—No. 13, GROCER'S-HARD, LOMBARD-STREET.
Letters address ed to Grays Essex, will meet with immediate attention.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
PEEP-RED RUBBING BRICKS
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS
OWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers &c
KENTISH RAG-STONE of the FINEST QUALITY
MILLS and PRICE, 5, ADELAIDE-PLACE London-bridge

BEST HERTFORDSHIRE MALM SECONDS and CUTTERS ALWAYS ON HAND.
MILLS AND PRICE, 5, ADELAIDE-PLACE, LONDON-BRIDGE;
AND CROWN WHARF, GREAT SCOTLAND-YARD

BRICKS, of first-rate quality and good colour, TO BE SOLD for CASH; suitable for forcing-walls, or where great strength is required. Apply to Mr. W. SMITH, Brick-wharf, Grosvenor-road, Thames-bank, near Pimlico Pier.

CHEAP WHITE BRICKS, for FACING HOUSES, Bearn's Patent. These bricks are of excellent make and colour, and impenetrable from frost, and do not vegetate or become green. For particulars, address, Patent Brick Works, Rugby, Warwickshire.

BRICKS.—WANTED, 200,000, Grey, and Stocks suitable for good and Place Bricks, on the Acorn Wharf, on the Grand Surrey Canal, London. Prices and samples to be forwarded to Mr. MAY, Timber Merchant, Old Kent-road.

MONEY and BRICKS.—FREEHOLD LAND TO LET, at low ground-rents, and for long terms. Apply personally, to Messrs. BLAKE and SNOW, 22, College-hill, Cannon-street, City.

BRICKFIELD TO BE LET at TOTTENHAM, containing 6½ acres of excellent malm earth, situate on the south side of the high road, 5½ miles from London. The bricks made in this field have always found a ready sale.—For terms and other particulars, apply to Mr. A. RICHARDS, Auctioneer, Tottenham.

TO BRICKMAKERS and OTHERS.—TO BE DISPOSED OF, a quantity of BRICK EARTH, solid and tunnel, sufficient for 2,000 to 3,000 Bricks. For further particulars apply to Mr. FREDERIC LEE, Arch-terr, 99, Essex-street, Strand.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 red bricks per day, or far more quickly by hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation on Thursday and Friday.
HENRY C. MOUNT, Sec.
37, King William Street, City.

HODSON'S PATENT BRICK-MAKING MACHINE may be seen in operation daily, on application to Mr. B. LOOKER, Jun. Agent, Northon Pottery and Brick and Tile Works, Kingston-hill, Kingston-on-Thames. The machine is confidently offered to the public as the most perfect and simple one that has yet been produced. Price, £35.

TUDDENHAM, IPSWICH, BRICK AND TILE WORKS.

EXPOSITION UNIVERSELLE de 1855.

Medaille de 2me Classe awarded to JAMES LUFF, for Specimens of Ornamental Bricks and Tiles.

JAMES LUFF

Begs to inform Architects and Builders that he MANUFACTURES all KINDS of ORNAMENTAL BRICKS and TILES, Red and White, for Chimney Shafts, Ridge Crests, Cornices, and Mouldings.

Also, all KINDS of ORNAMENTAL VASES, CHIMNEY-POTS, MALT-KILN TILES, DRAINING-PIPES, and TILES of every description.

N.B. Builders furnishing detailed drawings can have all sorts of Ornamental Designs executed.

LOOKER'S PATENT IMPERISHABLE GROUND INDICATORS.

A

Considerable difficulty has arisen among the various Burial Boards appointed under the New Burial Acts, as to the best and most economical method of marking the different grave spaces, in the Cemeteries that have already been opened.

This apparent want has suggested the idea of EARTHENWARE MARKS, or INDICATORS, of the form shown in the accompanying Engravings.

A is a sketch of the Patent Indicator, and B represents it as fixed in the ground.

The Indicators are made hollow, in well-burnt red or other pottery, with a thick sloping top, on which are impressed any letters or numbers that may be required. The lower part of the Indicator has openings, which give it a firm hold in the ground.

The advantages which these Marks possess need scarcely be mentioned. They will remain in the ground for centuries, unaffected by damp or change of atmosphere, and the figures, &c. being impressed, are as durable as the Indicator itself. They occupy but little space, while a good view is presented of the impression on the top. And the expense of these Indicators is not a third of that of Marks made in other perishable materials.

The Patent Indicator can be made of any shape or size applicable to every purpose for which a mark in the ground may be necessary.

*** *A limited number of Licenses will be granted to respectable Manufacturers.*

B

Further Particulars and Prices may be obtained, and Specimens seen, on application to

BENJAMIN LOOKER, JUN.
INVENTOR, PATENTEE, AND MANUFACTURER, KINGSTON-ON-THAMES.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that **FOUR-FIFTHS** of the **ROUGH PLATE**, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for **RIDGE** and **FURROW ROOFS**, giving a **SPAN** of **TWELVE FEET**, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders **BLINDS UNNECESSARY**, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

January 1, 1855.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

SNOXELL'S

PATENT REVOLVING WOOD AND IRON SHUTTERS,

WITHOUT MACHINERY,

96, REGENT-STREET, AND AT HIS STEAM WORKS, 135, OLD-STREET.

Testimonials from Architects, Bankers, &c. of their security and durability, forwarded.

MANUFACTURER OF METALLIC DRAWN SASH-BARS, STALL-BOARD PLATES, &c.

BUNNETT AND CO.'S NEW PATENT

INTERLOCKING CURVILINEAR REVOLVING IRON SHUTTER

MADE OF THE BEST GALVANIZED IRON, IS GREATLY SUPERIOR TO ALL OTHERS FOR LIGHTNESS, STRENGTH, SECURITY, DURABILITY, AND CHEAPNESS.

A MODIFICATION FOR WAREHOUSES, COTTAGES, PORTABLE BUILDINGS, &c.

MUCH CHEAPER THAN THE COMMON REVOLVING WOOD SHUTTERS OF OTHER MAKERS.

PATENTEES OF METAL SASH-BARS AND MOULDINGS.

ORIGINAL PATENTEES OF IRON SHUTTERS, 26, LOMBARD-ST. LONDON; & DEPTFORD.

Descriptive Illustrated Prospectuses and all necessary information forwarded on application.

ORNAMENTAL WINDOW-GLASS.—The Trade is respectfully informed that enamelled and other patterns of ENAMELLED GLASS, hitherto supplied through Mr. CHARLES LONG, may now be had direct from the Works of W. H. JAMES, inventor and sole producer, 37, High-street, Camden-town, London.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 4d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s; 4ths, 30s; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 22 by 14, 2d.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c., Sheet Lead, Pipe, White Lead, Oils, Colours, &c.
G. FARMILOE and SON, 118, St. John-street, West Smithfield.

JAMES PHILLIPS and CO. beg to call the attention of Builders and the Trade to their present LOW PRICES of GLASS for cash.—C C C per crate of 18 tables, 29s; 16 oz. sheet glass, 2½. per foot; crown and sheet squares, in 100 feet boxes, from 14 to 22 by 14, 2d. per foot; enamelled glass, in crates, 6d. per foot; ground, ditto, 3 d. per foot; foreign sheet, in cases of 200 feet, 36s, 38s, 40s, and 42s; 4 patent rough plate tiles 24s. per doz. Cathedral and stained glass, and all the neutral tints.—116, BISHOPSGATE-STREET WITHOUT.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Pipe, White-lead, Lead, Iron and Brass Pumps, Water-closet Cocks and Plumbers' Brasswork, Paints, Colours, Oil, and Turpentines of the finest quality, at wholesale prices. Lists on application at THOS. MILLINGTON'S Warehouse, 87, Bishopsgate-street, London. Established more than 100 years.

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 298, Oxford-street.
HELY and WARING, Managers.
CCC CROWN, 18 Tables, per crate, 30s.; 16 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s.6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Tiles and Plate from Stock. Sashes primed and glazed, 3d. per foot. HELY'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.
Catalogues and Prospectuses free.

By her Majesty's Royal Letters Patent.

THE ROYAL PATENT DECORATIVE GLASS COMPANY, 21, Castle-street, Southwark-bridge-road. NOTICE of REMOVAL.—REMOVED to No. 128, CUMBERLAND-MARKET, REGENT'S-PARK, where machinery has been erected to carry on the manufacture of this most important branch of ornamental glass.
Orders can now be executed, with the greatest cheapness and despatch, by EDWARD BAILIE and CO. 128, Cumberland-market, and 128, Wardour-street, Soho (successors to M. Toussaint, Carasser, and Co.)—Specimens of every description of Church Memorial Windows and Decorations, Glass Painting, Staining, and Embossing, may be seen, as above. Designs and estimates upon application.—February 25, 1856.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 26, Soho-square.

TO ARCHITECTS, BUILDERS, AND DECORATORS.

STAINED GLASS WORKS, 1, Arlington-street, Camden-town. Designs and estimates furnished for every description of painted, stained, and enamelled glass, on application to W. M. BELL, Glass Painter, as above.
Manufacturer of white enamelled letters for street names, &c.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 60 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot: also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 38s; 4ths, 30s. Squares; in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½d. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3½d. per foot. Crown and Sheet British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square

MACFARLANE'S PATENT

CAST-IRON PUBLIC WATER-CLOSETS AND URINALS,

FOR STREETS, RAILWAY STATIONS, WORKHOUSES, FACTORIES, BARRACKS, SCHOOLS, &c.

WALTER MACFARLANE and CO. having been engaged for several years in perfecting and testing their WATER-CLOSETS and URINALS for public purposes in their own city, beg now respectfully to submit them to general notice.

WATER-CLOSETS.—The simplicity of their construction and durability peculiarly fit them for public purposes. They require no cistern nor water pressure, are as efficient with an intermitting as with a constant supply of water, do as well with waste water as with clean, and require less than any closet in use. The whole working gearing is entirely out of the control of the persons using the Closet, and no action of any part takes place except for a few minutes once a day. They are made in ranges, to accommodate any number of persons; and when required for streets or other public situations, are inclosed in a neat cast-iron structure, with or without separate compartments and doors.

URINALS.—These are simple and durable in their construction, and adapted for all situations. Those for street use are of easy access, occupy very little room, and of a neat ornamental design. They can be fitted up on the most suitable parts of a street without in the least detracting from the general amenity of the neighbourhood, and made in ranges, to accommodate any number of persons.

WALTER MACFARLANE & CO. PATENTEES AND MANUFACTURERS,

SARACEN FOUNDRY, GLASGOW.

LONDON AGENT—THOMAS BEGGS, SANITARY ENGINEER, 37, SOUTHAMPTON-STREET, STRAND.

For Drawings, Prices, and Particulars, apply as above.

GENUINE SEYSSEL ASPHALTE.

ORSI AND ARMANI.

THE EXCLUSIVE SUPPLY OF SEYSSEL ASPHALTE (FRANGY)

DIRECT FROM THE MINES.

REDUCTION IN THE PRICE FOR VARIOUS WORKS FIFTEEN PER CENT.

AND THE

WORK GUARANTEED FOR THREE YEARS.

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

PATENT METALLIC LAVA.

A printed List of the important Works for Flooring, Roofing, Covering of Arches, &c. &c. executed from 1848 to 1852, with this Material, may be obtained at the Office of

ORSI AND ARMANI.

THEIR PATENT METALLIC LAVA IS FIFTEEN PER CENT. CHEAPER THAN THE GENUINE SEYSSEL ASPHALTE OF MESSRS. O. AND A.

OR THIRTY PER CENT. LOWER THAN ANY OTHER MATERIAL CALLED BITUMEN OR ASPHALTE

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage. 3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person. 5th. From its lightness, wet lying on it, about 50 lbs. to the square of 100 feet, the cost of carriage is small. 6th. Under slate, metal, or tiles, it is a most effective non-conductor

INODOROUS FELT, for damp walls and for down floors, under carpets and floor cloths. Price ONE PENNY per Square Foot.

CROGGON and CO.'S PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing the radiation of Heat, saving 35 per cent. of Fuel and deadening Sound.

Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES offered for PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 3, 5, OXFORD-STREET.

SUPERIOR BRITISH PLATE GLASS, at VERY LOW RATES.—The Union Plate-glass Company have recently completed considerable improvements and additions to their works, respectfully inform their friends that they are now able to supply orders without delay, and invite the attention of the trade to the low rates at which their now much esteemed manufacture is sold.—Lists of prices may be obtained on application at the Works, Pocaet Nook, St. Helens, Lancashire; the Warehouse, 20, Hatton-garden, London, and 4, Piccadilly, Manchester; Messrs. C. and J. MALLOCH, 30, Turner's-court, Glasgow; Messrs. JOHN DIX and CO. Bath-street, Bristol; Messrs. H. SHERIDAN and SON, Cork-hill, Dublin; Messrs. FORREST and BROMLEY, 24 and 25, Lime-street, Liverpool; Mr. WILLIAM HENRY HOLMES, Westgate-street, Newcastle-on-Tyne.—Rough Plate Glass from ¼ in. to 1 in. thick for windows, roofs, mechanics' shops, market halls, railway stations, &c. Beautiful and highly-finished polished plate-glass for shop-fronts and all other glazing purposes, and for silvering.—Superior Silvered Plate-glass Mirrors of all sizes.

GLASS.—To GLASS-CUTTERS, GLASS-BENDERS, PLUMBERS, and mechanics of men in general. An old established BUSINESS in the above line to be DISPOSED OF, in consequence of death. It may be easily learned by persons unacquainted with it, being under perfect management. Capital required, from £50 to £75. This is an opportunity for persons wanting a genuine concern seldom to be met with.—Lease of J. BOWDEN, 36, Lamb's-conduit-street, Foundling.

IMPROVED REVOLVING SHUTTERS. FRANCIS RICKABY and DUNN are now enabled to offer the above at the following reduced prices:—IRON SHUTTERS, double riveted, with machine-cut worm gear, complete, at 4s. 6d. per foot. WOOD SHUTTERS, with worm gear complete, at 3s. 6d. per foot. Machine-drawn Brass Sash Bars and Stall-board Plates made to any design.—84, Gray's-inn-lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned. Workshops, 119, Broadwall.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No. 18, Binfield-road, Clapham road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Saw-mills. Goods in Bond for Exportation.

N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected Stock of the various descriptions of Deals, commencing at the following low prices:—

Yellow Deals, from	£20	0 per 120
Spruce ditto, from	18	0 "
Yellow Battens	10	10 "
Dry Pine Planks, from	21	0 "

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a postage stamp.—N.B. All sawn goods delivered within two miles free of carriage. Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

NOTICE.—To BUILDERS, CONTRACTORS, and OTHERS.—WILLIAM MARSHALL begs to inform the trade generally, that he has about 10,000 feet of well-seasoned WAINSCOT, in all thicknesses, and at the lowest cash price. Also a very fine Stock of WALNUT, ROSEWOOD, and MAHOGANY, in clank, board, and veneer, at his Timber-yard, Vincent-street, Old-street-road.

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shopfitters to his carefully selected MAHOGANY, suitable for Counter Tops, and to his seasoned Materials for builders, cabinet and blind makers, &c. Delivered, carriage free, in any of the London railway stations, or within three miles from Kennington Church.

SEASONED FLOORING.—GEO. NOKES and CO. (late Archbutt and Atkinson), beg to acquaint builders, and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash:—

¾ inch White, 13s. 6d. per square.		¾ inch Yellow, 15s. per square.	
¾ ditto	15s. "	¾ ditto	16s. 6d. "
1 ditto	18s. "	1 ditto	20s. "

Laths, 36s. per load.

Also Timber, Deals, Planks, &c. Mouldings by machinery in every great variety.

ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of its kind ever established, a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from ¾-inch to 1¼ inches thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Puttie Laths, Oak Cills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, Kings-road, Chelsea.

MAHOGANY, seasoned by Symington's new Patent Process. JOHN COUMBE solicits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he is able to sell at prices generally charged for wet wood. Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile-end.

TO BUILDERS, PAINTERS, &c.

Oak Graining in Oil ..... 4½d. per yard.
Mahogany, Maple, &c. ..... 3½ "

In quantities not less than sixty yards.

All kinds of Staining for Wood at 2s. 6d. per gallon. Varnish for ditto, 10s. Church Writing done in the Letcherbeton style, at low prices. Estimates given for decorations and general repairs. Good reference given.—Apply to C. PETTET, 5, Princes-street, Wardour-street, Paddington.

GREAT REDUCTION.—Yellow Deals, 3s. 6d.; Spruce, 3s.; Pine Plank, 3s. 9d.; 9x4 Yellow Battens, 12d. 10s. per 120 12 feet: Mahogany, 6d. per foot. Carriage free to any part of town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth walk.

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

METROPOLITAN PATENT WOOD PAVING.—WILLIAM BASTABLE and CO. beg to state that they are prepared to execute orders for Paving Railway Stations Workshop, Wharfs, Gateways, Porticoes, Stables, Forges, Nave and Aisle of Churches, and School-rooms.

Office, Belgrave Works, Thames Bank, Pimlico.

MOULDINGS BY MACHINERY. Canvone, Sash Bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to

E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KINGS ROAD, CHELSEA,
AND WILTON-ROAD, PIMLICO.

TO BUILDERS, COACH-MAKERS, DECORATORS, HOUSE-PAINTERS, &c. &c.

CHAS. W. NOBLE (late A. and F. Strong), VARNISH MANUFACTURER, continues to supply every description of Varnishes and Colours, of the very first quality, and at the lowest prices. The Varnishes manufactured by Noble have stood the test of nearly a century, made of pure gum copals, insuring that desideratum in varnish—body, pale, and finish, for which his predecessors have been so long and so favourably known.

*** Methylated Spirit Varnishes. Polishes, &c.; also N. Noble's Flamed Paper Varnish, for decorators, &c. Coach-painters' and Lithographic Colours.

N.B. Merchants and shippers will find an advantage in exporting Noble's Varnishes

Manufactory—MITCHAM, Surrey.

Wholesale and Retail Warehouse 137, LONG ACRE, London.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark Saw Mill, Rotherhithe.

TO TIMBER MERCHANTS and OTHERS. The Proprietors of Letts's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of Dutch Timber, &c. Spacious Dry and Drawing Docks, and Patent Cranes, Sawpits for converting Timber, &c. Freights paid on delivery.—Apply to G. NOKES and CO. as above.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER-CUTTING MILLS, Commercial-road, Lambeth.—The Proprietors beg to announce to the trade that they have completed their extensive arrangements, and will be happy to execute all orders intrusted to their care with despatch and punctuality.

N.B. All goods sawn at these mills fetched and delivered free of charge.

TIMBER SAWING MILLS, Belvedere-road, Lambeth. ROBINSON and BARTRAM respectfully inform their friends in the Timber and Building Trades, that they have now completed their New Mill for Sawing building and other Timber, and will be glad to receive their favours in this department of sawing. Full particulars will be forwarded on application, per post or otherwise. Timber up to 55 feet long can be cut at these mills.—N.B. A powerful Crane for landing timber on to carriages, at 1s. 3d. per load.

NEW KENT-ROAD SAW-MILLS, half-way between Surrey Docks and West-end.—Messrs. TAYLOR and BUCKLEY beg to inform Timber Merchants, Builders, and Others, that having made large additions to their machinery, they are in a position to execute orders on the shortest notice. Extensive premises for piling goods. List of prices will be forwarded upon application.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, patrit lackers, and finishing spirit. The present price is 6s. to 6s. 6d. per gallon; white French polish, 10s. per gallon; white shellac, 4s. 6d. per lb.; gums, shellacs, and sold at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Leather-lane; and 14 and 15, Berrington-street, Holborn, London.

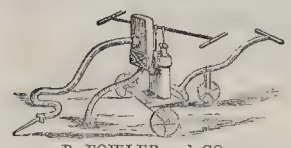
STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NO SIZING, and will stand the exposure of the weather. Price 6s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 14, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

TO BE SOLD, a TURRET CLOCK (by Parnell), 3 feet dial, with striking-bell; also, a Composition Centre Ceiling Flower, 8 feet diameter. Apply to Mr. TAYLOR, Builder, 87, Upper Seymour-street, Somers-town.

KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade, and of the manufacturer, G. B. KENT and CO. 11, Great Marlborough-street, London. Established 1777.

N.B. Kent's Painting Brushes are all stamped G. B. KENT & CO.

Price Lists forwarded by post.



B. FOWLER and CO.

SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.

The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve ways three times usual size, made to suit liquors of all kinds, hot or cold, portable or fixed, with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

ON SALE AND HIRE,

SINGLE AND DOUBLE PUMPS IN WROUGHT IRON

TO ANY DEPTH,

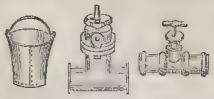
FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.

Sizes, from 3-inch to 15-inch barrels.

N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

B. FOWLER and CO.'S

FARM and COTTAGE PUMPS, 30s.



All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps Engine Frames, Horse-Gear Crab, Pulley Blocks, Wrought Pails, and Rubbish Baskets, Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country and export orders for the trade. Experienced workmen sent to any part of the kingdom.

BENJAMIN FOWLER & CO. GENERAL ENGINEERS, WHITEFRIARS-STREET, FLEET-ST.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 3	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron	2 8 0
3½ „	ditto 3 6	flanged pipe,	2 12 0
4 „	ditto 3 6	as required.	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot. forcing, and plant houses; they may be fixed, when desired, under the stage. May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

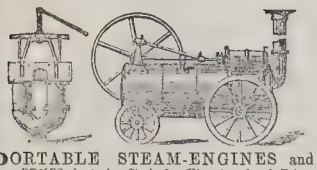
PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B The above can be worked either by hand, horse, or engine power.

Iron Pails 3s. per doz. painted.
Ditto .... 4s. per doz. galvanized.

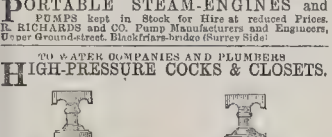
Upper Ground-street, Blackfriars Bridge, Surrey Side.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side)

TO WATER COMPANIES AND PLUMBERS

HIGH-PRESSURE COCKS & CLOSETS.



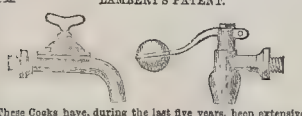
The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closet and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

PRIZE MEDAL, CLASS 9.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

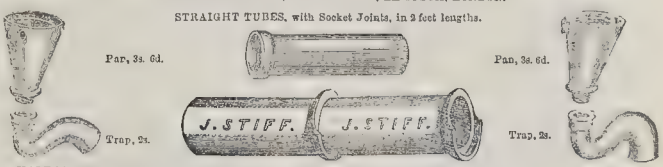
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz :—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.

Messrs. COLLS, SHADBOLT, and CO.'S, St James's and Thornhill Wharfs, Caledonian-road, Pentonville.

Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.

Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

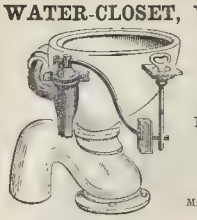
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing,

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as far the CHEAPEST yet manufactured.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.

THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of Mr. JAMES PILBROW, Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c. at the

NEAR POOLE, DORSET.

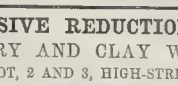
These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to THE AGENTS.

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;

Where a large stock is always kept on hand.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply a wide description of Glazed Drain pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Brankseais of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 9, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.

WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

UNDERHAY'S PATENT REGULATOR CLOSETS for constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in fixing, and a better flush of water obtained in use.

Pan, Valve, Self-acting, and Servants' Closets, on this principle, may be seen at the Works. They are very cheap, their efficiency is guaranteed. 5,000 of them have been sold, and no instance of failure has occurred.

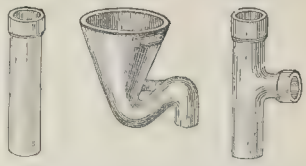
These Stool-valves are cheaper, stronger, and more ornamental, than any other. Many thousands are in use, and greatly approved of.

Manufactured by CHARLES BUTTEN and SON, Brass Founders, Crawford-passage, Clerkenwell, London.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction, the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Slabs, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 89 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having a wider experience, the public, agents, builders, and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 3d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

BY HER MAJESTY'S ROYAL LETTERS PATENT, APRIL 25, 1855.

JAS. LEWIS'S PATENT STENCH-TRAP

FOR STREET USE

Price, with Gutter Plate, 18 inches by 12 inches, each 25s.; weighs about 2 cwt. Larger sizes made, if required.

FOR AREAS, &c.

Price, with Back Plate, 6 inches by 7 inches, each 6s.

FOR COURTS, YARDS, &c.

10 inches by 8 inches, each 10s.

The above articles are protected for the Patentee by the British Government, and no one but himself has the construction for the advantages they possess, being a perfect trap for preventing smell proceeding from itself or the drain, should there be water or not in the pan. When stench-traps are put down generally speaking no attention is ever paid to them afterwards—this renders them useless. The above, therefore, are a desideratum, as they require no attention. It is well known when cholera has visited this country, it commences and leaves last those places where the air is vitiated by obnoxious gases proceeding from drains, &c.

Any inhabitant suffering inconvenience, is entitled, by the Sanitary Act to lay complaint before the public or private authorities of the property, to lay down stench-traps where they are required. Any persons interested in this advertisement will be kind enough to write to the patentee for drawings, and if wishful, testimonials. Please order from any respectable ironmonger, contractor, or the Patentee, JAMES LEWIS, Ironfounder, Aberystwyth. Specimens to be seen in the Court of Inventions, Crystal Palace, Sydenham.

PATENT SOLID SWISS PARQUETERIE.

This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s. per foot super, together with every particular of its cost and adaptation, can be obtained of Mr. BURT, 3, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 86, New Bond-street.

DECORATIVE PAINTING.—CHARLES KUCKUCK, Decorator to His Majesty the King of Hanover, whose works may be viewed in numerous public and private buildings in the metropolis, most respectfully begs to invite the attention of the nobility and gentry to his considerably increased establishment.—Address, 53, Pall-Mall. Hours from Nine till Six o'clock.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior quality to that of any and all competitors, as has heretofore been accomplished.

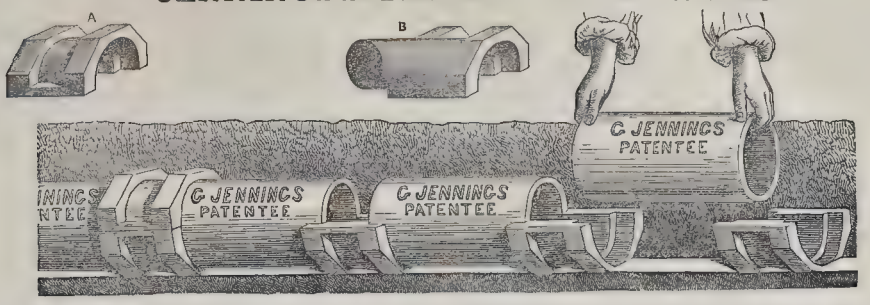
Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.

TUNED BY MACHINERY.

Stocked and wheels ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic scale, with improved Clappers, and pegged on a new system which gives a superior tone and facility for ringing.

JENNINGS'S PATENT DRAIN-PIPES.



THE PATENT CHAIRS AND SADDLES above shown are to a line of pipes the SAME SUPPORT AS SLEEPERS TO A LINE OF RAILWAY, the base of each Chair being BROAD and STRONG. The pipes are simple cylinders, of uniform thickness, made without the usual socket; the drying and burning, in consequence, is much more perfect. Pipes thus made and connected will be found to BEAR ANY PRESSURE, and are in no way liable to derangement. The laying of these pipes, and the making of the joints, IS DONE AT ONCE, EACH PIPE BEING BEDDED AS IT IS LAID, and the space between allows the workman to strike up the joint, and the superintendent TO SEE that every pipe is ACCURATELY LAID and PROPERLY JOINTED.

A shows one of JENNINGS'S PATENT SADDLES OR COVERS, by means of which examinations are effected; B shows one of the PATENT JUNCTION COVERS, by which connections are made to finished lines of pipes, it being only necessary AT ANY TIME to remove a PLAIN Cover or Saddle, A, and substitute a Junction Cover, B, the Junction being THE SIZE of the Branch Pipe.

The favour with which these pipes have been received will no doubt give rise to many imitations, as it is much easier to COPY than to INVENT; but GEORGE JENNINGS hopes his sanitary patrons will give HIM CREDIT for being THE FIRST TO SHOW HOW JUNCTIONS MAY BE INTRODUCED, OR EXAMINATIONS MADE, TO FINISHED LINES OF PIPES. These important improvements, as above shown, are PATENTED; and GEORGE JENNINGS would caution those who desire TO PROFIT BY HIS IDEAS, NOT TO INFRINGE HIS PATENT RIGHTS, as they will not be allowed to do so with impunity, although he feels confident the ORIGINAL, for its SIMPLICITY and EFFICIENCY, will be preferred to any copy.

Prices of JENNINGS'S Drain Pipes, per foot run, including the Patent Chair and Saddle, are as follows:—4-inch, 6d.; 6-inch, 8d.; 9-inch, 1s. 1½d.; 12-inch, 1s. 10d.; 15-inch, 3s.; 18-inch, 4s.; with the usual discount to the Trade.

JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.

Architects describing this Closet in their specifications will have a PERMANENTLY GOOD VALVE CLOSET, NOISELESS, and FREE FROM COMPLICATION. The Patentee has such confidence in its DURABILITY and EFFICIENCY, that he will guarantee every Closet for SEVEN YEARS.

JENNINGS'S IMPERISHABLE EARTHENWARE CLOSET AND TRAP.

This Closet has a large water surface, has no back to soil, is imperishable in its material, and the Trap and Closet is combined in one piece, suited alike for the PALACE or the COTTAGE.

JENNINGS'S IMPROVEMENTS IN LIFT AND OTHER PUMPS.

These Pumps would well repay a visit to Jennings's factory, where may be seen Jennings's Lavatories, Urinals, Sluice Valves, Fire and Steam Cocks, of every size; Shop-Shutter Shoes; Gully, Area, and Sink Traps, and other sanitary goods.

Or Illustrations and Prices can be had free by post, if two stamps are enclosed to

GEORGE JENNINGS, SANITARY ENGINEER, 29, GREAT CHARLOTTE-STREET, BLACKFRIARS-ROAD, LONDON.

AYLESFORD POTTERY COMPANY'S PATENT DRAIN-PIPES.

THE above Company respectfully invites the attention of Engineers, Architects, Surveyors, Builders, &c. to an improved DRAIN-PIPE, whereby all stoppages may be cleared without disturbing the invert of the drain, by simply removing the cover (marked A or B) whichever may be preferred.

The cover (marked B) may be used in conjunction with whole or half-socket Pipes.

Pipes thus constructed may be laid at intervals in a drain of ordinary Socket-Pipes.

With the great advantage these Pipes offer, they are cheaper than any yet submitted to the public.

London Depôt—AYLESFORD WHARF, Belvedere-road, Lambeth.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

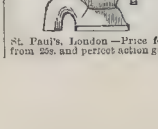
MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 28s. and perfect action guaranteed.



SALES BY AUCTION.

TO NOBLEMEN, GENTLEMEN, ARCHITECTS, BUILDERS, LANDSCAPE GARDENERS, AND OTHERS. Second Annual sale of the valuable and beautiful Materials manufactured of Ransome's Patent Silicious Stone

MESSRS. MANSELL and ELLIOTT are favoured with instructions from the Directors of the Company, to SELL by AUCTION, on the PREMISES, Whitehall Wharf, Cannon-row, Westminster, on TUESDAY, MAY 13th, 1856, and two following days, at TWELVE for ONE o'clock precisely, in lots adapted for private purchasers, the trade, and shippers, a well-selected assortment from the extensive stock at Ipswich of ITEMS adapted for ornamenting ecclesiastical buildings, mansions, and cottages, designed in the various styles of architecture by first-rate artists, including rich and elaborately-worked altar-pieces, screens, chimney pieces, dados and sills; reredos, pillars, pilasters, entablatures complete, capitals, caps, bases, cornices, moulding, porch and window dressings for architraves, brackets, trusses, circled and plain balustrading, gate and other piers, pedestals in great variety, terminals, sculptured quoins, copings, and string courses. The enrichments comprise fountains, shell and rock work, flower vases, tazzas, flower stands and boxes, fern tazzas, sun-dial pedestals, and terrace balustrading. The miscellaneous articles consist of coats of arms, turrets, pinnacles, fonts, mural tablets, combs, and every item that can be made in wrought or sculptured stone. Messrs. MANSELL and ELLIOTT beg to draw especial attention to this important sale, for the Patent Silicious Stone is superior, in appearance and durability, to any other stone, being unaffected by weather or age; and as its extraordinary capabilities of application are too numerous to particularise in an advertisement, they invite an inspection of the materials. The whole may be viewed three days prec ding the sale, and catalogues had (fourteen days prior) on the Premises, and of the Offices of Messrs. MANSELL and ELLIOTT, Auctioneers and Valuers, Belgrave-square (corner of Halkin-place), and 12, Birchin-lane, Cornhill, from whom plates of designs may be had.

TO BUILDERS and OTHERS Kensington park, contiguous to Kensington-gardens the Park, &c

MR. D. A. RAMSAY will SELL by AUCTION, at the MART, on MONDAY, MAY 5, at TWELVE, in two lots, by order of the Mortgagee, under full powers of sale, a very eligible LEASEHOLD ESTATE, comprising five private residences (nearly finished), of a uniform and neat elevation, agreeably situate, and being Nos. 8, 10, 12, 14, and 16, Portland-road North, immediately in the rear of Clarendon-road, the principal thoroughfare through the much admired and tastefully arranged Kensington park. When completed and let, the property is estimated to produce 90*l.* per annum which is held on lease for long terms at low ground-rents. To be viewed, and particulars obtained of WILLIAM PALMER, Esq. Solicitor, 3, George-street, Euston-square; at the Mart; and of Mr. D. A. RAMSAY, Auctioneer and Estate Agent, 79, King William-street, City.

TO BUILDERS AND OTHERS.—2,000 Plank Deals, Battens and Pine Plank, small quantity of Ironmongery, Floor-boards, &c.

MR. D. A. RAMSAY has received instructions from Mr. W. SIMS, to SELL by AUCTION, at HORNGATE WHARF, Pried-street, Hadleigh-road, on WEDNESDAY, MAY 7th, at TWELVE o'clock (to cover advances made):

750 Pieces Dry Yellow Pine (Squancey)
200 Yellow Battens Ditto
1,000 Plank Deals and Battens (Red Pine).
1,100 White Battens (Gothenburgh).

A small quantity of Ironmongery, floor-boards, and effects.—May be viewed two days previously, and on the morning of sale, and particulars obtained of W. PALMER, Esq Solicitor, No. 3, George-street, Euston square; and of Mr. D. A. RAMSAY, Auctioneer, No. 79, King William-street, City.

WEST-END and CRYSTAL PALACE RAILWAY.—Surplus Materials and Contractor's Plant, the Property of R. Byrnes, Esq. to clear the ground in consequence of the completion of the Streatham Tunnel.

PULLEN and SON are directed to SELL by AUCTION, on the PREMISES adjoining the Streatham Tunnel entrance Palace-road, Lower Norwood, and 1 mile from Tulse Hill to Norwood, on THURSDAY, MAY 8, at TWELVE, in Lots, the valuable SURPLUS MATERIALS, Plant, and Effects, comprising about 1,000 tons of Timber in balk and useful scantlings, 3,500 feet run of deals and battens, 33 framed grids, 24 feet span for tunnelling, with all the iron-work complete, 3,000 feet of galvanized iron gas tube, a Parkinson's patent watermetre, blocks, and falls, wire screens, a quantity of felt, 7 tons of wrought iron, in plates, and bolts, 100,000 superior bricks, bricklayers' implements and plant; pug-mill, crowding and offbearing barrows, moulds, wheeling planks, iron plates and pumps, trolly wheels and axles, 3-in. wheel stone truck 4 feet long, 3 brick-carts, and 2 light carts, erection and fittings up of workmen's cottages, stables, workshops, sheds, &c, and a variety of useful materials, engineering, and effects. May be viewed on Wednesday and morning of Sale; catalogues had on the Premises, at the Crown and Sceptre, Brixton-hill opposite Palace-road; of Mr. Barnes' Offices, 35, Parliament-street, and of PULLEN and SON, 73, Fleet-street, Copyingate.

TO TIMBER MERCHANTS, CONTRACTORS, BUILDERS, BARGE AND SHIP BUILDERS, AND OTHERS. Mr. Thomas Freeman having removed the largest portion of his Yards and Sawing Premises adjacent to Deptford Dockyard Station on the Greenwich Railway, and known as the Spa-road Timber-yard, Bermondsey, where he intends, for the future, to carry on the whole of his Business, is desirous

MR. PEAKE, to SELL by AUCTION, in Lots, on THURSDAY, MAY 15, 1856, at TWELVE o'clock, upon the PREMISES, situate in New-cross, Surrey, and fronting and facing the Lewisham-road, Deptford-bridge, Bermondsey, the remaining portion of the STOCK; consisting of about 5,000 PLANKS, DEALS, and BATTENS, sawn and unsawn; twenty loads of prime timber, loads of large scantling, 30,000 feet of seven-inch English oak plank, in three sizes of from 14-inch to 5-inch; a quantity of pine plank, flooring boards, and mahogany, all well seasoned:—to be viewed two days prior and mornings of sale; catalogues obtained on the Premises, New-road, Shad Thames, Horsleydown, and at Mr. PEAKE'S Offices, 3, Trinity-street, and 14, Fair-street, Southwark.

LONDON, BRIGHTON, and SOUTH-COAST RAILWAY COMPANY.—Arches, No. 84, Berners-street, corner of Wells-street. The Co-operative BUILDERS, BUILDING MATERIAL DEALERS, and OTHERS.—A considerable quantity of STOCK and IMPLEMENTS in TRADE, having accumulated upon the Premises situated as above, after the completion of sundry works for the Company, comprising an assortment of TIMBER, in large scantlings planks, deals, and battens, sawn and unsawn; about 15,000 BRICKS, various qualities; large slate slabs, of different thicknesses; wood and stone paving, numerous sinks, granite stone curb, a quantity of large centres, useful iron work and models, timber and builder's carts, substantial stone truck upon four wheels, fittings and enclosures of carpenters' shops and stabling; a capital brick-machine and mortar-mill, with gearing complete; prepared joiner's work, ladders, trussels, brick barrows, scaffolding, pulley blocks, ropes, fittings, useful effects, &c. Mr. PEAKE is directed by Mr. George Furness, Contractor, to SELL by AUCTION, upon the Premises, as before described, in lots, on THURSDAY, MAY 22, 1856, at TWELVE for ONE o'clock, he having completed his various engagements with the directors.—May be viewed morning of sale, and catalogues had at Mr. PEAKE'S Offices, for the disposal of general property, 44, Tooley-street, Southwark.

FREEHOLD BUILDING GROUND, NOTTING-HILL.

MR. ALLEN DAVIS will SELL by AUCTION, at the MART, on THURSDAY 8th of MAY, 1856, at TWELVE, in four lots, a valuable PLOT of FREEHOLD GROUND, having three frontages, to Mortimer-terrace, Ladbroke-road, and Clifton-terrace, close to St. Ann's-road leading from Royal-crescent, Notting-hill, divided into four plots, and suitable for the erection of moderate-sized houses, and presents an opportunity, by granting building leases, of creating freehold ground-rents.—Printed particulars may be had at the Duke of Sussex, directly facing the ground; of Messrs. SCRATCHLEY and SOMERSET, Solicitors, 5, New Bridge-street, Blackfriars; and of Mr. ALLEN DAVIS, 21, Old Jewry chambers, and at the Mart.

SALES BY AUCTION.

SOUTHWARK.—To BUILDERS, PLEASURE GROUND KEEPERS, PLASTERERS, GAS-FITTERS, and OTHERS. FIVE SALE by AUCTION, by

MR. SAMUEL BRETT, at the PREMISES, 4, Heir-terrace, Borough-road, on WEDNESDAY, MAY 7, 1856, at TWELVE o'clock, by order of the proprietor, 1,000 CHIMNEY POTS, of various sizes, cast and turned, well seasoned, about 70 Elgin cheeks, Gothic and other shafts, 30 12-in balls and stands, 2 18-in balls and stands, 60 fire flats and seconds, 4 ogee, made of the Royal Arms, &c. for balusters, trusses, caps, &c. large and small scrolls, Lotis and pilaster caps, trusses, balusters, fountain and cast figures, large and small heads of the Royal arms, 18 centre flowers, 3 square inside trusses, several vases, pedestals and stools, 2 earthy flower cups, scrolls, pine apples, and a large variety of Castings in good standing material. Samuel Brett, Auctioneer, Valuer, Contractor, and General Business Agent, 24, Southwark-bridge-road.

HATTON GARDEN.—Peremptory Sale of the Plant and Effects of a Builder and Sewer Contractor, and Lease of the Premises.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, Reading Hart-road, Charles-street, Hatton-garden, on TUESDAY, MAY 6th, the valuable PLANT and EFFECTS, consisting of a large quantity of planks, deals, battens, and boards of various dimensions; small boards and poles, ladders, struts, cases and trestles, drain and sewer pipes, blocking-boxes, paling-boards, and workbenches, iron pumps, screws, jacks, blocks and falls, a pair of gin, rolling, moving harrows and roots, trollers, iron wheeling-plates, paving and stone paving, and useful timber and iron work of various descriptions; also, the excellent builder's carts, one of carr harness, iron rails, and oh dd ex two portable counting-house offices, stove grates, and other effects. At the same time, the Lease of the Premises, at 100*l.* per year.—May be viewed one day previous, and catalogues had on the Premises, and of the Auctioneers, at Parliament-street or Coal Exchange.

TO IRONMONGERS, CABINET-MAKERS, BUILDERS, TRUNK-MAKERS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, the 6th of MAY, and following day, at ELEVEN each day, on the PREMISES, 39, James-street, Cockspur-street, in lots, the STOCK of IRONMONGERY, consisting of cross-garnetted, weight and cast hinges, a large assortment of brass cabinet-work, bellwork, coach-bolts and nuts, 350 gross of wood-screws, 20 bags of wrought and cut nails, patent iron bedsteads, bedding and Lane's shoe tools, 10 dozen fenders and stools, three tons of castings in sash weights, doors, false bottoms, gratings, &c.; 20 cancelli iron chancel pans, 20 registers, casings, sash and hollow ware, japanned ware, copper goods, and a large assortment of general ironmongery. To be viewed on Monday preceding to the Sale when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Bilbter street, City.

TO ENGINEERS, SMITHS, IRON MERCHANTS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the trustees to SELL by AUCTION, at the IMPERIAL IRON WORKS, Wednesfield, Cannock, on MONDAY, MAY 19, at ELEVEN, in lots, ENGINEERS' TOOLS and STOCK, powerful cutting and punching press, screwing machine, strong slide lathe, two planing machines, 3-horse power horizontal steam-engine and boiler, two Lloyd's fans shafting and riggers, wrought-iron tank, four iron and seven brick forges, fourteen anvils, 8 tons cast-iron pots, 50 cwt. bolt and bar iron, 3 cwt. cotton wicks, steel tools, corrugated iron roof, and other effects. To be viewed on SATURDAY previous to the sale, at the premises may be had on the Premises, and of Messrs. FULLER and HORSEY, Bilbter-street, City.

CHELTENHAM.—Valuable Premises and Building Land in the town, chiefly freehold

MESSRS. BEADEL and SONS have received instructions from the Proprietors, to SELL by AUCTION, at the PLOUGH HOTEL, Cheltenham, on THURSDAY, MAY 22nd, at TWO for THREE o'clock, in lots, the MONTPELLIER BATHS, the Bakery, Shops, Mill, Mill-yard, Premises, and Cottages, and Plot of Building Ground. Lot 1 will comprise the extensive and valuable range of premises situate at the corner of Bath-road and Orisel-terrace, with a commanding frontage of 320 feet, this block of building includes the Montpellier Baths and dwelling-house, in the occupation of Mr. Rock, who is under notice to quit at Michaelmas next, the bakery, with shops, residences, corn mill, with machinery, fronting two parallel streets, and the piece of ground on the manufactory for Cheltenham salts; the fittings to the baths, the 11-horse power brick-square chimney, coal-vaulting and all the modern improvements and features in and about the premises. Lot 2 is the vendors' private residence in the purchase. Lot 3 will consist of freehold and leasehold building land, conveniently divided for the erection of villas or other residences, fronting the new road to Bath-road-terrace, together with good roads and sewers as required. Further particulars, with conditions of sale and lithographic plans, may be obtained (fourteen days prior) of the solicitors, Messrs. C. and H. Sotheby, Solicitors, New Bank buildings, and at the Globe Insurance-office, Cornhill, London; of Messrs. WINTERBOTHAM and BELL, Cheltenham; at the Place of Sale; and of Messrs. BEADEL and SONS 23, Gresham-street, London.

VALUABLE SITE FOR BUILDING ISLEWORTH and WOODLANDS, 2 miles from the magnificent Estate of Osterley Park.

MESSRS. M. ADAMS and SON will SELL by AUCTION, at the RAILWAY STATION INN, Isleworth, on FRIDAY, MAY 9, 1856, at THREE for FOUR o'clock, a most desirable PIECE of LAND, adjoining the mansion and grounds known as Heddon House, containing 2 roods 34 poles, specially adapted for the erection of a first-class villa or a pair of semi-detached villas, perfectly inclosed by walls covered with choice fruit-trees, embracing all the advantages of retirement, with the convenience of possessing a first-class residence within ten minutes' walk of a railway station, in the immediate neighbourhood of the world-famed Osterley and Hampton-court. Also three valuable PLOTS of BUILDING LAND, in the delightful spot, Woodlands, adjacent to Isleworth and Spring-grove Railway station.—Particulars and conditions of sale may be had (fifteen days prior) of the Railway Station Inn, and Northumberland Arms Inn, Isleworth; Mr. Bunney, Land Surveyor, Hounslow; Messrs. Edwards, Solicitor, Isleworth; Messrs. LOVELAND and TWEED, Solicitors, 64, Lincoln's-inn-fields; Wm. C. KITCHENER, Esq Solicitor, Newmarket; Messrs. Adams and Son, Auctioneers, Penton-square, Grayson, and of the Auctioneers, Messrs. ADAMS and SON, Isleworth.

NOW ON VIEW, beautiful Marble Statues, Groups, Busts, and Vases, fine ormolu Bronzes, Florentine Mosaics, Pictures, very valuable Marble Chimney-pieces, Candelabras, and Pedestals in Scagliola, and other useful and ornamental Works of Art, being the entire portion of the Stock of Messrs. Browne and Co. by their direction.

MESSRS. RUSHWORTH and JARVIS will SELL by AUCTION, at the GALLERIES, University-street, near Fitzroy-square, on TUESDAY, MAY 6, and following day, the genuine and valuable Marriage Festival painted in oils by Watteau, Virgin and Child of the Italian school, many beautifully-sculptured Louis Quatorze and other chimney-pieces, suitable for mansions of the first class in statuary; Ravaccione, Broccatello, Sienna, and other marbles, a large and valuable collection of pedestals and cabinets in scagliola, some choice Florentine mosaics, marble tables, and slabs, lokstands, terra-cotta figures, and other useful and ornamental objects.—May now be viewed, and Catalogues had at the place of Sale, and at the Offices of Messrs. RUSHWORTH and JARVIS, Saville row, Regent-street, and 15, Change-alley, Cornhill.

SALES BY AUCTION.

NEAR THE RAILWAY STATION AND TOWN OF EPSOM, SURREY. The STOCK of BRICK YARD, comprising about 400 tons of BRICKS and TILES by

MESSRS. WHITE and SONS, on the PREMISES on TUESDAY, MAY 13, 1856, at TWELVE o'clock. The stock in trade is composed of 6,000 kiln-burnt building bricks of fine rate colour and quality, 30,000 stock, place, and gat well bricks well manufactured, and of a good colour, 8,000 capital fire-bricks, 4,500 plain and 500 ridge tiles, which will be divided to suit most the convenience of purchasers. Every facility for removing the stock is afforded by a tramway, from the Cow Pond Room to the wharf, which runs into the yard.—Catalogues may be obtained seven days prior to the sale; of Mr. WEAKLEY, Stationer, 21, Farringdon-street, London; of Mr. JOHN W. HAYNS, at his Patent Brick and Tile Works, Epsom; and of the Auctioneers, Dorking, who will forward them on prepaid application.

THIRD PORTION. To ENGINEERS, SMITHS, SAW-MILL PROPRIETORS, BUILDERS, and OTHERS.

MESSRS. DAVIS and VIGERS will SELL by AUCTION, on the PREMISES, Bull-lane, Seven-fields, on MONDAY MAY 5, and following day, at TWELVE for ONE, each day, the THIRD PORTION of Mr. SAMUEL GRIMSDELL'S STOCK, TOOLS, and MACHINERY; comprising three circular saw benches and saws, a vertical frame, mill-bands, &c. a very powerful screwing machine, gun metal valves and iron pipes, slide and other lathes, large grindstone, forges, bellows, wrought-iron anvils and stands, drilling post, vices, stocks, braces, &c.; five sets of iron sheave blocks, chain and rope falls, ditto swivel, jointing screws, five wrought-iron box girder, and cast-iron columns, new iron, lot, an iron crane, another with the general iron steering, engineering stores, &c.—May be viewed on the Premises, on the SATURDAY before and mornings of sale, and catalogues had on the Premises; of Messrs. WARMINGTON and REESON, New City-chambers, Bishopsgate; and at the Auctioneer's Offices, 3, Frederick's-place, Old Jewry.

TO ENGINEERS, ARCHITECTS, and SURVEYORS.—The Valuable Library, Engravings, &c of the late James Beaty, Esq.

MR. LEREW is favoured with Instructions from the Executors to SELL by AUCTION on the PREMISES, No. 11, Blenheim-terrace, Harrow-road, on THURSDAY and FRIDAY next, at TWELVE for ONE, the Valuable Library, comprising upwards of 600 volumes of Books, also the choice Collection of Prints, including the Peeping Macaroni, Saint John, and many others, the Modern Household Furniture, a capital Microscope, 3 Barometers, &c. May be viewed the day prior and morning of Sale, and Catalogues had on the Premises, and of Mr. LEREW, Auctioneer, Cardington-street, Hampstead-road.

TO BUILDERS, CARPENTERS, AND OTHERS.

MR. LEREW will SELL by AUCTION, on the PREMISES No. 42, Union-street, Somers-town, on MONDAY, MAY 5, at TWELVE for ONE, 1,000 Elm and white PLANKS, DEALS, and BATTENS, 7,000 feet wide Pine Board, 100 squares of 4 and white Flooring, also 6 feet Seasoned Deal, dry cut stuff, wood and iron useful Sundries. May be viewed, and bills had on the Premises, and of the Auctioneer, 2, Cardington street, Hampstead-road.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in Paddington. Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

FREEHOLD BUILDING LAND for SALE, ten acres, having upwards of 4,400 feet of frontage to good roads, close to Forest-gate Station, Stratford, Essex; 4 miles from Bishopsgate-street Railway Station. Price 5,300*l.* Also, between Eleven and Twelve Acres, having upwards of 2,000 feet of frontage to good roads, near the Carshalton Station of the Epsom Railway, 11 miles from London. Price 2,300*l.*—Apply to D. B. SLADEN, Esq. Solicitor, 38, King-street, Cheapside.

FREEHOLD BUILDING LAND, HOLLOWAY. — TO BE SOLD, or LET, about EIGHTEEN ACRES, in large or small Plots.—Apply to Mr. PEACHEY, 17, Salisbury-square, Fleet street.

FREEHOLD ESTATE at HACKNEY, near the Railway Station, where trains and other conveyances start for the City every quarter of an hour, TO BE LET, in plots averaging 50 feet deep, on Building Leases for ninety years, landtax redeemed. The roads and sewers are wholly completed, and the property situate on a fine gravel soil, in a most eligible position for villas and shops. For particulars and plans apply to Mr. HERING Architect, 23, Duke-street, Portland-place, or Messrs. GRAY and SON, Estate Agents, Church-street, Hackney.

FREEHOLD BUILDING GROUND, at BRIXTON, TO BE SOLD, in plots.—For particulars, apply to Messrs DAVIS and VIGERS, 3, Frederick's-place, Old Jewry.

STRATFORD, ESSEX. — FREEHOLD LAND, within three miles of London, exonerated from land-tax and free of tithe, TO BE LET, on Lease, for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London

TO BUILDERS and OTHERS.—Upwards of THIRTY ACRES of LAND TO BE LET, on Building Leases, in Bermondsey, with large frontages on to public roads.—Apply to Messrs. SNOOKE and STOCK, Architects and Surveyors, 6, Duke-street, London-bridge.

LAND.—FOR SALE, a SMALL FREEHOLD PARK, containing 80 acres, well studded with oak timber, and commanding views of great beauty and extent, and commanding views of great beauty over four counties, with good roads, and excellent water, situate eleven miles from London, and within two miles of the Northfleet Station. Well adapted for a cemetery.—For particulars, apply to Mr. EDWARD SAGE, Purfleet-road, near Rainham.

TO BANKERS, INSURANCE OFFICERS, and OTHERS.—The LEASE of some valuable PREMISES, near to the Indian House, with a frontage towards Leadenhall-street, of about 29 feet, TO BE DISPOSED OF. None but principals will be dealt with. — Apply to Messrs. SNOOKE and STOCK, Architects and Surveyors, 6, Duke-street, London-bridge.

VALUABLE BUILDING GROUND.—TO BE LET, on Building Leases, the valuable PLOT of GROUND, on the north side of Tavistock-row, Bermondsey, and abutting upon the high-road to the Commercial Docks and Deptford, formerly in the occupation of the late Jesse Gurling, Esq.—For further particulars apply to Messrs. SNOOKE and STOCK, Architects and Surveyors, 6, Duke-street, London-bridge.

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The Builder.

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ROYAL ACADEMY of ARTS, Trafalgar-square.—The EXHIBITION of the ROYAL ACADEMY of ARTS is NOW OPEN. Admission from Eight till Seven o'clock. One Shilling. Catalogue One Shilling.
JOHN PRESCOTT KNIGHT, R.A. Secretary.

THE NEW SOCIETY of PAINTERS in WATER COLOURS.—The TWENTY SECOND ANNUAL EXHIBITION is NOW OPEN at their Gallery, 53 Pall-mall, near St. James's. Free daily from Nine o'clock. Admission 1s.; Season-ticket, 5s.
JAS. FAIRY, Secretary.

THE ARCHITECTURAL MUSEUM, CANON-ROW, WESTMINSTER.—On MONDAY next, MAY 12th, a DISCOURSE on DECORATIVE PAINTING of the 13th, 14th, and first half of the 15th centuries, will be delivered by GEORGE SCHARF, Jun. Esq. F.S.A. Hour of admission, Seven o'clock. Tickets to be taken at Eight o'clock. Cards may be had at the Rooms of the Museum.
GEO. GILBERT SCOTT, Treasurer.
May 8th, 1856. HENRY CLUTTON, Hon. Sec.

ARCHITECTURAL ASSOCIATION.—At the next ORDINARY MEETING, to be held MAY 16th, Mr. R. DRUCE will read a paper on "The Picturesque Features of Style in Architecture."
The Class of Design will meet MAY 23, subject for sketch, "Cemetery Chapels."
T. W. GOODMAN, } Honorary
J. A. BUNKER, } Secretaries.
Lyon's Inn Hall, Strand.

COMPETITIONS.

NEW WORKHOUSE for the CITY and COUNTY of NORWICH.—To ARCHITECTS.—The Guardians of the Poor of the Norwich Corporation are desirous of being furnished with PLANS, ESTIMATES, and GENERAL SPECIFICATIONS for the ERECTION of a NEW WORKHOUSE for the City and County of Norwich, on a site near the north entrance to the new Cemetery, to contain 1,200 inmates. A lithographed plan of the site, with sections, together with instructions to architects as to the wards, rooms, and offices required, and all other particulars, may be had on written application to me on and after MONDAY, the 28th day of APRIL instant. The maximum sum proposed to be expended in the building is 20,000l. The plans, &c. are required to be sent by post, addressed to me, on or before TUESDAY, the 6th day of JULY next. Premiums will be given for the best and second best plans.
By order of the said corporation,
Norwich, April 17, 1856. E. C. BAILEY, Clerk.

TO ARCHITECTS AND BUILDERS.

CHELTENHAM COLLEGE.—It being in contemplation to build a CHAPEL in connection with this College, Architects and Builders are invited to send in PLANS and SPECIFICATIONS, addressed to the Secretary, on or before the 1st day of JUNE next (accompanied with a cypher). Such chapel to be capable of accommodating 700 persons, and in cost not to exceed 4,000l. A premium of 25 guineas will be given by the Directors of the College for the plan and specification selected, and it must be understood that the Directors shall in no case be subject to any payment for plans or specifications except the premium above mentioned.—For further particulars, apply to Mr. W. L. BAIN, Secretary to the College, Cheltenham.

CONTRACTS.

TO IRONFOUNDERS and OTHERS.—The Directors of the Tunbridge Wells Water Company are desirous of receiving TENDERS for the SUPPLY of about 1,000 YARDS of CAST IRON MAIN PIPING, to be delivered at the railway station, Tunbridge Wells. Tenders and specifications to be sent in on or before the 12th inst. to Mr. W. H. DELVES, Secretary to the Company, Tunbridge Wells.

CONTRACTS.

WELLS, Somerset.—To BUILDERS and CONTRACTORS.—Persons desirous of CONTRACTING for the ERECTION of new PAPER-MILLS at Wookey Hole, near Wells, may inspect the plans and specification at the Office of the undersigned, on and after THURSDAY, 15th inst. Sealed Tenders to be delivered on or before 31st inst. The lowest Tender will not necessarily be accepted.
EDWIN HIPPISLEY, Architect and Surveyor,
Dated May 8th, 1856. Wells, Somerset.

NORTH AYLESFORD UNION.—To BUILDERS.—The Guardians of the North Aylesford Union are desirous of receiving TENDERS for the ERECTION of a new INFIRMARY and other BUILDINGS, and for making various alterations and additions to the existing buildings at the Union Workhouse at Strood. All Tenders must be delivered, free of expense, at the Union Workhouse, Strood, sealed and endorsed "Tender for Works at the North Aylesford Union Workhouse," at ELEVEN o'clock in the forenoon of THURSDAY, the 5th day of MAY next, at which time and place parties tendering, or parties on their behalf, must be in attendance. The plans and specifications may be inspected at the Union House, any day except Sundays, between the hours of TEN and FOUR; and further particulars may be obtained from Mr. MARTIN BULMER, Architect, Maidstone. The bills of quantities and form of Tender are to be obtained at the Union House, upon payment of five shillings for each copy. The Guardians will not be bound to accept the lowest or any other Tender, and security will be required for the due performance of the works. By order of the Board,
J. S. BULLARD, Clerk to the Board of Guardians.
Strood, Rochester, 30th April, 1856.

TO BUILDERS.—Sealed TENDERS, in one specific sum, will be received by the Director-General of Contracts, Pall-mall, London, on or before the 19th day of MAY, 1856, at NOON, for the following SERVICES, at BULL POINT, near Devonport, viz:
1. Building a Case Store, Barrel-Store, Breaking-up-House, Racks, Privies, &c.
2. Lengthening the Siding of Railroad outside the Magazine Inclosure.
3. Building Cottages for Two Foremen and Five Labourers.
4. Building a Store for Planks, Store for Flannel Cartridges, Foreman's Office, and Printing-press Room, &c.

Detailed specifications of the above four Services, with every requisite information, may be obtained at the Royal Engineer Office, Bull Point, any Sunday excepted between the hours of TEN and FOUR o'clock, from the 24th of APRIL to the 14th of MAY, 1856, both days inclusive.
Royal Engineers' Office, Devonport, April 19, 1856.

ROYAL ENGINEER CONTRACT.—WAR DEPARTMENT.—The War Department being about to enter into CONTRACTS for the following Trades at Weymouth, Portland, and Sherborne, from the date of the acceptance of the Tenders, to the 31st MARCH, 1859, viz.:—
CARPENTERS.
BRICKLAYERS.
PLASTERERS.
PLUMBERS.
PAINTERS, GLAZIERS, and PAPER-HANGERS.
SLATERS.
SMITHS and IRONMONGERS.
MASONS.
UPHOLSTERERS.
GAS FITTERS.

Such persons as may wish to tender for the same may obtain schedules by applying to the Clerk of the Works, at the Royal Ensuine Office, Grand Depôt, Weolwich, on or before the 23rd of MAY, 1856, after which date no schedules will be issued. It must be understood that although each party tendering may specify the per centage on each trade separately, yet there will be only one Contract for each Station embracing all the several trade

TO CONTRACTORS AND BUILDERS.

NOTICE is hereby given that TENDERS will be received at the Office of the War Department, Pall-mall, London, on or before TWELVE o'clock, on MONDAY, 26 h of MAY, 1856, from such persons as may be willing to enter into a CONTRACT for the construction of NEW FACING to the BREAKWATER, and for repairing the Concrete Slope, &c. at the Circular Redoubt, at Eastbourne, Sussex. Plans, specifications, and conditions may be seen, and every information obtained, from such persons as may be desirous of CONTRACTING with the War Department, for REPAIRING certain portions of the RIVER FACE of QUEENSBOROUGH WALL, and the TOP of the RIVER EMBANKMENT, from the Right Demi-bastion to the Government Boundary, at Sheerness. The plans may be seen, and printed specifications and forms of Tender obtained, by persons fully competent to undertake the work (none others need apply), at this Office, between the hours of TEN and FOUR o'clock, from TUESDAY, 6th MAY, 1856, to TUESDAY, the 27th MAY, 1856, Sundays excepted. The party whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound, under a penalty of 500l. for the due performance of the contract. Tenders for the above Works to be addressed to "The Director General of Contracts, Pall-mall, London," and endorsed, "Tender for Repairing Queensborough Wall, Sheerness." No Tender can be admitted after the said 22nd day of MAY, 1856.
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Sheerness, May 6, 1856.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall Mall, London, on or before TUESDAY, the 3rd of JUNE, 1856, from persons desirous of contracting for RENEWING GRANITE PAVING, FIXING IRON FITMENTS, and PLASTERING &c. to STABLES, at CANTERBURY BARRACKS. Drawings and specifications of the Works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Canterbury Barracks, between the hours of TEN and FOUR o'clock, from MONDAY, the 19th of MAY, to MONDAY, the 2nd of JUNE, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 500l. for the due performance of the contract. Tenders for the above work to be addressed to the Director General of Contracts, Pall Mall, London, and endorsed "Tender for Paving Stables, &c. at Canterbury Barracks."
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, 9th May, 1856.

TO SCAVENGERS AND OTHERS.

THE COMMISSIONERS of SEWERS of the CITY of LONDON hereby give Notice, that they will meet in the Guildhall of the said City, on TUESDAY the 20th day of MAY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for CLEANSING the STREETS and REMOVING DUST, &c. from the houses of this City, for the term of one year from Midsummer-day next, agreeably to the provisions of a specification, a copy of which may be had upon application at this office. The Commissioners will also at the same time and place receive PROPOSALS for WATERING certain of the STREETS of the said City twice a day, agreeably to a specification to be seen at this Office. The City is divided, for the purposes of these contracts, into four divisions. Each contractor will be required to enter into bond, with two approved sureties, for the due performance of his contract. The Commissioners do not pledge themselves to accept the lowest Tender, nor any, unless deemed satisfactory. No Tender will be received after TWELVE o'clock on the day of treaty, nor will any Tender be read which does not distinguish in an inclosure of an 3d Bank of England note, as an evidence that the deposit is made bona fide, which sum will be immediately returned to each person whose Tender is not accepted and will be forfeited in the other cases until the contract and bond are duly executed.
JOSEPH DAW, Principal Clerk.
Sewers Office, Guildhall, April 19, 1856.

BOROUGH of STOCKPORT.—To CONTRACTORS and BRIDGE BUILDERS.—The Council of the Borough of Stockport desirous of obtaining TENDERS for the ERECTION of a STONE, or STONE and BRICK, BRIDGE, of three arches, over the river Mersey, between Heaton Norris and Chester-gate, in the Borough of Stockport, together with the approaches thereto. The plans and specifications may be inspected at the Offices of Messrs. CAWLEY and RADFORD, Civil Engineers, 41, John Dalton-street, Manchester, on and after MONDAY, the 28th day of MAY next; and sealed Tenders must be delivered at the Court-house, Stockport, addressed to the Chairman of the Municipal Rights Committee, on or before MONDAY, the 19th MAY next.
JOHN VAUGHAN, Town-clerk.
Court-house, Stockport, April 24, 1856.

TO BUILDERS.

PERSONS willing to CONTRACT for the ERECTION of a new WING to the mansion of Sir Henry G. Cotterell, Bart, may see the drawings and specifications on and after MONDAY the 28th inst. by applying to Mr. WILSON, Architect, Tenders to be sent in on or before TUESDAY, MAY 6th. The proprietor does not bind himself to accept the lowest or any tender, nor will any allowance be made for Estimates.
Garnons, near Hereford, May 1st, 1856.

TO BUILDERS AND CONTRACTORS.

LOUGHBOROUGH CEMETERY WORKS.—The Burial Board for the Parish of Loughborough, in the County of Leicester, are desirous to receive TENDERS for the several works (which will be divided into sections), required to be done in the ERECTION of two CHAPELS, to be erected with tower and spire, lodge and other buildings, &c. Also for the forming of roads, walks, fencing, and general draining. The plans and specifications may be seen at the Offices of the Architects, Messrs. BEDDOWS and WALLEN, 30, Bedford-place, London, and after the 5th day of MAY next, until the 12th day of MAY inclusive; and the said drawings and specifications may be viewed on and after the 12th day of MAY, until the 27th day of MAY inclusive, at the Offices of Messrs. HOWE, W. H. TOONE, Solicitors, Loughborough, where sealed Tenders are to be delivered addressed to the Chairman of the Board, not later than the 26th day of MAY, endorsed "Tender for Cemetery Works." The Board do not bind themselves to accept the lowest Tender.—By order,
W. H. TOONE, Clerk to the Burial Board.
Loughborough, April 28, 1856.

TO BUILDERS.

SUCH Bricklayers, Masons, Plasterers, Carpenters and Joiners, Plumbers, Glaziers, Slaters and Painters as are willing to undertake the ERECTION of a DWELLING-HOUSE on the Driffield Estate, the Mount, York, may inspect the drawings and specification at our Offices from the 5th to the 15th inst. inclusive. Sealed Tenders are to be delivered to the Architects on or before the 16th inst. at FOUR p.m. Security will be required for the due performance of the works, and it is hereby notified that no pledge is given to accept the lowest or any Tender. Schedules of the quantities may be obtained on application on and after the 12th inst.—By order of JOSEPH ROWNTREE and JOSEPH PENNY.
J. B. and WM. ATKINSON, Architects.
16, Micklegate, York, 3rd May, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

TO ENGINEERS, BUILDERS, AND OTHERS

THE DIRECTORS of the ST. ALBAN'S GAS and WATER COMPANY are desirous of receiving TENDERS for ENLARGING the GAS WORKS in that town agreeably to plans and specifications which may be seen at the Offices of Messrs. PAGE and CAMERON, Architects, Surveyors, 64, Old Broad-street, London; or at the Manager's Office, London-road, St. Alban's. Sealed Tenders to be delivered at my Office, at St. Albans, on or before the 18th day of MAY instant. No Tender will be received after TWELVE o'clock at noon on that day. RICHARD GIBBS, Manager of the Works.

WARWICK LOCAL BOARD of HEALTH.—CONTRACTS for DRAINAGE and WATER WORKS.—The Board hereby give Notice, that they are prepared to receive TENDERS from parties who may be willing to CONTRACT for LAYING certain SEWERS and CAST-IRON DRAIN PIPES, and CAST-IRON WATER PIPES Building an Engine and Boiler House, Constructing Reservoirs, Filter Beds, and Pump Well; also, for supplying a Wrought-iron Tank, and the Construction of a Service Tower and other Works. The Contract drawings and specifications may be examined at the Office of the undersigned, at Warwick, on and after the 8th inst.; where also, statements of quantities for each Contract may be obtained. Further particulars will be given at the Offices of Mr. ALFRED BARNES, Engineer to the Local Board, 4, Trafalgar-square, London. Tenders must be sent in on or before the 2nd day of JUNE next. No Tender will be considered unless duly made upon the printed forms. By order of the Board,

JAMES TIBBITS, Clerk to the Local Board.

Warwick, May 1, 1856.

SAINT GILES, CAMBERWELL.—To SEWER CONTRACTORS and OTHERS.—The Sewer and Sanitary Committee will meet to receive TENDERS for EXCAVATING certain new SEWERS and other works required in the Parish, on FRIDAY evening, the 16th MAY instant, at SEVEN o'clock precisely, at the Vestry Hall, Camberwell. Plans and forms of Tender will be supplied and no Tender will be received unless in accordance with the instructions contained in the specification and conditions; and the parties must be in attendance when their tenders are opened. Satisfactory responsible persons required. The Committee do not bind themselves to accept the lowest or any Tender. Particulars to be obtained between the hours of TEN and FOUR, at the Office of the Surveyor, Vestry-hall, Camberwell, on and after SATURDAY next. GEO. WM MARSDEN, Vestry clerk.

Dated May 3, 1856.

TO BUILDERS

PARTIES desirous of CONTRACTING for the ERECTION of a CARPET-FACTORY and other Buildings at Kidderminster, in the county of Worcester, for Messrs. Crane and Barton may inspect the plans and specifications for same on application to the Architect, Mr. JOHN GEO. BLAND, Offices, Unity-buildings, Temple-street, Birmingham; of whom all further particulars and copies of the quantities may be obtained. Applications to be made to offer (printed Tenders), and the Tenders to be delivered in the course of the following week: the precise day will be intimated to applicants. The lowest Tender will not necessarily be accepted.

TO BUILDERS

NEW CHURCH at EASTWOOD, NOTTS. Persons willing to CONTRACT for the WORKS to be done in BUILDING a NEW CHURCH, at Eastwood may see the plans and specifications, on application to the Architect, Mr. R. BARBER, on and after the 13th inst. Sealed Tenders to be sent to the Rev. H. W. PLUMPTRE, Eastwood Rectory, on or before the 29th instant. The lowest Tender will not necessarily be accepted.

ST. THOMAS DISTRICT CHURCH and PARSONAGE, LAMBETH.—TO BUILDERS.—Persons desirous of TENDERING for the above Works are requested to communicate their intention to the Architect, Mr. PETTERS, 9, Craig's-court, Charing-cross, where the plans and specifications may be inspected.—Tenders to be delivered on or before ONE o'clock on the 20th instant, at Mr. TALLON'S Office, as above, sealed up and addressed to the Trustees, who do not bind themselves to accept the lowest or any Tender.

BERMONDSEY VESTRY, SURREY.—To IRONFOUNDERS, BUILDERS, and OTHERS.—Notice is hereby given, that the Vestry of this Parish will meet at the Work-house, Bermondsey, on MONDAY, the 19th day of MAY instant, at SIX o'clock in the evening precisely, to receive TENDERS for the SUPPLY of CAST-IRON GULLY GRATES and INSULATING COVERS for GULLY BOXES, MANHOLE PLATES, and other IRON WORK, which may be required by them from the date of the acceptance of the contract to Midsummer, 1857.—Printed forms of Tender may be obtained, and the conditions of the contract inspected, at the Office of Mr. GEO. ELKINGTON, the Surveyor to the Vestry, in Maltby-street, Bermondsey, daily, between the hours of NINE and FOUR, and no other forms of Tender will be accepted. Tenders must be delivered sealed up at the Office of the Clerk, in Maltby-street aforesaid, directed and endorsed "Tenders for Iron-work," before TWO o'clock on the day of meeting. The contractor will be required to enter into a contract, and find two responsible parties to enter into bonds with him for the due performance thereof. The Vestry do not bind themselves to accept the lowest or any Tender. G. H. DREW, Clerk.

Office of Works, Maltby-street, May 6, 1856.

TENDERS for the ERECTION of SCHOOLS.—The Directors of the Rhymney Iron Company are desirous of receiving TENDERS for the ERECTION of SCHOOLS, at the Company's Works at Rhymney, in Monmouthshire, near Merthyr Tydfil. Plans and specifications may be seen, after the 30th inst., at the Company's Offices, 29, Laurence Pountney-lane, London; or at Rhymney.—Tenders, endorsed "Tenders for Erection of Schools," to be addressed to the Secretary, at the London Offices, not later than the 20th of MAY next.

25, Laurence Pountney-lane, 11th April, 1856.

SAINT ANNE, SOHO.—The Burial Board for this parish is about to alter the parish watch-house, Builders and others desirous of TENDERING for the Works may inspect the plans and specifications at the Office of the Burial Board, 17, Carlile-street, Soho, on or before SATURDAY, the 24th inst. The Burial Board do not bind themselves to accept the lowest or any Tender. Tenders to be delivered at the Office, in Carlile-street, on MONDAY, the 26th inst., by SEVEN o'clock precisely, when the Tenders will be opened.

May 7, 1856. GEO. ELLEN, Clerk to the Board.

TO CONTRACTORS and BUILDERS.—Notice is hereby given, that TENDERS will be received at the Office of the Vestry Clerk, in the Vestry-hall, Paddington, by TWELVE o'clock, on WEDNESDAY, MAY 28, 1856, from such persons as may be desirous of CONTRACTING for the SUPPLY of CAST-IRON PIPES, for the Construction of Sewers, Branch Drains, and Water Mains, and for the Supply of Fire-plugs and Valves, and for the Erection of Buildings, Engine and Boiler Houses, Reservoirs, Filtering Beds, and Pump Well, in the Vestry-yard, Harrow-road. Plans, specifications, and forms of Tender may be seen, and further particulars obtained, at the Vestry Clerk's Office, between the hours of TEN and FOUR o'clock. Each Tender must be delivered sealed up, and addressed to the Vestry Clerk, at the Vestry-hall, Paddington, on or before SIX o'clock precisely on the day above named, when the Tenders will be opened in the presence of such of the Contractors as may attend. The Vestry do not bind themselves to accept the lowest or any Tender.

By order of the Board, GEO. ELLEN, Vestry Clerk.

Cavalry Barracks, Brighton

TO BUILDERS AND CONTRACTORS

PARTIES willing to CONTRACT for the ERECTION of a new CHAPEL, at Aviesbury, Bucks, may see the plans, specifications, and conditions under which the Contract will be entered into, on application to Mr. JOHN GUNN, Aylesbury. The Contract will be opened and directed to Mr. Gunn, not later than THURSDAY, the 22nd instant, at FIVE o'clock p.m. The lowest or any Tender will not necessarily be accepted. Information, and other particulars, can be obtained by application to Messrs. POULTON and WOODMAN, Architects, Grey Friars-pl, Reading.

CONTRACTS.

BERMONDSEY VESTRY, SURREY.—To CONTRACTORS for SEWERS, BUILDERS, and OTHERS.—Notice is hereby given, that the Vestry of this parish will meet at the Work-house, in Russell-street, Bermondsey, on MONDAY, the 19th day of MAY instant, at SIX o'clock in the evening precisely, to receive TENDERS for the SUPPLY of MATERIALS and the execution of Jobbing and Measured Works required for the Sewers and Drains within this parish, from the date of the acceptance of the contract to Midsummer, 1857. Printed forms of Tender may be obtained, and the conditions of the contract inspected, at the Office of Mr. GEO. ELKINGTON, the Surveyor to the Vestry, in Maltby-street, Bermondsey, daily, between the hours of NINE and FOUR, and no other forms of Tender will be accepted. Tenders must be delivered sealed up at the Office of the Clerk, in Maltby-street aforesaid, directed and endorsed "Tenders for Sewers Work," before TWO o'clock on the day of Meeting. The contractor will be required to enter into a contract, and find two responsible parties to execute a bond with him for the due performance thereof. The Vestry do not bind themselves to accept the lowest or any Tender.

Office of Works, Maltby-street, 7th May, 1856.

NEW BAPTIST CHAPEL, NEWPORT.—TO BUILDERS.—The Committee are desirous of ATTENDERING for the ERECTION of a NEW CHAPEL for the congregation of Baptists at Newport, Monmouthshire, upon a piece of ground recently purchased at the Others of Mr. Gardner, in the centre of the Commercial Road, Newport. Tenders to be delivered at the Office of the Architect, Mr. GEO. H. DREW, Maltby-street, Bermondsey, on or before SIX o'clock on THURSDAY, the 22nd instant. The Committee do not bind themselves to accept the lowest Tender.

E. G. THOMAS Architect Newport, Monmouthshire.

N.B. Quantities will be furnished.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND, London

LOCKS, HINGES, LATCHES, &c.

First-class Prize Medal, Paris Exhibition, 1855.

Illustrated Price-catalogue, post free on application.

MACHINERY for SAWING, PLANING, MOULDING, &c.

SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can, at all times, deliver with little notice. S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines for home and foreign use.

WOOD CUTTING MACHINERY.

JOHN McDOWALL and SONS,

WALKINSHAW FOUNDRY, PAISLEY, near Glasgow,

MANUFACTURERS of VERTICAL SAW-FRAMES (driven by straps),

For cutting balks of timber, from 9 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam power attached; circular re-saws; radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from 24 of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and irregular cutting, well adapted for ship-builders; power tenoning and tenoning machines, moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for bat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. McDowall has been in the engineering and millwright business for upwards of 30 years, but during the last 24 years he has devoted his attention particularly to the manufacture of wood-cutting machinery, as evinced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be excelled. Applications for prices, &c., will be promptly attended to.

WROUGHT-IRON STANDARD HURDLE FENCING for SALE, in lengths 7 feet, 6 feet, and 5 feet 6 inches, 4 feet 6 inches, and 4 feet high, and 3 feet 6 inches high. WROUGHT-IRON STANDARD HURDLE RAILING, 4 feet 6 inches high, 7 feet long, with 3 rails of best Staffordshire Iron (new). Two thousand. Apply to Mr. NEWMAN, on the Estate; or to GEORGE MORGAN, Esq., 3, Princes-place, Strand.

TO RAILWAY CONTRACTORS.—TEMPORARY SLEEPERS for SALE. The advertiser can cut down a large number of Scotch Fir Temporary Sleepers, and deliver them at the Railway Station at Godstone, Surrey, in complete lots of 1,000 and upwards. Address, X. B. Post-office, Cambridge.

AUSTIN'S IMPERIAL.

PATENT SASH and BLIND LINE can be obtained of all ROPEMAKERS IN ENGLAND, FOREIGN PORTS AND WHOLESALE HOUSES, IN TOWN OR COUNTRY

Established 1774

IRON CHURCHES, STORES, &c.—For SALE, Substantial Corrugated Iron Stores, Churches, Dwelling-houses, and every description of Buildings, adapted to all climates. Iron Roofs constructed for all parts of the world. An Iron Church with sittings for 750 people for immediate sale. To view and for further particulars apply to SAMUEL HEMMING, Clift House Works, Bow, London.

HENRY FROST begs to call the attention of Architects, Builders, and the Public to the IMPERISHABLE IRON WATER TANKS, the cheapest most wholesome, and portable article manufactured, free from all pernicious matters so abounding in lead cisterns. Made to order at 7d. per gallon.

N.B Can be made in flat plates, to screw together, for the country or exportation.

Sole Agent: HENRY FROST, 17, Bathbone place.

FIRE-PROOF CONSTRUCTION.—FOX and BARRETT'S PATENT.

This improved system of fire-proof construction has been most extensively adopted, and late experiments have been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the strongest resistance to strain and pressure being secured, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection on this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

Further information may be obtained of the Proprietor of the patent.—Mr. BARRETT, 12, York-buildings, Adelphi.

KITCHEN RANGES.—The IMPROVED PATENT LEAMINGTON KITCHENER, with large Hot-plate Pan and Sliding Ovens, &c.—For Price Lists, &c., apply to CHARLES SLOWNDES, Manufacturer, Exmouth Foundry, Leamington, or to Messrs. SLACK, Ironmongers, 336, Strand, London, where one may be seen in action.

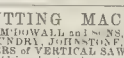
ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE, the invention of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the store and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and CO. opening to the Monument, London Bridge. Est. about A.D. 17—.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c., to be had on application. Estimates and Plans for fitting up TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

RANGES.—The PATENT WORCESTERSHIRE RANGE, Manufactured exclusively by JONES, ROWE, and PERKINS, Worcester. Also to be obtained through the agency of any respectable ironmonger.

"A more economical arrangement for fuel in the accomplishment of a great deal by small means, or a more compact contrivance for cooking at once all the courses necessary for a dinner, was probably never made."—Morning Herald, March 15, 1856.

Illustrations of Ranges forwarded upon application.

HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can refer to innumerable references of Churches, Dwelling-houses, Warehouses, &c., where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

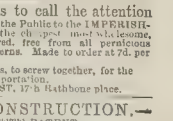
STEAM BOILERS of every description, Wrought-iron Girder Bridges, Gas-holders and Gas Apparatus, general Castings, Chains, Cranes, Iron Roofs, and Contractors' Ironwork, manufactured by MACE and BUSSEY, Phœnix Works, Tividale, near Dudley.

London Office: 28, HATTON GARDEN.

ORMOLU STOVES. — KEITH and McGEORGE, solicit the attention of Builders, &c. to their STOCK of STOVES, a large assortment always on hand, cheaper than any wholesale house in London, for cash. Bright and Ormolu Registers, with two sets of bars, first quality, from 4l. to be had only at KEITH and McGEORGE'S, Ironmongers and Kitchen-Fitters, 30, Piccadilly, opposite St. James's Church. Established 1817.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs.
2½ per inch, and upwards.
Register Stoves, 5d. 6d. 7d. 8d. an 9d per inch.
Self-acting Ranges, with circular ovens and backs, best wrought bars and bright fittings:—
3 ft., 3l. 16s.; 3 ft. 6 in., 3l. 7s.; 4 ft., 3l. 5s.
3 feet Cottage Ranges, with ovens, back boilers, 39s. each.
3-feet self-acting ditto, ditto, 34s. each
Air Burners, per lb. 2
Best Town Glue, 50s. Ditto, Scotch, 64s per cwt.
Best Pale Cut Chip and Rose.

½	¾	1	1¼	1½	3-in. & larger.
16s. 6d.	16s. 6d.	13s. 6d.	16s. 6d.	19s.	14s. per cwt.

And every article in proportion. Japanned tea trays, tea urns, tea kettles, and brass-founders' work of every description.

List of Prices had on application at the warehouse, or by letter prepaid.

SAVING IN GAS.—D. HULETT, INVENTOR and PATENTEE.—The Mercurial Governor is the only self-acting apparatus for obtaining wholesome and uniform lighting, equalizing the pressure, and preventing the escape of gas in the event of the extinction of the flame.—D. HULETT and CO. 85, High Holborn, London, Manufacturers of gas meters, governors, &c.

TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most efficient yet invented, is made by T. SMITH, of 14, Queen street, Oxford-street, near Argyll-street, where a working model can be seen or will be sent for inspection on receipt of card.

N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND,

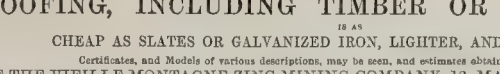
FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES

Beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16 ..	1¼ ..	7s. 0d.
15 ..	1½ ..	7s. 9d.
13 ..	1¾ ..	8s. 6d.
15 ..	2 ..	8s. 6d.
13 ..	2½ ..	9s. 6d.



THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11½ inches, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming REVERSED CLAWS, which are so bent that each end gram of the iron is presented longitudinally, and which become, when built into the brick-work, embedded in the structure, by which means a COMPLETE and PERFECT DETAIL TIE throughout the whole building is obtained.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.

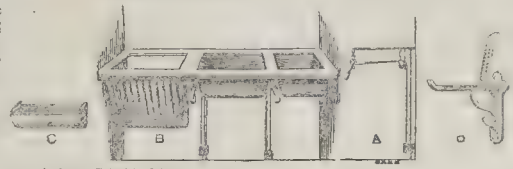
London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.

COTTAM and HALLEN, of Winsley-street,

Are the original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, to which they have made important additions, the many features of the same being explained in the following description and Engraving.



A represents the Patent Halter-guide and Collar-rein, the ball of which is taken to the back of the manger-works with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable.

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

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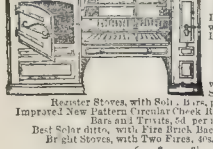

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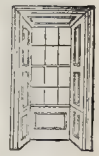

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ADVERTISEMENTS for the Hand Book to the Metropolitan and District Boards of Works, should be forwarded not later than the 15th instant, to Messrs. ABBOTT, BARTON, and CO. 2, Upper Wellington-street, Strand.

ESTABLISHED 1809.—OFFICES for the INSERTION of ADVERTISEMENTS in the LONDON and COUNTRY NEWSPAPERS.—The London Newspapers supplied in town, and by post, to all parts of the country and abroad. WM. DAWSON and SONS, 74, Cannon-street, City, London. Lists on application.

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Also Timber, Deals, Planks, &c. Mouldings by machinery in a very great variety.

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"To Mr Henry Stephens, 54 Stamford-street, London."

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MATHEMATICAL DRAWING INSTRUMENTS.—JOHN ARCHBUTT, 20, Westminster-Bridge-road, Lambeth (near Astley's Theatre), begs to call attention to his Stock of Instruments manufactured by superior workmen. The prices will be found considerably lower than ever charged for articles of similar quality and workmanship. Rules, scales, tapes, &c. at equally low prices. An illustrated price-list will be immediately forwarded, free, on application.

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THE T SQUARE INVENTED and MANUFACTURED by Messrs. STANLEY and ROBINSON, of 3, Great Turnstile, Holborn, and recommended in "The Builder," April 5th, and the "Practical Mechanic's Journal" for this month, possesses many advantages over any other T square, and is now coming into general use in all the principal offices in the kingdom.—42-inch, 7s. 6d.; 36-inch, 6s. 6d.; 30-inch, 5s. 6d.; 24-inch, 4s. 6d.

The Builder.

VOL. XIV.—No. 692.

SELDOM has the first Monday in May, which brings with it the opening of the Exhibition of the Royal Academy, been looked for more anxiously than on the present occasion. It has come and gone. The impatient crowd who stood without have been admitted within the walls of the Academy, and the doings there for another year are no longer a mystery. The multitude who have rushed between its portals comprise not only every member of the profession, and every hanger-on to it, but a crowd of those who are interested in art from various motives and causes, and who either do or do not realize its importance as one of the elements of our civilization, and as one of the great instrumentalities by which the present age is to be influenced and impressed.

Within its doors there has been the usual visiting of wealthy patrons and favoured guests; the usual interchange of courtesy and compliment between the members themselves; while without, there have been the accustomed murmurs of discontent and dissatisfaction; the usual heart-breakings and disappointments amongst the young members of the profession, who had laboured and hoped for better treatment at the hands of those to whom they have to commit the destinies of their professional year than they have received. But if we mistake not, with much that is usual and customary, there is this year something unusual and extraordinary too, if we may judge from the number and *weight* of the complainants whose statements have reached our ears. It will be but fair to the hanging committee themselves, to let them know the feelings that prevail, and we will print, therefore, part of a communication from a very estimable artist, without necessarily adopting all the opinions contained in it.

"The magnificent exhibition in Paris last year," says the writer, "of the choicest works of the various schools of Europe, was looked upon by intelligent and earnest critics as calculated to inspire the artists of our school with new energy, vigour, and freshness; and to infuse life and purpose into the next collection of their works that should be submitted to public view. The time has come that we naturally ask, Where is the evidence of any such results? And after looking round the walls of the Royal Academy, 'Echo answers, Where?' Either the council and hangers of that body have been unfaithful to their trust, or the artists of Britain have arrived at that self-satisfied condition which renders them blind to the necessity of constant effort, and insensible to the advantages and opportunities which such a collection as that referred to was thought to afford them. That this latter conclusion is correct, we are altogether unwilling to admit, for on visiting the studios of painters previously to the sending in of the pictures, we were struck with abundant proofs of the earnest care and conscientiousness, the close observation of nature, and the deep thoughtfulness with which our younger artists especially had been working; and we do not hesitate to declare that their works, so viewed and contemplated, would have done honour to any school, in any age of the history of art. We look for them on the Academy walls: some are found in obscure corners and disparaging situations, while others are missing altogether. We press our inquiries into the reason of all this, and are told by those in authority that 'want of space' is the sole cause of these disastrous results, which we cannot but regard as destructive of all progress, and as tending to falsify the real character and condition of art in this country, not only in the estimation of those foreign artists and critics who in these days come over to judge us, but even in the estimation of the intelligent portion of our own population. If it be true (and it may be so in a great measure) that there is not room, as the President said in his speech on Saturday last, to do justice to the 'fellow-labourers' of Academicians, and to hang their works, it is a lamentable and disgraceful defect in the economy of a nation professing to lead the van in the great march of civilization,—that when her sons of genius have laboured to their utmost (often in the face of great difficulties and privation) to produce works of excellence, having pressed their way through the countless obstructions to their progress, incidental to their pursuit, they should at last be denied the simple justice of being fairly judged of by the public themselves.

But let us for a moment inquire how the Royal Academy act under a sense of the difficulty of which they complain. In the present collection, it is said, that 27 feet of the line are taken up by one member; as much by a second; about 30 feet by one associate, and nearly as much by another; and mainly, too, by works of a class much resembling each other, and not all tending to illustrate the high aim and purposes of art; while the works of striving men, out of the circle, are consigned to the cellar. Is it thus that art is to progress amongst us? Is it thus that England is to hold up her head among the schools of Europe, or to maintain her position as foremost among the patrons of the ennobling, and elevating, and refining arts of peace? Surely not: and it becomes a question of the highest moment to the artists themselves, whether they submit to a state of things so uncertain and so deceitful; or whether they cannot combine for action in such a way as to secure more certainty in the management of the public exhibition, which is nothing more than the fair opportunity of exposing to view what fair and intelligent means, and honest labour of mind and hand, have produced. Never had the artists of England a better opportunity than at present, of erecting, on a broad and comprehensive basis, a noble and abiding superstructure; for patronage is abundant; the interest felt in art is wide-spread and universal; and the call to them is, not to seize eagerly upon the offered rewards merely, but to aim at excellence, by increased care, and thought, and labour: and then, if it is asked, How are we to secure, for such devotion to art, a safe appreciation at the hands of our countrymen? the answer is, that bold and united efforts must be made to break down the long-established usages to which the Academy clings,—that its administration, so cramped and illiberal, must be made to adapt itself to the requirements of the age in which we live; — that it must be aroused from that lethargy which makes its onward movement so tardy; — or else that the large body of artists who stand without, must combine for their universal safety and success, and seek some means to take the tide of patronage while at its flood, hoping it may yet last long enough to bear them on to a permanent haven."

Notwithstanding the assertions of our correspondent, made under a feeling of personal injury, and our personal knowledge of the fact that many excellent pictures have been rejected, or otherwise ill-treated, to make way for pictures of less worth, we must still view the collection as one of much interest; calculated, it may be, to make some minds doubtful as to the future of English art, for a time, but on the whole hopeful and promising. Stanfield's picture, "The Abandoned" (94), is worth a pilgrimage: "The Last Parting of Marie Antoinette and her Son," by E. M. Ward (75), although inferior to his "Argyle" of a previous year, is worthy of any school: "Love's Labour Lost" (17) is to our mind the best picture Mr. F. R. Pickersgill has yet painted; and the same may be said of Elmore's, "The Emperor Charles V. at Yuste." Dobson has two admirable paintings, "The Parable of the Children in the Market-place" (310), and "The Prosperous Days of Job" (532). Sir Edwin Landseer's two pictures seem spoilt by the hanging,— (208) "Highland Nurses," has much touching beauty, which would be more felt if the picture were seen alone; and (35) "Home," by J. N. Paton, notwithstanding an excess of despair in the group, under the circumstances,—the entire absence of hope,—will be a point for admiration during the season.

Nor should (131) "Many Happy Returns of the Day," by W. P. Frith; (162), "The Graces," by W. E. Frost; (209), "A Passing Cloud," by J. C. Hook; (248), "Agua Fresca," by J. Phillip; (328), "Un Corillo Andaluz," by D. C. Gibson; (336), "Street Scene in Cairo," by John Lewis; (506), "Going to be Fed," by R. Ansdell and J. Phillips; (592), "Highland Mary," by T. Faed; or (610), "The Heir cast out of the Vineyard," by W. C. Thomas, be overlooked. Amongst the landscapes (503), "Summer Crops," by W. Linnell, holds an eminent position.

Mr. Leslie's "Hermione" (144), in a modern furred cloak,—the Hermione whose innocence was decided by the Delphic oracle,—is a mistake in the title; and Mr. Leighton, who gave such good promise last year, has gone astray this, in his *fiddling* Orpheus (508).

The artists who have adopted the manner of painting which has been termed pre-Raffaellite, appear to be increasing; at any rate, the number of specimens exhibited by them, mostly placed on the line, is much greater than on any previous occasion; nor is it to be wondered at, since the mere manner is comparatively easy of imitation, and has found eloquent advocates and liberal purchasers. Sir Charles Eastlake said at the dinner, that "while the office of the professed critic is, almost necessarily, to detect imperfections, the enlightened amateur, on the other hand, recognises the principle, founded on a long observation of masterworks, that a few qualities, or even one quality carried to a high degree of perfection, though involving comparative defects in other particulars, stamps the work of art with character and value, and seldom fails to command approbation. Among the great masters each is admired for certain special qualities, while the fact that he is deficient in other respects does not interfere with the general estimation in which he is held."

We fully admit the truth of this, and, appreciating the good qualities to be found in the works of the chiefs of the new school, have gladly offered on many occasions tributes of admiration. Their works as stages in a progress, — as reactionary from sloppy indistinctness, — have deserved the greatest encouragement; but if these are to be pointed to as final results to be striven after by other artists,—the manifest errors and shortcomings of the school set up as examples for imitation,—the progress of art in England will be seriously retarded. The absence of air in their pictures; the want of a feeling for the beautiful, if not determined avoidance of it, and the consequent selection of indifferent models for representation, must surely be regarded as defects, in *spite of which* they have by their ability in other respects produced pictures worthy of admiration, and not as amongst the means through which success is to be attained. Further, art, as it seems to us, does not consist alone in an imitation of nature. The artist has to produce on the minds of others by entirely different means the effect produced by nature on his own mind, and to do this, must look *into* his own mind, and set forth what he sees there: he must not paint each thing as it really is, separately viewed, but as it seems viewed in relation to what is about it

and beyond. Mr. Millais has five pictures in the present exhibition, all possessing high qualities, yet open to strong objection. His largest, "Peace Concluded, 1856" (260), is greatly disfigured by the costumes introduced, and is altogether inferior, as it seems to us, to some of his previous works. No. 413, a picture without a name in the catalogue, but which may be called, "The Cavalier and Roundhead," or "The Duel," and is attributed to Mr. Burton, is an earnest and interesting painting, wanting, chiefly, in atmosphere. "The Scapegoat" (398), by Mr. Holman Hunt, is a work of remarkable power, but a very disagreeable picture: the number of its admirers will be few, but then these admirers will probably be worshippers.

FIRES: THE BEST MEANS OF PREVENTING AND ARRESTING THEM; WITH A FEW WORDS ON FIRE-PROOF STRUCTURES.*

I have been requested by the Council of the Society of Arts to send them some information as to "Fires; the best means of preventing and arresting them; with a few words on fire-proof structures." It is with great diffidence that I attempt a subject of such importance to the community, not only from my inability to do it justice in writing, but from the excessive difficulty of making each person comprehend the necessity of being sufficiently careful, due care being the best prevention against fire, as well as against many other evils.

To prevent fires, it is necessary to consider what are the principal causes of these calamities. These may be classed under several heads:—

1. Inattention in the use of fires and lights.
2. Improper construction of buildings, &c.
3. Furnaces or close fires for heating buildings, or for mechanical purposes.
4. Spontaneous ignition.
5. Incendiarism.

There is little to be said on the first head which is not well known to most masters of houses or other establishments, but the difficulty is to keep up their attention or that of those under them. * * * * *

The improper construction of buildings more generally assists the spread than is the original cause of fires, although laying hearths on timber, and placing timber too near flues, are constant causes of fire; and it is believed that many melancholy occurrences have arisen from these and similar sources. It is true the Building Act forbids all such proceedings, but the district surveyors do not seem to have sufficient power, or be able to pay sufficient attention to such matters, as they are constantly met with at fires. A very flagrant case of laying a hearth on timber was lately exposed by a fire in the City. Due notice was given of the circumstance, but no further attention was paid to the matter than to make the proprietor construct the floor properly, although the Act gave power to fine for such neglect. This omission is to be regretted, as there could not have been a better case for warning others, as it occurred in a very large establishment, and the work was done by one of the first builders in the City. Had this fire taken place in the night, and gained some head, it would have been very difficult to have ascertained the cause. As the premises were situated, a serious loss of life might have occurred, the apartment in which the fire originated being the only means of retreat which ten or twelve female servants had from their bed-rooms.

The Building Acts, up to about the year 1825, by insisting upon party-walls and other precautions, were invaluable for the prevention of the spread of fires. By them no warehouse was permitted to exceed a certain area. From the year 1842 the area has been exchanged for a specified number of cubic feet. But since 1825 a class of buildings has arisen of which there are now considerable numbers in the City, called Manchester or piece-goods warehouses, which somehow, up to the 1st of January last, have been exempted from the law restricting the extent of warehouses, on the plea that they are *not* warehouses, because "bulk is broken" in them, although it is thoroughly understood that the Legislature intended by the Act to restrict the amassing such a quantity of goods under one roof as would be dangerous to the neighbourhood.

It is necessary to state here, that the intensity of a fire, and the risk of its extending to other buildings, depends, *ceteris paribus*, on the cubic contents of the building which takes fire. Manchester and piece-goods warehouses have for some time past been built of unlimited size, sometimes equal to twenty average houses. This is pretty nearly the same as if that number of houses were built without party-walls, only that it is much worse, for the whole mass generally communicates by well-holes and open staircases, and thus takes fire with great rapidity; and, from the quantity of fresh air within the building, the fire makes much greater progress before it is discovered. By this means the risk of fire in the City has been greatly increased, not only to such warehouses themselves, but to the surrounding neighbourhoods; for it is impossible to say how far fires of such magnitude may extend their ravages under untoward circumstances, there being at present no preventive power in London capable of controlling them. To provide such a power would be a very costly business.

It is also against the generally received rule, that a man may burn himself and his own property, but he shall not unduly risk the lives and property of his neighbours.

The Building Act, which became law on the 1st January last, is likely to repress, to a certain extent, this great evil, unless its meaning be subverted by some such subterfuge as destroyed the efficiency of the last one. But what is to be done with those which are already built? It may seem tedious to dwell so much on this subject, but it appears to be a risk which is not generally much thought of, though it is of the most vital importance to the safety of London. It is very desirable that the metropolis should take warning by the experience of Liverpool, without going through the fiery ordeal which the latter city did.

From 1838 to 1843, 776,762*l.* were lost in Liverpool by fire, almost entirely in the warehouse risks. The consequence was, that the mercantile rates of insurance gradually rose from about 8s. per cent. to 30s. 40s. and, it is said, in some cases, to 45s. per cent. Such premiums could not be paid on wholesale transactions, therefore the Liverpool people themselves obtained an Act of Parliament, 6 and 7 Vict. cap. 109, by which the size and height of warehouses was restricted, party walls were made imperative, and warehouses were not allowed to be erected within 36 feet of any other warehouse, unless the whole of the doors and window-shutters were made of *wrought iron*, with many similar restrictions. This Act applied to warehouses already built, as well as to those to be built; and any tenant was at liberty, after notice to his landlord, to alter his warehouse according to the Act, and to stop his rent till the expense was paid. Another Act, 6 and 7 Vict. cap. 75, was also obtained, for bringing water into Liverpool for the purpose of extinguishing fires and watering the streets *only*. It is supposed that the works directed, or permitted, by these two Acts, cost the people of Liverpool from 200,000 to 300,000*l.* Shortly after these alterations had been made, the mercantile premiums again fell to about 8s. per cent.

There is another very common cause of fire, which seems to come under the head of construction, viz. covering up a fireplace, when not in use, with wood or paper and canvass, &c. The soot falls into the fireplace, either from the flue itself, or from an adjoining one which communicates with it. A neighbouring chimney takes fire: a spark falls down the blocked-up flue; sets fire to the soot in the fireplace, which smoulders till the covering is burnt through, and thus sets fire to the premises.

The danger from furnaces or close fires, whether for heating, cooking, or manufacturing purposes, is very great, and no flue should be permitted to be so used, unless it is prepared for the purpose. The reason is, that in a close fire the whole of the draught must pass through the fire. It thus becomes so heated that, unless the flue is properly built, it is dangerous throughout its whole course. In one instance of a heating furnace, the heat in the flue was found to be 300°, at a distance of from 40 feet to 50 feet from the fire. In open fireplaces the quantity of cold air carried up with the draught keeps the flue at a moderate heat, from the fire upwards; and unless the flue is allowed to become foul, and take fire, this is the safest possible mode of heating.

Heating by hot air, steam, and hot water are objectionable. First, because there must be a furnace and furnace-flue, and the flue used is generally that built for an open fire only. And, second, the pipes are carried in every direction, to be as much out of sight as possible. By this means they are constantly liable to produce spontaneous ignition, for there appears to be some chemical action between heated iron and timber, by which fire is generated at a much lower temperature than is necessary to ignite timber under ordinary circumstances. No satisfactory explanation of this fact has yet been given, but there is abundant proof that such is the case. In heating by hot-water pipes, those hermetically sealed are by far the most dangerous, as the strength of the pipes to resist the pressure is the only limit of the heat to which the water, and of course the pipes, may be raised. In some cases a plug of metal which fuses at 400° is put into the pipes, but the heat to which the plug is exposed will depend very much on where it is placed, as, however great may be the heat of the exit-pipe, the return-pipe is comparatively cool. But even where the pipes are left open, the heat of the water at the furnace is not necessarily 212°. It is almost needless to say that 212° is the heat of boiling water under the pressure of one atmosphere only; but if the pipes are carried 60 or 70 feet high, the water in the furnace must be under the pressure of nearer three atmospheres than one, and therefore the heat will be proportionately increased. Fires from pipes for heating by hot water have been known to take place within twenty-four hours after first heating, and some after ten years of apparent safety.

The New Building Act prescribes rules for the placing steam, hot-air, and hot-water pipes at a certain distance from timber; but as it must be extremely difficult for the district surveyors to watch such minute proceedings, it becomes every one who is anxious for safety to see that the district surveyors have due notice of any operation of this kind.

Another cause of fire which may come under this head is, the use of pipes for conveying away the products of combustion. Every one is acquainted with the danger of stove-pipes, but all are not, perhaps, aware that pipes for conveying away the heat and effluvia from gas-burners are also very dangerous, when placed near timber. It is not an uncommon practice to convey such pipes between the ceiling and the flooring of the floor above. This is highly dangerous. Gas-burners are also dangerous when placed near a ceiling. A remarkable instance of this took place lately, where a gas-burner set fire to a ceiling 28½ inches from it.

Another evil of furnaces is, that the original fireplace is sometimes not large enough to contain the apparatus, and the party-wall is cut into. A most melancholy loss of life took place from this cause last winter. Perhaps it may be necessary to notice at this point the use of gas, as it is becoming so very general. Gas, if carefully laid on, and properly used, is safer than any other light, so far as actually setting fire to anything goes; but the greater heat given out so dries up any combustibles within its reach, that it prepares them for burning; and, when a fire does take place, the destruction is much more rapid than in a building lighted by other means. Gas-stoves also, from the great heat given out, sometimes cause serious accidents: in one instance, a gas-stove set fire to a beam through a two-and-half-inch York landing, well bedded in mortar, although the lights were 5 or 6 inches above the stone. This is mentioned to show that gas-stoves require quite as much care as common fires. The heat given out by the gas also increases very much the risk of spontaneous ignition.

* From a paper by Mr. James Braidwood, read at the Society of Arts on the 7th inst.

This is believed to be a very fruitful cause of fires; but unless the fire is discovered almost at the commencement, it is difficult to ascertain positively that spontaneous ignition has been the cause. Spontaneous ignition is generally accelerated by natural or artificial heat. For instance, where substances liable to spontaneous ignition, are exposed to the heat of the sun, to furnace flues, heated pipes, or are placed over apartments lighted by gas, the process of ignition proceeds much more rapidly than when in a cooler atmosphere. Sawdust in contact with vegetable oil is very likely to take fire. Cotton, cotton waste, hemp, and most other vegetable substances, are alike dangerous. In one case, oil and sawdust took fire within sixteen hours: in others, the same materials have lain for years, until some external heat has been applied to them. The greater number of the serious fires which take place in railroad stations in and near London, have commenced in the paint-stores. In a very large fire in an oil warehouse, a quantity of oil was spilt the day before, and wiped up, the wipings being thrown aside. This was believed to have been the cause of the fire, but direct proof could not be obtained. Dust-bins, also, very often cause serious accidents. In one instance, 30,000*l.* to 40,000*l.* were lost, apparently from hot ashes being thrown into a dust-bin.

These accidents may in a great measure be avoided by constant care and attention to cleanliness, and where paints and oils are necessary, by keeping them in some place outside the principal buildings. Dust-bins should, as much as possible, be placed in the open air, and where that cannot be done, they should be emptied once a day. No collections of rubbish or lumber of any sort should be allowed to be made in any building of value. * * *

"What is Fire-proof Construction?" is a question which has given rise to a great deal of discussion, simply, as it appears to me, because the size of the buildings and the quantity and description of the contents have not always been taken into account. That which may be perfectly fire-proof in a dwelling-house, may be the weakest in a large warehouse. Suppose an average size dwelling-house 20 × 40 × 50 = 40,000 cubic feet, built with brick partitions, stone or slate stairs, wrought-iron joists filled in with concrete, and the whole well plastered. Such a house will be practically fire-proof, because there is no probability that the furniture and flooring in any one room would make fire enough to communicate to another. But suppose a warehouse equal to twenty such houses, with floors completely open, supported by cast-iron pillars, and each floor communicating with the others by open staircases and wells: suppose, further, that it is half filled with combustible goods, and perhaps the walls and ceilings lined with timber. Now, if a fire takes place below, the moment it bursts through the upper windows or skylights the whole place becomes an immense blast furnace; the iron is melted; and, in a comparatively short time, the whole place is in ruins, and it may be the half of the neighbourhood destroyed. The real fire-proof construction for such buildings are groined brick arches, supported on brick pillars only. This mode of building, however, involves so much expense, and occupies so much space, that it cannot be used with advantage. The next best plan is to build the warehouses in compartments of moderate size, divided by party-walls and double wrought-iron doors, so that if one of these compartments take fire, there may be a reasonable prospect of confining the fire to that compartment only. Again, cast iron gives way from so many different causes, that it is impossible to calculate when it will give way. The castings may have flaws in them; or they may be too weak for the weight they have to support, being sometimes within 10 per cent. or less of the breaking weight. The expansion of the girders may thrust out the side walls. For instance, suppose in a warehouse 120 feet × 75 feet × 80 feet, there are three continuous rows of girders on each floor, with butt joints: the expansion in this case may be 12 inches. The tie-rods to take the strain of the flat arches must expand and become useless, and the whole of the lateral strain be thrown on the girders and side walls, perhaps weak enough already. Again, throwing cold water on the heated iron may cause an immediate fracture. For these and similar reasons, the firemen are not permitted to go into warehouses supported by iron, *when once fairly on fire*.

The effect of fire on cast iron, as stated by Mr. Fairbairn, F.R.S. of Manchester (7th report of the British Association, 1837, vol. 6, p. 409), is, that the loss of strength in cold blast cast iron, in a variation of temperature of from 26° to 190° = 164° Fahr. is 10 per cent. and in hot blast, at a variation of from 21° to 169° Fahr. is 15 per cent. Now, if the loss of strength advances in anything like this ratio, the iron will be totally useless as a support long before the fusing point is attained.

It is sincerely to be hoped that the clause in the new Building Act, restricting the size of warehouses, may be more successful than its predecessor, for it is not only property that is at stake, but human life. In many of these "Manchester warehouses," there are fifty, or 100 and upwards, of warehousemen and servants sleeping in the upper floors, whose escape in case of fire would be very doubtful, to say the least of it.

Covering timber with sheet iron is very often resorted to as a protection against fire; but Dr. Faraday, Professor Brande, Dr. D. B. Reid, and Mr. W. Tite, M.P. are of opinion that it may be useful against a sudden burst of flame, but that it is worse than useless against a continued heat. Even cast-iron, 1 inch thick, laid on tiles, and cement 3 inches thick, has allowed fire to pass through both, to the boarding and joisting below, merely from the fire in an open fireplace being taken off, and laid on the hearth. This arises from iron being so good a conductor, that, when heat is applied to it, it becomes in a very short time nearly as hot on the one side as the other. If the smoke escapes up a chimney, or in any other way, there may be a serious amount of fire before it is noticed.

GALWAY AND ITS RESOURCES.

As to the health and well-being of the inhabitants, and the superficial appearance of the land, no country has been more suddenly revolutionized than this: whole districts of mountain, morass, and waste have been reclaimed; large estates of fertile acres, ill cultivated, have been restored to the sickle and the scythe; mansions, neglected or tottering, have been repaired and occupied; and the peasantry, once steeped in indolence, flaunting in rags, and a prey to famine, have been rescued from the fell influences which appeared to overpower resistance.

Theorists, moralists, jurists, and religionists might have tried, and tried in vain, to effect that which has only resulted, and could alone result, from the decrees of an all-wise Providence. Famine desolated the country, then disease, then the exodus—the progression was in due course. Mankind saw it, and were appalled; but it was the working of a Supreme Law under which the land recovered from the visitation, yielding again, from well-stored garners, supplies to many nations: so has Ireland become resuscitated, and arisen refreshed from the chastening.

Manufactures are, it is true, but feebly carried on; the northern province asserting herein its supremacy; the linen trade is theirs: an unequal share of the commerce of the island is also claimed by the flourishing town of Belfast. Yet there are circumstances which adapt other sea-ports for foreign trade, and which must hereafter realise for them that wealth and importance for which noble harbours, and the most felicitous maritime position are so well calculated.

Cork, in the south—the key to the great Atlantic—with a harbour most obvious and easy of access, open to the commerce of Southern Europe and of all the oceans; Galway, in the west, directly opposite to the giant Republic—this port and harbour are surpassed by none. To both these towns railways have been some years in action; and the consequent results of increased population and commerce are daily becoming more evident: added to this, improving cultivation of the counties vicinal to both, stimulate their advance from shire towns to incipient cities of cathedrals, colleges, and commerce.

Few localities possess the water-power of Galway; with a flood for a hundred mills, not a hundred hands are employed; with fishing-grounds for a thousand barques, 100 smacks troll listlessly, *three days in the week*; such were the old habitudes. They are entering upon new phases of regulation, and efforts are at last being made to bring the treasures of the deep to the aid of industry; for "they have but to cast in the net."

What cannot be changed, is the natural advantages of these great sea-ports; their mines and minerals, metals and marbles; the unsurpassed fertility of rich deep tillage; the exhaustless reproduction of pastures peculiar to the Emerald Isle. Truly, nature has enriched this favoured land; the hand of man is but of late directed to its cultivation: thus agriculture will advance, and is advancing; commerce is of slower growth,—it wants the staple of manufacture for the supply of return cargoes.

Could the cloths of Leeds and Manchester, the cutlery of Sheffield, the porcelain of Staffordshire, or any of the industrial products of England's endless factories, find in Galway a mart for sale equal to the free issue for embarkation, what American trader would drive up channel (a protracted voyage of days), and face the sinuosities and perplexities of uncertain seas, to interchange commodities with Bristol or Liverpool?

Time, and the changes it effects, will yet confer upon Galway a rank never aspired to by its Milesian settlers, or their descendants. The fluctuating influences of trade, ever prone to new vagaries, may, as they pitched upon the uninviting, sandy, and portless beach of New South Wales, yet fix an emporium on this (formerly most remote) part of the 'ultima Thule.'

At present there is little of a commercial nature in Galway, to raise it suddenly from its former character of a county town, except that the railway brings an access of occupants for its ancient Spanish structures, and pours in with its electric wires the spirit of enterprise in support of spreading agricultural improvements.

The exhaustless quarries of marble, pre-eminent for colour and variety, are also a source of prosperity: that, which was until very lately unwrought, is daily being turned to account. The Messrs. Franklin, of London, first imported the great varieties abounding in these rich quarries. Blocks of colossal dimensions, green mixed and streaked with yellow (either colour predominating, as required), black, and porphyritic marbles, are now regularly shipped to London and other ports; and, as before hinted in the *Builder*, it is somewhat unaccountable that these exquisite building-materials are not more extensively used by architects in Ashlar facings, and *polished*. Any desired colours and shades could be had. The labour of polishing could be done at the quarry, for a comparatively low cost; and the beautiful example of the Conservative Club columns, in Pall-mall, must evidence to every tasteful eye, how valuable, how inappreciable, would be this smoke-resisting surface and material for the dusky atmosphere of Old King Coal.

In the great metropolis but one of four fronts (and that more commonly the smaller) is presented to view. When the expense of ornate sculpture is taken into account, the polishing of a superficies being only one quarter of the elevation, could not be costly,—the lightness, the brightness, if not the novelty (and it must be ever new), would repay.

Additional to these elements of wealth, Galway possesses docks of a magnitude far beyond its present requirements; and an extensive harbour and bay, capable of sheltering the British fleet. Locked by headlands, and protected by the Isle of Arran, steamers from America will one day find here a direct point of intercommunication by rail to Dublin, and thence by Holyhead to London in sixteen hours!

Like all the old borough towns of *Old* Ireland, there is a gigantic gaol!—now happily used more as a reformatory than retributive criminal penitentiary. This is surrounded by gardens, which contribute to the instruction and improvement of probationary prisoners. But the

Queen's College,—a university endowed and chartered by Government, having privileges equal to Trinity College, conferring degrees in arts, medicine, and laws,—assures, at the same time, education of the first class to the rising generation of the province of Connaught, and the prospect of improved value, and rising consequence to the provincial capital.

This university, at a short distance from town, rises in majesty above the noble expanse of the clear and deep Lough Corib—a lake which, rising from the depths of its own great basin, sends torrents of the coolest, purest water through the town by a short and comparatively narrow passage; its ever-swelling rapids offering to industry a power which as yet the lagging speculatist converts to little use—at least as compared with the application of such natural advantages in England.

Amongst the advantages (valuable more peculiarly to a sea-port town) may be classed the easy distance of the *world's great cattle fair*, Balinasloe. For a naval depôt these cannot be overrated. And lastly, it may not be out of place to mention the truly Christian and primitive institution, originated by the Very Rev. Dr. Smythe, a Roman Catholic clergyman, at Eskar. That great philanthropic school was founded by the persevering energy, complete devotion, and unreserving liberality of the gentleman named, and perhaps hitherto unknown beyond the limits of the district. A large tract of several hundreds of acres was purchased by him, houses were built thereon, adapted to the cultivation of the soil, considerable numbers of the peasantry were induced to become domesticated, and there to learn the more advanced arts of agriculture. In the course of years, as the returns increased, the benign founder extended his cares to instruction in trades—those of shoemakers, tailors, smiths, carpenters, and even domestic servants, were taught, within the precincts of those hallowed enclosures, such habitudes as fitted them for that more humble calling; and yet this truly pious *chartreuse* was never made exclusive, nor subsidiary to the views of priestly nor of *episcopal partizanship*—a rare virtue in the Island of Saints!

From this foundation accomplished tradesmen, finished artizans, respectable mechanics, and honest servants, have emigrated to America, and settled there—some three score every year. And these have in gratitude returned to the worthy principal moneys—not for himself; no, they knew too well his aim and intention, but to extend the benefits of the system, to call their kindred to join themselves in America, and to do unto others as they had been done by. Such institutions tell that religious prejudices are on the wane.

The other great sea-port, Cork, requires and deserves a separate notice. Its great importance as a naval station, its commercial and territorial wealth, and its scenic beauty, were entitled to the first place. Returned peace may give a better occasion for the appreciation of its value in the last instance. The genius of this country is tending every day to commerce; modern Irishmen are not, as they were thirty years back, light, mercurial, *insouciants;* no, they have interchanged those manners, and left them with the Londoners. The negotiators, and toilers, and plodders, and speculators, *in matters of fact throughout the world*, are now Hibernians! they are no longer as

QUONDAM.

REVOLUTIONARY ARCHITECTURAL PRINCIPLES.*

WE have glanced at certain views of the nature, the moralities, and the economics—we are now to look a moment at an exhibition of what I may call the polity—of architecture; an exhibition no less portentous, whether as to what is simply architectural, or as to what is directly involved and distinctly implied, in reference to other things.

Mr. Ruskin appears, indeed, to regard the whole subject of architectural ornament, and of architecture itself, in a social as well as an artistic light. Thus he does not scruple to tell us that—

"Much of the delight with which we look on the fretted front of Rouen Cathedral, is the simple perception of time employed, and labour expended in its production."—*Mod. Painters*, part i. sec. i. chap. iii.

a statement which I, for one, can only receive as subversive of all that constitutes architecture a fine art, making, indeed, we might say, all art, by unavoidable implication, no longer the expression of our feelings, and a schooling and perfecting of our faculties, but a tasteless, mindless, vulgar evidence of the mere existence of those faculties. No wonder we find it further written, that—

"Power in labour is never wasted."—*Ibid.*

We might take this startling aphorism as one of the practical results of the artistic polity we are to look into; but let us proceed with all due method: we are told that—

"The systems of architectural ornament may be divided into three:—1. Servile ornament, in which the execution or power of the inferior workmen is entirely subjected to the intellect of the higher. 2. Constitutional ornament, in which the executive inferior power is, to a certain point, emancipated and independent, having a will of its own, yet confessing the inferiority, and rendering obedience to higher power; and 3. Revolutionary ornament, in which no executive inferiority is admitted at all."—*Stones of Venice*, vol. ii. chap. vi.

The two first systems are thus nationally apportioned:

"The Greek gave the lower workman no subject he could not perfectly execute. The Assyrian and Egyptian gave him subjects which he could only execute imperfectly, but fixed a legal standard for his imperfection . . . . *The workman was, in both systems, a slave.* . . . . But, in the Mediæval, or especially Christian, system of ornament, this slavery is done away with altogether."—*Ibid.*

The reason is no less remarkable than the fact,—

"Christianity having recognised, in small things as well as great, *the individual value of every soul.* But it not only recognises the value, it confesses the imperfection in only bestowing dignity upon the acknowledgment of unworthiness. . . . . And it is, perhaps, *the principal admirableness of the Gothic schools of architecture*, that they receive the results of the labours of inferior minds; and, out of fragments full of imperfection, and betraying that imperfection in every touch, indulgently raise up a stately and unaccusable whole."—*Ibid.*

We have long cherished the maxim that the "*summa ars*" was the "*celare artem*,"—the bathing performance and performer in the light of the subject. Every one knows Shakspeare's advice to the players (including the special order for the Clowns "to speak no more than was given them"): it is the glory of Shakspeare himself that he never lets you think about Shakspeare; and it is the infirmity of Byron that he almost never lets you cease to think about Byron. *Tempora mutantur:* we have been told that the special function of "imagination proper" is the simultaneous perception of mutual imperfections ("Modern Painters," part iii. sec. ii. chap. iii.): we now learn that the "principal admirableness" of the Gothic architecture consists — not in beauty, solemnity, impressiveness, the power of embodying hallowed feeling, and inspiring it,—but in giving the inferior workman the right of compelling you to think of him,—the right of scribbling his inferiority on gorgeous palace and solemn temple,—of converting cathedral fronts into a sort of monument to the perpetual memory,—shall we say, with his ingenious advocate,—of his "humility," and "the pride of an effective satire?"—or, of his self-sufficiency, rudeness, irreverence, and love of low buffoonery?

If our sense of degradation could be aggravated, it would be by the recollection of what we have been told by the same authority, that architecture is essentially the art of "associative sculpture;" and that "I do with a building as I do with a man, watch the eye and the lip: when they are bright and eloquent, the form of the body is of little consequence."—*Edin. Lect.* p. 120.

But let us hear something more of the principle. As they say in Italy, "*Si non e vero, e ben trovato.*"

"The finer the nature, the more flaws it will show through the clearness of it; and it is a law of this universe that the best things shall be seldomest seen in their best form.....Therefore, while we are to desire perfection and strive for it, we are not to set the meaner thing in its narrow accomplishment above the nobler thing in its mighty progress—not to prefer smooth minuteness above shattered majesty."—*Stones of Venice, ibid.*

What is this but revolutionizing the "*ne sutor ultra crepidam?*" But there is something further:—

"Above all, *in our dealings with the souls* of other men, we are to take care how we check, by severe requirement, or narrow caution..... ... In the make and nature of every man, however rude or simple, there are some powers for better things..... But they cannot be strengthened, unless we are content to take them in their weakness."—*Ibid.*

Is it not clear that we have mistaken the character and functions, as well as "principal admirableness" of Gothic architecture? I will not say we have gone the length of Robert Hall as to "soberizing the Bacchanalian," nor that we are now to go the reverse length of bacchanalianizing the Minster; yet is the actual contrast scarce less marvellous. We have looked hitherto on our cathedrals as sublime expressions of religious feeling: they are really and truly a sort of gymnasium, where Masters John and Thomas wrote down and stereotyped their "shattered majesty!" There they are—all noble alike, if you but read them rightly. In the light of Pre-Raffaellitism the true sermon in stones is "chipstone." And what a conclusion!—

"Out of all his dulness, all his incapacity, shame upon shame, failure upon failure, pause upon pause, but *out comes the whole majesty of him also* [no longer shattered], and we know the height of it only when we see the clouds settling upon him. And whether the clouds be bright or dark, *there will be transfiguration* behind them and within them."—*Ibid.*

Who can wonder, now, at the sacramental nature of trefoil and parsley? Who can dare to slight—who can do other than profoundly reverence the very infancy of such a manhood? and who can complain if, whilst other children leave their copy-books behind when they emerge from school, these masonic royalties hang up theirs for the wonderment of succeeding ages? Strange or not, there they are, and you are commanded to look on them:—

"Go forth again to gaze upon the old cathedral front, where you have smiled so often [not, of course, as the preparation for religious worship], at the fantastic ignorance of the old sculptors: examine once more those ugly goblins, and formless monsters, and stone statues anatomiless and rigid; *but do not mock at them, for they are signs of the life and liberty of every workman who struck the stone.*"—*Ibid.*

Such then is the artistic result of the gymnasium, or "transfiguration" process. We have all read of "the right divine of kings to govern wrong:" here is the correlative right of roughness, dulness, and stupidity, to disfigure cathedral fronts,—the *ultimate ratio*, in fact, of shattered majesty,—"ugly goblins, and formless monsters, and stone statues, anatomiless and rigid."

We may not swell these columns with self-evident deductions: yet it is impossible to withhold a further word as to the social part of the subject.

In all Greek, Assyrian, Egyptian, and Renaissance work, the inferior workman was, it seems, "a slave." Not to lose ourselves in expressions that precisely measure the slavery—"a thousand times more bitter and more degrading than of scourged African or Helot Greek,"—"prisons of the body,"—"graves of the soul," and so on; let us attempt to fathom the principle or proximate cause of a state so dire and shameful. It is, in truth, in a simple compass:—

"Square stones" (Edin. Lect. p. 76), "accurate mouldings" (Stones of Venice, chap. before quoted), and the reproduction of the same ornament, in violation of the great social law, that "*as men do not commonly think the same thought twice, you are not to require of them that they shall do the same thing twice.*"—*Edin. Lect.* p. 132.

These are serious words, very seriously uttered, and demanding, if only in courtesy, to

* Concluded. See pp. 161, 171, 203, and 227, *ante*.

be as seriously received and dealt with. No less certain is it that they cannot be taken in a restricted sense. Sound or unsound, they involve broad principles, and may not be made plea or basis for class legislation of any kind. If square stones are graves to masons, so must square walls be to bricklayers, and square boards to carpenters. If to require the inferior workman to do the same thing twice, is the bitter bondage, you are bound to carry out the practical inference. The inferior mason belongs to the common lump of humanity, and can plead no speciality, whether of mind, body, or estate. Carry out the great principle: write your Magna Charta in becoming language,—no two columns alike, no two capitals, no two hats, no two shoes, no two shirts, no two stockings, no two buttons, no two button-holes. Don't say stockings and shoes must match; that touches at best but a single pair. But all distinctions are beside the mark: enough *it is doing the same thing twice;* and that is bondage, incarceration,—intellectual, moral, and social death.

And what a prospect in the emancipation! If "there would be a resurrection" of masons, "as of renewed souls" (Edin. Lect. p. 77), so, of course, of shoe-makers, stocking-weavers, hat-makers, tailors, carpenters, bricklayers, plasterers, painters, brick-makers, pin-makers, stay-makers, cotton-spinners—where shall we stop? Why, you have but to establish the law, and you will have a general resurrection.

I will not attempt the whole chapter of consequences. We may certainly see much we are not quite prepared for when all these renewed souls go to work—each after "the will of his own"—on our houses, our furniture, our personal gear, and all the necessary machinery of our daily and hourly life. Some of us may be destined to a perpetual apprenticeship to the putting on and off of our own apparel. As regards art, the result requires no prophecy. If there be one fact in universal experience, it is that inferior minds are content with inferior things, and inferior workmen with inferior work. It is easy to talk of transfigurations: I affirm that the very conditions of the hypothesis are opposed, I had almost said, to improvement. *The standard of a majority* will be ever *a standard of mediocrity.* If the majority make the law, they will make it, not only after the notions, but in the interests of the majority: the sense of beauty, the spirit of excellence, will be poor correctives. These are, no doubt, natural instincts, but, save in natures specially gifted, very subordinate ones. Let power and inferiority go together, and the natural progress will assuredly not be upwards. Not only will ordinary faculties, common-place objects, and vulgar taste fix "the legal standard of imperfection," but self-sufficiency, shallow pride, ignoble selfishness, demand that every path shall be easy to all alike.

Your columns are no place for politics: let me only say that every virtue has its besetting vice, as every material substance has its attendant shadow. The shadow of liberty is just that notion of "equality" which so many will yet persist in mistaking for it. Into these things I must not enter. One thing is matter of consciousness: the special dread and hatred with which many of us regard sweeping radical principles in political and social life, is no simple jealousy of commonized power, but of commonized principles, standards, and functions,—the dread and abhorrence of a tyrannical average—a dead level of senses, perceptions, sensibilities, notions of fair and noble, of good and evil, that would infallibly dwarf down or ostracize all that, by surpassing excellence, rebuked itself—the thousand and one translations, in fact, of "*this fellow came to sojourn, and must be a judge.*"

I speak, of course, but of general tendencies: nor have I the remotest sympathy with the monopolizing, exclusive spirit that shapes its liking by the mere avoidance of what is common. We all profess and desire excellence for its own sake, and a steady, constant, pervasive advancement towards it. Were it not a direct denial of the very nature of things to assert that such advancement can be looked for from the conditions I have been intimating? that all which depends on finer perceptions, loftier feelings, profounder thoughts, a more generous, self-exhausting enthusiasm, will be originated and sustained by that, whose instinctive gravitation is towards equality? To hear some talk, one might suppose that good sense meant common sense, and that the word "vulgar," was but a term got up for factitious purposes at Almack's.

But we are not yet at the terminus of Pre-Raffaellitism. The great principle of "the division of labour" is, it seems, to be abjured; and an age, boasting of progress, to retrace its steps and return to barbarism. We have, in fact, given a wrong name to the principle.

> "It is not, truly speaking, the labour that is divided, but the men; so that all the little piece of intelligence left a man is not enough to make a pin or a nail, but exhausts itself in making the point of a pin, or the head of a nail."—*Stones of Venice*, same chap.

I will not stop to argue the case. That pin-making, whether in whole or part, should absorb a man's "soul," or what might practically come to the same thing, his time and thoughts, were indeed a murderous tyranny I would join any honest effort in putting down: but that the man's soul would be regenerated by making the whole pin instead of the point of it, and making it, not according to a fixed pattern, but after a will of his own, involves a chapter of metaphysics I want credulity, or faith, to open. We are not even yet, however, at the goal.

> "It would be well if all of us were good handicraftsmen in some kind . . . and yet more, *in each several profession, no master should be too proud to do the hardest work.* The painter should grind his own colours; the architect work in his mason's yard with his own men; the master manufacturer be himself a more skilful operative than any man in his mills; and the distinction between one man and another be only in experience and skill" (a hard-won distinction for the master), "and the authority and wealth which *these* must naturally and justly obtain."—*Stones of Venice*, same chap.

I think I am not overstating matters when I say that we are now beyond constitutional ornament. This broad principle, so honestly stated, comes from a special reprint of the special chapter, for the special benefit of those specially interested. Of course, the reformer has recked already "his own rede;" of course he helps to print as well as write—takes his post now and then at "the hardest part"—now and then, perhaps, with a certain black letter functionary not to be "named to ears polite"—perhaps allows the said functionary reciprocal employment, at least, in correcting the press: why not writing here and there, like mediæval masons, his grotesque and "effective satire?"

I will play no longer with a very serious subject. I have elsewhere written myself "a leveller to the backbone;" whether what we are here looking on is "*levelling upwards,*" I leave my readers to determine.

Let us love the "inferior workman," never forgetting for a single moment he is, for time and eternity, *our flesh and blood.* Let us care for him, watch kindly and scrupulously over his proper interests and lawful rights; but let us not think of doing all this *by becoming inferior workmen ourselves.* Let us cherish his nobler nature, and find channels for its development; but not by turning nails and pins into heroics, much less heroics into pots and pans; above all, let us recognise his essential membership in the social body, and give him, in all due and fitting ways the hand of brotherhood,—but let us solemnly pause ere, by abjuring necessary distinctions, or aggravating them by unseemly language, we sow seeds of discord, plant "roots of bitterness," and make the very amputation we deprecate, by suggesting the complaint an apostle adduced as an absurdity that precluded argument, "*Because I am not the eye or head, therefore I am not of the body.*"

Let these things be weighed and pondered,—not in the scales of party or personal controversy, but of serious, earnest, candid, enlarged, and enlightened thought. They involve, very plainly, the vital interests of art and architecture. *Can it be a moment assumed that they involve no more?* Is the great principle of divided labour and subordinated functions to be repealed *in extenso?* Are all distinctions of head, hand, and foot to be pronounced an out, rage? thought, invention, manual dexterity, and muscular strength to do, turn and turn about, each after its own liking, the same duty? Are law, language, and national polity to emulate the "fantastic ignorance of the old sculptors,"—not "silencing the peasant because he cannot speak good grammar" (*ibid.*)—"ugly goblins and formless monsters" had in reverence as "signs of life"—and "savageness" be an elemental quality in a Christian commonwealth, as it is alleged to be in "Christian Architecture"? Or is architecture to be a solecism?—an unresolvable discord?—a safety-valve for abstract rights and impossible theories?

But why is art to be made the scape-goat? *With what face* can we assert abstract principles in the case of art, while we lack the manliness to carry them out in other things? *With what prospect?* Do you expect the inferior workman to know no distinction beyond his own sense of it within the workshop, and to be the slave—the worse than Helot—the moment he steps out into social life? These are questions that will have an answer. LENY.

THE ROYAL LITERARY FUND SOCIETY.

THE anniversary dinner of this admirable society took place on the 7th inst. at the Freemasons' Tavern, Great Queen-street, H.R.H. the Duke of Cambridge presiding, and passed off with great spirit and success. The chairman, the American Minister (Mr. Dallas), the Belgian Minister, Mr. Robert Bell, the Bishop of Oxford, and others, spoke excellently well. Subscriptions were announced to the amount of 1,350*l.* During the past year grants have been made to the amount of 1,665*l.* a larger sum than the society had ever before dispensed in one year. Great credit is due to Mr. Blewitt, the secretary, for his untiring exertions in behalf of the fund.

CASTLE CAREY MARKET-HOUSE.

CASTLE CAREY, a small, pleasantly situated, and clean-looking town in Somersetshire, has lately been embellished by the works of two London architects.

The church has been almost entirely rebuilt by Mr. Ferrey, with a new tower and spire of remarkable elegance; and a new Market-house, to which the accompanying engraving refers, the work of Mr. Penrose, was opened on the 2nd of October last.

It is conveniently placed in the middle of the town, and occupies the site of an old Market-house of which almost all vestiges had perished. The shape of the ground is irregular and uneven, and the ground rises rapidly from the south to the north. The main building fronts the south: it is 64 feet in length and 24 feet in breadth (external dimensions). The height to the ridge of the roof is about 45 feet. The lower story is open and used for a corn-market, and on certain days for a cheese-market: it is well lighted, by windows towards the north, and an open arcade on the other sides.

Behind the main building, but forming one front with its western extremity, is a wing, seen in the engraving, running northwards up the hill: this, as well as the main building, has three stories. The lower is a market for poultry, vegetables, &c.; and the upper stories form reading-rooms and a dwelling for the porter. Over the corn-market, and behind the pointed arches which relieve the flat arches of the arcade from the weight of the superstructure, is a mezzanine story used for a granary and cheese store.

As the street at the back is considerably higher than the ground in front, a slightly inclined platform is formed against the east wall of the wing and over the open court, enabling carts to unload at once on to the level of the granary.

The upper story of the main building is an assembly-room, 51 feet by 20 feet 8 inches; having a small gallery for an orchestra at the western end. It is lighted at the east end by an oriel window. The roof is open to the ridge. The tiebeam is somewhat raised above the plate, and rests on curved struts springing from stone corbels. A convenient staircase, at the north-western corner of the main building, forms the communication between the different

CASTLE CARY MARKET-HOUSE, SOMERSETSHIRE.—Mr. Penrose, Architect.

stories and rooms, both of the main building and of the wing. A small court of a somewhat triangular shape occupies the remainder of the space. In this, butchers' stalls are placed, under a covered gallery along the curved wall which forms its northern boundary.

The Market-house is for the most part built of the ochreous coloured sandy limestone of the neighbourhood; and the pillars and other dressings are of freestone from Doulting, a stone much resembling Bath, but rather coarser, harder, and more durable. The roof is covered with Delabole slate. The builder was Mr. M. Davis, of Langport, who was also employed upon the church.

The entire cost of the building, including the market fittings, &c. was about 2,300*l.*

THE NEW MUSEUM BUILDING ON THE KENSINGTON GORE ESTATE.

In accordance with our promise we now give a plan and sections of this new building; and in justification of our strictures, and to the delight, doubtless, of the eye of taste in many a reader of our pages, we add a view of one of the sides of this melancholy construction, which is now a little further advanced towards the assumption of its complete form, and looks even worse than we anticipated. We had inadvertently stated that the shell was filled in with boarding; but we did our simile of the boiler some injustice in saying so, for it is filled in externally with corrugated iron, and is therefore all the more like a threefold monster boiler. The cost of the article, with the fittings, is estimated at 15,000*l.* a sum which might surely have been increased by a small per centage extra for the sake of appearance. The only imaginable excuse for its ugliness is the allegation that the structure is to be merely a temporary one; but this is scarcely consistent with the declaration of the Board of Trade report to the Treasury, that "it will at all times and for a lengthened period prove of much service." The report in question is the last in an appendix to the third report of the Exhibition Commissioners of 1851, which report, comprising 273 pages, and containing plans of the Gore estate, and of the new museum, has been printed for Her Majesty's Stationery Office.

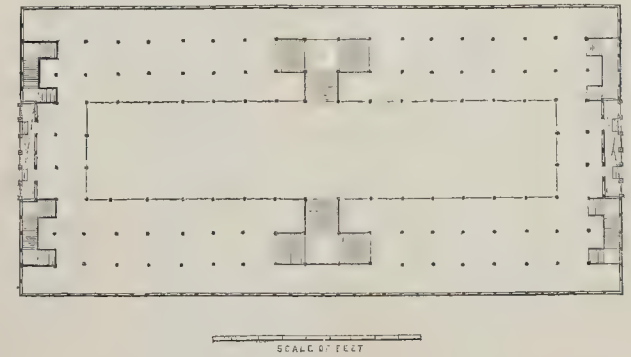
According to the specification given in the appendix to this report, the building will cover an area of 3,700 square yards, exclusive of the galleries, which give an additional space equal to 2,700 yards, making an entire space for exhibition of 6,400 yards, or 1½ acre. The walls of the building are composed of cast-iron uprights or standards, placed 7 feet apart, and tottled to a foundation frame of timber. The spaces between the columns are to be filled up with corrugated sheets, and the interior of the walls lined with boarding, tongued and grooved.

The building is being covered by three segmental roofs, each 42 feet span, supported on the outside walls, and on two intermediate rows of columns. The trusses are of malleable iron, 7 feet asunder, and covered with corrugated sheets. A skylight, 12 feet wide, and raised 18 inches from the surface, run along the entire ridge of each roof, the sides being fitted with moveable wrought-iron louvres.

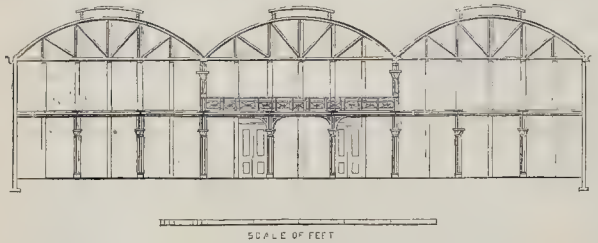
Galleries 42 feet wide run down each side of the building, and fill up the whole space beneath two of the roofs. They are connected at the ends by cross galleries 21 feet wide. And these galleries are carried by a system of longitudinal and cross girders—the longitudinal girders being placed 14 feet apart, and at an equal distance from the outside walls, and supported by columns placed 14 feet asunder. The cross girders spring from each of the standards of the outside walls, the principal ones resting on the interior columns, and the intermediate ones being tottled to the longitudinal girders. Joists are fixed between the cross girders, and the flooring spiked to them. The galleries are fenced by a light trussed railing, and lighted by the sky-lights in roof.

THE NEW MUSEUM ON THE KENSINGTON GORE ESTATE, BROMPTON.

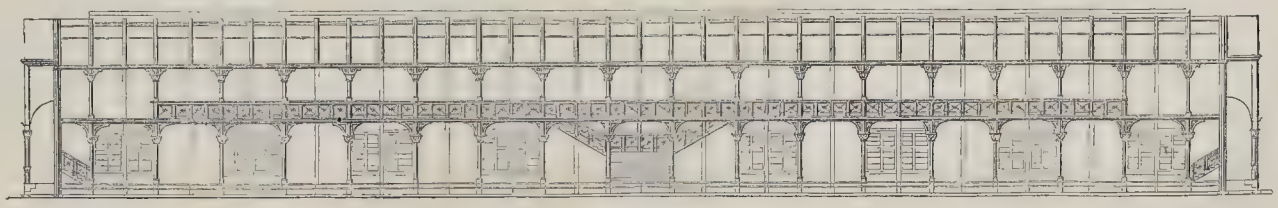
Elevation of Side.



Plan.



Transverse Section.



Longitudinal Section.

DECISIONS UNDER METROPOLITAN BUILDING ACT.

ORNAMENTAL REPAIRS NOT EXEMPT.

At Marlborough-street Police-office, on the 3rd inst. Mr. Bingham gave a decision in the case of an information laid by the district-surveyor of St. George, Hanover-square, Mr. Foxhall, against Mr. Longmire, of New Bond-street. The magistrate's statement will explain the case. Mr. Bingham said,—The defendant commenced work on his house in Bond-street after January, 1856. He removed a shop window and the cornice over it, took away a wooden brestsummer above the window, placed an iron one in its stead, and then fixed a cornice over the window exceeding in width the 18 inches prescribed by the statute. It cannot be contested that this is work commenced on the old building after the 1st of January, 1856. But it is contended that, under the 9th section of the Act, "necessary repairs" are excepted from its operation. It seems to me, however, that the cornice-work done by the defendant, if repair at all, as distinguished from alteration, is, at all events, ornamental repair, and not necessary repair. The work, therefore, must be altered to a conformity with the regulations of the Act.

BUILDINGS COMMENCED BEFORE JANUARY, 1856.

At the same court, on the same day, judgment was given in the case of Mr. Foxhall, district-surveyor, *v.* Mr. Clark, builder to Messrs. Laurie and Marner, of Oxford-street. The question was, whether Messrs. Laurie and Co. were justified in roofing in an area 40 feet by 47 feet, existing in 1855, by putting an iron and glass roof in 1856 on the then existing old walls, by which roofing they joined their large coach factory in Oxford-street to the premises in Tenterden-street, making the workshops of greater cubical contents than either the present or the late Act allowed. The information was laid under the present Building Act.

Mr. Bingham said,—In this case the "enclosing walls" of the defendants' building were commenced and carried 13 feet higher than the footings, and were surmounted by a plate for the reception of a roof, in November, 1855. The roof itself was not placed on these walls till March, 1856. It is clear that on the 1st of January, 1856, these "enclosing walls" were an "old building," exempt from the operation of the statute within the definition of sec. 8, 18th and 19th Vict. c. 122, which enacts that "a building shall be deemed new whenever the enclosing walls thereof have not been carried higher than the footings, previously to the 1st of January, 1856: any other building shall be deemed to be an old building." But it is contended, on the part of the surveyor, that the roof fitted on in March, although projected by the builder in the previous November, as must be inferred from his then surmounting the walls with a plate, is an alteration, addition, or other work made or done to, or upon, the old building; and if so, according to section 9, is subject to the regulations of the new statute. It is difficult, however, to understand why walls "higher than the footings" previously to January, 1856, should be designated by the Legislature as an "old building," unless the expression, "higher than the footings," was intended to comprehend the entire superstructure, which such walls were, at the time of their erection, intended and adapted to support. That superstructure, if carried out in conformity with the original plan, is part and parcel of what the statute calls the old building, as much as if it had been completed in November, and if so, must be subject to the same law as the old building. If the enclosing walls themselves had been altered or extended after December, or there had been evidence that the plan of November had been departed from, and that the roof in question was the result of a new plan substituted after December, that would have been an alteration of, addition to, or some work in the nature of alteration or addition done on, the old building. But the whole of the present structure seems to me, in the sense of the Act of Parliament, the old building of November. I think, therefore, the magistrate cannot make any order on the defendants.

EAVES TO OVERHANGING ROOFS.

Mr. Pound, building some semi-detached houses in Greenwich, was required by the district-surveyor (Mr. Browne), under section 26, paragraph 1, to construct the projecting portion of the roof of one house, within the prescribed distance of 15 feet from another building, of wholly incombustible materials. Ultimately the case went before the magistrate.

The section says:—

"Every coping, cornice, facia, window dressing, portico, balcony, verandah, balustrade, and architectural projection or decoration whatsoever, and also the eaves or cornices to any overhanging roof, except the cornices and dressings to the window fronts of shops, and except the eaves and cornices to detached and semi-detached dwelling-houses distant at least 15 feet from any other building, and from the ground of any adjoining owner, shall, unless the Metropolitan Board otherwise permit, be of brick, tile, stone, artificial stone, slate, cement, or other fireproof material."

Mr. Pound contended that the Act of Parliament only required the eaves, or cornices, to be of fire-proof materials *to* the overhanging roof, but that the materials constituting the "overhanging roof" itself, were not defined. The district surveyor said, that the general reading of this section was, that the projecting portions of roofs, coming within the prescribed distance of 15 feet, must be of wholly incombustible materials, and such was the superintending architect's opinion. Mr. Trail, the sitting magistrate, said section 19 required roofs to be externally covered with slates, tiles, or metal. Section 26 only spoke of eaves and cornices *to* any overhanging roof. That "eaves" meant the extreme finish of the roof itself, the last course of slates or tiles, and that therefore the complaint must be dismissed.

It is proper to mention that the district surveyor was of the same opinion as the magistrate, and had proceeded with the case only in deference to the general opinion, and for his own protection. The supposed requirement in the Act was opposed by the district surveyors before the Parliamentary Committee, but ineffectually, builders oddly enough urging its importance. The question, which will probably require some further arguing, should at once be set at rest.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

ANNUAL GENERAL MEETING.

The annual general meeting of the members of the Institute was held on Monday evening last, Mr. Tite, M.P. vice-president, in the chair. The report of the council showed that during the past year ten gentlemen have been elected fellows, six of whom were previously associates, and that fourteen have been elected associates. There are now 135 fellows and 136 associates. Mention was made that,—

"The council having ventured to suggest to the Directors of the East-India Company the advantage to be derived from allowing the interesting set of drawings, representing the public buildings at Beejépore, to be copied for distribution, they have much pleasure in learning from Mr. Fergusson, through whose intervention the drawings were made, that photographs are now being produced from them under his direction—an instance of attention to the interests of art on the part of the Hon. Company well worthy of imitation by other public bodies."

The addition of 200*l.* stock to the funded property, and a good balance in hand, showed a satisfactory state of affairs financially.

The report having been received and adopted, thanks were voted to the president, Earl de Grey, with expressions of condolence for a recent bereavement; to Mr. Scoles, specially, on his retirement from the office of honorary secretary; to Mr. C. C. Nelson; the council, and other officers of the Institute.

The ballot was taken for the election of office bearers for the ensuing year:—

The following were elected: President—Earl de Grey. Vice-presidents—Messrs. W. Tite, J. B. Bunning, and G. G. Scott. Honorary Secretaries—Messrs. C. C. Nelson and M. D. Wyatt. Mr. T. L. Donaldson, for foreign correspondence. Ordinary Members of Council—Messrs. A. Ashpitel, H. Baker, C. Barry, jun. H. Clutton, St. James's, J. J. Cole, J. Gibson, George Godwin, Owen Jones, T. H. Lewis, and J. Whichcord. Treasurer—Sir W. R. Farquhar, bart. Honorary Solicitor—Mr. W. L. Donaldson. Auditors—Fellow, Mr. F. W. Porter; and Associate, Mr. C. B. Thurston.

IRON AND GLASS IN BUILDING CONSTRUCTION.

There has probably never been a time in the world's history when men did not wish to be told of some new thing. At present there is a shaking amongst the dry bones of architecture; and we have preachings, denouncings, and prophesyings, revivals and new creations,—one of the newest being *pseudo* Crystal Palaces. Iron and glass are to supersede all other kinds of material; and not only are exhibitions and museums to be constructed of these materials, but even whole town communities are to be roofed beneath glass; and the Sydenham Exhibition construction is to be repeated, or duplicated, at every large town in the empire. Men are seldom long without a mania, and we bid fair to have an iron and glass constructing mania,—which, like most other manias, will end in disappointment, ruin, and disgust. Even the good will be confounded with the evil, and, for a time, will be swamped with it. People should wait to have some experience, or should at least ask for a faithful report as to existing experience of the use of iron and glass;—firstly, in the Exhibition at Hyde-park; and, secondly, in the structure at Sydenham. On the last day of the Hyde-park Exhibition rain came through the roof like water through a cullender, and we know that there are hundreds of leaks in the roofs every wet day at Sydenham. This liability to leakage during rain must ever be a serious drawback, and we should ascertain the cost of repairs and maintenance before multiplying such structures. But there are defects (for building purposes) inherent in the materials; and these defective qualities no art can overcome nor remove: we mean the vitreous character of iron and glass. In this variable and moist climate of England, there are many days when condensation takes place on all substances a few degrees lower in temperature than the surrounding atmosphere. Invisible vapour becomes visible and palpable wet, running down or dropping from all substances which condense and do not absorb. The praises of "marble halls," have been sung in romance and in poetry; but marble halls are anything but comfortable halls, simply because of the coldness of the substance, and the non-absorbing character of the surface. In these qualities marble resembles iron and glass.

There is one department at the Sydenham Palace where the glass is a positive injury. This is in the roof over the pumping engines: condensation takes place on the glass to such an extent as seriously to injure the ironwork of the engines beneath. Condensation must take place over the whole area exposed.

There is another defect in such structures, namely, open joints where the materials come together. It is practically impossible to make a permanent water-tight joint betwixt iron and glass: the materials do not expand and contract equally. There is vibration, and betwixt glass and glass there is no attempt at forming a joint other than "but" or "lap," through which rain is blown and snow is drifted. Again, iron will rust and glass will fracture, so that painting and repairing must go on in one perpetual round. These items, *painting* and *glazing*, will not be small for the Sydenham structure, and we say again, the cost should be ascertained before any large outlay is incurred in other places.

The parent type of the *Crystal Palace* is acknowledgedly a conservatory. For the purposes of a conservatory, iron and glass are the most fit material. The framework must be slender, and should be elegant. Plants require light, vapour, and heat: a few leaks more or less are of little consequence, because water must be used liberally over the soil and over the leaves of tropical and other hothouse plants. That which is an advantage in a conservatory, is a cause of ruin in an exhibition: silks, jewellery, pictures, statuary, furniture, musical instruments, and the thousand and one things collected in a large exhibi-

tion or bazaar require perfect shelter from wet; and, if this is not secured by the main structure, a second roof must be provided within. The advocates for crystal palaces must not forget this. Iron and glass have their use. They enable the architect to second the desire for *show* in modern shop-fronts. Floors, roofs, and galleries may have wider spans and bolder projections. Pillars, beams, and girders may have lightness and strength not to be obtained by timber, stone, or brick: for such purposes cast and wrought iron are peculiarly fitted, the one to bear crushing pressure, the other to resist tensile force; but the one must not be put to serve for the other; the cast iron for the wrought, admitting that, for many modern requirements, the architect may use iron as indicated. This fact must not be lost sight of: oxidation will take place, leading to premature decay. Public buildings require stone and bricks. These are the true materials for the architect to use. Iron and glass must be secondary and subservient. To use them as at Sydenham will only lead to extravagant cost and ultimate disappointment.

ENGINEER.

PROVINCIAL NEWS.

Lincoln.—A new building for offices to the Midland Counties Fire Insurance Company, is now about to be erected on the site of the old Parsonage in Silver-street, according to the *Lincolnshire Chronicle*. Tenders for the new building were decided upon on Wednesday before last. The tenders were as follow: — C. Ward, Lincoln, 2,780*l.*; Cave, Gainsborough, 2,749*l.*; W. Huddleston, Lincoln, 2,748*l.*; Sharman, Spalding, 2,663*l.* 10s.; Biatt and Binns, Nettleham and Lincoln, 2,618*l.*; Barnes and Birch, Lincoln, 2,567*l.* The lowest tender was accepted. In this case there was thus only a difference between the highest and lowest tenders of 213*l.* The architects' estimate was 2,725*l.* The architects are Messrs. Bellamy and Hardy, of Lincoln.

Horncastle.—The newly-erected Corn Exchange here was occupied by the public for the first time on Saturday before last. The interior has been ornamentally painted, under the direction and at the cost of the architects, Messrs. Maughan and Fowler, of Louth.

Netley.—The foundation-stone of the new Military Hospital, near Netley, was to have been laid by her Majesty, on the 12th instant, but the ceremony has been postponed on account of the ungenial change in the weather. The total extent of ground bought for the purposes of the hospitals, according to the *Hampshire Advertiser*, is 90 acres, and the building will cost from 150,000*l.* to 160,000*l.* It is calculated to hold, including the necessary staff, 3,000 persons. 150 men are already engaged in making new roads on the land, and erecting a jetty, &c. for the accommodation of the Queen. The pier or jetty will be run out about 150 yards from the shore. The site is about half a mile below Netley Abbey.

Gloucester.—The new market in Eastgate-street, of this city, was opened on Tuesday before last. The building stands upon the site of the old market, the present market being increased by the space occupied by the old corn market and sundry dilapidated tenements and stables facing Bell-lane. The total area is about 2,150 square yards. The building is divided into two compartments. The principal one, extending from Eastgate-street to Bell-lane, is 230 feet in length, 53 feet 6 inches in width, and 40 feet in height, to the ridge of the roof. The second one, connected therewith upon the west side by light iron columns, is 160 feet in length, 32 feet in width, and 32 feet in height to the ridge of the roof. The roof is composed of wrought iron arched principals, having a light appearance, the largest span being 53 feet 6 inches. A portion of it is glazed, the remainder boarded and slated. The market is fitted up with shops and stalls. A fountain, in the principal avenue, is surrounded by fish stalls, and separates the butchers' from those at the principal entrance. The fountain has been executed by Mr. Seeley, of London. All the latest improvements have been intended to be combined in the various arrangements. The market has been lighted with gas, by Messrs. Rogers and Gough, of this city. The principal façade in Eastgate-street is of Bath stone, and composed of four Corinthian columns and pilasters, supporting a pediment, crowned by a bell turret. Three arches between the columns give access to the market. Cast-iron gates, with scrolls bearing the City Arms, fill up the several archways. The carving has been executed by Mr. H. Frith, of this city. The façade in Bell-lane is constructed almost entirely of bricks. The mass of the work is of red brick; the quoins, cornices, arches, panels, and salient points being marked by white and blue bricks. A campanile divides the two compartments of the market. The works have been designed by Messrs. Medland and Maberly, of London, and carried out by Messrs. Jones and Son, of this city. The iron work for the roof, gates, and butchers' stalls, was executed by Messrs. Perry and Sons, of Bilston.

Liverpool.—The Liverpool Corporation have just completed some extensive alterations in connection with the docks; costing about 500,000*l.* New warehouses, and a dock and basin, seven acres in extent, have been made on the Wapping property; the warehouses, which are fire-proof, and fitted with hydraulic cranes, having cost 88,000*l.* The Queen's Dock has also been deepened five feet, so that it will now accommodate the largest ships of burden. At these docks ships can be unloaded with greater rapidity under cover, and their cargoes placed on railway trucks, and despatched immediately to any part of the kingdom.

Manchester.—The building erected in Quay-street, for the new St. Mary's Hospital, is expected to be opened in a few weeks. The builder is Mr. Robert Neill, Strangeways; and the architect, Mr. N. G. Pennington. The gas-fittings are being put up by Mr. William Wilson; and the plumbing work by Mr. Helsby. The lecture and operation rooms, which are fitted with rising circular seats, will be lighted at night by "sun-burners." The lecture-theatre will seat 200 persons. The other principal rooms are the Radford Museum and Library. All the large rooms are fitted with "lantern lights." There are between forty and fifty smaller rooms, and accommodation for about ninety beds for patients. The building forms nearly a square, having a frontage to Quay-street of 92 feet, and a depth of 90 feet 6 inches. The original estimate of the cost was 5,200*l.* but an addition made to the Atherton-street side of the building, and the gas-fittings, &c. will be extra. A lithographic view of the hospital has been executed by Messrs. Day and Sons, lithographers, London, and published by Messrs. Agnew, of Manchester. The building is in the Italian style of architecture.

Oldham.—The New Lyceum here is to be opened in the end of June. The building is of stone, in the Renaissance style, and will cost about 6,000*l.* a considerable portion of which has been subscribed. The lecture-room and music-hall will be decorated, and will have a semi-circular ceiling. It extends the whole length of the building, and has nine large windows on one side. The architect is Mr. N. G. Pennington, of Manchester.

Durham.—Mr. William Ground, of Petersborgh, civil engineer and surveyor, has been appointed Surveyor and Inspector of Nuisances for the borough of Durham, vacant on the resignation of Mr. Thomas Dickons, through ill-health.

Jarrow. — The contractors for the Jarrow Docks are busily employed with the embankments; and, in a week or two, nearly seventy acres of the slake will be enclosed. About 500 yards of the river wall is constructed. The mason-work of the six jetties leading to the dock are also progressing rapidly towards completion; and the lines of railway to them are about half finished: 100 men are also at work diverting the channel of the river Don.

Glasgow.—The Committee of the Loch Katrine Water Commissioners, at a late meeting, recommended the appointment of Mr. Mackain as resident engineer, on the same terms of remuneration which he held from the Glasgow Water Company, viz. 600*l.* per annum, and a free house at Dalmarnock. The committee reported that the offer of Messrs. Richard Thompson and Son, of Blackburn, for the construction of the Mugdock Reservoir and relative works, at the price of 40,158*l.* 15s. had been accepted. The offer of Mr. George Adamson, of Edinburgh, to construct the Mugdock tunnel and relative works was accepted. The minutes of the committee were approved of.——The extensive wholesale warehouse of Sir James Campbell and his copartners, in Ingram-street, appears to be now completed, and we take the following from a description given in a local paper. "Among the most recently-erected and most important 'commercial palaces' in this city is that of the Messrs. Campbell, in Ingram-street. The great extent of its walls, and the unusual style of its architecture, make it universally attractive. We need give no elaborate account of the various styles of architecture included in it, but it appears to us to be chaste and elegant, and well suited for the end which it is intended to serve. Opinions vary in regard to the projecting tower at the north-west corner, but, be that as it may, the long tiers of windows are well contrasted by the serrated or gabled upper termination of the walls, which sufficiently redeem it from the monotonous sameness of ordinary street architecture. The erection is of four stories, and, as each floor is the greater part of an acre, we have thus a surface of several acres available for business purposes. The whole interior of the establishment is open, that is, there is no partitioning of wood or stone into compartments, and no walling off by material that cannot be seen through. The various floors are supported by handsome iron pillars, a space being left in the middle of three upper floors immediately under a spacious glass roof, from which a flood of light is diffused throughout all the establishment. The framework of the lantern being of a light blue, with touches of yellow and crimson, the effect is extremely pleasant and lightsome. The ascent to the various floors is by a spacious stair at each end, both stairs throwing a branch to each side of the floor. The tower is a much more 'roomy' place than would be supposed from looking at it from the street. The floor of the tower is about 50 feet above the level of the street. The roof of the entire establishment is composed of six ridges, or rather six roofs, each having sloped ends and sides, and the north angles having lights in them."

CHURCH-BUILDING NEWS.

Martham, Great Yarmouth. — St. Mary's Church, Martham, Norfolk, consisting of chancel, nave, and aisles of five bays, groined south porch, with parvise, and western tower opening into nave, is now undergoing restoration. The arcades, with lofty clerestory, are being rebuilt. All the roofs will be executed in English oak, moulded, and covered with lead. That over the nave will be of hammer-beam construction, the curved ribs resting on angels holding scrolls and shields. Open seats of oak, with poppy-headed standards, will take the place of the pews, in conformity with original design. The chancel will be rebuilt next year. The works above mentioned are being executed at the sole cost of the widow of the late Rev. Jonathan Dawson. Messrs. Johnson, of Yarmouth, are the contractors for nave and aisles. The architect is Mr. Philip Boyce, of Cheltenham.

Colchester.—On Friday, in last week, the ceremony of consecrating the cemetery of eleven of the parishes of Colchester was performed by the Bishop of Rochester. The cemetery comprises eighteen acres, planted by Mr. B. R. Cant, nurseryman. The buildings are Episcopal and Nonconformist chapels, lodge, and receptacle-house for the dead. The chapels, in the Gothic and Decorated period, are of same size and design (save that the bell-turret in the Nonconformist chapel has open trellis-work in place of a bell). They are built on the cruciform plan, with open porch, tracery windows, stone crosses on the gables, and bell-cot. The material is Kentish rag, in random courses, with Bath stone dressings. The interior is plain, with roof supported by open stained wood-work. The Episcopal chapel has a carved wood reading-desk and chair in the chancel. The Episcopal chapel on the upper portion of the cemetery stands east and west, and the Nonconformist

chapel on the lower part of the ground looks north and south. The original designs were by Messrs. Edwards and Law, of London, architects, and afterwards carried out by Mr. Barnes, of Ipswich, architect. The contractors for carrying out the erection of the works were Messrs. Colls and Co. of London.

Northampton.—St. Peter's Church, which, for years, remained in a dilapidated and neglected state, has been thoroughly restored, according to the local *Herald*, and a school in St. Peter's parish, for the education of the children of the poor, is rapidly progressing towards completion. The latter was designed by Mr. E. F. Law, of Northampton, architect.

Harrow.—The school chapel at Harrow has been undergoing a process of almost entire transformation. A new aisle has been added to the original building from funds subscribed by the masters and the parents of the boys, and a chancel erected at a cost exceeding 2,500*l.* by the head master, Dr. Vaughan.

Romsey.—Mr. Lower, the architect appointed by the Local Burial Board, has submitted designs for chapels and a lodge at the intended cemetery; and although, says the *Hampshire Independent*, they were in a rather more elaborate style than severe economists might recommend, they were generally approved of by the Board, and will shortly be submitted to the vestry.

Birmingham.—A monumental brass, executed by Messrs. Hardman, of Birmingham, has just been laid down in St. Andrew's Church, Wells-street, in that town,—"In memoriam viri dilectissimi Vicesimi Knox." The figure is habited in a modern costume, over which robes are represented, the deceased having been a Bencher of the Inner Temple and Recorder of Saffron Walden.

Huyton (Liverpool).—The foundation-stone of an Independent church was laid at Huyton on Wednesday before last. The church will be about 70 feet by 40 feet, and is to be in the Gothic style, and of slate stone from Huyton quarry. The architect is Mr. T. R. Brown; the builder, Mr. Lyons, of Huyton; the joiner, Mr. Hughes, of Liverpool; and the plumber, Mr. Wainwright, also of Liverpool. The clerk of the works is Mr. J. H. S. Gibson.

Skipton.—The restoration of Skipton Church has been effected under the superintendence of Mr. J. A. Corry, of Durham. The east gallery has been removed, and the roof entirely restored, with the addition of carved brackets resting upon corbels, in accordance with the general architecture of the building. The square pews, which formerly filled the nave, of various heights and dimensions, have been taken away, and low oak seats, of uniform height, with carved ends, substituted. The chancel is a continuation of the nave without any visible division, except a slight difference in the masonry of the pillars and the clerestory windows. The carved screen which formerly marked the separation of nave and chancel has not been replaced. The want of stained glass in the east window leaves an impression of coldness and incompleteness, but it is believed the liberality of the parishioners will not leave this want long unsupplied. The formal re-opening took place on Wednesday in week before last.

Salford.—The sub-committee of the local burial board, in a report presented to the council by the committee, describe the contracts entered into for roads, boundary walls, &c. for the new cemetery, and the progress made by the several contractors. In concluding, the sub-committee state that "considerable delay has arisen in reference to the chapels, in consequence of the abandonment of the designs of Mr. Hill (originally selected), owing to the great difference between the stipulated sum and the amount of the tenders; but the committee are now advertising for tenders for the execution of the designs of Messrs. Pritchett and Sons." The report was adopted.

Buttermere.—The consecration of the new church at this isolated village took place on Monday before last, the Bishop of Salisbury officiating. The old parish fabric in the lapse of time had become decayed, and beyond repair. The new church is built on the old site. The designs were by Mr. R. J. Withers, of London, architect, who superintended the erection. The cost was 500*l.* The west window with a small portion of stained glass in the upper trefoil, the bowl of the font, and the bell are relics of the old fabric. The decorations of the interior, the pulpit, reading-desk, and stained glass windows are all donations.

Glasgow.—At a meeting of the City Incorporation of Wrights, held in the Trades' Hall, it has been resolved by a large majority that the sum of 50*l.* be voted as a contribution to assist the Trades' House in filling in one of the transept windows of the High Church with stained glass.——Mr. Rochead, the architect of a new Unitarian chapel here, has, according to the *Gateshead Observer*, designed an edifice for the Scottish Church, to be erected in the West-end-park, with a campanile upwards of 150 feet high, at the north-east corner, in which will be the main entrance.

FRENCH SCHOOL OF FINE ARTS.

Our brave allies do not shine quite so brilliantly in their exhibition of pictures, opened on Saturday, at 121, Pall-mall, as in former years: in fact, it is scarcely above mediocrity. There are some works, undoubtedly, of great merit, to which our strictures do not apply; but, on the whole, their presence does not compensate for the many unsatisfactory pictures by which they are surrounded. We must again object, too, to the manner in which the catalogue is arranged. Why should "140" be placed close to "35," and poor "36" be driven to the opposite side of the room? Unless, indeed, it be to convince grumbling Englishmen that "Routine" is not to be always despised.

We will follow the example of the catalogue, and pick out a few pictures, regardless of all order, beginning with "The Three Ages" (243), by C. L. Muller, very nicely conceived and equally well executed: of Mdlle. Rosa Bonheur's three small-sized pictures, the "Auvergne Peasant" (46), though only "a study," pleased us most: the head and hat are admirably touched.

Gudin has a wonderfully powerful sea piece (162), "Fishing-boat on the Dutch Coast;" and whoever shall be so lucky as we were, to see it with a bright sunbeam shining, as it were, right through the foremost waves, will feel as we did, that this is nature's truth, and that it is worth all the mannerism of any school or age.

Fichel has six of his pretty cabinet pictures, of which (145) "The Workman's Meal" is most to our liking; but he is eclipsed by Billotte, whose "Dairy Maid" (37), and "Breakfast" (35), are perfect gems. "Explaining a Dream" by Comte (98), is clever, especially in the texture of the dresses, velvet, &c. M. Paul Delaroche has discarded the romantic notion that the first Napoleon crossed the Alps on a prancing white charger (110). Eugene Flandrin, in his "View at Tripoli" (138), and "Mosques at Scutari" and "Stamboul" (139 and 140), is very successful; as are also "A Street in Constantinople," by Frere (156); and "Interior of St. Cecile," by Dauzats (105), in which the perspective is very effective. We would also notice (182) "The Boat Carpenter," Hoguet, and (195) Labouchère's "Erasmus." To Ary Scheffer's "Three Maries," displaying though it does, great thought and feeling, it must be objected that the drawing of the eyes and throats is very defective. Other artists have thought with him, that by making the throat large, strength and dignity are given to the figure; but we have here another instance of what is unfortunately but too general, namely, exaggerating a beauty until it becomes a deformity. It is a fine picture nevertheless.

TASTE IN GAS-FITTINGS.

Last week Mr. G. R. Burnell, C.E. read a paper at the Commercial School-rooms, St. Martin's-lane, before the Gas-fitters' Association, "On the Principles of Taste as applied to Ornamental Gas-fittings." The lecturer disclaimed any desire to lay down defined canons of taste, as applied to gas-fitting, since the judgment of the gas-fitter must, in a certain degree, be limited by the style of the building to which the fittings were to be applied, and to which their design should conform as much as possible, to avoid the appearance of anachronism, and also by the taste of those by whom he was employed. In all cases there were two essential points which should be borne in mind, the mode of distributing the light, and the quantity to be distributed. A dining-room, for instance, would require less light than a drawing-room, a lecture-room less than a theatre. He contended that it was in vain to expect any marked improvement until principles were more extensively applied, and in some measure thought the English gas-fitter might learn useful lessons in this respect from our neighbours, the French, illustrating his position by a drawing of a lamp, from the Place de la Concorde, Paris, which bore a remarkable contrast with the unsightly gas-lamps which disgrace the metropolis. The lamps at the Peel monument, in Cheapside, were given as recent instances, showing the room left for improvement; whilst the Philharmonic-hall, at Liverpool, was mentioned as one where the principle of light and distribution had been well applied. The want of taste displayed by London tradesmen was animadverted on, and the gas-fitter was forcibly impressed by the lecturer with the necessity which existed for cultivating taste, as an important adjunct in connection with his art.

OXFORD AND CAMBRIDGE ARCHITECTURAL SOCIETIES.

Oxford.—At the second meeting, on the 30th April, Mr. Parker, in continuation of his lectures "On Foreign Mediæval Architecture," read a paper "On the Architecture of France, South of the Loire." He reminded the members of the long continuance of Roman civilization in the south of France, and as a natural consequence the large number of buildings copied from Roman remains; also the early existence of a colony of Greeks who have left numerous churches of strictly Byzantine plan and construction; and a third class of churches which consists of a mixture of the two. This southern character extends as far north as the Loire, and the Cathedral of Angers is just of that character. In the same town is the Hospital of St. John, built by Henry II. which still is a public hospital. The hall of this hospital has all the lightness and elegance of a pure Gothic building, and it is believed to be the earliest building of that style in existence anywhere. He pointed out the beauty of the sculpture of the south even as early as the eleventh century, and that the art of sculpture travelled from the south northwards; but Gothic architecture, though it had attained to a certain point there, afterwards stood still, and was carried to much greater perfection in the north.

Cambridge.—At the second meeting of the society for the Easter Term, held on Friday, April 25th, the Rev. G. Williams, Vice-Provost of King's College, delivered a lecture "On some Controverted Points in the Topography of Jerusalem." Mr. Fergusson, in his "Essay on Jerusalem," had advanced a theory that the building called Es Sakharah, the Dome of the Rock, popularly known as the Mosque of Omar, is the identical church built by Constantine over the tomb of the Saviour. Mr. Williams contended at great length, with the help of diagrams, that Mr. Fergusson's views were wholly untenable.

PROPOSED GIGANTIC TUNNELS THROUGH THE ANDES, SOUTH AMERICA.

Among the various schemes which have been proposed for inter-oceanic communication between the Atlantic and Pacific, is one brought forward by Mr. Kelly, an enterprising gentleman of New York, who is at present in England, in order to lay the matter before the British Government. His scheme embraces the canalization of part of the grand river Atrato, and penetrating the Andes by two gigantic tunnels, which, if executed, would rival the Egyptian pyramids, and the celebrated wall of Babylon. The length of the twin-tunnels so proposed is 3¼ miles, the span or width 100 feet, and the extreme height 120 feet each respectively.

In order to form a proper notion of the magnitude of such tunnels, it is necessary to put down on paper the dimensions of one of the largest works of the kind which have been actually executed; such a work is the Box tunnel on the line of the Great Western Railway, which is 313,332 yards in length, 27 feet wide at springing of invert, 30 feet wide at springing of arch, and 25 feet high. The excavation, chiefly in freestone, amounted to 247,000 cubic yards. Now, taking the proposed Andes tunnels, at an average height of 100 feet, we have 57,200,000 cubic yards to be excavated, which, at 9s. a yard only, would amount to 25,740,000*l.* It is supposed that the stratification of the Andes at the part to be penetrated, is chiefly *greywacke*, or clay slate, such as is met with in certain districts of Westmoreland.

Another mode of illustrating the magnitude of the proposition, is to state, that one of the proposed tunnels would contain all the railway and canal tunnels in the United Kingdom.

COMPETITIONS.

Luton Sewage Plans.—The Luton Board of Health, after some discussion, have decided that of the six plans sent in for competition, and reported on by Mr. Dickens, the engineer of the General Board, and by the Tottenham committee of that Board, that marked "So oder so," be adjudged the premium of 30*l.* and that marked "Boar's Head," the second premium of 10*l.* On opening the sealed envelopes it was found that the successful competitor in both cases was Mr. T. L. Evans, of Luton, C.E.

Liverpool Museum, &c.—We understand that from 100 to 120 sketches have been sent in, and that the committee are proceeding to reject all that are evidently unfit. No person is to be allowed to see them, it is said, but the committee and their professional assistants, should such be employed.

Rotherham New Grammar School.—Ninety-nine designs have been submitted in competition, out of which the feoffees have selected that of Mr. Wm. Blackmoor, of Rotherham, for the first premium; and for the second that of Mr. Barry, of Liverpool.

PAYMENT FOR ASSISTING IN OBTAINING A GOVERNMENT CONTRACT.

ELLIS *v.* BENNETT AND ANOTHER.—WORK DONE IN PROCURING A GOVERNMENT CONTRACT.

THE plaintiff in this case (tried in the Common Pleas, May 2nd) is a surveyor at Northfleet; and the defendants are Government contractors, carrying on business in Pimlico. The action was brought to recover 100*l.* a sum agreed to be paid to the plaintiff for assisting the defendants in obtaining a Government contract.

The plaintiff's case was, that last summer he was engaged in some earthworks which were being carried out by Mr. Hutchins at Southampton; and, at the same time, the defendants were carrying on similar operations at Ryde, in the Isle of Wight. In the course of this work, the plaintiff became acquainted with the defendants; and on the 12th of July he called at their office, and said that he was employed in getting jobs on Government contracts. One of the defendants replied, if the plaintiff could get them a job, they would amply remunerate him. On the 14th August the plaintiff called again, and produced the plans and estimates of some earthworks at Fort Monckton, near Gosport, for which tenders were asked. It was arranged with Mr. Bennett that if the defendants obtained the contract they were to pay to the plaintiff 100*l.* for his trouble; but if they did not get it, they were to pay the plaintiff nothing. The tender was at once drawn up, and sent in to the Ordnance-office, and the defendants obtained the contract. The price at which they were to do the work was 1,868*l.*

Mr. Bennett, one of the defendants, and a clerk, who was present during part of the interview, denied that any arrangement was made to pay the plaintiff 100*l.* It was, however, admitted that the plaintiff was entitled to some remuneration, and 25*l.* was paid into court to satisfy any demand he might have.

Evidence was called to show that in the event of there having been no specific agreement, the 25*l.* was a sufficient sum to be paid to the plaintiff.

His lordship left it to the jury to say whether there had been any express agreement as to paying the plaintiff 100*l.* and if not, whether the 25*l.* paid into court was sufficient.

The jury considered the matter for one hour, and then gave their verdict for the plaintiff for 25*l.* beyond the sum paid into court.

Notices of Books.

VARIORUM.

A SEVENTH edition of the charming book of Messrs. Kirby and Spence on Entomology has just been issued by Messrs. Longman and Co. at a sixth of the cost of the previous edition. It also contains an Appendix relative to the origin and progress of the work. This is a delightful companion for an idle hour, especially in the country, and even in his profession the architect himself may thence obtain some useful knowledge: witness what is said on page 288 as to the habits of the Scolytus destructor, in "destroying in a great degree the effect of one of the most vaunted and costly productions of modern architecture." We must refer to the volume itself, however, for further light on this and other subjects.——"The Art of making Catalogues of Libraries" is a half-crown pamphlet by a Reader in the National Library at the British Museum, and is "published and sold by [at ?] the Literary, Scientific, and Artistic Reference Office, 10, Brownlow-street, Holborn." It developes "a method to obtain in a short time a most perfect, complete, and satisfactory printed catalogue of the British Museum Library." The scheme whereby it is proposed to settle this vexed question is too elaborate for explanation here, but it seems to display a good deal of thought and experience. The author properly divides the subject into what regards the merely inventorial catalogue, and what relates to the index or finding catalogue, the former not being necessarily an arranged or classified one, but the latter necessarily being so, and based upon the former, though much more brief in its titular indications, while full and comprehensive in its corelative and classified references. The library authorities have the Inventory but not the Index, or most essential catalogue; and if any writer can induce them to produce the latter in a short time, the public will be deeply indebted to him, and ought to show their gratitude by presenting him with a handsome testimonial.——The one hundredth part and last but two of Messrs. Longman's "Travellers' Library" has been issued. It contains Mr. Auldjo's still interesting "Narrative of an Ascent to the Summit of Mont Blanc" in 1827. This was one of the first published narratives of this now frequent feat, and it may be read with some interest in connection with another small volume just issued by the same publishers, and titled, "Where there's a Will there's a Way;" being an account of "An Ascent of Mont Blanc by a new Route and without Guides," by the Rev. C. Hudson and M. E. S. Kennedy, both of Cambridge. The motto on the title-page of this latter lively little volume, taken from Murray's "Handbook for Switzerland," is to the effect that "it is a somewhat remarkable fact that a large proportion of those who have made this ascent have been persons of unsound mind." Doubtless, the local guides ranked Messrs. Hudson and Kennedy, at all events, in the "unsound" list; but these gentlemen themselves are of opinion that "all such spirits" as the mounters of Mont Blanc "must be good fellows," and we are inclined to agree with them as to the "jolly" correlatives of the enterprising spirit which prompts the young and vigorous to the arduous and somewhat dangerous task. But surely there has been enough of it now, unless some additional motive turn up than merely the desire to accomplish it as a gymnastic feat.

Miscellanea.

OLD ST. PANCRAS-ROAD. — A WORD TO THE WISE.—Permit me to call attention, through the medium of your columns, to the state of the footways in the upper portion of St. Pancras-road. Very nearly opposite the toll-gate and crescent is a line of low, dirty-looking, once suburban, cottages: they are not only dirty, however, but dilapidated. *Lamps* there are few, if any. The footway in front might rival the primitive state of Balaklava itself: in fine weather, the ancles are twisted by the uneven earth; in wet weather, the person is bespattered in tramping through the unseen puddles with which it is lined. There is some attempt, a little lower down, by way of a central slab of paving, to give one a notion of being in a civilized country, but for the most part it is as I describe, as well also on the opposite side of the way, viz. the pathway round the square or crescent. I am not aware whose business it becomes to remedy this, but, having "hit the right nail on the head" once or twice previously, by your favour, I am led to hope a similar result, which may lead to the increased convenience and comfort of the public frequenting that locality, in respect of adequate paving and lighting being substituted for the present darkness and discomfort in that locality abounding.—OMNIBUS.

INVENTORS' AID SOCIETY. — The preliminary meeting of an Inventors' and Patentees' Mutual Aid and Protection Society, was held on Monday week, and the initiative taken towards the furtherance of its objects. It proposes to assist its members, or their nominees, in securing the protection or registration of inventions, and to afford capitalists and patrons of art and science an assured method of appropriating funds to approved scientific objects. It also proposes to appropriate one moiety of any profits which may arise, after paying a dividend of 10 per cent. to a fund for assisting members in sickness, adversity, or distress. All inventions patented and carried out by aid of the society, are to be transferred to it as security for repayment of sums advanced, and priority of protection is to be decided by ballot.

THE BOURNE VALLEY POTTERY.—As touching our article of last week, we hear with regret that the Bourne Valley Pottery was totally consumed by fire on Wednesday morning last, in the short space of one hour. The front or old pottery was built chiefly of wood: the new pottery in the rear—a very substantial brick building within which four new kilns had been erected—and the new steam machinery just set in motion, has nothing left but the bare walls. A great many persons will be thrown out of employment for some time.

THE BROMPTON-ROAD.—A correspondent suggests, in connection with the handsome roads forming by the Royal Commissioners on the Kensington-gore estate, the necessity for improving the Fulham-road from Knightsbridge to Brompton-square. "The row of houses called Brompton-row stands back at some distance from the road, the intervening space between them and the road being little different from a piece of waste. Some rank grass and a poplar here and there are growing on it, and it is in places partially inclosed with shabby fencing, but on no uniform plan, so that it is neither a piece of ground common to these houses, nor is it divided into parts and apportioned to them severally." His idea is to do with this strip of ground as has been done at Westbourne-terrace and at Gloucester-gardens, on the Paddington estate. Next to the high road (Fulham-road) form a handsome paved footway, say of 16 feet width. Let this footway be bounded on the north side by a dwarf wall and balustrading, or by an iron railing in stone curb, leaving sufficient openings in it for a convenient carriage access to the houses of Brompton-row. Within the wall and balustrading a row of limes might be planted, and a strip of turf or of gravel laid down. Next this strip a carriage-way for the houses of Brompton-row, and then the pavement immediately in front of the houses.

THE PEOPLE'S PARK FOR WOLVERHAMPTON.—A numerous meeting was held at Wolverhampton last week to promote the revival of this project. Mr. Hartley, who had offered 1,000*l.* conditionally on the former attempt which failed, was present, and promised to subscribe liberally after seeing what the working classes of the town were inclined to do for themselves in the matter. Mr. S. Griffith stated that he had just been promised 300*l.* towards the object in view.

AN ASTONISHING MEMORY.—Excavations are in progress at Holyrood, and the archæologists are on the look-out for what may turn up. One was at the heels of an Irishman, the other day, on the site of the old church, built, he told him, many centuries ago; and, while Pat was plying his pick, Monkbarns exclaimed to him,—"Take care! there must be a pillar there!" The next stroke of the pick (says the *Ladies' Own Journal*) alighted on the base of the shaft. Turning round with an indescribable look of bewilderment, and scratching his head, the Irishman said;—"By the powers what a mimory your honour has!"

INSTITUTION OF MECHANICAL ENGINEERS, BIRMINGHAM.—The general meeting of this institution was held on 30th ult. at the house of the institution, in Newhall-street, Birmingham, Mr. B. Fothergill, Vice-President, in the chair. Several new members having been elected, a paper was read, giving a description of an improved foundry hoist and cupola, by Mr. John Fernie, of Derby. The next paper was a description of a double slide expansion-valve for marine engines, by Mr. F. W. Wymer, of Newcastle-on-Tyne. The third was "On Waddell's Improved Packing for the Slide Valves of Marine Engines," by Mr. Charles Beyer, of Manchester; and the last "On an Improved Construction of Link Motion for Locomotive Engines, &c." by Mr. Alexander Allan, of Perth.

THE BIRMINGHAM "RECREATION SOCIETY."—At the evening meetings of this new society, as many as 1,500 people, at a penny a head, have attended—the ordinary attendance being 500. The receipts of the society are 20*l.* per week, the expenses 6*l.* For this they provide swings, an electrical machine, single-stick and fencing, gymnastics, reading, &c. There are also musical performances by a band and chorus formed by the members. The rooms are open from five to ten on week-days, and from two till ten on Sundays; and the whole is conducted with order and decorum, showing what working men can do for themselves, and forming an example well worthy of imitation.

METROPOLIS LOCAL MANAGEMENT ACT: SECT. 143.—It may be as well to remark, that no specific "modus operandi" is pointed out to be observed in the abatement of works alleged to be contrary to this Act. Are the vestry to proceed in a body armed with pickaxes to commence an assault; and, by committing a trespass on private property, provoke a breach of the peace? or are rich rewards to tempt any one to lead a "forlorn hope?" or is the parish engine to be brought up?—CAVENDO TUTUS.

Manchester School of Art. — The annual meeting of this school was held at the Royal Institution, Manchester, on Monday before last, Mr. Edmund Potter, president, in the chair. The chairman regretted the want of support under which the school languished, its existence being supported chiefly by a few friends instead of the public at large; and he should be glad to see the Royal Institution take the school by the hand, and relieve it from its heavy rent of 200*l*. At present 1,000*l*. a year were spent in educating 200 or 300 pupils, which was too much, though the education was of a high quality. The receipts were nearly equal to the expenditure: the subscriptions were about 300*l*. a year. About 100 pupil teachers paid 3s. a quarter. The secretary read the report. Efforts were being made to extend the benefits of the school by establishing a class for artisans, and by giving instructions in public schools at a low charge. Mr. Hammersley, the head master, reported that the school had maintained a steady course of improvement, the studies of the pupils being more numerous, and of a higher quality than before. In the first quarter the pupils numbered 458, in the proportion of 363 males and 95 females; second quarter, 194; third, 181; fourth, 204: total, 1,037, or an average of about 250 per quarter. The school fees amounted to about 200*l*. The Government grant was 380*l*.; annual subscriptions, 295*l*.; making, with private donations, school fees, &c. about 1,000*l*.; and there was a balance owing of 374*l*. Mr. Bazley regretted the withdrawal of a portion of the Government grant, which was last year 220*l*. less than it used to be. It would be disgraceful if such a useful institution lacked support.

Bristol Fine-Art Academy.—The annual meeting of the members and friends of this institution was held on Thursday in last week. There was a numerous attendance. Mr. P. W. S. Miles, who presided, opened the proceedings by referring to the new building now in course of erection, which he said was progressing satisfactorily. The committee hoped that in the course of the present year, about September or October, the roof would be put on, and that at this period next year the annual meeting, not only of this institution, but the School of Art and the Society of Architects, would be held within its walls. The architectural portion of the work had been done entirely by the Society of Architects gratuitously. In the original design, the building was intended to be erected in a much plainer form than had since been thought desirable. This alteration was made at the suggestion of Mr. Thomas, of London, the sculptor. The five windows will be filled up with different groups of sculpture. Mr. Tucker read the report, which alluded to the services of Mr. Underwood and Mr. Hunt, the two architects who planned and designed the building. The elevation of the edifice is in the Italian style, from four designs by Mr. Hunt. It is approached by a double flight of steps, leading into the vestibule. The building will contain spacious exhibition-rooms, and a room appropriated for the requirements of the Fine Arts Institution. Accommodation will also be provided for the School of Practical Art. The principal front will be ornamented with emblematical groups, designed and executed by Mr. Thomas, provided the necessary sum can be raised by independent subscription. This will involve an outlay of 300*l*. towards which 70*l*. have already been subscribed. The report was received and adopted.

Public Baths for Stoke.—In compliance with a numerously and respectably signed requisition, the chief bailiff of Stoke convened a public meeting on Tuesday before last, in the New Market-hall, Stoke, to devise the best means of establishing public baths in the town. The project owes its origin to Mr. Herbert Minton, who offered 500*l*. towards the formation of cheap baths. A confident and practical spirit pervaded the meeting, and gave promise that the liberal and philanthropic intentions of Mr. Minton will ultimately be accomplished. Appropriate resolutions were passed, one for the appointment of a committee, and another to the effect, that Mr. Lynam, architect, should be requested to furnish the committee with plans and estimates; and that after the design had been approved of by the committee, lithographs of the elevation should be furnished and extensively distributed.

"Racquet Courts" are to be built on the Pavilion land, near Sloane-street, Chelsea, Mr. Thos. Burton, architect. Tenders were received on the 30th ult. ranging from Lindsay, 999*l*. to Ashby and Sons, 830*l*.

A Profitable Speculation.—A short time since some few citizens bought 2,000*l*. worth of slates, and sent them out from Bristol to Melbourne, consigned to Messrs. Miles and Kington, when they quickly received back for their 2,000*l*., 4,000*l*. or cent. per cent. on the speculation. So that, if there have been a great many losing ventures to the Antipodes, there have been some profitable ones also.—*Sherborne Journal.*

Suffolk Institute of Archæology, &c.—The eighth annual meeting of this society was held on Thursday in last week, at Norton, and was attended by a large party. The first point of re-union was Thurston church, where, in the absence of the President, the Rev. Lord Arthur Hervey, the Rev. W. Spring Casborne was invited to assume the office of president for the day; and Mr. Tymms read a paper descriptive of the architectural peculiarities of the church. The party then proceeded to Little Haugh Hall, Norton, the seat of Mr. P. Huddlestone, and thence to the National School-room, the walls of which had been covered by rubbings of brasses, and where a number of antiquities and fossils had been arranged. The Rev. Henry Creed having been called to the chair, the secretary read the report, which congratulated the members on the satisfactory progress of the society. Various communications were then made, presents announced, and objects exhibited, and the company afterwards went to the church, and thence to the Great Oak.

Gas. — The works of the new Gas Company at Stockton are commenced, under contract, by a firm in Leeds, and will be erected on land purchased from the corporation, on the north side of the town, near the Leeds Northern Railway Station. 13,000 yards of pipes are to be laid. The bricks for the buildings are being made on the land, and the whole is to be finished and in operation by October next, when the contract to supply the public lamps with gas at 3s. a thousand feet, commences. The old Gas Company have given notice that they will reduce the price in October to 2s. 6d. a thousand feet, a concession made too late to be at all meritorious.

The Wrexham School of Art.—Some months since, says the *Wrexham Journal*, Mr. Ellis A. Davidson, the head master of the Government School of Art, at Chester, delivered a lecture in the Wrexham Music Hall on the subject of "Useful and Ornamental Art." The purpose of the lecture was to introduce to the people of that town Mr. Davidson's plan of opening a branch of his school at the Savings' Bank, Wrexham, the use of which building has been kindly granted by the trustees. The branch School of Art was accordingly opened in August last, Mr. Davidson devoting the whole of each Thursday to that town. A select class for ladies, a class for daughters of tradesmen, &c. and a general and artizans' class, meet at the Savings' Bank; and Mr. Davidson also attends, for one hour, at Mr. Floater's academy, and one hour at the British school. The success attending the labours of the students has been very satisfactory, and the classes are really conferring a great boon on the town. In the select ladies' class, we understand, carving in wood, modelling in clay, oil painting, water-colour and chalk drawing, are constantly proceeding; whilst, in the artizans' class, the students are busily engaged on freehand, ornamental, and model drawing, modelling, machine and architectural drawing, geometry, perspective, ornamental, and flower painting, and also on copper-plate and silver engraving. One moment's reflection, remarks the paper just named, must prove to workmen of every sort how important a knowledge of form, size, and colour is to them. Every bricklayer will lay his bricks better, every carpenter will work better, every turner will turn better, and every mason will cut stone better, if his eye and hand have been in some degree educated. How often do we see persons disappointed when the workman brings home something they have ordered, and how frequent is the exclamation, "Why this is not what I meant." Now, why is this? It is because the employer and employed have not possessed a knowledge of that language which is more eloquent than words, and more explanatory than whole pages of print, viz. a *knowledge of drawing.*

Bridge-building in Australia.—The ceremony of opening the Victoria-bridge, built across the Nepean river, at Penrith, took place, says the *Australian and New Zealand Gazette*, on New Year's-day last. This long-sought-for object opens a highway across the Nepean into the great western interior of New South Wales. The first pile of the bridge was driven on 1st of March, 1854. It spans the river in one of its noblest reaches, the length being 700 feet, the total width 30 feet. The total depth from the platform to the bed of the river varies from 17 to 20 feet. The structure is very plain. It is composed of a platform covering piles, and is almost entirely of the iron bark of the colony: it will cost about 10,500*l*.

Tunnelling Rocks.—Mr. C. Wilson, of Springfield, Massachusetts, has taken out a patent for machinery for tunnelling through hard rocks, consisting of a continuously revolving wheel, provided with circular rolling discs or cutters, regulated so that their axes stand alternately in opposite directions, nearly at an angle of 45 degrees with the shaft of the cutter wheel, thus continually cutting away the substance acted upon.

Welding Steel.—Mr. H. Anderson, of Garratsville (U.S.), has secured a patent for an improvement in welding steel, in the specification of which the patentee states that he is aware that alkalis have been before used for the purpose, both simple and compound; but his claim is for a compound of sulphate of soda and carbonate of soda, as a vehicle in the welding of steel and securing strength at the junction.

TENDERS

For building a stack of warehouses in Cannon-street West, for Messrs. Moses, of Tower-hill. Messrs. Tillott and Chamberlain, architects. The quantities supplied:—

Cubitt and Co.	£14,937	0	0
Piper and Sons	14,860	0	0
Haward and Nixon	14,476	0	0
Ashby and Sons	14,396	0	0
Ashby and Horner	14,040	0	0
Lucas, Brothers	13,994	0	0
Brass and Sons	13,972	0	0
Myers	13,846	0	0
Holland and Co.	13,796	0	0
Hill	13,389	0	0
Jay (accepted)	13,266	0	0

For additional steam-power buildings for the Plumbago Crucible Company's works at Battersea. Mr. Leicester, architect. Quantities supplied by Mr. T. B. Knightley:—

Freeman	£2,124	0	0
Downs	1,860	0	0
Rider	1,770	0	0
Coleman	1,672	0	0
J. and C. W. Todd	1,498	0	0
Willson (accepted)	1,483	0	0

For building "Half Moon" public-house, Rotherhithe-street, for Mr. Flowers:—

Hedges	£1,249	0	0
Hill	1,235	0	0
Wilson	1,224	0	0
Wood	1,180	0	0
Perry (Hackney)	1,167	0	0

For building villa at Horsham, for Mr. Braby:—

Lee and Son	£3,650	0	0
Lawrence	3,234	0	0
Lucas	3,180	0	0
Mansfield	3,120	0	0
Holland	2,908	0	0
Perry	2,793	0	0

For building Midland Counties Insurance Offices, at Lincoln. Messrs. Bellamy and Hardy, architects. Quantities not supplied:—

Ward	£2,780	0	0
Cave	2,740	0	0
Huddleston	2,718	0	0
Sharman and Lee	2,663	0	0
Biott	2,618	0	0
Barnes and Birch (accepted)	2,567	0	0

For the erection of new residence and offices for the Equitable Gas Light Company, at Pimlico. Mr. James Howell, architect:—

Rigby	£2,710	0	0
Lawrence	2,674	0	0
Jay	2,698	0	0
Piper and Son	2,629	0	0
Lucas, Brothers	2,616	0	0
Winsland and Holland	2,594	0	0
Mackenzie	2,348	0	0

TO CORRESPONDENTS.

"T. L. E."—"Working Man" (the district Surveyor is right. A building of wood is illegal). "S. E."—"J. G."—"C. R. S."—"F. W."—"T. D. B."—"Subscriber."—"G. G." "Shop, at the Academy."—"J. M."—"An Inquirer."—"M. N."—"W. M."—"M. J. L."—"W. S. Z." (see advertisement).

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

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Note.—Various statements having reached us as to the difficulty of procuring copies of the *Builder* in some parts of the kingdom—more particularly in Ireland,—it is proposed to parties desiring to subscribe, that on the transmission of a post-office order, or postage stamps, addressed "Office of the *Builder*, No. 1, York-street, Covent-garden, London," the *Builder* will be forwarded to them on the day of publication.

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WINDOW-BLINDS. — J. FULLER, Manufacturer, 29, Charlotte-street, Blackfriars-road. Established, 1850.—Venetian Blinds, from 10s. each, or 8d. per foot; Wire ditto, 7s. each, or 1s. 9d. per foot; Holland ditto, from 5s. each, or 5d. per foot. Every other description of Blinds equally low, warranted of the best manufacture. Discount to Builders and the Trade. Fixed complete.

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BUILDER'S FOREMAN WANTED.—Must be competent to superintend the several branches.—Apply at MILFORD WHARF, Strand.

TO CLERKS OF WORKS.

WANTED, for a Public Building in the Country, a CLERK of the WORKS.—Apply, stating references and salary required, to Messrs. BEADEL, SON, and CHANCELLOR, Architects, &c Chelmsford.

WANTED, in a Surveyor's Office, a good LAND SURVEYOR, who is a fair Draught man and Ornamental Writer. His principal occupation will be to take plans of houses for drainage purposes, which he must do quickly and accurately. The engagement may last a long time.—Address, by letter, stating any salary required, and references, to H. G. H. 1, Vicarage-place, Camberwell.

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WANTED, a Person who thoroughly understands the BURNING of GLAZED SANITARY PIPES. Apply by letter, post-paid, to Mr. T. LANGHAM, Birchwood Collieries, near Alfreton.

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WANTED, by a Young Man, a PLUMBER, who thoroughly understands glass cutting, glazing and lead glazing, a SITUATION. He is willing to fill up his time with painting. No objection to the country.—Address, A. B 46, Seymour-street, Euston-square

TO BUILDERS AND CONTRACTORS AT LIVERPOOL.

WANTED, as full or partial employment, by a re-pectable Middle-aged Man, an ENGAGEMENT as CLERK or SUPERINTENDENT. He is well acquainted with office duties, as measuring and estimating, and is a good accountant.—Address, Z. Z. Office of "The Builder."

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WANTED, a SITUATION in either of the above Offices, as CLERK, by a Young Man who is a neat draughtsman and quick accountant. Satisfactory references can be obtained from his late employers. Salary not so much an object as a permanent engagement.—Address, O. Z. Office of "The Builder."

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WANTED, by an experienced Man, a SITUATION as PLUMBER, GLAZIER, and PAINTER. Can be well recommended.—Address, A. B. 10, Edmond's-terrace, Old Ford, Bow, Middlesex.

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TO BUILDERS, PLUMBERS, &c

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WANTED, a SITUATION as CLERK of WORKS, SHOP FOREMAN, or FOREMAN of WORKS, by an established foreman, competent to undertake any duties he may be required to perform. Ample testimonials and references.—Address, A. B. 37, East-street, Walworth.

TO HOUSE PAINTERS, BUILDERS, &c

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TO ARCHITECTS.

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A COMPETENT Person, of good practical experience, who has had the management of very extensive public and private works, and has been accustomed to the management of steam-engines, sawing and other machinery, is desirous of a RE-ENGAGEMENT as CLERK of WORKS or GENERAL FOREMAN. First-rate testimonials and security if required. Locality no consequence.—Address, M. A. F. Office of "The Builder."

A YOUNG MAN, aged 23, most respectably connected, wishes to be received as IMPROVER, in a Builder's Establishment, where business transactions are not on a limited scale. The advertiser flatters himself that he would be found a useful hand at the bench, where the work is varied. Was five years with his late employer.—Address, X. X. Office of "The Builder."

PARTNERSHIP or otherwise.—A Practical Builder by trade, whose knowledge of business is based upon many years' experience as manager in one of the largest building establishments in London, is desirous of connecting himself with one of the mercantile branches of that business, where his experience as the man-general of the office, and his energies in the extension of the connection's saleable, together with the introduction of 1,000*l.* capital, might be considered a desirable addition to a business requiring further assistance in its management and open to further development.—Apply by letter to Mr. GEORGE ABBOTT, care of Mr. French, Printer, 66, Tabernacle walk, Finsbury.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT. —Second Testimonial.—"March 10th, 1853.—In reply to our letter, received this morning, respecting the Gutta Percha Tubing for Pump service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

CHAS. MACINTOSH and CO. Patentees of the VULCANIZED INDIA-RUBBER, and GENERAL MANUFACTURERS of WATERPROOF, AIRPROOF, and ELASTIC RUBBER GOODS beg to inform all persons who desire to correspond with them direct, that their SOLE ESTABLISHMENTS are No. 3, Cannon-street West, London, and Cambridge-street, Manchester. This notice is necessary, as the term Macintosh Depôt, Macintosh Warehouse, &c. is frequently adopted both in London and the country by vendors of India-rubber goods, who deal in articles not of the manufacture of CHAS. MACINTOSH and CO.—Goods manufactured by CHAS. MACINTOSH and CO are stamped with the name of the firm.

ROYAL POLYTECHNIC.—Patron, H.R.H. PRINCE ALBERT.—Whitsuntide Holidays. A New and Grand series of Forty Magnificent Dioramic Pictures, illustrating Bunyan's Pilgrim's Progress, with appropriate Music from Mendelssohn, Spohr, Haydn, and Handel; and Descriptive Lecture by the Rev. J. B. Brasted. New Lecture by J. H. Pepper, esq. on "The Moon Controversy," and other Scientific Subjects. The Historical Entertainment of Kenilworth, with New and Beautiful Dioramic Effects, and Description by F. Lenox Horne, esq. Graphic Pictures of the total Destruction of Covent-garden Theatre. Engagement of G. Barker, esq. for Lectures on Music, and of Mademoiselle Mundie and Herr Zirom for Performances on the Cither and the Emmelynka. New and very large Model of Sebastopol showing the Attack and Defence, and mounting 2,000 cannons and mortars. Lectures by Mr. Wyld on the new metal Aluminium, and on Herr Paul Preta's new process of Galvanography, or Printing by Light and Electricity.—Admission to the whole, 1s.; children and schools half price.

KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade, and of the manufacturers, G. B. KENT and CO. 11, Great Marlborough-street, London. Established 1777.

N.B. Kent's Painting Brushes are all stamped G. B. KENT & CO.

Price Lists forwarded by post.

IMPORTANT to BUILDERS and PAINTERS.—Genuine White Lead, 23*s.* per cwt.; Linseed Oil, 3*s.* 8*d.* per gallon; Boiled Oil, 3*s.* per gallon; Turpentine, 2*s.* 8*d.* per gallon; Fine Pale Oak Varnish, 7*s.* 6*d.* per gallon. For cash, at EDWARD PRICE'S Oil and Colour Warehouse, 45, Coleshill-street, Pimlico.—Every articles for the trade at the lowest price.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements (read at the Institute of Civil Engineers), to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank street, Westminster, who prepare one quality only (Portland Cement).

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND CEMENT. CHARLES NELSON, having completed his works for the manufacture of the above Cement, can supply Contractors, Builders, &c. with a very superior article. The manufacturing department being under his own immediate superintendence, he can confidently recommend it for all works in which Portland Cement is used, and only requires a trial to insure approbation.

Orders, addressed to
London Depôt, 16, South Wharf, Paddington,
BLYTH, BROTHERS, Sole Agents,
will meet with immediate attention.
Manufactory—Ewe-cote Mills, Warwick.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT, Messrs ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND and BATH CEMENTS. TATHAM and CO
14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO
14, South Wharf, Paddington.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS
Manufactured by J. M BLASHFIELD, at Millwall, Isle of Dogs. Warehouse, No. 1, Wharf, Paddington-basin.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail at his wharf, 8, Upper Thames street, London; and also at the manufactory, Faversham Kent. N.B. These Cements supplied for shipment, on advantageous terms.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris, White, Mastic, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the best quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccos dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting cement, that resists no colourns.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

DOVERCOURT CEMENT WORKS, HARWICH, ESSEX.
JOHN PATTRICK being now the only ROMAN CEMENT Manufacturer at Harwich, informs the public that he continues to carry on a Wholesale business, and offers to Contractors, Builders, &c. for the freight or half freight, ROMAN CEMENT of best quality, and manufactured terms.—Applicati n either at Harwich or to his Agent, GEORGE MORRIS, 20, New Common street, Queenhithe, London.

P.S. Inland London trade will in future be supplied from Messrs ROBINS and CO Scotland-yard, Westminster, instead of Whitefriars.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, burial work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market. Communications to be addressed to the General Offices, 50, Old Broad-street, London; to Mr MCNUMENT, 4, Carnarvon-place, City-road, to Mr. TIMEWELL, the Depôt, 3, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr. THOMAS WEEKES.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead; whilst the consumption of material is less than for one coat. It dries very fast and hard.

HUBBUCK'S STONY COLOUR BODY PAINT the same as the former, at three fourths the price.

HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and iron exposed to salt water; neither bilge water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, stamped, Hubbuck, London, PATENT; and when so marked the quality is guaranteed.

HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber coated with this Enamel is not attacked by the worm neither do barnacles attach to it.

Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite Shipher's, &c.

OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

FREEN and CO.'S PORTLAND CEMENT and LIME WORKS, WOULDHAM, near Rochester.—These Works having obtained Letters Patent for the Manufacture of Cement, by which very great and important advantages are obtained over the old method of manufacture, insuring at once uniformity of colour and quality. Merchants, Contractors, and Builders are informed that they can now be supplied with any quantity, either for home or foreign markets, for wholesale orders, on advantageous terms.—Samples and prices forwarded, on application at the Works; or to Mr. W. E. ATKINSON, 62, Moorgate street, City; from whom also testimonials from eminent engineers as to quality may be obtained.

BLUE LIAS LIME.—CHARLES NELSON begs to inform Engineers, Architects, Contractors, Builders, and the Trade in general, that he is prepared to supply direct from the Works in his own boats to any part of the Thames, Rivers Lee, on any canal or by rail to all parts of the kingdom, large quantities of the above GENUINE HYDRAULIC LIME now so extensively used.

Quality, Weight, and Measure may at all times be strictly relied on, references in proof of the above can be given.

N.B. The Captain of the Boat will always bring with him the Grand Junction Canal Scale, from which the contractor will be enabled to know exactly what weight of Lime he is paying for

All orders addressed to the—
LONDON DEPÔT, 16, SOUTH WHARF, PADDINGTON.
BLYTH, BROTHERS, SOLE AGENTS,
Will be promptly attended to, and any further information can be obtained from them
Works, Stockton-field, near Southam, Warwickshire.

PLASTER of PARIS.—MESSRS. BLYTH, BROTHERS, beg to acquaint the trade, that they have made a considerable reduction in price; the quality they are now manufacturing cannot fail to give entire satisfaction. Samples and prices forwarded to any part of England, or the metropolis. No extra charge made to any wharf or railway station in London.—Any further information can be obtained at their Works, Baldwin's-place, Gray's-inn-lane, Holborn; or at the Blue Lias Lime Depôt, 16, South Wharf, Paddington.

GREY STONE LIME WHARFS, 13, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 8d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmtnaham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

GREAVES'S BLUE LIAS LIME.—The above Lime supplied direct from the works to wharfs along side the rivers or canals, railway stations, or vessels in the docks. A large supply always in stock.—CHARLES RICHARDSON, Brick, Lime, and Cement Merchant, 3 and 6, South Wharfs, Paddington.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that they can obtain the best quality ground and lump into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent) STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to select for themselves.

Malm Place half-washed Stocks, and Place Bricks, also on sale These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hatton-field, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of a proved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Moulding, Whiting, Sand for sulphate, Land Drain Pipes, Paving Tiles and Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs MELSON and CO.'s Works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 300 to 600 tons can load at a spade the shores at Grays. At MELSON and CO.'s wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods, both Welsh and Newcastle, fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, and &c for exportation
General Office—No 13, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
BELFAST RED RUBBING BRICKS.
Also COWLEY and KENTISH STOCKS, to any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges.
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Pickings, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 5 ADELAIDE-PLACE, London-bridge.

BEST HERTFORDSHIRE MALM SECONDS AND CUTTERS ALWAYS ON HAND.
MILLS AND PRICE, 5, ADELAIDE-PLACE, LONDON-BRIDGE;
AND CROWN WHARF, GREAT SCOTLAND-YARD

BRICKS, of first-rate quality and good colour, TO BE SOLD for CASH; suitable for fortifications, or work where great strength is required.—Apply to Mr. W. SMITH, Brick-wharf, Grosvenor road, Thames-bank, near Pimlico Pier.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane, Dulwich. Price of good stock bricks, 25s. per hundred on the field, for cash.—Application to be made to the Foreman, A. BARHAM, at the Works.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday.
HENRY C. MOUNT, Sec.
37, King William Street, City.

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.:—Grey Stocks, 25s. per thousand; Grizzles, 20s. per thousand; Rough Ditto, 20s.; Place, 13s. to 15s. per thousand.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile, and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it, or convey the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; seconds and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 8d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

PEAKE'S TERRO-METALLIC TILES,
PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 881, of the Great Exhibition, rank the Manufactories known as long as "La Terre Pierre," Tunstall, Staffordshire, as the first of the kind in the world.

TO BRICKLAYERS, &c.—TO BE LET, an old-established JOBBING BUSINESS in the City, suitable for an industrious Young Man wishing to commence.—For cards apply to Mrs. LLOYD, No. 52, Gloucester-street, Bloomsbury.

TO RAILWAY COMPANIES and CONTRACTORS.—TWENTY quite new BALLAST-WAGGONS, for permanent way, have never been in use, precisely as those of the Great Northern Railway Company, well suited for mineral purposes; 400 Contractors' Earth-Waggons, side and end tips, with narrow way, coupled or 50 Sets Cast iron Wheels and Wrought Axles, pedestals, tip gear, straps, bolts, &c. the ironwork complete for wood waggons.—Apply to MATTHEW T. SHAW, Contractor for every description of Railway Plant and Stores, 64, Cannon-street, City.

TO BUILDERS.
MONEY at 4½ per Cent.—A Gentleman wishes to INVEST £6,000 by way of MORTGAGE, in one or more sums, upon either leasehold or freehold property, subject to long unexpired terms. Applications from principals or their solicitors by letter only, to F. R. S., care of G. J. RHODES, Esq. Accountant, Lincoln's-inn-fields Chambers, London.

MONEY ADVANCED.—FREEHOLD LAND, very eligibly situated in Gloucester-road and Fulham-road, Regent's-park, TO BE LET on BUILDING LEASES, for a long term, at fixed rate ground rents, for the erection of third-rate houses. Advances may be made on the buildings by the proprietors.—Apply to J. G. ELDART, Esq. Solicitor, 53, Great James-street, Bedford-row

METROPOLITAN LOAN COMPANY, Established 1838.
CRAVEN STREET, STRAND, LONDON.
Loans are advanced in amounts varying from 10l. 10s. to 100l. repayable weekly or otherwise, as may be agreed upon, at a discount of 2½ per cent. for twenty one weeks, and 5 per cent. for 50 weeks at 5 per cent. Forms may be had, price 2d.; if by post, three postage stamps to be enclosed. ROBERT NORTON, Secretary.

TUDDENHAM, IPSWICH, BRICK AND TILE WORKS.

EXPOSITION UNIVERSELLE de 1855.

Medaille de 2me Classe awarded to JAMES LUFF, for Specimens of Ornamental Bricks and Tiles.

JAMES LUFF

Begs to inform Architects and Builders that he MANUFACTURES all KINDS of ORNAMENTAL BRICKS and TILES, Red and White, for Chimney Shafts, Ridge Crests, Cornices, and Mouldings.

Also, all KINDS of ORNAMENTAL VASES, CHIMNEY-POTS, MALT-KILN TILES, DRAINING-PIPES, and TILES of every description.

N.B. Builders furnishing detailed drawings can have all sorts of Ornamental Designs executed.

ANCIENT HOUSE FURNITURE

In order to supply the deficiency which has hitherto existed in Furniture suitable for the many Mansions that have been erected or restored in the MEDIÆVAL STYLES, Messrs. CHACE have directed their particular attention to this subject, in addition to their other works, and have prepared appropriate specimens in the various branches of Furnishing.

STUFFS for HANGINGS, in simple Worsted Damask, in Silk; also in Tapestry of Bauderkin.
CARPETS, plain or in rich Velvet pile, with appropriate Borders.
PAPER-HANGINGS of various kinds.
OAK CABINETS, Buffets, Octagon Library and Occasional Tables, Benches, Chairs, and other useful and appropriate Furniture
The whole of the above-mentioned Furniture, &c. is designed by the late Mr. A. W. PUGIN, Architect.
To render this Furniture generally available, a considerable portion has been arranged in the simplest manner, consistent with it ancient character.
14, Wigmore-street, January, 1852.

WATERLOO BRIDGE WHARF, Commercial-road, Lambeth.—These desirable FREEHOLD PREMISES, with 10 dry arches under the Waterloo-bridge Road, TO BE LET on LEASE or SOLD.—For particulars apply to HENRY MOTT, Esq Solicitor, 4, King's-road, Bedford-row.

BUILDING GROUND, between the CITY and WEST END, or near the WEST-END.—WANTED, a PLOT of GROUND, or BLOCK of OLD HOUSES, for a Factory about 6,000 square feet, with good side-lights Frontage or good locality not indispensable. The business could not be objected to.—Address, A. G. Mr. Latchford, 61, Wardour-street, Soho.

MAITLAND-PARK, HAVERSTOCK-HILL, HAMPSTEAD-ROAD, land-tax redeemed.—TO BE LET, upon building leases, for ninety-nine years, desirable BUILDING SITES upon the above Estate. The continual demand for houses in this locality, and the picturesque position of the property, adjoining the grounds of the Orphan Working School, render this a desirable opportunity for builders or gentlemen wishing to erect villas for themselves.—For plans and terms apply to the Secretary of the Orphan Working School, 32, Ludgate-hill; Messrs. TERRELL and CHAMBERLAIN, 30, Basinghall-street; the Architects, Messrs. WEHNERT and ASHDOWN, 42, Charing-cross; or at the Lodge attached to the school.

TO BUILDERS and OTHERS.—TO BE LET, on building lease for eighty years, or the FREEHOLD TO BE SOLD, by Tender, the valuable and extensive PREMISES, No. 17, GREAT PRESCOTT-STREET, WHITECHAPEL.—Any particulars required, may be obtained on application to Messrs. SMITH and WILLIAMS, Architects, 7, Frederick's-place, Old Jewry, at whose Office the Tenders are to be delivered, sealed and endorsed, stating intended outlay and rate of rent/sec, on or before MONDAY, 19th MAY next. The highest or any of the Tenders will not necessarily be accepted. If desired the house and premises adjoining, and being No. 16, in the occupation of Mr. Moses, may be included in the Tender.

MARINE.—FREEHOLD BUILDING LAND.—FOR SALE, about SEVEN ACRES, at Hythe, Kent, having nearly 470 feet frontage southward towards the sea, and 680 feet frontage to an excellent road on the west. The plot is capable of being laid out in sites for the erection of upwards of sixty semi-detached and other houses, with gardens and pleasure-ground. The Corporation of Hythe have laid out upwards of 2,000l in the erection of an ornamental building with warm baths immediately adjoining the site, and have also formed an excellent promenade protected by a sea-wall next the beach. The inland scenery is extremely beautiful, and the surrounding country abounds with excellent driving roads and pleasant walks. In consequence of Her Majesty's Government having established at Hythe a school for musketry in connection with the Minie rifle practising ground, there is an increasing demand for houses in this place, with but little accommodation at present; it is therefore presumed that it would be an eligible investment for capitalists, builders, and others.—Further particulars may be obtained on application to Mr. E. B. WILSON, Architect and Surveyor, No. 7, Frederick-place, Gray's-inn-road, London, where plans of the property may be seen.

BUILDING LAND at HATFIELD, Herts.—TO BE LET, on building leases for sixty years, very desirable PLOTS of LAND, for building purposes. The land is within a quarter of a mile of the railway station at Hatfield, fronts the high road to St. Albans, and from its situation is well calculated to afford a means of supplying the existing demand for villa residences in this locality. The soil is gravel, and there are brickfields on the land in the immediate neighbourhood.—For further particulars, apply to RICHARD NICHOLSON, Esq. Solicitor, 4, Old Palace Yard, Westminster.

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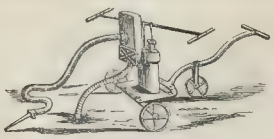

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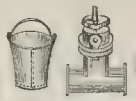

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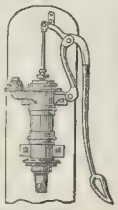

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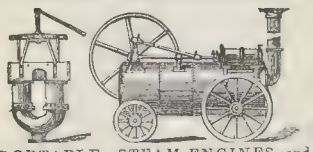

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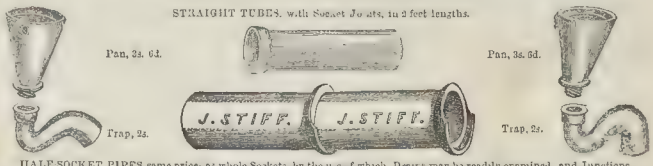

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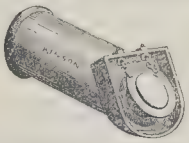

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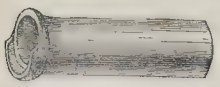
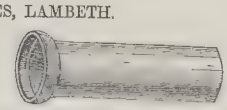




S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN-PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pans.

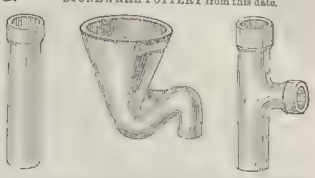
SUPERIOR STONEWARE GLAZED

PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

GREAT REDUCTION in the PRICE of

STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 85, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays-Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 5d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES

FREEMAN ROE'S PATENT SLUICE-

VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

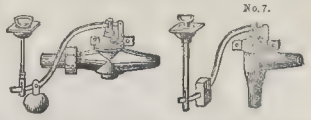
PATENT SELF-ACTING WATER-

CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principle, fabricating with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE POWERFUL FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen at the Premises of the Patentee, W. PATTEN, 32, Old Fish street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

LAMBERT'S SELF-CLOSING

LAVATORY AND CLOSET VALVE

No. 7.



is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 10 to 200 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS LAMBERT and SON,

Brass Founders and Engineers,

Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

TO WATER COMPANIES AND PLUMBERS

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

TO CLOCK-MAKERS. — EIGHT-DAY

CLOCK WANTED for the CASTLE CARY MARKET-HOUSE, Somersetshire. The clock will have to be placed in a roof, on timbers capable of bearing a weight not exceeding 10 cwt. The fall available for the weights is about 25 feet; but 15 feet would be rather more convenient. The rods which give motion to the hands, &c. must be carried along the roof horizontally about 25 feet; afterwards vertically about 10 feet, into an open lantern having four sides, on each of which there is to be a pierced dial, resembling a wheel, with six spokes, 3 feet 6 inches in diameter. The works to include a train for striking the hours and quarters on a bell already fixed in the lantern, weighing 9½ lbs. TENDERS to be sent to Mr. RUSS, Solicitor, Castle Cary, on or before SATURDAY, the 24th inst.

Dated Castle Cary, May 1st, 1856.

SALES BY AUCTION.

TO NOBLEMEN, GENTLEMEN, ARCHITECTS, BUILDERS, LANDSCAPE GARDENERS, AND OTHERS. — Second Annual Sale of the valuable and beautiful Materials manufactured by Messrs. Page's Patent Artificial Stone.

MESSRS. MANSELL and ELLIOTT are favoured with instructions from the Directors of the Company, to SELL by AUCTION, on the PREMISES, Whitehall Wharf, Pimlico, Westminster, on TUESDAY, MAY 13th, 1856, and two following days, at TWELVE for ONE o'clock precisely, in lots adapted for private purchasers, the trade, and shippers, a well-selected assortment from the extensive stock at Ipswich of ITEMS adapted for ornamenting ecclesiastical building, mansions, and cottages, designed in the various style of art, before the first-rate artists, including an entire Gothic screen, worked a two-piece screen, chimney pieces, basso and alto reliefs, pillars, pilasters, entablatures complete, capitals, cups, lace, cornices, panels, bases, pedestals, vases, tazzas, and architrave, tracery, tablets, tunnel arched and plain balustrading, gate and other piers, pedestals in great variety, terminals, ashlar quoins, copings, and strings in fine stone. The garden decorations comprise fountains, shell and rock work, figures, vases, tazzas, flower stands and boxes, fern tazzas, sundial pedestals, and terrace balustrading. The miscellaneous articles consist of coats of arms, turrets, pinnacles, fonts, mural tablets, tombs, and every item that can be made in wrought or sculptured stone. Messrs. Mansell and Elliott beg to draw especial attention to this important sale, for the Patent Siliceous Stone is superior, in appearance and durability, to any other stone, being unaffected by weather, and while of extraordinary capabilities of application are too numerous to particularise in an advertisement, they invite an inspection of the materials. The Whole may be viewed three days prior to the sale, and catalogues had four days prior on the Premises, and at the Offices of Messrs. Mansell and Elliott, Auctioneers and Valuers, Belgrave-square (corner of Halkin-place), 12, Birchin-lane, Cornhill, from which printed copies may be had.

TO IRONMONGERS, CABINET-MAKERS, BUILDERS, TRUNK MAKERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, the 20th of MAY, and following day, at ELEVEN precisely, on the PREMISES, St. James's walk, Clerkenwell-green, in lots (the proprietor of upwards of five thousand), the STOCK of IRONMONGERY, 2,800 dozen locks complete, wrought and cast hinges, a large assortment of brass cabinet-work, bell work cench bolts and nuts, 60 gross of wood screws, bags of wrought and cut nails, new Bilston grained japanned tinned and Lancashire tools, 10 dozen of spades and shovels, three tons of castings in sash weights, doors, false bottoms, gratings, &c., 200 enamelled iron chemical pans, 50 register stoves, fenders, black hollow ware, japanned ware, copper goods, and a large assortment of general ironmongery. To be viewed on Monday previous to the Sale, when catalogues may be had on the Premises, and of Messrs. Fuller and Horsey, Billiter-street, City.

The spacious Premises to be Let.

TO ENGINEERS, SMITHS, IRON MERCHANTS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the trustees to SELL by AUCTION, at the IMPERIAL IRON WORKS, Wenlock road, City-road, on MONDAY, MAY 19, at ELEVEN, valuable ENGINEERING TOOLS and STOCK, powerful cutting and punching press, screwing machine, strong slitting saw two inches, two large presses, three power horizontal steam-engine and boiler, two Lloyd's fans, shafting and riggers, wrought-iron tank four iron and seven brick forges, fourteen anvils, 5 tons smiths' tools, 80 tons bolt and bar iron in sheets, cast iron pipes and bolts, corrugated iron roofing, and other effects. To be viewed on SATURDAY previous to the sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

TO TIMBER MERCHANTS, CONTRACTORS, BUILDERS, BARGE AND SHIP BUILDERS, AND OTHERS.—Mr. Thomas Freeman having removed the largest portion of his valuable Timber, Deals, and Battens, at the Spa-road Station on the Greenwich Railway, and known as the Spa-road Timber-yard, Bermondsey, where he intends, for the future, to carry on only his Deal and Batten business.

MR. PEAKE, to SELL by AUCTION, in lots, on THURSDAY and FRIDAY, the 15th and 16th days of MAY, each at TWELVE o'clock, on the Premises, the PREMISES, viz., the New-walk, Shad Thames, Bermondsey, and the Railway Arches abutting the Jamaica-road, Bermondsey, a portion of the STOCK, consisting of about 1,000 loads of DEALS, and BATTENS, sawn and unsawn; twenty loads of prime Dantzic timber, in logs; large scantling, 12 feet of sorts; 2 by 6 inch, skirting, 18 inches of 12 inch by 3 inch; a quantity of pine plank, flooring boards, and various &c. May be viewed the day prior to and mornings of sale; catalogues obtained on the Premises, New-walk, Shad Thames, Bermondsey; also at Mr. Peake's Offices, 44, Tooley-street, and 4 Pair-street, Southwark.

NEAR THE RAILWAY STATION AND TOWN OF EPSOM, SURREY.—The STOCK of a BRICK-YARD, comprising about 4 millions of first BRICKS and TILES, &c.

MESSRS. WHITE and SONS, on the PREMISES, on TUESDAY, MAY 13, 1856 at TWELVE o'clock. The above quantity is composed of 3,000 bob, best building bricks, of fine-rate colour and quality, 300,000 stock, place, and grinell bricks, well manufactured, and of a good colour, 8,000 rubbers, 1,000 plain and moulded tiles, which will be divided into lots to meet the convenience of purchasers. Every facility for removing the stock is afforded by a tramway, from the Croydon and Epsom line, which runs into the yard. — Catalogues may be had on the premises; of Mr. Wright, Stationer, 91, Farringdon-street, London; of Mr. Johnson Hands, at his Patent Brick and Tile Works, Epsom; and of the Auctioneers, Dorking, who will be attending at the Land Improvement Office, Chancery-lane, London.

CHELTENHAM. Valuable Property and Building Land in the Suburbs.

MESSRS. BEADEL and SONS have received instructions from the Proprietors, to SELL by AUCTION, at the Plough Hotel, Cheltenham, on THURSDAY MAY 15, at TWO for THREE o'clock in lots, the valuable PREMISES known as the Bath Nursery, Malvern Road, Prestbury, consisting of about 4a. 3r. 36p. of Freehold land. Lot 1 will comprise the extensive and valuable range of premises situate at the corner of Bath-road and Oriel terrace, with a commanding frontage of 220 feet; this block of building includes the Montpellier Baths and dwelling-house, in the occupation of Mr. Jones, who is desirous to quit at Michaelmas next; the bakery, with shops, ovens, fittings, &c.; the mill, with machinery driving two pairs of stones, and the dwelling at present used as the manufactory for Cheltenham salts; the fittings to the baths, the hot-house, greenhouses, pinery, vineries, peach-houses, and all the machinery and fixtures in and about the premises being lot 2; these will be offered in the progress of the sale. The remaining lots will consist of freehold and copyhold building land, admirably adapted for the erection of villa residences, fronting the Malvern-road, close to Christ Church, and within a few minutes' walk of the Montpellier Gardens. Further particulars, with conditions of sale and lithographic plans, may be obtained fourteen days prior to the sale of Messrs. J. C. and H. Beadel, Solicitors, New-street, Cheltenham; of the G. H. Hussey, Esq., Solicitor, Bristol; of Messrs. Waterhouse and Bell, Cheltenham; at the Place of Sale; and of Messrs. Beadel and Sons, 25, Gresham-street, London.

Freehold Land, in Plots, conferring votes for Middlesex, Kent, and Surrey.

MR. TINDALL, will SELL by PUBLIC AUCTION, on WEDNESDAY, MAY 14, at the AUCTION MART, by order of Messrs. Hughes, Hibbs, and Hughes, ST. MARGARET'S ESTATE, Richmond; SIX PLOTS at FOREST-HILL; ONE PLOT at HORNSEY-RISE; first-rate situations for villa residences. A large PLOT at BOW, close to the Victoria-park, set apart for five capital shops, and an exceedingly valuable PLOT, on the CAMBERWELL-road, of eight lots, especially reserved for the erection of a public-house license certain. Particulars may be had of Messrs. Hughes and Lewis, Solicitors, 14, New Boswell-court; at the Red Cap, Camberwell green; Hanley Arms, Hornsey-road; Star and Garter, Richmond; Telegraph Hotel, near the Railway Station, Forest hill; Marquis Cornwallis, Old Ford-road; and at the St. John's wood Estate Office (where plans of the estates may be seen), 28 Portland-terrace, near St. John's-wood Chapel.

SALES BY AUCTION.

HATTON-GARDEN.—Peremptory Sale of the Plant and Effects of a Builder and Sewer Contractor; and Lease of the Premises.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, Bleeding Heart-yard, Charles-street, Hatton-garden, on TUESDAY, MAY 20th, the valuable PLANT and EFFECTS, consisting of a large quantity of plank, deal, and battens of various dimensions, scaffold boards and poles, ladders, sinks, cesses and troughs, iron and sewer centres, blocking-boxes, paling-boards, and work, benches, iron pumps, screw-jacks, blocks and falls, a pug-mill, gully gratings, crane barrows and boxes, trolleys, iron wheelbarrow plates, painted 1s. stone paving, and asphaltum grate, iron work of various descriptions; also, two excellent builder's carts, set of cart harness, tarpaulins, hand chaff-boxes, two portable counting-houses, office fittings, and numerous other effects. At the same time the Lease of the Premises, at 100l. a year. May be viewed one day previous and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

Valuable Materials of the temporary buildings erected in the Crystal Palace, Hyde Park, and Victoria Park, for the use of her Majesty's Government, in connection with the forthcoming display of Fireworks, on the 20th, to celebrate the return of Peace.

MESSRS. EVERSFIELD and HORNE are honoured with instructions to SELL by AUCTION, on the PREMISES, known as the Crystal Palace, the MATERIALS, FITTINGS, and FENCING, comprising a very large quantity of timber, of the most useful description, in framed principals, inch boarding, 3-inch planking, and quarterings; also the glazed sashes, doors, and other fittings; the whole of which have been selected with a view to conversion, and will be put in suitable lots.—Further particulars and the days of sale will be shortly announced, and any party wishing for a catalogue, may have it sent, post-free, by forwarding his address to the Auctioneers, 40, Parliament-street, Westminster.

ST JOHN'S WOOD. Leasehold Premises with Workshops.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, at the MART, on TUESDAY, MAY 13th, at TWELVE, by order of the mortgagees, a substantial brick built RESIDENCE, containing four rooms with workshops, yard, and stabling, situate on the south side of Clifton-road, St. John's-wood, held for an unexpired term of 96 years, at a ground-rent of 8l. The premises are in hand, but of the estimated value of 80l. May be viewed, and particulars had of J. Cundy, Esq. Solicitor, 10, Great Cattle-lane, Peckham Common; at the Mart; and of the Auctioneers, Coal Exchange, or 40, Parliament-street, Westminster.

PIMLICO.—Marble Chimney pieces.

MESSRS. EVERSFIELD and HORNE are instructed to SELL, early in JUNE, at the MARBLE SHOW-ROOMS, Belgrave place, about 150 MARBLE CHIMNEY-PIECES, several of which are richly sculptured, and others of a plainer character.—40, Parliament-street.

BUILDING MATERIALS, WATER-LANE.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, Waterlane, Strand, on FRIDAY, APRIL 18, at TEN for ELEVEN, the MATERIALS and FITTINGS of SIX HOUSES, being Nos. 9, 10, 11, and 12, Water-lane, and two houses at the rear, of the usual description; to be taken down by the purchasers.—May be viewed one day previous, and catalogues had of the Auctioneers, 40, Parliament-street, Westminster.

PORTPOOL-LANE.—Valuable Builder's Stock of seasoned Timber, Plant, Implements and Effects, on the Premises of the late Mr. Newton.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors to PREPARE for SALE, in LENT, the FIRST PORTION of the valuable STOCK and EFFECTS, which will comprise a large quantity of well seasoned yellow and white deals and battens, prepared floor-boards and battens, pine plank, matched boarding and skirting, die square timber and scantling, fir, pine, and mahogany planks, mahogany and pine steps, slabs, and paving; also, several lifting carts, stone trucks, and timber carriage; scaffold boards, poles, and putlogs; crane and scaffold ropes; ladders, sinks, cesses, and troughs; planks, barrows, pile driving engines; and numerous saw tackle, the contents of the joiner's, plasterers', painters', and smiths' shops; forty work-benches, and numerous other effects.—The days of sale will be shortly announced; and catalogues will be sent, post-free, on application to the Auctioneers, 40, Parliament-street, Westminster.

TO BUILDERS, CARPENTERS, AND OTHERS.

MR. LOUND will SELL by AUCTION, on MONDAY, MAY 26, by direction of Mr. Roberts, Builder and Carpenter, who is retiring, all those capital PREMISES, situate in DUDDY-COURT, Silver-street, within a few paces of Wood-street, comprising a convenient dwelling-house, extensive, lofty, and light workshops, saw-pits, yard, and sheds, very easy of access from the street, and suited for any business requiring spacious premises, in one of the most important parts of the City of London; held under Christ's Hospital, for a long term, at the low rent of 45l. per annum; the purchasers have the option of purchasing the timber, stock-in-trade, &c.—May be viewed, and particulars had of the Auctioneer, 49, Chancery-lane.

BUSHEY, NEAR WATFORD, HERTS. Valuable Freehold Building Land.

MESSRS. PRICE and CLARK are instructed to SELL by AUCTION, at GARRAWAYS, on TUESDAY, JUNE 3, at TWELVE precisely, several valuable PLOTS of BUILDING LAND, with 600 CHIMNEY-POTS, adjoining to Watford, in the charming village of Bushey, near the Windmill Inn, and a short distance from the railway station. This property is situate in a beautiful country surrounded by numerous gentlemen's residences, and having on the high road, leading to the Uxbridge and Barnet road, it has the advantage of a double frontage, rendering it particularly eligible for building purposes.—May be viewed till the sale, and descriptive particulars, with plans, obtained at the principal Inns in the vicinity and in London; of Geo. Plews, Esq. Solicitor, 1, Furnival's-inn, at Garraway's; and at Messrs. Price and Clark's Offices, 18, Chancery-lane.

STOCK-IN-TRADE of a MODELLER and MOULDER.—Sale for Wednesday next, instead of last Wednesday, which was postponed by reason of the severe weather.

MR. BRETT will SELL by AUCTION, on WEDNESDAY, the 14th of MAY 1856, at TWELVE o'clock, on the PREMISES, No. 4, Belvidere-place, Boroughroad, by order of Mr. Eaton, the CHIMNEY-POTS, models, forms, chimney pieces, moulds, tops, slabs, tablets, slates, and a vast quantity of castings; catalogues of which are now ready, and may be had at the place of Sale; and of Mr. Brett, Building Material and General Auctioneer, 23, Southwark-bridge-road.

Second Portion of the Valuable Stock of Mr. Peake, Builder, Bermondsey Brickfield, Jamaica-road, near Bow, Middlesex.

MR. G. HALL is favoured with instructions from J. Wilson, Esq. to SELL by AUCTION, without reserve, on WEDNESDAY, MAY 14, at ONE precisely, about new BRICKS, assorted in lots to suit the convenience of purchasers, and a quantity of improved of the usual description.—May be viewed three days prior to sale; catalogues had at the place of Sale; at the Rose and Crown and Queen Victoria Taverns, Bromley; and of the Auctioneer, 3, Cranbrook-street, Old Ford road.—Credit will be delivered into barges or on railway trucks, at the purchaser's option.

EXTENSIVE SALE OF BUILDING MATERIALS, OLD BRENTFORD.

MR. F. HALL has been favoured with instructions to SELL by AUCTION, by order of the Contractor, on THURSDAY, MAY 15, at TWELVE, on the PREMISES, Cromwell-lane, Old Brompton, the whole of the MATERIALS of several HOUSES and OLD BUILDINGS, situate in Cromwell lane, Old Brompton, comprising sound brickwork, in bricks, fancy and cantle bricks, sashes and frames, internal fittings, floors, roofs, pan and plain tiles, slates, fixtures, doors, gates, &c. &c. the whole to be taken down and cleared by the purchasers. May be viewed and catalogues had on the Premises, the day before the sale; and of Mr. F. Hall, Building Material and General Auctioneer, Chester-street, Kennington.

FREEHOLD BUILDING GROUND,

WOODFORD, ESSEX, close to the Railway Station.—TO BE LET, for a long term, an eligible CORNER PLOT, suitable in all respects for a Public-house. Also other Plots, for Shops or Private Houses.—Apply to Mr. RIVETT, Railway-bridge, Stratford.

FREEHOLD LAND TO BE LET, on

Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHILPSON, Architects, 4, Princes-inn, St. Clement's, Strand.

FREEHOLD BUILDING LAND, HOLLOWAY.—TO BE SOLD, or LET, about EIGHTEEN ACRES, in large or small Plots.—Apply to Mr. PEACHEY, 17, Sans-walk, Clerkenwell.

FREEHOLD BUILDING GROUND.—TO

BE LET or SOLD, on advantageous terms, TWO PLOTS of GROUND, situate in the most eligible part of St. John's-wood.—For particulars apply by letter, post-paid, to W. LEWIS, 9, Craven terrace, Craven-hill, Paddington.

FREEHOLD LAND for SALE.—TO BE

SOLD, about Fifteen Acres of LAND, situate within three miles of the metropolis, suitable for building. Excellent brick earth and building materials on the premises.—Apply to Mr. CHARLES LAWS, Architect 12, Dunstable-street, Bedford-row

SUPERIOR BUILDING LAND to LET,

near Cricklewood, St. John's wood, and Kilburn-gate and railway station, 120 feet above the Thames, commanding views of Hampstead, suited for good class villas of 60l. to 120l. yearly value. Leaseholds for 99 years. Rents from 3s. 6d. to 6s. per foot frontage. Address, Mr. BALL, 44, Regent-street, Piccadilly.

VALUABLE BUILDING LAND, on a fine

healthy eminence, commanding beautiful scenery, surrounded by open heaths and rich plantations, and within a few minutes' walk of a convenient railway station, less than twenty miles south-west of London. A long term (about eighty years) will be granted in one or more lots, the whole contemplating fifteen acres. JOHN DAWSON, Land Agent and Auctioneer, Marlborough-chambers, 4, Pall-mall.

TO BUILDERS, &c.—An undeniable SITE

for VILLAS, at CAVERSHAM, Reading, to be DISPOSED OF, on lease or otherwise, with accommodation, if required. Villa residences are much in request, and a capital return may be assured.—Apply to Mr. KNIGHTON, Caversham, Reading.

TO BE LET, WHARF PREMISES in

Regent's-canal, in one of the greatest thoroughfares round London; with counting-house, parlour, and shop fitted for the corn trade, with granary-sheds, lofts, a horse-walk, steam-engine, boiler, and shaft erected, and lastly for four cranes.

To Builders.—100 Loads of Petersburgh Laths for sale, cash prices low.

Apply to Mr. JOHN NEWTON, Norway Wharf, Hertford-road, Kingsland-bridge.

TO BUILDERS.

LEE, near BLACKHEATH.—FRONTAGES

TO BE LET, for detached or semi-detached villas, on the Belmont Estate. This estate contains the finest sites for building purposes anywhere round London, and good villas are in great demand, on account of the situation being lofty, dry, well drained, and excellently supplied with water. Assistance will be afforded to responsible parties.—For particulars, apply to Messrs. J. and C. W. TODD, Milner-street, Brompton, London, or Belmont, Lee, Kent, or Messrs. NEALON and INNES, Whitehall; and of Messrs. KIRKMAN and ENGLEHEART, King William-street, City.

BUILDING LAND TO BE LET, for the

erection of small houses, near the Licensed Victuallers' Asylum, Old Kent-road. This would be a safe investment to respectable Builders, who would be assisted with advances, if required.—Apply to Mr. ARTHUR TAYLOR, 38a, Basinghall-street.

BUILDING LAND TO BE LET within

six miles of the City.—7s per cent. advances. Also 10,000l. to be lent as a mortgage, in separate sums, on good security.—Apply to Mr. PATMAN, 31, Great James-street, Bedford-row.

BUILDING GROUND TO BE LET.—

Several PLOTS of GROUND TO BE LET, in the best part of Kentish town, Holloway, and Fulham. Money advanced if required.—Apply to Mr. TAYLOR, Surveyor, 21, Lincoln's-inn-fields.

HOLLOWAY.—Valuable BUILDING

GROUND TO LET, with liberal cash advances, to respectable builders, admirably situated for good Villa Residences, which are much required in this favourite and highly respectable locality. The situation is most healthy, possessing beautiful and commanding views, and the access to all parts of London easy. Property in this neighbourhood lets and sells rapidly.—For further particulars, apply to Mr. GEO. CLARKSON, Surveyor and Land Agent, 48, Penton-street, Pentonville.

TO BUILDERS.—FREEHOLD BUILDING LAND TO BE LET OR LEASE, for a Term of 999 years, at Horsford, Harrow, Stanmore, Hitchin, Wimbledon, Chertsey, Ash, near Aldershott Camp, and Wharf-road, City-road. Cash advanced, if required.—Apply to Messrs. BLAKE and SNOW, Solicitors, 23, College hill, Cannon street, London.

BUILDING LAND, very eligible, roads and

plots made and levelled, and a piece of valuable old brick earth, Turn, Dunstable, Beds to be let, Freehold. Moderate ground-rents. Situation, Higher-road, Angel, Edmonton. Other Freehold Land, front of Tottenham-green, opposite Trinity Church. Also Land at Stoke Newington, 200 feet frontage to high road, near Stoke Newington Station, Eastern Counties Railway, and near the junction with the new Caterham line. Moderate sized houses in great demand.—Applications to Mr. SCOTT, Clayhill, Enfield, Middlesex.

WOODCOTE ESTATE, CARSHALTON, SURREY.—To BUILDERS and OTHERS. To be LET for a term of 99 years, adjoining the Carshalton Station, on the London and Epsom Railway, several plots of BUILDING LAND, eligibly and delightfully situated close to Deptford-green village of Carshalton, commanding extensive and picturesque and extensive and varied scenery, and is peculiarly applicable for the erection of detached and semi-detached villas. Leases granted direct from the freeholder, and money advanced, if required. The Land is situated thirty minutes' journey from London-bridge. For terms and to see plans, apply at the offices of the Woodcote Estate, Messrs. WELHELM and ASHDOWN, 42, Charing cross.

BUILDING LAND at ACTON, near the

Railway Station, in a fine open and healthy situation, and plenty of fine water.—Apply to W. F. L. W. Esq. 67, Wimpole-street, Cavendish-square.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Sons) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," York street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, May 10, 1856.

The Builder.

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ROYAL ACADEMY of ARTS, Trafalgar-square.—The EXHIBITION of the ROYAL ACADEMY of ARTS is NOW OPEN. Admission from Eight till Seven o'clock; One Shilling. Catalogues, One Shilling.
JOHN PRESCOTT KNIGHT, R.A. Secretary.

SOCIETY of PAINTERS in WATER-COLOURS.—The FIFTY-SECOND ANNUAL EXHIBITION is now open at their Gallery, 5, Pall-mall East (close to Trafalgar square), from NINE till DUSK. Admittance, 1s. Catalogue, 6d.
JOSEPH J. JENKINS, Secretary.

THE NEW SOCIETY of PAINTERS in WATER-COLOURS.—The TWENTY-SECOND ANNUAL EXHIBITION is NOW OPEN, at their Gallery, 54, Pall-mall (near St. James's Palace) daily from Nine till Dusk. Admission 1s.; Season-tickets, 5s.
JAS. FAHEY, Secretary.

EVENING LECTURES to WORKING MEN, at the MUSEUM of PRACTICAL GEOLOGY, Jermyn-street, being the LAST of these Courses for the present Session. Six Lectures on MINING, by W. W. SMYTH, M.A. To be commenced on MONDAY next, MAY 19th, at EIGHT o'clock. Tickets may be obtained at the Museum, by Workmen *Monthly*, from TEN to FIVE o'clock on the day of the first Lecture, upon payment of a registration fee of Sixpence for the whole course.
TRENHAM REEKS, Registrar.

CONTRACTS.

TO BUILDERS.—Parties desirous to CONTRACT for carrying into effect the ALTERATIONS proposed to be made at the COMMON GAOL of the County of Surrey, at Horsemonger-lane, for the purpose of adapting the same to the separate system according to the plan, specification, bill of quantities and conditions, which may be inspected at my Office hereinafter mentioned, on and after MONDAY, the 2nd of next JUNE, are requested to transmit Tenders for the same, addressed to me at my Office hereinafter mentioned, sealed and marked, "Tender for the County Gaol," before FOUR o'clock, P.M. on MONDAY, the 23rd of the said month of JUNE; and to attend, personally, before a committee of Magistrates, for the said County, by whom the said Tender will be opened at the Sessions House, Newington, on TUESDAY, the 24th of the said month of JUNE, at HALF-PAST ELEVEN o'clock. The Committee will not be bound to accept the lowest or any Tender, and security will be required for the performance of the Contract by the party whose Tender may be accepted.
WORONZOW GREIG, Clerk of the Peace.
Record Office, North-street, Lambeth, May 15, 1856.

MIDDLE LEVEL DRAINAGE.—To CONTRACTORS for PUBLIC WORKS.—Notice is hereby given, that the Middle Level Drainage Commissioners are desirous of receiving TENDERS for the WIDENING and DEEPENING of the NEW CUT through MARSHLAND, extending from the 16-feet River to the River Ouse, being about 3½ miles in length.—Plans, Sections, and a Specification of the Work may be seen at the Office of Mr. R. LUNN, the Superintendent of the Middle Level Works, March, Cambs, on and after MONDAY, the 26th day of MAY instant, and any further information may be obtained at the Offices of Messrs. WALKER, BURGES, and COOPER, 23, Great George-street, Westminster. The Tenders must be delivered at my Office, at Parliament-street, Westminster, by 12 o'clock on the forenoon of THURSDAY, the 5th day of JUNE next. The Commissioners do not pledge themselves to accept the lowest or any of the Tenders.
GEO. CLARK,
Clerk of the Middle Level Drainage Commissioners.
Dated this 14th day of May, 1856.

TO GASHOLDER-MAKERS and OTHERS.—The Directors of the Fareham Gas Company are prepared to receive TENDERS for the SUPPLY and ERECTION of a GASHOLDER, and the execution of other work, the specification (which may be had at the Office of Mr. THOMAS G. BARLOW, Civil Engineer, 3, Parliament-street, Westminster; or at Mr. J. MASON'S, Dowding-street, Fareham, Surrey). The Tenders are to be delivered in at Fareham on the 26th MAY instant, and the Directors do not bind themselves to accept the lowest or any Tender.
Fareham, 7th May, 1856.

CONTRACTS.

BUILDERS willing to CONTRACT for ERECTING and COMPLETELY FINISHING a PRIVATE DWELLING-HOUSE, in the parish of Ightham, may see the plans and specification on WEDNESDAY next, MAY 21st, at the Office of Mr. GEORGE GATES, 9, Ironmonger-lane, Lee, Kent. Quantities will not be supplied.

TO MANUFACTURERS OF GAS APPARATUS, IRON-FOUNDERS, &c.

THE DIRECTORS of the SWINTON and MEXBROUGH GAS-LIGHT COMPANY are prepared to receive TENDERS from persons willing to SUPPLY and FIX, COMPLETE the RETORTS, CONDENSER, PURIFIERS, GASHOLDER, GOVERNORS, MAINS, SERVICES, &c. required, according to the drawings and specifications prepared by Mr. T. F. CASHIN, C.E. and Architect, 16, Bank-street, Sheffield. On and after the 19th inst. the drawings may be inspected at Mr. CASHIN'S Office; and a copy of the specifications obtained, on payment of one guinea. Sealed Tenders to be delivered at my Office, on or before the 24th inst. The directors do not pledge themselves to accept the lowest Tender.
JNO. MELLOR STORY, Solicitor.
Swinton, Rotherham, May 8, 1856.

ROYAL ENGINEER CONTRACT.—WAR DEPARTMENT.—The War Department being about to enter into CONTRACTS for the following Works at Woolwich, Purfleet, and Shoeburyness, from the date of the acceptance of the Tenders, to the 31st MARCH, 1859, viz.:—
CARPENTERS.
BRICKLAYERS.
PLASTERERS.
PLUMBERS.
PAINTERS, GLAZIERS, and PAPER-HANGERS.
PAVIORS.
SLATERS.
SMITHS and IRONMONGERS.
MASONS.
UPHOLSTERERS.
GAS FITTERS.
Such persons as may wish to tender for the same may obtain schedules by applying to the Clerk of the Works, at the Royal Engineer Office, Grand Depôt, Woolwich, on or before the 23rd MAY, 1856, after which date no schedules will be issued. It must be understood that all such each party tendering may specify the per-centage on each trade separately, yet there will be only one Contract for each Station, embracing all the several trades.

TO CONTRACTORS AND BUILDERS.

NOTICE is hereby given that TENDERS will be received at the Office of the War Department, Pall-mall, London, on or before TWELVE o'clock, on MONDAY, the 26th MAY, 1856, from such persons as may be willing to enter into CONTRACTS for the construction of NEW PACKING-PLACE, BREAKWATER, and for Repairing the Concrete Slope, &c. of the Circular Redoubt, at Eastbourne, Sussex. Plans, specifications, and conditions may be seen, and every information obtained, on application at the Royal Engineer Office, at Eastbourne, between the hours of TEN and FOUR, daily, from the 12th to the 19th of MAY, 1856, inclusive (Sunday excepted). Tenders to be sealed up, and endorsed on the outside "Tender for Work, at the Redoubt, Eastbourne."
Royal Engineer Office, Eastbourne, May 5th, 1856.

NOTICE to BUILDERS and CONTRACTORS.—CONTRACT for REPAIRING certain portions of the RIVER FACE of QUEENBOROUGH WALL, and the TOP of the RIVER EMBANKMENT, from the Right Demi-bastion to the Government Boundary, at Sheerness.—The Commissioners of Royal Engineer give Notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall Mall, London, on or before THURSDAY, the 22nd instant, from such persons as may be desirous of CONTRACTING with the War Department, for REPAIRING certain portions of the RIVER FACE of QUEENBOROUGH WALL, and the TOP of the RIVER EMBANKMENT, from the Right Demi-bastion to the Government Boundary, at Sheerness. The plans may be seen, and printed specification and forms of Tender obtained, by persons fully competent to undertake the work (none others need apply), at this Office, between the hours of TEN and FOUR o'clock, from TUESDAY, 6th MAY, 1856, to TUESDAY, the 13th MAY, 1856 (Sundays excepted). The party whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound, under a penalty of £600, for the due performance of the contract. Tenders for the above Works to be addressed to "The Director General of Contracts, Pall-mall, London," and endorsed, "Tender for Repairing Queenborough Wall, Sheerness." No Tender can be admitted after the said 22nd day of MAY, 1856.
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Sheerness, May 6, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall Mall, London, on or before TUESDAY, the 3rd of JUNE, 1856, from persons desirous of contracting for RENEWING GRANITE PAVING, FIXING IRON FITTINGS, and PLASTERING, &c. to STABLES, at CANTERBURY BARRACKS. Drawings and specifications of the Works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Canterbury Barracks, between the hours of TEN and FOUR o'clock, from MONDAY, the 19th of MAY, to MONDAY, the 2nd of JUNE, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of £60, for the due performance of the contract. Tenders for the above work to be addressed to the Director General of Contracts, Pall Mall, London, and endorsed "Tender for Paving Stables, &c. at Canterbury Barracks."
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, 6th May, 1856.

CONTRACTS.

NOTICE to CONTRACTORS.—The Commanding Royal Engineer, Portsmouth, hereby gives Notice, that SEALED TENDERS will be received at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on or before the 22nd inst. from persons desirous of entering into a CONTRACT for CONSTRUCTING a CAST-IRON BRIDGE of Communication from the Curtain to the Right Ravelin, and for RENEWING FIVE BRIDGES over the Ditch, Portsea Fortifications, Portsmouth. The Plans and Specification may be seen, and all necessary information obtained at this Office between the hours of TEN and FOUR each day Sundays excepted, until the 21st inst. The person whose Tender may be accepted will be required to provide two eligible securities, to be bound with him, jointly and separately, in a bond of £200 for the due performance of the contract by the 1st October, 1856. The War Department reserve the right of rejecting the whole or any of the Tenders. No notice will be taken of any Tender unless upon the printed form, which form may be obtained on application at this Office.
Royal Engineer Office, Portsmouth, 8th May, 1856.

TO CONTRACTORS and BUILDERS.—Notice is hereby given, that TENDERS will be received at the Office of the War Department, Pall-mall, London, on or before TWELVE o'clock, on the WEDNESDAY, MAY 28, 1856, from such persons as may be willing to enter into a CONTRACT for LAYING DOWN IRON PIPES, for supplying the Cavalry Barracks at Brighton with water. Plans, specifications, and conditions, may be seen, and every information obtained, on application at the Royal Engineer Office, at Brighton, between the hours of TEN and FOUR, daily, from the 14th to the 21st of MAY, 1856, inclusive (Sundays excepted).—Tenders to be sealed up and endorsed on the outside, "Tender for laying down Water-pipes at the Cavalry Barracks, Brighton."

TO SCAVENGERS AND OTHERS.

THE COMMISSIONERS of SEWERS of the CITY of LONDON hereby give Notice, that they will meet in the Guildhall of the said City, on TUESDAY, the 20th day of MAY next, at TWELVE o'clock at noon precisely, to receive PROPOSALS for CLEANSING the STREETS and REMOVING DUST, &c. from the Streets of this City, for the term of one year from Midsummer-day next, agreeably to the provisions of a specification, a copy of which may be had upon application at this Office. The Commissioners will also at the same time receive PROPOSALS for WATERING certain of the STREETS of the said City twice a day, agreeably to a specification to be seen at this Office. The City to be divided, for the purposes of these contracts, into six divisions. Each contractor will be required to enter into bond, with two approved sureties, for the due performance of his contract. The Commissioners do not pledge themselves to accept the lowest Tender, nor any, unless deemed satisfactory. No Tender will be received after TWELVE o'clock on the day of treaty, nor shall any Tender be read which does not contain an inclosure of a 20*l.* Bank of England note, as an evidence of the sincerity made bona fide; which sum will be immediately returned to each person whose Tender is not accepted; and will be retained in the other cases until the contract and bond are duly executed.
JOSEPH DAW, Principal Clerk.
Sewers Office, Guildhall, April 26, 1856.

HARDWELL'S HEALTHY HOMES.—Such builders as may be willing to CONTRACT for the ERECTION of ONE of these DWELLINGS, in the St. James's District, may see the drawn and specification at 4, Great Queen-street, Westminster, any day, between the hours of TEN and TWO. The proprietor does not pledge himself to accept the lowest Tender.

ROADS and SEWERS.—To BUILDERS and OTHERS desirous of TENDERING for the CONSTRUCTION of a PIECE of SEWER and ROAD, at Upper Holloway, for A. JONES, Esq. 13, Paragon, Old Kent-road, may see the plans and specification for the same at the residence of Mr. THOMAS, Architect and Surveyor, No. 16, Denmark-street, Camberwell, on TUESDAY and WEDNESDAY, the 21st and 22nd inst.

EAST LANCASHIRE RAILWAY.—to BUILDERS and CONTRACTORS.—The Directors are prepared to receive TENDERS for the ERECTION of the following WORKS:—
1st. One Warehouse and other Works at Radcliffe.
2nd Passenger Station..... at New Church.
3rd Waiting Rooms..... at Musselcads.
Plans and Specifications may be seen at the Engineer's Office, Bury Station. Sealed Tenders endorsed "Tenders for Stations, &c." for each of the above-named Works, will be received by the undersigned not later than 27th inst.
MYLES FENTON, Secretary.
Bury, Lancashire, May 8th, 1856.

NEW PUBLIC BUILDINGS and MARKETS, ASHBY-DE-LA-ZOUCH.—To BUILDERS.—The Directors of the Ashby-de-la-Zouch Market Company, "Limited," will meet at TWELVE o'clock on MONDAY, the 2nd day of JUNE next, at the ROYAL GEORGE HOTEL, Ashby, for the purpose of receiving TENDERS for the EXECUTION of the works comprised in the ERECTION of a BUILDING for public purposes, for a Corn Market, Bank, Inn, and other works. Tenders with Particulars of Prices for the several works may be sent in, and Specifications at the offices of MR. HENRY J. STEVENS, the Architect, Post Office Chambers, Derby; or at the Committee-room of the Company, the Queen's Head Hotel, Ashby-de-la-Zouch, on and after MONDAY, the 19th inst. Plans of small Cottages proposed to be erected, and Further information may be obtained at the Architect's Offices as above. The Directors do not bind themselves to accept the lowest Tender, and will require the usual securities for the due performance of the Contract. By order of the Directors,
THOS. DAVENPORT, Secretary.
Ashby-de-la-Zouch.

[*For remainder of Contracts see next page.*

CONTRACTS.

TO BUILDERS, PAINTERS, and OTHERS.—HOUSE and PREMISES to be REPAIRED, No. 7, Aberdeen-place, Maida-hill, St. John's-wood. Specification to be seen at the Premises from TEN to FOUR for one week from MONDAY next, 19th MAY. Tenders to be sent to the Architect's residence on or before SATURDAY, the 24th instant.—G. GORDON SCANAM, Architect, 31, Alma-building, Notting-hill, Hammersmith-gate. The lowest Tender not necessarily accepted.

TO BUILDERS.

PERSONS desirous of CONTRACTING for the whole of the WORKS in the ERECTION of SCHOOLS for the CHRIST CHURCH DISTRICT, Tunbridge Wells, may see the plans and specification at the Clerk of the Works' Office, Mount Ephraim, Tunbridge Wells, on and after MONDAY, the 12th inst., and obtain the necessary information as to the Contract. Sealed Tenders to be delivered at the Office of Mr. WILLIAM ROGERS, Architect, 13a, Cannon-row, Westminster, on or before FRIDAY, the 23rd inst., endorsed "Tender for Schools."—The Committee do not bind themselves to accept the lowest or any Tender.
May 14, 1856.

TO BUILDERS.

BUILDERS willing to TENDER for the ERECTION of a CHAPEL and HOUSE at Westonhill, near the Orgaal Inn, on the Portsmouth-road, Surrey, are requested to apply at the Office of Mr. WILLIAM ROGERS, Architect, 13a, Cannon-row, Westminster. TENDERS to be delivered to Mr. ROGERS, on FRIDAY, the 30th inst. at TWELVE o'clock. The Proprietors do not pledge themselves to accept the lowest or any Tender.
May 14, 1856.

TO BUILDERS.

BUILDERS willing to TENDER for thoroughly REPAIRING EIGHT HOUSES in Grafton-buildings, Duke-street, for the "Marylebone Association for Improving the Dwellings of the Working Classes," may see the specification and particulars at the Office of Messrs. W. G. and E. HABERSHON, the Honorary Architects, 38, Bloomsbury-square.

TO BUILDERS AND OTHERS.

PERSONS desirous of CONTRACTING for the ERECTION of a Farm House and Homestead on Pedwardine Farm; a Homestead on Buckton Farm; several additions to Homesteads on Wellington and Wolford Farms; and a Labourer's double Cottage on Coxall Farm; all on the Bramfield Estate in Herefordshire, may see the plans and specifications at the Orford Arms Inn, Brampton Bryan; or at the Office of Messrs. DENTON and DRAKE, 32, Parliament-street, Westminster, on and after the 19th of MAY. Tenders must be forwarded to Messrs. DENTON and DRAKE on or before the 9th of JUNE. (Quantities will not be supplied.)
15th May, 1856.

TO BUILDERS, IRONFOUNDERS, &c.

THE BURIAL BOARD for the Parish of Faversham, in the County of Surrey, are prepared to receive TENDERS for the ERECTION of about 300 feet of DWARF WALL, PIERS, and IRON RAILING at the New Burial Ground of the said Parish.—Plans and Particulars may be obtained at the Vestry-room, on and after WEDNESDAY, the 21st inst. And sealed Tenders addressed, "Tender for Iron Work," to be delivered at the VESTRY-ROOM aforesaid, on or before SATURDAY, the 31st inst. The Burial Board do not bind themselves to accept the lowest or any Tender by order.
C. H. MILLETT, Clerk to the Board.

WELLS and FAKENHAM RAILWAY.—CONTRACTS for STATION BUILDINGS.—The Directors of the Wells and Fakenham Railway Company are prepared to let CONTRACTS for the STATION BUILDINGS at Wells and Walsingham. Plans, specifications, bills of quantities, &c., may be had at the Offices of the Company, GEORGE BERKLEY, Esq. 24, Great George-street, Westminster, on and after MONDAY, the 19th of MAY, next.—By order,
JAMES HUTT, Secretary.
69, Lombard-street, London, May 9, 1856.

BOROUGH of STOCKPORT.—To CONTRACTORS and BRIDGE-BUILDERS.—The Council of the Borough of Stockport require PROPOSALS and TENDERS for the ERECTION of a STONE, or STONE and BRICK, BRIDGE, of three arches, over the river Mersey, between Heaton-lane and Cheshire-lane, the Parish of Stockport, together with the approaches thereto. The plans and specifications may be inspected at the Offices of Messrs. CAWLEY and RALFORD, Civil Engineers, 30, Dean's-yard, Westminster, on and after MONDAY, the 5th day of MAY next; and sealed Tenders must be delivered at the Court-house, Stockport, addressed to the Chairman of the Municipal Buildings Committee, on or before MONDAY, the 19th MAY next.
JOHN VAUGHAN, Town-clerk.
Court-house, Stockport, Ap. 21, 1856.

WARWICK LOCAL BOARD of HEALTH.—CONTRACTS for DRAINAGE and WATER WORKS.—The Board hereby give Notice, that they are prepared to receive TENDERS from parties who may be willing to CONTRACT for DRAINING certain STONEWARE and CAST-IRON DRAIN PIPES and CAST-IRON WATER-PIPES, Building in Engine and Boiler House, Constructing Reservoirs, Filter Beds, and Pump Well; also, for supplying a Wrought Iron Tank, and the Construction of a Service Tower and other Works. The Contract Drawings and the Specifications may be inspected at the Office of the undersigned, at Warwick, on and after the 8th inst.; where also statements of quantities and forms of Tender may be obtained. Further particulars may be given at the Offices of Mr. LEWIN, Engineer to the Local Board, 4, Trafalgar-square, London. Tenders must be sent in on or before the 2nd day of JUNE next. No Tender will be entertained unless it be made upon the printed form, Master of the Board.
JAMES TIBBITS, Clerk to the Local Board.
Warwick, May 1, 1856.

TO BUILDERS

NEW CHURCH at EASTWOOD, NOTTS. Persons willing to CONTRACT for the WORKS to be done in BUILDING a NEW CHURCH, at Eastwood, may see the plans and specifications, on application to the Architect, Mr. K. BARKER, on and after the 19th inst. Sealed Tenders to be sent to the Rev. H. W. PLUMPTRE, Eastwood Rectory, on or before the 29th instant. The lowest Tender will not necessarily be accepted.

TO CLOCK-MAKERS. — EIGHT-DAY CLOCK WANTED for the CASTLE CARY MARKET-HOUSE, Somersetshire. The clock will have to be placed in a roof, on timbers capable of bearing a weight not exceeding 10 cwt. The fall available for the weights is about 25 feet; but 25 feet would be rather more convenient. The most simple gearing motion to the hands, &c., must be carried along the roof horizontally about 25 feet; afterwards vertically about 10 feet, into an open lantern-head, 8 feet square, made of wood with three sides pierced for hanging a bell, with six spokes, 3 feet 6 inches in diameter. The works to include a train for striking the hours and quarters on a bell already fixed in the lantern, weighing 9½ lbs. TENDERS to be sent to Mr. RUSS, Solicitor, Castle Cary, on or before SATURDAY, the 24th inst.
Dated Castle Cary, May 1, 1856.

TO BUILDERS AND CONTRACTORS.

LINCOLNSHIRE.—NEW TUNNEL for DRAINAGE of WAINFLEET MARSHES.—All persons willing to CONTRACT for BUILDING a NEW TUNNEL, 90 feet long and 4 feet 6 inches wide, of BRICK and STONE WORK, with Sluice Doors, &c., through the Sea Bank, in Wainfleet Marsh, in the Parish of Wainfleet All Saints, and Hundred of Skirbeck, in the Parts of Lindsey, in the County of Lincoln, are desired to deliver in their proposals, in writing, sealed up, directed "Tenders for Wainfleet Marsh Sluice," to me, at the Angel Inn, on Wednesday, the 21st day of May next, at Two o'clock in the afternoon precisely, at which time the Tenders will be opened in the presence of such Contractors as may attend.
Wainfleet, May 1, 1856. DAVID MARTIN, Surveyor.

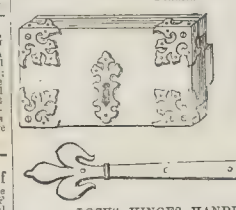
CONTRACTS.

WELLS, Somerset.—To BUILDERS and CONTRACTORS.—Persons desirous of CONTRACTING for the ERECTION of new PAPER-MILLS at Wookey Hole, near Wells, may inspect the plans and specification at the Office of the undersigned, on and after THURSDAY, 8th inst. Sealed Tenders to be delivered in or before 31st inst. The lowest Tender will not necessarily be accepted.
EDWIN HIPPISLEY, Architect and Surveyor.
Dated May 8th, 1856. Wells, Somerset.

THE CROYDON LOCAL BOARD of HEALTH are desirous of receiving TENDERS for PROVIDING and LAYING 955 feet of STONEWARE DRAIN-PIPES, of 12 inches in diameter, at the Canterbury road, Thornton-heath, Croydon, at depths varying from 3 to 13 feet, in accordance with the specification and drawings, to be seen at the Office of Mr. THOMAS COX, Surveyor, at the Town Hall, Croydon, on or after the 22nd instant.—Tenders to be sent in on or before FOUR o'clock, on TUESDAY, the 27th instant.
By order of the Board,
Croydon, May 14, 1856. HENRY RICHARDS, Clerk.

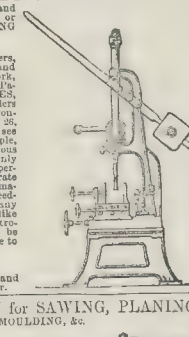
TO BUILDERS.—A Gentleman wishes to ERECT some COTTAGES or VILLAS on his own Land, advancing half the outlay, and granting leases at ground-rents, in small or large lots. Apply to Mr. KNIGHT, Surveyor, 14, Argyle-street, Regent-street, who also has a Brickfield to Let on easy terms, that is capable of producing millions of first-rate Brick.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London.



LOCKS, HINGES, HANDLES, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Illustrated Price-catalogues post-free on application.

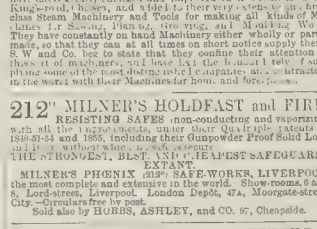
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at Mr. Plenteet, POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self feeding, it does not require any skill or care in using like the older inventions hitherto used. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the Kingsroad, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they confine their attention to these sort of machinery, and have had the honour of having supplying some of the most distinguished engineers and contractors in the world with their Machines for hour, and force.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and vaporizing), with all the improvements, under their Quadruple Patents of 1849-51-54 and 1856, including their Gunpowder Proof Solid Lock and Bolt without wards, keys, or escutcheon.
THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.
MILNER'S PHŒNIX (212°) SAFE-WORKS, LIVERPOOL the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depôt, 47A, Moorgate-street, City.—Circulars free by post.
Sold also by HOBBS, ASHLEY, and CO. 97, Cheapside.

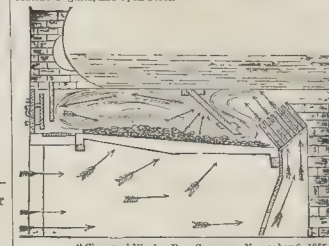
TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c. The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire, Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron Tube, Composition, Iron, and Brass Cocks, Copper Cocks, Brass and Lacquered Gas Tube for Pillar Brackets, Gasaliers, &c. Bell Brass for Engravers, Cushions, Gas Fire and Coke Stoves, Register Stoves, &c. &c.
RICHARD LEWELLEN'S Brass and Bell Foundry and Metal Warehouse, No. 9, 11, and 12, Charles-street, Long-acre, London.

WOOD CUTTING MACHINERY.
JOHN M'DOWALL and SONS,
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,
MANUFACTURERS of VERTICAL SAW-FRAMES
(driven by straps),
For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the following dimensions, with steam-power attached; circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a ¼ of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power mortising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; sale-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 36 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.

CONTRACTORS.—MATTHEW T. SHAW has on SALE a large quantity of Contractors' Rails and Earth-tip Waggons, Wheels, and Axles, and every description of Railway Plant and Stores; Girders of wrought-iron for Bridges, and Buildings designed and manufactured. Castings of every description. Deliveries in a few days.—84, Cannon-street, City.—P.S. Wrought-Iron Rolled Pitches 1 to 6 feet.

LESS FUEL, MORE STEAM, NO SMOKE.
GARDNER'S PATENT SMOKE CONSUMER is SELF-ACTING, EASILY FIXED at a SMALL COST, IMPROVES the DRAUGHT, and SAVES FUEL. Applicable to all Furnaces, Boilers, Ovens, Locomotives, Marine Engines, and Open Fires.



"Chemical Works, Bow Common, November 9, 1855.
"DEAR SIR, In answer to your further inquiry concerning the saving of fuel in connexion with the use of your patented apparatus, by which inquiry I was hitherto from incomplete observation, unable to reply, I beg now to state that we are enabled without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.
"I remain, dear Sir, yours truly,
"To E. V. GARDNER, Esq." "FRED'K. ALLEN.
Apply to the PATENTEE, 24, Norfolk-street, Middlesex Hospital; or to Messrs. BURRIDGE and HEALY, 118, Dorset-street, Fleet-street; or Z. D. BERRY, Albion Works, Victoria-road, Pimlico. Bakers' Ovens fitted for Iron-included.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 139, Shoreditch.
A great variety of Fillpail, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler
30 32 34 36-inch.
20s. 30s. 28s. 31s.
Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—
34 36 38 45-inch.
54s. 56s. 58s. 64s.
Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 1½d.
Register Stoves, with Solid Bars, per inch, 2d.
Improved New Pattern Circular Check Register, with strong Bars and Trimmings, 6d. per inch.
Best Solar Stove, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 40s. to 100s. each.
Cast Rain-water Pipe { 2 3 4 inch. 1½d. 1½d. 2s. per yard.
Cast Gutters—4 inch, 9d. per yard.
O G Gutters { 4 4½ inch. 1s. 1d. 1s. 3d. per yard.
2 3 4 5 6
Patent Line..... 4d. 4½d. 6d. 8d. 10d. per knot.
6-inch Rd. Ward Mortise, with Best Furniture and Patent Spindles, 4s. each. Light Elliptic and Register Metal, 1s. per cwt. Dr. Arnott's Ventilators, 3s. 6d. each.
Brack Moulding kept in stock. Any size made to order.
Best Cut Clasp and Rose Nails.
1½ in. 1¾ in. 2 in. 2½ in. 3 in.
1s. 6d. 1s. 6d. 1s. 6d. 1s. 6d. 1s. 6d. per cwt.
Best Sheet Cut Floor Brads..... 13s. per cwt.
Best Cut Lath Nails..... 10s. "

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, conchhouse, and other gates and doors. They have also a new description of non weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced at pleasure. Also spring hinges and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast and Wrought Iron Boiler Plates, and STEWART'S PATENT CANTILEVER CAST-IRON WATER-PIPES.
Office, No. 7, Bise-lane, London.

TO IRONMONGERS, BUILDERS, &c.
PATENT WROUGHT-IRON WELDED TUBE for GAS, STEAM, WATER, and ENGINE WORK. Non-corrosive, for portable and improved furniture.—HULETT and CO. 95, Chiswell-street, Finsbury.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES
eyond the current Price of Hoop-iron.

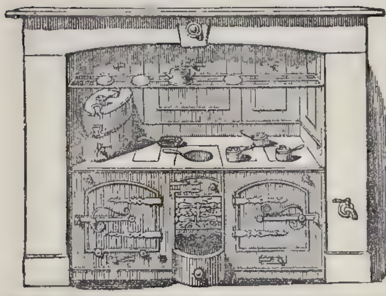
Gauge.	In. wide.	Per 1,000 ft.
No. 16	$1\frac{1}{4}$	7s. 0d.
15	$1\frac{1}{2}$	7s. 6d.
15	$1\frac{3}{4}$	8s. 0d.
15	2	8s. 6d.
15	$2\frac{1}{4}$	9s. 6d.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of $1\frac{1}{2}$ inches, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming REVERSED CLAWS, which are so bent, that a direct end grain of the iron is presented longitudinally, and which become when built into the brick work, embedded in the structure, by which means a COMPLETE and PERFECT DETAIL TIE throughout the whole building is obtained.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.

London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

FLAVEL'S PRIZE KITCHENER.



The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

SOLE AGENTS:

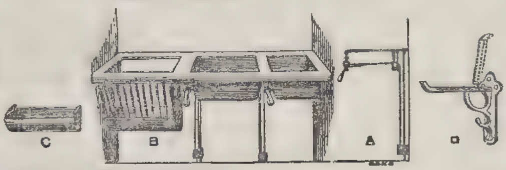
BENHAM AND SONS,
19, WIGMORE-STREET, LONDON;
and at the Crystal Palace, Sydenham.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.

COTTAM and HALLEN, of Winsley-street,

Are the original Inventors of the PATENT ENAMELLED MANGER, RACK, and WATER-TROUGH AS ONE FIXTURE, to which they have made important additions, the main features of the same being explained in the following description and Engraving.



A represents the Patent Halter-guide and Collar-rein, the ball of which is taken to the back of the manger-works with freedom and ease up or down the guide-bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

B. The Patent Portable Seed-box can be instantly detached from the rack without disturbing the hay. The saving of the seed in a clean and useful state, either for agricultural purposes, or mixing with the food in the manger, is alone sufficient to claim general notice.

C. The Seed-box detached, made of galvanized sheet-iron, light and durable.

D. The Patent Saddle and Harness Bracket combined, can be used with great advantage in harness-rooms, where space is an object, as the long portion of the bracket can be turned up out of the way when not in use.

COTTAM'S MANGERS are constructed in the best possible manner, both as to form and utility; are cleanly in appearance, durable, and impervious to infection. Manufactured plain, galvanized, and enamelled.

IMPROVED SURFACE-DRAIN, with safety covers, Sanitary Traps, Stable Pumps, Loose Box Fittings, Gutta-percha Preserving Saddle and Harness Brackets, and every Article in Stable Furniture in stock.

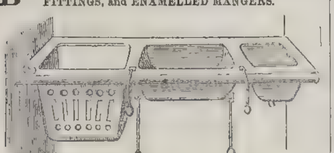
An extensive Assortment of Patterns for both Plain and Ornamental Castings, and every description of Wrought and Cast-iron Work for building and other purposes.

Agricultural and Horticultural Implements, Iron Gates, both plain and ornamental; Hurdles, Strain Fencing, &c.

The New Illustrated Catalogue for 1856 gratis on application. Estimates and Designs.

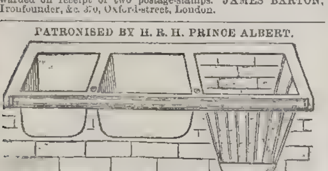
COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

BARTON'S PATENT SAFETY STABLE FITTINGS, and ENAMELLED MANGERS.



THESE FITTINGS will be found to possess all the latest and most important improvements, and are of the best manufacture. All kinds of Stable-furniture in stock. Iron Hurdles, Gates, Fencing, Tomb-railings, &c. New illustrated Catalogues forwarded on receipt of two postage-stamps. JAMES BARTON, Ironfounder, &c. 370, Oxford-street, London.

PATRONISED BY H. R. H. PRINCE ALBERT.



S. HOOD and CO.'S REGISTERED STABLE-FITTINGS, with FRONT REVOLVING ROLLER, plain or enamelled. GIRDERS (cast and wrought-iron), COLUMNS, Sash Weights, Rain-Pipes, Eaves-Gutters, various shapes modelled Ornamental Rain-Pipe Heads, of tasteful and other designs, and all castings connected with buildings, in London time, and at country prices.
CASTINGS WAREHOUSE, 68, UPPER THAMES-STREET.

GAS COOKING-STOVES, for large or small establishments.—DEANE, DRAY, and CO. 1, Arthur-street East, London-bridge.

Testimonial respecting the Crystal Palace Kitchen, as fitted by DEANE, DRAY, and CO.

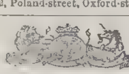
8, Ridgmount-place, Hampstead, March 9th, 1855.

Gentlemen,—I have great pleasure in bearing testimony to the capabilities of your extraordinary Gas Cooking Apparatus, being the largest and most perfect yet in use. Suitable for hotels, mansions, club-houses, private houses, and the army: having cooked in one day 1,000 fowls, and many cwts. of ham, beef, veal, mutton, lamb, tongue, &c.; roasting in one department a baron of beef weighing 360 lbs. in nine hours, fifty-three minutes, presented by J. Banister, esq. Threadneedle-street, to the directors, for the banquet given to the foreign ministers. They have been in full operation for ten months, and are now in as perfect order as when first finished. They have not cost one shilling for repairs.

I am, Gentlemen, yours respectfully,
EDWARD HORNE.

Messrs. Deane, Dray, and Co.

OLD STOVES and RANGES.—F. EDWARDS, SON and CO. have constantly on hand a quantity of OLD STOVES and KITCHEN RANGES, in very good condition, which are taken down by them at establishments when they erect new work, and which are to be sold at exceedingly low prices.—42, Poland-street, Oxford-street.

HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

STEAM BOILERS of every description, Wrought-iron Girder Boiler, Gasholders and Gas Apparatus, general Castings, [illegible] Contractors' Ironwork, manufactured by MELROSE and HUSSEY, Phœnix Works, [illegible]
London Office, 78, HATTON-GARDEN.

KITCHEN RANGES.—The IMPROVED PATENT LEAMINGTON KITCHENER, with large Hot-plate Double or Single Ovens, &c.—For Price Lists, &c., apply to CHARLES S. LOWNDES, Manufacturer, Emscott Foundry, Leamington, or to Messrs. SLACK, Ironmongers, 336, Strand, London, where one may be seen in operation.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fixing given.—J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

FENDERS, STOVES, and FIRE-IRONS.—Buyers of the above are requested, before finally deciding to visit WILLIAM S. BURTON'S SHOW-ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, FIRE IRONS, and GENERAL IRONMONGERY as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with bronzed ornaments and two sets of bars, 2l. 14s. to 5l. 10s.; ditto, with ormolu ornaments and two sets of bars, 5l. 10s. to 12l. 12s.; bronzed fenders complete, with standards, from 7s. to 3l.; steel fenders, from 2l. 15s. to 6l.; ditto, with rich ormolu ornaments, from 2l. 15s. to 7l. 7s.; fire irons, from 1s. 9d. the set to 4l. 4s. Sylvester and all other patent stoves, with radiating hearth plates. All which he is enabled to sell at these very reduced charges—

Firstly, From the frequency and extent of his purchases; and
Secondly, From those purchases being made exclusively for cash.

GASELIERS in GLASS or METAL.—The increased and increasing use of gas in private houses has induced WILLIAM S. BURTON to collect from the various manufacturers in metal and glass all that is new and choice in BRACKETS, PENDANTS, and CHANDELIERS, adapted to offices, passages, and dwelling rooms, as well as to have some designed expressly for him; these are ON SHOW over his SIXTEEN LARGE ROOMS, and present, for novelty, variety, and purity of taste, an unequalled assortment. They are marked in plain figures, at prices proportionate with those which have tended to make his establishment the largest and most remarkable in the kingdom—viz. from 12s. 6d. (two light) to 16l. 16s.

The alterations and additions to these extensive premises (already by far the largest in Europe), which occupied the whole of last year, are of such a character that the entire of EIGHT HOUSES is devoted to the display of the most magnificent stock of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel Silver, Plated Goods, Baths, Brushes and Turnery, Lamps and Gaseliers, Iron and Brass, Bedsteads and Bedding), so arranged in Sixteen Large Show rooms as to afford to parties furnishing facilities in the selection of goods that cannot be hoped for elsewhere.

Illustrated catalogues sent (per post) free.

39, OXFORD-STREET; 1, 1A, 2, and 3, NEWMAN-STREET; 4, 5, and 6, PERRY'S-PLACE. Established 1820.

IRON CHURCHES, STORES, &c.—For SALE, Substantial Corrugated Iron Stores, Churches, Dwelling-houses, and every description of Buildings, adapted to all climates. Iron Roofs constructed for all parts of the world. An Iron Church with sittings for 750 people, for hire or sale.—To view and for further particulars apply to SAMUEL HEMMING, Clift House Works, Bow, London.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, $2\frac{1}{2}$d. per inch, and upwards.

Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 5s.

3-feet Cottage Ranges, with ovens and back boilers, 32s. each.

3-feet self-acting ditto, ditto, 34s. each.

Air Bricks, 4s. per doz.

Best Town Glue, 50s. Ditto, Scotch, 64s. per cwt.

Best Fine Cut Clasp and Rose.

$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{4}$	$2\frac{1}{2}$	3-in. & larger.
16s. 6d.	16s. 6d.	15s. 6d.	15s. 6d.	15s.	14s. per cwt.

And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

SAVING IN GAS.—D. HULETT, INVENTOR and PATENTEE.—The Mercurial Gas Regulator is the only efficient instrument for ensuring wholesome and uniform lighting, equalizing the pressure, and preventing any irregularity in the height of the flame.—D. HULETT and CO. 55, High Holborn, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS' WORK STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSES, 13, Horseferry-road, and 1, New Peter street, Westminster.

GREAT REDUCTION IN PRICES.

RAIN WATER CASTINGS, per yard.

Sizes	2 in.	$2\frac{1}{2}$ in.	3 in.	$3\frac{1}{2}$ in.	4 in.	$4\frac{1}{2}$ in.	5 in.
Pipes	1s. $\frac{1}{2}$d.	1s. 1d.	1s. 1d.	1s. 7d.	1s. 1d.	2s. 4d.	2s. 8d.
Half-round Gutters			$7\frac{1}{2}$d.	8d.	9d.	1s.	1s. 2d.
O G Gutters				1s. 0d.	1s. 1d.	1s. 2d.	1s. 4d.
Ditto, with plain clips cast on				1s. 1d.	1s. 2d	1s. 4d.	1s. 6d.
Ditto, with lion clips ditto				1s. 2d.	1s. 3d.	1s. 5d.	1s. 7d.

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.

Best Cut Clasp Nails.

$1\frac{1}{4}$ in.	$1\frac{1}{2}$ in.	2 in.	$2\frac{1}{2}$ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads	12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails	15s. 6d. "
Best Zinc Slating Nails	40s. "
Best Glues	47s. to 53s. "

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

IRON FOUNDRY, HARROW-STREET, LANT-STREET, SOUTHWARK. W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel and Railing Bars, Panels, Iron Coping, Hot Plates, Tank Plates, Area Gratings, Sash Weights, Fly and other Wheels, Riggers, Pinions, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

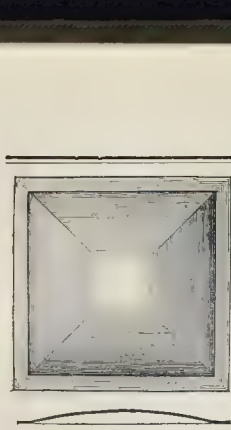
IRONMONGERY.

PFEIL AND STEDALL.

THE LARGEST STOCK AT THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

ROYAL POLYTECHNIC GAS FIRE. BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful [illegible] private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation.—To be seen in action at DEFRIES'S Office, 145, Regent-street, London.



Plan and Section of Buckled Plate; Convex Side.

MALLET'S PATENT BUCKLED PLATES.

TUPPER AND CARR,

SOLE LICENSEES AND MANUFACTURERS.

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The rate of interest allowed on deposits of 200l and upwards, at the Bank or any of its Branches, is now 5 per cent.
J. W. GILBART, General Manager.

TO CAPITALISTS AND OTHERS.

EAST COWES PARK, intervening between her Majesty's Royal Domain of Osborne and East Cowes, to be purchased and further developed under a Deed of Arrangement between the Proprietors. Capital, 400l. to be raised by subscriptions of not less than 100l. each many of which are already subscribed for, payable by instalments. The estate comprises 146 acres; has been expensively laid out; many mansions and other buildings have been erected, producing a large income, and possessing unusual productive and capabilities for greatly increasing it; a pleasure-garden of 22½ acres formed in the centre; three miles of iron palisading, lined with gates, &c. and is so situate that her Majesty and suite proceed through this private estate dire t to Osborne. The property has been valued by two eminent surveyors at above 35,000l. and it is calculated will ultimately realize upwards of 50,000l. with interim increasing income. Each subscriber will become a proprietor to the extent of his subscription, and will receive, annually, 5 per cent. interest, and each subscriber to have the option of taking part of the land in lieu of subscription.—Prospectuses, with pictorial view and plan, can be obtained at the Offices of L. G. WHITEHURST, Esq. 6, Guildhall chambers, Basinghall-street; of Mr. LANGLEY, Clarence-cottage, East Cowes-park; and applications for the unsubscribed remainder to be made personally or by letter to the Secretary of the United Orders Assurance Company, 63, Pall-mall, where prospectuses, view, and plan may be obtained, the surveyor's report inspected, and engineer's specimens of the clay produce seen, and every information ascertained.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Standees and temporary Awnings on shar of hire. Orders per post receive the most prompt attention.—WILLIAM PERRY, 11, 12, Bore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

The Builder.

VOL. XIV.—No. 693.

THE roads through London require assistance. Within a short time very great advances have been made in the character of our civic buildings: the leading thoroughfares and defiles have been adorned with many edifices of a style and pretensions hitherto unknown. The Exchange was the first grand innovation; then the Coal-Exchange; the various palatial insurance offices; the Hall of Commerce; then club chambers: a great extent of houses, lateral upon old streets and lanes, has been demolished, and renewed in a material and fashion, at all events, superior: still, with few exceptions, the causeways are narrow and tortuous as before.

Cannon-street is an exception. This is really an ornament to the City; and offers for commerce an opening without which the vital regions of the metropolis must, in the plethora of trade and population, have stagnated, if not ceased to pulsate.

Moorgate-street, on the other side, added an artery to the constricted system of circulation. These two improvements emanated from the civic functionaries! All honour to them for municipal care and forethought. The half million yearly, reported to be within scope of their rental, has not been wholly misapplied; nor has the change wrought in the capital, so far as such alterations were carried out, been subversive of their interests: on the contrary, the returns produced by the remodelled districts have repaid the enterprise and spirit by which they were dictated.

By one, however, who looks prospectively at that which has been done, and that which yet remains to be effected, there is a danger to be apprehended: it is, that the narrow ways of ancient London, though margined by palaces, may hereafter, when amendments shall be further carried out, become comparatively mean as contrasted with the routes which will certainly be constructed.

As the limits of the city are destined to comprehend the whole circuit of the great metropolis, so the lines of communication must not only be multiplied, but enlarged. It will be impossible to change the width of the central streets, already finished and embellished with noble structures, but new lines must be opened. Every other capital has its grand causeway,—Paris, her Boulevards; Rome, Il Corso; Naples, the Gran' Strada di Toledo; Dublin, Sackville-street; and New York, the imposing Broadway. London has—what? The Strand, and Holborn and Oxford-street,—all good as central routes for their several quarters; but what are they for the Queen of Cities? Look at the strictures, the straits, the narrows and rapids,—no, not rapids, but too often, dead locks, of the 'bars and crossings in so vast a torrent of rolling life!

There ought to be in London a great central duct, to which all others should be tributary and subordinate,—a "Via Condotti," a "Corso," or a "Via Sacra." This line should not only be direct, but intermediate between Holborn and the Strand: *it should also be level*, and the line pointed out seems to favour this end most to be desired; for the levels between Leicester-square and Paternoster-row, as laid down on the sewers' map, range between 46 and 56 feet, save only in one point, and that is at Farringdon-street hollow, where the gauge is just 26 feet above tidal level.

Hitherto, all wains approaching the City had to descend 30 feet and to rise again to the same elevation. The horrors of Snow-hill are too well known to need observation. Ludgate-hill is not so penal to our draft-horses, yet it is on a steep incline and heavy pull. All this might be obviated by a viaduct across Farringdon-street.

This road should commence from the City (in ancient times all our grand conceptions had thence their source and origin) in a direct line westward: it should open out from the statue of Sir Robert Peel 100 feet wide, slick through Paternoster-row. Leave the valuable shops in St. Paul's-churchyard if you like, that is, if they are too costly to pay the tribute to our great architect, Sir Christopher Wren, now deferred 200 years! Cut on thence, with the same *latitude of design*, straight to Gough-street,—thence to Carey-street (across Chancery-lane),—thence, diagonally, through blocks of wretched and dingy buildings, bounded by Vere-street, Wild-street, Stanhope-street, to Hart-street, and thence across St. Martin's-lane, between New-street and Long-acre; so crossing St. Martin's-lane and issuing into Leicester-square (north side) without interfering with Cranbourne-new-street, except at the point of junction.

Thus the present business streets would be spared, and the slums, only, opened out to fresh air and daylight. The noble civic esplanade would not only confer a value on that which, in its present condition, is a pest and a disgrace, but would enhance the worth of the vicinal streets, which are always sure to rise in estimation as the neighbourhood becomes respectable.

In so extensive a clearance, a great displacement of the working classes must demand new locations: it would be easy, by properly digested plans, to meet that requirement, so as not to drive them to quarters too remote from their avocations. Ranges of new and lofty buildings, with noble and imposing shops below, might be adopted, as in Victoria-street, to the improved health and increased comfort of working men and their families; and the traverse streets might also be arranged upon a similar plan—suitable not to M.P.'s and rich bachelors, but for honest workmen, their wives and children.

A main street worthy of the metropolis ought to be 100 feet wide. It is needless to refer to instances to prove that the carrying out of a plan which has been well conceived, with spirit, must always pay: the streets and squares of Belgravia prove it, and Mr. Jackson's *ultra latitudinarian* new roads at Brompton may also be cited in evidence of the fact, long since prognosticated, that "the liberal soul shall be made fat." A smaller site is always accepted as more valuable in an open position than a larger in a close one.

The long-neglected and slumbering condition of the civic estate in continuation from Farringdon-street to Islington,—the neutral and rude waste of that most valuable plot of ground on which the prison formerly stood in Farringdon-street, as well as of the other vacant site of the City Compter (next Christ's Hospital),—the neglected and *disgusting aspect of the river slums*, besides smaller blemishes everywhere, reproach the authorities with sluggishness.

Were there but one mind with one authority amongst them, and the rental no more nor less than it has been for years past; then, as cunning capitalists, calculating upon only the profits of improved value in judicious outlay, the City would not have been left as it has been, mapped out and ammorcelled in its *pristine complexity*:—no, the crooked ways would have been made straight, and the rough places plain.

What Napoleon has done for Paris, at an enormous outlay, might be effected here, with greater facility, as well as with less violence to vested interests.

It is but lately that works of an extensive nature,—such as the great plan of sewage, and the oft-mooted construction of quay-walls for the river,—have been received as public problems: the admission of the idea is a great advance towards the consummation of the design. Of all these the *Builder* has often treated. Engineering and architectural taste and skill are notably not deficient in the land. All Europe, as all colonies and foreign states, bears evidence of their achievements. Now, in the shade of our universal peace, the talent of Britons will, it is hoped, be turned towards the transformation and embellishment of the world's great commercial metropolis. Abroad, *the vista* has been always valued, whether in city-ways, parks, or avenues. Look at the Champs Elysées, Versailles, &c. HERE we obtruncate every open route: Pall Mall! Whitehall!! and Lincoln's-inn-fields, wholly *built in!!!*—all spoiled in the cooking.

The great central thoroughfare, to be in keeping with the Queen of Cities, should be in no part less than 100 feet wide: it would infallibly extend (in time); retrograde from Long-acre across Leicester-square, and take up the line of Piccadilly; thus dividing the whole area of trade, and liberating the constricted ducts of Holborn and the Strand. Whilst in progress, all the proximate quarters would keep pace with the enhanced value and merit of the "Via Sacra" here sketched out.

DESIGNS FOR CAVALRY BARRACKS.

THE rooms at Burlington House being required by the University of London, the exhibition of the Designs for Barracks had to be closed, as we apprehended in our last notice; and we believe the drawings by this time will have been stowed away in the attics of the building. The claims of unsuccessful competitors as to their designs—to which we have given expression—probably will in some manner be regarded. Still—however right on the part of Government, not to omit such consideration for the competitors in question—we who have preferred their claims, must not allow it to be supposed that any compensation will accrue to them, by the mere possession of their drawings.

For the competitor the drawings can be comparatively of little use—even to himself, after a competition. We have tried to show how some general advantage might be gained by keeping works longer together, and arranged for easy reference and comparison; and, believing that such course would afford the main advantage that any individual should calculate upon, under existing circumstances, in competitions, we continue to regret that the last opportunity has not been turned to adequate account.

Considering the heavy personal interests,—it is seen to be one of the difficult points in the competitions question, that at the close of the contest, and then alone, are the best materials gathered, from which to initiate the actual building design. To cast back all such valuable contributions, or to keep them huddled up where they cannot be inspected, may be consistent with justice to individuals—though little serviceable to them; but, neither course is consistent with that progress which should be a common aim. We are therefore, on due consideration, strongly disposed to urge, that the principle of remunerating unsuccessful competitors, and making their ideas serviceable, is generally the correct one. Limiting the number of competitors, however, is objectionable,—if new ideas are the object.

In the position of the question of barrack accommodation, as set forth in the Committee's report, the chief point of difference between infantry and cavalry barracks affecting the disposition of *plan*, appears to be involved with the requisite of the riding-school. This is to be so placed, "that every horse may be

brought from his stable into the riding-school without going into the open air." Therefore, whilst in the infantry barracks, the competitors have variously chosen to make the parade ground, or a covered drill-court, or the stores, or the canteen, or the commanding-officer's quarters, what we may call the *focus* of the plan; in the fresh case, each of these presumed centres of distribution is almost of necessity ceded to the riding-school; and there are extremely few of the twenty-five sets of drawings which endeavour to group the quarters round the parade-ground.

The committee "see no objection to the practice of allowing the men to live in rooms over the stables, provided that care be taken in the construction of the ceilings of the stables, and to prevent the foul air from entering the men's rooms through the windows." Nearly all the competitors have therefore kept to this arrangement,—which is certainly a very convenient one. The point, however, still deserves consideration: objections will not fail to be expressed to the arrangement,—allowing that by proper contrivance and attention, noxious effects might be reduced to a *minimum*. The stalls, it may be useful to notice, in their dimensions are directed to be 9 feet by 5 feet 8 inches. A width of 6 feet had been named in the case of the officers' stables to the infantry barracks. The horses, as at present, were to stand with their heads to the external walls, down each side of a 12-feet passage.

The number of horses to be provided for, on the usual scale of cavalry regiments, is 271 troop-horses and 50 officers' horses,—the latter in separate stables. The number of men, exclusive of officers and non-commissioned officers, is set down as 334. There are 27 officers, and the same number of non-commissioned officers, —the latter consisting of nine staff-sergeants, and eighteen sergeants attached to the "troops." Of the "troops," or divisions of cavalry regiments, there are usually six; and besides the regimental sergeant-major, these require (making up the eighteen) six troop sergeant-majors (answering to pay-sergeants of infantry), and twelve troop-sergeants. Thus, in some respects, the scale of accommodation is much less than in the case of infantry barracks, whilst a few additional features are required in the case of cavalry beyond what may have been mentioned. Such are the horse infirmary (also to be made capable of access under cover); and the forges, saddlers' workshop, granary, hay and straw barn, and foul litter-sheds. The other arrangements are the same for cavalry as for infantry, in proportion to the number of men.

Twenty-five designs for cavalry barracks having been sent in, and these being classified as we stated in the case of the designs for infantry barracks; the committee met on the 11th of December, and on the 14th, selected five designs, "as worthy of further consideration."

The list, as we find it, gives the names,—"Centaur" (Mr. Morgan's design); "Brevitas" (Mr. Young's); "Paritur Pax Bello" (Messrs. T. H. and M. D. Wyatt); "Y-Fynd Dwy-y-Fydd," and "Balaclava." On the 15th they made selection, as the names now stand. Messrs. Hunt and Stephenson's estimates, with 10 per cent. addition, were as under:—

No. 1. (Messrs. Wyatt)	£118,137
No. 2. (Mr. Morgan)	133,159
No. 3. (Mr. Young)	123,337

We may observe, that the estimates do not appear to have been "detailed estimates," in the ordinary sense, though they were, doubtless, made with care. We hear, however, that those for the infantry barracks are not satisfactory to some parties.

In a former number, we printed a description of the design of Messrs. Wyatt,—but we may remind our readers that in the plan, the men's quarters and stables form three sides of a quadrangle; in the centre of which is the riding-school building—along with dining kitchens, one for each troop, and together with library and reading-room, all reached by three covered ways from the quarters; that the horse infirmary stands at the back, and is reached also by a covered way; and that the parade is in front of the quadrangle just referred to, and is placed endwise, flanked by the officers' quarters on one side, and the chapel-school, canteen, hospital, and sergeants' quarters on the other. We may also add, with reference to the stables, that the troops are separated by archways through; and that from these last, the stables are entered, the doors thus being one at each end of the compartment for a troop. Each troop, however, has two stables, but communicating with each other. There are staircases to the quarters above, for each company: they are placed two next each of the three archways, the quarters having external galleries at the back. The foul litter-sheds are under these galleries. The dormitories open out directly from the galleries, as also do the lavatories. Each troop has four dormitories; the two sergeants' rooms being in the middle of the four,—thus, inspection as regards two of the rooms, would not approach to what most of the witnesses considered indispensable. We notice points such as this last, as it were interrogatively, and with reference to principles of arrangement,—what principles have been adopted as the basis of selection;—or whether any have been considered and set aside;—or is it left to us to show that before any *model* building can be commenced, the *desiderata* in such buildings must be assessed and placed in the order of their logical sequence? We have before expressed fear that the report, even by its precision in some things, has fettered invention, the real object being merely to afford information upon the military points. Here, again we touch upon a matter of great importance in the competitions question—the nature and limits of the "instructions." Again, if there are objections to dormitories lighted from the sides, they would appear to hold against the present design. The beds, thirteen in each room, are placed round the room; and what is in the centre marked with the letter T, it is due to the designers—after what was said in a letter in our pages—to say, appears to be a table, and not what was supposed. The plan under notice has the roadway all round, next the external wall, a feature which it might be well to adopt in all cases. It is here shown to be applicable for ball-practice. The cricket-ground, cesspools, and gas-works are to be provided externally. Were it shown to us that ready access to the parade-ground need be not a primary feature, or that the quarters need not necessarily look on to the parade, we should regard the arrangement of this plan as highly successful; for, as its authors say, by it every trooper is enabled to go from his bed-room to his stable, riding-school, dining-room, and reading-room under cover, whilst every troop-horse may be taken from its stable to the riding-school and the horse-infirmary under cover, and may be also cleaned and shod under cover.

Mr. Morgan's plan is even more successful in the points just mentioned, though it appears to be defective in some other particulars. The main group of buildings has a corridor of communication—15 feet wide and 14 feet high—running the whole length,—from the horse-infirmary at one end, to the officers' stables at the other. The riding-school is connected with it in the middle of its length; and ranges of buildings open out from it, four on each side,—for the six troops, and stores. Also leading from the same corridor, and intermediate to the quarters, are two smaller blocks of building, containing staircases, litter-sheds, and conveniences, and terminated in each case by a ventilating shaft. The official buildings form a front range of the same group next the parade; and, with the remainder of the barrack buildings, that part of the plan closely resembles the same architect's design for infantry barracks. Thus, it will be observed, the principal part of the plan is an arrangement of buildings enclosing six courts. Of these, the middle court, at the rear of the riding-school, is an exercising court, with a covered ride around it. At the front, the two courts outside, it would seem, would have to be crossed to get to the stores; and the entrances, we fear, would be found inconvenient. Ten feet, in most cases, may be wide enough for a cart-way; but is scarcely so, considering the oblique course which would have to be taken, according to the plan. It also seems to us that in planning entrances to stables, every turn that the horse would have to make is a defect. The dormitories (in this case also over the stables) are arranged on a principle generally resembling that of the design for infantry barracks,—but, there are separate dining-rooms, viz. one dining-room over the horse-infirmary and one over the officers' quarters,—three kitchens being attached to each dining-room. Grouping the quarters and stores round courts of their own, in one view, is better than another arrangement,—having regard to the distribution of the stores, and the opportunity thus afforded to the private of passing from one part of the barrack to another in undress. Mr. Morgan's design is also put forward as well planned for the duties of an inspecting officer, who could walk through all the stables and barrack-rooms, and "arrive at the point at which he started." But that which appears most to require notice is the arrangement of contrivances for effecting ventilation. In the dormitories, the arrangement contemplates the admission of fresh air by the windows, which are at the top of the room, with perforated glass and regulating swing casements; and from the fire-clay stoves, which project, and have a warming-chamber communicating with the open air. The escape would be at the ceiling. In the stables there is a fresh-air flue between each stall,—size, 14 inches by 14 inches, —admitting the air over the level of the horses' heads, with balance-valve. The provision for the escape is by flues 14 inches by 9 inches, from the ceiling, and passing up the walls into the roof; also by flues, 9 inches by 9 inches, opening immediately over the mangers; by others, in the iron columns, for the removal of products of combustion from the gas-burners; and, on both sides, by the windows, which are hung on centres. To the windows externally, and forming an additional covered way all round, is an overhanging penthouse roof, which might divert effluvia from the dormitories above; and, constructed of non-conducting materials, would promote equable temperature. The stables of each troop are not sub-divided; and generally, as in the barrack-room, large spaces are advisedly chosen with regard to ventilation. The two extracting-shafts already mentioned are proposed to be heated by gas-jets. The whole plan is put forth as devised so as to gain as much natural or spontaneous warming and ventilation as possible,—by extension of the buildings to the sun and air, and by avoidance of confined spaces. Is this principle, however, fully carried out in the quarters of some of the troops? "The rooms," says Mr. Morgan, "also present their length to the action of the sun and air,—an important feature in the warmth and cheerfulness of a chamber," and "the windows are planned of moderate size, to avoid large heating or cooling surfaces, but with a proper regard to cheerfulness and health."

An ordinary plaster ceiling and floor, being obviously unsuitable, Messrs. Wyatt proposed girders and joists of rolled iron, with concrete filling, and boarded floors above. Mr. Morgan proposes brick arches. He rejects the common lime-and-hair plastering as too absorbent, and proposes to cover the whole of the brickwork with a thin coating of Portland cement. The paving was to be laid with channelled vitrified bricks in cement, on ten inches of concrete, and the drainage he proposes to be a compound of underground and surface drainage,—gratings 45 feet apart, being fixed to the drain along the heel-posts, and self-acting apparatus supplied with water from the rainpipes and sinks, being provided to flush the drain-pipes.

In Mr. Young's plan, the general principle of distribution appears to be the same as in the design last named; but the quarters are somewhat differently arranged. If we suppose two cruciform blocks of building to be placed side by side thus, ++; and then to be joined horizontally at the head and foot, we shall have gained a general idea of the plan. Of the cruciform portions, each is composed of the quarters of three troops, and the officers' stables,—the latter inside, and connected with the riding-school, which thus is in the centre of the whole group. The horizontal line to be supplied at the foot or front, contains the official buildings and chapel-school, and the other line has in the centre the infirmary stables. Other parts of the general plan do not differ essentially from

Mr. Morgan's arrangement. At the intersection of each cross is an octagonal block of building, containing staircases, and tanks for the supply of water, and having a ventilating shaft in the centre. Corridors of communication run round the octagon,—with archways for carts. With these corridors are connected the covered ways which run along one side of each stable, and across the barrack. Covered ways are provided all round both quadrangles. In the upper floor, a dining-room and kitchen is provided at the commencement of each wing. Out of this leads the 9 feet corridor of the rooms. Mr. Young thinks that a competing architect is perhaps the last person who should furnish an estimate of his own design.

No. 4, with the motto, "Y-Fynd Dwy-y-Fydd," by Mr. H. Prichard, has the quarters arranged in the plan of a large segment of a circle, on the argument that this arrangement combines concentration and convenience of supervision, with economy of construction,—as to the latter in the item of roofs. Officers' quarters form a detached building in the chord of the arc, and at the middle thereof. Behind them, at right angles, and connected with the quarters, is a covered drill-court, and in the same line behind the quarters is the riding-school. The horse-infirmary, wash-house, stores, hospital, and other important buildings, are placed detached, at the back of the ground. The front of the plan is marked as a cricket-ground. The married privates' quarters are attached to one end of the riding-school. Over part of the latter is the chapel-school. In the stables there is a middle wall, and the horses' heads are turned in that direction,—or leaving a gangway next each external wall. The arrangement is turned to account in the dormitories, the fireplace being provided in the middle of the room. Covered ways, back and front, are shown in the chief parts of the plan, but do not communicate with some important buildings. The staircases are external. The dormitories are proposed to be divided by partitions of corrugated iron, double, with a cavity. The same material is used for ceilings. The corridors of the barrack-rooms are to serve as dining-rooms, flap-tables being there proposed. The ground for parade, as shown in the plan, would be limited to the quadrant-shaped spaces between the men's and the officers' quarters; or the "cricket-ground" would have to be gravelled and appropriated.

The fifth design of the five first selected, with the motto "Balaclava," was numbered 24 in the rooms. The parade-ground was shown as laid out in lawns, and it had other features which must be considered as defects,—the covered ways to the riding-school being very round-about from some of the quarters,—the school being towards one corner of the ground; and the rooms of the married privates being shown as opening from the corridors of the privates' quarters. The central position was given to the officers' quarters. The plan was devised on the scale of eight troops.

In No. 6, "Cordon," Mr. Thorold placed the riding-school, with the quarters connected at right angles, but somewhat radiating, so as to be less confined in arrangement than in the case of his design for infantry barracks.

In No. 7, "Con Amore," Mr. Kerr kept to the principle which he followed in his design for infantry barracks. As in that case, the officers' and men's quarters are grouped round the parade-ground, so that the stables have what seems to us the *advantage* of direct entrances at the ends, from the parade or an ample space of covered way, instead of, as in some cases, from an inconvenient passage. The covered way runs along the back of the stables, and communicates with the riding-school,—which occupies a central position, along with the chapel-school, in the line of buildings on the side of the parade opposite the entrance-gate. The troops are, as before, in detached buildings; and the plan is so arranged, by provision of recesses at the ends of the stables, that horses could be turned at the entrance to the covered way with as little obstruction to it as possible. The litter-sheds are across the covered way, separately ventilated. The dining-kitchen in the building of each troop occupies a position between two stables. The accommodation for married privates is on the same principle as in the design for infantry barracks,—the plans generally resembling one another.

There is both care and merit in the design numbered 10, with the motto "Britannia," by the same hand as one of the designs for infantry barracks; and in No 11, "Adequito," apparently by Mr. H. H. Fulton, the same attention to ventilation and to general construction is shown as in the design which he also had in the collection down stairs. So much labour as he has given to his drawings and specifications, should offer much that would be valuable in barrack-building. We confess to some apprehension as to the possibility that the manuscript matter of the designs was not always read. Another design, which appears to be by the author of a set down stairs (No. 13, with the motto, "In spe," in a horse-shoe), adopts the circular form of plan: it is difficult to see with what reason. There is more of point in the placing the stables and men's quarters away from each other,—whatever may be thought of the principle.

In No. 18, "Pugnamus Vincere," the panopticon principle is boldly adopted, with the riding-school (octagonal) as the centre to the stables and quarters radiating from it. The ablution-rooms are at the ends of the stables, and the married women are provided for in floors over the ablution rooms. In this design lines of rails are proposed to be laid along the stables, and intersecting them, or concentrically with the riding-school; and they communicate with the granary, and other parts of the barrack. The officers' quarters are at the front of the ground, but joined to the men's quarters by a covered drill-ground. No. 22, by Mr. W. R. Farrell, has a general plan of octagonal form, with bastions. No. 27, "Curragh," Mr. J. Constable, like the plan by the same author, for infantry barracks, is also made defensible, having bastions at the angles, and intermediate redans in the long curtain walls. These bastions and redans are the sites of the hospital, suttler's establishment, married soldiers' quarters, wash-house, gas and water works, and stores for coals and forage. The men's quarters and stables are in the centre of the ground; and together with the officers' stables, form two squares, separated by the riding-school. The officers' quarters are at another part of the ground, across the parade.

We did not notice in the collection at Burlington House, a design by M. Hector Horeau, shown by a photograph and description now before us; but the opinions on which it is founded may be worthy of attention in this article. Part of Mr. Thorold's *plan* resembles it, at first sight. With one general plan, the author contemplates a barrack capable of being used with little modification, either for infantry or cavalry. At the outset, he lays down as a principle, that a barrack should be only a durable camp. This would seem to be quite the opposite of what has been acted upon by most of the competitors in the late competition. Amongst other points which he prominently advances, is that of the importance of a plan which may conduce not only to classification of ranks, to facility of superintendence and communication, to economy of construction and working, to sanitary requirements, and to military education; but which also by the very order and simplicity of its arrangement, may produce a constant impression upon the soldier. His plan also recognizes the value of impressions derivable from objects of nature; avenues of trees and grass-plots being introduced with an effect which has been hardly sought for by others. For the men's quarters, he advocates the adoption of rooms or halls of considerable internal height, with partitions half the height,—and this arrangement he believes to recommend itself not only because the contrivances for ventilation required where there are upper stories, are, in his opinion, only expensive and ineffectual palliatives, but because he also thinks his arrangement as contrasted with that of small rooms, is more consistent with convenience and superintendence, as with considerations connected with morality as well as discipline. He also believes that in placing the rooms of the men over the stables, every object to be attained in a barrack, suffers. He proposes a large covered court (which would be the riding-school in the case of a cavalry barrack), measuring 360 feet by 120 feet, out of which open, on each side, the galleries or compartments for the several companies of infantry, or in the case of cavalry regiments, the stables on one side and the dormitories opposite. The covered court or riding-school opens from the grand parade, next which are the officers' quarters; and at the further end of the plan are the chapel-school, and canteen and other buildings, and a large space of ground symmetrically arranged, to be devoted to [illegible] amusements. There are roads for the "service," round the plan, lined with trees, and these can be entered by side gates, placed obliquely at the grand entrance, which is recessed, and is in the centre opposite to the covered court. In the residences of the officers, and other principal buildings, effect is not neglected; whilst the men's quarters have somewhat the character of sheds. The design, however, presents many useful hints in the sanitary aspects of the subject, which we cannot further allude to. M. Horeau's photograph, showing on one sheet of paper, the whole of his drawings, affords the hint as to a mode of turning the competition to account. Our correspondent (see the note below) has got hold of the right idea; but *photography* might answer all purposes.

In here terminating our series of notices of an architectural competition, which certainly has been the most remarkable we have been called upon to notice,—we again urge, that it has yet to be turned to account. It has cost us no small amount of labour and time to give the few particulars that we have been able to place in print. It has been simply impossible for us, without neglecting every other object, to do justice to the subject; but in labouring through the mass of material before us, we could not help often feeling a misgiving whether the members of the committee had done as much. It is calculated that 1,100 or 1,200 drawings were sent in, and there were probably twice that number of pages of manuscript.*

LATTICE BRIDGE ON THE ST. GALL AND APPENZELL RAILWAY.

WE are indebted to Mr. Villiers Sankey for particulars of the St. Gall and Appenzell Railway, which was opened on Easter Monday last, and for the details of a very remarkable Lattice Bridge which carries the railway over the Sitter river, given him by Mr. Hartmann, the chief engineer for the line.

The railway has had many difficulties to contend with, inasmuch as St. Gall is the highest town in Europe, being 2,050 feet above the level of the sea. The gradients are therefore necessarily very steep, in general, in order to get up to the level of the town; but what makes the difficulty still greater is the number of cross valleys that interrupt "the even tenor of the way," and necessitate the construction of lofty viaducts to span the deep ravines across which the railway has to be taken at an enormous height above the surface of the ground: several of these are of stone, and three of iron, namely, the one over the Thur, near Wyl; that over the Glatt near Flawyl; and especially that over the Sitter, at about 3 miles distant from St. Gall, which is about 560 feet long, and 200 feet above the water of the river. It is a wrought-iron lattice bridge, supported upon cast piers, which rest upon light stone pedestals, founded upon the solid rock. These stone foundations of the piers are 40 feet high, the cast-iron piers being 161 feet 5 inches high, and at the base 20 feet in the direction of the

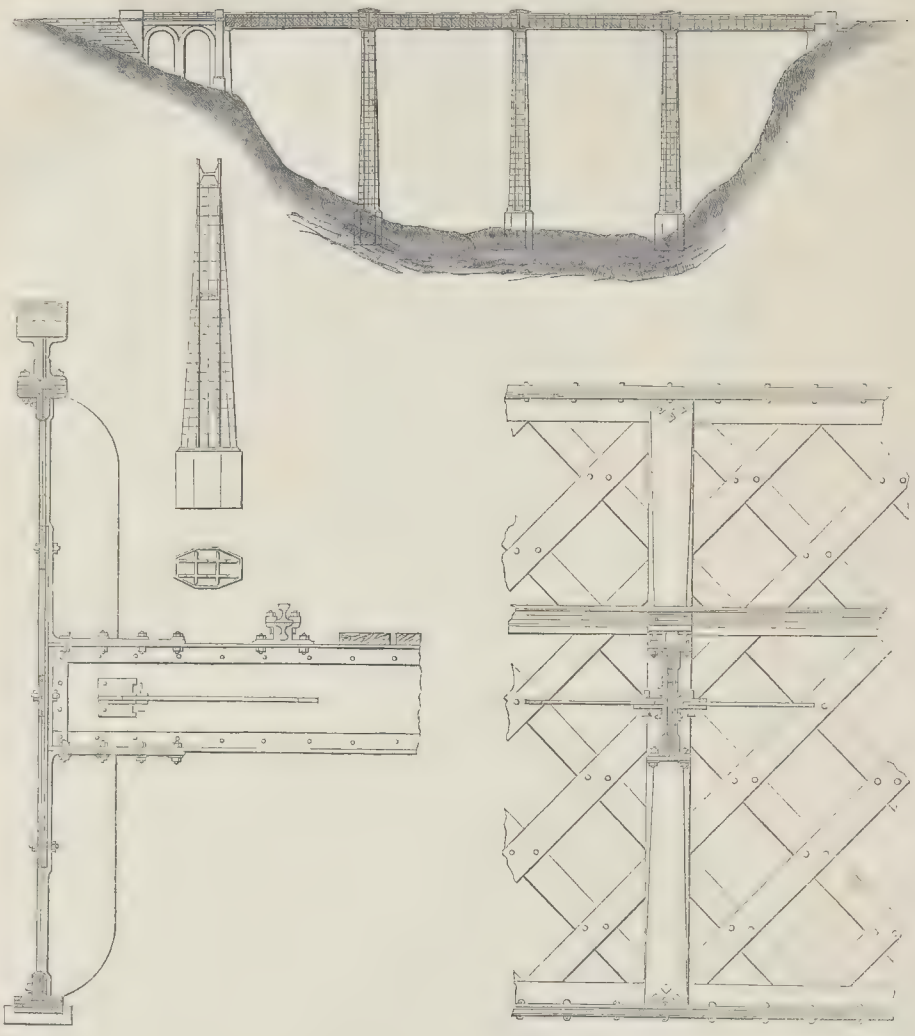
* The design for infantry barracks—No. 5, "Victoria,"—is by Messrs Guillaume and Campbell

We append the letter above alluded to. It refers to what it would be desirable to do in *all* competitions,—whether competitors have pecuniary compensation or not.

"SIR,—I would suggest that, should Government determine *not* to remunerate the architects as proposed in your last number for their designs submitted in the late competition, they, the Government, should be solicited to cause reduced copies of *all* the drawings to be lithographed: it would render them more useful for general reference, and the presentation of a copy of the work to each architect concerned would, I think, be appreciated not only for its great value, but also as an act of graceful courtesy to those gentlemen who have done so much towards the solution of a question really of importance to the nation at large. I cannot think that, under the circumstances, the necessary outlay should operate as an objection. Possibly photography might be of service to reduce the scale in the first instance.—E. B."

ST. GALL AND APPENZELL RAILWAY.

Lattice Bridge over the Sitter River.



Details of Bridge over the Glatt.

length of the bridge, and 40 feet in the direction of its breadth: these piers are smaller as they rise, having a batter of $\frac{1}{7}$th. The lattice frames, two in number, which support the roadway, are 13 feet 9 inches deep, and the rails are placed a little above the neutral axis, being 7 feet 10 inches above the lower flange of the lattice. These lattice frames are formed of bars of wrought iron, 5 inches wide, and $\frac{5}{8}$ of an inch thick, bolted in the usual manner; and crossing one another diagonally, they are strengthened by upright bars placed at intervals, 8 inches by $\frac{5}{8}$, which are stiffened by angle and vertical irons, as shown in the accompanying drawing of the details of the bridge over the Glatt, which is of similar construction. The two centre openings of the viaduct are 137 feet 9 inches span, while the two nearest the land, one on each side near the abutments, are 129 feet 10 inches between the supports.

This bridge contains 1,001 tons of cast-iron, at 22*l.* 1s. 2d. per ton; 238 tons of wrought-iron, at 33*l.* 14s. 6d. per ton; and 24 tons of iron, in bolts, nuts, screws, &c. at 40*l.* 15s. The foundation of each of the three piers cost 620*l.* up to the top of the masonry, where the iron work commences. The cast-iron was all imported into Switzerland, from Pfoxthin, in Germany; the wrought iron from Belgium; and the angle iron was obtained from England.

The excursion train, which was the first that crossed the bridge, consisting of two locomotives (the one called "The St. Gall, and the other, "The Appenzelle"), and twenty-five carriages each 30 feet long, and filled with guests, invited to be present at the ceremony, passed over the bridge three times, and remained on it for a long time, so that there was a very good opportunity of seeing how the bridge behaved. It only sank two lines when loaded with a weight of 227 lbs. to the square foot, and a rod firmly attached to the bridge, with a fine division marked upon it, being carefully observed by a theodolite during the passage of the train, showed that the bridge underwent no oscillation or lateral movement, as the division of the rod coincided with the cross hairs of the instrument, without any deviation, while the train was passing over it, precisely the same as when the bridge was unloaded. Before witnessing these experiments, it was thought that it would have been a good precaution to have made the bridge for a double line of way, so as to have given a greater guarantee against lateral motion; but, from the above experiments, it appears evident that the bridge is abundantly strong for all purposes to which it will be applied, as it showed no signs of weakness although loaded by two locomotives, and an unusually heavy train, while the sounds of

music, the firing of cannon, and the shouts of the assembled thousands, although rending the air, and throwing everything around into vibration, had no perceptible effect upon the viaduct.

The iron work of this bridge is made exceedingly light, having many interstices and open spaces left on every side, so that the beautiful scenery of the neighbourhood, and the distant mountains of Appenzell, almost always covered with wreaths of snow, may be seen through them to great advantage: and thus the new railway viaduct, instead of interfering with the beauty of the scenery, adds an additional charm to it, and is admirably in keeping with the weather-beaten rocky heights, surmounted with feathering firs, that flank the ravine on either side.

This railway, which joins the line from Zurich at Winterthur, forms a principal part of the important network of railways with which Switzerland will soon be covered, especially when it is continued on the other side of St. Gall as far as Rorschach, on the banks of the Lake of Constance, where it will form a junction with the South-Eastern Railway of Switzerland, which runs through the Rhine Valley, and is nearly finished as far as Chur, or Coire, the capital of the Grisons; and in the event of the peace lasting long enough, this latter line will be continued through the Luckmania, and so into Italy.

The portion of the line, however, between St. Gall and Rorschach, is fraught with many difficulties, the principal of which is the steepness of the gradients; for as the line has to rise nearly 1,000 feet in a distance of about eight miles, the gradients will hardly be anywhere much better than 1 in 40: add to this, the bad quality of the ground, which is exceedingly sidelong, and, from its nature, constantly subject to slips. Then, again, the cross valleys necessitate the construction of expensive works of skill, among which may be mentioned the stone viaduct of Goldach. The various difficulties and obstacles have now, however, been all, in a measure, overcome or removed by the indefatigable zeal and talent of the engineer; and this part of the line will be opened for passenger traffic in a very few months.

The accompanying drawings will serve to complete the necessarily short and imperfect description of this interesting railway, and the points which form so prominent and pleasing a feature in its construction.

THE ARCHITECTURAL ROOM; ROYAL ACADEMY.

ANXIOUSLY as we have aided the establishment of "The Architectural Exhibition," in Suffolk-street,—the provision of ample space for setting forth annually by plans and sections, as well as views, the works of English architects, we must continue to express a hope that Architecture may not be altogether unrepresented in the annual Exhibition of the Royal Academy. Attention is there gained for it from persons who at present, at any rate, will not travel after it, and in other respects the maintenance of its conjunction with the other fine arts is most desirable. In the present exhibition there are but few really architectural works,—between eighty and ninety; but considering the large number of drawings which were gathered together in Suffolk-street on the last occasion, we ought perhaps scarcely to express surprise. None of the Academician architects exhibit, but two of the associates, Mr. Sydney Smirke and Mr. Scott, do; the former sending two sections of the new reading-room at the British Museum, one showing it finished, the other showing its construction (1115); and the latter an isometrical view of Exeter College, Oxford, setting forth the contemplated new chapel and other buildings (1094); and a view of a new church about to be erected at Haley-hill, Halifax (1107), of the Geometrical, or Early Decorated period, and with a noble tower. The buildings for Exeter College are in the same style: the chapel has a polygonal east end, and a *flèche* springing out of the top of the roof at a short distance from it, after the *Saintes Chapelles* of France. Mr. Smirke's new reading-room, we have already illustrated and described. It is constructed wholly of iron and brick, lined with the fibrous material of which we spoke some time ago, intended to receive painted decorations, and sculpture to a considerable extent was to be introduced at the spring of the dome. We are glad to hear that the trustees have agreed to recommend the expenditure, at once, of the sum of 5,000*l.* on the painted decorations of the room, and we hope the architect will be allowed to introduce the best art that can be obtained,—not merely what will "do," but the best that can be had. The most elaborate and admirable drawing in the exhibition, or rather series of drawings, is (1154), "The Courts on the South Side of the Crystal Palace, Sydenham," by M. D. Wyatt, from whose designs, as all our readers know, they were erected. The amount of labour and thought expended on this work is scarcely realized by ordinary observers. Mr. E. Falkener has some elegant Pompeian Studies (1121, 1122); and Mr. F. P. Cockerell several very beautiful drawings of buildings in Rome and Venice, especially (1140) a study in the latter city. Amongst the drawings of buildings already illustrated in our pages, are (1118) Castle Cary Market-house, by F. D. Penrose; (1142) the Birmingham and Midland Institute, by E. M. Barry; (1146) the Music-hall in Covent-garden, by W. F. Hill; (1175) Bylaugh Hall, Norfolk, by Messrs. Banks and Barry, and some others. The last-named architects exhibit also a view of the new hall intended to be built in the rear of the Milton Club, Ludgate-hill, for which their designs were selected, it will be remembered, in a limited competition. It has an aspect of flatness, and will depend greatly for its effect on the decorations introduced. Mr. E. Barry adds a view (1080) of St. Saviour's Church, Haverstock-hill, wherein colour will be used to some extent. An increasing tendency to this is observable throughout.

No. 1061 is a design, by H. R. Newton, for forming a new roadway into St. James's-park, by taking away the ground on each side of the Duke of York's column: this would be a dangerous experiment not advisable. A way into the park at Spring-gardens, added to the road by the German Chapel, would answer every purpose. 1063, the Schools erected at Gold's-hill, West Bromwich, by S. W. Daukes, with their gablets, involves the question of water-pipes, raised by us some time ago;—a dozen pipes are shown: and this is further illustrated in (1083) Design for the proposed Town-hall, Rugby, by C. L. Eastlake, where five down-pipes are shown on the front, and two more would seem to be necessary. 1071 is the design for an iron church, by W. Slater, referred to in our recent notice of the Ecclesiological Society: this is placed so far out of sight, that we can form no opinion upon it. 1075, proposed interior of a new building on Cornhill for a commercial firm, by Messrs. Barnett and Birch, shows columns, arches, and coffered ceilings. A well-coloured drawing (1076) shows the interior of the new parish church of St. John the Baptist, at Bedminster, by J. Norton, with the sculptured reredos at the east end, which excited so much ill-feeling. The church is very creditable to the architect. 1081, the Branch Bank of England, at Hull, by P. C. Hardwick, is scarcely worth exhibiting; but in 1136, views of Addington Park, Bucks, the architect gives us something to praise: the style adopted is the later Gothic of France. 1134, new Assize Courts now erecting at Taunton, by W. B. Moffatt, does not speak its purpose, at least in the view here given. Made up of an assemblage of small parts, Domestic Gothic in style, we should have guessed its appropriation several times before we arrived at Assize Courts. 1145, St. Mary's Church, Martham, Norfolk, now in course of rebuilding, by P. Boyce, has one of the fine hammer-beam roofs for which the county is celebrated. In the City Bank now erecting in Threadneedle-street, at the corner of Finch-lane, set forth in 1148, by Messrs. Moseley, the circular arch of the entrance doorway in the circular corner has an effect which is not altogether agreeable. In 1155 and 1165 are set forth the mansion now erecting for Baron James de Rothschild at Ferrières, in France, by Sir Joseph Paxton. It is a very large and important structure, in arrangement something like the residence at Mentmore, erected by Sir Joseph, and exhibited some time ago, and has square towers at the angles. It is Italian in style, and has a rectangular porch, in the adornment of which sculpture is introduced to a considerable extent. 1171 gives a view of the schools and residence now erecting at Ferryside, Carmarthenshire, by R. K. Penson; and the same architect exhibits a view of Dynevor Castle, in the same county, where he has made some effective alterations. In 1173, the Inlet Tower for the water works now in the course of construction by the Government of India, for the supply of Bombay, Mr. Conybeare has adopted for the octagonal lantern and balcony at its summit, the Indian variety of pointed architecture, to show the applicability of it for structures of cast iron. Of Mr. Conybeare's elaborate report on the supply of water to Bombay we have already spoken. The design by P. Bremner (1177), for alterations at Branksea Castle, Dorset, the seat of Colonel Waugh (who was recently mentioned by us), shows a wilder luxuriance of gargoyles, bosses, statues, and stone lions, than we are in the habit of achieving, and will bear taming down. Amongst the good drawings may be mentioned 1057, the Upper Cloisters of a Convent at Valladolid, Spain, by T. R. Macquoid; and 1093, the Church of the Annunziata, Genoa, by A. W. Blomfield.

METROPOLITAN FIRES AND METROPOLITAN WATER SUPPLY.

THE remarks on "*Fires; the best Means of preventing them and arresting them*," by Mr. Braidwood, published in these pages last week, are valuable and worthy of attention. There are many "flagrant cases" of faulty construction, and more cases of gross negligence in the use of fires and lights generally. Numerous as fires are, the only wonder is that they are not more numerous: take the case of house-construction. Do not working men of all trades smoke and use "*lucifers*" for lighting their pipes—said lucifers being thrown down at random? Do not some carpenters and joiners work knee-deep in shavings, with wood fires on the hearth, naked candles on the bench, and a naked pipe in their mouths? Do not house-painters use oil and turpentine regularly with waste cloth, cotton, or hemp, occasionally to wipe up stains; or, with the turpentine, to clean the work to be finished, throwing these down carelessly? Are not lucifers used in the kitchen, in the parlour, in the office, and in the warehouse? Do not masters and servants leave open boxes of lucifers about in improper places, scatter them carelessly in drawers, on counters, or on the floor? Now it should be remembered that the nibbling of a mouse, the friction of a shoe, or of a moving door, or of a drawer, or even the shaking, or falling, or crushing of a box containing lucifers, will ignite the matches, and a fire may be the consequence. The inference is, lucifer matches are not used with sufficient care: they should not be given to servants without due caution as to their use: they should not be allowed to lie exposed on shelves, on tables, on floors, or in drawers; and should only be kept in tin boxes. Individual care is absolutely necessary.

As to the metropolitan water supply, water may be abundant; but for fire-extinguishing purposes, it is not available without the intervention of fire-engines: there is the pressure in the mains, but it is not active, by reason of the pipes not being properly graduated, and the "head" being too distant. Again, only a short time since, there was not one improved fire-cock or hydrant on any of the mains within the bills of mortality: the old fire-plug was alone in use. Government have insisted on the companies carrying out many and valuable improvements in the mode of water-supply. The river water is taken above metropolitan sewage contamination: the water is filtered; and open reservoirs are abolished. The supply is to be constant, and at "high-pressure." But not one word as to *active* pressure and improved fire-cocks. In this respect there will be no change: rude wooden plugs will be driven into open pipe-ends, and 150 feet head will be absorbed by friction, so that 10 feet head is not

available. In many northern towns water will rise, in a jet, from the surface of any street, 90, 100, and even 150 feet vertical, in volume and force equal to many hand-fire engines. Large buildings and much valuable property have been saved in Manchester by the use of water so available and so applied. The water-mains throughout the metropolis may be made as useful as the water-mains are in Manchester. Improved hydrants, or fire-cocks, may be applied so as to supersede the clumsy and unscientific plug. The only difficulty is—lack of will and the money. Rent enough is paid by the consumer to demand the additional advantage and protection.

Over the whole of the metropolis, pumps are still in use. Many of these are resorted to for street and road watering: this is simply a barbarism and gross waste. A watering-cart stands idle whilst a man pumps, say, 250 gallons of water. This process may occupy fifteen minutes. Now, by hose and hydrant, from an active water-main, such a cart may be filled in thirty seconds. More than half the time of man and horse is consumed in return journeys: as much ground is traversed empty as full: with hydrants and a movable stand-pipe there need not be one yard in length of journey wasted, as a water-cart may be re-filled by the driver in less than five minutes at any point. One watering-cart, working under such a system, is equal to three working from pumps. The cost of each thousand gallons of water should not be more than sixpence. The roads in Hyde-park are watered from pumps: there can be no doubt as to this pump plan being more costly and more inconvenient. The old fire-plugs are a disgrace to the companies: for use in case of fire, for use in street-watering, and for general use, the pressure in the water-mains should be made active; proper hydrants should be fixed at short intervals, and all modern facilities for the use of water should be rendered available.

PROVINCIAL NEWS.

Peterborough.—The first stone of a training institution for schoolmasters was laid here on Wednesday in last week. The site was given by the Bishop of Peterborough, and consists of about an acre of ground on the north side of the cathedral, called Tout-hill-close.

Chelmsford.—The directors of the new Corn Exchange Company met on Friday in last week, to consider the tenders for the erection of the new corn exchange, and buildings connected therewith. Five tenders were received:—

	£	s.	d.
Messrs. G. Mansfield and Son, London	6,450	0	0
Mr. Jas. Brown, Bocking	6,200	0	0
Messrs. J. Little and Son, London	5,738	0	0
Mr. Wm. Hill, London	5,697	0	0
Mr. S. Simpson, Ipswich	4,923	3	9

The lowest tender was accepted. It includes the expense of taking out the quantities for parties tendering, and 100*l.* for any extras that may occur. The contractor guarantees, under a heavy penalty, to complete the building by the 1st of the ensuing October.

Leicester. — The tender of Mr. Broadbent, builder, for the erection of the new corn exchange here has been accepted. His offer was to construct the new exchange over the present market-house for 1,559*l.* to be finished externally, either in Portland cement, or in red brick. The architect, Mr. Ordish, decided that red brick should be used. The other tenders were,—Messrs. Stirk and Mayne, 1,655*l.*; Mr. Rushin, 1,929*l.* with 40*l.* additional, if a cast-iron roof were required. Another tender was lodged after the time specified, but not entertained. The requisite amount has been secured.

Oxford.—We understand, says the local *Herald*, that Mr. Faulkner's suggestion for public fountains as memorials of the peace has met with so much encouragement, that a public subscription has been originated, to which the Mayor has promised 10*l.* 10s. and other gentlemen donations also. The matter was to be considered by the commissioners on Wednesday.

Worcester.—The erection of St. Peter's Infant School here is forthwith to be commenced. The site is one between the parochial schools in Frog-lane and St. Peter's Church, and the southern front will face the northern side of the Porcelain Works. The new building will be 75 feet long by 23 wide, and of brick, with stone dressings, and chiefly Broseley tiles. It will be chiefly lighted from the front. The interior will be divided so as to give a class-room at one end and an entrance-hall and cloak-room at the other; whilst the central portion, to the length of 48 feet, by the whole internal width, will be appropriated as the school-room. The height from the floor to the wall-plate is to be 11 feet, the roof open to the ridge, and the timbers framed and stained so as to be ornamental. The front elevation contains five windows, the central three lighting the large room, and the others the smaller. The plainness of the front will be relieved by a gable at the centre, and the ridge of the roof over the class-rooms will be lower than that over the main building. The builder was Mr. George Hunt, of Evesham.

Dudley.—At the last weekly meeting of the local guardians, Mr. Lovatt, of the firm of Messrs. Bidlake and Lovatt, the architects of the proposed new workhouse, was in attendance, and a report frrm the building committee was read, announcing that thirteen tenders had been received for building the new workhouse and school. The amounts of the respective tenders were read; these were as follow. The first of the three amounts is for the workhouse alone; the second for the school; and the third for the two buildings:—

	£	s.	d.	£	s.	d.	£	s.	d.
No. 1	14,625	0	0	3,250	0	0	17,875	0	0
„ 2	13,503	0	0	2,770	0	0	16,273	0	0
„ 3	12,703	6	0	2,528	3	0	15,231	9	0
„ 4	12,460	1	0	2,673	7	8	15,134	8	8
„ 5	12,295	0	0	2,700	0	0	14,995	0	0
„ 6	12,415	0	0	2,505	0	0	14,920	0	0
„ 7	12,323	19	7	2,556	10	5	14,880	10	0
„ 8	12,286	10	0	2,479	0	0	14,775	10	0
„ 9	11,918	17	11	2,570	7	1	14,489	5	0
„ 10	11,664	0	0	2,683	0	0	14,347	0	0
„ 11	11,441	0	0	2,553	11	6	13,994	11	6
„ 12	11,457	13	4	2,460	5	8	13,917	19	0
„ 13	11,520	0	0	2,314	0	0	13,834	0	0

The report stated that, so far as was known, the tenders were much more satisfactory than on the former occasion. It was resolved, said the report, that the seven tenders lowest in amount should be laid before the Board for consideration. The names of the last seven tenderers were given as follow:—No. 7, Mr. John Elliott, Wolverhampton; No. 8, Mr. J. S. Ferguson, Nottingham; No. 9, Mr. John Parnell, Rugby; No. 10, Messrs. Nelson and Co. Dudley; No. 11, Messrs. J. and G. Lilley, Measham; No. 12, Messrs. Trow and Son, Wednesbury; and No. 13, Mr. Charles Burkett, Wolverhampton. The subject was referred back to the committee. An entry on the minutes, expressing the satisfaction of the Board with the tenders, was agreed to. Mr. Lovett mentioned that the tenders would have been nearer still to the estimate had there not been the addition of a dining-room, costing 700*l.* or 800*l.*

Pembroke Dockyard.—The works now in progress at Pembroke Dockyard are expected to occupy two years in construction, as they embrace very extensive alterations and improvements. The fortifications at Dale Point, on the northern side of the haven, are proceeding, and, when completed, will form an important adjunct to the forts on Thorn Island and the Stack.

Warrington.—At the last quarterly meeting of the town council, it was stated, according to the *Manchester Courier*, that the museum committee estimated the cost of the present building, including plastering and heating apparatus, at 1,600*l.* leaving a margin of 400*l.* which would enable them to erect a curator's house in the north-east angle of the building. The plans so far acted upon had been drawn with the ultimate design of completing the building with a lecture-room, over which might be erected accommodation for the school of art, in case arrangements might be made with the committee of that institution for the purpose. The street-improvement committee reported that a shop at the bottom of Bridge-street and corner of Mersey-street, had been purchased for 300*l.* in order to widen Mersey-street. The general purposes committee reported that Mr. Coxon, the borough surveyor, had submitted a sketch of the kind of baths which he considered necessary for Warrington. He estimated the cost, exclusive of the site, at about 2,000*l.* and recommended Crown-street or Oxford-street as the most eligible site. A discussion ensued, and it was ultimately agreed that the baths in Church-street should be purchased. Mr. Litherland's tender for drainage, Messrs. Pennington's for walling, and Mr. Ladd's for erecting lodges, had been accepted.

South Shields.—At the South Shields Town Council meeting held on Wednesday in last week, the borough surveyor, Mr. Thompson, presented and explained the plan of the drainage for the Waterloo Vale and Central district. This work, according to the local *Gazette*, will be commenced shortly: the plan will be at once submitted for approval to the Central Commission. This large plan shows a system of drainage, extending from and including the Ogle Estate, to the Mill Dam as the main outlet. It accommodates Thames-street, and all streets and lanes of North-street, and the whole of Waterloo Vale, extending to Mount-terrace, as well as a portion of the densely populated part of the borough above the Mill Dam.

Dundee.—St. John's Church of Scotland schools, at Hawkhill, were opened on Friday in week before last. The building is capable of accommodating nearly 200 pupils (boys and girls), according to the Government rule. The site is central, and was acquired for an annual feu duty of 10*l.* commuted into a cash payment of 115*l.* and a 5*l.* feu duty, which is estimated at the value of twenty years' purchase. The General Kirk Session of Dundee defrayed the cost of the site.

Elgin.—A contract entered into with Mr. D. Morrison, for laying the High-street with square stone blocks, from the Court-house to the School-wynd, is now completed. There are now about a thousand yards of the street finished in this style,—the last 500 yards of which is laid down by the present contractor at an expense of 500*l.* The blocks of stone used, says the *Forres Gazette*, are of the hardest material from Spynie Quarry. They measure from 12 to 16 inches long, and 5 to 6 inches broad, and 9 inches deep. The causeway appears to answer the intended purpose. To have this improvement carried westward along the whole of the High-street is considered desirable. Elgin was long noted for its ancient highway, rising archedly towards "the crown of the causeway," where the high-minded folks were said to walk in a very exalted mood of mind: modern improvements, we suppose, are likely to modify this ancient state of things considerably.

VIEW OF THE LOUVRE, PARIS.

In illustration of the particulars given in our pages from time to time of the works which have been going on at the palace of the Louvre, we add a second view of that building, showing the new parts, with their rich adornment of sculpture, from the hands of many of the principal sculptors of France.*

DRAUGHTS IN CHURCHES.

May I ask some of your readers to give me a receipt for making a draughty church comfortable. A church has been built at Torquay, Devon, very lofty, with open roof, and in the winter it is impossible for the invalids who frequent the town to attend, from the cold draughts passing from the roof, and in summer the church is equally oppressive from want of ventilation, and the heat caused by the sun upon the slates. To remedy these evils the architect, I hear, has suggested felt between the boards and slates, but there is a dispute as to whether felt will be sufficient. Many persons wish for a false roof twelve feet below the present one, as they state the cold draughts are caused not by the cold air coming through the slates into the church, but by the hot air rushing to the roof and driving the cold air down into the church. Now can your readers assist *us* from their experience? It will be a real work of charity, as we suffer very much in the winter; and, by the advice of those who have also suffered and remedied the evil, we may obtain some suggestion that will do good service to the public, and especially to my fellow sufferers and myself. An Invalid.

* See p. 1, *ante*, and elsewhere On p. 137 will be found references to various notices of buildings in Paris in our previous volume.

THE ADDITIONS TO THE PALACE OF THE LOUVRE, PARIS.

PROGRESS IN DESIGN AS APPLIED TO MANUFACTURES.*

FICTILE MANUFACTURES.

IN no department of British industry has the value of a gradual introduction of improved modes of decoration been more clearly proved than in that of porcelain and ordinary earthenware. To any one who, like the writer of this paper, visited the Staffordshire Potteries nineteen years ago, and observed the state of things at that time, and has had the privilege of an occasional visit, at stated intervals, during the period which has intervened, it must be very obvious that a change, such as we frequently hear pronounced as impossible in other industries, has come over nearly the whole of the productions of that district. Far from resting satisfied, however, with even the present state of things, it is quite clear that every coming year will tend to still greater progress than that already realised, and that those who pertinaciously persist in the common fallacy that to do as they have done is all-sufficient, will be left behind in the race.

The illustration of the fictile manufactures of Staffordshire in the Paris Exhibition was of such a character as to prove most unmistakeably that a great improvement had taken place since 1851; and, without being prepared to approve, on artistic grounds, all that has been done, yet, with the experience of the past upon our memory, it would be unjust not to award the credit due to intelligent effort and steady enterprise. To two houses, that of Messrs. Minton and Co. and Messrs. Copeland, the credit of the earlier movements is due; but others have followed, who, applying a better style of art to less exceptional articles than those produced by these two firms, have certainly aided in no slight degree the more recent improvements; and it is quite evident that, at the present time, whatever fault may still be found with the subjects employed for the purpose of decorating the cheaper ware, yet that the character of the art employed is much higher than formerly. In the blue transfer ware, for instance, there is a decided tendency to mosaic forms, less attempt at projection in light and shadow, and although the details are often more architectural than fictile, yet the result is felt to be more suited alike to the use of the article, the surface decorated, and the method of ornamentation.

In these forms, too, one can trace the influence of the merest elementary outlines in use in our schools of art, of which that established in the Potteries eight years ago has been one of the most practically useful.

In the cheaper kinds of porcelain, neatness approaching severity is gradually taking the place of the blotchy floral designs which formerly disfigured forms which ought to have suggested more tasteful decorations. Nor have the forms themselves been neglected, since in many articles of every-day use, a purity of outline formerly unknown has taken the place of the eccentric convolutions which bid defiance to common sense and the ordinary rules of proportion.

Into the higher class of porcelain painting an artistic refinement has been introduced which contrasts in a remarkable manner with the hard, wiry, and laboured results of some twelve or fifteen years ago. One feels that the workman is more of an artist, and yet not the less of an artisan than formerly.

It may be reasonably asked, to what cause is this change to be attributed? and it may be replied that at one period matters were really so bad that a change was inevitable in order to retain the trade in the higher branches, and there can be no doubt that the efforts after improvement in this direction led to corresponding efforts in the production of less costly articles. The introduction of Parian, however, would appear to have given the first impulse towards a higher style of art. The enterprise which prompted the employment of artistic talent in the production of statuettes, either original or as reductions from celebrated works, modern and antique, was soon engaged in the improvement of analogous branches of fictile art. The key-note was struck in Parian, but the theme has been carried out, step by step, in other materials and modes of application, such as tiles, vases, garden decorations, and domestic services.

Recently the efforts to emulate the productions of Palissy, and rival the Majolica of the best periods, have been attended with so much success, that he must be a hyper-critic indeed who would not join in a congratulatory compliment to the skill which had solved the problem of modern progress in British fictile art so successfully.

In thus endeavouring to do justice to the progress made in the Staffordshire Potteries, the productions of Worcester must not be forgotten. In 1845, a first visit to this city showed the writer how much in arrear its porcelain manufacture then stood, even as compared with that of Staffordshire. Since that period a marked improvement has taken place, and "the faithful city" bids fair to resume its old position, and even excel it, in the manufacture of the higher class of porcelain. Here, again, the influence of reproductions in imitation of past modes of decoration has had its influence, and the imitation of Etruscan methods in the manufactory of Messrs. Kerr and Binns, followed as this has been by the successful production of admirable specimens, which go far towards rivalling the best class of Limoges ware, cannot fail to influence other departments, and stimulate to corresponding improvements. Good work of any kind always has this healthy influence, that it renders the mind impatient of that which is less perfect, and thus imperceptibly necessitates progress. In this fact lies the value of bringing fine works of art of every kind before the people. The mind once imbued with a true sense of the beautiful, detects at a glance any anachronism in form or colour, although the "why and wherefore" of the defect may not be so readily discovered. This can alone come of sound education and a knowledge of principles.

Let it not be supposed, however, that all recent progress in fictile art is confined to reproductions and imitations of antique types or methods. During a visit, the other day, to the Staffordshire Potteries, two new modes of decoration presented themselves. Of one of these specimens are forthcoming. This consists of an inlaid coloured body upon Parian, and seems admirably calculated, from its conditions, to necessitate severity in ornamentation. The process has been so far worked out by Messrs. Rickuss and Toft, and is of an economical character. Of the other process, now in the course of development by Messrs. Pratt, no specimen has, unfortunately, been forwarded, owing, as it would appear, to the proprietors not being at present prepared to bring it before the public. Some admirable things, however, are in progress, and, judging from a complete specimen, the results appear likely to be of a very satisfactory character. The process consists of enamelling upon terra-cotta, the outline of the ornament being printed by transfer, and the colours afterwards put in with a brush.

METALLIC MANUFACTURES.

In the wide and constantly extending field of the fancy metal trades of Great Britain, the opportunity for progress in design is so great, that, with much to regret and find fault with, there is also much which cannot fail to satisfy and encourage all who take an interest in the application of art to industry. Perhaps the greatest revolution in the higher departments of design, especially as applied to gold and silver, has arisen out of the great modern discovery in science of the deposition of metals by galvanic action. The opportunity thus afforded for copying or reproducing, at a comparatively reasonable cost, the fine works of past times, has tended to educate the taste of the people, and lift us to a higher plane of judgment in modern productions. Thus, the test by mere material value in bullion weight, which had usurped the place of the esthetic value conferred by art, has been gradually giving way, and the importance of the latter is gradually becoming more and more recognised. This is seen in the character of the works now usually produced for testimonial services and for racing prizes. It is useless to say that these are not always appropriate,—often, indeed, exceedingly inappropriate,—but as an evidence that a desire for something more than a given number of ounces of gold and silver is giving way to some consideration of the form in which the metal comes, they are evidence of progress.

Again, let any person whose recollections of the displays made by our gold and silver plate manufacturers date some fifteen or twenty years, compare the character of the productions then exhibited in show-rooms with that of some of the leading houses now, and then consider the change. In the show-rooms of Messrs. Elkington, Mason, and Co. of Birmingham, there are at the present time ten times more works, in which appropriateness and purity of design, in connection with excellence of art-workmanship, is displayed, than could have been produced, twenty years ago, by all the houses in England put together.

The progress made in the manufacture of church plate and general metal work for ecclesiastical purposes, as indeed in all matters connected with church ornaments, is well known to all who take an interest in the progress of the arts of design. The manufactories of Messrs. Hardman, of Birmingham, Skidmore, of Coventry, and others, have produced works from time to time, within the last few years, which would have done credit to any country and any age, if the fact is taken into account that the question of cost was a serious element in their manufacture. And here it may be permitted to say a word about the influence which one mind alone undoubtedly exercised, not only on the particular department of art to which he specially devoted his attention, but, indeed, upon all of a kindred character, in which other minds were engaged who could appreciate his arguments, and apply the principles he enunciated. For however much we may differ in many points from the late Mr. Pugin, as to his special views of the mission of art, and the application of modern scientific and mechanical means to the reproduction of works of excellence, his earnest and fearless denunciation of all "shams,"—his exposure of false systems of ornamentation—his thoroughly zealous working out, "in season and out of season," of his own views in his own way, must ever command the respect of every true and earnest lover of art, since it is to the influence of his example, in one direction, that we owe so much of the progress to be recorded in other departments of art-manufacture. It is therefore but an act of justice to his memory, which all who differed from him on special points can at least afford to perform—to fairly and honestly acknowledge how much he did in his comparatively limited time for the domestic and manufacturing arts of his country, both directly and indirectly.

That an enormous amount of work is still thrown away upon comparatively very indifferent designs in gold and silver is quite true. That the human figures and animals are pressed into service, rightly or wrongly, and that these are often wonderful examples of the ignorance of their producers, is also true. That ornamental types, originally designed for any material but metal, are introduced without the slightest consideration as to fitness, is a fact which is patent to all who interest themselves in this question; yet, with all these drawbacks, and many more not so easy to enumerate, it is affirmed that much has been done during the past few years for designs as applied to gold and silver plate and its imitations.

In brass and bronze work the same may be said; for, notwithstanding the ultra-naturalesque character of many productions still in the market, and likely still to "sell," an approximation has been made towards a much purer style, and this, too, since the Great Exhibition of 1851. It must never be forgotten that much of the over-ornate tendency, so visible in the ornamental brass manufactures of Birmingham, arose from a slavish and unmeaning following of the French, especially after the Exposition of 1844. It is satisfactory to know, however, that the present tendency has not its origin in this direction, and that in the brass and bronze chandeliers, gas brackets, and works of an analogous character, efforts are now being made, and some of them very successful ones, too, to work out a more severe style of treatment as applied to those useful articles; and, whilst giving less weight of metal and more hand-

* From a Paper by Mr. Geo. Wallis, read at the Society of Arts.

work, to produce tasteful results by a little more brain work at the outset. In fact, manufacturers are beginning to acknowledge that artistic talent, carefully directed to practical ends, will *pay* when it secures simplicity and elegance in design. Nor is this applied so much to the costly articles as to those coming within the means of persons of moderate income. In short, the construction required by the use appears to be first considered in the specimens alluded to, and then the ornamentation is carefully adapted to the embellishment of the necessitated form. This, we apprehend, is sound practice, based upon sound principles. Under any circumstances, the results are satisfactory, so far as manufacture goes; and that the articles will make their way in the market in due time, it would be as unreasonable to doubt as it would be to doubt the influence of light upon darkness.

In iron castings, especially those suited to the furnishing of entrance-halls and garden decorations, to quote the display of the Coalbrookdale Company in the Paris Exhibition will be quite sufficient as an indication of progress in this direction; for, without absolutely declaring that everything manufactured by this firm is perfection, one cannot hesitate to acknowledge that the improvement, even since 1851, must be visible to the most careless observer.

In connection with this part of our subject, the remarkable strides in design as applied to the Sheffield manufacture of stoves, grate-fronts, &c. must be noticed. It will be remembered how thoroughly well Sheffield maintained its position in the Great Exhibition of 1851. Since that time great progress has been made, and, although this was not illustrated to its full extent at Paris, it is not the less a fact. It is not the less gratifying, too, to know that here, at least, the influence of the instruction given in the School of Art has been acknowledged, and that those who availed themselves of its teachings have sought to do it honour.

CHURCH BUILDING NEWS.

Romford.—The new Roman Catholic chapel, built at the expense of Lord Petre, at Laurie Town, Romford, was opened on Tuesday in last week, by Cardinal Wiseman. Mr. Nichols was the architect. The edifice is in the Early English style. The walls are of rag-stone facings, with Caen dressings, and the roof is tiled. The length of the body of the building is 65 feet, the width, 23; the sanctuary, 12 feet by 16: there is a porch on the south side, 13 feet 6 in. square. The height is 30 feet. The roof is open with diagonal braces, and diagonal boarding stained light and dark oak. In the centre is a bell turret, with cupola, braced on the roof, rising above it to the height of 16 feet, and with one bell. At present the building will seat 200, but provision has been made for the erection of a gallery to hold 50 more. The cost of erecting the chapel was 1,800*l.* and the total outlay about 2,000*l.* The builder was Mr. Hammond, of Warley. In the interior, the body of the chapel is occupied with a double row of low benches, stained to imitate oak, and the passage between them is paved with Minton tiles. The chapel is dedicated to St. Edward. Mrs. Clifford has presented a stained window to be placed above the altar, and also a rose window at the east end of the chapel. To the right and left of the entrance to the sanctuary are figures of the Virgin and Child and of St. Joseph.

Lacock.—The foundation stone of a new church was laid in this parish, on 26th ult. The church is being built at the expense of Captain Gladstone, M.P. at a cost of about 1,600*l.* and will contain 150 sittings. The foundation stone was laid by Mrs. Gladstone. The building will be in the Early English style, from designs furnished by Mr. Gabriel, of London, architect. The builder is Mr. B. Mullings, of Devizes. The church is dedicated to St. Ann.

Fisherton (Salisbury).—The consecration of Fisherton Cemetery took place on Thursday, in week before last. According to the *Wilts Mirror*, the cemetery is situated in the parish of Bemerton, nearly a mile beyond the county gaol, on the Devizes road, and is about two and a half acres in extent. The spot is a very elevated one. The entrance is from the Devizes road, through a gateway of Early English architecture, having a tower on the north side, in which is a small room for the porter, with other conveniences. The effect of this entrance, says the *Mirror*, is by no means picturesque; and it is said to be contemplated by the Burial Board to remove it, and erect a kind of lodge. The ground appropriated to members of the Established Church is on the south side, and is divided from the Dissenters' portion by a sunken fence. The chapel is in the Decorated style, and is about 27 feet long and 17 feet wide. It has a porch on the north side, a chancel, a side aisle on the south side, and a bell on the gable end. The exterior is faced with flints, with Bath stone quoins and windows. The roof is open, the seats are of wainscot, and the floor of the building is laid with tiles, some of which are glazed. The chapel upon the unconsecrated portion of the ground is situated on the north side, and is in the Perpendicular style, and about 21 feet in length and 14 feet in width. It has a bell-turret surmounted with a vane, and the exterior, like that of the Episcopal Chapel, is faced with flints, with stone quoins and windows. The roof is framed and panelled, and the paving is decorated with encaustic tiles. The architect was Mr. John Turner, and the builders were Messrs. Gover, of Winchester. Mr. John Harding has officiated as clerk of the works.

Dorchester.—The new cemetery extras, over and above the originally supposed cost, will be 600*l.* and at meetings held in the vestry-rooms of the parishes of Peter's, Trinity, and All Saints, to obtain the consent of the ratepayers to a further levy of rates, to cover that sum, the proposition was unanimously carried. Trinity parish contributes 264*l.* 8s. 10d.; St. Peter's parish, 195*l.*; and All Saints' parish, 140*l.* 11s. 2d. The whole costs attendant on the cemetery, including consecration, and two years' salary of the clerk to the board, printing, &c. were 3,800*l.*

Sherborne.—In St. Mary's Church an improvement will shortly be made, through the instrumentality of the rector, the Rev. Talbot Greaves, by the construction of a tower with peal of bells. The tower will be built at the end of the edifice overlooking St. Mary-street. Upwards of 600*l.* according to the local *Journal*, have already been voluntarily offered by the gentry and inhabitants of the town towards defraying the expense.

Chalford Lynch.—The corner-stone of a new church which is being erected at Chalford Lynch, in the parish of Bisley, was laid on Thursday, in week before last. The land was given by a chaplain at present at Scutari, and the principal part of the funds by an unknown individual. It is intended as a chapel of ease to the mother church at Bisley, and is being erected in the Decorative style of the thirteenth century, with accommodation for 287 persons, principally free. Mr. G. F. Bodley, of Brighton, is the architect. Messrs. Wall and Hook are contractors for the masonry; and Mr. Restall, of Oakridge, for the carpentry.

Marston (Ross).—On the 11th ult. the foundation-stone for the much-needed new church for the parish of Marston, near Ross, in the county of Hereford, was laid by Mr. W. Brooke. The building consists of a nave, chancel, and south porch, with a double bell-cot over the western gable, after the Decorated style of English architecture. It is from the design of Mr. T. Nicholson, of the city of Hereford, diocesan architect, and is in course of construction, under his superintendence, by Messrs. Pearson, of Ross, builders.

Shrewsbury.—The projected restoration of the Abbey Church in this town, has been brought to a standstill for want of funds. The church needs very considerable repairs and alterations—in the interior especially. Mr. Randal, the architect, has carried out the restoration, so far as the funds at his disposal would allow. Another appeal for support, according to the local *Chronicle*, will shortly be made, and we hope it may be successful.

Ilkeston.—Since the restoration of the parish church of Ilkeston, Derbyshire, the churchwardens have obtained subscriptions for transforming the hitherto Italian tower into an Early English one. This has been accomplished without taking down any part of it, with the exception of the unsightly pinnacles (erected with the tower, some seventy-six years ago), which have been replaced by new ones. The design is by Mr. T. L. Walker, late of Leicester, who left for China before the completion of the works, which have been completed by, and under the superintendence of, Messrs. Lindley and Firn, of Leicester, builders, the contractors under the same gentleman for the rebuilding and restoration of the church. No scaffolding was made use of, but no accident occurred.

Morton.—The parish church of Morton, in Derbyshire, has been entirely rebuilt within the last two years, and from time to time has received additions to its internal fittings and decorations. It is distinguished among the county churches by the quantity of stained glass with which it is enriched, and another large window has just been added, as a memorial to the late Mrs. Turbutt. The window-frame is in the geometrical style of fourteenth century, and was reserved from the old church as it existed before the late restoration: it is now filled with stained glass by Mr. Warrington. The tracery is filled with the monogram IHS, angels with thuribles in adoration, &c.; and there are three lower lights of large dimensions, of which the first contains the Saviour bearing the Cross, with a kneeling female in grief at his suffering: the central light contains the Crucifixion, the Virgin and St. John on the sides, and Mary Magdalene at the foot of the Cross: the third compartment has Mary at the feet of Jesus, after the Resurrection, illustrating the text "Touch me not," &c.; the whole three surmounted with foliage, intermingled with canopied arches, and tabernacles containing angels. The reredos beneath the window, composed of ancient carved work in oak, has been painted by Mr. Warrington.

Whetstone.—The parish church here has now been restored and repaired. The tower, originally built of pebbles and sand with very little lime, and the spire, have been taken down, restored, and rebuilt. The tower must have been in a very dangerous condition for many years, as in 1826 an attempt was made to secure it by building a stone ashlar wall and buttresses under part of the north side, at an expense of 1,400*l.* (a pretty profitable job to the builders, as remarked by the *Leicester Advertiser*, and nearly enough at the present day—using the old material—to have rebuilt the whole—tower, spire, and church). This wall only accelerated the destruction of what it was intended to sustain, and must have, ere long, brought the other parts of the fabric to the ground, as the present builders, in scaffolding for taking down the spire and tower, found the latter in a much more dangerous condition than, on examination from the ground, could have been imagined. The spire, built of Attleborough stone, has been used again, its shape being a little altered, and a lightning conductor added. The windows of the tower have been restored, and a new three-light belfry-window, new doorways and doors, with a new broken parapet and new pinnacles, cornices, strings, gargoyles, &c. &c. added. The new walls are faced with Enderby granite. The church has been thoroughly cleaned within. The chancel arch has entirely gone: the piers which formerly supported it and two rudely-carved capitals only remain. The church itself is altogether in a very dilapidated condition. A huge buttress of bricks being put up as a prop on the north side, and the soil having been thrown up to the walls, has rendered the foundations anything but secure. The whole cost of the rebuilding, cleaning, &c. together with a new stone platform and steps to the entrance-gates, will, it is expected, be under 800*l.* Messrs. Parsons and Dain, of Leicester, are the architects, and Messrs. Lindley and Firn the builders.

Alvaston.—The erection of a new church, of which Mr. Stevens is the architect, and Mr. G. Thompson the builder, has been carried on successfully, and the structure is now almost completed.

Bolton.—The Dissenters' chapel in the new cemetery will be erected by Mr. James Marsden; cost, 570*l.*; architect, Mr. Woodhouse. There

are other chapels, lodges, &c. to be contracted for.

Carlisle.—The friends of the Dean of Carlisle have resolved to place a stained-glass window in the cathedral to commemorate a series of losses recently sustained by him in his family. With this view, a meeting was held in Carlisle on the 30th ult. when a committee was appointed for the purpose of carrying out the object in view.

Armagh.—The Roman Catholic cathedral at Armagh is nearly completed. The United States have subscribed the sum of 2,302*l.* towards its erection. The amount *intended* to be spent on it is 10,700*l.*

ART AND THE REJOICINGS ON THE 29TH.

THE arrangements with which Hyde-park and the Green-park are disfigured, and have been for some weeks past, inspire us with apprehensions as to the way in which the promised "rejoicings" are to be carried out on the 29th. Some huge sheds, of surpassing ugliness, have been erected, and these are so designed, that *raking shores* on all sides are necessary to keep them up! The instructions are said to be for fireworks, "as on previous occasions," and we know what such an order as that led to in the case of the "proclamation." It would be a sufficient reply for ignoring every improvement in pyrotechny since 1814. Some say we may think ourselves very well off if we get anything so good as it was on that "previous occasion." There are many living who remember distinctly the fireworks and games, exhibited in the parks, in 1814;—the mock battle and burning of the fleets on the Serpentine, and the water rockets, which were played off with excellent effect; the Temple of Concord, in the Green-park, which was designed by Smirke, and the numerous allegorical transparencies painted by Stothard, Hilton, and other artists. Then there was the Chinese bridge, across the water in St. James's-park, with a pagoda of immense height, which at night blazed with gold and silver light, and from the towers of which fireworks of various kinds were let off with good effect. This tower accidentally took fire, and was destroyed, with loss of life.

Wonderful changes have taken place in the country since 1814: improved taste and a certain knowledge of art have spread amongst large classes: science has also produced great results. The improved scenery and costume of the stage, the displays at some of our public gardens, have assisted to make the multitude critical; and the facilities for travelling abroad have enabled many to form a comparison between the arrangement of foreign festivals and our own.

These and other considerations render it necessary that the fireworks and the general design and effect of the matters intended for the public amusement should be better in every respect than those made more than forty years ago. Comparing, however, the frightful wooden sheds to which we have alluded with the well-designed structures of good architectural proportions which were used for similar purposes on former occasions, for instance, in 1748, and the terms of the instructions given from head-quarters, we cannot help having some misgivings about the 29th. The advice and assistance of the architect and artist should be obtained by the gentlemen of the Ordnance, and something like art should be imported into the devices. It is said that large masses of troops will be brought for the purpose of review into the neighbourhood of London. Might not military music on a very great scale be made available? Handel composed warlike music expressly for a public rejoicing about a century ago.

In 1814, large galleries were erected for the accommodation of the Court and others, and a portion of St. James's-park was set apart for those who chose to pay an admission fee. This appropriation of space for exclusive purposes seems to have been adopted with some misgivings, for the Government issued various notices of their great anxiety to give every accommodation to the public.

Many persons are now seeking to know how they are to see the fireworks without difficulty; and no doubt some provision is necessary; for, without desiring the division of classes, or anything of that sort, we ought to remember that a large number of children and females, unaccustomed to great crowds, will be brought to see this sight,—for the safe accommodation of whom "Pater Familias" would willingly pay. We have heard of one, indeed, who wanted to hire a house in Park-lane for the night, and was repulsed with scorn! A gallery well placed, covered with crimson, and decked with banners, would add much to the effect; and if it were generally known that any sum paid for admission would be appropriated to the relief of the children of soldiers who have fallen in the late war, we believe that the public would be perfectly satisfied. Ample entrances to all the parks should be made.

THE CRYSTAL PALACE, SYDENHAM.

THE opening *fête* for the new season, held on the 9th, when the Queen and Prince Albert were present, and the Scutari Monument and Peace Trophy, designed by Baron Marochetti, were unveiled, passed off brilliantly, and gives promise which should lead to a large issue of season tickets. The presence of five or six hundred of our soldiers from the Crimea, who defiled before her Majesty, gave an almost national character to the meeting, and inspired the greatest enthusiasm. The Scutari Monument is erected in the Nave, on the south side of the Centre Transept; a great mistake, so far as the building is concerned, as we have already said: the Peace Trophy is on the north side; and Marochetti's two Equestrian Statues of Richard Cœur de Lion, and her Majesty Queen Victoria, stand respectively at the foot of the Monument and the Trophy. The Monument consists of a lofty obelisk on a quadrangular base, which has a winged figure at each angle, and an inscription on the face: the whole height is about 100 feet, and the general effect not unsatisfactory. We cannot say as much for the Peace Trophy: a female figure with arms outstretched, and clad in gold and silver tissues, stands on a pedestal of the ugliest possible form, coloured in the ugliest possible manner. It would do discredit to a third-rate confectioner. The rapidity with which the Monuments have been put up is very remarkable. The fountains played in the afternoon; and all the arrangements made by the Company were very excellent.

METROPOLITAN BOARD OF WORKS.

AT a Meeting of the Board held on Friday, the 9th, the following reports by the Superintending Architect were agreed to:—

1. On Mr. R. Carbine's application for consent to erect a shop on the forecourt of No. 6, Pleasant-place, Hackney.

2. On application of Mr. Geo. Legg, for consent to the erection of a bow-projection to the front of Mr. Bryan Donkin's house, Grose's-buildings, Blackheath.

3. On application of the Board of Works of Lewisham, for consent to erect a porch on the forecourt of No. 2, Grove-place, Lewisham.

4. On application of Mr. Samuel Hemming, for the approval of the construction of a temporary iron church at Highbury.

5. On application of Mr. Richard Cattarns, Secretary to the Iron Steam Boat Company, for approval of the construction of a travelling crane at Nine Elms, Vauxhall.

6. On application of Mr. James Gooch, for consent to the erection of an addition in front of No. 1, Medina Cottages, Islington.

7. On application of Mr. Joseph Thompson, for consent to the erection of a building on the forecourt of No. 8, Clarence-place, Camberwell-road.

8. On application of Mr. James Telfer, for consent to erect a shop on the forecourt of No. 9, Durham-place, Hackney-road.

9. On application of Mr. Alfred J. Hiscocks, architect, for approval of the construction of an iron building at Tyndale-house, Wimbledon Park.

10. On application of Mr. F. Bellamy, for approval of the construction of a poultry-house in the rear of No. 5, Medina-cottages, Seven Sisters-road, Islington.

11. On application of Mr. R. L. Sibley for a fee for supervising the erection of a furnace chimney-shaft.

12. On application of Mr. John Tarring, architect, for consent to the erection of a porch to Sussex-villa, Camden-hill, Kensington.

At a previous meeting, in respect of a difference between the architect of the Surrey Gardens and the District Surveyor, as to the construction of parts of the new Hall, the Board determined, with the advice of the Superintending Architect, to support the District Surveyor in his objections; and accordingly alterations were agreed upon by the architect of the building to meet these views.

COMPETITIONS.

Middlesex Industrial School.—We are glad to be able to state that at a meeting of the Committee of Magistrates for providing this school, held on Monday last, it was resolved to refer the forty-one designs sent in to three architects, not being competing parties, to select the seven plans in their opinion most suitable, to carry into execution the printed instructions issued by the Committee. The gentlemen invited to make this selection are Mr. Sydney Smirke, Mr. P. C. Hardwick, and Mr. Pownall, the County Surveyor.

Independent Chapel, Aylesbury. — We are informed that twenty-four designs were sent in, and that the one by Messrs. Poulton and Woodman was accepted: it is a Gothic design, to cost about 1,500*l.*

Norwich Workhouse.—I have just received the "Instructions to Architects," which I beg you to notice in the *Builder*, on account of one special peculiarity. They provide, by clause No. 20, for the drawings being sent, not by railway or carrier, but *by post*, prepaid; a provision which also appears in the advertisement for designs. Now the specified drawings will each require a sheet of double elephant paper, which, to go "by post," will require *folding twice*, viz. across its length and across its breadth. No drawing *can* be strained, or framed and glazed. It is evidently the intention of the guardians to get rid of the exceedingly troublesome mode that now obtains, and to confine all the competitors alike to plain unadorned sheets of paper only. The "sending in" by post, is therefore a very wise arrangement, which will save the competitors much annoyance, and enable the guardians to receive and examine all the designs in one tolerably sized room, instead of having to hire the whole of the apartments of a town mansion to see them in, as was the case with the designs for the Army and Navy Club, and more recently the plans for the Government Barracks. It will, however, be utterly unfair if the guardians do not rigidly adhere to their own rule, by positively refusing to receive any designs transmitted otherwise than by post; and I beg you to give me a corner of the *Builder*, to impress on both guardians and competitors the vast importance of *strict compliance* with this part of the instructions.

A PROBABLE COMPETITOR.

MANY THINGS.

OLD "whitewash," &c. may readily be removed from walls by scrubbing with sand and water,—the latter being previously acidulated with about ·04 of its weight of commercial hydrochloric acid. The commonest variety of the acid, to be had for 1d. or 1½d. per pound should be used for the purpose.

To your Melbourne correspondent who wishes to cool his habitation, I can only say that cold is always produced by evaporation, and that the temperature is lowered in proportion to the amount of surface exposed: the rest must be left to your correspondent's ingenuity. If he can arrange some highly porous covering for his roof, and can keep the same constantly moist (not wet) by the help of a good water supply and a few yards of small tubing perforated with fine holes throughout its entire length, I doubt not that the desired object will be satisfactorily attained.

The "porous surface" might be made in many ways: layers of hay or straw even would answer, if occasionally renewed; and I think the employment of "boiler-felt" would leave nothing to be desired: in a word, let your correspondent examine one of the "Patent Porous Butter-Coolers," lately introduced, and carry out the same principle *in extenso*.

It may perhaps be as well to mention that a cheap and efficient imitation of the above convenient, but, for the million, rather high-priced article, can be easily manufactured in the following manner:—

Take an ordinary flower-pot of the required dimensions, invert it, and stop the small hole with "Portland cement;"* then insert over it another pot (of

* One part of the cement and two of fine sand.

such size that the space left between the sides of the two shall be rather less than half an inch), and fix their rims together at the bottom with the same cement. The inside of the smaller pot must be made impervious by a coat of some resinous substance, say either a mixture of wax and resin applied in the melted state, or else some "liquid glue" (solution of ordinary "shell-lac" in "methylated spirits"), laid on with a brush. The butter-cooler is then complete. Care should be taken that the pots are quite dry before the varnish is applied to the inner one, and three days should elapse after this last operation before the cooler is used.

If it be desired to combine a cooler for wine, &c. with the preceding, a small unglazed drain-pipe may be cemented (socket-end downwards) upon the top of the butter-cooler, and the object is accomplished. The cooler is filled with water from the top through the hole left in the larger flower-pot, and should rest on a large plate, with the butter, cheese, or other edible raised slightly on a smaller one underneath the cooler itself: a bottle may then be placed in the upper part of the contrivance. Some of the coolers used at present allow the water to permeate their substance and pass to the inside: as must be sufficiently obvious, this arrangement will not.

Certain substances (for instance, cream cheese) are injured by a moist atmosphere: in such cases a little Scotch oatmeal, carefully dried, should be placed round them: this will keep the confined air perfectly dry.

In answer to "A Builder," I beg to say that a solution of soluble silica is of great service in making friable or partly-decomposed building-stones hard and durable: the patent process of Mr. F. Ransome is, in my opinion, the best. Upon the subject of "soluble silica" I shall probably have a word or two to say hereafter.

"Philo's" suggestion about coffee and eggs I have known and often applied for some years past. I would merely warn your readers against the sudden addition of boiling water to a concentrated solution of albumine or vitelline (as present in the egg), as coagulation then generally takes place, and the curd thus formed is most unwholesome and indigestible: the addition of a very small pinch of carbonate of soda will prevent coagulation, otherwise the water must not be quite boiling.

I should imagine that iron water-pipes might be cleansed by filling them with brine (or dilute oil of vitriol), and passing up them strips of metallic zinc in contact with their inner surfaces, allowing the whole to remain for a day or two. If the pipes were then flushed, and a small piece of zinc kept attached to them here and there, inside, I think your correspondent would no longer complain of the ferruginous nature of his water. WENTWORTH L. SCOTT.

INSTITUTION OF CIVIL ENGINEERS.

THE evening of the 29th ult. was devoted to the discussion upon Mr. F. M. Kelley's paper, "On the Junction of the Atlantic and Pacific Oceans, and the Practicability of a Ship Canal, without Locks, by the Valley of the Atrato."

It was admitted that a correct description had been given of the routes hitherto proposed, and of the valley in question, but that the route by Panama would be found the most economical and most convenient, if the communication was made between the River Chagres and the Rio Grande, where there were only fifteen or sixteen miles from tide to tide, instead of by Chorrera, as proposed by M. Napoléon Garella.

A letter was read, addressed by Baron Von Humboldt to Mr. Kelley (after examining the maps and plans), expressing great confidence in the survey made and levels taken by Mr. Kennish and his predecessors.

Humboldt expressed an opinion that a free and open discussion would demonstrate the relative advantages and disadvantages of each proposed locality, and there would really be little difficulty in tracing the proper route, wherever there were good plans and sections, such as had been made under Mr. Kelley's directions, of the valley of the Atrato. His opinion in favour of that route, as compared with all the others, had always been strongly expressed; and, in his works, he had even given all the details he had collected, relative to the small canal stated to have been made in the year 1778, by the Indians, under the directions of a monk, the Curé of Novita, in order to unite the waters of the River Raspadura with those of the River San Juan, and thus establish a water communication for canoes across the Isthmus. He alluded also to the labours of Capt. Fitzroy, R.N. who had, in his report on the Isthmus of Central America, descanted on all the known routes; and he recalled the statement of Lieut. Wood, R.N. when surveying the coast, to the effect that he travelled on foot with native guides, from Cupica to the Napipi, in which he bathed, and returned to his ship within six hours, and that the most elevated ground passed over did not exceed 300 or 400 feet. In fact, Humboldt looked upon the proposition of forming an inter-oceanic canal by the valley of the Atrato as perfectly feasible; and he even added, "without locks, or, if possible, without tunnels."

Notices of Books.

WE wait for space to notice as they require a number of books now before us;—Mr. Cresy's "Supplement" to his "Encyclopædia of Civil Engineering" (published by Messrs. Longman), which contains valuable matter; Mr. William Linton's beautiful volume, "The Scenery of Greece and its Islands," illustrated by fifty views (Lodge-place, St. John's-wood); Mr. Ruskin's fourth volume of "Modern Painters" (Smith and Elder); M. Tegoborski's work on "The Productive Forces of Russia" (Longman); and Mr. Wornum's "Characteristics of Styles: an Introduction to the Study of the History of Ornamental Art," published by Chapman and Hall. The same publishers have issued a volume by Mr. Burchett, "Practical Perspective;" the course of lectures delivered in the schools of art in connection with Marlborough House, where Mr. Burchett is head-master of the Training and Normal School. From Messrs. Blackwood we have "The Science of Beauty, as developed in Nature, and applied in Art," by Mr. D. R. Hay, which is a *résumé*, with some original matter, of the author's former works, for those who desire to become acquainted with his theory of beauty in form and colour. Mr. H. R. Twining's second volume on "The Elements of Picturesque Scenery" (Chapman and Hall), is full of thoughtful and suggestive observations for those who will patiently study it. The eighth volume of the "Sussex Archæological Collections, relating to the History and Antiquities of the County," published by J. Russell Smith, for the Sussex Archæological Society, contains several papers of considerable value and interest.—Mr. Ruskin's "Notes on some of the Principal Pictures exhibited in the rooms of the Royal Academy, &c." (Smith and Elder), differ in this from the pamphlet of last year, that whereas then the notices were chiefly adverse, they are now, with the least possible exception, complimentary. In his preface Mr. Ruskin makes some observations respecting the probable difference, in aim, between anonymous and acknowledged criticism; asserts "the dishonesty of criticism in general;" and expresses regret, in which we participate, "that people should be so ready to call every kind of fault-finding 'hostility,' the moment they can bring it home to a known person."

Miscellanea.

OFFICE TABLES IN THE METAL TRADES.—A large sheet adapted for office walls has been published by Mr. William Johnston, of Glasgow, Metal Merchant, containing numerous tabular arrangements on the properties and prices of the metals chiefly used in the arts and manufactures. It is said to be compiled from the most recent and authentic sources, and contains much valuable and useful matter, including a central map of the fluctuations of price in the chief metals during the last sixteen years, and a general table of the physical and chemical properties of all the metals and metalloids, separate tables showing the weights of various forms and sizes of manufactured metals, &c.

MECHANICAL DRAWING AND EDUCATION OF THE HAND.—In a little sixpenny tract under this title, printed at the United National and Free School, Painswick, and sold by Groombridge, the advantage of the cheap French cases of drawing instruments, sold in Paris at from 1 franc 75 cents, or 1s. 6d. up to 20 francs or 16s. for use in primary and other schools as well as schools of art, is urged in form of a letter to the Dean of Hereford, by Mr. W. H. Hyett, F.R.S. There are samples of these cases in the Museum of the Department of Science and Art in Marlborough House. Surely the same sort of instruments could be as cheaply produced in this country, did the mathematical instrument makers know there was a sufficient demand for them. In the tract alluded to, their importation wholesale is recommended. Our home manufacturers should see to this, and by providing a prompt supply prevent the establishment of such a trade to their own prejudice. The tract of Mr. Hyett is worth perusing.

CLARE MARKET.—There is nothing like the "argumentum ad hominem," and I will plainly put it to you, as your house of call is in the locality in question, to ask yourself when you next walk cityward through the confined precincts adjacent to Lincoln's-inn Fields, whether such an ill-conditioned, badly accommodated, offensive, and dirty thoroughfare as that leading through Clare Market, ought to be tolerated; and whether you are not, as a public advocate, bound to protest against it? Late in the evening, especially on market-days, the press of persons there is so great, as not inaptly to remind one of a flight of rooks or starlings, fluttering over a feast fortune has presented to their notice. Surely something may be done to rectify this abuse. Model lodging and washing houses we have got the poorer classes, is there no means of providing appropriate places for marketing? I believe there are some parts of the metropolis where ample provision is made to this end. Perhaps it will be urged, that there would be an interference of vested rights, an immemorial usage perhaps of vending cats' or dogs' meat; one would certainly be averse to give occasion of umbrage to the victuallers of the canine and feline tribes, but no one in his senses will dispute the position that these are very trifling considerations, when placed in competition with what concerns the welfare and dignity of the "human form divine." As one of the public interested, I am content to leave the subject in your hands: perhaps it may have been previously agitated; if not, I hope it will not escape the notice of the *Builder*, and if it should happen that a phalanx of respectable inhabitants of the neighbourhood should, with an eye to amelioration, invade the passages of Clare Market, it is to be hoped they will not find the "pass" another Thermopylæ stoutly defended by "three jolly butchers."—FORUM.

CHELTENHAM SCHOOL OF ART.—The report for the third year has been just presented to the committee and friends of this school, by the hon. treasurer, Mr. W. M. Tartt, J. P. Whilst maintaining its usual amount of teaching at the central school, its operations have been widely extended amongst the colleges and schools of the town; the master, Mr. James Wright, having altogether about 1,100 pupils under instruction, in nine or ten separate institutions. In all an extensive use is made of the black board and class lectures. In the central school the evening students have commenced a small weekly book subscription, in order to form a nucleus of a Fine Art library, and to secure the *Builder* and *Art Journal* being always on the table for their information in Art matters.

THE VICTORIA DOCKS.—Certain modifications are being made in the twenty-one years' lease of the works of the Victoria Dock Company, to Messrs. Peto, Betts, and Brassey, one of which comprises an increase of the sum for expenditure in the construction of works on the additional land east of the docks, from 933,000*l.* to 1,199,000*l.* the entire parliamentary capital, under reservation of 5,000*l.* as a bankers' balance in hands of the directors. Sir M. Peto mentioned at a recent meeting of the company, that the tonnage entering the docks has exceeded 1,000 a-day since the opening.

NEW SCHOOL OF ST. THOMAS, CHARTERHOUSE. The foundation stone of the New School of St. Thomas, Charterhouse, Golden-lane, was laid on 8th inst. by Mr. W. E. Gladstone, M.P. in the absence of the Marquis of Lansdowne, who was to have gone though the ceremony. The existing schools of St. Thomas, Charterhouse, were established for the purpose of educating the children of the costermongers and poor inhabitants of Golden-lane and Whitecross-street. Of the lowest class of children, however, there are still 2,386 who do not attend any school whatever. To meet this deficiency, the present school has been promoted. A freehold site in Golden-lane was procured, and plans prepared by Mr. Hesketh for a building containing three school-rooms, and capable of accommodating 1,000 children. The cost of this building (including purchase-money of site for building and play-ground, 2,200*l.*) is estimated at 8,452*l.* Two-thirds of this, viz. 5,634*l.* 13s. 4d. will be defrayed by the Committee of Council. For the remaining, viz. 2,817*l.* 6s. 8d. the treasurer (the Rev. Mr. Rogers, incumbent of St. Thomas, Charterhouse) appeals to the public.

RATCLIFF, OR REDCLIFF.—We are informed that Mr. Andrews, the engineer, has brought to light some interesting relics of former London, in excavations making at Redcliff for a new dock for the West India Dock Company. Our correspondent says they came to a stratum of red earth, and thinks we may have here the reason of Redcliff being so named. There was also an extensive causeway of wood construction at a spot known as the Danish-causeway. There is a street here called Shakspeare's-walk. The reason may be worth inquiring into. We are told many ancient fragments are found, and, from want of care, are taken possession of by the workmen.

STRIKES IN SCOTLAND.—The masons in Kilmarnock struck work on Saturday before last for 26s. a week. The miners in various parts of Scotland have for some time been on strike, and the struggle still continues, although the men are getting worn out by privation and long endurance. It is computed that for some weeks past 40,000 men have been voluntarily idle, and an amount of wages equalling 320,000*l.* has been lost to them and to the country. The strike is against a reduction of wages.

ACCIDENT WITH A LADDER.—In Clement's-Inn-passage lately, three men were repairing the roof of premises belonging to a butcher, and having all got upon the ladder at once, after performing their work on the roof, while in the act of coming down, the ladder broke, and all were precipitated to the ground, except one, who was caught in the thigh by the butcher's hooks, where he hung till extricated. The other two were also severely, if not fatally injured.

NORWICH FREE LIBRARY.—At the last meeting of the Town Council, the committee reported that the Free Library would be ready for occupation next Michaelmas. The cost of the site was stated to be 1,850*l.*, and of the building, including all expenses, 4,108*l.*, making a total of 5,958*l.* At a previous meeting, statements were made that the contract had been broken by the erection of the additional story. The committee, including several legal gentlemen, are said to be of opinion that it is not broken, there being the usual clause in it for any enlargement or alteration of the original plan. The contractor, says the *Norfolk Chronicle*, has taken a whole year for the erection of another story. Though the money has been advanced for the building, some members of the council will not vote for a halfpenny rate. In the new building, besides three vaults and a large room for the Free Library, there will be large rooms for the Literary Institution, the Museum, the Chamber of Commerce, and the School of Art. A subscription has been opened for the purchase of books, and the secretary has already received a considerable number in the shape of donations.

ACCIDENT AT THE WEST INDIA DOCKS.—During the heavy north-east gale on Tuesday in last week, an accident took place at the West India Docks, by the bursting outwards of the lock gates of the Limehouse entrance of the South West India Dock, or City Canal, by which the whole of the shipping in the dock was placed in peril. The canal runs parallel with the large principal export dock, and within the last year or so, a new dock of gigantic proportions has been constructed at the Blackwall end, which connects the canal with the other extensive basins of the company. The entrance-locks are each fitted with two gates, so as to equalize the pressure of water. At the Limehouse end, however, the outer gate nearest the river was undergoing some repair, and could not be used, so that the whole pressure of water in this section of the dock was against the inner gate. It was constructed of timber 2½ ft. thick, ironed and bolted, and so built and hung as to open inwards. In the course of the evening the wind blowing directly up the canal, had the effect of causing some swell at the Limehouse extremity. The tide in the river was nearly at its lowest ebb, the entrance-lock as far as the inner gate almost dry, and on the other side of the gate in the dock there was a depth of water of some 20 feet. Suddenly the gates, probably weighing 20 tons, were smashed outwards, and swept in fragments into the river, the waters of the canal bursting down into the lock with overwhelming fury. In the torrent were swept away craft of almost every description, but two boats only are said to have been lost, although many were stranded. There were between 70 and 80 merchant ships lying at the various jetties, at each side of the canal. These were carried away from their moorings. The larger ships, however, quickly grounded in the mud. The gates are reported to have been almost the only property injured, and the entrance has been refitted.

CAMBRIDGE ARCHITECTURAL SOCIETY.—At the third meeting of this Society, held on Wednesday, May 7th, the Rev. H. R. Luard read a paper on the Church of S. Apollinare in Classe, at Ravenne. He dwelt particularly on the mosaics which adorn its walls, and gave a sketch of the rise and progress of that art.

A SCOTCH ARCHITECT IN NEW YORK.—A New York paper speaks in high terms of the fine specimens of domestic architecture to be seen in the celebrated street Broadway in that city. It says,—"Wonderful piles of marble, brown stone, and brick have arisen as if by magic, and the indefatigable pioneers of up-town civilization are still building with unabated industry." In Thirty-seventh street, also, it says,—that "a number of houses are going on which bid fair to surpass everything in the neighbourhood." This high praise is chiefly bestowed on Mr D. Jardine, architect, New York, from whose plans the buildings referred to were erected. It gives us pleasure to learn that Mr. Jardine is a native of Whithorn.

POLYTECHNIC INSTITUTION. — The unfavourable weather on Monday had little or no effect on the numbers visiting this establishment. Two new musical performers were introduced. Mademoiselle Mundie on the Cyther or Zitter, an instrument in use in the south of Germany, executed two pleasing pieces, and met with a cordial reception; but the extraordinary performance of Herr Ziros on the musical toy the Hemmilinska, must be heard to be appreciated. Picco's Pastoral Tibia requires the accompaniment of a band, and is a wonderful performance; but Herr Ziros is his own accompanyist, and executes three distinct parts with great facility. The entertainments concluded with an illustration of Bunyan's Pilgrim's Progress, some of the views for which are not so good as they should be. We must not forget to mention an excellent model of the north and south sides of the city and fortifications of Sebastopol, on a scale of 36 inches to a mile, which has been added to the collections here.

MR. WICKES'S "SPIRES AND TOWERS."—A wish has been expressed by some of the subscribers to Mr. Wickes's work, on English Mediæval Spires and Towers, that a supplementary volume should be issued, containing a number of beautiful and interesting illustrations, which want of space necessarily excluded from the two volumes already issued; and the author has decided on preparing such a volume for publication, if sufficient patronage be extended to the undertaking. It would comprise upwards of sixty subjects (the majority of which are referred to, and described in, the essays contained in the work itself), and would be uniform in size and price with the former volumes. As the publication of this supplement would involve considerable time, labour, and expense, and as it would be valuable to those only who possess the preceding portions of the work, the number of copies printed would be limited to the actual number of copies subscribed for, and the author, therefore, is anxious to receive, as speedily as possible, the names of those patrons of the work who desire to be furnished with copies of the supplement. The published volumes were so well done, and form so excellent a work, that we sincerely hope a sufficient number of subscribers will be found to induce Mr. Wickes to carry out this proposition.

THE ARCHITECTURAL MUSEUM.—Two lectures have been delivered here in accordance with the advertised list. We shall as heretofore print the substance of them.

THE BIRMINGHAM RECREATION SOCIETY.—The information sent us on this subject it appears was (doubtless inadvertently) wrong in naming Sunday as the day on which the rooms of the Society are open from 2 p.m. till 10 p.m.: it should have been Saturday not Sunday. The rooms do not appear to be open at all on Sunday.

THE RESERVOIR IN HYDE-PARK. — It has often struck me with surprise, and must, I think, many other frequenters of the parks, that the unsightly reservoir near Grosvenor-gate should still be tolerated. The parks have been greatly improved within these last few years in planting, widening walls, placing seats, &c. I do hope, now that attention has been given to this subject, that this basin will not be overlooked. It is an obstruction to the view and to any improvement of the walks near it, and is, with its hideous fountain, as ugly a thing as can be well conceived. Nothing but the greatest necessity ought to excuse its further remaining.—A PARK STROLLER.

ONSLOW BAPTIST CHAPEL, BROMPTON.—A site having been obtained near Queen's-elms, part of the land belonging to the Hospital for Consumption, the first stone of a chapel for the Baptists was laid on the 6th inst. The edifice will be in the Pointed style of architecture. The extreme length will be 85 feet, breadth 65 feet, height 52 feet, and two towers, each upwards of 90 feet high. The building is to be faced with Kentish rag, relieved with Bath stone dressings.

BARN-FLOORS.—Mr. Greaves, of Matlock Bath, Derbyshire, has favoured the Council of the Royal Agricultural Society with the following information respecting barn-floors, in reference to an inquiry made by Colonel Chapman, "whether any cheaper and equally durable material had been met with, as a substitute for barn-floors, than the old-fashioned oak flooring, for which an estimate had been sent in to him for 40*l.*" :— "In reference to your inquiries relative to the laying of barn-floors, I strongly recommend asphalte in preference to wood, for many reasons, a few of which may be mentioned; as, first, the imperviousness of asphalte to moisture; second, the exclusion it occasions to vermin; and, third, the preservation of the grain in a sweet state from the dryness in which it is kept. I get the asphalte in blocks, and having set up an old boiler near the place, I mix gravel with it while hot, and run out the mixture on the surface required to the thickness of about 2 inches. In a few hours the asphalte floor will bear any weight, and it will be found not only better but cheaper than wood."

DOVER WATER WORKS.—Strong statements have reached us as to the manner in which the water pipes have been laid at Dover, and the consequent waste of water. It seems too serious a case, however, to meddle with on *ex parte* evidence.

TENDERS

For warehouse in Bury-street, St. Mary Axe. Mr. T. C. Clarke, architect. Quantities supplied by Mr. Barrett:—

I'Anson	£2,376	0	0
W. Lawrence and Sons	2,180	0	0
Browne and Co.	2,147	0	0
Ashby and Sons	2,108	0	0
Wilson	2,091	0	0
Westacott	2,078	0	0
Pollock & MacLennan (accepted)	2,076	0	0

For vicarage-house, Gazeley, Suffolk. Mr. William Rogers, architect:—

Clarke (Newmarket)	£1,856	0	0
Grainger (Saffron Walden)	1,848	0	0
Gammon (London)	1,757	0	0
Freeman (Ely)	1,748	0	0
Rednall (Woolpit)	1,745	0	0
Bullock (Cambridge)	1,692	0	0
Taylor and Buckley (London) (accepted)	1,670	0	0

For two chapels, including inside fittings, &c.; two lodges, two sets of entrance-gates, dwarf wall, and iron railing, at Mansfield Cemetery. Messrs. Pritchett and Sons, architects:—

Valance	£1,850	0	0
Prisby	1,710	0	0
Lindley	1,488	0	0
Deunett (accepted)	1,467	0	0

For the erection of a cottage residence, for Mr. R. W. Boyle, Stratford, Essex. Mr. Horace A. Alexander, architect. Quantities supplied –

Perry	£1,224	0	0
Hill	1,217	0	0
Hedges	1,195	0	0
Pilkington	1,127	0	0
Morter	1,097	0	0
Rivett (accepted)	1,023	0	0

For Chorley Cemetery:—

	Saville.	Banks.	Todd.	Chester.
	£. s. d	£. s. d.	£. s.	£. d.
Entrance-Lodge..	447 7 9	384 6 11	473 9	397 0
Episcopal Chapel	345 14 11	306 14 6	412 0	316 0
Roman Catholic Chapel	342 4 4	247 1 2	373 12	265 0
Dissenters' ditto..	311 17 1	255 0 5	315 4	270 0
Totals	1447 4 1	1193 3 0	1574 5	1248 0

Mr. Banks's tender for the three chapels, accepted. The Commissioners are wishful to reduce the cost of the entrance-lodge, and, intending to alter the plan, did not let this building. The Episcopal and Roman Catholic Chapels are, each 32 feet by 18 feet on plan, inside measure; with vestries, 10 feet by 10 feet, and bell turrets. The Dissenters' Chapel is octagon on plan, 24 feet, inside measure.

For three chapels and lodge, at Salford Cemetery. Messrs. Pritchett and Sons, architects:—

	Masonry.	Other works.	Whole.
	£1,904	£ ...	£ ...
Warburton	1,847	598	2,445
Mitchell	2,000	828	2,828
Foggett	...	...	2,694
Burnhill	...	...	2,574
Tully ..	...	...	2,560
Frisby	1,810	...	...
Crowther (accepted)	1,728	... 632	2,360
Dallow (accepted)	...		

TO CORRESPONDENTS.

"*To Colour Mortar*"—Will any of your readers who have had practical experience in the matter, please to say what they have found best for making black mortar, for setting red bricks with, or for painting the same, to be durable, and to stand its colour.

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ERRATUM.—*Proposed Gigantic Tunnels, &c*—By the accidental transposition of the decimal point, page 266, ante, the length of the Box Tunnel was called 313.3·2 yards = 177 miles, instead of 3,133·33 yards, or less than two miles in length.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

NOTE.—Various statements having reached us as to the difficulty of procuring copies of the *Builder* in some parts of the kingdom—more particularly in Ireland,—it is proposed to parties desiring to subscribe, that on the transmission of a post-office order, or postage stamps, addressed "Office of the *Builder*, No. 1, York-street, Covent-garden, London," the *Builder* will be forwarded to them on the day of publication.

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BLUE LIAS LIME.—CHARLES NELSON begs to inform Engineers, Architects, Contractors, Builders, and the Trade in general, that he is prepared to supply direct from the Works in his own boats to any part of the Thames, River Lee, on any canal or by rail to all parts of the kingdom, large quantities of the above GLENDIE HYDRAULIC LIME now so extensively used.
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N.B. The Captain of the Boat will always bring with him the Grand Junction Canal Note, from which the contractor will be enabled to know exactly what weight of Lime he is paying for.
All orders addressed to the
LONDON DEPOT, 16, SOUTH WHARF, PADDINGTON.
BLYTH, BROTHERS, SOLE AGENTS.
Will be promptly attended to, and any further information can be obtained from them
Works, Stoke mum-field, near Southam, Warwickshire.

PLASTER of PARIS.—MESSRS. BLYTH, BROTHERS, beg to acquaint the trade, that they have made a considerable reduction in price; the quality they are now manufacturing cannot fail to give entire satisfaction. Samples and prices forwarded to any part of England, or the metropolis. No extra charge made to any wharf or railway station in London.—Any further information can be obtained at their Works, Baldwin's-place, Gray's inn-lane, Holborn; or at the Blue Lias Lime Depôt, 16, South Wharf, Paddington.

GREY STONE LIME WHARFS,
12, UPPER GROUND-STREET, Blackfriars (Surrey side).
7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or from where direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 8d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brick fields, which are only a quarter of an hour's walk from the City. H. D earnestly requests purchasers to favour him with a visit, in order to inspect his stock and judge for themselves.
Malm Place half-washed Stocks, and Place Bricks, also on sale. The e bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing
Apply to HENRY DODD and CO. at the Counting-house, Hatton Brick fields, Grange-walk, near the Mesonary Branch, Hoxton.
N.B. Light-colored Pit Sand of a good quality constantly on sale upon reasonable terms. This Sand, from its containing any saline matter, is acknowledged to be preferable to river sand

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick making, Flints for building and pottery work, Foundry Loam, Whiting, Whittle Sand for sclpbiade, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick making, &c. &c sent by Barge from Vessrs. MEESON and CO.'S Works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southeastern and Eastern Counties lines or any railway connected with them. Vessels loading from two to three hundred upwards of the above goods lie close to Messrs. MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above named articles can also be procured, as well as all kinds of fire goods of all Welsh and Newcastle Fire-clay, Place Paint Lume, and Marble and Temrer Lume; and here lime is packed in hogsheads, casks, jars, & c. for exportation
General Offices—No. 12, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
WHITE SUFFOLK PERFORATED BRICKS;
DEEP RED RUBBING BRICKS
Also COWLEY and KENT STOCKS, in any quantities,
J. EASTWOOD and SONS, Belvidere Rd. Lambeth; and Surrey-canal Bridge, Old Kent-road, Surrey.

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(Within a short distance of the fire bridges.)
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of the BEST QUALITY.
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WHITE SUFFOLK and RED FACING BRICKS
COWLEY, KENT and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers &c.
KENTISH RAGSTONE of the FINEST QUALITY
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BEST HERTFORDSHIRE MALM SECONDS AND CUTTERS ALWAYS ON HAND.
MILLS AND PRICE, 3, ADELAIDE-PLACE, LONDON BRIDGE;
AND CROWN WHARF, GREAT SOUTLAND-YARD

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent. This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plan and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane, Dulwich. Price of good stock bricks, 35s. per hundred on the field, for cash.—Application to be made to the Foreman, A. BARHAM, at the Works.

500,000 STOCKS.—Wanted, to Purchase about half a million or more of Stocks, delivered alongside in the creek at Stamford or Stanley Bridges, Fulham and Kensington Basin. The Stocks must be good sound grey Stocks. Cash on the delivery of each barge.—Apply to A. B. Mr. Tulls, Rising Sun, Fulham.

BRICKS and TILES FOR SALE.—500,000 Good Old Bricks, 20,000 Pan and Plain Tiles, Stone Steps, Curb and other Materials FOR SALE Cheap, on the Premises now pulling down for Improvements, adjoining the Great Northern Railway Terminus, King's-cross.—Inquire for WM. LAWFORD on the Prem ses.

CHEAP WHITE BRICKS, for FACING HOUSES (Beard's Patent).—These bricks are of excellent make and colour, and imperishable from frost, and do not vegetate or become green.—For particulars, address, Patent Brick Works, Rugby, Warwick-shire.

HODSON'S PATENT BRICK-MAKING MACHINE may be seen in operation daily, on application to Mr. B. LOOKER, jun. Agent, North-ton Pottery, and Brick and Tile Works, Kingston-hill, Kingston-on-Thames. This machine is confidently offered to the public as the most perfect and simple one that has yet been introduced Price £57

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday.
HENRY C. MOUNT, Sec
37, King William Street, City.

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BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES.
For Spouting Roofs of Houses either old or new, whether of thatch, slate, tile, or felt, and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest and most durable Roofing known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent at 5d. per foot. This charge to include tiles delivered in Agents yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Reading.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for the above WARES is REMOVED to No. 21, WHARF, Mac leslield-street North, Oxford Masin. Secondly, that the trade terms, "Terro-Metallic," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 281, of the Great Exhibition, rank the Manufactories known so long as "The Peakes." Tunstall, Staffordshire, as the first of the kind in the world.

HOGG'S REGISTERED GARDEN EDGE TILES.—The attention of PERSONS ENGAGED in LAYING OUT GARDENS and WALKS for Public Institutions, is solicited to these Tiles, as an improvement on box-edging. In colour they resemble Bath stone, they are impervious to frost, serve to drain the paths, are easily laid down, and last for years without further expense. Price 13s. per 100, or about 4½d. per yard run.—Full particulars will be sent on application to R. BLACKETT, Witham, Essex, of whom alone the tiles can be obtained
N.B. White and Brimstone Suffolk Bricks, and Paving Goods of the best quality

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The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve ways three times usual size, made to suit liquors of all kinds, hot or cold, is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

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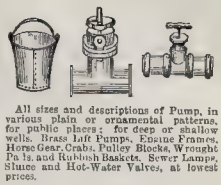

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CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.
1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 45 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non-conductor
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CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot: also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 38s.; 4ths, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 3½d. per foot. Larger sizes up to 24 by 14, 5d. per foot. Ground Glass, in Cases 3d. per foot. Crown and Sheet British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

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FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Zinc, White-lead, Lead, Iron and Brass Pumps, Water-closet Cocks and Plumbers' Brasswork, Paints, Colours, Oil, and Turpentines of the finest quality, at wholesale prices. List on application at THOS. MILLINGTON'S Warehouse, 87, Bishopsgate-street, London. Established more than 100 years.

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CCC CROWN, 18 Tables per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 8d. an ℓ PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d., and 8d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3d. ENAMELLED, 6d. per foot. Tiles and Slates from 6d each. Sashes primed and glazed, 3d. per foot. HELY'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.
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PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 26, Soho-square.

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MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system which gives superior tone and facility for ringing.

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The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dock-yard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

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STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

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Drawings, with Prices, will be forwarded free, on application.

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S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

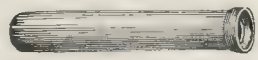
5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 9, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

PAPER-HANGINGS. — JEFFERY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. Their splendid Imitation Tapestry Papers, also in gilt, style, and colouring, as equal to the best made, are manufactured by J. A. and Co., the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls.—Factory, 115, Whitechapel; Show-room, 500, Oxford-street.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER HANGINGS is CROSSE AND BLACKWELL'S WAREHOUSE, 22, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, PRINTED IN THE BEST STYLE. (DEALERS than any other house in the trade. Builders, Decorators, Upholsterers, and large Consumers would do well to visit this establishment.

BRIERE'S PARISIAN PAPERHANGINGS, SATIN, FLOCK, and GOLD DECORATIONS and BORDERS, 16, Alfred-terrace, Queen's-road, Bayswater.

WARNER'S PATENT VIBRATING STANDARD PUMPS, PLAT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in. short	1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „ long	3 3	gutta percha	1 14 0
3 „ ditto	4 6	or cast iron	2 8 0
3½ „ ditto	5 6	flanged pipe,	3 12 0
4 „ ditto	6 6	as required.	3 3 0

2½ „ short, with 15 feet of lead pipe attached, ready for fixing ..... £ 1 4 0
2½ in. long ditto ditto 2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c. Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c., adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

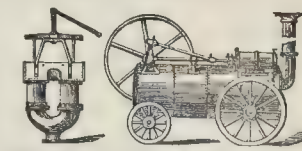
Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

PARSEY'S REVOLVING STEAM-ENGINES and PUMPS (the accomplishment of circular motion).—As steam-engines, are better than all others; and as pumps, being all metal, are equally good for hot or cold liquors; and having no packing, are not liable to choke, and are a vast improvement on pumping and for ships' pumps.—To be seen at Mr PARSEY'S Depôt, Great Scotland-yard.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington basin.

THE VIEILLE MONTAGNE ZINC MINING COMPANY'S PURE PATENT WHITE ZINC PAINT is unequalled for permanency of colour, hardness, and brilliancy of surface; it is unaffected by sulphureous or any other vapours or emanations. Being completely fluxurious and free from the pernicious effects of white lead, it may be employed in all apartments whilst in use without any inconvenience to the inmates.

The greatest caution is recommended to avoid any spurious compounds that might be sold at cheap rates as Pure Oxide of Zinc. If any adulteration take place in the oxide, either in consequence of impurity in the material primarily made use of to produce it, an imperfect mode of production, or by mixing with the oxide certain substances calculated to give it increased weight, it then produces a very inferior instead of a very superior paint, and the economy realised by the purchasers of such oxides becomes a very expensive result to the owner of the premises painted with them.

The VIEILLE MONTAGNE'S ZINC OXIDES, dry or ground in oil, are sold with the VM mark—in Hull by Messrs. BLUNDELL, SPENCE, and CO.; when ground and dry, by Messrs. T. B. MORLEY and CO. and by the Company's Grinding Agents in London, Messrs. CHARLES DEVAUX and CO. Wholesale Agents, 62, King William-street, City; and by the Manufacturing and Painting Agent, Mr. FREDK. BIRBY, Pitsroy Works, New-road. In Manchester and Liverpool by R. CLAY, 8, Mersey-street, who is the acknowledged Painter to the Company for Zinc Paints, and undertakes painting ships, warehouses, dwelling-houses, &c. In Leith, by Messrs. R. ANDERSON and CO. Timber-bush; and in Southampton, by Mr. H. J. BUCHAN. Dry OXIDES and PAINTS in kegs of 1 cwt. and casks of 2 cwt. and upwards, to be had of the Company's Agents in Birmingham, Newcastle, Glasgow, Bristol, Plymouth, Portsmouth, Norwich, Ipswich, Poole, and the Isles of Jersey, Guernsey, Man, and Wight; also in Dublin, Cork, and Belfast.

The Company also employ an acknowledged Painter in London, who will undertake any description of painting with Zinc Paint by contract.

For further particulars, apply to the Company's General Agency in London, 12, Manchester-buildings, Westminster.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.

H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 138, Fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

H H H H	for drawing on wood.	F F	light and shading.
H H H	for architectural use.	F	for general use.
H H	for engineering.	B	black for shading.
H	for sketching.	B B	ditto ditto.
H B	hard outlines for drawing.	B B B	ditto ditto.
		B B B B	ditto ditto.

H. MORRELL.

Sold by all the principal Stationers in Town or Country.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c. at the

NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to THE AGENTS:—

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;

Where a large stock is always kept on hand.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

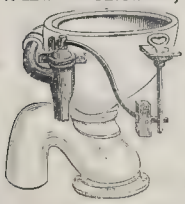
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as far the CHEAPEST yet manufactured.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

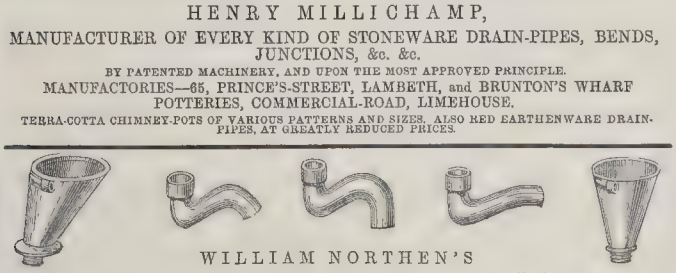
HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.



WILLIAM NORTHEN'S

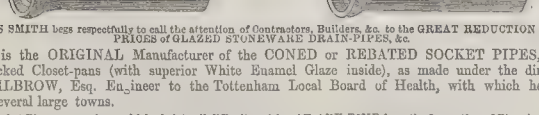
WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of JAMES PILBROW, Esq. Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

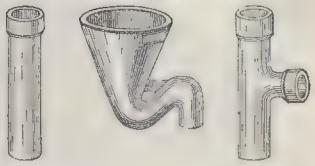
DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality, Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, St. Banksde.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO., Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 3d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 24, Old Fish street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

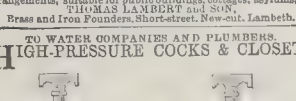
GROUND FLINT AND CORNISH STONE, UNADULTERATED.

WILCOX & CO.

FLINT MILLS, MILLWALL, POPLAR.

PRIZE MEDAL, CLASS 9.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

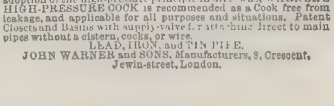
Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all houses, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valves for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

SALES BY AUCTION.

CHELTENHAM.—Valuable Premises and Building Land in the town, chiefly freehold

MESSRS. BEADEL and SONS have received instructions from the Proprietors, to SELL by AUCTION, at the PLOUGH HOTEL, Cheltenham, on THURSDAY, MAY 22nd, at TWO for THREE o'clock, in lots, the MONTPELLIER BATHS, the Bakery, Shops, Mill, Manufacturing Premises, and several valuable Plots of Building Land Lot 1 will comprise the extensive and valuable range of premises situate at the corner of Bath-road and Oriel-terrace, with a commanding frontage of 225 feet; this block of building includes the Montpellier Baths and dwelling-house, in the occupation of Mr. Ruck, who is under notice to quit at Michaelmas next, the bakery, with shops, ovens, fittings, &c.; the mill, with machinery driven by two gas engines, and the whole of the buildings and plant belonging to the vendors and included in the purchase. The remaining lots will consist of freehold and copyhold building land, eligibly placed for the erection of villas or other residences, fronting the Malvern road (close to Christ Church) and which will be offered without reserve in convenient lots (for further particulars, with conditions of sale and lithographic plans, may be obtained fourteen days prior to the sale) of Messrs. J. C. and H. Pilsbury, Bankers, New Bank-buildings; and at the Globe Insurance-office, Cornhill, London; of Messrs. Waterhouse and Bell, Cheltenham; at the Place of Sale; and of Messrs. Beadel and Sons, 25, Gresham-street, London

TO BUILDERS, CARPENTERS AND OTHERS.

MR. LOUND will SELL by AUCTION, on MONDAY, MAY 26, by direction of Mr. Roberts, Builder and Carpenter, who is retiring from all those premises, PREMISES, situate in DUDLEY-COURT, Silver-street, within a few paces of Wood-street, comprising a convenient dwelling-house, containing 5 rooms, and a back building, yard, and sheds, very easy of access from the street, and suitable for any business requiring spacious premises, in one of the most important parts of the City of London; held under Christ's Hospital, for a long term, at the low rent of 45l. per annum; the purchaser to have the option of purchasing the timber, wood, utensils, &c. May be viewed, and particulars had, of Mr. C. P. Upton, Solicitor, 41, Noble-street, City; and of the Auctioneer, 60, Chancery-lane.

BUSHEY, NEAR WATFORD, HERTS Valuable Freehold Building Land.

MESSRS. PRICE and CLARK are instructed to SELL by AUCTION, at GARRAWAY'S, on TUESDAY, JUNE 3, at TWELVE for ONE, several valuable PLOTS of BUILDING LAND, on the high road from London to Watford, in the charming village of Bushey, near the Windmill Inn, and a short distance from the railway station. This property is situate in a beautiful country, surrounded by numerous residences, and has a good road-front, and is in the Union and Harrow-road, it has the advantage of a double frontage, rendering it particularly eligible for building purposes. To be viewed till the sale, and descriptive particulars, with plans, obtained at the principal inns in the vicinity and of Lovelace Fox Person, Esq. Solicitor, 1, Furnival's-inn; at Garraway's; and at Messrs. Price and Clark's Offices, 48, Chancery-lane.

HATTON-GARDEN Peremptory Sale of the Plant and Effects of a Builder and Sewer Contractor; and Lease of the Premises.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, Bleeding Heart-yard, Charles-street, Hatton-garden, on TUESDAY, MAY 20th, the valuable PLANT and EFFECTS, consisting of a large quantity of planks, deals, and battens of various dimensions; scaffold poles and planks, ladders, strut-cramps and bottles, drain and sewer centres, blocking-boxes, paling-boards, and work benches, iron pumps, screw-jacks, blocks and tackle falls, a pug-mill, gully gratings, mortar-barrows and hods, trellises, invert-backplates, prong hoes, spade-irons, and effects; a large quantity of various descriptions; also, two excellent builder's carts, set of cart harness, tarpaulins, and chaff-boxes, two portable counting-houses, fire-irons, desks, and various other effects. At the same time, the Lease of the Premises, with 9 years to run. May be viewed one day prior to, and until the time of Sale. Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange

Valuable Materials of the temporary Iron Piers erected in the Green-park, Hyde-park, and Victoria-park, for the use of her Majesty's Government, for the Public Rejoicings on the occasion of the Peace.

MESSRS. EVERSFIELD and HORNE are honoured with instructions to SELL by AUCTION, on the PREMISES, early in JUNE, the valuable MATERIALS, FITTINGS, and IRON PIERS, consisting of a large quantity of timber, of the most useful description, in framed principals, in the boarding, 3-inch planking, and quartering; also the glazed sashes, doors, and other fittings; the whole of which have been selected with a view to conversion, and will be put in suitable lots.—Further particulars and the days of sale, will be shortly announced, and any party wishing for a catalogue, may have it sent, post-free, by forwarding his address to the Auctioneers, 40, Parliament-street, Westminster.

LONDON, BRIGHTON, and SOUTH-COAST RAILWAY COMPANY.—Arches, No. 24, Bermondsey-street (opposite Webb-street).—To CONTRACTORS, BUILDERS, IRONMONGERS, MASTER CARPENTERS, and OTHERS. A considerable quantity of STOCK and IMPLEMENTS in TRADE having accumulated upon the Premises situated as above, after the completion of sundry works for the Company, consisting of an immense of TIMBER, in large scantlings, planks, deals, and battens, sawn and unsawn; about 15,000 BRICKS, various qualities; large slate slabs, of different thicknesses; wood and stone paving, numerous sinks, granite stone curb, a quantity of large centres, useful iron work and moulds, three capital builder's carts, substantial stone truck upon four wheels, fittings and enclosures of carpenters' shops and stabling; a capital brick-built commodious mill, with gearing complete; prepared joiner's work, ladders, trussels, brick barrows, scaffolding, pile driving machine, useful stage and other items. Mr. PEAKE is directed by Mr. Lee, the Company's Contractor, to SELL by AUCTION upon the Premises, as before described, in lots, on THURSDAY, MAY 22, 1856, at TWELVE for ONE o'clock precisely. Catalogues will be ready for delivery on and after the 10th inst., at the Offices of the Auctioneers, 73, Old Broad-street, City.

TO IRONMONGERS, CABINET MAKERS, BUILDERS, TRUNK MAKERS, AND THE TRADE.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, the 20th of MAY, and following days, at ELEVEN each day, on the PREMISES, 9, James's-walk, Clerkenwell-green, (the retiring proprietor relinquishing the business), the STOCK of IRONMONGERY, 2,000 dozen locks assorted, wrought and cast hinges, a large assortment of brass cabinet-work, bell-work, cabinet and furniture locks, brass escutcheons, and wrought and cast furniture. Part of the Stock-in-Trade of a Lamp-dealer and Japanner, viz., three lots of castings in sash weights, doors, false bottoms, gratings, &c.; 20 crates of iron lamp-glasses, copper goods, and a large assortment of general ironmongery; tools and a bench, &c. May be viewed Monday, and catalogues had at the Premises, and of Messrs. Fuller and Horsey, Billiter-street, City.

Adjoining Premises to be Let

SALES BY AUCTION.

TO ENGINEERS, SMITHS, IRON MERCHANTS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the trustees to SELL by AUCTION, at the IMPERIAL IRON WORKS, Wenlock-road, City-road, on MONDAY, MAY 19, at ELEVEN, in lots, ENGINEERS' TOOLS and STOCK, powerful cutting and punch 8z press, screwing machine, strong slide lathe, two drilling machines, 8-horse power horizontal steam-engine and boiler, two Lloyd's fans, shafting and riggers, wrought-iron tank four iron and seven brick forges, fourteen anvils, 5 tons smiths' tools, 80 tons bolt and bar iron, 30 cwt. cotton wipings, steel tools, corrugated iron roof, and other effects.—To be viewed on SATURDAY previous to the sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

Third Portion of the Important Collection of beautiful Sculptures and Bronzes, Works in marble, bronze, stone, terra cotta, and ornamental objects of marble chimney-pieces, of Italian, French, and Elizabethan designs, choice specimens of seaglioli, &c. of Messrs. Rushworth and Co. at their Galleries, in University-street, by private direction.

MESSRS. RUSHWORTH and JARVIS will SELL by AUCTION, at the GALLERIES, in University-street, near Tottenham-court-road, on TUESDAY, JUNE 3, and two following days in consequence of the premises having been disposed of, the very celebrated COLLECTION of SCULPTURES, in marble, including classical figures, groups, vases, therms, pedestals and fountains, valuable bronzes, numerous chimney-pieces, of the most approved designs in Italian, French, English, and other marbles, many of which are beautifully sculptured by first-rate artists; also columns, pedestals, candelabras, mosaics, pietra dura, and marble slabs, and various works in stone, &c. which have been selected with great taste and judgment. The stock will be arranged in lots, suitable for the decoration of colonnades, terraces gardens, and pleasure-ground in front of the noblemen and gentry, and catalogues will be ready forwarding prior to the Sale, and may be had on the premises; and of Messrs. Rushworth and Jarvis, Sawmill-row, Regent-street, and 19, Change-alley, Cornhill.

TO IRON FOUNDERS, SMITHS, and OTHERS.

MESSRS. FULLER and HORSEY, are instructed by the Assignees of R. J. POLOGASE, to SELL by AUCTION, at the ATLAS WORKS, Broadwall, on WEDNESDAY, JUNE 4, at ELEVEN, in lots, without reserve, the PLANT and TOOLS of a SHELL FOUNDRY, two air-cast iron shell-boxes, three wrought-iron cupolas, Lloyd's fan, erection of driving gear, 5 tons damaged shells, 5 tons wrought scrap and broken cast-iron, 20 tons new rod and bar iron, cast, sheet, and spring steel, 5 tons galvanized corrugated iron roof plates, four smiths' forges, with bellows and anvils, 8 tons pig iron, smiths' tools, stores of various descriptions, files, brass-work, washers and bushes, iron pipe, 80 bags of coals, 1 ton old files, rivets, weighing machine, grindstone, 12 cks and falls, 50 chal-iron of coke, and other effects.—To be viewed on SATURDAY previous to the Sale, when catalogues may be had on the Premises, and of Messrs Fuller and Horsey, Billiter-street, City

Highly-finished double-cylinder Steam-engine

MESSRS. FULLER and HORSEY are instructed by AUCTION, on the PREMISES, 88, Union-street, Southwark, on THURSDAY, JUNE 5, at ELEVEN, a new highly-finished double-cylinder STEAM-ENGINE, of 20-horse power, with bright parallel motion, flywheel, with air-pumping shaft, and apparatus well adapted for a corn or cement mill; the consumption of fuel will not exceed 3lbs. per hp. per hour. To be viewed seven days prior to the Sale, and part with, with catalogues, may be obtained of Messrs Fuller and Horsey, Billiter-street, City.

TO ENGINEERS AND OTHERS

MESSRS. FULLER and HORSEY will SELL by AUCTION, on the PREMISES, 81, Parr-street, Southwark, on THURSDAY, JUNE 7, at ELEVEN the TOOLS and STOCK of an ENGINEER, self-acting planing machine, and wheel-cutting engine, drilling machine, high-pressure steam engines, each of 5-horse power, steam-boiler, seven mortising machines, vices and benches, stocks, taps, and dies, and steel tools, 7 cwt. of cast-iron, several cwt. of brass, large gas and tools, grindstones and frames, a large assortment of patterns, and numerous other effects.—To be viewed on WEDNESDAY previous to the Sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, 19, Billiter-street, City.

TO ENGINEERS, PATENT REVOLVING SHUTTER MANUFACTURERS, AND OTHERS

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY, MAY 26, at ELEVEN, on the PREMISES, No. 15, Gate-street, Lincoln's-inn-fields, in lots, without reserve, the PLANT and TOOLS of a PATENT REVOLVING SHUTTER MANUFACTURER; including a 10-horse power direct-acting steam-engine, an excellent high-pressure tubular boiler, a powerful 15-inch centre-slide lathe with 5-foot bed, 22-inch face plate, and turning lathes, two drilling machines, cutting and punching presses, six fly presses, a powerful draw bench, two cutting machines, set of bending rolls, 4-inch punching machine, screwing machines, vices, stocks and dies, a large assortment of steel tools, wood patterns, smiths' forges and tools, weighing machine, weights, office furniture and fittings, and numerous other effects.—To be viewed on SATURDAY previous to the Sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

HYDRAULIC PRESSES STEAM PUMPING ENGINES, &c.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on FRIDAY, the 6th of JUNE, at TWELVE, on the PREMISES, 73, Curtain-road, Shoreditch, in lots, EIGHT HYDRAULIC PRESSES, with 7-inch, 8-inch, and 9-inch rams, 5 feet 6 inches and 6 feet stroke; five with tables 6 feet wide, and three with tables 4 feet wide; two steam pumping-engines, four and a half horse power each, with two sets 21 and 24 inch pumps; four vertical steam boiler; a five-sets hydraulic hand-pumps, three extra cylinders and rams; two feet wrought-iron pipe, weighing 6 tons; a quantity of waste hoop, and other effects.—To be viewed THURSDAY previous to the Sale, when catalogues may be had on the Premises, or of Messrs. Fuller and Horsey, Billiter-street, City.

TO ENGINEERS AND OTHERS

MESSRS. FULLER and HORSEY are instructed by the Assignees of R. J. Polgase to SELL by AUCTION, at the ATLAS WORKS, Broadwall, on MONDAY, JUNE 2, and following day, at ELEVEN, in lots, without reserve, the valuable TOOLS and MACHINERY of an ENGINEER; one powerful 30-inch centre self-acting lathe, by Fox, bed 30 feet; one 13-inch self-acting lathe, by Collier; one 13 inch and one 9 inch self-acting screw-cutting lathes, beds 9 feet and 12 feet, by Smith, Beacock, and Tannett; one 10 inch self-acting screw-cutting lathe, by Lewis, with spherical slide; one 8-inch screw-cutting lathe, one 7-inch self-acting screw-cutting lathe, by Austin; two 6-inch, two 7-inch, one 8 inch, and one 13-inch back-geared slide lathes, with iron beds; 6-feet lathes, self-acting screw-cutting machine, two planing machines, seven drilling machines, 14-horse power inch pressure steam engine, two steam boilers, weighing 4 tons; forging rigging, two 4-horse power steam engines, steel tools, valuable patterns, and numerous other effects.—To be viewed on SATURDAY previous to the sale when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

TO BUILDERS, FIXTURE AND FURNITURE BROKERS, AND OTHERS

MR. T. S. SMITH will SELL by AUCTION, at the ROOMS, 38, Lodge-hill, Road, on THURSDAY next, the 22nd of MAY, at ONE precisely, OFFICE FURNITURE and FIXTURES, comprising 3 desks, 2 counting-desks, 2 bedstead, library-table, paper case, five one and two-flap desks, in wainscot and mahogany, and miscellaneous effects; also the power and counting-house fixtures, and the Premises; and of Mr. T. S. Smith, 38, Lodge-hill-street, and 1 Upton, Essex.

SALES BY AUCTION.

BUILDING MATERIALS, HOUSE FIXTURES, PAVING-STONES, FIREWOOD, &c.

MR. R. KING is instructed to SELL by AUCTION, on WEDNESDAY, the 21st of MAY, on the PREMISES, back of Saw-mills, Church-street, Mile-end New Town, a large quantity of excellent BUILDING MATERIALS, consisting of joists and timber, in long lengths, rafters, scantling, floor and lining boards, also the house fixtures, consisting of door and frames, sashes and frames, partitions and cupboard fronts, and a quantity of paving-stones, tiles, and several large stacks of firewood. May be viewed, and catalogues had, on the Premises; and of the Auctioneer, Quebec Wharf, Kingsland-road

BUILDING MATERIALS of extensive Premises and Vaults in Fenchurch-street and Paul's Head-court, Ludgate-hill.

MR. ELLIS is directed to SELL by AUCTION, on the Premises, on TUESDAY, 3rd JUNE, 1856, and following day, at TWELVE o'clock each day, in lots, to be taken down by the purchaser, all the capital MATERIALS and FIXTURES of the PREMISES, Nos. 154, 155, and 156, Fenchurch-street, and Nos. 1, 2, 3 and 4, Paul's Head-court, adjoining in the rear, comprising about 60 tons of lead, in flats, gutters, cisterns, and pipes; 800,000 bricks, capital timbers, in rafters, joists and girders; 1,000 plain tiles, 120 yards of glazed sashes, about 150 squares of stout boarded floors, quantity of doors and fittings, staircases, and an assortment of excellent fixtures, panel framing, and useful stuff. May be viewed two days previous, and morning of sale.—Catalogues had of Messrs. Tasson and Son, Architects, Lawrence Pountney-lane; and at the Offices of the Auctioneer, 150, Minories, City

FARNHAM, SURREY.—Within a mile of the town and station. To SMALL CAPITALISTS, BUILDERS, SPECULATORS, LAND SOCIETIES, and OTHERS.

MR. F. G. DEBENHAM will SELL by AUCTION, at the MART, on TUESDAY, JUNE 10, at TWELVE, in four lots, 7 TWENTY SIX ACRES of eligible FREEHOLD LAND, situated in a beautiful eminence, known as Lodge-hill, having frontages of about 1,560 feet to a good road, and within a few hundred yards of the high-road from Farnham to Alton. Particulars at the Bush and Lion Inns, Farnham; and in London, at the Mart; of E. Hockley, Esq. Solicitor, 10, Bell-yard, Doctors' Commons, and at Mr. Debenham's Offices, 36, Cornhill.

ISLINGTON GREEN.—BUILDING MATERIALS OF NINE HOUSES.

PULLEN and SON are instructed to SELL by AUCTION, on the PREMISES, on WEDNESDAY, MAY 21, at TWELVE, in LOTS, all the valuable BUILDING MATERIALS, and FITTING-UP of NINE HOUSES, Shops and Premises in Pierrepont-place and Pierrepont-row, Islington-green, comprising about 200,000 good round Bricks, a large quantity of pan and plain tiles, lead and deals gutters, oak and fir timber, in roof and floors, useful sashes, doors, partitions, chimney-pieces, sound florlegal deals shop fronts, stone pavine, coping, and sills, doors, cupres, and useful fixtures and fittings, &c. May be viewed on the day previous, and catalogues had of Wm. Rogers, Esq. Architect, 13a, Cannon-row, Westminster; and of Pullen and Son, 80, Fore-street, Cripplegate

FARRINGDON-STREET EXTENSION.—Building Materials of several Houses, also a large Quantity of surplus Materials, Timber, Deals, and Iron

PULLEN and SON will SELL by AUCTION, on the PREMISES, on TUESDAY, MAY 27, at TWELVE, by order of the Improvement Committee of the Corporation of the City of London, the BUILDING MATERIALS of Fifteen of Special Houses in Pierrepont and Turnmill-street, Clerkenwell, of the usual description of materials, and a large quantity of surplus materials and stores, consisting of about 10,000 feet run of inch boards, 2,000 feet run die square, 50 ledged gates, shoring timber and useful fir-wood, 10 tons of cast iron, to be viewed the day prior and Catalogues had at the Architect's Office, Guildhall; and of Pullen and Son, 80, Fore-street, Cripplegate

TOWER-HILL. Building Materials of 20 Houses

PULLEN and SON are directed to SELL by AUCTION, on the PREMISES, on MONDAY, MAY 26, at TWELVE, in lots, all the valuable BUILDING MATERIALS of 20 HOUSES, in Petty-wales and Seven Stars-yard, Royal Mint-street, near Tower-hill, comprising about 300,000 good sound BRICKS, YORK and FIR TIMBER, in roofs and floors, glazed sashes, useful doors, partitions, flooring boards, paving pantiles, York and clinker paving, gutters and pipes, weather boarding, gates and fencing, stone coping and sills, stoves, and useful fixtures and fittings. May be viewed on Saturday and morning of sale, and catalogues had of Pullen and Son, 80 Fore-street, Cripplegate.

The Valuable and Important Freehold Manor of Newington, Barrow, otherwise Highbury, in the Parish of St. Mary, Islington, in the County of Middlesex.

MESSRS. DENT and SON have received instructions to offer for SALE by AUCTION, at GARRAWAY'S COFFEE-HOUSE, Change-alley, Cornhill, on WEDNESDAY, the 18th of JUNE next, at TWELVE for ONE precisely, the valuable and improving MANOR, hereditable parcel of the possessions of the Crown, with all the customary advantages, arising from courts baron, and leet, court of survey, and the other rights of the lord, on death or alienation, quit rents, royalties, and all rights, members, profits, emoluments, and appurtenances thereto belonging. By a survey made by order of Henry Prince of Wales (the eldest son of King James I.) in 1611, the Manor was found to contain near 1,000 acres, of which 113a. 3r. 0p. were freehold, 467a. 0r. 6p. demesne land, and 414a. 3r. 14p. were copyhold of inheritance. By the custom of the Manor, two years' improved rent is payable to the lord on death or alienation. The quit rents presently at this time amount to 4l. 2s. 4d. per annum, extending over very valuable property, estimated at upwards of 1,300l. per annum, exclusive of the copyhold tenements. The emoluments to be expected to arise from lands and appurtenances, from which the quit rents and customary fines and payments have been omitted to be reserved, are an object of considerable value; and the whole forms an important investment in every respect worthy the attention of gentlemen of the legal profession or the capitalist. Particulars and conditions of sale with a plan of the Manor, are in progress, and will shortly be ready at the Place of Sale; the Angel Tavern and the Blue Coat Boy at Islington; the Gate House, Highgate; the Upper Holloway's and the Green Dragon, Hornsey; the Plough, Hornsey-road; at the Offices of R. W. Powys, Esq. Solicitor, 33, Russell-square; and of Messrs. Dent and Son, 26, Southampton Buildings, Chancery-lane, and Camden Town.

TO BUILDERS.

MR. GEORGE BERRY will SELL by AUCTION, at the COMMERCIAL-HALL, King's-road, Chelsea, on THURSDAY, MAY 22, at ONE for TWO o'clock precisely, by direction of the assignees of Messrs. Thomas Archbold, bankrupt, the INTEREST in a certain BUILDING AGREEMENT for the LEASE of No. 1, Pelham-square, Chelsea, the sewer to which has been wholly and the road partly completed, together with a Carcase and Foundations of two Houses. May be viewed, and particulars had of the Auctioneer, at the Commercial-hall; of P. Johnson, Esq. Official Assignee, 30, Basinghall-street; of James May, Esq. 3 Princes-street, Spitalfields; and of the Auctioneer, 8a, Motcomb-street, Belgrave-square

LAND.—WANTED, about SIX ACRES of LAND, of Freehold Tenure. It must be within four miles of London; a road-frontage not material.—Price, and other particulars, to be sent to Mr. J. Pontifex, 5, St. Andrew's-court, Holborn.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Brothers) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN at the Office in Hunter-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, May 17, 1856.

The Builder,

A JOURNAL FOR THE

Architect, Engineer, Operatives & Artist.

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ROYAL ACADEMY of ARTS, Trafalgar-square The EXHIBITION of the ROYAL ACADEMY of ARTS is NOW OPEN. Admission from Eight till Seven o'clock; One Shilling. Catalogues, One Shilling.
JOHN PRESCOTT KNIGHT, R.A. Secretary.

THE NEW SOCIETY of PAINTERS in WATER-COLOURS.—The TWENTY-SECOND ANNUAL EXHIBITION is NOW OPEN, at their Gallery, 53, Pall-mall (near St James's-palace) daily from Nine till dusk. Admission, 1s.; Season-tickets, 5s.
JAS. FAHEY, Secretary

ARCHITECTURAL ASSOCIATION.—At the next Ordinary Meeting, MAY 30th, the Vice-President, Mr. A. ALLOM, will read a Paper on the "Past, Present, and Future Position of the Young Architect"; in which the affairs of the Architectural Association, the young Architect's means of Education, and the Diploma Question, will be brought forward. Members of the Architectural Association, and of the Profession generally, are earnestly invited to attend, and take parts in the discussion of the above important questions. The Class of Design will meet JUNE 6th; subject for sketch, "The Junction of Tower and Spire."

Lyon's-inn-hall. T. W. GOODMAN, } Honorary
J. A. BUNKER, } Secretaries.

THE ARCHITECTURAL MUSEUM, CANON-ROW, WESTMINSTER.
On MONDAY next, MAY 26th, a LECTURE on the VARIETIES of STONE USED for ARCHITECTURAL CARVING, will be delivered by Mr C. H. SMITH. Hour of admission, SEVEN o'clock. The chair to be taken at Eight o'clock. Cards may be had at the Rooms of the Museum.
GEO GILBERT SCOTT, Treasurer.
May 23, 1856 HENRY CLUTTON, Hon. Sec.

COMPETITIONS.

TO ARCHITECTS, LANDSCAPE GARDENERS, &c
CHESTERFIELD BURIAL BOARD.—The Chesterfield Burial Board is desirous of receiving DESIGNS, comprising Plans, Elevations, and Sections for the ERECTION of LODGE, with Board room, Entrance gates, Lodge-house, and two Cemetery-chapels, the chapels to be under one roof, to be ornamented with ENAMELLING for the execution of the whole, including inclosing the ground with iron rails and Fences, Chapel-fittings, &c. The outlay not to exceed £2,000. Premiums of £15 and £5 are offered for the two Designs which the Board may consider as being respectively first and second in merit and suitability for the purpose and situation. Plans and drawings are also required for levelling, laying out, Planting and forming Paths and Roadways through the ground, to be likewise accompanied by Estimates fully carrying out and completing the Same, including Plans under the said path and roadways laid down for laying out the grounds. The architect or other person whose plans may be selected, must, if required by the Board, build a border or contractor who will carry out the designs according to estimate. The Board, however, reserve the right of award in any premium, should no Design be accepted for the entire object, accompanied by sealed envelope containing proper name and address, to be sent in, on or before the 23rd day of JUNE next, addressed to the Clerk, from whom a plan of the ground, showing the exact house, intended position of the chapels, &c. may be had on application, enclosing 2s. 6d. in postage stamps.—By order,
ROBERT WALLIS, Clerk.
Chesterfield, 19th May, 1856

EXHIBITION of the ART TREASURES of the UNITED KINGDOM in 1857. The Executive Committee will be happy to receive plans and suggestions as to the best form and mode of CONSTRUCTION of a BUILDING suited for the purposes of the contemplated exhibition. The space intended to be covered is about 15 acres square. The design must also admit of being erected within a period of not more than six months. The Committee do not offer a premium for any suggestion which may be furnished to them, but reserve to themselves the right to award a remunerative consideration if they think fit. The communications must be forwarded, addressed to the Chairman of the Executive Committee, Town Hall, Manchester, not later than the 4th of JUNE next. Every separate plan or paper must bear the signature of the owner. Plans not so marked will not be returned.

CONTRACTS.

NOTICE to CONTRACTORS.—The Commanding Royal Engineer, Portsmouth, hereby gives Notice, that SEALED TENDERS will be received at the Office of the Director General of Contracts, War Department, Pall-mall, London, on or before the 31st inst from persons desirous of entering into a CONTRACT for CONSTRUCTING a CAST-IRON BRIDGE of Communication from the Curtain to the Right Ravelin, and for RENEWING FIVE BRIDGES over the Counter, Portsea Fortifications, Portsmouth. The Plans and Specification may be seen, and all necessary information obtained at this Office between the hours of TEN and FOUR each day (Sundays excepted) until the 30th inst. The Person whose Tender may be accepted will be required to provide two eligible securities, to be bound with him, jointly and separately, in a bond of £900, for the due performance of the Contract by the 1st October, 1856. The War Department reserve the right of rejecting the whole or any of the Tenders. No notice will be taken of any Tender unless upon the printed form, which form may be obtained on application at this Office.
Royal Engineer Office, Portsmouth, 8th May, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall Mall, London, on or before TUESDAY the 3rd of JUNE, 1856, from persons desirous of contracting for RENEWING GRANITE PAVING, FIXING IRON FITMENTS, and PLASTERING, &c to STABLES, at CANTERBURY BARRACKS. Drawings and specifications of the Works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Canterbury Barracks, between the hours of TEN and FOUR o'clock, from MONDAY, the 19th of MAY, to MONDAY, the 2nd of JUNE, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of £—, for the due performance of the contract. Tenders for the above Works to be addressed to the Director General of Contracts, Pall Mall, London, and endorsed "Tender for Paving Stables, &c. at Canterbury Barracks."
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, 6th May, 1856

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director General of Contracts, War Department, Pall-mall, London, on or before THURSDAY, the 5th day of June next, from persons desirous of CONTRACTING with the War Department, for RENEWING the WHARFING on the RIVER BANK, at east end of East Gun Lane, Tilbury Fort, in the Medway district.—Plans and specifications of the work are to be seen, and forms of Tender obtained, on application at the Royal Engineer Office, Gravesend, between the hours of TEN and FOUR, till the 4th of JUNE next (Sundays excepted). The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound under a penalty of £90 for the due performance of the Contract. Tenders to be addressed to "The Director General of Contracts, War Department, Pall-mall, London," and to be delivered free, endorsed, "Tender for Works at Tilbury Fort." No Tender can be admitted after the said 5th day of JUNE, 1856.
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Chatham, May 20, 1856.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director-General of Contracts, War Department, Pall Mall London, on or before THURSDAY, the 5th day of JUNE next, from persons desirous of CONTRACTING with the War Department for ERECTING SCHOOLMASTER'S QUARTERS, near the Garrison Chapel school, at Chatham. Plans and Specifications of the work are to be seen, and forms of Tender obtained on application at the Royal Engineer Office, Chatham, between the hours of TEN and FOUR o'clock, till the 31st day of JUNE next (Sundays excepted). The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately, in a penalty of £— for the due performance of the contract. Tenders to be addressed to "The Director-General of Contracts, War Department, Pall-mall, London," and to be delivered free, endorsed, "Tender for Works at Chatham." No Tender can be admitted after the said 5th day of JUNE, 1856.
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Chatham, 19th May, 1856.

TO CONTRACTORS.—Notice is hereby given, that TENDERS will be received at the Office of the Director General of Contracts, War Department, Pall Mall, London, on MONDAY, the 2nd of JUNE next, from persons desirous of undertaking the BUILDING of a NEW PEDIMENT, the HEAD of the GUNWHARF, CAMBER, at PORTSMOUTH. The Specification and Contract may be seen, and every information obtained, at this Office, between the hours of TEN and FOUR, each day, Sundays excepted. Tenders to be endorsed "Tender for Pediment the Head of the Gunwharf, Camber, at Portsmouth, in the County of Hants."
Royal Engineer Office, Portsmouth, 19th May, 1856.

TO BUILDERS.
NOTICE is hereby given, that TENDERS will be received at the Office of the Director General of Contracts, War Department, Pall-Mall, London, on or before the 9th day of JUNE, 1856, from such persons as may be willing to enter into a Contract with the War Department for EXCAVATING for the SITE of a BARRACK, CONSTRUCTING ROADS, and RAISING a PORTION of the PARAPETS, &c of the Fortifications of Gosport, Hants, agreeably to the plans and specification, to be seen from the 26th MAY to the 9th JUNE, at the Royal Engineer Office, Portsmouth, where forms of Tender may be obtained between the hours of TEN and FOUR o'clock.
N.B.—The War Department reserve to themselves the right of rejecting all or any of the Tenders.
Royal Engineer Office, Portsmouth, 21st May, 1856.

TO BUILDERS.
PERSONS willing to CONTRACT for the ERECTION of a CHURCH, at GREEN-GREEN, in the Parish of Westhorncwich, in the county of Stafford, may see the drawings and specifications, on and after THURSDAY the 22nd of MAY, at the Offices of the Architect, Mr. JOHNSON, Lichfield.—Sealed Tenders to be sent to Mr. JOHNSON, on or before the 5th JUNE, and endorsed, "Green-green Church." The Committee do not bind themselves to accept the lowest Tender.

TO BUILDERS.—Parties desirous to CONTRACT for carrying into effect the ALTERATIONS proposed to be made at the COMMON GAOL of the County of Surrey, at Horsemonger-lane, for the purpose of adapting the same to the separate system according to the plan, specification, bill of quantities and conditions, prepared by Messrs. BANKS and BARRY, architects, which may be inspected at my Office hereinafter mentioned, on and after MONDAY, the 2nd of JUNE, are requested to transmit Tenders for the same, addressed to me at my Office hereinafter mentioned, sealed and marked, "Tender for the County Gaol," before FOUR o'clock, p.m. on MONDAY, the 23rd of the said month of JUNE; and to attend, personally, before a Committee of Magistrates for the said County, at which time and place the said Tenders will be opened at the Sessions House, Newington, on TUESDAY, the 24th of the said month of JUNE, at HALF PAST ELEVEN o'clock. The Committee will not be bound to accept the lowest or any Tender, and security will be required for the performance of the Contract by the party whose Tender may be accepted.
WORSLEY GREIG, Clerk of the Peace.
Record Office, North-street, Lambeth, May 15, 1856.

TO BUILDERS.
PERSONS desirous of TENDERING for the REBUILDING of the PARISH CHURCH of ALDERBURY, in the county of Wilts (nearly Salisbury), also for a PARSONAGE HOUSE, at West Grimstead, near Salisbury, are requested to communicate their intentions to the Architect, Mr. TEULON, of 6, Craven-street, Charing-cross. The plans and specification for the Church may be seen at the Church, on application to the Parish Clerk; and those of the Parsonage, at the present Parsonage. Tenders to be delivered to the Office of the Architect, on or before the 7th JUNE next. Neither party engages to accept the lowest or any Tender.

WILTON LOCAL BOARD of HEALTH.—WATERWORKS.—To IRONFOUNDERS, BRASSFOUNDERS, and OTHERS.—The Local Board are prepared to receive TENDERS for the MANUFACTURE and SUPPLY of about 100 tons of CAST-IRON SOCKET WATER-MAINS, for mains, and other castings for street arrangements. Also for a quantity of Hydrants, Bruce and Plumbing Valves, Air Vessels, &c. Specifications, with forms of Tender, may be had of the Clerk, on payment of 2s. 6d. and further particulars will be given on application to the Engineer and Surveyor to the Board.—Tenders, addressed to the Chairman of the Board, to be sent to the Clerk, on or before the 21st JUNE next.
By order of the Board,
THOMAS THRING, Clerk.
Wilton, near Salisbury, May 22, 1856.

MIDDLE LEVEL DRAINAGE.—To CONTRACTORS for PUBLIC WORKS.—Notice is hereby given, that the Middle Level Drainage Commissioners are desirous of receiving TENDERS for the WIDENING and DEEPENING of the NEW CUT through MARSHLAND, extending from the Ouse River to the River Nene, being about 11 miles in length.—Plans, Sections, and a Specification of the Work may be seen at the Office of Mr. R. LUNN, the Superintendent of the Middle Level Works, March, Cambs, on and after MONDAY, the 26th day of MAY instant, and any further information may be obtained at the Offices of Messrs. WALKER, BURGES, and COOPER, 4, Great George-street, Westminster. The Tenders must be delivered at my Office, 41, Parliament-street, Westminster, by TEN o'clock in the forenoon of THURSDAY, the 5th day of JUNE next, at which time the Commissioners do not pledge themselves to accept the lowest or any of the Tenders.
GEO. GAME DAY,
Clerk of the Middle Level Drainage Commissioners.
Dated this 14th day of May, 1856.

THE CONSERVATIVE LAND SOCIETY.
Viscount Ranelagh
Right Hon. R. V. N. Hamilton, M.P.
Hon. C. Cowper, M.P.
TO ROAD CONTRACTORS, &c.—The Executive Committee are prepared to receive TENDERS for CONSTRUCTING ROADS, DRAINAGE, &c. on the ST CATHERINE'S ESTATE, near Lincoln. The Drawings and Specifications may be seen at the Office of Mr. HENRY GODDARD, Hig-street, Lincoln, on and after MONDAY, the 26th of MAY, 1856. Tenders to be delivered at the Office of the Society, No. 2, Inner Temple-gate, Fleet-street, on THURSDAY, 29th MAY, 1856. The Drawings and Specifications may be seen at the Office of Mr. HENRY GODDARD, Hig-street, Lincoln, on and after MONDAY, the 26th of MAY, 1856. Tenders to be delivered at the Office of the Society, No. 2, Inner Temple-gate, Fleet-street, on THURSDAY, 29th MAY addressed to the Secretary, and endorsed "Tenders for Roads, &c. Estate, Lincoln." The Committee do not bind themselves to accept the lowest or any Tender.
CHARLES LEWIS GRENEN
33, Norfolk-street, Strand.

TO STONE-MERCHANTS, PAVIORS, AND OTHERS.
THE LOCAL BOARD of HEALTH for the Borough of HALIFAX are prepared to receive TENDERS from competent persons for the SUPPLY of all the MATERIALS and LABOUR necessary in the Formation, Repair, and Maintenance of the Public Streets, Road Footways, and Places within the Borough. Copies of the specification, with form of Tender annexed, may be had at my Office; and further information may be obtained from Mr. G. W. STEPHENSON, the Borough Engineer. Tenders, properly endorsed and sealed, must be delivered at my Office, in the Town hall, Halifax, on or before TUESDAY, the 24th day of JUNE next, noon.—By order,
EDMD. MINSON WAVELL, Town Clerk.
Halifax, May 14, 1856.

[*For remainder of Contracts see next page.*

CONTRACTS.

BUILDERS and CONTRACTORS desirous of CONTRACTING for the COMPLETION of TWO PAIRS of SEMI-DETACHED VILLAS, in the carriage of KILBURN, may inspect the plans and specification and obtain particulars, at my Office, on and after the 24th day of APRIL. A portion of the contract to be taken out in brick.—WILLIAM MUNEFORD, Architect, &c. 31, Leadenhall-st.

WELLS, Somerset.—To BUILDERS and CONTRACTORS. Parties desirous of CONTRACTING for the ERECTION of new PAPER-MILLS at Wookey Hole, near Wells, may inspect the plans and specification at the Office of the undersigned on and after THURSDAY, the 1st inst. Sealed Tenders for delivering the Work complete before the 1st of August. The lowest Tender will not necessarily be accepted.

EDWIN HIPPISLEY, Architect and Surveyor.
Dated May 8th, 1856. Wells, Somerset

TO BUILDERS AND CONTRACTORS.

PERSONS desirous of taking down the CHURCH TOWER at Newport, Essex, previous to its being rebuilt, may see the same, and obtain all particulars at Messrs. PROBERT and WADE'S, Solicitors, Saffron Walden, Essex. Tenders to be delivered at the Crown Inn, Newport, by TWO o'clock, on the 31st of MAY next, when they will be opened in the presence of the Contractors to be present.

G. E. PRITCHETT, Architect, Bishop's Stortford.

RESTORATION of BRAINTREE CHURCH. The Vicar and Churchwardens of Braintree are ready to receive TENDERS for the same. The plans and specifications may be seen, and a duplicate obtained, by sending the Tenders sealed up, addressed to the Vicar, or before THURSDAY, the 5th of JUNE. The Vicar and Churchwardens do not bind themselves to accept the lowest or any Tender.

J. P. BENWELL, Churchwarden.

Braintree, May 17, 1856.

NEW PUBLIC BUILDINGS and MARKETS, ASHBY-DE-LA-ZUCH.—To BUILDERS.—The Directors of the Ashby-de-la-Zouch Market Company, Limited, will meet at TWELVE o'clock on MONDAY, the 2nd day of JUNE next, at the QUEEN'S HEAD HOTEL, Ashby, to receive TENDERS for the EXECUTION of the works comprised in the ERECTION of a BUILDING for public purposes, for COVERED MARKETS and other WORK connected therewith. Parties intending to offer Tenders may inspect the Plans and Specifications at the office of MR. HENRY NEWTON, Architect, Post Office Chambers, Derby; or at the Committee-room of the Company at the Queen's Head Hotel, Ashby-de-la-Zouch, on or after MONDAY, the 26th inst., at which time Bills of Quantities, Forms of Tender, and further instructions and information may be obtained at the Architect's office as above. The Directors do not bind themselves to accept the lowest Tender, and will require sufficient security for the due performance of the Contract. By order of the Directors,

THOS. DAVENPORT, Secretary.

Ashby-de-la-Zuch.

TO BRICKLAYERS AND CONTRACTORS.

LINCOLNSHIRE.—NEW TUNNEL for DRAINAGE of WAINFLEET MARSHES.—All persons willing to CONTRACT for BUILDING a NEW TUNNEL, 90 feet long and 4 feet 6 inches wide, of BRICK and STONE WORK, with Sluice Doors, &c. through the Sea Bank, in Wainfleet, St. Mary's, in the County of Lincoln, agreeable to plans and specification now in the hands of Mr. Laland, after the 24th of May, on application to Mr. LALAND, Bank, Wainfleet, Wainfleet, are desired to deliver in their proposals, in writing, sealed and addressed "Tenders for Wainfleet Marsh Sluice," to me, at the Angel Inn, in Wainfleet, on or before TUESDAY, the 3rd day of JUNE next, at TWO o'clock in the afternoon.—By order

Wainfleet, May 19, 1856. DAVID MARTIN, Surveyor.

EXTENSION of TIME for SENDING in TENDERS, from MAY 20th to JUNE 2nd.—To BUILDERS.—Persons willing to CONTRACT for the ERECTION of a new WING to the Mansion of Sir Henry D. Cotterell, Bart. may see the drawings and specifications on and after MONDAY, the 24th inst. by applying to Mr. WILSON, as above. The proprietor does not bind himself to accept the lowest or any Tender, nor will any allowance be made for estimates.

Gam, by near Hereford, May 21, 1856.

TO GAS-WORKERS.

THE DIRECTORS of the OUNDLE GAS COMPANY are ready to receive TENDERS for a NEW GASHOLDER, to be 30 feet in diameter, 14 feet deep, and to hold 300 feet of gas; Three Iron Purifiers, Three Lime-boxes and a 450 gallon Double-acting Lime-water Apparatus, and also to receive Proposals for the Erection of Mr. ROBERT JOHNSON, of Oundle, Builder's Engineer, sealed Tenders will be received until the 7th JUNE next, and the work to be completed by the 1st OCTOBER following.

Gas Office, Oundle, Northampton-hire, May 20, 1856.

TO BUILDERS AND CONTRACTORS.

SWANSEA NEW POST OFFICE.—The Town Council of Swansea are desirous of receiving TENDERS for the ERECTION of the NEW POST OFFICE BUILDINGS, at Swansea. The drawing, plans and specification may be seen at the Office of Mr. FOWLER, Architect, on MONDAY, the 2nd day of JUNE next, at the Office of the Architect, Mr. J. H. BAYLIS, 12, Woolgate-st, Swansea. Sealed Tenders, endorsed "Tender for New Post Office Buildings," to be delivered on or before MONDAY, the 9th day of JUNE next, at the Office of the Town Clerk, Guildhall, Swansea. The Council do not bind the parties to accept the low st or any of the Tenders received.

C. B. MANSFIELD, Town Clerk.

Guildhall Offices, 20th May, 1856.

WANTED, Two or Three Double-purchase CRABS, also Double, Single and Sheave Blocks, second-hand, and in good condition.—Apply to T. L. 65, York-road, Lambeth.

TUPPER and CARR,
Patent Galvanized and Enamelled
CORRUGATED IRON MANUFACTURERS,
IRON ROOFS, SHEDS, AND TANKS, TUBES, &c.
Electric Telegraph and Wire Fencing erected complete.
Works—LIMEHOUSE and BIRMINGHAM.
Offices—8, MANSION-HOUSE-PLACE, LONDON.
Manufactory, Birmingham.

JOHN HENDERSON PORTER,
ENGINEER and CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.

PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fifth the weight of Sheet Lead, is consequently very much cheaper than that material, and at the reduced price of 2s. 6d. per cwt. stronger than Sheet Zinc.

No.			
11 gauge weighs about 1 oz. per foot super.		2s.	"
12	"	2s.	"
14	"	2s.	"
16	"	2s.	"

Full particulars and the reduced price sent by post on application to

A. MOREWOOD and CO. DOWGATE DOCK, LONDON, to whom all letters must be addressed.

SKAIFE'S GALVANIZING WORKS,
Commercial-road, Limehouse, London.

Skaife's process is the most effectual preventive against rust and is extensively used for all purposes where Iron not liable to rust is required.

Patent Galvanized Iron supplied in every form.

Sheets plain and corrugated. Roofs fixed complete.

J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.

An Allowance to the Trade.

JOHN WALKER,
Corrugated Iron Manufacturer Iron Founder, Iron Roof Bridge, and Portable Building Engineer
Offices and Works—William-st. Poplar, London.

A. MOREWOOD and CO. (late Morewood and Rogers),
Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham,
PATENT GALVANIZED IRON, and GALVANIZED IRON, in Sheets,
PLAIN or CORRUGATED, and Curved of all Gauges.
Manufacturers of articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building at the
OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON

WILLSON and ROBINSON, GALVANIZERS and CORRUGATING IRON WORKS, CHURCH-HILL, PENTONVILLE, LONDON.

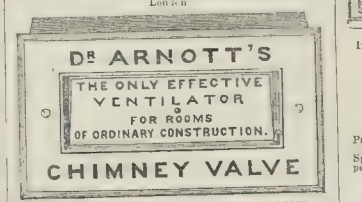
PATENT GALVANIZING and CORRUGATING IRON WORKS. Improved Process WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.

GALVANIZED SHEET IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London

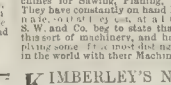


VENTILATORS OF EVERY DESCRIPTION.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham.
Illustrated Price Catalogues post free on application.

MACHINERY for SAWING, PLANING, MOULDING, &c.

SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, and of every size, at all times, in short notice, to give on S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished Companies and Contractors in the world with their Machines for home and foreign use.

KIMBERLEY'S NEW PATENT FLOORING CRAMP continues to receive the patronage one and all, of every leading Builder, Engineer, and Architect, not only in England, but throughout the world. Its simplicity, power, and economy still remain unquestionable, even by the side of its most important rivals, and the steady, annual increase in the sales is the best proof of it. It is useful in many ways as a cramp, and unlimited side-play can be given that it is a first-rate tool, which no Builder should be without.



London Agents—Messrs. THOMAS PUGH & CO. Wholesale Iron Merchants, 11, King-street, Snow-hill, London.

212 MILNER'S HOLDFAST and FIRE-RESISTING SAFES, both conducting and vaporizing with all the improvements, under their Quadruple patents of 1851, 54 and 1856, including their Gunpowder Proof Solid Lock and Door (without which no safe is secure).
THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.
MILNER'S PHŒNIX (212) SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6, Lord-street, Liverpool; 66, Cornhill, 174, Moorgate-street, City. Original, retrieve post.
Send also for Hollis's ASHLEY, and Co. 87, Cannon-st.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Gas Tubing and Copper Wire, Gas Pendants, Brackets, and Tools of all descriptions for fitting up. Brass and Iron; Tin, Composition, Iron and Brass Tubing, Gas Escutcheons, Rosses and Lacquered Case Tube for Picture Rods, Bell Rods, &c. &c.

Super. for Roller Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at

RICHARD EVERARD'S Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

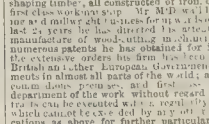
WOOD CUTTING MACHINERY.
JOHN McDOWALL and SONS,
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,
MANUFACTURERS of DIAGONAL SAW-FRAMES
(driven by steam),

For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

Patent vertical saw frames, of the following dimensions, with steam-power attached, circular cross-cut radial sawing machines, patent balance beam radial, patent diagonal cross-cut sawing machines, for heavy timber, planing machines, for working boards from a ¼ of an inch thick to 6-inch deck plank; reversible bill nets, for squaring and shaping logs by timbers, as used by ship-builders, &c; patent curvilinear sawing machine, for circles, sweeps, and straight cutting, well adapted for ship-builders; power mouzing and reducing machines, combined and single, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent sliding feed motions for saw frames, and every description of machinery for cutting and shaping timber; all constructed of iron, of the best materials, and first-class workmanship. Mr McDowall has been the engineer, sole manufacturer, and inventor of many of the most valuable improvements in all machinery of this description for many years, and during the last 25 years he has directed his attention particularly to the manufacture of wood-cutting machinery, having secured by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments, and private establishments in almost all parts of the world; and from their large and constant orders pressing, and first-class plant made for every department of the work required, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be excelled by any other house in the trade. Applications as above for further particulars, will be promptly attended to.

CONTRACTORS.—MATTHEW T. SHAW has on SALE a large quantity of Contractors' Rails and Earth-tip Wagons, Wheels, and Axles, and every description of Railway Plant and Stores. Girders of wrought-iron for Bridges, and Buildings designed and prices given for Ironwork of every description. Deliveries in a few days.—81, Cannon-street, City.—P.S. Wrought-Iron Rolled Flitches to 30 feet.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 178, Shoreditch.
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.



Improved Self-acting Cottage Ranges, with Large Oven and Boiler
20 in. 24 in. 30-inch.
28s. 30s. 42s. 34s.
Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars
30 in. 36 in. 38 in. 42 inch
54s. 56s. 58s. 60s.
Strong Ellip tic Stoves, with Extra Back and Solid Bars, per in. 2½d.
Register Stoves, with Sliding Doors, per inch, 8d.
Improved New Pattern Hot-plate Check Register, with strong Bars and Trivits, 8d. per inch.
Best Solar ditto, with Fire Brick Backs, per inch, 10d.
Bright Stoves, with Two Fires, 4s. to 10s. 6s. each.

Cast Ham-water Pipe	2 in.	3 in.	4 inch	
	11d.	1s. 2d.	1s. 8d. per yard.	
Cast Gutters—4 inch, 9d. per yard.				
	4		4½ inch.	
O G Gutters	1s. 1d.		1s. 3d. per yard.	
	3	4	5	6 inch.
Patent Line	4d.	4½d.	6d.	8d. 10d. per knot.

6-inch Rd. Ward Mortice, with Best Furniture and Patent Spindle, 3s. each. Light Ditto, 2s. 6d. Register Metal, 1s. 8d. per cwt. Best Arnott's Ventilators, 4s. 6d. each.
Brick Moulds kept in stock. Any size made to order.
Rod Cut Chain and Rose Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 in.
Best 8d.	Best 6d.	5d.	4d.	3d. per cwt.
Best Sheet or Flat Brads				1s. per cwt.
Best Cut Lath Nails				16s. "

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and Co. 64 and 65, Bridge-road, Lambeth, where a great variety may always be seen for church, park, rail, counthouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a single door. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletree, arm-mills, &c.

FENDERS, STOVES, and FIRE-IRONS.—Buyers of the above are requested, before finally deciding to visit WILLIAM S. BURTON'S SHOW ROOMS. They contain such an assortment of FENDERS, STOVES, RANGES, FIRE-IRONS, and GENERAL IRONMONGERY as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with bronzed ornaments and two sets of bars, 3l. 14s. to 8l. 18s.; ditto, with ormolu ornaments and two sets of bars, 8l. 10s. to 12l. 12s.; bronzed fenders complete, with standards, from 7s. to 3l.; steel fenders, from 2l. 15s. to 9l.; chimney-pieces, ormolu ornaments, from 2l. 15s. to 7l. 7s.; fire irons, from 1s. 9d. the set to 4l. 4s. Silvester and all other patent stoves, with radiating hearth plates. All which he is enabled to sell at the lowest cash prices.

Finally, From the frequency and extent of his purchases; and for cash only, From these purchases being made exclusively for cash.

GASELIERS in GLASS or METAL.—The increased and increasing use of gas in private houses has induced WILLIAM S. BURTON to select from the various manufacturers in metal and glass all that is new or elegant in BRACKETS, PENDANTS, and CHANDELIERS, adapted to offices, passages, and dwelling houses, as well as to have some designed expressly for him; these are NOW SHOWN over his SIXTEEN LARGE ROOMS, and present, for novelty, variety, and purity of taste, an unequalled assortment. They are marked in plain figures, at prices proportionate with those which have tended to make his establishment the largest and most remarkable in the kingdom, viz. from 12s. 9d. the light to 20 guineas.

The alterations and additions which these extensive premises already have undergone, and which comprise the whole of the first floor, are of such a character that the entire of EIGHT HOUSES recently added to the original premises, and the whole of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel, Silver, Plated Goods, Baths, Brushes, and Turnery, Lamps and Gasaliers, Bronzes, Iron and Brass Bedsteads, and Bedding) are on SEVEN large Show Rooms as to afford to purchasers facilities in the selection of goods that cannot be had elsewhere.

Illustrated Catalogues sent post free.

39, OXFORD-STREET, 1, 1A, 2, and 3, NEWMAN STREET; 4, 5, and 6, PERRY'S PLACE. Established 1820.

JOHN TANN'S new patent RELIANCE LOCK and FIREPROOF SAFES for the best and cheapest safe in the world against thieves and fire. Certificates to be had of Messrs. Waterlow, Birchin-lane; at the Warehouse, 30, WALBROOK, CITY; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong-rooms and party walls.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, also invites the attention of Builders, &c. to his stock of Iron-mongery, Brass Foundry, Safes, ornamental and cast Copper and Zinc, Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. &c. 6d. each.

J. H. BOOBBYER (late STURCH and) BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

ST. PANCRAS IRONWORKS,

OLD ST. PANCRAS-ROAD, OPPOSITE THE OLD CHURCH, LONDON.

TO ARCHITECTS, ENGINEERS, BUILDERS, AND CONTRACTORS.

HER MAJESTY'S
ROYAL LETTERS PATENT.

OR IMPROVEMENTS IN THE CONSTRUCTION OF
CORRUGATED IRON BUILDINGS
AND ROOFS,

As erected for and approved of by Government.

FOR ENCLOSURES,

This Patent is as Strong, as Durable, and much Cheaper, than
BRICK WALLS,
And as Portable as HURDLES.

CASTINGS,
HEAVY AND LIGHT,
PLAIN AND ORNAMENTAL.

WROUGHT
IRON-WORK,
AND FORGINGS,
OF
EVERY DESCRIPTION.

SPECIMENS MAY BE SEEN AT THE WORKS.

ENAMELLED MANGERS,
From 17s. 6d.

Patentees of the latest Improvements in Manger and Rack, and Manger, Rack and Water Trough approved by the
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EVERY DESCRIPTION OF STABLE FURNITURE.

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No. 16	1½	7s. 0d.
15	1½	7s. 6d.
15	1¾	8s. 0d.
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THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11½ inches, and turning one side of each notch in succession in contrary directions on the several strands of the iron, thus forming REVERSED CLAWS, which hold so fast that a direct end grain of the iron is presented longitudinally, and which become when laid into the brickwork, embedded in the structure, by which means a COMPLETE and PERFECT DETAIL TIE throughout the whole building is obtained.

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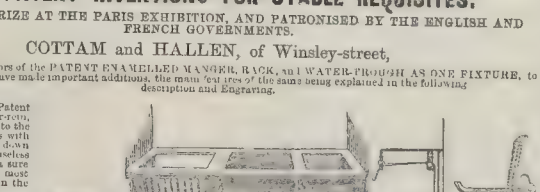

A represents the Patent Halter-guide and Cribbar-iron, the ball of which is taken to the back of the manger-works with freedom and ease up or down the guide bar, and is noiseless in its operation, as also a sure preventative against the most restive horse being cast in the stall.

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C. The Seed box detached, made of galvanized sheet iron, light and durable.

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Sizes—	1½	1¾	2	2½	3-in. & larger.
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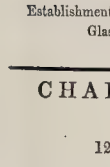

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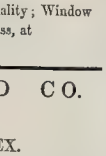

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"	VI.	"	Rome	..	..	..	..	3 "
"	VII.	"	Byzantium	..	..	..	..	3 "
"	VIII.	"	the Arabs	..	..	..	..	4 "
"	IX.	"	the Turks	..	..	..	..	3 "
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								48

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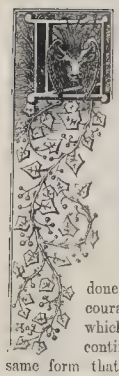
VOL. XIV.—No. 694.



LATELY, it has been stated by those who are in good positions for judging, that great progress has been made since 1851, in art as applied to manufactures, and to the decoration and furnishing of houses. We propose to say a few words on the matter. The Department of Art is beginning to disseminate knowledge of correct principles amongst designers, and even amongst manufacturers. There is still, however, much to be done ere the manufacturer will have courage to freely test whether that which is good in principle will not continuously please, and whether the same form that is beautiful and æsthetically correct, may not be that which will acquire the highest mercantile value,—for, that disposition of mind which exemplifies itself through changes of fashion, is really unfavourable to the sense of beauty. Assuming, as we can readily do, that the union of high art and manufacture is compatible—whilst necessary to the intended dissemination of the benefits resulting from art,—we must regret that the public demand either has not definitively spoken yet for results from correct principles, or that the character of the demand is not readily seconded by the supply. It is still scarcely possible to furnish a house, however plain your intended work, without violating at every turn some sense of propriety, and offending some cherished perception of beauty. Indeed, the more simple the scheme of decoration and the desired ornamentation, the more difficult is the attempt. The cause is not any want of variety in patterns: it would be one part of our business to remark that the variety is already too great,—as in paper-hangings.

The excessive desire for novelty is precisely one of the deductions from the sum of satisfaction with the existing state of taste. To satisfy the desire, a multitude of designs are produced in succession by the same hands, and in every combination of colour, without, as it would appear, any thought of what would be *the most* beautiful combination.

Still, whatever the nature of the demand may be, the contrast presented by it to the taste of a preceding period is quite manifest. Formerly, those who coveted a reputation were so excessively nervous about doing wrong, that they did *nothing*; and, though it may be said that it is better to be inoperative than to be actively bad, the principle of venturing nothing would stand in the way of *progress*; in which consists all excellence,—social, moral, and intellectual. Whereas, within the last few years, amongst people of every degree, there has sprung up the desire of embellishing that "kinde of private princedome" which, according to the often-repeated words, now on the title-page of our volume, may well deserve "to be decently and delightfully adorned;" and from which desire—spite of all drawbacks—spring some of the chief social virtues. Even that desire, however, will not be attended with unmixed good, if accompanied with any *pretence*, or if there be the eventual dissatisfaction following from the habit that people have of deluding themselves into the idea that they are pleased with certain forms and ornaments, whilst candid and unprejudiced consideration would show them that they were not so. For, without technical knowledge, people would often come to right conclusions on some of the chief art-questions,—if they could divest themselves of preconception. Thus, much of what is called "ornament" in furniture and fittings, would strike them as the very reverse of *ornamental*. The presence of such "ornament" will usually be traced to pandering on the part of the designer to the notion that quantity of work constitutes something that is beautiful: for, judging by the tactics of the manufacturer, he finds it commercially advantageous to put forth this *quantity*, even though a second glance would show it to owe little to mind and hand, and to be intrinsically bad.

Recently-completed works of interior decoration and furnishing may be ranged under one of two classes. Under the one head, we would put such works as are presumed to be from new designs; and under the other we would put such interiors as present a combination of old designs and manufactured articles. We will take the latter—the more common case—first.

It is assuredly to be regretted that so little has been done to produce household fittings moderate in price, and at the same time unobjectionable in form and decoration. We will suppose that you are furnishing a room. Of course, as in every good design, your work being viewed as a whole, it is to have its points of greater and lesser prominence, and its relieving surfaces undecorated. Proceeding on such principle, we will say you come to the fireplace. You want a fender, and it suits your scheme to have it good, but undecorated. Where can you procure such an article? You will require it made to order, just as much as in the case of the most ambitious production. Fenders may be bought for 7*s.* 6*d.*—but such fenders all attempt as much as those costing 3*l.*; and of course, failure in the effect which they profess is borne upon the face of the object. So we say, in everything that the room requires; everything pretends to be ornamental, yet is obviously not so. And everything procurable, even supposing it good *per se*, is designed as a distinct thing, instead of with some regard to the fact that it will be a part of a whole. What artist would think of painting a picture where every figure should seem to be striving for prominence?

Again, in carpets and paperhangings, it is quite correct that they should be treated as backgrounds: but how difficult it is for an architect to achieve this apparently simple result. The variety of patterns is wonderful; taste is, perhaps, not wholly wanting; yet it is most difficult to procure what you need. Provided the architect can accomplish that much, he is generally afterwards overruled by others. His employer seems to regard the selection of paperhangings as a prerogative to be surrendered on no account whatsoever. We are inclined to think that it could be predicted, that (what may be found from experience), the proprietor of the house will invariably reject any pattern selected and laid before him. Nothing will satisfy but the overhauling of some hundred pieces. "Why, sir," said an intelligent paperhanger to an architect, about one of these selections, — "I have noticed over and over again, that gentlemen get so bewildered with the lot of patterns that pass before them, that sometimes they end by choosing actually the very worst of the lot." Instead of any surprise at such a result, it would not be consistent with ascertained facts in physics if it were not so. It has been conclusively shown by M. Chevreul, that the eye in looking at colour after colour, is gradually undergoing change,—so that the character of each colour is altered; in short, the colour is vitiated. An analogous result is unquestionably produced in form and proportion; indeed, the recognition of it constitutes the whole art of design. In Professor Cockerell's lectures, the effect of different dimensions upon one another, has been lucidly explained. On every ground, therefore, it is vain to expect under the present system, all the success in the interiors of ordinary houses, that an architect *might* produce, even using manufactured decorations and fittings. It is impossible to draw the line anywhere between what some may think architects' work and the completely furnished apartment,—for there can be no separation in effect. In practice, indeed, it is found very difficult to carry out the elaborate supervision which might be required; and this will bring us to the next point that we have to notice,—the influence of the class called "decorators." Only let us premise, that we could suggest means of meeting the difficulty,—under somewhat amended relations between master and pupils.

It must be admitted that the qualifications of decorators have greatly increased of late years. The names of some individuals, heads of large establishments, will at once occur to our readers. It would be very unfair to rank these with the upholsterers of a few years back. In some cases, they are truly artists; and have studied their subject long and attentively, both in England and on the Continent. In other cases, the principals have in their employment designers of great talent,—who are sometimes foreigners,—as still are the best workmen. Where the system fails is in cases where the principals have not commenced their original attention to the subject with the training that an architect has undergone. The latter, if his progress teaches him anything, feels constantly the importance of the now recognised æsthetic principles, and more especially the importance of structural truth. Designs for decorations of rooms by foreigners (as shown by the works in the late Architectural Exhibition), were mostly very greatly wanting in the recognition of this principle. In some of the works by Messrs. Galli and Cotti, the errors of the late Italian school were prominently exhibited,—painted architecture (never to be viewed otherwise than as a weak substitute) being mixed up with the true pictorial; and figures so disposed as to mimic living figures, being placed adjoining the figures in the *picture* of a different motive. In many works by others, painted imitations of pilasters, mouldings, and other architectural forms were freely introduced. There was, however, in the majority of the works, besides skill of hand, an unusual amount of fancy. Designers who have been educated on the Continent, indeed, seem to us to excel our own in the extent of their resources, or their fancy. They, however, fail where the others are under advantages,—viz. in the application of such structural principles, as here there has been the opportunity for learning through the medium of the study of Gothic architecture.

The pursuit of several different styles, it would scarcely be consistent with much that has been said on the subject in these pages, did we not also consider an error,—though in furniture it is usually regarded as a venial one. The Gothic style alone seems not to come responsive to the hand of a continentalist. The absence of effort of any sort in the style by the chief exhibitors, and Mr. Kuckuck's painted imitation of a rose window as a ceiling decoration, exemplified what we refer to.

Mr. Prignot's version of the Louis XVI. style deserved notice, both from the skill and taste manifested in those of his drawings which were in that manner, and because we omitted to refer to it specially, in those articles of the "Recent History of Architecture," which related to the progress in France of distinct style in interior decoration. It differs from the Louis

XV. style, inasmuch as it has a decided rigidity of character. It is, therefore, a better style, having regard to the element of structural truth. It has many points of resemblance to the much earlier distinctive style of the Renaissance. It is further important just now, as being promoted in the application or revival of its character, by M. Fortoul, who, as the French Minister of Public Instruction, has more opportunities of influencing the condition of our art, than are within the scope of individuals in England.

Whilst, however, we think that the Gothic style of interior decoration was inadequately represented at the Architectural Exhibition, we think it needs infusion of fresh spirit.

The great drawback to the success of works of interior decoration as produced, we say, is that the *architect* does not bring his knowledge to bear on decoration, and that the decorator lacks that regard for structure which would preserve him from many glaring errors. Through want of encouragement, insufficient allotment of time and interference by the client, and inadequate return, the architect has been gradually giving up an essential part of his profession. Is he to remain falling short of one large portion of his proper art; or, what step can he take to get the confidence given to others who follow a trade? He maintains the professional position, whilst the public choose even his workmen as their *artists*. What is the reason of this? Is it that the architect, as at present educated, cannot be an artist; or is he unnecessarily oppressed with details of business (the old story of the duties of a commander swamped under the duties of an office-clerk)? or is his peculiar professional calling valueless, or merely not understood? He is forbidden by the Institute to contract, or have any commercial interest in any class of works,—though there may be architects, who do not pay implicit deference to the restriction, in the case of decoration. If the restriction is of value, should it not be applied to all persons, and under all circumstances? However, the decorator by trade contrives to get a degree of license, which it seems never the system to give to architects. We hear of those who are generally quite unlimited as to expense, and who will submit to no dictation. They *supply* everything; and they design all new fittings, such as gas-lights, just as may seem to them requisite. In one house at Manchester, the gaseliers alone have cost as much as a fair-sized house. When the work is done the bill is sent in, and paid without complaint. What, we ask, is the position of the architect's profession compared to this? How does the difference arise? Is the architect to be positively the worse off for the maintenance of a professional *status?*

Whilst his proper position is that of chief artist of a building, and sole controller of the works, is he thus to be made to resign really the bulk of his real duties to one who, whatever his merits, is after all tradesman and contractor, as well as artist? The question involves the very existence of our profession. We crave, rather than express, opinion on the subject. We only point to what seems a strange anomaly.

Our own doctrine as to the importance of interior decoration as a positive branch of professional architecture, has been adhered to from a very early period in the course of this journal. We contended for the comprehensiveness of architecture as a subject, and in favour of attention to decorative art by architects: and in our pages it was shown that the forms and principles of decorative art, and art-manufacture, were to be, and had ever been deduced from architecture and structure; and that we said long before such views were given forth by their present chief promoters, and of course before a Department of Art had been dreamed of. We claim no merit for any discovery: no one assuming to have the slightest insight into architectural principles, or art-history, could do so: but it does seem, that even yet the application of structural principles, no less than the true relation of nature to art, requires to be pressed upon the attention of many persons.

To apprehend, as some appear to do—even yet—that mechanical resources, and new inventions are antagonistic to art, would betray a crudeness of judgment, which no educated *architect* should be guilty of. What is done in cast work, may be inferior to what has been done in wrought; but surely, that is by those who have not invented designs suited to casting, but have preferred to promulgate that certain things their new process could not do. It is this very "confession of weakness," as we have heretofore called it, that has been the error in all that has been done in interior decoration, with the aid of manufactures: and it is most erroneous to disclaim against the manufacture, simply because some have chosen to turn it to a wrong account.

That which it is most important just now to do, is to moderate the desire for excessive ornamentation, or the imitation of it, in every article of furniture or decoration. Paintings and sculpture forming the most beautiful decoration for the walls of a room, nothing should be introduced which can detract from them: and so long as ordinary costume in a room has neither colour nor lustre, it seems even doubtful whether great richness can be displayed on the walls without some want of harmony arising from that particular.

Novelty also—be it added to all that we have been saying of late on that head—is a necessary element in art, but not the only, and perhaps not the highest one.—We would have the love of art, a thing such as "age" could "not wither, or custom stale." That result will be contemporaneous with decline of *fashions;* and then at length people will comprehend what is so often quoted, but so little understood, that,—

"Taste, never idly working, saves expense."

ON BRICKS AND BRICKWORK.*

It appears to me that the subject of bricks and brickwork can not be uninteresting to an inhabitant of London, for London is essentially a brick-built city, and however little any one may be interested in building every one is interested in the view from his window, or in his walk; and as the architecture of the city is the people's property, it behoves them not to neglect it, but to use every means in their power to have something to compensate them for the green fields and God's light and air, which the houses take from them. With the bulk of the dwellings of London, it is no question whether they shall be of brick, of freestone, or of marble, but whether they shall be of brick or plaster. The advocates of cement have been, after a long struggle, compelled to give up any rational defence for its use, as a means of imitating stone; but they now tell us that they advocate its adoption as a material as honest in its way as brick or marble, and on the ground that it has a bright look far superior to the dingy brick. But take any plaster with which we are acquainted in London, and were it not for its yearly coat of stone colour, it would exceed the worst brick in dinginess, for the colour of buildings in London very slightly depends on the colour of the material employed, but on its complexion; and plaster is more apt to hold the soot than brick or stone. In every other respect it is inferior, for who can contemplate any extent of the deadest brick wall, without it calling up reflections on the wonderful industry of man, who has piled up these small cubes, of 3 inches in height, to 100 feet, and the skill he has exhibited in placing them so that they stand for ages; while the plaster hides from us all history of the building's life, and from its being only a thin coating, it is incapable of receiving any deep impressions, while its liability to crack, and to be acted on by the weather, and its susceptibility to injury from external violence, renders it an unfit material for work that is to endure. Not that I object to carefully-*executed* plaster as a means of decoration, when used in small pieces and in sheltered situations, to throw out parts of the building, nor when used as a ground for painting, as a building then becomes one vast picture in colour, or chiar'oscuro. I only object to plaster when used unpainted to cover a whole front, or as an imitation of some other material.

Being, I hope, agreed on the superiority of the commonest brick to the best plaster, we will, if you please, just consider something of the history and application of brick, before we make any further remarks on its capabilities; and in speaking of brick, I intend to include every variety of the plastic, keramic, or potter's art—every material that from a plastic state is hardened or vitrified by fire, including glazed and unglazed tiles and earthenware. Bricks must be divided into two classes, the burnt and the unburnt; and though the unburnt would hardly appear worthy of mention in a country like England, so subject to heavy rains, and with so humid an atmosphere, still the enormous structures that have been raised in unburnt bricks in countries in many respects far more civilized than our own, must entitle them to mention. The manner of forming these raw bricks we learn from various authorities and specimens; but we may take the account of Pliny as about as good a one as any that we have. In book xxxv. cap. 49, he says:—

"Bricks are not to be made from a sandy nor from a gravelly soil, much less from a pebbly one, but from a chalky and whitish or from a reddish soil; but if from a sandy, let it certainly be from a stiff one. They are best made in spring, for they get cracked in the summer. They are not good for buildings, unless they are two years old, and the loam should be well steeped before they are made." This would lead us to suppose that the Romans did not use straw or reeds like the Assyrians or Egyptians. It may be remarked, that it does not seem improbable that the moulding of unburnt bricks was discovered in a few generations after the *Creation*. The impression of the human feet on soft ground at once strikes the attention of savages. We see it represented in the picture-writing of the Mexicans, and we hear of it being used as a means of tracking the enemy by the American Indians. When its susceptibility of receiving impressions was once noticed, man could not fail to observe how it hardened in the sun; clods that had fallen in on a river bank might readily suggest its use in masses, and the nest of the swallow or the house of the beaver might have given the pattern of a complete hut. Be this as it may, we find that unburnt bricks impressed with a pattern were used at an early period: some of the oldest remains of building are in that material.

The Nineveh palaces were built of unburnt bricks, formed of loam and straw; the walls were in many instances 15 feet thick, lined with the sculptured slabs of alabaster now in the Museum; and it is the falling in of these walls, and their being again converted into earth, that has so wonderfully preserved these sculptures.

Xenophon speaks of the city "Larissa being

* The following paper was read at the Architectural Museum, Canon-row, April 21st, being the first lecture of the summer session. Gratifying reference is made to the Architectural Museum in "The Third Report of the Royal Commissioners of the Great Exhibition of 1851," although the Commissioners take a little more credit than belongs to them, when they say that very shortly *after* the publication of their Second Report, wherein they referred to the want of means of imparting instruction in Architecture, and to the absence of any museum or collection in the metropolis illustrative of that important division of the Fine Arts, "Vigorous measures were taken to provide a remedy for the deficiency in question, and that they have resulted in the establishment of an Architectural Museum, which has for some time been open for exhibition in Canon-row," the fact being that the Committee had occupied their premises some time before the Report in question appeared. The Commissioners go on to say: "The interest excited by this museum, and the success that has attended it, notwithstanding its recent formation, lead to the hope that it may expand to wider dimensions, and serve as the nucleus of a complete national collection of Architecture in all its branches. It already embraces a collection of many thousand specimens, and appears to be supported by the most eminent men in the profession. It is understood that the limited space afforded by the rooms in Canon-row tends to impede the development of the collection, and that a more extensive site would be of great advantage to it. Should it appear that the means at our disposal could in this respect be made of assistance to the promoters of this museum, we shall be happy to afford them such facilities as may be in our power."

walled with πλινθοι" (κεραμιαι, or potters' bricks, which I imagine to be unburnt bricks). "This wall," he says, "was 25 feet thick and 100 high, built on a stone plinth of 20 feet in height." The latest discoveries at Nineveh have shown us a similar wall on a stone plinth. In Mexico, the Teocalis, or God's Houses, are built, or at least faced with bricks, generally believed to be unburnt. One of these Teocalis, near Cholula, is in the form of a square truncated pyramid, and is formed of four terraces; its whole height is 177 feet; each side of its base is 1,423 feet, twice the length of the Great Pyramid of Cheops. Its base covers 44 acres, and its truncated top contains more than one acre.

In Egypt there are many small pyramids of unburnt bricks,—at Dashour and Thebes,—the bricks being formed of loam and chopped straw. Many of these bricks are stamped or moulded with figures and hieroglyphics; and it is very probable that it was for the building of these pyramids that the Israelites were employed in making bricks, as described in Exodus c. 5, v. 7.

Among the Greeks, we learn from Pausanias of Agis besieging the city of Mantinea, which was walled with unburnt bricks, and which he overcame by turning the river against it, which dissolved the wall. It is recorded that Nineveh, under Sardanapalus, was destroyed in a similar manner. Pausanias, too, tells us that walls of unburnt bricks resist the battering-ram better than stone walls; and Pliny says, that walls of this material are less affected by earthquakes than other walls; and we have found in our attacks on the Russian earthworks, that earthern walls are not less adapted for modern warfare.

The burning of bricks, and the use of mortar, seem to imply so great an advance in civilisation, that we should hardly expect to find burnt bricks used before some thousand years had elapsed from the Creation; and the first mention that we find of it is in Genesis, for the building of the Tower of Babel (Genesis xi. 3, 4):—"Let us make bricks, and burn them thoroughly; and they had brick for stone, and slime had they for mortar; and they said, Go to, let us build us a city and a tower whose top may reach unto heaven." The description given by Herodotus agrees with this exactly: "Here I think I ought to explain how the earth taken out of the moat was consumed, and in what manner the wall was built. As they dug the moat, they made bricks of the earth that was taken out, and when they had moulded a sufficient number, they baked them in kilns; then making use of hot asphalte for cement, and laying wattled reeds between the 30 bottom courses of bricks, they first built up the sides of the moat and afterwards the wall itself, in the same manner." We have lately found walls in Babylonia built exactly in this manner, with asphalte and wattled reeds.

Herodotus tells us that the king Asuchis, wishing to surpass the former kings, left a pyramid as a memorial, built of brick, on which was this inscription,—"Do not despise me in comparison with the pyramids of stone, for I excel them as much as Zeus the other gods, for by plunging a pole into a lake and collecting the mire that stuck to it, were made bricks, and in this manner built me."

Xenophon, in his "Anabasis," book ii, cap. 4, gives an account of the wall of the Medes. It was built, says he, of burnt bricks laid in asphalte, 20 feet thick, 100 feet high, and its length was said to be 20 parasangs, about 67 miles long.

Diodorus Siculus, book ii. cap. 8, mentions the walls of a palace at Babylon, as being of burnt brick, carved with men and animals all painted in the natural colours; but it is not very clear whether these were not all in raw tints as those at Nimroud. Herodotus gives a similar description of the walls of Ecbatana. The use of bricks painted in colours and burnt in was doubted until the discoveries of Layard and others, when specimens of burnt bricks were found at Nimroud, painted in white, yellow, green, and black enamel. These bricks seem to have been embedded in the plaster above the alabaster slabs, as ornament, and near Wurka, Messrs. Loftus and Boutcher found a wall formed of mud and chopped straw, ornamented with geometrical patterns formed by the circular ends of small cones of baked brick, the remaining portion of the cone being embedded in the wall. These ends had been enamelled in black, yellow, and white. Coffins and other large pieces of pottery have been found of brick or terra cotta, glazed with a greenish glaze, of which there are many specimens in the Museum.

Similar cones, with inscriptions and hieroglyphics, are found in Egypt and Babylonia, the inscriptions on many of the Babylonian urns being so fine as scarcely to be deciphered with the aid of a magnifying glass; and we are all well acquainted with the Egyptian terra cotta and steatite gods, covered with the blue glaze, as well as beads and scarabæi of different colours. There are specimens of enamelled wall decorations from India, but they are of late date—they seem to have been introduced by the Mahommedans about the thirteenth century.

The Greeks were acquainted with the burnt brick and enamel from an early date, which may have been introduced from Egypt. The vases of Sauros were celebrated in Homer's time, B.C. 900, and we have enamelled vases as early as 700 B.C.

Æschylus, in his "Prometheus Bound," tells us that before Prometheus's time, men were unable to build brick houses.

Aristophanes, in his "Birds," gives a very amusing description of the building of a city in mid air, in which he says no Egyptian bricklayers were employed, but the storks were making bricks, and the other birds laying them.

Demosthenes, in his orations about the crown, speaks of bricks; and Pliny mentions that the Greeks, when they might build of flint, prefer brick walls, for they were eternal if they were built upright; and he tells us that the walls of a certain city were of brick, and the Temple of Jove also, although it was surrounded with stone columns. Yet it has been stated that no Greek bricks have been found prior to the subjugation of Greece by the Romans, and with the exception of the terra cotta antifixæ, I do not know that the Greeks ever used terra cotta or enamelled pottery in the decoration of their buildings. At Rome the common houses were generally built of unburnt bricks, while the body of nearly all their public buildings was of burnt brick, faced with marble or stone. If they used brick as a means of decoration, very few specimens have come down to us; although we find that the temple of the Divus Rediculus, in the valley of Egina, is all of brick, beautifully executed, with the capitals of the Corinthian pilasters, and the ornaments and cantalivers in terra cotta, and remains of terra cotta ornament have been found at the Villa of Hadrian, at Tivoli, and elsewhere. Suetonius, in his "Augustus," tells us that Augustus boasted of having left Rome of marble which he found built of brick, a boast which was facetiously applied to Nash as the London Augustus in the following epigram:—

> "Augustus of old was for building renowned,
> For of marble he left what of brick he had found;
> But is not our Nash, too, a very great master,
> He found us all brick and he left us all plaster?"

Among other ancient nations, the Chinese have been celebrated for their great acquaintance with the plastic art. It is needless to mention the great wall of China, built of burnt brick (which much resembles the wall of Media). Its date is about 200 years B.C. The invention of porcelain is said to have taken place about A.D. 1000; or at least the first furnaces for its fabrication were erected about that time. They have used porcelain as a means of decoration. Their tower at Nanking is ornamented with porcelain tiles; and open-work tiles, about 2 feet square, with a greenish glaze, are used by them for dividing their chambers,—a specimen of which may be seen over a shop in Fenchurch-street. It will be useless to enter into any description of brick after the Roman empire, for in all probability the art of moulding and burning bricks was never lost. We find buildings of brick in all parts of Europe, dating from the first century of our era; but I have not examined them sufficiently closely to say whether they were built of the old Roman remains, or of new bricks. In the fifth century the palace of Theodoric, at Ravenna, was built of brick; and nearly the whole of the campanili of that city are circular, and of brick. At Rome all the campanili previous to the Renaissance period are built of brick; and in the towns of Italy we see the cornices formed of moulded brick, or of projecting herring-bone courses, or of series of corbellings. The brick-built towns of Italy soon began to apply art to the terra cotta or brick; and every variety of ornament moulding or sculpture was executed in that material. I should merely exhaust your patience were I to enumerate the buildings at Pisa, Bologna, Siena, Venice, Verona, and hundreds of other towns where ornamental brick buildings may be found.

Mr. Fowler has made many drawings illustrative of the moulded brickwork of Germany, the earlier portions of which are of the fourteenth century. The first modern brick house in England is said to be at Little Wenham, in Suffolk, date about 1260; and there is a house at Cressingham, in Norfolk, the whole of the *traceried* part of which is executed in white terra cotta.

There was, however, a portion of the fictile art almost lost in Europe during the middle ages, that of enamelling in colours on earthenware. Theophilus, who wrote in the twelfth century, in his schedule of the different arts, under the head of "Earthenware Vases painted in divers Colours of Glass," says,—"The Greeks, likewise, make earthenware basins, and small vessels, and other fictile vases, painting them in this manner: they take all kinds of colours, grinding them singly with water, and mixing with each colour a fifth-part glass of the same colour, very finely ground by itself with water, they paint with it circles, or arches, or squares, and in them beasts, birds, or leaves, or any other thing they may wish; after these vases have been painted in this manner, they place them in a window-furnace, and apply a fire of dry beech-wood below them until they are surrounded by the flame, and thus the wood being taken out, they close the furnace; the same vases can also be decorated in places with gold leaf, or with ground gold or silver, if they wish, in the above-mentioned manner."

This shows us that the Greeks of the lower empire were the only people he knew of then acquainted with the art of enamelling on earthenware, for if other nations had been acquainted with this art, this learned monk would not have failed to mention it. It appears, however, that the Arabs were acquainted with this art at least as early as the ninth century, and in their conquest of Spain they carried it with them; the enamelled ware which came from Majorca (where they had established a manufactory) was imported into Italy, and earthenware is even now called Majolica. The mosques of Cadiz, Cordova, the Alcazar of Seville, and the palace of the Alhambra at Granada, are enriched with enamelled tiles of great beauty, which show the advanced state of their keramic manufactures. At Kirkook, between Bagdad and Moussoul, is a minaret covered with glazed bricks, which Mr. Boutcher believes to have been erected as early as the twelfth century. In most Turkish and Persian towns there are still more beautiful examples; at Moussoul there are curious geometrical patterns formed in the parapets to terraces by means of hollow brick tubes, which hide the sleepers from the public gaze, while they allow a free current of the cool night air. Many of the Romanesque churches are ornamented with blue, red, and green basins let into the face of the brickwork. St. Agostino and San Francisco at Pesaro, San Martino at Pisa, San Francisco Bologna, St. Pietro in Ciel d'Oro at Paria, may be mentioned as examples, but these are not considered to be earlier than the fourteenth century. In 1388 was born Luca della Robbia, who, after having practised as a sculptor for some years, found he got so little by his profession, that he thought he would try some other plan for making his fortune; "for, considering," says Vasari, "that clay was easily worked and with little fatigue, and then only wanted the finding a means to preserve it, he went thinking about it so long, that he found a means of defending it from the weather, by giving it a glazed coating made with pewter, terraghetta, antimony, and other minerals and mixtures, baked in the fire of a fur-

nace." The first works he executed in this glazed terra cotta were the bas-reliefs over the sacristy doors at Sta. Maria del Fiore, at Florence. These were covered with a white glaze, but afterwards he was enabled to colour them with blue, green, and yellow; and all Italy is filled with these works, either done by him or his pupils. In the cathedral at Arezzo there are several coloured bas-reliefs, and the frieze of the hospital at Pistoja is entirely composed of coloured bas-reliefs in the Luca della Robbia ware. In one of the churches, I think at Siena, there is St. John the Baptist's head in a charger, executed in its natural colours, and its ghastly resemblance to reality makes it a thing never to be forgotten. The last of his race, Girolamo della Robbia, it is said, made the bas-reliefs, &c. of the Château, Madrid, for Francis I. After his time bas reliefs, in coloured and glazed earthenware, were common throughout Italy. Madonnas are found in the walls at Assisi, and elsewhere; and I found the spire of a church built of common red brick, glazed with white, yellow, and green bricks, in the form of a truncated cone. At Amalfi, Capua, Naples, &c. most of the churches are covered with coloured tiles or bricks, as well as throughout France, Germany, and Belgium. And since the end of the sixteenth century, the art of manufacturing porcelain has become generally diffused through Europe; and I suppose that England may now boast that she can equal in fineness of material or colour, the pottery of any nation that now exists, or ever existed, while her designs have never equalled those even of the Chinese now so celebrated throughout the world, in the willow-pattern plate. Of cut brick I have said nothing; the folly of cutting a material in a hard state, when it can be moulded in a soft state, is too apparent to need comment.

It was but a few years ago that bricks and mortar were despised, and considered to be incapable of producing any architectural effect; and strange to say, the very despisers of this material are those who now cry out against sculpture, ornament, and colour, and tell us that architecture depends on proportion only. As an advocate of brick, I say, if you require proportion only, the use of bricks will not spoil the proportion of your building. The Castle of St. Angelo, at Rome, is surely imposing, though stripped of its coatings of marble and bronze; there is the Campanile of St. Mark's, and the interior of the Colosseum. Dante did not think the brick tower at Bologna was wanting in grandeur, when in one of his finest similes he compares Antæus Virgil and himself to this tower when a cloud passes across it.

And I think we shall find among the most imposing buildings of London the brick walls of the warehouses, the shot-towers, and the railway chimneys. But for architecture as a fine art we want something more than proportion,—we want ornament, and sculpture, and colour. A few mouldings from the curve of a shell, a leaf, or a stone, to give harmony and gradation to the lights and shadows, and we have the art of Greece, or of France and Italy in the thirteenth century. It is true that brick or terra cotta does not readily adapt itself to tracery or the pointed arch, and is totally unfit for circular columns of small dimensions, but we can substitute plate tracery, as at Pisa, and marble columns, and the pointed arch *may* be executed in brick, as at Siena, or better in terra cotta; or we may use round arches, with the smaller openings pointed in slabs of terra cotta, and for vaulting over any large span with a pointed arch there is no inconvenience in the use of brick. But the plastic nature of brick seems entirely to have escaped us; no one seems to have been struck with this fact but Luca della Robbia and the Chinese. We might take one of the commonest types of a London house, with two windows on each floor, with a circular head over each window, and fill it with a slab of bas-relief, or a pierced panel; the edges of the window-openings might be moulded; with openwork filling-in at the bottom of the window, bands of sculpture or foliage might be placed above the ground-floor; the rain-water pipes might be composed of stout earthenware, twisted, ribbed, or otherwise ornamented and gilt, with leaves or flowers at the junction, a slightly projecting band of ornament or colour for the cornice, and open parapets. If we complain of darkness in our streets, we may have the fronts of our houses entirely of white glazed tiles, or ornamented with bands and zigzags of colour; we may have them painted with frescoes like the Venetian palaces, but imperishable; we may cover our plastered fronts with mosaic, or with bulbs of fretwork like those at St. Mark's. And it is to the art workmen, and to all who may have the opportunity of employing them, that I would point out the advantages of brick. The cultivation of art is, in my opinion, the greatest benefit we can confer on any one; but it is a more especial benefit to those who are not gifted with that transcendant genius which will rise and make itself known and appreciated, in spite of every adverse circumstance. By cultivating art among those who are more particularly doomed to earn their daily bread by daily labour, we encourage a taste for the beautiful which brings with it its own reward; we encourage that individual exertion which raises and pleases at the same time, and enables the humblest to so far immortalise himself, that he may cause in after ages pleasure to thousands, while he is perpetuating the curl of a tendril or the expression of a face. We have at hand an inexhaustible supply of plastic material that merely asks us to mould it in any form of beauty that we love: it asks us to indulge in that instinct of our nature, never to repeat, but that every fresh piece shall have some difference from the piece that went before, or shall come after, in every foliated moulding, slab, panel, or spandril: it invites us to give with the same general form an endless variety: it gives to the sculptor a means of sketching out his burning thoughts, almost as rapidly as they come to him, and of fixing them so that they shall outlive marble and brass; it gives to the architect the means of decoration at a cost that cannot be attained by any other means,—the facility of plaster, the durability of granite. Every man may have his house decorated with the history of his life, his occupation, or his aspirations; our public buildings with their history and their viscissitudes; it gives to the flowers of our country an undying record on our buildings, to our heroes a reward for their toil and their sufferings; it affords to our people and our children a history that he who runs may read; and it may give to our city a series of historical sculpture which Nineveh or Athens never possessed; while we may paint and gild in imperishable colours the fronts of our houses, we may fill them with the finest fretwork, purer than alabaster and as enduring as adamant; we may set them over with jewels that shall glow like the liquid fire in the setting sun.

G. Aitchison, Jun.

OPEN FIRE-PLACES AND THEIR CONSTRUCTION.

At a meeting of the Royal Institute of British Architects, April 14th, a Paper on this subject was read by Mr. S. E. Rosser, in the course of which it was said;—That the position of the fire near the hearth is of the utmost consequence to the efficiency of any grate. This position lessens the direct radiation upon the faces of persons sitting near the fire, and throws more upon the legs and lower part of the body. The property of warmed air to ascend renders it necessary, for the general warming of a room, that the fire should be as low as possible, because heat, though readily carried upwards, cannot be communicated downwards. Hence the difficulty with the old-fashioned grates, mounted up 15 or 18 inches from the floor, of heating the air of the room below the seats of the chairs.

But an attempt has lately been made to revive the fashion of putting the fire half-way up the chimney, and it has been argued when it is considerably above the floor it will be in a better position to radiate downwards than when nearly on a level with it. This argument, however, is based upon an imperfect appreciation of facts. If the fire were a globular body, equally incandescent over its whole surface, the amount of heat radiated from its underside would be as great as that thrown upwards or forwards. No fire-place, however, that has yet been constructed is equally incandescent on all sides.

The Staffordshire fire-place, as it has been termed, is the nearest approach to the globular form, and it throws out more heat from its under surface than any other fire-place. The bottom of an ordinary grate is a mass of iron-work, which intercepts any amount of radiation; and this iron-work does not even become tolerably warm, because it is kept cool by the current of cold air rushing over it to feed the fire. Moreover, the space between the bottom bar and that immediately above it is commonly filled with dead ashes and dust, which materially impair the efficiency of this part of the fire, even to radiate heat in horizontal lines. The more we consider these facts, the more we shall be convinced that it is only the upper surface of the fire, and that portion of the front which is comprised between the two upper spaces of the bars, that are of any value in regard to radiating power.

Air-flues constructed in the chimney-breasts when a house is built would materially promote the comfort of the inhabitants. These flues might have openings at bottom communicating with the external air; and, if they were carried up alongside the smoke-flues from the different fire-places, or connected with the void spaces round the grates, a considerable portion of the waste heat, usually escaping by the chimney, would be communicated to the air in the flues. Apertures should be made into them at their upper part to communicate with the various rooms, and a continuous supply of tempered air might thus be provided to maintain salutary ventilation, to supply the requisite quantity of air to the fires, and to afford an increased degree of warmth.

Referring to Cardinal Polignac's statement as to the three modes in which the heat of burning fuel may be rendered serviceable for warming, viz. by radiation, by reflection, and by conduction; they may be combined to produce an effect very different from that of the stoves to which Dr. Arnott's remarks applied.

By the use of fire-brick linings, and by placing the aperture for the escape of the smoke at the back of the fire, we increase the intensity of the combustion, and the consequent radiation.

By the use of reflecting surfaces we ensure nearly all the radiated heat being directed into the room.

By placing the fire upon the hearth, and by properly arranging the conducting materials, we greatly increase the amount of radiation, and destroy the cold foot-bath which accompanies a fire raised much above the floor; while, by introducing warm-air chambers and caliducts, we abstract a large portion of heat from the smoke, and employ it to warm a supply of fresh air for the room, which prevents cold chink winds, one of the principal objections against the open fire-place, and corrects the tendency to unequal heating which arises when we depend on radiated heat alone.

By diminishing the quantity of air escaping up the chimney, we reduce its liability to smoking.

By the use of sunk ash-pits or concealed ash-pans, in conjunction with low fires, we prevent the dust being diffused into the room.

As regards bad ventilation, it is by no means evident that this asserted objection to the open fire-place is correct; but granting that the fire-place ought not to be the only means, modern practice has given us numerous contrivances by which efficient ventilation may be obtained; while, on the other hand, it is certain that so long as we allow the fire to draw its supply of air from the room, we must have some ventilation. As much disappointment is often occasioned by the want of knowledge as to the points which constitute a good stove, the following remarks are offered in the hope that they may be found useful.

1. The fire should be as near the floor as possible.
2. The opening of the front should be low.
3. The grate should be lined with fire-brick.
4. A shallow fire, with a large upper surface, is better than much front with a contracted upper surface.
5. A stove from which the smoke escapes

from the back is better than one from which it rises directly into the chimney.

6. A contrivance for regulating the quantity of air escaping up the chimney is very desirable.

7. The use of a blower in any form is only waste of fuel.

The following rules for setting stoves may be found of service.

1st. To let no air enter the flue, except what passes through the opening provided for the escape of the smoke. If it be desired to have a ventilating opening into the flue from the upper part of the room, the propriety of forming it will depend upon the draught which ordinarily exists in the flue. It will generally be better to use an unoccupied flue for the purpose of ventilation.

2nd. The grate should be kept as much forward into the room as is consistent with appearance. It is a mistake to suppose that it is more likely to smoke when brought well forward than when pushed back into a recess, provided cross draughts are avoided.

3rd. The flue in common register stoves should be brought down of equal dimensions perpendicularly over the fire, the register contracting the opening at the bottom, or, where the escape of smoke is at the back, the flue should be brought down at the back of the grate, and be made perfectly air-tight.

The gathering wings usually constructed over the openings of fire-places are perfectly useless.

In conclusion, it may be remarked, that with the improvements introduced into modern grates, the heat afforded for the warming of a room ought materially to exceed the proportion stated by Dr. Arnott, whose observations seem to have been made upon stoves of an imperfect construction.

A discussion ensued at the close of the paper from which the above is taken, and

Dr. Arnott, visitor, observed that the theory and principles of combustion were frequently quite opposite to the facts which occurred in the action of chimneys. He had no doubt that with some further study of the subject some of Mr. Rosser's opinions would become changed. With regard to low fires, it would be found by placing a thermometer on the floor, that a fire on the hearth did not dart a single ray of heat upon the carpet. The whole of the heat of a low fire would be found to ascend, and the feet of the people sitting in front of it became cold. Many of the opinions advanced on the subject of fire-places were no more true than the old opinions, that the sun rose and set instead of the earth turning round. M. Peclet, whom he had seen in Paris, had told him that the normal condition of all the chimneys in Paris was to smoke. The dearness of fuel caused the people there to keep their fires half smothered, and to shut the inside of the chimneys, and let the smoke into the room. The smoke, indeed, was made so cold by the channels round the fire, that the necessary intensity of ignition was prevented; so that less heat was obtained from the fire, and the smoke was so cold that the external atmosphere was not sufficient to make the chimney act. The tops of all the chimneys in Paris exhibited in a striking manner the distress of the inhabitants, by the great variety of cowls which ornamented them. He described the effect produced by substituting, in his own drawing-room, a low fire-place (the very best which a good ironmonger could supply), for one that was raised above the floor. He found with the low fire the cold affected his feet most severely. He considered a grate should be raised about 14 inches from the floor.

Mr. C. H. Smith observed that the horizontal shelf behind the Staffordshire grate he considered a very good contrivance. Most of the inns, and many private houses, in Yorkshire, had a similar arrangement, the shelf holding a sufficient quantity of coals to last all day. Reasoning upon this arrangement, he had been induced in his own house to adopt the plan of warming the coals beneath the grate before placing them upon the fire, and he found the combustion more perfect, and the smoke much less in consequence. His fire-place was upon a plan of his own,—the front of the bars being in a line with the front of the chimneypiece, and therefore in advance of the walls of the room. This grate drew exceedingly well, but was liable to disturbance from cross draughts.

Mr. Baker mentioned a case in which he had adopted one of the Farnley Company's fire-brick fire-places in the shape of a niche. The hearth, which was of fire-brick, was raised 3 inches above the floor: cold air was admitted underneath. The fire-place was made upon Leslie's principle, without any false front. The fire-brick consumed the smoke that was generated; but he found it was necessary to keep the hood thrown back, in order that the smoke might pass up the chimney. This stove, which was 22 inches wide, warmed perfectly a room of 40 feet by 24. The fire-brick itself was not, however, a satisfactory specimen.

DRAUGHTS IN CHURCHES.

OPEN ROOFS.

THE false roof referred to by your correspondent would be the most effectual remedy against such portion of the draughts as owe their origin to the leaky state of the lofty open roof.* Felt, however, applied between the boards and the slates, forms a very efficient protection. The kind of felt used should be the "No. 2 dry hair boiler-felt," the sheets laid close together at the edges; or better still, two thicknesses of 12-oz. felt, the sheets breaking joint. Churches with lofty open roofs are particularly liable to be draughty, and if they are not counterceiled between the rafters, the use of felt on the outside of the boarding is indispensable, more particularly if the church is intended to be artificially warmed. Hardly any amount of heating surfaces can render a church with a leaky roof tolerably warm. Your correspondent is correct in his surmise, that roof-draughts are not wholly caused by the cold air coming through the slates into the church. Lofty open roofs, even if all communication through them between the external and internal atmosphere be prevented, will still create draughts, from the cooling effect which their internal surfaces exert upon the body of air in contact with them. In cold weather the extent of roof exposed to the action of the wind parts with so much heat (although the boards are not very good conductors) as to cool the air in contact with the underside of the boards with great rapidity, and to create descending currents of cooled air, the velocity of which increases in proportion as the building is more lofty. A good lining of felt between the boards and slates will go far to prevent the transmission of heat from the interior. In a church now building under the superintendence of an eminent architect, the lining of felt is interposed between two thicknesses of boards, and the slates are laid upon battens placed longitudinally upon the outer stratum of boards. This is perhaps the best kind of roof that has been adopted, as the battens, when laid longitudinally, prevent the passage of currents of air in an upward direction under the slating.

When, however, all has been done that can be done to render the roof perfect, your correspondent will find that if the church be artificially warmed in any of the ordinary modes, the draughts will still prevail.

It has been common to refer these draughts to imperfections in the glazing, because they are more particularly experienced near the windows. The cause, however, lies in the transmission of heat by the glass to the external air. This cools the particles of air which are in contact with the inside of the glass, and with such rapidity, that it has been found that one foot superficial of glass will cool one cubic foot of air per minute, as many degrees as the internal temperature exceeds that of the outer air. The air so cooled by the action of the glass is contracted in bulk, and thus becoming heavier, descends in a current against the window until it reaches the sill, where, its farther progress in a perpendicular direction being arrested, it is deflected across the church just about the level of the heads of the congregation. In new churches this evil may be prevented by providing channels in the breast of the window, by which air warmed in the basement may be carried up and discharged at the level of the sill. The air introduced at this point being warmer, and consequently lighter than the general air of the church, has a buoyancy which carries it upwards for some distance, until it meets the cool current descending from the upper part of the window, with which it unites and dissipates it. Or the process may be reversed, and the cooled air may be allowed to continue its descent by the flues formed in the window breast as described, and thence conveyed by channels beneath the floor, to feed the warming apparatus in other parts of the church.

Where some such arrangements as these cannot be contrived, there is no remedy against window-draughts but by placing coils of hot water pipe at the windows, or carrying a continuous pipe all round the church at the level of the window sills. These facts explain a very common remark that churches warmed by artificial means are always more subject to draughts than buildings in which no warming is attempted, the draughts generally increasing in intensity with the elevation of the internal above the external temperature. S. EGAN ROSSER.

* Three correspondents have addressed communications to us with special reference to the particular church supposed to be alluded to by "AN INVALID." We prefer, however, to keep to the general question.

ST. JOHN'S-GATE, CLERKENWELL.

WE understand that upon removing some modern dwarf wainscoting in St. John's-gate, an interesting discovery has just been made of one of the original stone Tudor chimney-pieces, and a singular communication from the groined archway to the hall, or large room above. The chimney-piece is neatly moulded, and has spandrils containing cruciform gilt ornaments: the opening of the fire-place is 4 feet 6 inches by 4 feet 2 inches, and the stone is the same as that of which the gate is constructed. Over the chimney-piece is a relieving arch. The secret-chamber occurs in the inner side-wall: the latter is 3 feet 4 inches thick, and the chamber is 1 foot 11 inches wide, and 2 feet 9 inches in length. At the base of the chamber, or shaft, is an arched opening (now filled up), communicating with the open archway beneath the gate, and the top of the shaft is immediately under the floor of the hall. The chimney-piece is to be restored, and the chamber preserved intact.

We may mention that Mr. W. P. Griffith is preparing for publication, plans, elevations, and sections of St. John's-gate (as it originally existed in 1504); also of the crypt under St. John's church, with the boundary walls of the priory, and particulars connected therewith; so as to preserve an accurate record, and, if possible, rescue this once large establishment from the destroying hand of modern improvements and time.

COLESBORNE HOUSE, GLOUCESTERSHIRE.

COLESBORNE HOUSE, situated in the valley of the Cole, seven miles from Cheltenham, in the county of Gloucester, the residence of J. H. Elwes, Esq. has been completed from the designs of Mr. D. Brandon.

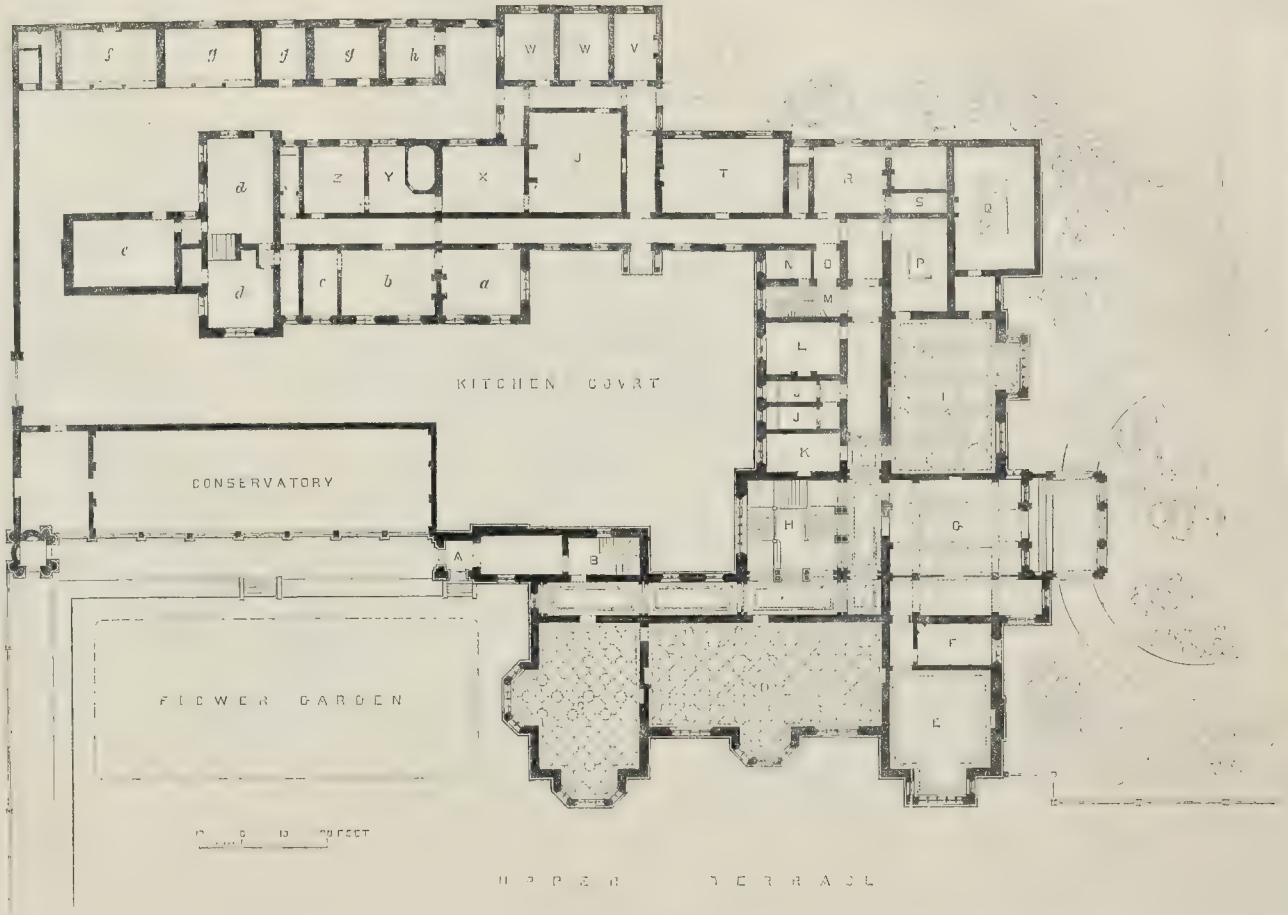
The style of architecture is similar to that of which there are many examples of manor and other houses of the beginning of the seventeenth century. The terraces are being carried out in the same style: the walls are constructed throughout of local sand-stone, with the exception of the cornices, and the transomes and mullions of the windows, which are of Bath stone. The principal staircase having a handsome window by Willement; the panelling and other joiners' work of the ground-floor are of oak; the dining and drawing-rooms having parquet floors supplied by Messrs. Steinitz and Co. The corridors communicating with two stone staircases, are of fireproof construction, upon Mr. Barrett's principle.

The arrangement of the rooms and offices on the ground-floor is shown in the accompanying plan of the building. The upper floors are appropriated for a boudoir, bed-rooms, dressing-rooms, and nurseries.

The height of the floors is as follows:—ground-floor 16 feet, first-floor 12 feet, second-floor 10 feet. The wine, beer, coal-cellars, &c. are in the basement.

Messrs. Piper and Son were the contractors for the work; the local stone, lime, and bricks, being supplied for their use.

A. Garden-entrance.
B. Private staircase.
C. Drawing-room.
D. Library.
E. Morning-room.
F. Waiting-room.
G. Entrance-hall.
H. Principal staircase.
I. Dining-room.
JJ. W.C.
k. Cloak-room, &c.
L. Business-room.
M. Back-staircase.
N. Housemaids' closet.
O. Lift.
P. Serving-room.
Q. Billiard-room.
R. Butler's room.
S. Strong-room.
T. Servants' hall.
U. Kitchen.
V. Kitchen-maids' room.
W. Larders.
X. Scullery.
Y. Bakehouse.
Z. Coals, &c.
a. Store-room.
b. Housekeepers' room.
c. Still-room.
dd. Washhouse and laundry.
e. Brewhouse.
f. Cooper's shed.
ggg. Wood, coal, & coke stores.
h. Game larder.



PLAN OF COLESBORNE HOUSE, GLOUCESTERSHIRE.

COLESBORNE HOUSE, NEAR CHELTENHAM.—Mr. D. Brandon, Architect.

THE PRODUCTIVE FORCES OF RUSSIA.*

Russia has been taught a lesson she cannot and will not forget in a hurry, whatever be the intrinsic value of the treaty of peace to which she has just been compelled to assent; and, doubtless, much more dependence may justly be placed in the result of that lesson than in the words or the concessions of any treaty. The grand effort of the present generation of Russians to carry out a notorious purpose *has been made and has failed.* No single generation of men is ever likely to repeat such an effort, whatever their posterity, not instructed by the struggle, may hereafter do; and in the failure of the past effort, and not in the treaty of peace, rests Turkey's future safety, so far as regards Russia, for many a day. It must be a future Constantine, and not the present, whose baptismal name shall truly proclaim him the destined king of Constantinople and its dependencies.

The part that we have taken in teaching the Russ this effective lesson will hereafter appear more brilliant and overwhelming than it now does. It will then be more clearly seen than it yet seems to be that our naval power did much more than the military power of the French towards the end in view. Had the French military power been so irresistible that the Russians had not dared to face it, and had retreated within the shelter of their desert steppes, would not this have been a virtual defeat of the Russians that ought to have redounded far more to the military renown of France than the taking of the Malakoff? And did not the late Czar frankly and publicly declare to "all the Russias" that the great and peculiar war-power of Britain—her naval power—was "invincible?" And was it not on account of this very invincibility that Russia fled the ocean altogether, and that Britain was thus afforded no opportunity of earning the brilliant but miner renown of vanquishing the foe in her own peculiar field of war? It yet remains to be seen, moreover, whether the rapid and immense augmentation of the naval forces of Britain preparatory to a new campaign against even the stone walls, the shallows, and other shelter of her fleets and coasts, did not contribute more than anything else (combined with the injury done, by the British mainly, to her commerce) towards the final defeat of Russian obstinacy, pride, and aggressive ambition. It is not our part here, however, to enlarge on such subjects. We have a more peaceful purpose in view than even the fighting of battles over again. Besides, the allies and their powerful foe have shaken hands, and to a certain extent are friends again: henceforth, let all strive together in the arts of peace, and let us even lend a willing hand to assist our former antagonist in carrying out that grand system of peaceful aggrandizement within her own territories, on which she now appears to be resolved; taking care, however, not to *forget* her past behaviour.

The return of peace, and the devotion of Russia and its ruler to the development of internal resources, would seem to have been anticipated by the sagacious publishers of the English version of the important and instructive work here under notice, so well timed is its issue; and the author himself must feel that his work is just the desideratum of the present critical epoch in Russia's history. We have very little doubt that by this time the book in question has been earnestly and interestedly perused and studied by the new Czar himself, who appears to be actuated by a more peaceful, civilized, and enlightened spirit than his fire-eating father, to whose moloch-like spirit of destruction so many thousands—we had almost said millions†—of his fellow-creatures have been sacrificed.

M. Tegoborski, in this second volume of his "Commentaries," treats of the manufactures and the commerce of Russia. The volume opens, in a continuation of the second chapter of the work, with an account of the woollen, silk, and cotton manufactures: those of a chemical description, that of leather, paper, and various others follow; then metallic manufactures, pottery, cabinet-work, &c. The third chapter is devoted to commerce, and the fourth to maritime navigation.

We shall take a slight dip here and there into some of these various subjects, especially as regards the manufacturing industry and resources of the Russian empire; premising that M. Tegoborski appears to be actuated by rather a liberal spirit, as regards questions of free-trade, competition, &c. and does not display much tendency to undue partiality or prejudice in his views; on the contrary, treating of his various subjects in apparently a fair and equitable spirit.

A distinguished technologist used to say that one might judge of the amount of industry in a country from the quantity of sulphuric acid that it consumed. The author, aware of this, gives some statistics on the subject, under the head of chemical products, to which we may briefly advert in the outset. The dearness of sulphuric acid long exerted an adverse influence on the extension of manufactures in Russia, and even yet the price is comparatively very high, being 1 rouble 20 kopecs per pood, which the author contrasts with the price in France, which he states to be about 70 kopecs per pood. About twenty years since, however, the price in Russia was 5 to 5¼ roubles per pood; and if such a price had still prevailed, it would doubtless have been a complete extinguisher to various important branches of manufacture which already begin to spread throughout the country.

Leather, one would have thought, must be a very flourishing and advanced branch of manufacture in Russia; yet it is not so: on the contrary, M. Tegoborski remarks that, "strange to say, our leather manufacture has remained in the rear of every other; and, whilst the cotton manufacture adopts every new improvement as it arises, the former still keeps drawling along in the same routine that it followed 100 years ago and more." He complains of the want of that capital which is requisite from the tediousness of the processes: were the latter improved and expedited, doubtless the want of the former would be of less importance. The bright side of this manufacture is the fabrication of "youfts," or Russia leather, to the prosperity and continuance of which the abundance of birch and its peculiar tar essentially contribute. About 250,000 poods of this leather, valued at 3,400,000 roubles, are (annually, we presume) manufactured, chiefly in the governments of Nijni, Nowgorod, Wladimir, Twer, Perm, Jaroslaw, Pskow, and Orel. Three sorts, red, white, and black, are manufactured, the red being the most important, on account of the abundance of birch tar used in *its* preparation.

Iron is the lever of every other species of industry, and the extent of its consumption affords a pretty fair index to a country's wealth, and the development of its productive forces. M. Tegoborski remarks on this subject, that "the prohibitory system, with a view to the protection of native iron, was long in vogue; but by degrees the conviction everywhere arose, that it was inexpedient to sacrifice all other interests to this one,—often, too, without even benefiting the latter; for experience showed that when the stimulus of competition was removed, the manufacture lagged behind in its methods." Again he says,—"Most of our iron-masters, reposing on the cushion of protection, long neglected to follow the progress of this industry in foreign countries; and any improvements introduced have been very recent and very exceptional." The increase of production, therefore, has been very trifling, and the reduction of prices very small. The perennial average production of pig iron in 1831-33, was 10,515,170 poods, and in 1849-51, it was only 12,638,540 poods. Of bar iron, the triennial average production in 1837-39, was 6,930,000 poods, and in 1849-51, it was 9,141,845 poods. The triennial average price of common bar iron at St. Petersburg has been nearly the same ever since 1824, namely, about 1 rouble 25 kopecs per pood. The author contrasts this unprogressive stability or stagnation of price, with reductions successively made in England, but he has mistaken mere gambling fluctuations for steady and permanent reductions of price attained by means of improvements in manufacture: thus he quotes 5*l.* 15s. per ton as the price of bar iron in England, reduced from 9*l.* and 10*l.* 10s. in 1836-40, "from the adoption of improvements in the process of production," whereas bar iron with us has returned to these very prices of 1836-40, and may, six or eight months hence, be down again to half the sum.

Formerly, Russia exported iron to the extent of 2,300,000 poods: this exportation gradually decreased to one-third of that quantity; but previous to our blockade of Russian ports 700,000 to 800,000 poods were still exported. The fact that any such export of iron at all from Russia still takes place is doubtless to be attributed to the decided superiority of iron made with charcoal, as it is in Russia, where coal is a very rare commodity, of which men of science in fact are only still in search. The author complains much of the bad state of the means of communication in the interior of the country as a great hindrance to the progress of this as well as of other branches of manufacture. To this evil, however, the eyes of the Russian Government are now sufficiently open, whatever be the real motives which are inciting them to their alleged resolution to interlace the interior with railways and roads. The formation of the former must tend greatly to promote the home production of iron in Russia, whatever aid England may be called upon to give towards the end in view.

The state of the iron trade in Russia is forcibly exhibited in the following quotation:—

> "The high price of iron is a great evil, both for agriculture and for most branches of industry,—a truth so generally recognised that it seems trivial to repeat it. Experience has also shown that there are few articles of which the consumption is so elastic or so much regulated by price. Where cheap, as in England and the free ports of Germany, it often takes the place of wood and stone; where dear, wood usurps the place of it, even for those purposes for which the use of iron seems the most natural of any. We find in the rural buildings of our western provinces wooden nails taking the place of iron nails; and even amongst easy, if not wealthy proprietors, we find locks and bolts at park gates and garden doors, and sometimes at barn doors too, replaced by wooden latches, and hinges by osier rings, by which the doors are hung upon the posts, whilst their richer brethren, who use the metal article, grumble sadly at its price. Throughout a great part of the empire, farm-horses are without shoes and farm-carts without tire; axles are of wood; spades of wood covered with a thin coating of iron; and in many districts the ploughshare itself is wood with an iron point. Implements of that description were to be seen at the St. Petersburg show of agricultural products in 1850. The partisans of the prohibitory system allege that in many provinces the shoeing of the horses and the use of iron in the peasants' carts would, from the quality of the soil, be totally useless,—in fact, rather hurtful than otherwise: but we think such assertions as these scarcely require a serious refutation."

In regard to absolute quantity of iron produce, M. Tegoborski places Russia in the third rank; its production, he calculates, being to that of England as 100 to 1,018; to that of France as 100 to 219; to that of Austria as 100 to 82; and to that of Prussia as 100 to 50: in regard to relative production and consumption, however, he admits that Russia ranks lowest of any of these nations.

The Uralian mines are believed to contain iron ore enough to last for an indefinite period, but their working is limited by their command of fuel. Strata of coal, however, it is said, have lately been discovered in the Ural.*

The author advises the admission of foreign iron in competition with that of home manufacture, under certain modifications of import duty, particularly as regards pig-iron. Russia, he remarks, is at present the only country in which the importation of iron by sea is still prohibited. The admission of foreign iron, he points out, would give a great impulse to the home construction of machinery, now imported, at great cost, to the value of nearly three millions of roubles. In regard to English iron, however, the invasion of which, he adds, is chiefly formidable to Russian iron-masters from its low price, the imposition of a duty is suggested, such as would prevent its successfully

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* "Commentaries on the Productive Forces of Russia." By M. L. De Tegoborski, Privy Councillor and Member of the Council of the Russian Empire. In three volumes: Vol. II. London: Longman, Brown, Green, and Longmans, 1856.

† In the one war just closed, it now appears that 500,000, or half a million, of the Czar's *own subjects alone* were thus sacrificed!

* Efforts, we may here remark, are being now also made to discover coal wherewith to supply the steam fleet of Russia.

competing with their own in the markets of the interior, leaving for its market the country within a certain radius of the coast.

In 1852 there were in Russia eighty-five iron works belonging to individuals, of which thirty-nine were in the government of Perm, seven in that of Orenburg, seven in that of Wiatka, and twelve in that of Kalouga: the other twenty were distributed over the governments of Wologda, Wladimir, Nijni-Nowgorod, Orel, Penza, Riazan, Tambow, Toula, and Kostroma. The Crown works are comprised in the six mining districts situated in the governments of Tomsk, Irkoutsk, Perm, Orenburg, and Olonetz, producing about two million poods of pig-iron, or 15 per cent. of the total production of the empire, without reckoning Finland and the kingdom of Poland. The eighty-five works belonging to individuals are in the hands of fifty proprietors or companies.

The manufacture of tools for the different trades is not in a very forward state. Its chief seat is at Toula. At Zlatoust, however, superior articles are made. Files à l'Anglaise have been manufactured, but the nicer sorts are still imported from England or France. The manufacture of locks and padlocks still leaves room for improvement: it is chiefly carried on at Pawloff, Toula, Jaroslaw, Moscow, and St. Petersburg. Padlocks, costing 2 to 35 kopecs each, are exported to Asia. The manufacture of cast-iron articles and machinery is far in the rear of its relative importance. Till of late there was only one large establishment of the kind (at St. Petersburg) except the crown works for the navy and army.*

PROVINCIAL NEWS.

Oxford.—The committee appointed by the Street Commissioners to carry out Mr. Faulkner's motion for the erection of two fountains, to commemorate the acquisition of peace, on discussing the subject, were unanimous in favour of erecting a fountain in St. Giles's, on the site where it had been agreed to erect a flushing apparatus and tank for flushing the sewer leading from St. Giles's to Magdalen-bridge; and it was unanimously resolved "That it is desirable that the flushing apparatus should be above ground; that the chief objection to such a structure above ground would be the unsightliness of it; and if this objection can be removed by making, through private subscription, a fountain, such a combination is highly desirable." It was, therefore, resolved that 200*l.* having been stated by the surveyor to the Board as the sum necessary for a mere flushing apparatus, the committee recommends that this sum be appropriated for such necessary work. They also recommend that this sum should be expended in co-operation with any general committee which may be appointed to conduct the erection of a fountain.

Andover.—On Tuesday in last week a large new stable fell, which had only been completed a very few days, in the yard of the Eagle Tavern.

Dudley.—The tender of Messrs. J. and G Lilly, of Measham, for the erection of the new workhouse and industrial schools (11,441*l.* and 2,553*l.* odds) has been accepted.

Bristol.—The *Bristol Times* revives a project for a new street, in two divisions, one from College-green to the top of Brandon-hill, and the second from the top of Brandon-hill to Clifton-hill. A road thrown over a series of arches from College-green to Brandon-hill, and likewise on arches from Brandon-hill to Clifton-hill, would, it is remarked, make the grandest street in the kingdom, "conducting people from the collegiate precincts of the old city, to that most noble of prospects, now to be enjoyed from Clifton Church."

Swansea.—On the 12th of May last, being Whit-Monday, the foundation stone of St. Peter's chapel of ease to the mother church of St. Mary, was laid by Mr. H. Hussey Vivian, M.P. of Singleton, Swansea. After the ceremony, the company was addressed by Mr. Vivian and the Rev. E. B. Squire, Vicar of St. Mary's parish. The edifice, which is to be of a plain, but substantial character, is a parallelogram in form, the internal dimensions being 77 feet by 25 feet. The chancel is formed by a continuation of the nave, and is principally distinguished by the treatment of the ceiling. There will be a porch on the south side, and on the north a vestry, with a heating chamber beneath. A bell gable will be on the west end. The roof is constructed with arched principals, and is open to the ridge, the ceiling being formed between the rafters, except over the chancel, which is to be boarded in an arched form. The style of architecture adopted is Transitional of the thirteenth century, immediately following that known as the "Early English." There is accommodation for 307 persons, including a gallery at the west end intended almost entirely for children. The whole of the sittings are free and unappropriated for ever. The subscriptions and grants received from the Church Building Commissioners amount to 750*l.* leaving a deficiency of 750*l.* the whole cost for the completion of the church being 1,500*l.* The architect employed is Mr. R. Kyrke Penson, and the builder is Mr. Joseph Richards, of Swansea.

Manchester.—A warehouse which is approaching completion in Portland-street, will be the largest building, it is stated, amongst the many already large ones, in Manchester devoted to mercantile purposes. It is being erected for Messrs. I. and S. Watts, merchants and manufacturers, Fountain-street, by by Messrs. Travis and Mangnall, architects. The dimensions of the building are 300 feet by 90 feet. It is seven stories high, and above 100 feet in extreme elevation. The architecture is Venetian, the windows of each story being of different construction, yet the whole façade, according to the local *Courier*, harmonising into one general effect. There are two principal entrances in Portland-street, one of which is opposite York-street: they are surrounded by pillars, with stone ornaments, and lead to vestibules, through three glass doors, from whence rise the principal staircases, which are three yards wide. The interior of the warehouse is lighted by five areas, and the roof is nearly all glass. At the back in Silver-street will be the offices, and a loading area, capable of accommodating two lurries at a time: there will also be a fire-proof staircase. As the chief precaution against fire there will be a large cistern at the top of the building for holding rain water. Hose will be placed on every floor, and other means taken to keep fire in check until the arrival of firemen. There will be two hoists in the building, one for raising goods and distributing them, the other for carrying them down when sold. Lavatories and other arrangements will be found on each floor, and more generally on the basement. The building was commenced early in 1855, and is expected to be finished in about eight months. The distinctive architectural features of the erection consist of four tower-like elevations fronting Portland-street, and which extend across the building, forming the seventh story, the windows in which will have the mercantile advantage of northern light. The visible parts of the warehouse will be of Yorkshire and Derbyshire stone; and the windows will be filled with plate glass. The area on which the building stands is about 3,000 superficial yards. There will be virtually three warehouses in one, Messrs. Watts occupying the principal portion.

Alnmouth.—The works connected with the erection of a new bridge across the Aln here are about to be commenced. At a recent meeting of the general committee of this undertaking, held on the 13th inst. the subscription lists were examined, from which it appears that sufficient funds have been collected for the erection of a narrow bridge; but that it would require 150*l.* in addition to the sums received, to build one of the width desirable for the accommodation of the public. It was resolved that the works be proceeded with according to the plans and specifications of Mr. F. Charlton, the engineer, upon the principle of a broad bridge; and that, as the contractors had engaged to erect a foot-path across for passengers, by 1st June next, this footway be completed and opened to the public on that day, and a toll of one penny taken from every person passing, in order to assist in making up the deficiency of funds required for erection.

* To be continued.

THE PRINTERS' ALMSHOUSES, AT WOOD-GREEN.

THE new Asylum, at Wood-green, Middlesex, is to be inaugurated on the 11th of June, by a public breakfast, to take place on the grounds of the Institution, at mid day. Earl Stanhope, who laid the foundation stone, is to preside on the occasion. There is an excellent list of stewards, even already, we are glad to see, including Messrs. Clowes, Mr. John A. D. Cox, Mr. Figgins, Mr. Henry Hansard, Mr. T. R. Harrison, Mr. H Ingram (M.P. for Boston), Mr. John Murray, Mr. W. Rivington, Mr. T. Spalding, Mr. W. Spottiswoode, Mr. Charles Whittingham, Mr. T. Longman, Mr. Charles Wyman, and many more. Mr. Douglas Jerrold, Mr. Mark Lemon, and other well-known literary men, we learn, have promised to attend. There is to be an evening-party, too, on the same day, when Mr. William Clowes will take the chair.

We some time since gave an engraved view of the new Almshouses, it may be remembered. They occupy a fine healthy suburban site, and will afford comfortable accommodation to the pensioners of the Institution.

It is the bounden duty of all who are concerned in the advancement of literature to interest themselves in the success of this Institution; and in the general term literature, we intend especially to include that modern power in the state,—the newspaper press,—and who is there that does not feel interested at least in that species of literature, to the wonderful diffusion and freshness of which the labours of the compositor and the printer night and day contribute, till they are but too often untimely and prematurely exhausted in the service of the public, and no longer fit for anything but for the asylum now prepared for them. We trust, then, that the public at large of this metropolis will extensively assist at the inauguration of the Printers' Almshouses, and contribute handsomely to the funds of the Institution; and that having once found their way to Wood-green, they will periodically remember its benevolent purposes, and assist in enabling the printers of London to extend its accommodations and its usefulness as an asylum for life to the poorer and more unfortunate brethren of the craft.

The object of the Institution being known, and its excellence admitted, our readers will not be surprised to hear that H.R.H. Prince Albert and the Duke of Cambridge have enrolled themselves amongst its patrons.

ARCHITECTURAL PUBLICATION SOCIETY.

THE annual meeting of this society was held at the rooms of the Royal Institute of British Architects, May 15th, Mr. James Bell, M.P. in the chair. The report of the committee was read: from it we learn that,—

"In the 'Dictionary of Architecture,' the letter B has been completed in the parts II. and III. and the quantity of letter-press thus issued for the year 1853-54, may be estimated at about equal to 680 pages of an octavo volume: it is illustrated by 115 woodcuts. A calculation has been made that these two parts of the text contain a quantity of type nearly equal to that in five volumes of the usual octavo novel. The year's production, as far as quantity alone is concerned, must therefore be considered as satisfactory; while from the great care and attention devoted to the work in all its stages, it is expected that very few, if any, cases of incorrectness have been found: should any be discovered, it is requested that they may be communicated to the secretary.

In the last report it was stated, in regard to the account for 1854-55, that in consequence of the shortness of the period during which it would be kept open, the income would be undoubtedly less than that of previous years, unless greater punctuality was evinced by the members themselves in paying their subscriptions. This has proved to be correct, the receipts showing an income of only 331*l.* 4s. 7d. whilst the expenditure has been 332*l.* 0s. 9d. leaving a debt of 16s. 2d. This income, however, has enabled the committee to issue twenty-four plates to illustrate the articles contained in the letters A and B of the 'Dictionary.' These parts have been considered by many members to be superior to any previously issued, and to constitute a sufficient return for the year's subscription. However, had the payments been larger, or even earlier, no hesitation would have been felt by the committee at ordering a third part."

"During the past season, the committee has been engaged in the consideration of various propositions for alterations in the conduct of the 'Dictionary:' these propositions, however, were found on discussion to involve too great an alteration in the present appearance as well as plan of the undertaking.

For the year 1855-56 just concluded, the letter C is in course of progress. The three first letters in all dictionaries contain the largest proportion of articles,

and the present one is not exempt from the rule. According to the published 'List of Terms,' A, B, and C comprise one-third of those in the whole alphabet. It is clear that the labour is well advanced, and it behoves the supporters of the society to assist in obtaining that accession of members which is requisite to complete the work for the amount estimated. The committee, as trustees of the funds of the society, can only expend the ascertained income: a larger quantity of matter, therefore, is only to be obtained by the desired increase in the funds."

"Although the desirability of adding to the number of supporters has been so frequently alluded to, the committee feel themselves called upon again to press this point upon the attention of the meeting. The present supporters consist chiefly of members of the profession: the *personal application* is only required of every member to his friends, whether amateurs, engineers, or builders, for each to secure at least two or three additional subscribers. The committee have great pleasure in quoting, as a proof of the utility of such applications, their resolution passed at a meeting held April 24th, namely, 'That the best thanks of the committee be given to Mr. Lockyer for his valuable exertions in increasing the list of subscribers.'"

The amount received for the year ending April, 1856, is 304*l.* 10s.

The report having been adopted, special votes of thanks were passed to the committee, treasurer, honorary secretary, and local honorary secretaries; also to Messrs. Benjamin Ferrey and T. Hayter Lewis, for their kind services as auditors; also to the Council of the Institute, for their kindness in allowing the use of the rooms.

Messrs. J. H. Good, jun. and Octavius Hansard were appointed auditors of the accounts for the year ending 30th April, 1856; and the cordial thanks of the meeting having been given to Mr. James Bell, for his conduct in the chair, the meeting adjourned.

APPROACHES TO HYDE-PARK FROM BROMPTON.

AUTHORITIES in office have of late deserved well of the public, by conceding to general conveniences free routes. Those through St. James's-park (when open), will mark an era in liberality, which may be termed the *Hall* mark. A new pathway has also been opened, across the north-west bridge into Regent's-park, besides numerous improvements in laying out grounds and cutting walks. There are, however, other openings and easements yet required, and the attainment of these depends on the inhabitants of the districts immediately concerned.

Brompton is one of the excluded quarters: from Albert-gate to the new roads (Messrs. Jackson and Freke's), beyond the new National Gallery, fully three-quarters of a mile, there is no traverse road. Along the park margin, from the towering Oil Cloth Factory to Mr. Freke's road, at the old Nursery-gate, a new Belgravia has been constructed. The houses are large, and the roads are raised in causeways, at right angles with the Park-road, giving factitious elevation to ranges which present enormous bastions to the dwindled domiciles of Brompton-square, and the various squares and crescents thereabout. All access to the park is barred out, although Brompton-square, which till lately was open to the aroma of the Serpentine, and other verdant influences of the Hyde, is but three hundred paces from the park railing.

The modern mimic St. Germains is wholly secluded. Princes-gate, Ennismore-place, and other accumulations, in lofty brick, the habitations of the upper ten thousand, are all *cul de sacs!* You must go out at the same gate whereat you entered, and with just the same dignity. This may be a good arrangement, but if Mr. Jackson and Mr. Freke, both very extensive builders, are right in their modes of laying out noble roads—roads 100 feet wide, and which lead from the park to various parts of the suburbs,—how can the *turn-again* plan of Princes-gate (as the whole quarter is called) be also right?

Several meetings have been held by the aggrieved householders of Brompton-square and the vicinage, to obtain a right of way by Ennismore-place to the park. A very small opening of about 10 feet still remains for a footway; but the lucky planner of Princes-gate got hold of the opening at the end of the square, built another bastion, towering 70 feet above the square—something of a "fanal," with a front to the park, a sort of temple of Janus, with as ugly a front as could be contrived to Brompton-square; in which also he has erected coach-house and stables, not leaving a foot for garden—no, not for half a yard of cabbage.

Must the Bromptonians suffer the Princes-gateians to make their square a stable lane! Will they allow their curb-stone and pavement to be cut away? (there is an iron post, too, just in the centre of the stable entrance): must they allow Mr. Elger to depreciate their dwellings 30 per cent. whilst he enhances his own perhaps by 5 per cent. only?

There is an authority of modern creation. Let those concerned convene a full meeting—let the Thurlorians, Oratorians, and the Montpellierians, unite in one common assault against the invader—let them first shut that stable-door, and then apply, on the plea of public health and utility, for a foot thoroughfare to the park, and they shall be aided by all the householders from No. 1 to No. 50,

BROMPTON-SQUARE.

PRINCIPAL WORKS CHOSEN TO THIS TIME BY PRIZEHOLDERS IN THE ART-UNION OF LONDON.

From the Royal Academy. — Landscape, with Sheep, G. Cole, 50*l.*; Welsh Fireside, D. W. Deane, 50*l.*; First Buttons, D. H. Friston, 30*l.*; Ferry-boat on Loch Leven, W. Luker, 20*l.* 5*s.*; Forest Stream, E. Gill, 30*l.*; Surrey Cottage Scenery, J. J. Wilson, 20*l.*; The First Scrape, R. Farrier, 20*l.*; A Favourite Retreat (North Wales), F. W. Hulme, 20*l.*; Dunkirk, A. Herbert, 30*l.*

From the Royal Scottish Academy.—Holy Island (Lamlach), W. H. Paton, 50*l.*

From the British Institution.—An Old Bridge near Pella, G. E. Hering, 200*l.*; Scene from the "Gentle Shepherd," W. Underhill, 60*l.*; Ruse de Guerre, J. M. Joy, 35*l.*; Wayside Inn, R. Brandard, 25*l.*; A River Bit, J. Dearle, 25*l.*; A Farm Pond, J. Stark, 20*l.*; A Roman Peasant Girl, T. Gooderson, 20*l.*; Dean Swift and the Messenger, T. P. Hall, 40*l.*

From the Society of British Artists.—Medmenham Abbey, H. J. Boddington, 60*l.*; The Youthful Gamester, J. Clater, 60*l.*; A Summer Morning, H. J. Boddington, 60*l.*; On the Conway, J. C. Ward, 50*l.*; An English Lane, H. J. Boddington, 40*l.*; The Pilgrimage Church of Bethanan, A. F. Rolfe, 35*l.*; Scene near Mysyduth, J. Tennant, 50*l.*; On the Look-out, J. Henzell, 25*l.*; A Welsh Ford, G. Shalders, 25*l.*; Goldfinch and other Birds, Mrs. Withers, 20*l.*; Highland Courtship, Miss Macleod, 25*l.*; A Fresh Breeze, J. Meadows, 20*l.*; Water-mill (Dolgelly), A. Barland, 20*l.*

From the National Institution.—The Mid-day Meal, H. B. Willis, 100*l.*; Early Morning, H. B. Willis, 60*l.*; Dutch Vessels entering Port, T. S. Robins, 50*l.*; Wild Flowers, Mrs. Withers, 50*l.*; The Woodman's Repast, H. P. Parker, 40*l.*; Surrey Scenery, W. Lukeing, 25*l.*; Rouen, A. Montague, 20*l.*; The Last Gleam in the West, H. B. Grey, 20*l.*

From the Water-Colour Society.—The Evening Gun at Castle Cornet, J. P. Naftel, 25*l.*

From the New Water-Colour Society.—The Vegetable-market (Venice), J. H. D'Egville, 26*l.* 5*s.*; Turf-boats approaching a Lock, M. A. Hayes, 21*l.*

THE METROPOLITAN BUILDING ACT.

Building for temporary Purposes.—Pray inform your readers that such buildings are not permissible unless constructed in every particular according to the Act. Under the shelter of this plea all sorts of irregularities are constantly committed:—the Act, it cannot be too widely known, does not recognise such erections, as they are often made permanent.

Cellar Arches and Vaults.—The Act makes notice to the district surveyor when vaults are to be built imperative, and regulates their construction: it also imposes a penalty of 20*l.* for every default. How is it, therefore, let me ask, that a builder of repute, employed on a large Government work too, has put in the whole of the arches for the Farringdon-street extension in default of the proper notice? The cumulative penalties would amount to a considerable sum.

District Surveyors' Fees.—Your remark that work done in default of proper notices is greatly on the increase by small jobbing builders, is very correct: this is so to a great extent: they will take work which respectable builders will not, undertaking to chance the fee and the work being found out. Some timely inflictions of the 20*l.* penalty, or in lieu thereof the incarceration of the defaulters, will be found useful. Since the abolition of the treble fees, a very salutary check, a great increase of work without proper notice is observable.

CRITO.

METROPOLITAN BOARD OF WORKS.

AT a meeting on the 16th inst. on the bringing up a report upon the "Duties of the Board under the Building Act," recommending that an officer be appointed for the purpose of verifying the plans and statements accompanying applications to the Board under the Building Act, and to assist the superintending architect in his duties, and that that officer be paid an annual salary of 150*l.*—

Mr. Leslie thought the Board were taking upon themselves duties which did not belong to them; and that under the 76th section of the Local Management Act, the province in such cases was with the district boards or vestries.

Mr. Turner moved an amendment to the effect, "That an additional clerk be appointed in the department of the superintendent architect;" and this was carried.

A stormy discussion ensued upon two paragraphs in the report, viz.—"That the application of Messrs. Turner and Sharpin, for permission to bring out the fronts of two houses, Nos. 63 and 64, Pratt-street, Camden Town, as shown by the drawings accompanying such application, be not granted."

This recommendation was denounced by Mr. Wilkinson and Mr. Corrie, the representatives of St. Pancras, as an act of injustice; and some strong comments were made upon the conduct of those who had erected a public-house and other buildings on the St. Martin's Cemetery, in Pratt-street.

The paragraph of the report was ultimately confirmed.

The second paragraph was that the application of Mr. J. Tarring, for permission to extend the porch of Sussex Villa, Sheffield-terrace, Camden-hill, Kensington, as shown upon the plan accompanying his application, be granted.

This proposal, after some opposition on the part of Mr. Hawkes, was also carried.

STATE AID IN FORMING LOCAL MUSEUMS OF ART.

A CHANGE has been made recently in the mode of examining the works of the Schools of Art, which is of a self-acting character, and calculated to assist materially in forming local Museums of Art. It has been determined that once in each year an inspector from the department, shall visit each school, hold an examination in certain of the early stages of the course: and, in conjunction with the head master, assisted, if necessary, by a master from one of the nearest schools, adjudge local medals and rewards. The principal and advanced works so rewarded will form a General or National Collective Exhibition, and be inspected by the art superintendent, who, in concert with examiners appointed by the board, will adjudge national medals to the best, in mutual competition. The collection will afterwards be sent round to some of the larger provincial towns. The works which have obtained first medals in the local competitions, being all collectively exhibited, will be examined by the art superintendent, aided by other appointed examiners, and medals awarded to the works successful in this second competition. For every medal awarded in the National Competition, the school in which the successful student was under instruction, will be privileged to select, from a list, works of art value 10*l.* The result to every school will, therefore, be proportioned to the advance of the students, and it will be by such means that the nucleus of a local museum may be established. Thus each local school will share in the State assistance, according to merits. The central authority, instead of giving the assistance as formerly, will be merely the executive of the self-acting demands of each local school.

GAS.

Weedon.—A numerous meeting was held at Weedon, on Tuesday before last, for the purpose of establishing a company for lighting this place with gas. Mr. Sharp, gas engineer, attended with estimate, &c. The capital proposed was 4,000*l.* divided into shares of 10*l.* each, nearly the whole of which were subscribed for at the meeting. A provisional committee was appointed, and it was agreed at once to proceed with the erection of the works, on a site provided by the Government. The great obstacle, hitherto, has been the difficulty in procuring the sanction of Government to light the barracks. The whole of the Government establishments are now to be lighted.

Alleged New Method of Generating Illuminative Gas.—The Boston newspapers state that an inhabitant of that city has got an apparatus for generating gas, simply from zinc and hydro-chloric acid, and without external heat. This apparatus, it is declared, yields a gas of great purity and brilliancy; as contrasted with coal gas, the same quantity yielding twice the illuminating power. The whole apparatus, it is added, is contained in a cylinder 3 feet in height and 16 inches in diameter; and a machine capable of generating sufficient gas for eight lights requires looking to and feeding only once a month, or less. That zinc and spirit of salt will yield a brilliantly illuminative gas is more than doubtful. The gas so generated is merely hydrogen, which (usually at least) yields very little light. Some time since, however, it was alleged that, by a catalytic process, it was made highly illuminative; and it remains to be seen, perhaps, whether the gas of which Boston is boasting be something of this sort, or a mere "flash in the pan."

Hansor's Oil Gas.—Mr. J. Hansor, of Vauxhall, is said to have succeeded in obviating the old difficulties in the way of preparation of gas from oleaginous substances. His process is described as consisting in the vaporization of the material in small retorts at a heat just sufficient for that purpose, and then of converting into gas, at a somewhat higher temperature, the vapour, which flows in hot volumes from the small retorts into and through a large one. The flues are

so proportioned that the proper heat of each retort is raised and equally sustained at same time. Each retort has its own flue, and each flue is regulated by a separate damper, so that the temperature of each retort may be rendered higher or lower at pleasure. By means of test-pipes and stop-cocks, the operator knows exactly when vapour is generated in the small retorts, and gas in the large one; and thus, by attention to two or three simple directions, can conduct the process with satisfactory and uniform results.

Gas-Combustion and Gas-Meting — Mr. L. Thompson, M.R.C.S. last week delivered a lecture to the Gas Fitters' Mutual Association on "Combustion" as connected with gas, illustrating his positions with practical experiments. Under certain circumstances, there was a peculiar smell with gas, particularly Cannel gas: this odour, the lecturer remarked, arose, not from the escape of gas, as generally believed, but from a peculiar compound, generated in its re-solution into water and carbonic acid, and to obviate which the ventilation should be proportioned to the amount of gas consumed. The lecturer concluded by introducing to the meeting an invention connected with the consumption of gas, leaving the inventor, Mr. Sanders, to describe it. This invention consists of an oblong trough, adapted to the size of the meter, in which is placed a semi-circular figure, immersed in water, and which revolves on its axis, and *maintains the water-level*, upon the accuracy of which depends the correctness of the gas register. The only drawback to its universal introduction among gas consumers was considered to be the liability of the water to freeze in winter, and thus prevent its efficient action, an objection, properly speaking, attributable to the wet meter itself rather than to the new invention, which, on the other hand, is said to obviate the usual objections to the wet meter.

CANDIDATES FOR DISTRICT SURVEYORSHIPS.

At the last meeting of the Council of the Royal Institute of Architects, certificates of competency, after due examination, were sealed for the following gentlemen:—Mr. Charles James Badger, Mr. Henry Astley Darbishire, Mr. William Richard Gritten, Mr. Sidney Godwin, Mr. Henry Hart, Mr. Walter Robert Kinipple, Mr. Henry Parsons, and Mr. Henry Stephen Ridley.

COMPENSATION CASE.

Lord St. Germains against the Mid-Kent Railway Company.—On Wednesday, the 21st inst. an inquiry was held at the Black Horse, Lewisham, before the assessor for the sheriff of Kent, to assess the value of five and a quarter acres of land, abutting on the road from Lewisham to Forest-hill. Mr. Alexander and Mr. Liddel appeared for the claimant, and Mr. Bovill and Mr. Holloway for the company. The plaintiff claimed 3,300*l.* and in support called Mr. William Tress, who valued the property at 2,709*l.* 7s.; Mr. Chinnock, 2,560*l.*; and Mr. Charles Smith, 3,180*l.* The surveyors on behalf of the company were Mr. Ritchie, Mr. C. Lee, Mr. E. Roberts, Mr. Withall, and Mr. Owen, but they were not called. The jury, after an hour's consideration, returned a verdict of 1,100*l.*

OXFORD ARCHITECTURAL SOCIETY.

On Wednesday in last week the fourth of the series of lectures on Foreign Architecture was read by Mr. James Parker. He said that Brittany had advisedly been chosen as a subject for a separate paper, inasmuch as it seems to have stood alone, isolated from the rest of France, in its manners, customs, history, and, to some extent, in geographical position. He showed that it had always been, as it is now, behind hand in the cultivation of the arts and sciences. That during the whole of the flourishing epoch of Architectural History in other countries, Brittany had no architecture which it could call its own, and that it was dependent both on England and France for its styles and architects. It was not till the sixteenth century, when, on the marriage of Anne of Brittany, it was united to France, that the country seems to have awoke from its sleep. Then, when, in every village, they commenced building churches, it struck out a style different to that in any other country of Europe. He described Brittany, always looking to the past, as battling with the Renaissance period; and showed that when the Classical style did penetrate, a mediæval character was given to them. In the course of the lecture, Mr. Parker dwelt some time on the "Ossiaires" and "Calvaires," which are the characteristic features of the Breton churchyards, and he illustrated his subject by mentioning many of the interesting customs of the Bretons, showing their reverence towards their dead, and their respect for their cemeteries.

Miscellanea.

The Torquay Branch of the Metropolitan Association for Improving the Dwellings of the Industrious Classes, have recently opened their first building, consisting of a dwelling-house for fifty single men; it is situated in Queen-street, and is in the Italian style, built of the local limestone, with brick and ashlar-tooled limestone dressings, and covered with a deeply-projecting roof of Italian tiles, surmounted by a lantern. The house consists of one general sitting-room, kitchen, and offices; each man has a dormitory and safe for food to himself, and the utensils for cooking, &c. are all provided. The establishment is regulated by similar laws to the London one. The charge made is 2s. per week, including cooking, washing, &c. The building is fitted up with Jennings's patent lavatories, gas and steaming apparatus, and is ventilated by a series of flues in the floors and walls. Accommodation is provided for a married man as superintendent. Mr. Edward Appleton, of Torquay, is the architect, and the works have been carried out by Mr. George Stevens, builder, of Newton Abbott.

The Works in progress at Windsor Castle.—Of late there has been active progress made with the various improvements now in progress at Windsor. The East Terrace of the Castle is being paved with Seyssel asphalte of Pyrimont, prepared by Claridge's Asphalte Company. At one end of the Terrace is a steam engine, which drives three large caldrons, containing each about one and a half ton of materials. The principal ingredient put in is a bituminous limestone, in powder, to which is added mineral tar and grit of uniform size. The caldrons being over strong fires, the contents are kept unceasingly agitated by machinery, which, in three hours, amalgamates the ingredients, in a semi-fluid state. In this condition the asphalte is run into iron trucks, on a portable railway, and rapidly despatched to the workmen on the Terrace. The thickness of the pavement is determined by strips of wood, against which the material is poured, and before it becomes set the workmen bring the surface uniform, so as to make it appear almost without a joint. The channels for water are formed in the same material, which, being impervious to water, is well suited to carry off the drainage. This asphalte has also been used upon the roofs and other portions of the Castle, and some years back the Royal Kennels were paved with it.

New Military Hospital on the Solent.—On Monday last the Queen laid the first stone of a large military hospital, about six miles from Southampton. It will include accommodation for 1,000 patients, and will cost, it is thought, about 200,000*l.* We shall give views and particulars in another number, and make it the occasion to offer some remarks on the subject. Mr. Mennie, the surveyor of the Royal Engineers' Department, in Pall-mall, is the architect.

A Cheap Self-Registering Minimum Thermometer.—The self-registering minimum thermometer, made by Messrs. Negretti and Zambra, for horticultural purposes, will supply a want. It consists of a glass tube mounted on a strong zinc scale, the bulb and part of the bore of which is filled with perfectly pure spirits of wine, in which floats freely a black glass index. A slight elevation of the thermometer, bulb uppermost, will cause the glass index to pass to the surface of the liquid, where it will remain, unless violently shaken. On a *decrease* of temperature the alcohol recedes, taking with it the glass index: on an *increase* of temperature, the alcohol alone ascends in the tube, leaving the end of the index *farthest* from the bulb indicating the lowest temperature that has taken place during the absence of the observer.

Exhibition at the Royston Institute.—At the new building lately erected for the Royston Institute, an exhibition of objects illustrative of science and art, and comprising 900 specimens, was opened on Monday in last week. Royston is a town of not more than 2,000 persons, men, women, and children. The Institute, nevertheless, has 240 paying members, or about one in every eight of the whole population, as remarked by the *Hertford Mercury*, which gives a full account of the Exhibition, and a report of a lecture by Mr. R. Hunt, F.R.S. on its various objects. Of the building itself in which the exhibition is being held, the same paper remarks that "there is no town in the county of Hertford, and probably no town in the kingdom, with a population five times that of Royston, which possesses such a building devoted exclusively to literary, scientific, and educational purposes, and with a museum, library, reading-rooms, class-rooms, and a spacious lecture-hall."

Fall of a Bridge near Montreal.—The new suspension bridge over the Falls of Montmorency gave way on 30th ult. and the whole structure was carried over the falls. A man and a woman were on the bridge, with a horse and cart, at the time, and were carried over the falls and lost their lives.

Forgery of Bank-Notes.—Mr. H. Bradbury delivered an interestting lecture lately at the Royal Institution, Albemarle-street, upon the "Manufacture of Bank-Notes, in connection with the subject of Forgery." The audience was numerous and distinguished; the Duke of Northumberland presiding. The lecturer said it was his object principally to direct attention to the engraving, as the most important feature in the manufacture of bank-notes, because upon that depended their security in the eyes of the public. The main feature of the note, the engraving and its security, depended upon the vignette: the higher the quality of the artistic impress, therefore, which this vignette carries, the greater the security of the note. The vignette derived its great value from being the uncounterfeitable seal of the note,—uncounterfeitable, because its individuality could not be imitated. However similar, there was a difference in the human countenance: however similar, there was a difference in handwriting; and if any number of the most eminent engravers were to endeavour to copy each other, it would be detected by a casual examination. The Bank of England note, the lecturer continued, had always been characterised by simplicity, but carried to an extreme in the opposite direction. In its present form it was unworthy of the bank and nation. In the case of the Anastatic and the photographic processes, the antidote consisted in the adoption of printing in different colours. If the water-mark of the bank-note were backed by excellence of art and engraving, it might be regarded as unforgeable; but if this should be found not to be the case, then it should be imperative on the Government in committee to resolve this question, or offer a reward for its solution.

Hackney.—Schools, to accommodate sixty girls and sixty boys, with offices attached, have just been completed for the committee of the New Gravel Pit Chapel, Hackney, at an outlay of about 420*l.* Mr. R. W. Wright was the architect; and the works have been carried out in a satisfactory manner by Mr. W. Harwood, of Hackney, builder.

An Opportunity for a Society.—It may be useful to say, that Societies requiring a large room of meeting have an opportunity at this moment of securing one in association with the Royal Institute of British Architects, who are looking out for some literary or scientific society to join with them in taking very eligible premises, now vacant near the best part of Piccadilly.

Rudhall, the Bell-founder.—"In the year 1684, one Abraham Rudhall, of the city of Gloucester, brought the art of bell-founding to great perfection. His descendants, in succession, have continued the business of casting bells; and, by a list published by them, it appears, that at Lady-day, 1774, the family, in peals and odd bells, had cast to the amount of 3,594. The peals of St. Dunstan's-in-the-East, St. Bride's, London, and St. Martin's-in-the-Fields, Westminster, are in the number." The above extract may perhaps form another note to the many observations in your journal on bells and bell-ringing. —W. P.

Railway Returns.—The official statements of railways in the United Kingdom for the second half-year of 1855, show that the total capital sunk in railways was 287,271,405*l.* the amount of interest and dividend in respect of it for the half-year being 5,934,589*l.* or at the average rate of 4*l.* 2s. 7¾d. per cent. per annum. Last year the rate of interest and dividend was 3*l.* 19s. 9¼d. per cent. per annum. The increase in capital during 1855, was 10,489,421*l.* The total traffic receipts for the half-year amounted to 10,915,770*l.* the working expenses to 5,188,473*l.* or 47·53 per cent leaving a profit on the working of 5,727,297*l.* or 52·47 per cent. of the receipts. The capital of twenty railways upon which no dividend was paid on the ordinary shares amounted to 25,707,077*l.* of which 12,922,947*l.* consisted of mortgage and preference capital, and 12,784,130*l.* of ordinary capital.

The Dwellings of the Industrious Classes.—An association has been organised in Liverpool, under limited liability, for the improvement of the dwellings of the industrious classes. It is called "The Liverpool Labourers' Dwellings Company," to which has been given the first certificate ever registered under this Act. A plot of land had been purchased in Northumberland-street, Toxteth-park.

Coloured Glass Window-Frames. — Another novelty in the glass window-frame invention has been produced by Messrs. Lloyd and Summerfield, of Birmingham. They have just completed a frame about 10 feet high, of transparent *coloured* glass, for a drapery establishment, at Northampton. The shafts are blue, and the caps and bases ruby, ornamental rings of amethyst being added. Each compartment, instead of being square, as in the specimens previously noticed, is surmounted by a depressed arch. The door plates will be enclosed in a frame-work of pale green glass.

THE NEW MUSIC HALL, BIRMINGHAM.—The New Music Hall, in Birmingham, of which we spoke some time ago, is nearly finished. The style is Gothic. The material used is ordinary brick-work with stone dressings. The hall itself is in the clear of the walls 111 feet 6 inches in length by 76 feet in width: on each side are saloons or refreshment-rooms of ample size. There are two tiers of galleries surrounding three sides of the building, with an orchestra at the east end, which leaves the clear space on the floor 76 feet by 50. The arrangements will afford sitting accommodation for 1,840 persons, thus disposed of;—720 on the floor, 420 in the lower gallery, 580 in the upper gallery, and 120 in private stalls to be arranged on either side the orchestra. The stalls or lower galleries are over the saloons, and project into the hall four feet on either side, with arched brackets under the projecting parts of the joists and in the saloons. The upper gallery is supported by iron columns, running up to receive the principals of the roof, which span the entire width of the building. The ceiling in its highest part is 70 feet from the floor: it presents the appearance of an open-timbered fourteenth-century roof, constructed entirely of yellow pine, stained and varnished. Projecting from the sides of each principal of the roof are traceried brackets, intended to support twenty polished brass coronæ: these brackets are to be banded to the arched parts of the principals with wrought-iron ties, filled in with brass illuminated foliated work. Considerable progress has already been made in the decoration. It consists of the primitive colours—red, blue, and gold as a basis: the compartments of the ceiling are painted ultra-marine blue—a light pattern on a dark ground, with red flowers interspersed. The timbers (consisting of the principals, arches, tracery, rafters, &c.) are relieved in colour with diapery patterns on the lower side: the octangular iron columns have their capitals picked out in blue, red, and gold, with the shafts diapered in two browns, lined with gold lines. The gallery fronts are composed of iron-work, and are finished in a sober colour, with leaves and bands in gold. The wall spaces behind the stalls and other parts of the hall are to be ornamented with a foliated decoration in various colours. The builder is Mr. Briggs, and the architect Mr. James Cranston, of Bennett's Hill. The entire cost of the hall, with its furnishings, is estimated at 10,000*l.* raised in 10*l.* shares.

DESIGNS FOR CAVALRY BARRACKS.—With reference to our notice of designs for cavalry barracks, we are asked to add that the authors of the fifth design chosen, and marked Balaclava, are Messrs. Ellis and Read.

STAINED-GLASS WINDOWS. — Some stained-glass windows have been recently fixed in Whitnash Church, Warwickshire, by Mr. Holland, of St. John's, Warwick. The east chancel window contains three subjects, namely, the Baptism, Last Supper, and Ascension, with canopies and daisy border, emblematical of St. Margaret, to whom the church is dedicated. The tracery is filled with angels, in an attitude of prayer, bearing the emblem of the Trinity, &c. A side window contains the following subjects in panels:—Christ blessing little children; Timothy being taught the Scriptures; Lamb and banner, and Dove descending. Mr. Holland has also fixed a stained-glass memorial window in Southam Church, Warwickshire, containing the following subjects:—The Ascension and Acts of Mercy; Christ healing the Sick; Almsgiving, or relieving the Pilgrim, illustrating the text—"I was hungry, and ye gave me meat; I was thirsty, and ye gave me drink; I was a stranger, and ye took me in."

CHELTENHAM SCHOOL OF ART.—The name of the master of this school is Mr. James P. Knight; not Wright, as stated in our last.

FOOD, CHEAP AND GOOD.—Dr. M'Cormack, Consulting Physician to the Belfast Hospital, &c. and an old correspondent of the *Builder*, has circulated some useful remarks on this subject in a printed form. He recommends the formation of bread from dough made with water impregnated with carbonic acid got from chalk instead of formed in the dough at the cost of the flour. This flour, he recommends, should be composed of the whole of the grain, merely stripped of husks or extraneous envelopes, and containing all its bran as well as all its flour, with no bolting or screening after grinding. On a large scale, as for workhouses, or for Government purposes, the dough should be placed in a machine, the counterpart of the common brick and tile machines, for delivery of the loaves as fast as they can be placed in permanently heated ovens, and there so arranged as to become crusted all over like the French loaf. This he regards on the whole as the best and cheapest mode of baking yet devised. In small families he advises the use of a rotating sheet iron oven before the fire for the baking of this kind of bread. Some useful instruction as to the preparation of cheap and good stews for the poorer classes is also given.

TESTIMONIAL TO DR. HASSALL.—A testimonial has been presented, at a dinner, to Dr. Hassall, whose services to the community, as the detector of adulterations in almost every article of nutriment, whether solid or liquid, are already well known and acknowledged. The testimonial was designed from Milton's "Paradise Lost," by the Rev. G. M. Braune, M.A. It represents the Angel Ithuriel, clad in armour, touching, with his spear, Satan, who, having assumed the shape of a toad, sat close to the ear of Eve, tempting her. The testimonial stands about 3 feet 6 inches in height. The figure was modelled by M. Frerèt. It might be read as the Genius of Good destroying Evil, in the shape of a toad, with the point of Truth.

WARMING APPARATUS IN FARNBOROUGH CHURCH, KENT.—A constant circulation of the air of a building through the air-drain, and its concentration on the stove, appear to be the principle of this apparatus. The warm air ascends, expands into every part, and gradually descends, as it cools by contact with the walls and windows, flowing down the air-drain, to be again warmed, and thrown up into the church. It is not necessary to conduct it to the extremities of a building, because the coldest air is always flowing down the drain; and the warm air necessarily taking its place, the warmth is diffused with very little variation of temperature. The construction of the stove is simple and inexpensive: it consists of an iron cylinder, cast in two pieces, 5 feet long by 2 feet 6 inches in diameter: the fire-bars are placed a little below its centre, and are lined with Welsh lump fire-bricks. The stove is fixed in an excavation under the aisle of the church. It has three gratings; the first serving the double purpose of a trap-door to the stoke-hole, and an air-draught to the fire: the second is placed over the stove, and admits the warm-air into the church; and the third, at a distance of 24 feet, is put over the air-drain, which is conducted down to the under part of the stove in the direction of the arrows in the section. The draft is regulated by a small screw-valve in the lower furnace-door, and no damper is used in the chimney. The fire is lighted on the Saturday, and keeps in during the night without an attendant, and it is never touched during the services. In the construction of the air-drain care should be taken that it has no sharp angles: it should be large—2 feet 6 inches by 2 feet 6 inches at the least. Sufficient air only for combustion is admitted by the screw-valve, and so very little heat escapes into the chimney, and the stove is never hot enough to burn the air. The apparatus was put into the church when it was restored last autumn, and has been found, we are told, to answer remarkably well.

FIRE-PROOF MATERIAL FOR FURNACES.—Mr. David Hill, of Tipton, Staffordshire, forge-manager, has patented an invention for "preparing a material capable of resisting fire, and especially suitable for the interior of puddling and other furnaces." In this preparation, the inventor employs materials that have been subjected to the greatest heat that furnaces excite. The combination consists of limestone and ironstone, or the cinder from furnaces, which are melted together and cast into moulds. The proportions of materials may be varied, but the following are preferred;—one-sixth part of limestone, and two-third parts of ironstone or cinder. These are mixed together and fused. Mr. Hill's experience as a forge-manager has no doubt taught him that the vitrified slag of the furnace is well adapted to resist the heat by which it has been melted, and in this respect it accords with the observations of Mr. Truran, that the vitreous covering of the bricks protects them from the farther action of fire. The specification of the invention is one of the shortest on record: the descriptive part and the claims only occupy twelve lines.

NEWS FROM NEW ZEALAND. — The Hutt-bridge at Wellington, New Zealand, a connecting link between Wellington and the river Hutt, has been opened for traffic. The following details are from the *Australian and New Zealand Gazette*:—The length of the bridge is 210 feet, the width of roadway 14 feet. The bridge is supported on four principal piers and two light embankment piers. The main piers are constructed of two parallel rows of piles (five in each row), driven on an average 14 feet below the bed of the river. Above the water-line these piles are firmly connected together by double waling pieces, planking, bolts, &c. so that one pile cannot be broken without breaking five others. The span between the main piers is 50 feet; the length of the main piers, 20 feet; width of main piers, 3 feet. The roadway is carried over the piers on girders 56 feet long, 18 inches by 15 inches, in one solid piece of totara, strengthened by two brackets, 15 inches by 10, resting on and secured to the caps of the main piers: to prevent any deflection, a king and queen post truss framing is constructed over each garden, which relieves the centre of the span and discharges the weight on the heads of the piers. The design as a whole appears heavy, but that it will withstand the heaviest flood there can be little doubt. The design is by Mr. Burt, who superintended the erection. The amount of the contract was 1,450*l.* The contractor was Mr. Carter. A dinner was given by the contractor at the opening to about forty of the workmen employed by him in town and on the works at the Hutt.——The same authority gives some details as to the Sydney College, New South Wales. The pile of building which will form the college was progressing satisfactorily. It is intended that the style and arrangements of the entire building should resemble Oxford, and it is expected that the college will be completed and occupied before the termination of 1856. This work had up to last advices cost 20,000*l.*; and the estimate for the entire construction was 140,000*l.*; but the diminution which has taken place since that calculation in the price of labour of all kinds supports the opinion that the whole expenditure will not exceed 120,000*l.*

PHOTOGRAPHY UNDER WATER.—Mr. W. Thompson, of Weymouth, gives an account, in the *Journal of the Society of Arts*, of means he adopted for taking a photograph of the bottom of the sea, in Weymouth Bay, at a depth of three fathoms. Mr. Thompson anticipates that this will be a ready and inexpensive means of arriving at a knowledge of the condition of piers, bridges, piles, structures, and rocks under water.

"CHRISTIAN ARCHITECTURE OF IRELAND."—On the 6th inst. a lecture was delivered to the members of the Highworth Institute and others, by Mr. Edward W. Mantell, of Swindon, architect. The subject was "The Early Christian Architecture of Ireland." In remarks on the early Irish churches, the lecturer noticed their general smallness in size, the larger in form resembling the Roman Basilica, the smaller only a simple oblong quadrangle, without any chancel, their roofs entirely of stone, windows narrowing as they rose in height, small, and splayed, or widening inwards, to afford more light, tops triangular or pointed, square, and semicircular. Glass seems to have been then unknown, or at least not used. Doorways for the most part quadrangular and without cement, occasionally arched at top, and but seldom ornamented. All these structures are of a plain character. Yet Ireland is not without a specimen of a more decorated architecture: there may be seen in the sequestered valley of Glendalough, the City of the Seven Churches, the Balbec of early Christianity in Ireland. They seem to have been founded about the latter end of the sixth or the beginning of the seventh century. It would seem, therefore, that a decorative style existed here, as did also civilization and learning, prior to these being introduced into England.

PROFIT ON COAL CULM, OR WASTE.—A person who not long since worked as a common collier in a mine near Glasgow had lately in his possession a mound of pit sweepings, or *débris*, which could scarcely be dignified with the name of coal-dross, and which covered an area of three acres, and consisted of about 80,000 tons. The extensive miners' strike in Scotland caused so great a scarcity of coal and dross, that the whole of this mound of sweepings was disposed of at prices ranging from 3s. to 13s. a ton, yielding the "proprietor" a clear profit of 26,000*l.* for stuff not usually worth carting away! It has, moreover, it is said, been discovered that, mixed with refuse coke from gas-works, this *débris* is better adapted to furnaces than the best coal-dross, producing a greater heat without half the smoke and waste. The *Glasgow Mail*, moralizing on this remarkable "transaction," is of opinion that "it's an ill wind that blaws nachody guid."

SHAM TENDERS.—For a concert-room, in Knightsbridge, advertised in our columns, eleven tenders were sent in, last week. Seven of these ranged from 797*l.* to 623*l.* (Messrs. Parry); the remaining four from 468*l.* 10s. to 420*l.*! Of these last not one of those who tendered was found to undertake the work: the tender being mere guess work, or worse. Ultimately, Messrs. Parry's tender was accepted. Some means should be adopted to check such conduct.

TENDERS

For the Central London District Schools, to be erected at Hanwell. Messrs. Tress and Chambers, architects:—

Jay	£43,860 0 0
Beck	43,093 0 0
Ashby and Horner	42,850 0 0
Piper and Son	42,437 0 0
Macey	41,670 0 0
Lee and Son	41,440 0 0
Myers	40,800 0 0
Brown	39 857 0 0
Holland	38,984 0 0
Downes	38,960 0 0
Kirk and Parry	38,881 0 0
Wilson	38,598 0 0
Crook	37,875 0 0
Ashby and Sons	37,810 0 0
Hayward and Nixon	37,746 0 0
Lucas	37,400 0 0
Brass	34,988 0 0

For extension of female department and addition to assistant chaplain and surgeon's residences, at the Surrey County Prison, Wandsworth:—

G. and W. Todd	£9,600	0	0
Lee and Lavers	9,347	0	0
Thompson	8,986	0	0
Ryder	8,940	0	0
Myers	8,720	0	0
Patrick and Sons	8,473	0	0
Winder	8,449	10	0
Wilson (Pimlico)	8,449	0	0
Willson	8,433	0	0
Hill	8,409	0	0
Adamson and Sons	7,795	0	0
Diggle	7,750	0	0
Hack and Son	7,479	0	0
Pollock and McLennan	7,269	0	0

For stabling, &c. to be built for the London General Omnibus Company, in the Eagle Wharf-road, Hoxton. Mr. Scurry, architect:—

Hill	£1,299	0	0
Raby	1,283	0	0
Smith	1,199	19	0
Dove, Brothers	1,175	0	0
Chapman and Parsons	1,087	10	0

TO CORRESPONDENTS.

"J. H." (will appear).—"H."—"E. A."—"H. P."—P. and W." "Rev. R. S. D."—"H. C."—"A. H." (send us particulars of the decision).—"E. T. B."—"C. and Co."—"T. S."—"Original Mallet." "An Inquirer," re Section 56 (shall have an answer next week).—"J. B. N." (various filters have been described in our pages).—"Philomath" (should send his name)—"T. T."—"A. L."—"J. R."—"E. R."—"G H" (a plasterer is certainly not bound to make his work *upright* on a wall, which, "about 40 feet in height, hollows in the middle to the depth of 12 *inches* from a line dropped from the top to the base," although he is agreed to execute the plasterer's work "in a proper and workmanlike manner." A house in that condition should be at once reported to the police commissioners).—"W. C."—"W. H. B."—"W. W."—"G. G."—"Rev. J. G."—"C. C. N."—"W. A."—"W. B."—"F. W. G."—"An Architect."—"Col. N."—"F. B."—"H. H."—"Mr. M" (thanks).—"E. A."—"P. and W."—"T. S."—"C. E."—"J. C."—"M. J. L."—"T. F."—"J. G."—"B. B."—"W. P." "E. O. W."—"Mr. R" (shall have attention).

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor;" all other communications should be addressed to the EDITOR, and not to the Publisher.

"*Books and Addresses.*" We are forced to decline pointing out books or finding addresses

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TO DEALERS in SANITARY-TUBES, FIRE-BRICKS, &c.—WANTED, an AGENT in London for the Sale of Glazed Sanitary Pipes, White Floor Quarries, Fire-bricks, &c. A party having a wharf in the neighbourhood of Paddington would be preferred.—Apply by letter, prepaid, to Mr. H. GOODEE, Hardingstone, Northampton.

WANTED, an IN-DOOR SALESMAN, in a wholesale paper-hanging warehouse.—Apply, by letter only, to Messrs. HUDKINSON and BURNSIDE, 50 Upper Thames-street.

TO CLERKS OF WORKS.

WANTED, immediately, by the Braintree Local Board of Health, a Young Man, to act as ASSISTANT to the ENGINEER in Superintending the Sewerage and Water-works. Any one who has been used to similar works will be preferred. Salary, two guineas per week. No one need apply who has not been accustomed to levelling.—Apply by letter, post-paid, to Mr. FENTON, Architect and Civil Engineer, Chelmsford, Essex.

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WANTED, in the Office of a Builder, a PERSON thoroughly acquainted with the usual routine of a Builder's Office, and who would not object to fill up his spare time at bench, if a joiner,—on the basket if a mason. As a MASON, used to lettering and monumental work.—Apply to W. H. care of Mr. Cousins, *Lincolnshire Times* Office, Lincoln.

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TO CARPENTERS.

WANTED, a YOUNG MAN, about 35, who thoroughly understands his trade, for a PERMANENT SITUATION. Reference as to character, &c. required. Address G. J. B. 19, New-road, Near Gower-street North.

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SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump lime to boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at the Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENTS.
BLYTH, BROTHERS,
16, SOUTH WHARF, PADDINGTON,
AND PLASTER WORKS
BALDWIN'S PLACE, GRAY'S-INN LANE

BLUE LIAS LIME.—CHARLES NELSON can supply direct from the Works in his own boats to any part of the Thames alongside, in the Docks, River Lee, on any canal, or by rail to any part of the kingdom, large quantities of the above GENUINE HYDRAULIC LIME, now so extensively used.
Quality, Weight, and Measure may at all times be strictly relied on; references in proof of the above can be given.
N.B. The Captain of the Boat will always bring with him the Grand Junction Canal Note, from which the contractor will be enabled to know exactly what weight of Lime he is paying for.
All orders addressed to the
LONDON DEPOT, 16, SOUTH WHARF, PADDINGTON,
BLYTH, BROTHERS, SOLE AGENTS,
Will be promptly attended to, and any further information can be obtained from them
Works, Stockton-field, near Southam, Warwickshire.

PLASTER of PARIS.—MESSRS. BLYTH, BROTHERS, beg to acquaint the trade, that they have made a considerable reduction in price; the quality they are now manufacturing cannot fail to give entire satisfaction. Samples and prices forwarded to any part of England, or the metropolis. No extra charge made to any wharf or railway station in London.—Any further information can be obtained at their Works, Baldwin's-place, Gray's-inn Lane, Holborn; or at the Blue Lias Lime Depôt, 16, South Wharf, Paddington.

GREY STONE LIME WHARFS,
12, UPPER GROUND STREET, Blackfriars (Surrey side),
7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Pavlors, and Pickings, of good and sound quality, constantly on sale at Mr. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.
Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for asphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and South Western and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods both Welsh and Newcastle). Fire-clay, Flare-burnt Lime, and Marl and Temper Lime; and bare lime is packed in hogsheads, casks, jars, &c. for exportation.
General Office, No. 12, GEORGE YARD, LOMBARD STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 8, ADELAIDE-PLACE, London-bridge.

BEST HERTFORDSHIRE MALM SECONDS AND CUTTERS ALWAYS ON HAND.
MILLS AND PRICE, 8, ADELAIDE-PLACE, LONDON-BRIDGE;
AND CROWN WHARF, GREAT SCOTLAND-YARD

TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane, Dulwich. Price of good stock bricks, 25s. per thousand on the field, for cash.—Application to be made to the Foreman, A. BANHAM, at the Works.

WHITE SUFFOLK FACING-BRICKS, delivered on the railway trucks, or into barges, at Ipswich, at 38s. per thousand.
SAME CONCERN.—Compact BRICK-YARD, 24 acres, with cottage, kiln shed, barrows, planks, pump, tile machine, &c. 250,000 of earth raised, price 500l.—Apply to WM. P. RIBBANS, Ipswich.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856. Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of these is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday.
HENRY G. MOUNT, Sec.
97, King William Street, City.

IMPORTANT to BUILDERS.—GREAT REDUCTION in the PRICE of BRICKS.—BRICKS delivered to any part of the River up to Battersea-bridge, at the following prices, viz.:—Grey Stocks, 25s. per thousand; Grizzles, 20s. per thousand; Rough Stocks, 30s.; Place, 12s. to 35s. per thousand.—Terms, cash on delivery.—Apply to Mr. G. SMEED, Sittingbourne, Kent

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER TILES.
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby

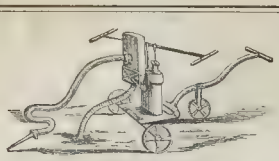
PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURORS," page 561, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

HOGG'S REGISTERED GARDEN EDGE TILES. The attention of PERSONS ENGAGED in LAYING OUT GARDENS and WALKS for Public Institutions, is solicited to these Tiles, as an improvement on box-edging. In colour they resemble Bath stone, they are impervious to frost, serve to drain the paths, are easily laid down, and last for years without further expense. Price 13s. per 100, or about 4½d. per yard run.—Full particulars will be sent on application to R. BLACKET, Witham, Essex, of whom alone the tiles can be obtained.
P.S. White and Brimstone Suffolk Bricks, and Paving Goods of the best quality.

TO STONEWARE POTTERS, BRICKMAKERS, CONTRACTORS, and OTHERS.—A POTTERY and BRICKWORKS TO BE DISPOSED OF, on easy terms, near a railway station, and within reach of the large Government works now in progress at Winchester, Hamble, &c. &c. The machinery, buildings, and plant are upon the most improved plan, and adapted for carrying on a large stoneware business, for which the clay is well suited. There is ample space and every requisite for making from four to five millions bricks per annum, large sheds for making tiles and red ware; a dwelling-house, stable, &c. &c. The whole in complete order, and now in operation.—For particulars, apply to Mr. F. SCHULTZ, Solicitor, 4, Dyer's-buildings, Holborn, London.

WANTED, immediately, TWO full-sized, strong, single-horse BUILDERS' CARTS, to match.—Apply to Mr. WHITE, 6, Emerson-street, Southwark.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.
J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.
Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.
TUNED BY MACHINERY.
Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.
MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system which gives superior tone and facility for ringing



B. FOWLER, HOLMAN, and CO.

SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.

The simplest, cheapest, and best thing of the kind before the public; almost incredible from the substances it will move at times, and so portable that it can be fixed with perfect ease. Delivers a large quantity of fluid, and is a really good article, commanding extensive home and foreign sales.

ON SALE AND HIRE,

SINGLE AND DOUBLE PUMPS IN WROUGHT IRON

TO ANY DEPTH,

FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.

Sizes, from 3 inch to 15-inch barrels.

N.B. The Largest Stock in London for hand or steam power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

BENJAMIN FOWLER and CO.

FITTERS OF HEATING-APPARATUS OF ALL KINDS,

For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,

And for every purpose where artificial heat is required.

They also erect DRYING ROOMS for ASYLUMS, UNIONS, DOMESTIC, and MANUFACTURING PURPOSES, upon the most improved principles, and up to the largest or smallest scale.

STEAM COOKING and BATH APPARATUS FIXED;

Also PUMPS, for DEEP or SHALLOW WELLS,

To be worked by hand, horse, or steam power,

AND ALL KINDS OF

ENGINEERS', MILLWRIGHTS', or SMITHS' WORK, for Public or Private Establishments.

The most ample references from a long experience in the above branches, can be given.

BENJAMIN FOWLER & CO. GENERAL ENGINEERS, WHITEFRIARS-STREET, FLEET-ST.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONEWARE PIPES.
DOULTON'S HALF SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS
DOULTON'S PATENT JUNCTION BLOCKS

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during that period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Public Sewers, Westminster Suburban Hydraulic, Deptford Dockyard, Her Majesty's Commissioners of Woods, &c. and in all its transactions with the Trade, have had the satisfaction of giving entire satisfaction to their employers, both as regards the quality of the articles supplied by them, and the low rates at which they have been enabled to offer their goods to contractors, the Trade, & others requiring such, and may therefore add at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Inferior Glaze, may now be obtained at the price of the commonest description [illegible]

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others to a very great REDUCTION in the PRICES of his GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION

J. CLIFF, Proprietor,

MANUFACTURER OF

FURNACE-BLOCKS, BRICKS, &c

CLAY GAS RETORTS,

GLAZED SOCKETED PIPES,

HALF-SOCKET PIPES,

JUNCTIONS, BENDS, AND OTHER SANITARY APPLIANCES.

M. B. NEWTON, Agent

LONDON STORES,

WHARF No. 4, GOODS STATION,

KING'S-CROSS.

The LARGEST, BEST GLAZED, and STRONGEST PIPES in London

INSPECTION SOLICITED.

WINDOW BLINDS.—Wire-blinds, 1s. 5d. per foot. 11 Broad-street, 41 and every other kind of inside or outside blinds, spring rollers, &c. of best possible quality, at proportionate prices. Fixed complete.—HENRY JENKS, late with Read and Co. Blind Makers to the Queen, Thames-bank Blind Factory, 4, Caledonia-street, near the Pimlico Steam-boat Pier.

WINDOW-BLINDS.—J. FULLER, Manufacturer, 24, Charlotte-street, Blackfriars-road. Established [illegible]. Venetian Blinds from 10s. each, or 8d. per foot; Wire ditto from 1s. 3d. per foot; Holland ditto, from 3s. each, or 2½ per foot. Every other description of Blinds equally low, warranted of the best manufacture. Discount to Builders and the Trade. Fixed complete.

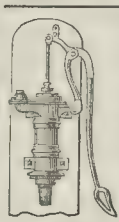
WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 4, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner. Venetian ditto, per square foot, 9d.; best Holland ditto, do. Paders, 8d.; best ditto, do. spring rollers, 9½; cane wire blinds, in mahogany frames, 2s.; perforated zinc ditto, do. ditto, 1s. 10½; oblong blinds of striped cloth, do. Transparent blinds in great variety. Engravings, with price and size sent to builders and the trade, forwarded on application, post free.

BRIERE'S PARISIAN PAPERHANGINGS, SATIN, FLOCK, and GOLD DECORATIONS and BORDERS, 16, Alfred-terrace, Queen's-road, Bayswater.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSS'S WHOLESALE WAREHOUSE, 22, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER HANGINGS! PAPER HANGINGS! PAPER HANGINGS! Builders, the Trade, Country Dealers, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSS'S MANUFACTORY, 22, Lower Arcade, Charing-cross, London. Splendid new designs, both in much-admired dark prices, not to be surpassed by any house in England. Patterns sent for approval to town or country. Cheapest house for panel decorations. Terms, Cash.

PAPER-HANGINGS. — JEFFERY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, which in price, style, and colouring, are equal to any that can be manufactured. J. A. and CO. are the sole proprietors of the Gutta Percha Paper, and the best remedy for damp walls. Factory, 115, Whitechapel; Show-room, 500, Oxford-street.



TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,

which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive chain and guide-rods are unnecessary, rendering the price considerably less than Pumps made in the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 25 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, mills, breweries, farms, gardens, stables, liquid manure, ships, barges, wells, sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

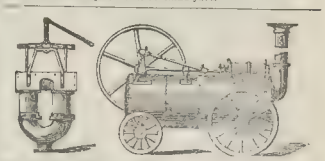
Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 3s. per doz. painted.
Ditto .... 4s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

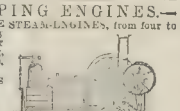
PARSEY'S REVOLVING STEAM-ENGINES and PUMPS (the accumulation of circular motion in steam engines, are better known in all the Docks, and as pumps, being all metal, are readily used for hot and cold liquors; and having no packing, are not liable to choke, and are a vast improvement on pumping and fire engine pumps. To be seen at Mr PARSEY'S Depôt, Great Scotland-yard.



PORTABLE STEAM-ENGINES and PUMPS, Kept in Stock, or Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge, Surrey Side.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to put on fire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.



JAMES BURTON & SONS,

Engineers and Contractors,
John's-place, Holland-street,
Southwark, London.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

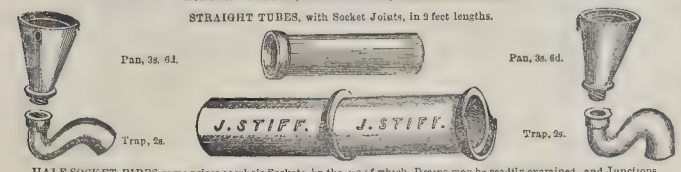
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Denyers wharf, Chelsea; Pratt-wharf Kings-road, Camden-town.

Messrs. COLLINSON and DUBOURT, and CO'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.

Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.

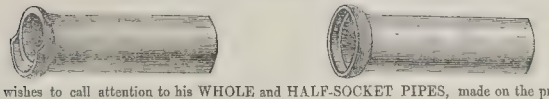
Mr. LAVERS'S, Dowgate wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

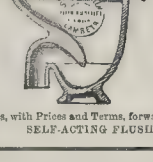
STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

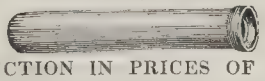


Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.

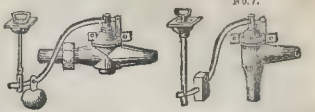
PLAIN ENDS.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE

No. 7.



is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under a pressure of 15 to 200 feet; they are found to be exceedingly simple, and are cheaper than common cocks. Manufactured solely by the patentees,

THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Kent-road, Lambeth.

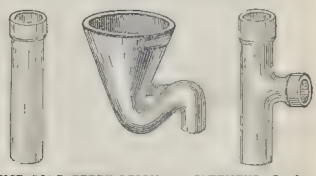
N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

SUPERIOR STONEWARE GLAZED

PIPES of a quality not to be surpassed. — E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are enabled to offer at such a most great satisfaction, the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Slabs, &c. All goods pressed. — E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND, London Establishment, Falcon Wharf, Blackfriars. DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to customers and others, STONEWARE PIPES &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. Per 21, 1855.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine Elms, London, and at all their Warehouses.

PRICES.

3 inch bore,	in 2 ft.	6 in.	lengths,	at	3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	9d. "
9	"	"	"	"	1s. "
12	"	"	"	"	1s. 6d. "
15	"	"	"	"	2s. 6d. "

These pipes are made on the best possible principle, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The principle adopted is used in the manufacture of the ancient ware is now found to be unglazed, and it is well known that good earth ware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES,

acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps set on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT SELF-ACTING WATER CLOSETS, with ECONOMIC WATER-REGULATORS,

manufactured on the newest principle, producing with powerful flush over the surface of the basin, a smaller quantity of water than is usually required, and effectually prevents waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING-WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 37, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

HIGHGATE ARCHWAY and BALL'S POND POTTERIES.—Drain Pipes, Bricks, Tiles, Chimney and Garden Pots constantly on sale.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS,

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

SALES BY AUCTION.

BUSHEY, NEAR WATFORD, HERTS.—Valuable Freehold Building Land.

MESSRS. PRICE and CLARK are instructed to SELL by AUCTION, at GARRAWAYS, on TUESDAY, JUNE 3, at TWELVE for ONE, several Valuable PLOTS of BUILDING LAND, on the high road from London to Watford, in the charming village of Bushey, near the Windmill Inn, and a short distance from the railway station. This property is situate in a beautiful country, surrounded by numerous residences, and has the high road, divided by the Uxbridge and Barnet road, it has the advantage of a double frontage, rendering it particularly eligible for building purposes.—May be viewed till the sale, and descriptive particulars, with plans, obtained at the principal Inns in the vicinity and in London; of Geo. Futber, Esq. Solicitor, 1, Furnival's-inn; at Garraway's; and at Messrs. Price and Clark's Offices, 48, Chancery-lane.

TO TIMBER MERCHANTS, CABINETMAKERS, CARPENTERS, BUILDERS, &c.

C. LEARY and CO. will SELL by AUCTION on the PREMISES, New Inn, Broadway, Curtain-road, Shoreditch, on MONDAY, the 26th of MAY, 1856, at ELEVEN o'clock precisely, by order of Mr. J. F. Mitchell, who is relinquishing the premises, and removing entirely to 131, Curtain-road, a first portion of his excellent and well-seasoned STOCK, consisting of Honduras, Spanish, and Cuba mahogany in fitches, planks, and boards; fine American birch, rosewood in satin wood, dry pine deals, &c.—To be viewed two days' previous to, and on the morning of Sale, when catalogues may be had on the Premises, and at the Offices of the Auctioneers, 75, Old Broad-street, City.

TO IRON-FOUNDERS, SMITHS, and OTHERS.

MESSRS. FULLER and HORSEY, are instructed by the Assignees of R. J. POLGLASE, to SELL by AUCTION, at the ATLAS WORKS, Borough-road, on WEDNESDAY, JUNE 4, at ELEVEN, in Lots, without reserve, the PLANT and TOOLS of the ATLAS FOUNDRY, 500 patent cast-iron shell boxes, three wrought-iron cupolas, Lloyd's fan, erection of 3-inch stoves (some damaged sheets), 5 tons wrought, scrap, and broken cast-iron, 20 tons new rod and bar iron, cast, shear, and spring steel, 5 tons galvanized corrugated iron roof plates, four smiths' forges, with bellows and anvils, 8 tons pig iron, smiths' tools, stores of various descriptions, files, brass-work, washers and burrs, iron pipe, 20 bags of nails, 1 ton old files, rivets, weighing-machine, crab-crane, blocks and falls, 20 chaldron of coke, and other effects.—To be viewed on TUESDAY previous to the Sale, when catalogues may be had on the Premises, and of Messrs Fuller and Horsey, Billiter-street, City.

Double horizontal double-cylinder Steam-engine

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on the PREMISES, 69, Union-street, Southwark, on THURSDAY, JUNE 5, at ELEVEN, A new highly-finished double cylinder STEAM-ENGINE, of 20-horse power, with bright parallel motion, fly-wheel, with wrought-iron shaft, and apparatus, well adapted for a corn or cement mill; the consumption of fuel will not exceed 3lbs. per hor e per hour.—To be viewed seven days prior to the Sale, by order, which, with catalogues, may be obtained of Messrs Fuller and Horsey, Billiter-street, City.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on the PREMISES, 69, Union-street, Southwark, on THURSDAY, JUNE 5, at ELEVEN, the TOOLS and STOCK of an ENGINEER, self-acting planing machine, self-acting shaping machine, self-acting drilling machine, a very powerful self-acting boring and surfacing lathe, one 11-inch back-geared lathe, one 6-inch self-acting screw-cutting lathe, one each 5-inch, 3-inch, and 2 inch back-geared slide lathes, four hydraulic pressure steam-engines, each of 5-horse power, steam-boiler, seven morticing machines, vices and benches, stocks, taps, and dies, and steel tools, several cast, wrought, copper, and gun-metal Cocks and tools, grindstones and frames, a large assortment of patterns, and numerous other effects. To be viewed on WEDNESDAY previous to Sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, 13, Billiter-street, City.

HYDRAULIC PRESSES, STEAM PUMPING ENGINES, &c

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on FRIDAY, the 6th of JUNE, at TWELVE, on the PREMISES, 79, Curtain-road, Shoreditch, in lots, EIGHT HYDRAULIC PRESSES, with 7-inch, 8-inch, and 10-inch rams, 5 feet long each, and rollers; five with tables 6 feet wide, and three with tables 4 feet wide; two steam pumping-engines, 5 and 6-horse power each, with two sets 3½ and 12 inch pumps; a 10-horse power Cornish boiler; five sets hydraulic hand-pumps, three extra cylinders and rams; Low feet of wrought iron weighing-machine, three iron and waste hoop, and other effects.—To be viewed THURSDAY previous to the Sale, when catalogues may be had on the Premises; of of Messrs. Fuller and Horsey, Billiter-street, City.

TO ENGINEERS AND OTHERS

MESSRS. FULLER and HORSEY are instructed by the Assignees of R. J. Polglase to SELL by AUCTION, at the ATLAS WORKS, Borough-road, on WEDNESDAY, JUNE 3, and following day, at ELEVEN, in lots, with ut reserve, the valuable TOOLS and MACHINERY of an ENGINEER; one powerful 20-inch centre self-acting lathe, by Fox, bed 30 feet; one 13-inch self-acting lathe, by Collier; one 13-inch and one 8-inch self-acting screw-cutting lathe, beds 10 feet and 17 feet, by Smith, Beacon, and Tennant; one 10-inch self-acting screw-cutting lathe, by Lewis, with spherical slide; one 6-inch screw-cutting lathe, one 7-inch self-acting screw-cutting lathe, by Austin; two 6-inch, two 7-inch, one 8-inch, and one 12-inch back-geared slide lathes, with iron beds; 6-feet lathes, self-acting screw-cutting; mortising, two planing machines, screwing machines, Lebone power self-acting sharpening, and other tools, iron and wrought-iron shafting and riggers, vice, benches, stocks and dies, steel tools, valuable patterns, and numerous other effects.—To be viewed on SATURDAY next, till the day with catalogues may to be had; at the Premises, and of Messrs Fuller and Horsey, Billiter-street, City

TO ENGINEERS, PATENT REVOLVING SHUTTER MAKERS, MILLERS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY, MAY 26, at ELEVEN, on the PREMISES, No. 15, Fenchurch-buildings, Fenchurch-street, the TOOLS of a PATENT REVOLVING SHUTTER MANUFACTURER; including a 10 horse power direct-acting steam-engine, an excellent high-pressure tubular boiler, a powerful 15-inch centre self-acting lathe, 12-inch, 10-inch, and 8-inch self-acting lathes, two drilling machines, cutting and punching presses, six fly presses, a powerful draw bench, set of bending rolls, shafting, riggers, &c., 3 cwt. of assorted bolts and nuts, smiths' stocks, tools, smiths' forges and tools, weighing machine, 10 tons of scrap iron; a few lots of household furniture, office furniture and fittings, and other effects.—To be viewed on SATURDAY previous to the Sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

NEAR HAMPSTEAD HEATH.—Twenty-three acres of Meadow and Arable Land, also Building Land, near Finchley-road, with

MR. MURRELL will SELL by AUCTION, at the MART, on THURSDAY, JUNE 5, at TWELVE, by order of the Mortgagees, important FREEHOLD ESTATES, comprising four unfinished houses, and about 23 acres of land, lying about one mile high bridge, several of which are valuable for building purposes, and having a frontage of 1,000 feet, running a considerable depth, well situate in the New Finchley-road, near Hendon and Hampstead-heath, and from its admirable position must soon be required for building purposes. The estate will be sold as follows:—Lot 1, a meadow 6a acres with brick earth. Lot 2, a 7-acre meadow (brick field). Lot 3, a 5-acre meadow. Lot 4, a 2½-acre meadow. Lot 5, two unfinished houses. Lot 6, two ditto. The property may be viewed, and particulars with plans had of Messrs. Wilkinson and Stevens, Solicitors, 2, Nicholas-lane, Lombard-street; at the Royal Oak, New Finchley-road; at the Mart, and of Mr. Murrell, Auctioneer, 42, Walbrook, City.

SALES BY AUCTION.

Third Portion of the Important Collection of beautiful Sculptures and other valuable Works in marble, bronze, stone, and terra cotta, an extensive variety of modern chimney-pieces, of Italian, French, and Elizabethan designs, choice specimens of sgraffiato, &c. of Messrs. Browne and Co. at their Galleries, in University-street, by whose direction

MESSRS. RUSHWORTH and JARVIS will SELL by AUCTION, at the GALLERIES, in University-street, near Fitzroy square, on TUESDAY, JUNE 4, and two following days in course, since the premises having been disposed of, the very celebrated COLLECTION of SCULPTURES, in marble, including classical figures, groups, vases, therms, pedestals and fountains, valuable bronzes, numerous chimney-pieces, of the most approved designs in Italian, French, English, and other marbles, many of which are beautifully sculptured by first-rate artists; also columns, pedestals, candelabra, mosaics, pietra dura, and marble slabs, and various works in sgraffiato, for which this establishment has been so long famous. The stock will be arranged in lots, suitable for the decoration of saloons, halls, corridors, terraces, cavilions, and pleasure-grounds of the nobility and gentry.—Catalogues will be ready four days prior to the Sale, and may be had on the premises; and of Messrs. Rushworth and Jarvis, Saville-row, Regent-street, and 15, Change-alley, Cornhill.

BUILDING MATERIALS of extensive Premises and Vaults in Fenchurch-street and Paul's Head-court adjoining.

MR. ELLIS is directed to SELL by AUCTION, on the Premises, on TUESDAY, 3rd JUNE, 1856, and following day, at TWELVE o'clock each day, in lots, to be taken down by the purchasers, all the capital MATERIALS and FIXTURES of the PREMISES, Nos. 14, 15, and 16, Fenchurch-street, and Nos. 1, 2, 3, and 4, Paul's Head-court, adjoining in the rear, comprising about fifteen tons of lead, in flats, gutters, cisterns, and pipes; 800,000 bricks, capital timbers, in rafters, joists, and girders; 40,000 plain tiles, 120 pairs of glazed sashes, 40 of the largest of stout boarded floors, quantity of doors and fittings, staircases, and an assortment of excellent fixtures, panel framing and wainscot, &c. To be viewed two days previous, and morning of sale.—Catalogues had of Messrs. Parsons and Son, Architects, Lawrence Pountney-lane; and at the Offices of the Auctioneer, 150, Minories, City.

Valuable Materials of the temporary buildings erected in the Green park, Hyde-park and Victoria park, for the use of her Majesty's Government, in connection with the forthcoming display of Fireworks, on the 29th, to celebrate the return of Peace.

MESSRS. EVERSFIELD and HORNE are how instructed with instructions to SELL by AUCTION, on the PREMISES, early in JUNE, the valuable MATERIALS, FITTINGS, and FENCING, comprising a very large quantity of timber, of the most useful description, in framed principles, inch boarding, inch planking, and quartering, also the glazed sashes, doors, and other fittings, the whole of which have been erected with a view to conversion, and will be put in suitable lots.—Further particulars and the days of sale, will be shortly announced, and any party wishing for a catalogue, may have it sent, post-free, by forwarding his address to the Auctioneers, 40, Parliament-street, Westminster

PORTPOOL-LANE. — Valuable Builder's Stock of seasoned Timber, Plant, Implements and Effects, on the Premises of the late Messrs. Locke and Nesham.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors to SELL by AUCTION, on the PREMISES, Portpool-lane, Gray's-inn-lane, on TUESDAY and WEDNESDAY, JUNE 10th and 11th, the FIRST PORTION of the valuable STOCKS and EFFECTS, which will comprise a large quantity of well-seasoned yellow and white deals and battens, prime 4 and 3 inch ends and battens, pine planks, matched boarding and skirting, 4in. square timber and quartering, oak sills, dry wainscot, and mahogany; stone steps, slabs, and paving; also, several builder's carts, stone trucks, and timber-carriages; scaffold-boards, poles, and putlogs; crab engines, hoisting-jacks, blocks and falls; ladders, wheeling planks, barrows, pile-driving engines, and monkeys; a new travelling-crane, as attached, the contents of the joiners', masons', painters', and smiths' shops; forty work-benches, and numerous other effects.—Catalogues will be sent, post-free, to any parties who will apply to the Auctioneers, 40, Parliament-street, Westminster

PIMLICO.—MARBLE CHIMNEY-PIECES.

MESSRS. EVERSFIELD and HORNE are instructed to SELL by AUCTION, on TUESDAY, the 3rd of JUNE, at TWELVE, at the Marble Show-rooms, Belgrave-place, about 150 Marble Chimney-pieces, several of which are richly sculptured, and others of a plainer character.—40, Parliament-street.

Valuable Leasehold Builder's Premises, Gray's-inn-lane.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors to prepare for SALE, early in JULY, the LEASEHOLD of the extensive BUILDER'S PREMISES, in Portpool-lane, with the steam-engine and machinery for sawing, morticing, tenoning, &c. as employed by the late firm of Locke and Nesham. A large sum has been expended in substantial improvements upon the premises, and they are held for a long term at a low rental.—40, Parliament-street.

COVENT-GARDEN.—Excellent Materials of a large House, with Offices: quantity of Lead Fixtures, &c.—by

MR. RICHARDS, on the PREMISES, 29, Bennet's-street, Covent-Garden, on TUESDAY, MAY 27, at TWELVE; comprising 70,000 STOCK BRICKS, 43 squares of Timber and Boarded Floors; Timber of Roofs, modern Fittings, Marble Chimney-Pieces, Patent Water-Closets, Register and other Stoves; quantity of Lead in sheet, flats, gutters, cisterns, and pipes; Iron Fence, York Paving, Coping and Sills; 20,000 plain Tiles, and other materials.—View the day preceding and morning of sale. Catalogues may be obtained of Mr. Henry Gray, Estate Agent, 14, Southampton street, Strand; and of the Auctioneer, Tottenham.

CROYDON, SURREY

MESSRS. BLAKE will SELL by AUCTION, at the BRICKFIELD, near the Railway Bridge, Selsdon-road, on MONDAY, MAY 26, by order of the executors of the late Mr. Davis, 200,000 BRICKS, consisting of stocks, grizzes, and place; also breeze, ashes and rand. May be viewed, and Catalogues had at the inns in the neighbourhood, and of Messrs. Blake, Croydon.

TO BUILDERS, CARPENTERS, AND OTHERS.

MR. LOUND will SELL by AUCTION, on MONDAY, MAY 26, by direction of Mr. Roberts, (under a distress for rent), all the capital REMAINS of materials in LUMBER and other useful BUILDING, a few pieces of Wood-street, comprising a convenient dwelling-house, extensive, lofty, and light workshops, saw-pits, yard, and sheds, very easy of access from the street, and suitable for any business requiring such premises, from some of the most important parts of the City of London; held under Christ's Hospital, for a long term, at the low rent of £8 per annum; the purchaser to have the option of purchasing the timber, stock-in-trade, &c.—May be viewed, and particulars had, of Mr. C. P. Utton, Solicitor, 41, Noble-street, City; and of the Auctioneer, 60, Chancery-lane.

BY ORDER OF THE COURT OF BANKRUPTCY TO BUILDERS, BUILDERS' SAW MILLS, AND OTHERS.

MR. HARDING will SELL by AUCTION, at GARRAWAY'S COFFEE-HOUSE, Cornhill, on WEDNESDAY, 4th JUNE, at TWELVE o'clock, in Six Lots, LEASEHOLD PROPERTY, held for a long term of years, at low ground-rent, situate and being No. 1 to 10 on the south side of Chapel-road, Hammersmith, consisting of Ten Houses, in an unfinished state, with four carts and back gardens, but when completed would, it is estimated, produce rentals amounting to 280l. per annum. Also a neat Residence, No. 23, Chancellor-road, the annual value of £40, now in the occupation of the tenant.—Of William Pennell, Esq. Official Assignee, Guildhall-chambers; of Messrs. Lawrence, Pitman, and Bell, Solicitors, 61, Jewry-chambers; of H. Barber, Esq. Solicitor, 17, Ironmonger-lane; at Garraway's, and at the Auctioneer's Office, 25, New Broad-street, City.

SALES BY AUCTION.

TO GOVERNMENT CONTRACTORS AND OTHERS. Sewing Sale of Stock, Plant, and Implements in Trade of a Contractor removing from the Premises.

MR. PEAKE is ordered by the Contractor, Mr Carlile, to SELL by AUCTION, upon the PREMISES, Bermondsey New-road, on TUESDAY and WEDNESDAY, JUNE 3rd and 4th, at TWELVE each day, without reserve—the several Contracts under the Commissioners of Sewers, &c. being completed—the whole of the valuable PLANT and EFFECTS, comprising a large quantity of drain-pipes, double and single junctions, elbows, &c.; 10,000 feet elm boards, about 12,000 straw, a quantity of lift-pumps, and other gearing; dry planks, boards and battens, with numerous other useful materials. May be viewed on Monday previous and mornings of Sale, and Catalogues obtained at Mr. Peake's Offices, 44, Tooley-street, Southwark.

FARRINGDON-STREET EXTENSION.—Building Materials of several Houses, also a large Quantity of surplus Materials, Timber, Deals, and Iron

PULLEN and SON will SELL by AUCTION, on the PREMISES, on MONDAY, JUNE 2, at TWELVE, by order of the Improvements Committee of the Corporation of the City of London, the BUILDING MATERIALS and Fittings-up of several Houses in Peter-street and Turnmill street, Clerkenwell, of the usual description; also a large quantity of surplus materials and stores, consisting of about 10,000 feet run of inch boards, 5,000 feet run do square, 50 lead cases, shoring timber and scaffolding five tons weight and, &c. &c. May be viewed on SATURDAY.—Catalogues had at the Architect's Office, Guildhall; and of Pullen and Son, 80, Fore-street, Cripplegate.

Extensive Sale of Valuable New Timber and Building Materials, Bricks, Wharf, Old Ford-road, Victoria Park, near the City of London Tavern

J. G. HALL is instructed by Mr. Wright to SELL, BY AUCTION, on WEDNESDAY next, MAY 28, at TWO precisely, upwards of SEVENTY LOADS of PRIME YELLOW BALKS, of various dimensions; 1,000 New Yellow Deals, from 12 to 22 feet long; 600 Dry Norway Battens; 9 Yellow and Pine Planks; 20,000 feet of 1 and 2 inch Yellow Planks, 3,000 feet of 1-inch Yellow and Pine Planks, 3,000 feet of Dry 1-inch Battens; 5,000 feet of New Quarter-ing, of all lengths and dimensions; 5,000 feet of 3-and-Feather-edge Boards; 5 cwt. Inch and Pantile Laths, &c. &c. On view the Day prior to and morning of sale. Catalogues at Wharf-cottage, on the premises; at the Lord Nelson and City of Paris Taverns, Old Ford-road; Alfred's Head, Cambridge Heath-road; Rose and Crown, Bromley; Yorkshire Grey, Stratford; Castle, Woodford; Red Lion, Ilford; Fox and Hounds, Romford; and of the Auctioneer, 9, Cranbrook-street, Old Ford-road.

BUILDING MATERIALS.—Great Northern Railway Terminus, King's-cross.

MR. F. HALL will SELL, on MONDAY and TUESDAY, the 26th and 27th days of MAY, at TWELVE o'clock, on the PREMISES, Old Pancras-road, the INTERNAL FITTINGS and TIMBER of FORTY HOUSES, taken down for improvements, as above, comprising sound timber, in joists, 22 feet long; rafters, quarterion, and plates; sashes and frames; 30,000 feet of lining and floor boards, doors, partitions, drain pipes and pans, 20,000 pan and plain tiles, stone paving, steps, and coping, chimney pieces, iron pipes, chimney pots, firewood, &c. May be viewed on Saturday, and Catalogues had on the Premises, and at the Offices, Chester-street, Kennington.

BUILDING GROUND.—TO BE LET, for the erection of private houses, 220 feet frontage in Oakley street, Chelsea, at seven shillings per foot. The main sewer is made, and the street is now being paved. Omnibus direct to the Caledonian steam-boat pier. A pretty style of 8-roomed houses much wanted in Chelsea, and would rapidly let, no restriction as to expenditure. Term 37 years from Christmas, 1855.—Apply to E. GUILLAUME, Esq. 1, Angel-court, Bank.

BUILDING LAND at HATFIELD, HERTS.—TO BE LET on building leases, for sixty years, very desirable PLOTS of LAND, within a quarter of a mile of the Railway Station, fronting the high road to St Albans, and well calculated to supply the increased demand for villa residences in this locality; soil, gravel; bricks and sand in the immediate neighbourhood.—For further particulars, apply to RICHARD NICHOLSON, Esq. Solicitor, 4, Old Palace-yard, Westminster.

TO BUILDERS and OTHERS requiring ROOMY PREMISES.—TO BE LET, a capital DWELLING-HOUSE, with entire building, offices, large yard, extensive workshops and stabling, &c. fitted with every convenience for carrying on a large business, and situated in the front of the high road, Upper Holloway, in the centre of a populous and rapidly neighbourhood, being only opposite the Red Cap Tavern.—For particulars, apply to D. BARRETT, 2, St. John's-park Villas, Upper Holloway.

N.B. FOUR PUG-MILLS and other BRICKMAKING PLANT for SALE.

CASSLAND ESTATE, overlooking Victoria-park.—Eligible PLOTS of LAND TO BE LET, for building villas and semi-detached residences; and also Plots of Land, for fourth-rate houses, on the northern portion of the estate. Plans, &c. can be inspected at the Estate Office, Victoria-road, Cassland, or at Mr. WALES'S Office, 8, Great St. Helen's, Bishop-gate.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Portions may be sold for building purposes in eligible situations. — Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

LAND for FACTORIES and DWELLING-HOUSES, most eligibly situate, lying between the River Wandle and the railway, and adjoining the Goal Yard and Railway Stations. TO BE LET, in one or more Plots, for Building purposes. Lease 99 years. Money advanced if required.—Apply to Mr. GEORGE LOW, Architect, 1, Church court, Clement's-lane, City.

HOLLOWAY. — Valuable BUILDING GROUND TO LET, with liberal cash advances, to respectable Builders, admirably situate for Good Villas. Roads, sewers, and gas made, secured to the tenants, and roof-pressure tiles included. The situation is one of the healthiest in Holloway, and commands the finest views of Highgate, Hampstead, and the Surrey hills, and is only a few minutes' walk from the Holloway and Caledonian Railway stations. Leases 99 years. Rents from 3s. 6d. to 4s. per foot front. Apply to Mr. BALL, 44, Regent-street, Piccadilly

WATERLOO BRIDGE WHARF, Commercial-road, Lambeth.—These desirable FREEHOLD PREMISES, with large arches under the Waterloo Bridge Road, TO BE LET on LEASE for a term.—For particulars, apply to HENRY MOTT, Esq. Solicitor, 4, King's-road, Bedford-row.

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The Builder.

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ROYAL ACADEMY of ARTS, Trafalgar-square. The EXHIBITION of the ROYAL ACADEMY of ARTS is NOW OPEN. Admission from Eight till Seven o'clock), One Shilling. Catalogues, One Shilling.
JOHN PRESCOTT KNIGHT, R.A. Secretary.

THE NEW SOCIETY of PAINTERS in WATER-COLOURS.—The TWENTY-SECOND ANNUAL EXHIBITION is NOW OPEN, at their Gallery, 53, Pall mall (near St. James's-palace) daily from Nine till dusk. Admission, 1s.; Season-tickets, 5s.
JAS. FAHEY, Secretary.

ARCHITECTURAL MUSEUM, Canon-row, Westminster.
The Second Elementary Class Lecture, on "HERALDRY in CONNECTION with ARCHITECTURE," will be given at the Museum, on MONDAY EVENING next, the 2nd of JUNE, by the Rev. CHARLES BUNTILL. Admission free.

CONTRACTS.

TO BUILDERS.

PERSONS willing to CONTRACT for the ERECTION of a CHURCH, at GREETS-GREEN, in the Parish of Westbromwich, in the county of Stafford, may see the drawings and specifications, on and after THURSDAY, the 22nd of MAY, at the Offices of the Architect, Mr. JOHNSON, Lichfield. Sealed Tenders to be sent to Mr. JOHNSON, on or before the 5th JUNE, and endorsed, "Greet's-green Church." The Committee do not bind themselves to accept the lowest Tender.

WILTON LOCAL BOARD of HEALTH.
WATERWORKS.—To IRONFOUNDERS, BRASS-FOUNDERS, and OTHERS.—The Local Board are prepared to receive TENDERS for the MANUFACTURE and SUPPLY of about five tons of CAST-IRON SOCKET WATER-PIPES, for mains, and other castings for street arrangements. Also for a quantity of Hydrants, Sluice and Flushing Valves, Air Vessels, &c.—Specifications, with forms of Tender, may be had of the Clerk, on payment of 2s. 6d. and further particulars will be given on application to the Engineer and Surveyor to the Board.—Tenders addressed to the Chairman of the Board, to be sent to the Clerk, on or before the 31st JUNE next.
By order of the Board,
THOMAS THRING, Clerk.
Wilton, near Salisbury, May 22, 1856.

TO STONE-MERCHANTS, PAVIONS, AND OTHERS.
THE LOCAL BOARD of HEALTH for the Borough of HALIFAX are prepared to receive TENDERS from competent persons for the SUPPLY of all the MATERIALS and LABOUR necessary in the Formation, Repair, and Maintenance of the Public Streets, Roads, Footways, and Places within the Borough. Copies of the specification, with form of Tender annexed, may be had at my Office; and further information may be obtained from Mr. G. W. STEVENSON, the Borough Engineer. Tenders, properly endorsed and sealed, must be delivered at my Office, in the Town-hall, Halifax, on or before TUESDAY, the 10th day of JUNE next enquire—By order,
EDMD MINSON WAVELL, Town Clerk.
Halifax, May 14, 1856.

THE VESTRY of the Parish of ST. MARY ABBOTT'S, KENSINGTON, Middlesex, will meet at the Vestry hall, Kensington, on WEDNESDAY, the 4th JUNE next, at SEVEN o'clock in the evening, to receive TENDERS, and for a CONTRACT for the SUPPLY of 3,000 YARDS of FLINTS, to be delivered at their Wharf, Kensington-basin. The form of Tender may be had, together with all particulars, on application to the Surveyor, Mr. JAMES BROADBRIDGE, at his Office, Vestry-hall.—Tenders to be sealed and indorsed, "Tender for Flints," and to be delivered at my Office, on or before FOUR o'clock in the afternoon of the above-named day. No Tender will be received except on a printed form, to be obtained as aforesaid. The Vestry do not bind themselves to accept the lowest or any Tender. The Contractor to enter into a written Contract, and to bear the expense thereof.—By order,
REUBEN GREEN, Clerk to the Vestry.
Vestry-hall, Kensington, May 23, 1856.

CONTRACTS.

CONTRACTS.—TENDERS WANTED for Bricklayers', Masons', and Plasterers' Work required in the ERECTION of a FIRST-CLASS HOTEL, West Hartlepool.—Plans and specifications at Mr. GEORGE ROBINSON'S. Tenders not later than JUNE 3rd. The lowest or any Tender is not necessarily to be accepted.
W. HARRISON, Architect,
No. 1, Brunswick-street, West Hartlepool.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director General of Contracts, War Department, Pall-mall, London, on or before THURSDAY, the 5th day of June next, from persons desirous of CONTRACTING with the War Department, for RENEWING the WHARFING on the RIVER BANK, at east end of East Gun Line, Tilbury Fort, in the Medway district.—Plans and specifications of the work are to be seen, and forms of Tender obtained, on application at the Royal Engineer Office, Gravesend, between the hours of TEN and FOUR, till the 4th of JUNE next (Sundays excepted). The person whose Tender may be accepted will be required to enter into a bond with two eligible securities, jointly and severately to be bound under a penalty of 200l. for the due performance of the Contract. Tenders to be addressed to "The Director General of Contracts, War Department, Pall-mall, London," and to be delivered free, endorsed, "Tender for Works at Tilbury Fort." No Tender can be admitted after the said 5th day of JUNE, 1856.
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineers' Office, Chatham, May 20, 1856.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director-General of Contracts, War Department, Pall-Mall, London, on or before THURSDAY, the 5th day of JUNE next, from persons desirous of CONTRACTING with the War Department for ERECTING SCHOOLMASTER'S QUARTERS, near the Garrison Chapel School, at Chatham. Plans and Specifications of the work are to be seen, and forms of Tender obtained on application at the Royal Engineer Office, Chatham, between the hours of TEN and FOUR o'clock, till the 4th of JUNE next (Sundays excepted). The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound under a penalty of 200l. for the due performance of the contract. Tenders to be addressed to "The Director-General of Contracts, War Department, Pall-mall, London," and to be delivered free, endorsed, "Tender for Works at Chatham." No Tender can be admitted after the said 5th day of JUNE, 1856.
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Chatham, 20th May, 1856.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director-General of Contracts, War Department, Pall-Mall, London, on or before SATURDAY the 14th day of JUNE next, from persons desirous of Contracting with the War Department for ERECTING a STORE, to contain shells for Sea Service, at Upnor Castle, near Chatham. Plans and specification of the Work are to be seen, and forms of Tender obtained on application at the Royal Engineer Office, Chatham, between the hours of TEN and FOUR, till the 13th of JUNE next, Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 600l. for the due performance of the contract. Tenders to be addressed to the Director General of Contracts, War Department, Pall-mall, London, and to be delivered free, endorsed "Tender for Works at Upnor Castle." No Tender can be admitted after the said 14th day of JUNE, 1856.
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Chatham, 27th May, 1856.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The Principal Officers of Her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following Contract, viz.:—For Work required in forming 1,356 Ventilators in Cribs of Field Officers', Officers' Servants', Soldiers', Hospital Huts, Privies, &c., and in the construction and erecting of 16 External Porches to Doors exposed to the weather, of Married Regimental Officers' Huts, and 118 Internal Porches to Doors exposed to the weather of Soldiers' Huts, &c.; also for enlarging 17 Ale-Rooms of the Mess Establishment at the Temporary Barracks, Curragh of Kildare, in the Curragh District. Persons desirous of Tendering for the same will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle-yard, Dublin; and at the Royal Engineer's Office, at the Curragh, and may obtain specifications, with the terms of Contract. The whole of the work to be executed within eighty-four days after the date of order to proceed with the work. The letters of Tender, with specifications, to be sealed, and transmitted under cover to "The Director-General of Contracts, War Department, Pall-Mall, London," so as to be received on or before the 8th day of JUNE, 1856, and to be marked on the outside "Tender for Work at the Curragh of Kildare."
Commanding Royal Engineer's Office, Dublin, 21st May, 1856.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The Principal Officers of her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following Contract, viz.:—For the CONSTRUCTION and ERECTION of TWELVE WOODEN BUILDINGS to afford separate accommodation for sergeants at the Temporary Barracks, on the Curragh of Kildare, in the Curragh district. Persons desirous of Tendering for the same will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle-yard, Dublin; and at the Royal Engineer's Office, at the Curragh, and may obtain specifications, with the terms of Contract. The whole of the work to be completed within sixty days after the date of order to proceed with the work. The letters of Tender, with specifications, to be sealed, and transmitted, under cover, to "The Director-General of Contracts, War Department, Pall-mall, London," so as to be received on or before the 4th day of JUNE, 1856, and to be marked on the outside, "Tender for Work at the Curragh of Kildare."
Commanding Royal Engineer's Office, Dublin, 22nd May, 1856.

CONTRACTS.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The Principal Officers of her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following Contract, viz.:—For the ERECTION and ERECTION of TWELVE WOODEN BUILDINGS, for staff-officers, Court-house, Look-up, Guard-room, staff-officers' Stable, Hut for butcher's men, hay, corn, and corps and about 6 years of Fencing, at the Temporary Barracks, Curragh of Kildare, in the Curragh district. Persons desirous of Tendering for the same, will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and at the Royal Engineer's Office, at the Curragh, and may obtain specifications with the terms of Contract. Persons desirous of Tendering for the same, will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and at the Royal Engineer's Office, at the Curragh, and may obtain specifications with the terms of Contract. The whole of the work to be completed with in 94 days after the date of order to proceed with the work. The letters of Tender with specifications, to be sealed and transmitted under cover to "The Director General of Contracts, War Department, Pall Mall, London," so as to be received on or before the 11th day of JUNE, 1856, and to be marked on the outside, "Tender for Work at the Curragh of Kildare."
Commanding Royal Engineer's Office, Dublin, 23rd May, 1856.

TO CONTRACTORS.—Notice is hereby given, that TENDERS will be received at the Office of the Director-General of Contracts, War Department, Pall Mall, London, on MONDAY, the 2nd of JUNE, 1856, from such persons as may be willing to undertake the DREDGING, &c. in DEEPENING the BED of the GUNWHARF, CAMBER, at PORTSMOUTH. The Specification and conditions of Contract may be seen, and every information obtained, on application at this Office, between the hours of TEN and FOUR, each day, Sundays excepted. Tenders to be endorsed, "Tender for Deepening the Bed of the Gunwharf, Camber, at Portsmouth, in the county of Hants."
Royal Engineer Office, Portsmouth, 19th May, 1856.

GUILDFORD UNION.—To BUILDERS and CONTRACTORS.—Extensive additions and alterations to the Guildford Union Workhouse.—The Guardians of the Guildford Union, in the County of Surrey, hereby give notice that they are desirous of receiving TENDERS for BUILDING NEW SCHOOLS and DORMITORIES, a NEW HOSPITAL, and other ADDITIONS and ALTERATIONS to the Workhouse, and the said Union generally, according to the plans and specifications prepared by Mr. C. H. HOWELL, architect, of Guildford, Surrey, and of the Norwich Union Insurance Office, New Bull-street, London. The plans and specifications may be seen at the Workhouse, Guildford, after SATURDAY, 31st inst. day of MAY next. The Contractor whose Tender may be accepted will be required to give security for the due performance of the Contract. The Guardians do not pledge themselves to accept the lowest or any of the Tenders, and request "Building Tenders," may be sent to James's SEVEN o'clock in the evening of WEDNESDAY, the 28th JUNE next.—By order of the Board
W. HAYDON SMALLPEICE, Clerk.
Guildford, 27th May, 1856.

Sewers Office, Guildhall, 23rd May, 1856.
TO BUILDERS and OTHERS.—The Commissioners of Sewers of the City of London acting as the Burial Board of the said City, hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 10th JUNE next, at TWELVE o'clock at noon precisely, to receive TENDERS for BUILDING a LODGE, CARPENTER'S SHOP, and SHED, in the City of London Cemetery at Little Ilford, Essex, agreeably to plans and specifications to be seen at the Office of the Engineer to the Commission, in the Guildhall Yard. The Burial Board do not pledge themselves to accept the lowest or any Tender. No Tender will be received after TWELVE o'clock on the day of treaty.—Builders intending to tender for these works are requested to notify the same to Mr. JAMES WOOD, the Engineer, on or before WEDNESDAY, the 4th JUNE.
JOSEPH DAW, Principal Clerk.

EXTENSION of TIME for SENDING in TENDERS, from MAY 29th to JUNE 2nd.—To BUILDERS.—Persons willing to CONTRACT for the ERECTION of a NEW WING to the Mansion of Sir Henry G. Cotterell, Bart. may see the drawings and specifications on and after MONDAY, the 26th inst. by applying to Mr. WILSON, as above. The proprietor does not bind himself to accept the lowest or any Tender, nor will any allowance be made for estimates.
Garnons, near Hereford, May 1st, 1856.

TO GAS CONTRACTORS.
THE DIRECTORS of the OUNDLE GAS COMPANY are ready to receive TENDERS for a NEW GASHOLDER, to be 36 feet in diameter, 12 feet deep, and to hold 30 feet of gas. Two Cast-iron Purifiers. Three Condensers, and a Governor to pass 25 cubic feet of gas per hour. Specifications and plans may be seen at the Office of Mr. ROBERT JOHNSON, of Oundle, Secretary and Company. Sealed tenders will be received until the 25th inst., and the work to be completed by the 1st OCTOBER following.
Gas Office, Oundle, Northamptonshire, May 20, 1856.

TO BUILDERS AND CONTRACTORS.
SWANSEA NEW POST OFFICE.—The Town Council of Swansea are desirous of receiving TENDERS for the ERECTION of the NEW POST-OFFICE BUILDINGS, in Swansea. The drawings, plans and specifications may be seen, and further information obtained on and after MONDAY, the 2nd day of JUNE next, at the Offices of the Architect, Mr. H. HAYLIS, 12, Wind-street, Swansea. Sealed Tenders, endorsed "Tender for New Post-office Buildings," to be delivered on or before MONDAY, the 16th day of JUNE next, at the Office of the Town Clerk, Guildhall, Swansea.—The Council do not bind themselves to accept the lowest or any of the Tenders sent in.
C. B. MANSFIELD, Town Clerk.
Guildhall Offices, 20th May, 1856.

For remainder of Contracts see next page.

CONTRACTS.

TO CLOCK-MAKERS, &c. — Notice is hereby given, that TENDERS will be received at the Office of the Director-general of Contracts, War Department, Pall-mall, London, on or before the 9th day of JUNE, 1856, from such persons as may be desirous of entering into a contract for supplying and fixing at Winchester Barracks, an EIGHT-DAY TURRET CLOCK, with bells to strike the hours, half-hours, and quarters. Persons tendering are required to send in a detailed description of the several parts of the clock, &c. and the method of fixing. All workmanship to be of the best quality, and subject to the approval of the Commanding Royal Engineer. The Clock, &c. to be fixed and in complete working order within two months from the date of acceptance of Tender. Payment to be made one month from the time of completion and approval. The Clock, &c. to be fixed ready to be delivered out on application to the Clerk of Works at Winchester Barracks, and forms of Tender, or any other requisite information may be obtained, and a drawing seen, on application at the Office of the Commanding Royal Engineer, Portsmouth.

N.B. The Master-General reserves to himself the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Portsmouth,
22nd May, 1856.

CORPORATION of PRESTON.—The Corporation of Preston, as the Local Board of Health, are prepared to receive TENDERS from parties willing to supply any of the following articles that may be required for twelve months, commencing on the 24th JUNE next:

IRON WORK.

Cast Iron Water Pipes of all sizes, per ft. pc.
Special Castings for same, per cwt.
Iron Bolts, per lb.
Other Wrought Iron Work, per lb.
Fire-plugs per plug.
Pickaxes, do.
Water Valves, double-faced, per inch of diameter.

BRASS, COPPER, TIN, AND LEAD

Copper Tubing, per lb.
Brass Ferrules of all sizes, per doz.
Brass Taps of all sizes per doz.
30-oz. Gas, cut to pattern for gas lamps, per doz.
Putty, per lb.
Sheet Lead, per cwt.
Lead Pipes, per ft.
Block Tin Bars, per cwt.
Copper Stand Pipes, each.
Sheet Copper, per lb.

STONE.

3-inch Flags, per yard
Curb stones, per yard lineal
Bench hammered Stone, per lineal yard.
Boulder Paving Stones per ton.
Squared Paving Setts, per ton.

EARTHENWARE PIPES.

Best Salt-glazed Socketed Pipes, in two feet lengths, of a thickness equal to fully ¼ the diameter, all sizes up to 21 inches diameter, per foot.

Bends, Junctions, Syphon, and Taper Pipes

SUNDRIES.

Oil, per gallon.
Coals, per ton.
Hose clips, per yard
Paviours' Barrows, each
Brooms and Brushes, per doz.
Tar paving, per yard.
White Lead, per lb.
Paint, per lb
Naphtha Varnish, per gallon.
Zinc Bars.

Proposals, addressed to the Chairman of Finance Committee, will be received for any (but not any less) of the articles. Each proposal must be sealed, and delivered or before the 9th day of JUNE, 1856.

Further particulars may be had upon application to me,

By order,
HENRY WRIGG,
Engineer and Surveyor to the Board.

Preston, 21st May, 1856.

SOUTH SHIELDS CEMETERY WORKS.

To BUILDERS and CONTRACTORS.—The Burial Board for the Parishes of South Shields and Westoe, in the County of Durham, are prepared to receive TENDERS for the following WORKS in connection with the New Burial Ground, viz.—

CONTRACT No. 1.—TWO CHAPELS.
CONTRACT No. 2. SUPERINTENDENT'S HOUSE, GATEWAY, and GATES adjoining.
CONTRACT No. 3.—GATEKEEPER'S LODGE, GATEWAY, and GATES adjoining.

The Burial Board will not object to receive Tenders for the execution of the whole of the works in one contract. The plans and specifications may be seen at the Offices of the Architect Mr. ROBERT LAMB, No. 5, Ridley-street, South Shields, on and after the 23rd instant until the 30th of JUNE inclusive. Sealed Tenders to be sent in to the Office of the Clerk to the Burial Ground, Chapter-row, South Shields, on or before FIVE P.M. on the 30th of JUNE next, endorsed "Tender for Cemetery Works," Nos. 1, 2, and 3. The Contractor will be required to give security for the due performance of the works. The Board do not bind themselves to accept the lowest or any Tender.

By order,
THOMAS SALMON,
South Shields, 21st May, 1856. Clerk to the Burial Board.

BUILDERS and CONTRACTORS desirous of CONTRACTING for the COMPLETION of TWO PAIRS of semi-detached VILLAS, now in progress at Kilburn, may inspect the plans and specification, and obtain particulars at my Office, on and after WEDNESDAY, the 4th of JUNE. A portion of the contract to be taken off in bricks.

WILLIAM MUMFORD, Architect.

21, Lincoln's-inn-fields.

TO BUILDERS and OTHERS. — Persons desirous of submitting TENDERS for BUILDING a SCHOOL-HOUSE and RESIDENCE, in the PARISH of PETERCHURCH, in the County of Hereford, may see the plans, and obtain copies of the bill of quantities, by application to Mr. GOODMAN, 33, London-road, Gloucester; or to the Architect, Mr. J. P. St. AUBYN, 36, John-street, Bedford-row, London, to whom Tenders are to be delivered in, on or before the 9th day of JUNE next.—The Trustees do not bind themselves to accept the Lowest or any of the Tenders. May 26, 1856.

RICKMANSWORTH CEMETERY. — TO BUILDERS and CONTRACTORS.—Notice is hereby given, that it is the intention of the Burial Board for the Parish of Rickmansworth, in the County of Herts, to enter into a Contract or Contracts for the ERECTION and COMPLETION of TWO CHAPELS and SEVERAL HOUSES, with ENTRANCE-GATES, &c. under the Burial Acts. The plans, specifications, and form of Tender may be seen at the Office of the Clerk to the Board, at Rickmansworth aforesaid, on and after WEDNESDAY next, at the hour of Ten in the forenoon. Any person or persons willing to undertake the said Contract or Contracts, are required to forward a Tender or Tenders, directed to the Clerk of the said Board, at Rickmansworth aforesaid, on or before THURSDAY, the 12th day of JUNE next. The Board do not pledge themselves to pay any expenses incurred in the preparation and submission of the said Tender or Tenders, nor to accept the lowest or any one of such Tender or Tenders in particular.

Rickmansworth, May 21st, 1856.

TO ROAD CONTRACTORS and OTHERS.

The Directors of the Lambeth and Provincial Fresh Id Land Society are prepared to receive TENDERS for the FORMATION and COMPLETION of Portions of the SHERNE PARK ESTATE, situate at Corfe Bar, Middlesex—and to the specifications may be seen and at the Offices of the Society, 211, High-street, Borough, from Monday next till SATURDAY. No Tender will be received after SATURDAY, the 7th JUNE next. The Directors do not bind themselves to accept the lowest or any Tender.

WM. BANKS, Secretary.

211, High-street, Borough, May 29, 1856.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
58, 54, 55, & 57, WYCH-STREET, STRAND,
London.

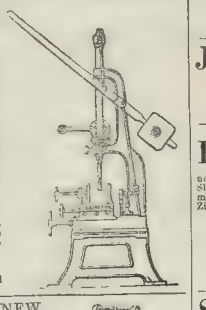
LATCHES, CORNICE POLE-ENDS, &c.

First-class Prize Medal, Paris Exhibition, 1855.

Specimens at the Hardware Court, Crystal Palace, Sydenham.
Illustrated Price-catalogues post-free on application

REGISTER STOVES, with PATENTED IMPROVEMENTS. — DEANE, DRAY, and CO. invite the attention of purchasers to their Stock of STOVES for drawing and dining rooms; also, a large assortment of PATTERNS, suitable for fitting-grates, offices, bedrooms, &c. In Feeders and Fire-Irons, DEANE, DRAY, and CO are constantly introducing every novelty at the lowest prices.—DEANE, DRAY, and CO. Stove, Range, and General Ironmongery Warehouse, London-bridge. Established A.D. 1700.

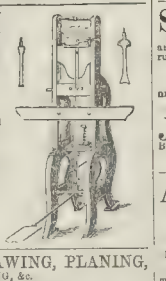
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', DOWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

KIMBERLEY'S NEW PATENT MORTISING MACHINE occupies but little room, is most simple and durable, and complete within itself, with seven chisels and three core drivers, and being all iron, is almost impossible of injury or derangement.



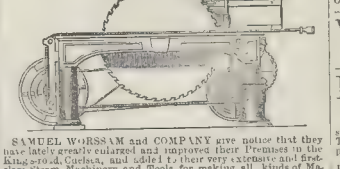
Thousands who use it bear witness to it.

A Book sent by post, with full particulars, and a great number of testimonials.

See, also, Kimberley's Patent Flooring Cramps, Scaffolding Brackets, Door Springs, &c. &c.

London Agents—
Messrs. PUGH & CO.
No. 13, King-street, Snow-hill,
Wholesale Ironmongers;
or the Works, Birmingham.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added thereto very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they confine their attention to the part of machinery, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines for home and foreign use.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 84 and 85, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges adapted for dining-room doors, &c., doors lifted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent sale-trees, steam-mills, &c.

IRON FOUNDRY,
HARROW-STREET, LANT-STREET, SOUTHWARK.
W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel and Railing Bars, Panels, Iron Coping, Hot Plates, Iron Plates, Area Gratings, Sash Weights, Pig and other Wheels, Sugars, Pulleys, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

WOOD CUTTING MACHINERY.
JOHN M'DOWALL and SONS,
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,
MANUFACTURERS of VERTICAL SAW FRAMES (driven by steam).

For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

Patent vertical saw frames, of the foregoing dimensions, with steam-power attached; circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a ½ of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power morising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for ring-boards, &c.; and most select feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 36 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications, as above for further particulars, will be promptly attended to

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MALLET'S PATENT BUCKLED PLATES
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS,
No. 3, Mauston house-place, Lambeth, and No. 6, Berkley-street, Birmingham.

For Plan, Section, and Description, see "The Builder," May 17.

TUPPER and CARR,
Patent Galvanized and Enamelled
CORRUGATED IRON MANUFACTURERS,
IRON ROOF, SHED, AND STORE BUILDERS,
Electric Telegraph and Wire Fencing Contractors.
Works—LIMEHOUSE and BIRMINGHAM
Offices—3, MANSION HOUSE-PLACE, LONDON.
Iron of every description galvanized

JOHN HENDERSON PORTER,
ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.

LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.
12 " " 20 "
13 " " 23 "
14 " " 26 "

Full particulars and the reduced price sent by post on application to

A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

SKAIFE'S GALVANIZING WORKS,
Commercial-road, Limehouse, London.

Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where iron not liable to rust is required.

Patent Galvanized Iron supplied in every form.

Sheets plain and corrugated. Roofs fixed complete.

J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.

An Allowance to the Trade.

JOHN WALKER,
Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor,
IRON MERCHANT, &c
Offices and Works—Mill-wall, Poplar, London.

A. MOREWOOD and CO. (late Morewood and Rogers).
Dowgate Dock, Upper Thames-street, London, and Bakerville Works, Birmingham.

PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.

PLAIN or CORRUGATED, and Cut to Sizes required, of all Gauges.

Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.

Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building, at the

OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

WILLSON and ROBINSON, GALVANIZING and CORRUGATING IRON WORKS,
CHURCH-ROW, LIMEHOUSE,
LONDON.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).
WORKS GLASS-HOUSE YARD, opposite the Entrance to the London Docks.

GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire. Gas Pendant, Brackets, and Stands for Gas and Candle purposes for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Corcanopolee, Rings and Lacquered Case Tube for Picture Rods, Desk Rails, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at

RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouse, No. 11, 12, and 13, Charles-street, Hoxton.

HYDRAULIC PRESS. — WANTED, in good working condition, a powerful HYDRAULIC PRESS. Ram, 12 inches in diameter, with a range of 3 feet. Ram-head 4 feet square, and pump to be worked by hand. Letters, stating price, to be addressed to F. F. F. Mr. Draper's, Stationer, 5, Little Tower-street.

SAVING IN GAS.—D. HULETT, INVENTOR and PATENTEE.—The Meter-governor Regulator is the most effectual instrument for ensuring wholesome and uniform lights by regulating the pressure, and preventing any irregularity in the height of the flame.—D. HULETT and CO. 35, High-Holborn, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality They have been used at the British Museum, National Gallery Bethlem Hospital, various Lunatic Asylums, the Ordnance Works Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere road, where terms may be obtained.

SLATE CISTERNS, SINKS, and every description of SLATE SLAB-WORK, ROOFING SLATES, or COVERING.—T. B HANNAFORD'S Price List (which can be had on application) will be found worthy of attention. Roofs covered within a four-mile circle, 21s persquare. Slate-paving, planed and squared, 1½ inch thick, 4d per foot; surer, stronger than three-inch York.—Trevalgan Wharf, Ratcliff cross

GROUND FLINT AND CORNISH STONE, UNADULTERATED, WILCOX & CO. FLINT MILLS, MILLWALL, POPLAR.

ASPHALTE. — THOMAS HARRISON, having completed his works for making by steam-power, is now in a position to execute orders for BLOCK ASPHALTE to any extent, at an hour's notice. Asphalte expressly prepared for barn and granary floors, and every description of agricultural buildings, for laying which plain instructions will be forwarded. Estimates given for every variety of Asphalte Pavement, Manure and other Tanks, Sea Walls, Railway work, &c.—The trade supplied on advantageous terms.—THOMAS HARRISON, Asphalte and Whiting Works, Cambridge-heath Wharf, Hackney; and Sunderland Wharf, Rotherhithe.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
FROM 2s. 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Paleocaust and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, White friars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened by the yard or per barge. Blocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.
W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrington-road, to 6, North Wharf-road, Paddington, have now on sale a fine Garden and Screened Gravel For terms, &c. apply at the Wharf
Contracts supplied to any extent.

BUILDING MATERIALS.
BECK'S WHARF, ISLEWORTH.—Builders having works to execute south-west of London, will find a good supply upon this wharf, on reasonable terms, with every convenience for easy loading, by travelling cranes, either into barges or trucks.—Portland, Bath, and Yorkshire Block Stone, always in stock; Landings Paving, &c. Also, Marble in Slab, Chimney-pieces, &c. Slab and Roofing Slates from the Penrhyn Quarries Timber, Deals, Limes, Cements, Clay Goods, &c.
N.B. This wharf is very near the St. Margaret's Estate.

MAHOGANY, seasoned by Symington's new Patent Process JOHN COUMBE solicits an inspection of his stock. The above process enabling him to season this wood in a short space of time, he sells at prices generally charged for wet wood.—Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile end-gate.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No. 18, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Sawmills. Goods in Bond for Exportation.
N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shopfitters to his carefully selected MAHOGANY, suitable for Counter Tops, and for his seasoned Materials for builders, cabinet and blind makers, &c. Delivered, cartage free, to any of the London railway stations, or within three miles from Kennington Church.

FURTHER REDUCTION OF PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected Stock of the various descriptions of Deals, commencing at the following low prices:—

Yellow Deals from	£20	0 per 120
Spruce ditto, from	18	0 "
Yellow Battens	12	10 "
Dry Pine Plank, from	21	0 "

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a post-paid stamp. N.B. All sawn goods delivered within two miles free of cartage. Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Pine Plank, 3s 6d.; Spruce Deals, 3s.; Mahogany, 6d.; 2½ Yellow Battens, 12l 10s.; F. Walnut, 7d. Cartage free in town.—T. FORMAN, 1 Walnut tree-walk, Lambeth-walk.

SEASONED FLOORING.—GEO. NOKES and CO. late Archbutt and Atkinson), beg to acquaint builders and the trade, that they have a large STOCK of DRY WHITE and YELLOW FLOORING, prepared by machinery, always on sale, at the following reduced prices, for cash:—

¾ inch White, 13s. 6d. per square.		1 inch Yellow, 13s. per square.	
¾ ditto	15s. "	¼ ditto	16s. 6d. "
1 ditto	18s. "	1 ditto	23s. "

Laths, 3s. 6d. per load.
Also Timber, Deals, Planks, &c. Mouldings by machinery in very great variety.
ST. PANCRAS SAW-MILLS, Cambridge-street, Old St. Pancras-road.

MOULDINGS BY MACHINERY.
Capping, Sash Bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to
E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S-ROAD, CHELSEA,
AND WILTON-ROAD, PIMLICO.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from 4-inch to 12-inches thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Cills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

TO BUILDERS, COACH-MAKERS, DECORATORS, HOUSE-PAINTERS, &c. &c.
CHAS. W. NOBLE (late A. and F. Strong), VARNISH MANUFACTURER, continues to supply every description of Varnishes and Colours, of the very best quality, and at the lowest prices. The Varnishes manufactured by Noble have stood the test of nearly a century, made of pure materials, insuring that deterioration in varnish—body, polish, and finish,—for which his predecessors have been so long and so far famed.
*** Methylated Spirit Varnishes, Polishes, &c.; also Noble's Enamel Paper Varnish, for decorators, &c. Coach-painters' and Lithographic Colours.
N.B.—Merchants and shippers will find an advantage in exporting Noble's Varnishes.
Manufactory—MITCHAM, Surrey.
Wholesale and Retail Warehouse 127, LONG ACRE, London

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A machine for Gothic Screen, Carved Glass Frames, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Rankside

ON SALE, a large quantity of SCAFFOLD POLES, BOARDS, PUTLOCKS, and CORDS, &c. Apply to G. BOOTH, Agent, 11, George-yard, Lombard-street, City.

TO TIMBER MERCHANTS and OTHERS. The Proprietors of Lett's Wharf, Commercial-road, Lambeth, offer the most convenient Wharf for landing all sorts of English Timber, &c. Spacious Dry and Drawing Docks, 30 and 10-ton Cranes. Sawpits for converting Timber, &c. Freights paid on delivery.—Apply to G. NOKES and CO. as above.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER-CUTTING MILLS, Commercial-road, Lambeth.—The proprietors beg to announce to the trade that they have completed their extensive arrangements, and will be happy to execute all orders intrusted to their care with despatch and punctuality.
N.B. All goods sawn at these mills fetched and delivered free of charge

TIMBER SAWING-MILLS, Belvedere-road, Lambeth.—ROBINSON and BARTRAM respectfully inform their friends in the Timber and Builder's Trades, that they have now completed their New Mill for Sawing building and other Timber, and will be glad to receive their favours in this department of sawing. Full particulars will be forwarded on application, per post or otherwise. Timber up to 55 feet long can be cut at these mills.—N.B. A powerful Crane for landing timber on to carriages, at 1s. 3d. per load.

GREAT REDUCTION. — Yellow Deals, 3s. 6d.; Spruce, 3s.; Pine Plank, 3s. 9d.; 2½ Yellow Battens, 12l. 10s. per 120 12 feet; Mahogany, 6d. per foot. Carriage free to any part of town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth-walk

IMPORTANT to BUILDERS and PAINTERS.—Genuine White Lead, 23s. per cwt.; Linseed Oil, 2s. 7d. per gallon; Boiled Oil, 2s. 11d. per gallon; Turpentine, 2s. 7d. per gallon; Fine Pale Oak Varnish, 7s. 6d. per gallon.
For cash, at EDWARD PRICE'S Oil and Colour Warehouse, 45, Coleshill-street, Pimlico.—Every article for the trade at the lowest price.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, sweet beckers, and finishing spirit. The present price is 6s. to 6s. 6d. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gum shellacs and sand at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NO SIZING, and will stand the exposure to the weather. Price 6s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 4a, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Dane's-Inn, St Clement's, Strand

FREEHOLD BUILDING GROUND.—TO BE LET or SOLD, on advantageous terms, TWO PLOTS of GROUND, situate in the most preferable part of St. John's-wood.—For particulars, apply by letter, post paid, to WILLIAM LEWIS, 3, Craven terrace, Craven hill, Paddington.

FREEHOLD LAND, TO BE SOLD, or LET, on lease, in plots of 50 feet frontage, within five minutes' walk from the Forest-gate Station of the Eastern Counties Railway. It is beautifully situated, and overlooks Lower Epping Forest.—For full particulars, apply to O. C. 20, City-road, London.

FREEHOLD LAND for SALE, Land-Tax Redeemed.—SIX ACRES of rich MEADOW LAND, with an old Farm-house, in a pleasant situation, high and healthy, with a view of the Surrey Hills; fine timber growing thereon; thirty miles from London, and three miles from a railway station; just suited for erecting a villa on the grounds, with a row of cottages next to the high road in the village; frontage, 134 feet.—Apply, per post, H. PAGE, 195, Whitechapel road.

WATERLOO BRIDGE WHARF, Commercial-road, Lambeth.—These desirable FREEHOLD PREMISES, with 10 dry arches under the Waterloo-bridge Road, TO BE LET on LEASE or SOLD.—For particulars apply to HENRY MOTT, Esq. Solicitor, 4, King's-road, Bedford-row.

HOLLOWAY. — Valuable BUILDING GROUND TO LET, with liberal cash advances, to respectable builders, admirably situated for good Villa Residences, which are much required in this favourite and highly respectable locality. The situation is most healthy, possesses beautiful and commanding views, and the access to all parts of London easy. Property in this neighbourhood lets and sells rapidly.—For further particulars, apply to Mr. GEO. CLARKSON, surveyor and Land Agent, 48, Penton-street, Pentonville

LAND for FACTORIES and DWELLING-HOUSES, most eligibly situate, lying between the River Wandle and Garratt-lane, at Wandsworth, and near Two Railway Stations, TO BE LET, in one or more plots, for Building purposes. Lease 99 years. Money advanced if required.—Apply to Mr. GEORGE LOW, Architect, 1, Church-court, Clement's-lane, City.

CASSLAND ESTATE, overlooking Victoria-park.—Eligible PLOTS of LAND TO BE LET, for building villas and semi-detached residences; and also Plots of Land, for fourth-rate houses, on the northern portion of the estate.—Plans, &c. can be inspected at the Estate Office, Cassland-road, or at Mr. WALES'S Office, 8, Great St. Helen's, Bishopsgate.

BUILDING LAND TO LET, 150 feet frontage by 159 feet deep, situate at Woodgreen, Hornsey. Rent 20l. a year.—Address W. S. at Stiles's Mineral Water Manufactory, 93, Wells-street, Oxford street.

CAMDEN-PARK, TUNBRIDGE-WELLS. PLOTS of LAND, offering great attraction for building houses and villas, of first-rate consequence, TO BE SOLD, or LET on LEASE for 100 years.—Inquire of Messrs. STONE, WALL, and SIMPSON, Solicitors; or of Mr. J. M. RICHARDSON, Auctioneer, Tunbridge Wells.

LAND.—WANTED, about Six Acres of LAND, of Freehold tenure. It must be within four miles of London; road frontage not material.—Price, and other particulars, to be sent to Mr. J. PONTIFEX, 5, St. Andrew's-court, Holborn.

ISLE of DOGS.—TO BE LET, on Building Leases for a term of 99 years, direct from the freeholder, numerous PLOTS OF LAND, at moderate ground-rents, suitable for the erection of fourth-rate houses, which are in great demand, being in the immediate neighbourhood of manufactories and other works carried on upon the most extensive scale. For plans of the estate and further particulars apply to SAMUEL STRATTON, Esq. Solicitor, 27, Lincoln's-inn-fields; Mr. BLYTH, Surveyor, 113, Aldersgate-street; or Mr. RAMSEY, Estate Agent, 8, Bow-lane, Poplar.

TO BE SOLD, a valuable ESTATE, part Freehold and part Copyhold, situated at Brockley-hill, in the parish of Edgeware, Middlesex, about ten miles from the metropolis, one from Elstree, and only a short remove from Great Stanmore, and comprises 43a. 3r. 32p (more or less); the whole is within a ring fence, and improved by various and luxuriant plantations, having a frontage of 2,000 feet, abutting on the high-road leading from Edgeware to St. Albans. This Estate is well adapted for the erection of a mansion or villa residences, from its commanding situation, overlooking an extensive and beautiful country.—For further particulars and plan, apply to Mr. SIBLEY, Solicitor, No. 11, Sergeant's-inn, Fleet-street; or to Mr. HOLLROOK, Surveyor, Lower Hale, near Edgeware.

LAND at WEYBRIDGE.—GROUND for SIX VILLAS, in the best part of this favourite locality, TO BE LET on lease. Term 99 years, with power of enfranchisement at moderate ground rents. Apply to EDWARD GUILLAUME, Esq. 1, Angel-court, Throgmorton-street.

TO BUILDERS.—FREEHOLD BUILDING LAND TO BE LET on LEASE, for a Term of 999 Years, at Norwood, Harrow, Stratford, Mitcham, Wimbledon, Cheam, Epsom, near Aldershott Camp, and Wharf-road, City-road. Cash advanced, if required.—Apply to Messrs. BLAKE and SNOW, Solicitors, 29, College-hill, Cannon-street, London.

TO BUILDERS. — TO BE SOLD, TEN well-built CARCASSES of FIRST-CLASS HOUSES, situate in Boundary-road, Regent's-park. The houses are detached, and have large gardens upwards of 250 feet deep. The whole purchase-money may remain on security of the property, and the vendor will advance half the amount requisite for completing the buildings. Apply to Messrs. GARRARD and JAMES, Solicitors, 14, Sudbrook-street, Pullman's, London.

TO BUILDERS.—HOUSES are very much WANTED near the Royal Medical College, at Epsom; and this advertisement is inserted hoping that it will attract the attention of some enterprising builder, who cannot fail to meet with encouragement in this locality. Some places are overdone with buildings, but Epsom is underdone, and the demand for good houses is immense. The party inserting this advertisement is in urgent want of a good house near the College, at Epsom; and may be referred to by letter addressed, E. J. P. Post-Office, Epsom

MANUFACTURING PREMISES, situate at Dockhead, TO BE LET, formerly used as a foundry, and known as Mac's Foundry, with foreman's dwelling, pattern-shop and factory, 89 feet by 23 feet, with small warehouse and stable adjoining.—For full particulars, apply to Mr. ELLIS, Auctioneer and Estate Agent, 15a, Minories, City

BUILDERS and OTHERS.—TO BE LET, in one or separate leases, SEVEN SHOPS, in a good neighbourhood. Will be let reasonably, so as for a party to make a good profit-rent. Two let,—the others waiting to be finished for the convenience of tenants.—Apply to Messrs. HILL and MATHEWS, Bury-court, St. Mary Axe.

TO SCHOLASTIC, MEDICAL, or BENEVOLENT INSTITUTIONS.—TO BE LET, on Lease, a COMMODIOUS RESIDENCE, in COMPTON-SQUARE, Bloomsbury, with a large modern Building in the rear, suitable for a Chapel, Lecture or Assembly Room. The furniture and fittings are most appropriate, and are to be paid for at a fair valuation.—Apply to Messrs. RUSHWORTH and JARVIS, Auctioneers, Saville-row, Regent-street, and 19, Change-alley, Cornhill.

WANTED, PERMANENT WHARFAGE, contiguous to the Thames, below bridge, adapted to carry on the stone trade in all its branches.—Apply by letter, addressed Mr. M. 174, Tooley-street, Southwark, with all particulars.

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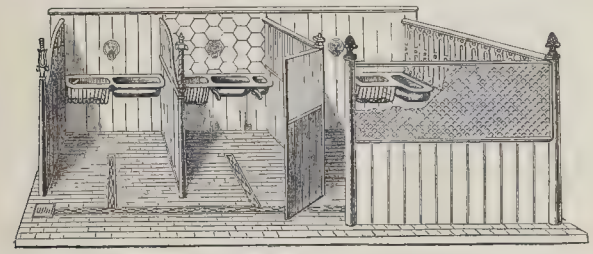

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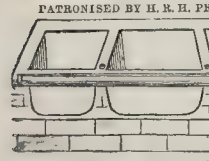

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Gentlemen,—I have great pleasure in bearing testimony to the capabilities of your extraordinary Gas Cooking Apparatus, being the largest and most perfect yet in use. Suitable for hotels, mansions, club houses, private houses, and the army: having cooked in one day 1,000 fowls, and many cwts of ham, beef, veal, mutton, lamb, tongue, &c.; roasting in one department a baron of beef weighing 336 lbs. in nine hours, fifty-three minutes, presented by J. Bannister, esq. Threadneedle street, to the directors, for the banquet given to the foreign ministers. They have been in full operation for ten months, and are now in as perfect order as when first finished. They have not cost one shilling for repairs.

I am, Gentlemen, yours respectfully,

EDWARD HORNE.

Messrs. Deane, Dray, and Co.

OLD STOVES and RANGES.—F. EDWARDS, SON, and CO. have constantly on hand a quantity of OLD STOVES and KITCHEN RANGES, in very good condition, which are taken down by them at establishments when they erect new work and which are to be sold at exceedingly low prices.—42, Poland-street, Oxford-street.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fixing given.—J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, 2½d. per inch, and upwards.

Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.

3-feet Cottage Ranges, with ovens and back boilers, 32s. each.

3-feet self-acting ditto, ditto, 34s. each

Air Bricks, 4s. per doz.

Best Town Glue, 8os. Ditto, Scotch, 64s. per cwt.

Best Fine Cut Cheap and Stone.

1½	2½	2	2½	3	3-in. & larger.
18s. 6d.	16s. 6d.	15s. 6d.	15s. 6d.	15s.	14s. per cwt.

And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSES, 19, Horseferry-road, and 1, New Peter-street, Westminster.

GREAT REDUCTION IN PRICES

RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	1s. 2d.	1s. 1d.	1s. 3d.	1s. 7d.	1s. 10d.	2s. 3d.	2s. 8d.
Half-round Gutters	7d.		8d.		9d.	1s.	1s. 2d.
O G Gutters					1s. 6d.	1s. 1d.	1s. 2d.
Ditto with plain clips cast on					1s. 1d.	1s. 2d.	1s. 4d.
Ditto, with lion clips ditto					1s. 2d.	1s. 3d.	1s. 6d.

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.

Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails ..... 15s. 6d. "
Best Zinc Slating Nails ..... 40s. "
Best Glues ..... 47s. to 53s. "

A large Stock of Ellipsis and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

ROYAL POLYTECHNIC GAS FIRE. BACHHOFFNER and DEFRIES'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation.—To be seen in action at DEFRIES'S Office, 146, Regent-street, London.

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

IRON CHURCHES, STORES, &c.—For SALE, Substantial Corrugated Iron Stores, Churches, Dwelling-houses and every description of Buildings, adapted to all climates. Iron Roofs constructed for all parts of the world. An Iron Church with sittings for 750 people, for hire or sale.—To view and for further particulars apply to SAMUEL HEMMING, Cliff House Works, Bow, London.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO., Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show. Every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list, 2s. 6d., 55 and 56, High Holborn.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE.

Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast Iron Girders, and

STEWART'S PATENT CAST IRON GAS and WATER PIPES.

Office, No. 7, Sise-lane, London.

CONTRACTORS.—MATTHEW T. SHAW has on SALE a large quantity of Contractors' Rails and Earth-tip Waggons, Wheels, and Axles, and every description of Railway Plant and Stores. Girders of wrought-iron for Bridges, and Buildings designed and manufactured. Castings of every description. Deliveries in a few days.—61, Cannon-street, City.—P.S. Wrought-Iron Rolled Pitches to 30 feet.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 139, Shoreditch. A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler
20 22 24 26-inch
23s. 30s. 32s. 34s.
Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars
24 26 28 42-inch
54s. 56s. 58s. 60s.
Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 3½d

Register Stoves, with Solid Bars, per inch, 5d.
Improved New Pattern Circular Cheek Register, with strong Bars and Trivits, 5d. per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	9	8½	3 inch.
	10d.	1s. 1d.	1s. 3d. per yard.
Cast Gutters—4 inch. 8d. per yard.			
O G Gutters	4		44 inch.
	2	3	4 5 6
			1s. 2d. per yard.
Patent Line	2s. 6d.	4s. 6d.	7s. 9s. per gross.

6-inch Rd. Ward Mortice, with Best Furniture and Patent Spindles, 2s. 9d. each. Light Elliptic and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.
Brick Moulds kept in stock. Any size made to order.
Best Cut Clasp and Rose Nails.

1½ in.	2 in.	2½ in.	3 in.
16s. 6d.	16s. 6d.	16s. 6d.	16s. 24s. per cwt.

Best Sheet Cut Floor Brads..... 13s. per cwt.
Best Cut Lath Nails..... 16s. "

JOHN TANN'S new patent RELIANCE LOCK and FIREPROOF SAFES form the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. Waterlow, Birchin-lane; at the Warehouse, 30, WALBROOK, CITY; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and party-walls.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; Chuns, Glues, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. 6s. 6d. each.
J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.
14, Stanhope-street, Clare-market, London.

IRONMONGERY.
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

TO GAS COMPANIES, GAS-FITTERS, and OTHERS.—FOR SALE, by PRIVATE CONTRACT, the GENERAL FITTINGS of a SMALL GAS-WORKS, which were erected and then removed without being used; consisting of about 190 feet of 4½ and 4 inch cast-iron pipe; 50 feet of 1½ inch pipe, including elbows, dipping sockets, and bends; 370 feet of 1½ inch, 1 inch, and ¾ inch service-piping; 18 double pendents; 14 brackets for single lights; four double jointed brackets; retort-casting, cutter, and other articles.—For price and further particulars, address, X. Y. Z. Office of "The Builder."

IRON STAIRCASE for SALE. — The Trustees of the Borough Market, are desirous of SELLING ONE of the IRON STAIRCASES, in the BOROUGH MARKET, leading from the interior to the lofts, containing twenty-three steps, in height 13 feet, forming a half circle, and well manufactured. The party purchasing the same will have to remove it at his expense.—Applications for the same, stating the highest offer, to be addressed to Mr. STUMMY, Clerk to the Trustees, 8, Wellington-street, London-bridge.

LESS FUEL, MORE STEAM, NO SMOKE.
GARDNER'S PATENT SMOKE CONSUMER is SELF-ACTING, EASILY FIXED at a SMALL COST, IMPROVES the DRAUGHT, and SAVES FUEL. Applicable to all Furnaces, Boilers, Ovens, Locomotives, Marine Engines, and Open Fires.

"Chemical Works, Bow Common, November 9, 1855
"DEAR SIR,—In answer to your further inquiry concerning the saving of fuel in connexion with the use of your patented apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I beg now to state that we are enabled without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.
"I remain, dear Sir, yours truly,
"To E. V. GARDNER, Esq. FREDK. ALLEN.
Apply to the PATENTEE, 24, Norfolk-street, Middlesex Hospital; or to Messrs. BURRIDGE and HEALY, 118, Dorset-street, Fleet-street; or Z. D. BERRY, Albion Works, Victoria-road, Pimlico. Bakers' Ovens fitted for M. license included.

TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most effectual yet invented, is made by T. SMITH, of 14, Queen street, Oxford-street, near Argyll street, where a working model can be seen or will be sent for inspection on the shortest notice.
N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

TO IRONMONGERS, BUILDERS, &c.
PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 55, High Holborn.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and vaporizing) with all the improvements, under their Quadruple patents of 1840-51-54 and 1855, including their Gunpowder Proof Solid Lock and Door (without which no safe is secure).
THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.
MILNER'S PHŒNIX (212°) SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 7, Lord-street, Liverpool. London Depôt, 47a, Moorgate-street, City.—Circulars free by post.
Sold also by HOBBS, ASHLEY, and CO. 97, Cheapside

CHUBB'S ILLUSTRATED LIST of LOCKS, FIRE-PROOF SAFES, CASH, DEED, and WRITING BOXES, with their sizes, fittings, and prices, will be sent by post on receipt of two stamps.—Apply to CHUBB and SON, 57, St. Paul's churchyard, London.

MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.
THOMAS JACKSON begs to draw the attention of the public to the most extensive stock of Marble Chimney-Pieces in the Metropolis; consisting of a selection of upwards of two hundred, and manufactured by steam power from the finest Italian and other marble, and with that careful attention to the details and finish so necessary in good marble work. The Stock consists of elegant Drawing-Room Chimney-Pieces in Statuary Marble; bold, massive Chimney-Pieces, in Black, Black and Gold, Bardilla, Sienna, Verd Antique, Brocatella, Dove, St. Ann's, and Serpentine Marble, suitable for Dining-Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Emperor's Red and Amber Marble, for Boudoirs, Breakfast-Rooms, best and secondary Bed-Rooms, &c.; also, Monuments, Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the most classical designs, and in all the varieties of the finest Italian and British Marble, at the lowest remunerative prices.

MARBLE.—The Italian Marble Company, Importers of the produce of their own quarries, in the province of Massa-Carrara, Italy, beg to inform the several Marble Trade in the United Kingdom that they are prepared to undertake contracts for any quantity of Statuary, Veined, Sicilian, Bardilla, Dove, and other Marbles, in blocks of all dimensions delivered on shipboard at Leghorn, or in dock, London. A constant stock always on view, and orders taken for Paving Slabs, Garden and Hall Statues, Vases, Tazzas, Mortars, Consoles, Chimney-pieces of all classes, Circular Table-tops, Monuments, &c. executed in Italy.—For further particulars, inquire at the Office, on the premises, Bridge Wharf, Millbank, Pimlico, adjoining the east side of Vauxhall-bridge.
WILLIAM W. BONNIN, Secretary.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

Lloyd's Marble Wharf, Thames-bank, Pimlico, Adjoining Vauxhall-bridge.
ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharfat all hours.

MARBLE and STONE CHIMNEYS.—150 MARBLE CHIMNEYS of various designs and colours, most of them fixed, are now on view at the Cambridge Heath Marble Sawing-Mills. The proprietor has again enlarged his workshops, and erected so much improved machinery, so as not only to compete, but is able to manufacture more, and consequently cheaper than any house in the trade.
The Trade supplied.

THE LIZARD SERPENTINE COMPANY manufacture and sell in block and slab the beautiful stone now raised from the lower beds of their quarries. Chimney-pieces, Columns, Fonts, and ornamental works on view, at 20, Surrey-street, Strand.
HENRY COX, Manager at the Lizard.
F. W. RUFFLE, Agent in London.

MARBLE MANTEL-PIECES. — The Belgian Marble Company, Importers of the produce of their own quarries, and Manufacturers of Chimney-pieces of Statuary, Veined, Brocatella, Verde-de-Mer, Rouge Royale, and other Marbles, beg to invite Builders and the Marble Trade in general, to an inspection of the largest Stock of Marble Mantel-pieces, now in London, of the latest and most approved designs and at prices varying from 1l. 10s. to 40l.—LAROCHE, PUGIN, and CO. Belgian Marble Works, Freeman's Wharf, Millbank-street, Westminster; and 3, Old Trinity House, Water-lane, City.

STONE! STONE! STONE!—To the TRADE. The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Pavior, Setsface Slab, Granite Pitching and Curb, Guernsey or Kea Road Materials, and every other description of stone, at JOHN KNIGHT and SON'S, Devon Wharf, Mile-end. York tooled paving, 38s. 4d. per 100 feet; slab for hearths, 4d. per foot sup.; slab for chimney-pieces, 3d. per foot sup.; 8 by 3 window-sills, 6d. per foot run; 13 by 3 coping, 9d. per foot run; bed chimnies (any opening), 8s. 6d. each. Terms cash on delivery

TO CONTRACTORS AND OTHERS.
YORKSHIRE PAVINGS, LANDINGS, STEPS, COPINGS, CURBS, SILLS, SINKS, and CHANNELS; Horse-hill, Robin Hood, Park Spring, and Gayby, in Blocks, Headstones, and Scabbled; Purbeck Paving, Sinks, Curbs, Rickstones, Pitchers, and Squares; Caithness Flags, Firestone, Newcastle and Bilston Grindstones; Portland Stone in Blocks, Landings, Slabs, &c.; Darley Dale, Cliff, and Cliffe Stone, Brantley Fall, Bath, Huddlestone, Park-wood, and other Block Stones. Valentia Slate Slabs, Bangor Slates, Cornish, Aberdeen, Guernsey, and other Granites; Marble, in Blocks and Slabs, supplied from the Wharfs, Millbank-street, City Basin, and Deptford; also direct from the quarries by vessel or rail.—Address, FREEMAN'S WHARF, 27, Millbank-street, Westminster.

FREESTONE.—Architects and Others are reminded that they can obtain the CASTERTON Freestone in blocks of any portable size, on applying to FRAS. and OCT. N. SIMPSON, Stamford. Specimens may be seen, and information obtained at the Offices of Messrs. PINDER, SIMPSON, and SONS, 29, Savile-row, Burlington-gardens, London.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

LANCASTER STONE, so remarkable for its free working quality, combined with colour and durability. Price, and cost of transit to any part, may be obtained upon application at Mr. W. THOMPSON'S Office, Elmer-street, Grantham.

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TO BE LET, with immediate possession, the no ed and valuable GRANITE QUARRIES of HAYTOR DOWN, in the parish of Bickington, in Devon; twenty miles from Plymouth, six miles from Newton-Abbot, eight from Newton-Abbot, where there is a railway-station, and twenty miles from Exeter. The Quarries are fully opened, and railroads communicate to each of them. They are known by the Old Quarry No. 1, the New Level, working under the sole of No. 1, the No. 2 Quarry, and the magnificent Quarry called Holwell Tor, which are all in a capital state for immediate working to an unlimited extent. Stones of all scantling, from the smallest Kirb to the largest columns or blocks, may be got with the greatest facility. Annexed to the Works are an excellent Bailiff's-house, workshops, and sheds, and, if required, several labourers' cottages. The stone is transported by means of a tram-road and canal to the port of Teignmouth.—For any further particulars, apply to the Duke of Somerset's Agent, Mr. BEARNE, at the Office, Telegrace, Newton-Abbot, Devon; Mr. BEATEN, Teignmouth; or Mr. SOUTHEY, Haytor Down.

RAWDON-HILL STONE.—Messrs. TRICKETT and PERKIN are prepared to execute orders to any extent for their much admired building Stone. Depôts, where large stocks are kept, No. 3, Stone-wharf, Great Northern Railway Station, King's-cross; Victoria Stone-wharf, Millwall, Poplar. Blocks quarried to suit customers for columns, cornice, landings, steps, ledgers, bed-stones, sills, &c. Delivered to any part by vessel or railway trucks.
"This stone when better known, must come into extensive use; I should think it exceedingly valuable for the London market."
C. L. DIESSEN, F.G.S.
Address, JOHN TRICKETT, Headingley, Leeds, Yorkshire; or, SAMUEL TRICKETT, Victoria-wharf, Isle of Dogs, London.
N.B. A large quantity of Foundation Landings for sale.

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GEO. VINT and BROTHERS, IDLE, near LEEDS.
Beg to inform Architects, Surveyors, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Paving, Bramley Fall, Park Spring, Robin Hood, Harehill, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

BANGOR WHARF, King's-road-bridge, Camden-town.—STRINGFIELD and COOPER, late W. W. Rawlins, beg to call the attention of Builders and others to their stock of Bangor slates, laths, plaster, Roman, Portland, and Keene's cements, blue lias, Dorking and chalk lime, plasterers' hair, Yorkshire plain, pan, and ridge tiles, glazed sewer pipes, closet-pans, and traps, Welsh fire-bricks, gravel and shells for garden paths, ballast, sand, &c. Materials landed, wharfed, and carted.

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BATH STONE of BEST QUALITY.—STRONG'S BATH-STONE DEPOT, BOX STATION.—Box Ground Stone, Corsham Block, Ashlar, Rangework, &c. supplied direct from the quarries. STRONG'S STONE-WORKS. Every description of Stone work for Building purposes, both plain and ornamental, prepared ready for fixing. Fountains, Chimney-pieces, Tombs, &c. &c. An elegant variety of Vases, both carved and plain, always on sale—STRONG, Stone Merchant, Box, Wilts.

BATH STONE OF BEST QUALITY
RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Box Stone Office, Corsham, Wilts.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cements, Tiles, Quarries, Laths, and Fire Goods. SCOLES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c cut on the shortest notice. Country orders promptly attended to.

PARIS EXHIBITION. — ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1846. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of lavatables, chiffoniers, consoles, &c.; baths baptistries, altar-tablets, pilasters, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

TO ARCHITECTS, BUILDERS, IRONMONGERS, &c.
ENAMELLED SLATE CHIMNEY-PIECES, of elegant designs and superior workmanship, in great variety, at prices from 4l. 4s. to 10 guineas. Slate Cisterns made to any size.—J. HOWELL, Manufacturer, 5, Cook's-grounds, King's-road, Chelsea, Middlesex.

TO CAPITALISTS.—Capitalists are invited to INSPECT one of the finest and most perfect SLATE FORMATIONS now existing in the Principality, combining an area upwards of one hundred acres in extent, of the most solid material, rarely to be equalled, but certainly not to be surpassed. The quarry can be reached by rail in nine hours from the metropolis, and is only distant seven miles from the South Wales Railway. In the process of manufacture, the edges of the Slate, solely through the operation of machinery, are cut by pressure, and consequently by this mode the Lamina is exempt from flaw or fracture. Specimens of the material will be transmitted to any party who may require them by receiving their address. If after a survey of the quarry, there should be a disposition to treat with the proprietor for the working of he Mine upon an extensive scale, a satisfactory reference would be required.—Address to the Proprietor, Summerton Slate Quarry, Letterston, Haverfordwest. Specimens to be seen at the Office of "The Builder."

SLATE.—HONDURAS-WHARF, BANK-SIDE.—H. SHEFFIELD has the pleasure of informing the trade, builders, and others, that he has an excellent assortment of the best Bangor Slates, at the lowest prices. Shipping and all orders promptly attended to.—Offices also, 6, Reed lane, City

The Builder.

Vol. XIV.—No. 695.

TAKE your ways straight is a Divine commandment, to which a second application may be given. In connection with the plan we recommended the other day (p. 269), for the formation of a grand main street, leading from Piccadilly to Cheapside, there are some points coincident with that object which ought not to pass unobserved. If London were built throughout in the so-so character of the larger portion of its vast extent; if there were no fine squares, no gardens and looses, no commanding buildings and places (or piazzas), then we should not have so much to deplore the original laying out of the streets, ranging, as they do, in all directions but the rectangular. The central quarters even are nearly all obnoxious to the same objection;—the nearer the Temple or the Royal Court, the worse the lanes, the greater the "bizarrerie" of both buildings and arrangements, and the more contemptible the purlieu! Near Gray's-inn, Leather-lane, Baldwin's-gardens, with other familiar places, are too well known: near the Temple, Essex-street is the most respectable avenue: near St. Paul's, Paternoster-row, Ave Maria-lane, Amen-corner, &c. &c. keep up at a respectful distance the invariable characteristic of the ancient cathedral, viz. a plea, "ad misericordiam," for mundane externals: near St. Mary's-le-Strand, and close upon St. Clement's Danes, *Holywell*-street marks again the sanctuary,—the place formerly resorted to for its living waters, is no longer the fountain of health or of *piety*; but near Lincoln's-inn-fields,—how shall we describe the sinuosities, the complexity, and the filth which block up and degrade the very heart of the metropolis? Here is the largest and best situated of our squares (offering a causeway leading direct between the two great arteries of Oxford-street and the Strand) comparatively useless and deserted: it runs nearly half way between both, and yet there is no advantage taken of the easement it offers for a grand traverse street.

A line drawn southward from it, on the west side, would cut the dens of Clare market and street, Vere-street, Duke-street, and other *defiles*, and issue out not far from the front of Somerset House, by Newcastle-street, eastward of St. Mary's-le-Strand.

A little violence might be done to the end of the venerable stack of Holywell-street, one house at the end of which block should come down, to make an appropriate opening; and in continuation large clearances should be made through Clare-market, and the vicinal heaps of dingy houses, which seem to have been accidentally ranged as a sort of maze to amuse the special pleaders who formerly occupied New-inn, Lyon's-inn, and all the other ins as well as outs of the region.

What a misfortune would it be, if the streets and lanes above-named, or any of them, were to be fastened upon posterity by the erection upon the old sites of magnificent structures, such as those which in the City have fixed for long years the narrows of Throgmorton-street, of Lombard-street, of Threadneedle-street, and other leading ways, formerly immortalized by trade, but now by noble buildings.

No, the rising taste of our day, and spirit of improvement, assure us that, in any changes meditated, and hereafter to be carried out, the first requisite of a great population must be considered, and that is an open and direct access from town to city, with equally open and convenient lines of traverse between the principal portions.

Allow St. Paul's churchyard to be bordered with Titanic warehouses, rivalling Cook's emporium, and extend the principle to Paternoster-row,—then, indeed, would St. Paul's be in a fix, and its lofty graces, if not outshone, at least further obscured from passing admiration.

The neighbourhood of Clare-market is tolerably secure, at present, from being fixed or stereo-structured after the manner of the City. The sites are not of the value, nor are the shaky tenements: nor are the interests of monthly tenants likely to increase the purchase considerably; but once practicate a grand leading street through that locality, and an increase of 200 per cent. will be added to the value. Therefore it is, that in any plan for extensive changes, a wide scope should be taken in the first appropriation of such poor and crowded neighbourhoods; and more particularly due care should be had for the allocation and arrangement of *suitable lodging-houses* for the evicted occupants. The model lodging-house has too much of the poor-house, or parochial, or eleemosinary character, to be palatable to the industrial classes of our day; not so streets with separate houses, having but *two tenements* upon a floor: these would be eagerly sought by clerks and assistants, and respectable operatives, having families; to whom propinquity to their avocations would render commodious and moderately-priced chambers an inestimable boon.

The great traverse street (suppose we call it Lincoln-street) would issue into Holborn, and, bearing northward, come on to King-street and by Southampton-row, and afterwards Seymour-street, into Hampstead-road, and so *straight* from the Strand for a distance of nearly three miles. The short interval between Orange-street and Holborn (about 300 feet) should be opened respectably, so as to form a grand street, surpassed by none other; having in its course Russell-square and Lincoln's-inn-fields as vents, and Oxford-street and the New-road as traverses; but, in fact, the way is made already, as will be seen by reference to the map: it needs only to be opened out and connected at the intervals described.

Such a plan as this,—so easily effected; comparatively, so inexpensive; offering to the largest municipalized congregation of earth easements and facilities hardly to be calculated, would act as a ventilating duct, whilst it would give scope to free intercommunication. It may have occurred to many, and is now urged as a corollary to the preceding article of the "Via Sacra."

ON DECORATIVE PAINTING OF THE THIRTEENTH, FOURTEENTH, AND PART OF THE FIFTEENTH CENTURIES.*

In a work upon ornament, recently published by the School of Design, it has been well observed that, for want of a more general knowledge of the variety of styles, the designer has been reduced to merely copying his neighbour, and hence the prevalence of the Louis Quatorze and Roccoco styles in the great London Exhibition of 1851. An extension of knowledge thus recognised as so important, leads to experience, and without these qualifications the most brilliant genius must be comparatively lost.

In bringing forward this matter, I may be said to hold a somewhat anomalous position. Without being an architect, I venture to address those who have made architecture their chief study. It is not upon that glorious science direct that I propose to offer any observations, but upon her important handmaid *painting*, and, as far as is inseparably allied with her, *sculpture*, that I shall venture to address you. Painting, then, as subservient to architecture, where the internal composition and arrangement of colour *must accord with a given space*, is to be my theme; and that rather in the way of pointing out examples of what has been done, than to lay down laws for guidance. I conceive it to be more useful, as I have had the advantage of travelling and spending much time abroad, to give a few notes of some of the most important examples of figure-painting connected with architecture, arranging them in chronological order, and touching upon the leading historical facts associated with them, rather than to confine myself to architectural ornament and patterns alone.

At the commencement of the thirteenth century, King John had just been seated on the throne of England.

The crusaders from the West were thundering at the gates of Constantinople, no longer to be recognized as a city occupied by descendants of the Roman emperors, who had deserted the banks of the Tiber since the days of Constantine. More Greek as a nation, and in constant intercourse with Persia and other nations of the East, they maintained tastes and customs totally different from those in the West. The very name of their city in use before the advent of the Romans was not extirpated; for the original name Byzantium is still retained, and we yet speak of Byzantine art and the Byzantine empire, although referring to a date subsequent to the conversion of the city to Christianity, and the Romans had, as the seat of empire, endowed it with the name of Constantinople.

The wealth of the city of the Greco-Roman empire was exhausted at the time of the siege, and Nicetas, an eye-witness, gives a lamentable account of the plunder and misconduct of the Western assailants when they became masters of the city. Then it was that the remaining statues that had been transported to Constantinople, and had escaped the ravages of time, were finally doomed. The last works of Myron, Polycletus, and Lysippus were melted or pounded into fragments for mortar, and many a fabric of the most costly material was wantonly destroyed. But to the rich stuffs and patterns, the elaborately-wrought metal ornaments, furniture, and utensils, that escaped destruction, and were transported to distant climates, may be assigned no trifling importance in the influence they exercised on foreign tastes. The sack of Constantinople, or Byzantium, carried a peculiarly Oriental taste to the far West in 1204, and the same city 250 years later exercised an almost greater influence when it received the Turks for its masters, and poured forth the remainders of the Greeks and the descendants of the Roman empire.

To return to our starting-point, the reign of King John, before the Italians of the middle ages could point to any one building of similar importance, a magnificent fabric arose in England (1206), with sculptures fully equal both in execution and design to the works of the Italian Niccola Pisano, who appeared nearly half a century later. This was the present beautiful cathedral of Wells; and another edifice of similar character, but still greater purity, was founded fourteen years later. The cathedral of Salisbury, with its chapter-house and exquisite Gothic sculptures, was founded 1220.

The condition of Italian art at this period may be inferred from a famous mosaic on the outside of the Duomo, or Cathedral of Spoleto, by one Solsternus, dated (according to Rossini) 1207.

The taste for the earlier Christian architecture, after it had emerged from the catacombs, at the time of Honorius and the Empress Galla Placidia (440 A.D.), will be seen in a view of the interior of her chapel at Ravenna.

During the reign of King John, two religious enthusiasts arose, independently of each other, with the desire of reforming the abuses and corrupt life of the monastic clergy. They both professed poverty, and became founders of the mendicant orders called, from their names,

* From a lecture by Mr. G. Scharf, jun. read at the Architectural Museum on the 13th inst.

Domenican and Franciscan. St. Domenic, in Spain, by his active zeal carried all before him, and by his preaching led to the fifth crusade, and, above all, to the persecution of the Albigenses. St. Francis lived retired in his convent at Assisi, near Perugia, and there died. Both of these holy men exercised no small influence on the arts; not so much by their lives, as by their deaths, for it was thought necessary upon their interment and canonization to bestow all honours possible upon their memory, and the arts were called into requisition. A magnificent church, with paintings, was reared in honour of St. Francis, at Assisi; and a superb sarcophagus adorned with sculpture, to St. Domenic, at Bologna.

The order of St. Domenic was confirmed the same year that Henry III. ascended the throne, and the order of St. Francis seven years later. Niccola Pisano, the great sculptor, began the Sarcophagus of St. Domenic in 1234.

In 1228 the great convent church and monument was begun to the memory of St. Francis. It was the work of a German architect named Jacopo di Lapo, who was appointed by Frederick II. emperor and king of Sicily. The church was completed in two years, and is the first specimen of Pointed architecture north of Rome. This style, peculiar hitherto to Sicily, had been imported from the east and established by the Saracens, who had spread themselves so rapidly along the Mediterranean. The emperor, being a Sicilian, may have been designedly instrumental in inculcating the new style. As a specimen of what it had already attained in Sicily, I would refer to the Chapel of Monreale, near Palermo, 1174. Giunta Pisano was the leading artist of this time in Italy. He executed a portrait of St. Francis, from the life, still preserved at Assisi, and contributed several fresco paintings to the walls of the upper church. All this happened before the birth of Cimabue, whom Vasari claims as the father of Italian painting. Meanwhile, our own country was not indifferent to the fine arts. Henry III. however weak he may have been as a ruler, was an earnest patron of the fine arts: he built Westminster Abbey and a magnificent shrine to Edward the Confessor.

At the same time, Bishop Poore, having erected the stately cathedral of Salisbury, commenced the celebrated nine altars at Durham.

England has a greater amount of records still preserved, of disbursements and orders given in remote times, than any other country, and it is very interesting to turn to these old documents, laid up at Westminster and in the Tower, and read sums paid and orders given for such and such paintings. I append two or three, both to show the taste of our ancestors at this period and the choice of subjects for their palaces and chapels.

In the year 1233 (the year of the establishment of the Inquisition), an order was given to the Sheriff of Southampton to have the King's wainscoted chamber in Winchester Castle repainted with histories and pictures.

In 1235 the Castle Chapel at Guildford was to be adorned with two tablets, one a crucifixion with Mary and John; the other a Majesty and the Four Evangelists.

In 1236 Henry issued an order to have the wall of his chamber painted green like a curtain.

In the year following one of the chambers was entrusted to the sheriff of Southampton to be coloured green, and starred with gold, and painted with the histories of the Old and New Testament. Oil and varnish are especially included among the materials used in the year 1238.

The keepers of the Tower of London were required to have the chapel of St. John whitewashed, and painted glass to be inserted. The church of St. Peter within the Tower to be beautified also.

In 1242, when Cimabue was only two years old, the king ordered a series of pictures from the Old and New Testament to be wrought in the chapel of Windsor Castle; they were not, however, finished till six years after.

In 1245 the Sainte Chapelle at Paris, and the nave and transepts of our Westminster Abbey were commenced, the Tower of Chichester had been just completed, and Rheims Cathedral also, by Robert de Coucy.

St. Stephen's Chapel, at Westminster, a fair parallel to the Sainte Chapelle, was just built, and an order is extant of 1245, to Edward, the son of Odo, the king's goldsmith, to paint on one side of the chancel, a beautiful figure of the Blessed Virgin, and on the other the king and queen. The same artist was desired in 1250, to paint in St. Stephen's Chapel, Apostles, the Last Judgment, at the west end, and the portrait of the Blessed Virgin on a board.

In the same year, the king ordered the "History of Antioch," to be painted at the Palace of Clarendon; and Edward of Westminster desired to paint the queen's low room at Westminster, with the "gests" of Antioch, and to copy the same from a large book, to be lent by Sandford, master of the Knights Templars. In 1248, is mentioned Brother William, a monk, of Westminster. He painted the King's Chapel, at Windsor.

The sheriff of Southampton was ordered to have a St. Christopher and King Edward, and the ring with the pilgrim, painted on the west gable of the Queen's Chapel, at Winchester.

At this time, 1250, Cimabue was only ten years old. The chief material for decoration in Italy was mosaic and Tarsia, or wood inlay. In mosaic the shape of each piece of stone or glass is lost in the pattern. In opere di commesso it forms a part of the design.

The Spoleto mosaic I have already pointed out, and may mention that Cimabue, in adopting the process, greatly improved on the system, and in the year 1300 executed a fine mosaic for the tribune of the Duomo, at Pisa.

The Madonna, of Cimabue, was carried in procession to the church. The next generation included Giotto, and the illustrious poet Dante, who in the year 1300 was at the height of his political influence. Giotto, the shepherd lad, was adopted by Cimabue, and being initiated into an art that had just attained sufficient development to express passion and sentiment, the youthful painter applied this technical skill to his own poetic and original conceptions, and produced a series of works, which for intention and individuality have never yet been surpassed. Dante, the poet, assisted him, and so rapid was his pencil, that he travelled all over Italy, leaving in almost every town of importance some monument of his skill. But it was at Assisi, under the banner of St. Francis, that he most particularly distinguished himself. He also wrought in mosaic, and was summoned to Rome by the Pope.

The long reign of our Henry III. has afforded us a great variety of events and enterprises. With the reign of Edward I. is generally introduced the period of the Decorated architecture, 1272. The Early English or Pointed had prevailed in England since the death of Henry II.

In the beginning of the fourteenth century, Arnolfo da Lapo, son of the architect of the church at Assisi, died, leaving the Duomo of Florence considerably advanced, but incomplete. Brunelleschi, many years afterwards, added the dome; but in executing this wonder of mechanical skill, as we shall see presently, he merely carried into effect the designs of Arnolfo.

In 1332, Simone Memmi painted the walls of the Spanish chapel at Florence.

In the paintings of St. Stephen's Chapel, at Westminster, judging by copies and engravings extant, there is great affinity to the works of Giotto, and those in the Incoronata at Naples.

During the reign of Edward III. of England, Rienzi, the tribune, pursued his romantic career at Rome and Avignon. In the same year that the battle of Cressy was fought, 1346, Rienzi mounted the Capitol, and published his laws.

The style of art and system of employing it with allegory to address the minds of the people, is curiously shown by the banners he had painted, &c.

The same year (1354) that Rienzi died, Marino Faliero was beheaded.

The same taste for allegory and wild fables was fostered by Petrarcha; and Orcagna, in 1360, painted the "Triumph of Death and Judgment" in the Campo Santo, at Pisa; Pietro Laurati, Hermits, &c.; Giov. Pisano, erected the Campo Santo.

The year 1348 is a remarkable date for events, both in England and Italy. With us the chapels of St. Stephen, Westminster, and St. George, at Windsor, were completed and endowed; and at Florence, the most terrible plague ever known, broke out. This afforded to Boccaccio an excuse or motive for his celebrated tales,—the Decameron; and it led, with a far better feeling, to the construction of the famous tabernacle in the Or San Michele, at Florence, which was completed by Orcagna in 1359. The Perpendicular style began with Richard II. in 1377. Brunelleschi was born in 1377; Ghiberti, in 1380.

[Mr. Scharf showed numerous illustrations of the early Italian wall paintings, copies from the decorations of the Painted Chamber, and St. Stephen's Chapel, at Westminster, together with *fac-similes* of illuminations in MSS. and miniatures, by Matthew Paris, in the British Museum. He also explained the arrangement of subjects on the walls of the Campo Santo at Pisa, the Brancacci and Spanish Chapels at Florence, and the Sistine Chapel, and that of Nicholas V. in the Vatican.]

To connect varieties of style with dates and historical events, seems to me a system of the utmost importance. How often do we find the spirit and feeling of ornament and patterns allied to the habits of the day! In costume this is particularly the case, and pervades even the minutest details, from the bonnet-clasp to the shoe-button. In furniture and tapestry it is more conspicuous still; and it is not a little curious to observe, notwithstanding the comparative difficulties of intercourse, how the same fashions prevailed at the same time in France, England, Italy and Spain. I shall probably have disappointed by the manner in which I have treated the subject entrusted to me. The chief point we have to deduce from examples before us, is the connection between the period, sentiment, and style of bordering, or architectural framework, and the subject actually inserted in compartments by the figure painter with the architect at his side. We now but too frequently see strange discord between the contents of the panels or the statues and ornaments and the architecture itself. The same applies to painted glass windows, where a want of consistency may be detected. Sometimes this is owing to a *partial* use of a good original with inferior filling in, or from an injudicious use of various materials to work from.

When the designer, either on a large or small scale, who can work out every part *himself*, apportions the labours definitely and clearly to his workmen, it seems almost impossible to miss a satisfactory result. Mechanical excellence is fast rising; and whether the painter be the architect, or the architect the painter, or both of these be "rolled" into one gentleman—the sculptor,—it matters little, for they are all three inseparable.

ON THE RESTORATION AND PRESERVATION OF WOOD CARVINGS.

At a meeting of the Institute of Architects, on the 28th ult. Mr. Henry Crace said,—Being much interested in the preservation of the various beautiful carvings of this country, more particularly those of the seventeenth century, I have considered that it might be of use to give particulars of some I have lately restored for the Worshipful Company of Mercers, in their Hall, which was rebuilt after the Fire of London, in 1666. I found the whole had been removed out of the Hall, the architect fearing they might fall from the panelling, as they were worm eaten in parts into perfect dust, and principally kept together by the large quantity of paint, varnish, &c. they had received from time to time. A small piece of one of the leaves which Mr. Eugene Barnes, clerk to the company, had preserved, and placed under a shade, shows the perfect honeycomb the wood had been reduced to when the dust was blown out. The main stem is of deal, the fruit, flowers, &c. are of lime, pear, and beech. Had the carvings been more perfect and wholly of oak, or any one wood, I could have restored them to their primitive colour and freshness.

It may now be necessary to explain what has been done to them. The carving is of the same colour as when taken down. I merely washed it, and with a gimlet bored a number of holes in the back, and into every projecting piece of

fruit, and leaves, on the face, and placing the whole in a long trough, 15 inches deep, I covered it with a solution prepared in the following manner:—I took 16 gallons of linseed oil, with 2lbs. of litharge, finely ground, 1lb. of camphor, and 2lbs. of red lead, which I boiled for six hours, keeping it stirred, that every ingredient might be perfectly incorporated. I then dissolved 6 lbs. of bees'-wax in a gallon of spirits of turpentine, and mixed the whole, while warm, thoroughly together.

In this solution the carving remained for twenty-four hours. When taken out, I kept the face downwards, that the oil in the holes might soak down to the face of the carving, and on cutting some of the wood nearly 9 inches deep, I found it had soaked through; for I should observe that not any of the dust was blown out, as I considered it a valuable medium to form a substance for the future support of the wood; this has been accomplished, and as the dust became saturated with the oil, it increased in bulk, and rendered the carving perfectly solid.

Each panel has consumed a little more than a gallon of the solution; they have been finished about five months, are becoming quite hard, and in the space of four or five years will be as hard as any wood. I have no doubt that in twenty years they will become so hard that no knife will cut them. Every gentleman present is aware that common putty becomes so hard within that period, that in hacking out a broken square of glass the wood is frequently destroyed, the putty being harder than the wood.

In my case the ingredients used will become more quickly hard, and I am confident that the carving is now more durable than at the hour it left the carver's hands. The holes made by the gimlet are left open, that the air may penetrate to assist in the solidifying of the decayed parts of the wood: at the same time we are aware that no insect can enter it, and it is impossible for any such to subsist on the composition introduced.

With reference to the cleaning and restoring of old carvings, I can state that my experience ranges over a period of fifty years, having commenced in the restoration of the very handsome wards of Greenwich Hospital.

Before that period it was the fashion to wash the oak compartments and varnish them, by which process, and with time and filth, they had become perfectly black, or rather of a chocolate colour. We set to work to clean them, and at last succeeded in bringing them back to their original freshness; and I believe that during that period my father had the works, and afterwards my brother and myself: every ward fitted up with oak was restored.

The Chairman (Mr. Penrose) mentioned a case in which some carving that had been much worm-eaten was preserved from further injury by dropping corrosive sublimate, by means of a pin-point, into all the holes.

Mr. Crace observed, that in some of the specimens before the meeting there was only a single hole in one piece of fruit, yet the whole of the interior substance was converted into powder, and the mischief could not therefore be remedied by the use of the pin-point. The insect which had committed these ravages was a small brown beetle, about the size of a pin's head.

Mr. Jennings, Fellow, considered that the beetle was the perfect form of the worm, which was in reality the eating insect. He had seen it in both conditions, and believed it did not pass through any intermediate chrysalis state.

Mr. C. H. Smith, Hon. Member, observed that the insect which was so destructive to ship-timber was unquestionably a worm, but in the present instance he believed it was the small beetle described by Mr. Crace, being similar (except in size) to the wood-louse and the cockchafer.*

SOUTH SHIELDS BURIAL BOARD COMPETITION.—Competitors are inquiring to whom the second premium has been awarded, and when their drawings will be returned?

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* At the next meeting of the Institute of Architects, to be held on Monday evening, the 2nd of June, the following Paper will be read—"On the Domestic Brick Buildings of the Sixteenth Century in Bruges, and other Places in Belgium," by R. Dennis Chantrell, Fellow. *The President.*—In consequence of the loss which has recently occurred in the family of the president, Earl de Grey, his lordship's annual *conversazione* to the members and friends of the Royal Institute of British Architects will not take place this year.

THE MATERIAL RESOURCES OF RUSSIA.*

BRICK-MAKING in Russia does not possess anything like the comparative importance it does in other countries. The greater number of the towns are built of wood. Comparing the value and progress of building and the value of bricks in France with that in Russia, the author estimates the value of bricks in France at eight millions of roubles, or thirty-two millions of francs, while the value of those in Russia he estimates at only two to two and a half millions of roubles. In France, so long ago as 1836, bricks and tiles were manufactured to the value of 28,112,000 francs; lime to the value of 23,827,000 francs; and plaster to the value of 14,714,000 francs. In Russia the brick manufacture is principally concentrated around the two capitals. The Moscow and St. Petersburg brickworks furnish at least two-fifths of the total consumption: the bricks are said to be of good quality, but very high priced. Large sized bricks cost at St. Petersburg 16 to 23 roubles per thousand: in France their price is 25 to 30 francs = 6¼ to 7½ roubles.

The manufacture of articles in terra cotta, such as statuettes, bas-reliefs, and other architectural ornaments, has lately been introduced; and this manufacture, of which the products, especially for external architectural ornaments, are very appropriate to the climate, it is thought may gradually acquire some importance.

Adding to the brick manufacture that of lime, plaster, and other cognate industries, M. Tegoborski considers that the annual produce of the whole may be estimated at 5 millions of roubles: the number of workmen employed at about 15,000.

The glass manufacture has, it seems, made marked progress in Russia within the last ten or fifteen years. The improvements introduced into the manufacture have brought down prices; but these are still much higher than the French and Bohemian. Under a protective duty of fifty roubles per pood, equivalent to from 250 to 500 per cent. *ad valorem*, the importation in 1848 was to the value of 16,308 roubles, and in 1850 to 53,609 roubles; but the duty having been reduced from January, 1851, to twenty roubles (still equivalent to 150 per cent.), the importation for that year amounted to 78,200 roubles. Most of the Russian glass works are situated in well wooded districts, where fuel is cheap, and the great difference of price is attributed to a want of competition, or to waste or errors in the processes of manufacture. "It is somewhat remarkable, however," says M. Tegoborski, "that whilst we ought to be able to furnish common window glass cheaper than any other country, a pane which sells for forty rupees at Vienna, costs seventy-five at St. Petersburg." This he ascribes to the long carriage, and to other circumstances affecting the Russian trade in general,—bad roads, we presume, or total want of roads, being one considerable circumstance amongst those here hinted at.

The manufacture of blown glass is said to have been greatly improved of late, but still prices are very high as compared with foreign countries.

The number of glass works in Russia in 1848, according to official returns, was 223, of which 27 were in the government of Wladimir, 22 in that of Wilna, 17 in that of St. Petersburg, 11 in that of Riazan, 10 in Livonia, 26 in the kingdom of Poland, and 16 in Siberia. Besides these there were 5 or 6 in Finland, making in all about 230 establishments. The total products of the manufacture are estimated approximatively at 2,500,000 roubles, and the number of workmen employed at nearly 10,000. In France there were 165 glass-works in operation in 1836, producing to the value of 47,474,300 francs = 11,868,600 roubles; and from the progress of the manufacture since then (manifested *inter alia* by the increasing exportation) the production must now amount to 13 or 14 millions of roubles. In Austria the total produce of the glass manufacture, including crystal and looking-glasses, was valued in 1845 in the official statistics at 17½ millions of florins = 11,025,000 roubles, and must now, it is estimated, be about 12 millions of roubles.

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* See page 238, *ante*: notice of M. de Tegoborski's book.

In Russia there is a large manufacture of window glass. In the large towns the houses and public buildings are spacious, and the severity of the climate necessitates the use of double windows.

The author, on the whole, regards the glass manufacture of Russia as being progressive, but impresses on the native manufacturers the necessity of sedulously applying themselves to the introduction of those improvements which would chiefly tend to diminish the cost of production.

Cabinet work is considered as both very perfect and very inferior, "according to the side on which it is looked at,"—not in the article itself, but as regards the two phases of luxury and poverty which prevail in Russia as elsewhere. The manufacture of luxurious furniture, says M. Tegoborski, is pushed, especially at St. Petersburg, to a high degree of perfection; but, although foreign woods are as cheap as anywhere else, the prices of the manufactured articles are most exorbitant, and out of all comparison with those of other countries; so that a little exportation to St. Petersburg might not be a bad speculation. This is ascribed to the high cost of skilled labour, from the limited number of good artizans and the want of competition. Common furniture, on the other hand, is of very bad quality: the wood is seldom well seasoned, and the workmanship is almost always careless. So is it with joiners' work in buildings. The doors and windows of the middle-class houses in St. Petersburg are generally warped, and will not shut close: in the provincial towns they are said to be still worse.

The crude value of all the industries treated of by the author, he estimates roughly at 500 millions of roubles; and the value which they add to the national wealth, exclusive of the raw material worked up, he sets down at 325 millions of roubles. The total number of persons,—men, women, and children,—employed in these various industries, he slumps at six millions. For other trades and professions not comprised in these, he adds 400,000 more, including masters, journeymen, and apprentices, and forty-eight millions of roubles as the product of their labour. These results, summed up as 500 millions of roubles, crude annual value, adding to the national wealth 375 millions of roubles, he compares with those of France, adduced by Schnitzler, as upwards of three milliards, and estimated by M. Tegoborski as now at least 3,500 million francs, or 875 millions of roubles; and with those of Austria, estimated at 795 millions of florins, or 500 millions of roubles, and further increased by the author to 550 millions of roubles. He thus regards Russia as on an equality with Austria as to the value of her various industries, and as 100 to 159 with France in these respects.

Of the building-timber exported from Russia England admittedly takes upwards of three-fifths. Prussia is next in importance to England as a purchaser of Russian timber, but the larger portion of the exports to Prussia itself is on British account. The value of building-timber exported to England, in the three years ending with 1853, is estimated at 1,955,100 silver roubles: to Prussia it was 1,367,000 silver roubles. The value of the building-timber exported to all countries was 4,285,700 silver roubles. In the timber trade of the empire, beams, deals, and staves are the chief articles exported,—beams to the value of 1,937,500 silver roubles, deals to the value of 1,430,900 silver roubles, and staves to the value of 349,100 silver roubles: all other sorts are valued at 518,200 silver roubles. More than three-fifths of the timber are exported by the Baltic, and nearly one-third by European frontier. The Baltic exports are chiefly from Riga and St. Petersburg, averaging 1,485,000 roubles from the former, and 965,600 from the latter. Pine and fir beams, about 160,000 piece, are chiefly exported by the Niemen and the Prussian port of Memel, and from the kingdom of Poland by the Vistula. Oak beams come mostly from Minsk and Volhynia to Prussian ports. Deals (about 2,000,000 pieces) are exported principally from St. Petersburg, but also from Riga, Narva, and the White Sea ports.

The average annual exports of all kinds from Russia by sea in 1849-53 are valued at

87,950,800 silver roubles, and by land 5,630,100. The imports of all kinds for same period averaged, by sea, 71,521,900 silver roubles in value, and those by land 6,394,000 silver roubles. Of the total imports, 26,363,400 silver roubles was the value of those from England alone, and 49,314,600 silver roubles that of the exports to England alone. The exports to Prussia are valued at 10,874,600 silver roubles, and the imports from Prussia 14,368,700 silver roubles, much of this traffic doubtless being also English ultimately. The next in importance to Prussia in reference to imports and exports is France, whose imports to Russia are valued at 8,301,800 silver roubles, and her exports from Russia at 8,237,600 silver roubles. It is admitted that nearly two-thirds of all the *exports* from Russia "are absorbed by the United Kingdom." Only three-tenths, however, of the total *imports* are estimated as arriving *directly* from England. France takes less than 8 per cent. of the exports, and sends nearly 10 per cent. of the imports. Austria takes about 6 per cent. of the one, and sends about 7 per cent. of the other. The general balance of exports over imports is only 20,709,200 roubles, although the trade with England alone presents an excess of exports to the extent of 22,951,200 roubles (or 3,634,000*l.*), so that all other countries taken *in cumulo* present a balance against Russia of 2,242,000 roubles only. Raw cotton and wool, dye stuffs and machinery, are the chief imports from England, and cereals, tallow, fibrous materials, and timber are the chief exports to England.

The English vessels employed in the Russian trade during 1849-53 were 3,977 in number, with a tonnage of 449,046 lasts, while those of Russia itself were only 2,188 in number, with a tonnage of 183,269 lasts. One of the next in importance was Austria, which had 638 vessels so employed, with a tonnage of 104,308 lasts. The English per centage on the whole shipping trade of Russia was 31·7, the Russian 12·9, and the Austrian 7·4. But in the triennial period 1824-28 the English per centage was 47·5, and as the Russian was then about the same as during the latter period, the shipping of other nations so employed has been on the increase, particularly the Turkish, which increased from 156 to 1,797 vessels, and the Dutch, which increased from 359 to 1,181 vessels. The Greek trade has, of course, wholly sprung up since about the earlier period,—and in 1849-53 it employed no less than 1,268 vessels, with a tonnage of 141,356 lasts, or 10·0 per cent. of the whole of the Russian shipping trade together. This is an instructive and significant item in the modern relationship of Russia to the Greeks, though, as yet, not exactly to those still of Turkey. Greece now ranks above Austria on the shipping list just quoted. It is also an important circumstance, as regards *our* influence over Russia, that "the English trade," as M. Tegoborski takes care to note, "though still foremost in rank, has lost much of its preponderance." Besides the Greek marine, the Black Sea trade of Russia has attracted a number of Italian vessels to its southern ports. The flags of all the Italian States together reckoned up only 29,333 lasts during 1824-28, but during 1849-53 that tonnage was tripled, and the Sardinian flag alone counted 78,180 lasts, and the Neapolitan 20,822.

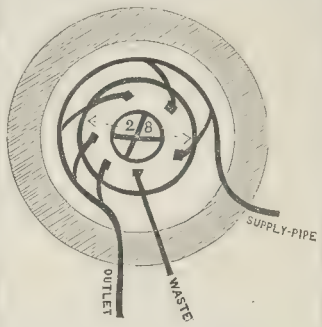
THE WATER-TOWERS AT THE CRYSTAL PALACE.

As a more intimate knowledge of the structure and character of these erections than can be gained by a mere casual observation is likely to be interesting to our readers, we subjoin a few particulars respecting them.

The foundation of each tower is composed of a ring of Portland cement concrete, the dimensions of which are,—outside diameter, 58 feet; width of the ring, 11 feet; depth, 3 feet.

On this foundation are erected 780 cubic yards of brickwork, also in Portland cement. This cylinder of brickwork is 18 feet in height, with an average thickness of 7 feet, carrying the entire structure of outer base plates, columns, face-panels, tanks, balcony floors, and roof. The diameter of each tower, from centre to centre of the columns, is 46 feet.

In the interior of the ring of brickwork, there is another foundation of Portland cement concrete, 28 feet in diameter and 5 feet thick, carrying the chimney-shaft and six water-columns. The water-column base-plates are placed equi-distant on this foundation, and branch into a circular pipe, through which the water passes both into the tank and out of the tank to the fountain. Of these six columns (communicating with the bottom of the tank), five are for the supply of the fountain, and one for the escape of surplus water. The following rough diagram will give some idea of the arrangement:—



The chimney is in the centre, and takes the smoke from the heating apparatus and boilers within the building. The height is 276 feet, the diameter 9 feet 3 inches: thickness, up to the height of 60 feet, 14 inches, after which it is reduced to 9 inches. On the top is an ornamental cap of cast-iron 14 feet in height by 16 feet in diameter.

There are eleven stories in each tower, the height between the floors being 20 feet. Winding round the chimney-shaft is a spiral staircase of iron and wood, containing 404 steps. As a means of additional stability, each tower contains ten diaphragms of wrought-iron, 5 feet wide, weighing about 6 tons. These diaphragms are all fixed between the columns and connecting pieces, and are tied together by iron rods $1\frac{3}{4}$ inch in diameter, and 32 feet in length. The total height of the towers from the first-floor to the top of the tank is 238 feet. There are ten tiers, each tier 20 feet high, making the height of the balcony-floor round the outside of the tank from the first-floor 200 feet. The tanks are 38 feet deep and 47 feet in diameter. Each tank, when full of water, contains 448,000 imperial gallons, or about 2,000 tons. The chimney-shafts go through the centre of the tanks. The total weight on the foundation when the tank is full of water will be,—

Water	2,000	tons.
Wrought-iron	240	,,
Cast-iron	638	,,
Glass, timber, lead, &c.	200	,,
	3,078	,,

Say 3,000 tons.

The pressure on the square inch at the mouth of the jet is 262 lbs. Each tower furnishes but one jet of water, which, on a calm day, will reach the altitude of from 220 to 240 feet. Mains connected with the water towers are laid in the Palace itself, which, in case of fire, could throw a jet of water to the top of the centre transept.

When finished, the towers will be decorated similar to the Palace, in blue and white.

Mr. I. K. Brunel was the engineer; and Mr. J. P. Ashton, of the firm of Fox, Henderson, and Co. the contractors, superintended the erection of the towers.

MONUMENT TO MR. LE SUEUR, AT ST. HELIERS.—The monument to the memory of the late Mr. Constable Le Sueur, is now almost finished. The bronze lions' heads destined, hereafter, we hope, to be issues for the refreshing waters which abound on the heights above the town have been placed on the four *façades* of the pedestal; and the inscriptions on the four panels of the base of the pillar are completed, with the exception of the gilding.—*Jersey Times.*

A TREATISE ON BUILDING BY CONTRACT.

THE prevailing mode of executing nearly all building and engineering works by contract having for some years engaged the attention of the writer, he proposes in the following remarks to take a comparative survey of this system with that which was commonly practised thirty years ago, and previously.

In former days it was customary for a person proposing to build, to consult an architect as to the best methods of carrying out his views, and to employ him to estimate the probable cost in detail, and to prepare such plans and working drawings as should, together with his instructions during personal supervision of the progress of the works, ensure the due execution of the original design, or such modifications of it as might seem to be desirable as the works proceeded. The whole of the works were undertaken by one tradesman, or several were engaged, each in his own particular department of mason, bricklayer, plasterer, carpenter, smith, plumber and glazier, slater, or painter.

On the completion of the works, they were measured off generally by the architect and the several parties directly interested, and it was the duty of the former to send in to his employer detailed bills of quantities (the result of the previous admeasurements), and his own valuation. For these labours the architect was compensated by a commission on the outlay, paid by the employer.

This mode of doing business has the following advantage;—the absence of disposition on the part of those employed to be dishonest, or at least the very slight temptation held out to them to be so; for supposing the tradesman to endeavour to take unfair measure, we must also suppose the architect to be either careless, incompetent, or venal, for such an attempt to succeed; and the author believes that architects, as a body, are too respectable a class of men for this evil to apply to any extent. Still, as architects are but mortal, there may be some amongst them to whom any one, or all three, of these characteristics might be justly applied; but as the cost of works generally is very well understood, and forms a most common topic of conversation amongst those interested in the business, culpable acts of injustice are very apt to ooze out in the gossip of those assisting in the admeasurements; and if the employer suspect any thing wrong, he can employ another surveyor and valuer to go through the works, and to supply him with his separate valuation to test the former. The risk of detection in any flagrant act of carelessness, incompetency, or dishonesty, is therefore great, and hence a considerable check is placed upon each, even where higher motives are not at work. Moreover, let it be always remembered, both by employers and architects, that it is the true interest of the latter to keep down the cost of buildings as low as is compatible with fair remuneration to tradesmen.

Another advantage consists in the ease with which works may be altered in their arrangements, or accelerated in their progress, or be suspended, or altogether stopped, at any period of their creation, without subjecting the proprietor to large claims for compensation for losses entailed upon the contractor in work prepared but not put in, in his workmen being suddenly thrown out of employment, or in materials bought and thrown upon his hands,—all which claims may have some foundation in fact, but more frequently have none. It is true these evils operate to some extent under the old system, but are reduced by the whole works being more under the control of the architect, who can generally anticipate any material departure from the first scheme, and by having the whole works under his own eye, check the undue advancement of one portion over the other; whereas it may occasionally suit the convenience or caprice of a contractor to finish one department entirely before commencing another,—as, for instance, he may prepare the whole of his joiner's work in the shop before laying a single brick, and should any alteration take place in the character of the doors and windows, his claim for work prepared but not used would apply. Under the old system the progress of the several portions of the works

would be balanced as it ought to be, and any such alteration would scarcely affect more than one story or division of a building.

A third advantage occurs in the fact of the builder having no interest in substituting worse material or workmanship, or less quantity than that ordered, because the valuer gives him only its equivalent.

The circumstance of its being to every tradesman's benefit to put in as good work as possible, that it may act as a specimen to invite patronage, constitutes a fourth advantage of no small moment.

The disadvantages of this system of "measure and value" are comparatively small, and may probably be summed up in the following;—The difficulty at times of getting work carried on with due rapidity, arising out of the tradesmen having much on their hands, or from a want of activity on their parts, or, perhaps, some negligence. The two latter causes soon provide their own remedy, for if tradesmen become notoriously negligent or inactive, nobody employs them. The first-mentioned cause no doubt occasionally operates prejudicially to the interests of employers; but whether the much-talked-of superiority of contracts, with conditions to complete by fixed periods under penalties in default, has really an existence, is a very open question.

Secondly,—The liability to high prices, which may be kept up by trade-unions, or by the absence of that stimulus to cheapen labour by method and machinery, which the fact of a minimum profit, or no profit at all, unquestionably supplies to contractors. There is, however, but little danger in trade-unions for such purposes: the real cost of work is too well understood, and the small capitalists will always reduce it to its smallest remunerating amount. Neither is it likely that improvements in machinery, giving promise of solid benefits, will be lost sight of in this mechanical age, though it must be admitted, that without the stimulus referred to, the prejudice in some minds for the old mode of doing work will impede their adoption.

Let us now enter upon a consideration of contracts, with their advantages and disadvantages.

Inasmuch as one man from the possession of capital or plant, from locality, from want of employment, or from talent for business, may be able to afford to do certain work for less money than another man, employers may be consulting their own interest by inviting tenders for the execution of the work proposed, and will have the advantage of knowing, or believing that they know, how much money they are about to expend, and that that sum of money is the lowest for which the work can be properly done.

So long as competitions are governed by the above recited considerations only, and the tenders vary in their amounts only as the one or other of such considerations particularly apply in each case, no harm, or but little, can result; but as there are many parties ready to contract to build anything, who have neither money nor plant, and who are without talent or character, employers may rest assured that in an appeal to the building community, they are asking for tenders from some in whose calculations not one of the foregoing legitimate elements will have a place, except the want of employment. Now, such men must live, and they know their only chance of getting a job is "to put it in as low as possible," that is to say, to send in a tender based upon the very lowest prices at which *any* work coming under the *general* description can be done, or actually involving them in a loss.

It is not to be supposed that these contractors (like the old woman) expect to realise a profit by an extension of their losses. They, no doubt, intend to obtain one by inadequate work, by avoiding the conditions of the contract,—or from extras thereupon. The lists of tenders for divers works, which are occasionally published in the *Builder*, wherein the lowest, and generally the accepted, tender is sometimes about half the amount of the highest (and that where thousands of pounds are concerned), show the recklessness (not to call it by a harsher term) with which contractors rush into heavy liabilities.

It is urged by the friends of the contract system, that irresponsible persons need not be treated with; and, indeed, there is usually inserted, in the advertisement for tenders, a notice that the lowest will not necessarily be accepted; but is it too much to say, that it almost invariably is,—and that such persons are treated with, notwithstanding this published tacit avowal of the employer's knowledge, that he is subjecting himself to tenders of amounts, for which his proposed works cannot be properly done? But employers seem to think, that in publishing a declaration to show no favouritism to the lowest tender, they are driving the adventurers out of the competition, or inducing them to put down such prices as should justify the expectation of a fair execution of the engagement, and they almost invariably accept the lowest tender. It is of little or no use the architect saying he does not approve of the party,—that he will not do the work well,—that he cannot at the price, and so forth. The answer of his patron is generally, "That is not your business, nor mine: the man is willing to engage to do the work for a certain sum, after having been warned in the advertisement, that cheapness was not my sole object. It *is* your business to see that he does it well, and in accordance with the plans and specification: you have drawn up the latter with certain clauses for my security, and I shall expect you to see them carried out." Now, herein the architect is an ill-used man: perhaps, out of a dozen competitors, the lowest is accepted, under his protest, as being incompetent, litigious, or unscrupulous, at a price for which he knows the work cannot be well done; and he is told that he is to see that it is: in other words, that he (the architect), is to do the maximum work for the minimum remuneration; for, be it remembered, the architect is paid by commission. Is this liberal? is it even fair? is it not turning the architect's as well as the builder's necessities to account? The philanthropist should look at the justice of the case—the mere man of the world, at the rational prospect of either architect or builder doing his duty under such circumstances.

The writer does not hesitate to affirm, that contractors are almost daily binding themselves to do work for less than it will cost them, and that they are fully aware of this. What, then, is the consequence? Naturally, that they do not fulfil their engagements according to the acknowledged understanding of them between employers and employed, but either put in inferior materials, or leave them out altogether, where they can without detection. It is utterly impossible for an architect to prevent this. To prevent it effectually, he must stand by the workmen and see everything done: this is out of the question, but recourse is sometimes had to a deputy in the shape of a clerk of the works, whose duty it is to see all the conditions of the specification carried out in their integrity. However honest, active, and intelligent this functionary may be, mal-practices on the part of the contractor will be successfully carried out if there is a disposition to adopt them. Superintendents of police have had their pockets picked, although they knew they were in bad company. The best guarantee against dishonesty is the absence of temptation to commit it.

Constantly at war with the contractor, the clerk of the works soon gets into disfavour with the workmen, who, having executed work according to their master's orders, do not like to have it pulled down or found fault with; and his position is one requiring great moral courage, patience, forbearance, and intelligence, and is, consequently, one demanding high wages. Now, if the salary paid to him be added to the amount of the contract, it will be found, probably, that the great saving which held out its allurements, in the sum total of the tender, has broken faith with the employer, and that which should have been spent as the price of *good* work has been swallowed up in expenses incidental to *bad*.

If a builder undertake to do for 900*l.* work which he knows should cost him 1,000*l.* he either does not look to his business as a source of income, or he intends to obtain profit by some dishonesty in the execution of his contract.

An employer may say, "I have nothing to do with this; I will take care, by means of stringent clauses and clerks of the works, that he does not cheat me, and whether he will lose by the job or not is not my business." Mr. Employer, it is your business: you either quietly arrange to involve in a serious loss, an honest man (supposing for the sake of argument the contractor to be one), or (adopting the supposition that he is not), by entering into such a contract with him, and taking care that he shall not impose upon you, you are an accessory before the fact to his robbing somebody else. "Honour among thieves" will scarcely avail you anything in the latter case,—for he will infallibly rob you notwithstanding all your care-taking. But you can go to law with him and obtain damages. Of course you can; but taxed costs will not cover your expenses, and their excess will add something to your intended outlay, perhaps rather more than would have made up the difference between your contract sum and a fair measure and value price of good work.*

GRADUS.

PRIZES TO THE METROPOLITAN SCHOOLS OF ART.

LORD STANLEY of Alderley, as President of the Board of Trade, distributed the prizes to the students of the Metropolitan Schools of Art on Saturday, the 24th, at Marlborough House. In the course of his observations he announced that it had been determined to hold, in the year 1858, an exhibition of those works of ornamental art produced since the establishment of the Schools of Art, as articles of commerce, which, either in their original design, or in their execution, have been carried out by those who have derived instruction from the schools. The works would consist of carvings in all materials, furniture, metal-working, pottery, &c. He also spoke of the other important measure, for promoting the extension of art instruction, to which we have already alluded. Instead of limiting the award of prizes to students taught in the Schools of Art, the Department would hereafter hold examinations at which any person might present himself to be examined in freehand and mechanical drawing.

We were glad to observe the number of female students who have been successful competitors. It is earnestly to be hoped that the special classes of wood engravings, porcelain painting, and others, in which female students have proved themselves so successful, will open a legitimate field of labour to a large number of young ladies, who would otherwise be at a loss to obtain an honourable livelihood.

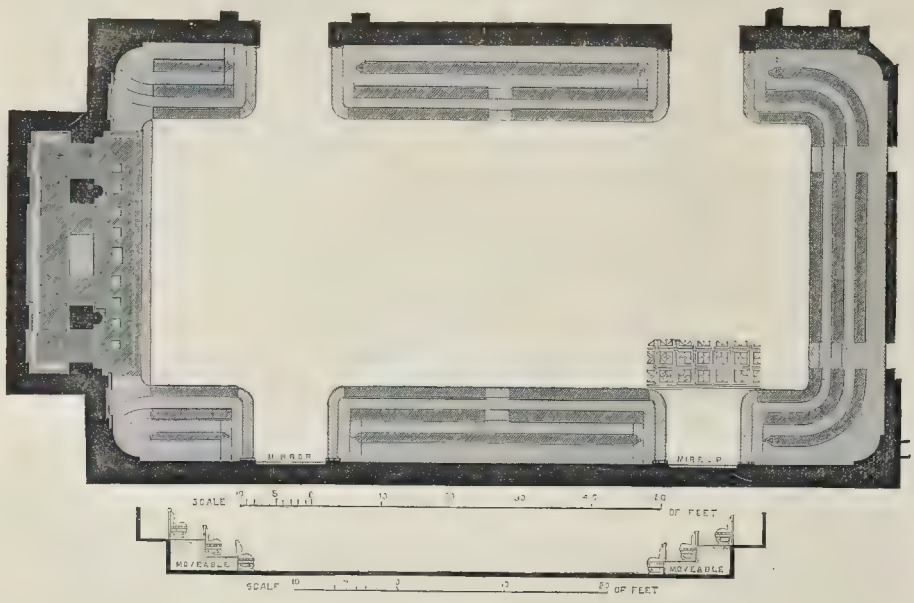
A large number of medals were also awarded to the male students. It is doubtful whether this extremely liberal distribution is calculated to stimulate the students, inasmuch as obtaining a medal seems such an easy matter that more than ordinary care and exertion is not required. The Board of Trade seem to have felt this, and to have wished for some higher prize than the present bronze medal, which should be the reward of greater excellence than that displayed in the regular class drawings. To effect this, the Board have selected four English sculptors (amongst whom is the modelling master at Marlborough House, Mr. Hancock) to make designs for two medals,—one to be the prize in *local* competition amongst the students of each school, the other to be awarded in a *general* competition of the successful works in the local competitions.

THE NEW STATE ROOMS AT BUCKINGHAM PALACE.

THE new state rooms on the south side of Buckingham Palace now completed, were constructed by the late Mr. Thomas Cubitt from the designs and under the superintendence of Mr. James Pennethorne, architect. They include a ball and concert room, a large supper-room, and a promenade gallery, with ante-room and approaches. The sculptures which adorn them are the work of Mr. W. Theed, and the decorations have been carried out under the direction of Mr. Lewis Gruner, in conjunction with the architect. The character of the decorations is

* To be continued.

THE BALL AND CONCERT ROOM AT BUCKINGHAM PALACE.



Plan and Section

that known as Cinque-cento,—the style which prevailed in Italy, contradictory, as it sounds, in the sixteenth century.

We give a view of the ball and concert room. This is a very fine rectangular apartment, 110 feet long, without the two recesses, at the east and west ends, 60 feet wide, and 45 feet high; including the recesses, the length is 135 feet. At the end towards the west a bold arch, supported by Corinthian columns, and surmounted by emblematical figures of Fame holding a medallion, upon which are the profiles of the Queen and Prince, rises above Her Majesty's seat, as shown in our engraving. The lunette formed by this arch will ultimately be filled with a copy from Raffaelle's Parnassus; it is at present decorated with an allegorical composition, representing "Britannia sanctioning Peace," exemplified by children with branches of olive, while a rising lion indicates the watchfulness and the strength of the nation. At the opposite end another arch, but without enrichments, confines a similar recess, containing the orchestra and a richly, but not very successfully decorated organ. At the foot of this and along the two sides of the room a triple row of seats, covered with red silk, and having a passage way behind, extends, which seats, with the other furniture of the apartments were furnished by Messrs. Johnstone and Jeanes. The roof of the ball-room rests on a wide cove enriched with stuccoes; double beams of considerable projection running parallel and transverse divide the whole roof into twenty-one compartments, each of which is shaped into a deep octagon recess, from which descends a glass burner for gas. The lustres are the work of Messrs. Osler, of Birmingham. Below the cove a cornice and frieze richly ornamented in stucco separate the walls from the ceiling. The upper part of each of the two side walls is divided into thirteen compartments, seven of which are the windows, which at night are filled with gaslights from behind, and six are surrounded with large borders, and represent figures of the Hours, taken from sketches by Raffaelle, and executed above life-size by Professor N. Canzoni, at Rome, where the originals are existing. Within similar spaces at the sides of the arches at the ends of the room, the arms of Great Britain are suspended from flower and fruit knots. Arabesques on gold ground and marbled panels fill the other spaces in the corners, while the four spandrils formed by the arches contain four Cupids from Raffaelle's frescoes at the Farnese Palace. The whole of the length of the lower part of the two side walls is covered with a rich silk, decorated with the national devices in flowers, and executed by Messrs. Jackson and Graham. On the north side of this apartment are two large doors with sculptures by Mr. Theed, of which the one leads from the Promenade-gallery, and the other opens into a similar room called the Approach-gallery, and through which the State dining-room of the palace is reached. Opposite to each of these doors, in the ball-room and concert-room, a mirror of large size, viz. 10 feet by 15 feet, has been placed to correspond with the doors. The ten candelabra of gilt bronze which are placed at the two sides of the seats of her Majesty and the royal family, and at the sides of each of the doors and mirrors, as also the two lustres in the recess on the west end, have been executed by Messrs. Barbedienne and Co. Each of these candelabra supports forty-three wax candles.

The floor is formed in solid parquetry, of wainscot, satin wood, and mahogany. The seats, we should mention, are not fixtures; so that in the event of using the apartment as a Banqueting Hall, they can be taken away, leaving only the raised footway next the wall, to serve as a sideboard for the service.

All the stucco enrichments are beautifully drawn, and with the general arrangement, reflect the greatest credit on Mr. Pennethorne. The Promenade-gallery is 95 feet in length and 31 in height, with a coved roof, from which the apartment receives its light.

The lower part represents an open gallery with vases filled with flowers under its arches; above these a series of panels has been introduced with chiaroscuro paintings of children. Eight busts, by Mr. Theed, are placed along the walls on marble columns.

The Approach-gallery has its walls painted in imitation of tapestry, divided by pilasters, with scrolls, and the two ends have large reliefs, representing the birth of Venus, and Venus descending with the armour for Achilles, in life size.

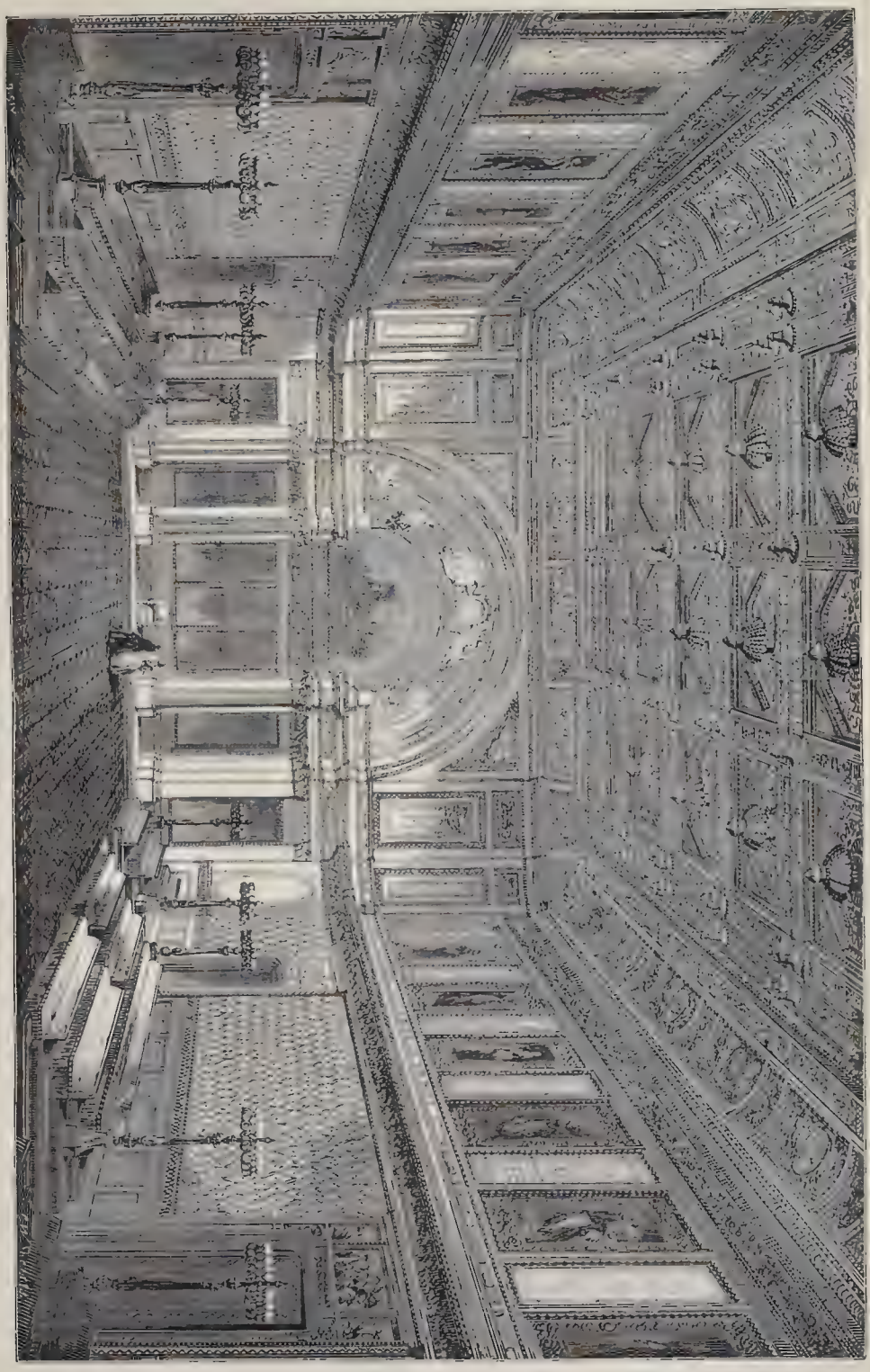
The Supper-room, the last apartment we have to speak of, is not far from a square, being 60 feet one way, and 70 feet the other, and is 45 feet high to the top of the dome. A large blue velarium, sown with golden stars, and bordered by cords and arabesques, extends over the whole of the dome, and it is painted as if the sky were seen beyond, between the cords which tie it down at the foot, and some birds are shown as having entered!

The walls of the upper part of the room are divided into panels alternately painted with arabesques in colour, upon a red ground, and with the royal arms in chiaroscuro on a gold ground, each panel being surrounded by a rich frame. The north and south sides contain a frieze in relief, each divided into one large and two small compositions, of which the principal ones are taken from Raffaelle's "History of Psyche," to which Mr. Gibson, the Royal Academician, has made some additions, the whole having been modelled and executed by Mr. Theed.

In the lower part Mr. Moxon has executed a variety of panels of various coloured marbles, as he has also executed all the other marbles and gilding in the whole building; and we bear willing testimony to the admirable manner in which the imitations are executed.

Many will doubtless find cause for regret that here, at the head-quarters of taste, intelligence, fashion, and wealth, the principle of truthfulness even in decoration has not been adhered to to a greater extent than is apparent: but we need not now discuss the question.

Let us add in conclusion, as affording a useful hint, that in order to study the effect of various combinations of colour, and to determine on the decorations to be adopted, careful drawings in outline of the sides and ceilings of the various apartments were lithographed, so as to afford any number of copies for experiments.



THE BALL AND CONCERT ROOM AT BUCKINGHAM PALACE.—Mr. Jones Pennethorne, Architect.

CHURCH-BUILDING NEWS.

Peterborough.—The erection of the new church of St. Mark, on the Lincoln road, under the superintendence of Messrs. Ellis and Son, is progressing. The site was presented by the Ecclesiastical Commissioners. The edifice is in the Gothic style of fourteenth century, and will accommodate about 800 persons, free. Upwards of 2,800*l.* including 1,000*l.* from the Bishop and 300*l.* by his son, the vicar of Peterborough, have already been guaranteed; but to complete the tower and spire, fence the ground, provide organ, bells, &c. about 700*l.* more will be required.

Ipswich.—The foundation-stone of a new church was laid last week at California, a remote suburb. The church will be in the Perpendicular style, and built of rubble with stone dressings. In plan it will comprise a nave, transepts, and chancel, the latter of apse form. The roof, of lofty pitch, will rise direct from the side-walls of the building. The structure will furnish about 350 sittings, mostly free. Mr. Woolnough is the architect, and Mr. Plumstead the builder.

Braintree.—The restoration of Braintree church is to be forthwith commenced, although the funds fall far short of the required amount, about 1,200*l.* only having been as yet secured, including 200*l.* from the Incorporated Society.

Brentwood (Essex).—The church in this town, erected about twenty years ago, being too small for the increasing population, has rendered an enlargement necessary; and this is to be effected by erecting a new chancel and chancel-aisle, which will occupy the extremity of the site, east of the church. The aisles will be gabled north and south, and thus the difficulty got over of adding to the wide span and roof of the present church. The walls will be of rag, with Bath stone dressings; the roofs, waggon-headed, with the main timbers showing. The arches opening into the chancel and nave will be divided by parclose screens, and the stall seats will be open and of massive construction. The floor is to be laid with tiles. A memorial east window is already in Mr. Ward's hands, and two others of painted glass are expected. Mr. Joseph Clarke, of London, is the architect.

North Kilworth (Leicestershire).—The interesting Early English chancel of this church is being entirely restored and re-seated, with a new roof, &c. The works are being carried out by Messrs. Law, of Lutterworth, under the direction of the architect employed at the Brentwood church. The east window will be painted by Mr. Holland, of Warwick, as a memorial to the rector's family. The doing away with the old square seats, the removal of a fire-place and a tall-brick chimney, the unstopping and restoration of the windows and chancel arch, and the removal of the present flat roof and ceiling, are amongst the works. The plastering is to be done in party colour.

Wardle (Rochester).—The foundation-stone of a new church for the village of Wardle was laid on Friday in week before last. Mr. G. Shaw is the architect. The style of the architecture is Early English. The building will consist of a chancel, nave, two side aisles, vestry, and organ-room, tower and spire, the latter occupying the south-west angle of the church. The roofs will be open-timbered, supported on columns, with clerestory. There will be no galleries. The accommodation will be for 500 persons, and the estimated cost, including architect's commission, warming apparatus, and other minor matters, is about 2,500*l.* It is expected to be finished about next May. The contractor is Mr. E. Taylor.

Tunbridge Wells.—On the 9th inst. an influential public meeting was held at the Town Hall, Tunbridge Wells, to consider a proposal for the erection of a new church in the town.

Weymouth.—A new tower, with peal of bells, are proposed to be added to St. Mary's church here. The design for the tower has been prepared by Mr. Pierse Arthur.

Wimborne.—The building of the new choir at the Minster is progressing. The organ is being reconstructed with modern improvements by Mr. F. S. Blount.

Malmesbury.—On the 8th inst. Garsdon Church was reopened, having been rebuilt at considerable cost. The new church is in the perpendicular style, with open stained roof, and uniform sittings for rich and poor. The builder was Mr. Chapman, of Frome. The operative mason was Mr. Francis Bowman, of Malmesbury. The architects were Messrs. Coe and Goodwin. There is a balance of 200*l.* due to the builder yet to be made up.

Tenbury.—Greet church has been restored and re-opened. Mr. Cranston, of Birmingham, was the architect employed, and Mr. G. Smith, of Tenbury, the builder.

Godmanchester.—It is in contemplation to put up a memorial window in the chancel of the church here, in token of respect to its former vicar, the late Rev. Charles Gray. It is calculated at a cost of 400*l.* The Dean and Chapter of Westminster have given 50*l.*; and the subscriptions already amount to nearly 200*l.*

Bath.—Some time since the citizens of Bath resolved to erect a monument in the Abbey Cemetery, as a memorial of the officers and private soldiers connected with the city who fell during the late war. The monument, of which Mr. S. Rogers, of Widcombe, is the sculptor, will be nearly twenty feet high, according to the local *Chronicle*. Its material is the finest pennant. "The design was derived from Père la Chaise." It is in the form of an obelisk, with wreaths on the faces. On the sides of the pediment will be engraved the inscriptions.

Prees.—The consecration of the new church at Fauls, an outlying district of Prees parish, in Shropshire, took place on Tuesday before last, according to the *Shrewsbury Chronicle*. Viscount Hill gave the site and the bricks, and the parsonage, now in the course of erection near the church. The church is in the pointed style of fifteenth century. It consists in plan of a simple parallelogram, 54 feet long by 17 feet wide inside, and, with the gallery at the west end, is capable of holding between 150 and 200 persons. It is almost wholly constructed of bricks. The dressings of the windows and details are of Grinshill stone, and various devices are worked in black and red brick on the face of the walls. At the junction of the body of the church and chancel, is a small open-timbered bell-turret. The roof is covered with Staffordshire red and blue tiles, of varied patterns. The interior is fitted up with open seats. The east window is to be of stained glass, representing the Crucifixion. The western window is in the wheel fashion, variegated with tracery. The architect was Mr. Ferrey, and Messrs. Nevett, of Ironbridge, were the builders. The cost was about 700*l.*

Uffington.—The church of Holy Trinity, Uffington, near Shrewsbury, was consecrated on Wednesday in last week. The new church consists of a nave and north aisle, 43 feet by 27 feet, separated by an arcade of stone-work; a chancel 21 feet by 18 feet, and two chancel aisles 11 feet by 9½ feet each. The style is Early English. The walls are of white Grinshill stone. The roof is of oak. The windows on the south of the nave are arranged in single and coupled lancets. The north aisle has also coupled lancets; the organ aisle having tripled lights cusped, and the old Norman loops. The east-end has a wheel window, surmounting three single lancets. The floor is of encaustic quarries, laid on hollow chambers, damp proof, and capable of being filled with hot air. This mode of warming renders unnecessary all wood flooring. The east and south windows of the chancel, the eastern and western windows of the south aisle, and the western lancet, have been filled with stained glass by Mr. Evans, of Shrewsbury. The remaining windows have been glazed in cathedral glass, varied in shade, each light being charged with one or more roundels or squares, containing scriptural subjects,—this being part of the collection of foreign glass left by the late Rev. W. G. Rowland to Mr. Corbet, of Belmont. The squares on the south side were obtained from the Abbey of Einsiedlen, Switzerland: the roundels were from Belgium. The architect, from whose designs the edifice has been erected, is Mr. Samuel Pountney Smith, of Shrewsbury. Mr. Ralphs, of Uffington, has carried out the woodwork, and acted as clerk of works; and Mr. Smith, of Grinshill, erected the masonry. The whole of the timber has been supplied from the Sundorne estate.

Wrexham.—The tender of Mr. Ebenezer Thomas, of Menai bridge, for the new Church of St. Mark, to be erected at Wrexham, has, according to the *Wrexhamite*, a local paper, been accepted. The amount of the tender was 4,561*l.* Mr. Thomas was the contractor for Gwersyllt Church. The successful competitor for the design of St. Marks was Mr. R. Kyrke Penson. The edifice is to be ready by 25th April, 1858. The requisite funds have not yet been fully subscribed.

Walsall.—The foundation stone of a Parsonage, in connection with the Church of St. James, at Ogley Hay, was laid on Monday before last. The architect of the Parsonage-house (which is in accordance with the style of the church) is Mr. G. T. Robinson, of Leamington; the builders, Messrs. Hardwick, of Birmingham, who also built the church.

Rainhill (Liverpool).—The new Chapel at Rainhill County Lunatic Asylum has just been completed. It stands at some little distance from the Asylum, at the north-east corner of the grounds. Mr. H. P. Horner, of Liverpool, was the architect. His instructions were to provide accommodation for a congregation of 350, but "with a view to future enlargement and strict economy of cost." The style is the late geometrical. The edifice consists of a nave, south aisle, south porch, belfry, and turret-spire, at the north-west angle, a small waiting or resting room for patients adjoining the turret, vestry near the north-east angle, and organ aisle on the south-east. The lower portion of the turret forms a north-west porch. The nave and aisle are separated by a series of six arches of dressed stone on octagonal stone piers. The roofs are open-timbered of simple carpentry, curved ribs over the communion space and champers on the angles being the only approaches to decoration. The wood is slightly stained and varnished. The timbers of the roof rest on the plain stone corbels in the nave and aisle, and a hexagonal ventilating louvre, surmounted by a spire-roof and vane, rises from the roof near the east end of the nave. The east window of three lights is fitted with stained glass, by Messrs. Pilkington, of St. Helen's, from a design by Mr. Horner. A diaper pattern, intermixed with bands inscribed with appropriate texts, fills the body of the lights, and the heads have symbolic letters, combined with foliage. A small quatrefoil light in the gable is also filled with stained glass. The west window is of four lights, this and the east having moulded internal jambs. The seats are open, excepting those for the choir and officers; the whole, except those obtained from the old chapel, being of varnished deal. The turret spire, with a light gilt cross which crowns it, is sixty-four feet in height: the other principal dimensions are as follow:—

	Ft.	In.
Extreme internal length	68	0
Length of aisle	73	0
Length of organ aisle	15	0
Width of nave	22	0
Width of aisle	13	0
Total outside breadth	42	0
Height of nave roof to ridge	37	0
Height of aisle roof	18	9

The building is of stone, furnished by a quarry on the site, and from which the asylum was built, the materials of the original chapel being also used in the new one. The external stone-work is of "Cumberland walling," with dressed quoins, jambs, &c. The contractor for the whole was Mr. H. Fisher, of Birkenhead. The amount of the contract was 1,283*l.*

Chorley.—The Chorley Improvement Commissioners have purchased the land for the cemetery for upwards of 3,120*l.* and have let the contract for the erection of the three cemetery chapels to Mr. Thomas Banks, of Chorley, joiner and builder. The chapels will be of the following dimensions;—Church of England, 32 feet by 18 feet; Dissenters', 24 feet by 24 feet; and Roman Catholic, 32 feet by 18 feet.

East Keswick.—On Saturday in week before last the foundation-stone of a new church was laid at East Keswick, in the parish of Harewood. The site, which is in the centre of the village, has been given by the Earl of Harewood, and com-

prises two roods twenty-three perches. The building will consist of a nave, chancel, porch, and vestry; the whole surmounted with a small spire. It will accommodate about 300 people, and the works, which are let to Mr. Hall, of Leeds, are expected to be completed about the end of the year. Messrs. Mallinson and Healy, of Halifax, are the architects. The building will be in the Early English style.

Carlisle.—A new Wesleyan chapel has been erected at Hallbankgate. Mr. Beattie, of Brampton, was the architect. The building, according to the *Carlisle Journal*, is in the Early English style, and is 42 feet 6 inches long by 32 feet 4 inches wide; height to ridge, 32 feet 6 inches, and will seat 200 persons. It stands on elevated ground.

PROVINCIAL NEWS.

Chelmsford.—The tender of Mr. S. Simpson, of Ipswich, for the erection of the new Corn Exchange here, at the sum of 4,923*l.* was accepted, there being four other tenders, of which the highest amounted to 6,450*l.* and the lowest to 5,697*l.*

Great Pandon, Essex.—The interior restoration of this little church, with a late transept added by Sir Josiah Childs, the eminent banker, soon after 1600, is now being completed, under the direction of Mr. Joseph Clarke, architect. The old seats in the nave will be restored, and followed throughout the nave; whilst in the chancel the stall seats will be of a richer character. The same architect is carrying out a village club-house: the walls will be of coloured brick, with a high open roof, and accommodation for reading, with a supply of tea and coffee from a bar at the end. Attached will be a smoking-shed, and every inducement to attract the labourer from the beer-shop.

Oxford.—A model of the public fountain proposed to be erected in St. Giles's, was exhibited in the Public Library, used as a withdrawing-room at the civic banquet. From the designs, it appears that the fountain would be 50 feet high and 50 feet wide at the base, with a jet over all of 50 feet, making the total height, when playing, 100 feet. The uniformity of the stem is broken by two smaller basins, the water of the main jet falling into them in succession before reaching the largest. Surrounding the latter, it is proposed to have seven sculptured figures representing Great Britain, France, Turkey, Sardinia, Austria, Prussia, and Russia, each emblematical of the peace, and throwing a jet of water. The name of the originator of this design and model did not transpire.

Liverpool.—The surveyor of the Liverpool Dock Trustees has reported that the connection between the lines of railways belonging to the trustees, at the north end of the Sandon dock, and the high lines of railway communicating with the Lancashire and Yorkshire and the London and North-Western Railways, are completed, and that a circuit by rail is now complete on the dock quays.

Manchester.—The front of the new Free Trade-hall, in Peter-street, has just had a piece of allegorical sculpture placed in the circular head of each of its nine windows. The centre piece represents free trade, with outstretched arms and open hands. On her right hand Europe is seated, followed by Asia, with the arts and manufacturers. On her left are Africa and America, with agriculture and commerce. All the work is in bold relief. In each case a single figure represents the allegory; but to each are added the various emblems, &c. which help to render intelligible the idea of the artist. The attitudes and draperies of the nine female figures are so disposed as to produce varied effects. The sculptures have been executed by Mr. Thomas, of London.

Blackpool.—The building of a school, in Bank Hey-street, for infant children, was commenced on Tuesday before last. The building is to consist of a school-room and mistress's house, with rooms for pupil teachers, after a plan prepared by the architect of the council on education. A large play-ground is to be attached to the school. The estimated cost is 682*l.* Mr. Thomas Topping has contracted for the whole building, under the superintendence of Messrs. Myres and Veevers, of Preston. Upwards of 200*l.* says the *Preston Guardian*, are still required to complete the undertaking, in addition to the amount promised.

Sunderland.—The erection of the new Sailors' Home has been let, says the *Shields Gazette*, to Mr. Alexander Thompson, of the firm of Thompson and Hunter, and will be commenced immediately, so as to be ready for habitation by November term. The building embraces two large rooms for the use of the Marine Board, with other smaller rooms. The Home embraces a spacious dining-hall, one large front sitting-room and library, and one large smoking and sitting-room. There are also about forty small bedrooms, intended each for two shipmates, with separate beds; while contiguous to these will be the baths and washing-rooms, with all the other necessary appliances for carrying out the objects of a sailors' home.

LIGHTNING AND CONDUCTORS.

THE following notes, made whilst going through M. Arago's "Meteorological Essays," lately published by Baron Humboldt, may not be uninteresting to some of your readers.

J. D. J.

"The celebrated Duhamel du Monceau says, that lightning, unaccompanied by thunder, wind, or rain, has the property of breaking oat-stalks. The farmers are acquainted with this effect, and say, that the lightning breaks down the oats."

NOTE.—This is a well-received opinion, I know, with the farmers in Devonshire. It may amuse our country members to inquire into the extent of this belief.

"In thunder weather the barking of oak-trees is said to be effected with less difficulty than when the day is fine, the wind in the north, and the sky clear."

Bodies shattered by Lightning.

"The hypothesis entertained on this subject is, that lightning by its action developes, in the substances which it traverses, an *eminently elastic fluid*, the tension of which must inevitably act in all directions. Would it be a very hazardous supposition if we were to assume the elastic fluid in question, to be no other than the vapour of water?" *i.e.* that the tension we have spoken of is the *force of steam.*

"Lightning, as we have seen, fuses thin metallic wires. May we not conclude, also, that it will render incandescent the minute aqueous particles which it may find in its passage?

"What force would water not have at the much higher temperature of red-hot iron? Such a force would evidently be adequate, in point of intensity, to all we know of the mechanical action of lightning."

"Suppose humidity in the fissures or small cavities of a block of freestone; and if struck by lightning the steam developed will shatter the stone to pieces, and the fragments will be projected to a distance in every direction."

Effects of Lightning on Animals.

"In the summer of 1774, lightning struck two persons who were under a tree: portions of their hair were thrown to the top of the tree."

"A workman was struck in a tavern: portions of his hat were found incrusted in the ceiling."

NOTE.—This of course is caused by what is termed the "up stroke" of lightning. Two years ago in this neighbourhood [Worcester], a hay trusser left his rick on the approach of a storm. Lightning struck the tree and the man: it split the bark of the former and destroyed the man: his shoes were burnt and much of his clothing, portions of which were driven up into the tree.

A Hint to the Ladies.

"A lady was putting out her hand to close a window during a thunder storm: the lightning darted, and a gold bracelet which she wore disappeared altogether, so that no vestige of it was found: she herself received only some slight hurts."

"When lightning falls on men or animals, ranged either in a straight line or in an open curve, it is at *the two extremities of the line* that its effects are, generally speaking, most intense and disastrous."

"This has been exemplified where lightning struck a stable in which were ranged thirty-two horses, when the two outside horses were killed! When lightning encounters an iron bar, it is only on entering and quitting it that it does much damage."

Precautions against Lightning.

"Franklin recommends persons to avoid the neighbourhood of fire-places. Lightning does, indeed, often enter by the chimney, on account of the internal coating of soot which is one of the bodies for which, as for metals, it evinces a preference."

"For the same reason, avoid as much as possible metals, gildings, and mirrors, on account of their quicksilver."

The best place is in the middle of the room; unless, indeed, there should be a lamp or chandelier hanging from the ceiling.

"The less the contact with the walls or the floor, the less the danger. A hammock, suspended by silk cords, in the middle of a large room, would be the safest place."

"In the absence of the means of suspension, the next best place is on substances which are bad conductors, such as glass, pitch, or several mattrasses."

"These precautions must be supposed to diminish the danger, but they do not altogether remove it."

"There have been instances of glass, pitch, and several thicknesses of mattresses being traversed by lightning."

"It should also be understood, that if the lightning does not find round the room a *continuity of metal*, which it may follow, it may dart from one point to another diametrically opposite, and thus encounter persons in the middle of the room, even if they were suspended in hammocks."

"The greater the mass and the volume of the conducting matter brought together in one place, the greater the chance of being struck by lightning in its neighbourhood.

"There is another cause which may contribute to render numerous assemblages of men or animals dangerous during thunder-storms.

"Their *perspiration* cannot fail to occasion an ascending column of vapours, and it is well known that moist air is a better conductor of lightning than dry air: such a column has a natural tendency to attract the lightning, by preference, to the place whence it proceeds. Need we, therefore, be surprised that flocks of sheep are so often struck by lightning, and that a single stroke should sometimes cause the death of thirty, forty, or even fifty of these animals."

Is the danger of being struck by lightning increased by running, or by rapid motion, during a storm?

"The rapid motion of any body leaves behind him or it a space, in which, mathematically speaking, the air is comparatively rarified. All other circumstances being equal, lightning will be more likely to strike such space."

NOTE.—Hence, ride for your life in a storm.

Lightning Conductors.

"All other circumstances being equal, lightning directs itself, generally speaking, to the *most elevated* portion of edifices."

"All other circumstances being equal, lightning directs itself, by preference, to *metals*. When, therefore, a metallic mass occupies *the most elevated* point of a house, we may feel pretty nearly certain that lightning, if it falls, will strike that point."

"Lightning, which has entered a metallic mass, does mischief to the surrounding masses at *the moment when it quits the metal, and at the vicinity of the point or points at which it issues from it.* A house, therefore, may be rendered safe from its highest point to its foundation, *if the metallic parts of the roof are prolonged without interruption to the ground.*"

"When there are upon the roof or summit of an edifice several distinct metallic masses *completely separated from each other*, it is difficult, and even impossible, to say which of them will be struck by preference. The only safe practice is to unite all these various metallic masses by rods of iron or copper, or bends of lead, zinc, &c. so that there may not be any one of them which shall not be in *metallic communication* with the bar which is destined to transmit the lightning to the damp earth, and which runs down one of the upright walls of the building."

"*Damp earth* offers to the fulminating matter which is passing along a bar a channel, by which it escapes easily, and *without detonation* or damage, provided the *bar plunges a little deeply into the earth*."

"By a proper conductor, I mean, on the one hand, that it should go into the ground until it reaches *earth, which is always damp;* and on the other, that it should be *sufficiently massive* to transmit the strongest lightning without being fused by it."

"A pointed rod is much more effective than a blunt one."

"In order to protect an extensive building, it would be necessary to arm it with several lightning-conductors, and the *less the length of the rods, the more they must be multiplied.*

"In certain cases, *oblique* rods may do good service.

"Platinum points are to be preferred to copper ones, not only on account of their unalterability under the action of water or air, but also on account of their *infusibility.*

"The conductors should be preserved from rust by a coat of paint.

"When the conducting bar enters the ground, there is an alternative between two opposite difficulties.

"If the soil is *humid*, the fulminating matter passes off easily; but the metal *rusts and is soon destroyed.*

"If the soil is *dry*, the bar lasts a long time; but it fulfils its function very badly. It was, therefore very desirable to discover some substance which should be a good conductor, but which should not injure iron. *Charcoal, when it has passed through a red heat, is of this description.*

"In passing the eaves and cornices, the conducting bar is sometimes bent into a right angle, and sometimes into an acute angle. Such *inflections become dangerous:* care should be taken to make the necessary changes of direction by *gentle curves.*

"We do not learn either from the Bible or Josephus, that the Temple at Jerusalem was ever struck by lightning, during an interval of more than a thousand years, from the time of Solomon to the year 70, although, from its situation, it was completely exposed to the violent thunderstorms of Palestine.

"By a fortuitous (?) circumstance, the Temple was crowned with lightning conductors quite similar to those which we now employ, and which we owe to Franklin's discovery.

"The roof, constructed in what we now call the Italian manner, and covered with boards of cedar, having a thick coating of gold, was garnished, from end to end, with long pointed and gilt iron or steel lances, which Josephus said were intended to prevent birds from resting on the roof, and soiling it.

"The walls also were overlaid, throughout their extent, with wood thickly gilt. Lastly, there were, in the courts of the Temple, cisterns into which the rain from the roof was conducted by *metallic pipes.* We have here both the lightning-rods and a supply of means of conduction so abundant, that Lichtenbergh is quite right in saying that many of our present apparatuses are far from offering in their construction so satisfactory a combination of circumstances."

A STROKE OF LIGHTNING AT BROMPTON.

As a practical illustration of the necessity of attending to the teachings of science to prevent evil from the presence of that powerful agent, electricity,—an agent always and everywhere at work,—we may mention what occurred at Mr. Rymill's, house, Brompton-crescent, on the 17th inst. It was raining while the family were dining, and Mr. Rymill sent his servant downstairs to take out a bell-trap close to the front of the house, that the water might get away. He had opened the lower door, and was about to stoop to do so, when the maid-servant called to him that she had already removed it. That call saved his life: an electric flash descended diagonally past the front of the house to the spot he would have occupied: as it was, he was struck down and remained insensible for a considerable time. The fluid seized upon the copper bell-wire, which it fused wherever a brass crank occurred to break the connection, leaving marks of the explosions on the wall, and in one case it fused part of the crank itself. It passed through a small hole in the front wall, along the wire, into the house, to the extent of 3 or 4 feet, and then, meeting the bell-spring, appears to have returned in preference along the copper wire to the outside, where the wire was inclosed in a zinc tube up to the garden-gate, up which it ran to a distance of about 45 feet, where, first again fusing the wire at its junction with a crank, it passed away. Mr. Rymill has reason to be thankful.

THE EMPEROR OF THE FRENCH AND MODEL LODGING-HOUSES.

The emperor, anxious for the well-being of the working classes of Paris, has caused to be announced in the *Moniteur*, that he has, at his own cost and risk, undertaken the construction, on a grand scale, of model lodging-houses, for which purpose he has caused 18,000 metres of land to be bought on the Boulevard Mazas. The *Labourers' Friend*, in mentioning this, says,—"The necessary and happy consequences of all prudent and well-considered enterprises is gain; and, as no enterprise can be more prudent than to supply a pressing and daily increasing demand, there can be little doubt that these lodging-houses, when finished, will leave a large profit upon the capital invested in them, for the home accommodation for the poor is at present very inadequate to their wants; but, as if to meet in advance all possible suspicion of self-interest in this generous undertaking, it is expressly stated that "so soon as the letting is completed, the lots will be granted, at cost price (*au prix de revient*), to such persons as will undertake to build within the term fixed upon, and according to a given plan."

EXPERIMENTAL ARCHITECTURE IN AMERICA.

Our readers may be glad to hear what is being said about architecture in America. The following is from the *Transcript*:—

The first thing that strikes a stranger in Boston is its admirable commercial buildings. An Englishman, for instance, must be surprised at our light, airy, yet substantial warehouses, compared with the cavernous, ill-ventilated, yet often flimsy structures, in which business is transacted in London.

In other parts of our city, perhaps the most striking fact is the absence of uniformity. It is evident that we are studying architecture in the way that we are studying everything else,—experimentally. The book architect says, 'You musn't use this or that feature: it's contrary to the rules of the pure Greek, or the pure Gothic, or the pure Renaissance.' 'Pure fiddlestick,' says the Yankee: 'you say that won't do, I'll try and see. You say that design there is meant for a base: now I think it would look well turned upside down, for a cornice, I guess I'll try.' Accordingly, a conspicuous building in Summer-street has such a cornice: The experiment, to be sure, is not strikingly successful.

Again, a sensitive classicist says, 'Don't touch, with rude fingers, these ancient, sacred forms. You may copy a little, but be careful to copy exactly. Don't dare to shake up these wonderful fragments.' 'I'll just try,' says the Yankee; and he shakes the kaleidoscope till it shows him a fair interior cornice—new out of the old,—classical yet original,—and he puts it up in Winter-street. Honour to the successful boldness of that man, whom, by the way, too few have honoured.

One says, 'I'll try an iron building. For ornament, I'll try what I've seen used in stone.' The experiment is going on, and the Yankee begins to see how insipid are Corinthian caps of cast-iron,—how all the interest of the delicate carving is lost when it comes to be cast. You can see he feels nervous, for he is smearing them with gum and sprinkling them with sand, a sort of tar and feather architecture. We won't give up the iron. It is not the material which has failed, but we were mistaken in subjecting it to stone ornament.

The 'trimming' style of building has been tried on and worn threadbare. One courageous man says,—'I'll try a cornice made of the old homely brick, on my big building up in Washington-street.' People look at the cornice, and remark how it grows out of the wall, as if necessarily of the same material; and they find that they can dispense with the binding after all.

Now the way the Londoners manage is the reverse of all this. An architectural guild has settled everything by rule and line. The great divisions are sharply marked out—Greek, Gothic, Revival. These architects have copied three Greek monuments, and piled them one upon another at St. Pancras. They have frozen the Gothic into the Parliament Houses. They have smeared the great town with stucco moulded into renaissance ornament.

The Greek was god-like when it blazed with colour above the blue sea: the ghost of the Parthenon is yet lovely: the Gothic is sublime in Westminster Abbey: Whitehall, and St. Paul's, and Somerset House, are graceful and imposing. But the question is, 'Why should the world be filled with bad copies of Whitehall?' London is full of unsuccessful, ineffective, renaissance buildings: English architecture is frozen.

Now what is to save us from falling into the same stupor? Our very barbarism. We are saying, in our rough way, 'We won't be bound by your rules: we'll try all sorts of things in all manner of places.' By-and-by, perhaps, we shall see clearly the truth that merit in a building depends on the developement of that building's individuality, consistently with its position in time and space;—in a word, that 'its architecture should be a function varying with the variation of all its co-efficients;' hence that preceding styles should be *used* for instruction, not *abused* for imitation.'

SUNDERLAND DOCKS.

INSTITUTION OF CIVIL ENGINEERS.

On May 13th, the evening was entirely devoted to the discussion of Mr. Murray's paper "On the Progressive Construction of the Sunderland Docks," read at the previous meeting.

It was said that the site of the docks was very peculiar, inasmuch as they had been constructed on ground gained from the sea by the action of groynes projected from the shore. There had been originally much doubt as to the feasibity of that plan or mode of proceeding: it had however proved very successful. The dams employed were novel in construction, apparently cheaper than usual, and had been used with success in exposed positions. There had occurred some casualties with one of these dams, which were unanxiously met, and would be interesting features in the paper if added before publication.

All the harbours on the north-east coast suffered more or less from the formation of bars across the mouths of the harbours themselves, or of the rivers leading to them. The difficulties in keeping open the [illegible] were considerable, and the [illegible] hitherto employed had not been very successful: the system [illegible] had adopted to be [illegible] devised, and the results were stated to be superior to anything attained elsewhere: it would be very desirable to be well informed on all these particulars.

The effect produced by the three southern groynes placed seaward of those originally constructed, had been to collect a mass of sand and *débris* on their southern sides; whilst the old groynes at the northern end of the embankment collected the sand on their northern sides. This apparent anomaly was due to the action of the litoral currents, which set sooner into Hendon Bay than at the mouth of the harbour, in consequence of the tidal wave having a more rapid progress in the deep water of the offing than along the shallow water of the coast. In consequence of this, there was a counter-current northwards from Hendon Bay, and similar counter-currents existed both north and south of the mouth of

the harbour, caused by the projection of the piers. A point had been observed between the northern and southern groynes, where there was a junction of these tidal currents, indicated by a spit of sand and gravel.

The coffer-dam in the tide-way of the river enclosed 2½ acres within it; there was considerable difficulty in obtaining a secure footing for the main piles, but after a deposit of clay had been made, the object was effected, and being secured together by walings and bolts, the dam proved quite water-tight. A series of raking shores inside gave great solidity to the structure, and enabled the rock to be excavated close up to the inner piles.

The sea coffer-dams of the channel were, however, of a different construction;—the object being to protect the inner dam by another in front of it, in skeleton, secured by a deposit of clay brought up to the low water-mark. The inner dam had then a mass of clay deposited on the interior side, having a tendency to force it outwards, but this effect was prevented by a series of raking shores. This pressure had the desired effect of keeping all in place, although powerfully acted upon by the waves of the sea. On more than one occasion it had been found necessary, during raging storms, to add extra weight to the dam, by bringing waggons, heavily loaded with rubble stone, along the railway, to the centre part. The effect of this additional weight was to impart greater stability to the structure, even when the waves were lashing against the timbers with considerable violence.

The average cost of the three channel coffer-dams, for timber, iron, and labour in fixing, and for depositing the clay, amounted to 19*l.* 3*s.* per lineal yard, and deducting from that sum the value of the timber which had been used in other portions of the work, the actual cost had been 16*l.* 12*s.* per lineal yard of coffer-dam, exclusive of the expense of rooting out the timbers and removing the clay. When compared with coffer-dams of the usual construction, even in situations not exposed, as these were, to the action of the sea, the cost was very moderate.

The scouring conduits were supplied by water from the half-tide basin, through archways, into a well 40 feet long, on each side of the shipping entrance. The four entering ports from each well were closed by shuttles, having the cills all laid at one level of 23 feet below the datum, or 8 feet 6 inches under low water of ordinary spring tides.

Each entrance was 7 feet wide by 9 feet high, and the conduits were separated into two, for a short distance within the discharging ports.

	Under low water of spring tides. Ft. In.
The first pair adjacent to, and on either side of, the shipping entrance had their bottoms laid at the depth of ...	12 0
The second pair beyond on each side ...	9 4
The third pair „ ...	7 4
The fourth pair „ ...	5 4

The sectional areas of the last-mentioned pairs were about 10 per cent. less than the sectional area of the entering ports, being each 7 feet wide by 4 feet high.

The sectional areas of the first-mentioned pairs were about 20 per cent. less than the entering ports, being each 6 feet 9 inches wide by 4 feet high.

The sectional areas of the intermediate pairs were proportioned in like manner, with the intention of keeping up the force of the currents; and on plan the conduits had the form of a fan, for the purpose of conducting the issuing water into the centre of the channel.

The area of the Great Dock, with the Southern Half-Tide Basin, was taken at 34 acres = 1,481,040 superficial feet.

The scouring water, at an ordinary spring tide, might be lowered to the permanent level in the dock, being a depth of 4 feet 6 inches.

Hence, 1,481,040 × 4·5 = 6,664,680 cubic feet of water available for scouring.

Eight apertures, each 7 feet wide by 9 feet high.....	=	504 sq. ft.
Deduct 10 per cent. for friction through the conduits	=	50 „
Gave as available area for scouring water	=	454 sq. ft.

	Ft. In.
Then the rise of an ordinary spring tide ..	= 14 6
Deduct for rise of tail-water	= 1 0
	13 6
The mean depth 4 feet 6 inches ÷ 2.....	= 2 3
Leaving mean pressure	= 11 3

which was calculated to produce a velocity of 862·44 feet per minute. Then 862·44 × 454 = 391,548 cubic feet per minute,

and $\frac{6,664,680}{391,548}$ = 17 minutes

Deduct 2 minutes consumed in opening the shuttles, leaving 15 minutes available time for scouring.

Assuming $\frac{6,664,680}{15}$ = 444,312 cubic feet per minute, which, passing through the sectional area of the channel, on the inner side of the pier heads = 1,232 square feet.

$\frac{444,312}{1,232}$ = 360 feet per minute,

= 4·091 miles per hour for the mean current,

= 3 166 miles per hour along the bottom, which was a current capable of carrying along large shingle and broken stones.

The effect of an experimental trial had been most conclusive. Although a large quantity of clay remained in the channel of the outer coffer dam, standing at the height of 6 feet above the bottom, and consequently holding the water within it in a quiescent state, yet when the shuttles were drawn, although there was a depth of 16 feet of water in the channel, or 4 feet above low water of spring tide, and the pressure of the water in the docks only 10 feet, and when closed was reduced to 7 feet, the column of issuing water caused that in the channel to be heaped up; and, being prevented by the channel cut through the marly rock, from escaping laterally, the whole mass of fluid was set in motion like a river. Meeting with the resistance of the clay in the outer coffer-dam, it rose and fell over it, as a tumbling bay; and even then the course to seaward was strongly visible on the surface, for a distance of more than 2,000 feet beyond the pier-heads.

It was stated, that Mr. Murray might be congratulated on having carried out a system of sluicing which promised to be useful in important cases. It was argued, that a marked distinction should be drawn between the operation ordinarily mis-called sluicing, or scouring, and the much more effective principle applied in this case. In the former, the object was to direct a small stream of water, with a high velocity, directly upon the spot to be scoured; and though this was usually effective, in removing deposit from one particular place, it only carried it a short distance away, to be soon again deposited; and hence, as at Dover and many other places, this system of scouring had, from its inefficiency, fallen into disrepute. The process, however, adopted at Sunderland, was on a different principle, namely, to create what might be called a temporary artificial river, which, running in a well-defined channel, for a certain time, at low water, should not only scour or clear the bed of such channel from deposit, but should carry that deposit away to a considerable distance. The velocity with which this scouring stream should run could be perfectly regulated by the sluices, the only object of which became, in this case, to supply such a quantity of water into the channel as would impart and maintain the velocity required: they, therefore, should be so placed as to distribute the supply widely, and thus to insure an equable stream in the channel. It was considered important, that the channel should become gradually narrower towards the mouth, so that the stream might act with the greatest power on the part where the deposit was most likely to occur. Confident expectations were held out, that by the more general application, under suitable regulations, of this system of sluicing, deep entrances might be efficiently and economically maintained in situations where they would otherwise have been impracticable.

THE HOUSE OF PEERS ON ARCHITECTURAL AND ART IMPROVEMENTS.

ON Friday, 23rd inst. Lord Ravensworth brought several points of architectural and sculptural interest under the notice of the House of Lords. His lordship first alluded to the projected approaches from Pall-mall to St. James's-park, and remarked, that in connection with the proposed improvement it was expedient to consider whether the east front of St. James's Palace might not be made a little more ornamental. The central gateway was a fair specimen of the style in which it was erected, but on the east side of the gateway was a most faulty specimen of that style, crowded with windows, and so rotten as to risk being blown down by the wind: it was surmounted, too, by chimney-pots not fit for farm-houses. As to the internal accommodation, the ladies of England who attended her Majesty's levees had but too much reason to complain. The ground wasted in court-yards might provide a large amount of accommodation. He wished to call the attention of Government to these desirable alterations. With reference to metropolitan statues, his lordship pointed attention to the fact that one of the pedestals in Trafalgar-square was still unoccupied. In Hanover-square there was a statue of Pitt, on a lofty pedestal, while northward, in a direct line, was one of Lord George Bentinck in Cavendish-square, where also an equestrian statue of William, Duke of Cumberland, stood on so low a pedestal that it could not be seen to advantage, being overshadowed by the higher statue adjoining. The grotesque effect ought to be obviated by placing it on a higher pedestal, and turning the figure in a different direction. The statue of the Duke of Kent, at the top of Portland-place, one of the widest streets in the metropolis, was too small to terminate such a vista, hiding itself as it did among the trees. The position reminded him, with the alteration of a single word, of the line in the Latin poet:

"*Nec* si cupit, *ante* videri."

He suggested the removal of the statue to the front of the new entrance to Buckingham Palace, in compliment to her Majesty. His lordship concluded by suggesting that now the pictures of Turner had been decided in Chancery to belong to the nation, they should be provided with a fitting gallery, and restored to the light. If a building could not be at once erected, Government ought to hire a public room, where the pictures would be safe from injury, while the public would have the advantage of seeing them. Lord Redesdale was of opinion that a straight road past Buckingham Palace, at the west end of Pall-mall, would be preferable to the park improvement proposed by the committee. His lordship thought there should be no line of road at all across the park. The Marquis of Clanricarde agreed with Lord Redesdale as to the straight road, and with Lord Ravensworth as to the want of accommodation at St. James's Palace, which was unbecoming the dignity of the Sovereign. Lord St. Leonards called attention to the state of one of the fronts of Somerset House, disfigured by two rows of chimneys, and suggested the removal of such an eyesore. It was impossible for any one to walk the streets and not be convinced of the want of a pile of buildings for the offices of the Government. The Earl of Malmesbury also urged similar views, and remarked that the Foreign Office was in so critical a state that it had to be propped up, and it may be remembered that a great part of the roof fell in some years since, and nearly destroyed the inmates. The accommodation for the reception of distinguished foreigners was disgraceful to the country. The Marquis of Lansdowne was understood to say that notice had been given in the other House for a committee in order that it might consider the plans and proposals which would be laid before it on the subject of new Government offices. Besides being an ornament to the metropolis, he believed that the erection of new buildings would ultimately prove more economical than any other way of providing the accommodation required. Earl Stanhope said that forty years ago there were no public statues but statues of royal personages. Now there were many of eminent public men. The great want, however, with respect to these statues was the omission of any inscription on the pedestal, except the name and date of birth and death.

METROPOLITAN BOARD OF WORKS.

AT a meeting of the Board, on Monday last, a report in favour of Mr. Bazalgette's plan for the sewage interception and main drainage of the districts *south* of the Thames, was carried, on the motion of Mr. Carpmael; and a deputation was appointed to see Sir Benjamin Hall on the subject. A point was raised by Mr. Leslie, touching the proposed outfall at Plumstead, which will probably lead to the removal of the outfall farther from London.

The scheme for the drainage of the north side of the Thames has been printed.

THE PROPOSED MEMORIAL OF THE '51 EXHIBITION.

IN reply to the subscribers to the memorial who have addressed us on this subject, we are enabled, by Alderman Challis, to state that differences of opinion as to the mode of carrying it out have alone postponed the fulfilment of the idea. The money collected has been funded, and before long we shall probably be able to announce the course determined on. The money was subscribed for a memorial of the Great Exhibition, and to that specific object it should be applied.

TO COLOUR MORTAR.

IN reply to the inquiry at p. 280, to colour mortar for what is called front work, I would recommend pounded hot lime, fine clear sharp sand, and smiths' ashes (passed through a fine sieve), in *equal* proportions. This will make an excellent hard *dark* mortar. Should a darker colour be desired after this admixture, a less proportion of sand to a greater of smiths' ashes would do it; also, if soot were added to the water previously to its being chopped up with the lime, &c. it would assist. But what is the best, "*after all*," would be to add black oxide of manganese: this

would be a lasting colour, which no weather would deface: the quantity required of this latter is but small, and is well understood by a "good bricklayer." It is used for staining the red roofing tiles to imitate slate.—J. B. W.

Notices of Books.

Examples of Antient Domestick Architecture. By Francis T. Dollman, Architect. Part I. London: Bell and Daldy. Also at 6, Albert-street, Regent's-park.

There has been a lull for some time in the production of ancient examples: Mr. Dollman breaks it worthily. He proposes in the work before us to illustrate the hospitals, bede-houses, schools, almshouses, &c. of the middle ages in England. In the present part, he gives ten plates, four from St. John's Hospital, Northampton, and six from Grey Friars [or Ford's] Hospital, Coventry, the latter one of the most beautiful specimens of mediæval wooden construction in the kingdom. The accuracy of Mr. Dollman's pencil is known to most of our readers.

Miscellanea.

Stonemasons' Dispute and Disturbance at York.—Mr. Lucas, the contractor for the stonemasons' work required on completing the additional buildings at the North and East Riding Pauper Lunatic Asylum, at Clifton, has had a dispute with his workmen, and he discharged twenty of them on 26th ult. and on 7th inst. brought nine men from Bradford, who were intimidated by his old hands, and prevented from continuing in his employment. One of the discharged workmen used threats, for which he has been sentenced to a month's imprisonment, with hard labour, the magistrates remarking that they were resolved to break up so fearful a combination; and that while workmen had a right to combine for their mutual protection, they had no right to tyrannize over their fellow-workmen, or to prevent their former employers from obtaining new hands. One of the causes of the disagreement was a demand made in course of the contract work of a rise in wages of 6d. a day, to which, however, the employer agreed for a time, to suit his own convenience. Another was a demand of short time on Saturdays. One of those who appeared for the defendants charged with intimidation, said the employer agreed to give the increased wages, with three months' notice, but had turned them off at a fortnight's notice. One of the magistrates, in reference to the unlawful combination, said the secretary and treasurer of the club were each liable to three months' imprisonment.

New Public Health Bill.—In the House of Commons, last week. Mr. Cowper, in moving for leave to introduce a Bill to amend the Public Health Act, stated that the measure was rendered necessary in order to correct the defects and ambiguities of the old Act. His Bill was to give power for the effectual cleansing of pavements, and removal of refuse and filth from the rear of houses. It would empower authorities to establish a system of drains and sewers to be carried out at a certain distance from the houses, also out-falls and reservoirs, into which the refuse or sewage could be carried. It would provide for sewage being applied as manure where practicable. The Bill would also extend the power of raising money for the erection of public works, and for repayment of the same over fifty years. The Bill was only intended to apply to towns where there was no representative government. Leave to bring in the Bill was then given.

To Clean Windows.—Windows should be cleaned with whitening, mixed very smoothly in some water: the addition of a very little *gin to the water* is a great improvement: afterwards polish with chamois leather. In Holland, small garden-engines are used in cleaning windows on the outside, an excellent plan, if used very early in the morning.—J. B. N.

On the Cultivation of Flowers in Windows.—There are fewer tests of a happy home *within* than the flower-decorated window, and neatly-kept garden; and there is no occupation for the leisure hours more calculated to keep it so, or to soothe the mind. It yields pleasure without surfeit: the more we advance, the more eager we become. And, how unlike this is to most of our worldly engagements! To those *blessed* with children, how delightful it is to bend their young minds to a pursuit so full of utility and intellectual instruction, combined with the advantages usually accompanying industry; and in children, carefulness and thought about their plants will lead to the same feelings respecting other matters.

J. B. N.

The Manchester Fine-Art Exhibition Building.—A meeting of the subscribers to the guarantee fund for the forthcoming Fine-Art Exhibition Building, at Manchester, was held in the Town-hall, Manchester, on Tuesday in last week, when it was resolved to hold the exhibition next year. The Earl of Ellesmere was elected president, and the Mayor of Manchester, chairman. A report was read, announcing that her Majesty had accorded her patronage, and the Prince Consort his favour to the proposed exhibition, although the prince regretted that previous exhibitions had not resulted in any permanent benefit to the district in which they had been held. The deputation who waited on H.R.H. however, assured him of the great probability of a permanent Museum of Art and Industry being established on the foundation of the Manchester Exhibition. An offer had been received from Messrs. Young and Co. of London and Leith, the contractors for the new Museum building at Kensington Gore, to erect a fire-proof building capable of holding 20,000 people for 22,500*l.*; the original estimate being 25,000*l.* The total estimated expenditure will be 40,000*l.* Messrs. Fox, Henderson, and Co. had also sent estimates. The building is to be erected in six months' time. The guarantee fund consists of thirty-two subscriptions for 1,000*l.* each, and sixty for 500*l.* each,—in all, 62,000*l.* Our readers will have seen that a design for the projected building has been advertised for.

New Westminster-bridge.—In reply to Mr. Henley, on the 19th inst. in the House of Commons, Sir B. Hall said that, after he came into office, the contractors for the works of the new bridge became bankrupts, and he placed the matter, which was attended with very great difficulty, entirely in the hands of Messrs. Rendell and Simpson; and he hoped, in a week or two, to be able to lay their report on the table of the house, as to the present state of the works and the course they recommended to be adopted.

New Streets.—I have this moment read your proposition for a new street, east and west. Could not something be done towards opening the communication with Leicester-square, by continuing King William-street, Strand. This was intended by Mr. Nash, but was prevented by the obstructives of St. Martin's, who would not consent to part with their workhouse—it was so "dear to them." If this could be accomplished, it would remove, from one of the finest sites in the metropolis, a nuisance of so extensive a character, that it is presumed its equal is not to be discovered in mighty London.—A. B.

The Iron Trade.—Complaints prevail in Staffordshire that orders come slowly in, and the nominal prices of last quarter-day have not been sustained, an extensive system of "underselling," as it is called, being prevalent; in other words, the nominal prices are, as usual, a point rather to be aimed at than realized. In Yorkshire and Derbyshire, the trade is rather in an active state. The ores of Northamptonshire are coming into extensive use.

Manchester Royal Institution.—In connection with the forthcoming Exhibition of the Manchester Royal Institution, it may be useful to mention that the Exhibition will open about three weeks after the close of the Royal Academy. The council are particularly anxious to obtain as good an exhibition as possible, and for that purpose the Honorary Secretary, Mr. Edward Salomons, has been in London, to obtain pictures from the artists. The inducements held out to contributors, are the general taste for the fine arts in Manchester, and the valuable pictures that are there purchased.

TENDERS

For erecting six pairs of semi-detached villas, near Reading, Berks, for Mr. C. E. Vine. Mr. W. H. Lovett, architect:—

Reed	£9,460	0	0
Taylor	9,247	0	0
Kelly and Son	8,496	10	0
Corbet	7,950	0	0
Partridge and Co.	7,598	0	0

For the erection of St. Thomas's Church and Parsonage-house, Lambeth. Mr. S. S. Teulon, architect. Quantities supplied by Mr. Poland.

White	£6,911	0	0
W. Higgs	5,983	0	0
Macey	5,983	0	0
Avis and Sons	5,880	0	0
Wilson	5,893	0	0
J. Higgs	5,748	0	0
Pollock and M'Lennan	5,685	0	0
Todd	5,517	0	0
Myers	5,100	0	0
L. Wilson	5,100	0	0
Dove	4,578	0	0

For additions and alterations to a villa at Herne-hill, for Mr. J. D. Welch. Messrs. Tillett and Chamberlain, architects. The quantities not supplied:—

Messrs. Thompson	£1,130	0	0
Messrs. Pritchards	990	0	0
Brass and Son	978	0	0
Benj Wells	902	0	0
Jennings	883	0	0
W. O. Wills (accepted)	880	0	0

For Training College, Liverpool. Messrs. J. and C. Hanson, architects:—

Anderson	£4,820	0	0
Baynes and Son	4,792	0	0
Nelson	4,442	0	0
Ladd	4,350	0	0
Jump and Son (accepted)	4,297	0	0
Nicholson and Eyre	4,190	0	0

For building a new church, on the site of the present one, St. Mary Magdalen, Kilby, Leicestershire. Mr. H. Goddard, Leicester, architect. Quantities supplied, and the old materials to be the property of the contractor:—

Young, Oxford	£1,480	0	0
Harrold, Hinckley	1,375	0	0
Porter, Leicester	1,368	0	0
Loveday, Kibworth	1,346	0	0
Lindley and Firm, Leicester	1,335	0	0
Rushin, ditto	1,286	0	0
Cox, ditto	1,260	0	0
Johnson, ditto	1,238	0	0
Broadbent, ditto (accepted)	1,199	0	0

TO CORRESPONDENTS.

"T. H. H."—"T. G."—"Fire."—"G. D. D." (shall appear).—"Competitor."—"J. H."—"R. V. L." (the contract can be stamped afterwards. An appraiser's license is not required, for making out bills of artificers' work).—"A. O." (license is not necessary).—"An Old Subscriber"—"J. S."—"S. and Son."—"E. O. W." (the roof as shown is not necessarily very early; the framing of the rafters at the foot is similar to that in the roof of Heckington Church. The window shown may be of the twelfth century).—"W. B."—"W. R."—"G. M. O. J."—"C. B. A."—"P. P. R."—"Dr. G."—"W. W." (next week)—"J. D. and Sons"—"W. C."—"F. T. D."—"H. C." (there are several such schools, but we decline recommending).—"E. L. B."—"E. J. P."—"Solid Sewage Manure."—"C. M."—"H. H."—"P. L. C."—"A Freeholder of Princes-terrace."—"J. M."—"P. O. P."—"O. P. Q." (no).—"Messrs. D."—"F. W."—"R. R."—"G. S."—"W. H. V. S."—"S. J. T."

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Norwich, May 22nd, 1856. E. C. BAILEY, Clerk.

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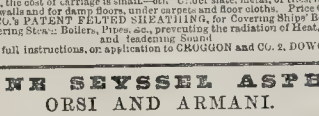

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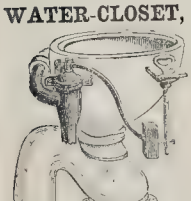

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SUPERIOR BRITISH PLATE-GLASS, at VERY LOW RATES.—The Union Plate-glass Company, having recently completed considerable improvements and additions to their works, respectfully inform their friends that they are now able to supply orders without delay, and invite the attention of the trade to the low rates at which their justly esteemed manufacture is sold.—Lists of prices may be obtained on application at the Works, Pocket Nook, St. Helen's, Lancashire; the Warehouse, 30, Hatton-garden, London, and 45, Piccadilly, Manchester; Messrs. C. and J. MALLOCH, 30, Turner's-court; Glasgow; Messrs. JOHN DIX and Co. Bath-street, Bristol; Messrs. H. SHEPHORDE and SON, Cork-hill, Dublin; Messrs. FORREST and BROMLEY, 23 and 25, Lime-street, Liverpool; Mr. WILLIAM HENRY HOLMES, Westgate-street, Newcastle-on-Tyne.—Rough Plate Glass from ⅛ in. to ¼ in. thick for windows, roofs, mechanics' shops, market halls, railway stations, &c. Beautiful and highly-finished polished plate-glass for shop-fronts and all other glazing purposes, and for silvering.—Superior Silvered Plate-glass Mirrors of all sizes.

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CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot: also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 24s. 28s.; 40s. 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½l. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3½l. per foot. Crown and Sheet, British and Patent Plate. HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

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CCC CROWN, 18 Tables, per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2½. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Tiles and Slates from 6d. each. Sashes primed and glazed, 3d. per foot. HELY'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

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J. ROBSON, 30, Castle-street East, Oxford-street, STAIRCASE and HANDRAIL MAKER to the TRADE.—Shop-fronts, Sashes, Frames, Doors, &c. with expedition and superior workmanship. Joiners' work estimated.

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DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter.—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT.—Second Testimonial.—"March 10th, 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and I there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Rentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.

¼	⅜	½	⅝	¾	1	1¼	1½	2	3 in.
9d.	11d.	1s.	1s. 3d.	1s. 5d.	1s. 7d.	1s. 9d.	2s.	2s. 3d.	2s. 6d. 2s. 9d.

Super-extra stout quality.

2	2½	3	3½ inches.
2s.	2s. 3d.	2s. 6d.	2s. 9d. 3s. per yard.

No. 6. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

1	1¼	1½	2	2½	3½ inches.
8d.	10d.	11d.	1s.	1s. 3d.	1s. 6d. per yard

The hose is Burnettized at an extra charge of 3d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door springs, and Solid Round Rubber Cord of all sizes and any length. Bilbied Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

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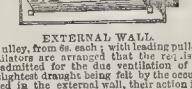
VENTILATION.—PURE AIR.

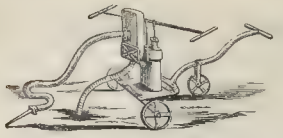
Sheringham's Ventilator for the admission of pure air through an



EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 6s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 106, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.



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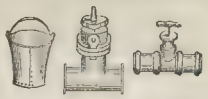
The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve ways three times usual size, made to suit liquors of all kinds, hot or cold, is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

B. FOWLER and CO.'S

FARM and COTTAGE PUMPS, 30s



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FIT UP HEATING-APPARATUS OF ALL KINDS,

For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,

And for every purpose where artificial heat is required.

They also erect DRYING-ROOMS for ASYLUMS, UNIONS, DOMESTIC, and MANUFACTURING PURPOSES, upon the most improved principles, and upon the largest or smallest scale.

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To be worked by hand, horse, or steam-power;

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SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

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Manufacturers of Improved Plain and Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for Sanitary and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and HIGHLY APPROVED.

Warranted impervishable, and to resist all acids and exhalations.

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These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to THE AGENTS:—

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Where a large stock is always kept on hand.

AYLESFORD POTTERY COMPANY,

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MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during that period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz. The New Cattle Market, Wellington and Chelsea Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

WARNER'S PATENT VIBRATING STANDARD PUMPS. PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 3	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron	2 6 0
3½ „	ditto 3 6	flanged pipe,	2 12 0
4 „	ditto 3 6	as required.	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Ails, Fire and Garden Engines, &c. &c.—Engravings sent on application.

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Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s per doz. painted.
Ditto .... 48s. per doz. galvanized.

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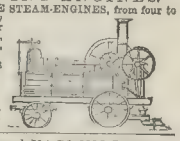
PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.



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STEAM ENGINE and VACUUM PUMPS, To SUGAR REFINERS, &c.—TO BE SOLD, a very Capital HIGH PRESSURE BEAM ENGINE. Cylinder 19 inches diameter, and 2 ft. 6 in. stroke, with air-pumps attached and able for working two Vacuum Pans of 150 to 200 gallons each. Both Engine and Pumps are of the best workmanship, made by Messrs. SHEARS and SON, of London, and are equal to new, having been used upon only five occasions. For further particulars or to view, apply to Mr. ARKEY, York-place, Battersea.

CONTRACTORS' STEAM-ENGINES.—To BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MCDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars road, where they may be seen.

TO LOCAL BOARDS of HEALTH. SURVEYORS, &c.—The Best and Simplest MACHINERY for CLEANSING CESSPOOLS, DRAIN PIPES, &c. including everything that is required, can be obtained from R. BARRETT and SON, Brass and Iron Founders, Beccles-street, Battersea, London, who will furnish prices on application.

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WANTED, for the SITUATION of WHARF CLERK, to a Lime, Cement, and Tile Wharf, a Young MAN, of respectability, who can produce the best of references as to integrity and diligence in previous engagements. Preference will be given to one possessing some knowledge of building materials.—Address, L. K., care of Mr. Selby, Oilman, 38, Blackfriars-road, London.

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Malm Place half-washed Stocks, and Place Bricks, also on sale. The e bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Countin-house, Hanover Brickfield, Grange walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand, of a good quality constantly on sale upon reasonable terms. Also, from its good moisture-absorbing matter, much coveted by the potters for years and

BRICKS of all kinds (clamp burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Fints for building and paving work, Foundry Loam, White and White Sand for ashpbalte, Land Drain Pipes, Patent Drain Pipes, Gas well for brick making, &c. &c. sent by barge from Messrs MEESON and CO'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 200 to 300 tons can load alongside the wharves at Grays. At MEESON and CO'S wharf and kilns, Bow bridge, Stratford, Essex, the above named articles can also be procured as well as all kinds of fire goods, both Welsh and Newcastle). Fire-clay, Flare burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks large, &c. for exportation
General Offices—No. 12, GEORGE-YARD, LOMBARD-STREET
Letters addressed to Grays Essex, will meet with immediate attention

WHITE SUFFOLK and RED FACING BRICKS
COWLEY, KENT, and ESSEX BRICKS
Also Yellow and Pale Malm Seconds, Cutters, Paviors,
Shippers &c.
KENTISH RAG-STONE of the FINEST QUALITY
MILLS and PRICE, 5, ADELAIDE-PLACE London bridge

BEST HERTFORDSHIRE MALM
SECONDS and CUTTERS ALWAYS ON HAND.
MILLS AND PRICE, 5, ADELAIDE-PLACE,
LONDON-BRIDGE;
AND CROWN WHARF, GREAT SCOTLAND-YARD

THE BEST HERTFORDSHIRE MALM
SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a few minutes' distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

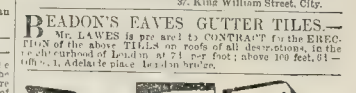
TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane Dulwich. Price of good stock bricks, 25s. per thousand on the field, for cash.—Application to be made to the Secretary, A. BANHAM, at the Works.

CHEAP WHITE BRICKS, for FACING HOUSES, Beard's Patent. These bricks are of excellent make and colour, and impervious alike to frost, and do not vegetate on the same green. For particulars, address, Patent Brick Works, Rugby, Warwick-shire

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 to 30,000 bricks per day, of far superior quality to hand-made, with three horse power, one man to feed the machine with clay and two to remove the bricks. For a lithographic description see "Practical Mechanic's Journal," for January 1st, 1855.—Any further information or the machines seen at work on application to Mr. HUMPHREY CHAMBERLAIN, 8, Compey near Worcester.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working to a field at Addington, near Croydon, and arrangements are made with the owner for hearers of a letter from the Secretary, to see it in operation every Thursday, at 1 Friday
HENRY C. SCOTT, Sec.
37, King William Street, City.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—offices, 1, Adelaide place, London bridge.



BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last when wood and iron are rotten and gone, and will last when wood and iron are rotten and gone, as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 3d. per foot. This leave to include tiles, labourers, Aqua-vitæ sand, cement, and hair. May be had in London, Gloster, Bridgwater, and Rugby

PEAKE'S TERRO METALLIC TILES, PIPES, &c. Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No 21, WHARF, Macclesfield-street, North, City-road Basin. Second, that the trade terms, "TERRO-METALLIC" is the exclusive trade of the Proprietors; and, thirdly, that the "Reports of the Jurors," page 581, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

TO STONEWARE POTTERS, BRICKMAKERS, CONTRACTORS, and OTHERS.—A POTTERY and BRICKWORKS TO BE DISPOSED OF, on easy terms, the railway station, and within reach of the large Government works now in progress at Dover. Humble, &c. &c. The machinery, buildings, and plant are upon the most improved plan, and adapted for carrying on a large stoneware business, for which the clay is well suited. There is ample space and every requisite for making from four to five million bricks per annum, large sheds for making tiles and red ware; a dwelling-house, stable, &c. &c. The whole in complete order and now in operation.—For particulars, apply to Mr. F. SCHULTZ, Solicitor, 4, Dyer's-buildings, Holborn, London.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.
J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.
Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.
TUNED BY MACHINERY.
Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.
MUSICAL HAND-BELLS tuned to the Chromatic Scale.
With improved Clappers, and peculiar to a new system which gives all error tone and facility for ringing.

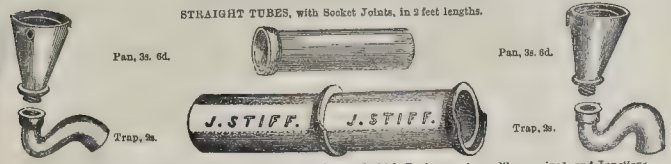
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz. :—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

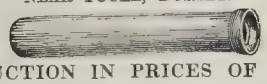
5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

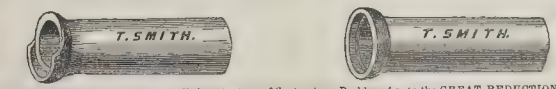
THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Brancksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G BECK, at NEW WHARF, No 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. H. PETTS, at the Works, Branksea Island, Poole, Dorset.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of JAMES PILBROW, Esq. Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

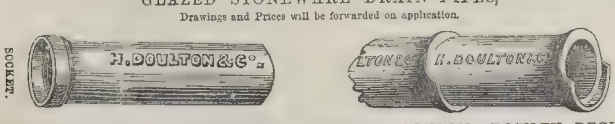
HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.



HALF-SOCKET.

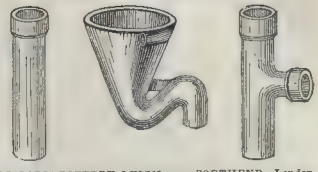
MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junction Bends, &c. Pans and Traps of the first quality. Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 37 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at				3d. per foot.	
4	"	"	"	4d.	"
6	"	"	"	6d.	"
9	"	"	"	9d.	"
12	"	"	"	1s. 3d.	"
15	"	"	"	2s. 6d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

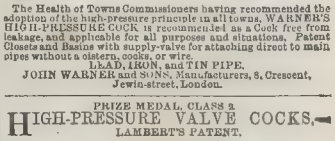
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

HIGHGATE ARCHWAY and BALL'S POND POTTERIES.—Drain Pipes, Bricks, Tiles, Chimney and Garden Pots constantly on sale

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS, LAMBERT'S PATENT.

These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO BROOM-MAKERS.—The Vestry of St. Martin-in-the-Fields will meet on THURSDAY, the 5th of JUNE next, to receive TENDERS for the SUPPLY of BASS BROOMS, HANDLES, and BROOMHEADS, to be required for sweeping the streets. Further particulars, and a sample of the brooms, may be seen at the Office of Mr. BURSTALL, Surveyor to the Vestry, 15, Castle-street, Long-acre. Tenders to be sent to the Vestry, at the Vestry-house, before THURSDAY, the 5th of JUNE next.

J. DANGERFIELD, Vestry-Clerk.

SALES BY AUCTION.

TO IRON-FOUNDERS, SMITHS, and OTHERS.

MESSRS. FULLER and HORSEY, are instructed by the Assignees of R. J. POLGLASE, to SELL by AUCTION, at the ATLAS WORKS, Borough road, on WEDNESDAY, JUNE 11, the very valuable and extensive PLANT and TOOLS of a SHELL FOUNDRY, 2 pair cast-iron shell-boxes, three wrought-iron cupolas, Lloyd's fan, exhausting fan, 3 cwt. anvil, 3 cwt. ditto, damaged shells, 3 tons wrought scrap and broken cast-iron, 20 tons new rod and bar iron, cast, shear, and spring steel, 5 tons galvanised corrugated iron roof plates, four smiths' forges, with bellows and anvils, 6 tons pig iron, smiths' tools, stores of various descriptions, files, brass work, washers and burrs, iron pipe, 20 bags of nails, 1 ton old files, rivets, wedges, iron hoops, 2 cwt. ditto, 4 tons old cauldrons, coke, and their effects. To be viewed on SATURDAY previous to the Sale, when catalogues may be had on the Premises, and of Messrs FULLER and HORSEY, Billiter-street, City.

Hydraulic Lifting Machine under Steam Power.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION on the PREMISES, 80, Union-street, Southwark, on THURSDAY, JUNE 5, at ELEVEN, the TOOLS and STOCK of an ENGINEER, self-acting planing machine, self-acting screw-cutting and facing drilling machine, a very powerful self-acting boring and surfacing lathe, one 15-inch back-geared lath, other quick self-acting screw-cutting lathe, one each 5-inch, 6-inch, and 8 inch back-geared slide lathes, four high-pressure steam engines, each of 8-horse power, slotting boring, screw mortiseing machines, vices and benches, stocks, taps, and dies, and steel tools, 200 feet shafting, riggers, and gearing, smiths' forges and tools, grindstones and frames, a large assortment of patterns, and numerous other effects.—To be viewed on WEDNESDAY previous to the Sale, when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, 70, Billiter-street, City.

HYDRAULIC PRESSES, STEAM PUMPING ENGINES, &c.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on FRIDAY, the 6th of JUNE, at TWELVE, on the PREMISES, 72, Curtain-road, Shoreditch, in lots, EIGHT HYDRAULIC PRESSES, with 7-inch, 8-inch, and 10-inch rams, 5 feet long each, and rollers; five with tables 6 feet wide, and three with tables 4 feet wide; two steam pumping-engines, four and a half horse power each, with two sets 2½ and 3½ inch pumps; a 10-horse power Cornish boiler; five sets hydraulic hand-pumps, three extra cylinders and rams, 1, 5 feet 6 wrought iron pipe, weighing upwards of three tons of waste hydraulic and other effects. To be viewed THURSDAY previous to the Sale, when catalogues may be had on the Premises; or of Messrs. FULLER and HORSEY, Billiter-street, City.

TO IRONFOUNDERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on MONDAY, JUNE 16, 1856, at TWELVE, at the AUCTION MART, Bartholomew-lane, by direction of the Assignees of R. J. Polglase, a Bankrupt, in lots, without reserve, 700 tons KENTISH SHELLS, from 24 inches to 13 inches, made of mixed cold-blast and Scotch iron and lying at the Royal Arsenal, Woolwich. To be viewed seven days prior to the Sale, by orders; catalogues may be had of GEORGE ASHLEY, Esq. Solicitor, 7, Old Jewry; at the Mart, and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Assignees of R. J. Polglase to SELL by AUCTION, at the ATLAS WORKS, Borough road, on MONDAY, JUNE 2 and following day, at ELEVEN, in 14 lots, with all reserve, the valuable PLANT and MACHINERY of an ENGINEER; one powerful 30-inch centre self-acting lathe, by Fox, bed 30 feet; one 13-inch self-acting lathe, by Collier; one 13-inch and one 9-inch self-acting screw-cutting lathe, 16 feet and 12 feet, by Smith, Beacock, and Tannett; one 10-inch self-acting screw-cutting lathe, by Lewis, with spherical slide, one 9-inch screw cutting lathe, one 7-inch self-acting screw-cutting lathe by Austin; two 6-inch, two 7-inch, one 8-inch, and one 12-inch back-geared slide lathes, with iron beds, 6 feet lathes, self-acting screw-cutting machine, two planing machines, screwing and nut machines, 14-horse power high-pressure steam engine, two steam-boilers, wrought-iron and cast-iron riggers, vices, benches, stocks and dies, steel tools, 4 table patterns, and numerous other effects. To be viewed; on SATURDAY previous to the sale, when catalogues may be had on the Premises, and of Messrs. FULLER and HORSEY, Billiter-street, City.

ELM TIMBER, WOOD-GREEN, near TOTTENHAM.

MR. C. PRYOR will SELL by PUBLIC AUCTION, on the PREMISES, near the Jolly Butcher's Tavern, on TUESDAY, 3rd JUNE, at TWELVE, FORTY-FIVE fine ELM TIMBER TREES, lying on the grounds of the Economic Freehold Land Society, well adapted for carriages within an easy distance of the River Lea, and Railway station, Hornsey; also the topwood, faggots, stuff for struts, billet wood, and a Timber Shed, 45 feet by 20 feet, with folding doors. Viewed on applying to the Foreman, of whom catalogues had; also of Mr. J. CLARKE, 18, Smithfield-bars, St. John-street; and of Mr. C. PRYOR, Walthamstow.

BUSHEY, NEAR WATFORD, HERTS. Valuable Freehold Building Land.

MESSRS. PRICE and CLARK are instructed to SELL by AUCTION, at GARRAWAYS, on TUESDAY, JUNE 3 at TWELVE, in 7 LOTS, several valuable PLOTS of BUILDING LAND, on the high road from London to Watford, in the charming village of Bushey, near the Windmill Inn, and a short distance from the railway station. This property is situate in a beautiful country, surrounded by numerous residences, and being a healthy building locality, must be viewed by the intending purchaser, as the advantage of a double frontage, rendering it particularly eligible for building purposes. May be viewed till the sale and descriptive particulars, with plans, obtained of the principal lots in the vicinity; and in London, of GEO. FULLER, Esq. Solicitor, 1, Furnival's-inn; at Garraways; and at Messrs. PRICE and CLARK'S Offices, 48, Chancery-lane

TO GOVERNMENT CONTRACTORS AND OTHERS.—Genuine Sale of Stock, Plant, and Implements in Trade of a Contractor removing from the Premises.

MR. BLAKE is ordered by the Contractor, Mr. Carlisle, to SELL by AUCTION, upon the PREMISES, Eaton-place, New-road, on TUESDAY, WEDNESDAY, and THURSDAY, JUNE 3, 4, and 5, at ELEVEN to TWELVE each day, on account of the number of lots, without reserve—the several Contracts under the Commissioners of Sewers, &c. being completed—the whole of the valuable PLANT and EFFECTS, comprising a large quantity of drain pipes, double and single junctions, elbows, &c., 2,000 feet of 9-inch, 6-inch, and 4-inch socket pipes, a quantity of lift pumps, and other gearing; dry planks, boards, and battens, with numerous useful materials. May be viewed on Monday previous and morning of Sale. Catalogues obtained at Mr. PEAKE'S Offices, 44, Tooley-street, Southwark.

PECKHAM, SURREY.

MESSRS. BLAKE will SELL by AUCTION, at the SURREY-CANAL BRICKFIELD, Crab Tree Shot-road, on WEDNESDAY, JUNE 4th, at THREE for FOUR o'clock, by order of the Executors of the late Mr. Davis, 1,000 BRICKS.—May be viewed and catalogues had on the Premises; at the Inns in the neighbourhood; the Artichoke Inn, Newington-causeway; and of Messrs BLAKE, Croydon.

SALES BY AUCTION.

Valuable and important Estates, St. Pancras, by order of the Vestry of the parish of St Pancras.

MESSRS. DENT and SON have received instructions to offer for SALE by AUCTION, on WEDNESDAY, JUNE 11, the very valuable and extensive LEASEHOLD PREMISES, situate 10, Edward-street, Hampstead-road, St. Pancras, heretofore the board-room, offices, stone-yard, and premises of the Southampton Paving Commissioners, now transferred to the vestry under the Metropolis Local Management Act, held under Lord Southampton for a term of which sixty-five years will be unexpired at Michaelmas next, at a ground rent of £72 12s.; also, a Freehold House and Premises No. 7, on the south side of Charles-street East, originally erected for the said Commissioners held likewise under the Southampton estate for a term of which fifty-two years will be unexpired at Michaelmas, 1856, at a ground-rent of £9 15s. per annum; the latter underlessed for a term of twenty-one years from Midsummer, 1849, at £45 per annum, the under lessee having substantially repaired and improved the property. Particulars and conditions of sale, with plans, to be had on the Premises; at the place of sale; at the Vestry Clerk's Office, Old St. Pancras, where the lease may be seen; and of Messrs. DENT and SON, Surveyors, 36, Southampton buildings, Chancery-lane, and 38, High-street, Camden-town.

The Valuable and Important Freehold Manor of Newington-Barrow, otherwise Highbury, in the Parish of St. Mary, Islington, in the County of Middlesex

MESSRS. DENT and SON have received instructions to offer for SALE by AUCTION at GARRAWAYS Coffee House, Change-alley, Cornhill, on WEDNESDAY, the 25th JUNE next, the above most valuable and improving MANOR, heretofore parcel of the possessions of the Crown, with all the customary advantages, arising from a manor baron, courts leet, courts of survey, fines at the will of the lord, on death or alienation, quit rents, reliefs, heriots, and all rights, members, profits, emoluments and appurtenances thereto belonging. By a survey made by order of Henry Prince of Wales (the eldest son of King James I.) in 1611, the Manor was found to contain nearly 1,000 acres, of which 112a. 2r. 6p. were freehold, 407a. 0r. 4p. demesne lands, and 454a. 3r. 14p. were copyhold of inheritance. By the rental, dated the same two years' imposed rent is payable to the lord on death or alienation. The quit rents payable at this time amount to £58 11s. per annum, exceeding by over twenty pounds the amount at which they have been settled to be for ever, or are malevolence, are very considerable; and the whole forms an important investment in every respect worthy the attention of gentlemen of the legal profession or the capitalist. Particulars and Conditions of Sale with a plan of the Manor, are in progress, and will shortly be ready at the Place of Sale; the Angel Tavern and the Blue Coat Boy at Islington; the Gate House, Highgate; the Archway Tavern, Upper Holloway; the Compasses at Hornsey; the Plough, Hornsey-road; at the Offices of B. W. POWELL, Esq. Solicitor, 3, Russell-square; and of Messrs. DENT and SON, 36, Southampton Buildings, Chancery-lane and Camden Town.

CAMDEN-TOWN.—Valuable Premises, formerly the Board-room and Offices of the Commissioners of Paving for the Camden Estate.

MESSRS. DENT and SON have received instructions from the Vestry of the Parish of St. Pancras, in whom the above property has become vested under the Metropolis Local Management Act, to offer for SALE, by AUCTION, on WEDNESDAY, JUNE 11, all those substantially erected and valuable PREMISES, with the spacious Yard and Appurtenances, situate No. 10, on the north side of Pratt-street, to which there is a frontage of 52 feet 4 inches, by a depth of 150 feet; held under the Marquis Camden and Prebend of Cantlowes for a term of which 71 years will be unexpired at Michaelmas, 1856, at a ground-rent of 10l. per annum—further particulars and conditions of sale, with plans, to be had on the Premises; at the Place of Sale; at the Office of the Vestry Clerk, Vestry-hall, 98 Pancras Old Road; and of Messrs. DENT and SON, Surveyors 36, Southampton-buildings, Chancery-lane, and 38, High-street, Camden-town.

PORTPOOL-LANE.—Valuable Builder's Stock of seasoned Timber, Plant, Implements and Effects, on the Premises of the late Messrs. Lee and Veal.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors to SELL by AUCTION, on the PREMISES, the extensive and valuable STOCK, on TUESDAY and WEDNESDAY, JUNE 10th and 11th, the FIRST PORTION of the valuable STOCK and EFFECTS, which will comprise a large quantity of well-seasoned yellow and white deals and battens, prepared floor-boards and battens, pine plank, matched lining and skirting, 8in. square timber and scantlings, 4 and 5in. planed and moulding, stone steps slabs, and paving, also, several builder's carts, stone-trucks, and timber-carriage; scaffold-boards, poles, and putlogs; crab-engines, hoisting-gear, trestles, ladders, wheeling planks, barrows, pile-driving engines, and monkeys; a travelling-crane, saw in situ, the workmen's benches; planers', painters', and other useful stores; a few handsome and numerous other effects.—Catalogues will be sent, post-free, to any parties who will apply to the Auctioneers, 40, Parliament street, Westminster.

GOVERNMENT STORES, WESTMINSTER.

MESSRS EVERSFIELD and HORNE are instructed by the Commissioners of Her Majesty's Works and Public Buildings, to SELL by AUCTION, at the STORE YARD, Great Smith street, Westminster, on TUESDAY, JUNE 3rd, at ELEVEN for TWELVE, a large quantity of STORES, comprising mahogany, satinwood, and deal cases, desks, tables, bookcases and shelves, oil-cloth, cocoa-nut fibre, and other matting, cloth cuttings, rope-mats, brooms, chairs, stools, lead, brass, copper, and iron work, oil-tins, and various other effects. May be viewed one day previous, and catalogues had at the Office of Works, 13, Whitehall-place; at the Store yards; and of the Auctioneers, 40 Parliament street, or Coal Exchange.

Valuable Leasehold Builder's Premises, Gray's-inn-lane.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors to prepare for SALE, early in JULY, the valuable LEASE of the extensive and valuable PREMISES, in Portpool-lane occupied by the late firm of Locke and Nesham, covering large area of ground, with covered sheds, timber stages, and 4 saw pits, cart, offices and joiners' shops for city benches, plumbers', smiths', and painters' shops, store-rooms, &c.; also an excellent steam-engine and boiler, 20-horse power, mortising, tenon &c. A large sum has been expended in substantial improvements upon it, premises, and they are held for a long term at a low rental.—60, Parliament-street.

Valuable Materials of the temporary buildings erected in the Prince of Wales's-gardens, in the Green park, Hyde-park, and Victoria-park, for the use of Her Majesty's Government, in connection with the late display of Fireworks

MESSRS EVERSFIELD and HORNE are instructed to SELL by AUCTION, early in JUNE, the valuable MATERIALS, FITTINGS, and FENCING, comprising a very large quantity of timber of the most useful description, in framed principals, inch boarding, 9-inch planking and quarring, also the glazed sashes, doors, and other fittings; the whole of which have been selected with a view to economy, and will be put into suitable lots. For further particulars and permits to see the same apply to the Auctioneers, 40, Parliament-street, Westminster.

PIMLICO.—LARGE CHIMNEY-PIECES, &c.

MESSRS EVERSFIELD and HORNE are instructed to SELL by AUCTION, on FRIDAY, JUNE 13, at TWELVE, at the MARBLE SHOW-ROOMS, Belgrave-place, about 100 CHIMNEY PIECES, in marble, stone, and alabaster, several of which are richly sculptured, and others of a plainer character; also, a Gothic Oven of the manufacturer; an alabaster ditto, with statuary tablet, several wall tablets, and two marble vases. May be viewed three days previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal-Exchange.

SALES BY AUCTION.

Nos. 1, 2, 3, 4, and 5, Camers-street, Chelsea.—Desirable Leasehold Investment.

MR. W. F. HAMMOND will SELL by AUCTION, at the COMMERCIAL HALL, King's-road, Chelsea, on TUESDAY, JULY 1, at TWELVE for ONE, FIVE LEASEHOLD HOUSES, in a neat terrace, in perfect repair. Lease, fifty years, from Michaelmas, 1855. Ground rent, 24l. let to excellent tenants, producing 107l. per annum. Particulars and condition of sale to be had of Mr. C. Hooper, Solicitor, 7, Staple-inn, Holborn; at the Commercial-hall, King's-road, Chelsea; of Mr. Ogorton, 8, Jubilee-place, King's-road, Chelsea; and at the Auctioneer's Office, 3, Carey-street, Lincoln's-inn.

28 ELIZABETH-TERRACE, CHELSEA.

MR. W. F. HAMMOND will SELL by AUCTION, at the COMMERCIAL HALL, King's-road, Chelsea, on TUESDAY, JULY 1st, at TWELVE for ONE, the above genteel PROPERTY, let to a respectable tenant at 52l. per annum; ground-rent, 8l.; lease, ninety-six years, from Michaelmas day, 1855. 80 per cent of the purchase-money may remain on mortgage. Particulars and conditions of sale to be had of Messrs. Wadd and Rees, Esq. Solicitor, 25, Bedford-row; and at the Commercial Hall, and at the Auctioneer's Offices, 3, Carey-street, Lincoln's-inn.

TO BUILDERS. Peremptory and important Sale of Twenty-three unfinished RESIDENCES, forming Lansdowne-crescent Terrace, Lansdowne Road, Notting-hill, and Lansdowne-crescent, Kensington-park, Notting-hill.

MR. ROBINS is directed by the Mortgagee to SELL by AUCTION to the highest bidder, at the Mart, on FRIDAY, JUNE 13, at TWELVE, in 23 Lots, a noble Terrace of TWENTY-THREE SECOND CLASS RESIDENCES and STABLES, forming Lansdowne Crescent Terrace, formerly known as St. Column's-terrace, Kensington-park, Notting-hill. The development of this most attractive estate is rapidly advancing, the superior character and it is considered that the commandable and tenants of the first respectability, the accommodation proposed to be given, the superior construction, will, in the early and salubrity of the air offer most desirable residences in the immediate neighbourhood. There is a garden to each house opening to an ornamental pleasure ground at the rear. The houses are held for a term of 93 years, at a ground-rent of 8l. a year each, and 2l. 2s. a year each to the ornamental pleasure-ground, and it is presumed, when complete, they will readily realize 1,400l. per annum.—May be viewed daily, and particulars had at the premises, at the Clarendon Hotel, on the Estate; of Messrs. Rolland Cockburn, 8, Hinde-street, Manchester-square; at the Auction Mart; and at Mr. Robins's Offices, Cpt. at garden.

N.B.—No reserve bidding whatever will be made by the vendor.

TO BUILDERS.—French Papier-Mâchés direct from Paris, Fancy Decorations, and a large assortment of English Papers.

MESSRS. ROBINS will SELL by AUCTION, at their ROOMS, in Covent-garden, on WEDNESDAY next, at TWELVE, FRENCH PAPERHANGINGS, recently imported direct from Paris, by an eminent house, of the newest patterns in satins and flocks, enriched with gold, also fancy decorations for drawing-room and borders, and a large assortment of English papers of a superior description, arranged into convenient lots.—On view two days prior in Covent-garden

SOUTHALL, MIDDLESEX.—Compact Freehold gentlemanly Residence, Park-like Grounds, Pleasure and Kitchen Gardens, Farm-yard, and Seventeen Acres of rich Meadow Land, close to the railway station, which is undergoing a change.

CHINNOCK and GALSWORTHY have been favoured with instructions to SELL by AUCTION, on THURSDAY, JULY 3, at TWELVE o'clock, at the AUCTION MART, London (unless previously disposed of by private treaty), the important FREEHOLD and small Part Copyhold ESTATE, late the residence of Mrs. Lawes, situate near the high road, at Southall, comprising a good square-built family house, stable, double coach-house, delightful pleasure and kitchen gardens, fish-pond, well stocked and well timbered, and seventeen acres of superior meadow land in high cultivation; the whole lying in a ring fence.—Lesser private particulars, with plans, may be obtained of Messrs. Sole, Solicitor, 3, Hatton-court, Threadneedle-street; of Geo. Wales, Esq. Surveyor, Great St. Helens; and at the Auctioneers' Offices, 23, Regent-street, Waterloo-place.

TO TIMBER MERCHANTS, GUN MAKERS, CABINET AND CHAIR MAKERS, AND OTHERS.

GEO. F. CORBETT will SELL by AUCTION, on TUESDAY, JUNE 3, at ONE o'clock, on the PREMISES, York-road, Lambeth, near the Waterloo Station, on account of inconvenience of sale, about fifty loads of capital dry WALNUT PLANK, and a few loads of SYCAMORE and LIME in PLANK, suited to suit the convenience of sale. May be viewed the day preceding and morning of sale, and catalogues had at the House of York and Hero of Waterloo, Waterloo-road; at the Place of Sale; and of the Auctioneer and Timber Surveyor, Lewisham, Kent.

43, UNION STREET, SOMERS TOWN

MR. LEREW will SELL by AUCTION, on the PREMISES, as above, on THURSDAY, JUNE 12th, at TWELVE for ONE, about 2,000 feet of Mahogany, 6,000 yellow, white, and pine planks, deals, and battens, 2,000 feet of prepared flooring, 3,000 feet wainscot, pine boards, 3,000 feet waintscoting, dry cut stuff, doors, and other useful stock. May be viewed the day prior to the Sale, when catalogues may be had on the Premises; and of the Auctioneer, Cardington-street, Hampstead-road.

WESTMINSTER-BRIDGE-ROAD.—TO BUILDERS, CONTRACTORS, AND OTHERS

MR. LEREW will SELL by AUCTION, on the PREMISES, Palace New-road, on MONDAY, JUNE 9th, at TWELVE, 1,000 yellow planks, battens, battens; 500 squares of flooring, 1in., 1¼in., and 1½in. thick; 3,000 feet 1¼in. quarter-inch; a large quantity of matched boarding, lap bank, and useful old materials; 5 tons iron, 3 capital spring carts, chaise, brown mare, harness, ranges, 24 vcs. old iron, &c.—Auction Offices, Cardinal-street, Hampstead-road.

FARRINGDON-STREET EXTENSION.—Building Materials of several Houses also a large Quantity of surplus Materials.

PULLEN and SON will SELL by AUCTION, on the PREMISES, on MONDAY, JUNE 2, at TWELVE, by order of the Improvements Committee, if their Agent is not up of several Houses, forming the BUILDING MATERIALS and fittings, Timber, Deals, and Battens, Joists, and Turnmill street, Clerkenwell, of the usual description: also a large quantity of surplus materials, as follows, consisting of about 10,000 feet run of 1½in. 1¼in. and 1in. planks, 3in. and 2½in. battens; 2,000 feet run of 1¼in. and 1in. stuff, &c. May be viewed on SATURDAY.—Catalogues had on the premises; of Mr. Gilbert, Land Surveyor, 5, Fore-street, Cripplegate.

2,500 Oak Gates, 5 Tons of Wrought-iron, and sundry loose Materials, removed from Smithfield-market

PULLEN and SON directed to SELL by AUCTION, on the PREMISES, Smithfield-bars, Long-lane, and Weaver-street, Smithfield, on MONDAY, JUNE 2, at TWELVE, about 2,500 Oak Gates, with wrought-iron hinges, Oak Posts, Rails, and Bars, and other surplus Materials. May be viewed on SATURDAY previous.—Catalogues had at the Auctioneer's Office, Guildhall, and of PULLEN and SON, 5, Fore-street, Cripplegate.

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The Builder.

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ARCHITECTURAL MUSEUM, Canon-row, Westminster.

On MONDAY next, JUNE 9th, a Lecture on "ORNAMENTAL HEADWORK," will be delivered at the Rooms of the Museum, by WILLIAM BURGES, Esq. Hour of Admission Seven o'clock. The chair to be taken at EIGHT o'clock. Cards may be had at the Museum.

GEORGE GILBERT SCOTT, Treasurer.
June 6, 1856. HENRY CLUTTON, Hon Sec.

ARCHITECTURAL ASSOCIATION.—At the next Ordinary Meeting, to be held at Lyon's-inn-hall, JUNE 13th, the nomination of officers for the next Session will take place; after which Mr. Allom, the Vice-President, in continuation of the paper read at the last meeting, will open a discussion upon the future prospects of the architectural student and of the Architectural Association.—Members of the Association, and of the Profession, are earnestly invited to attend.—The Class of Design will meet JUNE 20th; subject for sketch, "The Junction of Two Buildings of unequal height."

T. W. GOODMAN,
Lyon's-inn-hall, Strand. J. A. BUNKER.

ROYAL ACADEMY of ARTS, Trafalgar-square. The EXHIBITION of the ROYAL ACADEMY of ARTS is NOW OPEN. Admission (from Eight till Seven o'clock), One Shilling. Catalogues, One Shilling.
JOHN PRESCOTT KNIGHT, R.A. Secretary.

THE NEW SOCIETY of PAINTERS in WATER-COLOURS.—The TWENTY-SECOND ANNUAL EXHIBITION is NOW OPEN at their Gallery, 53 Pall-mall, near St. James's-palace daily from Nine till dusk. Admission, 1s.; Season-tickets, 5s. JAS. FAHEY, Secretary.

COMPETITIONS.

TO ARCHITECTS.—NEW CORN EXCHANGE at DEVIZES.—The Committee appointed to superintend the erection of a New Corn Exchange are prepared to receive DESIGNS and ESTIMATES for the erection on a site having a frontage to the present market-place of 46 feet, and extending backwards along the side of the proposed road to the railway station 140 feet, and will give a premium of £21 to the person whose Designs and Estimates are approved of. The Designs, Estimates, &c., obtaining the premium, will belong to the Committee, who do not bind themselves to employ the successful Architect to carry out the works. A sketch of the site, with further particulars, may be obtained on application to the Honorary Secretary. The Designs, &c. to be sent in under seal (without the author's name, but with a motto) on or before the 31st day of JUNE instant, addressed to the Honorary Secretary, Devizes, and marked "Corn Exchange." A sealed letter containing the author's name and address must accompany each plan, which will be opened after the selection has been made.

ALEX. MEEK, Hon. Secretary.
Devizes, 4th June, 1856.

CONTRACTS.

TO BUILDERS.—Persons desirous of submitting TENDERS for BUILDING a WESLEYAN CHAPEL at Bayswater, Middlesex, may inspect drawings, &c. and obtain bills of quantities, by applying to the Architect, Mr. W. W. POCOCK, No. 10, Trevor-terrace, Knightsbridge, where Tenders are to be delivered at SEVEN P.M. JUNE 12, 1856.—The Trustees do not bind themselves to accept the lowest or any of the Tenders.
June 4, 1856.

CONTRACTS.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director-General of Contracts, War Department, Pall-Mall London, on or before SATURDAY the 14th day of JUNE next from persons desirous of Contracting with the War Department for ERECTING a STORE, to contain Shells for Sea Service, at Upnor Castle, near Chatham. Plans and specifications of the Work are to be seen, and Form of Tender obtained on application at the Store-keeper's Office, Chatham, between the hours of TEN and FOUR, till the 13th of JUNE next, Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 600£. for the due performance of the contract. Tenders to be addressed to the Director General of Contracts, War Department, Pall-mall, London, and to be delivered free, endorsed "Tender for Works at Upnor Castle." No Tender can be admitted after the said 14th day of JUNE, 1856.

N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Chatham, 27th May, 1856

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The Principal Officers of Her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following Contract, viz.:—For Work required in forming 1,558 Ventilators in Gables of Field Officers' Quarters, Servants', Soldiers', Hospital Huts, Privies, &c. and in the construction and erection of 13 External Porches to Doors exposed to the weather, of Staff and Regimental Officers' Huts, and 113 Internal Porches to Doors exposed to the weather of Soldiers' Huts, &c.; also for enlarging 17 Ante-Rooms of the Mess Establishments, at the Temporary Barracks, Curragh of Kildare, in the Curragh District. Persons desirous of Tendering for the same will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle-yard, Dublin; and at the Royal Engineer's Office, at the Curragh, and may obtain specifications, with the terms of Contract. The whole of the work to be completed within eighty-four days after the date of order to proceed with the work. The letters of Tender with specifications to be sealed, and transmitted under cover to "The Director-General of Contracts, War Department, Pall-Mall, London," so as to be delivered free on or before the 9th day of JUNE, 1856, and to be marked on the outside "Tender for Work at the Curragh of Kildare."

Commanding Royal Engineer's Office, Dublin, 21st May, 1856.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The Principal Officers of her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following Contract, viz.—for the CONSTRUCTION and ERECTION of TWELVE WOODEN BUILDINGS, for staff-officers, Court-house, Lock-up, Guard-room, staff-officers' Stable, Hut for butcher's men, hay, corn, and straw Stores, and waggon and litter Sheds for land transport corps, and about 200 yards of Fencing, at the Temporary Barracks, Curragh of Kildare, in the Curragh district. Persons desirous of Tendering for the same, will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and at the Royal Engineer's Office, at the Curragh, and may obtain specifications with the terms of Contract. The whole of the work to be completed within 94 days after the date of order to proceed with the work. The letters of Tender with specifications, to be sealed and transmitted under cover to "The Director General of Contracts, War Department, Pall Mall, London," so as to be received on or before the 11th day of JUNE, 1856, and to be marked on the outside, "Tender for Work at the Curragh of Kildare."

Commanding Royal Engineer's Office, Dublin, 23rd May, 1856.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director General of Contracts, War Department, Pall-mall, London, on or before SATURDAY, the 14th day of JUNE next, from persons desirous of CONTRACTING with the War Department, for FORMING PARADE GROUND, at the ROYAL SAPPERS' and MINERS' HUTS, near Brompton Barracks, Chatham. Specifications and forms of Tender for the work are to be obtained, on application at the Royal Engineer Office, Chatham, between the hours of TEN and FOUR, till the 13th of JUNE next (Sundays excepted). The person whose Tender may be accepted, will be required to enter into a bond, with two eligible securities, jointly and separately to be bound under a penalty of 100£ for the due performance of the Contract.—Tenders to be addressed to "The Director General of Contracts, War Department, Pall-mall, London," and to be delivered free, endorsed, "Tender for Works at Chatham." No Tender can be admitted after the said 14th day of JUNE, 1856

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Chatham, 31st May, 1856.

NOTICE to BUILDERS.—TENDERS are wanted for the ERECTION of a HOSPITAL at the CAMP at SHORNCLIFF. Plans and specifications, and every other particular, may be obtained at the Surveyor's Office, War Department, Pall-mall, London, on and after MONDAY, the 9th instant, between the hours of NINE and FIVE (Sundays excepted). Tenders to be addressed to the Director-General of Contracts, War Department, Pall-mall, London, to be delivered on or before MONDAY, the 16th instant, after which no Tender will be received. To be endorsed "Tender for Hospital, Shorncliff."

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

War Department, Pall-mall, London, June 2, 1856.

TO BUILDERS, &c.—Notice is hereby given, that the Plans and Specifications for the ENLARGEMENT and REPAIRING of the VICARAGE-HOUSE at Wargrave, in the county of Berks and diocese of Oxford, will be left at the said Vicarage on WEDNESDAY next, the 11th day of JUNE, and six following days (Sunday excepted), and all persons willing to CONTRACT for the same must send in sealed Tenders directed to Rev. H. HUTCHINSON, Swyncy, on or before the 18th JUNE. The lowest Tender will not necessarily be accepted, but the Contractor will enter into the usual legal bond, with two approved sureties for the due execution of the works.

CONTRACTS.

NORWICH NEW WORKHOUSE.—NOTICE to ARCHITECTS.—ADDENDA to INSTRUCTIONS.—Accommodation in eight separate but contiguous rooms, each capable of containing ten persons, and to be used for both day room and dormitory purposes, is to be provided for each sex of Class 2, as named in instructions to architects. The plans, &c. may either be sent by post or parcel, prepaid, or delivered at my office, Little Orford-street, Norwich, on or before the day named in the instructions.—By order,

Norwich, May 22nd, 1856 F. C. BAILEY, Clerk.

GUILDFORD UNION.—To BUILDERS and CONTRACTORS.—Extensive additions and alterations to the Guildford Union Workhouse.—The Guardians of the Guildford Union, in the County of Surrey, hereby give notice that they are desirous of receiving TENDERS for BUILDING NEW SCHOOLS and DORMITORIES, a NEW HOSPITAL and other ADDITIONS and ALTERATIONS to the Workhouse of the said Union according to the plans and specifications prepared by Mr C. H. HOWELL, architect, of Godalming, Surrey, and of the Norwich Union Insurance Office, New Bridge-street, London. The plans and specifications may be seen at the Workhouse, Guildford, after SATURDAY, the 31st day of MAY instant. The Contractor whose Tender may be accepted will be required to give security for the due performance of the Contract. The Guardians do not pledge themselves to accept the lowest or any of the Tenders. Tenders, indorsed "Building Tenders," must be sent to me by SEVEN o'clock in the evening of WEDNESDAY, the 25th JUNE next.—By order of the Board,

W. HAYDON SMALLPEICE, Clerk.

Guildford, 27th May, 1856.

Sewers Office, Guildhall, 20th May, 1856.

TO BUILDERS and OTHERS.—The Commissioners of Sewers of the City of London, acting as the Burial Board of the said City, hereby give Notice, that they will meet in the GUILDHALL of the said City, on TUESDAY, the 24th JUNE next, at TWELVE o'clock at noon precisely, to receive TENDERS for BUILDING a LODGE, CARPENTER'S SHOP, and SHED, in the City of London Cemetery at Little Ilford, Essex, agreeably to plans and specifications to be seen at the Office of the Engineer to the Commissioners, in Guildhall. Security will be required for the due performance of the contract. The Burial Board do not pledge themselves to accept the lowest or any Tender. No Tender will be received after TWELVE o'clock on the day of treaty. Builders intending to tender for these works are requested to notify the same to Mr. HAYWOOD, the Engineer, on or before WEDNESDAY, the 4th JUNE.

JOSEPH DAW, Principal Clerk.

TO BUILDERS and OTHERS.—The Guardians of the Poor of the Edmonton Union will meet at the Board-room at Edmonton, on WEDNESDAY, the 25th of JUNE instant, at noon, to receive TENDERS for the ERECTION and COMPLETION of an INFIRMARY adjoining the Children's Establishment at Chase-side, Enfield, Middlesex. The plans and specifications may be seen at the Office of the CLERK of the UNION, in Silver-street, Enfield; and all further information obtained at the Offices of Mr. T. E. KNIGHTLEY, Architect, 25, Cannon-street, City. Sealed Tenders must be sent to me before the 25th JUNE instant. The Guardians do not bind themselves to accept the lowest Tender.—By order of the Board,

Enfield, June 5th, 1856. JOHN SAWYER, Clerk.

Surety will be required for the performance of the Contract.

SOUTH SHIELDS CEMETERY WORKS. To BUILDERS and CONTRACTORS.—The Burial Board for the Parishes of South Shields and Westoe, in the County of Durham, are prepared to receive TENDERS for the following WORKS in connection with the New Burial Ground, viz.:

CONTRACT No. 1. TWO CHAPELS.

CONTRACT No. 2.—SUPERINTENDENT'S HOUSE, GATEWAY, and GATES adjoining.

CONTRACT No. 3.—GATEKEEPER'S LODGE, GATEWAY, and GATES adjoining.

The Burial Board will not object to receive Tenders for the execution of the whole of the works in one contract. The plans and specifications may be seen at the Offices of the Architect, Mr. ROBERT LAMB, No. 70, Nile-street, South Shields, on and after the 23rd instant until the 10th of JUNE inclusive. Sealed Tenders to be sent in to the Office of the Clerk to the Burial Ground, Chapter-row, South Shields on or before Noon of the 10th of JUNE next, endorsed "Tender for Cemetery Works," Nos. 1, 2, and 3. The Contractor will be required to give security for the due performance of the works. The Board do not bind themselves to accept the lowest or any other Tender.

Information with reference to the subject will be given by Mr. F. CARTER, Engineer, Newnham, 28th May, 1856.

By order, THOMAS SALMON,
South Shields, 21st May, 1856. Clerk to the Burial Board.

NEWNHAM, GLOUCESTERSHIRE.—To GAS ENGINEERS and OTHERS.—Persons willing to CONTRACT for the ERECTION of GAS WORKS at Newnham aforesaid, with all necessary Mains and appliances for the purpose of lighting the said Town, are requested to send in TENDERS, with Plans, Specifications (free of expense), and all other necessary particulars explanatory of the system proposed to be adopted, to Mr. F. CARTER, Solicitor, Newnham, on or before the 19th day of JUNE next. The promoters of the above works do not bind themselves to accept the lowest or any other Tender. Information with reference to the subject will be given by Mr. F. CARTER.

Newnham, 28th May, 1856.

TO BUILDERS and OTHERS.—Persons desirous of CONTRACTING for the ERECTION of a COVERED HOME-STEAD and SIX LABOURERS' COTTAGES on the Priory Farm, Prittlewell, near Rochford, in the county of Essex, may see the plans and specifications at the Spread Eagle Inn, Prittlewell, or at the offices of Messrs. DENTON and DRAKE, of 32, Parliament-street, Westminster, on and after the 9th day of JUNE. Tenders to be sent to Messrs. DENTON and DRAKE on or before the 21st day of JUNE. Quantities will not be supplied.

5th June, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—CONTRACT No. 1.—To BRICK MANUFACTURERS and OTHERS. The Corporation of Sunderland are desirous of receiving TENDERS for the manufacturing and delivering in a depôt within the borough of Sunderland, the BRICKS necessary for the construction of the brick sewers, cess-pits, side entrances, &c. in connection with the said works. The quantity of bricks required will be about two and a quarter millions, including square bricks, and bricks to different radiuses for upwards of eight miles of sewers. Further particulars may be known on application to WILLIAM CROZIER, C.E. Borough Engineer, at his Offices, East Cross-street, Sunderland, to whom Tenders are to be sent on or before the 5th day of JULY, 1856, endorsed, "Tender for Bricks." The Corporation do not bind themselves to accept the lowest or any Tender. By order,
WILLIAM SNOWBALL, Town Clerk.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—CONTRACT No. 2.—To STONEWARE PIPE MANUFACTURERS and OTHERS. The Corporation of the borough of Sunderland are desirous of receiving TENDERS for the manufacturing and delivering in a depôt within the borough of Sunderland, the STONEWARE PIPES, Bends, Junctions, Invert Blocks, Junction Blocks, &c. necessary for carrying out the Sewerage Works of the borough. The works comprise the necessary pipes, bends, junctions, &c. for about 16½ miles of pipe sewers from 6 to 18 inches in diameter irrespective of private works, the necessary junction and invert blocks for eight miles of brick sewers, and other articles in stoneware which may be required in carrying out the said works. Further particulars may be known on application to WILLIAM CROZIER, C.E. Borough Engineer, at his Offices, East Cross-street, Sunderland, to whom Tenders are to be sent on or before the 5th day of JULY, 1856, endorsed "Tender for Stoneware Pipes." The Corporation do not bind themselves to accept the lowest or any Tender.
By order, WILLIAM SNOWBALL, Town Clerk.

PARISH of ST. PANCRAS, in the County of MIDDLESEX.—DEPARTMENT of WORKS.—To BUILDERS, SEWER CONTRACTORS, and OTHERS.—The Highways, Sewers, and Public Works Committee of the Vestry of the Parish of St. Pancras, in the county of Middlesex, will meet at the Office of the Department of Works, 10, Edward-street, Hampstead-road, on MONDAY, the 16th day of JUNE instant, at FOUR o'clock in the afternoon, to receive TENDERS from parties who may be willing to CONTRACT until Midsummer, 1857, for the execution of the GENERAL WORKS and REPAIRS to the SEWERS, GULLIES, DRAINS, &c. in the said parish, at, or under, or above a schedule of prices, which, together with the form of Tender and Contract, may be purchased at the Office of the Department of Works, 10, Edward-street, Hampstead-road, on and after WEDNESDAY, the 4th day of JUNE instant, between the hours of TEN and FOUR, up to the day and hour fixed to receive the Tender. Sealed Tenders to be sent in, signed by the proposed Contractor, with the names and description of two sufficient sureties for the performance of his Contract, to the Office of the Department of Works, by or before TWELVE o'clock at noon on the said MONDAY, the 16th day of JUNE instant. The Vestry do not bind themselves to accept the lowest or any Tender. No Tender will be received or accepted unless made out on one of the printed forms. Further particulars may be obtained on application to the Surveyor, at his Office, as under.
G. W. F. COOK, Vestry Clerk.
Department of Works, 10, Edward-street, Hampstead-road, June, 1856.

ST. MARYLEBONE, May 31st, 1856.—CONTRACT for YORKSHIRE PAVING.—Notice is hereby given, that the Vestrymen of the parish of St. Marylebone, in the county of Middlesex, will meet in the Board-room of the Court-house of the said parish, on SATURDAY, the 14th day of JUNE, at ELEVEN o'clock in the forenoon, to receive TENDERS from persons willing to contract for the SUPPLY of 2½-INCH YORKSHIRE TOOLED PAVING, from the said 14th day of JUNE to the 25th day of MARCH, 1857. Further particulars may be known, and forms of Tender procured from the Surveyor, Mr. ROBERT SEACE, at his daily attendance at the Court-house, from TWELVE till ONE o'clock. All Tenders to be upon the printed form, and to be delivered, sealed up, before ELEVEN o'clock in the forenoon on the said 14th day of JUNE, and no Tender will be received after the specified time. The Vestry do not pledge themselves to accept the lowest Tender. The Vestry will require the parties Tendering, or some persons on their behalf, to be in attendance at the time of opening the Tenders. By order,
W. E. GREENWELL, Vestry Clerk.

EDMONTON LOCAL BOARD of HEALTH.—To CONTRACTORS, BUILDERS, and OTHERS.—Notice is hereby given that persons desirous of contracting to ERECT an IRON GIRDER BRIDGE, together with RETAINING WALLS, ABUTMENTS, &c. near the railway station, Water-lane, Edmonton, Middlesex, are requested to send in sealed TENDERS for the execution of the said works on or before MONDAY, the 16th JUNE instant, endorsed, "Tenders for Water-lane Bridge," and addressed "To the Clerk of the Edmonton Local Board of Health, Edmonton." The plans and sections, together with specification and form of Tender, can be inspected, and further particulars obtained on and after WEDNESDAY, the 11th instant, upon application at the Office of Mr GOSSET, Surveyor to the Board, Church-street, Lower Edmonton, between the hours of TEN and FOUR. The Board do not bind themselves to accept the lowest Tender. Security will be required for the due performance of the contract, and it is requested that the names, description, and address of the proposed sureties be furnished with the Tender.—By order of the Board.
WILLIAM PULLEY, Clerk.
Edmonton, June 3rd, 1856.

TO IRON-FOUNDERS and CONTRACTORS.—LOUGHBOROUGH CEMETERY WORKS.—The Burial Board for the Parish of Loughborough, in the county of Leicester, are prepared to receive TENDERS for about 7 yards of CAST IRON FENCING, for enclosing the proposed Cemetery Ground at Loughborough aforesaid, including stays, rivets, screw, labour, and painting. The drawings and specifications may be seen at the Offices of the Architects, Messrs. BELLAMY and HARDY, 6, Broadgate, Lincoln, on and after the 9th day of JUNE instant, until the 14th day of JUNE inclusive, and the said drawings and specifications may be viewed on and after the 16th day of JUNE until the 21st day of JUNE inclusive, at the Offices of Messrs. H. and W. H. TOONE, Solicitors, Loughborough, where sealed Tenders are to be delivered, addressed to the Chairman of the Board, not later than the 23rd day of JUNE, endorsed "Tenders for Iron Fencing." The Board do not bind themselves to accept the lowest Tender. By Order,
W. H. TOONE, Clerk to the Burial Board.
Loughborough, 4th June, 1856.

TO BUILDERS.—Persons desirous of CONTRACTING for the ERECTION of a CORN EXCHANGE at St. Albans, Herts, can inspect the Plans and Specifications at the Offices of THOMAS WARD BLAGG, Esq., the Town Clerk, and at my Offices in Coventry, after the 12th day of JUNE instant. Tenders to be sent in not later than the 1st day of JULY.
JAMES NURSERY, Architect.
Priory-row, Coventry, June 4th, 1856.

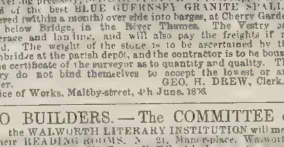
PARISH of ST. GILES, CAMBERWELL.—To SEWER CONTRACTORS and OTHERS.—The Sewers and Sanitary Committee of this Parish will meet at the Vestry-Hall, Camberwell, on FRIDAY, the 13th day of JUNE instant, at SEVEN o'clock in the evening precisely, to receive TENDERS for the execution of the JOBBERS' and GENERAL WORKS connected with the SEWERS in this parish. No Tender will be received except on the printed form provided, which can be obtained, with all necessary information, at the Surveyor's Office, Vestry-Hall, Camberwell, on and after FRIDAY, the 6th instant, between the hours of ELEVEN and THREE.—The Committee do not bind themselves to accept the lowest or any Tender. All parties Tendering are to be in attendance at the time above named, or their Tenders will not be received.
G. W. MARSDEN, Vestry Clerk.
Vestry Hall, Camberwell, June 2, 1856.

CONTRACTS.

TO STONE MERCHANTS and OTHERS.—The Vestry of the Parish of Bermondsey, Surrey, will meet at the WORKHOUSE, in Russell-street, in the said parish, on MONDAY, the 16th day of JUNE instant, at SIX o'clock in the Evening precisely, to receive TENDERS for the supply of 300 TONS of the best BLUE GUERNSEY GRANITE SPALLS, delivered (within a month) over side into barges, at Cherry Garden Tier, below Bridge, in the River Thames. The Vestry pay lighterage and landing, and will also pay the freights if required. The weight of the stone is to be ascertained by the weighbridge at the parish depôt, and the contractor is to be bound by the certificate of the surveyor as to quantity and quality. The Vestry do not bind themselves to accept the lowest or any Tender.
GEO. H. DREW, Clerk.
Office of Works, Maltby-street, 4th June, 1856.

TO BUILDERS.—The COMMITTEE of the WALWORTH LITERARY INSTITUTION will meet at their READING-ROOMS, No. 21, Manor-place, Walworth, Surrey, on the 11th INST. at NINE o'clock p.m. to receive TENDERS for ADDITIONS to be made to their LECTURE-HALL in Carter-street, Walworth. The plans, specification, and conditions can be seen at the Office of Mr. HENRY JARVIS, the Architect, 29, Trinity-square, Southwark. The Committee will not be bound to accept the lowest or any other Tender.
Dated June 2, 1856.

MACHINERY for SAWING, PLANING, MOULDING, &c.

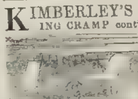


SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines for home and foreign use.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London.

HINGES, LOCKS, HANDLES, BOLTS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham.
Illustrated Price-catalogues post-free on application.

KIMBERLEY'S NEW PATENT FLOORING CRAMP continues to receive the patronage one and all, of every leading Builder, Engineer, and Architect, not only in England, but throughout the world. Its simplicity, power, and economy still remain unquestionable, even by the side of its most important rivals, and the steady, annual increase in its sale, is the best proof of it. It is useful in many ways as a cramp, and unlimited evidence can be given that it is a most valuable tool, which no Builder should be without.



London Agents—Messrs. THOMAS PUGH & CO. Wholesale Ironmongers, 13, King-street, Snow-hill, London.

THE BEST METHOD of CONSTRUCTING a ROOF for an EXHIBITION, or any other building, where a large amount of light is desirable.

"TO THE EDITOR OF 'THE BUILDER.'

"SIR,—In your publication of the 10th ult. 'Engineer,' at great length, lays down the disadvantages of the construction of the two Crystal Palaces. He says,—'There are defects (for building purposes) inherent in the materials, and these defective qualities no art can overcome nor remove.' I beg leave to differ with 'Engineer.' My Registered System of Glazing Roofs *without Putty* in the construction of the bars (wood and zinc), for which I have made provision for expansion and contraction, having proved to the contrary; and had Sir Joseph Paxton, or Messrs. Fox and Henderson, adopted my method, which was brought under their notice previous to the roof being commenced for the '51 Palace, there would have been none of the numerous complaints of leakage, &c. one constantly hears of. I had some specimens of my method in the Exhibition in '51, in Class 7, which were placed in an out-of-the-way place, *accidentally, of course!*

I consider for the purpose of an exhibition, or in fact for any purpose in which a building requires erecting with great rapidity, no material is so suitable as iron and glass, *provided* it can be made weather proof, which great desideratum can be effected by the use of NIXON'S REGISTERED SYSTEM of GLAZING WITHOUT PUTTY, securing also another advantage, *self ventilation*, no condensed moisture settling and dropping from the glass, and *no putty* being required, except for effect, and which may be done before the bars are fixed.—I am, Sir, your obedient servant,
THOMAS NIXON.

N.B. Specimens are exhibiting at the Crystal Palace, Sydenham.—For prospectuses, lists of agents, testimonials, &c. apply as under.
Metallic Skylight Manufactory, Kettering, May 26, 1856.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c. The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire. Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Cornice-poles, Rings and Lacquered Case Tube for Picture Rods, Desk Rails, &c. &c.
Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at
RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

SAWING MACHINERY.—TO BE DISPOSED OF, a DEAL SAWING-FRAME, that will cut planks 3½ inches thick and 15 inches deep.—To be seen at College Wharf Saw-mills, Belvidere-road, Lambeth.

WOOD CUTTING MACHINERY,
JOHN M'DOWALL and SONS,
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,
MANUFACTURERS of VERTICAL SAW-FRAMES
(driven by straps),
For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached; circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a ¼ of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power mortising and tenoning machines, moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 36 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe. Applications as above for further particulars, will be promptly attended to.

MALLET'S PATENT BUCKLED PLATES
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS,
No. 3, Mansion-house-place, London, and No. 6, Berkley-street, Birmingham.
For Plan, Section, and Description, see "The Builder," May 17.

P. O'CONNOR'S PATENT LEVER HINGE.—The most perfect and simple INVENTION for CLOSING SWING DOORS and GATES yet produced. The motive power being a weighted lever, it may be easily adapted to any size door, and it is not liable to get out of repair, as spring hinges generally are. May be had from all Ironmongers and Factors; J. CARTLAND and SON, Manufacturers, Birmingham; or from the Patentee, P. O'CONNOR, Ironmonger, Wavertree, Liverpool.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

IRONMONGERY.
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

IMPERISHABLE IRON WATER-TANKS. The cheapest, most durable, and wholesome, being free from all deleterious matter, so abounding in lead cisterns. Sole Manufacturing Agent, HENRY FROST, Engineer, 17, Rathbone-place, London.
N.B.—Three-horse table-engine and strong fly-press for sale.

LOSH, WILSON, and BELL,
NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and
STEWART'S PATENT CAST-IRON GAS and WATER PIPES.
Office, No. 7, Size-lane, London.

CONTRACTORS.—MATTHEW T. SHAW has on SALE a large quantity of Contractors' Rails and Earth-tip Waggons, Wheels, and Axles, and every description of Railway Plant and Stores. Girders of wrought-iron for Bridges, and Buildings designed and manufactured. Castings of every description. Deliveries in a few days.—64, Cannon-street, City.—P.S. Wrought-Iron Rolled Flitches to 30 feet.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and vaporizing) with all the improvements, under their Quadruple patents of 1840-51-54 and 1855, including their Gunpowder Proof Solid Lock and Door (without which no safe is secure).
THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.
MILNER'S PHŒNIX (212°) SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depôt, 47A, Moorgate-street, City.—Circulars free by post.
Sold also by HOBBS, ASHLEY, and CO. 97, Cheapside.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.
Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.
TUNED BY MACHINERY.
Stocked and wheeled ready for fixing. Old Bells recast taken in exchange.
MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system which give superior tone and facility for ringing.

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OLD ST. PANCRAS-ROAD, OPPOSITE THE OLD CHURCH, LONDON.

TO ARCHITECTS, ENGINEERS, BUILDERS, AND CONTRACTORS.

HER MAJESTY'S
ROYAL LETTERS PATENT.

OR IMPROVEMENTS IN THE CONSTRUCTION OF
CORRUGATED IRON BUILDINGS
AND ROOFS,
As erected for and approved of by Government.
FOR ENCLOSURES,
This Patent is as Strong, as Durable, and much Cheaper, than
BRICK WALLS,
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CASTINGS,
HEAVY AND LIGHT,
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WROUGHT
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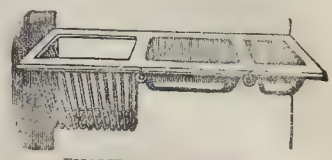
EVERY DESCRIPTION.
SPECIMENS MAY BE SEEN AT THE WORKS.



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From 17s. 6d.
Patentees of the latest Improvements in Manger and Rack, and Manger, Rack and Water Trough, approved of by the
ROYAL VETERINARY COLLEGE
EVERY DESCRIPTION OF STABLE FURNITURE.

IRON ROOFING OF EVERY DESCRIPTION. CORRUGATED IRON, PLAIN OR GALVANIZED, AT PER CWT.
ESTIMATES BY POST, OR ON APPLICATION. PRICES EQUAL TO ALL COMPETITION.
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ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

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CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.
Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to
THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.
ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.
THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.
Many roofs covered with zinc thirty-five years ago have never required repairs.

A
FIRST-CLASS MEDAL
WAS AWARDED TO
F. EDWARDS, SON, and CO.
AT THE
PARIS EXHIBITION,
For the SPECIMENS they exhibited of
DR. ARNOTT'S
SMOKE-CONSUMING GRATE,
AND SMOKE-CONSUMING
COOKING APPARATUS.

F. EDWARDS, SON, and CO. beg to inform the public that their STOCK of GRATES is ENTIRELY REFORMED, and consists SOLELY of GRATES on the SMOKE-CONSUMING PRINCIPLE. A large variety in real Bronze, Ormolu, Steel, and Berlin Black, suitable for Drawing-rooms, Dining-rooms, and Libraries, from 7l. to 3l.

The following are the prices of those for ordinary use:—
Black Grates, for Parlours, Offices, &c. from 4l. to 2l. 10s.; for Bed-rooms, Offices, &c. from 2l. 10s.

By the Grates on this principle as properly constructed by F. Edwards, Son, and Co. smoky chimneys are avoided, an agreeable fire is maintained, with one-half the trouble attending the ordinary grate, and a saving of from forty to fifty per cent. is effected in the consumption of fuel.

PROSPECTUSES, WITH FULL PARTICULARS AND TESTIMONIALS, SENT ON APPLICATION.

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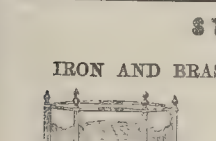
ENGINEERS,
IRON AND BRASS FOUNDERS AND MANUFACTURERS;
CONTRACTORS
FOR THE
ERECTION OR ALTERATION OF GAS-WORKS FROM
TWENTY LIGHTS UPWARDS,
With Buildings, Mains, Meters, Service-Pipes, Lamp-Posts, Lamps, and Gasfittings
WATERWORKS FOR THE SUPPLY OF TOWNS,
WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.



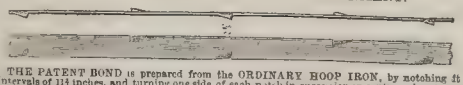
Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds, these have been recently fixed at New College, Oxford, St. George's Catholic Cathedral, Southwark, and numerous Churches, Chapels, &c.
Gas Cooking Stoves and Ranges on the most improved principles.

GAS-FITTING IN ALL ITS BRANCHES.
GAS CHANDELIERS OF ALL SIZES, IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS.
DEVICES FOR GAS ILLUMINATION.
IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.
These Turnstiles have been selected for the Entrances of the Great Exhibition, New York.
PATENTEES OF THE SEMAPHORE RAILWAY SIGNAL.
Signals for communication between Guard and Engine Driver. Railway Stores and Lamps of every description.
DARLINGTON WORKS, 16 to 19, SOUTHWARK-BRIDGE ROAD, LONDON.

TYERMAN'S PATENT HOOP-IRON BOND,
FOR BUILDING PURPOSES.
ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES
beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16 ..	1½ ..	7s. 0d.
15 ..	1⅝ ..	7s. 6d.
15 ..	1¾ ..	8s. 0d.
15 ..	2 ..	8s. 6d.
15 ..	2¼ ..	9s. 6d.



THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11¼ inches, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming REVERSED CLAWS, which are so bent, that a direct end grain of the iron is presented longitudinally, and which become when built into the brick-work, embedded in the structure, by which means a COMPLETE and PERFECT DETAIL TIE throughout the whole building is obtained.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.
London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

CAST-IRON PIPES, IRON-WORK FOR OVENS, &c.
RAIN PIPES, &c.—F. A. TIDDEMAN and CO. St. Ann's Wharf, Earl-street, City, near Blackfriars bridge, keep a large stock of Rain pipes, Heads, Shoes, Elbows, &c. half round and O G Gutters, Socket Pipes for Water or Gas, Flange Pipes, Hot Water Pipes and Connections, Sash Weights and other castings. Iron work for Bakers' Ovens of every description, fitted complete, to be seen in action or in parts. Prices equal to all competition. Contracts taken to any extent. Goods landed. A powerful crane.

CANNON IRON FOUNDRY, 80, Goswell-street, St. Luke's.—JONES and BLAXTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron for Open Balconies, Wind-us Boards, Vent Gratings, Ornamental Stoves, Pedals, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wheel Plates, &c.
BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

FOUNDRY AND IRON WORKS,
85, DRURY-LANE, and CHARLES-STREET, DRURY-LANE.
GLOVER, BROS.,
solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION, either structural or ornamental.
Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Latest Gas and Steam engines, Range and Hot-plate Metal. An improved Soot Door, adapted for internal work.
A large stock of Rain-water Pipes, Pans and OG Gutters, Air-bricks, Sash Weights, Ardent Sewer Grates, Stable Fittings, Hurdles, &c.
Plain and Ornamental Vases 20 per cent. cheaper than Terra-cotta.
Estimates given for Iron Buildings, Wrought-iron Roofing, Greenhouses, Staircases, Wrought-iron Girders, Firepit of Doors, Book-safes and strong Rooms, Tanks and Boilers, and every description of ironwork to specification, and the works executed with every attention to quality and despatch.
GLOVERS' IRONWORKS,
168, DRURY-LANE, and CHARLES-STREET.

IRON FOUNDRY,
HARROW-STREET, LANT-STREET, SOUTHWARK.
W. R. HARTLETT, manufacturer of Builders' Columns, Cantilevers, Newel and Railing Bars, Panels, Pedestals, Pump Chains, Plates, and Plates, Area Gratings, Sash Weights, Fly and other Wheels, Pinions, Pumps, Engine and Lathe Castings, Forge Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

SAVING IN GAS.—D. HULETT, INVENTOR and PATENTEE.—The Mercurial Gas Regulator is the only efficient instrument for ensuring uniform and uniform lighting, equalizing the pressure, and preventing any unnecessary waste of gas. Sold by D. HULETT and CO. 85, High Holborn, London. Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

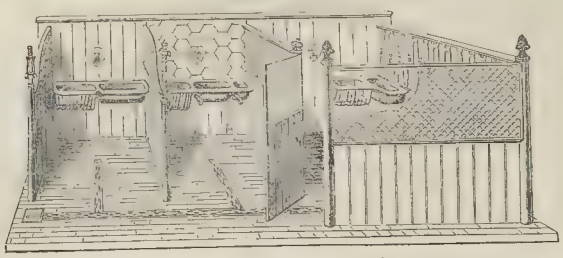
J. NAYLOR'S IRONMONGERY, NAIL, and METAL WAREHOUSE, 59, Oxford-street, near the Marble Arch. Builders, Carpenters, Cabinet Makers, Locksmiths, and Bellhangers, supplied at the lowest prices.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, beg to inform the public, &c. that they supply Lightning Conductors, with the point and all staples complete for fixing, at one guinea the foot.
R. S. NEWALL and CO.'s Patent Copper Rope Conductor is being used by architects, engineers, and scientific men in all parts of the world.
OFFICES.—Gateshead-on-Tyne
1, Strand, London.
67, Hyde-park-street, Glasgow.
27, Dale-street, Manchester.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.
ANDREW CLARK and COMPANY, PLUMBERS,
THE BEAR GARDEN LEAD WORKS, SOUTHWARK,
Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of
UNITING LEAD TO LEAD WITHOUT SOLDER.
Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.
PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT-IRON RACK, united to an iron top-plate, and forming one complete and useful fixture having Cottam's Patent Nozeles, Halter Guide and Collar-Rein attached, the rail of which is taken to the back of the manger, and works with ease and freedom up or down the guide-bar. Cottam's new Patent Seed-Box, of galvanized sheet-iron, is an important addition to the above fittings, being simple in construction, light and durable; promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use

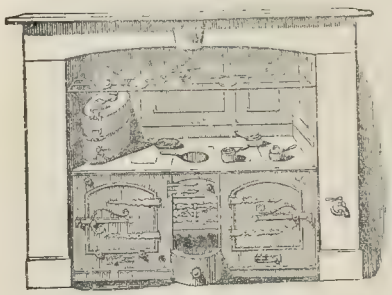
Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking Patent Loose-Box Fittings, Cheap and Durable Corn-Bins,

Improved Surface-Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and japanned Iron Gates, Fencing, Hurdles, &c.

The new Illustrated Catalogue for 1856, and estimates gratis, upon application to

COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

FLAVEL'S PRIZE KITCHENER.



The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

SOLE AGENTS:

BENHAM AND SONS,

19, WIGMORE-STREET, LONDON;

and at the Crystal Palace, Sydenham.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. 6s. 6d. each.

J. H. BOOBBYER (late STEVENS and BOOBBYER), established nearly 300 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

JOHN TANN'S new patent RELIANCE LOCK and FIREPROOF SAFES form the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. Waterlow, Birchin-lane; at the Warehouse, 30, WALBROOK, CITY; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and party-walls.

CHUBB'S LOCKS, with all the recent improvements; STRONG FIRE-PROOF SAFES, CASH and DEED BOXES.—Complete lists of sizes and prices may be had on application.

CHUBB and SON, 57, St. Paul's-churchyard, London; 28, Lord-street, Liverpool; 16, Market-street, Manchester; and Horsley-fields, Wolverhampton.

WOODCOCK'S PATENT SMOKE-CONSUMER.—The above Patent has a reputation beyond all question: it prevents smoke, saves fuel, promotes a rapid and abundant generation of steam, is entirely self-acting, and of small cost. Ample references and testimonials. Furnaces built on scientific and economical principles, and repairs or annual contracts for the same taken.—W. WOODCOCK, Consulting Engineer for Furnaces, 12, Bishopsgate-street Within, London.

CAUTION.—Gardner's so called Patent is an infringement of the above, and all parties are hereby warned against its use.

FIRE-PROOF CONSTRUCTION.—FOX and BARRETT'S PATENT.

This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

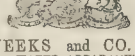
The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of all.

Further information may be obtained of the Proprietor of the patent.—Mr. BARRETT, 19, York-buildings, Adelphi.

IRON CHURCHES, STORES, &c.—For SALE, Substantial Corrugated Iron Stores, Churches, Dwelling-houses and every description of Buildings, adapted to all climates. Iron Roofs constructed for all parts of the world. An Iron Church with sittings for 750 people, for hire or sale.—To view and for further particulars apply to SAMUEL HEMMING, Cliff House Works, Bow, London.

ROYAL POLYTECHNIC GAS FIRE, BACHHOFFNER and DEFRIESS'S PATENT.—The public is respectfully informed that arrangements have now been made for the supply of this unique and beautiful mode of warming private houses, shops, public buildings, &c. Smoke, dust, ashes, and accidents from fire are effectually prevented by its use, while it presents all the comfort and appearance of an open coal fire, securing, at the same time, perfect ventilation.—To be seen in action at DEFRIESS'S Office, 143, Regent-street, London.

HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fixing given.—J. TYLOR and SONS, Manufacturers, Warwick lane, Newgate-street, London.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, 5½d. per inch, and upwards.

Register Stoves, 8d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.

3-feet Cottage Ranges, with ovens and back boilers, 32s. each.

3-feet self-acting ditto, ditto, 34s. each.

Air Bricks, 4s. per doz.

Best Town Glue, 50s. Ditto, Scotch, 64s. per cwt.

Best Fine Cut Clasp and Rose.

1½	1¾	2	2½	2¾	3-in. & larger.
10s. 6d.	12s. 6d.	13s. 6d.	15s. 6d.	18s.	14s. per cwt.

And every material required in the building, bell-hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most effectual yet invented, is made by T. SMITH, of 14, Queen-street, Oxford-street, near Argyll-street, where a working model can be seen or will be sent for inspection on the shortest notice.

N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 55, High Holborn.

TUPPER and CARR, Patent Galvanized and Ungalvanized CORRUGATED IRON MANUFACTURERS, IRON ROOF, SHED, AND STORE BUILDERS, Electric Telegraph and Wire Fencing Contractors. Works—LIMEHOUSE and BIRMINGHAM. Offices—3, MANSION HOUSE PLACE, LONDON. Iron of every description galvanized

JOHN HENDERSON PORTER, ENGINEER AND CONTRACTOR, IRON BUILDING AND ROOFING WORKS, GAS-STREET, BIRMINGHAM.

LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE. PATENT PLUMBIC ZINC. GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.				
12	"	"	20	"
13	"	"	23	"
14	"	"	26	"

Full particulars and the reduced price sent by post on application to

A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

SKAIFE'S GALVANIZING WORKS, Commercial-road, Limehouse, London.

Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where Iron not liable to rust is required.

Patent Galvanized Iron supplied in every form.

Sheets plain and corrugated.—Roofs fixed complete.

J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.

An Allowance to the Trade.

JOHN WALKER, Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor. IRON MERCHANT, &c. Offices and Works—Mill-wall, Poplar, London.

A. MOREWOOD and CO. (late Morewood and Rogers), Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.

PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets, PLAIN or CORRUGATED, and Curved, of all Gauges. Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.

Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hoopins, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building, at the OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process), WORKS GLASS-HOUSE YARD, opposite the Entrance to the London Docks.

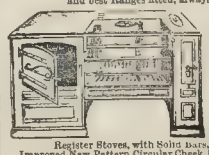
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

WILLSON and ROBINSON, GALVANIZING and CORRUGATING IRON WORKS, CHURCH-ROW, LIMEHOUSE, LONDON.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 159, Shoreditch. A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.



Improved Self-acting Cottage Ranges, with Low Oven and Boiler

30	32	34	36-inch.
28s.	30s.	32s.	34s.

Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—

34	36	38	42-inch.
54s.	56s.	58s.	68s.

Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 2½d.

Register Stoves, with Solid Bars, per inch, 5d.

Improved New Pattern Circular Check Register, with strong Bars and Trivits, 5d. per inch.

Best Solar ditto, with Fire Brick Back, per inch, 10d.

Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2	2½	3 inch.
	10d.	1s. 1d.	1s. 3d. per yard.

Cast Gutters—4 inch, 8d. per yard.

O G Gutters	4	4½ inch.
	1s.	1s. 2d. per yard.

	2	3	4	5	6	
Patent Line	3s. 6d.	4s.	5s.	7s.	9s.	per gross.

6-inch Rd. Ward Mortice, with Best Furniture and Patent Spindle, 2s. 6d. each. Ditto, Elliptic and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.

Brick Moulds kept in stock. Any size made to order.

Best Cut Clasp Rose Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 in.	
10s. 6d.	10s. 6d.	12s. 6d.	13s.	14s.	per cwt.

Best Sheet Cut Floor Brads..... 13s. per cwt.

Best Cut Lath Nails..... 16s. "

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSES, 19, Horseferry-road, and 1, New Peter-street, Westminster.

GREAT REDUCTION IN PRICES.

RAIN WATER CASTINGS, per yard.

Sizes	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	10½d.	1s 1d.	1s. 3d.	1s 7d.	1s. 10d.
Half-round Gutters	7½d.		8d.	9d.	1s.
O G Gutters	9d.	10d.	1s 0d.	1s 1d.	1s. 3d.
Ditto, with plain clips cast on	1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.	1s. 9d.
Ditto, with lion clips ditto	1s 2d.	1s. 3d.	1s. 5d.	1s. 7d.	1s. 10d.

Sash Weights, 7s. 6d. per cwt. Air Bricks, 3s. 3d. per dozen.

Best Cut Clasp Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 to 6 inch.	
16s. 6d.	16s.	15s.	14s. 6d.	14s.	per cwt.

Best Cut Floor Brads ..... 13s. 6d. to 13s. 6d. per cwt.

Best Cut Lath Nails ..... 15s. 6d. "

Best Zinc Slating Nails ..... 40s. "

Best Glues ..... 47s. to 53s. "

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show—every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list, 10s.—55 and 56, High Holborn.

BUILDERS! ARCHITECTS! and MASONS!—MARBLE.—The Italian Marble Company call the particular attention of Builders, Architects, Sculptors, and Masons to their PRESENT low prices, viz :—

Veins, in blocks of ordinary dimensions,	8s. 6d. per foot cube.
Sicilian "	6s. 6d. "

An inspection of their well-assorted stock is solicited, at "The Depôt," Bridge-wharf, Millbank, adjoining Vauxhall-bridge.—Apply to Mr. BAXTER, Wharf Foreman.

WILLIAM W. BONNIN, Secretary.

TO BUILDERS, MASONS, and CONTRACTORS.—OBSERVE! the CHEAPEST DEPOT in ENGLAND for MARBLE CHIMNEY-PIECES, of superior quality and workmanship, is the WESTMINSTER MARBLE COMPANY'S PATENT WORKS, Earl street, Holywell-street, Millbank. An inspection of their superior Stock of Statuary, Sienna, Black and Gold Vein and other Chimney-pieces, Tombs, Monumental Tablets, &c. is earnestly solicited. The Trade supplied with Slabs, &c. &c.

A WORKING FOREMAN WANTED.

TO BUILDERS, MASONS, AND OTHERS.

THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Brèchia, dove, black, black and gold, Sienna, St. Ann's, statuary, serpentine, verd antique, &c. Portland, Harehill, Park spring, and other stone, in blocks, slabs, landings, and hearth-stones. Yorkshire paving, granite curb, &c. All goods carefully packed and forwarded to any part of England. THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

Lloyd's Marble Wharf, Thames-bank, Pimlico.
Adjoining Vauxhall-bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

MARBLE and STONE CHIMNEYS.—150 MARBLE CHIMNEYS of various designs and colours, most of them fixed, are now on view at the Cambridge Heath Marble Sawing-Mills. The proprietor has again enlarged his workshops, and erected so much improved machinery, so as not only to compete, but is able to manufacture more, and consequently cheaper than any house in the trade.

The Trade supplied.

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LONDON: LONGMAN, BROWN, GREEN, AND LONGMANS.

The Builder.

VOL. XIV.—No. 696.

HOW often must the same thing be said before it will be attended to? Dr. Letheby, the City Medical Officer of Health, has recently reported to his commissioners on the condition of the houses in Plumtree-court, Holborn; and our morning contemporaries, struck with dismay, view the statement as if it had never been heard before, and write eloquent leaders on the hidden horrors thus unexpectedly brought to light!

Three years and more ago we described the very house in this very court, then as now the abode of disease, and the cradle of immorality and misery. How did the description run? "It was about two in the morning when we next wended our way to the valley of the Fleet, to visit some of the lodging-houses in that neighbourhood." . . "Leaving Field-lane, and crossing Holborn into Shoe-lane, opposite the wall of St. Andrew's Churchyard, you reach the entrance to Plumtree-court, which has long been the haunt of fever: this court extends a considerable distance towards Farringdon-street, when it goes off at right angles to Holborn: the court is very narrow and the drainage very imperfect. A sink at the bottom of this pestilent hole receives the greater part of the refuse of the place: it is often stopped, and then a pool of considerable extent is formed. Pulling the latch of the outer door of one of the houses here, and then entering, with the assent of its occupants, the room on the left, we found an atmosphere so stifling that we were forced for a moment to retreat. There were two beds in the room: in one, which seemed to have heads all round it, were no fewer than nine women and children. They were stored so oddly and so thickly, that it was not an easy matter to count them even by the strong light of the policeman's lantern. In the other bed were a man and a lad, and in a small room, or closet leading from this room, three other persons were sleeping. There was little ventilation. Had there been *none*, assuming that each respiration is forty cubic inches, the respirations twenty a minute, and that the existence of ·08ths. of carbonic acid is destructive, *the occupants of the front room must have died in eight hours!* Pondering on what we had seen, and weighing the possibility of improvement before the *infant-school* had done its work, we we were glad to make our way homeward, to freer air."*

This statement was reproduced and commented on in many journals, and was afterwards by us published in "London Shadows;" but no amelioration appears to have resulted, and now three years afterwards the metropolis hears the description with the same expressions of astonishment as before, admits the frightful evils to which such a state of things gives birth, lifts its hands—and will then probably forget all about it, as before. Let us hope, however, it will not be so.

"We arrived at the court," says the medical officer, "before the occupants were out of their beds, and the sickening odour which pervaded the lower rooms of most of the houses was almost overpowering. At No. 28, on the ground-floor, there was a small front room having an area of about 700 cubic feet, in which there were two wretched beds, from which five adults and four children had just arisen: behind this was another dark den, of 640 cubic feet in area, on the floor of which there were three heaps of rags, where two men, one woman, and two children were then lying. They were huddled together without the smallest regard to decency, and I was informed that they were chance lodgers. The landlord himself was one of the occupants of this miserable abode. The other rooms of the house were in a similarly wretched state, and for the accommodation of the many families which tenanted them there was but one watercloset, in a small back yard, which was so abominably filthy that I could not approach it. No. 6. The single room which formed the ground-floor had an area of 967 cubic feet. In this there were three beds lying on the floor, upon which two men, five women, and five children had been sleeping. In another small room, at the top of the house, there were two wretched families of six individuals, who had taken their night's rest upon a heap of shavings. The room was destitute of every article of furniture. At No. 9, which is a house of fifteen rooms, the largest of which is only 825 cubic feet, there were sixty-seven occupants, consisting of fourteen men, twenty-six women, and twenty-seven children. In two of the rooms the poor creatures were wholly destitute, and they were taking their rest upon the bare floor. This house was so overcrowded that the average cubic space per individual was only 175 cubic feet; in one room it was only 86¾ feet; and in another 93½ feet. No. 24, which is a small house of three stories in height, with four rooms, contained forty individuals, consisting of eighteen adults and twenty-two children. It has no back yard, and the ventilation is most imperfect."

The medical officer urged, as we have done for years past, that before we demolish those places in which the poor have hitherto lived, we should provide other and better places for their reception. While they are allowed to believe that crime, and disease, and wretchedness "are their inheritance, we can never expect to see them rising above their present miserable condition; nor can we ever hope to find that education, with all its power, can have any influence upon the minds of those who are too ready to receive the stronger and earlier impressions of vice. That which has already struck my attention during my visits to such localities as these, has been the fact that young children are, from their very infancy, made familiar with the worst scenes of dissipation and immorality; for to be kept in idleness, and to witness day by day the conduct of those who have no regard for the commonest decencies of life, is to insure another generation of criminals, whose habits may be even worse than those of their predecessors." He recommended that these houses should be at once subjected to the rules and regulations of common lodging-houses, and the commissioners adopted the recommendation, and ordered it to be acted on.

"Life," says Dr. Acland, "is a holy thing; and if communities throw away the lives of the individuals who compose them, or make these sickly, short, and miserable, the community will, in some manner, 'pay for it.' It will have work done badly by the crushed artisan while he lives; it will have to maintain him for years in his sickness, and his children on his death."*

We hope to hear before long that the Corporation have resolved to proceed with the erection of a pile of dwellings for the labouring classes, which has been long talked of. Some of the metropolitan parishes are becoming more and more overcrowded every day.

Let us in a parenthesis, by way of relief from the unpleasantness of the details we are forced to go into, here refer to the love of "art" which we find very often exhibited in the most miserable quarters, in the shape of plaster casts and little prints,—not of very refined character, it is true, but still agreeable and cheering as evidence of a striving upwards. The painted parrots and spotted cats, and red and blue varnished prints, which not many years ago *decorated* homes of greater pretence, have found a resting-place lower down in the social scale. Our sketch (see next page), an actual chimney-piece, will serve as a record of some well-known barbaric favourites.

We may safely anticipate that great benefits will result from the labours of the various Officers of Health, who have been appointed under the Metropolitan Management Act. We have before us a very satisfactory preliminary report from the medical officer of St. Leonard's, Shoreditch, Dr. Barnes, wherein he justly asserts that,—

"It is impossible to call into action such a well-devised sanitary administration as will effect material diminution in the rate of sickness and mortality in a district, which will not *pari passu* increase the value of the property, and lessen the burdens upon it. To communities, as well as to individuals, there is nothing so expensive, so fatal to prosperity, as sickness. To a productive and labouring community, such as that of Shoreditch, health is the chief estate. If we observe the analogy that exists between the welfare of an individual and the welfare of a community—and the analogy is so true that it is the basis of all sound political economy and good government—do we not find that in the case of sickness in an individual, if one organ is diseased, increased labour is thrown upon the rest, that the functions of all are disturbed and weakened, and that the whole system suffers? A community is but a system of individuals: if, therefore, one portion of that system be disabled by sickness, every other portion will feel the blow; the whole community will be taxed to support that part which is rendered incapable of supporting itself."

It is, as we have again and again said, a plain matter of self-interest, as well as a solemn obligation, to exercise the most vigilant care in preserving to the poor their only worldly possession—their health and capacity for self-support.

The area of Shoreditch comprises 646 statute acres, or about one square mile; and Dr. Barnes calculates that the entire population in 1745 was only 17,255, if so much. Let us see what it is now. By the census of 1831, the population was 68,564: in 1841, it had risen to 83,432; and in 1851, to 109,257. At the present time there are probably 125,000 persons crowded and compressed within the 646 acres comprised within the boundary of 1745.

The Report says:—"There is a constant and rapid flow of population into Shoreditch. It is in this circumstance that I see one of the most alarming dangers to the health of the district. The area does not enlarge, and yet, year after year, dense crowds of human beings, bringing with them other crowds of the living creatures that attach themselves to man, are packed and squeezed into that limited area. The most cursory glance into the courts and by-places of the district will satisfy us that the growth of the population has far outstripped the growth of the sanitary provisions necessary to provide for the accommodation and health of the masses pouring in. The progress in the construction of sewers, drains, the supply of water, the improvement of the dwellings, is, daily, more and more disproportionate to the necessities of the inhabitants. The causes of disease are therefore increasing at an accelerated ratio, and may at any moment assume an activity and a virulence beyond control."

What is the present sanitary condition of the district? In 1855, the total deaths registered in Shoreditch amounted to 2,985: of these, 639 were caused by typhus, smallpox, scarlatina, and other epidemic or endemic diseases. That is, one death in every five and two-thirds arose from causes directly traceable to removeable causes; and, from facts which have been made

* Vol. XI. p. 209.

* From "Health, Work, and Play," a valuable little tract just now published by J. H. and J. Parker, Oxford.

A Chimney-piece in Plumtree-court, Holborn.

manifest to Dr. Barnes, he is satisfied that the number of deaths referred to epidemics is very far from adequately expressing the destruction of human life, or the impairment of health, resulting from removable causes. Typhus—a disease really more terrible than the cholera itself, because it is ever insidiously at work sapping the strength of the community, is probably never absent from Shoreditch. It has made itself a home in the parish, where it lives—upon the life-blood of its hosts.

The death-rate in Shoreditch is very high,—there are annually twenty-eight deaths for every 1,000 persons living,—higher indeed than in any other metropolitan district. It must be Dr. Barnes's business to lower it, at any rate to the average which is about twenty-one in the 1,000. Even at that, however, it ought not to remain long. Our readers will remember that in the various houses which belong to the Society for Improving the Condition of the Labouring Classes, the deaths last year were only seven in the 1,000! Good encouragement indeed for perseverance! We understand that only one case of typhus fever has ever occurred in the society's buildings, and that in that instance the person was ill before he came there.

The medical officer of health at Kensington, Mr. Francis Godrich, sent in a report not long ago on the present condition of the Potteries, where the death-rate in 1848-9 was 60 in 1,000! the average age at death being but eleven years and seven months!! Mr. Godrich calls on the District Board as a first step to fill up the pool of stagnant water known as the "Ocean," described by us some time ago; and we earnestly hope this and his other recommendations will be forthwith attended to. If the whole population of London and its suburbs were placed in the same good condition as are the tenants of the society to which we have referred, thousands and tens of thousands of lives would be saved annually.

Thousands of lives! The fact is surely worth thinking over.

STATUES FOR THE NEW HOUSES OF PARLIAMENT.—Statues of Burke and Curran have been commissioned for St. Stephen's-hall, at the sum of 1,000*l.* each. Mr. Tneed is to execute Burke, and Mr. Carew, Curran.

ON THE VARIETIES OF STONE USED FOR ARCHITECTURAL CARVING.*

FORMERLY, the only economical mode of conveying ponderous blocks of stone to a considerable distance, was by sea or by navigable rivers. Canals were then introduced. Latterly the means of transport have been wonderfully increased by railway communication; therefore it becomes essential to ascertain whether better materials than those which have heretofore been employed in any given place, may not be obtained from other, although more distant localities, upon equally advantageous terms.

Before I attempt to describe the various qualities of stone used for architectural carving, the proper course of proceeding will be to give some idea of the different districts where stone quarries are generally found; and under what peculiar circumstances they are situated, with reference to their geological age and condition; or, in plainer language, before you can carve a stone, you should know where to look for one that is likely to suit your purpose.

It has been remarked by Dr. Buckland, in his "Bridgewater Treatise," that if a stranger, landing at the extremity of England, were to traverse Cornwall and the North of Devonshire, and, crossing to St. David's, should make the tour of North Wales, and passing thence through Cumberland to the south-western shore of Scotland, he would conclude from such a journey, that Britain was a thinly peopled, sterile region, whose inhabitants were principally miners and mountaineers.

Another foreigner, arriving on the coast of Devon, and crossing the Midland Counties, from the mouth of the Exe, to that of the Tyne, would find a continued succession of fertile hills and valleys, thickly overspread with towns and cities, crowded with a manufacturing population, whose industry is maintained by the coal with which the strata of these districts are abundantly interspersed.

A third foreigner might travel from the coast of Dorset to the coast of Yorkshire, over elevated plains of limestone, or of chalk, without a single mountain or mine, or coal-pit, or any important manufactory, and occupied by a population almost exclusively agricultural.

Let us suppose these three strangers to meet at the end of their journeys, and to compare their respective observations, how different would be the results to which each would have arrived, respecting the actual condition of England. The first would represent it as a thinly peopled region of barren mountains; the second, as a land of rich pastures, crowded with a flourishing population of manufacturers; the third, as a great cornfield, occupied by persons almost exclusively engaged in the pursuits of husbandry.

There is much truth in these remarks of Dr. Buckland; and it leads us to inquire into the cause of such very different occupations of the inhabitants.

Without travelling through the length and breadth of the land, we may take a general survey of England, by a glance at a geological map; by which we learn that the ground, a little beneath the vegetable soil, is composed of various sorts of rocks, arranged in stripes of different widths, which may readily be distinguished from each other by certain peculiarities. In England, these stripes take a general direction from north-east to south-west, and are somewhat parallel to the general line of hills. The origin, composition, order, and arrangement of these rocky masses, form the basis of geological science.

I shall endeavour to explain the outline of that part of the leading doctrines of geology as they are now generally admitted, which will be sufficient for our present purpose. In giving this outline, it is only to render my description of some of the principal stone districts more intelligible. If therefore some of my statements appear startling, and perhaps even improbable, as they are very likely to do, to those who come fresh to the consideration of the subject, they must either give me credit for advancing nothing but what is now admitted by men of science, as an established truth, or they must take the trouble to investigate the subject for themselves, and satisfy their doubts, by applying at the original sources of information.

In travelling along a line of railway, where there are occasionally deep cuttings, or if we notice high cliffs by the sea-side, we observe heaps of gravel, sand, clay, and different kinds of stone, to all appearance as if chance only had tossed them together in a confused heap. Yet amidst all this apparent confusion, geologists have discovered a certain degree of order prevailing; and that among these immense masses of rocks, broken and disturbed though they be, a regular succession is observed, which is nearly the same in all countries; and where their original position has undergone great subsequent disturbance, there still remain proofs of the order that once reigned. There are no conflicting laws in the material world; laws as fixed and immutable prevail in the disposition

* The substance of a lecture delivered by Mr. C. H. Smith, at the Architectural Museum, Canon-row, on Monday, the 26th May.

of rocks, as in all other of Nature's works. In fact, the same arrangement appears to be general, and must therefore depend upon general causes, which have on all occasions exerted the same influence from one extremity of the earth to the other. That which now appears to have been ordered for the wisest purposes, was, in ruder times, degraded by the misapplied title of "chaos."

There is much evidence to render it probable, that the entire materials of the great globe we inhabit, were at one time in a fluid state; and that the cause of this fluidity was heat. Upon cooling, the first result would be, the formation of various crystalline rocks of the granitic series, around an incandescent centre of melted matter. The gradations are innumerable which connect the infinite varieties of granite, porphyry, and basalt, with the lavas that are at this day ejected by volcanoes. This hypothesis is now admitted by the common consent of nearly all modern geologists and chemists.

Living, as each man does, but a comparatively short period, and seeing but a very small portion of the surface of the earth at any one time, it is somewhat difficult to conceive that the action of volcanoes and earthquakes can have had a general effect in changing the position of land and water. We occasionally hear of a volcanic eruption or an earthquake, and for the most part look upon it as something partial, confined to a certain district, and, on the whole, as unimportant to the rest of the world. There is, however, strong reason to believe that volcanoes and earthquakes are the operations of a power which is everywhere present beneath the ground, in which we all have an interest; and to which we must ascribe the circumstance of the land being raised above the waters, as well as the undulations of hill and dale. Such operations may have been more violent and extensive in earlier times than at present; although an apparently insignificant cause will produce a very surprising effect, if frequently repeated during a long succession of ages.

The first part in classification is the division of rocks into three great groups: the crystalline or igneous, sedimentary or aqueous, volcanic or lava, &c.

By heat, under great pressure, dark limestones, replete with shells and corals, may be converted into white statuary marble; and hard clays into slates of various kinds, all signs of organic remains having been obliterated; these are intermediate or altered rocks.

The very lowest sedimentary rocks, such as slate, contain no traces of inhabitants of the seas, in which they were accumulated; it is supposed that the heat during those periods must have been adverse to animal existence.

We are apt to regard the earthy foundation, on which the architect raises an edifice, as a specimen of duration and stability; but proofs of violent disturbances are conspicuous in every locality. All the materials of the sedimentary rocks appear to have been, originally, gradually deposited in nearly horizontal strata, at the bottom of the ocean, or at the bottom of inland seas, lakes, or estuaries. Thus formed, the collective heap remained in a state of perfect quiescence, while it became somewhat indurated into a mass. From the numerous contortions, and generally more or less inclined positions of strata in all countries, there cannot be a doubt of our islands and continents having been heaved up from the bed of the sea, by some violent terrestrial commotion, which has, in many cases, placed the rocks at a very considerable elevation above the waters. Many terrible convulsions have repeatedly broken up the surface of our earth, during which land and water have alternately been uppermost. England, Scotland, and Ireland have evidently undergone many submersions and elevations, before they rose from the mighty deep in their present natural condition. How long these surprising operations were in progress, or how many ages elapsed in a state of comparative tranquillity, between one terraqueous convulsion and another, is a question, among many more, which sets our researches at defiance; for conjectures are endless; even the labours of the wisest men afford but a glimmering light to direct us in tracing such wonders of Almighty power. But of this we are certain, that the solid earth may at one time form the depths over which the stormy billows wave, at another time may be elevated, and become dry land, where corn may wave, where the loveliest flowers may be organised and fructified, and the lofty patriarchs of the forest upheld for the nourishment and enjoyment of numerous tribes of the higher orders of animals. All is in a state of mutation. Nothing is more evident to geologists than a perpetual series of alterations; there can be discovered no vestige of a beginning, no prospect of an end.

The solid earth, which now appears above the surface of the sea, with its stores of organic remains, may be compared to a large collection of authentic records, that will reveal to man, whenever he may be capable of rightly interpreting it, a continued narrative of events, which commenced at a period indefinitely remote, and probably succeeded each other after intervals of vast duration. Unlike the records of human transactions, these are not liable to the suspicion of having been forged or mystified through intention or ignorance. In them we have neither to fear the dishonesty of artful statesmen, nor the blunders of unlettered and wearied transcribers. As the Nineveh marbles record the existence of a civilized people on the banks of the Tigris, in remote ages, so the shells entombed in solid stone, at the summit of the Alps and Pyrenees, attest that there was a time when the rocks of those mountains occupied the bottom of a sea that was peopled by numerous species of animals, differing in many respects from any which now exist.

As far as we know at present, granite is supposed to be the oldest or first formed of all rocks, and is generally considered to dip under, or to be found beneath every other formation; notwithstanding, it forms some of the most elevated mountain masses. In the British Isles, the oldest rocks, such as those of granite, slate, and certain varieties of marble, called "Mountain limestone," compose the highest eminences along the western part of our island, from Cornwall and Devonshire, great part of Wales, Cumberland, and the western portion of Scotland. The mountains of Snowdon and Skiddaw are composed of rocks very low in the series; whereas, the marsh lands of Lincolnshire, Cambridge, Essex, and many other parts on the eastern side of England, which are scarcely above the level of the sea, are composed chiefly of gravel, sand, clay, and the most recent geological formations.

Granite is generally considered to be a mixture of three substances, quartz, felspar, and mica, in various proportions. Occasionally, one or other of these bodies is altogether absent. Felspar colours the red granite, black mica the grey.

In speaking of sedimentary rocks, it is necessary first to show how such rocks were formed, or how stratification commenced. The solids of the globe,—granite, for instance,—cannot for a moment be exposed to water, or to atmospheric influence, without becoming liable to decompose and change their character and appearance. They instantly begin to wear down. This operation proceeded with as much certainty in earlier times as it does now, but probably upon a much more magnificent scale. The earliest stratified rocks contain no matters which are not to be found in the primitive granite. They are the same in material, but only changed into new forms and combinations.

Some rocks are composed almost exclusively of only one of the materials of granite; the mica schists, for example, of nothing but mica; the slates and clays of little else but decomposed felspars; and the sandstones almost wholly of quartz? Suppose that a river has a certain quantity of material suspended in its waters, it is evident that it will first deposit the largest and heaviest particles, and carry the lightest farthest on. To such a cause is it owing, that some of the materials of decomposed granite have settled in one place and some in another, and this wholly independent of chemical solution.

Granite is generally composed of coarse grains or crystals, of so hard and refractory a nature as to render it only suitable for those bold massive structures which have scarcely any minute-carved work. The statue of William IV. at London-bridge is of granite. For such a purpose granite is admirably adapted, and not likely to be stolen for the value of the material, as is the case with bronze.

In Cornwall and part of Devonshire the granite is remarkable for the superabundance of well-defined large crystals of white felspar which it contains. At the Earl of Morley's quarries, in the vicinity of Prince-town, Dartmoor, the granite is more or less decomposed to the depth of 30 or 40 feet. This surface granite has been much used, because it is cheapest; the result is, that in buildings, after some years, such as the Dartmoor Prison, each block of granite has become porous, absorbing moisture continually, and rendering the cells so damp that the walls have been covered on both sides with cement and tiles.*

If the felspar of the granite be removed by the process which I have described, a rapid disintegration of the quartz and mica must readily take place, leaving the quartz grains, or silicious sand and mica entirely separated from the clay and alkaline salts of the decomposed felspar. If sufficient time be allowed, the sand will ultimately become indurated into compact sandstone. This process of decomposition and partial induration must have gone on to an enormous extent, and continued through a vast period of ages, in order to have produced all the sandstone rocks which now constitute so large a portion of the earth's surface.

All sedimentary or aqueous rocks appear to have been formed either entirely under water or by frequent alternations of wet and dry. Sandstones frequently present a laminated structure, as if by the overflow and recession of a tide, which constantly left a sandy sediment, with minute plates of mica from the decomposed granite. These plates, being thin compared with their size, are almost invariably found with their flat surfaces parallel to the lamination; thus indicating the bed-way of a stone, by their presenting a spangled or glittering appearance when viewed in a direction to reflect the light; an effect not to be met with on viewing a surface across the strata.

There is one peculiarity in the sandstones which I think deserves notice, that is, the labour of converting them to decorative purposes: architectural ornaments, whether mouldings, carvings, or other decorations required to be well executed—particularly if on a small scale,—will unavoidably occupy much time if carved in sandstone, on account of the nature of the material, which is so destructive to edge-tools. In confirmation of this assertion, it is necessary to remark that the only material for sharpening edge-tools is sandstone, either as a hone or Turkey-stone used by joiners and cabinetmakers, grind-stone, scythe-stone, and many more, all of which are of a sharp sandy texture. Therefore, it is easy to conceive that the same kind of stone which is experimentally found to sharpen tools most expeditiously will also be the readiest to destroy their cutting edge, and thereby not only retard the progress of the workman, but occupy his time in frequently re-sharpening them. Quartz is one of the hardest substances in nature,—much harder than steel; therefore, instead of the chisels cutting the stone, the stone cuts the chisels, and a portion of the steel is left upon the stone after every blow. The actual effect of the tools on sandstone is to force the grains to separate from each other by concussion, for it is impossible to cut a hard substance with a comparatively soft instrument.

LIMESTONE.

The term limestone in its most extensive meaning, is one of the most abundant substances in the creation. Fish shells, corals of all kinds, and the remains of crustaceous animals, altered and modified in a thousand different ways, in the great laboratory of nature, constitute, almost exclusively, the calcareous rocks which form about an eighth part of the external crust of the globe. A minute fragment of chalk, of Portland or Bath stone, or of many varieties of marble, when highly magnified, presents unquestionable proofs of its having originated from the animated productions of the waters. Limestone

* Felspar is a decomposing substance. A few miles north of Plymouth the streams have a milky appearance. This produces clay for china and porcelain, to be seen at the Museum in Jermyn-street.

that is hard enough to receive a good polish is usually denominated "marble," although it may possess no chemical qualities but such as are common to all calcareous earths.

The oolitic rocks traverse England from the coast of Dorsetshire to the extremity of Yorkshire; in many places affording prodigious quantities of excellent stone, fit for buildings of the plainest, or of the most richly ornamented character; but variations of structure, hardness, and durability, are found in different quarries, tending to show the changeable nature of the subdivisions, even in short distances, throughout the entire district, which extends nearly 300 miles.

Some of the shelly varieties of limestone obtained from the oolitic series of rocks are amazingly durable for architectural works; but they are generally of too coarse a texture, and the shells interfere so as to prevent the possibility of minute carving being well executed in a material which is so varied in its texture; being hard and soft, close and open within the space of a few inches. The best kinds of shelly limestone are from Barnack, near Stamford, of which Peterborough Cathedral and many of the old Churches at Stamford are built; from Taynton, near Burford, of which the durable parts of the buildings at Oxford are constructed; Ham Hill, near Yeovil, used at most of the best buildings in that neighbourhood; and from Weldon in the wood, Northamptonshire, of which the oldest buildings at Cambridge are constructed: all these are merely varieties of the oolitic rocks.

Many quarries of excellent free working limestone are situated in the northern part of the oolitic district; such as the Ancaster and others in Lincolnshire, the Ketton in Rutlandshire, and many more; all of which are well suited for the carver. Most of these stones are rather soft, therefore may be expeditiously wrought into elaborate ornaments; and as they have been used in the neighbourhood of the quarries during several centuries, we can form an opinion of their fitness and durability. In Somersetshire and its vicinity there are almost inexhaustible quarries of oolite, very soft, therefore very expeditiously worked, consequently in great demand. Wells Cathedral is built with Doulting stone, which is similar in many respects to Bath, and is much decayed; whereas Glastonbury Abbey is said to have been built with stone from some of the Doulting quarries, and although 700 or 800 years old, is still in excellent preservation.

Bath stone is so well known that I need scarcely mention it. Large quantities continue to be used in buildings where present economy is more studied than future reputation. The principal quarries are at Box, Coombe Down, and Monckton Farleigh. The stone from each of these districts, and even in the same quarry, where there are generally a number of beds lying upon one another, is frequently found to differ, in some of the minor characters, from all the rest; such as being harder, coarser, more or less durable, &c. all of which are indiscriminately sold in the markets under the general name of "Bath stone," and it rarely happens that an architect specifies what kind of Bath stone is to be used. It is always understood that the materials are to be of the best kind; and it unfortunately too often happens that the stone which looks best when fresh from the workman's hand is frequently of a description most subject to premature decay. If it be left to the contractor's choice, he is sure to select the stone that may be most expeditiously worked.*

Portland stone is also a well-known material, and has been the chief stone used for ornamental architecture, not only in the south of England, but in many parts round the coasts of this country and Ireland, from the time of Inigo Jones to this day. The Banqueting-room or military chapel at Whitehall was begun in the year 1619, and finished in two years. As far as I can search or learn, this is the earliest building of magnitude constructed with Portland stone in London, or at a considerable distance from the quarries. If I call your attention to the beautiful carvings of fruit and flowers, of Corinthian capitals and statuary, about St. Paul's Cathedral, I feel assured you will require no further proof that Portland is decidedly one of the best free working stones that can be used for architectural carving. The whole of those decorations have been finished 150 years, some of them twenty or thirty years' longer; the greater part elevated above the surrounding buildings, and thereby exposed to all aspects, in an atmosphere charged with smoke and other impurities. Viewing this sacred structure collectively, it may be considered a satisfactory example of the fitness of Portland stone for such purposes; for although there may be symptoms of decayed stone in some few parts, the carved work generally may be said to be perfect, although sadly blackened with the smoke of the metropolis.

Caen stone has always been in great demand, because an immense amount of ornament may be executed for a comparatively small outlay. Wherever water-conveyance can be obtained, Caen stone is probably the cheapest stone that can be had for architectural decoration. It may be worked with great facility, perhaps more expeditiously than any other stone whatever; and it is quite immaterial as to the stones being placed in a building on their natural bed.

Caen stone, however, is not a durable material, and it is advisable to cover the projections with thin lead, to keep out the wet. There have been many ingenious plans for hardening the surface of soft stones, but they all want time to try their efficacy.

MAGNESIAN LIMESTONE.

Without a chemical test, some of the varieties of magnesian limestone might easily be mistaken for soft Portland stone, especially if they are of the same colour and partially oolitic. Two specimens, one from Cadeby, the other from Brodsworth, both in the neighbourhood of Doncaster, may be sawn dry with a common pegtoothed saw, and worked with a drag and tools the same as are generally used for soft stone; yet both these specimens have a large proportion of magnesia in their composition.

Time will not allow of describing the several varieties of Magnesian limestone, therefore, the few remarks which I have to offer, must be confined to the stone now being used at the new Houses of Parliament. Since the commencement of that magnificent work, notwithstanding an enormous quantity of stone has been obtained from the quarries, I do not perceive any material difference in its quality; occasionally slight variation may be found in the texture or hardness of some of the beds; but collectively, the produce of the quarries may be considered equal in quality to what it was at the commencement of the Parliament Houses. When first these quarries were opened, and for several years afterwards, only the eight uppermost beds were considered fit for the great work at Westminster; the stone underneath was imagined to be of too hard and coarse a texture, to be employed for superior architectural works. This idea was purely imaginary, for the number and thickness of the lower beds had not then been ascertained. Now and during the last few years, the whole of the beds, about thirteen in number, are worked, and to all appearance the quality of the stone is, with few exceptions, nearly the same in all of them; for there is no reason to suppose that generally the stone obtained from the lowest bed is not in every respect equal to that of the highest bed in the quarry. These thirteen beds compose the entire stata of Magnesian limestone to be found in the vicinity of North Anston; beneath them, after a few feet of different coloured clays, and thin rubble stone of an intermediate quality, we come at once upon beds of new red sandstone.

Since the introduction of Anston stone into the metropolis, the new material has been employed in several important edifices besides the palace of Westminster; and generally, if not invariably, has been considered satisfactory. One remarkable instance, however, is to be observed in the new buildings of Lincoln's-inn, where a large proportion of the masonry is already in a perishing condition. As sometimes happens, much useful information is obtained by searching into the cause of evident failure; therefore, at the quarries, I endeavoured to find out and examine the locality whence the objectionable stone had been obtained; and I was immediately taken by the foreman to the place, where I observed the hewn surface of the rock, especially the two uppermost beds, which had been left exposed to the weather several years, unequivocally in a state of rapid disintegration; the sharp arises and angles all rounded off, and the weathered surface for about a tenth of an inch deep, was easily abraided by the fingers: thus affording incontestable and striking evidence of the importance of avoiding the use of stone from these two particular beds, for ornamental architecture or sculptural purposes. For want of proper selection, a small quantity of this objectionable stone has been used at Westminster, but the proportional quantity is not more than might have been expected had any other stone been used.

I do not think that chemical analysis will render much assistance in determining the goodness of a stone for architectural purposes; the most accurate investigation of a chemist will give no certain test either of resistance to atmospheric influences or of rapid disintegration when exposed to weather. The same elements united in the same proportions, do not necessarily generate the same body. Common white chalk, Carrara marble, and many other varieties of limestone, when chemically examined, are all found to be composed of very nearly the same elements consolidated in the same relative quantities; yet we know they produce substances totally different in many respects. The precise causes of decay, or of duration in mineral bodies, such as building stones, are so complicated, that they often baffle our endeavours to represent them and their reactions by exact chemical formulæ. It is by some mysterious process of nature, which we do not at present understand, and generally cannot imitate; nevertheless, the visible distinction between durable and perishable stones may frequently be correctly ascertained, if diligently sought for.

A few hints to ascertain whether a given material is a sandstone, a limestone, or a magnesian limestone, may occasionally be useful to persons who may be in any way connected with the use of building stone. A very little chemical knowledge will show that there are extraordinary predilections amongst the atoms or molecules of substances, for each other's company; one will remain firmly combined with another till a third is introduced, when it will abandon its old companion and attach itself to a stranger. A fourth substance being added, the third will perhaps, leave the first and join the new comer.

C. H. SMITH.

* Henry VII.'s Chapel was repaired with Coombe Down stone between 1808 and 1822

FIRES AND FIRE-PROOF BUILDINGS.

THE paper on this subject by Mr. Braidwood, (p. 258, *ante*), led to a discussion at the Society of Arts, which extended over two evenings.

Mr. Sibley, in a note to the secretary, said—"I beg to adduce one fertile source of fires, that is, the fixing of the boiler furnaces of steam-engines, and other furnaces and close fires, against party walls, in which wood plates and bond timber are not unfrequently found. Under the Act of 1844, a clear space of six inches was made imperative, between the setting of the furnace and the party wall. Under the present Act they are subject to *no* restriction or regulation whatever. The disuse of bond timber and plates altogether; the introduction of iron hoop bond, and stone templates in their place; the building of cross walls, in lieu of hollow wood partitions, would tend much to diminish the hazard of fire. Wrought-iron brest-summer girders should also take the place of wood brest-summers: when these are burnt through, it is manifest that the whole superincumbent mass of brickwork has nothing for its support."

Mr. Chadwick, C.B., in the course of his address, said, after mentioning the time which usually elapses before the engines can be got to work at a fire, he was confident that practical concurrence would eventually be given to the conclusion at which he had arrived, that the principle of all future arrangements for the repression of fires must be a constant supply of water kept at high pressure, night as well as day, and the direct application of it from the mains before the door by means of a hose and jet. By that arrangement he had proved, that

a power equivalent to three or four of the best engines might be kept constantly before each door ready for application within two minutes. Having been consulted on the subject by Mr. Edward Rushton, the late benevolent stipendiary magistrate of Liverpool, and having learned of the corroborative example of the use of water direct from the mains, first for the cleansing of the streets and houses at Philadelphia, and then for the extinction of fires, he (Mr. Chadwick) gained his advocacy of the plan at Liverpool. When, upon his advice, Mr. Rushton proposed it to a Committee of the House of Commons, the proposal was received with laughter. The very serious effect of the conflagrations in the warehousing interests at last occasioned it to prevail in Liverpool, and, as had been stated that night, with such an effect in increased safety, as was shown in the insurance charges. In a communication to him, Mr. Newlands, the borough surveyor of Liverpool, had stated the new practice: "The mains from this reservoir under high pressure are available over the whole of the town." "On arriving at a fire the stand pipe or pipes are put down, and the hose run off the reels in an instant, and, it may be, a dozen jets are playing, and the flames nearly extinguished before the engines have left the yard." "Serious fires are now seldom heard of, for before the flames can gain head the jets can generally be played upon them, and this is the only time that there is a chance of subduing them." The mechanical or engineering objections made to the application of the like arrangements to the metropolis were wholly illusory. On a competent and impartial examination it would be found, that what had been done in some cities might be done with economy in the metropolis and all others. The present state of things—the combined prevalence of defective legislative and administrative as well as of engineering arrangements, in the face of proved available means of protection—the weakening of the unconscious action of natural interests in precaution by unguarded full insurance, in contravention of the established principles of insurance—the temptation to the commission of crime by the absence of proper means for its detection and prosecution—the daily occurrence of fires in the metropolis, the number of horrible deaths from them, as well as the loss of property which they occasioned—the apparent apathy with which such calamities were regarded, and the rapidity with which they were forgotten—were deeply to be lamented, and would hereafter be referred to as evidence of a very low social condition, and of defective administrative capacity and organization.

Mr. John Braithwaite claimed a little to himself, as being what was termed one of the earliest and oldest fire-eaters; for that was the designation, not within the last few years, but something more than a quarter of a century ago; and it was a matter of great surprise to him to know that the means (his steam fire-engine) which were then practically and successfully adopted and approved by the public—by the many thousands who witnessed the experiments then tried—that in all these matters, which were carried out at his individual expense, he was permitted to incur such an enormous outlay of money for the benefit of the community, without having received a sixpence in the shape of reward, directly or indirectly, from any one. In the early period of the building of Drury-lane Theatre, every possible means was adopted to prevent fire occurring, under his father's directions, in conjunction with Colonel Congreve and the late Mr. Whitbread. It was carried out to a perfection that was almost unheard of, or thought to be practicable. There was not a spot in any part of that theatre but that at one moment's notice they could control any chamber, however remote or however near, by—not a deluge of water, but sufficient water at a particular moment to arrest the progress of the flames. He was disposed to believe it was not to the interest of Fire Insurance Companies to put out fires! He had evidence beyond any doubt on this point, and the remark which Mr. Braidwood made about Legislative interference led him to think from that hour the Legislature would look more into these matters than they had done before—the only safeguard between the public and the Insurance Offices—for he must tell them that in 1830, under the special request and encouragement of the Insurance Offices, he constructed that which would not prevent fires, but would and did extinguish them most effectually, and that was the Steam Fire-Engine.

Mr. Hawes denied the charge which the last speaker had brought against the insurance offices of this metropolis.

Mr. Marrable said, in the Bill of 1844, and the present Building Act of 1855, several clauses had been introduced for the prevention of fire as much as possible, by disallowing the introduction of bond timber and wood bricks, and other regulations, and for arresting its progress by subdividing buildings by cross or party walls, when they exceeded, in cubical contents, a certain number of feet. He (Mr. Marrable) was not prepared to go quite as far as Mr. Braidwood in the regulations as to the distances at which it was now the law that all pipes for warming by hot water or steam should be fixed from any woodwork, viz. three inches. When high-pressure pipes were used, the precaution was wise and necessary; but he did not think there was any occasion for such a restriction when pipes for hot water at a low pressure only were used. He feared that such a rule might be found very difficult to carry out in all cases. He also dissented from the supposition that "a chemical action took place between heated iron and wood." He believed that the only action was, that the constant heat at last reduced the wood to a state resembling touchwood, which was ready to take fire on the slightest accident. With regard to the difficulty of enforcing the rules respecting the laying hearths free of all timberwork, it should be mentioned that the builders were bound to give notice to the district surveyors, whose business it was to enforce the rules of the Act.

Mr. F. Whishaw remarked, that when this subject was brought before the Institution of Civil Engineers, about four years ago, it was stated in the course of the discussion that as bulkheads were useful in preventing fires extending in ships, party walls should be adopted in large warehouses, so as to divide the space and confine the fire to the spot where it originated. That suggestion was approved of by Mr. Braidwood, and also by Professor Hosking, the late official referee. He was glad to find that Mr. Braidwood still held to that opinion, and it seemed to him that in any future Acts relating to building, clauses to that effect should be introduced. He knew a warehouse in Bermondsey with an unbroken area of wooden flooring of three quarters of an acre. There were also many large granaries which might be easily divided and fire prevented from extending. Mr. Braidwood seemed to think that the large buildings in the City had been constructed without reference to such precautions.

Mr. Charles Mayhew said, as he was surveyor to one of the oldest insurance companies, and a district surveyor, he could speak with some confidence on the subject brought forward by Mr. Braidwood. He begged, in the first instance, to reply to the observations made relative to the steam fire-engines. The reasons why they were not generally adopted on land was, that the large quantity of water which they could supply was not, in the generality of cases, required, inasmuch as water injudiciously applied, did, very often, more damage than the fire would if left to the judicious management of the fire brigade to extinguish, which was, in most cases, stopped in a way perfectly astonishing. As regarded the structure of buildings, he was quite persuaded that unless the Legislature would adopt strong measures, fires would continue as heretofore. Houses ought to be constructed on the French system, and not as they were built here, on purpose to burn. They were piled up as the wood was placed in a grate to light a fire. The floors were wood, the partitions were wood, the stairs were wood so put together as to be all hollow, and so connected as to allow air-drafts in every direction; and oftentimes the brick walls were what were called battened, allowing air-vents behind the plastering. Thus the house was on fire from top to bottom before it was known by the inmates that a fire had broken out, and the doors and windows in the surrounding walls allowed the admission of air to feed the flames. It was difficult, perhaps, to construct anything fireproof, but still it could be approximated to: it might, perhaps, be more costly so to build, but what was cost compared with loss of life? Speculating builders, however, would never adopt this manner of building, unless compelled by an Act of Parliament. With regard to the construction of warehouses, he did not think that anything would be effectual unless they were entirely constructed of brick, which would occupy too much room, and be exceedingly inconvenient. Therefore the only way was to confine them to a certain cubical content, as required by the present Act of Parliament. Another source of fires was using common flues for close fires: such flues were only enclosed by 4-inch brickwork, which was wholly inadequate. Another evil was using Welsh fire-lumps at the back of grates, which, if fixed close to the party-wall (especially in old houses, wherein timbers were almost invariably inserted), very often set fire to the adjoining houses.

Mr. J. W. Papworth assumed it would be agreed that what people called fireproof materials were literally the least protection in a great fire. Thus, stone staircases were likely to crack at the wall and fall, long before an equally solid wood staircase would be unsafe to the escaping occupier. Iron beams pulled the whole building down with them, whereas wooden beams, sadly charred, remained long after the engines had ceased working; and, in a great fire, even brick arches failed and fell. He admitted that very thick arches would stand a great heat; but the little things which were now called brick arches were impotent before even a moderate fire. A friend was saying last year, that he saw a brick-arched warehouse, belonging to his family at Liverpool, appear to melt down into the flames. Mr. Piper had observed that Yorkshire stone was exceedingly destructible by fire, and that, practically, it did not furnish a fireproof floor; but this did not appear to be Mr. Tite's opinion. And Mr. C. H. Smith considered that concrete, properly made, would bear a very considerable degree of heat, perhaps more than Yorkshire stone. Mr. Barrett had stated that, supposing any intense degree of heat to be generated, before it would act injuriously on iron and concrete, it would, probably, quite destroy a brick arch, either by disintegration, or by the arch's own expansion. Mr. Braidwood seemed to think that the only fireproof construction for large warehouses, where an intense degree of heat might be generated, was groined brick arching on brick piers. He (Mr. Papworth) accepted these discordant statements as evidence to one thing, viz. that none of them were fireproof in the ordinary sense of the word; and gave great credit to Mr. Braidwood for the distinction drawn between ordinarily fireproof, extraordinarily fireproof, and incombustible premises. The public had certainly been misled by the scientific acceptation of common terms. Fireproof did not mean incombustible, but only "not very likely to be totally destroyed by fire." Covering woodwork with metal was allowed by the insurance offices to be a prevention to a certain extent, that is to say, if a current of air passed between the hearth and the metal that touched the wood. A stone was equally a prevention under such circumstances, but he had seen a case where the hearth touched the stone: both the hearth and the stone had cracked—merely cracked—and the floor below took fire, with no current of air between the plate or stone and the hearth. By the late Building Act, any metal or other pipe or funnel for conveying smoke, heated air, or steam, ought not to have been placed nearer than 14 inches to any combustible material. But this had been constantly neglected; and in most cases the district surveyor had never known that work of the sort was being done; consequently, he could not be blamed for accidents. By the present Act, pipes for hot water must be 3 inches, for heated air or steam must be 6 inches, and for smoke or other products of combustion must be 9 inches from any combustible material; and no ventilation opening might be nearer than 12 inches to any combustible substance. Both Acts gave a penalty of 20*l.* if the work, although correctly done, had been executed without notice given to the

district surveyor; and the new Act added a penalty of 20*l.* a day after non-compliance in forty-eight hours with a notice from the district surveyor that he had discovered the fault. The new Act had provided against the future erection of such extensive buildings as Mr. Braidwood inveighed, very properly, against, under the name of Manchester or piece-goods warehouses; and now no warehouse or other building, wholly or in part for the purposes of trade or manufacture, was allowed to contain more than 216,000 cubic feet, which was quite large enough, for they would then be 100 feet by 40 feet by 50 feet, equal to five of the ordinary houses mentioned by Mr. Braidwood. In justice to a much-abused body of gentlemen, he must say, that architects, builders, and proprietors, did very frequently,—sometimes wilfully, sometimes ignorantly, sometimes carelessly,—defraud the district surveyor of his fee, by not giving him notice that work was to be done. On the other hand, the district surveyor trusted a good deal to the character of the tradesman employed, as well as to the good faith of the architect, if there was one concerned; but neither the district surveyor nor the master builder considered himself called upon to watch the action of the workmen, and it was here that the damage was done. Mr. Tite built a fire-proof Exchange with false windows in it: a bricklayer was engaged to build a flue, and made the wood frame of the sashes serve as one side of the flue, which took fire. Mr. Smirke built a wall across the roof of Covent-garden Theatre: *no one could tell who pulled it down, or when it disappeared.*

On the second evening, the secretary read a communication from Mr. Bridges Adams, which contained the following:—

"If the Legislature, deeming it right to guard human health from unwholesome buildings, as well as human life from dangerous buildings, should determine some day that all future buildings must be noncombustible, a great impulse will be given to the production of iron, brick, and stone, natural and artificial, and noncombustible buildings will come to be cheaper than combustible ones. They are, in fact, cheaper at present, if we take into account—insurance—doctors' bills—repairs—and inconveniences of all kinds; saying nothing of the process of being burned in bed, and the concomitant taxes for fire-escapes and other patch-work contrivances.

It is quite true that we cannot all at once get rid of our present dangerous buildings, but we can establish a principle, and, to a considerable extent, we can make it self-acting, by promoting the extension of non-combustible iron buildings in those situations where ground is costly, as in the City of London. For example;—Suppose a site 20 feet by 40 feet, and the four walls to be each 18 inches thick in brickwork, 20 per cent. of the area is lost, or about 170 feet out of 800 feet. If the walls be of double iron, and only 6 inches in thickness, the loss in area will be little over 6 per cent. or about 50 feet out of 800 feet, being a saving of 120 feet as compared with brick. If this be multiplied by five stories, we have a saving in space of 600 feet total, or nearly 67 square yards. When we think of the almost fabulous prices of City building sites, and multiply this result of one building by the whole of the buildings in the City, it is practically equivalent to the creation of so much new land—67 square yards on a base area of 89 yards.

This is a question very imperative for the consideration of the Metropolitan Board of Works, and the adoption of such a principle would give rise to new improvements in preserving iron from oxydation, and possibly to some new kind of compound metal, not subject to rust; at any rate, to a cheap and effective process of bituminising, as a substitute for the miserable wash of zinc called galvanising, which gradually disappears in a surface of red rust. The tin-plated roofs of Montreal and Quebec, flashing in the rays of the sun like a silver city of romance, are infinitely preferable to this. Tin is a metal not easily oxydised, and shelters the iron hermetically. Zinc being a metal easily oxydised, shelters the iron only by opposing its own substance to be devoured instead, as a kind of scapegoat. The oxydised zinc then rubs off, exposing a new surface, which is eaten in turn, till finally the iron is left exposed to the full action of the oxygen."

Professor Hosking, in a note to the secretary, referred to his book, written by him in 1847, entitled "Healthy Homes," and to an article in the *Encyclopædia Britannica*, on "Construction," written in 1854, as containing his views on the subject of Mr. Braidwood's paper. In this article a section is devoted to "Security of Buildings from Fire." The following passage explains how, in Mr. Hosking's opinion, dead heat may lead to the combustion of timber in buildings:—

"It is to be understood, at the same time, that a piece of wood will bear a powerful dead heat upon its sides for an indefinite period without igniting, unless a transverse section of the fibre, as at or around a live knot, or where a branch had been lopped, presents itself to the action. It is by the end that a piece of wood, exposed to powerful heat, most readily ignites. The gases evolved in the substance of the timber, by the action of heat applied to its surface, expanding as they are evolved, are thrown out by the pores among the fibres at their ends, if the ends are near enough to the action to allow of this effect, with less power than may be enough to obtain vent for the inflammable gases laterally."

Mr. Hosking added that, four years ago, he applied much of what he had advocated in respect of security from fire in buildings in a new compartment of Messrs. Clowes's printing-office, and that he is now applying the same system, more fully, perhaps, in Messrs. Berens and Co.'s large stack of buildings in Cannon-street.

In the course of the discussion, Mr. Baddeley, with reference to what Mr. Braidwood had stated, "that there appears to be some chemical action between heated iron and timber, by which fire is generated at a much lower temperature than is necessary to ignite timber under ordinary circumstances," said this fact was indisputable, but no satisfactory explanation of it had yet been given. The iron, chemically speaking, was by no means essential to the result, because it had been repeatedly observed that roasted bran, coffee, malt, and other vegetable substances, as well as coke, charcoal, and other matters, after being cooled down to such an extent as to be easily handled, had, when laid together in bulk, gradually increased in temperature, until they had eventually ignited. To this phenomenon he had given the name of the accumulative property of heat, but could offer no satisfactory explanation of its cause. Mr. Marrable, at the previous meeting, supposed that the timber was converted into "touch-wood" previous to ignition, but such was not the fact. The timber assimilated more to the character of charcoal, and ignition took place in these cases at a temperature much below the igniting point of either touch-wood or charcoal under ordinary circumstances. The greatest cause of fire was candles, upwards of 4,000 fires having been thus occasioned in London since 1832. But this might have been expected, seeing that candles were almost in universal employment. The next prolific cause of fire was flues, then gas, and under these three heads alone more than half the total number of fires would be found.

Mr. Robert Rawlinson remarked he felt satisfied that the water supply in London could be made as active as in Manchester or as in any lesser town. The question of extinction of fires was most important. It was one which, sooner or later, must engage the attention of the local governing bodies of the metropolis—and must involve an improved system of water supply. It appeared there was a dormant pressure of some 150 feet—that is, 150 feet head; but, by reason of friction and exhaustion, there was little or no active head. Water under the present system would not rise from the mains more than a few feet. It was a question well deserving consideration, as to whether some means could not be adopted to make the present mains answer the purposes required. "Head," or pressure, was lost by length of main, by bends, and by any obstruction causing friction. A length of parallel main might have 150 feet head at one end, and might only have a few feet of working or active pressure for fire purposes at the other end. By the erection of what he would call towers or reservoirs of equilibrium, a more even, regular, and effective pressure might be established. The capacities of pipes varied as the squares of their diameters, and their delivery about as the square root of the head, minus friction. Water would, under the most favourable circumstances, rise through the atmosphere in a jet to a height of about two-thirds the head; that is, from 135 feet head, a jet should rise 90 feet. Friction would reduce this. Mr. Beardmore, in his valuable hydraulic tables, detailed experiments with pipes under several conditions as to diameter, length of main, and head, giving the height of jet and volume of water discharged.

IN PRESTON,
From 6-inch main, head 110 feet.

	Height.	Discharge.
With 1 jet ¾ inch	57 feet	12·5 cubic feet.
„ 1 „	64 „	14·4 „

The first being during the day, the latter during the night.

IN LANCASTER,
From 8-inch main, head 225 feet.

With one jet an inch in diameter the water rose to a height of 140 feet.

With 100 feet of common hose of 3-inch diameter, the water rose to a height of 80 feet.

Before water could be available under pressure, there must be proper fire-cocks or hydrants. Force and volume of water might be obtained in the metropolis by a proper revision and improvement of the water mains and services.

Mr. Barrett observed, that Mr. Braidwood had stated in his paper, that *carefulness* was one of the best preservatives against fire, and no doubt he was right. He feared, however, that so long as we continued to construct the interiors of our houses of a material so inflammable as timber, so long should we have to regret the annual loss of a vast amount of property, and to deplore the still greater evil of a large destruction of human life. It was remarkable that with so subtle and insidious an enemy as fire to deal with, we should still continue to provide, in the construction of our buildings, that description of *food* which was best adapted to that enemy's devouring propensities. But so it was: we were wedded to custom, and it was exceedingly difficult to break through long-established habits. The construction of fire-proof buildings was a subject that had certainly not received that degree of attention which its importance merited. Until within a comparatively recent period, very little had been attempted in that way. Some few of our more important public buildings, some of the mansions of the nobility, occasionally a warehouse, and here and there a cotton, clothing, or silk mill, had been constructed upon a fire-proof principle, namely, that known as the iron girder and brick arch system; but this system was not adapted for domestic buildings, nor was it altogether free from objections. It had been well said that the arch *never sleeps*, it was always exerting a strain upon its supports, which required to be counteracted, and although it was customary to use tie or tension rods for the purpose of resisting this lateral strain, these rods were not always employed, nor when employed were they always successful, and occasionally accidents of a most serious nature had occurred in buildings constructed upon this plan. He could instance many of these, but would refer to only one, that of a large mill in the north of England, consisting of five stories. One of the arches in the upper floor of this building had settled, or sunk, and it became necessary to reconstruct it. In doing this, sufficient care had not been taken to strut or keep apart the girders upon which the arch was supported. They, in consequence, yielded to the lateral pressure of the adjoining arches, and the whole range of girders and arches gave way, and fell to the floor below. This floor also yielded to the mass of materials thus suddenly thrown upon it, and so on, in succession, every floor gave way, the entire building becoming almost instantaneously a mass of ruins, and killing twenty persons in its fall. This method of construction could not, therefore, be looked upon as free from objection, nor was it generally applicable. What was really wanted, he apprehended to be this—a method of construction that for all ordinary purposes should be practically fire-proof; one that should combine great *simplicity* of construction with *economy*, so as not to exceed, in any great degree, the cost of a building as generally constructed; and one that should at the same time be applicable to all descriptions of buildings, particularly to those of a domestic character. The system of fire-proof construction, which he had been for many years engaged in carrying out, he believed fulfilled all these conditions or requirements.

HOUSE DECORATIONS IN ENGLAND.

THE TAPESTRIES AND WALL PAINTINGS OF THE TIME OF HENRY THE EIGHTH, QUEEN ELIZABETH, &c.

IT is known that many of the tapestries and hangings of the interiors of English houses were manufactured in Spitalfields and the adjoining neighbourhood, even before the settlement of the French refugees in that district. At an ancient date the weavers formed one of the important City companies: indeed, it is asserted by some London historians, that this was the first incorporated society in the city of London. In the reign of Henry I. they paid 16*l.* to the Crown for their immunities, and eighteen marks annually. King John, in the year 1200, disfranchised them at the instance of the mayor and citizens of London; for which *favour* (as it is called) the citizens paid the king twenty marks per annum. This difference between the citizens and weavers probably arose from some bad practices of the latter, who, by virtue of a power granted by Henry II. in the thirty-first year of his reign, were put under the inspection of the chief magistrate of London; for, amongst other articles, the king ordained, "if any man made cloth of Spanish wool mixed with English wool, the portgrave, or chief magistrate, ought to burn it."*

In the seventh year of Henry IV. this company, which originally consisted of tapestry and cloth weavers, were reinstated with their freedom, and, by Act of Parliament, put under the management and authority of the Lord Mayor and aldermen of the City. The craft of the London weavers has now, however, been changed, by the discontinuance of the use of tapestry; and their skill is confined mainly to the manufacture of silk and velvets.†

Some opinion of the exquisite richness of the ancient works in cloth may be formed by an examination of the palls still preserved by several of the City companies, some of which were exhibited at the Society of Arts, and, together with other matters, displaying the skill of the Middle Ages. Some of these are of elaborate pattern, and composed of valuable materials.

In the fifteenth century, during the great festivals, the interior of the church of St. Jacques de la Boucherie, at Paris, the tower of which has been lately restored, was ornamented by a carpet representing scenes from the romance of "The Rose," and by another called "The Love of God and Old Age." On Christmas-day and other feasts, the subjects were changed.

In Hampton Court some of the tapestry was ancient, but very rich, the lights being all gold and the shadows of different coloured silk: here some of the tapestry represents Hercules and the Hydra, the story of Abraham, the Children carrying the Twelve Stones to the River Jordan, and also some subject illustrating English battles.

A century ago Windsor Castle was furnished with a considerable quantity of tapestry and other hand-wrought woven hangings. In the great dining-room the subject of the tapestry was the history of Hero and Leander. Some of the beds were hung with chintz, and the tapestry wrought in gold and silver. In the queen's presence-chamber the tapestry represented the history of the beheading of St. Paul and the persecution of the early Christians: the design and colouring of the tapestry were in this instance distributed over the roof by paintings of the figure of Queen Catherine attended by Religion, Prudence, and Fortitude, under a curtain spread by Time and supported by zephyrs, with figures sounding the happiness of Britain. Below, Justice was shown driving away Sedition, Envy, &c.; there were also some oil paintings in this room. In the queen's audience-chamber the ceiling was also decorated with allegorical figures. There was a canopy of fine English velvet set up by Queen Anne. The tapestry was made in Coblentz, in Germany, and presented to Henry VIII. For some of the other apartments the tapestry was procured by Charles II. from Brussels. A fashionable design at this time seems to have been the seasons of the year. Blue cloth embroidered with gold and silver was also much in use at this time; also green velvet embroidered with gold. In the queen's bed-chamber was a bed of state in rich flowered velvet, made at Spitalfields in the reign of Queen Anne. At about this time bed-chambers were hung with tapestry made in Spitalfields, of such subjects as "The Hay Harvest," Dutch wakes, &c.: the beds were hung with yellow and other coloured damask, and here and there were pictures of fruit, flowers, and such like subjects. An artist called Poyntz also executed tapestries of harvest fields, &c. at Spitalfields.

Wall painting in distemper had to a certain extent been a means of adorning English dwellings, but about the reign of Henry VIII. pictures of a more substantial kind began to form a feature in the decoration of domestic edifices. The works of Holbein,—such as the picture representing the granting of the charter to the Barber Surgeons, &c.—are well known. The famous picture of the meeting of Henry VIII. with Francis I. at the "Field of the Cloth of Gold," is such an important feature in the history of English art that it must not be passed over without notice. This picture, which possesses much merit, and is evidently a faithful representation of that important event, was at one time supposed to have been the work of Holbein, but although the portraits are all well executed, it is evidently the work of some other painter. On the occasion of this royal visit, Edward Hall, the recorder of London, was ordered by Henry VIII. to proceed to France and chronicle the event: from this account we gather some notion of the extravagant extent of the decorations in use at that period.

About the year 1459, one Sir John Fastolfe died, and the inventory of his goods gives us a great insight into the house furnishing of that time. This curious document is published in the *Archæologia*.

At a short distance east of Greenwich Hospital, stood, until within a short time, a characteristic specimen of the so-called Elizabethan domestic architecture. This house, with its "bow" windows quaintly glazed, the carved brackets, cornices, and other devices, had a pleasant look from the Thames, and led the thoughts of many to those bygone days when "Queen Bess" kept court at Christmas and other times in the palace of older date than the present. The interior of this house had been little interfered with: the staircase was of good proportion, and richly adorned with varied ornamentation of the time. There was, as is the case of the houses of this period generally, a judicious arrangement for lighting, which at most parts of the day caused broad lights or shadows. The walls were partly panelled, and unfortunately the rich-coloured oak was painted white: the dining-room, which, by its peculiar proportions, looked longer than it actually was, lighted by the bow-windows towards the Thames, was hung with tapestry of very choice colour and design. The mantelpiece was handsome, and the tapestry, without any addition of pictures, common trophies of the chase, or other matters, was quite sufficient to take away from any idea of bareness, or want of furnishing. The general colour of the tapestry was a deep greenish grey: the forest trees, reaching from the floor to the ceiling, were boldly drawn. Here and there were subdued tints of sky, hunters, and dogs; silver grey colours, on branches and varieties of foreground, and borders of scroll-work. The ceiling had been gilt, and delicately emblazoned; the windows, no doubt, partly filled with coloured glass. The modern Turkey carpet was a great improvement upon the rush-covered floors of other times; and the room, when we saw it, notwithstanding the introduction of some modern furniture, presented a picture of rare harmony. Some of the other rooms in this old house were also hung with tapestry, equally interesting. It was with regret when we went past one day, and found the bow-window, carvings, and tapestry all gone.

There are still some very large and elaborately-wrought tapestries hanging on the walls of the Governors' Room in the Charter-house. One of these shows the visit of the Queen of Sheba to Solomon. The grouping of this is excellent. The figure of the queen bears a strong resemblance to Mary Stuart, and observers of these matters suggest that King Solomon was intended to represent the unfortunate Howard, who came to his end in consequence of his attachment to the cause of the Queen of Scotland. The mantel-piece in this room is of great size, and elaborately wrought into panels, which are finely painted with various subjects.

About 1666, the famous Gobelin tapestry was established, under the protection of the French Government. Designs were prepared for these works by Raffaelle, and other Italian artists.

Portraits, generally of large size, and paintings, soon after the reign of Queen Elizabeth, began to displace the wrought hangings, and we find them in such places as the Guard-room of Lambeth Palace, hung side by side, in carved gilt frames, above the wood panelling, relieved by a stone-coloured tint.

After the disuse, in a great measure, of tapestry, distemper and other paintings came much into use, and had, no doubt, to a certain extent, a good effect on English art and taste.

The old apartments, staircase, and entrance-hall of the old British Museum were characteristic examples of the art decoration of several noble houses erected in England during the reigns of William III. and Queen Anne, and which consisted of paintings in dead colour, of subjects from the heathen mythology, Roman history, architectural devices, &c. many of which were also executed under the direction of Sir James Thornhill. The smoky atmosphere of London was sadly against this kind of ornament, which soon became dingy and indistinct. Many of our readers will remember the staircase of Montague House, when time, had turned the wall pictures to a dirty brown colour, which harmonized with the two decayed and shabby-looking giraffes which used to stand there. So indistinct had these works of art become, that it needed sharp eyes to discover that the paintings at the sides represented Cæsar and his military retinue, the chiefs of the provinces he had in part subdued attending upon him, and others on their knees imploring his assistance and protection. In one compartment were the feasts and sacrifices of Bacchus. In another, the rivers Nile and Tiber were represented by gigantic figures, emblematically ornamented, thrown out by a background of landscapes and pieces of classic architecture. On the ceiling were represented Phaeton, Phœbus, Diana, Juno, and other figures.

Further on Phaeton was shown driving the sun's chariot, accompanied by the hours in the form of women. Time was represented by Saturn; Eternity, by a female figure holding a serpent, near whom was Cybele, the goddess of the earth.

After the time of Queen Anne and George I. wall-hangings went out of use; and, amongst the wealthy, engraved prints and pictures served to some extent to supply their place. The effect of the distribution of engraved prints was of so much importance to English art and English house-furnishing, that we will reserve the subject for another paper, and meanwhile observe that about forty years since the houses of the traders and middle classes, particularly in the provinces, were chiefly coloured with simple washings of rose pink, whitening, &c. sized. Many of our readers will remember the whitewash mania which periodically seized the *woman kind* (as Mr. Oldbuck calls them): those of experience knew by certain hints when these vigorous operations were likely to take place, and endeavoured without effect to put off the day when the house would be upset from top to bottom.

At this time, in the houses inhabited by the class to whom we have referred, the pictures were of a very inferior description, consisting very often of rude sporting subjects, and coloured and plain engravings of battles by sea and land. In the dwellings of those not particularly tasteful, common prints were often framed by a sort of margin of the list torn off the edges of woollen cloth tacked to the walls. There were some pictures at this time, and for several years afterwards, greatly in use, and which were very showy, and in some cases very

* The dread of the importation into London of foreign labourers, manufacturers, and raw materials, expressed in the olden times, seems extraordinary at the present day.

† Some particulars of the Spitalfields weavers will be found in a previous volume of the *Builder*.

harmonious in colour. These often consisted of Scripture subjects, naval and military trophies supported by Nelson and Wellington, and an eruption of Mount Vesuvius. These are still to be met with in many houses, particularly in the country. These pictures, generally framed in black, were produced by transferring an impression from a copper plate on thin thin paper to glass plates, in the same way as designs are transferred to pottery. The outline and shadowing of the print is soon dried upon the glass, and then the colours mixed with oil or varnish are laid in their proper places. The great bulk of coloured prints at present in use are very indifferent.

INFORMATION FOR ENGINEERS.*

ONE day, some eighteen or twenty years ago the singular spectacle might be seen by the inhabitants of a certain inland town, of a ship progressing through the streets towards its own proper element. What combination of resources was required to get the novel freight to the nearest water-way; or how then to pass it over weirs, or through locks planned with reference to canal-boats, and to launch the vessel unstrained, in the Irish Channel, we are now unable to call to mind. The story, however, would mark the character of one of those tentative efforts which Mr. Fairbairn was making at Manchester, and which were consummated at his works at Millwall, in the construction of sea-going vessels of a class involving the largest dimensions,—the largest, at least, until, on the site of other achievements, rose the frame of a ship more gigantic than the works in naval architecture of the Egyptians,—indeed, a future very "Triton among the minnows." From the iron canal-boats that one used somewhat to wonder at, in the youth of our, and the country's, naval experience, down to the last forging link in this iron chain, how wonderful is not merely the material result, but the debt which is illustrated as due to science? Mr. Fairbairn *had* need to advocate the value of abstract science and theory,—for the hearing of a country or a government which leaves the investigations to the accidental conjunction of pecuniary means and inquiring spirit; but he had none, for the information of his northern *compatriotes*, to whom his own practical illustrations of the truth which he advances, are known in many departments of engineering construction touched upon in his lectures, other than iron-ship building. The experiments on hot and cold-blast iron; those of Mr. Hodgkinson, which determined the best form of section for iron beams; and others which extended our knowledge of the properties of materials,—not to mention what is due to Mr. Fairbairn in relation to the tubular-bridges and the available resources of wrought-iron rivetted girders,—are some of the things which are scarcely referred to in the volume before us, but of which the results could be quoted in aid of his argument.

The bulk of the work we are noticing, however, gives practical information on *several* subjects, in which the author's experience is of value. There is a little want of order and sequence as the subjects stand in the book itself,—perhaps resulting from the original arrangement for lectures. But matter is there, as interesting to architects as to mechanical engineers; and there will be no imputation on the score of putting it forward as "useful information." It is valuable occasionally in these days, to get *words* from him who has known something of *acts*.

The "lectures" relate primarily to the construction of boilers and to boiler explosions, as well as to the properties of steam; and also treat of the consumption and economy of fuel, and prevention of smoke, and of iron ship-building; and one lecture is "on the necessity of incorporating with the practice of the mechanical and industrial arts a knowledge of practical science," wherein the author adds his testimony as to the contrast which there still is between the educational institutions of other countries (such as the "Conservatoire des Arts et Métiers" at Paris) and those of this country; and wherein he gives a lucid sketch of the comparative state of the manufacturing industry of Lancashire during the last and present centuries, and shows that other branches of industry have increased in a ratio similar to the increase in the cotton manufacture. In England and Scotland generally, the weekly consumption of cotton is not under 31,500 bales. There are spun 50,000,000 miles of yarn per day, a length sufficient to circumscribe the globe two thousand times: and there are woven by 250,000 power-looms, 3,551 miles of cloth per day, equal to the distance between Liverpool and New York,—or forming an annual produce of cloth that would extend over a surface in a direct line, of 1,000,000 miles. On the score of love of nature and art, and some feeling about the gain derivable from these things also, we may be excused for a word of regret for "the secluded valleys, farmhouses, and neat cottages, the beauties of a Lancashire landscape of the last generation." Yet, we not only admit that the national prosperity is associated with facts as chiefly exemplified in a certain district: but *we* must necessarily feel interested in these facts,—dependant as is our own art upon the success of commerce. Such prosperity, however, is endangered by any character of attention to science not parallel with what obtains elsewhere. The great production and consumption above indicated, results from the fact of demand by the markets of the world; and the possession of these markets is precisely for those who can supply them in the best and cheapest manner. There may be nothing new in what we here state. But the conclusion requires to be acted upon. The value of abstract science, and of what is far too often depreciated as "theory," must be felt. Present wealth, and bull-headed strength can do much for the country; but there are resources of a more valuable description. Our professions require better educational systems. Our handicraftsmen would do their work all the better for some little insight into the *rationale* of their occupations. Do the ordinary building artizans achieve simple manual skill? Do bricklayers usually know how to lay bricks? Do house-painters, as a matter of course, know how to mix and lay colours. Mr. Fairbairn says,—

> "In my opinion, every one should be taught the rudiments and higher branches of their professions upon the same principles as barristers or physicians are taught,—and with this difference only, that no man should be ineligible to practise his profession whenever he finds himself competent to the discharge of its duties;—any enactment to the contrary would militate against the freedom of labour and the employment of capital, and if carried out, would paralyse the best interests of a manufacturing and commercial community."

The reference to the "Conservatoire," at Paris, and its school for persons destined to follow industrial occupations, came home to us in our special field. Amongst the subjects of instruction there are,—"Arithmetic, elementary geography, weights and measures, statics, descriptive geometry, stone-cutting, carpentry, cabinet-makers' work, perspective, mechanics, transmission of motion, hydro-dynamics, including descriptions of instruments of all kinds; designing—plain and ornamental; machinery, and architecture." But, besides this school, used by 300 students, there is another for similar objects, entitled "Ecole Centrale des Arts et Manufactures;" and hence, as Mr. Fairbairn remarks, "arises the superior knowledge" which in France "is brought to bear upon the useful arts."

Mr. Fairbairn has entered into the subject of the nature and properties of steam and other elastic fluids at considerable length; and he sets forth Mr. Joule's new theory of heat, with the nature of other investigations, as those of Regnault on saturated steam, which he says are likely to produce "important changes in the theory and construction of the steam-engine, as well as in the mechanical application of other elastic fluids." Such improvements have reference to the use of high-pressure steam in improved engines, "probably working from 150 to 200 lbs. on the square inch."

With regard to the construction of boilers: he gives rules for calculating the strength of cylindrical boilers, and particulars as to other forms. From the results of experiments to determine the effects of temperature, he infers "that the infusion of heat into metallic substances, such as cast and wrought iron, does not produce any serious diminution of their strength up to a temperature of 600 degrees." It is true, as stated by Mr. Braidwood, in his excellent paper,* that Mr. Fairbairn found a considerable diminution of strength up to a certain degree of heat in the more fluid or finer descriptions of iron; but in the harder and stronger descriptions, "there was nearly the same increase of strength up to 600 degrees."

The effect of rivets, Mr. Fairbairn some six years ago, demonstrated was to weaken the plates,—though the double rivetting is stronger than the single. Thus:—

Assuming the strength of the plate to be...	100
The strength of a double-rivetted joint would be, after allowing for the adhesion of the surfaces of the plate.....	70
And the strength of a single-rivetted joint	56

It had been contended by many boiler-makers that the rivetted joint was necessarily stronger than the plate.

Respecting the forms of boilers, he says that the haycock, hemispherical, and waggon shapes, should be "entirely exploded,"—since "they are all bad as respects their powers of resistance." The cylindrical form with hemispherical ends, is best for strength: but there are particular advantages in favour of the cylindrical form with two internal flues. The latter form also is recommended, because it admits of alternate firing, which itself is advantageous in regard to perfect combustion and diminution of smoke. In this form, flat ends will be necessary; and these should be stiffened by gusset pieces, internally, in preference to stay bars.

If boilers were properly constructed, there would be no difficulty, and much greater economy, in employing a pressure of steam, greatly exceeding that of 5 to 20 lbs. on the square inch as adopted in manufactories. This leads to the consideration of the causes of explosions. It is to be regretted that the evidence in such cases is necessarily defective. Still it appears to Mr. Fairbairn, that many of the explanations which have been lately given, are without foundation. He classes the causes of explosions under the following heads:—

1st. Boiler explosions arising from accumulated internal pressure.
2nd. Explosions from deficiency of water.
3rd. Explosions produced from collapse.
4th. Explosions from defective construction.
5th. Explosions arising from mismanagement or ignorance.

It is clear, however, that the last head would include the chief of the others; whilst there is a cause mentioned by the author, to which considerable importance should be attached, namely, incrustation of the boiler. Incrustation, as from salt-water, is not only a serious inconvenience as regards the duration of the boiler and the economy of fuel, but it is otherwise dangerous. The deposit being an imperfect conductor, the metal may become heated even to a red-heat; and the difference of expansibility between the two substances may then lead to a separation; when the water rushing to fill the interval would generate a large quantity of highly elastic steam, and thus endanger the security of the boiler. Culpable neglect, however, appears to be the most fertile cause; for, as Mr. Fairbairn says:—

"In nine cases out of ten, a continuous increasing pressure of steam, without the means of escape, is probably the immediate cause of explosion; in some instances it arises from deficiency of water; but accidents of this kind are comparatively few in number, as we often find, in tracing the causes, that they have their origin in undue pressure, emanating from progressive accumulation of steam of great pressure and density." The construction and efficiency of the safety-valve are therefore of the greatest importance. Mr. Fairbairn has figured a form of the apparatus, which could not easily be tampered with. But the super-

* Useful Information for Engineers; being a Series of Lectures delivered to the Working Engineers of Yorkshire and Lancashire; together with a Series of Appendices, constituting the results of experiments to inquire into the strength of materials, the causes of boiler explosions, &c. By William Fairbairn, F.R.S. F.G.S. &c. London: Longman and Co.

* See p. 350, *ante*.

vision of none other than a properly trained and steady engineer is indispensable. The opinion that explosions occur from the production of *hydrogen gas*, our author believes to be erroneous. Gas indeed might be produced by the sudden introduction of a small quantity of pure water, in the case of a new boiler; but explosion would not even then occur without the presence of atmospheric air or oxygen, and of flame or a substance heated to a very high degree. Mr. Fairbairn concludes, that "we have no foundation for such a theory, nor have we the least shadow of evidence to prove the presence of hydrogen gas in a boiler." The sudden introduction of water upon incandescent plates is, however, dangerous, from the generation of highly elastic steam; and it may be doubted whether the ordinary safety-valves are fully adequate to its escape. The danger of explosions (if they may be so called) from collapse, appears to be chiefly involved in the use of the internal flues.

It is clear from Mr. Fairbairn's statements, that boiler-explosions, which are now so frequent, might generally be prevented. In the Manchester district there is an association for the prevention of such explosions, and for effecting economy in the raising and use of steam. Inspectors are appointed, and the results of the examinations are preserved.

Mr. Fairbairn's lectures on the consumption of fuel, concentration of heat, and prevention of smoke are interesting as the observations of one to whose particular professional qualifications is added the results derived from the experiments of Mr. Henry Houldsworth at Manchester, and others. In the procurement and employment of heat, there have to be considered:—

1st. The quality and properties of the fuel used.

2nd. Its treatment in the furnace, and the supply of air requisite for its combustion.

3rd. The form of boilers, and the extent of their absorbent surfaces.

4th. The concentration and economy of heat.

And, lastly, the prevention of smoke.

On all these points the author's suggestions may be perused with advantage,—though, as to prevention of smoke, after all, the opinion that more depends upon the manner of firing, than upon mere proportion of openings and grate-bars, receives corroboration.

Mr. Fairbairn, as might be expected, is an advocate for the advantages of iron as a material for ship-building, especially in regard to its greater security and durability. Indeed, though unable to rebut the evidence of the experiments as to the effect of shot upon ordinary metal plates, he seems quite indisposed to consider the results as ultimate. We find no reference to the recently constructed mortar-vessels, in which thicker plates were employed. The apprehension about oxidation, he says, has been greatly exaggerated; "for it is with iron ships, as with iron rails; when in constant use, there is little, if any appearance of oxidation." The point as to tubular bridges we do not find noticed.

It is to be regretted that some few of the tables will be at first rather puzzling to readers,—on account of errors of the press. Where tens of thousands of pounds are intended, the insertion of a decimal point makes the numbers read as tens; and in the table of Rondolet and Hodgkinson's results, a 0, moreover, is omitted, for the bewilderment of the previously not too well informed reader. But where similar figures appear in the appendix, they are given correctly.

At the end of the book are a number of useful appendices, partly reprinted from Mr. Fairbairn's papers, in the "Philosophical Transactions," and which refer to the strength of wrought-iron plates, to that of plates rivetted, to the strength of locomotive and other boilers; to particular explosions, and the means of prevention; and which contain also reports relative to the smoke nuisance, and other subjects. There are also *formulæ* for calculating the strength of plate girders, which Mr. Tate has contributed.

The work leads us to hope that extended results of Mr. Fairbairn's varied and great experience may one day be given to the world. We cordially recommend the book as instructive and valuable to a far larger class than that for the benefit of which the lectures were prepared. It is a significant fact, and one worthy of the consideration of all interested in the success of London institutions, that these lectures could be given to popular audiences.

CHURCH-BUILDING NEWS.

Peterborough.—We are asked to make it clear that the architect, under whose superintendence the new church here is being carried out, is Mr. E. Ellis, of London, while the builders are Messrs. Ellis and Son, of Peterborough.

Lincoln.—The erection, in the new cemetery, of a public monument to the officers and private soldiers of Lincolnshire who fell in the late war, is suggested in the local *Chronicle*.

Lynn.—The consecration of the new cemetery took place on Monday before last. The grounds have been laid out so as to form a promenade for the inhabitants of the town. The two chapels, connected by an archway supporting a spire; the curator's house and offices, and the reception-house for bodies, are all in the Gothic style, faced with flints and dressed with stone.

Pyrton.—The parish church of Pyrton, Oxfordshire, which has been rebuilt and enlarged, was consecrated on 24th ult. by the bishop of the diocese. The building is faced with grey flint, hammered and laid in courses, and has frequent buttresses, free-stone ashen-work, and decorated windows, high-pitched roof of stained tiles, and a bell-turret rising 8 feet, and carrying three old bells. The architect was Mr. J. H. Buckler, of Oxford. The old porch—drawn in "Skelton's Oxfordshire"—through which John Hampden and his bride, Elizabeth Symeon, of Pyrton Manor-house, passed to the altar—still stands, and is refaced with flint: all else is entirely rebuilt; but the Norman doorway and Norman chancel-arch, with the two Norman windows in the chancel, have been re-erected. The deal roof has principals every 6 feet boarded and stained. The seats, all open, and so far copies from the old ones, are of oak, with some open carved work in the chancel. The aisles are floored with Minton's red and black tiles. The stoves are underground. The church will hold 300, nearly double the old church. It has been rebuilt—the nave at a cost of nearly 1,450*l.* The chancel has been rebuilt at a cost of above 400*l.* borne jointly by the dean and chapter of Christ Church, Oxford, and the earl of Macclesfield, their lessee.

Bucknell (Oxon).—The chancel of this well-known Early English church has just undergone a renovation, under Mr. White, and the windows have been filled with glass quarries by Mr. Lavers, from the designs of the architect. The builders employed were Messrs. Coney. The nave, also, has undergone repair, under the direction of the *churchwardens*, who have taken off the plastering, and replaced it with "stucco, jointed like stone."

Shepton Mallet.—The consecration of the Shepton Mallet cemetery took place on Monday before last. The cemetery is situate in Cow-street, and comprises about four acres. It is surrounded by a stone wall, and an iron-wire fence divides the part allotted for the use of the church from that of the Dissenters. The entrance is from the new road. There are two chapels built alike, from designs by Messrs. Wainwrights and Heard. The contractors were Messrs. Fudge and Gould. The cemetery was opened for interment on the 1st of June.

Edgbaston (Birmingham).—A vestry meeting of the parishioners of Edgbaston was held on Thursday before last, to take steps for the enlargement of the parish church. Mr. J. F. Ledsam, proposed, as an amendment, that it would be preferable to erect an additional church in the parish. This amendment, however, not being approved of by the meeting, the necessary resolutions for the enlargement of the existing church were carried. It is proposed to erect an additional aisle on the side of the church nearest to the park. Plans and specifications have been prepared by Mr. Fiddian, the architect, and the work will be commenced without delay. A considerable portion of the necessary expense has been already raised by voluntary subscriptions.

Rushall.—The re-opening of Rushall Church, near Walsall, took place on Thursday in week before last. The old building has been entirely taken down except the tower, and a new church, much larger, has been erected on the site. The present edifice consists of a nave, 53 feet long, and 24 feet wide, with a height to the summit of the open roof of 39 feet. Including the chancel (21 feet) and the tower, the total length, from east to west, is 95 feet. The old church had only one transept, to the south. Another has been added, to the north, giving the church the form of a cross, the extreme width across the transepts being 65 feet. The building is in the early English style. The exterior is of limestone with dressings of Hollington stone. The interior is fitted up with framed seats of deal, varnished. The edifice has been erected from designs by Mr. James Cranston, of Birmingham, architect, by Mr. I. Highway, of Walsall, builder. The building will seat 413 persons, and half the sittings are free. The funds have been furnished by voluntary contributions. The total cost will amount to about 1,600*l.* Mr. Highway, the contractor, added a stone plinth, not in his contract, as a gift to the church.

Rawtenstall (Manchester).—Some fifteen years ago, a Methodist chapel was erected in this village, with sittings to accommodate 1,200 persons, at a cost of from four to five thousand pounds; but sectional differences having arisen amongst that body, "the Old Wesleyan Methodists," there have been erected here since, places of worship for the Association Methodists, Primitive Methodists, Unitarians, and the Church of England; and on 16th ultimo, the foundation-stone for a new "Methodist Free Church," was laid by Mrs. D. Whitehead. The building is to be 78 feet long by 54 feet wide, exclusive of the portico, and in the Corinthian style of architecture, from stone procured in the neighbourhood. Mr. Robinson, of this place, is the architect; and Mr. Walter Sidley, of Ashton-under-Line, is the contractor for the whole of the works (exclusive of the painting, ironwork, gas-fittings, and heating apparatus), for the sum of 3,900*l.*

Burnley.—The cemetery for Burnley was consecrated on Saturday before last. The whole area of the ground purchased by the local commissioners is 18 acres; but the portion at present enclosed is 12 acres. The ground is divided into three allotments—6 acres being allowed to the Church of England, 4 acres to the Dissenters, and 2 acres to the Roman Catholics. On each of these plots there is a chapel. The architect was Mr. Thomas Worthington, of Manchester. The grounds are being laid out, and the plants and shrubs supplied by Mr. Stansfield, of Todmorden; and the whole of the works have been under the superintendence of Mr. J. Brierley, surveyor to the commissioners. The grounds were to be opened for interment on 1st inst.

Leeds.—The lower portion of the great west window of the parish church is being fitted with stained glass, by Mr. Evans, of Shrewsbury, who about fifteen years since supplied the stained glass of the upper portion of the same window. There are six openings in the window, and the two centres are occupied with two groups,—the baptism of our Saviour, and Christ blessing little children.

Sheffield.—The foundation stone of a new church at Belfield has been laid. The site of the new church (St. Stephen's) is on an eminence a few yards from Belfield House. The general form of the edifice is that of a cross (without aisles), with central tower, 24 feet square, and 80 feet in height. The style is early decorated English. The length internally, from east to west, will be 95 feet, and the breadth across the transepts 68 feet 6 inches. The contractor for the masonry is Mr. James Powell; for carpentry, Messrs. Dutton and Heald: the architects are Messrs. Flockton and Son. There will be accommodation for about 500 adults and 150 children. The whole expenditure will be met by Mr. Henry Wilson, of Westbrooke, snuff manufacturer. The entire cost of land and building is estimated at upwards of 4,000*l.*

THE NEW DISTRICT CHURCH OF ST. ANDREW, LAMBETH.

THIS church is arranged with a nave and north and south aisle, a ritual chancel extending to the second bay of the arcading, and a tower at the west end of the north aisle.

Its construction is of brick, both externally and internally. The exterior is built with common grey stock bricks, with bands of grey-stone: the jambs of windows and doors, and the discharging arches, are also all of bricks, the arches being set with alternated voussoirs of red and grey brick, and the stone window-frames and tracery standing in a deep reveal: the gables have their raking sides constructed in dovetailings instead of horizontal courses, thus (A); the tympanums being occupied with circles and reversed triangles (B), constructionally formed with red bricks. The tower, which is gabled on its four sides, has each tympanum also occupied by three circles and triangles, with cinque foliated lights, also in red bricks. From the apices of these gables rises an octangular timber spire; the exterior covering of which is of slate, in two colours, laid in bands, and other pattern.

The interior (independent of the shafts of the arcading) is of brick, in two colours, constructionally arranged. The general colour is that of the white Suffolk brick, diapered or banded, and otherwise varied with red. The general walls are banded with two courses of red to five of white. The spandrils of the arches have circles and reversed triangles in red. The chancel is worked in a diapered pattern, thus (C), with the voussoirs of the window arches alternately red and white.

The parclose, dividing off the vestry at the east end of the north aisle, is of brick, in two colours, terminating in a tracery of brick and brick cornice. The reredos consists of an arcade of seven trefoil-headed arches, constructed of brick, resting upon shafts of lizard serpentine, with carved caps and bases of stone. The spandrils have carved medallions in circles of brick. Above is a horizontal band of encaustic work, capped with a brick cornice, and stone coping. The arcading will contain the Decalogue, &c. inscribed upon rolls of tin. The bricks adopted are red, and black, and a few white.

The font is banded with encaustic work.

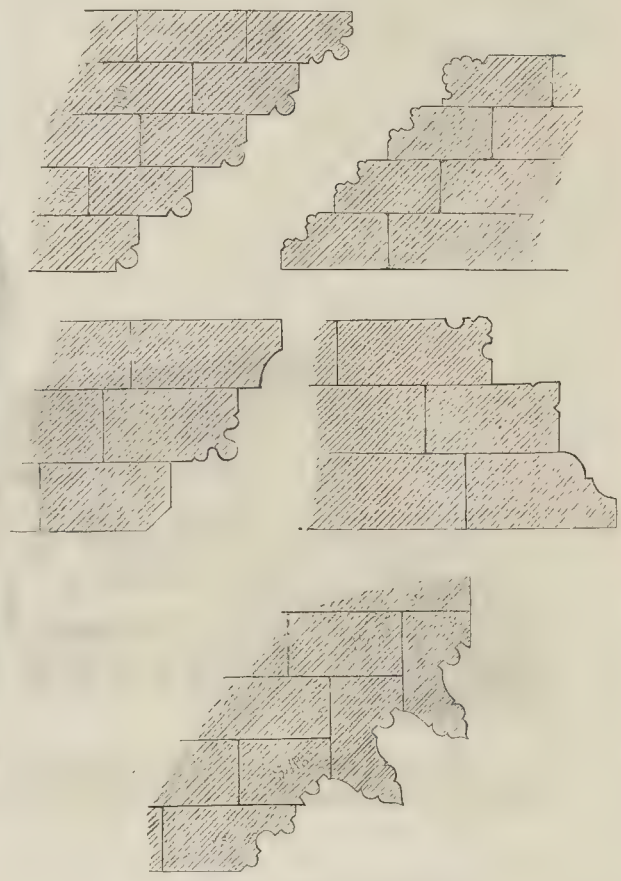
The object of this construction has been reality of application of material in constructive decoration. Its cost, independent of galleries (which are designed to be chiefly of iron, with a screen-work of floriated wrought-iron, by Skidmore, and spiral staircases of similar design), is 5,600*l.*; and it will accommodate, with the galleries, 1,100 persons. Its total cost (independent of gas and stoves) is 5,989*l.* The height of the spire is 150 feet. Mr. S. S. Teulon is the architect.

The annexed sections of brick mouldings from churches in Germany, are from the First Quarterly Report for 1855-6 of the Incorporated Society for Promoting the Building, &c. of Churches and Chapels, which also contains, as do previous reports, some observations on the use of brick in churches.*

BRICK ARCHITECTURE.

A. B. C.

Details: St. Andrew's, Lambeth.



Brick Mouldings, from Churches in Germany.

THE ILLUMINATIONS.

THERE are few days of national commemoration in England. The retention of two of the number—the 5th of November, and the 29th of May—is not due to grateful regard for the memory of certain kings of the house of Stuart. The annual ovation in fireworks, and the suspension of the leafy oak-bough, like some other customs, have survived the original significance. This year, however, the coruscations of gunpowder, and the festival of a 29th of May, were united in celebration of another starting-point, which the Royal Academy have well chosen to hail on their catalogue, as auspicious for artists. Soon may we write—

"Rich industry sits smiling on the plains,
Though "PEACE and plenty" may not tell
"A *Stuart* reigns."

For our own art, the value of international peace is obvious, spite of the inference which might otherwise be drawn from the history of certain countries, as history is written. Not long ago, we compared the appearance of London during the war with France, with its altered condition some few years after; and whether the progress during forty years has been worthy of the nation, or not, it may be noted that some of the chief undertakings in London street architecture date from the close of a long and costly war. In one respect forty years have not been misused; and in the knowledge of styles of architecture and principles, our architects surely are able to begin the peaceful victories of 1856, and leave a monumental London to mark the present reign, as the literature of the poet's day does the name of the "Stuart" queen.

What architecture now lacks is not so much professional skill, as discerning and discriminating patronage,—not patronage of the eleemosynary sort,—but that rarest of all things, the ability in those called *employers*

* The last report of the society states, "that in the year ending 31st March, 1856, the number of grants made was 100, viz.:—

For building churches	27
,, Rebuilding ditto	16
,, Enlarging &c. ditto	57

The amount granted was 10,903*l.* This is a smaller amount than in any year during the last nine years. . . . . The total cost of the works proposed is 122,55*l.* The number of additional seats to be obtained is 20,670, including 17,242 for the use of the poorer inhabitants, of which 5,156 are to be reserved for children. The committee have also to state that in the course of the year the society has paid 181 grants, amounting to 15,127*l.* to places at which works undertaken with aid offered in former years had been completed. The additional seats secured with this assistance are 28,525, including 25,204 for the use of the poorer inhabitants.

The new churches completed in the course of the year are 32
Churches rebuilt 29
Ditto enlarged, &c. 60
121."

ST. ANDREW'S DISTRICT CHURCH, LAMBETH.—MR. S. S. TEULON, ARCHITECT.

or *patrons*, to discover where it is that merit and capacity are in waiting, and how best to use these—without, by departmental and official restrictions, and unworthy suspicions, damping the flame of *art-spirit*. Treat the British architect as one following the calling of *artist*,—as one whose business it is to be something in addition to a skilful constructor, and a supervisor of accounts,—assume, moreover, that he is not necessarily otherwise than yourselves,—a man of honour and gentlemanly feeling,—and do not haggle about the reward which you give for learning and professional qualifications,—and we doubt not he will respond to your appeal.

Truly, however, are we compelled to say, that by the Government such progress towards good national architecture and grand public works, was not inaugurated on Thursday, the 29th of May, 1856. What was done in the way of fireworks, indeed, was successful; for we have never seen greater beauty of colour than that displayed for nearly two hours on the night of the commemoration. But in the illumination, the Government standard of art was of the lowest order. The public offices—"imposing," certainly—in taste were beaten by clubs, companies, theatres, city buildings, and even by shops and private houses. Some of the houses, indeed, with chandeliers lighted, and candelabra in the windows, succeeded in producing an effect which, though by simple means, was both novel and tasteful. Seldom had an Asmodeus so good a chance of seeing what of art there is in people's abodes,—and for us, the critical survey was not wholly valueless. What, however, could be expected from the manner in which the Government ordered their part of the display? We are told, and the statement is borne out by what was said by one of the ministers, that things were directed to be done *as on former occasions*. That is to say, the precedent of the most signally tasteless periods of British art was to be unreasoningly followed. Were there no artist-architects in all London, to whom could have been entrusted the designs, and the direction of lamp-men and gas-men? Surely, no such artists could have been engaged,—or they were restricted in such manner as led to little difference of result. It was the show of one night,—it was a mere illumination; but no Government can set to work a thousand or so of artizans on *any* old precedent, for any object, without doing them, themselves, the public eye and taste, and as an ultimate result, the national credit and position, a positive, though possibly a not immediately perceptible, injury. We are making no peculiar claims as to the power and office of *art*, which we might well do in such a case, at another time. It is fatal to everything that concerns the nation,—this going back, in any particular. It is pernicious, or rather destructive, to *mind*.

Somehow, in things connected with architecture, the country is always working *under* the mark of existing professional ability. For everything that is set up to deface our streets, the influential part of the public press is ready to discredit "our architects," who have so far, as the nearly invariable rule, had no voice in the matter.

We doubt not there is many an artist amongst us, who, with proper time allotted, would have displayed taste in the illuminations. Could the valuable library of the Government's own Department of Art suggest nothing which might have been improved upon? Was the Department ever spoken with upon the subject? Are the differences of scale between parts of the same design; the Brobdignagian crowns, and painted-tin flags, and the vile drawing and modelling of the various devices, to be taken as the result of expenditure on art of late years. Moreover, if we may ask questions at the Circumlocution Office, we *want to know* what is meant by Government illuminations of buildings. We confess (only of course our opinion goes for nothing against the Barnacles') that to us the intention should seem to be simply to *illuminate* the buildings. At Rome, they light up the church of St. Peter by small lamps following the lines of the architecture. The same thing was tried one year at the Travellers' Club. It was sparingly attempted at the Horse Guards. The most effective application of light for ordinary illuminations, is that which has been made by Sir Charles Barry, at the Reform and Travellers' Clubs,—and which Mr. Sydney Smirke appears to have followed out at the Carlton Club. At least, it follows that several modes of lighting up the architecture of a building might be devised,—productive of an effect far superior to that gained in the chief of the Government offices by the lamp-man's designs. Why, in the inauguration of Peace, was the noble architecture of St. Paul's left in darkness? Why was Trafalgar-square left barren? Why was no attempt made to combine the beauty of light with the rich decoration of the Houses of Parliament? And why were the steeples and columns of the metropolis equally unattended to? It appears to us that much better effect might have been produced by some of the means referred to, than by the plan of covering the fronts of buildings with screens and scaffoldings. Boards, poles, and pipes there were by day; and there were tasteless devices by night,—at least where these could be lighted. The *architecture* was screened off. *Lucus a non lucendo*. Surely there was dead wall somewhere in the town, that might have answered the Government purpose,—and left enough light in their rooms, to see the colour of red tape, by day.

The principle adopted in the lighting at Hyde-park corner was entirely different to that which we have noticed, and here the architecture appeared to good effect; and the bas-relief at the top was beautifully defined. We imagine that the buildings in the City were better managed; but it was not possible to get there from the other end of the town, and the newspapers give us little information. The Mansion-house, under Mr. Bunning's hands, no doubt did credit to the City for better judgment on such occasions; the Royal Exchange had lamps twined spirally round the columns, and its illuminated pediment must have appeared very beautiful; the India House also had its lights disposed in architectonic character, the pediment having scroll work, and festoons ran along the whole upper part of the *façade*. Whilst, in the western part of London, the very home of art—the National Gallery—was far from satisfactory. Some of the transparencies exhibited, as those by Messrs. Charlton, Allen, and Co. of Mount-street, and Messrs. Day and Son, Lincoln's-inn-fields, were creditable as pictures.

HOME-MADE GAS.—A baker of Herron-gate, near Brentwood, says a country paper, has constructed on his premises a gasometer, on a new principle, which occupies a space of about 6 feet square. He has fourteen lights, and the expense per night, burning from 7 to 12 o'clock, including interest of money for cost of erection—less than 20*l*.—is 2½*d*.

PROVINCIAL NEWS.

Horncastle.—The acoustic properties of the new Corn Exchange here are said by the *Lincolnshire Chronicle* to be very defective, the reverberation of the voice of each speaker, at a recent public meeting held in it, having been so great as to render the words nearly unintelligible except to those in the immediate vicinity of the speaker. One main purpose of the building, it is added, was the supply of a good public room for large meetings. It is hoped the architect will be able to remedy the defect.

Norwich.—The new Free Library is now roofed in, and will be opened in the course of the autumn.

Nantwich.—The foundation of a new Grammar School, for the education of the middle classes, was laid at Nantwich, a week or two since, by Mr. G. F. Wilbraham, at whose personal cost it is to be erected and endowed.

Chester.—"We are informed," says the local *Chronicle*, "that some most extraordinary discoveries have been made relative to the plans and estimates for the construction of the intended workhouse, for the Boughton Union, and that the discussions on the subject at the last meeting were remarkable. If what was then alleged is capable of proof, the steps taken were doubtlessly right; and if all that transpired as to the compilation of the plans can be sustained, there is much reason for animadversion. As the board does not allow the presence of the press, we are not in a position to speak of what occurred with safety or correctness. When there is a studied secrecy, the community has a right to suspect, and will believe the worst, as to motives and acts."

Liverpool.—The town council, at a recent meeting, decided to adopt a recommendation of the Improvement Committee, to purchase 1,500 square yards of land in Shaw's Brow, for 5,550*l*. as a site for the erection of a new library and museum. This site is in the immediate vicinity of St. George's-hall.——Workmen have been making preparations, according to the local *Journal*, for placing the sculptured finials on the dwarf granite pillars or gate-posts of the parapet surrounding St. George's-hall. These finials, which are to be twelve in number, are representations of Nereiads and Neptune's trident-bearers, arranged in pairs at each gate. Each of these figures is represented as rising out of the wave, and grasping a cornucopia surmounting fruit: on the upper end is a cluster of foliage, on the leaves of which the lantern rests. The heads and trunks of the figures are of heroic size, standing about 7½ feet high. They have been modelled and sculptured by Mr. G. Nicholl, of London, in fine Portland stone. Each of the figures is of one block, and in its finished state weighs about a ton and a half. The white colour of the sculptures contrasts with the red hue of the granite pillars on which they are placed.

Manchester.—The new circular room at the Market-street end of the Royal Exchange is about to be opened to subscribers. A gallery runs round the end, which will be devoted to reading, the newspapers being placed on stands and tables. The open floor below will be entirely devoted to its legitimate use as an Exchange. The gallery is reached by a wide and light open iron staircase. Five large additional self-ventilating lights are being inserted in the groinings, making nine in all, one in the ceiling of each groined recess. There were at first but four of these lights, but it was discovered that they caused awkward shadows, and hence the increased number. There will also be lights under the gallery. The windows are filled with plate glass from St. Helen's.——A foolish strike, says the local *Courier*, amongst the bricksetters and their labourers employed at the Manchester New Workhouse, at Crumpsall, which retarded the progress of the works, has terminated, but not quite voluntarily on the part of the workmen. The strike was not one of the ordinary kind between masters and servants, but arose from a ridiculous dispute between the bricksetters and their labourers, and had no reference to the rate of payment, but arose from the employment of a bricksetter who was obnoxious to a labourers' union in Blackley. The delay in the works caused by the dispute was found to be so inconvenient, that the Manchester Board of Guardians resolved to support the contractors, Messrs. Bellhouse and Sons, in compelling the resumption of work, under the protection of a strong body of county constabulary stationed on the ground: other labourers were accordingly procured, and the buildings are proceeding.

Sheffield.—Lord Wharncliffe has caused several improvements to be carried out at Wortley. A gasometer has been erected on his Lordship's premises, and mains laid into the village, where the Wortley Arms and several other dwellings have already been lighted up. His Lordship has also given instructions for some public lamps to be erected in the village. Arrangements are being carried out, likewise under his Lordship's directions, for bringing to the village an ample supply of water.

Kelso.—The Corn Exchange here is now completed and opened. The building, as described by the local *Chronicle*, is in the Old English style of architecture, and with its spires and gilded vanes, is said to be an ornament to the town. The interior of the Exchange is an oblong square, extending 105 feet in length by 52 feet in breadth; and, deducting 5½ feet as the space occupied by the stalls all around, there remains an area of 91 feet by 41 feet, for the use of the public,—equivalent to 415 square yards, and capable of containing with ease 1,200 people. The Exchange will be rendered available, under certain conditions, for holding public meetings, and for lectures, concerts, &c. for the last of which it is suited, having a gallery extending the whole breadth of the interior for the accommodation of an orchestra.

PUTNEY BRIDGES.

THE conservance of the Thames is supposed to be in the Corporation of London, which enjoys an arbitrary rule from Gravesend to Staines. Its conservation concerns every citizen, since on free navigation and proper regulation depends much of our commercial prosperity, as well as the health of the inhabitants. Some wants may be difficult to supply: there is, however, one very simple matter that comes under their jurisdiction, and that is the due allocation of bridges;—first, that the design is a good one; next, that the position is right; and lastly, that it obstructs no way: yet it would seem that little, if any, attention has ever been paid to these things, much as they concern the free intercourse both on the land and water.

Old Putney-bridge has long been the standing reproach of our *pontifical* corporation: it is a sort of mole to obstruct navigation, a relique of antiquity little adapted to vessels and boats such as now navigate the Thames: being about 700 feet long, it has no fewer than twenty-five pile buttresses, between most of which there is but 15 feet of space. Scarce a beam of its structure but has been drawn and replaced so often, that it is all at jars: still, being the property of a private company, the patchwork is kept together so as to pay a dividend, the directory making it a point to discourage traffic on the Lord's day, by charging *double tolls!* That is, however, their affair. Railways find that it pays better to encourage the multitude by charging *less on Sunday*.

Another bridge has been lately constructed close to the old one, but diverging from it at an angle of 10 degrees: it is built on the new principle of the tube, with buttresses of concrete compacted in iron cylinders, having four columns on each pier: the design might have been handsome, and, at a comparatively small increased expense, it would have served the purpose of an aqueduct, a foot way, and also a carriage-way; yet this bridge which *mars the view* of the river, and the aspect of the hamlets of both Fulham and Putney, is dedicated solely to the object of an aqueduct! The steamers plying up or down had formerly difficulty enough to steer clear of the buttress beams: they have now another breaker ahead in the aqueduct piers. Having cleared Scylla, Charybdis is at hand: there is scarce room in the old bridge water-way for a Richmond boat: our little skiff, on steaming up, hugged close on the timber; then stopped and sidled through.

What on earth were the corporation about

when they tolerated the erection of a second bridge alongside the old one? What were the proprietors of crank shares in Old Putney-bridge dreaming of, when they omitted, or forgot, or refused to agree with the Water Company, to erect a more solid and more permanent structure, that *might have served for all purposes?* Where was their discretion? Where was their taste? The genius of *uncivil* engineering could hardly produce a more hideous example of pontification, than the shaky, wavy, crooked old Putney! It strikes off obliquely from the Fulham-bank to the last-piled interval, where it turns again to the right, to avoid the churchyard, and to open obliquely on the main street of Putney. Then comes the new bridge—no, the aqueduct on stilts—which has no regular form, nor has it any symmetry!

A young Todleben offers a remedy. First, sink iron cylinders alongside those of the aqueduct, and exactly corresponding in appearance: let the buttresses be wider and stronger, if required for carriage traffic: connect the framework of another tubular span (a more massive one), with that now sustaining the pipes: let the new one be used for carriages, the other for foot passengers. There would be no great difficulty in designing a graceful finish, in form and ornamentation.

The new bridge has one advantage: it crosses the stream at right angles, and leads direct from Putney High-street, nearly to Fulham church, but clear of it. It has, moreover, between piers, open spaces of about 70 feet each. Let the companies at loggerheads, lay their bridges and differences together, the sum will be, great public accommodation, scenic improvement of this beautiful reach of the river, and the clearance of the deformed old wooden piles, which have been the occasion of many a loss and calamity. At present the wrong bridge is in the right place, whilst the wrong place is occupied by a hedge-carpenter's pontoon, that never was right; both together presenting, to foreign artists and engineers who visit London, the sublimation of absurdity.

THE WORKING EXPENSES OF RAILWAYS.

INSTITUTION OF CIVIL ENGINEERS.

AT a meeting, on the 20th of May, the proceedings of the evening were commenced by reading a reply of Mr. Robert Stephenson, M.P. president, to observations in the Second Report of the Postmaster-General, to the House of Commons, dated 30th January, 1856. This reply has been printed *in extenso*.

The paper read (in abstract) was "On the Improvement of Railway Locomotive Stock, and the Reduction of the Working Expenses," by Mr. D. K. Clark.

It was stated that the design of the paper was to discuss the locomotive engine physiologically; to consider some departments of practice which appeared to be in a transition state; to endeavour to indicate how far, in some respects, the locomotive, even in its present advanced state of existence, was susceptible of improvement; and to form some estimate of the pecuniary advantages thus derivable. The three elements of the locomotive,—the boiler, the engine, and the carriage,—were considered successively.

With respect to the boiler, the fuels in use, in this country, were stated to be coke and coal. The author had in a previous paper shown, by mechanical analysis, that the combustion of coke in the locomotive was practically complete; and he adduced, in corroboration, the results of a subsequent chemical analysis of the gases of combustion, by M. Ebelmen, in the engines of the Paris and Lyons Railway.

The author adduced the results of trials made by him, in 1850—51, and by Messrs. Woods and Marshall, in 1854, which showed, that in the prevailing type of boilers, the evaporative powers of good coal and good coke were as 2 to 3; coal doing mechanically just two-thirds of the duty of coke. He proceeded to give an account of recent trials made by him, in the beginning of this year, with the "Canute," on the London and South-Western Railway, one of Beattie's passenger-locomotives, planned expressly for the combustion of coal, and the heating of the feed-water. It was argued that, on Beattie's system, an economy of 36 per cent. of coal was effected in comparison with ordinary engines burning coal; and that this system was on a footing of equality with coke-burning engines, in evaporative efficiency of fuel, weight for weight.

The water supplied to locomotive-boilers was stated to be generally impure, mechanically, or chemically, and to affect very injuriously the durability of the engine, reducing, in one case, the durability of the tubes from eight or nine years, with soft water, to three years, with hard water. The loss by priming with bad water was shown to be considerable. It was concluded that the water supplied to locomotives should be previously purified, chemically and mechanically, in large tanks, or reservoirs.

With respect to the engine proper, the author maintained that the link-motion was a sufficient and satisfactory expansion-gear; that its merits were not appreciated; and that in the ordinary practice of expansive working in locomotives, the steam was not cut off earlier that at 40 to 50 per cent. of the stroke; but that, with proper arrangements, it might be cut off at one-fifth. He argued also that the steam should be superheated, and the cylinders perfectly protected; and that the slide-valves should be balanced.

The following was an abstract of the successive items of economy of working charges, separately estimated:—

By the successful substitution of coal for coke	33 per cent.
By efficiently heating the feed-water	15 „
By the use of pure feed-water	10 „
By protecting the cylinders, and superheating the steam	10 „
By increased expansive working	25 „
By the correct equilibration of the engine	10 „

The gross resulting economy would then be represented, not, of course, by the direct sum of these per centages, but by the result of the successive reductions obtainable by their successive application. Thus, after making the first deduction of 33 per cent. there would remain a balance of 67 per cent. to be operated upon for the second deduction, which was 15 per cent.; but 15 per cent. of 67 was equivalent to 10 per cent. of the original quantity, and would leave 67 — 10 = 57 per cent.: the third deduction to be made was 10 per cent. of 57, or 5·7 per cent. of the original, leaving 51·3 per cent. as the balance to be operated upon for the next deduction. Continuing the operation in this manner, the gross resulting economy would amount to about 70 per cent. of the existing average working charges. Allowing for contingencies in the estimate, 50 per cent. was adopted by the author as the probable average saving that might be effected in the consumption of fuel, and generally in the working charges of the locomotive stock of the railways of the United Kingdom.

The average apportionment of the receipts on the railways of this country was stated to be as follows, on the authority of Mr. Chattaway:—

Working charges	46½ per cent.
Interest on guaranteed capital	28½ „
Dividends in respect of ordinary shares	25 „
Gross receipts	100

Also, that the average cost of locomotive power was 29·3 per cent. of the receipts; consequently, the saving, estimated by the author, would be one-half of this, or 15 per cent. of the receipts, and would raise the available dividends from 25 to 40 per cent. of the receipts; or from the average on ordinary share capital, stated by Mr. Chattaway as 3·14 per cent. to a dividend of 5 per cent. per annum.

The president's *conversazione* on the 27th was attended by a very large number of persons: there was as usual a good collection of models and works of art. We may mention that Mr. Charles Manby has resigned the office of secretary, which he has long held with advantage to the Institution; and that Mr. James Forrest has been appointed in his stead. This has caused a vacancy at the Society of Arts, to fill which candidates have been advertised for.

THE THEATRE.

The Princess's.—As a graceful act on the part of Mr. Charles Kean, we may be excused, perhaps, for mentioning that he has recently presented to the conductor of this journal a very elegant vase of silver, 12 inches high, inscribed as follows:—

"To George Godwin, F.R.S. from Charles Kean, as a slight token of the high appreciation entertained for valuable assistance in architectural details, while carrying out the design of placing before the public correct historical illustrations of "Macbeth," "Henry VIII." and "The Winter's Tale," produced in the years 1853, 1855, 1856, at the Royal Princess's Theatre, under Mr. CHARLES KEAN'S direction.—May, 1856."

The *Winter's Tale* continues to fill the house nightly to the ceiling.

The Adelphi.—Mr. Webster intends to build his new theatre in iron; but it is not correct, as stated in some of the papers, that the works are already being proceeded with. The plans are not yet matured. On the 4th inst. the well-known Adelphi piece *Vanderdecken* was revived there for the benefit of Madame Celeste, when that versatile and very admirable actress played the part made famous by poor O. Smith.

Paris.—A theatre of large size is being built, by M. Charpentier, in the Place de Châtelet, to hold 6,000 persons. It is the speculation of a banker, we are told, and will be a fine thing as far as construction goes.

Ventilation.—It would be well if, taking advantage of opportunities, managers of places of amusement would endeavour to improve the almost universal fault of want of *adequate* means of exit for the foul air generated in them. Science would surely show how this could be done, without creating "draughts." Managers, as caterers for the public, are morally bound to provide that most necessary of all things,—air that *may* be breathed; so as to prevent their audiences undergoing a *peine forte et dure* while passing the ordeal of a modern "entertainment." Yet scarcely is this deemed worthy of passing notice; and the atmosphere is, generally speaking, in such places, so compounded of bad gases, as not only to render respiration difficult, but to inflict a certain and ineradicable injury on the audience. The insertion in your columns of this universally-shared remonstrance cannot fail to draw the attention of those to the subject whose business and whose *interest* it is to effect the remedy. Improvement, it is true, should not stop here, as a visit to the Parisian theatres, &c. most amply testifies; but assuredly it is the first and all-important desideratum to achieve; and till it be obtained, may the public, and their organ, the fourth estate, raise their voice in protestation against an evil unworthy the scientific progression of this nineteenth century.—PUBLICOLA.

WELLINGTON COLLEGE, NEAR SANDHURST.

ON Monday the 2nd, her Majesty laid the first stone of the intended college in honour of the late Duke of Wellington. A description of the proposed building, with view and plan, will be found at p. 85 of our present volume.

In preparing for the ceremonial, advantage was taken of the permanent scaffolding raised for the erection of the building, the exterior poles of which formed the main supports for the seats that were raised for the general company: of these five descending from the passage-way at the back towards the interior, like an amphitheatre, covered a portion of the foundations of the building, but leaving the arcade piers of the two quadrangles entirely clear in front. The base stories of these piers being fixed in their places, defined the interior lines of these quadrangles, those adjoining the chief corner-stone being carried two feet above the general base line, for the purpose of showing the alternate bright red brick and box stone construction of the building. The front seats were elevated five feet from the ground, so as to prevent the guards, who lined the enclosure, from interrupting the view therefrom. In decorating the front and supports of the awning covering the seats, red was used as the ground colour, the front of the lower seat giving a red line, under which a lining of blue gave a base to the whole, and at the same time a foil for the scarlet tunics of the grenadiers. The supports were lightened by spiral fillets of white, and connected above with a valance of red. At regular distances the supports were topped by flags, placed in groups of three, two being sloped and looped up, while the centre one, slightly elevated, hung freely on its staff. The intermediate supports were decorated with masses of wild broom and furze, whose yellow bloom and

green leaves, bound with laurel and red cloth festoons, made a pleasing contrast. Over the passage to the Queen's terrace, on the north front, a bust of the Great Duke was placed on a covered pedestal, and encircled with wreathed laurel and bays: above, on either side, were grouped flags as on the other sides of the quadrangle.

The supporting scaffolding, that carried the windlass and men that lowered the stones, was decorated to agree with the other portions: a ground colour of red, bound with red and white twisted cord, drooped in festoons and tassels to the flat parts, edged with a full valance looped up, the upper angles having their effect heightened by two sloped Union flags looped up; while, in the angle between each pair, a Royal Standard freely spread its bright colours on the breeze. The massive timbers that carried the whole were covered with the prevailing colour, round which twined bands of white, alternately with wreaths of laurel and bay, the general effect being backed by the tall masts of the scaffolding, each of which was graced with standards, flags, and banners, in every variety of application, producing a general effect that was much admired by the Court and Governors. Her Majesty and Prince Albert personally expressed to the architect, Mr. Shaw, their approval of the decorations and arrangements.

The whole of the general arrangements and decorations were superintended by the assistant-architect, Mr. Thomas Renton.

THE OXFORD ARCHITECTURAL SOCIETY.

At the fifth meeting, held on the 21st ult., Mr. Street read a paper on German Pointed Architecture. He entered at considerable length into the question of the date of German buildings, and showed that they were always much behind both those of France and England in any new development. A comparison of dates, he proved, must at once set aside any claims of Germany to the invention of the Pointed style. For whilst buildings whose whole character was directly derived from Romanesque or Lombard works were being built in the one country, Amiens and Westminster, and a host of churches of similar style, were rising in the other. He then proceeded to show the peculiarity of the ground plans of German churches. Each country affected a peculiar arrangement of the ground plan. In France the apsis was brought to perfection: in England the square east end was all but universal; whilst, in Germany, though both these plans were also found, the common plans were the transverse-triapsal or the parallel triapsal. The attempts at imitation of the French Chevet were very rare, and Cologne Cathedral, whose plan is obviously borrowed from France, and entirely unlike the German type, is a unique example of this arrangement really well carried out in a German church. He then entered into the question of window tracery, and exhibited a large number of drawings of German windows of the most remarkable character, among which those from the cathedral at Minden were, perhaps, the most curious.

On the 26th ult. the members of the society visited Coventry, and examined especially the site of the ancient cathedral. A writer in the local *Standard* says,—"The cathedral occupied a place called Hill-close, on a declivity from the north side of Saint Michael's and Trinity church-yards, and ran parallel to and at no great distance from Trinity Church, its south door opening into Trinity Church-yard. This grand edifice was built after the model of the cathedral at Lichfield, and was equally beautiful; and as Lichfield has the transept in the centre, similar to Coventry, and is 138 yards in length, the cathedral at Coventry probably reached from the entrance of the Blue-coat School to Mr. Pearman's house in Prior-row, as it is stated that the house built by the Rev. Mr. Bryan (now Mr. Gulson's), was on the cross aisles, and near the great central spire. All historians remark the grandeur of effect that must have been produced by the assemblage of three such fine churches, when the cathedral was standing.

This noble cathedral was levelled to the ground by Henry VIII. at the time he destroyed the neighbouring monasteries, after standing nearly 500 years. Only one fragment remains (now worked into a dwelling-house) of this once fine, costly, and majestic building. The solemn and religious processions of the monks along its long and richly-adorned aisles have long ceased, and its glory remains in its reminiscences."

"In 1649 the city granted part of the site of the cathedral to John Bryan, vicar of Trinity Church, who erected a house over against one of the steeples of the western front, near or over which passed the cross aisles of the original church: he also erected some dwelling-houses on the foundations of the two steeples, which were originally on both sides of the entrance from the Butcher-row, cleared the grounds of the ruins, and converted it into a garden. About the same time another part of the ruins was levelled, in the removal of which was discovered a great abundance of carved and gilt stones: of this was first formed a bowling-alley, and afterwards a garden: the east end of the cathedral had been previously converted into gardens and orchards, and the eastern wall of one of them is now standing on the original foundation of the chancel."

COMPETITIONS.

Liverpool Free Library.—The committee have just completed the first stage in the proceedings. There were 115 sets of sketches. These were hung in a suite of well-lighted rooms, the key of which was kept by the chief librarian, and to which no person, we are told, has had access except the members of the committee and the corporation architect called in to advise and assist. A schedule was prepared under the direction of the latter gentleman, giving, in a tabular form, the area respectively covered by the buildings in each design, the area of accommodation in each department, the mode of lighting, &c. so as to facilitate the comparison of the plans. The committee then went over the plans separately, minuting down their observations on each, and met to compare notes from time to time. Finally, the committee's observations were compared with those of the professional men (the chairman and the corporation architect). The result has been that sixteen designs have been unanimously selected, any of which the committee think would answer their purpose, with such modifications as any plan would have to undergo before being finally carried out. The authors of these sixteen will now be called on to mature and complete their designs for the final competition. The other designs are being *returned*. We must confess to some misgivings as to the goodness of the course which is being pursued, although we have none as to the honest intentions of the committee. It has a hole-and-corner aspect, which we are not prepared at this moment to recommend for imitation.

Scarborough Cemetery Chapels.—On the 23rd ult. the premiums were awarded as follow: First, to Messrs. Pritchett and Sons, architects, Darlington; and second, to Messrs. Johnson and Haswell, architects, Newcastle. Upwards of twenty sets of plans were sent in for competition, and the Board have expressed a favourable opinion of their merits generally.

DRAUGHTS IN CHURCHES.

All who have studied the matter will agree with Mr. Rosser in his remarks with reference to the importance of guarding the air under the roof surface from draught, and from change of temperature. But, in order to do this effectually, it is *essential* that there should be not only the double substance of covering, but also a *space* of *air* between the two substances. Even double boarding and asphalte are not properly effectual without two inches at the least of air between the outer covering and the inner lining. In laying a slated roof, the best possible plan is to fill in the spaces between the slate battens with *plastering lath*, and *flush up* the space with coarse plastering mortar, before the slating is put on. In a tiled roof, *torching* from within answers the same purpose. The rafters may then be lined beneath with boarding, or the boarding may be filled in between the rafters, care being taken to leave the requisite space between it and the covering.

W. W.

APPROACHES TO HYDE PARK FROM BROMPTON.

Under the above title, in the number of the *Builder* for May 24th, there is a curious statement from one who signs himself "Brompton Square." It is really marvellous to see how a self-interested party can distort the plainest facts. A cursory reader might imagine that an injustice had been done by the very parties upon whom, for the second time, a gross injury is now attempted.

It is more than inferred that the owners of the houses lately erected on Lord Listowel's two fields have deprived the inhabitants of Brompton-square of some long existing right or privilege, whereas the exact contrary is the fact. Handsome and valuable houses were erected on Lord Listowel's property, with the express understanding that his Lordship conveyed to the owners thereof all the rights and privileges that he had himself enjoyed; the greatest, and what constitutes the real charm of this locality, being its privacy, and the absence of any thoroughfare. Why, therefore, is our property, for which we have paid so high a price, to be depreciated, and a most serious injury inflicted upon us, for the purpose of enhancing the value of the property of others who have not contributed one farthing towards the large expenditure incurred by Mr. Elger in the vast public improvements he has effected in this neighbourhood?

A thoroughfare through our property would doubtless enhance the value of the houses in Brompton-square, which were erected long before the remotest idea of such a contingent advantage; but the occupiers of them have been deprived of no right; and, so far from their being in a worse position now than at the formation of that square, it is well known that two roads have recently been made by the Crown, a short distance westward of it, leading direct from the most valuable and populous parts of Brompton to Hyde Park and Kensington Gardens, independently of the thoroughfare which has long existed by Rawstone-street. The owners of property in Prince's-terrace, Rutland-gate, and Ennismore-place, have too much confidence in the justice of their cause, in the English feeling of fair play, to fear that their property is to be so seriously depreciated, because it may suit the purpose of one or two well-known interested persons to set on foot an agitation, the object of which is to enhance the value of their own property, at the sacrifice of that of many others whose simple offence is that they desire to live quietly and enjoy their own rights.

A FREEHOLDER OF PRINCES-TERRACE.

*** We give place in fairness to this the first of two replies received; but we must add that the letter in question was written by one who we believe has no more *personal* interest in the matter than we ourselves have in our advocacy, now of long standing, of the endeavour to obtain this much-needed opening to the Kensington-road from the Brompton-road. Those owners of houses in Prince's-terrace who are opposed to it must not imagine it is merely a question between them and the owners of Brompton-square: it is a question between them and the public, and on that ground alone we have urged it. We doubt altogether the supposed injury which would result to them. The arrangement of the thoroughfares of a great metropolis is a matter of public concern; and if it were not that self-interest itself, taught by experience, usually renders interference in this respect unnecessary, it would be the duty of the legislature to pass such enactments as would obtain the most direct means of communications for the community at large. Let us imagine the condition of London, or any large town, if the owner of each separate plot of land, on finishing his street, had built a wall at the end of it, and stood upon his "rights."

BARN FLOORS.

During the last two years I have laid down several barn-floors with asphalte (as described by Mr. Greaves) in this county. I find, however, that they do not answer their purpose in the most important point, viz. *they retain the moisture*, and consequently destroy the grain. In all other points, I can fully confirm Mr. Greaves's testimony.

Could any of your correspondents suggest any means to remove the moisture, the floors would be far preferable to any others for the purposes named.

I have thought that if brick or stone drains were put under the floors, at about 4 feet apart, and 12 inches sectional square, the spaces filled with broken brick or stone, and the blocks of asphalte laid thereon, with the coating run over it, that might prevent dampness. In the barn-floors that I have had laid down, I put 9 inches of broken brick and stone (*but no drains*). Still, the moisture rises, and the tenant is obliged to have a sheet for the corn to lie upon. If this could be remedied, it would be of great service both to landowners and their tenants.

G. D. POCKLINGTON.

STRIKE OF SHIPWRIGHTS AT LIMEHOUSE.

An unfortunate dispute has occurred in consequence of an endeavour of Messrs. Young, Son, and Magnay, so to arrange their times of work and refreshment as to enable their workmen to leave off half an hour sooner in the evening, and even to diminish their time of real labour by some ten minutes, without altering or diminishing the amount of their day's wages. Simply, one would imagine, because an arrangement so promotive of the improvement, recreation, and welfare of the men has originated with the masters, and assumed the shape of a stiff-looking "notice" that it was about to be done without consulting the workmen themselves, a determination has been come to by the men, and by a meeting assuming to represent "the whole of the shipwrights of the port of London," to resist, as an infringement, not of habits and customs, but of rights and privileges, the endeavours of Messrs. Young and Magnay to economise and arrange the hours of labour to the advantage of both parties. The gist of the intended change appears to be the throwing of a twenty minutes' interval, or what is called "allowance," between breakfast and early dinner, into the breakfast *hour*, in place of *half* hour, so as to enable many of the men to enjoy their comfortable breakfast meal at home with their families, instead of at a public-house.

The men are not content to be deprived of this fourth meal or "allowance" between breakfast and tea, which tea, by the way, by the new arrangement, they would also have the opportunity of enjoying at home as well as their supper, in consequence of the half hour for tea being thrown a little forward to, and cut off the *end* of, the day's labour, instead of coming in the midst of it, like the rest of these many intervals, allowed, as they are, nowhere but in London, and really not requisite for health or even rest in a day's work of only nine and a half hours: indeed, medical men insist that two hearty meals a day are sufficient for any one, far less four during the hours of work, besides, probably, one before going to work, and another after leaving it, or, in all, six meals a day! One object of the employers, in the present instance, appears to be the economisation of time; for these many intervals, as may readily be conceived, involve a much greater loss to masters and men than the mere measured minutes to which only they nominally extend. But keeping in view the immense advantage to the working man (so often insisted on in his behalf) of being able to throw down his tools *as early in the evening as possible*, we really cannot see any other reason why they have not regarded this as a positive *boon*, than simply because it did not emanate from themselves.

HOLYHEAD HARBOUR AND BREAKWATERS.

THE works now in progress at Holyhead, under the direction of Mr. J. M. Rendel, the engineer, are proceeding with activity, and will comprise a harbour of upwards of 300 acres of deep water, and a roadstead eastward of this, comprising from 300 to 400 acres of deep water, always available for vessels in case of their having to run to the old or the new harbour.

The works involve a north breakwater, 7,000 feet in length, of which 6,400 feet have already been formed, in from 7 to 8 fathoms of low water at spring tides; also an eastern breakwater of 2,500 feet, formed in from 3 to 4 fathoms of low water at spring tides, with all the necessary convenience of landing-pier for the largest class of Transatlantic steamers, with railways so laid down on such landing-pier that passengers may step from the boat into the railway carriages.

The quantity of stone used in the works up to the present time, and since 1849, is upwards of 5,000,000 tons. The peculiarity in the construction of the works, which has enabled the Government to carry and place in the breakwater this enormous quantity of stone in less than six years, is the introduction of a timber staging, first built into the sea, slightly in advance of the stonework, upon which there are laid five lines of railway, over which the waggons laden with stone are drawn from the quarry by locomotives, and the stone is deposited into the sea at 20 feet above high water by the falling of the bottom of the waggons, somewhat in the same way as the "hopper waggons" in the coal districts of the north of England.

The stone is obtained in masses, varying in size from that of ordinary building-stone up to 14 or 15 tons in a stone.

The average number of labourers and mechanics employed in the quarries and on the railways is from 1,100 to 1,200.

The expenditure up to the present time, including the purchase of land, has been upwards of 500,000*l.*; and it is calculated that by the time the works are completed, including the enlargement of the harbour as before referred to, the total cost will amount to upwards of 1,000,000*l.*

NEWS FROM ADELAIDE.

Water and Sewage.—The City Surveyor, by last despatch, had laid before the Municipal Council his plan for supplying the city with water, and for carrying off the sewage. The water pipes he proposed to lay just under the kerb stone at the side of each street, adjoining the pavement. Two sets of tanks to hold 300,000 gallons each, one for North Adelaide, and the other for South Adelaide, would be erected on elevated sites, so as to supply the city by mere gravitation. The tanks would each form a tower 82 feet high, the cost of tower and tanks to be 5,000*l.* For the disposal of the sewage, and besides a system of city sewers, the surveyor proposed to run an iron tube, of 4 feet diameter, along the bed of the river Torrens, from Frome Bridge to the Reed Beds, or even to the sea (a length of 8 miles), if the sewage could not be completely disposed of at the Reed Beds. The tube would cost about 12,500*l.* a mile. The iron plates, it was remarked, could be prepared in England. The *Adelaide Observer* urges the deodorization of the slaughter house refuse, and the sale of that and of the sewage to neighbouring farmers or horticulturists.

Temperance Hall, and Freemasons' Hall, for North Adelaide.—A meeting is reported in the *Adelaide Observer* as to the obtainment of funds for the erection of the Temperance Hall, already founded in Tynte-street. The architect, Mr. Cole, pointed out several plans, and in course of the discussion, it was suggested that the proposed Masonic Hall should be adopted by arrangement with the Masonic Hall Society, and the proposed Temperance Hall abandoned. It was ultimately resolved, however, that the architect should revise his plans of the latter, and advertise for the erection of the walls and roof.

St. Luke's Church, Adelaide.—The Episcopal Church of St. Luke, recently erected in the south-west part of the city, facing Whitmore-square, says the *Australian and New Zealand Gazette*, was consecrated by the Bishop on 14th February. The building is 66 feet in length, by 44 feet in width, including the side aisles. The sacristy is surrounded by a carved railing, and it is intended to construct the pulpit and other internal fittings of cedar. There is a large Gothic window over the altar, the upper part of which is stained glass, in which blue, crimson, amber, and white are blended. In the centre there is a cross, which is surrounded by a star, formed by the intersections of three triangular devices. The window has been constructed by Mr. Brooks, of North Adelaide. The erection of the building has been effected under the superintendence of Mr. Thomas Hall. The total cost, including the internal fittings, will be about 1,200*l.*

Adelaide and Gawler Town Railway.—The works on this line had not progressed so far as those between Adelaide and the Port in February last. The *Adelaide Observer*, of 26th January, gives a long report of the state of the works. It is intended to go no farther at present than the south side of the South Para, where the temporary Gawler Terminus will be erected, and the cost of a bridge obviated. The rails were all ordered, as well as other materials, in England, and it is expected that in the beginning of next year, the line will be opened for traffic as far as Salisbury.

USE OF PARTY WALLS.

HEMBRY *v.* SMITH.

IN this case, at the Rolls' Court, on the 30th ult. an interim injunction had been granted against the defendant, for having interrupted the smoke from ascending through the chimney-flues of the adjoining house to his own. The case was interesting to builders. It appeared that in 1839 Mr. Felton built the house No. 7, Halkin-street, Belgrave-square, and it was agreed with Mr. Thomas Cubitt that the intervening wall between the two plots of ground should be built as a party-wall, and it was accordingly built in part on Cubitt's ground, in Lowndes-street, next door. In 1844, Mr. Cubitt built the house No. 12, Lowndes-street, and then used two of the standing flues in the stack of chimneys left open in the party-wall, and no objection was taken to it until Mr. Felton, in 1848, had assigned the house to Lady Harrington. On her decease, the lease was assigned to Mr. Edmund Smith, solicitor. Up to the 19th of February, 1855, no objection was taken to the use made of the flues by Mr. Cubitt, but the tenant then found out that the smoke would not ascend through the butler's pantry chimney in Lowndes-street house, and it was found out that Mr. Smith had stopped up the tops of two flues in the party-wall, which he contended he had a right to do, as no person could be entitled to use his flues without his permission.

Mr. R. Palmer and Mr. Fielding Nalder were counsel for the plaintiff; Mr. Southgate for the defendant.

The case was heard on the merits, and the injunction moved to be made perpetual.

The Master of the Rolls held that the defendant had accepted the assignment with the full knowledge of the existing arrangement as to the party-wall in which the flues had been originally built. Mr. Cubitt's tenant, as well as himself, had a right to use the flues under that arrangement, and Mr. Smith ought not to stop them up. Under the circumstances, the injunction was proper, and must be made perpetual. The costs to be paid by the defendant.

BUILDERS' BILLS.

THE particulars of a case intended to show the necessity of security being given *to* contractors, as well as *by* them, in the construction of works under contract, have been forwarded to us, with comments, which, however, are too personal, and strongly put, for publication. The case was that of Brake, a builder, against Schmollinger, a tavern keeper, and related to work and labour done, materials supplied, and money expended in the finishing of three houses for defendant at Croydon.—Defendant pleaded not indebted, although there was alleged to be a balance of more than 300*l.* due to plaintiff on a contract, as agreed between the parties. The works had been commenced by a man named Pearman, who had drawn upon a mortgage, as the works went on; the money being advanced by the Rev. Mr. Mortimer; and Pearman having, it was said, drawn a considerable sum beyond what he was entitled to, left the premises, and went no one knew whither. Plaintiff was also paid by advances on the mortgage granted on the houses and land. The action for balance was brought in the Court of Common Pleas, at Guildhall, and was then referred to a Barrister-at-Law, for the settlement of all matters in dispute. Two surveyors were appointed on the part of the plaintiff, and two on the part of the defendant, who measured and valued the works, and after the measuring was completed, the defendant's surveyors refused to go farther into the matter. The plaintiff's surveyors therefore completed their account, and reported the value of the works measured to be about 140*l.* more than the day-bill amounted to. The arbitration then proceeded, and the arbitrator awarded his verdict in the plaintiff's favour, condemning the defendant to pay all costs. The award was taken up by the plaintiff at an expense of 15*l.* The defendant immediately he knew the result, became bankrupt. The plaintiff had thus done a thousand pounds' worth of work for an employer, it was alleged, not worth a shilling, and must now it appeared be a loser to the extent of at least 800*l.* The two surveyors' accounts alone are said to have amounted at least to 300*l.* a sum which the plaintiff must pay before he can prove his claim before the official assignee. The statement is altogether a strange one.

Notices of Books.

Shakspere's England; or, Sketches of our Social History in the Reign of Elizabeth. By G. W. THORNBURY. In two volumes. London: Longman and Co. 1856.

"SHAKSPERE'S England,"—much of it Shakspere's London,—is a pleasant olla podrida from the Great Shaksperean feast, well seasoned with varied condiments from other sources. The author leads us back to the sixteenth century days of gilt rapiers and roses on the shoe, of ruffs and fardingales, peaked and starched beards and slashed hose, to the days when fingers were forks and the tobacco-pipe the last novelty. He takes us rambling, gossipping walks "through Ludgate, up Cheap, and into Paul's, then away to the Bear-garden, in Southwark, and the Globe; anon past the old cross at Charing; to the Presence-chamber at Greenwich, or to Richmond, and back, to make a night of it, at the Devil Tavern, where the players and poets meet just under the chimes of St. Dunstan." These were the days when iris silks and leathern jerkins jostled each other in the streets of London, and when Drury-lane was Park-lane, and Whitehall and the Tower were Buckingham-palace and St. James's. London then, as now, could boast of various bridges; but amongst them were Fleet-bridge, Bridewell-bridge, and Holborn-bridge, while the clear pellucid salmon-sporting Thames could only boast of its one old London characteristic,—the wonder of all country cousins, and the pride of all Cockaigne,—"the bridge," with its houses and gardens, drawbridge, chapel, gatehouse, "nonesuch," et-cetera.

There is a lively and interesting chapter on the Architecture of Old London,—its mansions and palaces, and, indeed, of others besides those of London, and comprising minute descriptions of various well-known Elizabethan edifices, as well as some account of their architects, and, amongst them, of course, John Thorpe, the designer of many mansions and castles, and of his own quaint dwelling, with I T for its ground-plan,—I for the offices, and T for the house.

The subjects treated of in the present volumes are very various, and all combine in giving us, without many new facts, a graphic idea of life in the England of the sixteenth century.

Portsmouth Protected; a Sequel to "The Peril of Portsmouth;" with Notes on Sebastopol, &c. BY JAMES FERGUSSON, ESQ. With plans and woodcuts. London: Murray, Albemarle-street. 1856.

OUR readers will recollect Mr. Fergusson's "Peril of Portsmouth," and the new system of fortification which he proposed. In the present "Sequel" this important subject is farther treated of, by the light which the late war has

shed on the science of fortification and defence. The author begins with a "personal introduction," in which he (with some quiet humour occasionally) gives a narrative of the discussions which have taken place in reference to his proposed system since his last publication, "The Peril of Portsmouth," appeared; and indeed of the development of his views generally, and the reception they have met with. The opening section of the present work treats of the results of the present war as bearing on the subject. Mr. Fergusson is of opinion that every circumstance of every siege operation hitherto undertaken in this war has tended directly to confirm the correctness of his views; while, on the other hand, not one single instance can be quoted which tells against them. He points out, however, what he regards as a misrepresentation, or misapprehension, of his views,—

"There is no ruse," he remarks, "more common in argument than to apply to your opponent's cause some nickname which shall seem to describe it; and when this has, by reiteration, become accepted, to reason from this epithet as if it were a fact. In the present instance it is usual to call this question, '*Earthworks versus Masonry*,' whereas nothing can be more incorrect than such a description. If one must be used, I would suggest '*Guns versus Bastions*,' the fact being, that what I object to in the old system is, that the complication of re-entering and salient angles and flanking defences impedes and neutralises the power of the artillery of the fort to stop or hinder the approaches of the enemy, and at the same time exposes the guns of the fort to be enfiladed and destroyed by the attacking party. To obviate this, I proposed to reduce the outline of the fort to the simplest elementary form, and then showed how, by successive terraces of earthworks, such an overwhelming fire could be brought to bear on the approaches of the enemy as would stop him altogether. If this could be done as cheaply or as efficiently by masonry, I would at once concede that point, considering it altogether unessential; and I am not prepared to say that it may not be done by masonry covered by iron plates, but, till this is tried, earth is the only material known, and therefore I advocate its employment."

It certainly is our own impression (without any special reference back to Mr. Fergusson's previous work), that "Earthworks *versus* Masonry" constituted what might very fairly be regarded as a correct description of his views by contrast with those of a more orthodox official description; and even in the present publication there are passages which we think at least excuse his antagonists for adopting it; but we presume there must have been some misunderstanding on this point.

The author draws attention to rather an instructive little incident in reference to the discussion, on his views, which took place at the United Service Institution, in May, 1853, when invasion from France was deemed more likely than war in the Crimea. When that discussion came on, he remarks,—

"I took with me a few yards of baize, with two or three iron rods, and showed how I would propose to stick them along the crest of the parapet, and to hook on the green baize, letting it drop across the embrasures in front of all the guns. The baize was full of slits, through which the besieged could see or fire, without the possibility of their being seen by the besiegers. This unorthodox expedient was received with 'great laughter,' and afforded an excellent opportunity for criticism during the following three nights. When we entered Sebastopol, we found curtains of rope hung up, exactly as I proposed, across the embrasure, and rope wound round the guns so as to stop the hole in the curtain through which the gun was fired. This rope-cloth, if I may so call it, was rifle-bullet proof, and would probably stop grape, while round shot would pass through without doing it much injury. There can be no doubt that the maintenance of the fire till so late a period was mainly owning to this expedient."

While our military engineers were laughing, Russian *friends* were *thinking;* and it really appears as if young Lieutenant Todleben had then been studying, and reaping the benefit of, such discussions.

In reference to Portsmouth, Mr. Fergusson remarks,—

"Since the pamphlet entitled 'The Peril of Portsmouth' was written, something has been done, and in the direction therein indicated, to place this important position in a better state of defence, but it has been done in such a manner that the *peril* has increased in a tenfold greater ratio than the *protection* afforded is likely to obviate."

All works on the shore at Southampton Water, he is of opinion, are certain to be attacked by land; and it is hardly probable, he thinks, that they will be attacked from sea where the channel is so broad, and while the enemy can land in safety beyond their reach. If this view is correct, he adds, and I have no doubt but that it is so, it is not a little ridiculous to spend such sums as have been spent to defend the Isle of Wight batteries against a land attack, and to leave those on the mainland in such a state that any active man may get into them without either pickaxe or spade. In allusion to the works recently constructed, and which are closely criticised, the author says,—

"In every work described above we have had to point out that great pains have been bestowed in strengthening those points where an assault was either impracticable or least likely to take place, but that the really vulnerable points had at the same time been left wholly or at least partially unprotected. Unfortunately, this system extends beyond individual works to a whole system of defence, and is being carried out at Portsmouth so as to neutralise any advantage, however small, that might accrue from the erection of these defences."

We can only say in conclusion that whatever be the merits of Mr. Fergusson's own system, and of his statements as to that adopted, his observations come with sufficient force to render further inquiry and examination necessary.

Miscellanea.

TESTIMONIAL TO MR. HERBERT MINTON.—The committee appointed to promote the erection of baths and washhouses in Stoke-upon-Trent,—towards which Mr. H. Minton lately offered 500*l.*—have unanimously resolved, "That his recent liberal offer of the sum of 500*l.* towards the erection of public baths in this town affords a desirable opportunity for giving public expression to the regard generally entertained throughout the country for his public and private character." The project, according to the *Stafford Advertiser*, is to erect a public building (by subscription), which shall adjoin the baths, and be appropriated to the advancement of art and literature, particularly amongst the young, and with which Mr. Minton's name is to be associated in perpetuity.

DISCOVERY OF ANCIENT WALL PAINTINGS.—Recent reparations at Hadleigh Church, Essex, have been the means of bringing to light some interesting mural decorations. They are of different periods,—the oldest and best being of the thirteenth century. Among those of a later date is a large representation of the legend of "St. George and the Dragon," with all the accessories, such as the king and the queen, and their beautiful daughter, who was given up to be devoured by the monster.

SECURITY OF LIFE.—By the continuation of staircases right up to the roof, and opening by means of a door at once upon it, a plan adopted by the late Mr. Cubitt, in Belgravia, a great facility of egress is gained in event of fire. Ordinarily there is the treble difficulty of fixing and finding a ladder, opening a trap-door with bolts, possibly stuck with paint, or rusted with age, and then a dormer to be unfastened with the same difficulty with bolts, so that if to this be superadded the confusion and hurry incidental to a fire, it is almost equivalent to no egress at all.—FIRE.

CAMP AT ALDERSHOTT.—Frequent complaints have justly been made of the want of architectural appearance in the buildings here, and the absence of professional assistance in the laying out and arrangement of this camp, where a grand opportunity offered for the application of all the modern improvements in sanitary and scientific construction, and was lost. We are told that a step has been taken with the view of improvement in future, but we shall wait for a result before we say much about it.

DRAINAGE OF LAND IN FRANCE.—A report has been presented to the legislative body at Paris on a Bill to regulate drainage in France. This report details the advantages obtained by drainage on the system of Government aid given in England and elsewhere, as ascertained by special commissioners, and recommends the adoption of a similar principle in France, at least till private capital be attracted to the great profits derivable from the system. The Bill proposes that the French Government shall be empowered to make advances to the extent of 100,000,000 francs, and endows the state or the person who makes the advance with a privilege of payment of interest and capital by instalments in a series of years, taking rank immediately after that of taxation.

TOMB OF WILLIAM COBBETT.—Over the slab which has hitherto covered the grave of William Cobbett, in the churchyard of Farnham, Surrey, a tomb has just been erected by Mr. Thomas Milnes, the sculptor who executed the statue of Nelson, recently put up in Norwich. The tomb is made of a durable stone, from the quarry at Roch Abbey, in Yorkshire. It stands near the porch of the church, is of solid workmanship, oblong in form, and is described as "in style following the plainest old English architecture." Farnham Church is within a mile of Waverley Abbey, and of Moor Park (once the residence of Sir William Temple), and about two miles from Aldershott.

EXPERIMENTS WITH CAST-IRON.—The interesting fact is developed by experiments of the U.S. Ordnance Department, that iron, by repeated fusion, up to a certain number of times, is thereby greatly improved in strength. Guns cast solidly, and those cast hollow, through which latter water was made to circulate after casting, showed an astonishing difference in their relative strength, the difference being in favour of the hollow-cast gun, which is attributed to the method of cooling, the solid gun, contracting from the outside, exerting a strain upon the arrangement of the particles of the metal in the same direction as the strain of the discharges. The experiments also showed that old castings are a great deal stronger than new: 8-inch guns, proved 30 days after being cast solid, stood but 72 charges; 34 days, 84 charges; 100 days, 731 charges; and 6 years, 2,582 charges. This phenomenon is accounted for by supposing that the particles strained in the cooling re-adjust themselves in the course of time to their new position, and become free, or nearly so.—*New York Paper.*

SOCIETY FOR IMPROVING CONDITION OF THE WORKING CLASSES FOR BATH.—A meeting of the citizens of Bath, convened by the Mayor, in compliance with a numerously signed requisition, was held on Saturday in last week, at the Guildhall, for the purpose of considering the propriety of establishing, in connection with the celebration of peace, a permanent Society for Improving the Condition of the Working Classes. The attendance was very numerous, and appropriate resolutions in favour of the object in view were unanimously passed, and some promising subscriptions at once announced.

KILKENNY ARCHÆOLOGICAL SOCIETY.—The May meeting of this Society was held at Tholsel, on the 14th ult., the Dean of the Chapel Royal, Dublin Castle, in the chair, when thirteen new members were elected, besides the Clonmel Mechanics' Institute. Various presentations and communications were received and other business done, and the Rev. James Graves read a paper on the records of the ancient borough towns of the county of Kilkenny.

SURREY ARCHÆOLOGICAL SOCIETY.—The annual general meeting will be held at Croydon, on Thursday, the 12th of June; Sir William G. Hylton Jolliffe, Bart., M.P., Vice-President, in the chair. Some very good papers are promised.

THE SCHOOLS OF ART AND THE GOVERNMENT DEPARTMENT OF SCIENCE AND ART.—The registrar, Mr. Norman Macleod, has had printed a list of the Schools of Art throughout the United Kingdom, in connection with the Department of Science and Art, completed to May 1856. From this list the following abstract may be given:—Established as Schools of Design, between 1841 and 1852, nineteen local schools. Established as Schools of Art, since 1852, when the department was constituted,—in 1852, two schools; 1853, fourteen schools; 1854, fourteen schools; 1855, two schools; 1856, four schools—thirty-six schools: total, fifty-five schools; including the nine London district schools, sixty-four schools. Number of persons under art instruction in public schools, 18,198; in central schools, 9,041: grand total, 27,239 persons.

PARIS BUILDING COMPANIES.—Two Joint-stock Building Companies are announced in Paris, and they are to build whole streets, squares, and boulevards, with theatres and places of entertainment and recreation. The scene of their operations is to be the Champs Elysées and the Neuilly-road, around the Arc de Triomphe, and from thence right and left. They promise to adopt the English plan of making houses suitable for single families, and of turning annual rent into part purchase of property, which at the end of twenty-five years is to become the tenant's ever after.

A CURIOSITY.—At the Barnetby Junction of the Manchester, Sheffield, and Lincolnshire Railway, may be seen, on the hill side, a church which has been whitewashed, body and tower!

HOMERTON.—Parochial schools have just been completed for the parish of St. Barnabas, Homerton, for 150 children, together with a dwelling for the master and mistress. The cost of the schools was 777*l.* and of the dwelling-house 296*l.* Mr. Edmeston was the architect, and the works were carried out by Mr. Perry, of Hackney.

SOUTHWARK IMPROVEMENTS.—Plans have been submitted to us for effecting a better communication from the London-bridge Terminus to the western district of the metropolis, by means of a new street from Wellington-street, Southwark, to Blackfriars-bridge, and from thence forward, *vid* Stamford-street, to Waterloo and Westminster Bridges. The projector of these plans is Mr. Thomas Taylor, architect. Mr. Taylor has shown two lines of communication, each deviating, from York-street, near London-bridge, to one side of the extensive premises of Messrs. Barclay and Perkins, and both ending in a line with Stamford-street. He recommends that along Park-street, or to the north of Barclay and Perkins's, as passing through property of very inferior value, not necessitating the removal of important works, and occupying the present streets one-third the entire length. The opening up of this sadly involved and noxious locality by some great thoroughfare is unquestionably most desirable. It would also form a direct route to the West-end from the London-bridge terminus of railways, and so greatly relieve the traffic of the bridge itself, as well as of Cheapside, Fleet-street, &c.

THE ROYAL SOCIETY AND THE GOVERNMENT.—At a special meeting of the Royal Society, held on the 3rd inst. the following resolution was passed, on the motion of Sir Benjamin Brodie, seconded by Professor Bell;—"That the council be authorized to accept and carry out the proposal of the Government, as to the occupation of Burlington House, on the understanding that the hall, which it is proposed to construct in the west wing, and which is to contain the portraits belonging to the Royal Society, shall be placed in the custody of the Royal Society, subject to the free use of it by the senate of the University of London at all times at which it may be required for their examinations and public meetings." The library of the Royal Society now comprises 45,000 volumes. The Linnean Society and the Chemical Society will also have accommodation given to them in Burlington House.

THE SMOKE NUISANCE.—A Bill brought down from the Lords on the 26th ult. repeals the provision in the 16th and 17th of Victoria, c. 128, which exempts glass and pottery works from the operation of the Act; but the repeal will not take effect until the 1st of January, 1858.

THOROUGHFARES.—I noticed an article in your paper recommending the formation of a street through Lincoln's-inn Fields, "north and south." The utility of such a street no one can deny, but I think we ought also to have one east and west, in continuation of Great Queen-street into Holborn, through the corner of Lincoln's-inn Fields to come out opposite Messrs. Day and Martin's, through Whetstone-park. This would take off immense traffic, which now proceeds round by the Strand into the City. The "bridge" over the Fleet-ditch would soon follow.

J. S. R.

TENDERS

For the central schools, at Hanwell:—

Jay	£43,180	0	0
Kelk	43,003	0	0
Ashby	42,650	0	0
Pipers	42,437	0	0
Macey	41,670	0	0
Lee and Son	41,440	0	0
Myers	40,800	0	0
Browne	39,587	0	0
Holland	38,984	0	0
Downs	38,960	0	0
Rich and Parry	38,881	0	0
Wilson	38,598	0	0
Crook	37,875	0	0
Ashby and Horner	37,810	0	0
Haward and Nixon	37,746	0	0
Lucas, Brothers	37,400	0	0
Brass	34,988	0	0

For mansion at Balcombe, Sussex, for J. A. Hankey, esq. Messrs. Clutton, architects:—

Hayward and Nixon	£16,596	0	0
Lawrence and Son	16,248	0	0
Piper	16,195	0	0
Cubitt	15,985	0	0
G Smith	15,898	0	0
Lucas	15,830	0	0
Cheeseman	15,820	0	0
J. and C. I'Anson	14,996	0	0
Ashby and Horner	14,100	0	0

For offices, &c. for the Imperial Gas Company, 33 and 34, John-street, Bedford-row. Messrs. F. and F. Edwards, Architects:—

Holland	£1,949	0	0
King and Son	1,875	0	0
Ashby and Homer	1,784	0	0
J. and C. I'Anson	1,732	0	0
Mansfield	1,630	0	0

For "Healthy Homes," to be built in the district of St. James's. Mr. Bardwell, architect. Quantities by Messrs. Batstone and Hunt:—

Browne and Co.	£1,197	0	0
Lawrence	1,162	0	0
Gammon	1,157	0	0
Downes	1,120	0	0

To which 70*l.* are to be added for iron joists.

For the Congregational Church, Aylesbury, Buckinghamshire. Messrs. Poulton and Woodman, architects, Reading:—

Green (Aylesbury)	£1,694	0	0
Quarterman (Oxford)	1,670	0	0
Durley (Bierton)	1,610	0	0
Sharp and Cooper (Aylesbury)	1,492	0	0
Young and Co. (Oxford)	1,320	0	0

The materials of the old chapel are calculated to belong to the contractor.

Public buildings and markets, Ashby-de-la-Zouch. Mr. H. J. Stevens, architect, Derby. Quantities supplied:—

Dennett, Brothers (Nottingham)	£4,490	0	0
Cooper (Ashby-de-la-Zouch)	4,147	0	0
Wykes (Leicester)	3,997	0	0
Norman and Sons (Leicester)	3,879	0	0
Lindley and Firn (ditto)	3,759	0	0
Garland and Holland (Nottingham)	3,700	0	0
Ferguson (ditto)	3,650	0	0
Lilley (Measham), accepted	3,393	0	0

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JOSEPH DAW, Principal Clerk.
Sewers Offices, Guildhall, June 3, 1856.

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9d.	11d.	1s.	1s.	1s.	1s.	1s.	1s.	1s.	1s.	2s.	2s.	2s.	3s.

Super-extra stout quality.

2	2½	3	3½	4 inches.
2s.	2s. 3d.	2s. 6d.	2s. 9d.	3s. per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

¾	1	1¼	1½	2	2½	3 inches.
9d.	10d.	11d.	1s.	1s. 3d.	1s. 6d.	per yard.

The hose is Burnettized at an extra charge of 3d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

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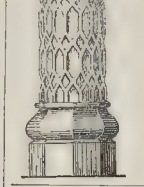

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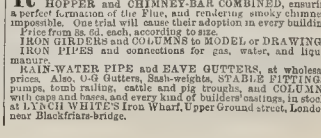

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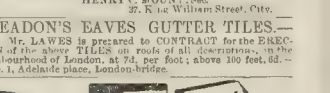

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*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

January 1, 1855.

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Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

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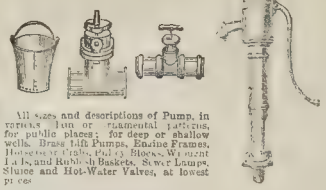

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To be worked by hand, horse, or steam-power;
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And by the most eminent members of the Royal Agricultural Societies of England, Scotland, and Ireland; at whose great national shows it has been exhibited, and OBTAINED THE PRIZE, for being the best and cheapest article for roofing; also used for under slates at the Royal Agricultural Society's House, in Hanover-square. Its advantages are lightness, warmth, durability, and economy. It is impervious to rain, snow, and frost, and a superior burning of heat and sound. The Felt can be cut to any length, by 36 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples, with full directions as to its uses and the manner of applying it, with TESTIMONIALS, some of them of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 25 per cent. in fuel is effected. The TRADE are respectfully enjoined to send their orders DIRECT to the FACTORY as the surest means of being supplied with the genuine article, and in lengths best suited to their roofs. There are likewise ASPHALTED FELTS AGAINST MUSCHAMS AT VENICE, now at work in Great Britain, where the above roofing is made. Apply to F. McNEILL and Co.'s Manufactory, LAMB'S-BUILDINGS, BUNHILL-ROW. Roofs covered with the Felt to be seen at the Factory, also the new Vice-Chancellor's Courts, the passages and offices leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

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Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, slate, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
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By the introduction of the vibrating standard the cumbrous carriage work, expensive chains and guides are unnecessary, rendering the price considerably less than Pumps made on the Hydra.
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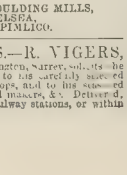

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Yellow Deals, from	£20	0 per 120
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Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a postage stamp.—N.B. All sawn goods delivered within two miles free of cartage.—Borough-road, Southwark, and Elm-street, Gray's-inn lane.

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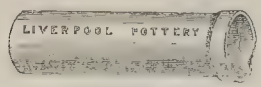

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DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

THE FARNLEY IRON COMPANY, WORTLEY, near LEEDS.

Manufacturers of FIRE BRICKS, TILES, QUARRIES, &c., White Building Bricks, Fire-clay CHIMNEY-TOPS, in Norman, Egyptian, Saxon, Tudor, Grecian, Gothic, and Elizabethan styles.

TERRA COTTA

Fountains, Vases, Pedestals, Capitals, Trusses, Brackets, &c., in great variety, which for beauty and elegance of design are unequalled

The designs of Architects modelled with the greatest exactness.

Also of PATENT GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, &c., well adapted for pressure, being made extra pressed under "Spencer's Patent." Superior White Glazed CLOSET PANS, TRAPS, &c.

The Works of the Company are situated in the immediate vicinity of the well-known bed of WORTLEY FIRE-CLAY, and their manufacture of BRICKS, for the use of Forges, Gas Companies, Foundries, Potteries, and Glassworks, is confidently recommended for all purposes where extreme heat is required. Their GROUND CLAY is also particularly adapted for the manufacture of CRUCIBLES, MELTING POTS, &c.

OFFICES AND STORES:

LONDON .....No. 14 York-chambers, York-buildings, Adelphi; No. 16, Bath-place, New-road; St. Ann's-wharf, Limehouse.
BIRMINGHAM..No. 7, Easy-row; also 23, Cambridge-street, and Lawley-street.
BRISTOL .....No. 14, Nelson-street.
LIVERPOOL....No. 9, Russell-street, 83, Renshaw-street, and Shipping-wharf Leeds-street.
NEWCASTLE. ..W. B. Wilkinson and Co. Prudhoe-street.
GRIMSBY.....P. G. Skipworth.
MANCHESTER..No. 45, Travis-street, and 23, 24, and 25, Birmingham street, London-road.
HULL.....No. 60, Queen-street, and Wellington-street.
BRADFORD ..Horton-road
LEEDS .....Wellington-street, adjoining the Midland Station; and Shipping-wharf, Victoria-works, Runslet;
SUNDERLAND..W. B. Wilkinson and Co. Queen-street.
WARE.....G. E. Kins, Stone Merchant.

Where Drawings, with Prices, &c. may be obtained.

GREAT REDUCON in PRICE of STONEWARE DRAN-PPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

J. CLIFF, Proprietor,

MANUFACTURER OF

FURNACE-BLOCKS, BRICKS, &c.

CLAY GAS RETORTS,

GLAZED SOCKETED PIPES,

HALF-SOCKET PIPES,

JUNCTIONS, BENDS, AND OTHER SANITARY APPLIANCES.

M. B. NEWTON, Agent,

LONDON STORES,

WHARF No. 4, GOODS STATION,

KING'S-CROSS.

The LARGEST, BEST GLAZED, and STRONGEST PIPES in London.

INSPECTION SOLICITED.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c to some of the largest Works in and around London, viz.: The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

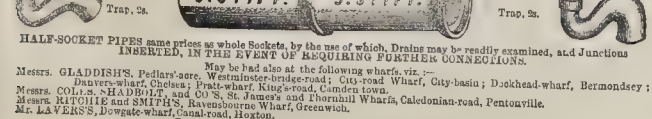
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden town.
Messrs. COLLS, SADBOLT, and CO'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

SUPERIOR STONEWARE GLAZED PIPES of a quality not to be surpassed.—E. and W. STURGE respectfully invite attention to the very superior character of their stone pipes, which they are confident are such as must give great satisfaction,—the price being also lower than many in the trade, viz. 25 per cent. discount off the list for cash. Junctions, Bends, &c. Pans and Traps of the first quality, Yorkshire Paving, Sinks, Sills, &c. all at low cash prices.—E. and W. STURGE, Bridge Wharf, City-road.

N.B. A small extra charge is made upon goods required to be delivered.—October 1, 1855.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at				3d. per foot.
4	"	"	"	4d.	"
6	"	"	"	6d.	"
9	"	"	"	9d.	"
12	"	"	"	1s. 6d.	"
15	"	"	"	2s. 6d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of which can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 28s. and perfect action guaranteed.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

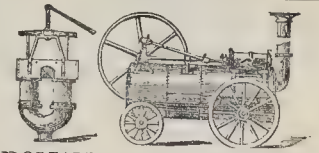
TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

PARSEY'S REVOLVING STEAM-ENGINES and PUMPS (the accomplishment of circular motion).—As steam engines are better than all others; and as pumps, being all metal, are equally good for hot or cold liquors; and having no packing, are not liable to choke, and are a vast improvement on pumping and for ships' pumps. To be seen at Mr. PARSEY'S Depôt, Great Scotland-yard.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

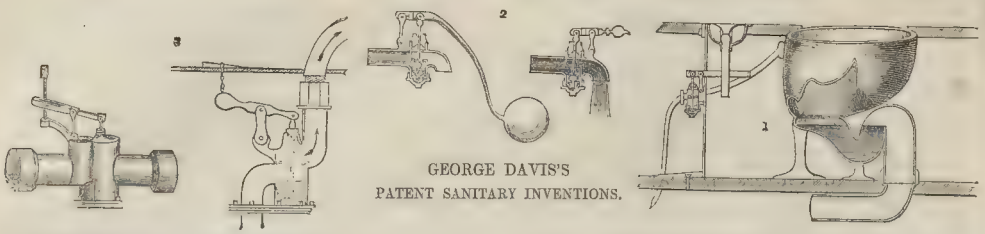
Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,

Engineers and Contractors, John's-place, Holland-street, Southwark, London.

TARPAULINS for COVERING ROOFS during Repairs, SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PLIGOTT, 115, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

TO WATER COMPANIES AND BOARD OF HEALTH COMMISSIONERS.



GEORGE DAVIS'S
PATENT SANITARY INVENTIONS.

G. DAVIS begs particularly to call the attention of Water Companies, &c. to his recently Patented Inventions. The Sanitary Closet and Valve is the most simple and effectual Apparatus for common purposes yet introduced to the public. The advantages it possesses over all others will be evident to every practical person, at first sight. Its superiorities consist in the following desiderata: — The Basin is so constructed, that instead of the water running round the sides of the Trap, it is precipitated into the centre, which flushes the Trap effectually with one half of the water usually required. The Handle of the Closet Apparatus is so arranged, that it cannot be Tied or Trigged up, and the Valve closes with the pressure, without weights or springs, and without concussion. The Bib and Ball Cocks are unequalled for High Pressure, and are perfectly self-closing, without concussion. Hydrants and Sluice Cocks are also manufactured on this Patent Principle, and nothing can be more simple or effectual. The Valves are of Indian Rubber, enclosed in a box so as to prevent wear, and they can be set into action in one second, in case of fire, and will not hang up or get deranged in any way. When closed, the pressure tends to keep them from leaking, and all the working parts are kept from the water when shut off.

For full Particulars, Prices, &c. apply to the Patentee and Manufacturer,

GEORGE DAVIS, MARLAND-PLACE, SOUTHAMPTON.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

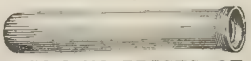
5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of closet-pans.

UNDERHAY'S PATENT REGULATOR CLOSETS

for constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in Fixing, and a better flush of water is obtained in use.

Pan, Valve, Self-acting, and Servants' Closets, on the principle, may be seen at the Works. They are very cheap, their efficiency is guaranteed. 5,000 of them have been sold, and no instance of failure has occurred.

These Stop-valves are cheaper, stronger, and more certain, than any other. Many thousands are in use, and greatly approved of.

Manufactured by
CHARLES TUNN and SON,
Brass Founders, Great Russell-passage, Clerkenwell, London.

BY HER MAJESTY'S ROYAL LETTERS PATENT, APRIL 25, 1855.

JAS. LEWIS'S PATENT STENCH-TRAP

FOR STREET USE.

Price, with Gutter Plate, 18 inches by 12 inches, each 25s.; weight about 2 cwt. Larger sizes made, if required.

FOR AREAS, &c.

Price, with Back Plate, 8 inches by 7 inches, each 6s.

FOR COURTS, YARDS, &c.

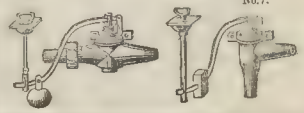
10 inches by 8 inches, each 10s.

The above articles are protected for the Patentee by the British Government, as an object of their consideration for the advantages they possess, being a perfect trap for preventing smell proceeding from itself or the drain, should there be water used in the pan. When stench-traps are put down generally speaking no attention is ever paid to them afterwards—this renders them useless. The above, therefore, are a desideratum, as they require no attention. It is well known when cholera has visited this country, it commences and leaves last those places where there are is vitiated by odours or gases proceeding from drains, &c.

Any individual suffering any nuisance, is entitled, by the Sanitary Act to lay complaint before the public or private authorities of the property, to lay down stench-traps where they are required. Any persons interested in this advertisement will be kind enough to write to the patentee for drawings and if wishful, testimonials. Please order from any respectable ironmonger, contractor, or the Patentee, JAMES LEWIS, Ironfounder, Abergavenny. Specimens to be seen in the Court of Inventions, Crystal Palace, Sydenham.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE

No. 7.



is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 300 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

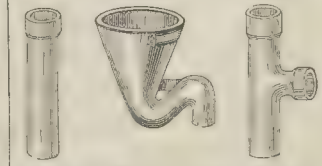
THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Silver-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

TO LOCAL BOARDS of HEALTH.

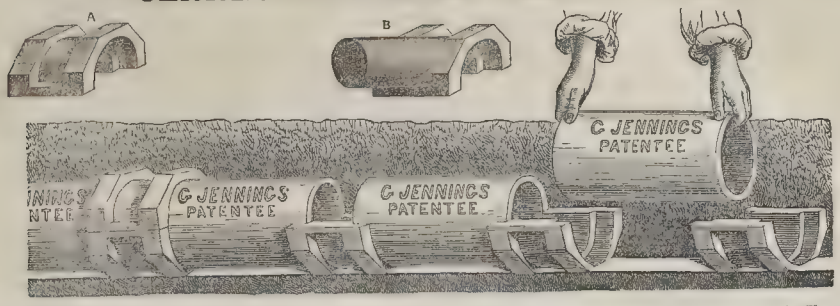
SURVEYORS, &c.—The Best and Simplest MACHINERY for CLEANSING CESSPOOLS, DRAINPIPES, &c. including everything that is required, can be obtained from R. BARRETT and SON, Brass and Iron Founders, Bermondsey-street, Barbican, London, who will furnish prices on application.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 80 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

JENNINGS'S PATENT DRAIN-PIPES.



THE PATENT CHAIRS AND SADDLES above shown are to a line of pipes the SAME SUPPORT AS SLEEPERS TO A LINE OF RAILWAY, the base of each Chair being BROAD and STRONG. The pipes are simple cylinders, of uniform thickness, made without the usual socket; the drying and burning, in consequence, is much more perfect. Pipes thus made and connected will be found to BEAR ANY PRESSURE, and are in no way liable to derangement. The laying of these pipes, and the making of the joints, IS DONE AT ONCE, EACH PIPE BEING BEDDED AS IT IS LAID, and the space between allows the workman to strike up the joint, and the superintendent TO SEE that every pipe is ACCURATELY LAID and PROPERLY JOINTED.

A shows one of JENNINGS'S PATENT SADDLES OR COVERS, by means of which examinations are effected; B shows one of the PATENT JUNCTION COVERS, by which connections are made to finished lines of pipes, it being only necessary AT ANY TIME to remove a PLAIN Cover or Saddle, A, and substitute a Junction Cover, B, the Junction being THE SIZE of the Branch Pipe.

The favour with which these pipes have been received will no doubt give rise to many imitations, as it is much easier to COPY than to INVENT; but GEORGE JENNINGS hopes his sanitary patrons will give HIM CREDIT for being THE FIRST TO SHOW HOW JUNCTIONS MAY BE INTRODUCED, OR EXAMINATIONS MADE, TO FINISHED LINES OF PIPES. These important improvements, as above shown, are PATENTED; and GEORGE JENNINGS would caution those who desire TO PROFIT BY HIS IDEAS, NOT TO INFRINGE HIS PATENT RIGHTS, as they will not be allowed to do so with impunity, although he feels confident the ORIGINAL, for its SIMPLICITY and EFFICIENCY, will be preferred to any copy.

Prices of JENNINGS'S Drain Pipes, per foot run, including the Patent Chair and Saddle, are as follows:—4-inch, 6d.; 6-inch, 8d.; 9-inch, 1s. 1½d., 12-inch, 1s. 10d.; 15-inch, 3s.; 18-inch, 4s.; with the usual discount to the Trade.

JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.

Architects describing this Closet in their specifications will have a PERMANENTLY GOOD VALVE CLOSET, NOISELESS, and FREE FROM COMPLICATION. The Patentee has such confidence in its DURABILITY and EFFICIENCY, that he will guarantee every Closet for SEVEN YEARS.

JENNINGS'S IMPERISHABLE EARTHENWARE CLOSET AND TRAP.

This Closet has a large water surface, has no back to soil, is imperishable in its material, and the Trap and Closet is combined in one piece, suited alike for the PALACE or the COTTAGE.

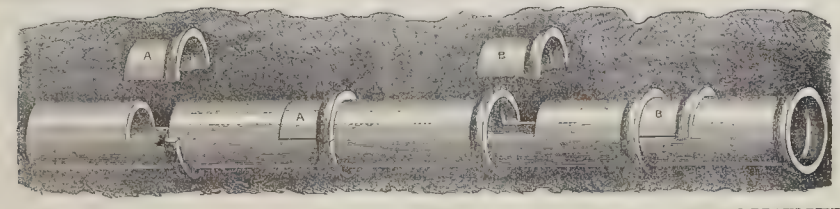
JENNINGS'S IMPROVEMENTS IN LIFT AND OTHER PUMPS.

These Pumps would well repay a visit to Jennings's factory, where may be seen Jennings's Lavatories, Urinals, Sluice Valves, Fire and Steam Cocks, of every size; Shop-Shutter Shoes; Gully, Area, and Sink Traps, and other sanitary goods.

Or Illustrations and Prices can be had free by post, if two stamps are enclosed to

GEORGE JENNINGS, SANITARY ENGINEER, 29, GREAT CHARLOTTE-STREET, BLACKFRIARS-ROAD, LONDON

AYLESFORD POTTERY COMPANY'S PATENT DRAIN-PIPES.



THE above Company respectfully invites the attention of Engineers, Architects, Surveyors, Builders, &c. to an improved DRAIN-PIPE, whereby al stoppages may be cleared without disturbing the invert of the drain, by simply removing the cover (marked A or B) whichever may be preferred.

The cover (marked B) may be used in conjunction with whole or half-socket Pipes.

Pipes thus constructed may be laid at intervals in a drain of ordinary Socket-Pipes.

With the great advantage these Pipes offer, they are cheaper than any yet submitted to the public.

London Depôt—AYLESFORD WHARF, Belvedere-road, Lambeth.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

MACFARLANE'S PATENT

CAST-IRON PUBLIC WATER-CLOSETS AND URINALS,

FOR STREETS, RAILWAY STATIONS, WORKHOUSES, FACTORIES, BARRACKS, SCHOOLS, &c.

WALTER MACFARLANE and CO. having been engaged for several years in perfecting and testing their WATER-CLOSETS and URINALS for public purposes in their own city, beg now respectfully to submit them to general notice.

WATER-CLOSETS.—The simplicity of their construction and durability peculiarly fit them for public purposes. They require no cistern nor water pressure, are as efficient with an intermitting as with a constant supply of water, do as well with waste water as with clean, and require less than any closet in use. The whole working gearing is entirely out of the control of the persons using the Closet, and no action of any part takes place except for a few minutes once a day. They are made in ranges, to accommodate any number of persons; and when required for streets or other public situations, are inclosed in a neat cast-iron structure, with or without separate compartments and doors.

URINALS.—These are simple and durable in their construction, and adapted for all situations. Those for street use are of easy access, occupy very little room, and of a neat ornamental design. They can be fitted up on the most suitable parts of a street without in the least detracting from the general amenity of the neighbourhood, and made in ranges, to accommodate any number of persons.

WALTER MACFARLANE & CO. PATENTEES AND MANUFACTURERS,

SARACEN FOUNDRY, GLASGOW.

LONDON AGENT—THOMAS BEGGS, SANITARY ENGINEER, 37, SOUTHAMPTON-STREET, STRAND.

For Drawings, Prices, and Particulars, apply as above.

SALES BY AUCTION.

TO IRONFOUNDERS AND OTHERS

MESSRS. FULLER and HORSEY will SELL by AUCTION, on MONDAY, JUNE 16, 1856, at TWELVE, at the AUCTION MART, Bartholomew-lane, by direction of the Assignees of R. J. Nelson, a Bankrupt, in lots, with at reserve, 650 tons REJECTED SHELLS, from 8 to 20 inch, to 12 inches, made of mixed cold-blast and Scotch iron, and lying at the Royal Arsenal, Woolwich. Particulars may be had previous to the Sale by orders.—Catalogues may be had of Gs. A. ASHLEY, Esq. Solicitor, 7, Old Jewry; at the Mart; and, with cards to view, of Messrs. FULLER and HORSEY, Billiter-street, City.

Valuable and important Estates, St. Pancras, by order of the Vestry of the Parish of St. Pancras

MESSRS. DENT and SON have received instructions to offer for SALE by AUCTION, on WEDNESDAY, JUNE 11, the very valuable and extensive LEASEHOLD PREMISES, situate 11, Edward-street, Hampstead-road, St. Pancras, heretofore the board-room, offices, stone-yard, and premises of the Southampton Paving Commissioners now transferred to the vestry under the Metropolis Local Management Act, held under Lord Southampton for a term of which sixty-five years will be unexpired at Michaelmas next, at a ground-rent of £31 12s.; also, a Leasehold House and Premises, No. 7, on the south side of Charlestreet, Fast, originally erected for the said Commissioners, held likewise under the Southampton estate for a term of which fifty-two years will be unexpired at Michaelmas 1856, at a ground-rent of £7 15s. per annum; the latter understood for a term of twenty-one years from Mid-summer 1849, at £92. per annum, the under lessee having substantially repaired and improved the property.—Particulars and conditions of sale, with plans, to be had on the Premises; at the place of sale; at the Vestry Clerk's Office, Old St. Pancras, where the leases may be seen; and of Messrs. Dent and Son, Surveyors, 36 Southampton-buildings, Chancery-lane, and 38, High-street, Camden-town.

CAMDEN-TOWN.—Valuable Premises, formerly the Board-room of the Commissioners of Paving for the Camden Estate.

MESSRS. DENT and SON have received instructions from the Vestry of the Parish of St. Pancras, in whom the above property has become vested under the Metropolitan Local Management Act, to offer for SALE, by AUCTION, on WEDNESDAY, JUNE 11, all those substantially erected and valuable PREMISES with the spacious Yard and Appurtenances, situate No. 10, on the north side of Pratt-street, to which there is a frontage of 29 feet 8 inches, by a depth of 150 feet; held under the Marquis Camden and Prebend of Cantlowes for a term of which 71 years will be unexpired at Michaelmas, 1856, at a ground-rent of 16l. per annum.—Further particulars and conditions of sale, with plans, to be had on the Premises; at the Place of Sale; at the Office of the Vestry Clerk, Vestry-hall, St. Pancras Old Road; and of Messrs. Dent and Son, Surveyors, 36, Southampton-buildings, Chancery-lane, and 38, High-street, Camden-town.

The Valuable and Important Freehold Manor of Newington, Barrow, otherwise Highbury, in the Parish of St. Mary, Islington, in the County of Middlesex

MESSRS. DENT and SON have received instructions to offer for SALE by AUCTION, at GARRAWAYS COFFEE-HOUSE, Change-alley, Cornhill, on WEDNESDAY, the 18th of JUNE next, the above most valuable and improving MANOR, heretofore parcel of the possessions of the Crown, with all the customary advantages, arising from courts baron, courts leet, courts of survey, fines at the will of the lord, on death or alienation, quit rents, royalties, and all rights, members, profits, emoluments, and appurtenances thereto belonging. By a survey made by order of Henry Prince of Wales (the eldest son of King James I.) in 1611, the Manor was found to contain nearly 1,000 acres, of which 113a. 3r. 0p. were freehold, 407a. 2r. 4p. demesne lands, and 444a. 1r. 0p. were copyhold of inheritance. By the custom of the Manor, two years' improved rent is payable to the lord on death or alienation. The quit rents payable at this time amount to £s. 19s. 7½d. per annum, extending over very valuable property, estimated at upwards of 1,300l. per annum, exclusive of those in abeyance. The emoluments to be expected to arise from lands and premises, from which the quit rents and customary fines and payments have been omitted to be enforced, or are in abeyance, are very considerable; and the whole forms an important investment in every respect worthy the attention of gentlemen of the legal profession or the capitalist. Particulars and Conditions of Sale with a plan of the Manor are in progress, and will shortly be ready at the Place of Sale; the Angel Tavern and the Blue Coat Boy at Islington; the Gate House, Highgate; the Archway Tavern, Upper Holloway; the Compasses at Finchley; the Plough, Hornsey-road; at the Offices of B. W. POWYS, Esq. Solicitor, 38, Russell-square; and of Messrs. DENT and SON, 36, Southampton Buildings, Chancery-lane, and Camden Town.

SOUTHALL, MIDDLESEX.—Compact Freehold gentlemanly Residence, Park-like Grounds, Pleasure and Kitchen Gardens, Farm-yard, and Seventeen Acres of rich Meadow Land, close to the railway station, a portion of which is admirably adapted for building societies, with immediate possession.

CHINNOCK and GALSWORTHY have been favoured with instructions to SELL by AUCTION, on THURSDAY, the 26th of JULY, at TWELVE o'clock, at the AUCTION MART, London (unless previously disposed of by private treaty), the important FREEHOLD (and small part Copyhold) ESTATE, late the residence of Mrs. Lawes, situate near the high road, at Southall, comprising a good square built family house, stable, double coach-house, delightful pleasure and kitchen gardens, fish-pond, park like grounds well timbered, and seventeen acres of superior meadow land in high cultivation; the whole lying in a ring fence.—Descriptive particulars, with plans, may be obtained of Thos. Browning, Esq. Solicitor, 1, Hatton-court, Threadneedle-street; of Geo. Wales, Esq. Surveyor, Great St Helen's; and at the Auctioneers' Offices, 28, Regent-street, Waterloo-place

TO BUILDERS.—Peremptory and Important Sale of Twenty-three unfinished Residences, forming Lansdowne-crescent Terrace, formerly known as St. Columb-terrace, Kensington-park, Notting-hill.

MR. ROBINS is directed by the Mortgagee to SELL by AUCTION to the highest bidder, at the MART, on FRIDAY next, JUNE 13, at TWELVE, in 53 Lots, a noble Terrace of TWENTY-THREE SECOND-CLASS RESIDENCES in CARASS, forming Lansdowne-crescent Terrace, formerly known as St. Columb-terrace, Kensington-park, Notting-hill. The development of his most attractive estate is rapidly advancing towards completion, and it is considered that the character and position of these houses will, as soon as finished, command tenants of the first respectability, the accommodation proposed being of a most liberal character, whilst the healthy and salubrity of the air offer more advantages than any other situation round the metropolis. There is a garden to each house opening to an ornamental pleasure-ground at the rear. The houses are held for a term of 95 years, at a ground-rent of 21l. a-year each, and 9l. 9s. a year each to the ornamental pleasure-garden, and this premium when completed will readily let at 45l. 9s. per annum. May be viewed daily, and particulars had on the Premises; at the Clarendon Hotel, on the Estate; of Messrs. Rod and Carpenter, Solicitors, Lewisbury; at the Auction Mart; and at Mr. Robins's Offices, Covent-garden.

N.B.—No reserve bidding whatever will be made by the vendor.

Capital New Building Materials, Bridge-wharf, Old Ford-road, Victoria-park, near the City of Paris Tavern.

J. G. HALL will SELL by AUCTION, on WEDNESDAY next, JUNE 11, at TWO precisely, by order of Mr. Wright, the second portion of seventy loads of capital yellow and white SALT, yellow, white, and pine deals and planks; Norway and spruce battens, 50,000 three-quarter and one-inch floor boards in 600 feet lots quartering 5000 feet in 1 to 12-inch battens, 30,000 feet prime yellow joist, 10,000 feet featheredge boards, 100 bundles of pantile laths, fifty new panel doors, &c. &c.—On view the day prior and morning of sale; catalogues at Wharf-cottage, on the premises; at the Lord Nelson and City of Paris Taverns, Old Ford-road; Alfred's Head, Cambridge-road; Marquis of Cornwallis, Old Ford; Rose and Crown, Bromley; Abbey Arms, Plaistow; Yorkshire Grey, Stratford, Shadie, Woodford; Red Lion, Ilford; Fox and Hounds, Romford; and of the Auctioneer, 8, Cranbrook-street, Old Ford-road.

SALES BY AUCTION.

Valuable New Materials to be removed from the Green and Hyde Parks

MESSRS. EVERSFIELD and HORNE beg to announce that they will SELL by AUCTION, on MONDAY, JUNE 16th, at TWELVE precisely, the Valuable New MATERIALS of the temporary buildings erected in these Parks, &c., in connection with the late display of fireworks. The Sale will be held at the Grand Stand, Hyde Park Corner, Piccadilly, and the Materials may be previously viewed. Catalogues to be had of the Auctioneers, 40, Parliament-street.

PRIMROSE-HILL AND VICTORIA-PARK.—VALUABLE NEW MATERIALS.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, on the PREMISES, Primrose hill, at ELEVEN, and Victoria-park, Bethnal-green, at ONE for TWO, on TUESDAY, JUNE 10, the MATERIALS and FITTINGS of the temporary erections used in connection with the late displays of fireworks, comprising a large quantity of excellent 4-inch boarding, numerous principals, rafters, quartering, whole timber uprights, iron sashes, posts and rails, and other useful materials.—May be viewed, and catalogues had on the Premises; and of the Auctioneers, 40, Parliament-street, Westminster

PIMLICO.—LARGE CHIMNEY-PIECES, &c.

MESSRS. EVERSFIELD and HORNE are instructed to SELL by AUCTION, on FRIDAY, JUNE 13, at TWELVE, at the MARBLE SHOW ROOMS Belgrave place, about 150 CHIMNEY-PIECES, in marble, stone, and alabaster, several of which are of rare acquirement, and others of a plainer character; also, a Gothic Caen stone monument; an alabaster ditto, with statuary tablet; several wall tablets, and two marble vases. May be viewed three days previous, and catalogues had on the Premises; and of the Auctioneers, 40, Parliament-street, or Coal-Exchange.

PORTPOOL-LANE. Valuable Builder's Stock of seasoned Timber, Plant, Implements, and Effects, on the Premises of the late Messrs. Locke and Nesham.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors to SELL by AUCTION, on the PREMISES, Portpool-lane, Gray's-inn-lane, on WEDNESDAY, JUNE 18th, and two following days, at TWELVE for ONE each day, the FIRST PORTION of the valuable STOCK and EFFECTS, which will comprise a large quantity of well-seasoned yellow and white deals and battens, prepared floor-boards and battens, pine plank, thirty loads of timber in the docks, die square timber and quartering, oak sills, dry wainscot and mahogany blocks of Portland and other stone steps and paving; also, several builder's carts, stone-trucks, timber-carriage; scaffold boards, poles, and pullops; crab-engines, bootting-jacks, blocks and falls; ladders, wheeling planks, barrows, pile-driving engines, and monkeys; saw-tackle, a new travelling-crane, the contents of the joiners', plasterers', painters', and smiths' shops; new and old iron, an endless lifting chain, and drum work-benches, and other effects.—May be viewed two days previous, and Catalogues had on the Premises, or will be sent post-free, to any parties who will apply to the Auctioneers, 40, Parliament-street, or Coal-exchange

EXTENSIVE BUILDER'S STOCK, Portpool-lane.—Alteration of the Day of Sale.

MESSRS. EVERSFIELD and HORNE respectfully intimate, that in consequence of the great number of lots they have to offer, it is necessary to POSTPONE this SALE from the 20th and 21th, to the 18th, 19th, and 20th.

40, Parliament street.

Valuable Leasehold Builder's Premises, Gray's-inn-lane.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors to prepare for SALE, early in JULY, the valuable LEASE of the extensive BUILDER'S PREMISES, Portpool-lane, late occupied by the firm of Locke and Nesham, comprising large yard-room with covered sheds, timber stages, and saw-pit, carpenters' and joiners' shops for forty benches, plumbers', and painters' shops, store-rooms, &c.; also an excellent steam-engine and machinery for sawing, morticing, tenoning, &c. A large sum has been expended in substantial improvements and alterations, and they are held for a long term at a low rental.—40, Parliament-street.

FOR ABSOLUTE SALE SHOREDITCH Valuable and very improvable Freehold Property offering to Capitalists, Trustees, and others, secure and highly remunerative investments.

MR. EDWIN FOX is favoured with instructions to SELL by AUCTION, at the MART, on FRIDAY, JUNE 20th, at TWELVE, in lots, the valuable FREEHOLD ESTATE, Nos. 130, 132, and 134, Curtain-road, and 138, Shoreditch, being four commodious dwelling-houses and shops, and extensive premises, at present let to responsible tenants, but at inadequate rents, occupying a very important position, and from the extent of the area on which it stands, affording advantageous opportunities for building purposes, by which means a greatly improved rental may easily be obtained. The premises may be viewed, and particulars had of Messrs. Ware and Ware, Solicitors, 28, Kingsland-road; of Messrs. Devonshire and Wallinger, Solicitors, 8, Old Jewry; of Messrs. Desmoronds and Co. Solicitors, 5, Size-lane; of Mr. Wm. Roscoe, Solicitor, King-street, Finsbury; of Mr F. Broughton, Solicitor, 4, Falcon-square; at the Mart; and at Mr. Edwin Fox's Offices, 41, Coleman-street, Bank.

500,000 STOCK BRICKS, STARCH GREEN, near HAMMERSMITH.

MR. ALLEN DAVIS is directed by the Executor to SELL by AUCTION, on the PREMISES, Mr. Street's Brick-field, Starch Green, in lots, on THURSDAY, 19th JUNE, at ONE for TWO o'clock, about 500,000 Stock Bricks, well made, and lying handy for cartage; also two handsome cows, a sow in pig, and about 90 head of Spanish and Cochin poultry. May be viewed, and catalogues had on the Premises; at the Travellers' Rest, and Seven Stars, Starch Green; the Victoria, Uxbridge-road; King's Arms, Acton Bottom; Castle, Hammersmith; and of Mr Allen Davis, Auctioneer, 11, Old Jewry Chambers, City

WESTMINSTER-BRIDGE-ROAD.—TO BUILDERS, CONTRACTORS, AND OTHERS

MR. LEREW will SELL by AUCTION, on the PREMISES, Palace New-road, on MONDAY, JUNE 9th, at TWELVE, 700 yellow and pine planks, deals, and battens; 50 squares of flooring, 10,000 feet of moulding, 4,000 feet of wide pine board, 8,000 feet of quartering, 100 four-panel doors, large quantity of matched boarding, fir balk, dry cut stuff, and useful old materials; five brick and spring carts, chaise, brown mare, harness, ranges, stoves, old iron, &c.—Auction Offices, Cardington-street, Hampstead road.

NORTH WOOLWICH, ESSEX.—Freehold Building Land.

MR. LEREW will SELL by AUCTION, at GARRAWAY'S, on WEDNESDAY, JUNE 11th, at TWELVE for ONE, in two lots (by order of the Administrators of the late George Prickett, Esq.), TWO valuable PLOTS of FREEHOLD BUILDING LAND, overlooking the Pleasure grounds, and near the pier and terminus of the North Woolwich Railway.—May be viewed, and particulars had of J. E. Pool, Esq. Solicitor, 4, South square, Gray's-inn; and of the Auctioneers, 2, Cardington street, Hampstead-road.

42, UNION-STREET, SOMERS-TOWN.

MR. LEREW will SELL by AUCTION, on the PREMISES, as a whole, on THURSDAY, JUNE 12th, at TWELVE for ONE, about 2,000 feet of Mahogany, 1,500 yellow, white, and pine planks, deals, and battens, forty-pairs of prepared flooring, 8,000 feet wide pine boards, 6,000 feet scantling, dry cut stuff, doors, and other useful stock.—May be viewed the day prior to the Sale, when catalogues may be had on the Premises; and of the Auctioneer, Cardington-street, Hampstead-road.

SALES BY AUCTION.

GRANGE-ROAD, BERMONDSEY.—Genuine Salvage Sale, without the slightest reserve. To Builders, Cabinetmakers, Wheelwrights, Firewood Cutters, and Others. The Stock of Messrs. Elwin and Townsman, Timber Merchants, damaged by fire.

MR. PEAKE is ordered by the Proprietors to SELL by AUCTION, on the PREMISES, on THURSDAY, JUNE 19, 1856, at TWELVE for ONE o'clock, in lots, all the STOCK DAMAGED by the late disastrous FIRE, comprising about 250 fine oak and pine planks, 200 yellow deals, 600 squares pre-ared flooring, in different thicknesses, large quantity of scantling, ash felloes, mahogany, and a great variety of other useful materials.—May be viewed the morning of Sale; and catalogues obtained on the Premises, and at Mr. Peake's Offices, 44, Tooley-street, Southwark

SALE POSTPONED from JUNE 3rd and 4th to JUNE 5th and 6th

TO GOVERNMENT CONTRACTORS AND OTHERS.—Stock, Plant, and Implements in Trade of Mr. Carlisle, Contractor.

MR. PEAKE is ordered peremptorily to SELL by AUCTION, on the PREMISES, Bermondsey New-road, on TUESDAY and WEDNESDAY, JUNE 10th and 11th, at TWELVE each day, without the least reserve, the several Contracts under the Commissioners of Sewers, &c. being completed, a large quantity of drain-pipes, double and single junctions, elbows, &c., 10,000 feet elm board, about 12,000 strutts, a quantity of superior bell-pumps, and other gearing, 8 x 8 capital builders' carts, several thousand feet walnut-tree veneers, dry planks boards, and battens, and 700,000 stock bricks, lying at Borgess-hill; stone, wrought and cast-iron, anvils, &c.; in all upwards of 500 lots. May be viewed on the 9th and mornings of Sale, and Catalogues obtained at Mr. Peake's Offices, 44, Tooley-street, Southwark.

TO CARPENTERS, BUILDERS FIXTURE-DEALERS, AND OTHERS

MR. LOUND will SELL by AUCTION, on the PREMISES Dudley-court, Silver-street, Wood-street, on FRIDAY, JUNE 13th, at TWELVE, in lots by direction of Mr. Roberts, who is retiring, the STOCK in TRADE, consisting of well-seasoned deals and battens, cut stuff, some fine mahogany, wainscot, and iron doors, new and old sashes, benches, scaffolding, superior pair of iron blocks, and the usual items of a builder's business; also, a few articles of Household Furniture.—May be viewed two days prior to the Sale, and catalogues had of the Auctioneer, 60, Chancery-lane

FOUNDRY.—TO BE LET, a small IRON and BRASS FOUNDRY, in the country, with good local trade. Any practical man will find this worthy of notice. No stock. Fixtures, &c. at valuation. Rent moderate.—Apply, by letter, A. B 100, Minories.

TO PLUMBERS, PAINTERS, and GASFITTERS.—TO BE SOLD, with immediate possession, an OLD-ESTABLISHED BUSINESS, situated about six miles from London. There is a good house, with spacious workshops attached, the present proprietor retiring. Premium, 50l. Stock and fixtures at a valuation.—For cards, apply at 543, New Oxford-street

TO BRICKLAYERS and OTHERS.—TO BE DISPOSED OF, immediately, in consequence of the death of the principal, an OLD ESTABLISHED BUSINESS, situate a short distance from Mid-Kent Rail, Sydenham; together with the lease of a substantially brick-built dwelling-house. Further particulars of Mr. SIDE, 69, Union street, Southwark, London.

WANTED to PURCHASE, within five minutes' walk of Oxford-street, the BUSINESS of a CARPENTER, or Carpenter and Builder. Direct, stating particulars, B. C. 11, Myddleton-street, Clerkenwell.

PAPER HANGINGS! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find an immense STOCK and excellent variety of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 29, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—TRUMBLE and CO. Manufacturers, Leeds, beg to call the attention of the trade to their immense STOCK of PAPER-HANGINGS, at No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, and Machine Goods. The whole being their own manufacture, can supply on the very best terms.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSS'S WHOLESALE WAREHOUSE, 36 GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, and THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER-HANGINGS, — JEFFERY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their last spring patterns in point, style, and colouring, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls. — Factory, 113, Whitechapel; Show-room, 509, Oxford-street.

CRYSTAL PALACE. — The PICTURE GALLERY, situated in the North Wing of the Palace, is NOW OPEN. G. GROVE, Secretary.
June 2, 1856.

CRYSTAL PALACE.—The GREAT FOUNTAINS. The Directors of the Crystal Palace Company beg to announce that WEDNESDAY, the 18th of JUNE, has been fixed for the OPENING of the GREAT FOUNTAINS. On this day will take place the first public display of the whole system of waterworks; comprising (in addition to the Fountains already in action) the Water Temples, the Cascades, the two large Waterfalls, and the Fountains of the Grand Lower Basins. On this occasion admission will be limited to Holders of One Guinea (pink) and Two Guinea (yellow Season Tickets, and to persons paying Half a Guinea. Transferable tickets (blue) will not be available on this day. See the dates specified on the face of these Tickets. The doors of the Palace and Park will be opened at TWELVE. Military bands in attendance, in addition to the Band of the Company.—By order.
Crystal Palace, June 4, 1856. G. GROVE, Secretary.

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The Builder.

A Weekly Record for Architect, Engineer, Operative & Artist.

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MEMORIAL CHURCH at CONSTANTINOPLE.—TO ARCHITECTS.—The Committee entrusted with the duty of giving effect to the Resolutions of the Public Meeting, held April 30, 1856, under the Presidency of H.R.H. the Duke of Cambridge, are encouraged by the success which has attended their appeal for funds, to invite Architects to send in DESIGNS for the MEMORIAL CHURCH, which it was then determined to erect at Constantinople.

The Committee feel that they are not acting prematurely in so doing, a months must still elapse before the site can be definitively approved, and a still longer interval before the work can be actively commenced. They are therefore satisfied that they best respond to the encouragement they have already received, and offer the best guarantee for their zeal in carrying out the work, by taking immediate measures to push forward the architectural arrangements.

The competition will be unlimited and anonymous.

The style to be adopted in the designs must be a modification to suit the climate, of the recognised Ecclesiastical Architecture of Western Europe, known as "Pointed" or "Gothic;" and the neglect on the part of any architect of this provision will absolutely exclude from competition.

The numerous and beautiful instances existing in Southern Europe of this modification of Pointed architecture amply justify the preference thus given to it. Any reproduction of the peculiar features of Byzantine architecture is prohibited, as being objectionable in many respects. Still more must the competitors abstain from the imitation of any forms connected with the religious architecture of the Mahometans, which is, indeed, at Constantinople based upon Byzantine models.

The church must be of sufficient capacity to hold without galleries a congregation of not fewer than 700 persons, while the cost must not exceed 20,000*l.*—a sum sufficient in the hands of an able architect to ensure the monumental character of the structure. The main expenditure must be devoted to enhancing the solid dignity of the building itself, the fittings being as simple and inexpensive as may be consistent with propriety. The substitution or addition of more expensive fittings is left to the munificence of individuals, who may desire to present them as special memorials. No representations of the human form, or of the forms of animal life, are to be introduced, either externally or internally; at the same time architects are advised to avail themselves of the beautiful constructive materials which are so easily and cheaply procurable at Constantinople, particularly the local Marmora marble.

The competitors' attention is directed to the risk of earthquakes occurring at Constantinople.

The competitors must send in, on the scale of ——, the following geometrical drawings:—

1. Ground-plan. 2. Elevation, west end. 3. Ditto, east end. 4. Ditto, north side. 5. Ditto, south side. 6. Longitudinal Section. 7. Latitudinal section, looking west. 8. Ditto, looking east.

They must also contribute detail drawings, upon, if necessary, a larger scale, of such constructional arrangements, ornamental details, and internal fittings, as they consider it requisite to elucidate, with concise explanations in a manuscript which must give the grounds upon which they base their estimate of the whole probable cost. They are also at liberty to send one perspective drawing of the exterior, and another of the interior, but not more. A convenient vestry must be shown adjoining the church, and provision made for the organ.

Non-compliance with the above regulations will absolutely exclude from the competition.

In order to ensure competence and impartiality in the adjudication, the Committee have entrusted the selection of the successful designs to the following gentlemen, who have kindly expressed their willingness to serve in a capacity of judges:—

THE RIGHT REV. THE LORD BISHOP OF RIPON.
SIR CHARLES ANDERSON, BART.
THE VERY REV. THE DEAN OF ELY.
THE REV. PROFESSOR WILLIS.
A. J. B. BERESFORD HOPE, ESQ.

The designs must be sent in to the Honorary Secretaries of the Memorial Church, No. 79, Pall mall, London, under motto, with the author's names and addresses in sealed envelopes, not later than JANUARY 1st, 1857, endorsed "Memorial Church at Constantinople."

The judges will be entitled to award a first prize of 100*l.* and a second and third prize of 70*l.* and 50*l.* or in case of equality, two second prizes of 60*l.* each. The design to which the first prize is adjudicated will, without some special reason to the contrary, be the one carried out, and the amount of the prize will be ultimately deducted from the architect's commission. The judges may also make honourable mention of any other designs which appear to them entitled to the distinction.

After the adjudication, there will be a public exhibition in London of all the designs, with the names of the respective architects.

** Copies of this notification to architects may be obtained at the Office of the Society for the Propagation of the Gospel, No. 79, Pall-mall, London.

EDMUND LYONS, Admiral, G.C.B.
F. E. CHAPMAN, Colonel, C.B. R.E. } Hon.
G. R. CLEIG, M.A., Chaplain-General, } Secs.
ERNEST HAWKINS, B.D., Secretary S.P.G.

79, Pall-mall, June 4, 1856.

ROYAL ACADEMY of ARTS, Trafalgar-square. The EXHIBITION of the ROYAL ACADEMY of ARTS is NOW OPEN. Admission (from Eight till Seven o'clock), One Shilling. Catalogues, One Shilling.
JOHN PRESCOTT KNIGHT, R.A. Secretary.

THE NEW SOCIETY of PAINTERS in WATER-COLOURS.—The TWENTY SECOND ANNUAL EXHIBITION is NOW OPEN at their Gallery, 53, Pall mall (near St. James's-palace) daily from Nine till dusk. Admission, 1s.; Season-tickets, 5s.
JAS. FAHEY, Secretary.

CONTRACTS.

GUILDFORD UNION.—To BUILDERS and CONTRACTORS.—Extensive additions and alterations to the Guildford Union Workhouse.—The Guardians of the Guildford Union, in the County of Surrey, hereby give notice that they are desirous of receiving TENDERS for BUILDING NEW SCHOOLS and DORMITORIES, a NEW HOSPITAL and other ADDITIONS and ALTERATIONS to the Workhouse of the said Union according to the plans and specifications prepared by Mr. C. H. HOWELL, architect, of Godalming, Surrey, and of the Norwich Union Insurance Office, New Bridge-street, London. The plans and specifications may be seen at the Workhouse, Guildford, after SATURDAY, the 31st day of MAY instant. The Contractor whose Tender may be accepted will be required to give security for the due performance of the Contract. The Guardians do not pledge themselves to accept the lowest or any of the Tenders. Tenders, indorsed "Building Tenders," must be sent to me by SEVEN o'clock in the evening of WEDNESDAY, the 25th JUNE next.—By order of the Board,
W. HAYDON SMALLPEICE, Clerk.

Guildford, 27th May, 1856.

TO BUILDERS and OTHERS.—The Guardians of the Poor of the Edmonton Union will meet at the Board-room at Edmonton, on WEDNESDAY the 25th of JUNE inst. at 11 o'clock, to receive TENDERS for the ERECTION and COMPLETION of an INFIRMARY adjoining the Children's Establishment at Chase-side, Enfield, Middlesex. The plans and specifications may be seen at the Office of the CLERK of the UNION, in Silver-street, Enfield; and all further information obtained at the Offices of Mr. F. R. SANDELL, Architect, 27, Cannon-street, City. Sealed Tenders must be sent to me before the 25th JUNE instant. The Guardians do not bind themselves to accept the lowest Tender.—By order of the Board,
Enfield, June 5th, 1856. JOHN SAWYER, Clerk.
Surety will be required for the performance of the Contract.

NEWNHAM, GLOUCESTERSHIRE.—TO GAS ENGINEERS and OTHERS.—Persons willing to CONTRACT for the ERECTION of GAS WORKS at Newnham aforesaid, with all necessary Mains and appliances for the purpose of lighting the said Town, are requested to send in PENDERS, with Plans, Specifications (free of expense), and all other necessary particulars explanatory of the system proposed to be adopted, to Mr. F. CARTER, Solicitor, Newnham, on or before the 19th day of JUNE inst. The promoters of the above works do not bind themselves to accept the lowest or any other Tender. Information with reference to the subject will be given by Mr. F. CARTER.
Newnham, 28th May, 1856.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—CONTRACT No. 1.—To BRICK MANUFACTURERS and OTHERS. The Corporation of Sunderland are desirous of receiving TENDERS for machinery for manufacturing and delivering in a depôt within the borough of Sunderland, 3,000,000 BRICKS necessary for the construction of the brick sewers, cesspits, side entrances, &c. in connection with the said works. The quantity of bricks required will be about two and a quarter millions, including square bricks, and bricks to different radiuses for upwards of eight miles of sewers. Further particulars may be known on application to WILLIAM CROZIER, C.E. Borough Engineer, at his offices, Post Cross-street, Sunderland, to whom Tenders are to be sent on or before the 5th day of JULY, 1856, endorsed, "Tender for Bricks." The Corporation do not bind themselves to accept the lowest or any Tender. By order,
WILLIAM SNOWBALL, Town clerk.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—CONTRACT No. 2.—To STONEWARE PIPE MANUFACTURERS and OTHERS.—The Corporation of the Borough of Sunderland are desirous of receiving TENDERS for the manufacturing and delivering in a depôt within the borough of Sunderland, the STONEWARE PIPES, Bends, Junctions, Invert Blocks, Curdon Blocks, &c. necessary for carrying out the Sewerage Works of the borough. The works comprise the necessary pipes, bends, junctions, &c. for about 4 miles of pipe sewers from 9 to 18 inches in diameter, irrespective of private works; the necessary junction and invert blocks for eight miles of such sewers, and the articles in stoneware which may be required in carrying out the said works. Further particulars may be known on application to WILLIAM CROZIER, C.E. Borough Engineer, at his offices, Post Cross-street, Sunderland, to whom Tenders are to be sent on or before the 5th day of JULY, 1856, endorsed "Tender for Stoneware Pipes." The Corporation do not bind themselves to accept the lowest or any Tender.
By order, WILLIAM SNOWBALL, Town Clerk.

TO SEWER CONTRACTORS and OTHERS.—The Sewer Committee of the Vestry of Saint Mary, Newington, will meet at the Vestry-room of the Parish Church, on FRIDAY, the 27th inst. at SEVEN o'clock in the evening, to receive TENDERS for the EXECUTION of DRAINING and MEASURED WORKS in connection with the DRAINS and SEWERS in the said Parish. Printed schedules and forms of Tender can be obtained at the Office of Mr. HENRY JARVIS, the Surveyor of Sewers, on Trinity square, Newington, on payment of Ten Shillings, which, money will be returned to the parties tendering when the Tenders are opened. No other Form of Tender will be received. Sureties will be required for the due performance of the contract, and the committee do not bind themselves to accept the lowest or any other tender.
H. and I. CHURCH, Joint Clerks to the Vestry,
1, Charlotte-st., Newington Butts.
6th June, 1856.

CONTRACTS.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—Commanding Royal Engineer's Office, Dublin, 7th June, 1856. The Principal Officers of her Majesty's War Department hereby give notice that they will receive proposals for the following CONTRACT, viz.:—For the CONSTRUCTION and ERECTION of a BARRACK COURT and TWO HALL COURTS, at the Temporary Barracks, Curragh, Kildare, in the Curragh district. Persons desirous of Tendering for the same will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and at the Royal Engineer's Office at the Curragh, and may obtain specifications, with the terms of Contract. The whole of the work to be completed within eighty days after the date of order to proceed with the work. The letters of Tender with specifications to be sealed, and transmitted under cover to "The Director General of Contracts, War Department, Pall Mall, London," so as to be received on or before the 24th day of JUNE, 1856, and to be marked on the outside "Tender for work at the Curragh of Kildare."

DORCHESTER LOCAL BOARD of HEALTH.—SEWERAGE.—CONTRACTS A and B.—The Town Council of Dorchester, acting as the Local Board of Health, are prepared to receive TENDERS for the following Contracts:

CONTRACT A.—For the supply of Iron Drain-pipes, Radiating Bricks, Stoneware Pipes, and Agricultural Tiles, intended for the construction of six and a half miles of public sewers within their district.

CONTRACT B.—For Excavating the Ground, and Laying and Jointing a length of about six and a half miles of Public Sewers, of which quantity 1,950 yards will be executed with radiating bricks, and the remainder with stoneware pipes.

Plans, sections, and specifications will be ready for inspection at the Offices of the Town Clerk, Dorchester, and at the Offices of Mr. WHITEHEAD, Engineer to the Council, on and after the 16th JUNE instant. A duplicate copy of the former specification and form of Tender may be had on the receipt of 10*s.* 6*d.* by post-office order, payable to Mr. ARTHUR WHITEHEAD, 4, Dix-fields, Exeter, and a duplicate copy of the latter on payment of 2*s.* 6*d.* The Tenders must be delivered at the Town Clerk's Offices, Dorchester, on or before the 14th JULY next. The Council do not pledge themselves to accept the lowest or any Tender.
Dated June 2nd, 1856. G. SYMONDS, Town Clerk.

DORCHESTER LOCAL BOARD of HEALTH.—WATERWORKS, CONTRACT, No. 4.—The Town Council of Dorchester, acting as the Local Board of Health, are prepared to receive TENDERS from parties willing to undertake the erection of a HIGH-PRESSURE PUMPING ENGINE, and the necessary pumps and machinery for raising water for the supply of their district. The specification may be inspected on and after JUNE 9th instant, at the offices of the Town Clerk, Dorchester; or at the Offices of Mr. WHITEHEAD, Engineer to the Council, 4, Dix-fields, Exeter. A duplicate copy of the specification and form of Tender, may be had on the receipt of 5*s.* by post office order, payable to Mr. ARTHUR WHITEHEAD. The Tenders must be delivered at the Town Clerk's Offices, Dorchester, on or before the 5th JULY next. The Council do not pledge themselves to accept the lowest or any Tender.
G. SYMONDS, Town Clerk.
Dated June 2, 1856.

DORCHESTER LOCAL BOARD of HEALTH.—WATERWORKS, CONTRACT, No. 5.—The Town Council of Dorchester, acting as the Local Board of Health, are prepared to receive TENDERS from persons willing to undertake to EXCAVATE the GROUND, and LAY and JOINT upwards of seven miles of IRON MAINS, &c. &c. The specification may be inspected on and after JUNE 9th instant, at the offices of the Town Clerk, Dorchester, or at the Offices of Mr. WHITEHEAD, Engineer to the Council, 4, Dix-fields, Exeter. A duplicate copy of the specification and form of Tender, may be had on payment of 2*s.* 6*d.* at the Offices of the Town Clerk's Offices, Dorchester, on or before the 5th JULY next. The Council do not pledge themselves to accept the lowest or any Tender.
Dated June 2, 1856. G. SYMONDS, Town Clerk.

TO BUILDERS.—Persons desirous of TENDERING for a DWELLING HOUSE to be ERECTED at LEWISHAM, may inspect the drawings and specification at the Office of Mr. JACKSON, Architect, No. 21, Baker-row, City, and to be delivered on or before 24th inst. The parties do not engage to accept the lowest Tender. Bricks may be had close on the spot.

WEST HACKNEY CHURCH.—To Builders and others.—TENDERING for the first portion of the REPAIRS and ALTERATIONS, consisting of NEW WINDOWS, throughout the above Church in Stoke Newington-road. Specification and drawings may be seen at the Office of the Architect, Mr. WILLIAM RUDDALL, No. 3, Charlotte-row, Poultry. Sealed Tenders to be delivered at the Architect's Office every day before NOON, the 23rd instant. The lowest Tender will not necessarily be accepted.

LOCAL BOARD of HEALTH, HASTINGS.—The Local Board of Health of Hastings are prepared to receive TENDERS, for the following WORKS in connection with their WATER SUPPLY, viz.:—Two steam engines, two boilers, pumps, rods, &c. &c. for the two newly-founded wells, including engine-house, boiler-house, coal-store, chimney, and brick tank. The plans and specification may be seen at the Town Clerk's Office, Hastings, on and after the 17th inst. All the Tenders must be delivered by TWELVE o'clock at noon, on TUESDAY, the 1st day of JULY next. The Local Board do not hold themselves to accept the lowest or any Tender.—By the Local Board,
JOHN G. SHORTER, Town Clerk.

Hastings, June 9th, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

TO CONTRACTORS.—The Directors of the Suburban Villa Association are open to receive TENDERS for the CONSTRUCTION of the SEWERS, ROADS, &c. on their Estate, near the Victoria-park, Hackney-wick.—Tenders to be sent in on or before MONDAY, 23rd inst. The Directors do not pledge themselves to accept the lowest Tender. Plans and specifications may be seen at the Office, 45, Moorgate, from TEN to FOUR daily. N. THORPE, Sec.
June 10, 1856.

PARISH of ST. MARYLEBONE, May 31st, 1856.—CONTRACT for GLAZED STONEWARE SEWAGE PIPES.—Notice is hereby given, that the Vestrymen of the parish of St. Marylebone, in the county of Middlesex, will meet in the Board-room of the Court-house of the said parish, on SATURDAY, the 21st day of JUNE, 1856, to receive TENDERS from persons willing to contract with the said Vestry of St. Marylebone for one year, for the SUPPLY of GLAZED STONEWARE SEWAGE PIPES, BENDS, JUNCTIONS, &c. The Tenders to be upon the printed forms at nett prices, and to be sent in, sealed, on or before ELEVEN o'clock in the forenoon on the said 21st day of JUNE. A 6-inch, 9-inch, and a 12-inch pipe to be delivered free of all charges at the St. Marylebone Court-house, on or before THURSDAY, the 19th day of JUNE, such pipes to become at once and to remain the property of the Vestry. Any peculiarity in the form or construction of any of the pipes to be specified, as also whether such peculiarity appertains to all the pipes, or to only a proportion of the same, and to what extent. Further particulars may be known, and forms of Tender procured from the Vestry's Surveyor, Mr. ROBERT SCACE, at his daily attendance at the Court-house, from TWELVE till ONE o'clock. The Vestry do not pledge themselves to accept the lowest Tender. The Vestry will require the parties Tendering, or some person on their behalf, to be in attendance at the time of opening the Tenders.—By order, W. E. GREENWELL, Vestry Clerk.

TO CONTRACTORS and OTHERS.—The Board of Highways for the Parish of Saint Mary, Nottingham, will, at their meeting to be held at the Town-hall, on the 4th day of JULY next ensuing, be ready to open TENDERS from parties willing to undertake the CONSTRUCTION and COMPLETION of the following SEWERAGE WORKS, viz.:

CONTRACT A.—The laying down and constructing a Main Low Level Sewer, together with all the several Works appertaining thereto, commencing at the present exit of the River Leen, under the Nottingham Canal, in the East Croft Meadow, and terminating at the Junction of the Leen and Tinker's Leen, near the parish of Sneinton.

CONTRACT B.—The laying down and constructing a Main Low Level Sewer, together with all the several Works appertaining thereto, commencing at the Manvers-street Sewer, in Hermitage-lane, and proceeding in direct and curving lines to, and terminating at, the River Trent.

Plans, sections, drawings, and specifications of the above Works may be inspected and forms of Tender obtained at the Offices of Messrs. JOHN UNDERWOOD and FREDERICK JACKSON, Engineers, Peter-gate, Nottingham, on and after the 20th inst. All Tenders must be sealed and addressed to the Board of Highways, for the parish of Saint Mary, "Tender for Sewerage Works," Offices, Leen-side, Nottingham, on or before the said 4th day of JULY.—By order of the Board, C. JENKINS, Clerk.
Nottingham, June 10, 1856.

TO BUILDERS.—TENDERS are required for REPAIRING the present FARM HOUSE, HOMESTEAD, and FARM BUILDINGS, situate at Hook, Kingston, Surrey, in the occupation of Mr. T. Peat's. The specification and conditions may be seen at the Premises, or at this Office, on and after MONDAY, the 16th inst., and Tenders are to be delivered here not later than SATURDAY, the 21st inst., addressed under cover to Mr. JAMES ORCHARD, Hall, well. W. M. MUNT, 25, Bloomsbury-square.

PARISH of ST. PANCRAS, in the County of MIDDLESEX.—DEPARTMENT of WORKS.—To BUILDERS, SEWER CONTRACTORS, and OTHERS.—The Highways, Sewers, and Public Works Committee of the Vestry of the Parish of St. Pancras, in the county of Middlesex, will meet at the Offices of the Department of Works, 10, Edward-street, Hampstead-road, on MONDAY, the 16th day of JUNE instant, at FOUR o'clock in the afternoon, to receive TENDERS from parties who may be willing to CONTRACT until Midsummer, 1857, for the execution of the GENERAL WORKS and REPAIRS to the SEWERS, GULLIES, DRAINS, &c. in the said parish, at, or under, or above, a schedule of prices, which, together with the form of Tender and Contract, may be purchased at the Office of the Department of Works, 10, Edward-street, Hampstead-road, on and after WEDNESDAY, the 11th day of JUNE instant, between the hours of TEN and FOUR, up to the day and hour fixed to receive the Tenders. Sealed Tenders to be sent in, signed by the proposed Contractor, with the names and description of two sufficient sureties for the performance of his Contract, to the Office of the Department of Works, by or before TWELVE o'clock at noon on the said MONDAY, the 16th day of JUNE instant. The Vestry do not bind themselves to accept the lowest or any Tender. No Tender will be received or accepted unless made out on one of the printed forms. Further particulars may be obtained on application to the Surveyor, at his Office, as under.
G. W. F. COOK, Vestry Clerk.
Department of Works, 10, Edward-street, Hampstead-road, June, 1856.

CHESTERFIELD, TAPTON, and CALOW CEMETERY.—To BUILDERS, CONTRACTORS, and OTHERS. The BURIAL BOARD for the Parishes of Chesterfield, Tapton, and Calow, in the County of Derby, are prepared to receive TENDERS for the Erection of Chapels, Lodge, Entrance Gates, Fence Walls and Fencing, &c., at Spital, near Chesterfield. The Plans, Drawings, and Specifications can be seen, and all information obtained, at the Offices of the Architects, Messrs. BIDLAKE and LOVATT, Market-place, Wolverhampton, and at the Offices of Mr. F. C. GILLETT, Market-place, Chesterfield, between the hours of TEN a.m. and FOUR p.m. from SATURDAY, the 14th inst. to JULY 1st. All Estimates and Tenders are to be sent in addressed to the Clerk to the Board, sealed up, and endorsed "Tenders for Cemetery Buildings, Chesterfield," on or before the 2nd day of JULY next, at TWELVE o'Clock at Noon. The Board do not, however, bind themselves to accept the lowest or any Tender.—By order,
ROBERT WALLER, Clerk to the Board.
Chesterfield, 11th June, 1856.

METROPOLIS LOCAL MANAGEMENT ACT.—BOARD of WORKS for the WESTMINSTER DISTRICT.—To BUILDERS, SEWER CONTRACTORS, and OTHERS.—The Committee of Works of the said Board hereby give Notice that they are prepared to receive TENDERS from parties who may be willing to contract for the EXECUTION of GENERAL WORKS and REPAIRS to the SEWERS, GULLIES, DRAINS, &c. in the district, under the jurisdiction of the Board, for the term of one year from Midsummer, 1856. A schedule of prices, together with the conditions of contract and form of Tender, may be purchased at the Offices of the said Board, in Millbank-row, Westminster, on and after TUESDAY, the 17th day of JUNE instant, between the hours of TEN and SIX. Parties tendering will be required to state in their Tenders the rate per cent. above or below the printed schedule of prices (or at the same) at which they will be willing to execute the several works. Sealed Tenders to be delivered, endorsed, "Tender for General Works and Repairs to Sewers &c." at the Offices of the said Board in Millbank-row aforesaid, by or before FOUR o'clock in the afternoon on MONDAY, the 23rd day of JUNE instant, at which time and place parties tendering, or some authorised agent, will be required to attend. No Tender will be received after the time specified, and that does not contain the names and descriptions of two sufficient sureties, to be approved by the Board, for the due performance of the contract, nor unless made out on one of the printed forms, and strictly in accordance with the conditions. The Committee do not pledge themselves that the lowest or any Tender will be accepted by the Board.
By order of the Board, W. F. JEBB, Clerk.
Millbank-row, Westminster, 12th June, 1856.

CONTRACTS.

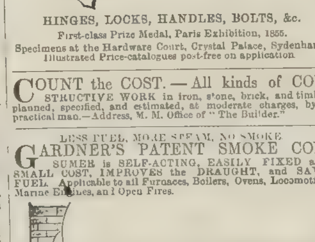
TO CONTRACTORS for PUBLIC WORKS.—The Local Board of Health of Hastings give notice that they are prepared to receive TENDERS from competent persons for the DRAINAGE of part of their district. The Contract will comprise the CONSTRUCTING and LAYING of about fifty yards of 4 feet CAST IRON CULVERTS, 100 yards of 15-inch CAST-IRON PIPES, all provided by the Local Board; about 217 yards of BRICK SEWERS, from 1 foot 6 inches to 4 feet; and about 1,470 yards of GLAZED STONEWARE PIPES of sizes from 9 inches to 15 inches. Also the necessary Gullies, Ventilating Shafts, Side Entrances, and Tide Flaps. The specification and conditions of Contract and Tender, with printed form of Tender, may be obtained, upon payment of five shillings, and the plans, sections, and drawings, may be inspected at the Office of the Town Clerk, High-street, Hastings, between the hours of TEN and FOUR, on and after the 17th instant. The Local Board will require the works to be completed within six months from their commencement, and they do not bind themselves to accept the lowest or any Tender. Sureties will be required. Sealed Tenders on the forms supplied by the Local Board, properly indorsed and addressed to "The Hastings Local Board of Health," must be delivered at the Town Clerk's Office, Hastings, before TWELVE of the clock at noon of FRIDAY, the 25th day of JULY next.—By order of the Local Board,
JOHN G. SHORTER, Town Clerk.
Hastings, June 9, 1856.

TO BUILDERS.—WANTED, TENDERS for BUILDING OFFICES, STORES, &c. at the Manor-house Works, Long Eaton. Plans, conditions and specifications to be seen at the Office of GEO. HALL, Architect, Derby, on MONDAY, the 16th inst. Tenders to be delivered in one amount for the whole of the Works complete, addressed, "S. J. Clave, Long Eaton, near Derby," on MONDAY, the 23rd inst. The lowest Tender will not necessarily be accepted. Printed quantities will be furnished.

TO CONTRACTORS, GARDENERS, and OTHERS.—The Burial Board for the Parishes of Chesterfield, Tapton, and Calow, are also prepared to receive TENDERS for LEVELLING, LAYING OUT, PLANTING, and MAKING PATH and ROADWAYS through the said proposed new Cemetery. The plans, drawings, and specifications can be seen, and all information obtained, at the Offices of Mr. F. C. GILLETT, Market-place, Chesterfield; or at the Offices of Messrs. BIDLAKE and LOVATT, Architects, Wolverhampton, between the hours of TEN a.m. and FOUR p.m. from SATURDAY, the 14th inst. to TUESDAY, 1st JULY. Estimates and Tenders are to be sent to the Clerk to the Board, sealed up, and endorsed "Tenders for Laying out Cemetery, Chesterfield," on or before the 2nd day of JULY next, at TWELVE o'clock at noon. The Board do not bind themselves to accept the lowest or any Tender.—By order,
ROBERT WALLER, Clerk to the Board.
Chesterfield, 11th June 1856.

TO SEWER CONTRACTORS and OTHERS.—The Sewer Committee of the Vestry of Saint Mary, Newington, will meet at the VESTRY ROOM, of the Parish Church, on FRIDAY, the 27th inst. at SEVEN o'clock in the evening, to receive TENDERS for CLEANSING and CASTING OUT of the MUD from the OPEN DITCH and other work connected therewith, in the Trinity district of the parish. The plan, specification, and conditions can be seen at the Office of Mr. HENRY JARVIS, the Surveyor of Sewers, at 29, Trinity-square, Newington. Sureties will be required for the due performance of the Contract, and the Committee do not bind themselves to accept the lowest or any other Tender.
H. and F. CHESTER, Joint Clerks to the Vestry,
June 6, 1856. 1, Church-row, Newington-butts.

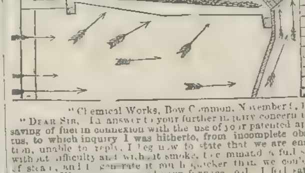
HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London.



HINGES, LOCKS, HANDLES, BOLTS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham.
Illustrated Price-catalogues post-free on application.

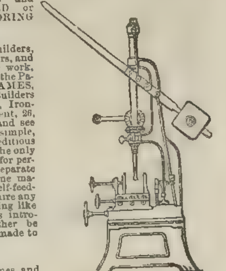
COUNT the COST.—All kinds of CONSTRUCTIVE WORK in iron, stone, brick, and timber, planned, specified, and estimated, at moderate charges, by a practical man.—Address, M. M. Office of "The Builder."

LESS FUEL, MORE STEAM, NO SMOKE.
GARDNER'S PATENT SMOKE CONSUMER is SELF-ACTING, EASILY FIXED at a SMALL COST, IMPROVES the DRAUGHT, and SAVES FUEL. Applicable to all Furnaces, Boilers, Ovens, Locomotives, Marine Engines, and Open Fires.



"Chemical Works, Bow Common, November 1, 1855.
"DEAR SIR,—In answer to your further inquiry concerning the saving of fuel in connexion with the use of your patented apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I beg now to state that we are enabled without difficulty and without smoke, to maintain a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.
"I remain, dear Sir, yours truly,
"To E. V. GARDNER, Esq." "FREDK. ALLEN."
Apply to the PATENTEE, 24, Norfolk-street, Middlesex Hospital, or to Messrs. BURBIDGE and HEALY, 118, Dorset-street, Fleet-street; or Z. D. BERRY, Albion Works, Victoria-road, Pimlico. Bakers' Ovens fitted for 5l. license included.

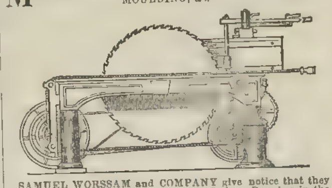
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines for home and foreign use.

WOOD-CUTTING MACHINERY,
JOHN M'DOWALL and SONS,
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,
MANUFACTURERS of VERTICAL SAW-FRAMES
(driven by straps).
For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached, circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a ½ of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power mortising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 46 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.

212° MILNER'S HOLDFAST and FIRE-RESISTING SAFES (non-conducting and vaporising) with all the improvements, under their Quadruple patents of 1840-51-54 and 1855, including their Gunpowder Proof Solid Lock and Door (without which no safe is secure).
THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.
MILNER'S PHŒNIX (212°) SAFE WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord-street, Liverpool. London Depôt, 47A, Moorgate-street, City.—Circulars free by post.
Sold also by HOBBS, ASHLEY, and CO. 97, Cheapside.

IT being desirable that her Majesty's Government be in a position to procure CAST IRON of the quality suited to the various purposes to which it is applied in the Service, a series of experiments, already commenced, will be made with every variety of Strong Iron that can be procured, the product of the United Kingdom. These inquiries will comprise:

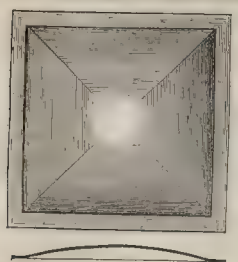
1. Chemical analysis.
2. Specific gravity.

Mechanical properties, as shown by:
- a. Tenacity.
- b. Torsion.
- c. Transverse strain.
- d. Compressibility.
- e. Impact.
- f. Rending, a combination of a and c.
- g. Elasticity.

The experiments will be tabulated and published. Iron-masters, wishing to submit their produce to the above investigation, are requested to communicate to the Principal Clerk, War Department, Pall Mall, before 30th JUNE, the terms on which they are willing to deliver at the Royal Gun Factories, Woolwich Arsenal, samples of not less than 5 cwt. of Pig Iron, with a small quantity of the Fuel, Flux, and Ore employed. A certified statement to accompany the samples, giving all particulars, and specifying that the sample of Iron is of the first or second melting, as the case may be, and that similar Iron can be produced in quantity. None that has been melted more than twice will be received.
H. R. DREWRY.
War Department, Pall Mall, 9th June, 1856.

IRONMONGERY.
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

JOHN TANN'S new patent RELIANCE LOCK and FIREPROOF SAFES form the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. Waterlow, Birchin-lane; at the Warehouse, 30, WALBROOK, CITY; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and party-walls.



Plan and Section of Buckled Plate; Convex Side.

MALLET'S PATENT BUCKLED PLATES.

TUPPER AND CARR,

SOLE LICENSEES AND MANUFACTURERS.

THESE Plates are applicable to every purpose where strong, rigid, light, and durable load sustaining surfaces are demanded, as for the Flooring of Bridges, Viaducts, Jetties, Fireproof Fronts for Buildings, Fireproof Partitions, Bulkheads, Doors and Shutters, the Plates in between Iron Piling for Wharf or Dock Walls, the Covering of Iron, or other Roofings, as for Building Slips in Docks, &c., for Railway Stations, &c. The construction of Iron, Military, Naval, or other Huts, Stores, and Iron Buildings of all sorts; the Formation of Water Tanks, the Covering of Reservoirs of Waterworks; and, generally, to every purpose to which Corrugated Iron has been applied, beside many others to which that is inapplicable,—as, for example, the Construction of Balcony or Cantilevered Galleries, Projecting Footways, &c. the Plates deriving their support solely from themselves and the walls

BUCKLED PLATES may be united to each other, or to the frame of the structure they cover, by either lap or butt joints and either by screw bolts, rivets, or wood screws (to timber), and the joints are made absolutely water tight when required, by rivetting and lines and caps, or by interposed strips of felt saturated in oil or cement, or in tar and pitch, or by strips of vulcanised India-rubber, or by a thin layer of oil putty.

The sizes of the Patent Buckled Plates are—4 ft. by 4 ft.; 3 ft. by 3 ft.; 4 ft. by 2 ft.; and 3 ft. by 1 ft. 6in.

Other sizes by agreement.

For further particulars, prices, &c. apply to the Licensees,—

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IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

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ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

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Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES

beyond the current Price of Hoop-iron

Gauge.	In wide.	Per 1,000 ft.
No. 16	.. 1½ ..	72s. 0d.
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15	.. 1⅝ ..	88. 0d.
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15	.. 2½ ..	98. 6d.

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11½ inches, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming REVERSED CLAWS, which are so bent, that a direct end grain of the iron is presented longitudinally, and which become, when built into the brickwork, embedded in the structure, by which means a COMPLETE and PERFECT DETAIL TIE throughout the whole building is obtained.

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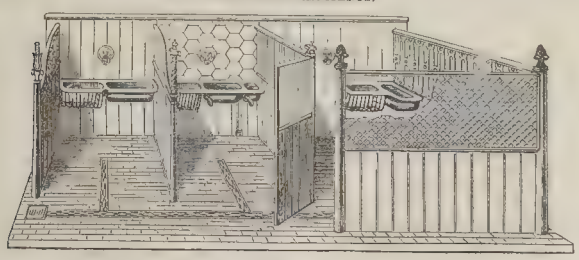

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Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT-IRON RACK, united to an iron top-plate, and forming one complete and useful fixture, having Cottam's Patent Noiseless Halter-Guide and Collar-Rein attached, the ball of which is taken to the back of the manger, and works with ease and freedom up and down the guide-bar. Cottam's new Patent Seed-Box, of galvanized sheet-iron, is an improvement in the above fittings, being complete in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

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Improved Surface Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and enamelled. Iron mates, Pergolas, Hurdles, &c.

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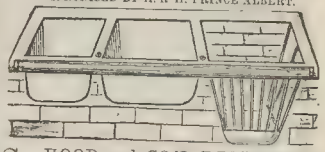

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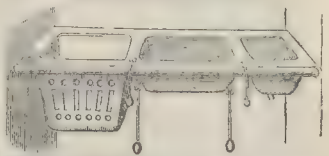

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12	"	20	"
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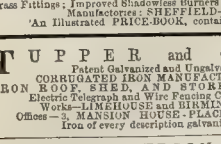

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O G Gutters		1s. 0d	1s. 1½	1s. 3d.	1s. 4½	1s. 6d.
Ditto, with plain clips cast on		1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.	
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Best Cut Clasp Nails.				
1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s. 6d.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails ..... 13s. 6d. "
Best Zinc Slating Nails ..... 40s. "
Best Glues ..... 47s. to 53s. "
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Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

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Stocked and wheeled ready for fixing. Old Bells recast taken in exchange.
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The result of the investigation for the triennial division of profits was then announced, by which the policies assumed in the assurances and the sum of which will be liable to the holders, but of which one-third, or 71 more, by the laws of the society, to be set aside as a reserve for allocation at the next triennial division in 1859.

From the remaining two-thirds a Bonus was declared to the rate of 1*l* per cent per annum, on all policies on which six premiums had been paid, but only on the sums in the policies but also on the former vested bonuses.

There was left, in addition to the sum of reserve above stated, a surplus of 13,625*l*, together, 74,802*l* to go to the next division

The Invested Funds of the Society amount to £279,971

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VOL. XIV.—No. 697.

NEXT week (Tuesday, the 17th), a meeting of several architectural societies will be held at St. Alban's, when Mr. Scott will give a walking commentary on the Abbey, and its proposed restorations; and Mr. Poole, of the Northampton Society, will deliver a lecture on architectural colouring. It is hoped that the gathering together of many persons interested in our ancient architectural glories will give a stimulus to the proposal for restoring the Abbey Church, the subscriptions to which continue to flow in from many and distant sources. It will be remembered that a meeting was held in April last, "to consider the best means of restoring and upholding the Abbey Church of St. Alban's, and of obtaining for it the dignity of a cathedral," when a report from Mr. Scott was read, and a large sum of money, now increased to nearly 8,000*l.* was subscribed. The sum required to render the building fit for cathedral uses is about 12,000*l.* and for works which, on the ground of consistency, should follow, about 5,000*l.* more. The historical interest attaching to St. Alban's Abbey Church makes its maintenance an object of national concern, and, remembering the sum of money that was subscribed in a short time when York Cathedral was partly destroyed, and that when, more recently, Doncaster Church was burnt, 30,000*l.* were subscribed in a few days towards rebuilding it, we feel little doubt as to the success of the movement in favour of St. Alban's. Its claims are great.

"Founded," as the Report says,—"in the days of Constantine the Great, in honour of England's first martyr, and within ten years of his martyrdom, it is probably the earliest in its authenticated foundation of any church now existing in Britain; and possibly the only instance of a church clearly proved to be the lineal successor of one of those built on the very first establishment of Christianity in our country; for we are informed that, the church first erected being small, the Pagan Saxons disdained to destroy it according to their usual practice; so that it survived the second period of idolatry, and was standing when the Saxons themselves embraced Christianity. Bede distinctly says that this Romano-British Church of St. Alban remained in his days; and a century later the body of the martyr, which had been removed during the Saxon invasion, was restored to the ancient church by Offa, king of Mercia, and an abbey founded in connection with it."

Whether King Offa rebuilt the church itself is uncertain; but, from some fragments of evidently Saxon date, it would appear probable that it was rebuilt either then or shortly afterwards.

The two last Saxon abbots collected vast stores of materials from the ruins of Verulam for the rebuilding of their church, a work carried into execution by the two first Norman abbots; on a scale so gigantic as even now to astonish the beholder. The nave, or western arm of the cross, alone measured internally no less than 270 feet in length, and the total length of the church appears to have been as much as 450 feet. It had no less than six apsidal chapels, besides the great apse containing the high altar and the shrine of St. Alban; and its dignity externally was enhanced by three towers; one at the intersection of the cross, and two in the western façade. The whole edifice, in its perfect and unaltered state, must have been dignified and noble in the highest degree; though (being built entirely of Roman brick, and covered both within and without with an incrustation of plaster) its beauty was the result of outline, proportion, and vastness, rather than of architectural detail: the stern severity of its interior was, however, relieved by costly accessories, and by the enrichment of every part of its surface with painted decorations, of which remains may still be traced, wherever the early surfaces remain. The painting is usually of a very simple character: the plastered surface is divided into the forms of stonework, by thick red or murry-coloured lines; some single, others double. In the arches the voussoirs thus represented are sometimes of alternated colours, and the soffites of the arches painted in some simple geometrical pattern, varying in each arch. In other parts the decorations were much more rich; consisting of bands of Norman foliage of much beauty, with figures and animals.

We have on several previous occasions given particulars of the building, both descriptive and pictorial, and in our present issue we add some farther illustrations.* The building is full of story:—

> "Where'er we move, or cast the thoughtful eye,
> Some memory starts, some form is sweeping by;"—

and beyond this it is a perfect study of the architecture of the middle ages. To adopt the words of the report,—

"Not to dwell upon the fact that its walls are composed of materials from ancient Roman structures (probably including also those of the church erected under Constantine), and that several architectural fragments remain of undoubted Saxon date,—we have in the building, first, a specimen on a vast scale of the earliest Norman architecture forming the great bulk of the building, including also the great central tower: we have, secondly, an extremely beautiful specimen of the later and more enriched Norman, in the passage or "slype" at the extremity of the southern transept: thirdly, we have, in the incipient works in the west front, including probably the three beautiful western porches, works of the earliest Pointed Architecture, executed in the days of King John; and in conjunction with these, and on either side of the nave, we have a majestic specimen of the same style in its future developement, executed early in the reign of Henry I.: fourthly, we have in the choir a highly finished work of the end of the same reign,—evincing the rapid developement and refinement of the art at that period; and adjoining this, in the half-ruined eastern aisle, is a truly exquisite specimen of the same style slightly more advanced, and probably executed in the time of King Edward I. In the nave again, in the eastern half of the south side, we have a most noble and magnificent specimen belonging probably to the close of the same reign; and in the exquisite Lady Chapel, we have the middle pointed or decorated style in its fullest developement; while, lastly, in the monumental chapels of Abbots Wheathampstead and Ramridge, and of Humphrey, duke of Gloucester, and in the magnificent altar-screen—rivalling and closely resembling that at Winchester—we have splendid specimens of the closing period of Gothic architecture; and, unfortunately, in many insertions into the older work, we see numerous instances of the decline which preceded its final extinction."

It is doubtful if a more complete series can be found elsewhere. The Norman passage, or "slype," referred to above, is the subject of one of our present illustrations.† This adjoins the end of the south transept, and was the passage to the chapter-house built by Robert de Gorham, who was bishop from 1151 to 1166. It is almost the only remaining portion of the abbey buildings, and is more elaborate in design than any similar passage-way that we remember. It is arched over in a plain, semi-circular form, with brick, springing from a cornice, beneath which the side walls are faced with an arcade of intersected Norman arches, thickly set with moulded bands, reel-shaped, and enriched with variously sculptured capitals, some of which we have shown more at large. A doorway at each end has been walled up, and a side opening pierced into the transept. The clear dimensions of the passage, according to Messrs. Buckler's "History," are 29 feet 6 inches in length, by 9 feet 11 inches in width.

Our other illustration (over leaf) represents the Watching Chamber on the north side of the Saint's Chapel, wherein a monk was posted as a guard of honour to the shrine.

On the frieze of the structure is a series of carvings, now much mutilated, representing the memorable events of Alban's history, and other singular subjects. Beneath are almeries or lockers, in which the reliquaries and the sacred vestments were deposited.

Some idea of the use made of the sacred edifice during the civil wars of the seventeenth century may be formed from an inscription, effected probably by the point of a knife, and now almost obliterated, on the south side of the north doorway in the screen: "Hugh Lewis souldier in his Ma^jes^ Army taken prisoner at Ravensfield Northampton scr y^e . . . . day June 1645." This part of the abbey church has long been used as the spiritual court in which visitations are held, and is designated the presbytery.

This large mass of woodwork, of about the time of Henry VI. entirely occupies the whole of one of the Early English arches on the north side, immediately behind the great altar. In some parts the more ancient work has been cut away, and in others filled up with plaster, in order to make this more modern structure fit properly in its place. In the foreground of the engraving some steps are shown, which lead to the small vault, containing the remains of the "good" Duke Humphrey, brother of Henry V. who was murdered at Bury, and afterwards brought for interment close to the shrine of St. Alban: the skull and some other portions of the body are still visible in a leaden coffin, which has been partly cased recently with wood. It has been since found necessary to place an iron grating in front of the vault, to preserve the bones of the "famous statesman and encourager of learning" from being pilfered from their resting-place. A curious painting of the Crucifixion is visible on the wall of the vault.

The oblong space just beyond the entrance of the vault—which is, by the way, the only underground part of the abbey—is the site of the shrine of St. Alban. This end of the abbey has evidently been painted: where the whitewash has been removed, the colours are found wonderfully perfect. A kind of madder crimson, which forms part of the decoration, is remarkable for its brilliancy.

Attempts have been made at various times to save this fine old abbey church from ruin. James I. was so greatly struck with the beauty of the edifice, and the disgrace attached to the country by the dilapidated state in which he found it, that he issued a royal brief for a collection to be made throughout the kingdom for the purpose of raising funds for repairing it. In 1680 a similar course was adopted by Charles II. and afterwards by George II. But on these occasions only temporary repairs were attempted, and nothing of any importance was done until the year 1833, when further subscriptions were entered into, and the abbey, in part, put into a comparatively good state of repair.

* See vol. xiii. p. 217, for an account of a visit to St. Alban's, with a plan and other illustrations; also vol. v. p. 543. In vol. vii. p. 383, will be found a view of the mutilated altar-screen.

† See p. 331.

ST. ALBAN'S ABBEY CHURCH. THE WATCHING LOFT, IN THE SAINT'S CHAPEL.

It is, however, distressing to witness the condition now of certain portions of the building, and that, too, notwithstanding the constant care and well-directed exertions of Dr. Nicholson, the rector. In part of the nave the thick coatings of whitewash have been scraped off, and the sharp and beautiful work of the rich ornamentation is made visible. Most of the oak doors and presses are undergoing a thorough cleansing. Fragments of shrines and ornaments have been collected, and carefully stored in niches, ready to be put into their proper places when required; and we may hope that it will not be long before they will be required, and that this gigantic monument of ancient piety and skill, this record of a thousand years, will be made fit for its holy purpose, and preserved for the contemplation of coming generations. Those

> "Whose souls the magic Present hath not bound;
> Who live to think, and dare to gaze around;
> Who fain would read man's history, hopes, and fears,
> Writ on the dark remains of vanished years,
> Can [illegible] ruins laid waste and bare,
> And o'er Art's past creations turn and glow,"—

will reap a large harvest of enjoyment from a visit to St. Alban's.

A FOREIGN WRITER'S REVIEW OF THE LILLE COMPETITION.

THE following is a translation of an article in a Paris journal from the pen of Henry Cauvain, which, as giving an account to the French people of the "concursus" lately held at Lille, will gratify many of our readers. The English architects will be glad to see the unbiassed criticism of an intelligent foreign writer on a subject to all of great interest.

An event has just taken place at Lille which, in more respects than one, is of great interest, and, as such, merits attention. We allude to the concursus opened in that city to the architects of every country, for the erection of a cathedral, under the title of "Our Lady of the Vine Arbour and St. Peter" ("Notre Dame de la Treille et de Saint-Pierre"), and to the extraordinary and unexpected results, which are in themselves very curious, and which have been brought to light by this solemn trial.

We shall here, at the beginning, be permitted to call attention to a fact which may perhaps at this moment have attracted notice from one end of France to the other: it is, that in proportion to the development of the wealth of a country, so also is awakened the love of the fine arts in every direction. Our civilization, although it has allowed a large scope to industry, has not by any means relinquished the cultivation of intellectual matters. Our towns are every day changing; and greater care than before is taken of the public health by the adoption of proper means for its preservation; while, at the same time, monuments of a civil and religious kind spring up, and statues are dedicated to our great men as well as to other men of worth. Paris is naturally at the head of this movement: it is not necessary for us to dwell on the wonderful works which are there accomplished,—especially those of the last five years, under the auspices of a prince who seems to have adopted the device applied by Augustus to Rome, "I found it built of bricks and I leave it of marble." The example set by the capital is followed and emulated by the whole country. At the two extremities of the empire, two cities, both remarkable for the commercial tastes of their inhabitants, and both having for a long time been deprived of the monuments of art, although the first was, in the early ages, the cradle of Grecian civilization in Gaul,—and although the second had received from the generosity of the Middle Ages many admirable edifices, since destroyed by the hand of man,—Marseilles and Lille are deserving of being specially mentioned. Each of these two cities is now labouring to effect the greatest enterprise that can be entrusted to architecture, namely, a cathedral; that is, the monument which is always to be considered as the loftiest expression of human art under the inspiration of the Divine Intelligence. Each of those cities has chosen a style for itself. For the cathedral at Marseilles the preference has been given to the Byzantine style; and its cupolas, resembling those of St. Mark, at Venice, will be observed by the eyes of the approaching sailors from a distance, brilliant from being gilt, in the azure sky. For the cathedral of Lille, the Ogival style has been selected, and its light spires and its hardy little columns will be well delineated in the frequently murky air of its northern climate. It is not possible to refuse every praise to these intellectual selections,—to the Oriental architecture, with its majestic profiles and its radiant ornamentation, on the shores of the Mediterranean; and, on the Flemish soil, to the Gothic architecture, with its thoughtful inspirations and its mystical splendour.

This Gothic monument at Lille has, from the circumstances attendant on its origin, assumed a character altogether special. From time immemorial, the town of Lille has been placed under the patronage of Notre Dame de la Treille. Although it may be difficult, if not almost impossible, to say whence this odd name has been taken for the patronage of a town in a country where the grape scarcely ripens;—it is certain that, within a very short time after the city was founded, the traces of the respect shown to Notre Dame de la Treille prove the fact of the worship. A miraculous image of that holy patroness was placed in the collegiate church of Saint Peter, formerly a magnificent edifice, erected by the piety of the first counts of Flanders, on the ruins of a Roman monument. A solemn procession was founded by the

piety of the Countess Margaret of Flanders; and the result was seen in the enormous multitudes which always flocked to join in it. All these traditions, which were in themselves so worthy of respect, were shattered into fragments by the Revolution. The collegiate church of St. Peter—the finest ornament of the city—was thrown down by the strokes of the hammer, when the adherents of the goddess Reason cared but little for an edifice built by Christians in the thirteenth century. The tombs of Louis de Male and of his successors, although then considered to be exquisite *chefs-d'œuvre*, were broken to pieces, and sold at the price of copper. The zeal of one pious man secured the preservation of the image of Notre Dame de la Treille, for which he found an asylum, until better times, in one of the chapels of St. Catherine's Church, which was previously known as being possessed of one of Ruben's grand pictures, the magnificent gift of two private citizens of the sixteenth century, Jean de Seur, and his wife Mary Paltin; by which means, at that time, two modest parishioners showed their veneration for their church.

During a solemn jubilee, two years ago, the banner of Notre Dame de la Treille was raised at Lille. On many occasions we have embraced the opportunity of establishing facts, which prove that amongst us of this age the strong faith of our ancestors is again awakened. The railing incredulity of the eighteenth century, the hatred and fury of the revolutionary period, have become for us anachronisms: on every side we see revived, with devotional eagerness, the recollections of ancient France, which is thereby for the present reconciled to modern France. The chain of our country's traditions is renewed, never, it is to be hoped, to be again broken. The festival at Lille, which from its *éclat* and its magnificence will long live in the memory of our contemporaries, was one of the happy symptoms of this powerful renewal in the bosom of our present civilization of the ideas, of the manners, and of the customs of former times.

It was in the midst of the rejoicings of this solemnity, that, as it were by the spontaneous emotion of the inhabitants, the thought dawned suddenly upon them of building a magnificent temple in honour of Notre Dame de la Treille. The proposal was hailed with delight; and it has already borne fruit: men of devotedness and enthusiasm have easily been found to carry it into full operation. Yet how much soever the merit of the organisation is due to the last-named, it undoubtedly is a very significant fact that the resolution emanated from the will of the entire city, in the midst of the attractions of public enjoyment; and that this inspiration of universal suffrage was, so to say, a vote for founding a cathedral. At this period, when the regular action of the administration has taken the place of every popular movement, there is in this fact something to remind us of the epochs of sincere and decided faith, when the marvellous creation occurred of such numbers of religious edifices, under the decree, in some measure of the fervid zeal, of the people.

It was decided that a concursus should be opened to the architects of every country. Prizes of considerable value, and gold and silver medals, were voted to stimulate the zeal of the candidates. Very recently we gave great praise (in reference to the premium offered by M. Veron) to the forms of a concursus for the encouragement of literature; but, perhaps, in questions of art, the plan of a concursus is of far greater utility. All the efforts of literary men obtain with ease the honours of publicity. The public press, the reviews, the booksellers, put the works of thought into circulation, and the names of the authors soon become known. But such cannot be the fate of the works of art, and especially of drawing—and above all, of architecture. In their case, the artists have to labour in solitude,—a thankless task, which keeps them during the dull hours of night in their studios, or their workshops. How many architects of great merit are there who, after they, in their reveries, had made plans for building palaces, were never able to build any thing more than pigeon-houses. The concursus serves to bring from their hiding-places men of knowledge and of study, with their plans ready in their hands; and then they become known by the light they create and diffuse around them. Then are they enabled to reveal their talents, to exhibit their labours, and to draw inspirations from the works of others. In times of yore, antiquity committed no mistake in such matters. It was by means of the concursus that the great architects and the great sculptors of Athens conquered and won their reputations. Phidias and Praxiteles, in the same way as Eschylus and Aristophanes, were indebted to the concursus for their most brilliant triumphs and their most splendid crowns. In modern times, the concursus, every time it has been employed, produced the best results. On this occasion we shall bring to mind but one concursus, and that is the one held at Florence, and which produced for that city the gates of the Baptistery, those gates which, according to the expression of Michelangelo, were fit to be the gates of Paradise. At this memorable contest, which forms a luminous epoch in the history of the art, a young man twenty-four years of age had the glory of carrying off the prize from artists of genius, as were Brunelleschi and Donatello, who themselves hastened to admit their being vanquished, and to decree that the palm should be given to their fortunate rival Lorenzo Ghiberti.

The city of Lille is therefore to be congratulated for having adopted the plan of a concursus. We shall now add that it was well done to open the competition to foreign architects. We know that against this proposal very strong protests were made. The concursus at Lille ought, it was contended, to have been kept sacred for French architects alone: the work was a French one, and French hands alone ought to begin and end it. We have even been assured that the resolution adopted by the Lille committee had given umbrage to a certain number of French architects, who, therefore, of their own accord abstained from interfering. Yet we cannot, without some pain, admit this fact to be exact. If it really be the case, those who abstained and withdrew from the contest must now regret their having done so, since they thereby contributed to give the vantage-ground to foreign rivals.

As for us, we heartily approve of the mode adopted at Lille, which, by inviting to the contest the architects of every country, has performed an act truly *catholic* in the real sense of the word, so that the presence of England, of Germany, of Belgium, at this peaceful battle, has shown what was the state of the art in these different countries. If the result of the contest has, contrary to general expectation, given the superiority to foreign architects, a powerful motive of emulation will be found therein to excite our artists to exert themselves, so that they may soon regain the ground lost. In France the artists, like the soldiers, do not see in a defeat anything more than a signal for fresh exertions, and as giving an opportunity for a glorious revenge.

Be that as it may, the concursus at Lille was most brilliant. There were forty-one competitors. Of this number, fifteen belonged to France, fourteen to England, and one to Scotland: Rhenish Prussia sent three; the Grand Duchy of Baden, two; Austria, one; Hanover, one; and Silesia, one; making in all eight for Germany. Holland, the Grand Duchy of Luxemburg, and Belgium, were represented each by a project. It is now seen that, in the number of competitors, France and England were equal and completely rivals, the contest between whom was hot and warmly discussed. Various devices, according to usage, concealed the names of the combatants. The jury for examining presented in the fullest degree all the guarantees that could be desired as to enlightenment and impartiality.

The models and plans of the forty-one competitors were all placed in order in a vast locality admirably appropriated for the purpose; for, in reality, very spacious halls were required to contain them all. In fact, besides the plans which were to serve in showing the projected edifice, in its general aspect, in the different sections, and in the details of its construction, the candidates were required to give satisfaction as to the complete ornamentation of the monument, and as to its suitable religious furniture. The programme required unity of style in the edifice, in the ornaments, and in the necessary furniture. A very wide field was thereby opened to all the competitors. A cathedral of the thirteenth century, with its chapiters, with its rosaces, with its verreries, with its portals, with its altars, with its episcopal seats, with its baptismal fonts,—is nothing less than a poem in completeness. To attempt such an enterprise, the imagination and the judgment must agree; science and creative talent must accord. A thorough, profound, and familiar knowledge of Christian symbolism is necessary. The furniture in a special manner demands all the erudition of a Benedictine professor, in union with the exquisite taste of the artist. In fact, if our Middle Age cathedrals were still standing, they might serve as starting-points for modern architects; but the moveable matters of furniture have in almost all places perished, being in this spot destroyed by the iconoclasts, and in that one being displaced by the selection of made-up articles. Thus, then, among the churches of the Middle Ages, some are naked and desolate,—the hands of the Vandals have been felt in these edifices,—while those others are encumbered with inconsistent objects and ridiculous ornaments, where the bad taste of the last century has effected an invasion. Men of intelligence, who understand what is to be restored, can alone reinstate them in their ancient splendour and their primitive unity.

In this point of view, the concursus at Lille presented very high interest. The throng of public spectators, previous to the enlightened appreciation of the examination jury, was a recompense for the exertions of the candidates. The projects as exhibited,—almost all, deep, skilful, and conscientious studies of the subject—one-half, at least, raised themselves above the ordinary level by the manifestation of real talent: seven or eight were worthy of the very highest praise. Amongst the last-mentioned, principally were to be distinguished, in connection with the work of erudition indispensable in the circumstances, the striking characteristics of invention and originality. But the cleverest imitation work is still but an imitation; and if a work of art is dragged along the beaten pathways of imitation, it from necessity is of the middle rank; it does not possess the qualities of life, for the generous blood of spontaneous and free inspiration ought to be felt beating in its veins.

At the Lille concursus there was found, in at least a certain number of the projects, the complete fulfilment of all these essential conditions. Three of these projects were placed by the jury in the first rank, and were remarkable amongst all for the power of their conception, as well as for the profoundness of archæological knowledge displayed in them.

It is already well known that the committee, in drawing up the programme, had imposed on the candidates a style and an epoch. The Cathedral of Notre Dame de la Treille was required to be of the Ogival style, in the system of the thirteenth century. This selection deserves the highest approbation. We do not thereby maintain that the Gothic is the only Christian art, as some persons suppose: on the contrary, we hold that the spirit of Christianism is by no means emprisoned in one sacramental form: we find it equally strong, equally brilliant, in the magnificent encirclement of the Basilicas, under the arches of the Roman churches, and under the imposing dome of St. Peter's, at Rome. The sentiment of religion does not dwell exclusively in the cathedrals of the Middle Ages: it is residing at St. Mary's de Transtevere, in the Cathedral of Pisa, in Notre Dame la Grande at Poitiers, as well as in the churches of Notre Dame at Chartres and at Rheims. It is not right to be more exclusive in the domain of ancient art than in the domain of sacred literature and of pulpit eloquence. However admirable may be the commanding position of St. Thomas of Aquinas, and St. Bernard, no one could, without injustice, sacrifice to them St. Augustin and St. John Chrysostome, Fenelon, and Bossuet. That the art of Pierre de Montereau and of Robert de Luzarche is profoundly catholic we all frankly admit; but that is not a reason for our slighting with disdain Michelangelo, Bramante, and Palladio.

We, moreover, with perfect goodwill, acknowledge, that after taking all things into consideration, as well with reference to the climate as to the traditions and the local conditions of the site, the choice of the Ogival style was the preferable one for the Cathedral of Lille, where it is to be erected on an eminence, which sustains the Chateau du Buc, which formed the cradle of the Flemish city at the dawn of the Middle Ages. It is destined to console the city for the loss of the collegiate Church of St. Peter, which was erected at the time when Philippe-Auguste reigned; and also for the loss of the Church of St. Stephen, a magnificent Gothic monument, which was ruined by the Austrian shells during the siege of 1792. Such were the reasons that produced the adoption of the Ogival style. The choice being once made, it was quite natural for those who fixed it to fix also their attention to the thirteenth century, which is the heroic age of this kind of architecture. The Sainte Chapelle of Paris, erected in three years, by Saint Louis, and offering also all the characteristics of unity of inspiration, is, in our eyes, the Parthenon of the Gothic art.

It now remains for us to make known the results of the concursus at Lille.* * *

On summing up, we find that England obtained two prizes, the first and second,—three silver medals and three honourable mentions, being in all eight nominations on fourteen candidates. France obtained one prize, the third, one gold medal, one silver medal, and one honourable mention, that is to say, four nominations on fifteen candidates. Germany obtained four nominations; while Belgium, Switzerland, and the Grand Duchy of Luxemburg, bore away one nomination each.

The result is, at the first glance, enough to surprise us. France, in all matters of art, has exercised such an incontestable supremacy, as the fact was proved so splendidly during the Universal Exhibition of 1855, that this victory of England, on the ground of religious architecture, has in itself something altogether unexpected. Besides, it is rather singular, we must admit, that a Catholic country such as France is, should yield the palm, at a solemn concursus, to a Protestant country, and that, too, for the object of creating a cathedral. We have, also, to add a circumstance, which gives greater *éclat* to the triumph borne off by the two first prizes: it is the admitted and consummate merit of the architects who took the first prize. The clever restorer of the Sainte-Chapelle, the author of the Church Saint-Nicholas at Nantes, and of the Church of Belleville, was, it must be allowed, a formidable competitor. The projects which have been crowned must have contained within them very high qualities of science, of invention, of style, and of taste, to gain the precedency over their learned and ingenious rival.

But if the result of the concursus has disappointed the general expectation, it will not appear so extraordinary to observers who have, with due attention and with eyes of careful experience, noticed the movement of mind on the other side of the Straits of Dover. There, in proportion as the prejudices of Protestantism grow weaker, a school of art has been formed and augmented. By little and little the liking has gone down for the uncouth architecture of columns, which has infested London and England with so many awkward and clumsy buildings; and the new school swears, by the climate of Great Britain, that it will, with predilection, with ardour, study the forms of the national architecture during the Middle Ages. This impulse being once given, the current of ideas has been rapid, resolute, and irresistible; and therein is to be found another evident proof of the positive and vigorous character of the English people. Scientific associations have been established in the principal towns under the name of Ecclesiological Societies; and in their treasuries money, as well as reason, abounds. Men of talent are largely remunerated: great publications have been undertaken and brought to perfection. Under the fertilizing influence of such encouragement, numbers of religious edifices have been erected; and all have seen rising up on the banks of the Thames, as a testimonial of the living power and force of the renovating movement, the prodigious monument, the Houses of Parliament, having an appearance fairy-like, and at the same time grand in the extreme, if indeed a strict and severe taste did not therein find more than one imperfection.

However slight may be the study applied to this monument, in the exterior as well as in the interior, and also after even a cursory glance at the works recently published in England, one cannot but be struck with the enthusiasm of imagination, the fertility of thought, and the vivifying energy exhibited by the English architects. One cannot be long examining their acts without discovering another source of merit, and which, perhaps, is, in itself, of high value;—that is the talent of appropriating the most remarkable things. In France, it is generally admitted, although there may be some exceptions, that the architects take but little trouble with anything but the façades and the staircases. Provided they succeed in these two points,—and God knows, it is not always that they succeed in them,—they take but little pains with the other parts. People are then lodged as well as they can be, in the newly fitted-up cage, brilliantly decorated on the exterior, but as incommodious as can be in the interior. You may visit the greater part of our modern edifices, and you will find that this observation is quite correct. In England the rule is to consider, beforehand, what the building is intended for: care is then taken that all the parts should contribute to the necessities for which it is required; and all kinds of ingenious plans are brought into play, in order that it may have not only a fine appearance, but be also a comfortable dwelling-house. The architects, thanks to their conscientious preparations, do not perpetrate those cruel blunders which can be pointed out by thousands in the productions of modern art, as well in Paris as in the country.

Such were the distinguishing qualities shown at Lille in the projects that emanated from the English artists, that the Examination Jury declared them worthy of being publicly rewarded. The object was to build a vast church fitted to the fulfilment of all the conditions of the Episcopal office (for Lille cherishes the ambition of installing hereafter a bishop in it) with three naves, a transept, absidal chapels around the sanctuary, a crypt under the choir, and at the entrance, two chapels—for the dead and for the baptismal fonts. Besides all these, it was necessary to produce sketches for the internal arrangement. This extensive programme has afforded a complete triumph to the schools of England, which have, during the last twenty years, dedicated especial attention to the nearly exclusive study of the Ogival art.

We do not, nevertheless, look upon this result as in any respect alarming for art in France. To men of judgment and of talent, such as our architects, a defeat like this is but a notice, and nothing more. The concursus at Lille tells them that a competition worthy of their emulation has arisen in England. That is enough to stimulate their zeal and spur them forward to emulate their rivals. On the first opportunity, we are convinced that they will efface the recollections of the defeat, by a brilliant victory. Sophocles himself was not always the victor in the combats of literature.

* This we have already done

ON THE BRIDGES AND VIADUCTS OF THE PRESENT DAY.*

THERE are few public works (commercially speaking at least) of greater interest or importance than bridges and viaducts. The necessity of good roads of communication from one part of a country to another, and the impossibility of completing them without erecting bridges over streams and viaducts over valleys, have given rise not only to the works of the present day, but also to those stupendous monuments of antiquity which have been handed down to us. With the magnificent bridges, viaducts, and aqueducts of the Romans every architect must be well acquainted, and it is indeed not long since that ancient Roman roads and modern British railways were compared by a very able authority before the Institute. In consequence of the immense extension of the railway system during the past thirty years, a more extensive field of bridge building has been opened than at any previous period. The fact that in 1852 fifteen thousand miles of railway had been constructed in Great Britain alone, and that these required, on an average, three or four bridges per mile, will give a total of fifty thousand bridges, large and small.

In speaking of the bridges and the viaducts of the present day, it will be hardly necessary to observe that their great and striking peculiarity is to be found in the use of iron; and though, as architects, we may be impressed with the superior dignity and proportions of stone bridges, it must be granted that iron has many advantages compared with either stone or timber, as it is much lighter and more economical in the first outlay than the former, and more durable than the latter. It must not, however, be forgotten that, although iron construction may be considered the great invention and distinguishing peculiarity of modern times, there are also some very fine works in stone, brick, and timber. In the two former, however, no progress worthy of peculiar notice has been made, bridges of larger span having been executed by the Romans centuries ago. The largest span in stone executed in England is that over the Dee of 200 feet; but ancient examples are recorded to have been from 50 to 100 feet wider, which, with reference to the age when they were executed, must have called for a comparatively greater amount of skill. It is in iron, therefore, with respect to the span, that the great merit of modern works consist: the changes in the different modes of applying this material have been gradual and progressive, and very similar to, though somewhat more rapid than, the changes in the different styles of architecture. The first iron bridge was erected about sixty years ago, and partook of the character of its predecessors in stone, being formed of cast iron voussoirs, or wedge-shaped blocks put together in ribs. From that time to the present there has not been much improvement in the construction of this class of iron bridges, and the span has only increased from 200 to 240 feet, which would appear to be the proper limit. Soon after the introduction of the cast voussoir principle, cast-iron beams were used for small spans of 50 feet, which eventually, by combination with wrought-iron trussing, reached as far as 100 feet. The greatest improvement was the formation of girders entirely of wrought-iron, which soon followed the production of rolled plates and bars of different forms and sections. This in a few years led to the execution of spans of 460 feet,—the largest of rigid roadways with a level headway beneath, yet constructed. In suspension bridges, spans on this principle have been executed of upwards of 1,000 feet. But as these, from their vibration, are quite unfit for the passage of heavy weights in rapid motion, they will not be treated of on the present occasion.

Cast-iron bridges may be classed as follows: the Arched Rib, the Trabeated, and the Combination Girder. Wrought-iron bridges consist of the Tubular Girder, the Tubular Bow Girder, the Large Tube, and Lattice Girders, with several varieties of combination.

The first iron bridge constructed in England is that over the river Severn, near to Colebrook Dale. The design appears to have originated with Mr. Pritchard, architect, about the year 1773, and the works were completed in 1779. In this bridge five arched ribs of cast-iron support perpendicular spandril pieces, which carry the roadway. The ribs are nearly semicircular, and have a span of 100 feet.

Sunderland Bridge, over the river Wear, the next cast-iron bridge erected, was designed by Mr. Rowland Burdon, in 1792, to whom a patent was also granted, for "a certain mode or manner of making, uniting, and applying cast-iron blocks to be substituted in lieu of keystones in the construction of arches." This bridge consists of six arched ribs of a segmental form, 200 feet span and 30 feet rise. Each rib is 5 feet deep, and consists of 105 separate blocks.

Buildwas Bridge, over the river Severn, by Telford, is like the foregoing,—a single arch, 130 feet span, with 27 feet rise. It consists of three arched ribs, 3 feet 10 inches deep.

* Read by Mr. John Clayton, Associate, at the ordinary general meeting of the Royal Institute of British Architects, May 26th

Boston Bridge, by Rennie, is remarkable for the slightness of its rise, which is 4 feet, with a span of 100 feet.

Southwark Bridge, also by Rennie, has the greatest span executed, that of the centre arch being 240 feet, and of the sides 210 feet. The rise of the centre arch is 24 feet, that of the side arches proportionate. The arches consist each of eight ribs, 8 feet deep at the springing, and 6 feet at the crown. Each rib is in fifteen pieces, cast of much larger masses than in the previous works.

The New Bridge, Westminster, in course of construction, will also prove a valuable addition to this class of works.

Upon simple cast-iron beams it will not be necessary to say much. The first application of this material as a beam is due to Boulton and Watt, after whom it was extensively applied in construction by Sir R. Smirke. Although useful in buildings, its fragile and treacherous character renders it hazardous for railway purposes. Capable of bearing a large amount of dead weight, it can be easily broken by a cross blow or the sudden shock of a passing train. Its span has been limited to 40 or 45 feet, and this only under very careful treatment.

With the view of remedying the defects of cast-iron girders, recourse was had to trussing them with malleable iron. Owing, however, to the unequal expansion and contraction of the two metals, and the fact that the two were seldom brought into action at the same time, the success of these beams has been very doubtful. They have been used in spans of 50 to 100 feet, but certain failures appear to have led to their disuse.

The Lea Bridge was erected about ten years ago. The total length is 70 feet, or 66 feet clear bearing. The girder was composed of two castings of a uniform depth of 3 feet, bolted together with wrought plates to the joints and trussing bars.

Dee Bridge, Chester, was the largest bridge of the kind. It crossed the river in three spans, and had a double line of rails with a pair of girders to each. The total length of each girder was 109 feet, or 98 feet clear bearing. It had a uniform depth 3 feet 9 inches, and was formed of three separate castings. Cast-iron plates, 13 feet long and 3 feet deep, were bolted over the top of the joints, and a set of trussing-bars was placed on each side of the girder. The thickness of the web or central part was 2⅛ inches, the top flange 7 inches wide, the bottom 2 feet. The girders sustained the usual test, yet gave way under a much less load. The failure has been attributed to a variety of causes, but a not unfrequent one has been overlooked, viz. the manner in which the roadway was made to take its bearing on the girders. As a general rule, too much care cannot be taken to give the weight a uniform bearing in a vertical direction, on either cast or wrought-iron girders, more especially the former. Placing the planking or beam on the inside flange will, on the passage of every weight, cause a tilting vibratory motion. If the roadway cannot be placed altogether on the top of the girder, it should be carried underneath it and suspended with plates and bolts.

Tubular girder bridges owe their origin to the manufacture of wrought plate iron, which was first used in ship-building. Great improvements were soon made in the mode of joining and rivetting these plates, and the T, L, and double L iron, manufactured by Mr. Fairbairn, led to the great works which were carried out after its application to railway purposes.

The Liverpool Canal Bridge, on the Blackburn and Bolton Railway, executed by Mr. Fairbairn, was the first application of these girders: the span is 60 feet. The Liverpool Landing Stage Bridge, erected by Mr. Fairbairn for Sir W. Cubitt, spans the space between the pier and the floating pontoon in deep water. Its total length is 152 feet and 142 feet between bearings.

The Gainsborough bridge, erected by Messrs. Fairbairn for Mr. Fowler, crosses the river Trent at the angle of 50 degrees. It consists of two spans, each of 154 feet. There are two girders to each span, carrying a double line of rails: the girders are of an uniform depth of 12 feet: the top is strengthened with a double chamber 3 feet wide by 1 foot 3 inches deep: the width of the girder below is 2 feet 6 inches. The sides of the girder are strengthened by an arched rib of a double L shape, 1 foot deep: the plates are 2 feet wide and half an inch thick.

The Britannia Bridge, by Stephenson, has been fully described, and it is only necessary to give chief dimensions. It consists of four spans, the two main 460 feet, the two side 230 feet, and it is 90 feet clear of high-water mark. There is a tubular girder to each line of rails, the dimensions of which are 30 feet by 14 feet 6 inches. The form of this tube is square, and it is stiffened at the top and bottom with small cells, which answer to the top and bottom chords of the lattice girder.

The High Level Bridge, Newcastle, also by Stephenson, forms a junction between several railways. It is remarkable for carrying a railway above and a roadway for street traffic below, and consists of six spans of 125 feet: the extreme height is 125 feet, and there is a clear headway of 80 feet above the water line. The weight is carried by arches on the level of the roadway, the bottom of which is suspended from it. The piers measure 50 feet by 16 feet, and are lightened by arches. The most striking and peculiar feature is seen from the roadway, which presents a series of dark arched ribs, with light bursting through the bars supporting the sides. The whole design is exceedingly good, and the exterior handsome.

Before entering upon the subject of lattice girder bridges, it is necessary to glance at the timber viaducts, as it is from them that the former derived their origin.

The most remarkable of these structures are the American. The greatest span is that over the Portsmouth river, 250 feet; the greatest height that over Genesse river, 230 feet. As English examples we may mention Dinting Vale, with a span 120 feet by 125 feet; Landore, 109 feet by 90 feet. Amongst the earliest wooden bridges are those designed by Palladio, three of which have 100 feet span: two are framed on the ordinary principle of trussing, and the other on the arched rib or voussoir principle.

The Portsmouth River Bridge is formed on the same principle as the last, with the addition of diagonal bracing to each voussoir. Don Bridge, near Aberdeen, is composed of a strong arched rib, the spandrils between which, and the level roadway above, is a filling in of framing distributing the pressure. Schaffhausen Bridge is similar in arrangement to the earliest American. The weight is carried by a series of raking struts, which radiate from one or more points on piers or abutments, they are bolted to the top and bottom chords of the girder, and transfer the weight of the roadway at regular intervals to the piers.

The Portage Timber Viaduct, the loftiest and most interesting piece of timber work of the kind, crosses the Genesse river at an altitude of 230 feet. This work, designed by Mr. Silas Seymour, was commenced on the 1st of July, 1851, and completed in a period of only thirteen months and a half. The whole length is 800 feet: the piers, 50 feet apart, are formed of wooden trestles, standing on a base of stone 24 feet high. The trestles are formed of timbers 14 inches square at the base, and 1 foot at the top; the braces to the piers and girders are 6 inches by 12 inches: the number of vertical posts at the base is twenty-one, which diminish to fifteen at the top. Three rows of girders, 14 feet deep, formed of diagonal braces, support the roadway. The cost of the bridge was 35,000*l.*; the quantity of timber 135,500 feet. It was estimated that a stone bridge would have cost seven times the amount, and that the interest would renew the whole three times as often as would be required. This may apply in America, but the economy of using timber is very questionable in England.*

ROYAL INSTITUTE OF BRITISH ARCHITECTS.—At the closing general meetiug to be held on Monday evening next, the 16th inst. the following paper will be read—"On the Resemblance between Mediæval and Classical Art, as exemplified in the Glass Paintings of the Twelfth and Thirteenth Centuries," by Mr. Charles Winston, Hon. Mem.

* To be continued.

VITRIFIED *v.* POROUS DRAIN-PIPES.

SOME months ago our great contemporary startled the public by a series of revelations, showing the fearful amount of deterioration which had taken place in our staple manufactures,—how that a good knife or an axe were scarcely to be had in Sheffield, and that our colonists preferred Yankee tools to those of our own make. Then, on the other hand, we had the case of the manufacturers, who showed that, if people would pay less for a spade than the price of the raw material, they could hardly expect the very best implement for their money. Doubtless in this, as in all similar matters, cause and effect mutually act and re-act on each other; and while manufacturers are prepared to underbid each other by cheapening and deteriorating their goods, the public will be equally ready to encourage the hurtful competition.

We have been led to these reflections by a discussion which has been recently taking place at the vestry of St. Marylebone, as to the comparative merits of the vitrified stoneware and the porous earthenware pipes, and a report made by Mr. Haywood to the City Commissioners of Sewers.

For the last few years an honourable rivalry has existed among the vitrifying potters in their manufacture, which has resulted in the production of very superior pipes: the thickness has been considerably increased, the body is more intensely vitrified, the form leaves scarcely anything to be desired; and the glaze being wholly silicious, resists every test. These are facts which it is in the power of every one to verify for himself, by a careful examination of those produced by any of the leading potters: the result has been a very general use of these to the exclusion of inferior productions, and consequent benefit to the public.

During the early introduction of the valuable system of pipe drainage, much disappointment was occasioned, and much opprobrium incurred, by breakages and accidents, arising from defective materials; since the great improvement which has taken place in the manufacture we scarcely hear a complaint. Now, however, the old story is beginning to be rehearsed, a less good article is in the market, and seeks to forward itself, like our Crimean axes, that would not cut; and picks and spades, that broke in the handling, by the usual recommendation of *cheapness*. The Marylebone vestry have advertised for *stoneware* pipes, and the porous earthenware manufacturers have sent in tenders, and have urged that their samples (which they admit are porous to the extent of 17 per cent.) are, if not equal in all respects, at least good enough for the purpose; and a sharp contest has ensued in consequence. Fortunately for Marylebone, Dr. Dundas Thompson is their medical officer of health, and Dr. Bachoffner a member of their vestry, both highly scientific men, well qualified to give an opinion on the subject, and they clearly explained to the vestry the difference between impermeable *vitrified* stoneware and superficially glazed earthenware.

Dr. Dundas Thomson, the medical officer of health having been asked to give his opinion, said,—"I may state that this is a subject to which I have paid considerable attention for many years, and my attention has been more particularly called to it since I received at your hands the appointment which I now hold. In examining the various nuisances which I meet with in this parish, I am in the habit of recommending a particular mode of drainage, and by your order these drains have been made of stoneware. Stoneware is totally different from earthenware. Earthenware is a porous, heterogeneous body, and not a homogeneous body. If you examine one of these pipes you will find that it adheres to the tongue, has not a surface like glass, but is in fact a mechanical mixture. What is the object of draining at all in forming the sewers and house drainage? It is to carry away completely and thoroughly from the houses to a distance from town all matter that contains materials which are likely to decompose and produce disease. If you have a porous material for carrying out this object, that porous material will allow the fluid to pass through—that is to say, by disorganising the body, passing through the pores of the material, and lodging in the sub-soil. In order to prevent all that, which would be equivalent to a cesspool, I have required that brick drains should be abolished as much as possible, and their places taken by stoneware pipes."

Dr. Bachoffner in the course of his remarks said,—

"It is true that the Aylesford pipe is slightly glazed, but this glazing is not due to the positive vitrification of the mass, as in the stone ware, but to a mere superficial layer of what is called lead glazing, similar to that employed in the common red pottery,—a glaze that is readily acted upon by chemical agents and sewerage water. It follows, therefore, that while the stone ware is impervious either with or without glaze, the non-permeability of the

Aylesford pipe is wholly dependent upon its thin layer of glaze, and should this be faulty in ever so minute a degree (which it is almost impossible to prevent when large quantities are manufactured), the whole mass is at once rendered permeable. The ill effects of permeability are infiltration and exudation, the probable injury by frost, and the chemical influence of the sewage matter on the substance of the clay. Our officer of health stated, in his last report, that 'it is of the utmost importance to prevent the sewage from percolating the subsoil of London through brick drains and porous pipes,' and I say you are bound to take notice of such an important statement as that. I believe that the glazing of the Aylesford pipes would soon peel off. I find that while hydrochloric acid decomposes the Aylesford pipe, the same acid, even in a boiling condition, has little or no action on the stone ware. As to the mechanical pressure, if you take the difference in the thickness of the two pipes, you will find the result greatly in favour of the stoneware pipes."

Setting aside for a moment all scientific arguments, the question would really seem to be the old one of Place Bricks *versus* Stocks. Every architect or surveyor in the profession has heard the same arguments repeated *ad nauseam*, and has experienced the same attempts to substitute the less expensive materials. The specification generally runs, "that the bricks shall be the best hard, well-burned grey stock bricks. The cutting contractor, after supplying a few thousands of moderately good *stocks*, introduces a quantity of *place:* the surveyor orders them off the ground; then the special pleading begins: the foreman asseverates in the usual formula that they are what was ordered, then that they are as good, that there are no better to be had, and upon being successfully driven from each position, begins to select the best specimens from the last lot, dramatically inviting the surveyor's admiration of the peculiar beauties of each and special fitness for each particular duty. But notwithstanding all his ingenuity, the fact remains the same and cannot be changed by any amount of argument.

Now this is the real point in the case: the vitrified stoneware potters produce an article which is fully equal to its duty, which the public fully appreciate, and which commands a certain value in the market: the earthenware potters offer one at 10 per cent. less cost, using the same arguments as those just cited in the case of place-bricks. If the public with their eyes fully opened to the fact say we will have the inferior article at the lower price, we will drink out of a red pipkin when we can get china tea-cups, why there will be no difficulty whatever in gratifying their tastes; only they must be prepared for one thing, viz. the decline and fall of the superior manufacture. The vitrifiers will very soon turn their attention to pipkins, if pipkins are to be the order of the day; and precisely the same result will follow as in the Sheffield and Birmingham, and indeed all the staple manufactures. Pipes are now at the turning-point in their career: the downward course once commenced, the bottom will soon be reached.

We would do no ill to the Aylesford potters, but we should not do our duty if in this case we did not urge the importance of using the best rather than even the "good enough."

RAILING AGAINST RAILING.

I HAVE often observed, in numerous instances about town, that iron railings are applied in an obtrusive manner; obstructing public convenience without answering any useful purpose. It was the more satisfactory, therefore, to find that the pedestal of Peel's statue, as a first instance, was to be left unencumbered.

The only legitimate and proper purpose of an iron railing, in such cases, is to protect the object it surrounds or fences off; and, if not so required, it becomes an intrusion on the space, and an obstruction of the public convenience, as well as an encumbrance to the building or monument it is attached to. One of the most provoking instances of this kind is the outer railing to the enclosure in front of the British Museum. The pallisading is in itself so formidable, and being set in a plain massive curb of granite, it might surely be deemed sufficient to take care of itself, and to be peculiarly exempt from liability to casual injury. Yet we find an outer rail, and posts topped with little nondescript figures planted round, to keep off the *turba mundi*, requiring the passers-by to make a long circuit at the corner of Montague-street. No doubt the ground thus rendered sacred was part of that purchased by the trustees; but then it was bought with public money; and, if not required for the special object, as is evident by the fact, the public are entitled to use it for the convenience of the thoroughfare. Therefore, the whole of the space outside the enclosure ought at once to be given up, and thrown into the public way, which will then be but of moderate width.

A similar nuisance formerly existed at the north-west corner of the Bank of England; and, as the ground there belonged to a corporate body, and not to the public, it was not so assailable; but common sense and good feeling prevailed over the "dog in the manger" principle: thus much gain has accrued to the public, and no loss to the Bank. The Wellington statue in front of the Royal Exchange has less need, if possible, than that of Sir R. Peel for a protective enclosure (they both abjured "protection"). The pedestal is remarkable for its boldness;—no delicate mouldings, no decoration, and next to no inscription; in short, nothing liable to casual injury. Its position also is the more secure than the other, by being remote from the carriageway: still it has not been exempted from the usual iron railing.

The enclosure of the statue of William IV. at the end of King William-street, is a striking instance of bad taste in this respect; and its intrusiveness is the more palpable from the importance and value of every foot of space at that great confluence of public traffic. The statue, with the whole of its substructure, is of that dreadnought material, granite, forming altogether a picturesque group; but the general outline, and the repose and grace of the composition, are sadly marred by those impertinent stone posts and iron railings by which it is enclosed. Admitted that on some occasions the populace will, in spite of police regulations, avail themselves of any means at hand to get an elevated position for a view: still it will be better, as less liable to accidents, to let them make use of the graduations of the pedestal, than to be stuck about on the posts and pallisading. Many more examples might be adduced of the like obstructions and encumbrances; but I am fearful of appearing to amplify what some persons may deem a small subject. This is an age of emancipation, and for removal of useless barriers; and I am anxious to obtain for public statues and monuments the benefit of the same good movements, more especially as there is a promise of further accessions, that they may be saved from the usual impediment. To this end I invoke the aid of the great censor of nuisances, the *Builder*. CIVIS.

PUTNEY-BRIDGE.

As a shareholder in Putney and Fulham Bridge, I trust you will allow me to say a few words in reply to the article contained in your paper of the 7th inst.

The bridge was originally built in the year 1728, by commissioners appointed by Act of Parliament, and by them made over to the shareholders, in thirty shares of 1,000*l.* each: a large sum was also paid to the then Bishop of London and Duchess of Marlborough, for their interest in the ferry; and the bishop and his family still retain the privilege of passing over free: provision was also made for the watermen, who receive an annuity of 30*l.* a year.

Although an old bridge (in fact, the oldest bridge on the Thames,—Westminster-bridge having been completed in 1749, and Blackfriars in 1769), it has at all times been well and properly repaired, and, while Westminster and Blackfriars are tottering to their fall, is now in as sound and substantial a condition as when first erected. This statement relies not only on my authority, but on that of a Government inspector, who, a few years since, was sent down to survey and report as to the condition of the bridge.

The centre lock or opening is 30 feet wide: there are also four other locks of 26 feet in width.

With regard to the payment of double toll on Sundays, that is expressly provided by the Act, and, although the shareholders generally would gladly see this tax on the public reduced to the same amount as on other days, yet they are unable, to the prejudice of infant shareholders, or others incapable of consenting, of making this desirable alteration.

With respect to a new bridge company, the shareholders have expressed their readiness to come to terms: a prospectus was issued, but as shares were not taken by the public the matter has dropped.

The erection parallel to the present bridge is strictly an aqueduct, which it was proposed should be taken through the bed of the river.

One thing may be said in favour of the committee of management, viz. that their services are gratuitous, and that the working expenses of the Board are "nil." The bridge is freehold property, and gives votes both for Middlesex and Surrey.

The City corporation may be to blame for allowing an additional obstruction to the river; and, although the shareholders have every wish to forward the interest of the public, yet with their hands tied they can do nothing; and we can only hope that Government, having settled the Eastern question, will now turn its attention to public improvements. J. F. WADMORE.

THE ORIENTAL STRANGERS' LONDON HOME.

THE contracts for the erection of the charitable but self-supporting institution under this name, at Limehouse, the first stone of which was laid by H.R.H. the Prince Consort, on Saturday before last, have been taken by Messrs. Piper, of Bishopsgate, at 7,649*l.* Mr. C. L. Bracebridge is the architect. The building will be capable of accommodating 230 inmates, with apartments for the superintendent, a hospital, registry, shipping, and secretary's offices, and when furnished throughout, including lighting, warming, hot and cold baths and lavatories, will cost nearly 8,000*l.* besides 1,250*l.* paid for the freehold of the site, which is close to the junction of the East and West India Dock roads, and in the immediate vicinity of Limehouse Church. The object of the directors is to offer to all Oriental strangers who visit England a comfortable and respectable lodging, with wholesome food, at a cost which it is presumed they can afford and which shall render the institution self-supporting. Arrangements will also be made for taking charge of their money and other property, when desired, for making remittances to their families and friends, tendering them advice, and affording them information, protecting them from imposition, procuring them employment in vessels, and providing them with instruction in the English language. Nearly 4,000*l.* have been subscribed towards the institution, including a gift of 500*l.* by the Maharajah Dhuleep Singh, and contributions amounting to 100*l.* by other natives of India, 200*l.* by the East-India Company, 100 guineas each from Messrs. H. and R. Green, &c. The Maharajah, and the young princess of Coorg, were present at the laying of the foundation-stone.

INSUFFICIENT SCAFFOLDS.

TARRANT *v.* WEBB.

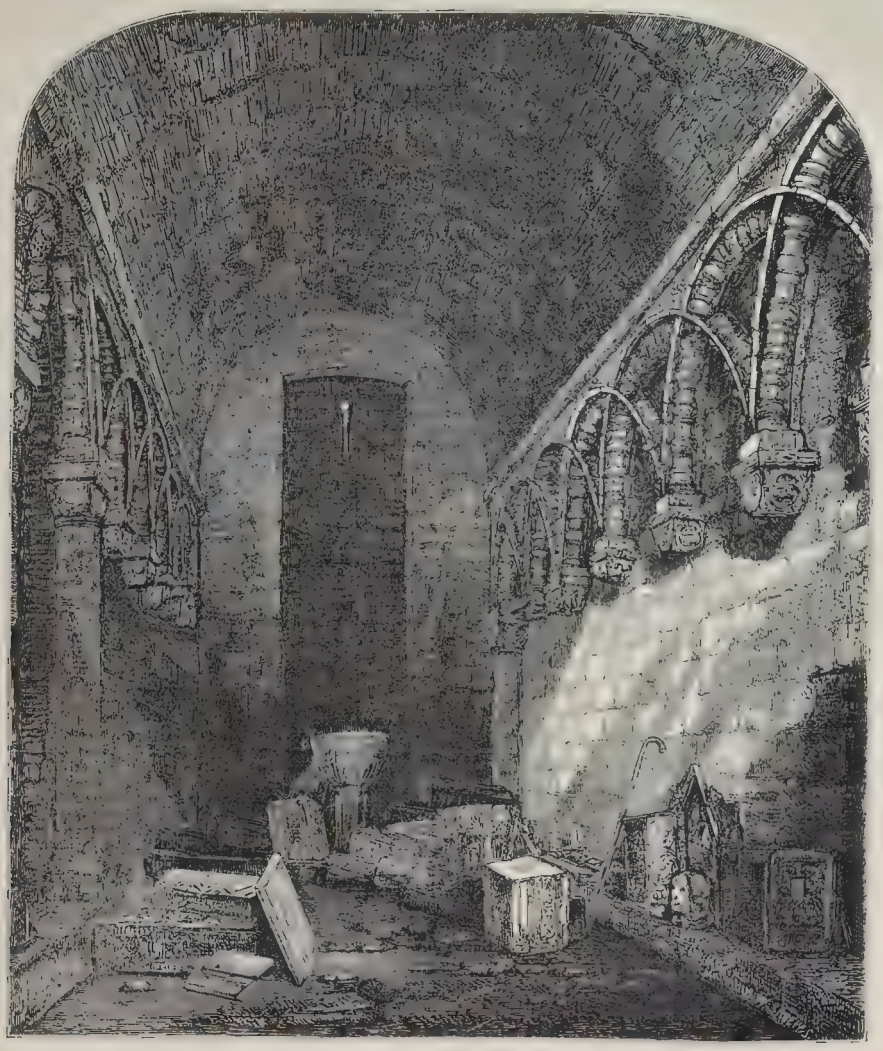
IN the Court of Common Pleas, at Westminster, on the 3rd inst. this case was tried. The defendant is a house decorator and painter, and in October last he was employed to do some work in the interior of the Carlton Club-house. For the purpose of performing his contract, a scaffold was erected (according to the case of the plaintiff) under the defendant's directions, in the hall of that building. The plaintiff, who was employed on the same work with several other men, mounted this scaffold on the 4th of October last: a portion of it gave way, and he was precipitated to the ground, and seriously injured, and he now sought to recover damages from the defendant, who as he alleged, had built the scaffold in an unsafe and insufficient manner.

The defence was, that even if Mr. Webb had erected the scaffold, he was not liable for any accident which might happen to the plaintiff, who, if he saw that the structure was faulty, need not have gone on it.

The jury eventually found a verdict for the plaintiff —damages, 25*l.*

THE NEW NATIONAL GALLERY.—On the 5th inst. the Chancellor of the Exchequer brought into the House of Commons a Bill to provide a site for a new National Gallery.

ST. ALBAN'S ABBEY CHURCH: PASSAGE TO THE CHAPTER-HOUSE.—(*See p.* 325, *ante.*)



PROVINCIAL NEWS.

Headington-hill (*Oxford*).—The residence on Headington-hill, once occupied by the late Mr. James Morrell, sen. has recently been pulled down to the ground, and a new mansion is about to be erected there, from the designs of Mr. Stone, architect. On Thursday in last week the foundation-stone was laid by Mrs. Morrell, wife of the present proprietor. After the ceremony, which was conducted with free masonic observances and a Sax-horn band, Mr. Morrell entertained the workmen with a substantial dinner and half-a-crown each, to commemorate the occasion.

Portsea.—The new school-rooms of the Portsea free or ragged schools are now completed, and, on Tuesday before last, were publicly opened. The building is situate in Richmond-row, Portsea, on a piece of ground the gift of the Ordnance authorities, and is provided with rooms sufficiently capacious, according to the *Portsmouth Times*, to afford accommodation for the education of as great a number of children as the funds of the institution will support for some time to come. The cost of the building has been 950*l*.

Winchester.—The improvements in the barracks here are progressing. The erection of the clock and cupola, in the centre of the west front, is nearly completed, and, says the *Hampshire Advertiser*, "is a measure in accordance with the original plan of Sir Christopher Wren, which, if our memory serves us rightly, included the erection of a dome in the centre of the western front, and two smaller ones at the wings."

Evesham.—The approaches of the new bridge on the Bengeworth side are very nearly completed. In the centre of the parapet, facing both to the river and the roadway, four inscription-plates have been let into the stonework. One ascribes the erection to the exertions and the public spirit of Mr. H. Workman, mayor, and states that the cost was defrayed partly by voluntary subscriptions, partly by the trustees of the adjoining turnpike-roads, and the remainder by rates. One of the other plates contains the names of Mr. James Samuel, engineer, and Mr. James Taylor, contractor. The plates were cast at Messrs. Hardy and Padmore's ironfoundry, Worcester.

Bath.—Although it was found impossible to complete the erection of the hot water fountain at the end of Bath-street on the day appointed for the celebration of peace, it was determined, says the local *Chronicle*, that its formal inauguration should form part of the celebrations of the occasion. Accordingly, arrangements were made for permitting the water from the street mains to play through the fountain, and thus a new feature of interest was added to the day's proceedings.

Birmingham.—New schools are to be erected in Great Colmore-street. It is proposed to expend 1,500*l*. in order to provide accommodation for 500 children; or, if it can be raised, 1,800*l*. for 750, by the addition of a second floor.

Liverpool.—The new concert-room in St. George's Hall is now almost finished, and was to be opened, according to the *Journal*, on Wednesday in the present week. The hall is circular, with the orchestra in the middle of its south side, the floor being a level area in the centre, with a rise towards the periphery of the circle. The whole of this portion of the hall is laid out in rows of benches. A light gallery, supported on sculptured caryatides, sixteen in number, runs round the walls from one side of the orchestra to the other. This gallery is divided into nave-like compartments, of interlacing segments, fifteen in number, with the caryatides placed under the points of junction. In front these compartments present to view an ornamented panelling of white and gold on a ground of vermillion. In the centre of the ceiling is a shaded cupola light of obscured and coloured glass, and from this depends a gas lustre from the establishment of Mr. Ostler, of Birmingham. In the orchestra, composite columns, carved, fluted, and in gold decoration, are placed at each side and along the back of the platform, the intervals between the upper portions of which are filled in with mirrors. The walls of this saloon are divided into ornamented compartments, styles and mounters of fretted gold work, the panels being imitations of elm-root, shaded off with cool-toned fieldings of satinwood, interspersed with beadings of gold, a similar style of ornamentation being carried up into the ceiling. The caryatides are white, with slight gold ornaments introduced into the draperies. The hall is seated for 900 individuals, but additional seating can be introduced to accommodate about 200 more.

Stockport.—A new grammar-school is to be erected on a site near the workhouse, at Shawheath from plans furnished by Mr. Bowman, of Manchester, architect.

CHURCH-BUILDING NEWS.

Grantham.—The works of the cemetery here are progressing in accordance with a design furnished by Mr. E. Browning, of Stamford. The chapel is in the Gothic style, having a tower and spire 100 feet in height: the whole is to be completed in five months, at a cost of 1,350*l*. The Ancaster stone, worked by Mr. Wilson, is to be used.

Littleport (*Suffolk*).—Littleport Church is being considerably enlarged, by the addition of a new nave and aisle on the north side, at the sole expense of the Rev. E. B. Sparke, the vicar. The expense will be above 2,000*l*.

Bromsgrove.—The consecration of Holy Trinity Chapel, Bromsgrove, took place on Friday in last week. The structure is in the Early English style, and was erected from the designs of Mr. Day, of Worcester, architect, by Mr. Robinson, of Redditch, builder. A school has also been erected in close contiguity to the church.

Taunton.—At a preliminary local meeting to consider as to the restoration of the Tower of St. Mary Magdalene, it has been resolved that Mr. Carver and Mr. Pollard, architects, and Mr. Herniman, builder, should thoroughly survey the tower in its present condition, and ascertain the amount that would be wanted to put it in a good state of repair. They were also requested to draw up a document, to be laid before the churchwardens, who would afterwards bring it before a meeting of the parishioners.

Bidston.—The church of Bidston, now drawing to completion, will be opened on 26th inst by the Bishop of Chester. The architects for the restoration are Messrs. *J. W. and J. Hay*; and the builder, Mr. H. Fisher.

Altrincham.—The foundation-stone of a Wesleyan Methodist Chapel was laid on Wednesday in last week, at Bowdon, fronting Stamford-road, not far from the parish church. 1,000*l*. have been subscribed for the purpose by the members of this body in the neighbourhood, 400*l*. of which were given by the Misses Wood. Mr. Peter Wood, M.D. of Southport, laid the stone. The building is expected to cost, including land, 1,700*l*. The architect is Mr. James Simpson, of Leeds; and the contractor, who engages to have the building ready by March 1, 1857, is Mr. Penk, of Manchester. The style of the building is Gothic. There will be seats for 300 persons, eighty free.

Birmingham.—The new church of St. Matthias is quadrangular in plan, and consists of nave, with north and south aisles, chancel, north and south chantries, and sacristy. The church is without galleries. The style adopted is that of the Middle Pointed period, and the material is common brick, with Bath stone dressings, from the quarries of Messrs. Raudall and Saunders. The church will accommodate 1,151 adults, 741 for the poor. The nave is 78 feet long by 25 feet 8 inches wide: it is separated from the aisles by an arcade of five bays, with arches springing from octagonal shafts, with moulded caps, supporting a clerestory, perforated with traceried windows, each divided into two lights. The west end of the nave has a large window of four lights, with flowing tracery. This window it is hoped may be filled with stained glass. The chancel, which is 30 feet deep by 25 feet 8 inches wide, has also a four-light traceried window, arranged for figure subjects similar to the west window. The reredos extends across the entire width of the chancel, and is divided by stone columns, with moulded caps and bases, into seven compartments. The floor of the chancel and the aisle floors of the church are laid with the ordinary blue and red quarries, designed by the architect in a series of crosses and croslets, according to the space to be covered. The whole of the pews are of uniform character, with plain square standard ends, and open. The roof timbers are all exposed, and, together with the whole of the woodwork throughout the church, are stained and varnished. The church was built by Mr. James Wilson, of Handsworth, from the designs and under the superintendence of Mr. James L. Pedley, of this town, architect.

Ulverstone.—The estimated cost of the new church at Pennybridge is 750*l*.; and the architect is Mr. M. Thompson, of Kendal. The farmers of Egton-cum-Newland, have given a "boon leading" of stones to the proposed site: about 160 loads were led. The foundation-stone was to be laid in the present week.

Westnewton.—The *Carlisle Journal* states, that the foundation-stone of a new church was to be laid here on 11th instant, by the Freemasons of Wigton and others.

North Shields.—The foundation-stone of the Wesleyan Reformers' New Chapel, in Howard-street, North Shields, was laid on Thursday in week before last. The chapel is to be in the Italian style, and built of stone, to contain 800 sittings: it will be heated with hot water. The front will look into Howard-street, and a large school-room, to be erected behind, will face Norfolk-street. Mr. John Green, of Newcastle, is the architect; and Messrs. J. and M. Robson, of North Shields, are the builders.

Glasgow.—The new church recently completed in Berkley-street, from designs by Mr. Burnet, has been glazed throughout with stained glass. The large front, clerestory, and nave windows being of tinted quarry glass, leaded, with outlined and yellow stained diaper ornaments. The lower front windows are similarly worked, but with the additional introduction of coloured ornamental medallions, also ornamental tracery openings. The large pulpit window is of rich geometrical design on a tinted ground, varied throughout the several lights both in detail and colour. The peculiar nature of the glass employed produces a diffusion of light throughout the building, counteracting any glare which might otherwise have existed. The whole of the work was supplied by Messrs. Tower and Arrol, of Glasgow, and designed and executed by Messrs. Pickington, of St. Helen's.

Perth.—St. John's Roman Catholic Church, Melville-street, Perth, has been re-opened. The entrance to the church is by the tower on the south side, the first division of which is only built. the roof, though temporary, is pointed and slated, and surmounted by a cross. The addition to the church, which is in the Decorated style of Gothic architecture, from designs furnished by Mr. Heiton, jun. of Perth, renders it capable of accommodating nearly double the number it could formerly contain. Its length, which before was 68 feet, is now 103 feet, by 40 feet in breadth. The height of the new portion, which is provided with an open roof, is 65 feet. In the front is a decorated window, 25 feet high, and filled with tracery, above which the gable is pierced by a small window, and its apex crowned by a stone cross. The altar, which is of white Carrara marble, stands in a circular recess, having a vaulted roof, decorated with moulded ribs, tracery, and bosses of Rosso-antico marble, and supported on columns of the same, the capitals of which are in white and gold, against a wall composed of slabs of Sienna marble. The altar is ornamented with burnished gold work, mouldings, and pinnacles, the centre compartment with angels in adoration around the cross. Behind the altar is a painting of the death of the Madonna, brought from Italy. The sacristy on the south side is 22 feet long and 16 feet high, having an open roof. On the north side is likewise a sacristy, besides other apartments connected with the church.

A POTTER'S DEVICE: MAN IS CLAY.—At the Branksea Pottery and Clay Company's premises, on the "Rejoicing Night," the device exhibited showed a drain-pipe within a ribbon inscribed "The Branksea Pipe of Peace," with a wheatsheaf below it, and this motto:—"May we never want for a Pipe nor a Drain!" The joke was at any rate *transparent*.

REGULATIONS UNDER METROPOLITAN BUILDING ACT.

METROPOLITAN BOARD OF WORKS.

AT a meeting of the Board, held on the 6th inst. the following regulations were determined on:—

"That an order be passed directing that all builders or other persons who may be desirous of erecting any chimney-shaft of a steam-engine, brewery, distillery, or manufactory, the same being buildings to which the rules of the Metropolitan Building Act, 1855, are inapplicable, shall, before commencing any such building, make an application to this Board, requesting their approval thereof, setting out a plan of the proposed building, and such other necessary particulars as may be required by the Board.

That the following rules and regulations with respect to applications to the Board, under the Metropolitan Building Act, and the 143rd section of the Metropolis Local Management Act, be adopted, and that they be printed and issued to the public.

All applications must be made in writing on foolscap paper, setting forth the nature of the building, work, or other matter, the situation and district in which the same is to be built, and describing all necessary particulars as to the proposed mode of construction, stating under which section of the Act the sanction is sought: to be accompanied by plans and sections drawn to a scale of one-eighth of an inch to a foot (when practicable), with dimensions and thicknesses figured thereon, together with a block plan to a smaller scale, showing the situation of the building with reference to adjoining buildings, and to the ground of any adjoining owner. In the event of the sanction of the Board being granted, duplicate drawings or tracings must be supplied by the applicant for enrolment in the office of the Board, and for transmission to the district surveyor for his guidance.

Applications that are not received at the office of the Metropolitan Board of Works (No. 1, Greek-street, Soho), at least three clear days before the next meeting of the Board, cannot be entertained at that meeting.

That the following fees be demanded and received by every district surveyor under the Metropolitan Building Act, 1855, who shall perform any of the services hereinafter enumerated, the same being special services required to be performed under the first part of the Metropolitan Building Act, 1855, for which no fee is specified in the first part of the second schedule to that Act; viz.:—

For the supervision of Furnaces and Chimney-shafts.			
For every furnace and chimney-shaft belonging thereto, not exceeding 75 feet in height	£1	10	0
Not exceeding 100 feet	2	0	0
For every 10 feet in addition, up to 150 feet	0	2	6
For every 10 feet in addition, above 150 feet	0	5	0"

It was further determined;—

That the committee be authorised to submit a case for the opinion of counsel as to the extent of the powers of this Board under sec. 49, Metropolitan Building Act, with respect to altering the fees payable to district surveyors in respect of the matters specified in the second schedule to the Act.

THE THEATRE AND MUSIC.

The Royal Italian Opera House.—Madame Ristori, the Italian tragedian, now acting at the Lyceum on off nights, and for whom London is indebted to Mr. Gye, is a wonderful artist, and should be studied by other artists. With a full recollection of Rachel, we are much disposed to consider her the greatest actress now living, uniting, as she does, to the power and energy and modulated elocution of the great French actress, an amount of tenderness not possessed by her. Madame Ristori's personation of "Medea" is a study for painters and sculptors, as well as a delight for the lovers of dramatic power in its highest development. Mr. Gye's arrangements for the erection of a new opera house are progressing. He hesitates, we believe, between the old site, which is offered to him on fair terms, and one farther west.

A Model.—It may be useful to mention, that a very elaborate model of a theatre, prepared, we believe, for King George IV. has been deposited in the Architectural Museum, Canon-row, Westminster, and deserves examination.

The Surrey Theatre.—Messrs. Beale and Co. have opened the Surrey Theatre with a very good Italian company, for the performance of operas. "Norma" and "Lucrezia Borgia" have been well represented. Every well-meant endeavour to provide good music for the multitude should have support.

Young Musicians.—The performances of the Brousil family at the Gallery of Illustration, in Regent-street, are very remarkable. It consists of six children, ranging from six years old to seventeen, and they all display surprising skill and taste.

PROPOSED MEMORIAL CHURCH AT CONSTANTINOPLE.

IT may serve as an assurance to several correspondents to mention that the committee entrusted with the duty of giving effect to the resolutions of the public meeting, held April 28, 1856, under the presidency of H.R.H. the Duke of Cambridge, have invited architects to send in designs for the Memorial Church, which it was then determined to erect at Constantinople. The competition will be unlimited and anonymous. The style to be adopted in the designs must be a modification, to suit the climate, of the recognised Ecclesiastical Architecture of Western Europe, known as "Pointed," or "Gothic," and the neglect on the part of any architect of this provision will absolutely exclude from competition.

The church must be of sufficient capacity to hold without galleries a congregation of not fewer than 700 persons, while the cost must not exceed 20,000*l.* a sum sufficient in the hands of an able architect to ensure the monumental character of the structure.

In order to ensure competence and impartiality in the adjudication, the committee have entrusted the selection of the successful designs to the following gentlemen;—The Right Rev. the Lord Bishop of Ripon; Sir Charles Anderson, bart.; the Very Rev. the Dean of Ely; the Rev. Professor Willis; and A. J. B. Beresford Hope, esq.

The judges will be entitled to award a first prize of 100*l.* and a second and third prize of 70*l.* and 50*l.* or in case of equality, two second prizes of 60*l.* each. The design to which the first prize is adjudicated will, without some special reason to the contrary, be the one carried out; and the amount of the prize will be ultimately deducted from the architect's commission. After the decision, all the designs will be exhibited.

MASONS' STRIKE AT CARDIFF.

A STRIKE of a very unreasonable, and, indeed, absurd description, has occurred at Cardiff. The workmen, in the course of last month, issued what they call a "Code of Laws," the "3rd proposition" in which is to the effect that no worked stone shall be allowed to be introduced into Cardiff by the employers, except machine-worked chimney-pieces and slate. The "2nd proposition" is to the effect that every workman, whatever his worth or skill, shall be paid alike at a fixed rate of wages, namely, 5s. 6d. a day for "public jobs," and 4s. 6d. for "private jobs." In laying down this "Code," the operative law-makers state that "if the masters require any alteration from this code of laws they must give three months' notice to the men of their intention of seceding from any of these laws at the expiration of the first three months;" and, in order to let the masters see that they were actuated by *equitable* principles, they thus apply the T-square to the other side of the question. "Also, if the men require any alteration in the laws herein mentioned, *they* will give three months' notice of such intention of alteration after the first three months have expired!" The masters of course refused to have the "law" laid down to them under any such equitable codification, and the consequence was, that the law-makers struck work. Just now Cardiff has made a considerable start in the building trades, some new streets being in course of formation. Prudent men would have hesitated ere they checked such a start, especially in a comparatively small town like Cardiff, by creating any disturbance of settled relationships with those whose business it was to provide for the trade's welfare by encouraging capitalists, by moderate charges in their contracts, to continue the expenditure of their money in such a line of improvements. It is only very indiscreet and foolish persons who can imagine that, by immediately taking an undue advantage of such a crisis to lay down restrictive rules that must forthwith raise the cost of the improvements which capitalists seem inclined to go on with, they are likely thus to secure an increased share to themselves of the profits that are going. One of the chief reasons, on the contrary, which the master builders in this case urged for rejecting the "3rd proposition" was, that it is "unwise and impracticable, and moreover would not benefit the workman himself, while it would increase very much the cost of buildings in the town," and hence, of course, put a stop to them till starvation induced the Cardiff masons to be thankful of anything lik a job at all. What would the operative masons of Cardiff think of an attempt of, say for instance, the home-knit stocking-makers of Cardiff (if there be any such) to prevent the introduction of stockings made anywhere else for behoof of the Cardiff masons? Would they not feel that these workers in wool wished to fleece their fellow-workers in stone? Suppose that the Cardiff tanners laid down the like code of laws in regard to the home-made leather of Cardiff,—its blacksmiths and tool-makers the like in respect to home-made tools,—or the home-spun weavers the like as regarded clothing. The absurdity of such pretensions would very speedily become clear to the masons of Cardiff. The master builders, we think, are quite right to resist such pretensions on the part of their workmen, as they seem determined to do; and we hope the resistance will induce the workmen shortly to listen to reason, and indeed to self-interest in the matter. Is it not surprising that they do not see that, by insisting, during a push of business, that the masters shall have all the stone requisite at the moment worked in the town itself, they would compel them to bring in additional hands, who would remain as competitors with themselves for every minor job after the push was past? Or do they desire to cramp or restrict the building operations at Cardiff within the limits of their own individual capabilities? What *would* they they be at?

WAYS AND MEANS FOR ART AND OTHER IMPROVEMENTS.

IN the House of Commons, on the 6th inst. several votes of money were taken for purposes which require a notification in our columns.

On the proposal of a vote of 2,000*l.* for a National Gallery of Portraits of Distinguished Persons, some discussion ensued, and the Chancellor of the Exchequer stated that there would be no necessary connection between this gallery and *the* National Gallery. There were an immense number of historical portraits in this country, owing to the exemption of the people from the effects of war; and the Government hoped that if a gallery of this sort were established, patriotic persons might contribute such portraits to the nation. Copies would also be made by competent artists of others not to be parted with by their owners. The Government wished to begin with a temporary exhibition, voluntarily contributed, in the new building shortly to be opened (at Kensington-gore), in which there would be found room enough for all purposes. Their ultimate object, however, was to form a national collection which would be an honour to the country. Mr. Spooner opposed the vote on not very clear grounds; but it was agreed to by a majority of ninety-seven against twenty-eight.

The next vote was for 10,000*l.* "for expenses of removing the collection at Marlborough House to Gore House." Mr. Wilson said, the collection must soon be removed to make way for the Prince of Wales. Mr. Disraeli, Sir Joseph Paxton, and other members approved of the vote; and Mr. Spooner opposed it. The present partnership between the Government and the Royal Commissioners, he said, ought to be dissolved, and the property got rid of with advantage. His conviction was, that the 150,000*l.* some time since agreed to would yet be seen to grow up to 1,000,000*l.* Mr. Wilson said the present vote had nothing to do with the purchase of the estate. It was intended for the erection of an iron building for the reception of the articles of art which, sooner or later, must be removed from Marlborough House: a more economical arrangement could not have been made. As to the property at Kensington-gore, the Government would have power over the erection of buildings on one-half of it. As regarded Burlington House, no plan had yet been decided on for building on that site. The Royal Society, who in the meantime were to be accommodated in the present building, on giving up their apartments at Somerset House for Government purposes, were willing to open their magnificent collection of portraits at all times free to the public. Colonel Boldero wished the site they were now disposing of (at Kensington-gore) could be devoted to the erection of new barracks, as Lord Portman was demanding the surrender of those in Portman-street. The vote was then agreed to without a division.

A sum of 24,700*l.* was then proposed, to defray the expense of making a new road from Buckingham-gate to Pall-mall, with a foot-bridge over the ornamental water. Lord R. Grosvenor moved that the vote be postponed for six months, with a view to the reconsideration of the St. James's-park improvements by a select committee. Opening a road through the park, with various turnings right and left, would not effect the object in view. His lordship defended the project of a bridge across the water in St. James's-

park. Sir Benjamin Hall was surprised at such a project coming from one of the select committee who voted for the measure to carry out which the present vote was proposed, and against that now advocated. Mr. Tite said all that was wanted was a communication from Belgravia through Pall-mall, and he could not understand why it should not be granted. To part of the plan now proposed he objected. The sudden turn at Marlborough House was inconvenient. They should have a straight road, 40 feet wide, and that would enable them to give the width of 70 feet to Marlborough House. If that were to be done, it would cost only about the odd hundred pounds of the vote. He objected to the pulling down of the German chapel. It was considered by the most distinguished architects of the day as a gem inside, and associated with many historical recollections. There was no necessity at all for interfering with this chapel. Let the entrance to Marlborough House be in Pall-mall, and all the advantages which he proposed could be obtained. His proposition was—"That the road from Pall-mall into St. James's-park be so placed that the necessity for pulling down and rebuilding the German chapel be avoided, and that the 10,000*l.* provided for doing so be omitted in the estimate, thereby reducing the cost of the new road and other works to 14,700*l.*" He believed that by the adoption of his proposition they would be doing justice to themselves, and saving the country from a large and unnecessary expense. Sir J. Paxton did not think that the hon. member for Bath had improved upon the plan of removing the German chapel. Such a plan as that proposed would have the effect of impeding the entrance to St. James's Palace, and creating inconvenience. It was not proposed to destroy the German chapel, but to remove it to some more convenient spot. He thought it would be desirable to postpone the consideration of this question. This was finally done by a majority of 192 to 70 against the present grant of the sum asked for.

GOVERNMENT ILLUMINATIONS.

Is it not strange, that whilst this country supports a Department of Art, in which 27,000 persons are receiving an art education; whilst in the central training school for masters there are upwards of forty men qualifying themselves to receive appointments as drawing-masters, there could be found no man to direct the illuminations of our Government offices,—no artist or architect to design an illumination which should not be a national disgrace, or outstripped by private individuals?

Could anything be more atrocious than the blocking up of the front of the National Gallery with a coating of black boards, and the exhibition upon them of a set of sickly-looking, badly-drawn flags? Is the only use of such a portico in a case of general rejoicing to be blocked up and hidden religiously from our sight?

Had outlines of our public buildings been sent to the office of any good architect, or to a public academy, that designs might be made to suit the character of each building, we might not now have been the jeer of our neighbours for the signal failures in our national illumination. "Oh, John Bull!" said a Frenchman, whilst surveying the Ordnance Office, "when will you make use of your own resources?

A STUDENT.

COMPETITIONS.

Bolton Cemetery.—At a recent meeting of the Bolton Burial Board, it was resolved that from the competition plans submitted, the designs No. 5 and No. 7, furnished by Mr. Charles Holt, architect, should be adopted. No. 5 is an Early Decorated design for a detached chapel, and is to be for the use of the Roman Catholics, and No. 7 an Early English one, for the use of the Episcopalians. A contract has been made by Mr. Robert Burrows, builder, to complete the two for 1,222*l.*

Chesterfield Cemetery.—The competition here has been great, no less than thirty-six plans for the buildings having been sent in: the plans for laying out the burial-ground numbered fifteen. After a comparison of the respective merits of the many designs, the committee decided on accepting those submitted under the motto "Perseverance," which, as was afterwards proved, were furnished by Messrs. Bidlake and Lovatt, of Wolverhampton. The chapels, while they are under one roof, are quite distinct from each other, the entrance to the one being on the south side, to the other on the east. They are exactly the same in size, viz. 34 feet by 18 feet, and the same in accommodation, while an individual character is given to each by adopting the earlier and later periods of the geometric style, the former being that in which the Dissenters' chapel has been designed, the latter that of the Episcopal. The materials to be used in its erection will be stone from the Wingerworth Bole-hill quarries, with dressings of Horton stone, the same classes of material as have been used at the grammar-school and the master's residence at Chesterfield: the roofing will be open timbered, and covered with the Staffordshire bridled tiles: the floors generally will be quarried, those of the pews of wood: the woodwork of the sittings and roof will be stained oak and varnished. The second premium was awarded to Mr. Drury, architect, Lincoln. The committee afterwards turned to the consideration of the best plan for laying out the burial ground, and after examination selected, for execution, the one signed "Pro Salute Publica," which proved to be the work of Mr. F. C. Gillett, of Chesterfield. The plan which was considered second-best was by Mr. Kitching, of Chesterfield.

PROPERTY INJURIOUSLY AFFECTED BY RAILWAYS.

A COMPENSATION CASE.

A JURY case under the Land Clauses Consolidation Act, of considerable importance to railway companies, was tried last week at the Portland Hotel, Greenwich, before Mr. Palmer, the Under Sheriff, and occupied two days. Mr. Browne was counsel for claimant, and Mr. Woollet for the company.

Mr. Penny, of Lewisham, builder, has premises consisting of a house, garden, builder's yard, workshops, stables, and cottage, within about 60 feet from the side of the station there, and he claimed from the South-Western Railway Company the sum of 420*l.* for depreciation in value, and injury done to his leasehold interest for twenty-two years in the said property, by reason of the loss of privacy in his house and garden from being overlooked by the public from the station, which is on an embankment about 20 feet high; by noise occasioned by the passing of trains; by injury to the buildings from vibration caused by passing trains, more particularly the express and goods trains; and by consequent increase in the annual cost of repairs.

Mr. Smith, Mr. Danes, Mr. Kirkham, surveyors, and other witnesses to facts, were examined in support of the claim. Mr. Charles Lee, Mr. Edward Ryde, Mr. Ritchie, surveyors, and Mr. Nicholson, builder, were examined for the company.

The Under Sheriff ruled that noise and depreciation in value were not proper subjects for compensation, but that substantial injury to buildings, and being overlooked, were, and that the property might be in those respects injuriously affected, and he so charged the jury, who gave a verdict for the claimant of one hundred guineas damages.

This case actually raises the question whether all the houses on each side of the Greenwich, Blackwall, and the other railways entering London, on arches and embankments, are not injuriously affected by being overlooked and their privacy destroyed, and whether the owners could not obtain compensation from the respective companies;—a very serious affair.

PROGRESS OF SEWAGE DISINFECTION AND SOLID MANURE AT LEICESTER.

THE Patent Solid Sewage Manure Company have issued a circular giving the following amongst other particulars as to their progress, at Leicester, in disinfecting the town sewage, fixing and precipitating its ammonia, salts, and other fertilizing matters; and condensing the fertilizing ingredients into a solid manure,—all by one continuous operation under covered sheds. The directors of the company state that they have abstained from bringing their undertaking before the public until their Leicester permanent works had been in perfect and regular action for a long period. These works were opened in May, 1855. They have been in operation, day and night, ever since, and without the slightest nuisance, they say, even in the works themselves, on the sewage of a population of 65,000 inhabitants, and the refuse of the manufactories of the borough. The success they maintain has been complete. From eighty to ninety tons of solid sewage matter, it is said, are separated every week from about 95,000 tons of sewage, the liquid portion flowing into the river Soar in a disinfected and inodorous state, so as to be fit even for drinking and other household purposes. The manure is sent out either in the form of bricks or in a dry powder. Above 500 tons have already been taken by agriculturists. Ten tons of the manure are offered, at the cost of carriage and bags only, to the authorities of any town contemplating the adoption of the system, in order that neighbouring farmers may satisfy themselves as to the value of the manure. Plans, drawings, and estimates for the patent works and machinery are furnished professionally by Mr. Thomas Wicksteed, C.E. under whose superintendence the drainage of Leicester has been carried out, and the company's works established. The deep drainage of Leicester was completed and the sewage works in full operation in the summer of 1855; and it appears that the mortality has coincidently diminished from 450 in the quarter ending March, 1855 (or 420 in same quarter of 1854), to 340 in the quarter ending March, 1856,—an improvement doubtless in some degree, at least, attributable to the sanitary works effected in 1855, although the returns generally throughout the country this year have been more than usually favourable to life and health. The only question, perhaps, as to the utility and the permanent practicability of the solid sewage system relates to the influence of the lime used on the fertilizing power of the matters fixed or separated by its means. It is very desirable that this question should at once be decided by some agricultural chemists in whose verdict the public would place confidence.

INAUGURATION OF THE PRINTERS' ALMSHOUSES.

THIS event took place on Wednesday, the 11th inst. and was celebrated by a public breakfast in the grounds of the Institution, at Wood-green, near Hornsey. The Earl of Stanhope, president of the Institution, presided on the occasion, and was supported by the treasurer, Mr. W. Clowes, the trustees, and a large body of stewards, comprising many of the leading London publishers, some of the more eminent of the stationers, and most of the principal master-printers of the metropolis. The company included many foremen and managers from the greater printing establishments, together with the working committee of the printers, by whom and by whose exertions mainly the institution was founded and the building erected. The whole proceeding was, moreover, graced and adorned by the presence of a goodly number of wives and sweethearts, sisters and daughters.

It appeared that although, by the exertions of the operative members of the profession the ground had been obtained and the building erected, the means of providing for the aged or disabled members, for whose benefit the Institution was created, were still wanting, except as to three, and these had been already elected. The day's proceedings will probably have the effect of doubling this number, so handsomely have the masters contributed to the requisite endowment.

After the formal induction of the recipients of the forethought and kindness of their brethren to their respective tenements, and the bodily refreshment of the company (about 200 in all), had been duly effected, the noble President addressed the assembly on the subject of the meeting especially, and generally on the progress printing has made, and in its effects on society at large, by the means it affords of diffusing truthful information, as well as fulfilling its proper office of the handmaid of Literature.

Mr. John Murray, in proposing the health of the Chairman, reminded the company of his Lordship's hereditary claim to the respect of printers, and of all who benefit (and who does not?) by improvements in the art of printing.

Mr. R. Clay acknowledged the complimentary toast to the Master Printers; Mr. Bohn that to the Publishers: Mr. Gough Nichols answered for Literature, and Mr. W. Spottiswoode for the Stewards.

The only personal toast, except that to the Chairman, was to the Treasurer, of whose service to the Institution, and personal worth, Lord Stanhope spoke most heartily, and of which, in acknowledging, Mr. Clowes spoke most modestly.

The only discord throughout (if that may be so called which was most willingly listened to) was the frequent announcement by the secretary of fresh and fresh contributions to the funds of the Institution.

OXFORD ARCHITECTURAL ASSOCIATION.

THE annual meeting was held last week. In their report the committee said,—"The check given by the war to the progress of public works generally has had little, if any, effect on church building, and during the present year many excellent restorations have been carried out, and not a few fine churches built. In Oxford especially, your society has had from time to time to call attention to the successful restorations and enlargements effected in several of the colleges and city churches, by Mr. Scott, Mr. Street, Mr. Buckler, and others. The buildings in the Broad-street, belonging to Exeter College, are now completed. They have been noticed several times, during their progress, with commendation, and now that they are finished, your committee can have no hesitation in pronouncing them superior, in general effect, to everything else that has been erected in Oxford during the year. The old buildings within are being rapidly demolished, and foundations being dug for a very fine building on the east side of the quadrangle, which will contain the rector's lodgings, and will, with the new chapel (about to be erected shortly), complete a new quadrangle. A new feature in Oxford Collegiate architecture—stained glass in the staircase windows—has been employed in the Exeter-buildings, with

excellent effect. This glass (executed by Mr. Lavers, of London), consists of quarries resembling Powell's quarries, but stencilled instead of stamped. The new library at the same college is very nearly finished, and is a most satisfactory work. At Balliol the old chapel has been demolished, and your committee, though they have not seen the drawings, expect a work fully worthy of the distinguished architect employed—Mr. Butterfield. The president's-room in the lower gateway of Magdalen College is in course of restoration, by Mr. Scott. Your committee have also noticed with approbation Mr. Buckler's restoration of the front of Jesus College. But the work of the day in Oxford is, without dispute, the splendid museum now in course of erection in the parks, which your committee in their last noticed as being but then begun."

RECENT PATENTS.

THE following are selected from the lists of specifications of patents recently granted, and published of late in the *Mechanics' Magazine*:—

Wohlgemuth, P. F. The Construction of Bridges. The patentee proposes to construct bridges of pontoon-shaped iron boats. Two or more of these boats may be braced together with diagonal tie-bars. The bottoms of the boats are to be firmly tied together by a circular concave iron frame, keeping under water a number of hollow iron caissons or cylinders, at 50 feet from the surface. One or more piers, 100 feet high, are erected on the platform, and braced together by diagonal tie-bars, forming frames on either side to support the top and sides of piers, themselves being the starting-point of the arches.

Spilsbury, F. G. and F. W. Emerson. Improvements in the Manufacture of Paints and Pigments. Claims.—1. The use of the tungstates of oxides of zinc, calcium, antimony, aluminium, magnesium, barium, and strontium, as paints or pigments. 2. Any combination or mixture of two or more of the aforesaid tungstates. 3. All mixtures or combinations of the above-mentioned tungstates with oxide of lead, in whatever manner produced. 4. All mixtures of the aforesaid tungstates, whether with or without oxide of lead, with the antimonites, antimoniates, arsenites or arseniates of any of the aforesaid bases, when applied to the manufacture of paints or pigments.

Stansbury, C. F. An improved changeable Lock. This invention consists in forming a lock with a number of tumblers so arranged that they can be worked by means of a key with changeable bits, so that when the bolt of the lock is thrown out by a certain arrangement of bits, it can only be thrown back by the same arrangement, and yet admitting of innumerable changes of the relative positions of the bits on the key without requiring a change in the tumblers.

MARTIEN, J. G. Improvements in the Manufacture of Iron and Steel. This invention has for its object the purifying iron when in the liquid state from a blast furnace or from a refinery furnace, by means of atmospheric air, or of steam or vapour of water applied below, so as to rise up amongst and penetrate every part of the metal prior to the congelation, or before such liquid metal is allowed to set, or prior to its being run into a reverberatory furnace in order to its being subjected to puddling.

Burley, Thomas Haley, of Ohio, United States of America. A new Machine for making Dovetails. This invention consists in giving obliquity to the cutting edges of the saws, in combination with inclined fronting-guides or tables on which the pieces to be mortised are to be brought up to the saws, and in arranging the series of chisels with inclined cutting edges over a double inclined cutting bed or table.

Lee, Henry, the younger, of Lambeth, Surrey, contractor, and John Gilbert, of Hackney-road, Middlesex, engineer. Certain Machinery for Mixing the Substances used in the Formation of Concrete and other like Substances. This invention consists in mounting a cylinder or case upon a shaft, and in providing such cylinder or case with an aperture and cover, which forms both the feed and exit passages for the materials. Rotary motion is communicated to the cylinder, and after having been continued a sufficient time the cylinder is stopped with the aperture downwards, the cover is removed, and the concrete runs out. Half a revolution is given to the cylinder, a fresh charge is inserted, the cover placed over the aperture, and the operation repeated.

Coniam, T. T. Improvements in Tiles for Roofing. This invention consists in making tiles with edges turned up on three sides, so as to lock into each other.

Muller, Emile, civil engineer, Joseph Gilardoni, and Xavier Gilardoni, of Rue de Provence, Paris. A grooving and clamping hooked tile, by means of which the entire covering of a roof is tied together. A machine, for the fabrication of such tile, by which it is continuously delivered from the mould through a peculiar system of delivery, applicable to any matter that may be moulded, and a continuous succession of furnaces for its burning. The inventors describe certain improved tiles, so shaped that a recess in one falls over a projection on the other, the whole being afterwards clamped together by means of metallic wires, &c.

Jones, E. G. An improvement in flattening cylinders of sheet glass. This invention consists in flattening such cylinders in a vertical position, simply by the action of the fire, without resting them on any substance which might affect the polish of the surface of the glass. The cylinder is gradually heated in a kiln, and then carried by suitable pincers to a carriage on a tramway, where it is allowed to partially develope itself by the heat of the kiln: it is then pushed along to the front of a flashing furnace, by the heat of which it is brought perfectly flat. It is then detached from the pincers, piled up in a kiln or moveable apparatus, and annealed in the usual way.

Bowron, James, of the Tyne and Tees Glass Works, South Shields. An improvement in the manufacture of glass tiles. Claim—The manufacture of glass tiles by pressing them from fluid glass, instead of first making the glass into sheets and then shaping it.

IMPERFECT STILL.

There is a touching, teaching, though perhaps an untrue, story,—
But 'tis warm with the weird wisdom and sanctity of old,—
How within the Coliseum strayed an old man bent and hoary,
'Mid Titan trunks of orders by Time, the tyrant, fell'd.

Tho' the snows of fourscore winters his heavenward head encumbered,
Like the prophet on Mount Nebo, whose stern lineaments he limned,
On the Sistine vaults Valhalla with saints and seers unnumbered,
His force was unabated, his eager eye undimmed.

'Twas he who at St. Peter's hung on high the daring dome,
That stretches like the firmament above the gazer's ken;
And in many a princely palace in the regal realms of Rome,
Brought down the gods on earth in the likenesses of men.

The softened southern sunset shed a melancholy glory
O'er his features, as in Ghirlandaio's pictures of the blest;
And o'er the Pincian hill heights, on cloud cushions rent and gory,
The day-god lay a-dying along the flaming West.

And while with mute devotion on those shatter'd shafts he pondered,
Those vague and crumbling arches, those thoughts carved out in stone,
A reverent disciple asked the old man why he wandered
Amid the sullen shadows of that fallen fane alone.

The painter-poet turned him as one awaked while dreaming,
And the young man felt a fiercer fire within his bosom burn,
As gazing on his flashing face with faith and fervour beaming,
Buonarotti bow'd his lordly brow and answer'd him,—"*I learn.*"

Be this tale or truth, or fable, it at least one lesson teaches,
And 'twere well if on the table of each heart there were enwrit,
This truth it more than labour'd lore or Pagan precept preaches,
So long is art—the longest life is all too short for it.

JOHN HEBB.

Notices of Books.

VARIORUM.

"THE Action of Water on Lead," by Dr. H. Osborn, of Southampton, has reached a second edition. In this little sixpenny tract, to be had of Sharland, of Southampton, will be found some useful information (though we do not mean to commit ourselves to all that is said), not only as to the action of water on lead, but also on the symptoms produced by poisoning by lead, caution as to the use of lead pipes and cisterns in certain localities, and a mode of detecting the presence of lead in water. Dr. Osborn, if we recollect rightly, was one of those correspondents who addressed us at the time when we first brought this subject under public notice.——"Nomos" is the title of a volume just published by Messrs. Longman and Co. in which an attempt is made to demonstrate a central physical law in nature. The author, whose name is not given, here endeavours to show that "the law of the laboratory" (the expansive power of heat being, more especially, it seems, referred to under this law) must be regarded as a cosmical law. The force of gravity, itself, he conceives, is not sufficient to account for every phenomenon in which it is supposed to be the principal or exclusive agent; and, certainly, the manifest tendency of the planetary orbits, for instance, to *circularity* of route is not explicable by the mere law of gravitative attraction, which manifests its power in elliptical and parabolical routes; but, rather strangely, the present author seems, somewhat inconsistently with himself, to reject a principle of repulsion as co-operative with the principle of attraction in cosmical affairs; whereas the expansive power of heat which he recognises as the great antithesis of the attraction of gravitation is just *a* mode of repulsive force, at least as much so as is gravity a mode of attractive force, the truth being that both terms—attractive and repulsive—imply hypotheses as to the *modus operandi* of the phenomena of aggregation and segregation, or concentration and radiation, of masses and spheres, with which it is unnecessary to entangle one's thoughts at all. It is refreshing, however, to peruse the work of any original thinker in these times of prostrate adhesion to great authorities, however much one may differ from him on various points: differences are often much more interesting, instructive, and suggestive, indeed, than accordances.——"A Natural History of the Animal Kingdom," by W. S. Dallas, F.L.S. is a goodly volume, with numerous illustrations, just issued by Messrs. Orr and Co. of Amen Corner. It apparently comprises one division of their "Circle of the Sciences" completed, and contains a vast amount of interesting knowledge in regard to the habits, structure, and classification of animals, from the lowest forms to the highest,—opening the mind and filling it with wonder and delight, as well as enhancing the interest with which it notes those manifestations of life by which every one is surrounded; from the insect that dances in the sunbeam, to the intelligent animals who in so many instances act the part of faithful slaves to man.——"June; a book for the country in summer time," by Mr. H. T. Stainton (Longman and Co.), may very appropriately be noted here in corelation with the more important work just alluded to. This little volume is one of very light reading, certainly; but slight as its texture may be, it has an odour of natural history and general intelligence, and kind feeling, too, about it, that will make it a pleasant enough summer companion in the country, in one of those little excursions to which we have often urged our own younger readers in the profession, *sketch-book* in hand *at least*, if not with herbarium or entomological case along with it. To give a specimen of the author's quality, let us take a paragraph from "June, in Sussex."

"Let us turn into this meadow," says he, "still gay with the flowers of the marsh marigold (*Caltha palustris*), and wandering on till we come to where it skirts a little wood, repose awhile, and, while listening to the merry songsters of the little thicket, the humming of bees, and the murmur of the little streamlet, let us note the varied vegetation of the grassy bank. Here, the golden broom, with all its rank luxuriance of blossom, seems to challenge us to produce a garden plant more beautiful; there, the bank is blue with speedwell (*Veronica Chamædrys*) a more modest plant, but of which the flower is pleasantly intertwined with our earliest recollections of summer time in the days of our childhood, when the days were far longer than ever they are now, and when the pleasure was to gather a nosegay of wild flowers, little caring what became of them afterwards. Perhaps some can recall those days, and can remember how their older companions, though not sharing in their childish glee, were yet pleased to see them pleased; and will not this reflection, rightly used, lead us to perceive that by being pleased then we were the cause of pleasure to others, and that so it must be now; and that when we enjoy any pleasures given to us, He who gave them is pleased at our enjoyment of them? I have no patience with those who advocate ascetism and gloom: everything not pleasant at the time will be found by experience but a step to greater pleasure afterwards, and hence evil is permitted as a means (why or wherefore we know not, nor should we inquire) of obtaining greater good than could otherwise have been arrived at."

——"Life in the Trenches," another little volume just issued by the same publishers, treats of far different scenes and pursuits. This is one of those interesting "tales of the wars," which the returned hero himself, in times of old, would have narrated, *viva voce*, to auditors "who live at home at ease." Here we have "an En-

gineer's Life in the Trenches," and many little anecdotes of interest in regard to the momentous siege of Sebastopol, or rather of the Russian armies. Some idea of the office of a surveyor under the pressure of cannon-shot may thus be obtained. The author is Major Whitworth Porter, of the Royal Engineers.——"The manufacture of a pin, accompanied by specimens, showing the progress of the manufacture, from the rough metal to the finished article," is the second of those "Illustrations of the Useful Arts," by Mr. Charles Tomlinson, in course of publication, by Messrs. Myers and Co. of Leadenhall-street, the first of which related to the manufacture of a needle. These are exceedingly interesting and instructive little treatises, not the least interesting thing connected with them being the specimens illustrative of the manufacture, affixed to a card, and enclosed with each treatise in a cloth and pasteboard envelope. The present specimens consist of little slips of copper and zinc, the elements of brass, and of brass itself; then of brass wire, soft, rough drawn, fine drawn, &c. and hard and elastic; then straightened and pointed, separated for shafts, headed, silvered, blacked, blued, and fully finished, with long "stobs" for blankets, and Lilliputians for ribbons. The next will trace a piece of calico from the pod to the finished piece.——"A Practical Swiss Guide," by "An Englishman in Switzerland," has been issued by Messrs. Longman and Co. It is brief and handy, and though there is not much descriptive matter in regard to buildings, the volume will be very useful to every tourist in Switzerland, which it penetrates by various routes, and in all directions, giving a clear and apparently correct index, as it goes on, to the more notable features of each locality, with very useful railway tables of the leading routes through France, Belgium, the Rhine, &c.

Miscellanea.

THE CRYSTAL PALACE.—The picture-gallery has been opened, and promises to form a very interesting additional feature. It is not yet, however, in a complete state. The concerts are most successful; the singers were never heard to greater advantage, but to obtain this result the general effect of the building is much interfered with. Those who love good music should not lose the opportunity here afforded them. On Thursday, the 18th, the great waters will be completed, and made to play. We shall have something to say about them.

THE PARIS AGRICULTURAL SHOW.—The taste which has been exhibited in the arrangement of the cattle show in Paris conveys something of a reproach to the managers of our cattle show. "Grassplats, with their velvet verdure, graceful flower-beds, shrubs, fountains, groups of statuary,—all, in fine, that could refresh the sight and shed a charm over the whole place, has been got together. Standing in the gallery, one might fancy one was looking over some fair valley, rich in verdure and fragrant in flowers, while the singing of birds, from aviarics half concealed amid the trees and shrubs, the gushing of the cool waters as they flash in the stray sunbeam that shoots down through the crystal roof, and the occasional lowing of the cattle, complete the illusion." Never was it imagined by those who year after year have contented themselves with the doings in Baker-street, that a cattle show could be made so interesting. The French building was, nevertheless, ill adapted for the purpose, and we are told that several animals have died.

THE SMOKE NUISANCE.—The Smoke Nuisance Abatement Act is to be amended, by including in its provisions glass works and potteries.

ST. ALBAN'S BRANCH RAILWAY TO WATFORD.—It is said that there were nineteen tenders for the construction of this line, the highest being 30,000*l.* and the lowest 23,000*l.* It is to be a single line, and the contractor whose tender was accepted is Mr. Richard Goodison, of Lewisham, Kent.

ART, SCIENCE, AND LITERATURE, IN THE CITY. The Lord Mayor, Salomons, entertained about 200 visitors at the Mansion House, on Wednesday, the 11th, all connected with art, science, or literature. The Royal Society, responded to by Sir Benjamin Brodie; the Civil Engineers, coupled with the names of Mr. Stephenson, Mr. Brunel, and Mr. Gregory; the Architects of England, with the names of Professor Cockerell, Sir C. Barry, and Mr. Tite, M.P.; the Sculptors, with the names of Mr. McDowell and Mr. Bailey; and the Press, responded to by Mr. John Forster, were amongst the toasts. The dinner was exceedingly well managed, and passed off most satisfactorily.

THE ARCHITECTURAL EXHIBITION.—We would make it known that the Exhibition will be opened to the public in the Suffolk-street Galleries on the 17th day of December next, and will remain open till nearly the end of February. All works must be delivered at the Galleries on the 1st or 2nd of December; and none will be received later. Two rooms, as before, will be retained for models, carvings, decorations, specimens of manufactures, and inventions connected with building, and as the committee have ascertained beyond a doubt that most of those who have been exhibitors on former occasions have reaped a substantial advantage—have found it most profitable, and the very best mode of making their productions known, not only to the architects and builders of London, but to those also of the country at large,—they will on future occasions expect all to pay a sum according to the space they occupy.

THE HALF HOLIDAY.—Sir,—The men in the employ of Mr. Glenton, of Blackheath, commenced on Saturday, May 31st, leaving off at twelve o'clock, thus obtaining a good long half-day for recreation. The way we manage it is thus:—The men work half an hour longer five evenings per week, making two and a half hours; the master gives two and a half hours; and they are paid and off the premises by twelve o'clock. We average from 100 to 120 men the year round. All work well; and we find the men study us more by giving them a little privilege as we do.—J. H.

WATERLOO-BRIDGE COMPANY.—At the half-yearly assembly of proprietors held on 5th inst. at the Freemasons' Tavern, it was resolved to contribute the sum of 100 guineas towards a subscription for the purchase of a piece of plate to be presented to Mr. George Powell, their surveyor and chief clerk for the last fifty years. The directors and proprietors are also to subscribe individually towards the same object.

THE IRON TRADE.—Prices have a decided downward tendency. Welsh bars have fallen 10s. per ton in Staffordshire, and a farther decline in bars is talked of. The Thames-street houses have also of late been selling at reduced prices, and at Liverpool also there has been a decline. The American trade has been seriously damaged, as was to be expected, by the past conduct of speculators in this trade. There is a great falling off in orders for America, which are said to have "disappointed every one's expectations;" and this is considered as all "the more strange" that imports into American ports have of late been very greatly on the increase. In Scotland thirty-five furnaces have been out of blast in consequence of the colliers' strike, so that prices have there been better sustained in the meantime. The Belgian Legislature is following the British example of free trade, having reduced the import duty on pig iron from 2*l.* 6s. 6d. down to 18s. 7d. per ton, a reduction of 60*l.* per cent.; and the Representative Chamber, by a large majority, have even "resolved," in the face of the Government, that the iron and coal duties should be entirely abolished.

TAUNTON SCHOOL OF ART.—The inauguration of the Taunton School of Art took place on Monday in last week, in the Public-hall, Bath-place, Taunton, the building set apart for the purposes of the school. The meeting, which was convened by public notice, and presided over by the bailiffs, was numerously attended, especially by the artizan class, who seemed desirous of examining the casts, models, and other apparatus of the school, which were now for the first time publicly examined. Mr. Jones, the honorary secretary, explained the objects and advantages of the school; and Mr. W. F. Elliot delivered an able address on art, which is pretty fully reported in the *Taunton Courier* of 4th inst. together with an address by Mr. J. B. Williamson, the head master, and other proceedings.

GAS.—The price of gas at Ripley has been reduced from 6s. 8d. per 1,000 cubic feet to 5s. 10d. for the current year, after which it is to be further reduced to 5s. in accordance with a request made to the proprietor of the local gas-works, Mr. Crossley, by the gas-consumers of the place.

TENDERS FOR SEWERS.—The following is a list of the tenders for new sewers to be constructed in the parish of Twickenham, according to plans, sections, and specifications, prepared for the board of surveyors of that parish, by Mr. C. Eley, jun.:—

Ellis	£950 0 0
Murray	630 0 0
Baker	620 0 0
Dethick	550 0 0
Adamson	537 0 0
Pound	535 0 0
Yeoman	522 0 0
Gardener	479 0 0
Rowe	475 0 0
Boulter	452 10 0
Thurst	442 0 0
Pope (accepted)	430 0 0
Rogers	419 10 0

ASPHALTE FLOORS.—We observe in your journal of the 7th inst. a communication signed "G. D. Pocklington," stating that asphalte floors "retain the moisture, and consequently destroy the grain." We can assure your readers that if asphalte floors are laid properly, such is not the case. Our maltstores, which are built in a low situation, we laid with asphalte floors several years ago, and upon these we have regularly stored our malt without injury to its condition, or its becoming "slack." To effect this, all persons conversant with malt know how essential dryness is. Our experience in using asphalte floors is, that with proper care, asphalte forms the cheapest, driest, and most durable flooring yet known.

T. PRENTICE AND CO.

TENDERS

For the Baptist Chapel, Newport, Monmouthshire. Mr. R. G. Thomas, architect.—

William Cock, Newport	£2,253 0 0
William Williams, Newport	2,139 0 0
James and Roberts	2,131 0 0
Thomas Richards	2,014 0 0
David Prosser	1,975 0 0
L. B. Moore	1,973 0 0
H. P. Bolt (accepted)	1,903 0 0

TO CORRESPONDENTS.

"*Varnish.*"—Can any of your readers inform me what description of varnish is the most transparent, and at the same time durable and suitable for polishing, and where it can be obtained? A CONSTANT.

"*Stains.*"—A working man wishes to know "of any cheap substance which will remove the marks of mahogany and rosewood stains from the hands, as soap or soda does not answer the purpose."

"R. W."—"T. R."—"J. S." (other builders think very differently).—"T. P."—"Mr. M. (under our mark).—"Mr. F." (ditto).—"The Mason" (ditto).—"F. D."—"Mr. N."—"M. B. and Co."—"O. H."—"W. H." (the water could be usefully applied: consult a practical engineer).—"Z." (will appear).—"J. W. B."—"D. J."—"A Householder."—"H. and B. H."—"Mr. R."—"T. P. Jun."—"G. L. F." (it depends on the wording of the contract. We cannot attempt to advise in private disputes).—"Frank" (declined with thanks).—"R. C."—"W. and B."—"T. G."—"C. F. H."—"J. J. M."—"W. V. P."—"C. C. N."—"W. F. H."—"E. C."—"Sir W. C."—"J. W."—"W. H. S."—"A. P."—"R. S."—"One of the First Ten."—"Mr. B."—"J. N." (we shall be glad to receive the particulars offered).—"W. S."—"C. G." (next week).—"E. L. B."—"C. F."—"A. J. B. H."—"C. and A. G."—"Nemo" (says the "shaft" at Bethlehem Hospital, complained of, has disappeared, and wants to know who pays for putting up and taking down: 5030 to 1, Brompton."—"T. M." (what was the nature of the building tendered for?—"A. L." (the specimen may be had on application).—"Perseverantia" (apply to the artists' colourmen).

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

ADVERTISEMENTS.

APPRENTICE.—A first-rate WRITER has a VACANCY for an APPRENTICE, either in or out-door. A moderate premium required. Apply to D. O. HASWELL, Sign and Glass Writer, 98, Greek-street, Soho-square.

BOROUGH of DORCHESTER, DORSET. CLERK of WORKS WANTED.—The Town Council of Dorchester require the services of a competent CLERK, to take charge of the works of sewerage and water supply about to be commenced in their district. It will be necessary for him to have a practical knowledge of well-sinking and boring, the construction and fixing of steam-engines and pumps, and of masonry generally; and the works connected with laying brick and pipe sewers and water pipes. Candidates are requested to apply for further information to Mr. A. WHITEHEAD, Engineer to the Council, 4, Dix-field, Exeter, and to state the salary they require, before the 1st of JULY next.

Dorchester, June 9, 1856. G. SYMONDS, Town Clerk.

BUILDERS' CLERKS.—WANTED, a well-educated, respectable YOUNG MAN, acquainted with bookkeeping, and of active business habits. Apply by letter, stating age and last occupation, to F. K. Office of "The Builder."

CLERK of WORKS.—WANTED, immediately, an experienced CLERK of WORKS fully competent to perform all the usual duties.—Address, stating terms and enclosing testimonials, to MORGAN and PHIPSON, Architects, 4, Bucklersbury, Strand. No personal application will be attended to.

CLERK of the WORKS for the DUDLEY UNION WORKHOUSE WANTED, a thoroughly competent person in the above capacity, and who will devote his whole time and energies to the due performance of the duties, at the rate of 150*l.* per annum. Written applications, with testimonials, to be addressed to Mr. SHORTHOUSE, Clerk to the Guardians of the Dudley Union.—Dudley, 9th June, 1856.

IN a Builder's Office, WANTED a JUNIOR CLERK, who writes a good hand, and is capable of tracing drawings and checking dimensions.—Address, O P Office of "The Builder."

NOTICE to MASONS and BRICKLAYERS.—CONSTANT WORK for 200 GOOD HANDS, at 4*s.* 6*d.* per day.—Apply to Mr. OWEN LEWIS, Royal Oak, Saint Mary-street, Cardiff. Cardiff, June 2, 1856.

TO CARPENTERS AND SMITHS.

WANTED IMMEDIATELY, in a Builder's Establishment, a CARPENTER, thoroughly acquainted with his business, and capable of taking the management of a workshop in which a considerable number of hands are employed. Some acquaintance with working from plans and setting out work indispensable. An experienced and steady BLACKSMITH, accustomed to jobbing in a building yard, also required.—Apply by letter, prepaid, to B. B. "Merlin" Office, Newport, Monmouthshire.

TO PARENTS AND GUARDIANS.

WANTED, an active LAD as IN-DOOR APPRENTICE to the MATHEMATICAL DRAWING INSTRUMENT MAKER.—Apply to J. TETTMAR, 18, Robert-street, Jubilee-street, Mile-end-road, London.

TO GENERAL FOREMEN.

WANTED, a thoroughly practical FOREMAN, by a Builder (Carpenter by trade).—Address, by letter, with testimonials, A. B. Office of "The Builder."

WANTED, a good DRAUGHTSMAN, who thoroughly understands the various styles and the general routine of an Architect's Office. State last employment, and terms.—Apply, by letter, to Mr FOWLER JONES, Architect, York.

WANTED, immediately, in an Architect's Office, an ASSISTANT, who is conversant with the measurement and prices of works, taking out quantities, and capable of getting out working drawings. Address, stating references, age, and salary required, to G. B. Post-office, Birmingham.

TO BUILDERS' CLERKS.

WANTED, in an Office in the Country, a Respectable Young Man as CLERK. He must be able to keep the books, to set out plans, and attend to the various duties of the office.—Letters, post-paid, stating age, terms, and other particulars, addressed to S. B. Post-office, Northwich, Cheshire.

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AT the LOWEST PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected Stock of the various descriptions of Deals, commencing at the following low prices:

Yellow Deals, from	£20	0 per 120
Spruce ditto, from	18	0 "
Yellow Battens	13	0 "
Dry Pine Plank, from	21	0 "

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a pennyc stamp.—N.B. All sawn goods delivered within two miles free of cartage.—Borough-road, Southwark, and Elm-street, Gray's-inn lane.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Pine Plank, 3s. 6d.; Spruce Deals, 3s.; Mahogany, 6d.; 21 Yellow Battens, 12l. 10s.; F. Walnut, 7d. Carriage free in town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth-walk.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from 1-inch to 1½-inches thick, in White or Yellow Deal, Oak, or Mahogany. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Cills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—E. SIMMS, Flooring Manufactory, Wilton-road, Pimlico; and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No. 18, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Sawmills. Goods in Regent's Canal.
N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process.—JOHN COUMBE solicits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he sells at prices generally charged for wet wood.—Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile-end-gate.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—South wark-bridge Wharf, Bankside.

STEAM FRET-CUTTING WORKS.—To BUILDERS, CABINET-MAKERS, CARVERS, CHINAMEN, and PLAN & PATTERN MAKERS and TURNERS.—SANDYand CO Established twelve years, Tottenham-court-road. Every description of fret and other open work cut in a superior style, with economy and despatch. Shapings, bevel patterns for founders, devices for illuminations, &c. cut in any thickness.

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere road, Lambeth, foot of Hungerford-bridge.

SUN SAWING, PLANING, and VENEER CUTTING-MILLS, Canal-road, Kingsland-road.—A. COX and SON beg to call the attention of Builders, Timber Merchants, and the Trade in general, to the above Mills, and to inform them that they are now prepared to execute any amount of work with promptness and despatch, on the following terms:—Sawing or planing battens, 3s.; deals, 3s. 6d.; plank, 3s. per dozen cuts of 12 feet; veneers, 3s. 4d. 5s. 3s. 6d. and 6s. per 100 feet super. The Premises abut on the Regent's Canal, and afford every facility for piling goods.
N.B. Goods fetched from the docks and carted home, free.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that they have completed their extensive arrangements, and will be happy to execute all orders entrusted to their care with despatch and punctuality. Wet and dry docks, and powerful cranes for lading heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring match boarding, &c. &c. always in stock at reduced prices.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NOKES and CO invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:
1-inch white, 12s. 6d. per square; ¾-inch white, 15s. per square; 1-inch white, 18s. per square; 1-inch yellow, 18s. per square; ¾ inch yellow, 16s. 6d.; 1-inch yellow, 20s.
Planing, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

TIMBER SAWING-MILLS, Belvedere-road, Lambeth.—ROBINSON and BARTRAM respectfully inform their friends in the Timber and Building Trades, that they have now completed their New Mill for Sawing Building and other Timber, and will be glad to receive their favours in this department of sawing. Full particulars will be forwarded on application, per post or otherwise. Timber up to 55 feet long can be cut at these mills.—N.B. A powerful Crane for landing timber on to carriages, at 1s. 3d. per load.

TO BUILDERS.—100 Loads of Petersburg CEILING LATHS FOR SALE.—Nett price, 34s.; also, about 23 loads of 3 inch laths, nett price, 20s. per load.
WHARF PREMISES, suitable for saw-mills, engineers, builders, or coal merchants, in the Regent's Canal, in one of the greatest thoroughfares of South London, with fine stable, eight horse steam-engine and boiler, and chimney shaft erected, and lay-by for four barges. To be LET on lease. For particulars apply to Mr. T. NEWTON, Hertford-road, Kingsland-bank.—Immediate possession can be had.

IMPORTANT to BUILDERS and PAINTERS.—Genuine White Lead, 32s. per cwt.; Linseed Oil, 2s. 7d. per gallon; Boiled Oil, 2s. 11d. per gallon; Turpentine, 2s. 7d. per gallon;
Fine Pale Oak Varnish, 7s. 6d. per gallon.
For cash, at EDWARD PRICE'S Oil and Colour Warehouse, 45, Coleshill-street, Pimlico.—Every article for the trade at the lowest price.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, spirit lackers, and finishing spirit. The present price is 6s. to 8s. 6d. per gallon; white French polish, 10s. per gallon; white shellac, 3s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Leather-lane; and 13 and 15, Dorrington-street, Holborn, London.

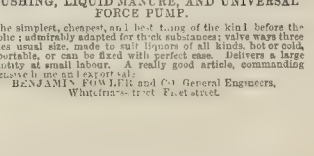
TO PAINTERS, BUILDERS, &c.—LIVETT, FRANK, and SON, No. 14, Borough, London-bridge, opposite the Brighton and South-Eastern Railway Stations, quote their prices for cash—for pale, 2s. 8d.; boiled, 3s.; turpentine, 2s. 8d.; oak varnish, 7s. 6d. per gallon; genuine white lead, 32s.; seconds, ditto, 31s.; best town glue, 42s. per cwt.; colours, brushes, &c. equally low.

STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NO SIZING, and will stand the exposure to the weather. Price 6s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 4a, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

PAINT, certified by the Government Engineers and Contractors to be the CHEAPEST and BEST covering for wood and iron, price 28s. per cwt.—Apply to the London Anti-Oxyde Paint Company, D. WALKER, Secretary, 29, New Bridge-street, Blackfriars

TO BUILDERS, PAINTERS, &c.—Oak Graining, in Oil, 4½d. per yard, in quantities not less than 60 yards. Church writing done in the Elizabethan style. Reference given.—Apply to C. PETTET, 5, Princess-street, Maida-hill.

STONE-PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES.—E. and W. STURGE invite particular attention to their stock of these goods, which continues to give great satisfaction both as to manufacture and price. A list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock Yorkshire paving, sinks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.



B. FOWLER, HOLMAN, and CO.
SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.
The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve ways three times usual size, made to suit liquors of all kinds, hot or cold, is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.
BENJAMIN FOWLER and CO. General Engineers, Whitefriars-street, Fleet-street.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs.
Warehouse, No. 1, Wharf, Paddington-basin.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL — Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.
11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent — KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its comendituous properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 89, Old Broad-street, London; to Mr. MONUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr. THOMAS WEEKES.
Agents in London, Messrs. GEORGE POTTER and CO. Limemerchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 19, North-wharf-road, Paddington.

FREEN and CO.'S PORTLAND CEMENT and LIME WORKS, WOULDHAM, near Rochester.—These Works having obtained Letters Patent for the Manufacture of Cement, by which very great and important advantages are obtained over the old method of manufacture, insuring at once uniformity of colour and quality, Merchants, Contractors, and Builders are informed that they can now be supplied with any quantity, either for home or foreign markets, for wholesale orders, on advantageous terms.—Samples and prices forwarded, on application at the Works; or to Mr. W. C. ATKINSON, 62, Moorgate street, City; from whom also testimonials from eminent engineers as to quality may be obtained.

PORTLAND and ROMAN CEMENTS.
BLYTH, BROTHERS,
16, SOUTH WHARF, PADDINGTON,
AND PLASTER WORKS,
BALDWIN'S PLACE, GRAY'S-INN LANE.

GREY STONE LIME WHARFS,
12, UPPER GROUND-STREET, Blackfriars (Surrey side),
7, NORTH WHARF-ROAD, Paddington.
WILLIAM PEGERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

MEDINA CEMENT CONCRETE BUILDINGS.
This mode of applying cement is suitable for sea groyne, sea wells, and for soldiers' huts, emigrants' dwellings, temporary chu-ches, school-houses, and workmen's cottages, all of which may be built with greater rapidity and economy than with any other materials; good cement and sea beach, or washed gravel stones, only necessary.
A sea groyne 200 feet in length, erected four years since in Sandown Bay, Isle of Wight, is a perfect specimen.
Two concrete models may be seen at FRANCIS' (BROTHERS), Cement Works, Nine Elms, London; and two soldiers' huts have been built by them for the Government, at Shorncliff Barracks, near Sandgate, Kent.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead; whilst the consumption of material is less than for one coat. It dries very fast and hard.
HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three-fourths the price.
HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and iron exposed to salt water; neither bil-e water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, stamped, Richmond, London, Patent; and when so marked the quality is guaranteed
HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustati n. Timber coated with this Enamel is not attacked by the worm neither do barnacles attach to it.
Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.
OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground or lump into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime. Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote—Office, at Warwick.

CHALK LIME. — New White CHALK LIME, of a very superior quality, per barge, at the Works—in the River, or Canal.—Apply to Mr. JOSEPH MENDAY, Wouldham, near Rochester.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO CEMENT, STUCCO PAINT.—CLARK and BENNOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

CHARLES RICHARDSON, 3 & 6, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.
3 & 6 South Wharf, Paddington.

NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.
All applications for prices and terms will meet with prompt attention.
N.B. Please observe the lime is ground at the works, not in London.

BLUE LIAS LIME.—CHARLES NELSON can supply direct from the Works in his own boats to any part of the Thames alongside, in the Docks, River Lee, on any canal, or by rail to any part of the kingdom, large quantities of the above GENUINE HYDRAULIC LIME, now so extensively used.
Quality, Weight, and Measure may at all times be strictly relied on; references in proof of the above can be given.
N.B. The Captain of the Boat will always bring with him the Grand Junction Canal Note, from which the contractor will be enabled to know exactly what weight of Lime he is paying for.
All orders addressed to the—
LONDON DEPOT, 16, SOUTH WHARF, PADDINGTON,
BLYTH, BROTHERS, SOLE AGENTS,
Will be promptly attended to, and any further information can be obtained from them.
Works, Stockton-field, near Southam, Warwickshire.

PLASTER of PARIS.—MESSRS. BLYTH, BROTHERS, beg to acquaint the trade, that they have made a considerable reduction in price; the quality they are now manufacturing cannot fail to give entire satisfaction. Samples and prices forwarded to any part of England, or the metropolis. No extra charge made to any wharf or railway station in London.—Any further information can be obtained at their Works, Baldwin's-place, Gray's-inn-lane, Holborn; or at the Blue Lias Lime Depôt, 16, South Wharf, Paddington.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to call over his works, and thoroughly inspect his stock and to judge for themselves.
Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pid Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for sabphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 800 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods both Welsh and Newcastle-, Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.
General Office—No. 12, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

BRICKS.—Sydenham, Penge, Beckenham, and Forest-hill.—A large quantity FOR SALE, on advantageous terms.—Apply, Mr. W. ELLIS, Surveyor, 40, Clifton-gardens, Maida-hill.

WHITE SUFFOLK and RED FACING BRICKS.
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY
MILLS and PRICE, 5, ADELAIDE-PLACE, London-bridge.

BEST HERTFORDSHIRE MALM SECONDS AND CUTTERS ALWAYS ON HAND.
MILLS AND PRICE, 5, ADELAIDE-PLACE, LONDON-BRIDGE;
AND CROWN WHARF, GREAT SCOTLAND-YARD

HERMITAGE BRICKYARD, North-end, Fulham.—The best description of STOCK BRICKS now ready for sale at this yard. Gentlemen and builders are respectfully invited to inspect the quality of these bricks. Price for cash, 28s. per 1,000.

TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane, Dulwich. Price of good stock bricks, 28s. per thousand on the field, for cash.—Application to be made to the Foreman, A. BANHAM, at the Works.

CHEAP WHITE BRICKS, for FACING HOUSES (Beard's Patent).—These bricks are of excellent make and colour, and imperishable from frost, and do not vegetate or become green.—For particulars, address, Patent Brick Works, Rugby, Warwickshire.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boy to remove the bricks. For full particulars, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented.
HENRY C. MOUNT, Sec.
37, King William Street, City.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles (delivered in agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 31, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 281, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 15, South Wharf, Paddington, Manufacturers of Improved Plain and Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for Sanitary and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted imperishable, and to resist all acids and exhalations.
*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

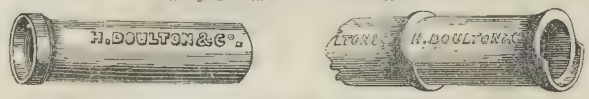
GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

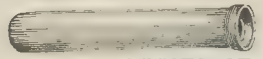
5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free; as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

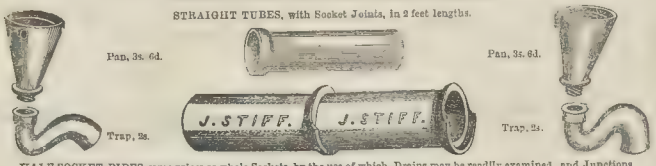
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.

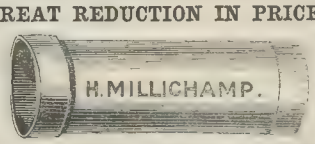
Messrs. COLES, SADLER, and CO'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.

Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.

Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN PRICES



OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

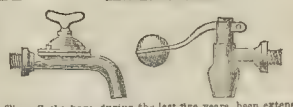
MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

PRIZE MEDAL CLASS 2.

HIGH-PRESSURE VALVE COCKS.—

LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns in the Continents high pressure, varying from 1 to 3 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and perfect in its action, and is cheaper than the common Cocks now in use.

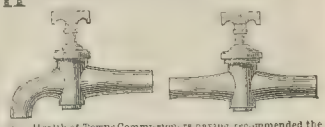
Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT, and SON,

Brass and Iron Founders Short-street, New-cut, Lambeth.

TO WATER COMPANIES AND PLUMBERS.

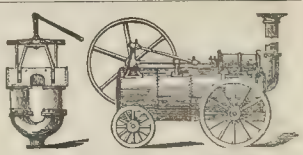
HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Nose and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

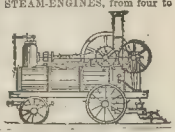


PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

STEAM PUMPING ENGINES.—

PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready for hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.



JAMES BURTON & SONS,

Engineers and Contractors, John's-place, Holland-street, Southwark, London.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST IRON PUMPS,

for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2⅝ „	long 3 3	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron	2 8 0
3½ „	ditto 3 6	flanged pipe,	2 19 0
4 „	ditto 3 6	as required.	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing.....		2 14 0
2½ in.	long ditto ditto		3 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of cottages and sinks in washhouses with soft water from underground tanks, or in hot forcing and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

R. RICHARDS and CO.

PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

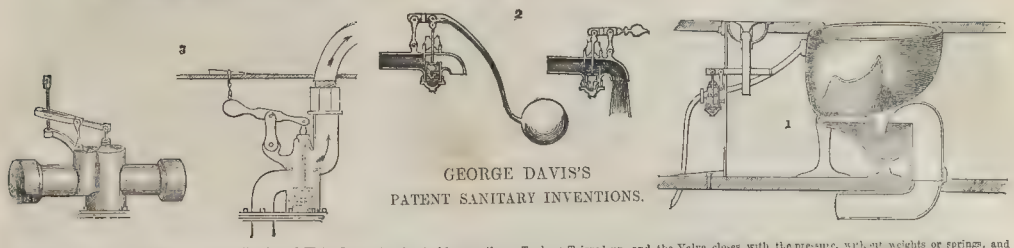
Iron Pails 38s. per doz. painted.
Ditto .... 42s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

PARSEY'S REVOLVING STEAM-ENGINES and PUMPS (the accomplishment of circular motion—as steam-engines, are better than reciprocators, and as pumps, being all metal, are equally good for hot or cold liquors; and having no packing, are not liable to choke, and are a vast improvement on pumping and for saving pumps. To be seen at Mr PARSEY'S Depôt, Great Scotland yard.

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

TO WATER COMPANIES AND BOARD OF HEALTH COMMISSIONERS.



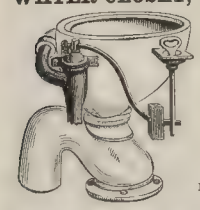
GEORGE DAVIS'S
PATENT SANITARY INVENTIONS.

G. DAVIS begs particularly to call the attention of Water Companies, &c. to his recently Patented Inventions. The Sanitary Closet and Valve is the most simple and effectual Apparatus for common purposes yet introduced to the public. The advantages it possesses over all others will be evident to every practical person, at first sight. Its superiorities consist in the following desiderata :—The Basin is so constructed, that instead of the water running round the sides of the Trap, it is precipitated into the centre, which flushes the Trap effectually with one half of the water usually required. The Handle of the Closet Apparatus is so arranged, that it cannot be Tied or Tripped up, and the Valve closes with the pressure, without weights or springs, and without concussion. The Ball and Ball Cocks are unequalled for High Pressure, and are perfectly self-closing, without concussion. Hydrants and Sluice Cocks are also manufactured on this Patent Principle, and nothing can be more simple or effectual. The Valve is of Indian Rubber, enclosed in a box so as to prevent wear, and they can be set in motion in one second, in case of fire, and will not hang up or get deranged in any way. When closed, the pressure tends to keep them from leaking, and all the working parts are kept from the water when shut off.

For full Particulars, Prices, &c. apply to the Patentee and Manufacturer,

GEORGE DAVIS, MARLAND-PLACE, SOUTHAMPTON.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



DOULTON & WATTS,
LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,
AND
LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,
With Handle, Lever, and Weight, ready for fixing,
Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as far the CHEAPEST yet manufactured.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c. at the

NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the Kingdom, and can be had upon application to THE AGENTS :—

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;
Where a large stock is always kept on hand.

WILLIAM NORTHEN'S
WHITE ENAMELLED STONEWARE,
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

J. CLIFF, Proprietor,

MANUFACTURER OF

URNACE-BLOCKS, BRICKS, &c.
CLAY GAS RETORTS,
GLAZED SOCKETED PIPES,
HALF-SOCKET PIPES,
JUNCTIONS, BENDS, AND OTHER
SANITARY APPLIANCES.

M. B. NEWTON, Agent,

LONDON STORES,
WHARF No. 4, GOODS STATION,
KING'S-CROSS.

The LARGEST, BEST GLAZED, and
STRONGEST PIPES in London.

INSPECTION SOLICITED.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR & FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

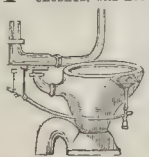
3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 3d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, as it is well known that good earthenware, UNGLAZED, is the finest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES

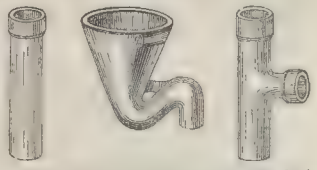
FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 32, Old Fish-street, near St. Paul's, London. Price for Closet and Apparatus complete, from 23s. and perfect action guaranteed.



TO LOCAL BOARDS of HEALTH. SURVEYORS, &c.—The Best and Simplest MACHINERY for CLEANSING CESSPOOLS, DRAINPIPES, &c. including everything that is required, can be obtained from R. BARRETT and SON, Brass and Iron Founders, Beech-street, Barbican, London, who will furnish prices on application.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

GROUND FLINT AND CORNISH STONE, UNADULTERATED.
WILCOX & CO.
FLINT MILLS, MILLWALL, POPLAR.

TO STONEWARE POTTERS, BRICK-MAKERS, CONTRACTORS, and OTHERS.—A POTTERY and BRICKWORKS are TO BE DISPOSED OF, on easy terms, near a railway station, and within reach of the large Government works now in progress at Winchester, Hamble, &c. &c. The machinery, buildings, and plant are upon the most improved plan, and adapted for carrying on a large stoneware business, for which the clay is well suited. There is ample space and every requisite for making from four to five million bricks per annum, large sheds for making tiles and red ware; a dwelling-house, stable, &c. &c. The whole in complete order, and now in operation. For particulars, apply to Mr. F. SCHULTZ, S. Heitor, 4, Dyer's-buildings, Holborn, London.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PRIGOTT, 115, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

SALES BY AUCTION.

TO IRONFOUNDERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on MONDAY, JUNE 23, 1856, at TWELVE, at the AUCTION MART, Bartholomew-lane, by direction of the Assignees of R. J. Polehin, a Bankrupt, in lots, without reserve, 650 tons REJECTED SHELLS, from 5½ inches to 12 inches, made of mixed cold-blast and Scotch iron, and lying at the Royal Arsenal, Woolwich.—To be viewed seven days prior to the Sale, by orders.—Catalogues may be had of Messrs. ASHLEY, Esq. Solicitor, 7, Old Jewry; at the Mart; and, with cards to view, of Messrs. FULLER and HORSEY, Billiter-street, City.

TO TURPENTINE AND TAR DISTILLERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on WEDNESDAY, JUNE 25, at ELEVEN, in lots, without reserve, on the PREMISES of the late Mr. Garton, Rotherithe, near the Globe Dock, the PLANT of a TURPENTINE and TAR DISTILLERY, including two copper melting-pans, capable of melting twenty five barrels each; four copper turpentine stills, 500 to 700 gallons, with copper heads; four copper worms and backs, one copper tar still, 60 work, sixteen barrels, with copper head and pewter worm and tub; four cast-iron resin oil-pans, seven cast-iron pans, four-horse power steam-engine and boiler, several rods of brickwork furnace-work and smoke-consuming apparatus, four large lead turpentine and oil cisterns, in wood cases; twenty turpentine punncheons, fourteen iron-bound casks, with brass cocks; scale beams and weights, two horses, two waggons, two carts, harness, various utensils, and a quantity of building materials, in paintings, rafters, &c.—To be viewed on TUESDAY previous to the sale, when catalogues may be had on the Premises, and of Messrs. FULLER and HORSEY, Billiter street, City.

CLAPTON.—Building Materials. Important Sale by Tender.

MESSRS. BROOKS and BEAL are instructed by the Trustees of the London District Freehold Land Society, 79, King William-street, City, to SELL by TENDER, in one lot, the whole of the excellent BUILDING MATERIALS of the house now standing on the Society's Estate at Clapton, facing the Triangle.—Tenders to be delivered at their Offices, 5, Piccadilly, by FOUR o'clock, on THURSDAY, the 19th of JUNE, marked "Tender for Building, Clapton." The Trustees reserve the right of letting one Tender. And further particulars to be had of Mr. DALTON, Surveyor, 23, Lincoln's-inn-fields; or of Messrs. BROOKS and BEAL, 260, Piccadilly. Attendance will be given on the Premises, on the 17th and 18th inst. when conditions of Sale will be produced.

PORTPOOL-LANE. — Valuable Builder's Stock of seasoned Timber, Plant, Implements, and Effects, on the Premises of the late Messrs. Locke and Nesham.

MESSRS. EVERSFIELD and HORNE are instructed by the Executors to SELL by AUCTION, on the PREMISES, Portpool-lane, Gray's-inn-lane, on WEDNESDAY, JUNE 25th, and two following days, at TWELVE for ONE each day, the FIRST PORTION of the valuable STOCK and EFFECTS, which will comprise a large quantity of well-seasoned yellow and white deals and battens, prepared floor-boards and battens, pine plank, thirty loads of timber in the docks, die square timber and quartering, oak sills, dry wainscot and mahogany blocks of Portland stone; stone steps and paving; also, several builder's carts, stone-trucks, timber-carriage; scaffold boards, poles, and putlogs; crab-engines, hoisting-jacks, blocks and falls; ladders, trestles, planks, barrows, pile-driving engines, and monkeys; saw-tackle, a new travelling-crane, the contents of the joiners', plasterers', painters', and smiths' shops; new and old iron, an endless chain, and drum work-benches, and other effects. May be viewed two days previous, and Catalogues had on the Premises, or will be sent post-free, to any parties who will apply to the Auctioneers, 40, Parliament street, or Cornhexchange

STOCK of Messrs. BROWNE and CO. University-street.—The last Sale previous to delivering up the Premises at Midsummer, including Marble Bronzes, Models, Women, a Stained-glass Window, Marble Chimney-pieces, Scagliola Pedestals, &c.

MESSRS. RUSHWORTH and JARVIS beg to announce that the FINAL SALE of the valuable STOCK of Messrs. Browne and Co. will take place at the GALLERIES, 71, Great Russell-street, on MONDAY, JUNE 23rd, and following days, and will include many valuable groups, figures, and busts, in marble; eight marble statues of Italian poets and painters, size of life; statues, groups, &c. in marble and Parian stone, adapted for pleasure grounds and gardens; a few choice bronzes; the specimens of scagliola, in pedestals, brackets, &c.; beautiful marble and pietra dura chimney-pieces; a stained window, stained with great taste, and sculptured by first-rate artists, six groups of figures in wood (life size), and two stands formed of boys and foliage, from Venice; an ancient mosaic table from the baths of Caracalla, a stained glass window, and a great variety of objects of taste and utility, to clear the premises by the 24th inst. May be viewed two days prior, and catalogues had on the Premises, and of Messrs. RUSHWORTH and JARVIS, Sav ile-row, Regent street, and 19, Change-alley, Cornhill.

THE PRIOR-PARK ESTATE, BATH, comprising a noble and spacious stone mansion, with its extensive modern wings, connected by arcades and corridors, lately occupied as the Great Roman Catholic College, with various other Ancillary offices, select-fully situate in one of the most prominent and picturesque parts of the city of Bath, and commanding a grand expanse of magnificent scenery, but secluded in private grounds of surpassing and varied beauty

MESSRS. DANIEL SMITH and SON are commissioned to submit for PUBLIC COMPETITION, at the MART, near the Bank of England, on TUESDAY, the 24th of JUNE, at TWELVE (unless an acceptable offer shall be previously made by private treaty), entire or in a few sub divisions, presenting choice sites for building, the above very important and desirable ESTATE, within and consequently possessing considerable influence in the borough of Bath. It comprises nearly 60 acres, of a ring-fence, and chiefly sound pasture land, finely sheltered and richly wooded, and embodies within its commanding plateau, being 500 feet above the level of the sea, the whole of the above-named Mansion, in the best Bath stone, and in a perfect state, presenting a noble specimen of architecture, with a grand portico to each principal front of lofty Corinthian columns, and unbroken length of communication for a family of rank and fortune, with handsome mahogany and stone staircases, moulded doors, &c. The wings, distinguished as St. Peter's and St. Paul's, comprise the chapels, refectories, lecture-rooms, theatres, studios, refectories, &c. but might be easily removed. There are capital stabling and farm buildings, with entrance lodge and gates, an excellent walled garden, productive pleasure-grounds, with terrace and other walks and rides of unusual variety and extent, the whole abounding with springs of the purest water, and an extensive ceiling fish-tank, known as the Priory; a complete gymnasium, and several neat entrance lodges, an observatory, and very valuable stone quarries.—Descriptive particulars, with plans, may be had 28, each, to admit four persons, at the chief Libraries at Bath; of Messrs. DANGERFIELD and FOSTER, Solicitors, Cook-street, Strand; of Messrs. WARD and PEARSON, Solicitors, Bath; at the Auction Mart, and of Messrs. DANIEL SMITH and SON, Land Agents in Wimpole-street, Parliament will not be held sufficient to treat for a disposal.

TO CABINET-MAKERS, TIMBER-MERCHANTS, BUILDERS, AND OTHERS.

FOR SALE by AUCTION, on the PREMISES, NEW-INN, BROADWAY, Cutler-street, Houndsditch, by Mr. JOSEPH DAW, on MONDAY, the 23rd inst. by order of the Mortgagee, the PREMISES, and Capital PORTION of the STOCK-IN-TRADE of Mr. J. Lovell, which will comprise a large quantity of well-seasoned deals and battens, TEN for ELEVEN o'clock precisely; consisting of large quantities of excellent and well-seasoned Spanish, Cuba, and Honduras mahogany, in fine flitches, planks, and boards; birch, maple, rosewood, walnut and other hardwood planks, dry pine deals and planks (whole and cut), &c. To be viewed two days previous to and on the morning of sale. Catalogues may be had on the Premises, and of Mr. JOSEPH DAW, Land Valuer, Auctioneer, &c. Bermondsey Brickfields, Jamaica-row, Bermondsey.

N.B. No private sales to be let for any other trade.

SALES BY AUCTION.

Freehold Building Land, nine miles from London, in the County of Surrey.

MESSRS. WINSTANLEY are instructed to treat for the SALE of a beautiful and picturesque PLOT of BUILDING GROUND, land-tax redeemed, and free of great tithe, comprising about 33 acres, situate within ten minutes' walk of the Norwood Station. The great facilities afforded by the London and Epsom Railway to this locality, couple it with its proximity to the Crystal Palace, renders this estate particularly eligible for building purposes. The land will be sold either as an entirety or plots suited to the erection of gentlemen's villas. Half the purchase money may remain on mortgage.—For further particulars and terms, apply to Messrs. WINSTANLEY, Pater. osterrow.

JAMAICA TAVERN Jamaica Level, near Mill Pond Bridge, Bermondsey To Building Material Dealers and Others.

MR. PEAKE is favoured with instructions by Messrs. Courtnee and Co. to SELL by AUCTION, upon the PREMISES, on WEDNESDAY, the 18th inst. 1856, at TWELVE o'clock, in lots, the MATERIALS comprised in that well-known ancient place of resort, "The Old Jamaica House" consisting of sound oak brickwork, timber, flooring, wood fittings, &c.; lead gutters, pipes, and flats, stone paving, and a variety of fixtures, fittings, and effects. May be viewed the morning of sale, and catalogues obtained at Mr. PEAKE'S Offices, 44, Tooley-street, Southwark.

45 and 46, LONG-LANE, BERMONDSEY. To Building Material Dealers, and Others.

MR. PEAKE will SELL by AUCTION, upon the PREMISES, on FRIDAY, JUNE 20th, 1856, at TWELVE o'clock, in lots, the MATERIALS comprised in the above brick-built Residences, consisting of stock brickwork, timber, and flooring; large quantity of panelled partitioning, doors, sashes, and frames; lead gutters and pipes; stone paving, with a variety of effects of the usual description.—May be viewed the morning of sale; and catalogues obtained at Mr PEAKE'S Offices, 44, Tooley-street, Southwark.

Valuable Building Ground, cheerfully situate at Hampton, Middlesex.

MR. JOHN DAWSON will SELL by AUCTION, at the MART, on WEDNESDAY, JUNE 18, at TWELVE, in lots, FOUR ACRES of LOT LAND, equal to freehold, desirably situate for building purposes, on the elevated bank, just beyond Rose-hill, on the high road from Hampton to Sunbury. The subsoil is a bright gravel, with delightful water, the view of the Thames and country beyond cheerful and interesting, and about one mile from the railway terminus at Hampton-court.—Particulars, with conditions of sale, may shortly be had of E. J. KENT, Esq. 1, Guildhall-chambers, Solicitor; at the Red Lion Inn, Hampton; at the Auction Mart; and at Mr. JOHN DAWSON'S, Land and Auction offices, Kingston-on-Thames, and Marlborough-chambers, 49, Pall-mall.

500,000 STOCK BRICKS, STARCH GREEN, near HAMMERSMITH.

MR. ALLEN DAVIS is directed by the Executor to SELL by AUCTION, on the PREMISES, Mr Street's Brick-field, Starch Green, in lots, on THURSDAY, 19th JUNE, and FRIDAY, 20th JUNE, 500,000 Stock Bricks, well made, and lying handy for sale; also two handsome cows, a sow in pig, and about 20 head of Spanish and Cochin poultry. May be viewed, and catalogues had on the Premises; at the Travellers' Rest, and Seven Stars, Starch Green; the Victoria, Uxbridge-road; King's Arms, Acton Bottom; Castle, Hammersmith; and of Mr. ALLEN DAVIS, Auctioneer, 11, Old Jewry Chambers, City.

LUDGATE-HILL.—Building Materials of part of the Belle Sauvage Inn.

PULLEN and SON are directed to SELL by AUCTION, on the PREMISES, on MONDAY, JUNE 30, at TWELVE, in lots, all the valuable BUILDING MATERIALS of Five Houses, workshops, and premises belonging to the Westminster Fire Office Company, forming part of the Belle Sauvage Inn, Ludgate-hill, comprising good sound brickwork, slate slabs, lead gutters, pipes, and flats, cast-iron columns, large plate-glass sashes, doors, floor-boards, shop-fronts, various partitions, large plate-glass skylights, iron girders and columns, large slate slabs, lead gutters, pipes, and flats, cast-iron columns, large plate-glass sashes, doors, floor-boards, shop-fronts, various partitions, large plate-glass skylights, iron girders and columns, large slate slabs, lead gutters, pipes, and flats, cast-iron columns, and fittings up. May be viewed on SATURDAY. Catalogues had of Messrs. THOMAS and CHAMBERS, Architects, 27, Queen-street; and of PULLEN and SON, 20, Fore-street, Cripplegate.

GRESHAM-STREET WEST. Building Materials of Two Houses.

PULLEN and SON are directed to SELL by AUCTION, on the PREMISES, on THURSDAY, JUNE 26, at TWELVE, in lots, all the valuable BUILDING MATERIALS and FIXTURES of two houses, Nos. 5 and 6, Gresham-street West, Wood-street, comprising sound brickwork, plain and gauge tuck and jar pointing, roofing and boarding, sashes, doors, floor-boards, shop fronts, lead gutters, batten cisterns, lead pipes, stoves, and other useful fixtures and fittings up. May be viewed on WEDNESDAY. Catalogues had of PULLEN and SON, 20, Fore-street, Cripplegate.

ARTILLERY PLACE, FINSBURY.—Capital Building Materials of seven large Residences, to clear the site for the Royal London Militia Depôt.

PULLEN and SON are honoured with instructions from the Commissioners of the Lieutenancy of the City of London, to SELL by AUCTION, on the PREMISES, on MONDAY, JUNE 23, and following day, at TWELVE, the whole of the excellent BUILDING MATERIALS, FIXTURES, and FLANGE of SEVEN RESIDENCES, of an unusually superior description, No. 1 to 7, Artillery-place, Finsbury, including the Artillery Ground, comprising 5,000 capital stock bricks, good deal timber, in large and useful scantlings, 60 squares of slates and slating boards, lead, in gutters, flats, cisterns, and pipes, 300 pairs glazed sashes, with shutters, modern doors, partitions, bathing pans, chimney-pieces, and interior fittings-up, 300 squares of capital boarded and timber floors, stone paving and steps, coping and cills, iron palisades, rewarded stone, iron, and other railings, modern stoves and ranges, coppers, force-pumps, large iron bookcases, fittings, and all the expensive house and cellar fixtures. May be viewed on FRIDAY and SATURDAY, the premises forming the Estate of HENLEY SMITH, Esq. Clerk to the Lieutenancy, Mansion-house; and of JOSEPH JENNINGS, Esq. Architect, 3, Foley-place; and of PULLEN and SON, 20, Fore-street, Cripplegate.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Office of Messrs. MORTIMAN and THIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

FREEHOLD GROUND, CHANCERY-LANE.—The Commissioners of Sewers of the City of London give notice that they will SELL by PUBLIC AUCTION, at the Office of the Sewers Commission, in the Guildhall Library, at TWELVE at Noon precisely, to receive PROPOSALS for the GRANT of BUILDING LEASES for EIGHTY YEARS, at a ground rent, of the Freehold Premises, situate on the west side of Chancery-lane, and near Fleet-street, late in the occupation of Messrs. Hall, Bell, and Co. and subsequently of Mr. HAYWOOD. Engineer to the Commission, of these Offices in the Guildhall, where forms of proposal may also be obtained. The Commissioners will require a plan and elevation of the premises proposed to be built, to be submitted to them for their approval, and do not bind themselves to accept any proposal, and no notice will be taken of any proposal that may be received after the above-mentioned time. Persons whose proposals may be accepted will be required to enter into an agreement at once.

JOSEPH DAW, Principal Clerk.

Sewers Offices, Guildhall, June 3, 1856.

FREEHOLD BUILDING GROUND.—TO BE LET or SOLD, on advantageous terms, TWO PLOTS of GROUND, situate in the most preferable part of St. John's-wood. For particulars apply by letter, post paid, to WILLIAM LEWIS, 2, Craven terrace, Craven hill, Paddington.

FREEHOLD LAND.—TO BE LET, or SOLD, a very eligible PIECE of FREEHOLD LAND, adapted for the erection of upwards of forty houses of the fourth rate. Sewers and roads have been made. Situated at Holloway, near to the Archway.—Apply to WALTER JUSTICE, Esq. Solicitor, 6, Bernard-street, Russell-square.

FREEHOLD BUILDING LAND at Norwood, Anerley-grove, and Palace-road Estates.—TO BE LET, 50 FREEHOLD, eligible BUILDING SITES, in close proximity with the Crystal Palace and its railways.—At Hackney, within three minutes' walk of the Victoria-park station, for ninety-five years, at FORTY PLOTS, at ground-rents from 15 per plot per annum upwards, being nearly equal to freehold. Roads and sewers on all the estates complete, and liberal advances to respectable builders.—Apply to Mr. JAS. BRAGG, Devonshire-villa, Rotherithe; at No. 98, Star-street, Edgware-road; and Vale-cottage, Anerley, near the land opposite the Crystal Palace Railway station.

STRATFORD, ESSEX. — FREEHOLD LAND, within three miles of London, exonerated from land-tax and free of tithe, TO BE LET, on Lease, for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

CASSLAND ESTATE, overlooking Victoria-park.—Eligible PLOTS of LAND TO BE LET, for building villas and semi-detached residences; and also Plots of Land, for fourth-rate houses, on the northern portion of the estate.—Plans &c. can be inspected at the Estate Office, Cassland-road, or at Mr. WALES'S office, 8, Great St. Helen's, Bishopsgate.

MOORE PARK ESTATE, KING'S-ROAD FULHAM.—Eligible LAND TO BE LET, on Building Leases, for long terms. Ground rents moderate, and advances will be made, if required. Plans &c. can be inspected at the Estate Office, King's-road, near Stanley Bridge; or at Mr. Wales's Office, 8, Great St. Helen's, Bishopsgate.

LAND for FACTORIES and DWELLING-HOUSES, most eligibly situate, lying between the River Wandle and Garratt lane, at Wandsworth, and near Two Railway Stations. TO BE LET, in one or more plots, for Building purposes. Lease 99 years. Money advanced if required. Apply to Mr. GEORGE LOW, Architect, 1, Church-court, Clement's-lane, City.

HOLLOWAY. — Valuable BUILDING GROUND TO LET, with liberal cash advances, to respectable builders, admirably situated for good Villa Residences, which are much required in this favourite and highly respectable locality. The situation is most healthy, possesses beautiful surroundings, and the access to all parts of London easy. Property in this neighbourhood lets and sells rapidly.—For further particulars, apply to Mr. GEO. CLARKSON, Surveyor and Land Agent, 28, Penton-street, Pentonville

EAST HAM and BARKING.—BUILDING LAND.—TO BE LET on Building Leases, for ninety-nine years, several eligible PLOTS of LAND, close to the Ilford Station, East Ham, and near the station at Barking. The land will have a frontage of 60 feet, with depths of 80 feet, and are well adapted for the erection of houses of from 25l. to 35l. a year.—For particulars apply to MESSRS. GEORGE NICHOLSON and SON, Solicitors, 4, Old Palace-yard, Westminster, or to THOMAS SMITH, Esq. 36, Hart-street Bloomsbury

BUILDING LAND at HATFIELD, HERTS. TO BE LET on building leases, for 50 years, very desirable PLOTS of LAND, within a quarter of a mile of the Railway Station, fronting the high road to St. Alban's, and well calculated to supply the demand for villa residences in this locality. Soil, gravel; bricks and sand in the immediate neighbourhood. For further particulars apply to RICHARD NICHOLSON, Esq. Solicitor, 4, Old Palace-yard, Westminster

TO BUILDERS, PRINTERS, STONEMASONS, &c.—TO BE LET, in the vicinity of Tottenham-court-road, eligible PREMISES, consisting of dwelling-house, workshops, and yard.—Apply to Mr. BELLEN, 4, Princes-street, Bedford-row

VALUABLE BUILDING GROUND.—TO BE LET, on Building Leases, the Valuable PLOT of GROUND, at the north side of Jamaica-row, Bermondsey, and abutting upon the high-road to the Commercial Docks and Deptford, formerly in the occupation of the late Messrs Curling. For further particulars, apply to ALLEN, SNOOKE, and STOCK, Architects and Surveyors, 6, Duke-street, London-bridge

TO BANKERS, INSURANCE OFFICERS, and OTHERS. The LEASE of some valuable PREMISES, near to the Indian House, with a frontage towards Leadenhall-street, of about 25 feet. To BE DISPOSED OF. Some but principals will be dealt with. Apply to ALLEN, SNOOKE, and STOCK, Architects and Surveyors, 6, Duke-street, London-bridge.

TO BUILDERS and OTHERS.—Upwards of THIRTY ACRES of LAND TO BE LET, on Building Leases, in Bermondsey, and in a position of very rapidly increasing value.—Apply to ALLEN, SNOOKE, and STOCK, Architects and Surveyors, 6, Duke-street London-bridge.

OLD FORD, near VICTORIA-PARK.—Valuable FREEHOLD BUILDING GROUND TO LET, with liberal cash advances, situate on a high road, for first-rate houses, which are much required in this rapidly-improving neighbourhood, at which letters will rapidly. For further particulars apply to Mr. CLARKSON, Surveyor and Land Agent, 28, Penton-street, Pentonville

CAMDEN PARK, TUNBRIDGE WELLS. PLOTS of LAND, offering great attractions for villas, and villas of first-rate consequence, TO BE SOLD, or LET on LEASE for 100 years.—Inquire of Messrs. STONE-WALL and SIMPSON, Solicitors, or of Mr. J. M. RICHARDSON, Auctioneer, Tunbridge Wells.

LONDON DISTRICT FREEHOLD LAND and HOUSE SOCIETY, offices, 79, King William-street, City. FREEHOLD BUILDING LAND at PECKHAM, for SALE by TENDER.—The Directors of the above Society are prepared to receive TENDERS for any, or all, of the few PLOTS remaining unsold on the Society's Estate at Peckham. Buildings are not necessary as a portion of the property in front of the road is very commanding. Tenders to be delivered at the Office by Four o'clock, on MONDAY, the 23rd inst. The Directors do not bind themselves to accept the highest, or any Tender. For plans of the Estate, and every information, apply to

E. W. ROBERTS, Secretary.

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The Builder,

AN ILLUSTRATED WEEKLY PAPER FOR THE ARCHITECT, ENGINEER, OPERATIVE & ARTIST.

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ROYAL ACADEMY of ARTS, Trafalgar-square. The EXHIBITION of the ROYAL ACADEMY of ARTS is NOW OPEN. Admission (from Eight till Seven o'clock, One Shilling. Catalogue, One Shilling.
JOHN PRESCOTT KNIGHT, R.A. Secretary.

THE NEW SOCIETY of PAINTERS in WATER-COLOURS. The TWENTY SECOND ANNUAL EXHIBITION is NOW OPEN, at their Gallery, 53, Pall-mall (near St. James's-palace) daily from Nine till dusk. Admission, 1s.; Season-tickets, 5s. JAS. FAHEY, Secretary.

THE ARCHITECTURAL MUSEUM, Canon-row, Westminster.
On MONDAY next, JUNE 23rd, a Lecture will be delivered in the Rooms of the Museum, at 8 o'clock precisely, by C. H. WILKINSON, Esq., "On the Application of Natural Foliage to Architecture," by J. K. COLLING, Esq. Hour of Admission, SEVEN o'clock. The Museum to be taken at EIGHT o'clock. Card may be had at the Museum.
GEORGE GILBERT SCOTT, Treasurer
June 20, 1856. HENRY CLUTTON, Hon. Sec.

ST. MARYLEBONE.—METROPOLIS LOCAL MANAGEMENT ACT.—At the Vestry, June 7th, 1856, pursuant to the provisions of this Act, vesting the sewerage and drainage in this parish in the Vestry thereof, it was resolved,—
That the entire length of all drains or other drains which pass under the public roads or pavements of this parish be constructed by the Vestry at the expense of the parties who shall require or be ordered to construct such drainage.
That the parties pay beforehand to the Vestry such amount as the Vestry's Surveyor shall require, the balance (if any) to be returned to the applicants after the performance of the works; and if the surveyor's estimate prove insufficient, the parties to pay the additional expense.
That all applications for the sanction of the committee as to drainage or other works be made three clear days previous to the weekly meetings of the Sewers Committee on Wednesdays, at THIRTY o'clock in the forenoon.
That all applications as to drainage be accompanied by a plan of the premises, showing the proposed drainage and the levels thereof, drawn to a scale of not less than an eighth of an inch to a foot.
That in cases where parties may be unable to make the required plan, the same shall be prepared, if the parties desire it, by the Officers of the Vestry, at a charge of not less than five shillings, and not more than ten shillings, to be paid upon making the application.
And notice is hereby given, that the penalties provided by the Act, 18th and 19th Victoria, cap. 120, intituled "An Act for the better Local Management of the Metropolis," for infringement of the regulations of that Act with regard to sewerage and house drainage, will be enforced against all parties contravening the same.
By order,
W. E. GREENWELL, Vestry Clerk.

IT being desirable that her Majesty's Government be in a position to procure CAST IRON of the quality suited to the various purposes to which it is applied in the Service, a series of experiments, already commenced, will be made with every variety of Strong Iron that can be procured, the product of the United Kingdom. These inquiries will comprise:—

1. Chemical analysis.
2. Specific gravity.
Mechanical properties, as shown by
a. Tenacity.
b. Transverse strain.
c. Compressibility.
d. Impact.
e. Bending, a combination of *a* and *c*.
f. Density.

The experiments will be tabulated and published. Iron-masters, wishing to submit their produce to the above investigation, are requested to communicate to the Principal Clerk, War Department, Pall Mall, before 30th JUNE, the terms on which they are willing to deliver at the Royal Gun Factories, Woolwich Arsenal, samples of not less than 6 cwt. of Pig Iron, with a small quantity of the Fuel, Flux, and Ore employed. A certified statement to accompany the samples, giving all particulars, and specifying that the sample of Iron is of the first or second melting, as the case may be, and that similar Iron can be produced in quantity. None that has been melted more than twice will be received.
H. B. DREWRY.
War Department, Pall Mall, 9th June, 1856.

CONTRACTS.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—CONTRACT No. 1. To BRICK MANUFACTURERS and OTHERS. The Corporation of Sunderland are desirous of receiving TENDERS for the manufacturing and delivering in a depôt within the borough of Sunderland, the BRICKS necessary for the construction of the brick sewers, cess-pits, side entrances, *&c.* in connection with the said works. The quantity of bricks required will be about two and a quarter millions, including square-bricked and bricks of different radiuses for upwards of eight miles of sewers. Further particulars may be known on application to WILLIAM CROZIER, C.E. Borough Engineer, at his Office, East Cross-street, Sunderland, to whom Tenders are to be sent on or before the 9th day of JULY, 1856, endorsed, "Tender for Bricks." The Corporation do not bind themselves to accept the lowest or any Tender. By order,
WILLIAM SNOWBALL, Town-clerk.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—CONTRACT No. 2.—To STONEWARE PIPE MANUFACTURERS and OTHERS. The Corporation of the Borough of Sunderland are desirous of receiving TENDERS for the manufacturing and delivering in a Depôt within the borough of Sunderland, the STONEWARE PIPES, Bends, Junctions, Invert Blocks, Junction Blocks, *&c.* necessary for carrying out the Sewerage Works of the borough. The works comprise the necessary pipes, bends, junctions, *&c.* for about 42 miles of pipe sewers from 6 to 18 inches in diameter, irrespective of private works; the necessary junction and invert blocks for the same; the brick manholes, and the other stoneware which may be required in carrying out the said works. Further particulars may be known on application to WILLIAM CROZIER, C.E. Borough Engineer, at his Office, East Cross-street, Sunderland, to whom Tenders are to be sent on or before the 9th day of JULY, 1856, endorsed "Tender for Stoneware Pipes." The Corporation do not bind themselves to accept the lowest or any Tender.
By order, WILLIAM SNOWBALL, Town Clerk.

LOCAL BOARD of HEALTH, HASTINGS. The Local Board of Health of Hastings are prepared to receive TENDERS for the following WORKS in connection with their WATER-SUPPLY, viz. a 20-horse steam-engine, two boilers, pumps, iron roofs, *&c.*; also for the necessary buildings, including engine-house, boiler-house, cottage, cottage and brick tank. The plans and specifications may be seen at the Town Hall Office, Hastings, on and after the 17th inst. when Tenders must be delivered by TWELVE o'clock at noon, on TUESDAY, the 1st day of JULY next. The Local Board are not bound to accept the lowest or any Tender. By the Local Board,
JOHN G. SHORTER, Town Clerk.
Hastings, June 9th, 1856.

TO CONTRACTORS for PUBLIC WORKS. The Local Board of Health of Hastings give notice, that they are prepared to receive TENDERS from competent persons for the DRAINAGE of part of their district. The Contract will comprise the CONSTRUCTING and LAYING of about fifty yards of 4 feet CAST-IRON CULVERTS; 100 yards of 15-inch CAST-IRON PIPES (all provided by the Local Board); about 2,147 yards of BRICK SEWERS, from 1 foot 6 inches to 4 feet; and about 1,400 yards of GLAZED STONEWARE PIPE-sewers from 9 inches to 15 inches. Also the necessary Gullies, Ventilating Shafts, Side Entrances, and Tide Flaps. The specification and conditions of Contract and Tender, with printed form of Tender, may be obtained, upon payment of five shillings, and the plans, sections, and drawings, may be inspected at the Office of the Town Clerk, High-street, Hastings, between the hours of TEN and FOUR, on and after the 17th instant. The Local Board will require the works to be completed within six months from their commencement; and they do not bind themselves to accept the lowest or any Tender. Sureties will be required. Sealed Tenders on the forms supplied by the Local Board, properly indorsed and addressed to "The Hastings Local Board of Health," must be delivered at the Town Clerk's Office, Hastings, before TWELVE of the clock at noon of FRIDAY, the 25th day of JULY next.—By order of the Local Board,
JOHN G. SHORTER, Town Clerk.
Hastings, June 9, 1856.

TO CONTRACTORS and OTHERS.—The Board of Highways for the Parish of Saint Mary, Nottingham, will, at their meeting, to be holden at the Town-hall, on the 4th day of JULY next ensuing, be ready to open TENDERS from parties willing to undertake the CONSTRUCTION and COMPLETION of the following SEWERAGE WORKS, viz.:—
CONTRACT A.—The laying down and constructing a Main Low Level Sewer, together with all the several Works appertaining thereto, commencing at the present exit of the River Leen, under the Nottingham Canal, in the East Croft Meadow, and terminating at the Junction of the Leen and Trasser's Leen, near the parish of Sneinton.
CONTRACT B.—The laying down and constructing a Main Low Level sewer, together with all the several Works appertaining thereto, commencing at the Manvers'-street Sewer, in Hermitage-lane, and proceeding by direct and curving lines to, and terminating at, the River Trent.
Plans, sections, drawings, and specifications of the above Works may be inspected, and forms of Tender obtained, at the Offices of Messrs. JOHN UNDERWOOD and FREDERICK, Engineers, Peter-gate, Nottingham, on and after the 20th inst.—All Tenders must be sealed and addressed to the Board of Highways, for the parish of Saint Mary, "Tender for Sewerage Works," Offices, Leen side, Nottingham, on or before the said 4th day of JULY.—By order of the Board,
Nottingham, June 10, 1856. C. JENKINS, Clerk.

TO BUILDERS.—Persons desirous of CONTRACTING for the ALTERATION and ENLARGEMENT of SCHOOL and the ERECTION of a new RESIDENCE for the Head Master, at Kettering, in the county of Northampton, may see the plans and specification and obtain a bill of the quantities at the Office of Mr. E. F. LAW, Architect, Northampton. The TENDERS are to be delivered by the Architect on or before SATURDAY, the 5th day of JULY next.
N.B. The Trustees do not pledge themselves to accept the lowest Tender. E. F. LAW.
Priory Cottage, Northampton, June 17th, 1856.

CONTRACTS.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—Commanding Royal Engineer's Office, Dublin, 7th June, 1856.—The Principal Officers of her Majesty's War Department hereby give notice that they will receive proposals for the following CONTRACT, viz.: For the CONSTRUCTION and ERECTION of a RACKET COURT and TWO BALL COURTS, at the Temporary Barracks, Curragh of Kildare, in the Curragh district. Persons desirous of Tendering for the same will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and at the Royal Engineer's Office at the Curragh, and may obtain specifications, with the terms of Contract. The whole of the work to be completed within eighty days after the date of order to proceed with the work. The letters of Tender with specifications to be sealed, and transmitted under cover to "The Director General of Contracts, War Department, Pall Mall, London," so as to be received on or before the 24th day of JUNE, 1856, and to be marked on the outside "Tender for work at the Curragh of Kildare."

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—Commanding Royal Engineer's Office, Dublin, 13th June, 1856.—The Principal Officers of Her Majesty's War Department hereby give Notice, that they will receive proposals for the following CONTRACT, viz.:—For RAISING the present WATER-TOWER, and FIXING CLOCK thereon, at the Temporary Barracks, Curragh of Kildare, in the Curragh District. Persons desirous of tendering for the same will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and at the Royal Engineer's Office at the Curragh, and may obtain specifications, with the terms of Contract. The whole of the work to be completed within one hundred days after the date of order to proceed with the work. The letters of Tender with specifications to be sealed, and transmitted under cover to "The Director General of Contracts, War Department, Pall-mall, London," so as to be received on or before the 1st day of JULY, 1856, and to be marked on the outside "Tender for work at the Curragh of Kildare."

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives Notice, that sealed TENDERS, addressed to the Director-General of Contracts will be received at the War Department, Pall-mall, on or before the 30th JUNE, 1856, for SUPPLYING and LAYING DOWN GRANITE PAVING, at the Tower of London. The present Station and plan for the same may be seen, and forms of Tender obtained at the Royal Engineer's Office, Tower between the hours of ELEVEN and THREE o'clock, from the 23rd to the 30th JUNE, 1856, inclusive.—The War Department reserves to itself the right of rejecting the whole or any of the Tenders.
Royal Engineer's Office, London District,
13th June, 1856.

TO BUILDERS.—Sealed TENDERS for BUILDING the NORTH WING of NEW BARRACKS, to be erected at Devonport; separate Tenders for the Asphalte Work, and also for lighting both wings of the barracks with Gas, including all requisite fittments, will be received at the War Department, Pall-mall, London, on or before THURSDAY, the 31st JULY next, at noon, addressed "To the Secretary to the Board of Ordnance," and endorsed, "Tender for new Barracks, Devonport," "Asphalte Work for new Barracks, Devonport," "Gas Works for new Barracks, Devonport," as the case may be, on the lefthand corner of the envelope. The north wing of the new barracks comprises: The officers' barracks and Mess-buildings, as for barracks and without mid-central building, and canteen, &c. of nine walls, roads, parade, drains, &c. &c.—Plans and specifications, with terms of contract, may be seen, and forms of Tender and Agreement obtained at the Royal Engineer's Office, at Devonport, from the hours of NINE and FOUR o'clock on week days from TUESDAY, the 1st JULY, to TUESDAY, the 29th day of JULY next, both days inclusive.
Royal Engineer's Office, Devonport, 21st June, 1856.

THE BOARD of WORKS for the LEWISHAM DISTRICT.—Notice is hereby given, that a Meeting of this Board will be held at their Offices, in Grove-place, Lewisham, on THURSDAY, the 26th day of JUNE instant, at SIX o'clock in the evening for the purpose of RECEIVING TENDERS for the EXECUTION of the SEWERAGE WORKS, proposed to be constructed in STANSTEAD-LANE, and parts adjacent, within the said district. A specification and plans will be at the Offices of the Board for inspection, between the hours of TEN and FOUR, up to the day and hour fixed to receive the Tenders. Sealed Tenders to be sent in on the printed form to be obtained at the Office, by or before FOUR o'clock in the afternoon of the said 26th of JUNE instant. The Board do not bind themselves to accept the lowest or any Tender.—By order,
OCTAVIUS C. TRYON EAGLETON, Clerk to the Board.
Grove-place, Lewisham, June 19th, 1856.

HAMPSTEAD JUNCTION RAILWAY. TO CONTRACTORS.—The Directors of the Hampstead Junction Railway Company are prepared to receive TENDERS for the CONSTRUCTION of the RAILWAY from Kentish-town to Willesden. Parties desirous of tendering may see the drawings and obtain a statement of the quantities at the Office of Mr. GEORGE BERKLEY, the Engineer of the Company, 24, Great George-street, Westminster, on and after Monday, the 23rd inst. between the hours of TEN and FOUR o'clock. Sealed Tenders, addressed to the Secretary, at Euston Station, to be sent in on or before WEDNESDAY, the 2nd JULY, at TEN o'clock, a.m. The Directors do not bind themselves to accept the lowest Tender.
By order,
GEORGE BERKLEY, Secretary.
Secretary's Office, Euston Station, June 19, 1856.

ST. GEORGE'S SCHOOLS, BATTERSEA. Builders wishing to state TENDERS for the ERECTION of these SCHOOLS, may see the plans and specification, &c. and obtain bills of quantities, at Mr. PEACOCK'S Office, 15, Bloomsbury-square, after MONDAY, JUNE 23. Tenders to be delivered on SATURDAY, JULY 5, before FIVE o'clock.—The Trustees do not pledge themselves to accept the lowest or other Tender.

[*For remainder of Contracts see next page.*]

CONTRACTS.

COMPLETION of ROCHESTER-BRIDGE, REMOVAL of the ANCIENT STRUCTURE and FORMATION of QUAY.—The Wardens and Assistants of Rochester-bridge will be ready on THURSDAY, the 24th day of JULY, 1856, at the Bridge Chamber, in Rochester to receive TENDERS from persons willing to undertake the TAKING DOWN of the present STONE BRIDGE of ten arches across the river Medway there, with its piers, foundations, and abutments; and the removal of the materials, and of all local impediments caused thereby to the navigation of the river; and also for the construction of an embankment or quay, on the Rochester side of the river, in the direction of the castle. The parties tendering are required to state their terms for the whole under the several heads and description. Plans, drawings, and specifications of the intended works may be seen at the Office of the Resident Engineer, in Strood, any working day between the hours of TEN and FOUR, when and where all requisite particulars may be ascertained. Sealed Tenders for the above works are to be delivered at the Bridge Chamber, Rochester, and marked on the outside, "Tender for taking down, &c. Rochester Bridge," on or before the final moment on the Master side of or before WEDNESDAY o'clock at noon, on THURSDAY, the 2nd 24th day of JULY, 1856 after which hour no Tenders will be received, save and except by a letter from one person engaging to become bound in 2,000 or from two persons in 1,000 each, with the party tendering, for the due performance of the contract. The Wardens will not hold themselves bound to accept any Tender unless fully approved by them. By order of the Wardens and Assistants,

GEORGE ENSELL, Bridge Clerk.

Rochester, June 19th, 1856.

HACKNEY UNION.—CONTRACT for the BEST BLUE GUERNSEY GRANITE CHIPPINGS.—The Guardians of the Poor of this Union are ready to receive TENDERS for CONTRACTS for the supply and delivery (each separately) to the Stone Yard belonging to the Union House, Homerton Bridge in the Hackney Marshes, in all the month of OCTOBER next, free of all expenses, at per ton, and to be paid for in the month of OCTOBER, when the whole quantity is delivered. Sealed Tenders, with samples of the stone intended to be supplied, to be sent to the Union House endorsed "Tender for Granite Chippings," on or before TUESDAY the 24th day of JULY next, which will be opened by the Board, the next morning, at TWELVE o'clock at the Union House in Homerton, when the parties tendering, or some competent person from them, must attend to answer when called for. The Board will not bind themselves to accept the lowest or any Tender unless the quality of the sort of stone may be seen at the Union House on application to the master.

CHARLES HORTON PULLEY, Clerk.

MONTGOMERYSHIRE.—WELCHPOOL WATER WORKS.—Persons desirous to CONTRACT with the Local Board of Health for the district of Welchpool, in the county of Montgomery, for the supply of CAST-IRON PIPES and their CASTINGS, may, upon payment of five shillings, obtain a copy of the specification and form of Tender, on application to ALFRED MEREDITH, Solicitor, Welchpool. Any further information may be obtained at the Office of ROBERT DYMOND and SONS, Surveyors, Exeter. The Board do not pledge themselves to accept the lowest or any other Tender, nor any offer which is considered unless made in the form deposited with the specification. The Tenders must be sent in sealed cases, "Sealed Tenders," and delivered on or before the 7th day of JULY, 1856, at the office of ALFRED MEREDITH, Clerk to the Local Board of Health, Welchpool.

MONTGOMERYSHIRE.—WELCHPOOL LOCAL BOARD of HEALTH.—Persons desirous to CONTRACT with the Local Board of Health for the district of Welchpool, in the county of Montgomery, for the supply of STONE-WARE SEWER PIPES and other articles, may, upon payment of five shillings, obtain a copy of the specification and form of Tender on application to ALFRED MEREDITH, Solicitor, Welchpool. Any further information may be obtained at the Office of ROBERT DYMOND and SONS, Surveyors, Exeter. The Board do not pledge themselves to accept the lowest or any other Tender, nor any offer which is considered unless made in the form deposited with the specification. The Tenders must be sent in sealed cases, "Sealed Tenders," and delivered on or before the 7th day of JULY, 1856, at the office of ALFRED MEREDITH, Clerk to the Local Board of Health, Welchpool.

BOARD of WORKS, WHITECHAPEL DISTRICT.—Notice is hereby given, that a Meeting of this Board will be held on MONDAY, the 23rd day of JUNE instant, at TEN o'clock in the forenoon, at the Board Room, No. 258, Great Alie-street, Whitechapel, to receive TENDERS for CLEANSING the STREETS and GULLIES, &c. and for REMOVING the DUST and other REFUSE from within the district, for the term of one year, to commence on the 1st day of JULY next. Persons disposed to contract may obtain printed forms at the Office of the Board.—All Tenders must be delivered at the Office of the Board before FOUR o'clock in the afternoon of the day of meeting, and any Tender which is not upon the printed forms prepared by the Board, and also signed by the person or persons Tendering, will be rejected. The Board, however, do not bind themselves to accept the lowest or any Tender

ALFRED TURNER, Clerk.

15, Great Alie-street, Whitechapel, June 13, 1856.

ROMSEY, HAMPSHIRE.—To BUILDERS and OTHERS. The Burial Board of the Parishes of Romsey Infra, and Romsey Extra are desirous of receiving TENDERS for building, on their new burial ground TWO CHAPELS and a LODGE, and also for constructing the Boundary Walls with Entrance Gates, according to plans and drawings prepared for the purpose by Mr. J. WEBB, of No. 60 King-street, Whitehall, London, the architect, to whom application may be made. The plans, drawings, and specification may be seen at my Office in Romsey, between the hours of TEN A.M and FIVE P.M. inclusive, and from the 16th of JUNE instant, until the 5th of JULY next; and the Board will not object to receive Tenders from the separate trades, or for the whole or any part of the works, but they do not pledge themselves to accept the lowest Tender, or the lowest Tender. Sealed Tenders are to be forwarded to me before FIVE o'clock in the afternoon of TUESDAY, the 8th of JULY next, marked, "Tender for Cemetery," and the due performance of the works to be prepared at the expense of the contractor) will be required.

C. L. LORDAN, Clerk to the Board.

Romsey, June 14, 1856.

NEW CONGREGATIONAL CHURCH and SCHOOLS, DORKING.—TO BUILDERS. Parties willing to CONTRACT for the ERECTION of the above Buildings may see the plans, elevations, and specifications at the ESTATE OFFICE, Deepdene, Dorking, and at the Office of M. DEVENISH, Esq. Dorchester.—The Tenders to be delivered sealed, and directed to the Building Committee, not later than FRIDAY, the 27th instant, at the Estate Office, Deepdene, Dorking. Tender will not necessarily be accepted. Information, and bills of quantities can be obtained on application to Messrs. POULTON and WOODMAN, Architects, Grey Friars-road, Reading.

ROYAL NORTH LINCOLN MILITIA STOREHOUSE.—To BUILDERS, BRICKLAYERS, CARPENTERS, and OTHERS.—Persons wishing to CONTRACT with the Lieutenancy of the county of Lincoln, for the several WORKS required to be done in the ERECTION of a STOREHOUSE at Lincoln, for the Royal North Lincoln Regiment of Militia, are desired to send their sealed proposals to Mr. EDWARD [illegible], Architect, [illegible] Lincoln, on or before MONDAY, the 30th instant, by whom the Contract will be signed, and to whom the Castle of Lincoln, on and after MONDAY, the 30th instant, be given the required Plans, Specifications, and Forms of Tender for the said Stores; and Tenders must be delivered on the 2nd day of JULY next at the Castle of Lincoln, which will be holden at the County Hall on the following FRIDAY. The Magistrates will not bind themselves to accept the lowest or any Tender, and they will require satisfactory [illegible] for the due performance of the works. By order,

FREDK. BURTON, Clerk of Gaol Sessions.

Lincoln, June 16, 1856.

CONTRACTS.

ST. MARYLEBONE, JUNE 14, 1856.—CONTRACTS for the HIRE of HORSES and ONE-HORSE CARTS.—Notice is hereby given, that the Vestrymen of the parish of St. Marylebone, in the County of Middlesex, will meet in the Board-room of the Court-house of the said parish, on SATURDAY the 28th day of JUNE, 1856, at ELEVEN o'clock in the forenoon, to receive TENDERS from persons willing to CONTRACT for the SUPPLY of HORSES and ONE-HORSE CARTS from the said 28th day of JUNE until the 25th day of MARCH, 1857.—Further particulars may be known and forms of Tender procured, from the Surveyor, Mr. ROBERT SCACE, at his daily attendance at the Court-house, from TWELVE till ONE o'clock; but no Tender will be received unless the same be delivered sealed up, before ELEVEN o'clock in the forenoon, on the said 28th day of JUNE, and no Tender will be received after the specified time. The Vestry do not pledge themselves to accept the lowest or any of the Tenders. The contractor to pay three guineas as the expenses of the Board and contract. The Vestry will require the parties tendering, or some person on their behalf, to be in attendance at the time of opening the Tenders.

By order,

W. E. GREENWELL, Vestry Clerk.

CHESTERFIELD, TAPTON, and CALOW CEMETERY.—To BUILDERS, CONTRACTORS, and OTHERS.—The BURIAL BOARD for the Parishes of Chesterfield, Tapton, and Calow, in the County of Derby, are prepared to receive TENDERS for the Erection of Chapels, Lodge, Entrance Gates, Fence Walls and Fencing, &c. at Spital, near Chesterfield. The Plans, Drawings, and Specifications can be seen, and all information obtained at the Offices of the Architects, Messrs. BIDLAKE and LOVATT, Market-place, Wednesbury, and at the Offices of Mr. F. C. GILLETT, Market-place, Chesterfield, between the hours of TEN a.m. and FOUR p.m. from SATURDAY, the 14th inst. to JULY 1st, and sealed Tenders addressed to the Clerk to the Board, sealed up, and endorsed "Tenders for Cemetery Buildings, Chesterfield," on or before the 22nd day of JULY next, at TWELVE o'clock at Noon. The Board do not, however, bind themselves to accept the lowest or any Tender.—By order,

ROBERT WALLER, Clerk to the Board.

Chesterfield, 11th June, 1856.

TO CONTRACTORS, GARDENERS, and OTHERS.—The Burial Board for the Parishes of Chesterfield, Tapton, and Calow, are also prepared to receive TENDERS for LEVELLING, LAYING OUT, PLANTING, and MAKING PATHS and ROADWAYS through the said proposed new Cemetery. The plans, drawings, and specifications can be seen, and all information obtained, at the Offices of Mr. F. C. GILLETT, Market-place, Chesterfield; or at the Offices of Messrs. BIDLAKE and LOVATT, Architects, Wednesbury, between the hours of TEN a.m. and FOUR p.m. from SATURDAY, the 14th inst. to TUESDAY, 1st JULY. Drawings and Tenders are to be sent to the Clerk to the Board, sealed up, and endorsed "Tenders for Laying out Cemetery, Chesterfield," on or before the 22nd day of JULY next at TWELVE o'clock at noon. The Board do not bind themselves to accept the lowest or any Tender.—By order,

ROBERT WALLER, Clerk to the Board.

Chesterfield, 11th June, 1856.

DORCHESTER LOCAL BOARD of HEALTH (SEWERAGE.—CONTRACTS A and B.—The Town Council of Dorchester, acting as the Local Board of Health, are prepared to receive TENDERS for the following Contracts:—

CONTRACT A.—For the supply of Iron Drain-pipes, Fire-brick Bricks, Stoneware Pipes, and Agricultural Tiles intended for the construction of six and a half miles of public sewers within their district.

CONTRACT B.—For Excavating the Ground, and Laying and Jointing a length of about six and a half miles of Public Sewers, of such quantity of various sizes as may be required, in trenches to be [illegible] and the remainder with stoneware pipes.

Plans, sections, and specifications will be ready for inspection at the Offices of the Town Clerk, Dorchester, and at the Offices of Mr. WHITEHEAD, Engineer to the Council, on and after the 10th JUNE instant. A duplicate copy of the former specification and form of Tender may be had on the receipt of 10s 6d. by post-office order, payable to Mr. ARTHUR WHITEHEAD, 6, Dix-fields, Exeter, and a duplicate copy of the latter on payment of 5s. The Tenders must be delivered at the Town Clerk's Offices, Dorchester, on or before the 19th JULY next. The Council do not pledge themselves to accept the lowest or any Tender.

Dated June 2nd, 1856.

G. SYMONDS, Town Clerk.

DORCHESTER LOCAL BOARD of HEALTH.—WATERWORKS, CONTRACT, No. 4.—The Town Council of Dorchester, acting as the Local Board of Health, are prepared to receive TENDERS from parties willing to undertake the erection of a HIGH-PRESSURE PUMPING ENGINE, and the necessary pumps and machinery for raising water for the supply of their district. The specification may be inspected on and after 20th instant, at the Offices of the Town Clerk, Dorchester; or at the Offices of Mr. WHITEHEAD, Engineer to the Council, 4, Dix-fields, Exeter. A duplicate copy of the specification and form of Tender, may be had on the receipt of 20s. by post-office order, payable to Mr. ARTHUR WHITEHEAD. The Tenders must be delivered at the Town Clerk's Offices, Dorchester, on or before the 19th JULY next. The Council do not pledge themselves to accept the lowest or any Tender.

Dated June 2, 1856.

G. SYMONDS, Town Clerk.

DORCHESTER LOCAL BOARD of HEALTH.—WATERWORKS, CONTRACT, No. 5.—The Town Council of Dorchester, acting as the Local Board of Health, are prepared to receive TENDERS for supplying and constructing CAST-IRON PIPES, and for LAYING the ROUND, and LAYING the Ends of IRON MAINS, for the water supply of their district. The specification may be inspected on and after JUNE 20th instant, at the Offices of the Town Clerk, Dorchester; or at the Offices of Mr. WHITEHEAD, Engineer to the Council, 4, Dix-fields, Exeter. A duplicate copy of the specification and form of Tender, may be had on payment of 5s. The Tenders must be delivered at the Town Clerk's Offices, Dorchester, on or before the 5th JULY next.—The Council do not pledge themselves to accept the lowest or any Tender.

G. SYMONDS, Town Clerk.

Dated June 2, 1856.

THE LUTON LOCAL BOARD of HEALTH are prepared to receive TENDERS for BUILDING an INTERCEPTING SEWER and other DRAINS connected therewith, and for ERECTING the TANKS, ENGINE-HOUSE, and other WORKS required for deodorizing and precipitating the sewage of the township, according to the drawings and specification which may be seen at the Surveyor's Office, after Monday, the 16th inst and printed copies of the specification, conditions, bill of quantities, and form of Tender may be had on payment of 10s 6d. each, by applying to Mr. T. L. EVANS, C.E., as above. Tenders, sealed, addressed to the Chairman, endorsed "Tender for Sewerage Works," to be delivered at the Office, before SIX o'clock on TUESDAY, the 15th day of JULY.

Dated June 11th, 1856.

GEORGE BAILEY, Clerk.

WELLINGBOROUGH LOCAL BOARD of HEALTH.—The Local Board of Health for the District of Wellingborough, in the County of Northampton, hereby give notice, that they are prepared to receive TENDERS from parties willing to CONTRACT for [illegible] STONEWARE PIPES, Bends, and Junctions.

CONTRACT No. 1.—For [illegible] and Laying Stoneware Pipes, and Constructing Brick Sewers.

Specifications and drawings may be seen at the Offices of the Clerk to the Board, and [illegible] may be obtained at the Surveyor's Office.—Sealed Tenders to be delivered to me on or before MONDAY, the 23rd of JUNE, 1856. The Board do not bind themselves to accept the lowest Tender.

By order of the Board,

Wellingborough, June 11, 1856. THOMAS COOK, Clerk.

CONTRACTS.

LONDON and NORTH-WESTERN RAILWAY.—To CONTRACTORS and BUILDERS.—The Directors are desirous of receiving TENDERS for the ENLARGEMENT of the RAILWAY CLEARING-HOUSE. Parties desirous of TENDERING are requested to attend at the Engineer's Office, at this station, between the hours of TEN and FOUR, on WEDNESDAY, the 25th inst. when the drawings and specifications may be inspected. Tenders, addressed to the Secretary, are to be delivered not later than TEN o'clock on WEDNESDAY, the 9th JULY.

CHARLES E. STEWART, Secretary.

Secretary's Office, Euston Station, 18th June, 1856.

TO BUILDERS and OTHERS.—The Guardians of the Poor of the parish of Saint George the Martyr, Southwark, will meet in the Board-room of their Workhouse, situate in Mint-street, Southwark, on THURSDAY, the 3rd day of JULY next, at THREE o'clock in the afternoon, precisely, to receive TENDERS for the ERECTION of INFANTS' SCHOOLS at Mitcham, in Surrey. The drawings and specifications may be seen, and the quantities obtained, at the Office of Mr HENRY JARVIS (the Architect), 29, Tenth-square, Southwark. Sealed Tenders must be sent to me at my Office, before the 3rd JULY next. Security will be required for the due performance of the Contract, and the Guardians do not bind themselves to accept the lowest Tender.

JOHN HENRY FITCH, Clerk.

17, Union-street, Southwark, June 19, 1856.

TO BUILDERS.—PAVEMENT CHAPEL, New North-road Hoxton, ALTERATION and ENLARGEMENT.—The Building Committee is willing to receive TENDERS for the WORKS, which are intended to be commenced as soon as possible. The plans and specification can be seen, and the quantities obtained, at the office of Mr. SPAULE, Architect, 29, Finsbury-pavement, on or before MONDAY, 30th JUNE. The Committee will not bind themselves to accept the lowest or any Tender, unless satisfactory.

TO SEWER CONTRACTORS and OTHERS.—The Sewer Committee of the Vestry of Saint Mary, Newington, will meet at the Vestry-room of the Parish Church, on FRIDAY, the 27th inst. at SEVEN o'clock in the evening, to receive TENDERS for the EXECUTION of JOBBING and MEASURED WORKS in connection with the DRAINS and SEWERS in the parish. Printed forms of Tender can be obtained at the Office of Mr. HENRY JARVIS, the Surveyor of Sewers, 29, Trinity-square, Newington, on payment of ten shillings, which money will be returned to the parties tendering who in the Tenders accepted. No other form of Tender will be received. Sureties will be required for the due performance of the Contract, and the Committee do not bind themselves to accept the lowest or any other Tender.

H. and F. CHESTER, Joint Clerks to the Vestry,
6th June, 1856. 1, Church-row, Newington Butts.

TO SEWER CONTRACTORS and OTHERS.—The Sewer Committee of the Vestry of Saint Mary, Newington, at the VESTRY-ROOM, of the Parish Church, on FRIDAY, the 27th inst. at SEVEN o'clock in the evening, to receive TENDERS for CLEANSING and CASTING the TOP OPEN JOINTS, and their work connected therewith, in the Trinity district of the parish.—The plan specification and conditions can be seen at the office of Mr HENRY JARVIS, the Surveyor of Sewers, at 29, Trinity-square, Newington. Sureties will be required for the due performance of the Contract, and the Committee do not bind themselves to accept the lowest or any other Tender.

H. and F. CHESTER, Joint Clerks to the Vestry,
June 6 1856. 1, Church-row, Newington Butts.

THE CONSERVATIVE LAND SOCIETY.

TRUSTEES.

Viscount Ranelagh.
Right Hon. R. A. C. N. Hamilton, M.P.
Hon. Col. Lowther, M.P.
J. C. Colvile, Esq., M.P.

To ROAD CONTRACTORS, &c.—The Executive Committee are prepared to receive TENDERS for CONSTRUCTING the ROADS, DRAINAGE, and FENCING, on the MALDON ESTATE, Essex. The drawings and specification may be seen at the Offices of Mr. HERBERT CODD, Solicitor, Maldon; or of the Surveyor, Mr. GEORGE MORGAN, 23, Norfolk-street, Strand, London, on and after THURSDAY, 19th JUNE, inst., between the hours of TEN and TWO. Tenders are to be delivered on or before TWELVE o'clock, on FRIDAY, JULY 4th, to the Surveyor, at his Offices, and endorsed "Tenders for Roads, &c. Maldon Estate." The Executive Committee do not bind themselves to accept the lowest or any Tender.

CHARLES LEWIS GRUNEISEN,
23, Norfolk-street, Strand, London.

TO BUILDERS.—Persons desirous of CONTRACTING for the ERECTION of a CORN EXCHANGE at St. Albans, may inspect the plans and specifications at the Offices of THOMAS W. BLAGG, Esq. the Town Clerk, and at my Offices, Prior's-gate, Grimsthorpe, on the 1st day of JULY next, on which day the Tenders are to be sent in.

JAMES MURRAY, Architect.

Coventry, June 5th, 1856.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc Tube, and Copper Wire. Gas Fittings, Brackets, and Lamps of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Corcopeplex Rings and Lacquered Case Tube for Picture Rods, Desk Rails, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. &c.

RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

JAMES BILLINGE, Manufacturer of all kinds of Lancashire Wrought-iron Hinges and Locks, ASHTON, near Wigan.

IRON CHURCHES, STORES, &c.—For SALE, Substantial Corrugated Iron Stores, Churches, Dwelling-houses and every description of Buildings, adapted to all climates. Iron Roofs constructed for all parts of the world. An Iron Church with sittings for 750 people, for hire or sale.—To view and for further particulars apply to SAMUEL HEMMING, Cliff House Works, Bow, London.

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be efficiently warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus, and to be seen in extensive operation at their Premises, King's-road, Chelsea.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 55, High Holborn.

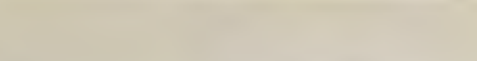
TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	2¼	7s. 0d.
15	1½	7s. 6d.
15	1¾	8s. 0d.
15	2	8s. 6d.
15	2½	9s. 6d.



THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11½ inches, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming REVERSED CLAWS, which are so bent, that a direct end grain of the iron is presented longitudinally, and which become, when built into the brick-work, embedded in the structure, by which means a COMPLETE and PERFECT DETAIL TIE throughout the whole building is obtained.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.

London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

FIRE-PROOF CONSTRUCTION.—

FOX and BARRETT'S PATENT.

This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

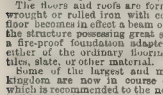
The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

Further information may be obtained of the Proprietor of the patent,—Mr. BARRETT, 12, York-buildings, Adelphi.

KIMBERLEY'S NEW PATENT FLOORING CRAMP



continues to receive the patronage one and all, of every leading Builder Engineer, and Architect, not only in England, but throughout the world. Its simplicity, power, and economy still remain unquestionable, even by the side of its most important rivals, and the steady, annual increase in its sale, is the best proof of it. It is useful in many ways as a cramp, and unlimited evidence can be given that it is a most valuable tool, which no Builder should be without.

London Agents—Messrs. THOMAS PUGH & CO. Wholesale Ironmongers, 15 King-street, Snow-hill, London.

LOSH, WILSON, and BELL,

NEWCASTLE-ON-TYNE.

Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and STEWART'S PATENT CAST-IRON SASH and WATER PIPES Office, No 7, Bise-lane, London.

CLARK and HUNT'S IRONMONGERY,

STOVE, and METAL WAREHOUSE, 159, Shoreditch. A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler

30	32	34	36-inch.
28s.	30s.	32s.	34s.

Best Self-acting Ranges with Oven and Back Boiler, Bright Wrought Bars—

34	36	38	42-inch
54s.	56s.	58s.	60s.

Strong Elliptic Stoves with Extra Back and Solid Bars, per in. 2½d.

Register Stoves, with Solid Bars, per inch, 3d.

Improved New Pattern Circular Check Register, with strong Bars and Trivets, 5d. per inch.

Best Solar ditto, with Fine Brick Back, per inch, 16d.

Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2	2½	3 inch.
	10d.	1s. 1d.	1s. 3d. per yard.

Cast Gutters—4 inch, 8d. per yard.

O G Gutters	4	4½ inch.
	1s.	1s. 2d. per yard.

	2	3	4	5	6
Patent Line	3s. 6d.	4s.	5s.	7s.	9s. per cwt.

6-inch Rd Ward Mortice, with Best Furniture and Patent Spindles, 2s. 3d. each. Light Elliptic and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 3s. 6d. each.

Brick Moulds kept in stock. Any size made to order.

Best Cut Clasp and Rose Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 in.
16s. 6d.	16s. 6d.	15s. 6d.	13s.	14s. per cwt.

Best Sheet Cut Floor Brads..... 13s. per cwt.

Best Cut Lath Nails..... 16s. "

LIGHTNING CONDUCTORS.—

R. S. NEWALL and CO Patentees of the Copper Rope Lightning Conductor, supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.

R. S. NEWALL and CO'S Patent Copper Rope Conductor is being applied by architects, engineers, and scientific men in all parts of the world.

COPPER and IRON CORD for WINDOW SASH-LINES.

OFFICES, Gateshead-on-Tyne.
149, Strand, London.
67, Hyde park-street, Glasgow.
27, Dale-street, Manchester.

A PRIZE MEDAL for SUPERIOR LOCKS

was awarded to J. H. BOODBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. 6s. 6d. each.

J. H. BOODBYER (late STUBCH and BOODBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

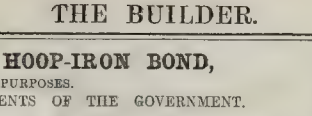
CHUBB'S LOCKS, with all the recent improvements; STRONG FIRE-PROOF SAFES, CASH and DEED BOXES. Complete lists of sizes and prices may be had on application to

CHUBB and SON, 57, St. Paul's-churchyard, London; 28, Lord-street, Liverpool; 16, Market street, Manchester; and Hornsley-fields, Wolverhampton.

SAVING IN GAS.—

D. HULETT, INVENTOR and PATENTEE. The Mercurial Gas Regulator is the only efficient instrument for ensuring wholesome and uniform lighting, equalizing the pressure, and preventing any irregularity in the light of the flame.—D. HULETT and CO. 55, High Holborn, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

MACHINERY for SAWING, PLANING MOULDING, &c.



SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines for home and foreign use.

WOOD-CUTTING MACHINERY,

JOHN M'DOWALL and SONS
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,
MANUFACTURERS of VERTICAL SAW-FRAMES
(driven by strap),

For cutting balks of timber, from 5 feet on the side down to the smallest deal frame

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached, circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross cut sawing machines, for heavy timber; planing machines, for working boards from a ¼ of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power mortising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; sash-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 30 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evinced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London.

CORONAS, STANDARDS, PENDANTS, &c.

First-class Prize Medal, Paris Exhibition, 1855.

Specimens at the Hardware Court, Crystal Palace, Sydenham. Illustrated Price-cat. (gives post-free on application.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show—every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price-list, free—55 and 56, High Holborn.

AUSTIN'S IMPERIAL

PATENT SASH and BLIND LINE can be obtained of all ROPEMAKERS, IRONMONGERS, FACTORS AND WHOLESALE HOUSES, IN TOWN OR COUNTRY. Established 1774.

CANNON IRON FOUNDRY, 80, Goswell

street, St. Luke's. JONES and BLAXTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wrecl Plates, &c.

BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

FOUNDRY AND IRON WORKS,

5, DRURY-LANE, and CHARLES-STREET, DRURY-LANE.
GLOVER, BROS.,

solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION either structural or ornamental.

Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathes, and Steam-engines; Range and Hot-plate Metal. An improved Soot Door, adapted for internal work.

A large stock of Rain-water Pipes, Plain and O G Gutters, Air-bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings, Hurdles, &c.

Plain and Ornamental Vases 20 per cent. cheaper than Terra-cotta.

Estimates given for Iron Buildings, Wrought-iron Roofing, Fire-houses, Staircases, Wrought-iron Girders, Fireproof Doors, Book safes and Strong Rooms, Tanks and Boilers, and every description of iron work to specification, and the work executed with every attention to quality and despatch.

GLOVERS' IRONWORKS,
168, DRURY-LANE, and CHARLES-STREET.

IRON FOUNDRY,

HARROW-STREET, LANT-STREET, SOUTHWARK,
W. H. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Newel and Railing Bars, Panels, Iron Copings, Bed Plates, Tank Plates, Area Gratings, Sash Weights, Fly and other Wheels, Rafters, Pinions, Dismes and Lathe Castings, Force Backs, Furnace Bars, Kilns, Pans, and other castings, to patterns or drawings.

212° MILNER'S HOLDFAST and FIRE-

RESISTING SAFES non-conducting and vaporizing with all the improvements, under their Quadruple patents of 1851, 54 and 1856, including their Gunpowder Proof Solid Lock and Door without which no safe is secure

THE STRONGEST, BEST, AND CHEAPEST SAFEGUARDS EXTANT.

MILNER'S PHŒNIX and SAFE-WORKS, LIVERPOOL, the most complete and extensive in the world. Show-rooms, 6 and 8, Lord street, Liverpool. London Depôt, 47A, Moorgate-street, City, (Illustrated Catalogue sent free.)

Sold also by HOBBS, ASHLEY, and CO. 97, Cheapside.

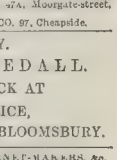
IRONMONGERY.

PFEIL AND STEDALL.

THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of Ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs, 2½d. per inch, and upwards.

Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 3l. 16s.; 3 ft. 6 in., 3l. 19s.; 4 ft., 3l. 15s.

4-feet Cottage Ranges, with ovens and back boilers, 32s. each.

3-feet self-acting ditto, ditto, 34s. each

Air Bricks, 4s. per doz.

Best Town Glue, 8d. Ditto, Scotch, 6d. per cwt.

Best Fine Cut Clasp and Rose.

1½	1¾	2	2½	3-in. & larger.
16s. 6d.	16s. 6d.	15s. 6d.	15s. 6d.	14s. per cwt.

And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

COLLINGE'S PATENT HINGES.—

Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, conchouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

JOHN TANN'S new patent RELIANCE

LOCK and FIREPROOF SAFES form the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. Waterlow, Birchin-lane; at the Warehouse, 30, WALBROOK, CITY, and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and party-walls.

ORMOLU STOVES. — KEITH and

McGEORGE, solicit the attention of Builders, &c. to their STOCK of STOVES, a large assortment always on hand, cheaper than any wholesale house in London, for cash. Bright and Ormolu Registers, with two sets of bars, first quality, from 4l. to be had only at KEITH and McGEORGE'S, Ironmongers and Kitchen Fitters, 33, Piccadilly, opposite St. James's Church. Established 1817.

REGISTER STOVES, with PATENTED

IMPROVEMENTS. DEANE, DRAY, and CO. invite the attention of purchasers to their Stock of STOVES for drawing and dining rooms; also, a large assortment of PATTERNS, suitable for sitting-rooms offices, bed-rooms, &c. In Fenders and Fire-Irons, DEANE, DRAY, and CO are constantly introducing every novelty at the lowest prices. DEANE, DRAY, and CO. Stove, Range, and General Ironmongery Warehouse, London-bridge.—Established, A.D. 1700.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY,

PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK,

Sole Manufacturers of Delbruck's Patent Autogen as Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER,

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with all SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

BATHS and HOT-WATER APPARATUS.
J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fixing given.—J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most effectual yet invented, is made by T. SMITH, of 14, Queen street, Oxford-street, near Argyll-street, where a working model can be seen or will be sent for inspection on the shortest notice.
N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

WANTED, some Second-hand GAS or other IRON PIPES, from 8 to 12 inches diameter, for a drain. A letter, stating price and quantity, addressed to T. B. Post-office, Hampton-wick, Kingston, will be attended to.

MALLET'S PATENT BUCKLED PLATES
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS,
No. 3, Mansion-house-place, London, and No. 6, Berkley-street, Birmingham
For Plan, Section, and Description, see "The Builder." May 17.

TUPPER and CARR,
Patent Galvanized and Ungalvanized
CORRUGATED IRON MANUFACTURERS,
IRON ROOF, SHED, AND STORE BUILDERS,
Electric Telegraph and Wire Fencing Contractors.
Works—LIMEHOUSE and BIRMINGHAM.
Offices—3, MANSION HOUSE-PLACE, LONDON.
Iron of every description galvanized.

JOHN HENDERSON PORTER,
ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about	18 oz.	per foot super.
12 "	20	"
13 "	23	"
14 "	26	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

SKAIFE'S GALVANIZING WORKS,
Commercial-road, Limehouse, London.
Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where Iron not liable to rust is required.
Patent Galvanized Iron supplied in every form.
Sheets plain and corrugated.—Roofs fixed complete.
J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.
An Allowance to the Trade.

JOHN WALKER,
Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor.
IRON MERCHANT, &c.
Offices and Works—Mill-wall, Poplar, London.

A. MOREWOOD and CO. (late Morewood and Rogers),
Dowgate Dock, Upper Thames street, London, and Baskerville Works, Birmingham.
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Cast and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).
WORKS' GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

CONTRACTORS requiring CASTINGS, WROUGHT-IRON GIRDERS, &c. with despatch, and punctuality, MATTHEW T. SHAW has such arrangements that deliveries are made in a few days.—Contractor for Plant and Stores of every description.—64, CANNON-STREET.

TO CONTRACTORS AND BUILDERS.
WROUGHT-IRON GIRDERS for BRIDGES and BUILDINGS, manufactured and guaranteed as to strength
CAST-IRON GIRDERS, for BRIDGES and BUILDINGS.
Castings of every description
ROLLED WROUGHT-IRON FLITCHES for trussing between timber.
Orders executed in three days.
STORES, BOLTS & NUTS, SPIKES, RIVETS, CUT NAILS, WROUGHT ditto, SCREWS, BOND HOOPS, CHAIN, &c.

CONTRACTORS' PLANT, RAILS, EARTH WAGGONS, and IRON WORK, for Wood Waggons, &c.
MATTHEW T. SHAW,
64, CANNON-STREET (late with C. J. Mare and Co.

FOUNDRY.—TO BE LET, a small IRON and BRASS FOUNDRY in the country, with good local trade. Any practical man will find this worthy of notice. No stock. Fixtures, &c. at valuation. Rent moderate.—Apply by letter to A. B. 100, Minories.

PATENT HAND-RAILS, without heading joints, applicable to all staircases, the grain of the wood being continued round the wreathed or otherwise circular parts, and patronised by the most eminent architects in the kingdom.
N.B.—A Portable Pulpit for sale, with hand-rails, &c. complete, convertible into a circular stair, to economise space in a shop, &c.
JOHN MELVILLE, 64, John street, Fitzroy-square, London.

ESTABLISHED 1817.
WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSES, 19, Horseferry-road, and 1, New Peter-street, Westminster.
GREAT REDUCTION IN PRICES.
RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	10½d.	1s. 1d.	1s. 3d.	1s. 7d.	1s. 10d.	2s. 4d. 2s. 8d.
Half-round Gutters	7½d.		9d.		1s.	1s. 3d.
O G Gutters			1s. 0d.	1s. 1d.	1s. 2d.	1s. 4d.
Ditto, with plain clips cast on			1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d
Ditto, with Iron clips ditto			1s. 2d.	1s. 3d.	1s. 5d.	1s. 7d.

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.
Best Cut Clasp Nails.

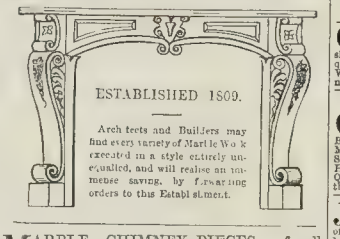
1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails ..... 28s. 6d. "
Best Zinc Slating Nails ..... 40s. "
Best Glues ..... 47s. to 63s. "
A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.
Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

BUILDERS! ARCHITECTS! and MASONS!—MARBLE.—The Italian Marble Company call the particular attention of Builders, Architects, Sculptors, and Masons to their PRESENT low prices, viz :—
Vein, in blocks of ordinary dimensions, 8s. 6d. per foot cube.
Sicilian " " 6s. 6d. "
An inspection of their well-assorted stock is solicited, at "The Depôt," Bridge-wharf, Millbank, adjoining Vauxhall bridge.—Apply to Mr. BAXTER, Wharf Foreman.
WILLIAM W. BONNIN, Secretary.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

SCULPTURED STATUARY MARBLE CHIMNEY-PIECES, in great variety, on view at the Westminster Marble Company's Works, Earl-street, Millbank



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Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

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This Granite is selected for the New Westminster-bridge.

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Insurers claiming returns upon lapsed or cancelled Policies, are requested to bring the Numbers of the Policies under which they claim.
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This Society is established on the tried and approved principle of Mutual Assurance. The funds are accumulated for the exclusive benefit of the Policy-holders, under their own immediate superintendence and control. The profits are divided annually, and applied in reduction of the current premiums. Policy-holders participate in profits after payment of five annual premiums.
The Annual General Meeting was held on the 24th May, 1856, when a highly satisfactory Report of the state of the affairs and progress of the Institution was presented to the Members. During the last three years, upwards of 1,200 new assurances have been effected, yielding an increase of premium income of more than 20,000l. per annum; and although a general high rate of mortality has prevailed among Assured lives during the last two years, it has not been deemed necessary to reduce, in the slightest degree, the allowances previously awarded to the Policy holders.
The Members present at the meeting were fully satisfied with the Report, and resolved unanimously that a reduction of 3½ per Cent. should be made in the current year's Premium payable by all Policy-holders now entitled to participate in the Profits.
Credit is allowed for half the annual Premiums for the first five years.
A. R. IRVINE, Managing Director.
14, Waterloo-place, London.
2nd June, 1856.

SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY. Established 1831.
The Annual Meeting of the above Society was held in Edinburgh on the 6th MAY. The report by the Directors stated that the number of policies issued during the year ending 1st MARCH last, was 634, the sums assured thereby being 230,954; and the annual premiums thereon, 9,104.
The result of the investigation for the triennial division of profits was then announced. The surplus ascertained to have arisen amounted to 181,858, which wholly belongs to the members, but of which one-third (61,276) must, by the laws of the society, be set aside as a reserve for allocation at the next triennial division in 1859.
From the remaining two-thirds a Bonus was declared at the rate of 1l. per cent. per annum, on all policies on which six premiums had been paid and on the sums in the policies, but also on the former vested bonuses.
There was left, in addition to 61,276l. of reserve above stated, a surplus of 13,692l.; together, 74,968l. to go to the next division.
The Invested Funds of the Society amount to £979 361
The Annual Revenue to 164 140
The Existing Assurances to 4,784,840
Copies of the report may be obtained at the Society's Head Office, 26, St. Andrew-square, Edinburgh; at the London Office, 126 Bishopsgate-street Within; and at any of the Agencies.
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E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 115, OXFORD-STREET.

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The Builder.

VOL. XIV.—No. 698.

FOUNTAINS were the order of the day at Sydenham, on Wednesday last, when our gracious Queen was present, to inaugurate the "great waters," in the lower grounds; and fragrant flowers, and fine weather, and flocks of fair ladies, all aided in making the day agreeable, and the sight a gay one. It is necessarily somewhat difficult to describe within reasonable limits the arrangements for a system of water-works, of such magnitude and variety as those at the Crystal Palace: we must endeavour, however, with the aid of our engraving on the next page, which shows the position of all the fountains, to give a correct general idea of the plan on which they are constructed and worked; leaving the pleasanter features of the *fête* to other pens.

The supply of water for ordinary purposes, and for provision against fire, within the Crystal Palace and through the grounds, is comprised in these waterworks. But their principal object is of course the formation of the great system of fountains. Within the Crystal Palace itself are various ornamental fountains, though necessarily of lesser magnitude, as for example the bronze fountains in the basin at the junction of the nave and north transept, of which we gave a representation some time ago, and the crystal fountain, that formed so prominent a feature in the Exhibition of 1851. The others are distributed through the architectural courts.

It will be seen on the plan, that in the ornamental basins on the terrace and below it, there are two distinct series of fountains, the upper series comprising the nine basins adjacent to the main building, and terminating with the large circular basin on the central walk through the gardens; the second series including the first series, and in addition to them the more extensive fountains in the temples, cascades, and two large basins in the lower grounds, which terminate the water supply. The upper series, or ordinary display now daily exhibited, can be worked independently of the others, but when the lower fountains are shown, the whole display is brought into action, and to effect this, it will be seen very elaborate arrangements have been found necessary. In order that these may be understood, let us first describe the arrangement in connection with the fountains of the tanks and upper reservoir, containing the supply of water for the jets, and of the lower reservoirs, where it is collected after being displayed.

The water for supplying the fountains is maintained at three different elevations;—first, in the two high tower-tanks which supply the 250-feet jets in the centres of the lower great basins, and concerning which towers we will speak more at length presently; secondly, in two lower tanks, which contain water for fountains; and for ordinary use in the building, and are situated near its northern extremity. These tanks supply also the high central jets in the upper series, as well as four secondary jets, round each 250 feet jet in the lower grand basins. The supply at the third elevation is contained in the large upper reservoir at the northern end of the building. This reservoir contains about six and a half millions of gallons, and from it the great body of the water displayed in the fountains is drawn.

To raise water from the upper reservoir into the high and low tanks above described, two 30 horse-power pumping-engines are placed near it.

For collecting the water after its display in the fountains there are two reservoirs, namely, one for the upper and one for the second series of fountains. That for the upper series (usually called the intermediate reservoir), is situated at some distance to the north of the central circular basin, and a little below it in elevation. This collects the waste water from the ordinary display of the upper fountains, which is first received into the circular basin, and flows thence into this reservoir.

Four forty-horse-power engines are placed adjoining the intermediate reservoir, which raise or return the waste water from it to the upper reservoir, so as to render it again available for display.

The receiving reservoir for the second series of fountains (which is called the lower reservoir), is situated below the south grand basin, and is of still larger capacity than the upper reservoir, as it would be required to receive all the water contained in the latter and in the high and low tanks, in the event of its being all displayed. The lower reservoir is constructed in the form of an ornamental lake, and the well-known representations of the various extinct animals, and strata illustrative of the science of geology, are placed on its eastern banks. The lower reservoir collects the waste water from the entire system of fountains when in full operation,—the waste being first received into the grand basins, and flowing thence into this reservoir; while to raise or return this waste water from the lower to the upper reservoir, so as to be again available for display, two forty-horse power engines are provided. The water, it will be seen, is thus made to play its part again and again.

An artesian well is sunk in the lower part of the grounds for a water supply, and a small engine is provided for raising the water from this to the lower reservoir. The well consists of a brick shaft 8½ feet in diameter, and 247 feet in depth, whence a boring is sunk to the additional depth of 328 feet; giving a total depth of 575 feet. The strata, we may mention, consist of clay and sand for 360 feet from the surface, and of chalk for the remainder. And now a few words as to the fountains themselves.

The water displayed in the upper terrace fountains is conveyed through pipes to the large circular basin, where it plays a second time in the low network jets round the margin, and in the other low jets through the basin. When the lower great fountains are displayed, all the waste water from the circular basin is similarly conveyed to them to play their jets of low elevation. Thus the water from the terrace fountains is displayed thrice, and that from the circular basin twice, throughout the entire operation.

We have given a view of what is not quite correctly called a water-temple, at the head of the cascade, marked G on the plan.* In this, the water issues from a ring round a ball, upon which stands the figure of Mercury, and from the cupids' mouths thence flowing over the steps of the dome, where it is collected in a cistern formed by the cornice: the bottom of this is perforated, and lets the water fall below in the form of a curtain to the openings. Water also flows from the lions' mouths at the projecting angles of the base. Bordering each side of each cascade is a range of tazzæ, borne by figures of children, and extending nearly to H, where the water falls into the basin below, past the face of an arcade, through which there is a passage-way. Next week we shall give a general view of the grounds, which will convey a clearer idea of the arrangement to those who have not visited the place.

* See p 333.

The magnitude of this system of fountains may be conceived from the circumstance that, when the great waters are in full operation, there are 11,788 jets playing, and that the quantity of water displayed simultaneously in them is about 120,000 gallons per minute.

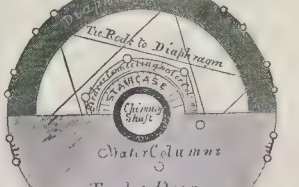
The whole of these works we must here mention were designed by Sir Joseph Paxton; and six contractors were employed under him in their execution, viz.—Messrs. Cochrane and Co.; Simpson and Co.; Easton and Amos; Aird; Cox and Wilson; and Roe. The engineering operations were executed under the superintendence of Mr. Sheilds, the company's resident engineer, and all the architectural portions were designed and superintended by Mr. Stokes.

The water-towers, which now form most prominent features in any view of the Crystal Palace, play an important part in the arrangement, serving various purposes. By their means, in the first place, a supply of water can be raised to such an elevation as to play jets of the enormous height of 250 feet in the large ornamental basins in the lower part of the grounds already referred to. The supply of water thus elevated is contained in a tank placed on the top of the towers, and is also available for extinguishing fires in the main building itself. Pipes communicating with the water-tanks are carried through the building with a number of fire hydrants placed upon them, so that in the event of fire every part of the edifice may be reached by streams of water of immense force. In the more elevated parts of the structure, which the ordinary supplies of water will not reach, this advantage would be peculiarly appreciated. We have already given some particulars of these towers;* but they are such large and costly works that we may be excused for adding the results of more minute inquiries.

A chimney shaft is carried up through the centre of the towers for the heating apparatus employed in the main building, and for the fires of the steam engines, which supply water to the building, and raise it to the top of the towers themselves. Besides serving these purposes, the towers, although somewhat heavy in appearance themselves, improve the architectural effect of the entire design of the Crystal Palace—a point of importance in a building of this character.

The towers are very solidly constructed. They are based, as we have already said, on a bed of cement concrete, and a foundation of brickwork in cement of immense strength is built on the concrete to support the external iron columns which mainly form the structure and carry the water-tank on its top. These columns stand in pairs, 3 feet apart, on the brickwork, each pair being united through their whole length by a solid iron plate or web in the 3-feet space between them. Each pair of

Half Section, showing Diaphragm, &c.

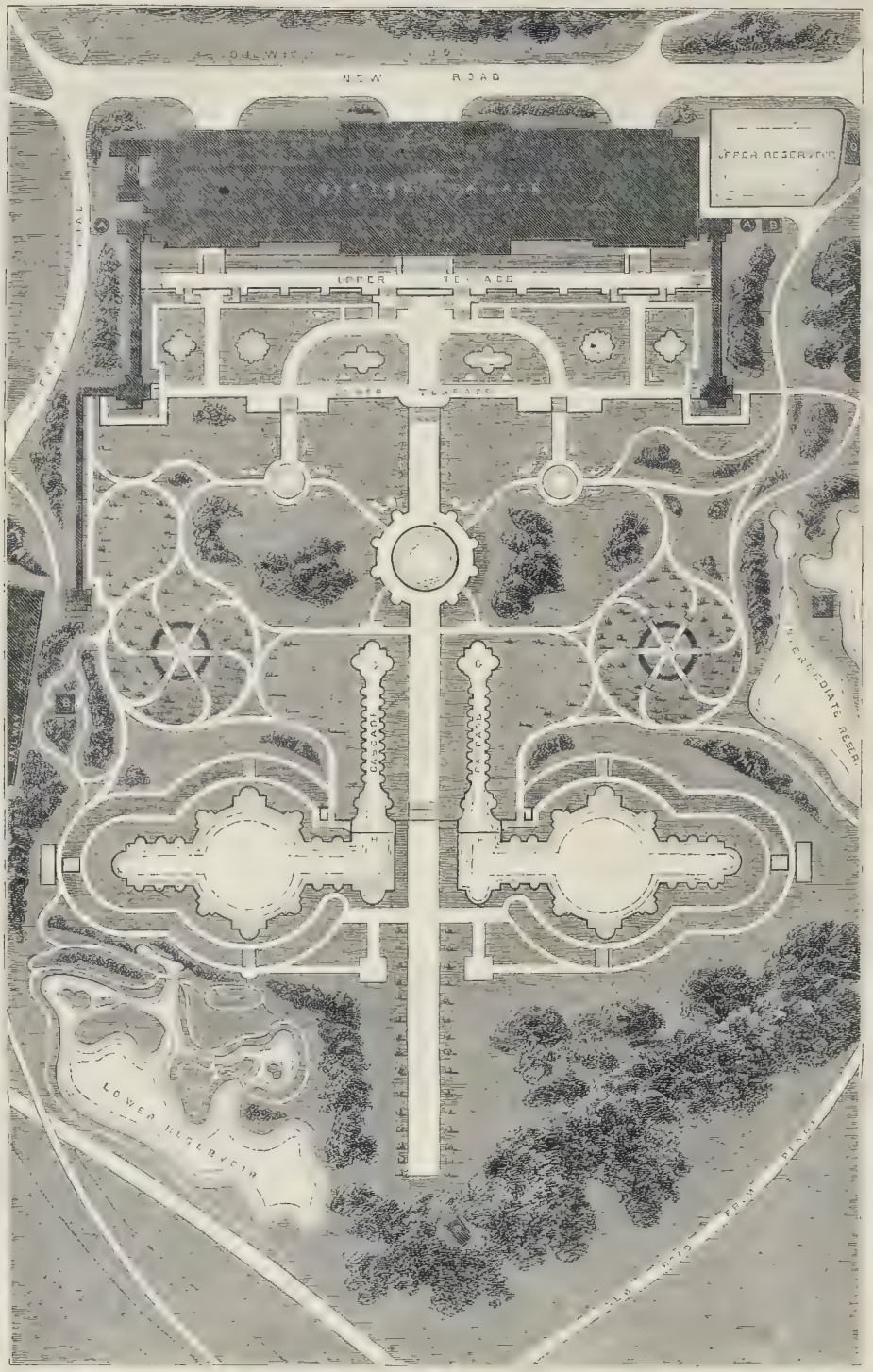


Half Section, showing Floor.

columns and web aids equally to carry the load, and forms, in effect, a single column. There are

* See p 293, ante

CRYSTAL PALACE, SYDENHAM: PLAN OF THE GROUNDS AND WATERWORKS.



AA. Water-towers. BBB [illegible] Waterfall. D. Refreshment. EE. Wings. F. Railway Colonnade. GG. Water. HH. Arcade.

twelve of these compound columns, each finished with a broad bearing plate across the top and bottom, the bottom bearing plate resting on the brick foundation, and the top plate receiving and supporting the underside of the tank. These towers are polygonal in plan. Each compound column presents externally a flat surface; and between them is a second flat surface about double the width of the first. The towers thus present twenty-four faces, which, measuring from the centres of columns, are alternately 4 and 8 feet wide. The diameter of each tower is 47 feet. The annexed horizontal section will serve to explain further their construction.

Vertically, the compound columns are fixed in lengths of 3 and 17 feet alternately, the top length immediately under the tank being 3 feet. Between each compound column is a clear space 7 feet wide. These spaces are occupied partly by iron girders and partly by glazing. The iron girders are fixed between the 3-feet lengths of the columns, and thus form a solid ring of iron 3 feet deep round the towers at each of these intervals. The glazing occupies the spaces between the 17-feet lengths of columns, and there are also strong diagonal tie-rods between the compound columns fixed in these spaces of 7 by 17 feet.

The girders and tie-rods last mentioned thus unite the external surfaces of the towers, rendering them, as it were, a sort of tube. But internal supports are also requisite to stiffen the external surface in the same manner as the floors of a house stiffen the walls. This is effected by fixing internally, at each 20 feet in height, a horizontal diaphragm or ring of plate iron. These rings are 5 feet wide, being 36 feet internal and 46 feet external diameter. Their outside edges are attached to the columns, and their inside edges are strengthened by angle iron, and drawn tight by horizontal tie-rods. The brick chimney-shaft is built in the centre of the rings last referred to, and of the tower. It is 9½ feet external diameter, and a winding staircase round it gives access to the top. A floor and landing of timber are also fixed at every 20 feet in height across the space between the chimney-shaft and external columns. The timber floor is placed at the top, and the iron diaphragm or ring at the bottom, of each 3 feet length of the columns.

The arrangements for the water supply will now be easily understood. Six water columns are erected within each tower round the shaft, rising through the open spaces between the shaft and the iron diaphragms, as well as through the floors. Five of these are connected directly to the bottom of the tank, and they serve to convey the water either upwards from the pumping engines to the tank, or downwards from the tank to the high fountain pipe, or to the pipe which passes through the main building. The sixth water column acts as an overflow pipe to the tank.

The five water columns which convey the supply are connected by outlets at their bases to a horizontal pipe laid round the basement floor of the towers. This pipe is connected at one end with the pumping engines, and at the other with the pipes to the high fountain and the building. The communication of the water supply in either direction is effected by an arrangement of sluice-cocks on the pipes. All the six water columns are erected in 3 feet and 17 feet lengths, corresponding to those of the outside columns, and are connected to each other by girders and tie-rods at each 3-feet length.

These columns, however, carry no portion of the weight of the tanks, as their expansion and contraction from changes of temperature would (from their containing water and being protected from the weather) be so different from that of the outside columns, as to render a similar employment for them inadmissible. The tanks are therefore entirely supported on the external columns. They are circular in plan, having their bearing round the outside circumference. Their bottoms are dome-shaped. They are 47 feet in diameter, and 38 feet in extreme depth, and are capable of containing about 300,000 gallons, or nearly 1,400 tons of water each!

The chimney-shafts are conveyed through openings in the form of a tube, made for them in the tanks. A gallery supported on brackets is carried round the base of each tank, and from this magnificent views of the neighbouring country are obtained. The structure is finished by an ornamental roof, which covers the gallery and the tank. The extreme height of these towers from the ground is 282 feet. The top gallery, which is the highest point of the Crystal Palace buildings made attainable to the public, is at an elevation of 550 feet above the level of high water in the Thames. We have only to add to this description, that there were employed in the construction of these towers about 2,000 tons of iron, besides various other materials, and that in the whole about *thirteen miles* of pipes have been laid, ranging from 36 inches in diameter downwards; a large proportion, perhaps one-half, being above 20 inches.

On Wednesday, when the whole of the waters burst forth simultaneously for the first time, and the sun shone, and the Queen came, and the people cheered, the effect was admirable: it was a scene that will not soon be forgotten by those who were there to see. Schlegel says truly,—"The soul needs a certain amount of intellectual enjoyment, to give it strength adequate for the daily struggle in which it is involved;" and we know of no place where this may be more completely obtained than at the Crystal Palace at Sydenham.

ON THE BRIDGES AND VIADUCTS OF THE PRESENT DAY.*

THE CRUMLIN VIADUCT, &c.

My own professional engagement in the locality enables me to enter more at length into the description of the Crumlin Viaduct, situated on the Newport, Abergavenny, and Hereford Railway Extension, which, with the exception of the Aqueduct of Spoleto and the Portage Timber Viaduct, in the United States, exceeds any other structure of the kind in height. It is a remarkable example of the modern application of iron to such purposes. The dimensions are as follow:—Total height from the bed of the river to the level of the rails, 200 feet; the piers from centre to centre, 150 feet; actual bearing of girder, 148 feet; the total length of viaduct, 600 yards. There are altogether ten spans or openings, but they are unequally divided by a tongue of land on which are placed masonry and earthwork, about 50 yards in length, making in reality, as far as the ironwork is concerned, two separate viaducts. The larger viaduct has seven spans and six piers; the smaller one, three spans and two piers. Excepting the height of the piers from the level of the valley, the two are precisely similar, and it will be necessary only to allude to the larger one. The piers are formed of clusters of cast-iron columns, placed in stages. Each column is 17 feet long by 1 foot in diameter, cast hollow, the thickness of metal, varying from 1 inch to ⅞, diminished within, the same external diameter and form of column being preserved throughout. The number of columns in each stage is fourteen, and they are arranged on plan, in the longer direction, in four rows of three each, with one standing singly at each end of the piers, which gives it a salient angular outline. The width between the columns at the base of the pier measures 13 feet 6 inches in every direction, taken on the square, excepting between the centre rows, where it measures 6 feet throughout the height. The pier gradually diminishes to the top of the columns below the girders, where the dimension 13 feet 6 inches is reduced to 9 feet, and at the external angle columns to 2 feet. The dimensions of the piers at the base are between the centres of the columns 60 feet by 27 feet, and the upper dimension is 30 feet by 18 feet, giving a diminution of 30 feet in one direction, and of 9 feet in the other. To effect this, nearly all the columns are more or less inclined, and the two centre are the only upright ones. The four columns at the corners, forming the square of the piers, lean diagonally, 4 feet 6 inches. The six intermediate columns correspond, but lean each in one direction only. The two single outside columns are most inclined, being 11 feet 6 inches out of the perpendicular, forming a raking brace. The top of each stage of columns is connected by horizontal cast girders, 1 foot deep, with 5-inch flanges, bolted together. There are also horizontal and vertical wrought tie rods. The former are circular, and 2 inches diameter, and the latter flat bars, 4 by ¾. They are tightened with wedges where necessary. The columns are fitted together with socket joints, a projection of half an inch being left on the top of the cap, which fits into the base of the column above. These are held together by four ears cast on the top and bottom, which are fixed with bolts and nuts. The joints of the columns are planed and fitted together with the greatest nicety to ensure a perfect bearing. The base plates upon which the columns stand vary from 3 feet to 5 feet in height, and have a plate 3 feet square resting on the masonry, into which they are joggled, plugged, bolted, and put together with sulphur joints. The number of stages of columns to centre piers, it will be perceived, are ten, without base plates. The upper stages of the columns are connected together at top by stronger horizontal girders than those below. They are finished with A-shaped, or triangular trusses, placed over each row of columns below, upon which the girders rest. It should be mentioned that the foundations for the piers are formed of solid, flat bedded, and jointed masonry: they were generally carried down to the solid rock, and vary from 10 to 3 feet in depth. The largest blocks are placed immediately under the base of the columns, and so arranged as to distribute the weight below as much as possible. The girders are formed of wrought-iron, after Warren's patent. This consists of a stout beam above, and a bottom tie below, with diagonal filling in, the whole being supported by the top beam on the principle of an inverted truss: the mode of execution, however, differs much. The girders at the Crumlin are 150 feet long, and 14 feet 6 inches deep, outside dimensions. The dimension of the top tubular beam is 14½ inches by 9 inches; the average thickness of the plates being, the sides an inch, the top and bottom half an inch. The sides have flanges formed on the edges, which are rivetted to the top and bottom plate. Extra stiffening pieces are carried along the bottom, and likewise the joints and where the bolts cross. The ties at the bottom of the diagonals of the girder are formed of a series of four wrought bars, 6 inches by ⅝-inch average, placed in pairs 3 inches apart in the centre, to admit the diagonals and packing, and showing a 4-inch separation on face; the whole forming a square combination measuring 16 inches by 7 inches: these bars reach from diagonal to diagonal, where they are all four joined with a plate 16 inches deep, and bolted with five ⅞-inch rivets to each. There are eighteen diagonals to each girder, which act as struts and ties until they gradually approach the centre, where they act as both. The diagonals do not cross each other, as is the case in the lattice girder, but are both fixed to the top beam and bottom tie with large bolts 3½ inches diameter; and it is on the care and security with which these parts are connected that the chief strength of the girders depends. The diagonal ties and struts present a different section, the main strut being of a cross shape, measuring 10 inches to each extremity, cut out of ⅝-inch plates, with four 5-inch L angle pieces rivetted. The ties are formed of two flat iron bars 9 inches by ½-inch, which lap the struts, where they are rivetted, top and bottom. The ties near the centre, extending two on each side, are strengthened by smaller pieces of T iron, to enable them to act in some measure in

* See page 328, *ante*.

the double capacity of ties and struts. The part of the lower beam or ties between the four centre strains of diagonals is strengthened by an additional bar 4 inches wide, filling the space between the other bars, and rivetted like them to the junction plates. The whole girder is gradually strengthened by an additional thickness of plates towards the centre, given by a close calculation of the forces required to be resisted. The side plates of the girder and ties diminish from 1 inch in the centre to $\frac{5}{8}$-inch at the ends. Each pair of girders is connected at each of the large bolts or pins with a 5-inch cast-iron hollow bar, with $\frac{1}{2}$-inch thickness of metal. The bolts are passed through the ties, diagonals, and packing pieces, leaving the heads outside, the ends of the pin projecting about an inch: the end is then covered with a cast-iron cap, which is screwed or bolted with a $1\frac{1}{2}$-inch screw into the centre of the pin, to prevent the same from drawing out. This affords a means of connection with the cast-iron bars by corresponding flanges, which are firmly bolted together. The bearing of the girder, by which the whole is sustained, is worthy of particular notice. It is held by the ends of the *upper beam only*, the lower one dropping in a state of suspension: the weight thus entirely rests on the last pin, which passes through the outside diagonal tie. The top of the angular termination of the piers is furnished with a casting 3 feet 6 long and 5 inches wide, on the upper surface of which is a flat sinking $\frac{3}{4}$-inch deep. Under the ends of the upper beam are placed cast-iron blocks, hollowed out on the upper surface to receive half the diameter of the pin, and of sufficient depth to raise the bottom flanges of the beam clear of the sliding groove. This block has perfect freedom of play backwards and forwards, to suit the expansion and contraction of the girders, as affected by the temperature of the atmosphere, or the superincumbent weight: for this purpose a space of 9 inches is likewise left clear between the ends of the beams. The ordinary expansion and contraction in summer, between midday and midnight, does not exceed $\frac{1}{4}$ of an inch. The girders have been tested with a weight of 250 tons each, which produced a very slight deflection; and were the viaduct loaded with locomotives, this would be seven or eight times as much as could be put upon them. The struts have also been tested with a crushing weight of 250 tons. The roadway is formed of 6-inch planking, bolted to the beams, and it is intended that the rails should be laid on strong longitudinal framed sleepers. An ornamental cast-iron balustrade is fixed on each side of the roadway. The whole viaduct is not straight on the plan, the approaches to the larger one being curved, to which the last spans of the viaduct accommodate themselves by a slight inclination southwards at the extremities. This viaduct has been described as one of the engineering wonders of the day; and it may be mentioned that another, projected by the same engineers, is of much greater height. Messrs. Liddell and Gordon, engineers; Mr. M. W. Carr, resident engineer; Messrs. Kennard, contractors.

The Sitter Viaduct, on the St. Gall and Appenzel Railway, an account of the completion of which has just appeared,* is one of similar construction, except that the girders are lattice. It is close upon the same height, and has four spans, the two centre being 138 feet, and the two side ones 130 feet; but, on the whole, is a work of less magnitude than the Crumlin.

The Newark Dyke Bridge, crosses in one span a branch of the Trent at an angle so oblique as to render it necessary that the girder should be 240 feet 6 inches long, whilst the width, measured on the square between the abutments, is only 97 feet 6 inches. This is also one of Warren's patent, but differs materially from the Crumlin, inasmuch as the top tube and the parts compressed are of cast iron. Each line is carried by a pair of girders 13 feet apart, between which the trains run. The top tube or strut is composed of twenty-nine cast-iron pipes, 13 inches diameter, the thickness of metal $1\frac{1}{2}$ inch. The ends of these are turned and nicely fitted together and bolted: the cast iron struts are of the form of a Maltese cross. Each girder weighs 122 tons 10 cwt.; the whole bridge, including the platform, 589 tons. The deflection caused by two heavy goods engines, travelling both fast and slow (60 tons weight), was $2\frac{1}{2}$ inches. This bridge was erected before the Crumlin, and although the span is greater, the preference must be given to the latter, as being composed entirely of wrought iron.

Chepstow Bridge, over the River Wye, by Mr. Brunel, is a remarkable example of the combination of the tube and girder, to which may be added a third principle, that of suspension. The whole length of the bridge is 623 feet, one-half of which is crossed by a viaduct girder of three spans, the remaining portion by a single span of 296 feet. The central pier is composed of six cast-iron cylinders 8 feet diameter below, and placed in two rows of three each: the viaduct piers are in single rows of three in each. Two girders, of uniform depth throughout, carry each line of rails: those above the roadway are perfectly distinct, and do not depend upon each other. 50 feet above the large span a circular tube 9 feet diameter is placed, from which the roadway to each is suspended. This is done by two vertical frames of wrought iron, dividing the girder into three spaces, the centre the widest, the spaces braced with cross chains put together in links similar to suspension bars. The main chains hang from the tube at the ends over the pier to the opposite corner at the level of the roadway, where they are joined across the centre on both sides of the girder, and the middle space is crossed by chains both ways, which gives additional security to the centre of the girder. The tubes are carried at each end on seventeen rollers, 5 inches diameter, which allow for expansion and contraction: the diameter of the pins which carry the leading chains is 7 inches. The girders are formed of single wrought plates, with top angular casing 3 feet wide, and a curved bottom flange. This girder is made strong enough for the 100 feet spans; and over the space three times that width, it will be perceived that it is supported in two intermediate parts, so that in reality the girder has very nearly the same bearing throughout. This is an extremely ingenious arrangement, the sectional quantity of material used with reference to the span being less than in any like structure. But it is to be regretted that from its want of symmetry and its lop-sided appearance, it is by no means an agreeable design. The Great Saltash Bridge is on the same principle, with four spans, the two principal not less than 445 feet.

The objection to combination girders does not apply to those made all of wrought iron. In cast iron the girder is broken by the first deflection, but no mischief is done to wrought before the trussing-bars or suspension-rods are called into action.

The Boyne Bridge, on the Dublin and Belfast Railway, is one of the finest examples of the lattice girder which has hitherto been executed. The main span is 264 feet between the bearings: the two side spans 137 feet. At the end next the town of Drogheda are thirteen arches of masonry of semicircular form, 61 feet span. At the other end are three similar ones. These are built of finely-wrought stone. The height of the bridge above water-mark is 100 feet, allowing the passage of shipping without striking top-gallant masts. The depth of the lattice girder is $22\frac{1}{2}$ feet. It is formed of top and bottom wrought tubular chords: the area of the top chord where the greatest strength is required, is 265 inches, where the least 137: the lattices are placed on each side of the chord at an angle of 45 degrees, 7 feet 6 apart, forming double squares in height: the sizes vary from 10 inches by $\frac{5}{8}$ to 4 inches by $\frac{5}{8}$, according to the strains: they are closely bolted to cross braces at the intersections. There is a double line of railway, with the girders on the outside, measuring 24 feet 6 inches on the clear: the roadway is supported on cross beams, also on the lattice principle, 7 feet 6 inches apart, covered with 6-inch planking bolted down. The girders being joined over the piers form one length, and are fixed only on one pier; the other supports being the usual rollers working in grooves to admit of expansion. Sir J. M'Neil was chief engineer. Mr. Burdon and Mr. Barton (to the latter of whom I am indebted for much information on the subject) were the resident engineers.

It will be perceived that the principle of the lattice girder does not materially differ from that of the large tube, the sides of the former being open with lattices where material is not so much required. With the same weight of metal the lattice girders will carry a greater load than tubes. The comparative duration has not yet been ascertained, but the lightness and elegance of appearance, and several other considerations, are greatly in favour of the lattice bridge. For further particulars useful reference may be made to notes of the comparative strength of the tube, warrens, and the lattice girder, by Mr. James Barton, C.E. Various opinions have been also given by eminent engineers, which will be found in the "Transactions of the Institution of Civil Engineers."

In forming a comparison of the materials to be used for any particular work, whether a bridge or a viaduct, many questions have to be taken into consideration, but none more important than that of economy. To arrive at that, the original outlay and the probable durability must be taken into consideration; and from what has hitherto taken place, the conclusion arrived at appears to be in favour of wrought-iron; but it should also be noticed that metals can be destroyed by repeated vibrations, which have a tendency to separate the particles of which they are composed. As a sufficient excess of strength should be provided, this objection does not detract from the value of the material, while it demands additional skill and ingenuity on the part of the constructor.*

* See p. 271, *ante*.

ARCHBISHOP WHITGIFT'S HOSPITAL, CROYDON.

AT the third annual meeting of the Surrey Archæological Society, held at Croydon on the 12th inst. a descriptive account of Whitgift's Hospital, by Mr. W. Pettit Griffith, was read. The following is the substance of it:—

Among the many interesting public buildings in the town of Croydon and its suburbs, this hospital ranks as the most important charitable institution, and offers an example of ancient domestic architecture, illustrating the hospitals, schools, and almshouses of the Middle Ages in England.

On the 29th of March, last year, the Court of Chancery sanctioned a scheme for the better management and regulation of this interesting and important charitable institution, and as alterations may from time to time be effected, it may be useful to place on record a more detailed account of the building than has hitherto been attempted.

Archbishop Whitgift, the founder, having obtained letters patent for building this hospital, with license of mortmain from Queen Elizabeth, dated the 22nd of November, 1595, in the thirty-eighth year of her reign, purchased the following lands for its site: the Checker, in Croydon, cost 200*l.*; a tenement adjoining, cost 30*l.*; and another tenement in Croydon, called Stay-cross, with one acre and a half, cost 80*l.* Upon the ground previously occupied as above, the hospital was constructed, and was therefore not rented.

The Rev. Samuel Finch, vicar of Croydon, in letters to the Archbishop of Canterbury and Mr. Woormall, of Lambeth, written in 1596 (which are preserved in the Lambeth MS. Library, No. 275, and printed *in extenso* in Ducarel and Steinman's Histories of Croydon), entered minutely into many particulars respecting the erection of the hospital.

The bricklayers' work was executed for 1s. 2d. to 1s. 4d. a day; and the labourers were paid 11d. a day. The sand was procured from Duppa's-hill, as it could not be obtained from the park. The foundations were formed with brick, chalk, and large flint; small flint being used for filling in. These materials were properly laid, not in a confused manner, but "orderlye," and "rammed stronglye, course upon course, stronge and sure." Four loads of flint cost 10s. which saved 1,000 bricks at 16s.

* This paper was read, as we mentioned last week, at the Institute of British Architects. The closing meeting for the session was held on the 16th: we defer our report.

The masons employed were Nicholas and Christopher Richardson, citizens and freemasons of London, and Gabriel Anscombe, of Charlton, yeoman, who were bound to Samuel Finch, John King, and William Tagbourne, in 100*l.* to execute the works. The bond bears date the 19th of February, A.D. 1596. In this agreement they are bound to procure so much good and seasoned freestone as shall be sufficient for the doors and windows belonging to the said intended hospital. The doors were to be wrought "fayre and comelie," and the windows with "bowgeworke." The whole to be completed at 9d. the foot for the windows, and 10d. the foot for the doorcases.

The foundations were begun on February 14th, 1596, and, as the workmen were digging them, several skeletons were discovered: these were, in all probability, says a writer, the remains of the Londoners, who, flying from the battle of Lewes, where they had taken part with the barons against Henry III. were intercepted at Croydon on the 14th of May, 1264, by a detachment of the king's forces, who put them to the sword with great slaughter.

On March the 22nd, 1596, the founder laid the two corner-stones, north and south. "The 27th of June the first of all the hospital was reared, and the 6th of September the last of the same was reared; and, the 24th of September all the outworke, as tyelinge, &c. was (God be praysed) fully finished, A.D. 1597."

"Trees were sett in the hospital outyard, Decr. 1599, and in March, 1603, thirty-two elmes and ashes were sett at the hospital."

The Rev. Samuel Finch, then vicar of Croydon, was the person employed by the archbishop to make contracts, to overlook the workmen, and to see them put his intended plan into execution. This he performed with very great care and diligence, paying them regularly every week: the total amount of which to September 29th, 1602, was the sum of 2,716*l.* 11s. 11d.

This hospital is endowed with lands for the maintenance of a warden, schoolmaster, and twenty-eight poor brethren and sisters, or a greater number, not to exceed forty, if the revenues should admit of it. The schoolmaster, who is likewise chaplain, is allowed by the statutes 20*l.* per annum, the warden 11*l.* and the other members 5*l.* each, besides wood, corn, and other provisions. The nomination of the brethren and sisters was vested by the founder in his successors in the see of Canterbury, whom he appointed also to be visitors. Whenever that see shall happen to be vacant, the rector of Lambeth and the vicar of Croydon are to fill up the places. The persons to be admitted must be sixty years of age at least; inhabitants of Croydon and Lambeth are to be preferred. Among the crimes to be punished by expulsion, are "obstinate heresye, sorcerye, any kind of charmmynge, or witchcrafte."

The lands with which the hospital was endowed were of the annual value of 185*l.* 4s. The estates have been much improved, and the revenues of the hospital farther increased by various benefactions.

The hospital is square in form, and has a court in the centre converted by the poor brethren into flower-gardens; it is situated on the east side of the high street on the London side of the town. Over the doorway are the arms of the Archbishopric of Canterbury, surmounted by a mitre in bas-relief. In the frieze of the pediment is inscribed, "Qvi Dat Pavperi Non Indigebit." The buildings are in the old English style, constructed of red bricks, with black glazed bricks in the principal front, forming the initials of the founder, diagonal squares, &c. with the foundations of flint; the muntins jambs, &c. of windows, quoins of building, &c. are of stone, and have been disfigured with cement. The labels over the windows in the quadrangle are of moulded red bricks, worthy of notice. The principal front remains as in the print engraved in 1755 (published in "Queen Elizabeth's Progresses"), with the exception of the removal of the clock, which projected into the street, and the bell-turret over it on the roof.

With regard to the clock and bell, W. Drummond, esq. of Croydon, kindly permitted me to make the following extracts from a copy of an old memorandum-book formerly belonging to Dr. Rose:—

"Mr. John Shaw, clerk of the Chamber of London, gave the dial."

"The clock to this hospital was removed in 1810 for a double purpose, thro' a fear of the roof falling in where it then stood, and to remove the dial on the inside of the quadrangle, for the greater convenience of the poor."

When the bell was taken down the following inscriptions were found upon it:—

"Decani Dalyson Ecclesiæ beatæ oremus pro bono Statu Mariæ de Lincolne.

"Thomas Dalyson Miles firmarimus hujus Manerii de Gretwell me fieri fecit quarto Aprilis, Anno Dmi. 12 . ."

This bell is therefore about 600 years old: "the rest of the date is obliterated either by the continual striking of the clapper or the friction of the rope. It is now so placed that the inscription cannot be damaged."

The memorandum-book above mentioned also alludes to several gifts presented soon after the foundation of the hospital. John Parker, Neville dean of Canterbury, and Mr. Brackenburie, each gave a cup of silver. Mention is also made of houses at Northampton, bearing the date of 1595. Over the outer gate in an upper room called the Treasury, are deposited (in boxes which once were remarkably strong and secure) a variety of papers relating to the hospital; viz. purchase-deeds of the estates in the neighbourhood, leases, licenses, &c. The more curious and valuable are Queen Elizabeth's original grant to the founder, and the archbishop's deed of gift of the several estates with which he endowed this hospital. They are both on vellum; the first neatly endorsed, and the margins beautifully ornamented with a drawing of the Queen in her robes, sitting in a chair of state, and the royal arms in different compartments. The other instrument is written in a very fair legible hand in English: the beginning is embellished with a drawing of the archbishop in his robes; the margin contains the arms very highly illuminated. These drawings are engraved in the Appendix to Ducarel's History of Croydon, and other papers relating thereto.

The principal objects of interest connected with this building are the chapel, the hall, the kitchen, and the founder's room.

The chapel was dedicated by the name of "The Chapel or Oratory of the Holy Trinity," on the 10th of July, 1599, by the Bishops of London and Chichester. It is situated in the south-east angle of the quadrangle, and is very neat and curious. The eastern window is Perpendicular, in three lights, and contains, in painted glass, the arms of the archbishopric of Canterbury, impaling Whitgift; viz.—Argent, on a cross fleury sable five bezants. Over this window, externally, is the following, inscribed upon a stone tablet,—"Eboracensis hanc Fenestram Fieri Fecit, 1597." On the walls of the chapel are suspended many objects of interest; on the east wall is a framed tablet, containing seven commendatory verses, to the memory of the founder, and also a board containing a Latin inscription, describing the miseries of human life. On the north wall is a wooden tablet with a pediment, containing select Latin sentences, surmounted with "I. W." united by a knot, and dated 1600. Also a portrait of one of the founder's daughters who died in 1616, aged 38, dressed in the costume of Elizabeth's time; and an outline delineation of Death as a skeleton and grave-digger. Attached to the south side of the chapel is an ancient oak tablet with a pediment, containing the Commandments, supported by Moses and Aaron, in semicircular-headed panels. Affixed to the west wall is an excellent portrait of the founder, surmounted by his arms and motto, with Latin inscriptions. He is standing at a table, containing an open Bible, bell, watch, seal, inkstand, knife, pens, &c. all minutely painted.

On each side of the chapel are oaken stall-seats with carved finials, 2½ inches thick: these seats were finished on Feb. 5th, 1598, and arranged each side of the chapel from west to east, leaving a central passage.

The hall is the next object of interest: it is in the north-east angle of the building. The windows on the west side contain quarry lights, with fragments of stained and painted glass, with the founder's motto upon a coronet,—a shield with the royal motto, a mitre and cross, with the motto "Deum." On the east side the windows contain the arms of "Edwardus Aysworth, anno 1598," and stained glass inserted in 1851. The hall has a fire-place, containing the dogs for burning wood; also an ancient oak table, given "to the poore for ever," and very substantial benches. Upon the table is an interesting black-letter Bible of 1595, repaired at the expense of Thomas Lett, of Lambeth, in 1813, and again in 1851. An ancient chest, bound with iron, containing the plate, used to stand in the hall: it is now in the treasury over the outer gate.

Adjoining the hall is the kitchen, connected by a large Tudor arch: beneath the latter is a smaller arched communication. In this room is an oak seat, panelled and inscribed as "The gift of Edward Chapman, 1816:" it formerly stood in the outer gateway. There are also several curious recesses in the walls, another oak seat, and objects of interest.

Immediately over the hall is the founder's room. In this room is an oak table, now worm-eaten, at which the archbishop has often dined; and it is stated that Queen Elizabeth has also dined at this table. On the south side of the room is a curious and elaborately-carved oak Elizabethan chimney-piece, with the founder's arms in the centre. The walls of this apartment, and the room adjoining south (now the warden's), are lined with wainscoting, 7 feet 5 inches high: the doors are worth notice.

Lysons, in his "Environs of London," alludes to "three antique wooden goblets," belonging to the establishment: one of them, which holds about three pints, is inscribed with the following legend:—"What, sirrah! holde thy pease; thirste satisfied, cease."

There are at present nineteen brothers, eighteen sisters, and a warden and schoolmaster, and their dwellings are arranged on each side of the quadrangle, and are of good and convenient size.

In 1848 were erected, at the east end of the hospital grounds, houses for five additional members. The funds were raised without any burden on the existing members of the charity. All new members had their stipends fixed at 40*l.* a-year, instead of taking an equal share of the revenues; and the difference between the above allowance and the share was funded until a sufficient sum was raised.

The new applicants were, of course, happy to commence with 40*l.* a-year, and the stipends of the old members were unaltered. After the requisite sum was provided, all the inmates were restored to an equal participation of the revenues.

The following is a list of the chaplains, from the foundation of the hospital. Ambrose Brydges, A.D. 1600; John Ireland, 1601; Robert Davies, 1606; William Nicholson, 1616; John Webbe, 1629; Thomas Gray, 1651; Wm. Crowe, 1668; John Sheppard, 1675; John Cæsar, 1681; Henry Mills, 1711; Sam. Stewely, 1742; John Taylor Lamb, 1752; James Hodgson, 1774; John Rose, 1801; John Collinson Bissett, 1812; George Coles, 1843, the present chaplain.

Like most of our charities, this hospital has not been exempted from abuses; some of them are explained in a pamphlet printed in 1813, entitled "An Account of the Proceedings and Evidence on a Writ of Enquiry executed before the Sheriffs of Middlesex and a Jury, on the first day of November, 1813, to ascertain the Damages due from the Rev. John Rose, D.D. unto the Warden and Poor of the Hospital of the Holy Trinity in Croydon."

Prior to 1855 the management of this hospital was conducted by the brethren, who kept their own cash in a chest, and divided the revenues among themselves. They also determined the terms of their leases, and regulated all other matters in connexion with the charity; and although the original intention of the founder embraced a school for the rising generation, as well as an asylum for the declining, still the school (from its being considered to be simply a classical school, and therefore not desirable in modern times for poor children), had fallen into complete disuse. A deputation, consisting of the Vicar of Croydon, the churchwardens, and John William Sutherland (a magis-

trate), and several gentlemen and tradesmen of Croydon, waited on the Archbishop of Canterbury, on January 21st, 1853, and presented a memorial suggesting a mode by which the school might be restored and rendered subservient to the requirements of the present age. The Archbishop of Canterbury gave ready attention to the memorial, and the brethren of the hospital lent their aid, and on March 29th, 1855, a new scheme for the management and regulation of the Hospital, received the sanction of the Court of Chancery.

Under this scheme, all brethren hereafter appointed are to receive stipends not exceeding 40*l.* nor less than 30*l.*; and all sisters hereafter elected are to receive such stipend, not exceeding 30*l.* nor less than 25*l.* The surplus revenues which will accrue, together with all future increase of rents, are to be applied towards the establishment of two schools (in connection with, and as part of the foundation). One is to be a "Commercial or Middle School," suited to the educational requirements of the sons of tradesmen, professional men, and gentlemen of humble means; and the other school is to be for the sons of the working classes, after the plan of national schools. And it is considered that, from the increasing value of the Hospital estates, and the short time in which many deaths of members take place, on account of the advanced age (60 years) at which they are admitted, it will not be many years before this new scheme will produce a most satisfactory result, viz.: the restoration or addition to the present asylum, of valuable and eminently useful scholastic establishments, affording opportunities to boys of acquiring a sound, religious, moral, and useful education, which verifies the saying of Boyse Sisi, ambassador from France at the time of the Archbishop's death, that—"The bishop had published many learned books, but a free school to train up youth, and an hospital to lodge and maintain aged and poor people, were the best evidence of Christian learning that a bishop could leave to posterity."

THE ARCHITECTURAL ASSOCIATION.

SEVERAL discussions have taken place lately on the position of the Architectural Association, and the steps which should be adopted. At a meeting on the 2nd of May, Mr. Rickman moved a string of resolutions, the fourth of which went to declare that the Association had been virtually renounced by both the elder and the younger members of the profession, and that there were "sufficient reasons for at once taking the requisite measures for dissolving the society." The meeting, however, gave evidence that there was still vitality in the Association, and by show of hands negatived the proposition. On the 30th of the same month, Mr. Arthur Allom read a Paper on "The Past, Present, and Future Condition of the Young Architect;" in the course of which he traced the progress of the Association, showed what it had done, and combatted the opinion of those who consider there is no necessity for two architectural societies in London. The reader protested against the apparent jealousy of the society in some quarters, and at the same time deprecated the strong expressions made use of occasionally in the rooms of the Association with reference to the Institute of Architects. The reader further said, he should like to see the various societies for the study and development of architectural art amalgamated into one grand Institution,—not absorbed into the Institute, but holding their meetings in one building. A long discussion ensued, and, at the close, the chairman (Mr. Charles Gray) stated, that he proposed to bring forward at the next meeting a series of resolutions relative to the management of the Association.

In the course of the evening, reference was made to the report in these pages of the discussion some time ago, at the Institute, as to the diploma question and the Association, and it was suggested that the *Builder* had displayed an *animus* against the Association. Can it be necessary for us to deny such an assertion? an assertion which could only have proceeded from forgetfulness, want of knowledge, or desire to misrepresent. From the first hour of its establishment, the Architectural Association has had our sincere support, and we have ever borne most willing testimony to the good which has proceeded from it. At the present moment, in anything that can serve it, it may command our aid. As to the mendacious and scurrilous pen which has elsewhere perverted the truth in connection with the Association, to serve its own purposes, as it has often done before, we leave it, for the present, to the contempt which it cannot fail to engender in the mind of every honest man who will take the trouble to look to the facts.*

The Council of the Institute, anxious, probably, to show their sympathy with the objects of the Association, and their desire that, should the Association be dissolved, as was at one time contemplated, the impression of antagonism should be removed, either have addressed, or are about to address, a letter to its committee, suggesting amalgamation, and pledging themselves, we believe, to aid in arranging all such opportunities for artistic or literary exercises as may be desired. We offer no opinion on the proposition: it will be for the members of the Association to consider it, and decide for themselves. They may believe, however, that it was drawn up in the best spirit, and in that same spirit they will, doubtless, receive and discuss it.

* Since the above was set up, we have received a letter from the member from whom the suggestion of ill feeling on our part towards the Association proceeded, stating, that information obtained by him at the Institute has altogether exonerated us from the slightest imputation of such a feeling; explaining the means by which he had been led into the error; and expressing his intention of taking the earliest opportunity of relieving the *Builder* from the charge of misrepresentation hastily made against it. The letter is marked "private," or we should have allowed the writer to speak for himself. We have also received a letter from the chairman of the meeting, Mr. Gray, repudiating in the strongest terms an untrue remark attributed to him.

CONTRACTORS IN GROSS.

WITH reference to the article, headed a "Treatise on Building, by Contract," in your paper of the 31st of May, in my mind it requires no logic to clearly prove, both in an economic point of view, as well as in a mercantile and artistic, the many advantages to all parties, in the original mode of giving away contracts, when compared with the present monopolising and demoralizing system which, if continued, will ultimately degenerate the different trades in the building and other lines. It is a fact beyond contradiction, that of all the public and other buildings of the past ages, which we view as landmarks of architectural beauty, each trade had the control and benefit arising therefrom, in their own department, which benefit now goes into the pocket of the monopolising contractor, who cannot possibly be as good a judge as each separate tradesman; nor is the work done so well or cheaply, as when we had our Bernasconys, Browns, and Palmers, of London, in their line; and the different master masons, stone-cutters, slaters, carpenters, stucco workers, painters, and plumbing employers, who by this corrupt system are all but extinct, as they had either to retire from business, die in despair, or become inmates of the poorhouse, and that from the way their separate trades were encroached on by the present corrupt system. This mode offers no object of emulation, nor any hope or opportunity for the sons of each tradesman in his particular line to learn his business, as was formerly the case under the old system, when Westminster Abbey was erected, St. Paul's, Greenwich Hospital, Henry the Seventh's Chapel, Lord Grosvenor's, and numberless other edifices in England, as well as the Bank of Ireland, Four Courts Temple, Old Man's Hospital, Custom-house, Lord Kingston's, Earl Belmore's, Lord Gosford's castle, and many others that do honour to the architects that designed them, and to the different tradesmen and artists who executed the different works in their own department. The present mode is the cause of the emigration of all those men of talent and emulation, transplanting them to other lands, and rising in visible judgment against our empire, both in art, trade, and commerce, formerly admitted to be the mistress of the world for talent, emulation, and enterprise; and it astonishes me much that the Government of the day is persistingly so blind to its own interest in giving to one capitalist, who generally sub-contracts and doles out each department to a sub-contractor in each line for about the one-half what he gets, who, of course, cannot half pay his workmen, and has no interest in doing the work well, as his name is never brought into requisition: his object is only to have a certain quantity done, so as he can get the means to half pay the workmen under him, which is the cause of so many turn-outs and combinations amongst them; whereas, if the Government would subdivide the same, they would have more competition in the market, independent of the work being better done, as each trade would work with more emulation, and be accountable for its separate contract, the tradesmen under them be better paid, apprentices taught their business, a great saving to the public accrue, and good feeling, order, contentment, and comfort be created between master and man, and throughout all society. I have known in two or three recent instances in Ireland contracts given away in the stucco plastering line exclusively: of three separate Roman Catholic chapels, the works were given to carpenter contractors in place of legitimate stucco plasterer employers, which, in my mind, arose from the Government adopting this fatal system. I would suggest that Parliament ought to make a law to grant a yearly license to each individual tradesman (tested by skill and ability), say each tradesman to pay 1*l.* per year as a license, which would amount to some millions yearly: the said sum could go into the coffers of the Exchequer for the benefit of the public, or as a fund to protect the old and infirm tradesmen, many of whom are now a burthen to the poor-house relief; or it could go to educate the young orphan or tradesmen's sons in a preparatory and scientific education previous to their being bound to their trades.

T. MCANASPIE.

METROPOLITAN BUILDING ACT.

SHOP FRONTS.

"AN INQUIRER" writes, "As there appears to be some difference of opinion respecting the interpretation to be given to clause 3, sec. 26, of the new Building Act, which stands thus;—

'No part of the woodwork of any shop-front shall be fixed *nearer* than 4½ inches from the line of junction of any adjoining premises, *unless* a pier or corbel of stone, brick, or other fireproof material, 4½ inches wide at the least, is built or fixed next to such adjoining premises, as high as such woodwork is fixed, and projects an inch at the least in front of the face thereof;'—

it would be conferring an obligation if you, or one of your numerous readers, would define the limit of deviation from the other rules of the Act permitted by the said clause."

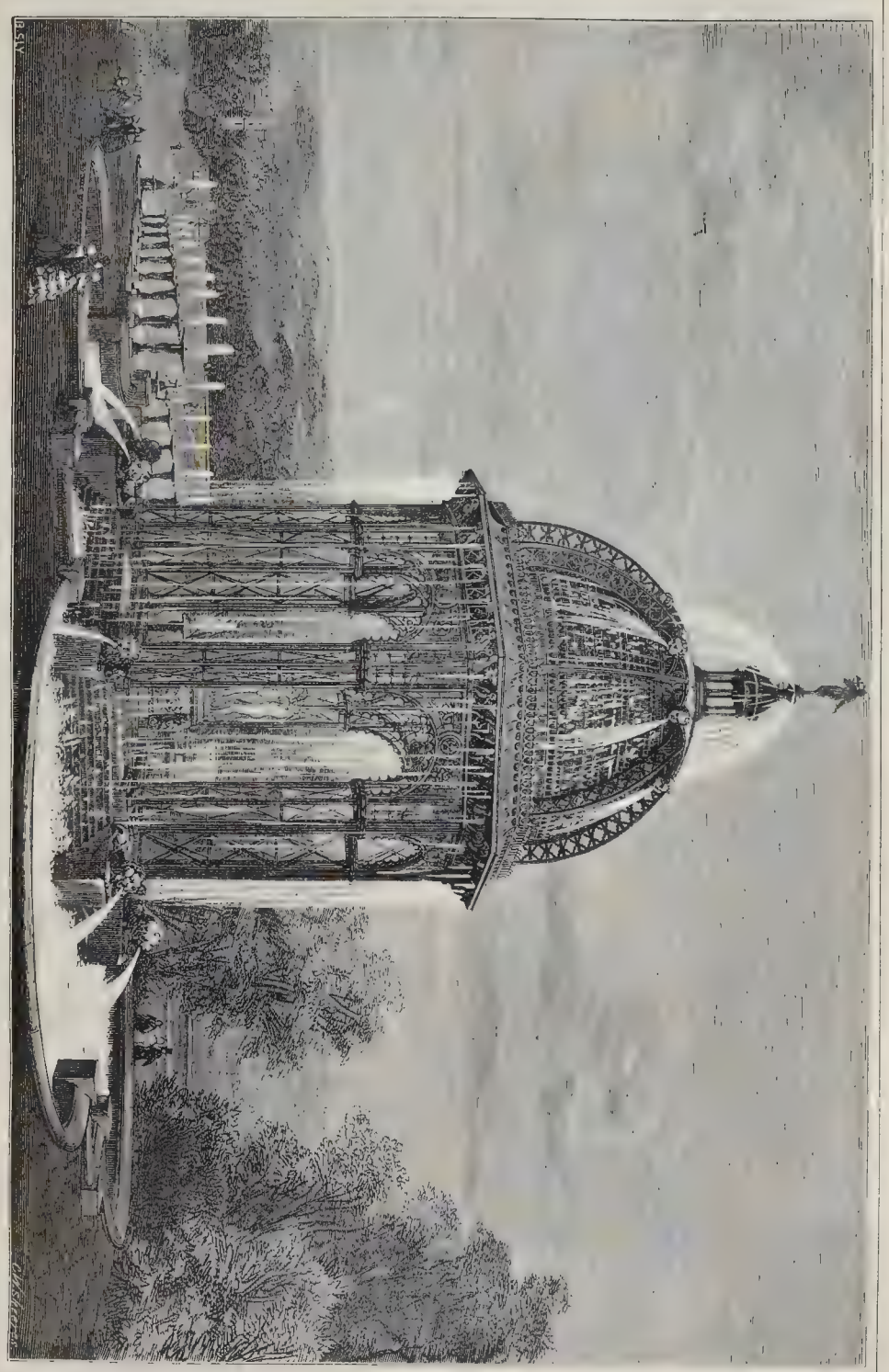
*** This is one of those obscurely-worded clauses, unfortunately not few, in the new Building Act, the exact intention of which cannot possibly be arrived at. We leave it at present for the consideration of our readers. It would seem, at all events, that the centre of the pier or corbel, of fireproof material, 4½ inches wide, may be made to range with the centre of the party-wall, notwithstanding the expression "*next* to such adjoining premises," thus permitting the woodwork to be brought within 2¼ inches of the line of junction. If it be not so, the "unless" means nothing.

BRITISH EMBASSY-HOUSES ABROAD.

THE House of Commons has refused to pass a proposed vote of 6,912*l.* for British Embassy-houses abroad. A portion of this sum, 1,627*l.* was for professional remuneration to the architect, Mr. Albano, in Paris, including personal and travelling expenses.

A correspondent animadverts on this, and says the same architect received another 294*l.* for his personal and travelling expenses in Madrid, and a further remuneration of 470*l.* "for professional services connected with the British Protestant Cemetery in the same capital."

Considering the smallness of the amount expended in both these cases (not so much, we are told, as the amount of the architect's remuneration), there seems to have been very bad management somewhere, but we are not aware of any circumstances to justify the onslaught on the architect. The Governments seem to be the parties to blame.



WATER BOILER, AT THE CRYSTAL PALACE, SYDENHAM.

[See p. 337, ante.

might have been lost to his family; and an equitable payment of a portion of the outlay from every person who might own the estate during the continuance of the rent-charge was secured.

The justice and the policy of this principle soon became apparent, and it was found that it might be safely and advantageously extended to the execution of other works quite as important as draining; such as good farm-roads, improved buildings, enlarged houses, embanking, irrigating, &c. But the administration was slow to secure the advantage to the public, and the need was merely registered by them for future consideration as a desirable object that it was the especial business of no one in particular to obtain. But private enterprise viewed the experience gained in a different light, and seeing that profit might be realized, took advantage of the inactivity of the Legislature, and formed private companies, by whom special Acts of Parliament were obtained, empowering them to create rent-charges upon land for the works above named. As this privilege was granted exclusively to the companies a monopoly was created, which has been to this day retained, and it results, that although a tenant for life may borrow or advance money for draining with the sanction of the Inclosure Commissioners, and make a charge on his estate for the amount so expended, yet the commissioners can themselves, in no case, make a charge on land for any of the other works above named. The companies alone can do this, because they alone have obtained the necessary powers from Parliament, and they charge every applicant 3 per cent. on the amount of his outlay for the use of their Act in making this charge. Still no reason can possibly be assigned why a landowner should not do all he may require directly with the commissioners, as in the case of drainage, and save his 3 per cent. and the unnecessary intervention of the company. I see no objection to the employment of a company to effect the arrangement if a landowner is disposed to engage such an agent; but I say it is monstrous to compel all to travel out of their way to accept such unnecessary and costly service.

But the Government is now alive to this, and a Bill has been prepared, which will soon become law if the popular voice is raised in its favour: it is known as the "Drainage (Private Advances) Act Amendment," and is before a select committee of the Lords, having been read a second time. Its provisions are simply to empower a landowner to do for himself directly with the Inclosure Commissioners, without the intervention of any third person, as much as he can now do with the commissioners through a company, so that he may no longer be compelled to pay 3 per cent. upon his outlay for services he may not need.

I have long advocated this measure, having in course of my practice experienced the necessity for it; and I wish now to bring the Bill under the notice of the public, and particularly of landowners having seats in the House of Peers.—CHAS. F. HUMBERT.

COVENTRY NEW CORN EXCHANGE AND MUSIC-HALL.

THIS building was inaugurated by a public dinner, on the 20th ult.—Lord Leigh, the Lord Lieutenant of the county of Warwick, being in the chair,—at which upwards of 400 persons attended; more than 200 ladies being present as spectators. The site selected is a very peculiar one, and the architect had to exert ingenuity to surmount the obstacles arising. The style chosen is Italian, with detail partaking of the Romanesque, brick and stone being the principal constructive materials of the front. The principal entrance is in the centre of the front, and consists of a columnar recessed portico, which is continued the whole height of the front, and is divided by the floor of the first story, which forms a gallery of semicircular shape over the entrance. The exchange-room is entered from a hexagon vestibule, and the first impression is one of surprise at finding so large a hall as is the principal one of the building come upon one so unexpectedly. The dimensions are 110 feet in length, by 55 in breadth, and 46 feet the height: the extreme width of the exchange-room across the galleries is about 74 feet. This is, we believe, the largest interior yet constructed for the purposes of a corn exchange, and its noble size suggests its future frequent use for the purpose of musical festivals, for which, we are informed, it has already proved itself to be well adapted. The entrance end of the room is semicircular: the opposite one is of elliptical form, intended to receive an organ and orchestra: the galleries, which are arcaded, run nearly round the interior, except the organ end, having corridors under, on the ground floor. The roof, or ceiling, is also elliptical and panelled, two rows of the panels being filled with glass, the others having appropriate plastic enrichments, emblematical of music, agriculture, &c. At night the hall is lighted by three gas sunlights in the ceiling. The front building contains five large shops on the ground floor, with assembly rooms, &c. in the two upper stories, which latter are connected with the galleries in the hall, an arrangement likely to prove advantageous when it is used for balls and musical meetings. Mr. James Murray, of Coventry, is the architect. The cost, including ventilation, gas, and other general fittings, together with stabling for the adjoining hotel, which, we should perhaps mention, runs under the whole of the main building of the exchange, was about 7,600*l.*

BUILDERS' PRICES.

Two years ago I sent you some remarks on builders' price-books, and suggestions for improving the same. I find that a Master Builders' Association, in the Midland Counties, have issued a "Local Price-Book." The attempt is praiseworthy, but I cannot say much as to the manner in which it is carried out. There are several blunders in the classification, and the bulk of the contents seems to have been copied from London publications, there being but a very small portion relating to local matters, and that without the usual explanations. In comparing the price of mortar, per hod and per barrow, with the prices of lime and sand, there is a great discrepancy: the quantity of lime and sand to a rod of brickwork, is not computed from any particular lime in the district, with a given quantity of sand (why use the rod when the standard of brickwork is a rood of 7 super. yards?). A better schedule of brickwork, giving the data on which it was founded, also separate prices for labour only, would have been serviceable; also a greater variety of prices for stonework, there being several valuable descriptions of stone in the district not mentioned, and various kinds of work peculiar to the same, which might have been advantageously introduced. The painters' prices want great reformation. In conclusion, I hope the members of the Association have agreed to adopt this standard of prices in their contracts as well as in their ordinary charges. Z.

ST. JOSEPH'S ROMAN CATHOLIC INSTITUTION FOR THE DEAF AND DUMB, CABRA, DUBLIN.

THE ceremony of laying the foundation stone of the above asylum was performed on Tuesday, the 9th inst. by the Archbishop of Dublin, in presence of a large number of the clergy and laity, the celebrated band of the Tipperary militia being in attendance, and an extensive platform and numerous tents having been provided for the accommodation of the spectators.

The building, which is of Tudor character, is to be erected of rubble limestone masonry, pebble-dashed, having the quoins, cornices, window dressings, &c. of red bricks, from Wexford, and the window sills, corbels, gable crosses, copings, &c. of County Dublin granite. The schools and dormitories will measure 67 feet by 32 feet, the flooring being formed of 3-inch deals, supported on wrought trellis iron girders, without joists. The central erection consists of apartments for chaplain, head-master, junior masters, and domestics; and the wings, when completed, are intended to afford beds for 200 children, with school-rooms, play and trades rooms, refectory, kitchen, offices, &c.

The contract for present works taken by the Messrs. Beardwood, amounts to 5,000*l.* and the designs are to be carried out under the direction of the architect, Mr. Charles Geoghegan.

THE SATURDAY HALF-HOLIDAY.

THIS boon has been conceded in Manchester to almost all classes of people, in Bradford also, and to at least professional men in Leeds; but in London there seems to have been as yet no step taken to close, as a general rule, all offices at an early hour on Saturday afternoon.

For more than two years I occupied a situation in a London office, and I can affirm now (after the lapse of five times that period) my sure belief that nothing would have been so gratefully received, nothing so beneficial to my health and feelings, nothing so calculated to increase my efficiency and retain me in the position of a cheerful worker, as the concession of the Saturday half-holiday.

My residence was at the extremity of Kensington-gardens: my daily walk through these and Hyde-park, yet the consequence of the unceasing round of duty was this that the rest of Sunday served only, in the *fœtid atmosphere of London*, to recruit my physical system for the succeeding three days, and left me subject to headaches, and other symptoms of a body out of sorts, and to the depressions and discontentments consequent thereon, for the remaining three.

I should, I believe, have been glad to purchase the remission of three or four hours on Saturday by extra time upon the other days of the week; but I question whether it is not quite as much the interest of the employer to grant freely the half-holiday, on account of the extra energy infused into the system, as it is of the employed to obtain it. In factories, as you are aware, where shorter hours have been conceded, the engine has been increased a corresponding per-centage in speed, and the loss recovered.

May the young men of our profession, when they obtain, as I hope and trust they soon will, the boon in question, imitate this example, and work with energy while they do work, but also forget not to *rest* when they ought. L. L.

POLYCHROMATIC GLASS.

SOME results have been submitted to us of an invention by Mr. Burridge, which has for its object the introduction of an entirely new description of coloured glass, adapted to useful as well as ornamental purposes, for which a transparent coloured glass, or a transparent and opaque coloured glass combined, is required. It consists in this,—that plates of glass being formed with a different colour on each side, patterns are removed by an acid, and give either one or other of the colours, pure white, or combinations of the two colours, according to the thickness of each left. It is applicable for the windows, walls, and ceilings of buildings in every style of architecture, and supersedes the necessity for any kind of lead-work. Glass thus decorated has a peculiar richness and brilliancy. The invention certainly deserves attention.

BUILDERS' BILLS.

Re SCHMOLLINGER AND BRAKE.

IN your publication of June 7th, some statements are made under the above heading which I cannot allow to pass unnoticed, although not interested therein beyond a desire not to allow reflections to be thrown upon one who is undeserving of them; and as I have had the pleasure of knowing and been known to you for upwards of eighteen years, and am well aware of your inherent love of justice and fair-play, so frequently acknowledged during your editorship of your excellent journal, I am very certain you will not deny me the opportunity.

Mr. S. was, I understand, the owner of the ground in question, and his fault has been placing too much confidence in man, and believing that all men with whom he came in contact were as well disposed as *himself*; and I dare to say, if you were to make personal inquiries among the majority of those to whom he is known, you would find a general testimony on their part to his straightforward conduct and integrity of manner.

A recital of the facts connected herewith would, I feel assured, lead you to a very different conclusion from that communicated to you; and although it has been his misfortune to have the award given against him, still the decision is not what could have been anticipated. The reason for his declaration of bankruptcy was the fact, that claims to the tune of upwards of 1,000*l.* independently of the costs of the other side, were being pressed upon him, and he desired that his creditors should equally participate in the residue of what was left him,—which an injudicious interference in building speculations had reduced to a small amount,—as you will not be much surprised to learn when I inform you that the action and arbitration were protracted for nearly two years, and the property, although since completed by another builder, has never yet been let. VERITAS.

THE METROPOLITAN BOARD OF WORKS.

AT a previous meeting of the Board, Mr. Carpmael moved the adoption of the report of the engineer, in so far as it related to the upper level and middle level sewers and other branches *north* of the Thames. This gave rise to a debate which was eventually adjourned. On its resumption on Tuesday, 17th, Mr. Leslie moved, as an amendment, that it was not expedient to discuss the northern drainage plan, proposed by the engineers, in sections, while the point of outlet remained undetermined, as that was the basis of the whole calculation, and the efficiency of the entire scheme depended upon it. After a long discussion the amendment was negatived by 13 to 6, and the original motion of Mr. Carpmael carried. Mr. Carpmael then moved the adoption of the report of the engineer, so far as it related to the western district and the construction of deodorizing works. Mr. Leslie opposed the motion, on the ground that it was altogether contrary to the Act of Parliament, which required them to remove the sewage entirely from the metropolis. The motion was lost. Mr. Carpmael next moved the adoption of the alternative proposition of the engineer in reference to the western district, which contemplates the construction of works suitable for pumping the sewage and rain water into the low level sewer. To this Mr. Hawkes proposed an amend-

ment that the Board proceed at once to the consideration of the outfall, and that the question stand adjourned until that point be decided. This amendment was negatived, and the original carried by 18 to 5. Mr. Carpmael moved the adoption of the engineer's report, so far as it related to the extension of Barking Creek. An amendment to this, by Mr. Savage, that no plan for the drainage of the metropolis north of the Thames could be deemed satisfactory which proposed an outfall within the metropolis, was lost by 15 to 10, and the original motion was affirmed. Mr. Carpmael next moved a reference to the Committee of Works of the report of the engineer, so far as it related to the low-level sewer, for their consideration and report. To this an amendment was moved by Mr. Ware, and seconded by Mr. Seeley, that a deputation of five members of the Board be appointed to wait on the Government to know whether their co-operation could be secured in reference to a plan for the embankment of the Thames. At this point, the debate was adjourned until Thursday next.

Notices of Books.

Ancient Crosses and other Antiquities in the West of Cornwall; drawn and engraved by J. T. BLIGHT. London: Simpkin, Marshall, and Co. 1856.

THIS is a small quarto volume of illustrations intended to preserve the forms of the Cornwall crosses, which are gradually disappearing,—not from natural decay, for they are in general made of enduring granite, but from mutilation and destruction by the ignorant and mischievous. The book contains illustrations of a great many of those still in a comparatively entire state. They are divided into examples of the Greek, Transition, Latin, and Gothic crosses; and appended are other illustrations, of Celtic, Druidical, and Roman remains, with brief descriptive details annexed to each view, and a few introductory remarks prefixed to the whole; and though the illustrations are scarcely up to the mark of present requirements, the volume forms a very useful record.

The Churches of Essex, architecturally described and illustrated. By GEO. BUCKLER, Architect. Parts I. and II. London: Bell and Daldy. 1856.

THE two parts of Mr. Buckler's work already published, contain accounts of Margaretting Church, Broomfield Church (with round tower), South Ockenden Church (also with round tower), Fryerning Church, and Mucking Church. It promises to supply a want, for, as the writer observes, "the authors of the Histories of Essex seem really to have overlooked the Architecture of the churches." Judging from the parts before us, the illustrations seem scarcely to go far enough: we would suggest the desirability of making them more complete; meanwhile, we recommend it to our readers.

Miscellanea.

PORTABLE THEATRE FOR ST. GEORGE'S HALL, BRADFORD.—It has been proposed to adapt this hall for operatic purposes. A beautiful little model has been prepared by Messrs. Grieve and Telbin, of London, of a portable erection which might be placed at the orchestra end of the hall (without in the slightest degree interfering with the structure of the building), and which included all the scenery, stage-fittings, &c. required for the performance of operas of the first class. It was stated that the whole outlay, including gas-fittings, would be only 630*l.* and that, as several parties had intimated their willingness to subscribe towards such an object, there was a probability that the whole amount might be raised without any outlay on the part of the shareholders. It has been justly urged that the hall was intended to be used for any object which would tend to the rational and innocent amusement of the people, and shall be glad to hear that the proposal is adopted.

WALLACE MONUMENT.—A meeting of gentlemen interested in this movement, lately inaugurated at Stirling, took place on Thursday, 12th inst. in the Queen's Hotel, when it was resolved that, recognising the duty of the citizens of Glasgow to take an active part in any well-conceived proposal for erecting an appropriate monument to the memory of Sir William Wallace, the citizens now present do pledge themselves to give their cordial support to the movement which has been initiated for the erection of a monument on the Abbey Craig, Stirling.

BRITISH SCULPTORS.—The vote of 17,500*l.* agreed to by the Commons in committee of supply, for the Scutari monument, designed and executed by Baron Marochetti, and now on its way to the East, has excited much adverse comment. The Sculptors' Institute, as our readers may have observed, has addressed a memorial to Sir Benjamin Hall on the state of sculptural art in England, in which, guarding themselves against any imputation of illiberal jealousy, they deprecate the unmerited neglect into which native talent seems to have fallen, and submit that public competitions, before a committee so constituted as to give confidence both to artists and to the public, ought to be instituted, so that foreign artists might at least be made to enter into fair competition with those of England, the models of every competitor being publicly exhibited before selection by the committee. The memorial is signed by all the principal sculptors of this country. More than one eminent sculptor has stated that the sum paid for the Scutari monument, which certainly betrays no great stretch of genius, is exorbitant.

THE POLYTECHNIC INSTITUTION, REGENT-STREET.—The lessee of the Polytechnic, Mr. Pepper, has issued a prospectus of a new course of Monday evening lectures, which opened on the 16th inst. with one by Mr. H. Mayhew, on the Curiosities of Life among the Labourers and Poor of London. The next (on the 23rd inst.) will be on Schools of Design and other Means of cultivating the Fine Arts, by Mr. Jacob Bell; and amongst the subsequent lectures of the course is one to be delivered on 4th August, on the Teachings of the Courts of the Crystal Palace, by the Rev. Charles Boutell.

PRIOR PARK ESTATE, BATH, is to be sold on the 24th by Messrs. Daniel Smith and Son. Tunstall, in his "Rambles Round Bath," states that "in 1738 John Wood, the celebrated Bath architect, who designed the Lansdowne-crescent, Circus, and many other fine buildings in and near Bath, received a commission from Ralph Allen, esq. to spare no expense in the erection of a mansion at Prior-park, to show to the world the capabilities of the Bath stone, which, on its introduction about that time, had been rejected by the London architects." It would be useful to know its actual and exact condition now, especially if the quarry can be identified.

ST. JAMES'S-PARK.—On 13th inst. Lord Palmerston, in committee of supply, moved for votes for the proposed improvements, and in the course of his remarks stated, that when the committee of supply before rejected or postponed the vote for the road, her Majesty, anxious to promote the public convenience, at once consented to give up a portion of the garden of St. James's Palace, in order that a straight road might be carried from the iron gate between Marlborough House and St. James's Palace, and thence across the bridge to be erected over the water. The estimate for the road, for a large footway, for rebuilding the wall at Marlborough House, and carrying it to the end of St. James's-garden, and for putting a railing at the back of the Ambassador's-court, and erecting lamps on the road leading to the bridge, would be 4,500*l.*, and that for the erection of the foot-bridge across the water would be 3,500*l.* After some discussion the vote for the road was agreed to without a division, and that for a bridge was carried by a vote of 182 against 95. A very fair and satisfactory decision has thus been come to in regard to these improvements, and the necessity of undermining the Duke of York's Column or removing either it or the German Chapel has been happily obviated by her Majesty's readiness to promote the public interests and convenience in the opening of the park to the public.

THE ADVANCEMENT OF SCIENCE.—In the Commons, on 10th inst. Mr. Heywood moved for a select committee to inquire what public measures can be adopted to advance science and improve the position of its cultivators. Some discussion, and four attempts to "count out" the house, took place, in the midst of which the Chancellor of the Exchequer objected to the proposal, on the ground that, as regarded the materials of science, its cultivators had no reason to complain; and Lord Stanley advised a reconsideration of the motion next session, as no specific measure was proposed; while Mr. Tite supported the motion, and suggested a Board of Science as a means of advancing science; and Lord Palmerston expressed doubts on this and other suggestions, and hoped a division would not be pressed. Ultimately Mr. Heywood withdrew his motion.

THE BOARD OF INLAND REVENUE AND THE SOCIETY OF ARTS.—Mr. John Wood, the chairman of the Board of Inland Revenue, has placed two appointments annually in the surveying department of the Excise at the disposal of the council of the Society of Arts. No candidate will be recommended for these appointments who shall not obtain second-class certificates, at least, in mathematics, chemistry, English composition, and writing from dictation.—*Civil Service Gazette.*

THE PEOPLE'S PARK FOR WOLVERHAMPTON.—Active and determined efforts are being made at Wolverhampton, to realize the project of a public park to which we have already alluded. In an able address, signed H. Beckett, president of the committee of working men elected at the public meeting originating the movement, the project thus assumes a definite form and outline:—Twenty acres of land should be selected, and it is hoped will be readily obtained in a healthy site removed from building land, although the park will raise the adjoining land fourfold in value for building. The purchase is estimated at 4,000*l.*; and the requisite draining, planting, fencing, &c. 2,500*l.* more; or, in all, 6,500*l.* The address suggests, that the money expended in a single pint of ale per week, by the 10,000 families of working men in Wolverhampton, for twelve months, would actually accomplish the end in view; and that if the remaining 2,000 families would only refrain from one bottle of wine each per week, a sum of 20,800*l.* might even be realized. The park would be for all classes. Why should not all contribute? All, doubtless, will contribute; for a project urged on with a will, as this one seems to be, is infectious, and the desire is likely to seize all classes, and to continue till the object in view be realized, as we earnestly trust it will be.

RAZING RUINOUS BUILDINGS.—Mr. Milner Gibson, M.P. as owner, and Mr. James Sutton, as occupier, of a house, No. 82, in West Smithfield, were summoned, on 12th inst. to Guildhall, and ordered to pull down the house in question in seven days, or, in default, the City Commissioners of Sewers to complete the work for them. Two adjoining houses, in an equally ruinous condition, were to be seen to by the solicitor for the Commissioners.——The Rev. George Last, and others, the owners of a house, No. 34, Farringdon-street, and Mrs. Burdett, as occupier, till 24th inst. were also ordered to pull down the house in fourteen days.——The occupiers of No. 120, Aldersgate-street, and house adjoining, were ordered to take down a dangerous party-wall in seven days.

APPROACHING IMPROVEMENTS OF CAREY-STREET.—A sale is now taking place of the building materials of a large block of property at the corner of Carey-street and Chancery-lane, which I believe is for the purpose of clearing the ground, for the erection of one of our principal insurance offices. I would ask, Has the line of frontage been determined upon? When the projected street was proposed by Government, it was determined to take an angular piece of the ground into the street to widen it. Would it not be as well if our Metropolitan Board of Works were to make such a matter one of consideration, rather than permit a noble structure, such as is proposed, to be built on the present line, where it would be hemmed in, and form an obstacle to the much-desired thoroughfare. I dont suppose that the freeholders will propose to give up any of their ground, and if no movement is made to get the required strip, it will no doubt occasion general disappointment, and I think that you will agree with me that such a chance should not be lost sight of. The principal frontage is in Carey-street, and is, as I believe, intended to be a building with two wings, and of handsome elevation; but it will be much out of place unless it is set back, constantly shaken by railway waggons, the footway being only 2 feet 9 inches, and the carriage-way with not room for two carriages to go abreast.—F.

STREET LETTERINGS.—As the fresh naming of streets is contemplated, it may be useful to mention the letters we have seen prepared at Mr. Minton's establishment. Some six inches high encaustic (white inlaid on black), have been for eight or nine years in use by the Bedford Paving Commissioners. These letters are made of the height of one or two courses of brickwork, to admit of their being let into the wall itself—a mode far preferable to the present exhibition of rusty-iron framework. Another letter is of a vitrified stone body, the coloured ground being burnt into the surface of the tile. The public is certainly entitled to all the information to be derived from a perfect system of street nomenclature: one should neither be condemned to stumble upon a Charles street at every hundred yards, nor have to call in imagination to make perfect what is now too frequently in a fragmentary state from frost or juvenile casualties, which the bulk of the letters in use are quite unable to withstand.

EXHIBITION OF THE FINE ARTS, BRISTOL.—The annual exhibition of the Bristol Academy for the Promotion of the Fine Arts, was opened to the public on Monday, the 9th. The productions are pretty equally divided between oil paintings and water-colour drawings, and, including eight architectural drawings, they amount altogether to 176.

METROPOLITAN TOLLS.—A select committee of the House of Commons has been appointed to inquire into these nuisances and obstructions. Lord Lonsdale, the chairman of the Middlesex Commission, has already intimated his anxiety that the parishes should take to the roads and relieve the commissioners.

LECTURE AT SHEFFIELD ON ROME AND ITS ANTIQUITIES.—A lecture was delivered in the New Queen-street National School-room, Sheffield, lately, before the members of the Church of England Educational Institute and their friends, by Mr. T. R. Smith, Associate of the Royal Institute of British Architects. The subject was Rome, and its Antiquities, illustrated by photographic views, and the attendance (according to the local *Independent*) was extremely good.

CHURCH STRUCK BY LIGHTNING. — During a thunder-storm on the 27th ult. the spire of Hemingbrough Church was struck by lightning, and so much damaged that it is feared a considerable portion of it will have to be taken down. The lightning passed through the spire and tower into the body of the church, and, taking an easterly direction, destroyed some of the interior fittings, and displaced two large stones in the main wall of the chancel. The lofty spire of this church is commonly called "Hemingbrough Broach," and is locally considered one of the best proportioned in the kingdom. The date of its erection is supposed to be about the middle of the fifteenth century.

OPENING OF NEW DOCKS AT WEST HARTLEPOOL. — The third dock at West Hartlepool, together with a graving dock, &c. have been opened in the midst of great rejoicings and festivities. At a general meeting of the proprietors of the West Hartlepool Harbour and Railway, held previous to the opening of the Swainson Dock, it appeared from the report read that the revenue of the company had increased during the last year in every department of trade; the income being 146,952*l*. 10s. 1d. showing an increase of 10,178*l*. over the preceding year. At present the company's harbour and dock works consist of—the tidal or outer harbour, 44 acres; first dock (coal), 8 acres; second (coal and merchandize), 14 acres; and third (for merchandize solely), 10 acres; besides 10 acres for timber float and store yards, with two graving docks, one 320 feet and the other 350 feet in length. The harbour, docks, quays, staiths, and terminal dock arrangements occupy a total space of 145 acres, which has been covered in little more than eight years. For the conversion of the bay of Hartlepool into a harbour of refuge, the directors stated that an Act of Parliament was obtained, and the port commissioners intend to construct two large piers or breakwaters to shelter the entire bay, and thus form an outer harbour of nearly 1,000 acres in extent, which will be accessible to the largest merchant ships on the coast in all weathers and states of the tide.

GAS.—The Plymouth Gas Company, according to the local *Times* is about to divide 10 per cent. on old shares, and 7½ on new ones, and as they cannot divide more than 10 per cent. the price of their gas, it is said, will be reduced from 5s. to 4s. 6d. per 1,000 cubic feet.——A gas company has been formed at Staveley, and works are about to be erected from designs by Mr. Cashin, of Sheffield, C.E.——The attempt to establish a new gas company in Willenhall is progressing successfully, though the old company have reduced their price to 5s. 6d. There is talk of the old company selling their works to the new, as well as of the very usual "amalgamation" between the two. A reduction of price to 4s. 6d. seems to be the point aimed at by the gas consumers of Willenhall.——Mr. Wm. Basford, of Pencławdd, has patented an invention for purifying coal gas, and obtaining a residuum therefrom. It consists in causing the gas when made to pass through vessels filled with any of the various charcoals, and heated; by preference charcoal made from wood, which is previously immersed in a strong solution of lime water for not less than fifteen minutes, and afterwards called prepared charcoal.

DEATH OF MR. BRINE, SURVEYOR TO THE BIRKENHEAD COMMISSIONERS.—We regret to have to record the demise of Mr. J. A. Brine, who for about twelve years fulfilled the important duties of surveyor to the Birkenhead Commissioners.

THE WESTMINSTER CLOCK. — Would not the Westminster clock be rendered more effective if a transparent red light could be placed at the extremity of each hand.—T.

UNITED SERVICE INSTITUTION.—At a meeting held on the 16th instant, a paper was read by Col. Twemlow, "On the Proper Season for Felling Oak Timber."

CARLISLE SURVEYORSHIP.—The Local Board of Health last week considered the subject of the appointment of a City surveyor, in the place of the late Mr. Hogg, when after some discussion it was resolved, by a majority of 16 to 10, to recommend Mr. McKie to the council for the appointment. Two names were voted for,—16 for Mr. McKie, and 10 for Mr. Gordon. On a question as regarded salary, a motion in favour of 150*l*. was rejected by a majority of 15 to 12, and 180*l*. recommended to the council by a majority of 17 against 10.

ELECTRO-TELEGRAPHIC PROGRESS.—Mr. J. Jones, of St. Asaph, Flint, has obtained provisional protection for improvements in telegraphs, by which a *fac simile* of the message is recorded simultaneously on the transmitting and receiving instruments, so that the sender may know immediately, and without the trouble of repeating, whether his message has reached its destination correctly. —— Mr. Thomas Allen, of London, C.E. has prepared a telegraphic wire of iron insulated with a new flexible material, sufficiently strong, it is said, to afford full protection, the whole weighing in some cases as little as one-tenth of the common wire, though having a conducting power three or even five-fold greater, while the relative proportion of strength in the wire is increased to a considerable degree.—— Mr. William Brown, of Australia, has made an offer to the Government to erect an electric telegraph from Mount Louis to Hobart Town, thence to Launceston and George Town, and to complete the whole within nine months from signing the contract, for 16,000*l*.——The screw-steamer *Propontis*, Capt. Goodwin, was lately at Queenstown, with the submarine electric cable to be laid down between Cape Ray, Newfoundland, and Cape North, Breton Island. The length of this cable is eighty-five miles, and its weight 170 tons. She has also on board the cable to be laid down between Cape Traverse, Prince Edward's Island, and Cape Formantino, New Brunswick,—length thirteen miles, and weight thirty tons. The cables were manufactured and are to be laid down by Messrs. W. Kuper and Co. of London, under direction of Mr. Canning, who, with his assistants, is on board.

AN IRON MONUMENT FOR THE IRON DUKE.—Having seen that a monument is about to be erected to the illustrious warrior in this our iron age of railways, palaces, suspension and tubular bridges, let me ask, Why should not the memory of the man be perpetuated in the material to which he was likened? In former ages, if we look into the memorials of the past, either at home or abroad, we find that our forefathers have left us specimens of their skill in the development of the same material. At home, in the chapel of Bishop West, at Ely; in the tomb of Edward IV. at Windsor; in the doors of Merton College, Oxford; at Bury St. Edmund's, at Westminster, at Leighton Buzzard, and the gates of the printing-office, Oxford; or abroad, in the cities of Munich, Brussels, Paris, Cologne, Liége, Rouen, Nuremberg, and the Grille of Sta. Maria, at Rome, &c. Why should it not be put forward for public competition, and the worker in metal be allowed to compete with the sculptor and the mason as in former ages? Are the works of the past not to be appreciated, which have stood the test of time? or are England and her artizans who build her iron ships and her locomotives, and send them over the face of the whole earth to defy competition in the construction, not worthy to erect a work of art to commemorate the greatest warrior of their age?—J. A.

BARN FLOORS.—With reference to "G. D.P.'s" inquiry concerning the means to remove moisture from asphalte barn floors, allow me to say, the moisture he complains of is caused by the damp vapour of the atmosphere being condensed on the surface of the asphalte floor, and not from its rising up through the same, as no dampness or moisture will penetrate through it if it is good material. The following method was carried out more than three years ago, in laying down the basement floors of an extensive range of first-class buildings in London. The ground underneath the floors intended to be laid was first well rammed down and regulated, on which a bed of concrete, 4 inches thick, was laid, to an even and level surface. Sleeper joists, 3½ inches deep, and 2½ inches thick, coated on the two sides and bottom edge with ashphalte, were then laid down on the concrete, at a distance of 12 inches apart. The spaces between the joists were then filled in with concrete, to within ¾ of an inch of the top of the joists. A layer of asphalte, ¾ of an inch thick was then spread over the surface of the concrete, thus forming a level floor of the asphalte and top of the joists, and securing a coat of asphalte between every part of the concrete and floor timber. Floor boards were then nailed or screwed down to the joists, completing the floors, which are now as free from dampness, moisture, and vermin, as when they were first laid down. The timber should be well seasoned before being used.—A. P.

LABOUR IN CANADA.—The *Canadian News* says: For three or four years past labour has been scarce and dear in Canada. The great public works, such as the Grand Trunk Railway, which will cause, from first to last, an expenditure something like 11,000,000*l*. sterling, have absorbed all the available labour, and raised it to an unusually high figure. Railway labourers have fetched from 4s. to 5s. sterling a day, and mechanical labour has been proportionably high. The great amount of extra labour employed on the railways has given the farmers a profitable consuming population.

MANUFACTURE OF IRON RODS, BARS, HOOPS, &c.—Messrs. Hocroft and Forrest, of Tividale and Tipton, have obtained provisional protection for improvements, which consist in piling together iron bars, and then rolling them down to one bar, which is slit into rods, either of one or more sizes, and at the same heat passed through rolls, with grooves, producing various descriptions of iron, such as two lengths of hoop iron and one of round simultaneously. By these means the bolting and breaking down processes may be dispensed with, and waste and heatings saved.

COOKING WITHOUT FIRE.—The *Scientific American* describes a plan for cooking without a fire. The invention is a combination of tin cooking dishes, placed one above another, the bottom of one vessel fitting on the top part of the dish below. In the lower dish of all a small quantity of quicklime is placed, and then, by means of a tube, cold water is introduced upon the lime. Chemical action generates intense heat, whereby the articles on the dishes are quickly cooked, ready for the table.

LETTER-BOXES. — Some compulsory enactment requiring letter-openings for all street-doors is very necessary. Being an observant individual, I not unfrequently see that for four, five, and six minutes, the postman has to wait unnecessarily at various street-doors. A double loss is entailed by the want of this very simple expedient: much unnecessary labour is entailed on the postman, with expense to Government and the ratepayers, and delay and inconvenience to the general public.—PAULATIM.

TENDERS

For the erection of a Warehouse Building, in Cannon-street West, for Messrs. C. Nicholson and Company. Mr. Richard Roberts, architect. The quantities supplied:—

Kelk	£11,760	0	0
Holland	11,370	0	0
Lucas	10,970	0	0
Haward and Nixon	10,535	0	0
R. Lawrence	10,499	0	0
Haynes and Eyre	10,575	0	0
Jay	10,326	0	0
Browne and Co.	10,263	0	0
Lawrence (Brothers)	10,120	0	0
Willson	9,988	0	0
Myers	9,751	0	0
Downs	8,926	0	0

Opened by the Guardians at the Aylesford Union, at Strood, on the 29th ult.:—

Gerrett and Colegate	£3,261	0	0
Wm. Jenner	3,176	10	0
Wm. Cobb	3,220	0	0
Geo. Cobb	3,080	0	0
Thompson and Crosswell	2,998	0	0
Chas. Collins	2,971	0	0
Thos. Thompson	2,900	0	0
John Goodwin	2,879	0	0
Geo Cotton	2,832	0	0
John Diggle	2,800	0	0
Clements	2,914	0	0
Lilley	2,794	0	0
Kirk and Parry	2,774	0	0
Naylor	2,697	0	0
Spicer (accepted)	2,650	0	0

For a new Church at Enfield, Middlesex. Mr. St. Aubyn, Architect:—

Smith and Co. London	£1,983	0	0
Patman and Co. Enfield	1,874	0	0
Cushing, Enfield	1,816	0	0

For a pair of Villas, on the Granville Estate, Blackheath, for Mr. Hally. Mr. W. Hill, architect. Quantities supplied:—

Bartlett	£2,602	0	0
Coleman	2,498	0	0
Willmott	2,390	0	0
Harding	2,240	0	0
J. and C. W. Todd	2,239	0	0

For a Wesleyan Chapel, at Bayswater. Mr. W. W. Pocock, architect. Quantities supplied:—

	Chapel.	Extra for Galleries.
Harding, jun.	£4,780	£350
Partridge and Cruch	3,797	362
Smith	3,692	380
Higgs	3,644	345
Greig	3,618	380
J. and C. W. Todd	3,546	342
Adamson and Son	3,497	371
S. S. Wilson	3,348	374
Cowland	3,240	338

TO CORRESPONDENTS.

"*Iron Gates*." - A correspondent suggests, that drawings or photographs of some of the "ribbon-work" iron gates in Milan would be a great acquisition to the iron trade in England, and that the Society of Arts could get them.

"P. N. L." (thanks). — "W. H. C." — "A. W. M." — "J. T." — "S. H." — "P. W. S." — "E. P." — "A. C." — "T. S." (not yet determined). — "M. R. J." (the cost could not be recovered from the landlord). — "G. D." — "T. H. A." — "W. M." — "J. H." — "C. G." (thanks). — "H. G."

"*Books and Addresses*."—We are forced to decline pointing out books or finding addresses.

NOTICE. — All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

APPRENTICES.—WANTED, by a Builder of congiderable experience, FOUR OUT-DOOR APPRENTICES, Two as Carpenters and Joiners and Two as Bricklayers A premium required. Good wages given, advancing yearly —For particulars apply to JOHN DYNE, Builder, 3, Clar mont-place, Wandsworth road, Surrey.

BOROUGH of DORCHESTER, DORSET. CLERK of WORKS WANTED — The Town Council of Dorchester require the servi es of a competent CLERK, to take charge of the works of sewerage and water supply about to be commenced in their district. It will be necessary for him to have a practical knowl dge of well-sinking and boring, the construction and fixing of steam-engines and pumps, and of masonry generally, and the works connected with laying brick and pipe sewers and water-pipes. Candidates are requested to apply for further information to Mr. A. WHITEHEAD, Engineer to the Council, 4, Dix-field, Exeter, and to state the salary they require, before the 1st of JULY next

Dorchester June 9, 1856. G. SYMONDS, Town Clerk

TO PARENTS AND GUARDIANS.

MESSRS. CORDEROY, Surveyors, No. 98, High-street, Marylebone, have a VACANCY for an ARTICLED PUPIL — Apply by letter for particulars.

NOTICE to MASONS and BRICKLAYERS —CONSTANT WORK for 200 GOOD HANDS, at 4s. 6d. per day.—Apply to Mr. OWEN LEWIS, Royal Oak, Saint Mary-street, Cardiff. - Cardiff, June 2, 1856.

SURVEYOR'S CLERK.—WANTED a respectable, well-educated, single Young Man as CLERK in the Office of a surveyor, who can write a good and expeditious hand, and is a tolerable Draught-man and a good Accountant. He must be well acquainted with the general routine of a Surveyor's or Builder's office. Hours of Attendance from Nine until Seven. Respectable reference a will be required.—Apply, by letter only, post paid, stating age, qu lifications, previous engagements, and salary expected, to S. G. at Mr. Roberts's, No 2, Arabella-row, Pimlico. I is particularly requested that testimonials be not forwarded unless applied for

WANTED, One or Two good JOINERS. They mu t u derstand Staircase and Handrail Work. Also, a good PLASTERER, who understands Plain and Ornamental Work.—Apply to Mr. GEO. JEEVES, Builder, Hitchin, Herts.

TO BUILDERS FOREMEN.

WANTED, an experienced, active Person, to UNDERTAKE the general SUPERINTENDENCE of a JOB, comprising alterations to some buildings in London.—Address, stating age, particular-, salary required, and where last engaged as foreman, to R. O Office of "The Builder."

TO CARPENTERS AND J INERS

WANTED, a steady and very active Man, as WORKING FOREMAN on a Gentleman's Estate. He must be able to measure owners' work, convert rough timber, make working drawings, set out work, write a good hand and keep accounts. One having a knowledge of steam saw-mills would be preferred. State age, and, if married, how many children. Wages 25s. per week, and a cottage rent-free. — Addres s A. B. Post-office, Uxbridge

TO BUILDERS.

WANTED, by the Advertiser, a Man of experience, who is about leaving his present employment, a RE-ENGAGEMENT as SHOP or GENERAL FOREMAN. Unexception ble reference as to character and ability —Address, A. B. Post-office, Wells-street, Hackney.

TO PLUMBERS AND BUILDERS.

WANTED, a SITUATION, by the Advertiser, who is a thorough good practical Plumber, and who would not objec to look after painting and glazing if the place would be permanent. Can have a good reference from his late employer, where he has been six years —Direct, A. B. Mr. Collins, 4, Christiana t ce, Han reserve, Peckham.

WANTED, in a Builder and Contractor's Office, a Clerk, one who thoroughly understands taking out quantities, estimating, and the general routine of the office. One having filled a similar situation with a London firm preferred. Apply by letter, stating age, where last employed, and salary required to O. M. Office of "The Builder."

WANTED, by a first-rate Draughtsman, Writer, and Colourist, an ENGAGEMENT to make finished maps and plans of estates, towns, parishes, railways, docks, drainages, &c. Has for eighteen years executed schemes and projects, in every variety, for the profession and the Government.—Apply, by letter, to R THEODORE, 4, Trafalgar-square, Charing-cross.

TO BUILDERS AND OTHERS

WANTED, a RE-ENGAGEMENT, as SHOP or OUT-DOOR FOREMAN, by an experienced person —Address Y. Mr Renton, Christ's Hospital

TO BUILDERS &c.

WANTED, by a Young Man, constant WORK, as PLUMBER, PAINTER, and GLAZIER Direct, B H. 10, King's-place, Old St. Pancras-road.

TO MASTER CARPENTERS AND BUILDERS

WANTED, EMPLOYMENT as an IMPROVER, by a Young Man who has not quite served his time out, his master having left the country.—Address to J. W. 5, South Island-place, Brixt n-road.

TO BRICKLAYERS AND GENERAL BUILDERS.

WANTED to PLACE OUT for three or four years, a LAD, aged 16, as an IN-DOOR APPRENTICE, to learn the general business. A small premium given.—Address, M. J. CARTER, Tea Dealer, King's-road, Chelsea.

TO CARPENTERS, FIXTURE-DEALERS, AND OTHERS.

WANTED, by a Young Married Man, a SITUATION as CARPENTER or JOINER, or Jobbing Hand, and can French Polish if required. Has no objection to go abroad. Wages not so much an object as constant employment —Direct to E. C. at Tanner's News-paper Office, No. 48, Boston-place, Dorset-square, Regent's park.

TO SURVEYORS AND BUILDERS

WANTED, a RE-ENGAGEMENT, by a Young Man, as ESTIMATING and MEASURING CLERK; is thoroughly conversant with accounts, book keeping, and the general routine of the office — Address, Mr. ROBERTS, 27, James-street, Buckingham-gate

TO CARPENTERS AND JOINERS.

WANTED, by a Young Man of industrious habits, EMPLOYMENT in either town or country.—Apply, B. Mr. G. Humphrey's, near the Lion and Key, Lower Leighton, Essex

TO ARCHITECTS, &c.

WANTED, a RE-ENGAGEMENT, as CLERK of WORKS, by a thorough practical man, who has a good knowledge of the business, and is a very good draughtsman. To any one requiring the services of a trustworthy confidential person, the advertiser more particularly calls his attention, being of very steady habits, and highly respectable references from last employer.—Address, A. G. E. P. City News-rooms, 66, Cheapside.

WANTED, EMPLOYMENT, by a first-rate BELL-HANGER and GAS-FITTER; can perform work and find mat rials complete, or on y labour work, at moderate terms. Good references.—Address, A. P. 14, Alfred-place, Bedford-square

WANTED, a RE-ENGAGEMENT as CLERK of WORKS Testimonials unexceptionable.—Address, Y. Z. care of Mr. Small, 9, Wellington-street, Hampstead-road, London

TO PLUMBERS, &c

WANTED, a permanent SITUATION as WORKING FOREMAN, by a good Painter, Lead and Sash Glazier, Paper-hanger, and Plumber.—Address, A. D. 61, New-street, Vauxhall

TO CARPENTERS, &c

WANTED, to APPRENTICE a YOUTH, aged 14, to a Master Carpenter and Builder A moderate premium will re given. A trial will be required.—Address by letter, to E. D. 25, Hart-street, Barking, Essex.

TO ARCHITECTS, SURVEYORS, &c

THE Parents of a Youth, aged 15, are desirous of placing him as IN-DOOR APPRENTICE to a Gentleman in the above profession. A moderate premium will be given — Apply by letter only, to S. P. Mr. Jeffrye's, Stationer, 14, Sun-street, Bishopsgate.

TEMPORARY ASSISTANCE. — The Advertiser, who is known to many London Architects as an Assistant, and who was a pupil of one of the most eminent among them, now principally occupies himself in PREPARING DRAWINGS and SPECIFICATIONS at his own Office for many of his former employers and others who need occasional assistance The Advertiser's terms are the usual ones of an experienced assistant, and his office most centrally situated.—Address, A. B. care of Messrs. Soyer and Co. 118, High Holborn.

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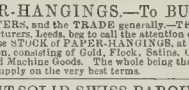

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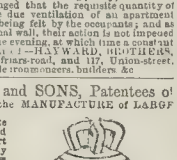

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ARCHITECT—T. H. Wyatt, esq.
BANKERS—Messrs. Coutts, Strand; Barnett, and Co. Pall-mall.

Mr. Benjamin Webster, the sole proprietor and owner of the freehold of the Royal Adelphi Theatre, London, having lately purchased very extensive premises adjoining, has decided upon rebuilding and enlarging this theatre, which is acknowledged to be the finest and most valuable theatrical site in the metropolis.

For this purpose, in order to meet a portion of the consequent expenses, and induce a personal interest of the patrons of the drama in the undertaking, Mr. Webster has determined to issue a limited number of Debentures (not to exceed fifty at the most) to the public, bearing interest at 5 per cent. per annum, payable half-yearly, and secured upon the freehold of the Royal Adelphi Theatre, as well as upon the adjoining freehold above mentioned. Only applicants will be attended to who can give undoubted references of respectability. Each debenture to be 600*l.* payable as follows:—20*l.* per cent. to be deposited on application for debenture or debentures, which will be returned, free of all charge, if no allotment is made; 250*l.* on each debenture upon allotment, less the deposit; and the residue by monthly sums of 50*l.* from the day of such allotment, which sums will bear interest at the rate aforesaid, from the time of their respective payments, to Messrs RANSOM, BOUVERIE, and CO.

By way of bonus, each debenture is to be entitled to a free admission annually transferable, to all parts of the theatre before the curtain, orchestra stalls and private boxes excepted, which will admit the occupier to order, his or her carriage (not of course of approved respectability), to every public performance throughout each year, commencing from the 29th of September. This privilege, totally distinct from the admission, being annually transferable, is estimated at 20*l.*; there being on the average upwards of 400 performances in each season, which, with the 5 per cent. insured, equals 9 per cent. in each debenture

FORM OF APPLICATION.

"Sir,—Having paid into Messrs Ransom, Bouverie, and Co's the sum 1*l.*—, being 5 per cent. on the amount of the allotment required by me, I request that you will allot me £500 debentures, secured on the Royal Adelphi Theatre and adjoining freeholds, agreeably to the terms of your prospectus; and I undertake to pay the sum of 20*l.* per debenture, less the above deposit, on the allotment being made, and to pay the residue, at the rate of 50*l.* a month, on every debenture from the date of such allotment.

Name .....
Residence .....
Profession or occupation .....
Date .....

To B. Webster, esq. Royal Adelphi Theatre, London.

Prospectuses and forms to be had at the Theatre.

N.B.—The theatre is to be constructed on plans rendered perfect by repeated visits, and soon as approved of by the Board of Works and the Lord Chamberlain, will be submitted for the inspection of the applicants

ROYAL POLYTECHNIC.—Patron, H.R.H. Prince ALBERT.—On Monday evening, June 23, at Eight, Jacob Bell, esq. will Lecture on schools of Design, and other means of cultivating the Fine Arts.—On Monday, Wednesday, and Friday, at Four and Nine, the Grand Series of Views after DAVID ROBERTS, as published in Fullarton and Co illustrating Bunyan's Allegory of the Pilgrim's Progress, with descriptive Lecture by the Rev J. B. Brasted.—On Tuesday, Thursday, and Saturday, at Three, Lecture by J. H. Pepper, esq. on the Moon Cosmogeny.—On the same days, at Four and Nine, the Historical Entertainment of Kenilworth; and at half-past Three and Eight, Performances by Mdlle Mundie on the Cither, and Herr Zirom on the Child's Mouth-organ.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Magic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to C. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank street, Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel street, Liverpool.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brick-work, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of their very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 80, Old Broad-street, London; to Mr. MUNEMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER ROLLING, near Rochester. Agent at the Works—Mr. THOMAS WEEKES.

Agents in London, Messrs. GEORGE POUTER and CO. Limemerchants, Furfleet-wharf, Earl-street, Blackfriars, and No. 10, North-wharf-road, Paddington.

FREEN and CO.'S PORTLAND CEMENT and LIME WORKS, WOULDHAM, near Rochester.—These Works having obtained Letters Patent for the Manufacture of Cement, by which very great and important advantages are obtained over the old method of manufacture, insuring at once uniformity of colour and quality, Merchants, Contractors, and Builders are informed that they can now be supplied with any quantity, either for home or foreign markets, for wholesale orders, on advantageous terms.—Samples and prices forwarded, on application at the Works; or to Mr. W. C. ATKINSON, 63, Moorgate street, City; from whom also testimonials from eminent engineers as to quality may be obtained.

PORTLAND and ROMAN CEMENTS.
BLYTH, BROTHERS,
16, SOUTH WHARF, PADDINGTON,
AND PLASTER WORKS,
BALDWIN'S PLACE, GRAY'S-INN LANE.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs.
Warehouse, No. 1, Wharf, Paddington-basin.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. This internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames street, London; and also at the manufactory, Faversham, Kent. N.B. These Cements supplied for shipment, on advantageous terms.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GREY STONE LIME WHARFS, 13, UPPER GROUND-STREET, Blackfriars (Surrey side), and 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 6d. per ton.

Small ditto, ditto, 4d. per ton.

Barges loaded in a few minutes.

Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

MEDINA CEMENT CONCRETE BUILDINGS.

This mode of applying cement is suitable for sea groyne, sea walls, and for soldiers' huts, emigrants' dwellings, temporary chu ches, school-houses, and workmen's cottages, all of which may be built with greater rapidity and economy than with any other materials; good cement and sea beach, or washed gravel stones, only necessary.

A sea groyne 200 feet in length, erected four years since in Sandown Bay, Isle of Wight, is a perfect specimen.

Two concrete models may be seen at FRANCIS' (BROTHERS), Cement Works, Nine Elms, London; and two soldiers' huts have been built by them for the Government, at Shorncliff Barracks, near Sandgate, Kent.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead; whilst the consumption of material is less than for one coat. It dries very fast and hard.

HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three-fourths the price.

HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and iron exposed to salt water; neither bilge water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, stamped, HUBBUCK, LONDON. PATENT; and when so marked the quality is guaranteed.

HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber coated with this Enamel is not attacked by the worm neither do barnacles attach to it.

Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.

OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at the Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent road. Office, 4, George-yard, Lombard-street.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote Office, at Warwick.

CHARLES RICHARDSON, 3 & 5, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS.
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 5, South Wharf, Paddington.

NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

BLUE LIAS LIME.—CHARLES NELSON can supply direct from the Works in his own boats to any part of the Thames alongside, in the Docks, River Lee, on any canal, or by rail to any part of the kingdom, large quantities of the above GENUINE HYDRAULIC LIME, now so extensively used.

Quality, Weight, and Measure may at all times be strictly relied on; references in proof of the above can be given.

N B The Captain of the Boat will always bring with him the Grand Junction Canal Note, from which the contractor will be enabled to know exactly what weight of Lime he is paying for.

All orders addressed to the
LONDON DEPOT, 16, SOUTH WHARF, PADDINGTON,
BLYTH, BROTHERS, SOLE AGENTS,
Will be promptly attended to, and any further information can be obtained from them
Works, Stockton-field, near Southam, Warwickshire.

PLASTER of PARIS.—MESSRS. BLYTH, BROTHERS, beg to acquaint the trade, that they have made a considerable reduction in price; the quality they are now manufacturing cannot fail to give entire satisfaction. Samples and prices forwarded to any part of England, or the metropolis. No extra charge made to any wharf or railway in London.—Any further information can be obtained at their Works, Baldwin's-place, Gray's-inn-lane, Holborn; or at the Blue Lias Lime Depôt, 16, South Wharf, Paddington.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

WHITE SUFFOLK and RED FACING BRICKS
COWLEY, KENT, and ESSEX BRICKS.
Also Yellow and Pale Malm Seconds, Cutters, Paviors, Shippers, &c.
KENTISH RAG-STONE of the FINEST QUALITY.
MILLS and PRICE, 5, ADELAIDE-PLACE, London-bridge

BEST HERTFORDSHIRE MALM SECONDS AND CUTTERS ALWAYS ON HAND.
MILLS AND PRICE, 5, ADELAIDE-PLACE, LONDON-BRIDGE;
AND CROWN WHARF, GREAT SCOTLAND YARD

HERMITAGE BRICKYARD, North-end, Fulham.—The best description of STOCK BRICKS now ready for sale at this yard. Gentlemen and builders are respectfully invited to inspect the quality of these bricks. Price for cash, 26s. per 1,000.

TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane, Dulwich. Price of good stock bricks, 25s. per thousand on the field, for cash.—Application to be made to the Foreman, A. DANIAM, at the Works.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for ashphalte, Land Drain Pipes, Patent Drain Pipes, Clay, Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 200 to 300 tons can load alongside the wharves at Grays. At MEESON and CO.'S malt-yard and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle), Fire-clay, Flare-burnt Lime, and Nodule and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.

General Office—No. 12, GEORGE-YARD, LOMBARD-STREET.

Letters addressed to Grays Essex, will meet with immediate attention.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of these is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to test it in operation every Thursday and Friday. It is the most simple machine seen at work, on application to
HENRY C. MOUNT, Sec.
37, King William Street, City.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES.
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in towns, cottages, and agricultural buildings.

Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street Docks, City-road Basin, Shoreditch, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURY," page 82, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 13, South Wharf, Paddington, Manufacturers of Improved Plain and Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for Sanitary and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, South Staffordshire, and other Lines of Rail, and highly approved. Warranted imperishable, and to resist all acids and exhalations.

*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability, Slabs and Tiles for Fireplaces and Hearths, Cornices for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent Staffordshire.

HOGG'S GARDEN EDGE TILES.—The attention of persons engaged in laying out Gardens for Public Institutions is solicited to these Tiles, as an elegant, cheap, and permanent substitute for box edging. In colour they resemble Bath stone, are very hard, easily laid down, afford no shelter for vermin, and act as a drain to the paths. Price 13s. per 100, or about 4½d. per yard run.—Full particulars on application to R. BLACKETT, Witham, Essex.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly seven years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dock-yard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith, take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pan.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

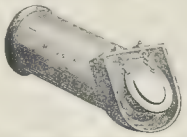
N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.



WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

DURABILITY of GUTTA PERCHA TUBING.

—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT.—Second Testimonial.—"March 10th, 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

HOSE PIPING.—WAITHMAN'S

PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.

½	⅝	1	1½	1½	1¾	2	2¼	2½	2¾	3 in.
9d.	11d.	1s.	1s.	1s.	1s.	1s.	1s.	2s.	2s.	2s.

Super-extra stout quality.

2	2½	2½	2¾	3 inches.
2s.	2s.	2s.	2s.	3s. per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

½	¾	1	1¼	2	2½ inches.
6d.	7d.	10d.	1s.	1s.	1s.

The hose is Barnettised at an extra charge of 3d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

CHAS. MACINTOSH and CO. Patentees

of the VULCANIZED INDIA-RUBBER, and GENERAL MANUFACTURERS of WATERPROOF, AIRPROOF, and ELASTIC RUBBER GOODS beg to inform all persons who desire to correspond with them direct, that their SOLE ESTABLISHMENTS are No. 4, Cannon-street West, London, and Cambridge-street, Manchester. This notice is necessary, as the term Macintosh Depôt, Macintosh Warehouse, &c. is frequently adopted both in London and the country by vendors of India-rubber goods who deal in articles not of the manufacture of CHAS. MACINTOSH and CO. Goods manufactured by CHAS. MACINTOSH and CO. are stamped with the name of the firm.

HANCOCK'S PATENT VULCANIZED

INDIA RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

VENTILATION.—J. KITE, Patentee for

Ventilating and Smoke-curing Operations.—Churches, chapels, schools, club-houses, public buildings, stables, &c. effectually ventilated, upon a new and economic system. Also, the New Patent Albert Chimney Cap, for the cure of smoke. Patronised by her Most Gracious Majesty; and on Buckingham Palace; to be also on St. James's Palace, Clarmont, Windsor Castle, Government buildings, &c. Wrought iron, 35s.; galvanized ditto, 30s.; cast iron, 33s. each, the latter as durable as the building itself. Illustrations and testimonials forwarded on receipt of two postage stamps.—Depôt, BARTON'S Ironworks and Manufactory, for the Patent Stable Fittings and enamelled Mangers.—Address, JAMES BARTON, 370, Oxford-street, London.

GARDNER'S PATENT SMOKE-CONSUMING APPARATUS

may be seen in successful operation in many places. Saves 30 per cent. fuel, and is entirely new. A Mr. Woodcock having made assertions affecting this patent, the patentee will perfectly satisfy all parties of the incorrectness of such statements at 7, Norfolk-street, Middlesex Hospital, or to the Makers, Messrs. BRIDGE and HEALY, 119, Dorset-street, Fleet-street.

CARTS, VANS, WAGGONS, LADDERS,

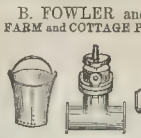
BARROWS, &c.—Price Lists for the Month may be had on application of

No. 1. Carts, Vans, Waggons, Drays, and Trucks.
No. 2. Wheels and Repairs.
No. 3. Ladders, Barrows, &c.
No. 4. Hire of ditto.

G. ELL, 3, Tottenham-court-road, and 8, Palace-row, New-road, St. Pancras, near the Hampstead-road.

B. FOWLER and CO.'S

FARM and COTTAGE PUMPS, 30s.



All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps, Engine Frames, Horse-gear, Crabs, Pulley Blocks, Wrought Pails, and Rubbish Baskets, Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJAMIN FOWLER and Co. General Engineers, Whitefriars-treet Fleet-street.

PORTABLE STEAM-ENGINES and

PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

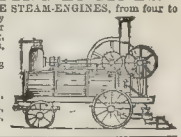
CONTRACTORS' STEAM-ENGINES.—

TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

STEAM PUMPING ENGINES.—

PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.



JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, Southwark, London.

TO SUGAR REFINERS, &c.—STEAM-

ENGINE and VACUUM PUMPS for SALE.—A very superior 14-horse-power Beam Engine, with Pumps attached, adapted for working two strikes of pans of 200 gallons each. Both engine and pumps of the best workmanship, by Sheara and Son of London, and nearly new. For further particulars, or to view, apply to Mr. ARNEY, York-place, Battersea.

TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,

which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the pump considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS, 8, Crescent, Jewin-street, London, Manufacturers and Patentees.

R. RICHARDS and CO.

PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, mines, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 36s. per doz. painted.
Ditto .... 42s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as being free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

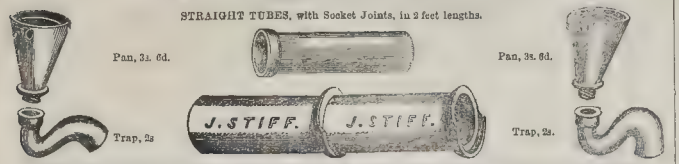
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

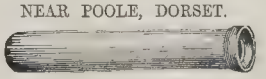
May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Denyer-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. HITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the Island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.

HALF-SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. DOULTON'S HALF-SOCKET PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

J. CLIFF, Proprietor,

MANUFACTURER OF

URNACE-BLOCKS, BRICKS, &c.

CLAY GAS RETORTS,

GLAZED SOCKETED PIPES,

HALF-SOCKET PIPES,

JUNCTIONS, BENDS, AND OTHER SANITARY APPLIANCES.

WORSLEY FIRE BRICK WORKS ESTABLISHED 1795

M. B. NEWTON, Agent,

LONDON STORES,

WHARF No. 4, GOODS STATION,

KING'S-CROSS.

The LARGEST, BEST GLAZED, and STRONGEST PIPES in London.

INSPECTION SOLICITED.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 6d. "
15	"	"	"	"	2s. 6d. "

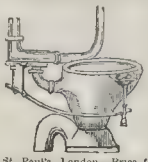
These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the most approved principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish street, near St. Paul's, London. Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.



CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE

No. 7.

Is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 300 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS. LAMBERT and SON,

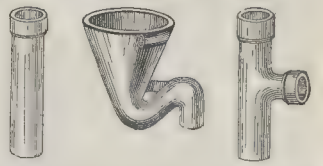
Brass Founders and Engineers,

Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

TO LOCAL BOARDS of HEALTH, SURVEYORS, &c.—The Best and Simplest MACHINERY for CLEANSING CESSPOOLS, DRAINPIPES, &c. including everything that is required, can be obtained from R. HARRETT and SON, Brass and Iron Founders, Beech-street, Barbican, London, who will furnish prices on application.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 88, Bankside. DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

STONE-PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES.—E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.

CLAY.—The BRANKSEA CLAY COMPANY, near Poole, Dorset.—Stone and other Potters are informed, that they can be supplied by the above Company with all descriptions of clay of the finest quality, and in any quantities, at very low prices. Brewers, Gas Companies, Farmers, Builders, and others, supplied with peculiar fine fire clay: the same may be had ground, if required.—Orders addressed to Mr. T. G. BECK, at New Wharf, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset, will meet with prompt attention.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without blistering. These Paints have been tested for five years at Her Majesty's Dockyards, and by Official Reports made thereon, which testify that coats of Wolston's Torbay Iron Paint will effectually cover as much surface as Lead Paint of the same Colour, White or Red Lead, and that they are stronger and cheaper than Lead Paints for all Public Works, Roofing, Boarding, and other Iron Roofing, Fencing, Shipping purposes, Wood or Iron, Stone or Cement Fronts, economy and durability will be secured. To Builders and Painters, for all inside purposes, they are equally applicable. Manufactured at the TORBAY IRON PAINT and OIL WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John street, Bedford-row, will have immediate attention.

SALES BY AUCTION.

TO TURPENTINE AND TAR DISTILLERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on WEDNESDAY, JUNE 25, at ELEVEN, in lots, without reserve, on the PREMISES, of Messrs. Masterton, Rotherhithe, near the Old Lie Dock, the PLANT of a TURPENTINE and TAR DISTILLERY, including two copper melting-pans, capable of melting twenty-five barrels each; four copper turpentine stills, 500 to 700 gallons, with copper heads; four copper worms and backs, one copper tar still, to work sixteen tarrels, with copper head and pewter worm and tub; four cast-iron resin oil pans, seven cast-iron pans, four-horse power steam-engine and boiler, several rods of brickwork furnaces, work and smoke-consuming apparatus, four large lead turpentine and oil cisterns, in wood cases; twenty turpentine coppers, fourteen iron-bound oil-butts, with brass cocks; scales beams and weights, two waggons, two waggons, two carts, harness, various utensils, and a quantity of building materials, in partitions, rafters, &c. To be viewed on TUESDAY previous to the sale, when catalogues may be had on the Premises, and of Messrs. Fuller and Horsey, Butler-street, City.

THE PRIOR-PARK ESTATE, BATH, comprising a noble and spacious stone mansion, with its extensive modern wings, connected by arcades and corridors, lately occupied as the Great Rom n Hotel, the coach-house, stabling, and other appendages, delightfully situate on one of the proud eminences overlooking the fine city of Bath, and commanding a grand expanse of magnificent scenery, but secluded in private grounds of surpassing and varied beauty.

MESSRS. DANIEL SMITH and SON are commissioned to submit for PUBLIC COMPETITION, at the MART, for the Lots of England, on TUESDAY, the 24th of JUNE, at TWELVE, unless an acceptable offer shall be previously made by private treaty), entire (or in a few sub-divisions presenting choice sites for building), the above very important and far-famed ESTATE, within and consequently possessing considerable influence in the borough of Bath. It comprises nearly 200 acres, in a ring-fence, tithe-free, and chiefly sound pasture land, finely undulated and richly wooded, and embellished with ornamental plantations, fish ponds, and hedges. The mansion, formerly the residence of Lord Hawarden) is of the best Bath stone, and is a charming and noble specimen of architecture, with a grand portico to each principal front of lofty Corinthian columns, and containing ample accommodation for a family of rank and fortune, with handsome mahogany and stone staircases, mahogany doors, &c. The wings, distinguished as St. Peter's and St. Paul's, comprise the chapels, dormitories, lecture-rooms, theatres, studios, refectories, &c. but might be easily removed. There are capital stabling and farm buildings, with various other detached offices, excellent gardens, and romantic pleasure-grounds, with terrace and other walks and rides of unusual variety and extent, the whole abundantly watered with springs of the purest water. Also, an ornamental cottage retreat, known as the Priory, a complete gymnasium, and several neat entrance lodges, all in repair, and very valuable stone quarries. Descriptive particulars, with plans, may be had (2s. each, to admit four persons), at the chief inns and libraries at Bath; of Messrs. Daggerfield and Fraser, Solicitors, Craven-street, Strand; of Messrs. Watts and Petgrave, Solicitors, Bath; at the Auction Mart; and of Messrs. Daniel Smith and Son, Land Agents, 11, Tavistock-place, Pall-mall, who are fully authorised to treat for its disposal.

TO CONTRACTORS, BUILDERS, CARPENTERS, AND OTHERS.

MESSRS. DAVIS and VIGERS are instructed to SELL by AUCTION, on the PREMISES, Cherry-tree yard, Bowling-green-lane, Clerkenwell, on THURSDAY, JULY 3rd, and following day, at TWELVE for ONE each day, the well-seasoned STOCK of MAHOGANY and FIR TIMBER, comprising 2,000 pine planks and deals, 600 yellow and white deals, 1,200 yellow and white battens, 100 squares of prepared flooring and match boarding, 5,000 feet of prepared mouldings, 12,000 feet of Spanish and Honduras mahogany, cut from eighteen months to three years; oak staves, fir timber, ash, beech, elm, and other planks, 3, sashing, panitic laths, and sundry useful stuff.—May be viewed the day previous and morning of Sale, and catalogues had on the Premises; and at the Auctioneers' Offices, 3, Frederick's place, Old Jewry.

GRESHAM-STREET WEST.—Building Materials of Two Houses.

PULLEN and SON are directed to SELL by AUCTION, on the PREMISES, on THURSDAY, JUNE 26th, at TEN for ELEVEN precisely, all the BUILDING MATERIALS and FIXTURES of two houses, Nos. 5 and 6, Gresham-street West, Wood-street, comprising sound brickwork, plain and pan tiles, oak and fir timber, oak and deal floors, glaze dashes, doors, floor-boards, shop fronts, lead gutters, batten cisterns and pipes, stoves, and other useful fixtures and fittings.—May be viewed on WEDNESDAY.—Catalogues had of PULLEN and SON, 89, Fore-street, Cripplegate.

ARTILLERY PLACE, FINSBURY.—Capital Building Materials of seven large Residences, to clear the site for the Royal London Dairy.

PULLEN and SON are honoured with instructions from her Majesty's Commissioners of Lieutenancy for the City of London, to SELL by AUCTION, on the PREMISES, on MONDAY, JUNE 30, and following day, at TWELVE, in lots, the whole of the excellent BUILDING MATERIALS, FIXTURES, and FITTINGS-UP of SEVEN RESIDENCES, of an unusually superior description, Nos. 19 to 25 inclusive, in Artillery-place (adjoining the Artillery Ground), comprising 800,000 capital stock bricks, prime oak and fir timber, in large and useful scantlings, 60 squares of slates and slating boards, 12 tons of lead, in gutters, flats, cisterns, and pipes, 200 pairs glazed sashes, with shutters, modern doors, partitions, handsome marble chimney-pieces, and interior fittings-up, 300 squares of capital boarded and tongued and grooved paving and steps, oppn and plain iron balcony and verandah rails, 1 chain of iron railing, 100 modern stoves and ranges, coppers, force-pumps, large iron bookcases, gas fittings, and all the expensive house and office fixtures.—May be viewed on FRIDAY previous, and catalogues had of HENLEY SMITH, Esq., Clerk to the Lieutenancy, 4, Warnford-court; of JOSIAH JENNINGS, Esq. Architect, 3, Foley-place; and of PULLEN and SON, 89, Fore-street, Cripplegate.

WHITEPARISH, eight miles from Salisbury, seven from Romsey, fifteen from Southampton, and two miles from the Dean Station on the South-Western Railway.—Important Timber, sale.—To Timber Merchants, Timber Merchants, Carpenters, Wheelwrights, &c.

MESSRS. KEYNES will SELL by AUCTION, at the MANOR FARM, Cowesfield-green, near Whitparish, on WEDNESDAY, the 30th of JULY, at TWELVE o'clock, 400 prime OAK TIMBER TREES, 8 Elm Trees, 13 Beech Trees, 143 capital Oak Flitterns, 40 Ash Flitterns, now lying marked in sundry lots in Cowesfield Wood, in Gatemoor, in Gasens, and in Meanwood Coppices; in Long Field, Beechy Nesick, Cumming's Meadow, and in Tom Pike's Row, on the above estate. The above are choice parcels of timber, remarkable for its superior quality, being well adapted for ship-building, and other purposes. Parties requiring timber of considerable dimensions and long lengths will find this sale well worth attention.—Catalogues may be had at the Inns in the neighbourhood; of Messrs. Cobbett and Sons, Solicitors, Romsey; and Messrs. Burt, the woodmen, near Whiteparish, either of whom will show the lots. Catalogues may be also had at the King's Head Inn, Whiteparish, and of the Auctioneers, Salisbury, of whom any additional information may be known.

IMPORTANT TIMBER SALE, CLARENDON-PARK, near SALISBURY.—To TIMBER MERCHANTS, SHIP BUILDERS, and Others.—To WHEELWRIGHTS.

MESSRS. KEYNES will SELL by AUCTION, at PIPER'S BARN, Clarendon-park, on THURSDAY, JUNE 26, 1856, at TWO o'clock, about 300 capital OAK TIMBER TREES, and a large quantity of OAK and ASH FLITTERNS, now lying, marked in suitable lots, on the above estate.—Catalogues may be obtained of Mr. PARSONS, Clarendon-park, who will show the lots. Catalogues may be also had of Mr R. ELKINS, Clarendon-park; and of the Auctioneers, Salisbury, of whom any additional information may be known. The above oak timber is noted for being exceedingly spiney and sound. The cutting this year is very superior, and will be found well worthy the attention of parties requiring useful timber.

SALES BY AUCTION.

CAMDEN-TOWN.—To CABINET and PIANOFORTE MAKERS, COACH-BUILDERS, CARPENTERS, and OTHERS.

MR. LEREW will SELL by AUCTION, on the PREMISES, Stanmore place, Clarendon-street, Grove-st et, near Park-street, on MONDAY, JUNE 30th, at TWELVE for ONE precisely, a fine drove of FIVE-BOARD HARDEANY, and yellow pine and spruce planks, deals, and battens, 2,000 feet of quartering, thirty squares of flooring, dry oak stuff, work-benches, sun-blinds, loose wood, old range, screws, slate cisterns, stone, tubs, &c.—To be viewed on SATURDAY prior to the sale when catalogues may be had on the Premises, and of the Auctioneer, Cardinal-parade, Hampstead-road.

TO IRONFOUNDERS, ENGINEERS, SMITHS, AND OTHERS.

MR. ALFRED DAY will SELL by AUCTION, on the PREMISES, Windsor Iron Works, Windsor-street, Gray's-rd, on TUESDAY, JUNE 24, 1856, at TWELVE o'clock, without reserve, the entire FITTINGS and UTENSILS of the WORKS; comprising 4-horse steam-engine, 8 horse boiler, iron casting frames, ditto furnaces, ten tons of iron, force-pump, powerful crane, iron shafting, drums, force, patent bucks, bellows, anvils, smiths' tools, trucks, patterns, cast-iron sash weights, several bags of nails, horse cart harness, scaffold-poles, boards, pulleys, carpenters' benches, plate-glass fr. mounting house fittings, writing-tables, desks, paving bricks, and effects.—May be viewed on Monday, and morning of sale.—Catalogues had on the Premises, and of the Auctioneer, City terrace, City-road.

TO CABINET-MAKERS, TIMBER-MERCHANTS, BUILDERS, AND OTHERS.

FOR SALE by AUCTION, on the PREMISES, Newington, BROADWAY, Curtain-road Shoreditch, by order of the Proprietor, who is retiring from the premises, and removing entirely to 201 Curtain-road, the SECOND PORTION of the STOCK in TRADE, of Mr. J. F. Mitchell, which will be sold without reserve, on MONDAY, 23rd JUNE, at TEN for ELEVEN o'clock precisely; consisting of large quantities of excellent and well-seasoned Spanish, Cuba, and Honduras mahogany, in fine pitches, planks, and boards; birch, maple, rosewood, walnut and cedar, in planks and boards; fine satinwood planks and boards; mahogany planks (whole and cut), &c.—To be viewed two days previous to and on the morning of sale.—Catalogues may be had on the Premises; and of THOMAS EDWARDS and SON, Mahogany Brokers and Auctioneers, 12, Pinner's hall, Old Broad street, City.

N B The premises to be let for any other trade

TO MARBLE MASONS, BUILDERS, SCULPTORS, AND OTHERS.

MESSRS. EVERSFIELD and HORNE have received instructions from Mr Fabbricotti to SELL by AUCTION, at his WHARF, Thames Bank, Pimlico, on TUESDAY, JULY 8th, at TWELVE for ONE, a choice selection of MARBLE, recently imported, consisting of Statuary, Vein, Sicilian, Black and Gold, and Dove, in block and scantling.—May be viewed one week previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament street, Westminster, and Coal Exchange.

TO BUILDERS, CARPENTERS, AND OTHERS.—Thoroughly seasoned well made Doors, at Union-street, Borough.

MR. ALFRED EWITT will SELL by AUCTION, at ELEVEN o'clock, on TUESDAY next, 24th JUNE, on the PREMISES, No. 4, Dunsmure-place, Union-street, Borough, about fifty well made and thoroughly dried DOORS, glued up, by order of Mr J. Harrison, Carpenter, &c. Also to suit the premises at Midsummer-fee. Parti ulars to be had on the Premises, of the Auctioneer, City-chambers.

FREEHOLD LANDED PROPERTY near BRISTOL.—To CAPITALISTS, CONTRACTORS for PUBLIC WORKS, BUILDERS, STONE-MERCHANTS, and OTHERS.—The Dodge Estate, Stoke Bishop, Bristol to Pressing Quarries.

MR. J. DEBENHAM has received instructions from the mortgagee to SELL by AUCTION, at the MART, on WEDNESDAY, the 16th JULY, at TWELVE, in two lots, the important FREEHOLD ESTATE known as "Dudley Down," comprising about seventy-five acres pasture and arable land, situate on the summit of Dudley Hill, 4½ miles from the city of Bristol, with the extensive and valuable quarries, containing an immense quantity of the finest description of building stone, the quality of which has been tested by C. H. Smith, Esq. of London (one of the gentlemen appointed under the authority of the Lords Commissioners to select the stone used for the new Houses of Parliament), who reports it has been published and highly satisfactory. It is specially adapted for substantial and ornamental buildings and possesses every evidence of which from the fact that they excellent quality of Dundry Hill, 4 miles from the city of Bristol, with the exception of Dundry Hill, built with stone from these quarries in the thirteenth century. The quarry has been recently opened, and only a small additional outlay will be required to place it in full working order.

Lot 1 comprises SEVENTY ACRES, including two cottages, occupied by Mr. Charles Withey, Mr. Chard, and Mr. Carp; and produces a present rental of 92l per annum; and

Lot 2, NINE ACRES of RICH PASTURE, let to Mr. R. Batt, at 20l per annum, both forming solid landed investments, with the valuable prospective advantages, in addition, of the Rich stone ledges in the Quarry. The views from the summit of the hill can hardly be exceeded in extent and beauty.

Particulars with conditions of sale and plans may be obtained of Mr R. Batt, Dundry, who will show the Estate; of Messrs. Ashmead and Son, Surveyors, Bristol; of Messrs. Cobson, Norwich; of Mr. J. G. Hobbs, Solicitor, Bristol; and at Mr. Debenham's Auction and Estate Agency Offices, 80, Cheapside, London, where also specimens of the stone can be seen.

Freehold Building Land, nine miles from London, in the County of Middlesex.

MESSRS. WINSTANLEY are instructed to offer for SALE by AUCTION, at the MART, on MONDAY, the 30th of JUNE, and if not then disposed of, on the following Monday, the 7th of JULY, a PLOT of BUILDING GROUND, land-tax redeemed, and free of rent (the purchase money may remain), situate on the north walk of the Norwood Station. The great facilities afforded by the London and Epsom Railway to this locality, coupled with its close proximity to the Crystal Palace, render it a most desirable, eligible for building purposes. The land will be sold in the same entirety or plots suited to the erection of gentlemen's villas. Half the purchase money may remain on mortgage. For further particulars and terms, apply to Messrs. WINSTANLEY, Paternoster-row.

FREEHOLD GROUND RENTS in the COUNTY of MIDDLESEX, amounting altogether to 70 per annum, and several Freehold Houses in Kingsland.

MESSRS. WINSTANLEY have received directions from the Executors to SELL by AUCTION, at the MART, on MONDAY, the 30th of JUNE, and if not then disposed of, on the following Monday, the 7th of JULY, the FREEHOLD PROPERTY; consisting of about 300 Dwelling-houses, Public-houses, Shops, and Wharfs, situate on the Tile Kiln and Coldharbour Estates, in the Hackney-road, viz.: in Trafalgar-place, Esq. Cambridge-place, York-place, Thorne-street at Upper Barton-street, York-street North, Cross-street, Great and Little Cambridge streets, Herbert-street, Edith-street, Windmill-street, Brunswick-street, Wenlock-terrace, Cumberland-street, Kingsland-street, Waterloo-place, Bath-place, &c. Some of the leases have only short terms to run. The ground-rents are well secured, and the lots vary from 8l. to 50l. per annum, and amount to about 5l. per annum. Particulars with plans may be had previous to the sale; to be then obtained of HARRISON RHODES, Esq. Solicitor, Davies-street, Berkeley-square; of Mr. Boston, Estate Office, Tile Kiln, Hackney-road; the Place of Sale, and of Messrs. WINSTANLEY, Paternoster-row.

OXFORD-MARKET.—Materials of the Elephant and Castle Public-house, Hunslow.

MR. A. RICHARDS, on the PREMISES, on MONDAY, the 23rd of JUNE, at TWELVE, comprising capital STOCK, brickwork, floor-boards, joists, rafters, and quartering, fittings, pewter-top counter, pipes; quantity of lead, in ci-terns, gutters, and pipes; sheet copper panties, York paving, stills, and coping, and a variety of materials. May be viewed the morning of Sale. Catalogues obtained on the Premises; and of the Auctioneer, Tottenham.

SALES BY AUCTION.

TO TIMBER MERCHANTS BUILDERS, WHEELWRIGHTS, PATTEN-MAKERS, and OTHERS.—1,000 Oak Timber Trees and Fellers, 2,000 Oak, Beech, and Birch use Poles, 760 House Parrels, 2,300 Hurdles, 17 Cords of Wood.

MESSRS. CHARLTON are favoured with instructions from Robert Bowman, Esq. to SELL, the above by AUCTION, at the GRANGE FARM, Hadlow, Kent, about two and a half miles from the Railway Station at Tonbridge, on FRIDAY, the 27th JUNE, 1856, at TEN o'clock in the forenoon, in suitable lots.—Catalogues may be had of the bailiff, on the Premises; at the Inns in the neighbourhood; Angel, Tonbridge; or of Messrs. Charlton, Auctioneers, Surveyors, and Estate Agents, Tonbridge.

TO BUILDERS, CARPENTERS, AND OTHERS. Timber Sale at Peckham.—On MONDAY, JUNE 23, at TWELVE o'clock, by order of the Contractors.

MESSRS. BARTON and SON will sell by AUCTION, opposite the Police-station, Huch-street, Peckham, upwards of 300 prime lots of BUILDING MATERIALS (pulled down from several city offices and warehouses to make room for improvements, and removed here for convenience of sale). There will be timber, fittings, stone, slates, iron, and an immense lot of useful and convertible materials.—Catalogues ready, and to be had on the ground.

THE HARROW FREEHOLD LAND TONTINE, to be established under a Deed of Settlement, to be enrolled in the High Court of Chancery. Capital, 84,000l. in 4,000 Shares of 21l each, payable by instalments.

PROVISIONAL COMMITTEE OF MANAGEMENT.

Edward Samuel Alderson, esq. 2, New-square, Lincoln's-inn.
Vice-Admiral Sir Andrew Pellett Green, K.C.H. 9, James-street, Buckingham-gate.
Joseph Henry Good, esq. 21, Upper Hamilton-terrace, St. John's-wood.
Jasper Wilson Johns, esq. Lawrence Pountney-hill, Cannon-street.
William Grimes Kell, esq. 112, Westbourne-terrace, Hyde-park.
George Henry Smith, esq. H.E.I.C.S. Cleveland-square, Hyde-park.
Frederick Hale Thompson, esq. 4, Clarges-street, Piccadilly.
Edmund White, esq. 39, York-terrace, Regent's-park.

AUDITORS.

William Turquand, esq. 13, Old Jewry Chambers.
Joseph Radford, esq. 22, Gloucester-road, Regent's-park.

BANKERS.—The London and Westminster Bank.

ARCHITECT.—C. Octavius Parnell, esq. 50, Pall-mall.

SURVEYORS.—Messrs. Chinnocks and Galsworthy, 23, Regent-street.

SOLICITORS.

Messrs. Pickering, Tompson, and Co. 4, Stone-buildings, Lincoln's-inn.

SECRETARY.—John Bennett, esq.

TEMPORARY OFFICES.—6, Lyddle-hill.

IMMEDIATE ADVANTAGES WITHOUT RISK.

The promoters of this Tontine have secured a valuable estate, consisting of 150 acres of very superior freehold land, in the county of Middlesex, forming one of the Headstone domain, eleven miles from London, and contiguous to the Harrow Station on the London and North-Western Railway, with the view of building thereon villa residences, of the yearly value of 80l. each and upwards, fit for the reception of wealthy residents and respectable families of moderate income, whereby it is estimated a return of 9l. per cent. per annum will be secured upon the capital employed.

Residents will be entitled to the valuable privileges of Harrow School, which is within an easy walk of the estate; and the London and North-Western Railway Company offer to those persons who shall erect houses of approved elevation on this estate, and of the annual value of 80l. and upwards, one first-class free pass between the Harrow Station and Eastcastle-street, for the occupier for the time being of each of such houses, during a period of eleven years.

Water in abundance, and of most excellent quality, is obtainable within a few feet from the surface of the land.

The shareholders will be entitled, during the lives of their respective nominees, to share in the annual profits of the undertaking, until seven-tenths in number of the then originally-nominated shall have fallen in, when the entire property of the Tontine will be divided among the then remaining shareholders; and until such division they will have a chance (if no villa shall think fit) of becoming an occupier, at a moderate rent, of a villa to be erected on the estate, and of obtaining, without cost, the privileges of a free pass as before mentioned, and likewise of enjoying the privileges of Harrow School.

Every shareholder will be entitled to nominate one life, of any age, with state of health, and the survivor of such life or lives for several shares so held by him, and the nominee will be restrained by the deed of settlement from incurring liabilities beyond the amount of the funds for the time available for the purposes of the Tontine, whereby the shareholders will incur no risk beyond the amount of the shares subscribed for.

Applications for shares must be addressed to the Secretary, or to the Solicitors of the Company, in the form hereto annexed, and must be accompanied with a deposit of 1l. for every share applied for, which will be returned to the applicant with respect to such shares as shall not be allotted to him, and should all the shares in the Tontine not be allotted, the whole of such deposits will be returned without any deduction whatever.

The residue of the sum payable on the respective shares shall be paid by monthly instalments of 1l each, to be called in from the date of the allotment thereof.

Arrangements have been made with most respectable and responsible insurance offices to insure the lives of nominees at a moderate annual premium; and which insurances may be effected at the offices of the Tontine—whereby shareholders may guard against the possibility of loss, while they will enjoy the chance of gaining a large profit upon their investment.

FORM OF APPLICATION FOR SHARES.

THE HARROW FREEHOLD LAND TONTINE.

I do hereby request you to allot me ..... shares in the above-mentioned Tontine; and I undertake to accept such shares, or any less number that may be allotted to me, and to acquaint you with the names and full particulars of my nominee or nominees upon receiving notice of such allotment.

Dated this ..... day of ....., 1856.

To the Provisional Committee of Management

Name ..... Address ..... Occupation .....

Post-office orders and cheques may be made payable to the Secretary, JOHN BENNETT, Esq., and prospectuses, with plans, may be obtained, and the reports of the architects and surveyors inspected, at the temporary offices.

WANTED, a dry, strong WARE-ROOM or ROOMS, containing about 1,000 feet square, convenient for trade, and near the City. Rent not to exceed 40l. per annum. Also a Counting-house suitable notice from either party. The first quarter's rent in advance if desired. Address, L. D. O. 23, Southampton street, Strand.

OFFICES, WESTMINSTER.—To be LET, a capital Ground-floor Suite of Offices, adapted either for professional men, law stationers, or tradesmen.—Apply at No. 46, King-street, Portman-square.

HOUSES of PARLIAMENT.—OFFICES, PARLIAMENT-STREET.—TO BE LET, capital light Chambers; new, and built for professional uses.—Apply at No. 60, King-street, Parliament-street.

EIGHT unfinished EIGHT-ROOMED HOUSES TO BE SOLD, and the money need not be paid till completed; Grove-road, Holloway-road, very near the Victoria-park. Apply at the Earl of Aberdeen, adjoining.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "The Builder," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, June 21, 1856.

The Builder.

A JOURNAL FOR THE

Architect, Engineer, Operative & Artist.

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ROYAL ACADEMY of ARTS, Trafalgar-square. The EXHIBITION of the ROYAL ACADEMY of ARTS is NOW OPEN. Admission from Eight till Seven o'clock. One Shilling. Catalogues, One Shilling.
JOHN PRESCOTT KNIGHT, R.A. Secretary.

THE NEW SOCIETY of PAINTERS in WATER-COLOURS.—The TWENTY SECOND ANNUAL EXHIBITION is NOW OPEN at their Gallery, 53 Pall mall (near St. James's-palace) daily from Nine o'clock. Admission, 1s.; Season-tickets, 5s.
JAS. FAHEY, Secretary.

THE ARCHITECTURAL MUSEUM, Canon-row, Westminster.—The Annual CONVERSAZIONE will be held in the Rooms of the Museum, on WEDNESDAY, JULY 16th, instead of July 2nd, as announced in the cards for the Summer Session. The Chair to be taken at EIGHT o'clock.
GEORGE GILBERT SCOTT, Treasurer.
June 27th, 1856. HENRY CLUTTON, Hon. Sec.

CONTRACTS.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—CONTRACT No. 1.—To BRICK MANUFACTURERS and OTHERS.—The Corporation of Sunderland are desirous of receiving TENDERS for the manufacturing and delivering in a depôt within the borough of Sunderland, the BRICKS necessary for the construction of the brick sewers, cess-pits, side entrances, &c. in connection with the said works. The quantity of bricks required will be about two and a quarter millions, including square bricks and bricks to different radiuses for upwards of eight miles of sewers. Further particulars may be known on application to WILLIAM CROZIER, C.E. Borough Engineer, at the Offices, East Cross-street, Sunderland, to whom Tenders are to be sent on or before the 9th day of JULY, 1856, endorsed, "Tender for Bricks." The Corporation do not bind themselves to accept the lowest or any Tender.
WILLIAM SNOWBALL, Town clerk.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—CONTRACT No. 2.—To STONEWARE PIPE MANUFACTURERS and OTHERS.—The Corporation of the Borough of Sunderland are desirous of receiving TENDERS for the manufacture and delivering in a Depôt within the borough of Sunderland, the STONEWARE PIPES, Bends, Junctions, Invert Blocks, Junction Blocks, &c. necessary for carrying out the Sewerage Works of the borough. The works comprise the necessary pipes, bends, junctions, &c. for about 12½ miles of pipe sewers from 6 to 18 inches in diameter, irrespective of private works; the necessary junction and invert blocks for eight miles of brick sewers, and other articles in stoneware which may be required in carrying out the said works. Further particulars may be known on application to WILLIAM CROZIER, C.E. Borough Engineer, at his Offices, East Cross-street, Sunderland, to whom Tenders are to be sent on or before the 9th day of JULY, 1856, endorsed "Tender for Stoneware Pipes." The Corporation do not bind themselves to accept the lowest or any Tender.
By order, WILLIAM SNOWBALL, Town Clerk.

THE CONSERVATIVE LAND SOCIETY.
TRUSTEES.
Viscount Ranelagh.
The Right Hon. R. C. N. Hamilton, M.P.
Hon. Col. Lowther, M.P.
J. C. Cobbold, esq. M.P.

TO ROAD CONTRACTORS, &c.—The Executive Committee are prepared to receive TENDERS for CONSTRUCTING the ROADS, DRAINAGE, and FENCING, on the MALDON ESTATE, Essex. The drawings and specification may be seen at the Offices of Mr. HENRY CODD, Solicitor, Maldon; of the Surveyor, Mr. GEORGE MORGAN, 33, Norfolk-street, Strand, London, on and after THURSDAY, 19th JUNE, 1856, between the hours of ELEVEN and TWO. Tenders are to be delivered on or before TWELVE o'clock, on FRIDAY, JULY 4th, to the Surveyor, at his Offices, and endorsed "Tenders for Roads, &c. Maldon Estate."—The Executive Committee do not bind themselves to accept the lowest or any Tender.
CHARLES LEWIS GRINSTEAD,
33, Norfolk-street, Strand, London.

CONTRACTS.

TO CONTRACTORS for PUBLIC WORKS. The Local Board of Health of Hastings give notice, that they are prepared to receive TENDERS from competent persons for the DRAINAGE of part of their district. The Contract will comprise the CONSTRUCTING and LAYING of about fifty yards of 4 feet CAST-IRON CULVERTS; 100 yards of 15-inch CAST-IRON PIPES, all provided by the Local Board; about 2,147 yards of BRICK SEWERS, from 1 foot 8 inches to 4 feet; and about 1,427 yards of GLAZED STONEWARE PIPES of sizes from 9 inches to 15 inches. Also the necessary Gullies, Ventilating Shafts, Side Entrances, and Tide Flaps. The specification and conditions of Contract and Tender, with printed form of Tender, may be obtained upon payment of five shillings, and the plans, sections, and drawings, may be inspected at the Office of the Town Clerk, High street, Hastings, between the hours of TEN and FOUR, on and after the 7th instant. The Local Board will require the works to be completed within six months from their commencement; and they do not bind themselves to accept the Lowest or any Tender. Sureties will be required. Sealed Tenders on the forms supplied by the Local Board, properly indorsed and addressed to "The Hastings Local Board of Health," must be delivered at the Town Clerk's Office, Hastings, before TWELVE of the clock at noon of FRIDAY, the 25th day of JULY next.—By order of the Local Board
JOHN G. SHORTER, Town Clerk.
Hastings, June 9, 1856.

TO BUILDERS.—Persons desirous of CONTRACTING for the ALTERATION of the GRAMMAR-SCHOOL, and the ERECTION of a new RESIDENCE for the Head Master, at Kettering, in the county of Northampton, may see the plans and specification and obtain a bill of the quantities at the Office of Mr. E. F. LAW, Architect, Northampton. The TENDERS are to be delivered to the Architect on or before SATURDAY, the 5th day of JULY next.
N.B. The Trustees do not pledge themselves to accept the lowest Tender.
E. F. LAW.
Priory Cottage, Northampton, June 17th, 1856.

COMPLETION of ROCHESTER-BRIDGE. REMOVAL of the ANCIENT STRUCTURE and FORMATION of QUAY.—The Wardens and Assistants of Rochester-bridge will be ready on TUESDAY, the 24th day of JULY, 1856, at the Bridge Chamber, in Rochester, to receive TENDERS from persons willing to undertake the TAKING DOWN of the present STONE BRIDGE of ten arches across the river Medway there, with its piers, foundations, and abutments, and the removal of the materials, and of all local impediments caused thereby to the navigation of the river; and also the constructing of an embankment or quay, on the Rochester side of the river, in the direction of the castle. The parties tendering are required to state their terms for the whole undertaking of removal and construction. Plans, drawings, and specifications of the intended works may be seen at the Office of the Resident Engineer, in Strood, on any working day between the hours of TEN and FOUR, when and where all requisite particulars may be ascertained. Sealed Tenders for the above works are to be delivered at the Bridge Chamber, Rochester, and marked on the outside "Tender for taking down, &c. Rochester-bridge," and "For the Embankment on the Rochester side" at or before TWELVE o'clock at noon, on THURSDAY, the said 24th day of JULY, 1856 (after which hour no Tender will be received), accompanied by a letter from one person engaging to become bound in 2,000*l.* or from two persons in 1,000*l.* each, with the party tendering, for the due performance of the contract. The Wardens will not hold themselves bound to accept any Tender unless fully approved by them.—By order of the Wardens and Assistants,
GEORGE ESSELL, Bridge Clerk.
Rochester, June 12th, 1856.

ROMSEY, HAMPSHIRE.—To BUILDERS and OTHERS.—The Burial Board of the Parishes of Romsey Extra and Romsey Extra are desirous of receiving TENDERS for building on their new burial ground TWO CHAPELS and a LODGE, and also for constructing the Boundary Walls, with Entrance-gates, according to plans and drawing prepared for that purpose by Mr. E. W. LOWEN, of No. 60, Kingstreet, Mitchell's, London, the architect, to whom application may be made. The plans, drawings, and specifications may be seen at my Office in Romsey, between the hours of TEN and FOUR, on and from the 30th of JUNE instant, until the 5th of JULY next; and the Board will not object to receive Tenders from the separate trades, or for the whole or any part of the works. Parties desirous to tender themselves to accept either of them, or the lowest Tender. Sealed Tenders are to be forwarded to me before FIVE o'clock in the afternoon of TUESDAY, the 8th of JULY next, marked, "Tender for Cemetery." Security for the due performance of the work to be prepared at the expense of the contractor) will be required.
C. L. LORDAN, Clerk to the Board.
Romsey, June 13, 1856.

THE LUTON LOCAL BOARD of HEALTH are prepared to receive TENDERS for BUILDING an INTERCEPTING SEWER and other DRAINS connected therewith, and for ERECTING the TANKS, ENGINE-HOUSE, and other WORKS required for deodorizing and precipitating the sewage of the township, according to the drawings and specification, which may be seen at the Engineer's Office, after MONDAY, the 30th inst. and printed copies of the specification, conditions, bill of quantities, and form of Tender may be had on payment of 10s. 6d. by applying to Mr. T. L. EVANS, C.E. at Luton. Tenders, sealed, addressed to the Chairman, endorsed "Tender for Sewerage Works," must be delivered at the Office, before SIX o'clock on TUESDAY, the 8th day of JULY.
Dated June 18th, 1856. GEORGE BAILEY, Clerk.

TO BUILDERS.—PAVEMENT CHAPEL, New North-road, Hoxton. ALTERATION and ENLARGEMENT.—The Building Committee is willing to receive TENDERS for the WORKS, which are intended to be commenced as soon as possible. The plans and specification can be seen, and the quantities obtained, at the Office of Mr. CHARLES EARLE, Architect, &c. Poultry, by application on or before MONDAY, 30th JUNE. The Committee will not bind themselves to accept the lowest or any Tender, unless satisfactory.

CONTRACTS.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—Commanding Royal Engineer's Office, Dublin, 13th June, 1856.—The Principal Officers of Her Majesty's War Department hereby give Notice, that they will receive proposals for the following CONTRACT, viz.:—For RAISING the present WATER-POWER, and FIXING CLOCK therein, at the Temporary Barracks, Curragh of Kildare, in the Curragh District. Persons desirous of tendering for the same will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and at the Royal Engineer's Office at the Curragh, and may obtain specifications, with the terms of Contract. The whole of the work to be complete and within one hundred days after the date of order to proceed with the work. The letters of Tender with specifications to be sealed, and transmitted under cover to "The Director General of Contracts, War Department, Pall-mall, London," so as to be received on or before the 1st day of JULY, 1856, and to be marked on the outside "Tender for work at the Curragh of Kildare."

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives notice that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall-mall, on or before the 8th JULY next, for STRIPPING and RESLATING part of the CAVALRY BARRACKS at Windsor. Printed schedules and forms of Tender may be obtained at the Royal Engineer's Office, 11, James-street, Pimlico; or of Mr. HARRISON, at the Barrack office, Cavalry Barracks, Windsor, between the hours of TEN and THREE o'clock from the 30th JUNE to the 14th JULY next, inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.
Royal Engineer's Office, 11, James-street, Pimlico, 24th June, 1856.

NOTICE is hereby given, that on MONDAY, the 7th of JULY next, I shall be ready at my Office, to receive sealed TENDERS from such persons as may be willing to UNDERTAKE the DREDGING and REMOVAL of MUD, for the improvement of Portsmouth Harbour. Drawings and specifications can be seen at the Office of the Clerk of Works, in this Dockyard, where all necessary information on the subject may be obtained. I do not bind myself to accept any Tender, nor any Tender. No Tender will be received after the above-named day.
Dated at Her Majesty's Dockyard, near Portsmouth, the 24th JUNE, 1856.
J. W. MARTIN Admiral Superintendent.

NOTICE to BUILDERS.—Such Persons as may be desirous of CONTRACTING with the War Department for CONSTRUCTING a BATARDEAU and SLUICE and DEEPENING the APPROACHES at the EMBARKING STEPS at GOSPORT, in the County of Hants, are requested to send in sealed TENDERS, addressed to the Director-General of Contracts, War Department, Pall-mall, London, on or before the 30th JULY next. Plans and specifications of the above works, with forms of Tender and any information relating thereto, can be obtained at the Royal Engineer Office, Portsmouth, on any day (Sundays excepted), between the hours of TEN and FOUR, from 1st to 11th JULY, 1856.
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Portsmouth, June 24, 1856.

NOTICE to BUILDERS and CONTRACTORS.—CONTRACT for REPAIRING certain PORTIONS of the RIVER FACE of QUEENBOROUGH WALL, and the TOP of the RIVER EMBANKMENT, from the RIGHT DEMARCATION to the GOVERNMENT BOUNDARY at SHEERNESS.—The Commanding Royal Engineer gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 10th of JULY, 1856, from such persons as may be desirous of CONTRACTING with the War Department for Repairing certain portions of the River Face of Queenborough Wall, and the Top of the River Embankment, from the Right Demarcation to the Government Boundary, at Sheerness. The plans may be seen, and printed specifications and forms of Tender obtained, by persons fully competent to undertake the work (none others need apply), at this Office, between the hours of TEN and FOUR o'clock, on TUESDAY, the 8th of JULY, 1856, Sunday excepted. The party whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound, under a penalty of 500*l.* for the due performance of the contract. Tenders for the above works to be addressed to "The Director-General of Contracts, Pall-mall, London," and endorsed, "Tender for Repairing Queenborough Wall, Sheerness." No Tender can be admitted after the said 10th day of JULY, 1856.
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Sheerness, June 25, 1856.

TO BUILDERS.—Sealed Tenders for BUILDING the NORTH WING of NEW BARRACKS, to be erected at Devonport; separate Tenders for the Asphalte Work, and also for Laying down Pipes and Fittings for lighting both wings of the barracks with Gas, including all requisite elements, will be received at the War Department, Pall-mall, London, on or before THURSDAY, the 31st JULY next, at noon, addressed "To the Director General of Contracts," and endorsed, "Tender for new Barracks, Devonport," "Asphalte Work for new Barracks, Devonport," or "Gas Work for new Barracks, Devonport" (as the case may be), on the lefthand corner of the envelope. The north wing of the new barracks comprises officers' barracks and model cubicles, sergeants' messes and cook-house, central building, canteen, enclosure walls, roads, parade, drains, &c. &c. Plans and specifications, with terms and conditions, may be seen, forms for Tender and bond, and furniture required at the Royal Engineer's Office, at Devonport, between the hours of TEN and FOUR o'clock on weekdays, from TUESDAY, the 1st JULY, to TUESDAY, the 29th day of JULY next, both days inclusive.
Royal Engineer's Office, Devonport, 21st June, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

THE VESTRY of the PARISH of SAINT MARY ABBOTTS, Kensington, are ready to receive TENDERS and to contract for the supply of 1,500 Yards of FLINTS, to be delivered at their Wharf, Kensington-basin. The form of Tender may be obtained, together with all particulars, on application to the Surveyor, Mr. JAMES BROADBRIDGE, at his Office, Vestry-hall. Tenders are to be sealed, and endorsed "Tender for Flints," and to be delivered at my Office, on or before FOUR o'clock in the Afternoon of TUESDAY, the 1st of JULY next. No Tender will be received except that on one of the printed forms. The Vestry do not bind themselves to accept the lowest or any Tender. The Contractor to enter into a written contract, and to bear the expense thereof.

By order, REUBEN GREEN, Clerk of the Vestry.
Vestry hall, Kensington, 21st June, 1856.

TO ENGINEERS, BUILDERS, and OTHERS. Parties disposed to offer, on or before the 12th of JULY next, DESIGNS, and TENDER for the ERECTION of a FOOT and CATTLE BRIDGE, constructed so as to convey water across the River Exe (a width of 100 feet) at Bourn, in the parish of Bickleigh (about eight miles from Exeter), are requested to apply for particulars at the Land Drainage Company's Offices, 30, Parliament-street, London; or 9, Bedford-circus, Exeter.

BIDWELL and BOOPLE, Secretaries

TO BUILDERS, ROAD CONTRACTORS, and OTHERS.—The Town Council of the Borough of Walsall are prepared to receive TENDERS for the ERECTION of a BOUNDARY WALL around the land intended to form the new cemetery in and for the said borough, extending to about 3½ acres or thereabouts. Also for the FORMING, MAKING, and SEWERING of the CARRIAGE-ROAD of 48 feet wide, and about 1,340 yards in length, from Bridgman-street, in the said borough, to the said cemetery, and for the fencing off by posts and railings of the said carriage-road from the adjoining lands according to plans and specifications which may be seen at the Office of the Town Clerk, Bridge-street, Walsall. Sealed Tenders, endorsed "Cemetery Tenders," for all or any of the above works, to be sent to the Town Clerk's Office, on or before the 9th day of JULY next. The Council do not bind themselves to accept the lowest or any Tender. By order,

SAMUEL WILKINSON, Jun. Town Clerk.
Walsall, 17th June, 1856.

THE PUBLIC HEALTH ACT, 1848.—TO CONTRACTORS and OTHERS.—The Local Board of Health for the district of Leamington, are prepared to receive TENDERS for the CONSTRUCTION of TWO COVERED RESERVOIRS (each capable of containing five millions of gallons of water), on the Newbold-hill, near Leamington, with the LAYING of a WATER MAIN, 1,130 yards in length, of 12 inches and 11 inches internal diameter, and the works connected therewith; the plans for which may be seen, and further particulars thereof obtained, on application to Mr. JOSEPH FOX SHARP, Surveyor of the Local Board, at the Office of the Town hall, Leamington; and copies of the specification and form of Tender may be obtained by applicants to the Clerk, at the Office, Town hall, on payment of 7s. 6d. each, after MONDAY, the 7th day of JULY, 1856, to whom Tenders must be forwarded, endorsed "Tender for Reservoirs on Newbold-hill," on or before MONDAY, the 21st day of JULY, 1856. The Board do not bind themselves to accept the lowest or any Tender.—By order,

R. H. DAVIES, Clerk.
Town-hall, Leamington, June 17, 1856.

MIDDLESEX and ESSEX TURNPIKE ROADS.—Notice is hereby given, that the Trustees of these Roads will meet at this office on TUESDAY, the 15th day of JULY next, at TEN o'clock in the forenoon, to consider PROPOSALS and to CONTRACT for 3,000 YARDS of BLUE GUERNSEY GRANITE, of the best and hardest quality, broken to a gauge of two inches and one-half inch, and to be free from dust; also for the Supply of 2,500 YARDS of the best picked KENT FLINTS, broken to the above gauge; and also for the supply of 2,000 YARDS of GRAVEL BALLAST, sifted through a sieve 2½ inches diameter in the clear, containing thirty-seven wires; the Trustees to be at liberty, at their own expense, to re-sift the same through sieves of 22 inches diameter, having forty-one wires, and to pay only for the quantity of ballast when re-sifted. Such materials are to be delivered alongside the wharf of Messrs. John Wesson and Company, situate on the eastern side of the river Lea, at Stratford Essex, near Bow bridge. The Trustees to pay the expense of unloading the barges. One moiety of each description of stone to be delivered within seven weeks, and the remainder within fourteen weeks from the date of the Tender being accepted: if such broken granite be not then delivered ballast are of the same and the quality contracted for, payment will be made for such materials on the 28th October next, if received by the trustees at the time stipulated. Materials delivered after the above specification will be rejected and not paid for. Should the parties tendering to supply the gravel ballast procure or have it in the County of this division of the roads, it or some must be sifted in manner before stated and be subject to be re-sifted by the Trustees, as aforesaid, and be within a convenient distance of the road where the same is to be used, which is across North-street, Whitechapel-road, and Bow Church. The Trustees do have the use of the land whereon the said gravel ballast is deposited until it may be required to be used on the road. Payment will be made for the same at the quarterly meeting of the Trustees held next after each stack has been measured. Tenders sealed and endorsed "Tender for Broken Granite," or "Kent Flints," or "Gravel Ballast" as the case may be, to be sent to this Office, on or before THURSDAY, the 10th day of JULY next, with a sample of each of the three descriptions of materials to be found by any person of depositing a sample, the Tender will not be considered. The Trustees do not bind themselves to accept the lowest, or any specific proposal that may be made to them. The penalty for not performing of the Contract is, in each case to be 20*l.*

GEORGE RACKE,
Solicitor and Clerk to the said Trustees.
Turnpike Office, Bow, Middlesex, June 14, 1856.

TO SEWER CONTRACTORS and OTHERS—MITCHAM, Surrey.—The Nuisances Removal Committee are desirous of receiving TENDERS for LAYING DOWN about 1,400 feet of 12-inch GLAZED ST. NEWARE PIPE DRAIN, and 200 feet of 9-inch BRICK SEWER. Plans and specifications will be ready for inspection at my Office on the 31st inst. Sealed Tenders endorsed "Tender for Drains," to be delivered to me at or before FIVE o'clock p.m. the 4th of JULY next. The Committee do not bind themselves to accept the lowest or any other Tender.—By order,

EDWIN CHART, Upper Mitcham,
Clerk to the Committee.
June 20th, 1856.

TO BUILDERS.—TENDERS are required for the ERECTION of FIVE DWELLING-HOUSES at BOW (Freehold), specimens of which and of contract, may be seen by application to Mr. WESLEY, No. 1, Morpeth-road, Bow.—Tenders to be delivered on or before MONDAY, 21st JULY. The parties do not engage to accept the lowest Tender.

BLEAN UNION.—To BUILDERS.—The Guardians of this Union are desirous of receiving TENDERS for the ERECTION of a NEW CHAPEL and SCHOOL-ROOM, ABLE-BODIED WARDS, INFIRMARY, and other BUILDINGS, and for making various Alterations at, and Additions to, the present Buildings at the Union Workhouse, Herne, Kent. Tenders, superscribed "Tenders for Works at the Blean Union Workhouse," to be delivered, free of expense, at the Union Workhouse aforesaid, on or before ELEVEN o'clock in the forenoon of THURSDAY, the 3rd day of JULY next, at which time and place parties Tendering, or their representatives, must be in attendance. The plans and specifications of the works may be inspected at the Board-room of the Workhouse, any day after the 3rd of JULY next, exclusive of Sunday, between the hours of TEN and FOUR; and any further particulars obtained of Mr. MARTIN BULMER, Architect, Maidstone. Bills of quantities and a form of Tender may be obtained at the Workhouse, upon payment of 7*s.* for each copy. The Guardians do not bind themselves to accept the lowest or any other Tender. Security will be required for the due performance of the works. By order of the Board,

JAMES BURCH, Clerk.
St. Dunstan's, Canterbury, June 24, 1856.

CONTRACTS.

SAINT JAMES, WESTMINSTER.—SEWERS WORKS.—The Sewers, &c. Committee of Vestry will meet in the Vestry-room, Greencard, precisely at SIX o'clock p.m. on WEDNESDAY, the 2nd of JULY next, to receive TENDERS from those willing to CONTRACT for all Works of SEWERAGE, DRAINAGE, CLEANSING of GULLIES, &c. in the parish for one, two, or three years, from the 30th of JUNE instant. Printed forms of Tender and specification of the several works may be obtained (price 5*s.* each), by applying at the Vestry Clerk's Office, Somerset House, Strand, Parish Surveyor's, or Inspector's Office. The Committee do not bind themselves to accept the lowest Tender nor to contract for more than sufficient sureties, and pay the expenses of the contract and bond.

June 21, 1856. GEORGE BUZZARD, Vestry Clerk.

NORTH EASTERN RAILWAY.—The Directors of the North-Eastern Railway Company are prepared to receive TENDERS for the undermentioned Articles, in such quantities as they may require, from the 1st of JULY to the 31st DECEMBER next, delivered at the Company's Storehouses at Newcastle, Gateshead, York, Leeds, or Hull. Payment for each Month's delivery at the end of Three Months, or Cash deducting discount.

1. Timber Deals &c.
2. Best English Oak Wagon Wood.
3. Railway Keys, Fence Railing, and Posts.
4. Wrought and Cast Iron Chairs and Switches
5. Nails.
6. Chains and Heavy Ironmongery.
7. Steel, Files, and Springs.
8. Tire Hoops.
9. Rivets.
10. Wire Ropes and general Hemp Cordage.

Forms of Tenders may be had on application to Mr. BARNES, Stores, Gateshead, on and after MONDAY, the 30th JUNE; and Tenders must be sent in, addressed to the Secretary at York, sealed and marked "Tenders for Stores," on or before MONDAY, the 14th JULY. The Directors do not bind them elves to accept the lowest Tender.—By order,

York, 24th June 1856. W. OBRIEN Secretary

TO BUILDERS.—Persons desirous of CONTRACTING for ALTERATIONS and ADDITIONS to Merton Church, Surrey, may inspect plans and specifications at the Office of the Architect, Mr. F. DIGWEED, 13, Queen's-square, Bloomsbury. Tenders to be delivered on or before MONDAY, JULY 7, at TWELVE o'clock at the Rectory, Merton endorsed "Tender for Church." Quantities supplied.

BUILDERS' TENDERS are required for the ENLARGEMENT of the PARISH CHURCH of ST. ANDREW, Nutfield, near Redhill, Surrey. The plans and specifications may be inspected at the Rectory, Nutfield, on MONDAY, the 30th of JUNE, and the Tenders must be delivered to the Architect, on THURSDAY, the 3rd day of JULY next, before THREE o'clock p.m. The lowest or any Tender not necessarily accepted.

JAMES G. SMITHER, Architect,
7, Duke-street, Adelphi, London.

ROYAL NORTH LINCOLN MILITIA STOREHOUSE.—To BUILDERS, BRICKLAYERS, CARPENTERS, and OTHERS.—Persons wishing to CONTRACT with the Magistrates for the county of Lincoln, for the several WORKS required to be done in the ERECTION of a STOREHOUSE at Lincoln, for the Royal North Lincoln Regiment of Militia, in accordance with plans and specifications prepared by Mr. HENRY GOWARS, Architect, of Lincoln, Architect, and which may be inspected at the Surveyor's Office, at the Castle of Lincoln, on and after MONDAY, the 30th instant, between the hours of TEN in the morning and FOUR in the afternoon, are desired to send to me sealed Tenders on or before the 10th day of JULY next, in order that the same may be opened and entered in the Minute Book of the Magistrates for the county of Lincoln, which will be holden at the County Hall on the following FRIDAY. The Magistrates will not bind themselves to accept the lowest or any Tender, unless they will require satisfactory security to be given for the due performance of the works.—By order,

FREDK. BURTON, Clerk of Gaol Sessions.
Lincoln, June 16, 1856.

TO BUILDERS and OTHERS.—The Guardians of the Poor of the parish of Saint George the Martyr, Southwark, will meet in the Board-room of their Workhouse, situate in Mont street, Southwark, on THURSDAY, the 3rd day of JULY next, at THREE o'clock in the afternoon, precisely, to receive TENDERS for the ERECTION of INDUSTRIAL SCHOOLS at Mitcham, in Surrey. The drawings and specifications may be seen, and the quantities obtained, at the Office of Mr. HENRY JARVIS, the Architect, 26, Trinity-square, Southwark. Sealed Tenders must be sent to me at my Office, before the 3rd JULY next. Security will be required for the due performance of the Contract; and the Guardians do not bind themselves to accept the lowest Tender.

JOHN HENRY FITCH, Clerk.
17, Union-street, Southwark, June 20, 1856.

TO SEWAGE MANURE COMPANIES, SCAVENGERS, and OTHERS.—The Board of Works for the Hackney District are desirous of entering into a CONTRACT for the EMPTYING of CESSPOOLS within the district, agreeably to the specifications and conditions which may be seen, and particulars obtained at the office of Mr. JAS. LOVEGROVE, Surveyor to the Board, Town hall, Church-street, Hackney, any morning between NINE and FIVE o'clock. The parties contracting will be required to empty the cesspools by the atmospheric process, viz by means of a cart, consisting of a closed air tight vessel or vessels, with flexible tubes attached thereto, the soil to be charged with the soil by the exhaustion of the air therein contained. Tenders to be addressed to Mr. RICHARD ELLIS, Clerk to the Board, Town hall, Hackney, endorsed "Tenders for emptying Cesspools." The prices to be inserted in words, at length, and to be forwarded to the Clerk on or before WEDNESDAY, the 9th of JULY next. The Board do not bind themselves to accept the lowest or any Tender.

TO BUILDERS and OTHERS.—Notice is hereby given, that the Board of Works for the Fulham District, invite TENDERS for LAYING DOWN about 1,200 of 12-inch PIPE SEWER, or thereabouts, in Bradmore, Hammersmith, and other works connected therewith in accordance with a plan and specification to be seen at the office of the Surveyor, Mr. A. C. BEAN, Bridge-road, Hammersmith. Tenders must be sent in sealed, addressed to the Chairman of the Board of Works, Broadway House, Hammersmith, endorsed "Tender for Sewers," on or before WEDNESDAY next, at FOUR o'clock p.m. The Board does not pledge itself to accept the lowest or any Tender.

By order,
June 26, 1856. W. LOVELY, Clerk.

TO BUILDERS and CONTRACTORS.—Persons desirous of TENDERING for the ERECTION of a HOUSE, with Outwork, &c. may now see the plans and specifications by applying to FRITH and SMITH, No. 1, Bateman's-row, Curtain-road, between the hours of ELEVEN and ONE, or THREE and SEVEN o'clock. All Tenders to be sent in on or before JULY 10th, 1856. F. and S. do not pledge themselves to accept the lowest or any Tender, nor will any allowance be made for estimates.

June 27th, 1856

NORTHCOTES INCLOSURE.—A CONTRACT No. 1. PUBLIC ROAD BRIDGES. The Valuer acting in the matter of the Northcotes Inclosure is desirous of receiving TENDERS for the ERECTION of TWO BRIDGES of brick and stone over public roads in the Township of Northcotes: plans and specifications of which may be inspected at the Office of Messrs. Mallalieu and Power, Accountants and Surveyors, Rochdale, on and after the 27th Inst. JULY next, and to which sealed Tenders are to be delivered before the 15th day of JULY, under cover to me.

CHARLES NORTH, Valuer.
South Thoresby, June 28, 1856.

CONTRACTS.

CONTRACTS for SUPPLY of YORK PAVING, ABERDEEN KERB FLINTS, GRAVEL, HARD CORE, and other ROAD MATERIALS.—Parish of St. PANCRAS, in the county of Middlesex, Department of Works.—To CONTRACTORS.—Notice is hereby given that the Highways, Sewers, and Public Works Committee of the Vestry of the parish of St. Pancras, will meet at the Office of the Department of Works, 10, Edward-street, Hampstead-road, on MONDAY, the 7th day of JULY next, at FOUR o'clock in the afternoon, to receive TENDERS, or contracts to supply the following materials, &c. viz. York stone, Aberdeen granite, kerb, gravel, flints, hard core, lime sand, Thames ballast, and other materials all of the best description, to be delivered as follows, either on the Wharf adjoining to, and alongside of, the Regent's Canal, at Agar-town, near Salisbury-street-bridge, or in the yard attached to the Office of the Department of Works, or on the roads in the parish, as may be required. Sealed Tenders to be sent in, signed by the proposed Contractor, with the names and description of two sufficient sureties for the performance of his Contract, to the Office of the Department of Works, to be before TWELVE o'clock at noon, on the said MONDAY, the 7th day of JULY next. The Vestry do not bind themselves to accept the lowest or any Tender. No Tender will be received or accepted unless made out on one of the printed forms, which, with further particulars, can be obtained on application to Mr. WILLIAM BOOTH, Chief Surveyor to the Vestry, at his Office, as under.—By order,

G. W. F. COOK, Vestry Clerk.
Department of Works, 10, Edward-street, Hampstead road,
June 27, 1856.

TO BUILDERS.—WHITECHAPEL UNION WORKHOUSE.—The Guardians of the Whitechapel Union will meet at the Workhouse, in the Whitechapel-road, on FRIDAY, the 4th of JULY next, at THREE o'clock in the afternoon precisely, to receive TENDERS and CONTRACTS for BUILDING the FIRST PORTION of the NEW WORKHOUSE for this Union, in Charles-street, Mile-end New-town. The plans, specification, and conditions of Contract may be inspected at the Offices of the Architect, THOMAS D. BARRY, Esq. 15, Lincoln's-inn-fields, London; and 47 Bedford-street, North, Liverpool, from the 14th to the 19th JULY next. Builders proposing to Tender, or their representatives, are invited to meet the Architect, at his Office, 15, Lincoln's-inn-fields, London, on FRIDAY, the 4th of JULY next, for general explanation, and to receive particulars. Tenders must be delivered sealed in, and indorsed, "Tender for Workhouse," at the Whitechapel Workhouse, previous to the time of meeting, and the person whose Tender is accepted will be required to give satisfactory security in the sum of 2,000*l.* for the due performance of the Contract.—The Guardians reserve to themselves the right not to accept the lowest or any Tender.—By order of the Board,

G. ADAMS FAIR, Clerk to the Guardians.

TO BUILDERS.

PERSONS desirous of CONTRACTING for the ERECTION of ST. MICHAEL'S BAPTIST CHAPEL, Coventry, may inspect the plans and specifications at my Offices, Priory Row, after the 1st day of JULY next. Tenders to be sent in on the 23rd JULY. The Committee do not bind themselves to accept any tender.

JAMES MURRAY, Architect.
Priory Row, Coventry, June 24th, 1856.

TO BUILDERS.—Persons desirous of CONTRACTING for the ERECTION of a COACH-HOUSE, STABLING, and OFFICES, at Hatfield, may inspect the plans and specification at my Office, on and after MONDAY, the 30th inst. between the hours of TEN and FOUR o'clock. TENDERS to be delivered on or before MONDAY, the 7th JULY, 1856. The Proprietor does not bind himself to accept the lowest or any Tender.

J. R. DAGG.
Hatfield, Herts, 27th June, 1856.

ELIZABETHAN CLOCK COMPETITION.—Mr. BENNETT, Clockmaker, Greenwich, Kent, hastens to inform the Competitors for the above that the Designs having been returned from the country, may now be obtained at his London Clock Galleries, 65 and 65a, Cheapside, between TEN and FOUR o'clock, or they will be forwarded, if required, on receiving an application addressed to him as above.

PARNELL'S improved PATENT LOCKS, to be had only of the Patentee, 281 Strand, opposite Norfolk-street. These Locks are the safest and cheapest, made of all sizes, and for every purpose. Descriptions and Lists of Prices gratis. Liberal discount to the Trade. Fireproof Safes, Doors, and Frames, Deed and Cash-boxes.

JOHN TANN'S new patent RELIANCE LOCK and FIREPROOF SAFES form the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. Waterlow, Birchin-lane; at the Warehouse, 30, WALBROOK, CITY; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and party-walls.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. may be had on application. Estimates and Plans free. Seven—J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

ORMOLU STOVES.—KEITH and McGEORGE, solicit the attention of Builders, &c. to their STOCK of STOVES, in large patterns, always on hand, cheaper than any wholesale house in London, for cash. Bright and Ormolu Registers, with or without bars, first quality, from 42*s.* to 4*l.* 4*s.* each. KEITH and McGEORGE, Ironmongers and Kitchen-Fitters, 36, Piccadilly, opposite St. James's Church. Established 1817.

TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most efficient yet invented, is made by C. SMITH, of 14, Queen-street, Oxford-street, near Argyll-street, where a working model can be seen or will be sent for inspection on the shortest notice.

N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

ESTABLISHED 1817

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERS' WAREHOUSES, 19, Horseferry-road, and 1 New Peter-street, Westminster.

GREAT REDUCTION IN PRICES.

RAIN WATER CASTINGS, per yard.

Sizes—3 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	1s. 1d.	1s. 3d.	1s. 5d.	1s. 7d.	1s. 9d.	2s. 0d.
Half-round Gutters	1s. 3d.	1s. 5d.	1s. 7d.	1s. 9d.	2s. 0d.	2s. 3d.
O G Gutters	1s. 9d.	1s. 11d.	2s. 0d.	2s. 4d.		
Ditto, with plain lips easton	1s. 3d.	1s. 5d.	1s. 7d.	1s. 9d.		
Ditto, with top clips	1s. 6d.	1s. 8d.	1s. 10d.	2s. 0d.		

Bash Weights, 7*s.* 6*d.* per cwt.; Air Bricks, 3*s.* 3*d.* per dozen.

Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16*s.* 6*d.*	16*s.*	15*s.*	14*s.* 6*d.*	14*s.* per cwt.

Best Cut Floor Brads ..... 12*s.* 6*d.* to 13*s.* 6*d.* per cwt.
Best Cut Lath Nails ..... 12*s.* 6*d.* to 13*s.* 6*d.* "
Best Zinc Slating Nails ..... 46*s.* "
Best Glues ..... 47*s.* to 52*s.* "

A large Stock of Elliptical Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

Estimates given for any description of Wrought or Cast Iron Work. Heat up to Hot Water &c.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 55, High Holborn.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES

beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	.. 1¼ ..	7s. 0d.
15	.. 1½ ..	7s. 6d.
15	.. 1¾ ..	8s. 0d.
15	.. 2 ..	8s. 6d.
15	.. 2½ ..	9s. 6d.

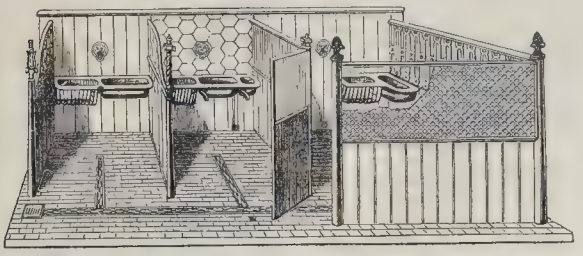
THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming REVERSED CLAWS, which are so bent that a direct end grain of the iron is presented longitudinally, and which become, when built into the brick-work, embedded in the structure, by which means a COMPLETE and PERFECT DETAIL TIE throughout the whole building is obtained.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.

London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



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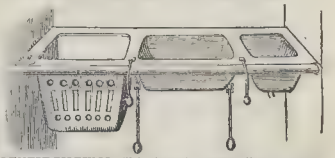

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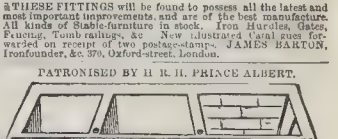

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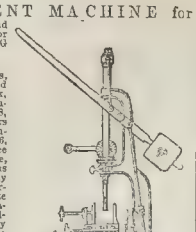

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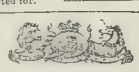
HEATING BY  HOT WATER.

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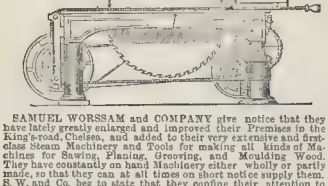

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Patent vertical saw frames, of the foregoing dimensions, with steam-power attached, circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a 4" an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power mortising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 36 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders this firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be surpassed by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.

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Elliptic Stoves, double backs, 2½d. per inch, and upwards.
Register Stoves, 5s. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and hot boilers, best wrought bars and bright fittings:—
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2-feet Cottage Ranges, with ovens and back boilers, 25s. each.
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Best Fine Cut Clasp and Rose.

½	¾	1	1½	2	2½	3-in. & larger.
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And every material required in the building, bell-hanging, ornamental, and brass-founding trades on the most reasonable terms.
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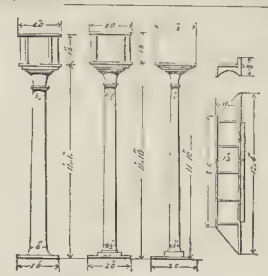

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PFEIL AND STEDALL.
THE LARGEST STOCK AT
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5 AND 6, BROAD-STREET, BLOOMSBURY.

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Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.
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Vein, in blocks of ordinary dimensions, 8s. 6d. per foot cube.
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The Trade supplied.

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EXAMPLES OF BONUS.

Date of Policy.	Sum in Policy.	Total Bonus Addition to 1856.	Sum in Policy with Bonus Addition.
15th Nov. 1825 ..	£1,000	£1,172 0 0	£2,172 0 0
,, 1840 ..	1,000	327 0 0	1,327 0 0
,, 1845 ..	1,000	582 0 0	1,582 0 0
,, 184 ..	1,000	347 0 0	1,347 0 0
,, 1845 ..	1,000	174 10 0	1,174 10 0
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The Builder.

VOL. XIV.—No. 699.

EVERY cathedral town in England will afford matter of interest to those of our student readers who, now that we have excursion weather, are seeking new lands to conquer; but few of them will be found more instructive and delightful than Lincoln. It is full of thought-inducing remnants: the Roman, the Saxon, and the Norman have each left stone records of their presence, and the cathedral, commenced by the last-named, exhibits wonderful specimens of all the mediæval styles up to the time of their decay. Lincoln was at one time a watery place. *Lhin*, for lake or water, and *dun*, a fortress or hill, give us the *Lindum* of Latin writers: and from *Lindecollina* and *Lindocollyne*, as it was sometimes written by later annalists, we soon get to Lincoln. Industry and knowledge have transformed the marshes which formerly surrounded the city into corn-producing and valuable land. "I hard say," writes Leland, "that the lower parte of Lincoln town was al marisch, and won be policy, and inhabitid for the commoditie of the water." The castle is placed on a hill, where, too, stand the cathedral and the more ancient portion of the town, while on the land thus won in the valley grew up the "lower town."

The Roman north gate (the centre arch and one side-arch remaining) is the most perfect antiquity of its kind in the kingdom. Standing as it does over a thoroughfare, it is exposed to many casualties, and should have careful attention. Not far from it there is a mass of the ancient wall, standing in a field, apparently well tended, for which the owner, Mr. Keyworth, deserves thanks. The wall and ditch anciently passed where now stands the lower, or eastern transept of the cathedral, and this may account to some extent for the disruption of parts of the structure there. Of the fine position of the cathedral every one has heard. Placed on the hill, it stands high above the houses of the lower town, and is seen for miles around. And what a structure it is! with stronger claims for admiration, we are disposed to think, than even that of York. Look at the majestic west front where the central portion, the semi-circular work of Remigius, dating from about 1086, is added to, and surrounded by the Early English work of Bishop Hugh, put up at the end of the following century, and quite the beginning of the thirteenth. Norman sculptures give additional interest to this front: the range of statues over the central doorway represent eleven kings of England.

Milner, speaking of the rebuilding in the Pointed style of the eastern part of Canterbury Cathedral, remarks that "the style thus adopted in the first metropolitan church of this kingdom was followed by the suffragan cathedrals as soon as any of them stood in need of rebuilding or repairing. Lincoln," he continues, "led the way about the year 1195, under the direction of the illustrious St. Hugh, who undertook the whole of this vast cathedral, and who was so intent upon the work that he carried stones and mortar on his own shoulder for the use of the masons."

Then look to the beauty of the east end, externally geometric in style, where the Chapter House, with its high pointed roof and its flying buttresses far outstanding, clumsy as the latter device may be in a constructional point of view, lends additional beauty to the picture. Notice, too, the central tower soaring up to the sky, and once surmounted by a spire.

The glory of the cathedral internally is the presbytery, the extreme east end beyond the choir, the beauty of which is marvellous. This was not entirely finished in 1306. The angels in the spandrils of the triforium arches and other of the details, will be found in the Mediæval Court at Sydenham. In the original, from pavement to roof, there is beauty. A cast of the "Holy Sepulchre," from the choir of the cathedral, is also at Sydenham.

The rose window of the main south transept is especially noticeable as a specimen of Decorated tracery: we gave an engraving of it some years ago.* The stained glass in this is gem-like and beautiful in the extreme. The glass in the lancet windows under is also good. The glass in the rose window of the north transept has been satisfactorily repaired and perfected lately by Messrs. Ward and Hughes. In the south aisle three memorial windows have been put up,—by Messrs. Powell (the easternmost), Mr. Wailes, and Messrs. Chance, respectively. In Mr. Wailes's window the colour is indifferent, or, at all events, looks so where it is placed; nevertheless, as a whole, it would seem to be the best of the three. Eight windows, we were told, are in preparation for the south arm of the small transept, to serve, together with a recumbent figure, by Mr. Westmacott, as a memorial of the late bishop. It is to be hoped that Mr. Westmacott's figure will assimilate in character with the building: a monumental tablet, in memory of some of our brave soldiers, by Mr. Richardson, put up at the west end, does not, and in consequence is unsatisfactory.

Returning, however, to the glass, we have to mention the east window, recently executed by Messrs. Ward and Hughes, at the cost of 1,060*l.* and wherein Messrs. Powell's glass is employed. This must be considered a very remarkable work, although not free from defects. It purports to set forth the Scheme of Human Redemption in a numerous series of panels. Twenty-eight of these, circular in form, are placed in the form of a cross up the centre and across the window: twenty others, of another shape, enclose the cross in a parallelogram; and the spaces between the cross and the square are occupied by sixteen smaller panels. The panels forming the cross contain scenes from our Saviour's life, the Adoration of the Magi, the Transfiguration, Temptation, and other events. The Fall of Man and its result provide subjects for the panels composing the square,—for example, the Expulsion; the type of the Great Sacrifice, the offering of Isaac by Abraham; and the type of the Atonement, the setting free of the Scape Goat and the destruction of the other goat, mentioned in the 16th chapter of Leviticus. In the whole there are sixty-four subjects. Seen close, this window is much too blue, and greatly wants white light. The desire of the artists in adopting this tone was probably to increase the apparent length of the church from the choir; and, seen from the gallery in the upper part of the west end of the church, the desired effect is gained.

When the visitor is in this gallery, he will not fail to see the Stone Beam, as it is called, a flat arch 27 feet 11 inches long, 1 foot 9¾ inches wide, 11 inches deep, and with a rise of 1 foot 2⅛ inches, which springs from tower to tower over the vaulting of the nave, and has puzzled all investigators. It vibrates considerably when jumped upon, and is accordingly made to undergo this ordeal constantly. This should now be prohibited.

When the visitor comes down on the north side of the west end, he will find that the verger, James Clark, can supply him with casts of many of the smaller sculptures about the cathedral; some from the misereres of the choir, where, by the way, the canopies of the stalls are exquisitely carved.

To mention everything that is interesting here we do not pretend: we will but note some ironwork in the choir: Bishop Longland's monument in the south aisle of the presbytery, with its punning inscription, "*Longa terra mensuram ejus Dominus dedit;*" the Galilee Porch on the west side of the south transept, which has been restored, not quite satisfactorily; the little monument in the south aisle of the choir, attributed to the child Hugh, and then pass to another part of the city.

According to tradition, the boy Hugh was crucified by the Jews of Lincoln in 1255, in derision of the Saviour. One version of an ancient ballad, founded on the occurrence, sets forth that, playing at football with his playmates, Hugh drove it "throuch-and-thro' the Jew's window," and that the Jew's daughter decoyed him into the house, when he went to ask for it:—

"She's led him in through ae dark door,
And sae has she thro' nine;
She's laid him on a dressing table,
And stickit him like a swine.

* * * * *

She's row'd him in a cake o' lead,
Bade him lie still and sleep;
She's thrown him in our Lady's draw-well,
Was fifty fathom deep.

When bells were rung, and mass was sung,
And a' the burns came hame,
When every lady gat hame her son,
The Lady Mary gat nane."

True or false, the story will serve to lead us naturally to what is called the Jew's House, a very curious specimen of Norman domestic architecture, at the foot of the hill. This is in two stories, with arched and ornamented openings. It is so interesting a specimen that the corporation should buy it, with a view to its preservation: the more so as it appears to be getting into a very bad state. It might be connected with the charities of the city, and made to serve as an almshouse, or used for some municipal purpose. Near it is another Norman house, and in the lower town, near the railway station, there are considerable remains of a building, erroneously called John of Gaunt's Stable, of the same period and style: the string course is elegant. John of Gaunt's Oriel Window has become well known through Sydenham: we have given an engraving of it in a previous volume.

Close by is the church of "St. Peter, at Gowts," the second title of which speaks of the drainage of the land. A gowt is a sluice, used in embankments against the sea, for letting out the land waters when the tide is out, and preventing the ingress of the salt water, in fact, a go out. This tower shows some of those peculiarities which distinguish a class of buildings which have been called Saxon,—the peculiar capital of the centre column in the belfrey windows, and the occurrence of "long and short work" in the masonry. And although it is maintained by some authorities that the lower town where St. Peter's stands, was formed on land won from the marches after the Conquest, we should hesitate before removing this tower from the list of Saxon structures. As we are now at the Station, we will not go back to speak of the Guildhall, or Stone Bow, as it is called, spanning the High-street, or the Conduit, or any of half-a-dozen other interesting matters. We have surely said enough to mark out Lincoln as a place to be visited by those of our readers who have not seen it.

The aspect of the country, too, just now, is magnificent; it presents a blaze of colour, preaching a strong lesson to the drab and white-

* See also "Buildings and Monuments, Modern and Mediæval," p. 85. In this also will be found views of the East End, p. 85, and of the Chapter House, p. 22. Eleven pages of illustrations of Lincoln Cathedral, with descriptions, will be found in Mr Britton's well-known fifth volume of the "Architectural Antiquities." And there are some interesting views of the town in the same author's "Picturesque Antiquities of the English Cities."

wash school. There is clover here, daisies and buttercups there, and May everywhere; the hedges are literally covered with it. Some of the smaller fields show a sheet of yellow blossom. Broom decks one cutting and gorse another; while a scarlet poppy here and there contrasts with the brightness of the green wheat. The pear-trees are in blossom too, and every garden you pass is getting full of flowers. Who will venture to call these super-added charms, these "children of showers and sunny beams" useless? Is delight nothing? Is a cheerful and thankful heart no result?

The old workers in stone and wood thought differently, and nowhere have they shown this more clearly than in Lincoln Minster.

CLOSING MEETING OF THE INSTITUTE OF ARCHITECTS.

CHAIRMAN'S ADDRESS.

AT the closing general meeting, held on Monday evening, the 16th inst. Mr. Tite, M.P. vice-president, in the chair, Sir John Benson, of Ireland, attending for the first time since his election, was admitted a member: Mr. William John Green was elected an associate.

A paper was read by Mr. Winston, "On the Resemblance between Mediæval and Classic Art, as exemplified in the Glass Paintings of the Twelfth and Thirteenth Centuries," to which we shall return.

The Chairman said that he was requested to mention, for the purpose of obtaining the support of the members of the Institute, the fact that the Architectural Exhibition proposed to make another collection, which, he hoped, would be equal in interest to the one just closed. This collection would be opened to the public from the 17th December till near the end of February, and he trusted the gentlemen present would readily contribute drawings to an exhibition which had done so much for the advancement of professional knowledge, and was so highly creditable to the profession. The chairman then begged to say one word in reference to himself. He had had the honour of opening the present session of the Institute with some remarks which were received more kindly than they deserved, but which had led to another class of remarks, in which he appeared to have been misunderstood, and he wished particularly to refer to the latter, as he was exceedingly anxious to stand well with the younger members of the profession. In the outset of his address of the 19th of November last, he had mentioned, in terms which he intended to be complimentary, *the Architectural Association*. He could really only repeat what he had then said—that he thought an association of that kind deserved to be encouraged, and he had done his best to encourage it. He had gone there at some inconvenience on a most tempestuous night, and felt much interested in all he heard. It was a step in the right direction, and the desire of the members for a diploma was, in his opinion, much to be commended. He was sorry, therefore, that anything he had said or was supposed to have said should have been misunderstood. Some gentlemen of that Association seemed to think that he had spoken slightingly of it, but he had no such intention. In early youth, his friend Mr. Donaldson, with himself and some other young architects had endeavoured to associate with similar objects; he therefore felt especially interested in the Association, and he only wished the members of it would do as he had done in subsequent years, that is, join the Institute, and thus constitute one body instead of two. He thought that suggestion was worthy their consideration, and if he did not think well of them he certainly should not invite them to join the Institute. He regretted that he had been misunderstood, as he had a sincere regard for all young students, and especial sympathy for all who wished to embark in so difficult a profession as architecture. There was another subject to which he had ventured to allude at the opening meeting, namely,—the cultivation of Mediævel to the neglect of Classical architecture, and he was extremely sorry that their vice-president, Mr. Scott, was not present, in consequence of an engagement at St. Alban's. If he (the chairman) had been sure that his other duties would have enabled him to attend this evening, he should have given that gentleman notice of his intention, because some remarks of Mr. Scott's had been read when he (the chairman) was absent, in reference to the subject, and had been issued to the members through the ordinary channel. On this communication he wished to make some observations, which he hoped and believed might not be unacceptable to the meeting. Mr. Scott's letter was called, "A reply to some remarks made at the ordinary general meeting, November 19th, 1855." Now, in that letter Mr. Scott remarked that—"In a society which supposes each of its members to hold his own individual opinion, and to express them freely as he pleases, it may appear unnecessary to notice mere manifestation of feelings which every one knows our respected friend entertains; but coming *ex cathedrâ* from the Chair of our Institute, and from our parliamentary representative, they may, if unanswered, appear to acquire more weight than belongs to them, and be viewed not as the feelings of an individual member only, but as those of the Institute as a body; in which case it would naturally become the duty of those who hold contrary opinions to make a formal protest, or to separate themselves from the society." This passage contained two suggestions from which he (the chairman) must dissent. He had the honour of representing a large constituency, but certainly not the architects of England nor the Institute, and anything he might say there or in another place should only be received as the expression of his individual opinion. If he came forward officially as chairman, and stated that he was instructed by the council to say this or that, the case would be different, but at the opening meeting he merely expressed his own opinions, opinions for which he held himself responsible, and with which the Institute, as a constituted body, had nothing to do. To return to the question at issue, he must be allowed to be again guilty of the sin of telling the younger members of the profession what he was most desirous they should learn,—namely, that while they were studying Mediæval architecture, they should not forget that there was such a thing as Greek or Italian architecture; and he could not enforce this point more than by reminding them that the Royal Academy medal had not been competed for, apparently in consequence of the study of Mediæval architecture having been pushed, as he thought, to a dangerous extent. He would not renew the vexed question as to which was the best style of architecture for modern purposes. He, as every other man, had his own opinion on that, but he would say as a Protestant, that a Protestant church ought to be convenient for the services for which it was intended; and it did appear to him that many modern Mediæval churches were not well adapted to the main purposes for which they were intended. In his former remarks he had quoted a high authority, that of Mr. Petit, which he begged to quote again. Mr. Petit observed, "There are good reasons why we should rather make the best of our old churches, than materially alter them or destroy them to build others in their room: the impression they are calculated to produce more than compensates for some inconvenience in their form or arrangement; but there seems no reason why we should ever plan or build a new church of an inconvenient form, or in any way unsuited to our manner of worship. If, for instance, it is desirable that all the congregation should be within sight and hearing of the minister, why should a church ever be built in which a part of the congregation is hidden from him when he performs any part of the service in the usual place? And this must be the case in every church having aisles which terminate at the division between the nave and chancel. If we find that galleries are useful and convenient, why should we build churches that will not bear galleries, or to which they are a disfigurement? If we professedly adopt high-pitched roofs as suitable to our climate, why should we ever combine them in such a manner as to leave a lodgment for snow or rain? There may be difference of opinion as to the advantage of an unbroken area, or the expediency of galleries; still they serve my purpose in illustrating the proposition I would advance, which is, that an architect ought not to abandon a convenient arrangement on account of its ugliness, but rather try to get rid of the ugliness without giving up the convenience. If, then, a feeling that his first object is to make his building fully answer its primary purpose, and a determination that nothing shall be allowed to interfere with this object, be referable to a spirit of utilitarianism, I consider that so far, at least, an architect ought to be a utilitarian." This was the end and aim of his (the chairman's) argument. They should not be led by the desire of imitating ancient examples, however beautiful, into neglecting the infinitely more important object of public worship, or diminishing, by the character of the building, the convenience of the worshippers assembled in it. On the point of taste he thought his friend Mr. Scott had been a little uncandid with him. In objecting to Gothic churches in modern squares, he had quoted some instances in the neighbourhood of his own residence. These squares consisted of regular masses of houses, elegant in themselves, but, forming one end of the square, an irregular Gothic church was placed, which had no fitness, and was inharmonious with the lines and masses of the houses, and, in his opinion, inconvenient internally for a large and crowded congregation. Nothing could be more elegant than a Gothic spire in the country, amongst trees and fields, and irregular forms added to picturesque beauty, where it was not necessary to crowd many people into the building; but in London, where it was necessary to accommodate probably 1,500 people in a church, and it was desirable to place them so that all might hear, niceties of technical detail should be forgotten, and utilitarianism and the real object for which the churches were built should be regarded. Mr. Scott had objected to him for suggesting as objects worthy of imitation the examples of the Romanists. This he did because that class of the Roman Catholic clergy who gave great attention to public preaching particularly consulted architectural fitness in their arrangements. As evidence of this, take the great church at Pisa, built by Vasari, or the great churches at Florence: in them was found no heaping together of columns or piers to interfere with the sound or sight. Preaching, in most cases in the Catholic churches, was only incidental, and at Milan and other places he had seen preachers ascend the galleries while large numbers gathered round them, but very few except those immediately near to the preacher could hear him. This was of less importance in Roman Catholic churches, because, as he had already stated, except in the case of the preaching friars, the sermon was considered incidental, and not essential; but in Protestant churches the congregation went as much to hear as to pray and to worship together. The deep and narrow chancels of Mediæval churches were also admirably adapted to the service of the Mass, but not at all to the Communion of the Protestant Church, especially in the crowded parishes of London, where there were sometimes 800 or 900 communicants, who in such a building must be led up a few at a time, rendering a service, already too long for weak and delicate people, painfully longer. His friend Mr. Scott was one of the most able exponents of Mediæval architecture, and had executed many fine examples of it; but he could not help thinking that Sir Christopher Wren, in St. James's Church, Piccadilly, had produced a building internally far more appropriate and useful for a large congregation than Mr. Scott's elegant but inconvenient arrangements. He did not wish to commit any gentleman to these opinions; but they were his own, and he thought an architectural "Tract for the Times" was wanted. They should do their best to restore ancient churches, and protect them from destruction; but a Protestant church in a city, for a large congregation, should be adapted to the wants and conveniences of the worshippers, and the peculiarities of the Protestant services. His object in these remarks was rather to set himself right with the profession than to invite any discussion of the subject, though he should be happy to enter upon such a topic if proper notice of it were given. He would merely add, that Mr. Scott had indulged in a little criticism respecting a Gothic church which he (the chairman) had referred to, and in which, though elegant in itself, he thought the worst evils of the existing system were exaggerated. Mr. Scott availed himself of a misprint as to a date to be eloquent in his criticism; but it must have been clear, from the context, that he (the chairman) was speaking of the time and style of Edward I. and not of Edward III. Such criticism was therefore hardly worthy of the subject. The main point, in his opinion, was that a Protestant church ought to be built in the most convenient form for Protestant worship, and he contended that the Mediæval plans were not adapted to such purposes.

After some conversation as to the discussion of the question hereafter, the chairman urged the members to remember the Institute in their foreign travels, during the recess, and to glean information which might be useful to it, and especially to study foreign churches in relation to the religious of those countries, and their appropriateness to the forms of those religions.

CARVED EBONY CHAIR.

WE are sometimes asked to give representations of ancient or curious furniture, and the annexed engraving may please some who have made that request. It represents a carved ebony chair, from Ceylon, which, at the time our sketch was made, now some time ago, belonged to Mr. Baylis, then of Prior's Bank, Fulham. This house, as many of our readers will remember, contained many rare things, and was the scene of many pleasant doings.

SURVEYOR OF READING.—On the 23rd inst. Mr. W. H. Woodman, of the firm of Poulton and Woodman, of Reading, was appointed surveyor to the corporation of that town.

CARVED EBONY CHAIR, FROM CEYLON.

ON THE DOMESTIC BUILDINGS OF WESTERN FLANDERS IN THE SIXTEENTH CENTURY, ILLUSTRATING THE ORNAMENTAL BRICKWORK OF THAT PERIOD.*

BELGIUM, for the last twenty-five years only an independent kingdom, had previously undergone as many changes as it contains provinces, under Austria, Spain, Holland, and France, and was at the commencement of the present century subdivided under the last named power into departments named from the rivers or other local features. It is now, however, restored to its former Flemish counties, Brabant in the centre, containing the seat of royalty, Brussels, with Antwerp, celebrated for its fine cathedral, East Flanders with its capital, Ghent, the birthplace of our John of Gaunt, and West Flanders with its chief town Bruges.

On the east and south the provinces of Limburg, Liege, Namur, Luxemburg, and Hainault, all more or less mountainous districts, offer in their products of coal, iron, stone, marble, clay, and timber, nearly all the materials required for building.

West Flanders was once the most important province from its long line of sea board, with the ports of Dunkirk, Furnes, Nieuport, Ostend, Sluys, and Damme. The last, now a mere farming village with a population under 900, was once a strongly fortified town containing more than 25,000 inhabitants, who early in the thirteenth century destroyed a fleet of 1,200 ships sent against them by Philippe Auguste, king of France, in the Bay of the Zwyn, which has now been long warped up, the sea having receded nearly six miles. The French shortly after burnt the town, but in 1384, it was so strongly fortified that it resisted for a considerable time an army of 80,000 men, and was forced to capitulate only from the want of fresh water. Its grassy ramparts still indicate the site of massive brick bastions and extensive lines of fortification, while its name denotes that like Ostend, Furnes, and Nieuport, the besieged could inundate the surrounding country so long as they held the dam or flood-gates, and that there was a dam to retain the supply of fresh water which was conveyed to them by the Bruges canal.

The whole surface of the country towards the north is covered with loose, light sand, and clays and marls are only found in the east and south at some depth below it; so that brick, lime, and stone are obtained from a distance by means of the canals with which the country is intersected, although railways now traverse a large district and must soon tend to expedite the traffic. All the western province is low and level, like Holland, and only needs locks to pen up the water to float their inland vessels or canal boats, whilst portions of the dykes may be under repair.

Above the trees lining the canals and roads are seen some few of the plain brick towers of the village churches with their high pitched moss-grown tiled roofs, their apses, and their crosses. On the canal from Bruges to Sluys the first is the fine old thirteenth-century brick tower of the Church of Damme, which is over 150 feet in height. The nave, side aisles, and transepts were destroyed at the close of the last century by the French revolutionists, by whom the churches were either converted into "Temples of Reason," or used as cavalry stables: the bells were coined into money stamped with the cap of liberty, and the fine painted glass was removed from the windows and sold in some instances to London glaziers, who retailed it at their own prices.

The nave of this church did not exceed 80 feet in length, but the choir, now reinstated as the village church, is more than 100 feet in extent from the eastern face of the transept to the spring of the apse of the high altar, and 36 feet wide in the clear: the aisles of 28 feet each, and the clustered pillars of 5 feet each, give more than 100 feet total width. These dimensions, as well as the height, are nearly the same as what remains of the nave of the fine old Priory Church, now used by the Dutch Protestants, in Austin Friars, London.

The windows have moulded bricks externally; but within, the capitals, bases, column-shafts, piers, pillars, string courses, and mouldings, are of a hard blue limestone from Ecaussines, in Hainault, near to Nivelles, in Brabant.

In most parts of Belgium, this hard blue stone (somewhat akin to our blue or black mountain limestone from Skipton, in Craven, West Yorkshire), by the French named "Pierre d'Ecaussines," and by the Belgians, "Orduyn Steen," is used for decorative purposes only, the cost of working almost preventing its common use. A stone, somewhat similar in appearance, but softer, is obtained from the Weald formation near Tournai, in Hainault: it is known as Tournai stone, and is sometimes used for building, but generally for paving. It bears some resemblance to our Kentish rag, but it is rather darker in colour.

The Town-hall, or "Stadt Huys," at Damme, is partly faced with it: the pinnacles, steps, brackets, and other ornaments are of the Ecaussines stone, but the end and back walls are of brick: the vaulting of the basement, once the guard-house, now a stable, has the pillars, arch and groin ribs of stone filled in with brick. This building is now used as an "Estaminet," or tavern. Internally, some of the rooms have plastered walls, but others are bare: all the large floor-beams are of oak, richly carved, and the joists and boards are of the same wood: in one of the rooms is a plastered ceiling of the last century: the walls are generally lined with oak panelling to a considerable height, and some of the arras, or tapestry, remains above it.

Advancing eastward on the canal we see the church towers of Oostkerke, Houcke, Lissweghe, West Capelle, and others, which point out the locality of the several villages; the church of Damme being the type of the whole of the churches, but of more importance.

On the east side of the road to Blankenberg all the churches have towers, while on the west, even to the frontier of France, they have all variously formed spires.

On the right of the Town-hall at Damme is the ornamented brick house belonging to the burgomaster: the farm buildings are on each side: over the entrance door is an ornament carved in white stone (like that of Paris) from beneath the clay of Dieghem and Martélanche.

* Read by Mr. R. D. Chantrell, Fellow, at the Ordinary General Meeting of the Royal Institute of British Architects, June 2nd.

At Iseghem, on the line of railway between Bruges and Courtrai, the church is in course of re-construction entirely with this stone. The rest of this house is built wholly with brick, and the roof is covered with pantiles: the front has piers corbelled out on the lower story which terminate with arches above, and form recesses moulded with a bead and hollow, the former describing the jamb and arch, and the latter the tracery: the tracery forms a second hollow, and the wall within the recesses recovers its face by the projection of the window cills. In the further portion or mass of this house, which contains the entrance door, the piers rise from the base, and the recesses are plain, though the mouldings are the same as in the traceried portion.

The bricks are similar in dimensions to those of this country, but there is a small, compact red brick, called by the natives "Brabant Steen," resembling the old Roman brick in quality, and which, set in Dutch tarras, makes very sound work. In some of the oldest buildings a large brick has been used, of ordinary proportions, but one-third larger: it may be seen in the churches, town-halls, and gates. It is made of unmixed clay and remains very perfect.

On entering the town of Bruges we are reminded of the olden times by its gates, which are closed at nine o'clock every night. The old Ghent gate will convey an idea of those remaining, viz. the Porte Marechale, St. Croix, and d'Ostende; those of Bouvine, St. Catherine and St. Laurent or Damme, having been rebuilt or modernized. The fortifications have long been dismantled, but the broad moat still surrounds the ramparts, and a second moat outside, but not so broad as the first, shows that the town was well calculated for a long and formidable resistance to besiegers. The buildings have an uniform yellow tint, which arises from a regulation of the municipality long in force, and gives a very cleanly aspect to the place, the yellow washing being required annually. In the earlier years of this century contrast was the fashion, and every one compelled to colour the front of his house chose the most opposite colour to his neighbour, as red, pink, blue, green, &c. The yellow colour predominant in the several illustrations will thus be accounted for: whether this originated in the large villages of Gheluwe (yellow), and Ghelu veld (yellow field), I cannot say, but a few years ago, on my way from Courtrai to Ypres, I first noticed in both these places that all the buildings were yellow washed even to the churches.

In Bruges the high roofs terminate in picturesque gables, ornamented with arches and tracery. There are as many of them with plain copings as with steps, though these stepped roofs have always been considered essentially Belgian. The old chimney stacks were ornamented, and invariably covered over to check the eddy or down draft occasioned by the lofty roofs, and though few remain intact, it is found necessary to cover the flues, so that a most curious amalgamation of ridge tiles is seen crowning the chimney stacks in every part of the town. Wood is invariably burnt by the inhabitants upon the hearth, rested upon a piece of iron called a dog, as coal is of comparatively recent introduction by the English residents: the flues are smaller than ours, and are usually cleansed about once a year by an iron ball attached to a rope and a bundle of straw at the other end. Sometimes two dogs or "fire-irons" were placed on the fire-brick hearth for the small bundles of wood or faggots, and were highly ornamented with figures and devices very creditable to the skill of the smiths. The large open fire-places have usually a large slab of Ecaussines stone, moulded, on each side, and a deep mantel which projects considerably, and the chimney breast above it is highly ornamented. Many of those from the town halls of Bruges, Courtrai, Oudenaerde, and other places, are most elaborately carved, and have been made known to us by the accurate drawings of Mr. Louis Haghe. The inside under the lofty mantel is frequently lined with white Dutch tiles, which give a light and cheerful effect. In ordinary houses, the white and blue figured tiles with grotesque ships, windmills, and landscapes, give a far more pleasing aspect than the blackened cast-iron contrivances, which convey the heat up the chimney and radiate but little into the apartment of an English house. Now occasionally the fire-places are closed and stoves placed in front. Our kitchen fire-place is rarely seen in Belgium, the cooking being performed on open "Carrefours," or square furnaces, with charcoal, or rather the wood ashes from the bakers' ovens.

In many of the streets groups of buildings remain unchanged, and the Rue Queue de Vache affords one of the best specimens of street architecture, having decorated houses on each side. The date, 1561, upon one corner building, is formed by iron bolts or bars bolted through to the beams, which rest upon the solid front piers, and act as main ties to the floors, roofs, and walls,—these irons, which are called by the Flemmings "Ankers" (Anchors), may be observed in all the old houses. The large oak beams and joists, having always been exposed, are as sound as when first placed. The beams usually extend from the front to the back wall, crossing the brick partitions: the joists are either laid upon or dovetailed into the beams, flush with the upper side, and the floor boards are pinned or trenailed to them. In the better houses parqueterie is laid over rough boards, but all are kept polished, as carpets are luxuries till recently scarcely known to the Belgians.

The streets are paved with large pebbles or shingle from the sea-shore: they incline from the houses to the middle, where a channel or gutter is formed, and a side footpath is scarcely seen, except of recent date: the water from these middle street channels is conveyed by shoots into the numerous canals, so that after a shower of rain the streets are soon clean and dry.

Sometimes before an entrance door a narrow paving with slabs of Tournai stone (each about a foot square) is found, which, like our Rockhill flag, is slippery when worn and wetted. The floors of the entrance-halls are also paved with small Tournai slabs: the wooden and brick floors are usually sanded.

In the adjoining street, "Rue des Aiguilles," is another picturesque brick building, formerly the town residence of the Counts de Saint Pol Tiennes, now the school for instructing poor girls in lace-making, founded in 1816, by the Abbé Defoere.

In this building there is another feature said to have originated in Bruges,—the staircase turret carried frequently to a considerable height for the purpose of an observatory. Mons. Delepierre, a Belgian Consul in London, a learned antiquary, states that the foreign consuls and merchants had them erected that they might witness the arrival and departure of their ships. The lower part is of brick, and the foliated gallery and crocketted spire of white Dieghem stone. There are varieties of them in the town, for though numerous, no two are alike. The salient angle turret is another peculiar feature of Belgian buildings, both in town and country: some of very remote antiquity are circular on plan, the angular forms being later, both hexagonal, octagonal, and multangular. Sometimes they are corbelled over with plain or moulded bricks, and occasionally they spring from large, richly carved stone brackets.

Nearly opposite to this, in the "Rue des Tonneliers," is another lofty house with arched and traceried recesses, terminated with a square screen or "*masque*," raised only in the centre to take the bolt of the ridge piece of the roof. This, with the lower portion adjoining and the further gabled building, formed one large house, with a court-yard in the centre. The basement and gateway jambs and arch are of Ecaussines stone, the rest of old red brick. The rooms of this and most of the large houses of this time are at least 15 feet in height: they were erected when Bruges was the emporium of commerce, and its prince-merchants were of the class of Shakspeare's Antonio.

They had their East-India Company's House, with its lofty tower, now only hinted at by the adjacent "Tower Bridge," but shown on the old illustrated map by Marcus Gerardus, 1562, in the Town-Hall: the Dukes of Burgundy and of Brabant, and the Counts of Flanders had their palaces of the "Seven Towers" on the Bourg adjoining. The Town-Hall, the Cathedral of St. Donat (the last remains were removed in 1805), and the Church of St. Basile; the Palace "Princen hof," or Court of Princes, and the Mint were near together. The house in the Rue des Tonneliers was once occupied by King Charles II. of England, when in exile. He then patronized the Society of Archers of St. Sebastian, and on his restoration gave them his portrait and some valuable presents, which still decorate their ancient hall.*

A TREATISE ON BUILDING BY CONTRACT.†

In all contracts a spirit of antagonism is bad. When two men fight, the victor generally receives some punishment. In the contemplated contest to which we have referred, you have been regarded as the winner: should you lose, you will be in a far worse position, and will, probably, then, like many others, seek some solace in an indiscriminate abuse of all architects and builders as a set of rascals and swindlers, and people with whom no one should have anything to do; whereas your misfortunes have been your own fault, in having endeavoured to get work done under its value.

Even when a contract is entered into honestly, clauses will have different readings to the opposite interests affected by them. Respectable men, when reading over the specification, generally require explanations of ambiguous stipulations; and, if they are not satisfactory, obtain an alteration of them, or provide accordingly; but it is far different with the unscrupulous, who rather pass such clauses over *sub silentio*, in the hope of getting their version of them adopted afterwards.

Honest contracting, however, is over, or soon will be. What chance has the plain dealing straightforward man with the casuist and the knave? Reputation may do something for him if backed by the recommendation of the architect, but the difference between his tender and the lowest is a stumbling-block involving his fall. It is usually so with an individual employer, and with a board of directors, or committee of works, the course is clear at once. They take the lowest because they are spending other people's money, and are trustees who will have to give an account of themselves. The result is, that highly respectable men will not send in tenders where the competition is thrown open to all, and hence the system of making the price of works a matter of public competition has defeated itself. An employer does not now obtain a cheap job,—he gets a bad one. An advertisement for tenders does not, in the present day, procure for the advertiser a *guarantee* that his proposed works shall be fairly executed without exceeding a certain sum; but it brings to him a number of offers from irresponsible or unknown parties, to undertake them for sums for which he is warned by his architect they cannot be properly done. The disastrous consequences of entering into engagements with such parties have been so often and so severely felt, as to account for the usual clause in advertisements for tenders, to the effect, that "the lowest will not necessarily be accepted." This is like asking for entries for a handicap, of which one of the conditions is, that perhaps the first horse past the winning-post will not be entitled to the stakes, the stewards having the power after the race to determine if his weight was sufficient. As no man would enter his horse subject to so absurd a condition, so it is surprising that men should be found to send in tenders by the invitation of such advertisements; but the avidity with which the inferior tradesmen do so, demonstrates the fact of the advertisers not being true to their own principles, but of their finding an irresistible captivation in the smallest amount. Competitors know very well their most powerful advocate is the employer's purse; and, despite the deprecatory advertisement, they run a ruinous race with one another.

An effort to arrive at the true aim of competition is sometimes made, by inviting a few picked persons to estimate, with the under-

* To be continued. † See page 296, *ante*.

standing that the lowest tender amongst them will be accepted; and as in a race of this sort none other than the considerations quoted in the last paper need apply (at least the parties should be so selected that they alone should apply), this is the least objectionable development of the contracting mania. But even here evils are to be guarded against. In selecting a flock of this kind, beware of a black sheep! It is of the greatest importance that all the parties should be of the highest respectability, otherwise it is not impossible, perhaps not improbable, that mutual accommodations may be given under such arrangements; that is to say, A. B. may agree not to compete with C. D. for a certain work, if C. D. will be equally obliging to him in another; and of course a higher estimate than the one intended to be accepted will be respectively sent in in each case. Such combinations may be extended amongst several contractors; and, for a consideration, all of them except one may send in tenders for greater amounts than the one which it is agreed amongst themselves shall have the job; and where is the employer's remedy? Is it not reasonable to believe, and does not every day's experience in all trading prove, that if purchasers will run down the fair profits of tradesmen, the latter must in self-defence resort to some other source to obtain the means of paying their way? Bearing upon the remark just made, and standing out as one of the worst evils of the system of public competition for low prices in building, is the fact of the gradual deterioration in the character of work generally. Admitting that the pushing propensities of most contractors (who regard speed as the chief if not the only merit in the execution of work) have not entirely destroyed good workmanship, and that there still remain some artificers who take a pride in their handicraft, yet they are not supplied with first-rate materials, because the builders cannot afford to buy them; and this is especially true of timber, which at present prices must not be allowed to lie idle as it ought to do, to become seasoned, but is worked up green. Hence the disgust of many a proprietor who may have had a contract finished under the most agreeable circumstances, on finding in a few years or months his cielings cracked by the shrinking of the joists, his floors showing wide nicks between the boards, his doors twisted and cracked across the panels, and his window-sashes rattling with every breath of wind. Nor can an architect entirely relieve him from this, with all his stringent conditions in his specification. All cannot tell from the appearance of timber if it has been properly seasoned; and generally, if an architect reject work, he is told it is as good as others would have done it, or good enough for the style of building, or even its arrangements or situation; for, strange as it may seem, such pleas are urged, and still more strange, are listened to by the arbitrators before whom the resulting disputes often come. The "best materials and best workmanship"—stipulations in most contracts—no longer carry their English meaning with them, but are tortured into intentions of the best materials and best workmanship, in accordance with the general character of structures of the same class. So that a proprietor cannot by contract build a row of cottages of thoroughly good workmanship, however much such may be his intention, because they will be executed as cottages by contract usually are,—of the lowest style of house-building; though surely, if it ever is desirable that a door should have less ventilation than a gate, or that a window should exclude something more than audible conversation, it is in the poor man's house, where economy in the consumption of coal is of great importance. Hence it follows that contractors have a direct interest in lowering the standard of work, as each badly-executed job justifies them (on their principle) in the similar execution of another.

It was remarked in the early part of this treatise, that the small capitalists amongst builders must live: it is equally true of their wealthier brethren; but to share in any employment with their younger brothers, they also must reduce prices, and consequently their standard of work; and the natural result has been that work is never done so well now as it was twenty or thirty years ago. London, especially the rapidly increasing portion of it, is, for its importance, the worst-built place in the world,—worse than any Irish hamlet of mud habitations. The principle of building on lease is very generally adopted in the metropolis, and as lessor, lessee, and builder, have present rather than future advantage for their object, their three immediate interests may be consulted by the prevailing practice.

If men would have houses to last their lives, built well and satisfactorily, they must return to the old custom of paying for their works according to a valuation of the quantity and quality of materials and workmanship expended therein, or, at least, abandon the driving of hard bargains by the present system of public competition in prices. To a man of upright principle it can be no agreeable reflection that he is getting more than his money's worth out of a contractor; and it is owing possibly to misgivings on this point, that a proprietor will sometimes forsake the side of his architect, and perhaps just at those times when he ought most to stand by him and uphold his authority, —as, for instance, in not enforcing the penalty for non-completion by the specified time. This penalty upon the contractor, or, in more legal phraseology, the employer's claim "as and for liquidated damages" in case of non-completion by the specified date, is very rarely enforced: why it is not more generally insisted upon it is difficult to say. The architect has a direct interest in having the work executed rapidly, as his labour is the sooner performed, and his compensation (by commission) therefore more easily earned; yet employers, either from a false sympathy with the contractors, or from a fear of law expenses, have repeatedly allowed this, their just claim, to go by default, and contractors have availed themselves of this culpable weakness on the part of employers to plead custom to the contrary whenever the claim is seriously urged. Certain it is, that this is about the last claim upon which employers make a stand, although they may be constantly complaining of delay in the progress of the works, and be frequently threatening to put the penalty in force. The result is, that architects cannot expedite work, and contractors laugh at their threats and reminders: in fact, the usual stipulation of this penalty is a dead letter. Where, then, is the advantage of the system of contracts over the old system, in getting work rapidly executed?

To a man of the world it may possibly occur that contractors would not take contracts if they did not get a profit somehow or other out of them, and to the sharp practitioner or "knowing" employer it may, perhaps, suggest itself that his contractor may be more knowing than he is, and, peradventure, be obtaining a great gain out of him without his being able to ascertain its whereabouts, or its extent. Of course, an apparently losing concern to the contractor is here supposed. If, on the other hand, it is a paying one, it is obvious the employer derives no advantage from the modern over the old system of "measure and value," which is, at least, his safeguard against trickery. By the new method he may be obtaining a very cheap, and if so, most likely a very bad article, for the price at which a contract is taken is often quoted (ridiculous as it may appear) in extenuation of its faulty execution,—whilst by the old system he pays for only that which he has, as he would for a peck of potatoes, or a chaldron of coals, by measure, at the market price; and he can have a good or a bad article, just as he may determine. It is also worthy of remark, that if a contractor has made a mistake in his own favour, the employer does not obtain any deduction, because he cannot break the contract, even if he knows of the error; or, assuming that there are some contractors left who have the prudence to put something into their contracts for contingencies, the employer gets no abatement if those contingencies do not arise. Therefore, on either of these suppositions, he may be paying for more than he obtains; whilst an equivalent advantage scarcely accrues to him from the converse of these propositions, inasmuch as in such cases the contractor represents the hardship, and prays for some consideration; and it is not easy to turn a deaf ear, without compunction, to the importunities of a man who declares he is being ruined, when his relief from insolvency would be accomplished by your not insisting upon his obligation, but by paying him for that which he has unintentionally bound himself to supply to you for nothing.

It may be argued that this evil is obviated by the quantities being supplied to the competitors, and that the race is then merely one of prices, in which a man can scarcely make a serious mistake, because, each item being presented to him, he has nothing to do but put the price to it at which he can afford to do it, and money it out accordingly. No doubt this is so; but the practice of architects supplying the quantities of their own works is merely substituting one evil for another, and perhaps not the less for the greater; for, when competitors take out the quantities themselves, the approximation of the several sums of their tenders is not only a check upon the tariff of their prices, but also upon the accuracy of their calculations, and affords, therefore, to some extent, a collateral guarantee of the work being accomplished for about the sum; but when the quantities are supplied by a third party, the utmost care on the part of the competitors will not cancel his fallibility. It has been admitted in one part of this Treatise that architects may make mistakes. Supposing a mistake is made in the quantities by the architect, —if it is to the benefit of the contractor, no one hears anything of it, the contractor holds his peace, and the architect does not know of the injustice; but if the contrary is the case, the contractor's receipts and expenditure soon demonstrate it to him, and he states his grievance to the architect. What is to be done? Is the contractor to lose money by the architect's carelessness? It would be very hard. Is the architect to make the loss good? He ought to do; but he may argue in this way,— "Why should I pay for the building, or any part of it?—why not use less of the particular material in which the error has arisen, or adopt a less expensive one, so that neither the builder nor I need lose,—as I shall be doing my employer no wrong: he will have the value of his money, and I shall save my credit." If such arguments have sufficient weight, the employer gets a worse article than he meant to have. He virtually pays for his work upon the converse principle of measure and value, inasmuch as the quality of the work is regulated by the money to be paid for it, whereas the price ought to be apportioned to the quality.

If the quantities are supplied by indifferent parties, employed, as they sometimes are, jointly by the competitors, the evil is not mitigated, because they err on the safe side in taking the quantities full, as the proprietor is then the only sufferer; and if they take the quantities out on their own risk, they must make enough to insure themselves against the losses they may be compelled sometimes to make good.

There seem to be so many evils in the practice of building by contract, that it is difficult to determine how it can have gained the popularity it has; but probably it is to be ascribed to the laudable desire of knowing what the thing will cost before we buy it. It is, no doubt, satisfactory to know, not only that the proposed works will cost no more than such a sum, but that some one has bound himself to execute them for that sum. Would not the architect's estimate answer this purpose? No! because there is no guarantee of its accuracy beyond the *bonâ-fide* result of a fallible judgment; whereas if the builder make the mistake, the loss is his, and not mine, says the employer, and herein is my guarantee that I spend no more. The real state of the case is, that if the architect has a mistake in his estimate, the building costs the proprietor more money, but not more than it is worth. If the error is with the contractor, the employer does not pay more money, but experience shows there is strong presumptive evidence that he does not get the article he intended to have,—certainly a semblance of it, but not one that looks as well, or that will last as long as he intended it should, or one that has cost *anybody* as much as it ought to have done to realise that intention.

The result of the system of public competition for the execution of buildings or works has been to deteriorate workmanship, to introduce bad

materials, to provoke disputes, to involve litigation, to offer a premium to rascality, to disappoint those embarking in building speculations, and to lower the tone of moral principle in masters and men. The writer respectfully submits these items to the consideration of his readers, believing them to be amongst the most serious social evils of the present day.

GRADUS.

THE ARCHITECTURAL MUSEUM.

To aid in preventing disappointment, we repeat, what is elsewhere advertised, that the annual *conversazione* will be held in the rooms of the Museum, on *Wednesday, July* 16, instead of July 2, as announced in the cards of the summer session.

It was thought that Prince Albert might be led to attend, and Lord de Grey could not have met H.R.H. so early in July as the 2nd. The Prince, however, is unable to be present, but has sent, through the president, 50*l.* as a contribution to the funds of the Museum.

Three large stone figures, which stood in Westminster-Hall prior to the alteration, have, by permission of the First Commissioner of the Board of Works, been transferred to the Museum, as a place of deposit for safety and study, during the pleasure of the Board. The promoters of the Museum are indebted to the kind offices of Sir Charles Barry for these additions; and the occurrence has led to an acknowledgment of the Museum by the Government as a place where works, which might otherwise be destroyed, may with security and utility be deposited. The lectures which have been delivered we shall print in due course.

A HINT FOR A NATIONAL GALLERY OF ENGRAVINGS.

PASSING through the gallery of Egyptian antiquities in the British Museum, at the top of the first flight of stairs leading to the other departments, is a door with a very quiet aspect. On obtaining admission, a passage leads to a spacious apartment, fitted up with glazed cases, surmounted by busts of those great in ancient and modern art. This is the print-room of the British Museum. In the cases which surround us, in handsomely-bound volumes, are collected choice examples of the skill of the Italian engravers, copied from the works of Michelangelo, Raffaelle, and other great masters. Here are also the collected works of Albert Durer, the etchings of Rembrandt, the engraved works of the Flemish school, the engraved works of the British school, Reynolds, Lawrence, Gainsborough, and others. There are here, also, valuable original sketches and drawings by various artists. Many of the engravings, particularly those of the Flemish school, have cost large sums; in some instances, 200*l.* and upwards having been paid for a single print, which, in addition to its artistic value, has been enhanced in price by the scarcity of the impression. Not to enter further into particulars, it cannot be doubted that this room contains the means of conveying a large amount of art education to the multitude. At the present time, the number of persons who visit the print-room is very limited. We have seldom at one time seen more than half-a-dozen students availing themselves of this extensive and valuable collection.

In order to obtain admission to the print-room, it is necessary to have a recommendation from a member of the Royal Academy, or some other person of well-known position.

Some years since it was proposed, we believe, by Mr. Carpenter, the present obliging keeper of the prints, to erect a gallery for their exhibition to the public. This plan was submitted to the late Sir Robert Peel, and much approved of by him; and the long apartment which now contains the Nineveh marbles was originally intended for that purpose.

We have not yet had in this country any sufficiently important exhibition of engravings, but it is easy to imagine how valuable and interesting such a thing would be, and what great good would result from the display of the contents of print-room folios, systematically arranged on the walls of such a gallery as was proposed. We might without any considerable amount of trouble, or risk to engravings, have periodical changes of the exhibition: for instance, a part of the gallery might be devoted to the display of the gems of the various schools by the way of contrast or comparison, and the remainder at times with the Italian works, at others with the Flemish, &c.: our own engravers' labours would have the greatest interest, consisting, as it would, in the designs of Reynolds and the painters of his day, Lawrence, Fuseli, Opie, Barry, Stothart, Blake, Flaxman, and others. The engravings after Turner, Landseer, Wilkie, &c. by the engravers of the present day, would make an exhibition which could not be equalled: and then in wood engraving we are unrivalled. The wood engravers of France and Germany have some admirable qualities; but for breadth of effect, boldness and vigour of execution, and good tone of colour, the English wood engravers far excel. Why should we not have a public exhibition of choice specimens of English engraving on wood?

We throw out these few hints for the second time, hoping that they may revive the idea of a public gallery of prints, such as was formerly proposed, and which, but for the unfortunate death of the late Sir Robert Peel, would most likely before this time have been carried into effect.

COLOURED MATERIALS AS APPLICABLE TO ARCHITECTURE.

AT the meeting of the St. Alban's Architectural Society, held on the 17th inst. as we announced would be the case, Mr. Ayliffe Poole read a paper "On Colour in Architecture," so far as it could be obtained from the use of varied materials. He commenced by saying that it might be assumed as a fact that, in the use of building materials of diverse colours, we were behind other nations, although not behind our ancestors. They did not make much use of colours: they were not practically in possession of so great a variety of coloured materials, and had not that nice appreciation of tone, as distinct from colour, which was necessary to enable them to take advantage of the materials they had. The Normans did not care for harmony of colour; and whatever the materials they used, they brought all to the same hue, by the addition of plaster and whitewash. He considered, too, the use, in later times, of Purbeck marble columns, with white stone, as harsh in effect, and not realising the gradations and tones which nature pointed out in the material she so richly and variously supplied. He showed how almost every locality produced several tints of stone, which also best amalgamated with the landscape features of the neighbourhood; and that on every ground of nearness, cheapness, association and effect, the native material, however rude, should be always employed. He instanced Mr. Christian's new church at Kenilworth, and Mr. Scott's, at Leicester, as modern examples of the use of various coloured stones. The latter church has five distinct colours artistically wrought up in it. It was not from any want of variety in the colours of materials applicable to architectural purposes, that the use of colour had been neglected in England; for we had an ample supply of stone and marble of every hue and shade, from absolute white to perfect black; while in artificial materials, such as bricks, tiles, and terra cotta, any colour desired might be obtained. Glass also offered a wide field for the introduction of colour externally and internally in the roofing of buildings. The conditions on which colour should be applied might be briefly stated. Any good stone usually harmonized with the surrounding scenery; the slate stone of the lake districts being an exception; and *ceteris paribus*, the nearest material was the best; and when neighbouring quarries yielded materials of two or three colours, it was so much the better. In St. John's, at Kenilworth, the red sandstone was used in rubble, with white sandstone dressings, all the materials being found in the neighbourhood; and the effect was extremely beautiful and picturesque. In the combination of tones and colours, the greatest contrasts would not necessarily be the best. In a church, asblar dressings, with black slate walls, would offer too strong a contrast unless well managed. Light might harmonize with light materials, and warm with warm might bear to be repeated, but no dark with dark, or cold with cold. Marble was strangely neglected in England, and its more frequent introduction was desirable. Coloured materials might properly be introduced in such buildings as market-houses and town-halls. Mr. Poole advocated the use of brick as giving every colour that the architect could desire; and concluded with a practical suggestion that each architectural society should exhibit specimens, in uniform cubes, of the stones and marbles belonging to its own locality; while the Architectural Museum in London might collect specimens from every district, with the price, rate of carriage, and facility of working attached to each example.

THE CRYSTAL PALACE WATERWORKS, SYDENHAM.

IN conjunction with the plan in our last number, the accompanying view of the grounds, fountains, cascades, and part of the building, will serve, we hope, to convey to our readers away from London, a tolerably correct notion of the extraordinary work now completed at Sydenham. One of the water-towers is seen on the left of the building. In a mechanical point of view, this is unquestionably the most extraordinary system of waterworks the world has ever seen, and art may hereafter be brought to bear upon it, so as in other respects to render it super-eminent. Sir Joseph Paxton will doubtless show the directors one of these days, when money is at command, what the art of the sculptor could be made to do for these waterworks.

The flower-show on the 25th was very successful; much greater cleverness was shown in the arrangement of the groups of flowers than had before been attempted. The right spirit is apparently being awakened at the Crystal Palace.

THE MANCHESTER EXHIBITION BUILDING.

IT is stated that the committee have adopted the design of Mr. Edward Salomons, of Manchester; to be carried out by Messrs. C. D. Young and Co. iron-founders, the firm with whom they were in treaty before they invited designs in competition; and that the amount of contract is 25,000*l.* The impression given by this first step in the affair is decidedly bad: perhaps Mr. Fairbairn, or Mr. John Deane, the manager (it is of no use appealing to a body) may think it worth while to give some explanation of it. Messrs. Young are the perpetrators of the abominations with which the land of the '51 Exhibition Commissioners is now disfigured,—"the Brompton Boilers," as these precious constructions are called.

SECOND LIST OF WORKS CHOSEN BY PRIZEHOLDERS IN THE ART-UNION OF LONDON.

From the Royal Academy.—Grandmama Caught, A. S. Lumley, 70*l.*; The Deer Park, H. Jutsum, 40*l.*; An English Village, R. P. Noble, 26*l.* 5*s.*; A Group in the Marshes, W. Weekes, 25*l.*; Laura, J. W. B. Marshall, 25*l.*; Bristol Market Woman, C. Richards, 35*l.*; A Weary Journey, C. Dukes, 25*l.*; Trellis Vine—Lugano, W. W. Fenn, 20*l.*

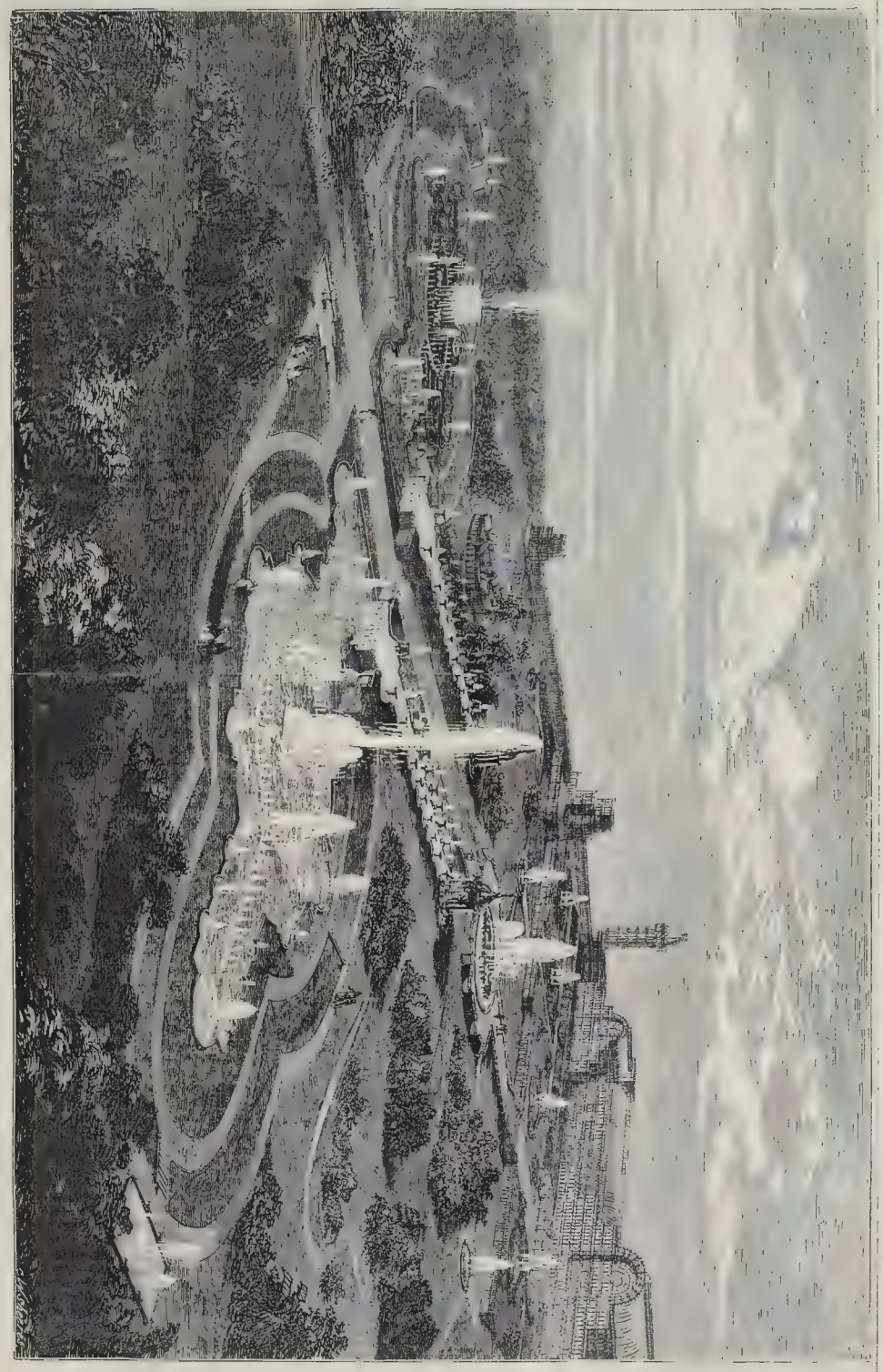
From the Royal Scottish Academy.—Llangharne Castle, Perigal, 35*l.*

From the National Institution.—Shades of Autumn, A. W. Williams, 150*l.*; Swaledale, J. Peel, 50*l.*; Thames Tow Barge, W. S. Rose, 35*l.*; Bacharach, J. Bell, 30*l.*; Dutch Vessels beating out, E. Hayes, 20*l.*; Domestic Poultry, H. B. Gray, 30*l.*; Gipsies in a Wood, J. E. Meadows, 35*l.*

From the Society of British Artists.—Streatley Mill, Boddington, 125*l.*; View in Dovedale, J. C. Ward, 80*l.*; Fruit, N. E. D. Stuart, 50*l.*; Goat Fell, G. Cole, 38*l.*; Gleaners Resting, W. Shayer, 40*l.*; View near Barmouth, A. Clint, 25*l.*; A Yorkshire Farmhouse Kitchen, E. Cockburn, 21*l.*; Afternoon, A. J. Starh, 25*l.*; Loch Lomond, P. C. Auld, 30*l.*; The Mumbles, Swansea, G. Wolf, 25*l.*; Summer Shade, E. G. Warren, 25*l.*

From the Water-Colour Society.—Hotel de Ville, Brussels, W. Callow, 73*l.* 10*s.*; Oyster Dredging, E. Duncan, 105*l.*; Somersetshire-lane, G. Fripp, 47*l.* 5*s.*; The Homestead, C. Davidson, 40*l.*; Fête Champêtre, G. Dodgson, 60*l.*; Coast of Boulogne, J. J. Jenkins, 26*l.* 5*s.*; All Saints' Church, Hastings, C. Davidson, 25*l.*; Distant View of Edinburgh, J. Callow, 21*l.*; A Beech Grove, F. O. Finch, 20*l.*; Old Gateway, Guernsey, J. P. Naftel, 25*l.*

HAM, NEAR RICHMOND, SURREY.—On Wednesday, July 2nd, H. R. H. the Duke of Cambridge will lay the first stone of the new building for the National (late Cholera) Orphan Home, founded in 1849. The architect is Mr. Edward C. S. Blake.



CRYSTAL PALACE, SYDENHAM: GENERAL VIEW OF THE FOUNTAINS AND GROUNDS.—[DESIGNED BY SIR JOSEPH PAXTON, M.P.

CHURCH-BUILDING NEWS.

Peterborough.—Land for a cemetery, upwards of five acres in extent, is to be forthwith purchased of the Ecclesiastical Commissioners for 800*l.* and enclosed by a sunk wall or haw-haw fence.

Gresham (Norfolk).—Gresham Church, which has been for many years in a dilapidated state, is about to undergo a thorough restoration, through the liberality of the Rev. J. Spurgin, the rector, assisted by the parish. A new open timber roof will be provided, and the church re-seated, the greater part with free open benches. Mr. Spurgin is also erecting a school-house, with master's residence. The whole of the works are being done under the direction of Mr. J. J. Darkin, of Holt, architect.

Thatcham.—Plans have been prepared for repairing and altering the parish church, by Mr. Thomas Hellyer, of Ryde, architect. The estimated cost is 1,311*l.* odds. The principal works are the building of a new south aisle and works connected therewith in the old walls, 440*l.* 2s. 6d.; re-seating throughout, 377*l.* 12s. 8d.; and restoring the Fuller Chapel, 217*l.* It is thought desirable that at least 1,500*l.* should be raised before the restoration is commenced.

Sherborne.—Mr. George Digby Wingfield has announced his intention of completing the restoration of the abbey church of St. Mary, Sherborne, as a memorial to his uncle, the late Earl Digby. The plans and estimates for restoring the entire fabric were prepared by the late Mr. R. C. Carpenter, but were only carried out in the nave, aisles, and transepts. The cost has hitherto been 14,000*l.* The choir, aisles, and Lady Chapel remain to be done. The work has been intrusted to Mr. Slater, as Mr. Carpenter's successor. It is stated that the completion of the work will occupy three years, and cost 10,000*l.* to 12,000*l.* It is said to be Mr. Wingfield's wish that Sherborne tradesmen should be employed on the work.

Bristol.—On 16th inst. the foundation-stone of an intended new chapel for the use of the Moravian congregation at Kingswood-hill, from a design by Messrs. Foster and Wood, of this city, was laid by Mr. Charles Hindley, M.P.

Llandarrog.—The new church of Llandarrog was opened on Friday in week before last, by the Bishop of St. David's.

Cwm-Avon.—All Saints' Church, erected by the partners of the Cwm-Avon Works Company, at a cost of about 4,000*l.* was consecrated on 10th inst. It is in the Early English style, from designs furnished by Messrs. Prichard and Seddon, of Cardiff, and consists of nave with west porch, north and south aisles with porches, central tower with organ chapel on one side and vestry and heating-room opposite, and sacrarium to the east. The nave, which is 60 feet high to the top of the cross, has arcades of four bays of wide span, with moulded arches of freestone, with labels resting on carved corbels, and clerestory with four triplets of lancet windows on each side, the internal arches of which are supported by polished serpentine detached columns with carved capitals. Above the western porch is a four-light window, the head being pierced with trefoils and an octofoiled circle with carved cusps, forming an annulet of foliage, the spandrils between being carved, and the arch mouldings supported by columns, which on the inside are of serpentine. The roof of the nave is of Memel, each pair of rafters being treated as a principal, and having crossed braces. The tower is over the western portion of the chancel, with a moulded chancel arch having double polished serpentine columns to either jamb, with carved capitals and large figures of angels supporting the label. The vestry and heating-chamber are covered by stone lean-to roofs against the tower, formed by laminated courses of freestone resting upon deeply moulded ribs. The sacrarium, to the east of the tower, has also a stone compass roof of the same character. The tower is lighted on either side by a large wheel traceried window, and the sacrarium by a triplet of lancets, the central one being nearly 30 feet high: their internal arches are supported by slender detached polished serpentine shafts from Cornwall. The tower batters or diminishes slightly, to prepare for the broach spire, which is not entirely completed, but will be 100 feet high, and with the tower 180 feet from the ground: the masonry of the spire has been arranged so as to avoid monotony. The materials for the walls are Pennant stone in bands of irregular rangework, alternately with river pebbles in random-work, with quoins and dressings of Combe Down Bath stone: all the carved work is executed in Caen stone, as also are the pulpit and font, excepting their shafts, which are of polished serpentine. The roofs are of Memel, covered with boarding, felt, and Bangor slates. The doors are of oak, fitted with grilles, for ventilation, and plate-glass slides to cover them at pleasure. The seats and other furniture are of pitch pine varnished. The floors are laid with Minton's tiles, those in the sacrarium being of rich encaustic pattern. The glazing is of green cathedral glass, with white border next the stonework. The church will be heated by a hot-water apparatus, and lighted by one gas corona, gilt and coloured, and having three tiers of lights. The cost of the whole building complete will be within 4,400*l.* The works have been carried out by Messrs. James and Price, of Cardiff, builders; the carving by Mr. Clarke, of Llandaff; and the ironwork, by Mr. Skidmore, of Coventry.——The new Baptist Chapel, at Cwm-Avon, has been opened for divine service. It is 64 feet by 40, with a gallery all round. The contractors were Messrs. James and Price, under the superintendence of Mr. Stephens, of Cwm-Avon, architect.

Mold.—The church here has been restored and re-opened. The alterations and additions were commenced about two years ago, and consist principally of the addition of a chancel, the re-modelling of the seats, and the removal of the organ from the west to the east end of the church. Mr. Scott was the architect employed. By the plan adopted 300 additional seats were obtained. The chancel is at the east end of the church, and is of an octagonal form, supported by four buttresses, and built of freestone. The greater portion of the stone-work was executed by Messrs. Powell, of Mold, stone-cutters. The pinnacles and exterior carving were executed by Mr. J. Plinstone. The wood-work for the chancel, nave, and centre aisle, was contracted for by Mr. Robert Edwards, of Mold, joiner, and the pews by Mr. Broadbent, of Leicester. The chancel windows are of stained glass, furnished by Mr. Wailes, of Newcastle, and exhibit representations of the Saviour, from his birth to his ascension. It appears that the subscriptions were not sufficient to cover the whole expense incurred, there being now unliquidated a sum of 411*l.* 18s. 3d. The whole outlay amounted to upwards of 5,000*l.*

Wolverhampton.—About 2,000*l.* are still required for the restorations (by Mr. Christian) of the Collegiate Church of this town, and a public meeting was to be held on Tuesday, on the subject.

Heywood (Manchester). — The consecration and opening of Heywood Cemetery, took place on Saturday before last. The cemetery is situate at Chamber House, about a mile from Heywood. The area is ten acres, and five held in reserve.

Bradford.—The foundation-stone of a second chapel for the Baptists of this town was laid last week. The site is in Little Horton-lane. The chapel will be much like the one in Westgate, and will therefore have few architectural attractions. The length within the walls will be 75½ feet, width 50½ feet, and height 34 feet. It will be lighted by five windows on each side, and several smaller windows at the end. There is a vestry 22 feet by 17 feet, and another room 32 feet by 18 feet; and over these is a school-room 49½ feet by 28½ feet, which can, by the removal of a sliding partition, be placed in communication with the chapel. The ground-floor of the chapel will afford accommodation for 627 adults, and the end gallery for 282 children,—all being free. When side galleries are erected, accommodation will be afforded for 1,295 persons. The school-room will accommodate about 400 children. The estimated cost of the building, inclusive of a fence wall, but exclusive of the site, is 2,750*l.* Messrs. Andrews and Delaunay are the architects, and the various contracts have been let as follows,—masons, Messrs. Barker, Farnish, and Bell; plasterer, Mr. George Raistrick; joiner, Mr. Archibald Neill; slaters, Messrs. Joseph Thompson and Son; plumber and glazier, Mr. J. Keighley; painters, Messrs. Harland, Bros.

Darlington.—From a report by the local Burial Board, it appears that the Bishop of Durham refused to sanction a modified plan for the new cemetery, with the chapels 36 feet apart, stating that as the parties appeared so urgent he would not object to 40 feet; but less than that he could not feel it his duty to allow, although it seems that the bishops of Ely and Lincoln have sanctioned chapels from the same plan unaltered, while the Archbishop of York does not require the chapels to be separated at all. The architect, according to the report, stated to the Board that he could still alter the plan, so as to give 40 feet between the chapels, at a cost not exceeding 60*l.* on the original number and plan. The Board, however, declined to proceed further without consulting the ratepayers, but agreed to call a meeting for approval of the new design altered to meet the bishop's request. After much discussion at this meeting, a resolution was carried in favour of the amended number and plan proposed by the architect, by which the chapels will be 40 feet apart, as required by the bishop.

Carlisle.—The consecration of Hilton and Murton chapel took place on Tuesday in last week. The building cost 596*l.* odd, and the subscriptions fell short about 100 guineas. The accounts for the erection, however, were all discharged by the vicar. The chapel stands on the road leading between the two villages, and close to Thwaite School. The architect was Mr. George Robinson, of Appleby. The style of architecture is the Early English of thirteenth century. The interior is plain. The seats (for 170) are all open. The woodwork is stained dark oak.

Dalston.—A monument has been erected in Dalston churchyard over the vault in which the remains of the late Bishop of Carlisle are interred. It is a Norman cross of twelfth century, and is about 8 feet in height. It is executed in Caen stone, after a design by Mr. Austen, of Canterbury, who superintended the work. At the four extremities of the cross are the emblems of the Evangelists, and in the centre is the inscription. There are other allegorical chisellings besides the emblems referred to.

PROVINCIAL NEWS.

Peterborough.—The construction of a more commodious cattle-market is proposed to be effected by pulling down a number of old buildings in Priest-gate.

Boston.—The new Athenæum in the market-place here was opened on Tuesday in last week, with a "*déjeuner*" in the Assembly-rooms, and an evening "*soirée*" in the new Corn Exchange. The reading-room is on the first-floor, over a shop, which occupies the ground-story, along with a carriage-way to the Exchange and Athenæum. Behind the reading-room is the library. In the upper-story are two class-rooms, one of the size of the library and reading-room, both of which are of considerable dimensions. The work was executed by Mr. W. Webster, of Wyberton, from the designs of Messrs. Bellamy and Hardy, of Lincoln. Mr. J. Saville was clerk of the works.

Kettering.—Plans of the Grammar School-house and school-rooms, as proposed to be reconstructed, have been exhibited at the banks of the town for inspection. The style is Elizabethan. The subscription-list is in progress, but a further sum of 400*l.* at least is required, if not 900*l.* to clear all without mortgage.

Rochester.—The works connected with the new bridge are about completed. A public promenade, to extend along the Medway, from the new bridge to the Baths, has been under consideration by the wardens, and a plan adopted for carrying out the undertaking. A model is to be placed in the Corn Exchange, Rochester, for exhibition. It is expected that after the taking down of the present bridge, the flow of water up the river will be greatly increased, to the serious damage of surrounding property,

unless the river-bank landowners take steps to prevent their lands from being inundated. The ceremony of opening the new bridge will take place about the first week in July.

Great Bedwyn (*Wilts*).—The chief stone of the Infant Schools now in progress of erection in this town was laid on Monday before last. After the principal part of the ceremonial was gone through, a somewhat new feature in "stone-laying" was exhibited. "Several other stones were then laid by Mrs. Hodgson, Mrs. Pike, Miss Martin, Miss Radford, Miss L. Potter, Miss Talbot, Mr. Jones, &c." The buildings (a gift from the Marquis of Ailesbury) are intended to comprise a school-room, wash-house, outbuildings, &c. the school to be capable of accommodating eighty children under six years of age. The architect is Mr. J. Overton; the builder, Mr. J. Lloyd.

Bath.—The tenders for the erection of the Lansdown Proprietary College were opened on Tuesday in last week, and that of Mr. Steeler was accepted. The site has been extended from six to eight acres.

Holyhead.—On Friday in week before last 120 feet of the staging at the Holyhead harbour works gave way. Two men were killed The loss is estimated at between 2,000*l.* and 3,000*l.*

Birkenhead.—The foundation stone of day and Sunday schools in connection with St. Werburg's Roman Catholic church, Birkenhead, was laid on Monday in last week, on a site in Price-street. The buildings are to be of decorative Gothic architecture, and comprise a boys' school, 50 feet by 32 feet; girls' school, 40 feet by 32 feet; infants' school, 24 feet by 17 feet, and three class-rooms, with residence for teacher. Mr. E. W. Pugin is the architect, Mr. S. R. Eyre, the surveyor, and Mr. James Routledge, the builder. The total cost will be about 4,000*l.*

Liverpool.—Some building and other ground and villas near Liverpool, were sold by auction last week at the Clarendon-rooms. The property is situate in the hamlet of Thingwall, near Roby. The first lot comprised about ten acres of arable and meadow land, with a residence known as "Ashfield House," and various outbuildings. The lot, says the *Journal*, was ultimately sold for 2,560*l.* The next lot, about 8,829 square yards of land, was bought by the purchaser of the first lot, at 16d. per square yard. Lot 3.—About 2,000 square yards of land, with two semi-detached villas erected thereon, sold for 700*l.* Lots 4 and 5, each consisting of 2,040 square yards of land, fetched 13d. per square yard. Lot 6.—3,700 square yards of land, sold for 1s. per square yard. The remaining two lots were 2,300 and 2,080 square yards of land: the first sold for 1s. and the last for 11d. per square yard.

Manchester.—The circular end of the Manchester Exchange, which has been rebuilt to correspond with the larger portion of the building, from designs by Mr. Mills, the architect, has now been completed and opened to the subscribers. The floor, says the *Courier*, is the largest of any public building in this country, or, in fact, in Europe, exceeding very considerably the space afforded by the late Tree-trade Hall. In addition to this, as we have before noted, there is a light gallery over the new end, set apart for the newspaper-stands and tables, leaving nearly the whole of the immense floor below for business purposes.

Stockport.—On Wednesday week a public meeting was held at Stockport, at which, among others, the following resolution was passed;—"That as public baths are essential to the health and comfort of the inhabitants of this borough, the corporation be requested to take the necessary steps for the erection of such baths."

Carlisle.—It has been resolved to erect a statue, on a site in the market-place, in honour of the late Mr. James Steel, a local celebrity. A monumental fountain, surmounted by a clock-tower, was first resolved on, but the sum in hand, it was found, would just provide a marble statue, which therefore is to be cut by Mr. W. F. Woodington, sculptor, from a design already prepared.

Jarrow.—The works in connection with the Jarrow Docks are being proceeded with rapidly by the contractors, Messrs. Jackson, Bean, and Gow. At present 174 acres of the Slake are enclosed, and the workmen have commenced to excavate for the dock bottom, which will be from 18 to 20 feet below the present surface. Five bridges, of mason work, four 80 feet in length, and one 30 feet, will cross the road at a distance from each other of about 150 feet. One is now completed by Mr. Heaps, who has contracted for this part of the work. About 150 yards of the permanent timber quay-walls are constructed. The piles, of 50 feet in length, are driven by a Nasmyth hammer, which gives seventy-five strokes in a minute: this work is under the superintendence of Mr. Scott. The diversion of the river Don is nearly completed. The number of men employed at present is from 800 to 1,000, but in a short time double that number will be at work.

Kelso.—The new corn exchange, in Kelso, was formally opened on Monday before last. The building, the foundation of which was laid last July, is situated in Wood-market, and has been erected at a cost of about 4,000*l.* Mr. David Cousin, of Edinburgh, was the architect, and Messrs. Oliver and Bulman were the joint contractors. The large hall is 103 feet by about 52 feet, having a height of 35 feet from floor to ceiling, and is calculated to hold 1,400 persons. There are thirty stalls on either side of this hall for the use of farmers, as well as five at one end and seven at the other for grain merchants, seedsmen, &c. Those not possessing stalls have the use of a hall 39 feet by 15 feet, placed over the vestibule. The principal hall is lighted from the roof, which is divided by five rafters into six compartments. There is a small gallery at one end. The building, however, according to the local *Chronicle*, is ill-constructed for hearing, otherwise it might have been an important addition to the accommodation for public meetings, &c. in the town.

Spey.—Mr. Errington, C.E. of the firm of Lock and Errington, in his evidence before the Commons' committee on the Inverness and Aberdeen Junction Railway Bill, said the company intended to throw a tubular bridge across the river Spey, similar to, though smaller than, the one which spans the Menai Straits. The bridge across the straits is about 500 feet: that over the Spey will be 230 feet in length.

THE INUNDATIONS IN FRANCE.

THE total damage done by the inundations in France, is estimated at 8,000,000*l.* sterling! It seems extraordinary that in a country where the science of engineering is studied as it is in France, a repetition of such disasters should be permitted. Whenever we hear of inundations from the overflow of rivers, the question occurs, what sort of bridges are there? The bridges on the Loire are constantly either tumbling down under floods, or holding the water back to flood the country. The Rhone has the old middle age, or older than that, bridges to bridle it, and make it kick!

Mr. Hosking, in the preliminary essay to his "Treatise on the Practice and Architecture of Bridges,"* published in 1842, wrote:—

"It must be supposed, in any case, that the piers of a bridge have been adapted to the section of the river, so as not to impede the current in any greater degree than it may be liable to be impeded by existing natural causes. While the water meets with no obstruction greater than that which the piers offer, no appreciable head should be formed, nor should any severe action take place on the bottom of the river; but if the springings of the arches be once immersed, the haunches and spandrils add, inch by inch, and foot by foot, to the line of obstruction as water attains a head, which it does with constantly increasing effect; the bed of the river is acted upon, and the piers are undermined to the utter destruction of the whole edifice; or, if the piers be so founded and formed as to withstand this action, and the bridge is not overturned bodily, it forms a perforated dam, and is productive of more mischief than would be occasioned by its fall, by holding the water up to flood the surrounding country and thus to mingle the inhabitants and their habitations in one common ruin."

In the Practical Treatise,—

"It seems quite evident in this case [Smeaton's bridge over the Tyne, at Hexham, which had been thrown down by a flood in the river] that the bridge was the cause of its own overthrow, and it is very likely that the yielding of the bed of the river prevented the greater calamity which must have followed if this had not happened; the waters must have risen until the banks above should give way or be overflowed, when the whole country would have been deluged to the probable destruction of life and property beyond calculation."

And then,—

"The bridges, and ruins of bridges, which remain to the present day, of Roman construction, exhibit for the most part great massiveness in the piers, as these are in some cases equal in thickness to one-half the spaces between them, in some to one-third, and in few instances do the piers bear less than the latter proportion to the openings. The bridges of the Middle Ages, such as those over the Elbe at Dresden, and over the Rhone at and below Lyons, have piers, or masses of substruction to the piers, occupying almost, if not quite, as large a proportion of the bed of the river as they leave to the water; and to these and such-like nuisances, inundations—of which the fearful inundation at Lyons in the winter of 1839-40 is an instance—may be certainly traced, whilst the bad drainage of the lands bordering upon rivers vexed with bad bridges is a constant source of evil to the countries which possess them."*

And now again, in 1856, the same deplorable disaster has recurred.

* Weale, London.

POLYCHROMATIC GLASS.

IN your last number you alluded to a new description of glass, called "polychromatic glass," describing it as a new invention. The principle, however, on which the effects produced by this glass depend is not a new one, as I have known and used it for some time past, and am now having a large church window made by Mills, glass-stainer, of Great Quebec-street, in the border and tracery of which it is being carried out. A description of it also appeared in your last volume (p. 514), in a communication headed, "New Effect in Windows."

Mr. Burridge's invention is an improvement (and a great and important one) upon the process there described, and consists in substituting for the two pieces of flashed glass—say for example, one blue, the other ruby—one piece of glass, having a blue stain on one side, and ruby on the other. The effects produced are precisely the same, but the use of double glass is obviated. I can testify to the rich and brilliant effects which can be produced, at a small cost, by this new process of decoration; and hope that Mr. Burridge's ingenuity in providing a material suited to its development will be appreciated.

It is quite likely that he may never have seen my former communication to you, but if he did, his present invention is a result of the valuable publicity effected by your columns, and an encouragement to your readers to communicate the result of their observation.

I have tried in vain to induce one or two in the glass trade to take up the matter, and began to fear that the use of this glass would be confined to my own practice, but I heartily rejoice to know, that it is in a fair way of being publicly appreciated. E. E.

OUR PUBLIC THOROUGHFARES.

Confusion of streets is inevitable where a city is built without a plan. Some seem to lead in the direction you want to take, which bring you back again, as in a maze, to the point whence you started. The Seven Dials may be cited in this wise as a good example of a bad plan.

Again, there is a public nuisance that ought not to be tolerated—*the foreclosure of streets and squares.* Some are called squares which are in reality only causeways, with narrow preserves, railed in and long drawn out, marginal or central: they are more properly *cul-de-sacs*, or turnagains, which, tending towards the cardinal point of your journey, only lure you on to the reduplication of toil. Such is Queen's-square, an attenuated oasis of lawyers. This, however, is not walled off, nor built up at the end; for a railing shows the trees and the verdure beyond it, and admits the air (in such quality as it there abounds). The Duke of Bedford's estate has its bars, and they annoy occasionally; but they are *opened at call*, and attended by porters, stationed only to preserve the right of excluding wains and nuisances from a private quarter. Belgravia, too, is protected in a similar way.

Other parts of the metropolis discover a mode of

* We may take the opportunity of mentioning that Mr Hosking, who, as our readers know, ceased to hold office as official referee when the present Metropolitan Building Act came into operation, is now laying himself out to act as arbitrator or referee upon questions of the kind and character to which his experience applies, and also as consulting architect.

laying out and a spirit of exclusiveness very much at variance with the foregoing. In Brompton, a quarter covering some square miles, the access to the Park is cut off from Albert-gate to Thurloe-square. This formerly favoured and pretty suburb did enjoy at least a view of the Park at the end of Brompton-square, where an opening of 45 feet had been reserved for a thoroughfare. This opening was obtained by the builder of some houses above it, and has been closed in by a house which towers two stories over the old and respectably-finished ranges; blocking out all view and access, together with much of the light and air!

The health, the convenience, and the enjoyment of the greater numbers, should be consulted in all such cases; and in great municipalities they ought to be protected. If there be a private right in conflict with the public weal, that right should be satisfied, while the public health is saved.

Curzon-street is an old instance of accidental exclusion from free circulation: the impediment in that case stood on the private rights of the Duke of Devonshire and the Marquis of Lansdown: their gardens intervened to shut out Berkeley-square and Bond-street (at that time the great centres of attraction). These noblemen surrendered a footway, and built walls, the whole traverse length of their gardens, and dedicated to the public a path, which is closed but one day in the year. Could not the lord of the soil, at Princes-gate, so preserve his royalty?

COMPETITIONS.

New Presbyterian Church, De Beauvoir-town.—The design of Mr. Knightley, of Cannon-street, has been adopted for the New Presbyterian Church, De Beauvoir-town. The first premium has been awarded to Mr. Wm. Lee, and the second to Mr. Robert Lamb, of South Shields. The competition was a limited one, five architects having been invited to submit designs.

PROCEEDINGS UNDER METROPOLITAN BUILDING ACT.

NOTICE TO DISTRICT SURVEYORS.

At the Mansion-house last week, Mr. Joseph Sherwin, of 62, Tabernacle-walk, City-road, stove manufacturer, appeared upon summons, charged under the Metropolitan Buildings Act (1855), with having, on the 9th February last, he being then a builder, set a cooking apparatus upon a floor in the house No. 4, Pope's Head-alley, Cornhill, without giving notice to the district surveyor, by which he had incurred a penalty of 20*l.*

Mr. John Young, surveyor to the eastern district of the City of London, in which Pope's Head-alley is comprised, said that, in the month of February last, certain alterations had been made in the premises No. 4, Pope's Head-alley, Cornhill, which included the fixing of a cooking apparatus on the first-floor, and that this apparatus had been fixed by the defendant, without notice being previously given to him, as was required by the 38th section of the Act. Shortly afterwards a fire broke out on the premises, in consequence of the fixing of the stove, and the fact having been reported to the architect of the Metropolitan Board of Works, that gentleman had called his attention to it, and directed him to take the present proceedings.

In reply to the Lord Mayor and Mr. Alderman Cubitt, prosecutor gave it as his opinion that the fixing of a stove was a "work" under the Act, for which notice was to be given.

Mr. W. Jones, who attended for defendant, contended, firstly, that the fixing of a stove was not a work for which notice was necessary; and, secondly, that notice had been actually given.

The prosecutor, upon cross-examination, admitted that he had received notice of an intention to make a new chimney-shaft, and that he inspected it, but without knowing that there was any intention of fixing any cooking apparatus in connection with it. And besides, at the time of his inspection he supposed that all the works contemplated when notice was given to him had been completed; and as the notice had been given to him by Mr. Carter, a builder, and the apparatus had been fixed by defendant, he contended that there had been a change of builders, which rendered it compulsory upon defendant to give a fresh notice.

Mr. Jones, in reply, urged that it was absurd to call his client, who was a blacksmith, a builder; that the penalties of the Act applied to builders alone; that the chimney-shaft, for the erection of which due notice had been given, was constructed for the apparatus subsequently fixed, and that, consequently, one notice was sufficient for all the purposes of the Act.

Mr. Alderman Cubitt was of opinion that one notice ought to have been considered quite sufficient by the surveyor; and further, that the fixing of a stove was not a "work," however carefully it required to be done, within the meaning of the Act. The summons, therefore, must be dismissed.

The opinion thus expressed will, we fear, lead to error and difficulty. The Act points out distinctly certain requirements to be attended to in fixing stoves used for the purpose of trade or manufacture; and as the district surveyor must see that the directions of the Act are properly carried out, notice must be given to him.

A RAILWAY COMPENSATION CASE.

In the year 1846 the South-Eastern Railway Company obtained their Act of Parliament for making the North Kent line, and in February, 1847, they gave notice to Mr. Thomas Lintott, the owner of two houses and gardens, with a cottage adjoining, and a piece of orchard ground, in the parish of Swanscombe, that they required thirty-two perches of his land, for the purpose of the railway.

Mr. Lintott claimed 1,060*l.* for the land, and consequential damage to his estate.

The company objected to the amount, but were allowed to take possession of the land they required, upon depositing 400*l.* in a bank at Gravesend, in the joint names of the claimant and the chairman of the company.

The question remained in litigation until the spring of 1855, when it was agreed to submit it to the arbitration of two surveyors, or an umpire, in the usual way.

Before the surveyors could meet the claimant died.

It was eventually arranged with the executors to refer the whole question to Mr. Wallen (of the firm of Humphreys and Wallen), as sole arbitrator.

The inquiry occupied two days.

Mr. Edward Topping, surveyor, and Mr. Debenham, auctioneer, with other witnesses, for the claimant, were examined; and Mr. Charles Lee and Mr. Edward Ryde, surveyors, and Mr. Marsh, auctioneer, for the company.

The arbitrator has awarded 284*l.*; the claimant to pay all his own expenses incident upon the arbitration, and half the arbitrator's charges.

Notices of Books.

The Scenery of Greece and its Islands. Illustrated by fifty views. By WILLIAM LINTON. 7, Lodge-place, St. John's-wood. 1856.

The influence which Greece—so small, so great—has exercised upon the world is very wonderful to contemplate, and should be instructive to governments. As Dr. Wordsworth truly says,—"The works of the architect and of the sculptor, in every quarter of the globe, speak of Attica: of Attica, the temples, and palaces, and council-rooms of capital cities, give sensible witness, and will do for ever. The genius of the Athenians made their speech universal: the treasures which they deposited in it rendered its acquisition essential to all: and thus the sway, unlimited in extent and invincible in power, which was wielded over the universe by the arms of Rome, was exercised over Rome itself by the arts of Athens." Every prominent point in Greece brings a story to the memory: every ruin there has an interest in the eyes of the world. Mr. Linton, in his charming volume, brings the present aspect of this marvellous country vividly before us, and, in addition to his fifty views, many of which are pictures in little, gives some admirable letterpress—graphic, learned, and suggestive. We take a paragraph from his chapter on "Statue and Temple Painting," wherein he shows, what cannot now be denied, that the Greeks applied colours to statues and buildings, but maintains that sculpture cannot combine with painting, without sacrificing its high character:—

"The writer," he says in conclusion, "has already ventured to record his opinion as an artist respecting the impropriety of applying colours to works of sculptural art. Architecture not being an imitative art, is not necessarily confined by such stringent laws; indeed, a building may be so designed as to admit of the richest ornamentation that colour and gilding can bestow, as in Gothic edifices: but the simple dignity of Greek buildings would appear to be more or less vitiated by the introduction of such attractions, especially when they are employed to excess. Finery and fine art do not harmonize. In addition, also, to a consideration of the character of the architecture, whether it be that of simple grandeur or of intricacy and variety, the colouring, if colour be employed at all, should be governed by the climate. Where external nature developes her tints freely, the popular mind is prepared for similar displays on public or private edifices; but where such developments do not obtain, a more moderate share of these excitements will probably be found sufficient."

Miscellanea.

News from Australia.—A meeting of persons interested in the timber trade at Adelaide, was held on 23rd February last, when various resolutions were unanimously passed, condemnatory of the short measurement of cedar sent from Sydney, which seems to be a general grievance at Adelaide. There was a good attendance of influential persons at the meeting, including Messrs. Lines, Brown, Debney, Soward, Farr, Stewart, Clark, Pulsford, Mayfield, Hill, Smith, Macgeorge, Noltenius, and Wentzel. Mr. J. F. Ross also sent a letter describing his losses from false measurements.——The Episcopal church of St. Luke, Adelaide, erected in the south-west part of the city, facing Whitmore-square, was consecrated by the Bishop of Adelaide in February last. The Adelaide *Observer* describes the edifice as being 66 feet in length by 44 feet in width, including the side aisles. The pulpit and other internal fittings are of cedar. There is a large Gothic window over the altar, the upper part of which is of stained glass, in which blue, crimson, amber, and white are blended. In the centre there is a cross, which is surrounded by a star, formed by the intersections of three triangular devices. The window has been constructed by Mr. Brooks, of North Adelaide. The erection of the building has been effected under the superintendence of Mr. Thomas Hall. The total cost, including the internal fittings, will be about 1,200*l.*——The Melbourne Public Library was opened with great ceremony by His Excellency General MacArthur, in the beginning of February. Although quite in its infancy, it contains about 3,000 volumes of choice books, and has been opened to the public under liberal regulations.——The new lighthouse on Troubridge Island has been completed. The engineers were Messrs. Gordon, of England, Mr. Hyndham, superintending engineer, and Mr. Coleman, of the Port of Adelaide, the contractor for the foundations of the tower.

Adornment of Public Places.—The *Critic* says:—"In France the public lounges of even a provincial town are decorated with a luxury which is quite unknown to us; but with us it seems a rule that the more public the place, the more shabby and disreputable its condition. Take, for example, Richmond-hill. When a foreigner comes among us, almost the first thing that he is told is that he must see the view from Richmond-hill. He goes, he sees, and he admires. It is perhaps a little too highly cultivated, yet 'tis a glorious view, worthy the pencil of Constable or of Claude; but the appointments and decorations of the terrace are beneath contempt. Were this in France, it would be supplied with a tesselated pavement, bronze railing, and decorative statues—things not very important in themselves, but which would certainly enhance the pleasure to be derived from visiting the place. But what is the fact? Is it not mean, insignificant, disgraceful? Two or three miserable benches of the commonest and most ungraceful form, and made of the most ordinary material. Instead of railings we have a common chain, and how fixed, think ye? Why, fastened to the magnificent trees which crown and dominate over the view: each mighty bole has a great cicatrix in its bark, which proves too significantly that the iron hath entered into its soul. As if to supply an added ignominy to the degradation, we notice also that the trees have been mutilated, in order to afford a view to the houses of the Prince de Joinville and his neighbours, which have been built in their rear. It is the same thing in Hyde-park, the great promenade of London. There the seats, the barriers, everything is of the meanest description. When shall we learn to take a lesson of our neighbours in this respect?"

Kilburn.—The first stone of a new church, to be called "St. Mary's, Kilburn," in the parish of Hampstead, was laid by the Hon. General Arthur Upton, on Saturday, the 31st ult. The church consists of nave, aisles, transepts, chancel, and chancel aisles, with a tower and lofty-broach spire at the south-west angle. The accommodation provided is for 1,160 persons, including children. The style of the building is the flowing Middle Pointed. The cost will be 8,000*l.* The architects are Messrs. Francis; and the builders, Messrs. Holland, of Duke-street, Bloomsbury. The following were the tenders:—

Foundations:—

Hopkins and Roberts	£373
H. and R. Holland	340
Myers	310

Carcase of nave and aisles:—

Rigby	3,105
J. and C. I'Anson	2,802
Hayward and Nixon	2,786
Hopkins and Roberts	2,697
G. Myers	2,620
W. Higgs	2,415
Pollock and McClennan	2,323
H. and R. Holland	2,244

THE IRON TRADE.—The first (preliminary) meeting of the iron masters of South Staffordshire and East Worcestershire, was to be held on the 26th instant. Some of the masters themselves are already advocating a reduction of bars to 8*l.* per ton. Demand is very slack at present. There are various speculations as to the cause of the diminished demand from America, amongst which is the very unlikely one that "rumours of war" have been the cause,—a cause which would have *stimulated* the demand were not the Americans in a position to rely on themselves, as in all probability the strange "cantrips" in the English trade of late years have taught them to do. The hopes, at least, of the Americans, for the future, may be gathered from the following quotation from the *Scientific American*:—"Recently a kind of pig-iron (the Thomas, of New Jersey), has been brought into the market, which, for the most of purposes, will supersede the Scotch pig-iron, and it sells for three dollars less per ton. It is very soft, and flows smoothly, and is therefore well adapted to mix with our general hard and strong American cast-irons. The great variety of iron ores in our country, and the vast extent and easy working of our coal beds, demand from our iron manufacturers much better and cheaper cast-iron than has been produced. We ought to make—and yet shall make, we believe—the cheapest iron in the world. Who can describe the benefits that would be conferred on our people, if iron were sold for one-half its present price? It would tend to reduce the cost of machinery, and give an impetus to every branch of business in our country,—agriculture, architecture, commerce, &c. We hope and trust that our iron manufacturers will heed these suggestions, both for their own sakes and that of the public."——Some interesting analyses of cast-iron have of late been made in the United States arsenal, at Pikesville, Md. The extraneous substances combined with the iron were found to be allotropic carbon, combined carbon, silicium, slag, &c. It would appear that the iron having the greatest amount of combined carbon with the least slag was the best, and was found to be made by the cold blast. The hot blast appears to drive off some of the combining carbon, at the same time leaving a greater quantity of allotropic carbon, existing in a form analogous to graphite, or black lead, which is injurious. From the analysis it is concluded that hot blast is inferior in strength to cold blast iron. Great advances have yet to be made in the manufacture of cast-iron to improve its quality and reduce its cost.

GAS.—The Swinton and Mexbro' Gas Company is now established. It is proposed to light the adjoining villages of Mexbro' and Kilnhurst. The contracts for the building and machinery have been let, and are to be completed before October. Mr. Cashin, of Sheffield, is the engineer.——The Brackley Gas Light and Coke Company have resolved on a dividend of 5 per cent. free of income-tax, on the share capital of the company, besides placing a good sum to the reserve fund. On 29th September last, the directors reduced the price of gas 1s. 8d. per thousand feet, with a further allowance of 10d. per thousand to large consumers, the result of which has been a very large increase in consumption compared with any former year.

THE M'LELLAN GALLERIES, AT GLASGOW.—One good result of the acquisition of Mr. M'Lellan's picture galleries by the Town Council, says the *Glasgow Gazette*, may be learned from the fact that Mr. William Euing, an esteemed citizen of Glasgow, has gifted no fewer than thirty of his splendid paintings to the Municipal Corporation for the enjoyment of the citizens, and we have no doubt that others will follow his example.

DOVER LOCAL BOARD OF HEALTH AND ITS LATE ENGINEERS.—The action brought against the Dover Board of Health, a few months ago, by Messrs. Rammell and Lister, came on for hearing last Wednesday, in the Court of Common Pleas at Westminster. The suit was for 1,800*l.* the balance of the engineers' claim for professional fees on the works of drainage and water supply, designed by them and recently completed. The case did not go to the jury, but at the last moment the legal advisers on either side arrived at a compromise, the advisers for the local board consenting to pay Messrs. Rammell and Lister, 1,300*l.* and to bear all the costs. It is understood that the law expenses on both sides will be very heavy.

MONUMENT TO PROFESSOR WILSON, AT EDINBURGH.—At a recent council meeting, the Lord Provost stated that Mr. Fraser, late Dean of Guild, and Mr. Cousin, the superintendent of works, to whom had been remitted a memorial regarding a site for a monument to the late Professor Wilson, in East Princes-street-gardens, had as yet made no report on the subject, and that the sculptor, Mr. Steel, was said to be anxious to have the site fixed, as his modelling for a cast of the statue of Professor Wilson was in a very advanced state.

THE PROPOSED SUEZ SHIP CANAL.—The favourable report, of 6th January, 1856, to the Viceroy of Egypt, by a committee of the International Commissioners on this question, consisting of Messrs. Conrad, for Holland; Renaud and Lieussou, for France; Negrelli, for Austria; and Maclean (colleague of Mr. Rendell in this commission) for England, has placed the Suez ship canal question in a new and important light as respects the prospect of its realization. A thick pamphlet or volume, titled "New Facts and Figures relative to the Isthmus of Suez Canal; edited by M. F. De Lesseps, minister plenipotentiary, with a reply to the *Edinburgh Review*, by M. B. St. Hilaire, member of the Institute of France," has just been issued by Wilson, of the Royal Exchange, London, which will be found to contain much interesting information and discussion on the subject. The *Edinburgh Reviewer* is ably handed by M. St. Hilaire, and we are glad to find our prepossessions in favour of the proposed canal so completely justified by the report of the International Commission. The works will, it seems, not exceed 8,000,000*l.* in all, the amount of the original estimate of the Viceroy's engineers. The route by Pelusium is that indicated, the Alexandrian route having been found to be practically out of the question.

ARCHÆOLOGICAL PUBLICATIONS.—The Sussex Archæological Society have had published, by J. R. Smith, of Soho-square, their seventh volume of "Sussex Archæological Collections." Besides the annual report, list of members, rules of the society, catalogue of antiquities, &c. the volume contains numerous papers, pretty fully illustrated with engravings: the more important of these papers, exclusive of some family memoirs, documents, and extracts, are the following:—On Sedgwick Castle, by the Rev. E. Turner; on Dureford Abbey, by Mr. W. H. Blaauw; on the Abbey of Robertsbridge, by the Rev. G. M. Cooper; on the Saxon College of Bosham, by the Rev. E. Turner; Notices of Winchelsea, by Mr. W. D. Cooper; and on the Church of Worth, by Mr. W. S. Walford.——The first part of the first volume of the "Transactions of the Surrey Archæological Society" for the years 1854, 1855, has been issued for the society by the same publisher. It contains papers on the Archæology of Surrey, by the Rev. O. F. Owen; on the Religious Bearing of Archæology upon Architecture and Art, by the Rev. J. Jessop; on the Kingston Morasteen, by Mr. W. Bell; on the Warham Monument in Croydon Church, by Mr. G. S. Steinman; on the Roman Road between Silchester and Staines, by Lieut.-col. P. L. M'Dougall and Mr. E. J. Lance; on Mural Paintings formerly in Lingfield Church; on an Ancient Barrow at Teddington; and on Chertsey Abbey Charters. There are various illustrations to some of these articles, and to one on coins amongst the number.

WARWICK WATER SUPPLY AND DRAINAGE.—The tender for drainage and water supply made by Mr. James Marriott, of Coventry, has been conditionally accepted by the Local Board of Health. There were sixteen tenders sent in, four under 10,000*l.* and twelve from that to more than 15,000*l.* As the committee could not spend more than 10,000*l.* only the four tenders under that amount were considered, viz. Edward Knight, Manchester, 9,542*l.* 7s. 7½d.; James Marriott, Coventry, 9,948*l.* 3s. 6d.; George Steene, Lichfield, 9,432*l.* 9s.; and Rumble and Vint, ditto, 7,916*l.* 16s. 4d. On resolving that Mr. Marriott's tender be accepted, it was also agreed that Mr. John Disney be engaged as chief superintendent of the works, at twelve guineas per month, and that Mr. J. W. Croker, of London, be the assistant, at eight guineas per month.

HORRIBLE DEATHS BY SUFFOCATION AT LIVERPOOL.—On Friday in last week some men were engaged in making a branch sewer, for the purpose of draining a cesspool at Thirty-four-court, Upper Mann-street, Toxteth-park, and one of them broke a hole for the purpose of forming a connection with the sewer, when he was overpowered by the effluvium, and fell into the drain face downwards. Another jumped in to render him assistance, and instantly shared a similar fate; when another also went to the rescue, but was in a moment overpowered. A fourth followed with a like result; but proper aid was now at hand, and when lifted out, two of the poor fellows were found to be quite dead, and the other two unconscious; but after restoratives were applied, the two latter gradually recovered. At the inquest it was stated that, after the accident, 5 feet deep of nightsoil was found in the pool, which had not been cleaned out efficiently for four years. A verdict of accidental death was returned.

ARCHITECTURAL ASSOCIATION.—The session will close on (this) Friday, the 27th, when the officers for the ensuing session will be elected, and various propositions brought forward. It has been suggested that the meetings of the Association should be held as early as possible at the Rooms of the Architectural Museum.

ADVANTAGES ON THE FINE ARTS.—At the Polytechnic Institution, Mr. Jacob Bell a few evenings ago, delivered a lecture, one of a series intended for the benefit of the working classes of the metropolis, on the advantages of the fine arts, as an important branch of general education. Mr. Bell reminded his hearers that art is a language understood over the whole globe, but which has unfortunately been too much neglected amongst us. The lecturer advised the working men who wished to gain a useful knowledge of art, to begin by sketching groups of familiar objects, and exhibited seventeen large chalk drawings,—dogs, dead and alive; some seen sideways, and others foreshortened, which had considerable artistic merit. He regretted the want of care which had nationally been shown to art, and the little encouragement which had been given to those who wished to bequeath valuable pictures to the country, noticing the cellar accommodation which had been afforded to the collection of Mr. Vernon, and the pictures of our inimitable Turner, and contrasted the almost incredible sums expended on the war with those expended in the cultivation of the arts of peace. He mentioned the great good which had resulted from the efforts of the Art-Union of London,—not only from the value of the sums which have been distributed for paintings, &c. but also in consequence of having in many instances led from the possession of one picture through the Art-Union to the formation of extensive and valuable collections of both oil and water-colour paintings, statuary, and prints.

ERITH AND THE METROPOLITAN DRAINAGE.—On Thursday in last week at a vestry meeting held in the parish church, Erith, resolutions were passed containing a strong condemnation of the contemplated proceeding on the part of the Metropolitan Board of Works, which, it was urged, will occasion an accumulation of soil and filth from fifty main sewers on the north, and twenty-one on the south side of the Thames to be poured into and meet at a point of the river not far from Erith. A committee was appointed to resist the plan proposed, and a voluntary rate was agreed to be entered into to defray the necessary expenses.

A NEW CHURCH ON THE BOSPHORUS.—A new church, erected at Ortakeoi, a village on the banks of the Bosphorus, was opened for divine worship on Whit Sunday. It is placed under the charge of a missionary from the Propagation Society. The design is Early English, the roof, of lofty pitch, that of an equilateral triangle. The edifice consists of nave, chancel, transept, and campanile. The east and west windows are large, and six dormer windows are placed just above the eaves. The fittings are exceedingly simple.

THE ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—At the death of the Duke of Sussex, Grand Master of Freemasons, a subscription was entered into to erect a memorial to his memory. This subscription amounted to about 1,600*l.* and after some deliberation it was determined to present it to the Royal Free Hospital towards the erection of a Sussex wing, on their obtaining a sufficient farther sum to carry out such a design. A sufficient amount was considered to have been reached last year to justify the committee in proceeding with the work; and accordingly in July last the foundation-stone was laid, with masonic honours, Brother Dobie officiating. Last week the new wing was opened. It is calculated to afford accommodation for 135 beds, fifty-four of which, however, were displaced by the alterations in the new building, necessary for the new wing, so that the real number of additional beds is about eighty, making the total number of beds in the hospital about 200 in all. Messrs. Nelson and Innes were the architects.

AN INDIAN CHURCH BY A MILITARY ARCHITECT.—A church is being erected at Umballah, N. W. Provinces, India, from the design and under the superintendence of Capt. G. F. Atkinson, Bengal Engineers. The tower and spire will be 200 feet high, the nave 117 feet by 30 feet, the chancel 50 feet by 26 feet, the walls 45 feet high to roof, top of roof 65 feet. The church when completed, it is said, will be one of the finest in India.

AN ANCIENT HINDOO CITY.—An interesting pamphlet has lately been published at Bombay by Mr. Bellasis, collector of Hyderabad, in Scinde, containing an account of his excavations and discoveries on the site of the ancient city of Brahminabad, on a branch of the old bed of the Indus. Tradition affirms that the city—the capital of a Hindoo kingdom to which the tide of Mahomedan invasion had scarcely penetrated—was destroyed by fire from heaven and by earthquake on account of the wickedness of its ruler. The investigations of Mr. Bellasis seem to prove that the place really was destroyed by some terrible convulsion of nature, which probably, at the same time, completely changed the course of the Indus. The time of its destruction he conceives to have been about A.D. 1020.

THE STATE OF ARCHITECTURE ON THE LUNAR SURFACE!—Though negative in their results, the observations already made by Lord Rosse with his great new telescope are interesting. His lordship assures us that every object on the surface of the moon 100 feet in height is now distinctly visible, and under favourable circumstances even objects 60 feet in height. Rocks and stones innumerable are seen, but *no architecture—no building*, although such a single structure as Somerset House, for instance, ought to be distinctly visible, far less a street, a village, or a town. Not a vestige of green fields or of water appears, although even a small reservoir or a not very large flower-plot would be recognizable: all seems desolate. There is something awful in such a desert solitude. But the earth, too, has its desert wastes. Can it be, that what we do see of the lunar surface is but its desert districts, while what we do not see is not unlike the face of our own planet elsewhere than in its solitary districts? There is an ingenious theory of the moon consistent with such an idea, and we cannot see how the quibbling question of the lunar rotation can subvert the inferences and conclusions based upon that theory. Let us suppose that the lunar form is that which would naturally arise from the operation of the centrifugal force on a (once?) fluid sphere revolving and say even rotating round its primary, so as always to present the same phase towards the primary, that is towards the centrifugal centre. Would not the fluid mass of the sphere so revolving and rotating be centrifugalized out of the strictly spherical form, and become oblate with its greatest diameter in the line of the radius uniting it with its primary? And if there existed even a fluid ocean and an atmosphere on the surface of such a sphere, would not that ocean and that atmosphere be also centrifugalized or driven outwards to the hemisphere farthest from the primary? In such a case, the base, as it might now be called, of the oblate sphere, or its hemisphere next to the primary, might well be a desert waste, without a drop of water, while the exterior hemisphere, invisible from the primary, might for all that be full of life, vegetable and animal, though subject to laws very different from those which prevail upon the surface of the earth, at least in its temperate and tropical regions.

PRESTON WATERWORKS.—Mr. Joseph Quick, C.E. in a report to the council of Preston, on the state of the waterworks in progress, recommends a modification of the works at Grimsargh, whereby the original estimate of 22,503*l.* odds might be reduced by 7,648*l.* by completing for 8,955*l.* the works already begun, and on which 6,000*l.* have been expended. The storage, it is reported, might be increased from 159,093 3/4 gallons to 289,936,004 gallons, by raising the banks of the Spade-mill reservoir two or three feet, or by enlarging the Alston reservoir. Mr. Quick very much questions whether the Grimsargh works can be completed, as proposed, within the original estimate, and hence his suggested alterations.

WORCESTERSHIRE ARCHITECTURAL SOCIETY.—The first excursion of this society for the season took place on Monday in last week, when nearly forty members and visiting friends assembled. Leigh Church and the site of the ancient Court-house were inspected, the Rev. Mr. Bradley ("Cuthbert Bede"), receiving the party at Leigh. Thence they went to Alfrick Chapel, Lulsley Chapel, Osebury or Rosemary Rock, and Knightsford-bridge, where they dined, and afterwards proceeded to Whitbourne Church and Court, the new church near the inn, and the top of Ankerdine-hill. On their return to Worcester, the churches of Broadwas and Cotheridge were inspected.

BOARD OF WORKS, IRELAND.—Mr. Jacob Owen, architect to the Board of Works, has retired on superannuation of 1,000*l.* per annum, his full salary. Mr. James H. Owen (son of Mr. Jacob Owen), junior clerk of works, has been appointed architect to the Board of Works, at a salary of 800*l.*

MOTIVE POWER.—Mr. Thos. R. Cooper, of Battersea-fields, has provisionally specified an invention for obtaining motion, with power and velocity, by purely mechanical means. The motion is to be obtained "by a certain combination and position of machinery, not hitherto known or adopted."

THE FARRINGDON-STREET BRIDGE.—Going down Holborn-hill on the outside of an omnibus, it occurred to me that the great inconvenience and labour of descending Holborn and ascending Snow-hill might be prevented by throwing a light iron bridge over Farringdon-street, and thus bringing the top of Holborn and Snow-hill on a level. The bridge would be in the centre of the roadway, and ample room would be left for traffic on either side of the bridge. If a company might be formed and allowed to charge a halfpenny for the accommodation, it would pay well; but it should be stipulated in the agreement that the bridge, after a certain number of years, should be given up to the public free.

A TIME-SAVER.

RAILWAY MATTERS.—The Manchester, Sheffield, and Lincolnshire Railway Company being about to build a number of offices in the vicinity of the Royal Docks, Grimsby, have accepted the tender of Mr. Huddlestone, of Lincoln, amounting to 3,410*l.*——The North Kent Railway branch line of the South-Eastern was opened from Strood to Maidstone on Wednesday in last week. For eleven miles in length of this branch the original estimate was 250,000*l.* but it will be exceeded by 100,000*l.* mainly, it is said, from exorbitant demands made by landowners on the line.——About 900 of the *employés* at the goods stations of the London and North-Western Railway Company, at Liverpool, are at present on strike, or rather have dismissed themselves, since the Marquis of Chandos, the chairman, refuses to have any farther conference with them. Of the number, upwards of 100 are clerks, who have adopted this mode of protesting against certain reductions which have been recently made in the numbers and remuneration of that branch of the service. A new superintendent, it is also said, had brought strangers from elsewhere, and set them in advanced posts instead of promoting old *employés* at Liverpool. The remainder are porters, pointsmen, sheeters, &c. who were contending for a uniform remuneration at the rate of 24s. weekly, whereas the company declined to pay more than 21s. to casual or inexperienced hands. The directors have brought new hands from other places, and are gradually filling up every vacancy, greatly to the hinderance of business and the loss of the company in the meantime.

SPLENDID DWELLINGS IN AMERICA.—The mania for building splendid dwelling-houses, so prevalent a short time ago, says the *New York Times*, has sensibly abated, and this spring but little building of this character is going on. There is promise, however, of a partial revival next autumn, when gentlemen have returned from their travels, and to which time several very heavy contracts are postponed. As affording some idea of the extent to which the "merchant princes" of New York have invested in private mansions (a description of property not celebrated for its dividend-paying qualities), it may be stated that there are at least a dozen houses in the city which cost from 100,000 to 150,000 dollars—rivalling in magnificence almost any of the royal palaces of Europe, and inferior only in point of magnitude. Nearly all these have been recently erected. . . . The laws of England favour such arrangements by making the eldest son the sole heir of the paternal estate. But in this country, where primogeniture does not obtain, the property of our wealthiest men, upon their death, must be divided among all their children, and the chances are, that upon the death of the original owner, and the division of his estate, his house must be sold—for less than half its cost—and converted into a boarding-house. This has been the fate of many such establishments in this city, and the wonder is that the lesson thus conveyed is not more widely learnt.

WATER IN THE DESERT BY BORING.—A letter from Algiers states that water has been discovered at Tameins, near Bethna, on the edge of the southern desert, after boring to a depth of about 200 feet. This was the first well bored on the European plan; and as the place had always suffered dreadfully from drought, the natives, it is said, manifested "frantic joy" on seeing the water burst forth.

THE PRINCE'S-GATE AND BROMPTON-SQUARE THOROUGHFARE.—The Board of Works have resolved to adopt their committee's report on this subject, to the effect that as an application to Parliament would be necessary for the object suggested, the Board cannot carry it out, and that they have no power to delegate their authority to others, interested, and willing, it was said, to pay the cost of carrying out the work.

ROYAL LYCEUM THEATRE. — The character of *Pia dei Tolomei*, in the tragedy of that name, has enabled Madame Ristori still further to establish her claim to the possession of histrionic genius of the highest character. The play is not remarkable for fine situations or opportunities,—working up mainly to the death of the maligned *Pia* in the marshy wastes of the Maremma of Sienna; but every act is nevertheless made the occasion for a display of ability and power; and when sinking inch by inch, with attenuated form and exhausted system, flashed into life for an instant by the repentance of her husband, she expires at his feet, the audience display, first by stillness and tears, and then by applause of no common kind, her hold upon their feelings. Ristori is truly a great artist.

FULHAM-BRIDGE.—Having seen a letter in your paper, from a correspondent, relative to Fulham-bridge, I shall feel obliged by your correcting two errors; first, the watermen of Fulham and Putney, receive 62*l.* per annum, and not 30*l.*; secondly, the tolls are not double on Sundays, except for foot-passengers.—HENRY CHASEMORE, Secretary.

GREAT AMERICAN CANAL PROJECT.—The *New York Times* states that, at a meeting of the Pittsburg Board of Trade, a gentleman submitted a proposition (unanimously approved of) on the subject of improving the Ohio river, by converting it into a slack-water canal. From Pittsburg to the mouth of the Ohio is 977 miles, with an aggregate fall of 423 feet. To convert the river into slack-water would require fifty locks. To give a series of deep pools, affording a safe and easy navigation for the largest steamers and the heaviest barges, it is proposed to raise dams 10 or 12 feet high, giving 5 feet water at the upper ends. The estimated cost of the work is from 7,000 to 10,000 dollars per mile, or from 7,000,000 to 10,000,000 dollars for the whole work.

VARNISH.—"A Subscriber" wishes to know what is the most transparent and durable varnish, at the same time capable of being polished? The white polishing copal is the kind of varnish required: it can be obtained of any respectable varnish-maker.

W. E.

[ADVERTISEMENT.]

TO THE EDITOR OF THE BUILDER.

MESSRS. CLARK AND CO. of 15, Gate-street, Lincoln's-inn-fields, having erected at our premises two very large revolving-shutters, one weighing upwards of two tons, we feel much pleasure in recommending them, having acted exceedingly well during the whole of the three years they have been in use; also for the lowness of their charges and rigid punctuality, entitling them to the support of all those with whom durability is economy and time saved money made.

Our shutters may be seen nightly in active operation at eight o'clock.

SOWERBY, TATTON, AND COMPANY,
Linendrapers.

Regent-circus, Oxford-street.

TENDERS

For building a new church, on the site of the present one, at Eastwood, Nottinghamshire, including the old materials. Mr. R. Barber, architect:—

Lindley and Son, Mansfield	£4,270	0	0
C. C. & A. Dennett, Nottingham	4,149	0	0
J. S. Fergusson, Nottingham	4,129	0	0
J. E. Hall, Nottingham	4,082	0	0
J. Fisher, Nottingham (accepted)	4,054	0	0

For the erection of two villas at Canonbury, with Taylor's patent facing. Mr. Arthur Taylor, architect. Quantities supplied:—

Carter	£2,688	0	0
Brass and Co.	2,734	0	0
Hill and Ladds	2,689	0	0
Dove and Co.	2,639	0	0
Clemence	2,540	0	0
Ashby and Horner	2,527	0	0
Piper and Son	2,518	0	0
Ashby and Sons	2,483	0	0

For Skirwith Church and parsonage, Cumberland. Messrs. Francis, architects:—

Dove and Vasey	£4,166	0	0
Mounsey	3,622	0	0
Fisher and Shaw	3,623	0	0
M'Adam and Scott	3,225	0	0
Pollock	3,082	0	0
J. Howes	2,833	0	0
James	2,631	0	0
Bowerbank	2,542	0	0

For a Congregational Church, to be built at Folkstone. Mr. J. Messenger, architect:—

Porter	£2,500	0	0
Banks	2,130	0	0
Johnson	2,062	0	0
Edwards	2,040	0	0
Ayers	1,977	0	0
Tolputt	1,975	0	0
Pope	1,950	0	0

For chapel and house, Norwood. Mr. William Rogers, architect:—

J. Wilkinson	£1,373	0	0
J. Wilson	1,168	0	0
H. T. Dover	1,150	0	0
Symonds	930	0	0
J. Peak	918	0	0

For tower and spire, &c. at St. Mary's, West Brompton. Mr. Godwin, architect:—

Dove	£1,540	0	0
Lawrence	1,090	0	0
Lucas	1,000	0	0
Myers	883	0	0

TO CORRESPONDENTS.

"*Whitewash on Slate.*"—I want to know the means of fastening whitewash on the exterior of a slate roof? The object is to reflect the sun's rays and to lower the temperature under the roof.—P. B.

"W. H. P."—"J. H."—"G. H. S."—"J. W."—"Justice" (the measuring has been paid for by Sir C. Barry).—"S. P. X."—"J. E."—"T. D."—"C. and H."—"W. Y."—"C. E." (if the contractor assented to the condition that the architect should not be held responsible for correctness of the bills of quantities, of course he has no remedy against him).—"C. K."—"E. R."—"H. J. P."—"H. J."—"S. L. M." (under our limit).—"P. S." (ditto).—"W. W."—"C. P."—"S. P."—"Architect's Assistant."—"Young Engineer."—"A. W."—"W. G."—"T. G."—"H. C. M."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

ADVERTISEMENTS.

AGENTS WANTED, for the SALE by CONTRACT of WELSH PAVING SETS, CHANNEL STONES, STONE for CROSSINGS, WHEELERS, and every other variety of first-rate quality for durability, similar to what are laid and highly approved of by Liverpool, Manchester, and other Corporations. Address (with reference) A. B. (Stone), care of Mr. Dissiter's, No 2 3, Strand, London.

ENGINEER WANTED.—Wanted, immediately, an ENGINEER for the Wilts County Asylum, Devizes. He will have the care of the steam-engine, pump, heating apparatus, and gas works, in which duties he will have suitable assistance. He must also be competent to undertake the repairs in the smith's work throughout the Asylum. An unmarried man will be preferred. Commencing salary, 40l per annum, with board, lodging (for a single man), and washing in the establishment.—Applications, with references as to character and qualifications, to be addressed to Dr. THURNAM, superintendent at the Asylum.

EMPLOYMENT can be GIVEN to TWO PERSONS in the FRET LEAD GLAZING. Three months' engagement can be guaranteed. Apply at C and A. GIBBS'S Stained Glass Works, 22, Allsop-terrace, New-road, St. Marylebone, London. Apply between TEN and FIVE o'clock.

TO SLATERS AND SLATE MASONS.

WANTED, an active, intelligent Man, as WORKING YARD FOREMAN. He must thoroughly understand both branches of the business, and give good references as to integrity, sobriety, and ability. Salary progressive.—Address, in own handwriting, to Mr. A. A. ROBINSON, Bow-bridge Slate Works, Stratford, near London.

WANTED, a FRET LEAD GLAZIER, who has been used to church work, and also has a knowledge of plumbing, &c. References, &c. required.—Apply at 39, Brewer-street, Golden-square.

TO HOUSE PAINTERS.

WANTED, several good HOUSE-PAINTERS. None need apply except experienced workmen.—Address, Mr. V. BRUMFIELD, Plumber, Southampton.

WANTED, in a Builder's Office, a CLERK who thoroughly understands taking out quantities, measuring, estimating, drawing, and the general routine of the office. Apply by letter, stating age, where last engaged, and salary required, to H. S. Office of "The Builder." A liberal salary would be given.

TO BRICKLAYERS.

WANTED, immediately, BRICKLAYERS to take the BRICKWORK of FOUR HOUSES at Camden-town, the contractor to find his own scaffolding.—Apply to J. B. H Engineers' Tavern, Gloucester road, near Chalk-farm, on MONDAY Morning, the 30th inst. at TEN o'clock, for all particulars.

WANTED, by an experienced Carpenter and Joiner, a SITUATION as WORKING SHOP, or OUT-DOOR FOREMAN. Has travelled similar situations, and can produce satisfactory testimonials as to ability, &c.—Address, A. S. 56, Shepperton-terrace, Rosemary-branch-bridge, Islington.

WANTED, a SITUATION, by a Person who has a thorough practical knowledge of building, either for the whole or part of his time. He can make working plans and specifications, take out quantities, and estimate.—Address, B. B No. 4, Wilmington-street, Bloomsbury.

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WANTED, by a Young Man, aged 21, a SITUATION as TIMBERYard. Has been used to the bench.—Address, by letter, post-paid, J. B. 5, Mount pleasant, Gray's-inn-lane.

TO PLUMBERS AND BUILDERS

WANTED, by a Young Man, a SITUATION as PLUMBER. No objection to fill up his time with glazing and painting.—Direct to N. R. 17, Norfolk-place, Curtain-road, Shoreditch.

TO DECORATIVE ARTISTS.

WANTED, by a Young Man, a RE-ENGAGEMENT, in London. He can design, has a practical knowledge of the art in all its branches, and will be happy to make himself generally useful.—Address, D. A Office of "The Builder."

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WANTED, by the Advertiser, a SITUATION as PLUMBER'S LABOURER. Can fill up his time at plain painting if required. Has an excellent character from the situation he has just left. Wages not so much an object as constant employment.—Address, P. L. 63, Goswell-road, London.

WANTED, by a Young Man, aged 17, an IMPROVER'S PLACE in the CARPENTERING and BUILDING LINE.—Address, J. W. 294, Farringdon-street, City.

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WANTED by the Advertiser, a SITUATION as CLERK of WORKS, or Assistant in an Office, for two or three days a week; is a good draughtsman and accountant, and has had considerable experience in farm buildings and villa architecture. Can give ten years' character and first-class testimonials, both from Government and private office.—Address, R. E. Tennant's, Printer, Broadway, Stratford, Essex.

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WANTED, by a married Man, aged 23, a SITUATION as BOOKKEEPER or TIMEKEEPER, in an Office or in Works. Could attend to accounts and packing in a Warehouse. The advertiser writes well, is a good hand at lettering, and can work at the carpentering.—Address, B. C. H. Post-office, Oundle, Northamptonshire.

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WANTS EMPLOYMENT, as DRAUGHTSMAN, or Draughtsman and CLERK, a Young Man, a practical engineer and draughtsman, who has filled a similar situation.—Address, J. P. Office of "The Builder."

WANTED, by a Young Man, a SITUATION in a JOINER'S SHOP, as an IMPROVER. Has been six years in the cabinet line. Wages not so much the object. Address, J. D. Office of "The Builder."

TO PLUMBERS, BUILDERS, GASFITTERS, AND OTHERS.

WANTED, by an experienced active Young Man, a SITUATION as Plumber, Painter, Glazier, Gasfitter, and Paper Hanger. Wages not so much an object as a permanent situation. No objection to the country. Address S. SIMMONS, 8, Albert-place, Hornsey-road, Holloway.

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TO ARCHITECTS, SURVEYORS, BUILDERS, &c.

TEMPORARY ASSISTANCE afforded to the above on exceedingly moderate terms, in preparing and copying plans, specifications, estimates, &c.—Address, W. W. care of Mr. Harris, No. 6, Exmouth street, Clerkenwell.

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THE Advertiser, whose engagement with a Surveyor to the Metropolitan Board of Works has just expired, is desirous of EMPLOYMENT in the Office of either of the above. He can engage in surveys, take levels, trace neatly, and is a fair draughtsman.—Address, T. C. E. care of Mr. T. Chester, Eltham, Kent.

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AN ASSISTANT, who has been six years in the profession, a good draughtsman, and quick at design, desires an ENGAGEMENT in town or country. Address, DELTA, Post-office, New Brentford, Middlesex.

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A GOOD DRAUGHTSMAN WANTED, as an assistant for a few months; one who has been accustomed to town surveys and levelling will be preferred.—Address, stating qualifications and terms, to Mr. THOS. FENWICK, Borough Surveyor, Tynemouth

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JOSEPH DAW, Principal Clerk.

Sewers Offices, Guildhall, June 3, 1856.

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IN the Vauxhall-bridge-road, Pimlico.—To IRONMONGERS, GROCERS, CHEESEMONGERS, and OTHERS.—Capital commanding corner BUSINESS PREMISES, and and a HOUSE, with SHOP adjoining, admirably adapted for carrying on any wholesale or retail trade, most eligibly situate in the above extensive thoroughfare and crowded locality, the corner premises being well adapted for an ironmongery business, in which it has been long established.—Apply to Mr GEORGE GOULDSMITH'S Offices, 3, Pont-street, and 24 Belgrave road, Pimlico.

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Applications for allotments on the second portion (Lots 132 to 267 of this favourable property, will be received on or before the 11th day of AUGUST, 1856. All persons joining the Society previously will be eligible to participate. This estate is distant three and three-quarter miles from the City, about five minutes' walk from Stratford Church and Forest-gate and Stratford Stations. More than twenty trains from Shoreditch, and nearly forty trains from Stratford, each day. Return ticket to Stratford, 4d. Trains leave Fenchurch-street and Shoreditch for Stratford Stations every half-hour, and vice versa. Several trains daily to and from all stations on the North London Railway.

The prices of the lots vary from 12l. to 36l. conveyance included. The lots may be paid for in one sum, or by instalments of 6s. per plot per month.

8,800l. already advanced.

BUILDING DEPARTMENT.

The premium for the advance is added to the principal, and not required to be paid down.

The interest payable is 5l. per cent and only upon the amount remaining unrepaid each year.

FIVE HUNDRED POUNDS will be OFFERED to the MEMBERS on MONDAY, JULY 7th, 1856.

Persons taking shares on or before that date may tender for the whole or any part of the above.

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HENRY J. PHILLIPS, Secretary.

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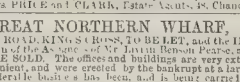

With single pulley, from 6s. each; with leading pulley, from 8s. 6d.

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"GENTLEMEN,—We have been using almost exclusively, for the last three years, your Packing for stuffing boxes of steam and water joints, now out of which time it has stood well, and has only come under our notice but yours we consider decidedly the best and most economical. We are, yours respectfully,

"JOSHUA CROSFIELD and SONS."

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"London, Nov. 11, 1854.

"GENTLEMEN,—We have tried your Packing for some time on our steam-engines, and also on steam-pipe joints, and find it efficient and economical, and to be much superior to the ordinary hemp packing. We generally employ it on the sluice valves.—Yours truly, "HOWARD RAVENHILL and CO."

"I have pleasure in stating that the Packing of Messrs. S. W. Silver and Co. has been in use in the various parts of the engines on board the steam-ships of the company, and has given every satisfaction. "J. BEARCROFT, Engineer

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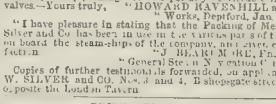
PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 300 lbs; their efficiency and durability is by experience established.

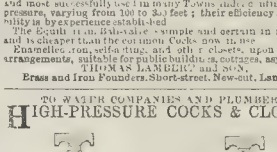
The Equilibrium Valve is a simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,
Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire

LEAD, IRON, and TIN PIPE.

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KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade, and of the manufacturers, G. B. KENT and CO. 11, Great Marlborough-street, London. Established 1777.

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SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY. Established 1831

The Annual Meeting of the above Society was held in Edinburgh on the 6th MAY. The report by the Directors stated that the number of policies issued during the year to 31st MARCH last, was 834, the sums assured thereby being 293,850l; and the annual premiums thereon, 9,954.

The result of the investigation for the triennial division of profits was then announced. The surplus ascertained to have arisen amounted to 205,000l, which was wholly added to the members, but of which one-third, 68,427l. must, by the laws of the society, be set aside as a reserve for allocation at the next triennial division in 1859.

From the remaining two-thirds a Bonus was declared at the rate of 1l. per cent per annum, on all policies on which six premiums had been paid, not only on the sums in the policies, but also on the former vested bonuses.

There was left, in addition to 61,823l. of reserve above stated, a surplus of 13,023l.; together, 74,903l. to go to the next division.

The Invested Funds of the Society now amount to 2,873,261
The Annual Revenue to 169,400
The Sum at Risk to 4,764,949

Copies of the report may be obtained at the Society's Head Office, 28, St. Andrew square, Edinburgh; at the London Office, 126, Bishopsgate street Within; and at those of the Agencies.

ROBERT CHRISTIE, Manager.
ARCHIBALD T. RITCHIE, London Agent.

PHŒNIX FIRE ASSURANCE COMPANY, LOMBARD-STREET & CHARING CROSS, London, established in 1782.

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James Horsley, esq.
William Jas. Lancaster, esq.
John Dorrien Magens, esq.
J. Mas[illegible], esq. M.P.
John Thos. Mellersh, esq.
George Shirley Repton, esq.
Rob. Alexander Shafto, esq.
Matthew Wilson, esq.
Frances Wilson, esq.

AUDITORS.

John Hodgson, esq.
Henry Hyman Toulmin, esq.

SECRETARIES.

Wilmer Harris, esq.
George William Lovell, esq.

ACTUARY AND SURVEYOR—John Sharp, esq.

Solicitors—Messrs. Dawes and Sons, Angel-court.

Insurances against loss by fire are effected by the PHŒNIX COMPANY upon every description of property, in every part of the world, on the most favourable terms.

Persons insuring with the Phœnix Company are not liable to make good the losses of others, as is the case in some offices.

Insurances with this Company expiring at Midsummer must be renewed within fifteen days thereof or they will become void.

Receipts are now ready at the principal offices, Lombard-street, and Charing-cross, and with the respective Agents throughout the United Kingdom.

GUARDIAN FIRE & LIFE ASSURANCE COMPANY, No. 11, Lombard-street, London.

DIRECTORS.

Francis Hart Dyke, esq. Chairman.
Henry Hulse Loraine, esq. Deputy Chairman.

John Dixon, esq.
Sir W. M. T. Farquhar, bart.
Sir Walter R. Farquhar, bart.
Thomas Hankey, esq. M.P.
John Hankey, esq.
John G. Hubbard, esq.
George F. Huth, esq.
John Labouchere, esq.
John Loch, esq.
St. Vincent Mary Shirley, esq.
John Martin, esq. M.P.
Rowland Mitchell, esq.
James Morrison, esq.
Henry Norman, esq.
Henry R. Reveley, esq.
John Shaw Stewart, esq.
James Wedderburn, esq.
Henry Yglesias, esq.

AUDITORS.

A. W. Robarts, esq.
Lewis Loyd, jun. esq.
Henry Sykes Thornton, esq.
John Henry Smith, esq.

SECRETARY—Geo. Keys, esq.
ACTUARY—Samuel Brown, esq.

LIFE DEPARTMENT.—Under the Provisions of an Act of Parliament, this Company now effects future risks on Four-fifths of the Profits, with Quinquennial Division, or a low rate of premium without participation in profits.

The next division of profits will be declared in June, 1860, when all Participating Policies which shall have subsisted at least one year at Christmas, 1858, will be allowed to share in the profits.

At the two divisions of profits made by this Company, the total profits ascertained to be available for the benefit of the assured have exceeded 91,000l.

At Christmas, 1854, the Assurance in force amounted to upwards of [illegible] and the Life Assurance Fund (independent of the Guarantee Capital, exceeded 1,000l.

FOREIGN RISKS.—The extra premiums required for the East and West Indies, the British Colonies, and the Northern parts of the United States of America, are much reduced.

INVALID LIVES. Persons who are not in such sound health as would enable them to insure their lives at the tabular premiums, may have their lives insured at extra premiums.

LOANS granted on Life Policies to the extent of their values, provided such Policies shall have been effected a sufficient time to have attained in each case to the net single premium.

ASSIGNMENTS OF POLICIES. Written Notices of, received and registered.

MEDICAL FEES paid by the Company, and no charge will be made for Policy Stamps.

NOTICE is hereby given, That Fire Policies which expire at Midsummer must be renewed within fifteen days with a Office, or with Mr. SAMS, No. 1, St. James's-street, corner of Pall-mall; or with the Company's Agents throughout the Kingdom, otherwise they become void.

Losses caused by Explosion of Gas are admitted by this Company.

THE LONDON and WESTMINSTER BANK issues CIRCULAR NOTES of 10l. each, payable at every important place in Europe, without delay, and free of charge, and they are cashed abroad free of commission. The Bank also issues, free of charge, Letters of Credit on all the principal cities and towns in Europe. Letters of Credit are issued only at the Head Office, in Lothbury. The Circular Notes may be obtained at the Head Office, in Lothbury, or at any of the Branches, viz.—

Westminster Branch, 1, St. James's-square.
Bloomsbury ditto, 214, High Holborn.
Soho Branch ditto, 4, Wellington-street, Strand.
Eastern ditto, 87, High-street, Whitechapel.
Marylebone ditto, 7, Stratford-place, Oxford-street.
Temple Bar ditto, 217, Strand.

The rate of interest allowed on deposits of 500l. and upwards, at the Bank or any of its Branches, is now 3 per cent.

J. W. GILBART, General Manager.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL — Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Marie, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Rodding, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel street, Liverpool.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Accounts of COMPARATIVE EXPERIMENTS on the strength of this and other Cements (read at the Institute of Civil Engineers), to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

BATH, PORTLAND, and ROMAN CEMENTS. The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 53, Old Broad-street, London; to Mr. MC NUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester.

Agent at Works—Mr. THOMAS WEEKES.

Agents in London, Messrs. GEORGE POTTER and CO. Lime-merchants, Purfleet-wharf, East-street, Blackfriars, and No. 19, North wharf-road, Paddington.

FREEN and CO.'S PORTLAND CEMENT and LIME WORKS, WOULDHAM, near Rochester.—These Works having obtained Letters Patent for the Manufacture of Cement, by which very great and important advantages are obtained over the old method of manufacture, insuring at once uniformity of colour and quality, Merchants, Contractors, and Builders are informed that they can now be supplied with any quantity, either for home or foreign markets, for wholesale orders, on advantageous terms.—Samples and prices forwarded, on application at the Works; or to Mr. W. C. ATKINSON, 62, Moorgate street, City; from whom also testimonials from eminent engineers as to quality may be obtained.

PORTLAND and BATH CEMENTS. TATHAM and CO. 14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT. Glazed Stoneware Sewage Pipes. Brick, Lime, and Cement Merchants, TATHAM and CO. 14, South Wharf, Paddington.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs. Warehouse, No. 1, Wharf, Paddington-basin.

PARIAN CEMENT is reduced in price, by the Patentees and Manufacturers, FRANCIS, BROTHERS, Nine Elms, London. Thus, internal stucco may be painted or papered within a few hours of its application, and rooms be thus made dry and habitable immediately.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment on advantageous terms.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the Trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 8d. per ton.

Small ditto, ditto, 4d. per ton.

Barges loaded in a few minutes.

W. and P. are the Grey Stone Lime Works on the Medway, near Rochester.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 1, George-yard, Lombard-street.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead; whilst the consumption of material is less than for one coat. It dries very fast and hard.

HUBBUCK'S STAIR CASTLE PAINT is the same as the former, at three fourths the price.

HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and Iron Steamers, as it neither emits noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, unstamped. Hundreds, London. Patent; and when so marked the quality is guaranteed.

HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber coated with this Enamel is not attacked by the worm, neither do barnacles attach to it.

Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.

OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can supplied with any quantity they may require, either at his Wharf, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by C. N. at the master has instructions to produce (on demand) the canal bargee's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 16, South Wharf, Paddington, or D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works. Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilnecote.—Office, at Warwick.

CHARLES RICHARDSON, 3 & 8, SOUTH-WHARF, PADDINGTON BASIN. COWLEY AND KENT BRICKS, PORTLAND, ROMAN, AND OTHER CEMENTS, TAMWORTH GLAZED SEWAGE PIPES BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 8 South Wharf, Paddington.

NOTICE.

CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keene's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c.

THE BEST HERTFORDSHIRE MALM SECONDS: THE BEST WHITE SUFFOLK and RED FACINGS: WHITE SUFFOLK PERFORATED BRICKS; DEEP-RED RUBBING BRICKS. Also COWLEY and KENT DOCKS, in any quantities. J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY (Within a short distance of the five bridges). THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and FACINGS, in any quantity. Also, STOCKS, of FIRST QUALITY. J. EASTWOOD and SONS, Belvidere-road, Lambeth.

HERMITAGE BRICKYARD, North-end, Fulham.—The best description of STOCK BRICKS now ready for sale at this yard. Gentlemen and builders are respectfully invited to inspect the quality of these bricks. Price for cash, 26s. per 1,0 0.

TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane, Dulwich. Price of good stock bricks, 25s. per thousand on the field, for cash.—Application to be made to the Foreman, A. BANHAM, at the Works.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, fine for building and pottery work, Foundry Loam, Whiting, Whiting Sand, for ashpbalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by large from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 50 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S barf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle), Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, &c. for exportation.

General Office—No. 12, GEORGE-YARD, LOMBARD-STREET. Letters addressed to Grays Essex, will meet with immediate attention.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at 21 DOLDS Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.

Malm Place, half-wasted Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Barges loaded with the above quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1855.—Any further information, or the machine on trial, on application to J. H. CHAMBERLAIN, 15, Savoy-street, Worcester.

TIVIDALE BLUE BRICK and TILEWARE WORKS, and STAFFORDSHIRE SANITARY PURE POTTERY, Tividale, near Birmingham. WILLIAM GILBERT, Manufacturer.

TO BRICKMAKERS.—The Price of 70,000 best STOCK BRICKS, and 20,000 best PLACE BRICKS, delivered on wharf at Brentford.—Address to WILLIAM CURRY, Esq. Architect, Surveyor, &c. &c. 7, Denbigh-place, Pimlico.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented.

HENRY C. MOUNT, Sec. 37, King William Street, City.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES, For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.

SOLE AGENT, J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 6d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Ruchy.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURORS," page 861, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 16, South Wharf, Paddington, Manufacturers of Improved Plain and Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Flue and Socket Sewerage Pipes, &c. adapted for Sanitary and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted imperishable, and to resist all acids and exhalations.

*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

HOGG'S GARDEN EDGE TILES.—The attention of persons engaged in laying out Gardens for Public Institutions is solicited to these Tiles, as an elegant, cheap, and permanent substitute for box edging. In colour they resemble Bath stone, are very hard, easily laid down, afford no shelter for vermin, and act as a drain to the paths. Price 13s. per 100, or about 4d. per yard run.—Full particulars on application to R. BLACKETT, Witham, Essex.

TO ELECTRIC TELEGRAPH COMPANIES, RAILWAYS, and ENGINEERS.—GODEFROY'S IMPROVED PATENT GUTTA PERCHA, tested on all points by eminent engineers, and proved to be far superior to any other covering for electric wire. Orders received for the Patentee by G. TRIMBEY, 41, Queen's street, Cheapside.

TO ENGINEERS, MACHINE MAKERS, AND OTHERS CHARLES MACINTOSH and CO. Patentees and Manufacturers of the VULCANIZED INDIA-RUBBER in all degrees of elasticity, recommend this material as capable of sustaining the action of hot or cold water, gas, steam, acids, and grease. It is used extensively for valves in marine and land engines, railway buffers and springs, washers for pipe-joints, hose and tubing; also for gaskets, solid pumps, alkali cisterns, &c. &c. Articles, moulded or otherwise, made to any size or figure.—Address, 3, Cannon-street West, London; and Cambridge-street, Manchester.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., YENTNOR, ISLE of WIGHT. —Second Testimonial.—"March 10th, 1853.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bengeworth, Lancaster.

No. 1 quality, inches diameter, and price per yard.

½	¾	1	1¼	1½	1¾	2	2½	3 in.
9d.	11d.	1s.	1s.	1s.	1s.	1s.	2s.	2s. per yard.

Super-extra stout quality.

2	2½	2¾	3 inches.
2s.	2s. 3d.	2s. 6d.	3s. per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

½	¾	1	1¼	1½	2 inches
6d.	9d.	11d.	1s.	1s. 3d.	1s. 6d. per yard

The hose is Barretterized at an extra charge of 4d. per yard Union Joints, Branch Pipes, and Jets, are also supplied.

J. CLIFF, Proprietor,

MANUFACTURER OF

URNACE-BLOCKS, BRICKS, &c.

CLAY GAS RETORTS,

GLAZED SOCKETED PIPES,

HALF-SOCKET PIPES,

JUNCTIONS, BENDS, AND OTHER SANITARY APPLIANCES.

M. B. NEWTON, Agent,

LONDON STORES,

WHARF No. 4, GOODS STATION,

KING'S-CROSS.

The LARGEST, BEST GLAZED, and STRONGEST PIPES in London.

INSPECTION SOLICITED.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as far the CHEAPEST yet manufactured.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLLS, SHADBOLT, and CO'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.

H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 149, Fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

H H H H	for drawing on wood.	F F	light and shading.
H H H	for architectural use.	F	for general use.
H H	for engineering.	B	black for shading
H	for sketching.	B B	ditto ditto
H B	blue and black for drawing.	B B B	ditto ditto.
		B B B B	ditto ditto.

M medium.

Sold by all the principal Stationers in town or country.

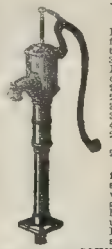
STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,

Engineers and Contractors, John's place, Holland-street, Southwark, London.

WARNER'S PATENT VIBRATING STANDARD PUMPS—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.



Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short	1 ft. 7 in.	Fitted for lead, } 1 10 0
2½ „	long	3 3	gutta percha } 1 14 0
3 „	ditto	3 6	or cast iron } 2 5 0
3½ „	ditto	3 6	flanged pipe, } 2 12 0
4 „	ditto	3 6	as required, } 3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long	ditto ditto	2 18 0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot. forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, cables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 3s. per doz. painted.
Ditto .... 4ss. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

BENJAMIN FOWLER and CO.

FIT UP HEATING-APPARATUS OF ALL KINDS,

For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,

And for every purpose where artificial heat is required.

They also erect DRYING-ROOMS for ASYLUMS, UNIONS, DOMESTIC, and MANUFACTURING PURPOSES, upon the most improved principles, and upon the largest or smallest scale.

STEAM-COOKING and BATH APPARATUS FIXED;

Also PUMPS, for DEEP or SHALLOW WELLS,

To be worked by hand, horse, or steam-power;

AND ALL KINDS OF

ENGINEERS', MILLWRIGHTS', or SMITHS' WORK, for Public or Private Establishments.

The most ample references from a long experience in the above branches, can be given.

BENJAMIN FOWLER and CO. General Engineers, Whitefriars-street Fleet-street

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

STEAM-ENGINES for SALE. — First-rate London-made horizontal STEAM-ENGINES, from 6 to 25-horse power. These engines are constructed with great care and attention to economise fuel, attain great speed and power, and a twelve months' warranty given.—For prices and further particulars, apply to JOHN MUSTO and CO. Engineers, Millwrights, and general contractors, East London Iron Works, Mile-end.

N.B. Gentlemen requiring any kind of machinery are respectfully invited to inspect the capabilities of the above works.

TO BE SOLD, a great bargain, a DOUBLE-ACTION PUMP, consisting of a square cast-iron frame, with a 2-inch wrought-iron two-throw crank, two winches, fly-wheel 5 feet diameter, spur and driving-wheel, wrought-iron levers, &c. &c. fitted up with brasses in the most substantial manner, and regardless of expense Working barrels, 3¼ inch, rising main, 2 inch, and connecting rods, 1 inch diameter; and depth of well, 100 feet. Cost, five years ago, nearly 70*l.*—to be sold now for 25*l.*—For particulars, apply to Mr. GOSLING, Builder, Edward-street, Woolwich, Kent.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.

TUNED BY MACHINERY.

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved clappers, and peeled on a new system, which give superior tone and facility for ringing.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

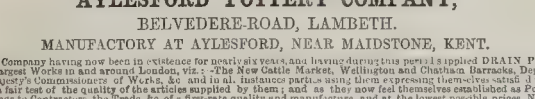
MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

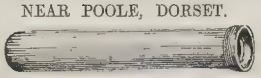
5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET. HALF-SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

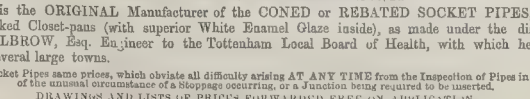
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

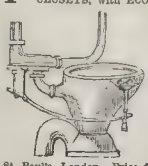
T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of JAMES PILBROW, Esq. Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

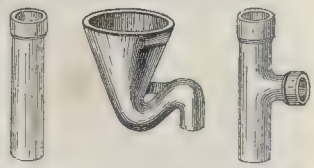
DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORK-HOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 35s. and perfect action guaranteed.



GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 95 Blackfriars.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856

STONE-PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES.—E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price. A list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at		3d. per foot.	
4	" " "	4d.	"
6	" " "	6d.	"
9	" " "	9d.	"
12	" " "	1s.	"
15	" " "	2s. 6d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

GROUND FLINT AND CORNISH STONE, UNADULTERATED.
WILCOX & CO.
FLINT MILLS, MILLWALL, POPLAR.

SUPERIOR GLAZED STONEWARE DRAIN-PIPES, &c.—The attention of Boards of Works, Contractors, and others, is invited to the MANUFACTURES of the DARFIELD (Yorkshire) STONE POTTERIES, with which for even cleanness of finish and imperishable quality few can compare. Tubes, bends, junctions, grids and stench-traps, closet-pans, syphons, yard and street gully-sinks, with every article applicable to sanitary works, in any quantity, and immediately available, at the London Depôt, No. 4 Warehouse, Goods Station, Great Northern Railway, City Offices, 37, Bucklersbury, City, where Illustrated Price Lists can be obtained.
E. B. BEAUMONT, Proprietor.
J. D. JONES, Agent

N.B.—Chimney-pots, roofing-tiles, ridgings, wall copings, flooring and paving tiles, fire-bricks, oven-bricks, bakers' lumps, cinder oven lumps and quarries.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSS'S WHOLESALE WAREHOUSE, 28, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXPENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER-HANGINGS.—JEFFERY, ALLEN, and CO. beg to inform the trade they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, which in price, style, and workmanship, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls.—Factory, 115, Whitechapel; Show-room, 500, Oxford-street.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—PUMBLE and CO. Manufacturers, Leeds, beg to call the attention of the trade to their immense STOCK of PAPER-HANGINGS, at No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, and Machine Goods. The whole being their own manufacture, can supply on the very best terms.

ROYAL POLYTECHNIC.—Patron, H.R.H. Prince ALBERT.—On Monday evening, June 30, at Eight, Dr. Rae, F.G.S. will Lecture on the Adventures and Risks of Arctic Travelling. On Monday, Wednesday, and Friday, at Four and Nine, the Grand Series of Views after David Scott, as published by Fullarton and Co. illustrating Bunyan's Allegory of the Pilgrim's Progress, with descriptive Lecture by the Rev. J. B. Brasted.—On Tuesday, Thursday, and Saturday, at Three, Lecture by J. H. Pepper, esq. on the Moon Controversy. On these same days, at Four and Nine, the Historical Tournament of Kenilworth, and at half-past Three and Eight Performances by Madle. Maddie on the Cither, and Herr Zoom on the Child's Mouth-organ.

THE EXTENSIVE SHIP-BUILDING ESTABLISHMENT AND IRON WORKS OF MR. C. J. MARE, AT BLACKWALL.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees, with the consent of the Mortgagees, to OFFER for SALE by AUCTION, at the AUCTION MART, London, on the 30th of JULY next (unless an acceptable offer be previously made by private contract), in four lots, the extensive SHIP-BUILDING ESTABLISHMENT and IRON WORKS of Mr. C. J. Mare; together with the whole of the valuable fixed PLANT and MACHINERY. These works, which together occupy a site of 14a. 3r. 30p. are situated at Blackwall, on the opposite banks of Bow-creek, at its junction with the Thames, a portion of the works having a direct frontage near the Thames. The land fr. ms its river frontage to the rear of the premises, Blackwall, and on the North Woolwich Railway, near the junction of the Victoria Dock Line, by means of which and the North London Railway, direct communication with the northern and midland districts is established. The approach from the City is easy and frequent throughout the day, by the Blackwall and North Woolwich Lines, from their joint terminus in Fenchurch-street, by means of which the northern and southern division of the works are reached within half an hour; there is also a ferry across Bow-creek for the facility of communication. The resources of the establishment for the purposes of ship-building, conversion of iron, and general engineering works are unequalled in the world, upwards of 36 000 tons of shipping having been built and launched in the years 1853 and 1854 from the yards, while from the forge and iron works upwards of 17,000 tons of iron have been hammered and rolled within the same period, and from the foundries upwards of 4,000 tons of castings delivered. The high character of the work executed has gained for the firm a world-wide reputation. In this building have been built for the English, Turkish, Russian, Spanish, and Sardinian governments, the Peninsular and Oriental, the General Screw, and the General Steam Navigation Companies, the Dover Mail Packet Company, the South-Western (Jersey) Company, and private individuals, unsurpassed in speed, and without a failure in any case. Among others may be named the two-masted *Hamidieh* of 1,000 tons burthen, the *Pera*, the *Fenice*, the *Giulia*, the *Hydra*, the *Spes*, the *Cecile*, the *Ida*, the *Pluto*, the *Indiana*, the *Crimea*, the *Ionian*, the *Envoy*, the *Genoa*, the *Transit*, the *Perseverance*, &c., with many others; also yachts for the Emperor of Russia and his Highness the Viceroy of Egypt; and such are the appliances and facilities afforded by existing arrangements, that the rapidity with which the works are carried on is perfectly astonishing. The works executed in the forge department, including marine engine shafts, upwards of 20 tons in weight, and frames of the largest description for the principal engineers in London, the total weight of hammered iron produced in one year exceeding 4,000 tons. The Engineering Department have executed a considerable portion of the Britannia Tubular Bridge, upwards of 1,000 tons of wrought-iron bridges for the East-India Railways, the wrought-iron bridges for the North London Railway, the beautiful iron roof for the terminus of the Shoreditch Railway, and a large portion of the iron work at present completed for the new bridge at Westminster; while in the Boilermakers' Department, marine boilers, equal to 4,000-horse power, can be produced annually.

The principal buildings are on the freehold portion of the property, and have been erected in the most substantial manner; they include the hammer and rolling-mills, the four-fires, engineers' shops smithies, press and pattern-makers' shops, and large fitting-shops from ten to twelve tons, the two larger ones having double cranes and furnaces, the whole forming a two-fold capacity; four fire-hearths, three sets of rolling mills for plates and bars, worked by compound steam engines, equal to 160-horse power, steam hammers, punching presses, bending rolls, planing and slotting machines, drilling machines, numerous self-acting lathes, several of which are adapted for the largest work; smiths' forges, plate, angle, and bulling furnaces; fitters' lathes and tools, &c. The whole of the machinery, both for ship and engine work, is of the most improved, a considerable portion new within three years; a spacious boiler-makers' shop, fitted with forges, furnaces, shearing, punching, and drilling machines; steam riveting machine, travelling cranes, &c., an angle iron-making plant, 14 inches per ton, whole the most extensive in London of its kind; a capacious mould loft, a saw mill fitted with timber and deal sawing frames, planing, moulding, and tenoning machines, worked by a 60-horse power steam-engine. In the ship-yard are twelve slips for building vessels of the largest tonnage, steam kilns, saw-pits, mast house, boat-building and block-making shops, joiners' and carpenters' shops, riggers lofts, stores of various descriptions, offices, and other buildings. The situation of these works affords the greatest facility for the transit of heavy land or water carriage as there is at present on to the North Woolwich Railway, and several wharfs next the water side, with powerful cranes one of them being a steam crane equal to twenty-five tons. The premises of the East India and Victoria Docks is also of great advantage. The immense extent of coals during the season, with masses of iron per ton, whole the most extensive terminus of railways in the metropolis, from which a large quantity of waste iron and scrap rails are annually obtainable, together with the vast accumulation of waste from the different manufacturing establishments in London ensure a constant and sufficient supply of scrap iron for the purposes of the mill and forge on the best possible terms. The construction of these works the whole of which has been effected within the last few years, has involved an outlay approaching to a sum exceeding £100,000, and the whole of the buildings are of the most substantial character, and have depended under the immediate superintendence of eminent practical men. The result shows the formation of an establishment of great extent, enormous in its capabilities, unrivalled in situation, and enjoying the highest reputation for the character of the works performed, possessing facilities for the transaction of business unequalled by any, and qualified by nothing within itself all the accessories requisite to command a large and lucrative trade. The tenure of the property is partly freehold and partly leasehold.

The works may be viewed till the sale, by cards only, which may be obtained shortly, together with printed particulars, of CHARLES LEE, Esq. Official Assignee, Aldermanbury; of Messrs. LAWRANCE, PLEWS, and BOYER, Solicitors, Old Jewry-chambers; of Messrs. NEWSON and EVANS, Solicitors, Warnford-place, Throgmorton-street; of Messrs. PULLEN and SON, 50, Fore-street, Cripplegate; and of Messrs FULLER and HORSEY, Billiter-street, London.

FREEHOLD LANDED PROPERTY, near BRISTOL.—To CAPITALISTS, CONTRACTORS for PUBLIC WORKS, BUILDERS, STONE-MERCHANTS, and OTHERS. — The Dundry Estate and valuable Freestone Quarries.

MR. F. G. DEBENHAM has received instructions from the mortgagee to SELL by AUCTION, at the MART, on WEDNESDAY, the 16th of JULY, at TWELVE, in two lots, the important FREEHOLD ESTATE known as "Dundry Downs," comprising about eighty acres of excellent pasture land, situate on the summit of Dundry Hill, 4½ miles from the city of Bristol, with the exceedingly valuable quarries, containing an immense quantity of the finest description of building stone, the quality of which has been reported by C. Smith, Esq. of London (one of the gentlemen appointed under the authority of the Lords Commissioners to select the stone used for the new Houses of Parliament), whose report has been published and is highly satisfactory. It is specially adapted for substantial and ornamental buildings and possesses great durability; evidence of which is supplied by the excellent preservation of Dundry church tower, built with stone from these quarries in the thirteenth century. The quarry has been recently opened, and only a small additional outlay will be required to place it in full working order.

Lot 1 comprises SEVENTY ACRES, including two cottages, occupied by Mr. Charles Withey, Mr. Chard, and Mr. Carp; and produces a present rental of £ per annum; and

Lot 2. NINE ACRES of RICH PASTURE, let to Mr. R. Batt, at £90 per annum, both formine solid landed investments, with the rare and valuable advantages, in addition, of the Royal next Leader von, from the quarries. The views from the summit of the Hill are hardly to be exceeded in extent and beauty —Particulars with conditions of sale and plans may be obtained of Mr. R. Batt, Dundry, who will show the Estate; of Messrs Aspinall and Son, Surveyors, Bristol; of Messrs Dawes, Norwich; of Mr. J. G. Hobbs, Solicitor, Bristol; and at Mr. Debenham's Auction and Estate Agency Offices, 80, Cheapside, London, where also specimens of the stone can be seen.

WIMBLEDON-COMMON (park side). — Important Sale of Freehold Building Sites, of from one and a half to four acres

CHINNOCK and GALSWORTHY will SELL by AUCTION, at the MART, on THURSDAY, the 3rd of JULY, at TWELVE, in lots of convenient size, FREEHOLD BUILDING PLOTS, especially adapted for the erection of first-class villas, which let and sell in this locality immediately or before they are finished. The land forming this sale comprises the Durham-hill portion of the beautiful domain of Wimbledon-park, eminently distinguished as the most healthful neighbourhood in the environs of London, being only six miles from Hyde-park, and near the Wimbledon, Putney, and Wandsworth Railway Stations. The estate is well supplied with pure water from its own well, lighted on the gutsaic's gas, and is unsurpassed for its picturesque scenery and delightful drives. These lots may be approached dry from Portsmouth by the Park Lodge House, the grounds of Belmont-house, by the entrance near the Wimbledon station; also by the lodge drive at Putney-heath, through the plantation, which leads to the brow of the hill, commanding the autumnal amphitheatre formed by these very eligible building sites.—Descriptive particulars and plans may be obtained of Messrs Batty and Wood, Land Surveyors, 26, Charles-street, St. James's; C. F. Cruso, Esq. Solicitor, Carlton-chambers, 8, Regent-street; and of Messrs. Chinnock and Galsworthy, 28, Regent street, Waterloo-place.

Freehold Building Sites, West-hill, near Wandsworth.

CHINNOCK and GALSWORTHY will SELL by AUCTION, at the MART, City, on THURSDAY, JULY 3, at TWELVE, FORTY-IX PLOTS of FREEHOLD BUILDING GROUND, comprising a portion of the West hill Estate, adjoining the Wimbledon-park domain, occupying some of the highest ground in the neighbourhood, commanding extensive views of a richly diversified country, extending to St Jeh lam and the Surrey Hills. The plots vary from a quarter of an acre upwards, and will be sold with the usual restrictions, which will secure good roads, and other advantage to parties buying plots on this estate. The sites are approached on all sides by good roads, the soil is gravelly, and the situation within ten minutes' walk of the station on the Richmond line, and contiguous to the noble avenue skirting Wimbledon-park. Villas of a respectable character on this estate meet with immediate purchasers; and for investment, the property eligible for a safe and profitable investment.—Plans and particulars may be obtained of Messrs. Bethell and Wright, Solicitors, 26, Charles-street; of C. F. Cruso, Esq. Solicitor, Carlton-chambers, 8, Regent-street; and of the Auctioneers, 28, Regent street.

SOUTHALL, MIDDLESEX.—IMPORTANT to BUILDERS.—An excellent Freehold Residence, seated in park-like grounds, and several Freehold Building Sites, eligible for villas or cottages to the high road, situate close to the station, with immediate possession.

CHINNOCK and GALSWORTHY have been favoured with instructions to SELL by AUCTION, on THURSDAY, JULY 24th, at TWELVE, at the MART, unless previously disposed of by private treaty, the important FREEHOLD mansion and part of the FREEHOLD ESTATE, as the residence of Mrs Serjeant Jones, situate in the high road to Southall, comprising a good square-built family house, stable, double coach-house, and other offices, with kitchen-garden, shrubbery, and pleasure-ground, well stocked with fruit trees, and in a most respectable manner in which situation the family have resided for many years past, and having very valuable building frontages. Descriptive particulars with plans may be obtained of Thos. Browning, Esq. Solicitor, 1, Hatton-court, Threadneedle-street; of Geo Wales, Esq. Surveyor, Great St. Helens; and at the Auction-erts' Offices, 28, Regent-street, Waterloo-place.

OLD-STREET ROAD.

MR. ALFRED DAY has received instructions to SELL by AUCTION, on the PREMISES, Stoneyard, Old-street-road, near Pitfield-street, on TUESDAY, JULY 1, 1856, at TWELVE o'clock, without reserve, a quantity of STONE; comprising stable, coach-house, and other building stone, landings, 30th coping stone, landing stone, paving stone, blue, and yellow bricks, and other effects. May be viewed on MONDAY morning of Sale; catalogues had on the Premises; and of the auctioneer, Cavendish-chambers, Fore-street.

ARTILLERY-PLACE, FINSBURY.—Capital Building Materials of seven large Residences, to clear the site for the Royal London Militia Depôt.

PULLEN and SON are honoured with instructions from her Majesty's Commissioners of Lieutenancy for the City of London to SELL by AUCTION, on the PREMISES, on MONDAY, JUNE 30, and following day, at TWELVE, in lots, the whole of the excellent BUILDING MATERIALS, FIXTURES, and FITTINGS UP of SEVEN RESIDENCES, of an unusually superior description, Nos. 19 to 25 inclusive, in Artillery-place (adjoining the Artillery Ground), comprising 800,000 capital stock bricks, prime oak and fir timber, in large and useful scantlings, 60 squares of slates and slating boards, 12 tons of lead, in gutters, flats, cisterns, and pipes, 200 pairs sheet sashes, with shutters, modern doors, partitions, handsome marble chimney-pieces, and interior fittings up, 300 squares of capital boarded and 3 timber floors, stone paving and steps, cast and other iron balconies and verandahs, 76 feet run of iron railing, 100 modern stoves and ranges, pumps, force pump, large iron hooks-to-gas fittings, and all the extensive hi-ne and other fixtures May be viewed on FRIDAY and SATURDAY previous. Catalogues had of Messrs. Pullen, Clerk to the Lieutenancy, 4, Warnford-court; of Joseph Jennings, Esq Architect, 3, Foley-place; and of Pullen and Son, 80, Fore-street, Cripplegate.

FREEHOLD GROUND-RENTS in the COUNTY of MIDDLESEX, amounting to about £601 per annum; and several Freehold Houses at rack rents

MESSRS. WINSTANLEY have received directions from the Executors to SELL by AUCTION, at the MART, on MONDAY, the 14th of JULY, and following day, in numerous lots, an extensive and valuable FREEHOLD PROPERTY; consisting of about 300 Dwelling-houses, Public-houses, Shops, and Workshops, situate on the Tile Kiln and Coldharbour Estates, in the Hackney-road, Vere-st. Trafalgar-place, Great Cambridge-place, York-place, Tuilerie street and place, Boston-street, York street North, Grosse-street, Great and Little Cambride streets, Herbert-street, Edith-street, Windmill street, Brunswick-street, Weymouth-terrace, Cumberland-street, Keat-street Water-loo-place, Bath-place, &c. Some of the leases have only short terms to run. The ground-rents will be found in the lots vary from 3l. to 30l. per annum, and amount to about 600l. per annum.—Particulars with the ready fourteen days previous to the sale; to be then inquired of Messrs. Rhodes, Esq. Solicitor, Davies-street, Berkeley-square; of Mr. Bostow; and at the Rag's Head, in the Hackney-road; the Place of Sale; and of Messrs. Winstanley, Paternoster-row.

TO CONTRACTORS, BUILDERS, CARPENTERS, AND OTHERS.

MESSRS. DAVIS and VIGERS are instructed to SELL by AUCTION, on the PREMISES, Cherry-tree yard, Bowling-green-lane, Clerkenwell, on THURSDAY, JULY 3rd, and following day, at TWELVE for ONE each day, the well-seasoned DOCK of MAHOGANY, DEAL and BATTEN, comprising 3 000 pine planks and deals, 600 yellow and white deals, 1,200 yellow and white battens, 100 squares of prepared and moulding boards, 5,500 feet of prepared pine linings, 12,000 feet of Spanish and Honduras mahogany, cut from eighteen months to three years; oak staves, American ash, beech, elm, and other planks; scantling, panels, and many useful articles. May be viewed the day previous and morning of Sale; and catalogues had on the Premises; and at the Auctioneers' Offices, 3, Frederick's place, Old Jewry.

CAMDEN-TOWN. — To CABINET and PIANOFORTE MAKERS, CARRIAGE-BUILDERS, CARPENTERS, and OTHERS.

MR. LEREW will SELL by AUCTION, on the PREMISES, Stanmore-place, Clarendon-street, Grove-street, near Park-street, on MONDAY, JUNE 30th, at TWELVE for ONE, 20,000 feet dry wide PINE BOARD, MAHOGANY, well-seasoned PANEL and BOARD, Deal and Batten, 3,000 feet of quartering, thirty squares of flooring, dry cut stuff, work-benches, sun-blinds, loose wood, old range, stoves, slate cistern, stone, bulk, &c. To be viewed on the Saturday prior to the sale, when catalogues may be had on the Premises, and of the Auctioneer, Carding-town-street, Hampstead-road.

The Stock of a Timber Merchant and Builder.

MR. LEREW will SELL by AUCTION, on the PREMISES, No. 49, Union-street, Somers-town, on MONDAY, JULY 7, at TWELVE, the excellent STOCK; comprising about 2,000 planks, deals and battens; 120 squares of flooring, 7,000 feet quartering, 60,000 feet wide pine boarded pencil still, fifty dozen eight rails of oak and ash plank, 300 ash spokes, 400 ash fellows, four benches, ninety scaffold-poles, seventy-four boards and eight dozen pegs, forty-two pattern deal battens, barrows, and other useful stock.—To be viewed on the Saturday prior to the sale, when catalogues may be had on the Premises; and of the Auctioneer, Carlington-street, Hampstead-road.

TO MARBLE MASONS, BUILDERS, SCULPTORS, AND OTHERS.

MESSRS EVERSFIELD and HORNE have received instructions from Mr. Fabbricotti to SELL by AUCTION, at the WHARF, Thames Bank, Pimlico, on TUESDAY, JULY 8th, at TWELVE for ONE, a choice selection of MARBLE, recently imported, consisting of Statuary, Vein, Sienna, Black, and Gold and Silver Antique, in blocks and slabs, to which the attention of trade purchasers is invited. May be viewed two days previous, and catalogues had on the Premises, and of the Auctioneers, 10, Parliament-street, Westminster, and Coal Exchange.

PIMLICO.—MARBLE CHIMNEY-PIECES, &c.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, at the SHOW-ROOMS, Belgrave-wharf, Pimlico, on MONDAY, JULY 7th, at ONE, a selection of MARBLE CHIMNEY-PIECES, in every variety of style, also in slabs for tops and backs. Cast-iron and bronzed mountains, tablets for ditto, Italian and other marble, and slate slabs for tops, and a few Antique Busts, &c. To be viewed and catalogues had on the Premises, and of the Auctioneers, 10, Parliament-street, Westminster.

TO BUILDERS, MARBLE AND STONE MASONS, AND OTHERS.

MR. MARSH has received instructions from the Proprietors in consequence of their having disposed of the Premises, to SELL by AUCTION, on the PREMISES, 6, WHARF, MACCLESFIELD-STREET-OFTH, CITY ROAD, on FRIDAY, JULY 4th, 1856, at TWELVE o'clock, the superior stock, consisting of black, veined, and French marble, in blocks and slabs, blocks of Caen, Portland, and Hall stone, York pieces and landings, about 100 York slabs, 6 capital Ionic troughs, Kerbs, curbed and serfaced slabs, a large quantity of Portland sawtting, and miscellaneous effects. May be viewed the day prior and morning of sale, and catalogues obtain d on the Premises, and at Mr. Marsh's Offices, 2, Charlotte-row, Mansion House.

Valuable New Timber and Building Materials, Bridge Wharf, Old Ford-road, Victoria-park, near the City of Paris Tavern

MR. J. G. HALL will SELL by AUCTION, on THURSDAY next, JULY 3, at THREE, TWO THOUSAND LOADS of DEALS, Norway battens, yellow and pine plank, 200,000 feet of new quarter inch, 3-inch yellow and white boards, prepared floor battens, pantile laths, feather-edge boards, flooring, paving planks, 10-inch feet of prime yellow joists, 40 loads of capital yellow bark, &c. &c. on view the day prior to and morning of sale Catalogues may be had at Wharf adjoining the Premises, Lord Nelson, and City of Paris Taverns, Old Ford-road; Alfred's Head, Cumberland-st.; King's Arms, near Kingsland-gate; Marquis of Cornwallis, Old Ford; Rose and Crown, Victoria-park; Grey, Stratford; Abbey Arms, Plaistow; Castle, Woodford; Red Lion, Ilford; Fox and Hounds, Romford, and of the Auctioneer, 9, Crauf ord street, Old Ford-road.

NOTICE.—To MAHOGANY MERCHANTS, CABINET-MAKERS, and OTHERS.—The next Liverpool PERIODICAL SALES by AUCTION, of MAHOGANY (among which are three cargoes from St. Domingo, two being Cuba), Rosewood, Logwood, Fustic, Bahia and American white woods, &c. will take place on WEDNESDAY, the 9th DAY, 23rd, and 30th of JULY, at eleven o'clock at noon, and the following day, in the Wood Sales Shed, South end of BRUNSWICK and TOXTETH DOCKS, Liverpool.—Catalogues, containing full descriptive particulars, may be had on application to EDWARD CHALONER, Sworn Broker and Measurer, No. 6, 12-st Sct. Queen's Dock, Liverpool.

IRONMONGERY BUSINESS.—FOR DISPOSAL, a first-class BUSINESS, doing an extensive and lucrative trade in black and furnishing ironmongery. The returns are about 15 000l. per annum, a considerable proportion of which is for cash. The premises are in a commanding situation, in one of the leading thoroughfares in London, and a large sum of money has been expended within a few years in rendering them externally attractive, and in adapting the interior completely for the various branches of the business. The stock is all modern, and of the best description. About 10 000l. will be required to purchase the goodwill, fixtures, &c. of which may remain on security for two years; and to two or three active young men, who can command that sum, an opportunity is thus presented for purchasing a business, which is of the first class, of a high reputation, and capable of still further extension.—Apply (by letter only) to Messrs. FULLER and HORSEY, 13, Billiter-street, E.C.

TO BRICK and TILE MERCHANTS.—To be DISPOSED OF, owing to the completion of public works, a SUPERIOR PLANT, for the manufacture of bricks and tiles by steam power, to the extent of 20,000 daily: it includes Ingram's patent machine, an horizontal high-pressure steam engine of 10-horse power, steam engine of 6-horse power, with patent boilers, all fitted, the going gear and tackle, drying sheds, three kilns with Swaine's patent feeders and furnace, clay tempering machine, clay, and blacksmith's shop and tools, with all necessary buildings and working plant. There is sufficient brick earth of the finest character for burning off 100,000 of bricks, and brought to good road: to be had of the proprietors on most advantageous terms. Situate within 45 miles of London, and immediately adjoining a railway. To view the same, and for particulars apply to M. JOYCE, Auctioneer, St. Neot's, Hunts

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TO CARPENTERS, CASEMAKERS, AND OTHERS.

MESSRS. ABRAHAMS and CO. 115, Great Portland-street, and 23, Mortimer-street, Cavendish-square, have to DISPOSE OF this splendid BUSINESS in the above line, doing £80l. per annum. Price, including a good house, shop, fixtures, &c. £200l. Rent £45 per annum. The whole of same nearly let off.—Apply to Messrs. ABRAHAMS and Co. Valuers, Estate, House, and General Business Agents.

TO MANUFACTURERS, particularly those engaged in Building.—CAPITALISTS have now a good OPPORTUNITY of EMBARKING in a WELL ESTABLISHED CONCERN, in full work, principally a ready-money trade. Its affairs will bear the fullest investigation, and, from circumstances, the concern is now to be disposed of. A capital of about £2,000 will be required, the party taking to stock, machinery, and debts; but the amount would be considerably reduced if the stock and debts were taken by application to Messrs. WOODHOUSE and PARKIN, 5, New-square, Lincoln's-inn; or to Messrs. WARING, ROBINS, and BARGES, 7, New-inn, London.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 14, Ye-street, Paternoster-row, St. Paul's, in the City of London, all in the County of Middlesex.—Saturday, June 28, 1856.

The Builder,

AN JOURNAL FOR THE

Architect, Engineer, Operative & Artist.

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ROYAL ACADEMY of ARTS, Trafalgar-square. The EXHIBITION of the ROYAL ACADEMY of ARTS is NOW OPEN. Admission from Eight till Seven o'clock), One Shilling. Catalogues, One Shilling.
JOHN PRESCOTT KNIGHT, R.A. Secretary.

THE NEW SOCIETY of PAINTERS in WATER-COLOURS.—The TWENTY-SECOND ANNUAL EXHIBITION is NOW OPEN, at their Gallery, 53, Pall-mall (near St. James's-palace) daily from Nine till dusk. Admission, 1s.; Season-tickets, 5s. JAS. FAHEY, Secretary.

BUILDERS' BENEVOLENT INSTITUTION.—At a Preliminary Meeting of the Committee appointed to carry out the design of presenting a TESTIMONIAL to Mr. THOMAS COZENS, as the Founder of the Builders' Benevolent Institution, established in 1847, for giving Relief and granting Pensions to Decayed Members of the various branches of the Building Trade and their Widows, held at the Offices of the Charity, 19, Southampton-street, Bloomsbury, 30th JUNE, 1856, Mr. GEORGE BIRD, Treasurer, in the chair, it was resolved that the sums already received be advertised, viz.:—

A. B. per Mr. Thomas Stirling	£1	1	0
Mr. Joseph Bird	5	5	0
Mr. G. Bird, Treasurer	3	3	0
Mrs. George Bird	0	10	6
Mr. John Bulmer	1	0	0
Mr. John Boulting	1	1	0
Messrs. Bolding & Son	0	10	6
Mr. Ald. W. Cubitt, M.P.	5	5	0
Mr. W. H. Cooper	1	1	0
Mr. Chas. Carr	0	10	6
Mr. Wm. Collier	0	10	6
Mr. F. Chesterman	0	10	6
Mr. Wm. Ellis	1	1	0
Mr. John Ebbs	1	1	0
Mr. Chas Formby	1	1	0
Mr. Geo. Grayson	1	1	0
Mr. Joshua Higgs	2	2	0
Mr. W. Hutchons	2	2	0
Messrs. G Head and Co.	2	2	0
Mr. Thos. Howard	1	1	0
Mr. John Harvey	1	1	0
Mr. J. H. Hunter	0	10	6
Mr. A. G. Harris	0	10	6
Mr. Geo. Jennings	1	1	0
Messrs. Edw. & W. H. Jackson	0	10	6
Messrs. Keyes & Head	1	1	0
Messrs Lee, Son, and Smith	£3	3	0
Messrs. Lucas, Brothers	2	2	0
Mr. R. Lloyd	0	10	0
Mr. John Laidler	0	10	0
Mr. H. D. Major	1	1	0
Mr. Geo. Myers	2	2	0
Mr. John Martin	0	5	0
Mr. John Newson, sen.	1	1	0
Mr. John Newson, jun.	1	1	0
Mr. D. Nicholson, jun.	1	1	0
Mr. John Outhwaite	1	1	0
Messrs. Patrick & Son	1	1	0
Mr. Hen. Patman	1	1	0
Mr. John Radley	0	10	0
Mr. Thomas Stirling	3	3	0
Mrs. Stirling	2	2	0
Mr. W. Stirling	1	1	0
Mr. G. Spencer Smith	1	1	0
Mr. S. J. Stephens	1	1	0
Mr. W. S. Symons	1	1	0
Mr. G. E. Sewell	1	1	0
Mr. Wm. Todd, sen.	1	1	0
Mr. W. Todd, jun.	0	10	6
Mr. Thos. Turnbull	0	10	6
Mr. John Williams	0	10	6
Mr. J. S. Wilson	0	10	0

Gentlemen connected with the trades represented and relieved by the above named Institution, who are desirous of adding their names to the said list, will be pleased to forward the same to the Honorary Secretary and Treasurer, Mr. JOSEPH BIRD, 10, Hanover Cottages, Regent's-park; the Committee, the Treasurer of the Institution, Mr. GEORGE BIRD, 38, Edgware-road; or to the Secretary, Mr. A. G. HARRIS, at the Office, 19, Southampton-street, Bloomsbury.
1st July, 1856.

THE METROPOLITAN BUILDING ACT, 1855 (Sec. 33).—The Institute of British Architects hereby give Notice, that an EXAMINATION of persons desirous of obtaining a Certificate of Competency to perform the duties of DISTRICT SURVEYOR, will take place at the ROOMS of the INSTITUTE, No. 16, Grosvenor-street, Grosvenor-square, on TUESDAY, the 15th day of JULY, at TWELVE o'clock noon. Persons desirous to be examined must, on or before FRIDAY, the 11th of JULY, 1856, send an application, which must be accompanied by a statement, according to a form to be previously obtained at the Rooms of the Institute.

C. C. NELSON,
M. D. WYATT, } Hon. Secs.

June 30, 1856.

THE OPERATIVE MASONS' BENEFIT SOCIETY, held at The George, Great Chapel-street Soho, Instituted 1810. Enrolled 10 Geo. 4. c. 56. The FORTY-SIXTH ANNIVERSARY of the above Society will be celebrated on TUESDAY, JULY 15, 1856, at the Manor House Tavern, Walworth C. H SMITH, Esq. in the chair. Dinner on table at HALF-PAST THREE o'clock precisely

HONORARY SUBSCRIBERS

Messrs. G. Baker and Son.	J. Foot esq.
" W. Cubitt and Co.	E. Foester, esq.
" T. Piper and Son	E. Farrow, esq.
" W. and J. Freeman	T. Grissell, esq.
" Smith and Appleford.	W. Harding, esq.
" Thompson and Holmes.	S. Hancock, esq.
T. Cubitt, esq.	T. Jackson, esq.
T. Cowlishaw, esq.	G Myers esq.
R Batterbury, esq.	T. Stirling, esq.
J. J. W. Bird, esq.	W. Wright, esq.
G. Dyke, esq.	C. H. Smith, esq.

STEWARDS

J. Britton, esq. 28, Desborough-terrace, Harrow-road.
J. J. W. Bird, esq 5, Gloucester-road North Camden-town.
R. Hassell, esq. 9, Moreton-street, Belgrave-road, Pimlico.
Tickets to be obtained of the Stewards.

ARCHITECTURAL EXHIBITION. Exhibitors in the Department of Materials and Inventions connected with building, should apply immediately for space, by letter, stating all particulars, to Mr EDMESTON, jun.; as the committee are ready to allot the same as soon as a sufficient number of applications are made, and those who defer applying will be disappointed as on the last occasion. The Exhibition will open in DECEMBER next, at the Galleries, Suffolk-street

JAMES FERGUSSON, F.R.A.S.,
20, Langham-place,
JAMES EDMESTON, jun. } Honorary Secretaries.
5, Crown-court,

COMPETITIONS.

TO ARCHITECTS.—BASINGSTOKE CEMETERY.—The Town Council of Basingstoke, acting as the Burial Board, is desirous of receiving DESIGNS, SPECIFICATIONS, and ESTIMATES, for the FORMATION of a CEMETERY, comprising the erection of Episcopal and Dissenters' Mortuary Chapels, entrance building and gates, enclosure, laying out, and planting the land, and forming approaches thereto. The land, which comprises about 14 acres, is known as the "Liten," and a portion has heretofore been used as a burial place. On the site is a ruin, called the "Holy Ghost Chapel," and the Board will be ready to receive and examine separate designs, specification, and estimate for the restoration or adaptation of the same, to the purpose of an Episcopal Mortuary Chapel. Plans, &c. to be sent, free, to the Town Clerk's Office, on or before the 31st of JULY next, under motto, with a sealed letter, similarly endorsed, containing the name and address of the author. A premium of 30l. will be given to the author of the design selected, and 10l to the second chosen.—Application for further information, or to view the site, to be made to H. DOWNS, Esq. Mayor, or at my Office, Basingstoke. J. C SHEBBEARE, Town Clerk.

TO ARCHITECTS.—Proposed new Church at Blackfordby, two miles from Ashby-de-la-Zouch.—The Committee appointed for Rebuilding Blackfordby Church, are ready to receive PLANS and ESTIMATES for the WORK. The site is very high ground, the church is intended to be built of stone, of the Early English style of architecture, to hold 350 persons, and not to cost more than 1,200l. All communications to be sent on or before the 18th of JULY, and addressed to the Rev. M. VAVASOUR, the Vicarage, Ashby-de-la-Zouch.

CONTRACTS.

TO BUILDERS.—WHITECHAPEL UNION WORKHOUSE. The Guardians of the Whitechapel Union will meet at the Workhouse, in the Whitechapel-road, on FRIDAY, the 1st of AUGUST next, at THREE o'clock in the afternoon precisely, to receive TENDERS and CONTRACTS for BUILDING the FIRST PORTION of the NEW WORKHOUSE for this Union, in Charles-street, Mile-end New-town. The plans, specification, and conditions of Conarct may be inspected at the Offices of the Architect, THOMAS D. BARRY, Esq. 15, Lincoln's-inn-fields, London, and 47, Bedford-street North, Liverpool, from the 14th to the 19th JULY next. Builders proposing to Tender, or their representatives, are invited to meet the Architect, at his Office, 15, Lincoln's-inn-fields, London, on FRIDAY, the 4th of JULY next, for general explanation, and to receive particulars. Tenders must be delivered sealed up and indorsed, "Tender for Workhouse," at the Whitechapel Workhouse, previous to the time of meeting; and the person whose Tender is accepted will be required to give satisfactory security in the sum of 2,000l. for the due performance of the Contract.—The Guardians reserve to themselves the right not to accept the lowest or any Tender.—By order of the Board,

G. ADAMS FARR, Clerk to the Guardians.

THE PUBLIC HEALTH ACT, 1848.—TO CONTRACTORS and OTHERS.—The Local Board of Health for the district of Leamington, are prepared to receive TENDERS for the CONSTRUCTION of TWO COVERED RESERVOIRS (each capable of containing five millions of gallons of water), on the Newbold-hill, near Leamington, with the LAYING of a WATER MAIN, 1,150 yards in length, of 12 inches and 11 inches internal diameter, and other works connected therewith; the plans for which may be seen, and further particulars thereof obtained, on application to Mr. JOSEPH FOX SHARP, Surveyor to the Local Board, at his Office, Town-hall, Leamington; and copies of the specification and form of Tender may be obtained on application to the Clerk, at his Office, Town-hall, on payment of 10s. on and after MONDAY, the 7th day of JULY, 1856, to whom Tenders must be forwarded, endorsed "Tender for Reservoirs on Newbold-hill," on or before MONDAY, the 21st day of JULY, 1856. The Board do not bind themselves to accept the lowest or any Tender.—By order,

R. H. DAVIES, Clerk.

Town-hall, Leamington, June 17, 1856.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives notice that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall-mall, on or before the 15th JULY next, for STRIPPING and RESLATING part of the CAVALRY BARRACKS at Windsor. Printed schedules and forms of Tender may be obtained at the Royal Engineer's Office, 11, James-street, Pimlico; or of Mr. HARRISON, at the Barrack Office, Cavalry Barracks, Windsor, between the hours of TEN and THREE o'clock from the 30th JUNE to the 15th JULY next, inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineer's Office, 11, James-street, Pimlico, 24th June, 1856.

NOTICE to BUILDERS and CONTRACTORS.—CONTRACT for REPAIRING certain PORTIONS of the RIVER FACE of QUEENBOROUGH WALL, and the TOP of the RIVER EMBANKMENT, from the RIGHT DEMI-BASTION to the GOVERNMENT BOUNDARY at SHEERNESS.—The Commanding Royal Engineer gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 10th of JULY, 1856, from such persons as may be desirous of CONTRACTING with the War Department for Repairing certain portions of the River Face of Queenborough Wall, and the Top of the River Embankment, from the Right Demi-Bastion to the Government Boundary at Sheerness. The plans may be seen, and printed specifications and forms of Tender obtained, by persons fully competent to undertake the work (none others need apply), at this Office, between the hours of TEN and FOUR o'clock, till TUESDAY, the 8th of JULY, 1856, Sundays excepted. The party whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound, under a penalty of 500l. for the due performance of the contract. Tenders for the above works to be addressed to "The Director-General of Contracts, Pall-mall, London," and endorsed, "Tender for Repairing Queenborough Wall, Sheerness." No Tender can be admitted after the said 10th day of JULY, 1856.

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Sheerness, June 25, 1856.

TO BUILDERS.—Sealed TENDERS for BUILDING the NORTH WING of NEW BARRACKS, to be erected at Devonport; separate Tenders for the Asphalte Work, and also for Laying down Pipes and Fittings for Lighting both wings of the barracks with Gas, including all requisite fitments, will be received at the War Department, Pall-mall, London, on or before THURSDAY, the 31st JULY next, at noon, addressed "To the Director-General of Contracts," and endorsed, "Tender for new Barracks, Devonport," "Asphalte Work for new Barracks, Devonport," "Gas Works for new Barracks, Devonport" (as the case may be), on the lefthand corner of the envelope. The north wing of the new barracks comprises officers' barracks and cook-houses, soldiers' barracks and cut-buildings, central building, canteen, enclosure-walls, roads, parade, &c. &c.—Plans and specifications, with terms and conditions, may be seen, forms for Tenders and every information obtained at the Royal Engineer's Office, at Devonport, between the hours of NINE and FOUR o'clock on weekdays, from TUESDAY, the 1st JULY, to TUESDAY, the 29th day of JULY next, both days inclusive.

Royal Engineer's Office, Devonport, 21st June, 1856.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, on or before FRIDAY, the 18th day of JULY next, from persons desirous of CONTRACTING with the War Department for ERECTING a GUNPOWDER MAGAZINE, at Upnor Castle, near Chatham. Plans and specifications of the work are to be seen, and forms of Tender obtained, on application at the Royal Engineer Office, Chatham, between the hours of TEN and FOUR, on the 17th of JULY next, Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately to be bound, under a penalty of 5 000l. for the due performance of the Contract. Tenders to be addressed to "The Director-General of Contracts, War Department, Pall-mall, London," and to be delivered free, endorsed, "Tender for Works at Upnor Castle." No Tender can be admitted after the said 18th day of JULY, 1856.

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Chatham, 30th June, 1856.

TO MASONS and PAVIORS.—The Board for the Repair of the Highways in the parish of West Ham, Essex, are ready to receive TENDERS for about 10,335 feet superficial of inch YORK PAVING, to be laid down in various parts of the said parish, from the eastern end of Bow-bridge to certain places in Stratford, West Ham, and Plaistow, as are detailed in the specification, which can be seen at the residence of Mr. JAMES LOUDON, Assistant Surveyor, at West Ham. Also for 3,500 feet run of ABERDEEN GRANITE KERB. Also for 6,000 feet superficial of the present pavement to be taken up, squared, and relaid in Stratford; and 50 yards of the present pitchings to be taken up and relaid. Such York paving, granite kerb, and pitchings to be supplied forthwith, the same laid down, and other works completed, by the 1st of SEPTEMBER next, unless prevented by some inevitable accident, or unless otherwise ordered by the Assistant Surveyor. Persons willing to supply all or any of such York paving, granite kerb, and pitchings, and to perform such works, may see the said specification, and obtain all other particulars by applying at Mr LOUDON'S. The Tenders are to be delivered in to Mr. ROBERT MAYPHERSON, of Plaistow, the Chairman of the Board, before TWELVE o'clock, at Noon of THURSDAY, the 10th inst.; and the Board do not bind themselves to accept the lowest or any of the Tenders unless satisfactory to all particulars. GEORGE DACRE, Straffer's green.

July 1, 1856. Clerk and Solicitor to the Board.

[For remainder of Contracts see next page.

CONTRACTS.

SAINT JAMES, WESTMINSTER.—SEWERS WORKS.—The Sewers, &c. Committee of Vestry will meet in the Vestry-room, Church-yard, Piccadilly, at SIX o'clock p.m. on WEDNESDAY, the 16th of JULY next, to receive TENDERS from persons willing to CONTRACT for all WORKS of SEWERAGE, DRAINAGE, CLEANSING of GULLIES, &c. in this parish, for one, two, or three years, from the 20th of JUNE instant. Printed forms of Tender and specification of the several works may be obtained (price 6d. each), by applying at the Paving &c. Office, Stone-yard 6, Dufour's-place, Broad-street.—The Committee do not bind themselves to accept the lowest Tender, and the contractor must provide two efficient sureties, and pay the expenses of the contract and bond.

June 21, 1856. GEORGE BUZZARD, Vestry Clerk.

TO SEWAGE MANURE COMPANIES, SCAVENGERS, and OTHERS.—The Board of Works for the Hackney District are desirous of entering into a CONTRACT for the EMPTYING of CESSPOOLS within the district, agreeably to the specifications and conditions, which may be seen, and particulars obtained at the office of Mr. JAS. LOVEGROVE, Surveyor to the Board, Town-hall, Church-street, Hackney, any morning between NINE and ELEVEN a.m. The parties contracting will be required to empty the cesspools by the atmospheric process, viz by means of a cart, consisting of a closed air tight vessel, the contents of the said vessel to be conveyed thereto, and the vessels to be charged with the soil by the exhaustion of the air therein contained. Tenders to be addressed to Mr. RICHARD ELLIS, Clerk to the Board, Town-hall, Hackney, endorsed, "Tenders for emptying Cesspools." The prices to be inserted in words, at length, and to be forwarded to the Clerk on or before WEDNESDAY, the 9th of JULY, 1856. The Board do not bind themselves to accept the lowest or any Tender.

BOROUGH of LEEDS.—WANTED, by the Town Hall Committee of the Council of this Borough, plans, specifications, and estimates for WARMING and VENTILATING the TOWN HALL at present erecting in the said borough. All plans to be sent to the Town Clerk's Office, not later than THURSDAY, the 24th JULY next, addressed to "The Chairman of the Town Hall Committee" plans, &c. for warming and ventilating." A ground plan of the building may be seen, and any information obtained, at the Office of the Architect, at the Works; but the Committee do not bind themselves to adopt the lowest estimate, or any plan which may be submitted.

By order, JOHN A. IKIN, Town Clerk.

Leeds, June 27, 1856

WARE LOCAL BOARD of HEALTH.—CONTRACT for PAVING, SUPPLYING MATERIALS, &c. The Local Board of Health are prepared to receive TENDERS from parties willing to CONTRACT for LAYING DOWN PAVING, RUBBING, and other WORKS required in forming Paths, &c. in the Town of Ware, and for Supplying best Aberdeen Granite, Curb Stone, and Wick Rockhill Flagging for the same. Plans and specifications may be seen, and particulars and other information obtained, by applying to the Clerk, between the hours of ELEVEN and FOUR. Tenders to be sent to, or delivered at, any of the of the Local Board, at Ware, on or before MONDAY, the 21st of JULY next. The Board do not bind themselves to accept the lowest, or any Tender.—By order,

NATH. COBHAM, Clerk to the Board.

Ware, June 24, 1856.

TO BUILDERS, IRONFOUNDERS, &c. KENT COUNTY PRISONS, MAIDSTONE.—Persons desirous of CONTRACTING with the Justices of the County of Kent for the ERECTION of additional BUILDINGS at the NEW PRISON for FEMALES, may inspect the plans and specifications, and obtain all other information, at the Office of the County Surveyor, at Maidstone; or at the Office of Messrs. ASHPITEL and WHICHCORD, Architects, No 2, Poet's corner, Westminster, Tenders are required to deliver Tenders for the said Works to the County Surveyor, at Maidstone, sealed, and marked "Tender for Prison Buildings," before TEN o'clock in the forenoon of SATURDAY, the 26th day of JULY next, and to attend personally at the General Sessions, to be holden at the Court-house, at Maidstone, at HALF-PAST TWELVE o'clock in the afternoon of MONDAY, the 28th day of JULY next. The lowest Tender will not necessarily be accepted, unless approved in all respects. Security will be required for the performance of the contract, and the names of two sureties proposed are to be named in the Tender

H. A. WILDES, Clerk of the Peace for Kent.

Maidstone, June 26, 1856.

N.B.—The quantities will be furnished.

TO BUILDERS.—The Town Council of the Borough of Eye, in the County of Suffolk, are desirous of receiving TENDERS for the ERECTION of a new TOWN-HALL and CORN EXCHANGE in the said Borough, according to plans and specifications which may be seen at my Office, and at the Office of the Architect, Mr. T. L. LAMB, 3, Hinde-street, Manchester-square, London, between the hours of TEN and FIVE o'clock where also estimated quantities, and forms of Tender may be obtained. Sealed Tenders are to be sent to my Office, addressed to the Town Council of the Borough of Eye, on or before the 21st JULY next. The Tender found will not be absolutely accepted of, and the Council will not bind themselves to accept the lowest or any Tender

G. W. LAWTON, Town Clerk of Eye.

Eye, 28th June, 1856.

TO BUILDERS.—Parties desirous of CONTRACTING for the several WORKS required to be done in the EXTENSION of Messrs. TIBBENHAM'S CARPET FACTORY at Kidderminster, in the County of Worcester, may inspect the plans, specifications, and bills of quantities after 7th instant, at the Offices of the Architect, Mr. J. G. BLAND, Unity-buildings, Temple-street, Birmingham, of whom copies of the same may be had, and all further information may be obtained.

July 1, 1856.

THE CONSERVATIVE LAND SOCIETY.

TRUSTEES.

Viscount Ranelagh.
Right Hon. R. A. C. N. Hamilton, M.P.
Hon. Col Lowther, M.P.
J. C. Cobbold, esq. M.P.

To ROAD CONTRACTORS &c. The Executive Committee are prepared to receive TENDERS for CONSTRUCTING the ROADS, DRAINAGE and FENCING, on the WOODBURY PARK ESTATE, Norfolk, as per Plans, Drawings and Specifications now lying at the Offices of Mr. N. E. STEVENS, Architect, Church-road, Tunbridge wells; or of the Surveyor, Mr. GEO. LEAN, Norfolk-street, Strand, London, on and after WEDNESDAY, the JULY, 1856, between the hours of ELEVEN and TWO. Tenders are to be delivered on or before TWELVE o'clock, on FRIDAY, JULY 18th, to the Surveyor, at his Offices, at Woodford. Tenders for Roads, &c. Tunbridge Wells Estate. The Executive Committee do not bind themselves to accept the lowest or any Tender.

CHARLES LEWIS GRUNEISEN,
33, Norfolk-street, Strand, London.

TO CARPENTERS, &c.—TENDERS are requested for a CLEFT RAIL OAK FENCE, to be erected on a piece of ground opposite the five-mile-stone, Leabridge road, to be a close lapt fence, 4 feet 6 inches high, with two rails, and posts of yards apart, quality to be as per sample to be seen. For further particulars, apply to J. G. DEANE, 38, Kingsland-road, Shoreditch. The Tenders will be received and opened by the Committee at the Public House, the Kingsgate Arms, on THURSDAY, the 17th of JULY, at SIX o'clock, and are not bound to accept the lowest Tender. J. G. DEANE, Sec.

Dated, June, 1856.

TO BUILDERS.—Persons desirous of CONTRACTING for the ERECTION of a COAST-GUARDS' HOUSE and SEVEN COTTAGES at Dymchurch, near Lyne-Ripps, Dover shore, can see the drawings and specification at my office, between the hour of Ten and Five, on and after MONDAY, 7th inst. No pledge given to accept the lowest or any Tender.—WILLIAM MASON, Architect, 7, Great Sun, Strand, London.

CONTRACTS.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—CONTRACT No. 1.—To BRICK MANUFACTURERS and OTHERS.—The Corporation of Sunderland are desirous of receiving TENDERS for the manufacturing and delivering in a depôt within the borough of Sunderland, the BRICKS necessary for the construction of the brick sewers, cesspits, side entrances, &c. in connection with the said works. The quantity of bricks required will be about two and a quarter millions, including square bricks, and bricks to different radiuses for upwards of eight miles of sewers. Further particulars may be known on application to WILLIAM CROZIER, C.E. Borough Engineer, at his Offices, East Cross-street, Sunderland, to whom Tenders are to be sent on or before the 8th day of JULY, 1856, endorsed, "Tender for Bricks." The Corporation do not bind themselves to accept the lowest or any Tender.—By order,

WILLIAM SNOWBALL, Town-clerk.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—CONTRACT No. 2.—To STONEWARE PIPE MANUFACTURERS and OTHERS.—The Corporation of the Borough of Sunderland are desirous of receiving TENDERS for the manufacturing and delivering in a depôt within the borough of Sunderland, the STONEWARE PIPES, Bends, Junctions, Invert Blocks, Junction Blocks, &c. necessary for carrying out the Sewerage Works of the borough. The works comprise the necessary pipes, bends, junctions, &c. for about 461 miles of pipe sewers from 6 to 18 inches in diameter, for connection of private works; the necessary junction and invert blocks for each mile of the sewers, and other articles in stoneware to which may be required in carrying out the said works. Further particulars may be known on application to WILLIAM CROZIER, C.E. Borough Engineer, at his Offices, East Cross-street, Sunderland, to whom Tenders are to be sent on or before the 8th day of JULY, 1856, endorsed "Tender for Stoneware Pipes" The Corporation do not bind themselves to accept the lowest or any Tender.

By order, WILLIAM SNOWBALL, Town Clerk.

TO BUILDERS.—TENDERS are required for ERECTING and COMPLETELY FINISHING a CHAPEL at EAST BERGHOLT, Suffolk. Persons desirous of CONTRACTING for the same, may see the drawings and specification, at the London Office of the Architect, Mr CHARLES F. HAYWARD, 3, Adam-street, Adelphi, between the hours of NINE and FIVE, from MONDAY, JULY 7 to the following THURSDAY, and from the latter day till SATURDAY, JULY 19, at the Architects' Colchester Office 2, St. John's-terrace, where Tenders, sealed and endorsed, are required to be delivered on or before the same days, JULY 19 Neither the lowest nor any Tender necessarily accepted.

HASTINGS LOCAL BOARD of HEALTH.—To CONTRACTORS for PUBLIC WORKS.—The Local Board of Health of Hastings give notice, that they are prepared to receive TENDERS from competent persons for the DRAINAGE of part of their district. The Contract will comprise the CONSTRUCTING and LAYING of about fifty yards of 4 feet CAST-IRON CULVERTS; 100 yards of 15-inch CAST-IRON PIPES all arranged by the Local Board; about 2,147 yards of BRICK SEWERS, from 1 foot 6 inches to 4 feet; and about 1,400 yards of GLAZED STONEWARE PIPES of sizes from 9 inches to 15 inches. Also the necessary Gullies, Ventilating Shafts, Side Entrances, and Tide Flaps. The specification and conditions of Contract and Tender, with printed form of Tender, may be obtained, upon payment of five shillings, and the plans, sections, and drawings, may be inspected at the Office of the Town Clerk, High-street, Hastings, between the hours of TEN and FOUR, on and after the 17th instant. The Local Board will require the works to be completed within six months from their commencement; and they do not bind themselves to accept the lowest or any Tender. Sureties will be required. Sealed Tenders on the forms supplied by the Local Board, properly indorsed and addressed to "The Hastings Local Board of Health," are to be delivered at the Town Clerk's Office, Hastings, before TWELVE of the clock in the forenoon of FRIDAY, the 25th day of JULY next. Full particulars of quantities will be furnished at 10s. each. By order of the Local Board

JOHN G. SHORTER, Town Clerk.

Hastings, June 9, 1856.

BLEAN UNION.—To BUILDERS.—The Guardians of this Union are desirous of receiving TENDERS for the ERECTION of a NEW CHAPEL and SCHOOL-ROOM, ABLE-BODIED WARDS, INFIRMARY, and other BUILDINGS, and for making various Alterations at, and Additions to, the present Buildings at the Union Workhouse, Herne, Kent. Tenders superscribed "Tenders for Works at the Blean Union Workhouse," to be delivered, free of expense, at the Union Workhouse, Herne-common, at or before ELEVEN o'clock in the forenoon of THURSDAY, the 17th day of JULY next, at which time and place parties Tendering, or their representatives, may be in attendance. The plans and specifications of the works may be seen at the Board-room of the Workhouse, any day after the first of JULY next excepting Sunday, between the hours of TEN and FOUR; and any further particulars obtained of Mr. W. BUNCH, Architect, Maidstone. Bills of quantities and a form of Tender may be obtained at the Workhouse, upon payment of 7s. for each copy. The Guardians do not bind themselves to accept the lowest or any other Tender. Security will be required for the due performance of the works.—By order of the Board,

JAMES BURCH, Clerk.

St. Dunstan's, Canterbury, June 24, 1856.

GUILDFORD UNION.—To BUILDERS and CONTRACTORS.—EXTENSIVE ADDITIONS and ALTERATIONS to the SUPERANNUATION WORKING HOUSE. The Guardians of the Guildford Union, in the County of Surrey, hereby give notice, that they are desirous of receiving TENDERS for BUILDING NEW SCHOOLS and DORMITORIES, a NEW HOSPITAL and other additions and alterations to the Workhouse of the said Union, according to the plans and specifications prepared by Mr. C. H. HOWELL, Architect of Godalming, Surrey, and of the Norwich Union Insurance Office, New Bridge-street, London. The plans and specifications may be seen at the Architect's Office, in London-street, in the Union-street, New Bridge-street, after FRIDAY, the 11th JULY instant. A copy of the bill of quantities, may be obtained from Mr CHARLES POLAND, Surveyor, 72, Margaret-street, Cavendish-square, upon the payment of 10s. The Contractor whose Tender may be accepted will be required to give security for the due performance of the Contract. The Guardians do not pledge themselves to accept the lowest or any of the Tenders tendered. Tenders marked "Building Tenders," must be sent to me by SEVEN o'clock in the evening of FRIDAY, the 25th JULY instant.

By order of the Board,
W. HAYDON SMALLPEICE, Clerk.

Guildford, July 1, 1856.

TO BUILDERS, CARPENTERS, and OTHERS.—COUNTY POLICE STATIONS.—The Magistrates for the county of Berks are willing to receive TENDERS for the ERECTION of POLICE STATIONS at the several places following, viz.:—

Abingdon,	Newbury,
East Ilsley,	Wallingford,
Farringdon,	Wantage.

Persons desirous of Contracting for the works may see the plans, specification, and particulars, and obtain bills of quantities, at the County Police Office, No. 1, Bridge-street, Reading, Berks, at present reading; and as hereinafter specified, viz.:—

Abingdon ..... At the COUNTY GAOL.
East Ilsley ..... At the Office of Mr. TILBERT.
Farringdon .... At the Office of Mr CROWDY.
Newbury ..... At the Office of Messrs. GRAY and GODWIN.
Wallingford .... At the Office of Messrs HEDGES.
Wantage ..... At the Office of Mr. ORMOND.

after WEDNESDAY, JULY 16th instant, between the hours of TEN and FOUR. Separate Tender for each station, sealed, and proper envelopes, to be sent under cover, addressed to the Chief Constable, Berks Constabulary, Reading, on or before SATURDAY, JULY 26th instant. The lowest Tender will not necessarily be accepted.—By order of the Magistrates,

J. B. CLACY, Architect, County Surveyor.

Reading, July 4, 1856.

CONTRACTS.

NORTHCOTES INCLOSURE.—CONTRACT No 3.—PUBLIC ROAD BRIDGES.—The Valuer acting in the matter of the Northcotes Inclosure is desirous of receiving TENDERS for the ERECTION of TWO BRIDGES, of brick and stone, over public drains in the Township of Northcotes; plans and specifications of which may be inspected at the Offices of Messrs. MAUGHAN and FOWLER, Architects and Surveyors, Louth, from the 7th to the 19th days of JULY next, and to whom sealed Tenders are to be delivered, before the 18th day of JULY, under cover to me.

CHARLES NORTH, Valuer.

South Thoresby, June 28, 1856.

TO BUILDERS.—PLANS and SPECIFICATIONS of DRAINAGE WORKS proposed to be executed at Stanley-green, Hammersmith, may be seen at the Traveller's Rest Inn, Starch-green, on and after SATURDAY, the 5th JULY, 1856. TENDERS to be delivered at the Surveyor's Office, on or before SATURDAY, 12th JULY.

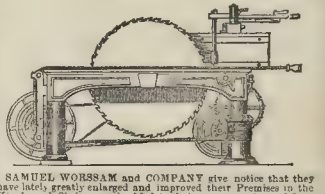
G. GORDON STANHAM, Surveyor.

North-end, Hammersmith.
The lowest Tender not necessarily accepted.

TO SAW-MILL PROPRIETORS, FANCY WOOD MERCHANTS, CABINET-MAKERS, &c.—A valuable MACHINE TO BE DISPOSED OF, in full working order, at present employed to a steam-power business, where it can remain or be removed as may best suit a purchaser. This advertisement affords an active person a fine opportunity of doing an extensive and profitable business with a small outlay. Satisfactory reasons given for parting with it.—Address, A. B. Mr. Bunting's, 9, Manor-place, King's-road, Chelsea.

PATENT MACHINES for WORKING in WOOD.—These celebrated Machines have been awarded a number of prize medals by many eminent institutions, and also by the Great Exhibition in London, and are now extensively used by the Indian, American, and all the principal governments in Europe; also by eminent Contractors, Builders, Shipwrights, Machinemakers, and other workers in wood. Their operations are in every respect perfect, either in hard or soft wood, for planing, squaring up, moulding tenoning, mortising, grooving, rebating, sawing, and boring, which they perform in a very rapid and superior manner, at a greatly reduced 03.—Sold only by WILLIAM FURNESS, Patentee, 36, Lawton-street, Liverpool, from whom full particulars may be obtained, and all the machines can be seen at work.

MACHINERY for SAWING, PLANING, MOULDING, &c.

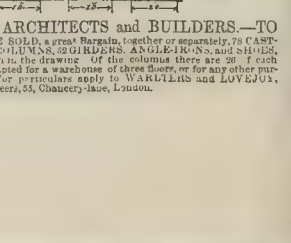


SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand many Machines, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they confine their attention to this sort of trade, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines for home and foreign use.

WOOD-CUTTING MACHINERY, JOHN M'DOWALL and SONS, WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow, MANUFACTURERS of VERTICAL SAW-FRAMES (driven by straps),

For cutting balks of timber, from 6 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached; circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross cut sawing machines, for heavy timber; planing machines, for working boards from a ⅛ of an inch thick to 6-inch deck planks; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power tenoning and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent saw-feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'DOWALL has been in the engineering and millwright business for upwards of 30 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evinced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments, and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a rapidity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.



TO ARCHITECTS and BUILDERS.—TO BE SOLD, a great Bargain, together or separately, 78 CAST-IRON COLUMNS, 52 GIRDERS, ANGLE-IRONS, and SHOES, as shown in the drawing. Of the columns there are 26 of each size, adapted for a warehouse of three floors, or for any other purpose. For particulars apply to WARDLEDS and LOVEJOY, Auctioneers, 55, Chancery-lane, London.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

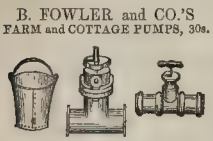
THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

B. FOWLER and CO.'S
FARM and COTTAGE PUMPS, 30s.



All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps, Engine Frames, Horse Gear, Cranes, Pulley Blocks, Wrought Pails, and Rubbish Baskets, Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJAMIN FOWLER and CO.

FIT UP HEATING-APPARATUS OF ALL KINDS,

For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,

And for every purpose where artificial heat is required.

They also erect DRYING-ROOMS for ASYLUMS, UNIONS, DOMESTIC, and MANUFACTURING PURPOSES, upon the most improved principles, and upon the largest or smallest scale.

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Also PUMPS, for DEEP or SHALLOW WELLS,

To be worked by hand, horse, or steam-power;

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ENGINEERS', MILLWRIGHTS', or SMITHS' WORK, for Public or Private Establishments.

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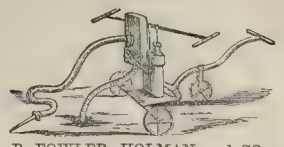

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OR IMPROVEMENTS IN THE CONSTRUCTION OF
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AND ROOFS,

As erected for and approved of by Government.

FOR ENCLOSURES,

This Patent is as Strong, as Durable, and much Cheaper, than
BRICK WALLS,
And as Portable as HURDLES.

CASTINGS,
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EVERY DESCRIPTION OF STABLE FURNITURE.

IRON ROOFING OF EVERY DESCRIPTION. CORRUGATED IRON, PLAIN OR GALVANIZED, AT PER CWT.
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FIRST-CLASS MEDAL
WAS AWARDED TO
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For the SPECIMENS they exhibited of
DR. ARNOTT'S
SMOKE-CONSUMING GRATE,
AND SMOKE-CONSUMING
COOKING APPARATUS.

F. EDWARDS, SON, and CO. beg to inform the public that their STOCK of GRATES is ENTIRELY REFORMED, and consists SOLELY of GRATES on the SMOKE-CONSUMING PRINCIPLE. A large variety in real Bronze, Ormolu, Steel, and Berlin Black, suitable for Drawing-rooms, Dining-rooms, and Libraries, from 7l. to 30l.

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The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

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They are admirably adapted for the Cure of Smoky Chimneys.

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GREAT REDUCTION IN PRICES.

RAIN WATER CASTINGS, per yard.

Sizes—	2 in	2½ in	3 in.	3½ in	4 in	4½ in.	5 in.
Pipes	1s. 6d.	1s. 8d.	1s. 9d.	1s. 7d.	1s. 10d.	2s. 4d.	2s. 8d.
Half-round Gutters	7½d.		8d.		9d.	1s.	1s. 2d.
O G Gutters			1s. 0d.	1s. 1d.	1s. 2d.	1s. 3d.	1s. 4d.
Ditto, with plain clips cast on			1s. 1d.	1s. 2d.	1s. 4d.	1s. 5d.	1s. 6d.
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Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.

Best Cut Clasp Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 14s. 6d. per cwt.
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A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.
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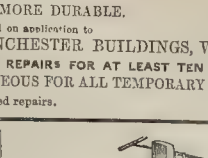

Improved Self-acting Cottage Ranges, with Large Oven and Boiler

30	33	34	36-inch.
28s.	30s.	32s.	34s.

Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars

34	36	38	49-inch.
54s.	58s.	58s.	64s.

Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 9d.

Register Stoves, with Solid Bars, per inch, 3d.
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Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2	2½	3 inch.
	10d.	1s. 1d.	1s. 3d. per yard.
Cast Gutters—4 inch, 8d. per yard.			

O G Gutters	4	4½ inch.
	1s.	1s. 2d. per yard.

Patent Line	2	3	4	5	6
	3s. 6d.	4s.	5s.	7s.	9s. per gross.

6-inch Rd. Ward Mortise, with Best Furniture and Patent Spindle 2s. 9d. each. Light Elliptic and Register Metal, 14s. per cwt. Dr Arnott's Ventilators, 4s. 6d. each.
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Best Sheet Cut Floor Brads ..... 14s. per cwt.
Best Cut Lath Nails ..... 16s. "

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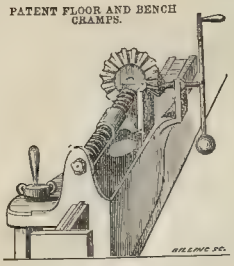

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Patentee,

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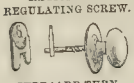
REGISTERED REGULATING SCREW.



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ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES
beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1¼	7s. 0d.
15	1½	7s. 6d.
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With Buildings, Mains, Meters, Service-Pipes, Lamp-Posts, Lamps, and Gasfittings

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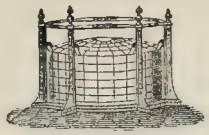

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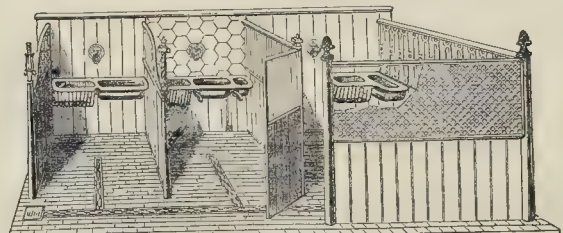

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Sheets plain and corrugated.—Roofs fixed complete.

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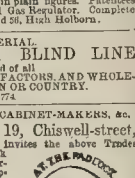

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Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
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1½	1¾	2	2½	2¾	3-in. & larger.
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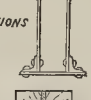

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The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete, so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.
Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.
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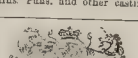
HEATING BY  HOT WATER.

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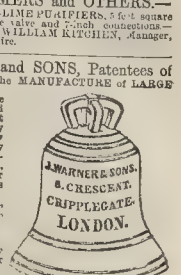

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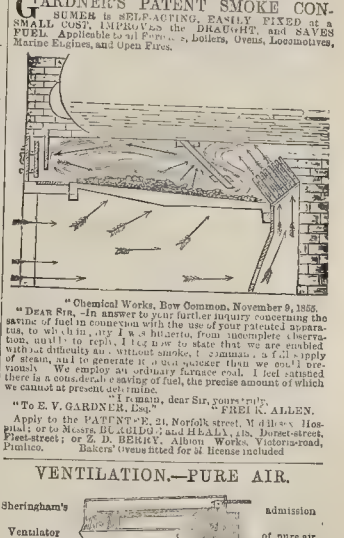

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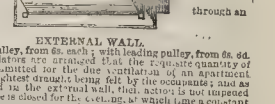

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The Builder.

VOL. XIV.—No. 700.

THE learned Smelfungus, who travelled from Boulogne to Paris—from Paris to Rome—and found all barren;—Mundungus, who made "the whole tour,—going from Naples to Venice—from Venice to Vienna—to Dresden, to Berlin, without one generous connection or pleasurable anecdote to tell of,"—such characters would personify the opposite to the happily-constituted architect. It is indeed little *comparatively* that can be learnt in any single school. But, as the delightful writer from whom we have quoted, elsewhere says,—"What a large volume of adventures may be grasped within this little span of life by him who interests his heart in everything; and who having eyes to see what time and chance are perpetually holding out to him as he journeyeth on his way, misses nothing that he can *fairly* lay his hands on!" There is, we believe, an organ recognized by phrenologists, in which they assert resides a distinct faculty,—that giving aptitude for *taking notice* of objects. This surely is the faculty which is the very first for every ARCHITECT to possess,—for, without it, power to apprehend dimensions, and relations of form and colour, and power of memory would be of little avail. None there are perhaps, at this time, who would travel from Dan to Beersheba, and cry, "Tis all barren,"—yet are there any who like Smelfungus—coming out of the Pantheon—would speak slightingly of some noble relic of a particular school of art? For such unworthy sons of architecture we have little sympathy.

We should have nothing to show of remnants of classic art, and little just now in the way of mediæval antiquities, in the locality which we would herein visit with the reader. Yet, we may find much that is interesting in connection with architecture, if not something which would claim to be looked at in forming opinions upon some controversial questions.

At this time of the year in London—when heat, smoke, and dust, conspire against body and spirit,—when the noisome stench of the river is reviving,—whilst we are told that the alternative of poison left, is, whether we will *drink* or *breathe* it, health and invigorated faculties at least may be found within a moderate distance. Our *route* will take us to the neighbourhood of Reigate,—to a district interesting for its natural beauty, its geological formation, and the variety of building materials to be found, and for much that is creditable in its recently-built houses, or picturesque in its older domestic architecture.

The county of Surrey—extra-metropolitan—stands lowest in mortality as compared with the rest of England; and not many years ago, in one of the reports on public health, the town and district of Reigate were specially referred to. In consequence of this reference, the place has had a considerable accession of inhabitants, and at the period of the late outbreak of cholera at Croydon, many members of the Society of Friends removed from the one town to the other. Reigate stands in the valley between the range of hills called the North Downs, and the sand hills which are found near them, at various points of their attendant strata in the chalk formation. The range of chalk hills extends from east to west throughout the county, and beyond it, and passes by Guildford, Dorking, and Merstham. The principal elevations of the sand formation are the celebrated Leith Hill, south-west of Dorking, and which is the highest in Surrey, and the range south of the town of Reigate. The principal elevation here, has for its summit a broad plateau, half a mile in length, from which there is a magnificent view to the chalk hills, beyond the town, on the north, and over a wide range of Surrey and the Wealds of Kent and Sussex in the other directions. Looking north, the foreground formed by the trees and the ravines of Lord Somers's park, seen with the broad shadows from a setting sun, forms a combination such as may not be found in any other country in Europe. A prominent object in the valley is the "Castle-keep," which, however, consists of a mere mound of earth, with a modern gateway, the mound having, at the base, on one side, a deep dry ditch. A piece of water known as "The Moat" also exists in some grounds adjoining the castle, but is on a higher level than the castle moat. Leading down from the summit of the castle mound is a descent by steps, ending in a large excavation, which passes under the name of "The Barons' Cave," and is said to be the place where the barons agreed upon the articles of Magna Charta before presenting them for the signature of King John, at Runnymede. But we cannot undertake to say that there is any foundation for the story. The place may be seen for a "backsheesh." There are other curious excavations under the town: these, at least, appear to have been merely sand-pits.

Amongst the beautiful views in the neighbourhood may be mentioned that which bursts upon you, as the top of the hill north of Reigate is reached, approaching by the Sutton-road; one from the tastefully-arranged gardens of Mr. Hackblock's house; and others from various points along the chalk range. Redhill, by "the junction" of the Brighton, and the South-Eastern and Reading and Reigate lines, is part of the range of sand hills. The view from it extends far into the county of Kent. At the first approach from the town of Reigate, the effect is aided by the church spire seen over the crest of the hill, as an object in the foreground. This church was a building of note a few years ago, when the details of Gothic architecture were not so well understood as at present. The ribs of the spire, apparently in cement, seem to be quickly perishing. The manner in which some of the early revived-Gothic churches were designed, was not always without merit. The support for the spire, formed by buttressed angle piers and arches in place of the ordinary base of a tower, might yet be worked out better than it has been. Amongst other places in the neighbourhood, Gatton, where there is a church and a beautiful park, may be mentioned. Before it fell into schedule A. of the Reform Bill, two members were returned to Parliament, by a few score of inhabitants, or, mayhap, as in the days of Bottom the weaver, somebody 'presented a wall, as report says was much the case at Old Sarum,—although Manchester and Birmingham were unrepresented. Reigate, which now returns one member, formerly sent two; and Bletchingley, which lies some three miles and a half east of the Redhill Junction, also sent its two members. Bletchingley is interesting for its remains of domestic architecture, its church, and other antiquities; and here a Roman hypocaust was discovered in 1813. Nutfield church, on the road to Bletchingley, is also an interesting building: Merstham Church, 2¼ miles north of the Junction, is still more so. Reigate church is chiefly "perpendicular," but has a few portions of earlier date, as the nave-piers, and arches. The piers are alternately circular and octagonal. The east end has been restored under Mr. Woodyear. A good reredos and sedilia were discovered a few years ago; and the church contains a "perpendicular" rood-screen, encaustic tiles, and a monument to the Lord Howard of Effingham who was concerned in the defeat of the Spanish Armada. Indeed, other objects of antiquarian interest may be found within very short distances of Reigate; and, for beautiful scenery, the neighbourhood of Dorking, and the valley of the Mole beyond Box Hill, are seven or eight miles distant. The picturesque features of the old domestic architecture, however, should not be passed over. High pitched roofs, and effective chimney shafts, and the use of tiles in ornamental patterns, and sometimes varied in courses, which sometimes both cover the roof and form the enclosure to the upper story—now form the common appliances, handed down in the locality from previous times. Of the seventeenth century iron-work, some capital specimens are to be found. The opportunity for imparting a pleasing character to the architecture, is greatly aided by the fortunate position of the place as to available building materials. This characteristic originates with the geological formation. Passing on the Brighton line from London, we cross a descending succession of the strata, which "crop out" at various points. Geologically under the Bagshot sand, London clay, and lower plastic clay, the chalk formation begins a little beyond Croydon. The chalk formation comprises these divisions,—as they are placed by Dr. Mantell, whose works form the great authority on the geology of the south-east of England*:—

1. Upper chalk, with flints.
2. Lower chalk, without flints.
3. Firestone { Chalk marl. / Upper green sand, or glauconite.
4. Galt, or Folkstone marl.
5. "Green sand," Shanklin, or lower green sand.

These strata terminate a little south of Reigate, to be again intersected by the railway further south. They form a figure on the geological map approaching that of the letter C. The strata next to the green sand are the Weald clay, and the Hastings sand and Purbeck beds. The marl is an argillaceous limestone pretty constantly found underlying the chalk: the lower beds contain a large intermixture of green sand, and form the coarse calcareous sandstone called "firestone." The chalk and marl are seen to best advantage in the deep cutting at the entrance of the Merstham tunnel. The "hydraulic" properties of the Merstham lime, and that of the same formation, are due to the argillaceous intermixture. When Colonel, now General, Pasley made his experiments, he readily produced artificial hydraulic limes by imitating the natural combination.

The firestone is used as the chief building stone of the neighbourhood. Amongst the old instances of its application is mentioned that by Cardinal Wolsey at Hampton Court Palace. It is not generally considered to be suited for tracery and decorative work, though we are told that Mr. P'Anson has lately so used it at Lindfield church. Caen or Bath stone for such purposes is preferred. But for many purposes the firestone answers well. When first quarried it is dark coloured; but, drying to a beautiful white, it tells with excellent effect, as applied in some houses at Reigate, where used as quoins to the walling of the ordinary Nutfield stone, which is of a yellow, and sometimes of a dark brown or slaty colour. The Galt supplies good brick earth, and the "lower green sand" affords sand and stone, with occasional beds of chert and fullers' earth. The fullers' earth is got at

* See "Geology of the South-east of England," "The Wonders of Geology," "A Day's Ramble in and about Lewes," "Thoughts on a Pebble," and the same author's contributions to "Bragley's Surrey."

Nutfield, whence it is conveyed to the woollen districts of England. In days gone by, a railway between Merstham and Wandsworth helped in one part of the carriage. In 1805, an experiment was tried to see how much one horse could draw on the railway, and thirty-six tons having been taken six miles in an hour and forty minutes, the wise men of the day affirmed that railways were things that could never be worked with profit. The Nutfield stone is used for ordinary walling very generally; and the schools at Reigate, by Mr. Clutton, are built of it.

Few localities, however, will be found with the same varied application of building materials. In the principal Gothic houses, the red brick and stone dressings are employed. For roofing, the red and stained black tiles are commonly used. The schools are roofed with grey tiles, brought by railway from Ashford; whilst the original covering of the church is of heavy stone slabs.

In the argillaceous beds of the Weald, bands of ironstone are found; and up to 1720, the chief iron manufactures of England were in Sussex. The decrease of the requisite fuel—wood and charcoal in this case—is said to have been the reason why the source of supply was transferred to the coal districts; but up to 1827 a furnace was in operation at Ashburnham. From the Weald also is procured Purbeck marble.

The green sand being the chief of the water bearing strata, Reigate is supplied with excellent water by wells, sunk from 20 to 40 feet deep. On the north side of the town, water is reached at greater depth,—sometimes at 70 feet. A band of iron-stone a few inches thick runs through the strata: and when the water is not found above this, experience shows that the well may have to be sunk much deeper. A depth of 150 feet is occasionally required. At the Feathers Inn, at Merstham, the well is said to be 210 feet deep, passing wholly through clay and marl; but there, a copious supply was reached at 60 feet, and now rises to a somewhat higher level. We apprehend that the collating of a few such facts may one day again be important in connection with the water supply of London.

The absence of a more copious supply for the town of Reigate, however, interferes with perfect success in the house-drainage. There is a sewer along the main street, which takes the road-drainage. Most of the houses in the town are connected with the sewer, but retain the original cesspools,—the overflow only passing off; whilst the houses lately built generally depend upon cesspools only. In cases where the system of perfect drainage into the sewer is sought to be carried out, it is found that the street becomes offensive,—so that, from the want of facilities for flushing the sewer, the abolition of cesspools is not encouraged. The whole question of the sewerage and water-supply deserves re-consideration, though the healthfulness of the district may at present remain. During the prevalence of the cholera, it is said that no case occurred at Reigate. We are told that the well water does not generally get contaminated, and that in the exceptions, the defective cesspool, when discovered, is soon altered. This, however, seems to us to admit the main case,—a single cesspool being sometimes productive of a large amount of mischief for years, before its state is discovered.

It cannot be too well considered in the case of new, or rapidly extending towns, that the whole question of sewerage and abolition of cesspools turns upon the position and sufficiency of outfall, and the complete removal of the contents of the *sewers* to such point, at least. But even here the inquiry does not stop. In short, there is a preliminary question,—only held over in the case of London, from the apparent peculiar impracticability of immediate solution. A commencement has, however, been made at Reigate in the utilization of the sewage; and though, as partly will have appeared, even there the evidence is incomplete, every experiment of the kind at such a juncture demands at least a notice. But, we are assured that a much larger quantity of sewage—as from increase of houses, and the better working of drainage—could be employed profitably on the land which now receives a supply. This land consists of a portion of the Priory Farm, taken by Mr. Wythes, the well-known contractor, from Lord Somers, at Michaelmas, 1854. The portion now under irrigation—about thirty-five acres—in 1854 was mere moor land, bearing rushes, and of little value. It is now becoming covered with rich grass and clover—though no seeds have been sown—and, in this the first season for fairly testing the operations, is obviously of considerable value for pasture. The land is to the south-west of the town, and adjoining the Heath; and the sewage formerly found its way through ditches, marked as branches of the Mole on the Ordnance map, and ran for two or three miles on to the main course of the river. The sewage is now intercepted at the main outfall, or at various lower points, by sluices, and turned aside into branches intersecting the land, from which the distribution is effected simply by other branches called "gutters," over the edge of which the liquid is allowed to flow laterally, and spread through the roots of the grass. It seems open to consideration whether this simple mode of distribution, though possibly the means of benefit to the health of the district as contrasted with the previous arrangement, is the best that could be carried out. In other cases, where similarly simple means have been adopted, it has been argued that injury resulted. At Rugby, for the distribution over Mr. Walker's farm, iron piping, jointed with lead, is provided; and elsewhere the operation is completed by stand-pipes or canvas hose and spreader-jets. These, however, are points which need not be gone into further at present; and the land in question is not such as will be likely for some little time to be approached much nearer by the populous part of Reigate. It is, however, to be noted as curious in physiology, that cattle will drink sewage water sometimes in preference to that at their regular drinking-place. This is said to arise not from any absence of preference for the pure over the impure water, but from the coldness of spring water, which is distasteful to them. But a horse has a more delicate taste. Cattle could be pastured within a fortnight of the time of irrigation.

The question of water supply is important to all parties. In dry seasons we apprehend that neither are the original ditches relieved, nor can Mr. Wythes's operations be continued. With reference to the relative proportions of land to receive sewage, and sewage to be got rid of, it seems that there is a limit which would be speedily reached in the instance of London, even in the Essex marshes, which have a description of soil that will take an unusual quantity. Mr. Wythes's land might take three times the present quantity, or more: but if the irrigation be excessive, or the sewage matter in great strength, grass is forced too fast (as shown here in spots close to the places of overflow), and the cattle will leave it. The question whether gain rather than loss might not be made to result through this rapid development, did not appear to be answered; for, although two crops of hay in the course of the year may be the most that the seasons will allow, there would seem to be the alternative of turning on more cattle. Doubtless, however, these are points which could be settled by persons more familiar with agricultural operations than we claim to be. But they seem to us points of some moment in reference to utilization of the sewage of London. The *drainage* of Mr. Wythes's land is effected by 2-inch piping, leading into open ditches. The pipes are laid at a depth of 4 feet, and about 25 feet apart. The latter distance, adopted for convenience, is greater than what might have been chosen otherwise. No general rules should be laid down without reference to the soil. Thus in clay, the drains will require to be comparatively close. Depth, even exceeding that adopted in the present case, is desirable in land drainage. With drains at only 18 or 20 inches, which, according to Mr. J. B. Denton, have been used at Aldershott, land "regains its wetness in a few years."

As to the commercial question involved in the application of sewage, it would, perhaps, be premature to hazard an opinion in such a case as the present. Nevertheless, the improvement in the quantity and quality of the grass is such, that it is thought in another year the land will be worth four times its former value. There is no engagement between Mr. Wythes and the town as to the future,—as the natural outfall is simply diverted; and it is thought the town could not divert in any different direction. At Rugby, Mr. Walker has a lease of the sewage for twenty years,—paying for it 50*l.* a year. But we hope Mr. Wythes will receive the full benefit from his enterprise. The same sewage-water has been used on arable land, by means of a manure-cart, with great advantage. Road-scrapings and ditch-earth, where saturated with the sewage, are highly valuable as dressing to crops. The main sewer at Reigate, we may remark, though well built, is said to be put in at too high a level for Lord Somers's house (the Priory), so that parts of the house have been liable to get flooded.

The number of houses commenced round the town within a very recent period, has been considerable. Much of the work, however, got into bad hands; so that many of the houses have been standing for some time unfinished. The chief of them are now in course of completion.

We have no particular wish to set the London speculative builders to work in the neighbourhood; for, indeed, what can be done at Reigate, in character of art, seems to be much in advance of what is done in the immediate suburbs of London. The principal exceptions may be found on two estates of freehold land societies, south of the town. At Redhill Junction, also, where a new town, called Canning Town, has risen, the *laying out* and the general taste are of a low order. But, north of Reigate, where the chief building has been going on, not only are the houses distributed, so as to preserve the trees and the beauty of nature generally, but in the designs themselves there is considerable taste. A similar remark would apply to several large houses, as those in the Tudor style—one belonging to Mr. Compton, designed by Mr. Clutton, and another with effective tiled roof by Mr. Parnell, and to an Italian villa on the Heath, and others. Mr. Clutton was the architect of the schools, which are built of the Nutfield stone. One of the largest houses recently built is that of Mr. Roslin: it is in the Italian style, and generally excellent in character. Indeed, both arising from the materials and the design, there is extraordinary variety of character at Reigate; and one who wanted to cogitate over the questions appertaining to the great question, "Classic" *versus* "Mediæval,"—to wit, whether one or the other is best fitted for the eduction of *art*,—which is most consistent with modern ideas and comforts,—or whether both might be taken up and laid down just as whim might dictate, would find many practical suggestions and exemplifications, albeit he might get not farther than the cautious judgment, that "much could be said on both sides." *A priori*, it should seem, that contrast by regular forms with the forms of nature, would be the aim we ought to hold in view, and that, consequently, those styles in which regularity of form and proportion is the principle, would go to make the best combination. Regarding character of style in our time, the Italian style, or something nearest allied to *it*, it must be observed, maintains its hold. With all the talent which has been exhibited, Gothic architecture is not yet the style of the majority of houses and public buildings. If it appeals from the exterior of a house, it sits uneasily within; for, not even in the most "consistently" decorated and furnished building—even the Houses of Parliament—can you be blinded to some interloping thing, which tells that the world without is still not going any-ways mediævally. The course in art, as in all things of knowledge and intellect, once entered upon, is as that of a barbed hook. It *may* be even nearer to go back; but pull that way, and it rends you; but push on and you get a long distance and with little detriment. We do indeed, now, hear less of the merit of standing *on the ancient ways;* and the aim of classicists and mediævalists we will now take as one,—viz. the eduction of new art. The emancipation, however, should be complete; and words are sometimes let fall at evening meetings—less by architects than architects' "patrons,"—which raise in us misgivings. Beyond that remark, we may say that indeed (as we have said often), particular style chosen is of less consequence, than that for the sake of

public appreciation of *architecture*, there should be but one general style; and the main point, therefore, will in such case be,—how is this soonest to be reached?

Still is there something in the character of recently-built houses at Reigate (the majority of which have Gothic features) which seems to harmonize well with the scenery. And the roofs, eaves, chimneys, and porches have, in new houses as in old, that importance preserved to them which should be ever found in domestic architecture; and perhaps, after all, it is because these things were, during many years, neglected in versions of Italian architecture by those who were thinking too much of precedent, that a prejudice which need by no means pertain to new works, or to mere style, belongs. The Reigate architecture seems mainly due to local men, who have studied the old buildings of the neighbourhood, put forth some effort, and have known how to use their resources in materials. There are a few buildings in starved Italian, carpenter's and cement-man's Gothic, and other nondescript styles,—some which are "picturesque," rather than durable and weather-proof, and some otherwise good designs which fail in the barge-boards. But the place generally deserves a visit.

When Mr. Felix Summerly went on his excursions some few years ago, he happened, at Reigate, to come near a clean-looking *hostelrie*, called the White Hart. Whereupon having called for a toothpick, mustard-pot, and some such light articles, and finding the diagnosis of the mustard-pot promising (a test which we take leave to say had been one of ours ever since we practised peripatetic eating), he was emboldened to order a stuffed chicken, and came back to it and ate with appetite. Whereupon, still mindful of the toothsome flavour, and having "judicious drank," he sat down to immortalize mine host, and send guests to his larder,—not, however, without threatening instant impalement in case of any dereliction from the moderation of his charges. Whether Mr. Cole's friend did wisely stand upon his "ancient ways," we know not, but he did leave the scene of his ministrations with cash in pocket. What may be the genius of the place now, also we know not; but the "exterior perspective view" is still clean and comfortable looking; and those who may not have the best of friends at Reigate, or who look to find their—

"* * * warmest welcome at an inn,"

we should think may, "nobly daring," call for stuffed chicken, on strength of the traditional repute of the White Hart.

ON THE DOMESTIC BUILDINGS OF WESTERN FLANDERS IN THE SIXTEENTH CENTURY, ILLUSTRATING THE ORNAMENTAL BRICKWORK OF THAT PERIOD.*

THE population of Bruges was formerly over 200,000, but now it is not one-fourth of that number; and from its frequent sieges, and the destruction of its cathedral and many churches and religious houses towards the close of the last century, gardens of great extent are attached to many houses in the town. Two other square fronted houses of later date are equally decorated, as those before-mentioned, though differing in character. The basement is of stone up to the windows, the upper part of red brick moulded in the arches and jambs, and the ornaments are panelled, fretted, or reticulated, all of varied patterns. The parapet is embattled, and over each pier is a corbelled turret decorated like some of our Elizabethan chimney-shafts: the upper parts have been destroyed. Over the arches are inserted white stone medallions. This building, and another in the Rue Neuve opposite, are called the Spanish Houses: both are covered with terraces or lead flats, and have their beam "ankers" in the piers.

On this square stands the great belfry, or as it is now called "Tour de la Halle," built of brick in 1291. The quoins and some of the mouldings, the hexagonal pinnacles of the upper stage, the angles of the upper octagonal stage, the small windows, belfry jambs, and the arches are of stone: the masks or salient angles, and the body with the recesses and some of the tracery, are of brick.

Of the form of the original termination there is no account, but after being struck by lightning in 1492, it was decorated with a wooden bulbous-formed composition, which was again destroyed by a storm in 1741. It was then covered with a common low-pitched roof till 1824, when pinnacles and a parapet were added.

This tower was at first insulated, but in 1364 the large hall surrounding it was built by the cloth merchants for their market-house, in which the annual fairs are now held. The tower is about 300 feet in height, and with that of the Church of Notre Dame, 360 feet high, may be seen from the sea on approaching the port of Ostend. The belfry contains four octaves of bells, varying from 23,000 to 28 lbs. in weight. The apertures are open, and the bells visible: they are firmly attached by the head to oak frames, and are struck on the external surface by hammers connected with levers balanced by weights, and raised by strong wires also acted upon by metal pegs inserted in a large copper cylinder, turned by a weight which is wound up daily. Four airs are set upon the cylinder, one for each quarter of an hour: these are generally changed once in three years. On Wednesdays, Saturdays, and Sundays, from noon till one o'clock, modern airs are played on the bells by a professor of music, who strikes keys properly balanced. These chimes or carillons, which are said to be the finest in the world, were invented in 1469 by a native of Alost, near Gand, and first introduced in this tower in 1503 by Simon Waeghenlis, of Mechlin. The bells were recast in 1675 by Melchior de Haese, of Antwerp, and again after the fire in 1741 by Georges and Jacques Dumery. They remain in very perfect condition, though exposed for more than a century to the action of the weather. In 1805, when preparations were being made for a descent on England, being a *détenu* in the town, I could see with a telescope our English blockading squadron from this belfry.

Crossing the Grande Place to the Rue Flammande, there is a curious front, rising from a central pillar and corbels which project 2 feet from the end walls: all is brick excepting the pillar-shaft, brackets, key-stones of the arches below, and the huge crockets and ornaments on the coping of the gable, which are of Ecaussines stone. Continuing by the Quai des Augustins, and passing several of the same class of houses, at the corner of the Rue Espagnole, is a double-gabled house bearing the date 1596 in front, and on the Quai de la Main d'Or adjoining (on the site of the India House and doubtless a portion of it), is a building with the corners bevelled off for brackets and canopies to contain statues of saints, many of which have been reinstated: the recesses are richly moulded and contain pillar bases, but the roof has been recently modernized, the gables, arches, and tracery removed, and a wooden cornice substituted. This will give an idea of the general style of modernization now in progress. Opposite this building are two very singular gables: the recesses are moulded, and contain pillars with capitals and bases. Leaving these buildings by the Place des Orientaux (now Wednesday Market), we arrive at the Place de l'Académie. The Academy of Arts is a doubtful restoration of the fourteenth-century hall burnt 1755, but near to it is the sixteenth-century Weigh-house, for regulating the town dues, or "Octroi." The steps, columns, arches, and tracery, with the curious recessed window, are of stone, but the warehouse portion of the building is of brick: within sight of this building are nearly a dozen others of the same class, and the old Exchange is a fine specimen of a hall of the fourteenth century. On the "Quai-long," bordering the canal, which passes through the town and unites those of Gand and Ostend, is another good example of this class of houses. In St. John's-street, among several others, one is selected for the curious line of junction of the arches; and in the Rue des Pierres we find a very lofty gable covering five apertures in width. At the back of the "Palais de Justice," communicating with the old Corporation Hall, or "Maison des Francs," which contains the celebrated carved chimney-piece, in stone, marble, and oak, is a curiously ornamented brick gable, so situated that it can only be seen from a private garden, from which an arch leads to a vaulted basement under the hall, the front of which, with curious angle turrets springing from corbels, faces the canal of the Fish Market. The high-pitched roofs are covered both with pan and plain tiles. Most of the roofs are lighted by glass tiles of the same form and thickness as those of clay: they have been used for ages, as well as the conical ventilators, which are made to fit to both plain and pan tiles. The general character of the buildings is not confined to the vicinity of Bruges, for there were many of the towns proportionately opulent which are now equally reduced. All these houses were most substantially built: both the external and partition walls were of great thickness; the cellars invariably vaulted, the arches in many instances formed of accurately-radiated stone and hard burnt bricks, usually set in tarras. In many of these houses plaster was entirely omitted, the walls being lined from the floor with panelled oak wainscoating or dado upon battens over trellis, upon which strong canvas was nailed, which was covered with stamped, gilded, and coloured leather, often tapestry, and even oil paintings. The floor-beams were frequently carved on the underside. In the tapestried rooms, jib-doors, with concealed hinges and spring latches, were well contrived so as not to interfere with the design. The windows (from their cross-bars called croisées) are of considerable antiquity, and in many cases coeval with the buildings; they open on hinges both outwards and inwards, and sometimes slide and fasten by side bolts or iron pins. Sash windows are unknown.

In the fine old fortified frontier town of Ypres (now in course of dismantling), which contains but a tithe of its former population, the same general style of domestic architecture prevails. I was struck with the fine proportions of a lofty house built entirely with Ecaussines stone, and on inquiry ascertained that it was called "La Maison des Templiers," being a portion of the buildings belonging to the Knights Templars, erected in 1250. The remains of the corbelled turret are hexagonal on plan, and the tracery of the upper windows varies. This town contains a magnificent town-hall of the fourteenth century, 430 feet long in front, with a large corbelled pinnacle at each end, and a grand central tower, with corbelled pinnacles at each angle, and a spire. The brick church of St. Peter has corbelled, polygonal turrets at the angles of the transition Norman tower, and curious square projections on each side for staircases, which rise from the ground. The body of the church, rebuilt with brick in the fourteenth century, is 250 feet long and 90 feet wide.

The cathedral of St. Martin is a fine thirteenth century structure, with transepts and a grand western tower: a spire begun at the end of the fourteenth century is still incomplete, and some of the angle crockets remain within an enclosure on the north side as they were left by the workmen. Another fine (fifteenth century) church is St. Jacques', and there are several monastic buildings of later date. The towns of Commines, Wervick, Menin, Courtrai, Roulers, and Thourout, with many others, contain large brick churches, and their brick buildings present the same general features as those of the capital,—Bruges.

Now, inferior brickwork and stucco are coming into fashion and superseding the fine old realities: on the Quai Saint Walburge, in Bruges, I recently observed that a large old building, used for many years as a cavalry barrack, was being prepared for the Athenée, or public school of the town. The basement appeared to be of granite, but on approaching to ascertain whether it was granite or Ecaussines stone, I was surprised to find it only one inch thick,—a mere plaster imitation; this too a public work conducted by l'Architecte de la Ville!

All modern buildings are of the same character: plaster fronts, wood or plaster cornices, are rapidly superseding the old gabled realities, and compo is there, as here, the genius of the age; plaster and paint imitating whatever modern taste, or the want of it, requires.

All these old buildings in their picturesque

* Read by Mr. Chantrell, at Institute of Architects. Sess.

variety, with sufficient light and shade, required not the aid of colour to improve them, and the Spanish as well as the Gothic traceried elevations might suggest an idea for improving the style of decoration in our street architecture without having recourse to mere copyism. Brick, no longer subjected to an excise duty, might be moulded to any form required by the architect; arches, semicircular or segmental, thrown over apertures unlimited in extent, and window openings made of adequate size for the admission of light and air, with every comfort that the most sanitary measures could demand: ornament might also be introduced in a similar manner, and skylines formed of great variety with brick (when the expense of stone precluded its use), properly set in cement, which ought to be capable of resisting the effects of rain, so that we might have dry and durable houses. The great difficulty arises, not from want of skill or good materials, but from the admixture of inferior and improper ones by the speculating builder, who, though he professes to build cheaper than the architect, will ultimately prove more expensive to the unfortunate owner, who is deceived by the flimsy cloak that for a time covers the rottenness beneath it.

The Chairman (Mr. G. G. Scott, V.P.), at the close of the paper, observed, with regret, that the great towns of Belgium had sunk from their former commercial importance into comparative decay, and that "compo" was every day detracting from their architectural interest. It would be most desirable to have the ancient buildings of Belgium fully illustrated by measured drawings: for street architecture, these buildings furnished a most valuable field of study. The brick buildings of Italy and North Germany were better known than those of Belgium, probably because the latter were in remote towns, at a distance from the main lines of railway. Thus, from Calais to Ypres, all the little towns were full of beautiful specimens of brickwork, both in the churches and houses. He might say that there were four great brick districts in Europe—1. some parts of England, particularly Norfolk; 2. Belgium; 3. the North of Germany; and 4. the North of Italy; each of them deserving of attentive study. There were also three sizes of ordinary bricks. The size now used for ordinary commercial purposes, being that which could be most easily handled and laid, would always prevail, but there were two other sizes. In the north of Germany they had not only a brick of our own ordinary size, and one about 7 or 8 inches long by 1½ inch thick, but also an enormous brick used for buildings on a magnificent scale, being more than 1 foot long, 3½ inches thick, and 6 inches wide. These were used with great effect in churches, city gates, &c. With regard to brick bond, the chairman observed, that at Richborough Castle bricks were used at certain intervals to bond together with flint rubble, over the face of which they were in some cases made to turn down. As the restrictive duty on bricks had been removed, it seemed absurd that architects should have gone on for four or five years without any application (except in a very few instances) of moulded bricks to ornamental uses. The misfortune was, that they never prepared their working drawings long enough beforehand to give time for making moulded bricks. A great deal might easily be done, not only with moulded but with cut bricks, of which some beautiful specimens might be found in the sixteenth century buildings about London. Bricks fit for this purpose could be obtained not far from the metropolis, at Hedgerley and Chalfont. The moulded bricks on the Continent were often glazed with a green or black glaze, which gave them a very rich effect. At Lille there were some bricks with a bright green and a bright yellow glaze.

Mr. M. D. Wyatt, in reference to the manufacture of glazed bricks, said that the difficulty appeared to be to find a glaze which would expand and contract in the same ratio as the brick itself.

Mr. Jennings, as to the English cut bricks of the sixteenth and seventeenth centuries, observed that they were all kiln burnt. Modern bricks were very unequally burnt, and besides the inferiority of the material, it would be more expensive to cut them for ornamental work than to employ stone. He referred to some beautiful cut brick capitals, about 200 years old, where it was evident the bricks had been built up first and cut afterwards. There would be no difficulty in getting bricks of any form or size if the demand for them existed; but brickmakers justly complained that they would not be able to get rid of any new forms or sizes.

Mr. Pocock concurred in the opinion that the adoption of moulded bricks depended entirely upon the time necessary for making them, and not on the extra expense. He knew a case occurring within the last few days, in which a gentleman had been obliged to abandon the use of a particular form of brick which he particularly desired, because he was told that it would take six weeks or two months to make them. Unless architects allowed the necessary time, there was not much chance of moulded bricks coming into use again. Mr. Pocock added, that the rosettes in the metopes and the mouldings of the well known house in St. Martin's-lane, had been cut after the bricks were laid.

Mr. Donaldson remarked upon the singular fact that in the Belgian works the tracery was generally placed in the solid panels, and not, as in England, in the heads of the door and window openings. It would be very interesting to know exactly the manner in which this brickwork was put together, and particularly whether two or three original types only were employed, and applied in different ways, as in the Moorish style, or whether the bricks were put up in rectangular forms and cut afterwards. He hoped Mr. Chantrell would investigate this point during his next annual visit to Belgium. Before moulded bricks could be successfully employed in England, it would be necessary to train a class of workmen for the use of them. The smith's work of Belgium, briefly referred to by Mr. Chantrell, was of great excellence, and had been ably illustrated in the works of Mr. Haghe and Mr. Digby Wyatt. Mr. Chantrell had referred to the Spanish houses of Bruges; and it was a curious circumstance, that although the Spanish dominion in Flanders existed only 150 years, the buildings of that era, both in Bruges, Lille, and other towns, displayed a distinctive and magnificent Renaissance character, with large bold features and richness of decoration. He did not think the white stone employed at Bruges resembled that of Paris, but that it was rather an indurated chalk, such as was found at St. Omer. While on the fronts of some of the Belgian houses the ironwork bore the date, on these Spanish houses the date was sculptured in the stone panels, so that a chronological series of them might be selected.

Mr. Papworth said that the English moulded and cut bricks were of a very different material from those now in use. Some good specimens would be found in the doorways of the two Temples in London. They were kiln burnt, with a close grain, made without breeze, and were laid, not in mortar, but in lime cream, thinned to the greatest possible extent, and they were sometimes driven into their place with a mallet. The work was left out in bosses where necessary, and these were cut to the required form. After being worked with the chisel they had to be rubbed, so that an enormous amount of work was necessary, and a 13-inch capital would not cost less than 6*l*. or 8*l*. at the present time. He believed the comparison of cost between moulded bricks of common form and common Portland stone would be a little, but not very much, in favour of the latter. To the four brick districts already mentioned, he begged to add another, the south of Spain, where some very interesting works existed. The Spaniards also used terra cotta, and of this material there were some examples in England. These dated from before the Civil War, and preceded the use of sculptured brickwork, which came in after that period.

Mr. Scoles said that moulded bricks had been extensively used (for the tracery of windows, &c.) at Cossey Hall, Norfork, the seat of Lord Stafford. These bricks were made upon the spot, and he believed that the damage from breakage in burning rendered them as expensive as stone. For plain splayed work, however, moulded bricks would be as cheap as common bricks.

Mr. C. Fowler said that the subject of brick buildings was peculiarly interesting to him, as he had special opportunities of studying the subject, and had brought before the notice of the Institute the brick architecture of the north of Germany. The specimens illustrated by Mr. Chantrell were all of later date than those, with the exception of the bell tower of Bruges. The description which Mr. Chantrell had given of Bruges forcibly reminded him of the German towns, especially of Lübeck, where the wide but grass grown streets, and the houses, either untenanted or applied to other than their original purposes, exactly tallied with Mr. Chantrell's account of Bruges. In the practical application of moulded bricks the most essential requisite was to design so that very few moulds only should be needed. The buildings in the north of Germany presented great variety in their appearance, but the different forms employed were really very few. With M. Chateauneuf he had spent a considerable time in studying these buildings. They had drawn every moulding they could find, and the result was that the variety arose chiefly from the combination. They had also visited the places where the bricks were manufactured, and where in some instances the manufacture had been carried on for centuries. The brick-fields of Lübeck, for instance, had been in constant operation since the erection of the cathedral, repairs and other works being constantly required. At Lübeck the works were conducted in a very primitive manner, but at Rathenau,* where the best bricks were manufactured for Berlin, the more modern processes were used. All the German bricks were kiln burnt and retain their form better than the English clamp bricks. He believed that glazed bricks were not used at a very early period. Glazed headers however, accidentally vitrified in the kiln, were employed, and the use of artificially glazed bricks ensued. The latter appeared to have been glazed by dipping them into some solution, and perhaps burning them afterwards, but the glaze was certainly not applied before the brick was burnt. Mr. Fowler stated that his father had employed moulded bricks to some extent for the circular-headed windows of a large lunatic asylum, without any extra cost beyond that of plain bricks, which, for such a purpose, would require to be axed and rubbed.

Mr. Hayward stated that the tower of the church of St. Botolph, Colchester, adjoining the ancient Priory, was full of the most elaborate moulded brickwork, the work of the proprietor of a large brickyard near the town; and it afforded a most satisfactory proof of our ability to execute any work of the kind.

The Chairman drew attention to the grandeur of the buildings illustrated by Mr. Chantrell, arising from their magnitude and height; points which were not sufficiently attended to in English street architecture.

ON THE RESEMBLANCE BETWEEN MEDIÆVAL AND CLASSICAL ART, AS EXEMPLIFIED IN THE GLASS PAINTINGS OF THE TWELFTH AND THIRTEENTH CENTURIES.†

IT may perhaps be recollected that on a former occasion, whilst adverting to the harmonious agreement between ancient painted glass and ancient Gothic architecture, I alluded to the resemblance which the glass paintings, contemporaneous with the architecture of the latter part of the twelfth century and early part of the thirteenth, bore to the antique; and thus I concluded, from their agreement with the architecture, that we might contrive to produce modern glass paintings equally in keeping with early Gothic architecture, and superior to the old ones as works of art, if, instead of merely copying these ancient remains, or perhaps barely correcting their bad drawing, we should strive to work up to those models of excellence which inspired the earliest Christian artists, and which have been admired, and I will venture to say will be admired so long as an appreciation of beauty shall continue to be a faculty of the human mind, although persons may occasionally be met with who seem to have been rendered insensible or indifferent to their merit by a too exclusive study of the Mediæval art. In the discussion which these remarks occasioned, the propriety of illustrating my views by means of a drawing was suggested, and I agreed to resume the subject whenever I was prepared with such a means of explanation. I have been prevented from fulfilling my promise earlier, but the delay is not to be regretted, since it has afforded me more time for consideration. Even now I would particularly guard myself against the supposition that the drawing produced pretends to be a perfect exponent of my views. To carry out these views as I desire would require far greater artistic power than I can command; and therefore I must request you to regard it not by any means as a finished design, but simply as an explanatory diagram.

The influence which classical antiquity exerted on the arts of the west, principally through Byzantium, has been repeatedly insisted upon and illustrated by modern writers. In some instances we are almost able to see the very track by which such influence was transmitted: in others it is impossible to forbear ascribing much to the effect of local remains, the fruit of a Roman occupation: in either case it is difficult to discriminate between the work of native and foreign artists. Still, however, a common resemblance points to a common origin. A variety of causes may unite to render this resemblance more palpable on some occasions than on others. But the wider the experience the more positive is the belief in the Byzantine

* In the old Mark of Brandenburg.

† Read by Mr. Charles Winston, Hon. Mem. at the Ordinary General Meeting of the Royal Institute of British Architects, June 16.

or Greek character of western art in the twelfth and thirteenth centuries.

From this influence ancient glass paintings are not exempt. They are infected by it in the same degree as other specimens of pictorial art. I am sorry I cannot corroborate by documentary evidence the opinion I have formed from the appearance of the painted glass. When and where the art of painting upon glass was discovered is still a matter of conjecture. The testimony of the earliest writer, Theophilus, by itself only shows that, at the time he wrote, France was, *par excellence*, the country in which it was practised. He tells his readers, that they will find in his book "all the knowledge that Greece possesses in the kinds and mixtures of colours; Tuscany in inlaid works, and the various kinds of niello; Arabia in malleable, fusible, or chased work; Italy in the various kinds of vases, and the carving enriched with gold and silver, of gems and ivory; *France in the precious variety of windows*; and the industrious Germany in the delicate workmanship of gold, silver, copper, iron, wood, and stones." The Abbé Texier indeed—the author to whom I have had the most resort, because his inquiries are the most germain to my own pursuits—considers it probable that the honour of the discovery is due to the Limoges school of artists;* and though his chief reason, the similarity of the process of enamelling to that of glass painting, of itself is entitled to little weight, especially if the opinion be correct that Germany shared with Limoges the manufacture of enamelled ware, the leaning of my mind, in the absence of any evidence to the contrary, is in favour of his opinion. Our not finding any specimens of painted glass earlier than the twelfth century or the end of the eleventh, and these nowhere except in France—so far, at least, as I am aware of—affords a presumption that earlier specimens never existed, and that the commencement of the manufacture was in France. And I have long been of opinion that the glass used in the earliest glass paintings was made from Greek or Byzantine recipes, on account of its being so similar in texture and colour to the ancient Greek glass. Therefore (without, however, necessarily committing ourselves to the opinion that the art was discovered in France) I think we may safely conclude that it was discovered in Western Europe by some school of artists under Byzantine influence. Indeed, the very badness of the figure-drawing in the earliest examples, as compared with the excellence of the foliaged ornaments—and which, therefore, cannot be attributed, as in the case of the earliest enamels, to any peculiar difficulty in the manufacture—is an argument in favour of the discovery being made by a school of artists as yet immature, such as a provincial school might be considered in comparison with that of Byzantium. And by way of accounting for the spread and intensity of Byzantine influence in France, I may mention, on the authority of M. Texier, that as early as 979 a Venetian colony was settled at Limoges, for the purpose of trading with the spices and other commodities of the East, conveyed from Egypt by way of Marseilles. Mr. Fergusson, in his very useful Handbook,† corroborates the supposition that it was with Alexandria that the Venetians had their closest connection, though no doubt, as the great carriers of the Levant, they were, at that time, in frequent communication with Byzantium. To what extent the Venetians imbibed the Byzantine principles of architecture—in some degree modified by their commerce with Alexandria—is seen by a reference to their great church of St. Mark (a building remarkable, according to Mr. Fergusson, for being the only real specimen of Byzantine architecture within the limits of the Western empire), and the churches of St. Front Périgueux, the erection of which is ascribed to the Doge Orscolo I., who came to sojourn in France in 978. Souillac, Angoulême, Cahors, Solignac, Fontevrault Abbey, Fleac, St. Hilary of Poictiers, and others, all at no great distance from Limoges, attest, in their general architectural resemblance to St. Mark's, how thoroughly the colony carried with it the taste and arts of the parent State.

The Byzantine school, thus implanted in France, was during a considerable period continually having its traditions revivified and corrected by the influx of fresh artists, and new works of art from the East. Greek artists, it seems, were living there in the thirteenth century; and as late as 1421 an inhabitant of Limoges brought with him an artist to carve a resemblance of the Holy Sepulchre, on his return, by way of Venice, from a pilgrimage to Jerusalem. If, then, glass painting were a French art, having its cradle in or in the neighbourhood of Limoges, we should expect to find its earliest remains displaying Byzantine features, and if so, the features more or less strongly developed of the Antique; and wheresoever the birth-place of the art may have been, I assert that its earlier remains do display these features. The most careless observer can hardly fail to be struck with the resemblance between the glass paintings of and towards the middle of the twelfth century, and the illuminations in the contemporary Greek MSS. or with the frequent recurrence in them of Greek ornaments; and the same general character may be traced in glass paintings until quite the middle of the second half of the thirteenth century, when it gradually died out, before the increasing influence of a new style, of which the sculptures in the choir of Lincoln, to which Mr. Cockerell has directed our attention,* may be said to be an early and a favourable type. But the glass paintings which, on the whole, most closely resemble the antique, are those which were executed between 1170 and 1240, or thereabouts. I am not seeking to deny that these works were executed by native artists either in France or England; but I cannot ascribe, as some have done, their greater freedom and closer likeness to good models, merely to the progressive improvement of a school. It seems more reasonable to suppose that the change was in great measure caused by the influx of Greek artists, and greater aptitude on the part of their pupils to profit by instruction. The draperies, instead of being tightly wrapped about the limbs, and scanty in their proportions, as in the earlier examples, are more elegant and flowing, reminding one of the voluminous draperies of the antique; which they resemble not only in the set, but the very form of the folds, betokening a material thin in texture, and, from its pliancy, allowing the action of the limbs to be easily seen beneath it. The heads, too, more nearly resemble the antique in their contour. In one of the windows of Canterbury Cathedral, erected shortly after the fire in 1174 (the second window from the west, on the north side of the choir), are some heads which might have been copied from the old Roman. There are some similar ones at Lincoln, in glass, of the same date as that of the north rose, and now worked into it, though not belonging to it. There is also a strong resemblance to the antique in the fashion of the garments. It is well known that the Romans had in great measure ceased to be the gens togata (Romanos rerum dominos, gentemque togatam) even in the reign of the Emperor Augustus. The lacerna, a cloak fastened on one shoulder with a clasp, and sometimes furnished with a hood, originally borrowed from the army, became, on account of its greater convenience, worn with the tunic, as the ordinary dress of the Roman citizen, and by degrees the toga was reserved for State occasions. After the removal of the seat of empire to Constantinople, a variety of additional dresses were used, many of them of Greek origin; the more stately of which were, with its usual tact, appropriated by the church, as it gathered power, and which are the foundation of the mass vestments of the Roman clergy at this day. This has been clearly demonstrated by the learned Krazer,† whose accuracy, though it may have been painful to the high churchmen, as showing the Pagan origin of some of the most sacred things, has never been impugned. Some of these dresses were, moreover, adopted in their courts by the barbarian conquerors of the Roman empire, and thus were handed down to later times. The Dalmatic, in which the effigy of King John, in Worcester Cathedral, is clothed, is an instance, and the modern peers' state robe is another. The most popular dress amongst those nations who possessed themselves of the territories of the empire, no doubt was the tunic, with or without the lacerna, or a shorter cloak used by the private legionaries, called the sagum; and this dress, with slight modifications, appears to have been in actual use in the thirteenth century. The Mediævals almost invariably adopted the tunic with long sleeves, in preference to that with short sleeves, which was the one usually worn by the Romans; and instead of the Braccæ and buskins of antiquity, they clothed the nether man in long hose, over which they use long shoes or boots. So that, with the exception of the legs and arms being clothed, there is but little difference between an ordinary thirteenth century figure copied from glass, and a figure taken from the arch of Titus, or Trajan's column. The long tunic reaching to the feet, so common in the glass paintings of the thirteenth century, also had its prototype in imperial Rome. The figures on the arch of Titus show that it was at that time often worn beneath the toga. Indeed, startling as it may appear, representations of the toga itself are to be found in pictures on glass of the thirteenth century; and I have little doubt in my own mind that the mantle which, carelessly thrown over the long tunic, constituted the conventional dress of prophets and of saints, not being ecclesiastics, throughout the middle ages, was, in fact, but a corruption of the toga.

With regard to the *Ornament*, it is easy by means of the carved ivories (of which I perceive a catalogue by the Arundel Society, has just been issued), to trace the transition from the classical, to that used in the twelfth and thirteenth centures. It is so plain that the mediæval artists borrowed their ideas of ornament from the antique, and which being so purely architectural and conventional is on that account, I think, the finest of all ornament, that I shall not urge the matter farther. Indeed, the thing speaks for itself. I shall, therefore, proceed without farther delay to deduce a few practical hints from the facts I have stated.

The question that naturally arises is, if glass paintings whose drawing so much resembles the antique, completely harmonize with the buildings of the twelfth and thirteenth centuries, would not other glass paintings equally harmonize with such buildings whose drawing should more exactly resemble the antique in point of excellence? I say in point of excellence, for I totally disclaim any intention of recommending the substitution of copies of classical draperies or ornaments for mediæval ones, or exchanging the individual character, and strictly human, as opposed to God-like expression of the countenance which distinguish Christian art, for the more generalized and conventional treatment of the antique. I wish to see the Christian sentiment elevated but not obliterated by a study of the antique, and the mediæval drapery drawn as the mediæval artist would have drawn it had he possessed the power of the Greek.

I am persuaded that if the same tone of colour which we see in ancient glass paintings of the twelfth and thirteenth centuries be adopted, all archæological requirements will be satisfied by adhering to the costume of the period, and general form of ornament, and preserving the individuality and character of the heads. Thus the attitudes of the figures, the arrangement of the groups, and general cast of the features, might be taken as closely as possible from the antique, whilst the draperies should be treated as being thin in texture, voluminous, accommodated to the limbs, and moulded into deep simple folds. I believe that works executed upon this principle would often be taken for old ones of very superior quality. No doubt to achieve such works would require far higher artistic power than is generally now employed in glass painting, and a vast deal more time to be bestowed on their preparation than is now required, all which would tend to increase their cost. But having confidence in the common sense of the country, I believe, if the matter were properly presented to their minds,

* See Essai historique et descriptif sur les Argentiers et les émailleurs de Limoges, par M. l'Abbé Texier, Curé d'Aurrat Published in the Memoires of the "Societé des Antiquaires de l'Ouest." 1841, 1843. Poictiers. 8vo.

† "The Illustrated Handbook of Architecture," by James Fergusson, M.R.I.B.A. 2 vols. Murray. 1855.

* Proceedings of the Archæological Institute at Lincoln. 1848.

† Krazer de Liturgiis. Augsburg. 1736.

that most patrons of glass painting would prefer possessing one picture window in a church, exhibiting a decent display of art, all the other windows being filled with good pattern glass paintings instead of being content as now with having every window filled with the veriest trash, under the denomination of Pictures. The present want of artists to execute such works is no argument against the system, since we may be sure that plenty of artists would come forward as soon as they ascertained that their services were required. If the system is correct, there can be no insuperable difficulty in working it out.

Mr. M. D. Wyatt, Hon. Sec. called attention to some drawings exhibited by Mr. Waring, Associate, which illustrated the principles laid down by Mr. Winston. He added that the best confirmation of Mr. Winston's opinions might be found in the works of the early Italian masters who studied entirely from the remains of Greek art, and whose pictures, if transferred to glass, would make the most perfect glass paintings that could be had.

Mr. Waring, Associate, said that in the drawings exhibited his object had been to show that the best painting was applicable to glass as well as to any other material. In glass painting especially the end justified the means, and if the effect was striking and beautiful, it was absurd to quarrel with the material. A general feeling existed that opaque objects should not be painted on glass, but in the drawings before the meeting representing windows in the Duomo of Florence, executed in the early part of the fifteenth century, colour was the means of producing the effect. The drawing was excellent, but colour was the great point the artists had in view. He had seen nothing in oil painting approaching the excellence of these works, and he believed when a painter witnessed the effect produced by the richness and brilliancy of them when the sun shone through them he would be tempted to throw away oils in despair. Tuscany was particularly rich in specimens of painted glass, and it was a matter of surprise that so many artists had visited Italy without describing or illustrating the numerous specimens there to be found. Mr. Waring gave the dates of the windows shown in his drawings, and the names of the artists by whom they were executed.* He drew attention to the fact that in these works the design was made without regard to the intersections by the lead line, and he believed, from examination of numerous specimens, that the lead line, far from destroying the effect of glass paintings, rather added to it. In the specimen, from the Jerusalem Chamber, exhibited by Mr. Winston, the lead line went completely across the head of the Saviour, but if seen at a distance, that lead line could never be observed. The idea conveyed by these works was that of a beautiful work in mosaic rather than a painting. The idea of the injurious effect of the lead line had induced a mode of treatment in modern works which produced the effect of transparencies rather than mosaic work. This was the case with some of the specimens exhibited in the Great Exhibition of 1851.

Mr. Wyatt said that in a former discussion of the subject there appeared to be some difficulty in understanding how it was that the black line was essential to beauty in stained glass. The reason was that those colours which transmitted most light were apt to spread upon the adjoining colours, and therefore unless the black line went round the light parts the whole windows would fuse, and the lighter parts would appear to eat up the shadows.

Mr. Donaldson observed that in glass painting one obvious requirement was, that there should be no large surface of any one unbroken colour. The object was to fill up, in one way or other, whether by black lines or by ornament, all the spaces, so that they should mould one into the other, and yet have a line of demarcation; but there was no great mass of unbroken colour in any one part whatever. Therefore in the example shown by Mr. Winston, a portion of a Jesse window, although the whole was cut up into small parts, it still formed an agreeable composition. In another specimen shown by Mr. Winston, the figures were made to occupy as much as possible of the whole space, leaving as little ground as possible dividing them; and he believed Mr. Winston could find that in his own design rather too much ground was left, the figures being too small. In the old works large and powerful masses of dark colour formed the predominant tints, to which the other colours were subordinate. In examining the various examples of different ages he had always felt that these were some of the principles which had guided the best painters on glass; and, to a great degree, the effect had been irrespective of the forms of any particular period. He believed the forms of any period might be made harmonious, provided these leading elements were adhered to with regard to the combinations of colour. Mr. Winston's design was an effort to get rid of the trammels which bound down modern artists. In France the art had recently been carried out very successfully.

Mr. Winston stated that in his own design he had given more ground round the figures purposely to counteract the spread of colour in the figures, which, it would be observed, were invariably coloured lighter than the ground of the panel. In the example shown from the Jerusalem Chamber the effect was not satisfactory, because the figures were so crowded that there was not sufficient ground to cut them clearly out.

Mr. Donaldson was of opinion that there should be very little ground, but that that should be of a very deep colour. Glass painting should be treated like bas-relief in sculpture. In the bas-reliefs of the Parthenon and the tombs of the Greeks, especially of the later period, and in the Roman triumphal columns, the proportions of the figures were rather large and gross, in order to fill up the ground. This was necessary in order to produce fullness and richness of effect, and to prevent poverty of expression in the figures.

Mr. Wyatt said that the principle in ancient art was to allow sufficient ground where poverty of action was intended, but where continuous and moving action was required, as in the Parthenon and Trajan's Column, they filled up the whole of the ground. The same law would hold good in glass painting, but for the swelling of the colour of the light parts. He therefore agreed with Mr. Winston that a larger proportion of ground was necessary in glass painting than in any other branch of art.

The Chairman, Mr. Tite, observed that the want of success attending modern English glass painting, as compared with that of France, arose as much from a want of combination of colour as from a want of character in the design. Many costly attempts had been made in which the colouring was utterly inharmonious; and the want of character in the imitation of ancient glass was equally remarkable. In some recent cases, as at Ely Cathedral, the object appeared to be to copy all the ugliness of ancient glass; and he sincerely wished some of the ameliorations proposed by Mr. Winston might be introduced.

* St. James, from the Transept of the Cathedral, Florence; Prophets and Saints, from the same place, ascribed to Francesco Gambassi, 1434, but certainly earlier; St. Matthew and St. Mark, from the Choir, Lucca Cathedral—Ugolino da Pisa, 1482; Virgin and her Child, from the North Transept, Sta. Maria, Novella, Florence. Alessandro Fiorentino, 1491.

CROMLECHS AND INSCRIBED STONES IN CORNWALL.

WE noticed, lately, a work containing views of the "Ancient Crosses and other Antiquities in the West of Cornwall," drawn and engraved by Mr. J. T. Blight.* We have since learnt that Mr. Blight, now little more than twenty-one years old, is wholly self-taught, both as a draughtsman and wood engraver, and has progressed in the face of difficulties; and we would therefore strengthen the previous notice, and obtain for him, if it might be so, the aid of those interested in antiquarian pursuits.

We will let him speak for himself, and give a few of his representations of cromlechs and incised stones.

There are five of these ancient monuments in the west of Cornwall, all in a good state of preservation. The remains of one may be seen in a field about half a mile from the Lanyon cromlech, and of another at Bosprennis, in Zennor. There are two other cromlechs beyond the limits of his inquiries,—one at Trevethy, in St. Cleer, and another, now fallen, at Coit, in St. Columb.

The cover-stone of the Lanyon cromlech is 18½ feet long and 9 feet wide: from the under part of this stone to the ground it measures 5 feet. Borlase, and others who have followed him, state, that this cromlech is high enough for a man on horseback to pass under it. The Caerwynen cromlech (fig. 1) is less than that of Lanyon.

The Zennor cromlech is the largest in the county: the supporters are about 9 feet high,—the cover-stone, 18 feet long and 10½ feet wide.

The cover-stone of Mulfra is about 9 feet by 12 feet. The upright stones are 5 feet high.

The top-stone of Chûn cromlech is nearly 13 feet long and 11½ feet wide: its elevation is about 4 feet. (See fig. 2.)

The Mên Amber (fig. 3) is in the parish of Sithney, on the property of C. W. Popham, esq. of Trevarno. It was formerly a logan-stone, but was thrown off its balance in the time of Cromwell, by Shrubshall, then governor of Pendennis. This stone is 11 feet long from east to west; depth, 4 feet. Mên Amber is a corruption of Mên-an-bar, which signifies *the top stone.*

There is a Druidical Circle at Boscawen-ûn, St. Burian: fig. 4 shows it. The stone within the circle, which is in a slanting position, measures 8 feet in length. The stones which compose the circle are at irregular distances, some being 8 feet, and others 12 feet asunder: they are from 4 feet to 5 feet high. This circle consists of nineteen stones, and is about 73 feet in diameter.

Mên-an-tol (the holed stone)—fig. 5—is at Anguidal-down, Madron.—Centre stone, 4 feet in diameter and 1 foot thick,—the hole, 1 foot 3 inches in diameter. The other stones stand about 7 feet or 8 feet from the holed one, and are from 4 feet to 5 feet high.

In the parish of Wendron there is a holed stone like the above: it is 7 feet high, 9 feet long, and 1 foot thick,—the hole, 1 foot 6 inches in diameter. In a field adjoining there is a barrow covered with rough stones.

Fig. 6 shows some Inscribed Stones in St. Hilary Churchyard. "The parish church of St. Hilary was destroyed by fire in 1853: in clearing away the ruins the above inscribed stones were discovered. One was found built into the wall with the inscription downwards, filled with mortar, and a portion of one side had been chipped off to make it even with the wall, and thus part of the inscription was destroyed. The first line is nearly gone, yet the letter P, as an initial letter, is perceptible: then follow contractions of the words *Flavio Julio* (or *Juniori*); then *Constantio* (or *Constantino*, these words being used indifferently for the same person, as may be seen by reference to the Fasti Romani Consulares); then *Pio*, with the abbreviation of *Augusto*; then *Caes*, for *Cæsari*; then an anomalous word which is considered to be *Divi*; then *Constanti*, for *Constantini*; followed by *Pii*; and *Aug.* for *Augusti*; terminating with *Filio*. The inscription may be interpreted,—*P . . . . to Flavius Julius* (or *Junior*) *Constantius* (or *Constantinus*), *the pious and august Cæsar, son of the divine and pious Constantine the Great.* The date of this monument, which was probably a milliarium, or mile-stone, must be somewhere between A.D. 326 and 337: it is composed of a coarse elvan or porphyry, which occurs in the parish. The length of this stone is 4 feet 6 inches, breadth 1 foot 11 inches, and 10 inches thick."

The other stone is of granite, and measures 6 feet 7 inches in length, 1 foot 9 inches wide, and 10 inches thick: it was found at the north-west angle of the chancel, 2 feet below the level of the floor. From its position, it is probable that it was used as a foundation-stone; and it is imagined that the symbols inserted on it, arranged in two lines, represented Masonic tools and implements, which had been adopted as a sign manual by Notus, the builder or architect of some ancient structure which might have stood on the same spot. The inscription would simply mean, "Notus, his mark." "Notus, his mark." The symbols are shown by fig. 7 on a larger scale.

Mr. Blight's endeavours deserve encouragement.

* London: Simpkin, Marshall, and Co.

OUR ROADS AND WAYS.

MODERN cities and towns have a great advantage over the earlier Capitals as constructed by our ancestors: they are founded not only in the best localities as regards convenience of harbourage and water-carriage, but they are laid out in wide and straight streets that quadrate with each other. There is a clear vent and view from end to end, at every angle, and in four directions; each line terminating in the expanse of nature, whether it be land, or ocean, or river.

In the United States the benefit of such arrangement is exemplified by the metropolitan Washington; and the cities of South Australia, laid out on the same plan, will secure to increased populations an immunity from those complexities, sinuosities, and incongruities which hamper and disfigure old London.

In progressing from a hamlet to a village,

CROMLECHS AND INSCRIBED STONES, CORNWALL.

Fig. 1.—*Caerwynen Cromlech, Parish of Camborne.*

Fig. 2.—*Chûn Cromlech, Morvah.*

Fig. 3.—*The Mên Amber.*

Fig. 4.—*Druidical Circle at Boscawen-ûn, St. Burian.*

Fig. 5.—*Mên-an-tol, at Anguidal Down, Madron.*

Fig. 6.—*Inscribed Stones, St. Hilary Churchyard.*

Fig. 7.

then to a town, then to a commercial port, then to a city; all the constrictions of the first foundations were here retained, whilst suburban districts became incorporated within the nucleus of the bills of mortality, and the limits of small tenures, in crofts, tofts, and messuages, defined the causeways, and fixed the old arterial ducts of communication between the old heart and the more healthy new limbs of the municipal body. Thus it is that, with the exception of the Tower, there is no loose in old London: it is baled and packed together like the common warehouses of great contractors: ground was too valuable, space within the walls too limited. Between London-bridge and Blackfriars, at right angles with the river, a distance of scarcely three-quarters of a mile, there are twenty-four streets traversing Ludgate-hill and Cheapside, all running nearly parallel to King William-street and Bridge-street! St. Paul's Cathedral occupies the first great open space cleared within the corporate jurisdiction, and, together with the improvements consequent upon the great fire of 1660, led to the epoch of architecture which, under the great Sir Christopher Wren, conferred upon this country credit for architectural celebrity. The great thoroughfares of access which now lead from the City, such as the Commercial-road, Whitechapel-road, Shoreditch, and Aldersgate-street, were mere accidents. They then *led to* the City, as did Oxford-road, the New-road, and others: so that for width and directness, the public now existing, and still breathing, is indebted in nowise to the original design for the vitality *they* afford to an aggregate multitude of nearly *three millions*. It would not be fair to omit the credit due to liberality and enlarged notions, for Trinity-square, Gough-square, and the Temple-gardens!—that is all that was set apart for the health and recreation of citizens; for Finsbury and Gray's-inn-square, as well as Lincoln's-inn-fields, were *extra muros*. We must not, however, forget that the hallowed Smithfield was *intra libertates*.

As stated in a recent number of the *Builder*, most of the old streets remain in the pristine curvilinear and rectilinear propinquity. The value attained by commercial position and convenience of sites, formerly occupied by dusky counting-houses, has transmuted the modest lane shops of such merchant princes as once gifted this country with colleges, almshouses, schools, and hospitals, into mighty palaces of stone and marble: so far the narrows of old London are rigidly fixed, but no farther.

Old boundaries were doubtless the directing lines for the roads or streets when first formed: a fence, a ditch, or a wall were winding, and the proprietor built up to his metings; the public way thus taking the direction of private rights.

The greatest amount of individual profit was considered, rather than general convenience.

We did not make the city nor the town, therefore we must take them as we might a slop garment,—*ready-made;* and, as in the latter case, all we can do to adapt the vesture to the shape and body of our times is to open out a little here, to take in a little there, and so rub on, until occasion and circumstances may allow us new fabrics with new and better workmanship.

In young America, as in our new colonies, where blocks of land are surveyed and laid out in squares, such irregularities of crooked and mazy roads are less of a necessity. Private property in lands is easier both of measurement and of definition: your neighbour's landmark is, in territorial cases, settled by a meridianal and longitudinal line: four angular points, at most, demarcate it, and a solar observation sets it at rest. It is thus they square their differences in the new States, and the system of square miles, or 640 acres, to a block, is extended to townships in one-half, one-quarter, one-eighth, or one-sixteenth sections.

A great sameness may be considered to follow the chequering of a town in this fashion,—Street 100, in width and extent, corresponds so exactly with Street 10. It is not so; for, unlike Russell, and Harley, and Wimpole, and so on streets, there is a diversity of structure,—the taste, fashion, and fancy, are as strongly contrasted as the extent, style, and pretension of the houses: and then you have the termination at either end *invariably open*. To form an idea of the effect of this, we have only to recollect the feelings produced on us by the opening of Portland-place into Regent's-park; or on a smaller scale, those of Grosvenor-street or Brook-street into Hyde-park; but the aspect of an internal square, such as Russell-square from Bedford-place, and others similar in that locality (so agreeable on that account only), is quite sufficient to embody the idea of a noble route, having its termination in the country. If it be woodland, the trees glitter in the sunshine and rage with the storm: in snow or frost, and every variety of season, they are beautiful: if hill or mountain, plain or prairie, still the sense of freedom rushes on the thoughts of townsmen and of drudges, every time they look forward during their out-door occupation.

There is yet a stronger motive for the *thorough range* of streets, and the planting of forest-trees within cities, and that is the perfect ventilation secured by the former, and the more healthy atmosphere by the latter.

Those familiar with the city will readily remember the freshness occasioned by *lime-trees* grown to forest dimensions in some courts and recesses, as well as in churchyards there. The Parisians know how to value their Boulevards: they sit and linger and luxuriate under their road-side trees. Some approach to their taste is carried out in Westbourne-terrace and in Eaton-square: these are noble beginnings, so far as they go, but made only to be seen, not enjoyed, by the wearied squatter.

It would be too much to expect, that the most magnificent street in London, Pall-Mall, should be opened to the Green-park, and thereby another proof given of the highly picturesque in alliance with much that is beautiful in architecture, and all that is ancient and courtly in the metropolis. The great facilities for such an improvement are obvious; it needs but to remove six houses and a stable slum, six more small houses, which are hoarded up against the Old Palace in St. James's-place, and Lord Sydney's block, next the Green-park. The park itself need not be thrown open, except by a footway; so that the grand effect of a vista, extending to Buckingham Palace gardens, might be obtained, without trenching upon the privacy of Lord Ellesmere and the Duke of Sutherland: a light iron railing would disclose the view and admit the air, and then Pall-Mall might rival some of the Parisian public places.

It is high time that some beginning were made in the reformation and transformation of this strangely incongruous metropolis; to clear away the decayed and rotten, to straighten the crooked, and to open out the inaccessible portions. The sinews of war can in nowise be so profitably used as on works of peace.

THE REMOVAL OF OLD LONDON.

THOSE who feel interest in comparing the construction of the old houses of London with those of the present time would do well to make a pilgrimage to some of the places in which extensive alterations are going forward. The opportunity at the present time is most favourable, for during no part of this century have there been so many venerable houses either in course of removal, or marked for it by props, shores, and other unmistakeable indications.

Over the Temple gate the carved house of James the First's time is at present left standing. A vigorous inroad has, however, been made into the buildings adjoining. The side of Cardinal Wolsey's Palace, as it is wrongly called, is exposed to view, and is a characteristic specimen of the timber framework of the better sort of London dwellings of the above date. The backs of other houses here exposed to the daylight are remarkable for the rottenness and combustible nature of their materials, and the absence of sufficient means of ventilation. This mass of houses is also worthy of note in marking the stoppage of the great fire of 1666 in this direction. On the west side of Chancery-lane a portion of London saved from the fire may still be traced. This, however, is in course of removal. The houses which adjoined the shop of honest Isaac Walton, on which were some quaint carvings, have disappeared, and active means are at work for the removal of the other buildings of the same date which reach to the brick buildings of Lincoln's-inn: these have been much altered from time to time: there are, however, some richly ornamented ceilings, which will not remain many weeks, yet which are worthy of notice. At Carey-street, Chancery-lane—a site of some historical interest — the pullers-down are at work; and although we acknowledge our liking to places of old date, we can scarcely regret the operations which are here going forward, for we have seldom passed this nodding group without having the uncomfortable feeling that the warped walls would rush down upon some unfortunate wayfarer. On the south side of this place, at the corner of Bell-yard, is a building which has been already described, in the *Builder*, as almost as great a curiosity as some of the leaning towers abroad. This house, which has been said (on slight authority) to have been designed by Inigo Jones, is about his date. The staircase of hand-turned wood, the massive panelling on the ground-floor, may be all seen but little changed. On the first-floor there is a room fitted with carved panelling of great beauty. The mantelpiece is not so old, and has evidently been there placed in the reign of Charles II. when Gibbons had introduced elegant scroll-work, which forms a feature of the dwellings of that day. This room only requires the ornamental ceiling to make it, if the paint was removed from the panelling, the most perfect example of the kind which we have met with in London. The exterior form of this house is elegant, and some Ionic columns are worth examination. We were glad to peep into Bell-yard, and find that place and the courts we have already noticed, drained, much to the benefit of the inhabitants. Various attempts have been made here to transmogrify the shops: large plates of glass have been brought into use: some of the pents have been removed, &c.: still in defiance of all these efforts this narrow yet bustling London alley cannot be deprived of its picturesque and old-fashioned appearance.

Up Chancery-lane—wondering at the difficulty there has been to get but a trifling increase of roadway—down Holborn,—the people of Plum-tree-court wondering, as we also did, what they are to do for lodgings. On the wide and long space of the Fleet-valley the clearing away of dwellings is still continued. The area cellars of many of the new streets have been completed, and the roadways in the course of formation; and it is curious, in this bright, sunny weather, to contrast the dusty ways with the grim masses of brickwork which now enclose this great site. Some pents where the windows are out look very black; but brickwork, and woodwork, and tiles, have a sable, pall-like hue, which shows the prevalence and effect of London smoke.

In Smithfield and the neighbourhood several very old houses are marked for demolition: some of them are reported dangerous. In Farringdon-street, some old places of about the time of the fire are shaky, particularly those at the corners of lanes; and beyond the Fleet Prison-wall, a great opening is being made through the block of houses eastward. In Fetter-lane, the famous White Horse Tavern, the sign of which, emblazoned on the stage coaches, was so familiar to boys, and those of older years, in many parts of the kingdom, a little while ago, has now, its "former occupation being gone," been transformed into a lodging-house for mechanics, &c. A large part of the lane has given way to the new Record Office, and the little bit left of old date at the bottom will soon move on. We have noticed several masses of timber buildings, behind the brick facings in the winding passages near Gough-square. A fire, a few months since, broke out near here, which was remarkable for the rapidity of its progress: the parts behind were chiefly of wood, and it must have been by extraordinary exertions that it was prevented from extending further.

Old London is rapidly giving way to the new, and ere long the student of the history of the metropolis will only be able to gather from books the appearance and economy of the abodes of our forefathers. And while feeling no small pride in the advancement of this great city, we are bound to urge upon the authorities the great want there is of suitable dwellings for those whose houses have been removed. Some of the streets east of Langham-place, Portland-place, and many other parts we could mention, in consequence of this neglect, have already become densely packed with human life; and the evil is increasing, as will be evident to any one who will take the trouble to walk in the right quarters, particularly in the dusk of a summer evening.

THE BATH STONE QUARRIES.

IN the number of the *Builder* for June 21st, you seem to express a wish to know from what quarry the stone was derived of which Ralph Allen's house, now called Prior-park, was built. I think I can give you a little information upon that subject, and also upon the state of the Bath stone quarries at that time (about the year 1730), for which I am largely indebted to a work on Bath, published by the celebrated Wood himself in 1765.

The ancient freestone quarries were subterraneous caverns, from time to time dug out in the prow of the hill known then under the Roman name of *Camalodunum*, which comprised that part of the hills lying to the south of the city of Bath, now bearing the names of Hampton-downs, Coombe-down, Claverton-down, and Odd-down; and they have been remarkable for ages past, not only for the manufacture of wrought stone for buildings, but also for small ornaments to embellish them.

The exportation of block freestone was a branch of the trade with that building material in which Mr. Allen engaged himself. He first purchased some of the quarries on Camalodunum, with the land about them; and then determined to make such a tramroad between the summit of the hill and the river Avon, as had just been made in the north of England, from the collieries to the river Tyne.

This circumstance plainly shows us the site of the quarries then in the possession of Mr. Allen, for the tramroad is at present in very good preservation, and leads from the quarries now known as producing the Hampton-down stone, to the river in the valley beneath. The best bed of this stone is of a beautifully warm colour, and is now being used upon the new Bank at Bristol, and several other works in the west of England.

Accidents frequently happening in the old subterraneous quarries, Mr. Allen began to dig for stone in a new quarry open from the top, the refuse of which was burnt into lime.

There was great opposition to the introduction of the stone into London; some of the opponents comparing it to Cheshire cheese, liable to breed maggots that would soon devour it; and Mr. Colin Campbell, as architect, together with the Messrs. Hawksmoor and James, his clerks of the works at Greenwich Hospital,

were so prejudiced against it, that at a public meeting of the governors of that building at Salters-hall, in the spring of the year 1728, they represented it as a material unable to bear any weight, of a coarse texture, bad colour, and almost as dear as Portland stone for a public work in or near London.

Wood himself was present at this meeting with samples of several kinds of stones; and the governors ordering them to be laid on the table before them, Mr. Campbell himself, by mistaking one stone for the other, gave such a notorious proof of his partiality, as led the governors into an inquiry concerning the mason's trade, that enabled them to contract for their new work in Portland stone, upon terms full three-and-thirty per cent. below what they had formerly paid.

This great abatement entirely defeated Mr. Allen's proposals for carrying on the mason's work of the hospital with his stone; and the reflections cast upon the freestone of the hills of Bath brought him to a resolution to exhibit it in a seat which he had determined to build for himself near his works, to much greater advantage, and in much greater variety of uses, than it had ever appeared in any other structure.

About 800 tons of freestone in large blocks were buried underground to make a secure footing, and upon this the main walls of the building were erected, both inside and out, with wrought freestone. The whole of the basement is vaulted, and the paving composed of freestone of a harder kind than the walls. It is part of the first bed of the open quarry; and from its calcined or rather shelly nature, the workmen call it ragstone. It is the very stratum of stone that makes the roof of the subterraneous quarries, and the next layer under it is generally as much softer than the good freestone as the rag is harder.

Wood, in describing his work, says,—"Now as the seat was thus far sufficient for displaying the material proposed to be recommended to the public by it, the perambulation for the curious was thus designed. After viewing the stables in the simplicity of the Doric dress, and coming under a pavilion, great in its kind, they were to enter an Ionic gallery, which would have had the effect of a vast long stage to a rich theatre; and this leading them to the stone passage that traverses the basement story of the house, from thence they were to ascend, by a flight of stone steps, to a stone hall of the Corinthian order, and then pass into the sumptuous portico of the same order. Returning from this pavilion into the hall, and passing through the dining-room, dressed with the Corinthian order, a staircase, enriched with the same order, was to amuse them while they were ascending to the chamber story, proposed to have been finished with all the elegance and beauty that could possibly be given to works in the Corinthian dress; and from this gallery they were to pass into the tribunal tent of the chapel, where the Corinthian order was to increase in its magnificence; and by representing cherubim and palm-trees placed alternately, give them an idea of the manner in which King Solomon finished the inside of his temple at Jerusalem."

Pope was an intimate friend of Mr. Allen, and it was here that he wrote many of his works. WM. J. GREEN.

ARCHITECTURAL ASSOCIATION.

ON Friday evening, the 27th instant, an ordinary meeting was held: in the absence of the vice-president, through illness, the chair was taken by Mr. T. M. Rickman, A.I.B.A. After the minutes of the previous meeting had been read and confirmed, the honorary secretary read the following letter from the council of the Royal Institute of British Architects, addressed to the honorary secretaries of the Architectural Association:—

GENTLEMEN,—We are instructed by the Council of the Royal Institute of British Architects to address a few observations to you, which they will feel obliged by your bringing under the notice of the Architectural Association generally.

The Council of the Royal Institute of British Architects have for a long while watched, with sincere sympathy, the efforts at self-improvement made by the members of the Association, experiencing true pleasure when those efforts have been concentrated on ends tending to the general good of the profession, and pain when they have occasionally observed an antagonistic feeling springing up, either among the members of the Association or towards this Institute.

The Council have long desired that the professional exercises carried on under the countenance of the Institute should assume a more serious character than they have hitherto done, so that the inducements to take part in them might not be limited to the student's class, but might prove sufficiently attractive to induce at least all the younger members of the profession to take part and interest in them.

The Council have regarded a friendly co-operation with the Architectural Association, or a more or less complete fusion of their members in the list of those of the Institute, as one means to this desirable end; and it is mainly with a view to ascertain how far such a connection might be made practicable, that the present communication has been framed.

The Council desire us to transmit to you a copy of the charter and bye-laws under which the Institute exists as a corporate body: slight modifications might, if necessary, be made in the latter, but none can be introduced in the former. No alteration can be made in the manner of admitting members, but the Council have little doubt that the necessary formalities would offer no real obstruction to the incorporation of the Architectural Association, as some years ago they offered no obstruction to the old Architectural Society, presided over by one of the Institute's present vice-presidents, Mr. Tite.

By the latter amalgamation unity of action was insured, and great benefits were derived by the profession: corresponding advantages, in a greater or less degree might probably be obtained, if the energetic desire for self-improvement, manifested by the majority of the members of the Architectural Association, was infused into those classes of the Institute into which their professional status would permit the various members of the Association to be admitted.

The Council of the Institute, far from desiring to interpose the slightest obstacle to any suggestion which might be made for carrying on within the apartments of the Institute the exercises for self-improvement which appear to have been attended with happy results in many personal instances in the Association, distinctly pledge themselves to co-operate to the fullest extent of their ability with any such suggestion which may appear likely to conduce to a useful and successful issue.

In conclusion, the Council desire to record their opinion that every alienation among its members tends to a lowering of the social weight and position of the profession as a body, and that a policy of affiliation is infinitely to be preferred to one involving repulsion or isolation.

With every desire that the members of the Architectural Association may be induced to recognize what the Council sincerely believe to be the best method of attaining those desirable ends the Association has proposed to itself,—We have the honour to be, Gentlemen, your obedient servants,

(Signed) CHAS. C. NELSON, M. DIGBY WYATT, } Hon. Secs.

After the letter had been read, several members expressed their opinions as to its importance and complimentary nature. Mr. Cates then proposed, and Mr. Gray seconded, the following resolutions, which were carried unanimously:—

"That the secretaries do write to the secretaries of the Royal Institute of British architects, acknowledging the receipt of the letter, and informing them that it shall be taken into consideration by the Architectural Association at the earliest opportunity after the recess."

"That the letter be referred to the Committee to consider the whole subject, to collect information thereon, to ascertain the feelings of the members generally, and to prepare an answer to be sent to the Institute, which answer shall be submitted to a general meeting at the earliest opportunity of next session."

The following gentlemen were elected officers for the next session:—

President.—Mr. Arthur Allom. *Vice-President.*—Mr. G. J. Wigley. *Treasurer*—Mr. T. W. Goodman. *Registrar.*—Mr. A. Billing. *Secretaries.*—Messrs. T. W. Goodman and J. A. Bunker. *Ordinary Members of Committee.*—Messrs. A. W. Dresser, B. A. C. Heneng, C. Gray, G. W. Lloyd, H. Hall, T. M. Rickman, and H. Stone. *Auditors.*—Messrs. T. W. Hovenden and J. H. Christian. *Curators.*—Messrs. F. B. J. Benwell and Randall Druce.

PROVINCIAL NEWS.

Lynn.—The new public baths being nearly completed, the committee have issued a report, from which it appears that the original estimate of 1,200*l.* has been exceeded by about 93*l.* The 1,200*l.* (including 300*l.* from Lord Stanley), have been collected, except about 40*l.* The original plans have been reduced, to bring them within the means at command.

Chelmsford.—The chief stone of the new Corn Exchange here was laid, on Friday last, by Sir John Tyrell. The contest between the two rival schemes ended in a friendly arrangement and compromise, by which the site selected is that in Tindal-square, as the centre of the town, and the most convenient for all. The building is to be in the Lombardic style, the front being faced with stone to the height of the first floor, and above that with white brick and stone dressings, and crowned with a stone cornice and balustrade. The entrance will be through three arches to the hall, which is to be 100 feet by 45, with a gallery above, so as to adapt it for public meetings, &c. The roof is to be of glass. The architect is Mr. Frederic Chancellor, of Chelmsford; the builder, Mr. S. Simpson, of Ipswich; clerk of the works, Mr. C. Taylor, of Chelmsford.——In honour of the meeting of the Royal Agricultural Society at Chelmsford, a sum of 150*l.* has been voted from the public fund for ornamenting the streets and open spaces in the town, and in order that this may be applied with effect, the committee have arranged with an architect (Mr. Clark, of Gloucester), to furnish designs and superintend the erection of the principal arches which are to span the public way.

Reading.—On Wednesday in last week, the ceremony of laying the corner stone of the new schools in course of erection at the south end of Trinity Chapel, Queen's-road, Reading, was performed by Mr. H. S. Keating, M.P. for Reading. The design for the new building has been prepared by Messrs. Poulton and Woodman, of Reading, architects, and is being carried out under their supervision. The walls are rising. The style is Early English, in harmony with the chapel. The size of the school inside is 50 feet by 25 feet. Windows at the east and west ends, and a series of smaller ones towards the north, give light to the interior. Messrs. North, Martin and Jordan, Matthews and Freeman, are the contractors for the works, at the total amount of 508*l.* 9s. 9d.

Oxford.—It has been resolved to postpone the formation of the proposed Peace Fountain in St. Giles's, for the present, the commissioners in the meantime erecting their flushing apparatus, so that the whole can be afterwards completed.

Tunbridge Wells.—The chief stone of Christ Church National Schools was laid on Thursday in last week, by Miss Sophia Franklyn. The building about to be erected will accommodate 208 children. The length of the school-room will be 48 feet by 26 feet.

Brighton.—The local guardians propose to erect new schools for the workhouse, on a site between the reservoir and the Race-hill, and by the removal of the present schools from the workhouse, and by the erection of some new wards, to obviate the necessity of building a new workhouse. The arrangement still requires the sanction of the Vestry and the Central Board. ——The tender of 14,100*l.* by Messrs. Haley and Hornby, contractors, has been accepted for the erection of a mansion for Mr. Hankey, at Balcombe.

Crickhowell.—A sum of 500*l.* towards the erection of new schools here having been offered by Miss Payne, a sister of the late Archdeacon Payne, on condition that the funds to commence building with should amount to 900*l.* and a site be also provided, another lady, Mrs. Hardman Phillips, of Gwernvale, forthwith offered 400*l.* and Mr. W. E. Seymour, of Porthmaw, gave a site. The inhabitants, moreover, added 450*l.* making in all 1,350*l.* and the new school has been erected on the site given, which is near the church. The building comprises a boys' room, 45 feet by 18 feet; a girls' room, 40 feet by 18 feet; a commodious class-room; and master's residence. The builder was Mr. J. Daniels, of Crickhowell, who is said to have

satisfactorily carried out the idea of the trustees, Mr. E. W. Seymour and Dr. Lucas.

Weymouth.—The new waterworks are proceeding with activity. The large reservoir on the hill near the Wyke-road, to supply the Weymouth side of the harbour, approaches completion. The pipes are being laid down in St. Thomas-street. There will be 800 tons of iron piping, which, when laid down, will extend over a distance of fifteen miles, and, before it can be completed, will cost nearly 30,000*l.*

Devonport.—The tender of Messrs. Greenwood and King, of Devonport, builders, who have had much of the Government work in this locality, has been accepted for the building of a series of cottages, stores, &c. at Bull Point, where they are engaged in executing a large contract. The amount of the tender now accepted is 8,500*l.*

Bath.—The foundation-stone of the Lansdown Proprietary College was laid on Tuesday in last week. The site is near the new Kingswood Wesleyan College, but on the opposite side of the Lansdown-road. The architect is Mr. Wilson, of Bath. The style of the building is Gothic, of the Early Decorated period. The principal front to the west, parallel to the Lansdown-road, comprises a central tower, with staircase turret, at the angle, surmounted by a spirelet. A high-pitched gable, with oriel windows in it, and a smaller gable and turret on the north side of it, form the centre, from which two wings run north and south, containing the several halls for the various classes of study. The principal entrance is in the tower. The senior school in the north wing is reached by a branching staircase leading from the vestibule, and contains an area of 3,500 square feet, and is lighted by a series of early traceried windows, towards the east and west, and one large window of five lights in the north gable. The roofs throughout this floor are open timbered, plastered, and coloured in pattern between the rafters, and stained. In the south wing is a similar room, of an area of 2,100 square feet, with a raised stage at one end. On this floor are rooms also for the principal and vice-principal, and a spacious library. On the ground-floor, the north wing is appropriated to five smaller halls of study (four of these averaging an area of 450 square feet each, and one containing 840 square feet), approached through a cloister, with windows facing the west. In the south wing is a dining-room for daily boarders, and kitchen, stores, &c. The ventilation, on the principle patented by Watson, of Halifax, is effected by means of the turret in the roof over the central school. The building is to be covered in by the 1st of June, 1857, and completed for habitation by the 1st of July, 1857. The contract has been taken by Mr. Edward Streeter, of Bath.

Bristol.—The plans and specifications for the completion of St. George's Hall, Broad-street, are now prepared, and the building will be altered and decorated forthwith. Messrs. Pope, Bindon, and Clark, are the architects.

Worcester.—The unsightly and dangerous archway leading from Cooken-street to the Warmstry-slip has been pulled down, by the arrangement of the Model Dwellings Association, and a good thoroughfare opened from St. Alban's Church through Birdport. The new dwellings approach completion, and ultimately three if not four sides of the square will probably be occupied by them.

Stratford-on-Avon. — The *Literary Gazette* states that a Mr. John Shakspeare, who claims a relationship to the poet, is about to cover Shakspeare's house, at Stratford, with a building of glass and iron, to protect it from the weather. The cost is estimated at about 3,000*l.*

Macclesfield.—The old grammar-school having become inconvenient and dilapidated, the governors decided upon erecting more commodious buildings in the field to the rear of the old school. Designs were accepted from Mr. F. T. Bellhouse, of the firm of Messrs. D. Bellhouse and Sons, of Manchester, and the new buildings have been erected in the Gothic style, at a cost of 3,230*l.* The inauguration of the new school took place on Friday last.

Birmingham.—The new music-hall, erected in Broad-street, by Mr. Briggs, from the designs of Mr. Cranston, is near completion, and will be opened in September next. Externally the hall presents no marked architectural features: internally it is fully decorated. Experiments on the distribution of sound in the hall have been made, and the result is said to have been satisfactory.

Birkenhead.—A large hotel, in Conway-street, Birkenhead, nearly completed, fell to the ground on Monday in last week. Two men narrowly escaped. The foundation, it is said, was bad, and the building of inferior quality.——A graving dock is projected at Birkenhead, which will be large enough to contain the gigantic steamer, the *Great Eastern*. The length of the proposed dock is 718 feet, and width 120 feet. The cost and estimates, prepared by Messrs. Freeman, of London, are under 100,000*l.*

Warrington.—The works of the new market are drawing towards completion, but it is doubted whether the market will be ready by the 16th of July; and if not, a penalty of 10*l.* per week will be inflicted.

Manchester.—The new wholesale fish-market, erected in Great Ducie-street by the Lancashire and Yorkshire Railway Company, and leased to the corporation, was for the first time occupied on Wednesday in last week.

Halifax.—The Wesleyan day and Sunday school building will be of the Decorated style of Gothic architecture, and will consist of school-room, 66 feet by 32 feet, and two class-rooms, each 19 feet 6 inches by 15 feet 7 inches, the whole of which will have open timbered roofs. The principal entrance to the school will be through a porch in the gable end towards Orange-street. At this end there will be a large three-light traceried window over the entrance, and a one-light traceried window on each side of the porch. The northerly side of the school will have six three-light square headed windows, and two two-light pointed windows surmounted with gables. The south side will correspond with the north. On the west side will be the playground, in which will be the master's residence, of the same style as the school building. The works have been contracted for by the following tradesmen:—Excavator's and mason's work, by Messrs. Hesseldine and Sons; carpenter's and joiner's work, by Mr. Wm. Jackson; slater's and plasterer's work, by Messrs. Joseph Bancroft and Sons; plumber's and glazier's work, by Mr. Wm. Barrett. The architects are Messrs. R. Ives and Son.

Sheffield.—The Sheffield gymnasium recently erected and fitted up in Clarkhouse-lane, at a cost of near 3,000*l.* (in 5*l.* shares) was last week offered by public auction for the mortgagee. There was a numerous attendance, but not a single bidder, although from the inquiries made a brisk competition was expected.

Penrith.—The new baths and wash-houses here were recently opened. They form a commodious building, situated in Hunter'-lane, next to the Working Men's Reading-room. There are two large plunge baths, and a number of private baths and rooms fitted up for patients who wish to remain to take the benefit of the water. The washing apparatus is complete: there are stands for fifty or sixty women, with wringing-machine, &c. The baths have been well attended since the opening.

Dundee.—An attempt is being made to combine with the proposed new public hall here, a new court-house and post-office, on the large site at the Meadows.

Nairn.—The harbour improvements formed the subject of discussion last week at a meeting of Town Council, and a committee was appointed to take steps for raising funds to the extent of 7,000*l.* or 8,000*l.* on security of the harbour revenue, with the view of carrying out a part of the engineer's plan, and commencing the works this season. The Council have already contracted for the repair of the breakwater on the east side of the river, and the workmen are now engaged in its execution.

Banff.—A new drain along the High-street was decided on at late meetings of the Burgh Police Commissioners and Parochial Board; and specifications were agreed on, that the drain should be at least 4 feet deep, the conduit to be built with stones, and at least 18 inches square. After advertising for estimates, another meeting was held on Thursday in last week to receive them, when the offer of Wm. Scott was accepted, in which, according to the local *Journal*, he engaged to complete the whole, affording all materials and carriage, at 2s. 10½d. per yard. The drain extends from the bottom of Boyndie-street, along High-street, to the top of Back-path, a distance of 200 yards or upwards.

Wick.—A sale of building feus, lying along Bridge-street, Wick, says the *John O'Groat Journal*, was disposed of by public roup at an annual feu rent, on Wednesday in last week, when the whole were sold at high rents. The five street feus of a frontage of 30 feet each, and from 80 feet to 100 feet back, brought 53*l.* or about 7s. per foot, frontage. The back feus around the Free Church brought between them half that amount—in all, 85*l.* 10s. exclusive of what was formerly built upon.

ARTISTICAL.

RUBENS'S celebrated *Rainbow Landscape* was sold the other day amongst Lord Orford's collection of pictures for the sum of 4,550*l.*

At the same sale we were glad to observe that some *Carvings by Mr. Rogers* sold for more money than had been paid for them. This was the case, too, at a sale at Mr. Strahan's, at Ashhurst.

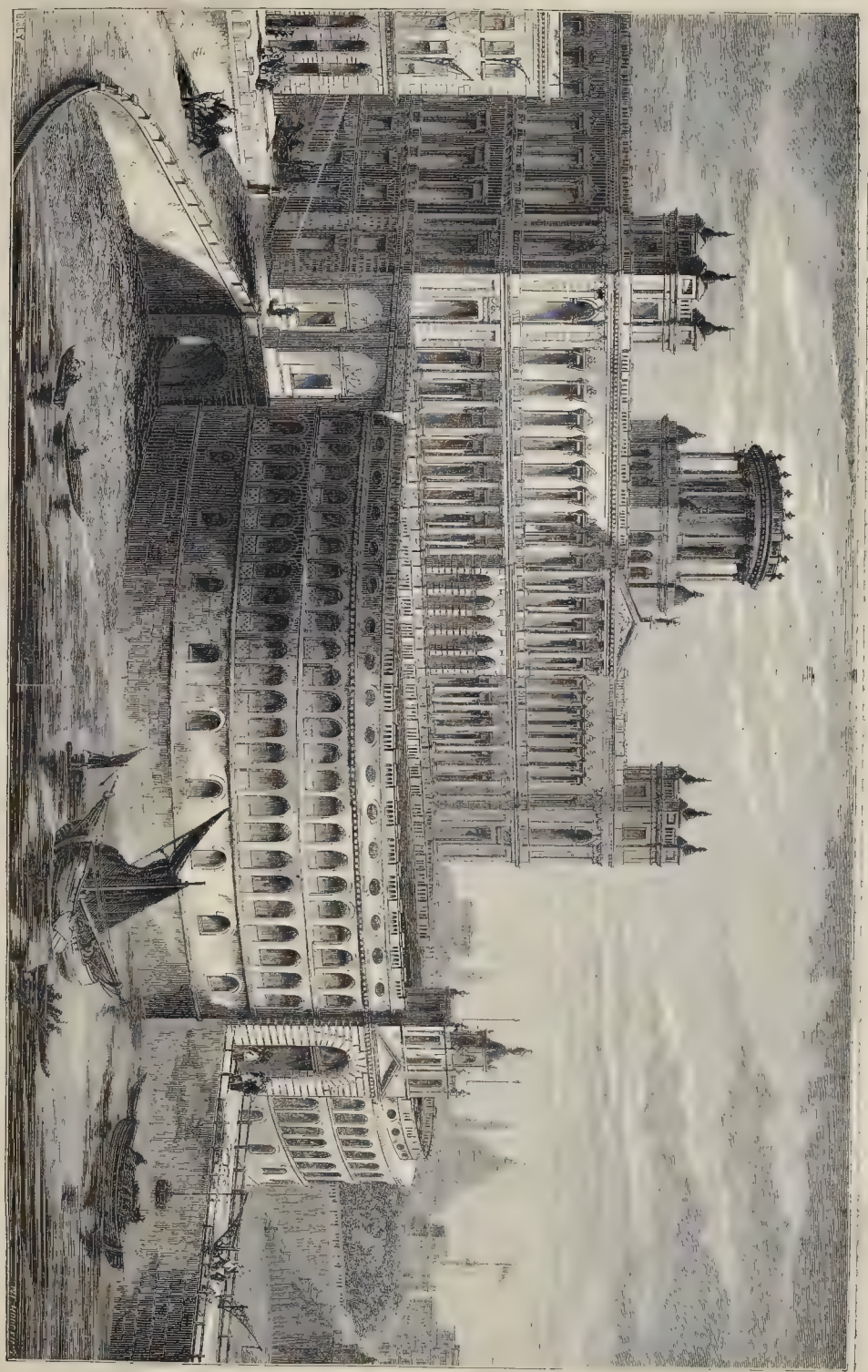
Mr. Burford's Panorama of St. Petersburgh, Leicester-square, wherein he has been very ably assisted, as of old, by Mr. Selous, is as well painted as any that has been exhibited, and serves to give a good idea of the scale on which public buildings are executed in that capital. We may safely recommend a visit. The water, by the way, is particularly well painted.

The Council of War, painted by Mr. A. L. Egg, A.R.A. from photographs taken on the spot, is a very characteristic and satisfactory production. Those who were at the place at the time tell how Pelissier sent for his "orders" when he found he was to be photographed; while but for a red stripe on the trowsers, Lord Raglan would scarcely be thought military.

NEW CUSTOM-HOUSE AND PUBLIC OFFICES, AT BUENOS AYRES.

WE have received a sketch of the new Custom-house and public offices, designed by Mr. Edward Taylor, architect, of Buenos Ayres. The semicircular portion of the edifice nearest to the Rio de la Plata is drawing fast to completion, and will be used as deposit stores. It is a substantial mass of building, three stories in height, covering nearly two acres and a half of ground. The materials of the country, brickwork (built with bricks 13 inches by 6½ inches by 1½ inch), and hardwood timber, are almost exclusively used in the structure; and massive square brick piers and vaulted arches occupy the position which in Europe would be occupied by iron columns and fireproof floors of modern design. Covered promenades extend along the curve in the two upper floor levels, and the entire roof of this portion is formed so as to serve as a terrace, commanding a fine view of the river and shipping. The larger edifice in the background is intended for Government offices, and will occupy the site of the antiquated fortress, which is no longer useful as a military defence, owing to its having been over built by the surrounding structures, as well as to its being in a dilapidated state. Goods are intended to be conveyed from the vessels in the inner roads, 14 or 15 feet water, by means of a railway connecting with a mole. The present mole has been carried out 450 yards from the Alemeda wall, but this distance being insufficient to bring it into deep water, it is proposed to extend it 700 yards farther. This wooden mole has been built under Mr. Taylor's direction.

LONDON DOCKS.—The foundation stone of the London Dock Company's new works at Shadwell has been laid. The works consist of a large basin or dock, with an entrance to the river, and a communication lock from the new basin to the eastern dock; the entrance lock to be 350 feet long, 60 feet broad, and 28 feet of water on the sill of gates, capable of affording accommodation to the larger class of shipping. The cost of the undertaking is estimated at 700,000*l.*



CUSTOM-HOUSE AND PUBLIC OFFICES, BUENOS AYRES.—MR. EDWARD TAYLOR, ARCHITECT.

CHURCH-BUILDING NEWS.

Gainsborough.—The ceremony of laying the foundation-stone of Burringham Church was performed on the 18th ult. The village wore a holiday appearance, and garlands were plentiful. The church, which will be dedicated to Saint John the Baptist, is intended to afford nearly 200 sittings, and to have a peal of four bells. The estimated cost is 1,270*l.* towards which about 1,000*l.* have been raised by subscriptions, bazaars, &c. The Church-Building Society contributed 100*l.* The lord of the manor gave the site of the church and burial-ground, to which he added 50,000 bricks, and his son, Capt. Healey, 25,000 more.

Sleaford.—The cemetery for Sleaford was consecrated on Tuesday in last week. The ground is formally laid out, but there is no chapel, an inconvenience complained of. A lodge is to be erected.

Cinder-hill (Nottingham).—Christ Church, Cinder-hill, in the parish of Basford, was consecrated on 19th ult. by the Bishop of Lincoln. The church has been erected on a site given by the Duke of Newcastle, with consent of his son, the Earl of Lincoln. The design was furnished by Mr. T. C. Hine, of Nottingham, architect. Mr. J. Fisher, of Nottingham, was the builder and general contractor. The church will accommodate 380 persons, and has cost about 2,000*l.* It is in the Decorated Gothic style of fourteenth century, with geometrical tracery and sculptured corbels (heads of sovereigns, &c.), and consists of a nave, north aisle, chancel and porch, with a turret for three bells at the south-west corner of the nave. At the east end of the aisle there is a recess for an organ, divided or separated from the aisle by a triple arcade, with double rows of slender shafts, sustaining foliated capitals. The nave is 62 feet by 21 feet, the aisle 52 feet by 9 feet, and the chancel 25 feet by 17 feet. The extreme altitude of the nave is 42 feet vertical height. The roof is of lofty pitch, and formed of a series of framed rafters and collared beams; while that of the chancel is of framed rafters with curved braces. The windows throughout are filled with stone tracery; the west end window being composed of two lights, filled with tracery, extending one-third of the height from the head, and surmounted by a trefoil light. The large eastern window of four lights, surmounted by geometrical tracery in quatrefoils, is filled with figured (glass) quarries. The small window of quarry lights in the north aisle was glazed by Mr. N. W. Lavers, of London. The design is very simple, and of small cost, though considered effective, being a cross and fleur-de-lis on alternate panes; the cross rising out of a red, and the fleur-de-lis out of a green gem, the whole being enclosed in running borders of flowers and leaves. The aisle is divided from the nave by an arcade of four arches, in which Minton's encaustic tiles are introduced in the form of a border, constituting a substitute for the ordinary hood moulding. These arches rest on octagonal piers of Ancaster stone. The chancel arch is supported on triple stone shafts, with triple moulded capitals.

Harrow.—The first stone of the Memorial Aisle of the new school chapel at Harrow (in honour of the Harrow officers who fell in the Crimea), was laid on Thursday in last week, by Major-General Sir W. Fenwick Williams of Kars.

Croydon.—Exertions are being made to realise funds for completing St. Peter's Church, Croydon, with tower and spire, according to the design of the architect, Mr. Scott.

East Hoathly.—The church at East Hosthly has been rebuilt and enlarged. The new church comprises a nave, north and south aisles, and south porch, of Early English architecture: the cumbersome galleries have been removed, a screen erected between the tower and the nave, and the west window thrown open. The windows of the chancel have been filled in with stained glass from Mr. Lavers, London. The rebuilding and enlargement of the church were carried out by Mr. Cheale, of Uckfield, builder.

Brighton.—At a vestry meeting held last week a report from the Burial Board was received and adopted, and the Board authorised to borrow 6,000*l.* on the poor-rates, to be laid out on the new burial-ground, and repaid in twenty years. The following was the estimate in the report referred to:—

Walling to enclose 20 acres	£1,027	0	0
Widening and formation of road	1,344	17	0
Two chapels, each to accommodate 100 persons...	1,500	0	0
Sexton's lodge and receiving house	550	0	0
Entrance gateway for memorial (say)	200	0	0
Laying out the ground	800	0	0
Contingencies, superintendence of works, and law expenses...	578	3	0
	£6,000	0	0

Newport (Isle of Wight).—The slaters are now covering in the roof of St. Thomas's church, Newport, rebuilt by Messrs. Dashwood, of Ryde, from designs furnished by Mr. W. S. Daukes, of London.

Sherborne.—The architect engaged in the restoration of the chancel of Sherborne church, according to the local *Journal*, has been making a survey of the edifice. The wall which divides the ambulatory from the present residence of the head-master of the King's School, has been opened, and a fine arch of the Early English period exposed to view. The arch is in such a state of preservation that it can be perfectly restored: the gilding and decorations still remain: the capitals are of delicate workmanship, and the clustered columns are of polished Purbeck marble. This arch, which, it is thought, must have been erected in the beginning of the thirteenth century, was the entrance into the ladye chapel. How that came to be converted into a residence is a mystery. Hutchins, in his "History of Sherborne," speaks of there being, probably behind the "unmeaning heavy altar-piece of Norway oak," "an entrance into a part of a chapel dedicated to the Blessed Virgin, which, in most cathedral and conventual churches, stood at the east end of those fabrics. The tradition that there was a chapel where the school now stands is confirmed by the groins and niches in the roof and sides of the house, exactly corresponding with the general style of the church." The master's house appears to consist of three chapels,—the ladye chapel, the chapel of St. Mary of Bow, and a third chapel, as yet unexplored. In the walls have been found a great number of curious remains, tiles, carved stonework, &c.

Warminster.—The works in connection with the restoration of the chapel of St. Lawrence are making progress. The amount collected is about 550*l.*; but to complete the whole about 200*l.* more will be required.

Devonport.—Preparations are being made in a field adjoining Cecil-street, for the purpose of laying the foundation stone of the new Roman Catholic chapel. Mr. Roberts, of Stonehouse, is the contractor for the work, and Mr. Hansom, of Bristol, the architect.

Gloucester.—A public meeting has been held on the subject of the proposed cemetery for this city. The corporation having decided upon the purchase of a piece of land at Tuffley, about two miles from the city, for the purpose of a public cemetery, a portion of the citizens opposed the project, and a deputation was formed to wait upon the corporation, requesting that a piece of ground belonging to the corporation at Wotton might be selected. This deputation now reported that they had been unsuccessful.

Wolverhampton.—At the meeting just held here, as to the completion of the Collegiate Church restorations, a report by the architect, Mr. Christian, was read, stating that the works up to the present time, including "the restoration of the clerestory and the re-roofing of the nave of the church, the partial re-building and re-casing of the west front, the restoration and re-roofing of the south aisle of nave, and the restoration of the porch, the repair of the tower, and the external drainage, with a few minor improvements, have cost 4,416*l.* 11s. 6d. of which all but 66*l.* 11s. 6d. has been paid. In order to repair the north aisle and north and south transepts in a similar manner, and to put a new roof on the north aisle, a sum of 1,950*l.* 10s. 2d. is required, to which 10 per cent. should be added for contingent expenses." The report suggests several improvements in the interior of the building, and concludes by remarking that with regard to the chancel, to which the above estimate does not extend, the present building is so very miserable, and so discordant with the noble proportions of the remainder of the church, that nothing short of re-building can possibly remedy its present grievous deficiencies. The meeting was thinly attended. Resolutions to appeal to the inhabitants of Wolverhampton to raise the amount required, and appointing a committee, were unanimously agreed to.

King's Norton.—The restoration of the west entrance of the parish church of King's Norton has just been completed. The children's and singers' galleries are removed, the partition of the tower-arch and the ringing-floor taken away, and the perpendicular west window is now seen from the nave through the tower arch, which extends from the floor to the ceiling of the nave. The pews have given way to open seats. Workmen are now engaged at the east window of the chancel, and a new organ, costing 250*l.* will be among the improvements.

Sydenham (Oxon).—The parish church was re-opened by the Bishop of Oxford three weeks since, it having been closed for some months for general restorations, new seating throughout, and the erection of a wooden spire by Mr. Holland, builder, of Thame. Mr. John Billing was the architect.

Bowdon.—On Monday in last week a meeting of the parishioners of Bowdon was held "to take into consideration the extensive repairs necessary for the restoration of the parish church, and to enter into a subscription for defraying the cost of the same." A report by Messrs. Starkey and Cuffley, of Manchester, architects, was read, which pointed out the extent of the dilapidations of the church, and the best means of restoration. The report stated that a considerable portion of the edifice must be entirely rebuilt. The reporters proposed to take down the exterior walls of the north and south aisles, together with the porch, and to rebuild the same, using up the old materials where practicable. The tracery for the new windows, buttresses, and parapets to be executed in Alderley Edge stone. The roof of the south aisle to be taken off, and a new ornamental roof in oak to be substituted. To take down such portions of the nave wall and arches as are in a dilapidated state, and to rebuild the same and insert new clerestory tracery windows on both sides. The nave roof to be taken off, and a new oak ornamental open-timbered one to be substituted. The organ to be taken down and to be re-erected in the north aisle of the chancel. The whole of the church to be re-pewed with new oak pews, also a new oak pulpit and reading-desk. It appears to be indispensable to retain the galleries, and also to erect an additional gallery, entirely remodelling the same. The tower to be repaired and renewed where required. Resolutions favourable to a thorough restoration were passed, and a committee appointed to see to the objects of the meeting. The proposed alterations would give sixty additional sittings, and the projected new gallery from forty to fifty more. About 1,000*l.* towards the 4,000*l.* to 5,000*l.* said to be requisite, were at once subscribed.

Alderley.—The parish church of Alderley has been recently improved in its interior by the patron of the living, Lord Stanley of Alderley. The chancel having fallen into disrepair, Messrs. Starkey and Cuffley, of Manchester, architects, were commissioned to prepare designs for its renovation, which have been carried out by Messrs. Bowden, Edwards, and Foster, of Manchester. The chancel is rebuilt in the Early Decorated style of thirteenth century, with Alderley stone. The buttresses, porches, windows, pinnacles, gable crosses, &c. are decorated. The interior of the chancel is decorated in stone carving, painted windows, &c. The tracery of the windows is flowing in character, and the scripture subjects and stories were wrought in the glass, by Messrs. Edmundson, of Manchester, and Mr. Wailes, of Newcastle. In one of the canopied recesses, at the end of the sacrarium, there is an altar tomb of Caen stone, in the Gothic style, with a life-size recumbent figure of the late John Thomas Stanley, first Baron Stanley, of Alderley. This work is by

Westmacott. The cost of the eastern window was paid by a subscription among the parishioners.

Stanningley.—A new church, dedicated to St. Paul, was consecrated here by the Bishop of Ripon, on Wednesday in week before last. The site is near the local station of the Leeds, Bradford, and Halifax Junction Railway. The building consists of a nave, 65 feet 6 inches long, and 24 feet 6 inches wide; north and south transepts, each 22 feet 4 inches, by 18 feet 3 inches, opening in the nave by lofty arches; chancel, 21 feet, by 22 feet 3 inches; south porch, tower, engaged at the north-west angle of nave and north transept, and in which is the principal entrance to the church; vestry at the south-east angle of the chancel, and south transept. The tower is surmounted by a broad spire, and the height of tower and spire is 90 feet. The style is plain Early English. The windows in the north and south sides of the nave, transepts, and chancel, are narrow single lancets. The chancel window is a triplet with foiled heads, under one hood mould. The west window has four lancets and superimposed quatre-foil and hood mould. All the roofs are open, and gabled. The roof timbers and wood fittings are of deal, stained. The building is of hammer-dressed wallstones, with stone dressings. The whole structure is plain. It will seat 519 persons, and the amount of the contracts was about 1,300*l.* The architects were Messrs. Perkin and Backhouse, of Leeds; the builders, Mr. Richardson, mason, Bretton West; Mr. W. Smith, joiner, Leeds; Mr. Barker, plasterer, Leeds; and Mr. Storey, plumber, Leeds.

Mottram.—On Wednesday, in last week, Mottram Church, which has been closed for repairs during the last fourteen months, was opened for divine service by the Bishop of Chester. The amount of subscriptions actually paid is 2,178*l.* 8s. 6d. and the interest of money, with the proceeds of the sale of old materials, raise this sum to 2,543*l.* 1s. 8d. of which about 2,250*l.* have been expended upon the building alone. Mr. J. E. Gregan was the architect, and Messrs. Eaton and Hollas, of Ashton-under-Lyne, and Messrs. Stokes, Brothers, of Stalybridge, were the contractors. The organ has been wholly rebuilt, by Mr. John Wheeldon.

Liverpool.—St. Aiden's Church was opened on 27th ult. The edifice is small and plain: it is in the Pointed style, with a nave with two side aisles, and a gallery capable of containing nearly 200 sitters in the west end of the nave. Altogether, the church is seated for about 900. The material is red sandstone. Above the western gable is a small belfry, in which there is a bell. The whole cost of the building, exclusive of the site, is stated to be about from 3,500*l.* to 4,000*l.*; the site itself being valued at 4,000*l.* Mr. Nicol, of the firm of Nicol and Holme, of Liverpool, builders, were the contractors for the whole of the work. St. Aiden's is intended chiefly for dock labourers and their families who reside at the north end of Liverpool. Mr. Shaw Leigh gave the site, in Victoria-road, near Rakelane. Mr. Arthur Holme was the architect.

Barnsley. — The Congregational Church, Regent-street, Barnsley, has had its spire completed, which rises to an altitude of 160 feet, and terminates with a vane 10 feet in height. The architect was Mr. James, of London. This new edifice is in the Gothic style.

York.—The Methodist new connection have had their new chapel in Peckitt-street opened. The building, including a large school-room, with vestries, is in the Byzantine style of architecture, and has been erected under the superintendence of Messrs. Atkinson, of this city. It is called Trinity Chapel, and will accommodate about 800 persons. In front is a circular and a five-light window. There is in the interior a small gallery on each side.

Whitby.—St. Michael's Church, Whitby, was consecrated on Wednesday in last week. This edifice was opened so long since as 14th September, 1848.

Edinburgh.—It is expected that the meeting of the General Assembly of the Free or Dissenting Church of Scotland in 1858 may take place in a new building to be erected for the meetings of the Assembly. The site is contiguous to the Free Church College, and the hall, when built, will be almost parallel to the Assembly Hall of the Established Church, the two being separated by merely the breadth of a narrow street. The estimated cost of the building has been stated at 4,000*l.* The disadvantage which the locality presents in obtaining effective light from side windows it is intended to obviate by having the house lighted from the dome, which will be mainly composed of iron.

Elgin.—At a meeting of the Elgin Parochial Board, held on Wednesday in last week, a committee was appointed to look out for a site for a new burying ground, and to obtain plans. This proceeding is taken under the present "Burial Grounds (Scotland) Act," by which parochial boards are authorized to borrow such funds as they may require from the Government commissioners for advancing money on public works.

Kilcronaghan.—After a long delay, the building of the new church of Kilcronaghan, says the *Coleraine Chronicle*, has at length been commenced. Last week the foundation was laid, without the usual ceremony, on a plot of ground adjoining the town of Tubbermore. The site is elevated. It was granted by the Rev. Marcus M'Causland, Parsons-town, King's County, as a gift to the parish, and to promote the interest of the Protestant religion in that locality. The edifice will be 82 feet in length and 36 feet in breadth, and will be 18 feet high in the side-walls. The contractors are Messrs. Birnie and Co. The building is progressing, but many months will elapse before the work is completed.

CARLISLE.

THE re-opening of Carlisle Cathedral took place on 22nd ult. the restorations, which were commenced in August, 1853, having just been brought to a conclusion. They include the general repair of the building, externally and internally, renewing decayed portions, supplying those missing, &c. The flat roofs of the nave and transepts have been removed, and high-pitched oak roofs, covered with lead, substituted, the new end gables finished with crosses, and filled in with tracery windows. A geometrical design has taken the place of the modern tracery in the great north window; and a moulded and carved doorway has been inserted in the south front of the transept. The western portions of the cathedral, seen from Paternoster-row, formerly to the eye a mere shapeless mass, have now assumed a very different aspect. The greatest change, however, has taken place in the east end of the choir. Here the stonework of the great window, and nearly the whole of the ornamental details, which were entirely decayed, have been removed. A finishing stroke has been the introduction of the statues in the buttress niches. They were sculptured by Mr. Phyffers, of London, at the expense of the Rev. Canon Harcourt. The figure in the small niche is the Virgin and Child: the others, which are 6 feet 9 inches high, are St. James, St. John, St. Peter, and St. Paul. In the interior great changes have also taken place. The walls have been cleansed from their thick coating of white-wash, the floors taken up and concreted, to prevent the damp rising, and the choir floor relaid with white flags in diamonds. The modern plaster ceiling has been removed from the choir, and the old oak ceiling restored: this is semi-circular in form, and divided into square panels with carved bosses, and shields at the intersections of the ribs. The whole has been richly decorated—the prevailing colours being gold and blue. To give the ceiling its proper effect, much stained glass is required in the building: little, however, has yet been obtained. The tracery lights of the great east window are filled with the old glass, which has been restored by Mr. Wailes, of Newcastle. One of the south clerestory windows also has been restored by Mr. Harcourt. Besides these there are only two new stained windows in the cathedral—the rose window in the north transept, the gift of Mr. Scott, of Rickergate—and a memorial window to the late Dr. Heysham, by Mr. Wailes, just inserted in the east end of the south aisle. Outside, provision has been made for the drainage of the building, and the soil accumulated round the walls is being removed. A better view of the east end will soon be obtained by the removal of a house in Castle-street. The total cost of the improvements has been nearly 15,000*l.* The substantial repairs have been paid for by the Ecclesiastical Commissioners; the decoration of the roof, &c. by the Dean and Chapter, aided by public subscription. The whole of the works have been carried out under the direction of Mr. Christian, superintended by Mr. Purday. The general contractors were Mr. Wm. Dove, of Scarborough, and Mr. Geo. Vasey, of Whitby. The painting of the ceiling was executed by Messrs. Scott and Drape, of Carlisle. The new organ, by Willis, of London, has not yet been cased. "The restoration," says the *Carlisle Journal*, "is still grievously incomplete. The chaste splendour of the resuscitated choir makes more painfully obvious its fatal want of symmetry, and its connection with the hidden, mutilated nave. Noble as are the proportions of the organ, its position affronts every eye that has swept the noble vista of Canterbury Cathedral, where only a low screen breaks the line of view from east to west. Yet would little be gained by opening the transept arches, and rooting out the ugly sheep-pens that make up the parish church, if there were no hope that the original eight arches would some day arise upon the now desolate space in front of the tower. The artistic skill and zeal that have written their own praises on the choir would be well employed upon the nave."——The Church of England portion of the Carlisle Cemetery was consecrated on Monday in last week. This cemetery was opened on 27th May, 1855. The chapel for the use of nonconformists was opened in January last, since which time the service of both churchmen and nonconformists has been conducted in it. The second chapel, for the use of members of the Church of England has more recently been erected at the east side of the cemetery, and directly opposite to that on the unconsecrated ground. Both chapels are in the same style of architecture as the lodge, and are from designs furnished by the Messrs. Hay, of Liverpool. They are both built with pressed bricks, with white stone facings, and are each provided with a bell turret. They are floored with Minton's tiles, and fitted up in the interior with stained seats, and open roofs of stained wood. The windows are of Hartley's stained glass. The Church of England chapel is somewhat larger than the other. Both chapels have been built by Mr. Charles Armstrong. The cemetery is about 1½ mile south-west from the centre of the city.

THE MEROPOLITAN BUILDING ACT.

ARCHES UNDER PUBLIC WAY.

WITH reference to Sec. 25, which specially places arches under any public way under the control of the district surveyor, a difference arose between the City authorities and the district surveyor of Clerkenwell, Mr. Sibley, touching the vaults for the houses in Victoria-street, and streets in connection with the Farringdon-street extension. The former refused to admit the surveyor's jurisdiction, and summonses were accordingly issued against Mr. John Jay, as builder, for the penalty of 20*l.* in each case. Previously to the hearing, however, the authorities admitted the jurisdiction, and the summonses were accordingly withdrawn.

It seems quite clear that separate notice must be given for the vaults of houses if under any public way, and a separate fee is payable to the surveyor for inspecting them.

"*Acts regulating Buildings, &c in the Metropolis.*"—Under this title the honorary secretary of the Builders' Society, Mr. Thomas Piper, jun. has put together, for the members of that society, a digest of the law as it now stands, with reference to building and matters connected with it in the metropolis.* The endeavour has been to afford "a plain description of all the enactments and regulations now in force, and to bring into one view whatever is required by these Acts of Parliament, arranged in the order in which they will come into operation in the regular course of business, and couched in language as much as possible divested of legal technicality." It is only intended by its intel-

* Waterlow and Sons, printers, London-wall.

ligent author as a *guide* to the provisions of the various Acts, and not to supersede the necessity of referring to the Acts themselves, where difficulties occur. Much trouble would be saved if every builder in the metropolis could be persuaded to master it. In another edition the compiler may as well modify the paragraph at the head of page 5, which says, "Before beginning to build or *repair*, two days' notice must be given to surveyor;" since for necessary repair, unless "affecting the construction of any external or party wall," notice is not necessary.

Mr. Piper adopts the belief, that as to the substance of walls of public buildings, "Section 12 is intended to apply, and that the architect of the Board of Works must approve." We have already given reasons for thinking differently, and a recent paper of instructions from the superintending architect shows that the same view is held at the Board of Works, namely, that it is only in the event of *disagreement* between the builder and the district surveyor that reference in this respect need be made to the Metropolitan Board.

COMPETITION FOR THE MANCHESTER EXHIBITION BUILDING.

As a warning to my professional brethren, who might be tempted to engage in competitions where the terms are as ill defined as they have been in the late Manchester competition, I enclose you a letter I have had the honour to receive from the chairman of the executive committee.

I need hardly say that I have declined the proffered gift. OWEN JONES.

The letter says,—

"SIR,—At the last meeting of the general council of this exhibition, it was resolved to acknowledge with some mark of the council's approbation such of the designs for the exhibition building as, either from the genius of their conception, their artistic merit, or their approach to meet the full requirements of the contemplated art treasure display, should, in the opinion of the executive committee, merit such a distinction.

It is gratifying to me to inform you that the design submitted by you is amongst the limited number so selected; and in tendering the enclosed draft as a slight compensation for the labour and expense which have been bestowed on your plans, the committee trust that you will receive their acknowledgment of the ability displayed in your suggestions, and their thanks for the interest you have evinced in the success of the undertaking.

I am, sir, &c.

(Signed) THOS. FAIRBAIRN,
Chairman of the Executive Committee."

The draft enclosed was for twenty-one pounds.

The design determined on was submitted to H. R. H. Prince Albert on Wednesday, the 2nd. There appears to be some mystification as to its authorship.

STANDARD LEVELS.

IN the present discussions on the drainage of the metropolis, and in many maps relating to the levels throughout the country, the Trinity standard on the Thames, and the standard levels at Liverpool Docks, occupy so prominent a position, that you would be conferring a boon on many of your readers by giving them, or by inducing some of your correspondents to give them, replies, on which confidence may be placed, to the following inquiries:—

1. Trinity standard, Thames high-water mark. Where is this placed? and if more than one, where are the others also placed? Do they indicate high-water spring tides at these places, or neap tides, and what are the differences above and below the standard marks of high and low water at spring tides and neap tides at these places?

2. This Thames standard high-water mark is said to be 12½ feet above mean tide level at Liverpool, or Ordnance datum. What are the differences at Liverpool, above and below this datum, of high and low water at spring and neap tides there?

3. Bradshaw's maps of the canals, railways, &c. of England, published in 1830, give in one place the levels from a datum of "6 feet 10 inches under the old dock-sill at Liverpool," while in another place it states the levels are taken from "*low water*" at Liverpool. Is low water at Liverpool the same level as 6 feet 10 inches under the old dock-sill; and if not, what is the difference, and which is highest?

4. In Wyld's Map of the Levels of London and its Environs, published a few years since by order of the then commissioners of sewers, but not dated, it is stated "the altitudes are given in feet above the approximate mean water at Liverpool, being 12½ feet below Trinity high-water mark." In reply to my inquiries on this, I am told this is high water at Liverpool, and that this is 12½ feet below high water at London; but whether it is high water, spring, or neap tides, at each place, or a mean between the two, and what the difference in heights is, I cannot get any information upon.

In studying the sewerage of London and its environs, it is so important to have at once both clear and accurate knowledge on these points; and the whole subject of levels is so intimately connected with the scope of your journal, that I feel assured you will kindly lend your pages for these inquiries, and the replies, if authentic and reliable, of your correspondents who may be kind enough to notice them. AN OLD SUBSCRIBER.

AMERICAN INVENTIONS.

THE commissioners appointed to visit the United States, for the purpose of inspecting the manufacture of fire-arms there, in the course of their inquiries collected a considerable amount of information on a variety of miscellaneous manufactures, which they embodied in their report. Thus, on the subject of,—

Wood Screws.—Very superior wood screws, they say, are used all over the United States. In the generality of wood these screws do not require a hole to be bored for them, as they force their own way, by reason of their gimlet or taper-screwed point. The machinery by which these screws are made is self-acting, and is quite different from the screw machinery used in England.

Machinery for Making Wrought-iron Nails.—There are immense nail manufactories in different parts of the country, where no hand labour is employed. The machines for the smaller sizes of nails are self-acting; for the larger sizes the iron has to be supplied to the machines by a boy, who makes nails at the rate of 200 per minute. Machine-made nails have been much improved by a change in the mode of rolling the iron, by which the fibre now runs in the line of the nail. Large spike nails, used to fasten rails, are also made by machinery, which turns out the spikes at the rate of sixty per minute.

Padlocks, Locks, &c.—The manufacture of locks for doors and padlocks is carried on most extensively. The shells of door-locks are made of cast malleable iron, about one-sixteenth of an inch in thickness, and have the greater part of the wards cast within them. The keys are also cast, and turned by a machine on the clamp milling arrangement. Those that are hollow, are drilled out by self-acting machinery. The door-handles are chiefly made of porcelain, formerly obtained from England and France; but having set up machinery, which not only does all the rough work, but extends even to the forming them in metal dies, and to the turning them on slide lathes on the copying principle, they are now produced of superior quality, and at a remarkably low cost. A lock of good quality, 2¾ by 2½, is sold wholesale at the rate of fifty cents per dozen, each of the twelve having a differently formed key.

File-cutting Machinery.—Striking up the teeth of files has been accomplished in a very successful manner, one machine being capable of cutting twelve dozen files per day, one man being able to attend two of them.

HINTS TO WORKMEN FOR THE PRESERVATION OF HEALTH.

1. ABSTAIN from all spirits and dram drinking. Spirits relax the muscles, diminish the strength of the body, and render men susceptible of disease.

2. When mild-brewed beer agrees, keep to it as a beverage (*at your meals only*).

3. Where (*well filtered*) water does not disagree, value the privilege and continue it. Pure water is a far *better* beverage for the *sedentary*, and those who take but little exercise, and for those whose labour or exhausted strength do *not* require stimulants.

4. The quantity (of most things) is always more hurtful than the quality.

5. Take your meals at regular hours always. The human frame is capable of being changed from sickness to perfect health, by a well-regulated system of diet.

6. Avoid everything—however agreeable to the palate—that from experience you find to disagree with you.

7. Make daily ablution *the first thing on rising*: you will feel stronger and more refreshed for it during the day. I fancy I hear you say that you have not the time to do so. *My answer* to you is, *rise ten minutes earlier*, dip a coarse towel in cold water, wring it out, and rub the whole body over. "Cleanliness is next to Godliness!"

8. Never quack or tamper with your constitution by taking patent medicines: they are offered for every kind of disease, for many of which they are decidedly prejudicial, producing very often fatal results. If slightly indisposed (and if it is possible to do so), remain quiet, avoiding all excitement, and abstaining from all meats and fermented liquors *for the day*. In headache, and slight fever, this plan mostly effects a cure. Never use strong purgatives. If *costive*, take a mild dose of castor-oil; if *too relaxed*, a dose of Gregory's powder (kept at all chemists'); and, five or six hours *after* taking the powder, take the following mixture;—Prepared chalk, 1 drachm; spirit of sal volatile, 10 or 12 drops; cinnamon water 2 ounces; mix.

9. Take exercise, if you value your health, but proportion it to your strength. The mind taints by too long sitting:—

> "Better to hunt in fields for health unbought,
> Than fee the doctor for a nauseous draught.
> The wise for cure on exercise depend:
> God never made his work for man to mend."

10. Never learn to smoke: shun tobacco in all its forms. It stunts the growth, when taken at too early an age: it is a great promoter of indolence and laziness: it causes nervous trembling of the hands, and nervous debility: it has nothing nourishing or stimulating in it, but is merely *a narcotic*, of which the moral and physical effects upon those who use it are of a very dubious character.

11. If you have exceeded the bounds of temperance, or, in plain English, been tipsy, then take the following mixture;—Liquor ammon. acet. ½ ounce; tinct. rhei. 2 drs.; mix the above with a glass of ginger-beer,—and remain sober afterwards.

J. B. N.

COMPETITIONS.

Rickmansworth Cemetery.—Twenty-five designs were submitted to the Board in response to their advertisement: one by Mr. Robert Wheeler has been selected, and the works are to be carried out under his superintendence. Mr. Geen, of University-street, has taken the contract.

Devizes Corn Exchange.—Twenty-six architects have sent in designs, and the choice of the committee has fallen on that of Mr. C. Phipps, of Bath. His design is in the "Roman style," affording an area of 6,000 feet, with three entrances towards the Market-place, and three on the side towards the railway road. The building will be finished before the close of the present year. About 2,100*l.* have been subscribed, but some 400*l.* or 500*l.* more will be required to complete the undertaking.

SALISBURY CHAPTER-HOUSE.

THE elaborate tile paving of the Chapter-house at Salisbury, which was in a miserably dilapidated condition, has been restored by Mr. Minton, with tiles manufactured for the purpose. The endeavour has been to make as true a copy as possible. The general repair of the building is progressing, and if we may judge from the very intemperate animadversions sent to us at different times, has excited some strong personal feelings. Information from other sources, however, has not seemed to us to justify the statements in question. The central column was considerably out of upright, and, to make it perpendicular, the base has been moved slightly out of the centre: it now stands 25 feet 1¾ inch from the west wall, and 24 feet 3 inches from the east wall. The column is almost entirely of the original Purbeck, reinstated. New Purbeck columns have been supplied in all the other parts, viz.,—in the windows under the graining and in the arcades, except where a few of the old shafts were fit for turning afresh. Colour is being used on the stonework and vaulting.

"THE STATE OF ARCHITECTURE ON THE LUNAR SURFACE."

IN reference to the theory broached in our last under this title, and according to which it would appear to be probable that the moon is not perfectly spherical in form, but oblate, with its longest diameter in the line of the radius uniting it with the centrifugal centre, that is with the centre of the earth, and that the centrifugal force which has so operated on its once fluid mass as to produce this peculiarity in form would also centrifugalize any atmosphere and water on its surface to the hemisphere farthest from the earth and hence invisible to it, so that after all, the hemisphere, or portion of the oblong hemisphere, seen by us may be but as it were the desert and barren hill-top of the lunar surface, while all else may be full of life, vegetable and animal, like that on the earth's own surface, except in its desert districts;—it is rather an interesting circumstance, in corroboration of the verisimilitude of this theory, that, since it was broached, the following paragraph from a country newspaper has been brought under our notice:—

"A statement appears in the American papers, that it has been discovered, by calculation, and demonstrated as a geometrical fact, that the moon's centre of form is eight miles nearer to us than her centre of

gravity, through which, of course, her axis of revolution must pass; or, in other words, that *this side of the moon is sixteen miles higher than the other*. A New York paper announces the discovery on the authority of one of the most eminent mathematicians and astronomers in the world; and states that it is about to be declared in a scientific quarter." If such a calculation really has been made, the truth of the theory in question may be said to be proved. It may also be worth while to note another fact that seems to bear upon this question. Certain stars, as they have disappeared behind the body of the moon, have been observed to *hover*, as it were, upon the edge of the lunar disc, and thus to remain visible longer than by strict calculation they ought to have done. Now, on the supposition that there is an atmosphere *behind* the moon, that is on its invisible or outer hemisphere, capable of refracting the light from the star so observed, this hovering seems to be explicable; but *not otherwise*, since no vestige of lunar atmosphere has been observed upon its visible horizon, nor within its disc on the side presented to us. In our previous paragraph on this subject, we may here note, the word "base" was used inadvertently instead of "apex," which would perhaps have been more appropriate as applied to the stony summit of the (*ex hypothesi*) *oblongated* hemisphere, which the moon presents towards the earth.

Notices of Books.

Practical Perspective. By R. BURCHETT, Head Master of the Training and Normal Schools. Chapman and Hall. London: 1856.

ALTHOUGH the number of works on perspective which have issued from the press since the days of Dr. Brook Taylor are almost innumerable, yet great ignorance of its real principles, as well as a want of ready application of its rules, prevails amongst those who ought to be as familiar with it as with the first four rules of arithmetic. This chiefly arises from the form in which the subject has usually been placed before the student, either as a purely mathematical science, requiring an extensive knowledge of geometry, and more thought and study than artist-students care to give to the matter, or else in the form of rules, without any information respecting the principles on which those rules are founded.

It must always be borne in mind that linear perspective is the projection on a vertical plane of any object in nature, by means of lines drawn from the object to the eye which is on the side of the plane opposite to the object. The whole science, therefore, consists in the intersection of planes with planes, and is an extension of the investigation contained in the 11th book of Euclid, with which the student should be acquainted, if he expects thoroughly to master the principles of perspective.

Before attempting to draw from models, or from nature, the student should have some instruction in perspective, through ignorance of which he will be continually making distorted representations of the objects which he attempts to delineate.

The work before us presents the subject in a very lucid form to the student: without wearying him with geometrical problems, it nevertheless gives a thorough insight into the principles of the science, as well as the methods which are most ready of practical application. The plates are numerous, and not overloaded with lines, and may easily be understood.

One important method is omitted, namely, where one vanishing point is near, and the other at a considerable distance, as frequently occurs in practice, in which case the further point may be dispensed with by employing two distinct "lines of heights."

There is a serious error inculcated in Lesson 13, which is devoted to drawing circles in perspective. The method given is correct enough, but the deduction drawn from the figure "that a circle seen in perspective is *not* an ellipse," is untrue, and shows a slip in knowledge of conic sections. The rays of light from a circle to the eye form an oblique cone, every section of which by a plane is an ellipse.

The Railway Question. Practical Suggestions for a Fundamental Reform of the Railway System. By "CIVIS." London: E. Stanford.

RECONSTRUCTION would be a title more appropriate than "reform," for the series of suggestions put forward by the author of this essay. He proposes—

"To bring to a satisfactory adjustment the numerous vexed questions between the railway interest, the Government, and the public," and to create "a basis of arrangements by which railway property can be raised from the zero of depression and the thraldom of insecurity to a fair negociable value and to a position of safety and security, on terms conducive not only to the interest of shareholders, but to that of the public at large."

The steps by which the author tells us we can realize them, involve not merely the reform, but in plain truth the abolition of the present system of railway politics, and the substitution of another, founded on principles entirely different. Looking at the mischief caused by the conflicts between the authority of directoral boards, and that exercised in fits and starts by Government and Parliament, he maintains that the welfare of all parties dictates the surrender to the Government, on equitable terms, of a paramount control over the railways of the United Kingdom. Indeed, he contemplates as the ultimate result, the vesting of all railways in the State.

As equivalents for the paramount power to be ceded to Government, the author proposes, in the first place, the guarantee of a minimum dividend of 4 per cent. on all existing lines, the remission of the passenger duty now paid by British lines, and likewise the remission of all local rates beyond the amount which was paid, by the land now occupied by railways, before such land came into their possession. There would also be a more "symmetrical territorial division than that which now exists, and an extensive recourse to the rate-in-aid-principle, for sundry purposes of utility which are explained and advocated. Some of these purposes refer to borrowing powers, and some to the guarantee of a minimum dividend on approved projects.

When we hear that the capital stock of twenty-five companies, comprising the principal lines in the kingdom, is at present at an average discount of 36 per cent. it becomes evident that the road heretofore taken has not been the right one.

Miscellanea.

NEWS FROM ADELAIDE.—A new Wesleyan Chapel, at Lower Finniss, was opened for Divine service on 24th February. The chapel is built of timber and lime: it is 27 feet by 16 feet in the clear, and stands so that it can be seen from the Murray.——"We have often," says the *Adelaide Observer*, "had occasion to notice, in terms of complacency, the excellence, abundance, and variety of materials, presented to the architect among the uplands of South Australia; and we now regard with much satisfaction a specimen of highly-wrought freestone, from Glen Ewin, which was exhibited at the recent Show of the Agricultural and Horticultural Society, and is now left at our office for the inspection of the curious."

THE PORTSMOUTH FINE ARTS EXHIBITION SOIREE.—The Inauguration Soirée of the Exhibition of Fine Arts in the Museum of the Portsmouth and Portsea Literary and Philosophical Society, was held last week. Above 200 visitors, composed principally of the *élite* of the town and neighbourhood, were present, and great satisfaction was expressed as to the collection of paintings gathered together. Although labouring under the disadvantage of being exhibited by gas-light, says the *Portsmouth Times*, enough was seen to show that the collection contained much that was valuable, both as works of art, and as a means of æsthetical education—of instructing the people in a knowledge of "the beautiful."

OUR STREETS.—I beg to suggest what I think you will deem a ready and practical mode of ascertaining the exact whereabouts of people and places of business whose names or numbers may have for the moment escaped the memory. The plan which has suggested itself to me is, to have affixed to an iron pillar or standard (for which a strong lamp-post would suffice) a "black-board" of proper dimensions at the ingress and egress of each main thoroughfare and principal street, and this to bear (neatly and distinctly lettered) the name, number, and occupation of each firm carrying on business in the same, numerically arranged, so that one might observe their precise *locale* at a glance, and thus escape the annoyance of hearing the next likely-to-know-looking police-officer declare that there is no firm of the name you mention in the street, which assertion you prove to be incorrect, after half an hour's search from right to left, and from odd to even. GO-AHEAD.

NEW APPLICATION OF INDIA-RUBBER.—By an American process coal-tar is mixed with India-rubber, and the compound, it is said, makes one of the most solid, elastic, and elegant articles that can be found in the market. It resembles polished stone, is as black as coal, needs no finish, and has of itself as hard and exquisite polish as it is possible for any metal to bear. There is said to be no end to the articles into which it can be made. Cabinet-work inlaid and mosaic, ornamental to the parlour and the chamber, is composed of it, as are tape-lines, pencil-cases, brushes, canes, boxes, buttons, spectacle-bows, and an endless variety of articles, so that this new use of rubber is likely, it is said, to work a complete revolution in the arts and manufacturers.

SALE OF BUILDING SITES AT NEWCASTLE-UPON-TYNE.—Several building sites to form the west side of the street of approach to the high-level railway-bridge at Newcastle, were put up for sale by auction on Friday last; as also were other sites on both sides of the Quayside-street, No. 1, to be called Headlam-street, and which is to extend from the side to the quay; a site which was devastated by the great fire. There was a numerous attendance of capitalists and others; but, owing to the reserved bid by the town clerk in every case exceeding the sum offered, no sales were effected. The high-level sites, numbered from 1 to 7, comprising 1,067 square yards of ground, were first put up in one lot, at a gross sum, and 2,000*l*. was offered; but the reserved bid was 4,500*l*. The sites were then offered in separate lots. The first consisted of 155 square yards, with the privilege of taking the two sites adjoining at the same price, and 50s. per square yard was offered; but the reserved bid was 70s. For site 4, with the two adjoining, 45s. was offered; but the reserved bid was 70s. Lot 7 was the site of the old Duke of Cumberland public-house, and possessed a license: the area was 180 square yards, and 45s. per yard was offered; but the reserved bid was 5*l*. The Quayside sites were then put up; and for the sites, No. 1 to 7, comprising 1,141 square yards, the sum of 4,200*l*. was offered; but the reserved bid being 10,000*l*. there was no sale. The property was then offered in separate lots. For the first, a site of 200 square yards, as much as 8*l*. 10s. a yard was offered; but the reserve bid was 12*l*. For the second lot (209 yards) there was no bid; and for the third, 5*l*. 10s. was offered, but the corporation reserve was 9*l*. Lot 17 was then put up: it was described as a valuable corner site with two frontages. 60s. a yard was bid, and the reserve was 8*l*. Another site was that of a public-house, but no bid was received.

GAS.—The old Gas Company of Stockton have agreed to sell all their works, plant, &c. to the Gas Consumers' Company, for 10,000*l*. The new company had already proceeded so far in laying out works of their own. By a special condition of the agreement, all the property of both companies shall be offered to the Stockton corporation, and sold them, if willing, as soon as they can obtain authority, at cost price, the companies assisting in obtaining that authority.——The gas consumers of Ware have had a notice circulated amongst them to the effect, that on and after the 1st July, the price of gas there shall be raised from 4s. to 6s. per 1,000 cubic feet. This sudden and unexplained rise of 50 per cent. is giving great cause for discontent amongst the Ware gas consumers.

THE IRON TRADE.—Notwithstanding the admitted downward tendency of prices and depressed aspect of the trade, the iron-masters who held their preliminary meeting at Stewponey, on 26th ult. resolved in the mean time to sustain the nominal prices, on the alleged ground that "the future prospects of the trade are becoming very promising."

THE COPPER TRADE.—A reduction of 2d. per pound in copper is announced. At per ton it has been sold for 107*l*. 10s. instead of 124*l*. and 126*l*. In allusion to this unexpected move of the Swansea rulers of the cupreous roast, the *Mining Journal* says,—"Considering that it was only on Tuesday, June 10, that the monthly meeting of smelters was held, and attended by most of them, who bore testimony to a fair trade being transacted, and gave their vote in support of current rates, it reflects great suspicion on the truth of their statement, and, at the same time, has every appearance of an underhanded, dirty, unprincipled trick; for it is nothing less than deception, which they evidently wish to practice on the trade, by holding meetings at fixed dates, as they assert, for the purpose of regulating prices for the ensuing month, when about a fortnight afterwards they find such a different state of things as to justify them in reducing the value 2d. per pound, these clever men of business not being able to foresee what would probably take place between the 10th and 25th inst." Those capable of playing such tricks, are equally capable of acting from similar motives in keeping *up* the prices, or in raising them when it suits their purpose.

ELECTRO-TELEGRAPHIC PROGRESS. — Professor Giovanni Caselli, of Florence, says *Galignani's Messenger*, has just made a discovery which promises to cast all previous contrivances in electro-telegraphy into the shade. He has invented an apparatus by which the telegraphic wire will transmit to any distance an exact fac-simile of any writing or design, when made to communicate with a similar apparatus at the other station. The transmission of telegraphic despatches by single letters will thus, it is added, be entirely superseded; and the original writing put into the apparatus will be reproduced in an instant, with the signature of the correspondent as if written by himself. It is hopeful, ever and anon, to have such inventions turning up again; but it is a mistake to consider this invention as a new (though it may be an improved) one.——The Magnetic Telegraph Company appealed last week to the Liverpool magistrates against the assessment made upon them for their Liverpool offices. They were assessed upon a sum of 25*l.* for about a mile and a half of wires which passed through some of the streets. The magistrates, after hearing the case, in which it was urged that the wires could not have any real rateable value, made a reduction from 25*l.* to 1*l.*

MASTERS AND WORKMEN AT SHEFFIELD.—For some years Sheffield had become notorious for the ferocity with which workmen occasionally treated both their fellow workmen and their masters. It is to be hoped that a new era is commencing, if we may judge from a paragraph in the local *Independent*, titled, "Three Cheers for the Masters," wherein a correspondent says,—"Sheffield masters and workmen are throwing off their conservative natures and are beginning to look upon each other as men and brethren, in social intercourse with each other. Last week, we observed Messrs. R. Broadhead and Co. electroplaters, of the Britannia Works, along with their workmen and women, rejoicing together at the delightfully-situated sylvan Palace of the Peak, Chatsworth House; and this week, Messrs. Wing and Wharton, file and steel manufacturers, of the Brook Works, have been following their example. This is as it should be. Had this been the case some years ago, long ere this the once prevailing opinion amongst workmen generally that masters were tyrants and the workmen slaves, would have given way to more liberal views, in which the labour protection societies and trades unions would have participated."

RAILWAY MATTERS.—The opening of the London branch of the London and North-Western line from Mumps to Greenfield was to take place on the 4th inst.——The strike of clerks and porters at Liverpool may be said to be at an end, as many of those who struck have quitted Liverpool,—some of them to emigrate, others to go into new employment, while no symptom of relenting has been manifested on the part of the Marquis of Chandos and his co-directors, whose lordly style of treating those so far beneath their level is generally commented on with some severity, and is not likely to lessen the wide interval, or to increase the bonds of sympathy, between the lower and the upper ranks of society. At the same time, the imprudence—nay, the folly, of the strike itself, cannot be defended, but that is no excuse to those who have no "bowels of compassion" for their own fellow-workers of a humble class at a moment when impelled by unbending severity to "kick against the pricks." A great many of the shareholders and merchants interested in the North-Western Line are said to be in favour of the men, and indignant with the policy of the directors in keeping out so many for the sake of 9*l.* a week. Meantime, far more than that sum, probably nine times over, has been sacrificed every day to the prejudice of the shareholders, from the want of experienced and accustomed hands.——By late advices, it appears that the Melbourne and Geelong Railway fast approaches completion. Six of the bridges had been constructed, twenty miles of rails completed, six passenger engines, and twenty-four first, second, and third class carriages, together with trucks, &c. and 400 tons of coke, had been landed at the railway pier at Corio Bay, and the remainder of the rolling stock was shortly expected. The *Melbourne Argus*, in reference to the progress of public works, says,—"If a sufficient supply of labour reach our shores it may be expected that ere long other extensive railway operations may be initiated."

THE MASONS' STRIKE AT CARDIFF.—The Cardiff masons appear to be bent on bringing themselves under the operation of quite another "code of laws" than that by which they lately attempted to bind their masters; three of them, James Dando, John Keif, and Thomas Quin, having been committed at the Cardiff Police Court for trial at the assizes, "for having unlawfully and violently assembled together to disturb the public peace, and with having made a great noise, riot, and disturbance, to the great terror of her Majesty's subjects." This being the usual upshot of such strikes, there is no necessity to enter into particulars.

RAZING RUINOUS BUILDINGS.—At Guildhall, London, on 26th ult. Mr. John Billings, engineer, appeared before Sir William Magnay, on behalf of the joint freeholders of seven houses in Bull's-head-court, Snow-hill, to answer a complaint of the Commissioners of Sewers for not pulling down said houses, which were in a ruinous and dilapidated condition, after notice had been given that they were dangerous to the safety of the public. They had been shored up by the Commissioners of Sewers, but even that was not sufficient for the protection of the public. Sir W. Magnay made an order that the houses Nos. 1 to 7, Bull's-head-court, Snow-hill, should be pulled down at the expiration of a fortnight.

THE CONSERVATIVE LAND SOCIETY. — At the twenty-fifth quarterly meeting of this Society, held the 26th June, the committee announced the purchase of a metropolitan estate in the parish of St. Pancras, at Kentish-town. It was also announced that nineteen leased plots on the Round-hill Park estate, Brighton, would be offered on the 7th of August to the members having rights of choice. These plots had been let for ninety-nine years, at rents varying from 7*l.* to 10*l.* 10*s.* so as to give a return to the members who may select them of 8 per cent. on the purchase-money. It was intimated that offers have already been made to begin building on the Tunbridge Wells estate, the value of which can be estimated by the fact that for four of the 50*l.* plots the rent of 10*l.* per annum has been offered to the holders merely for cultivation.

THE GLASGOW SCHOOL OF ART.—The inspector sent from the Government Department of Science and Art, says a Glasgow paper, has just left Glasgow, after a careful scrutiny of the works, with which he has been much satisfied. It is in this gentleman's power to award thirty medals; and in the Glasgow school he has awarded the unusually large number of twenty-five medals—three students having passed a successful examination in perspective, and also gained prizes, and the works of four art pupil-teachers (five in number) have been sent to the national competition. Thus, thirty-four honours have been taken by Glasgow students, the largest number awarded by the inspector upon his tour of inspection up to the present date. The Glasgow students thus maintain their high character for success in the study of art. Whilst this extraordinary progress is being made amongst designers, pattern-drawers, and artisans, the wealthy classes are not taking the same pains to acquire a useful knowledge of art. This may become a serious disadvantage. It is as important that the young men who are to be future merchants and manufacturers should be trained in art and the laws of taste as that the class which they employ should be so trained.

NEGLECT OF WORK.—As soon as the warm weather sets in, every summer, a series of petty sessions charges against puddlers in the iron districts for neglect of work take place. The heat, we suspect, is one of the real reasons for neglect of this-at-any-time-roasting work; and, although it is but right that workmen should be obliged to abide by their agreements with employers, still there is something painful in the idea of compelling the poor fellows literally to roast themselves alive in a season when there is no possibility of getting a breath of cool air to temper the heat of the furnace. Could not something be done towards rendering such work a little more endurable in the heat of summer, if it must be carried on at such seasons? But why should not puddling in summer heat be regarded as an impracticability like building or plastering in frost or wet?

THE LANCASHIRE AND YORKSHIRE RAILWAY COMPANY AGAINST THE EAST LANCASHIRE RAILWAY COMPANY.—The long-pending dispute between these companies, as to the amount of toll payable by the latter company for the use of the Clifton and Manchester Railway, previous to their becoming joint owners of that line in 1853, was decided by the House of Lords on Monday last. The question involved a sum of about 30,000*l.* claimed by that company for extra toll. Unanimous judgment was given in favour of the East Lancashire Company, entirely disallowing the claim.

ST. JOHN'S CHURCH, KENILWORTH.—May I correct a mistake into which I fell (not from carelessness, but from the too long delay in the answer to a note of inquiries which I wrote to Kenilworth), in my paper "On Colour in Building Materials," read at St. Albans, and reported by you in your last number? St. John's Church, Kenilworth, is not of *red sandstone* rubble, with white sandstone dressings; but of the much better combination in every respect, *Hartshill* rubble, and white sandstone dressings. The *red sandstone* is used only in the foundations. You have supplied (which I did not) the name of the architect, which makes it a point of justice to correct my mistake: moreover, the combination is so good, that it ought to be properly stated, by way of example.

GEO. AYLIFFE POOLE.

THAMES EMBANKMENT FROM VAUXHALL TO BATTERSEA.—Lord Chelsea, M.P. Mr. Tite, M.P. Mr. Fielder, churchwarden, Mr. Perry, Mr. Strickland, and Mr. C. Lahee, vestry clerk, as a deputation from the parish of St. Luke's, Chelsea, waited on Sir B. Hall on Tuesday, in reference to the Thames embankment from Vauxhall-bridge to Battersea. The deputation having been introduced by Lord Chelsea and Mr. Tite, the latter gentleman proceeded to explain to the right hon. baronet the vast public utility which must result from the completion of the Thames embankment to Battersea. Sir B. Hall said he thought they could not proceed with this work without another act of Parliament, and what he proposed was this: he had caused instructions to be given to the surveyor to make a report to him on the subject. As soon as that report was presented to him he should send it to the Treasury, and ask for two things: first, if he had the power to carry the work into execution; next, for money to do so. And lastly came the great question—if Parliament would grant what was required. He, for one, was quite ready to carry it ont, if means were placed in his hands to do so, or if he had the power. As at present advised, what he should do was this: as soon as he received the report of the surveyor he should see the deputation again on the subject.

THE SCOTTISH SOCIETY OF ANTIQUARIES.—At the seventh ordinary meeting of this society, held at Edinburgh last week, a paper was read by Mr. A. H. Rhind, "On One of the Simple Forms of Burial in use among the Ancient Egyptians, observed in a recent excavation at Jeezeh." In this paper, Mr. Rhind described two connected tombs recently excavated by him, situated near the Great Pyramid of Jeezeh. It appeared that the interments had been made in underground chambers of about 3½ feet in length, and that the bodies had been huddled up as they seem to have been in many cists in Scotland. Mr. Rhind pointed out some features common to the primitive interments of various nations. At the same meeting, a paper, entitled "Notes of the Life of Swein Aslief, an Orkney Viking of the Twelfth Century," was presented by Mr. W. H. Fotheringhame, F.S.A.S.

ADDITIONAL CHURCHES IN LONDON.—It is proposed to vote, this year, the sum of 10,000*l.* as a contribution in respect of the revenue derived from the Crown estates in the metropolis, towards the formation of a fund for building additional churches and parsonages in London.

MAMMOTH TREE FROM CALIFORNIA.—We have already mentioned the grove of gigantic trees found in the vicinity of the southern mines, and that a part of one of them was in England. This has now been set up in the Adelaide Gallery, Strand, for want of a better place, and has a very remarkable effect. The whole height of the tree was 363 feet; height to the first limb, 140 feet; diameter at base, 31 feet; diameter a hundred feet from the base, 15 feet; thickness of the bark at base, 18 inches, and varying from that down to 12 inches all over the trunk.

PRIOR PARK, AT BATH.—The Prior Park estate, near Bath, lately occupied as the Great Roman Catholic College, was put up to sale, at the Auction Mart, at Bath, on Tuesday in last week. The mansion was formerly the residence of Lord Hawarden, and is constructed with Bath stone, with extensive wings, having a grand portico to each principal front of lofty Corinthian columns, with mahogany and stone staircases and mahogany doors. The wings, designated as St. Peter's and St. Paul's, contain the chapels, dormitories, lecture-rooms, theatres, refectories, &c. and they are lighted with gas. There are several springs of pure water, an observatory, an ornamental cottage known as the Priory, a complete gymnasium, some valuable stone quarries, &c. The estate comprises nearly 200 acres, chiefly pasture land, enclosed in a ring fence, in the midst of which are fishpools, bridges, ornamental plantations, &c. The auctioneer stated that the estate was worth at least from 150*l.* to 200*l.* an acre, and that about 40,000*l.* had been laid out on the mansion. He asked for an offer of 30,000*l.* and went down to 20,000*l.* This sum was bid by a person in the room. Sums were offered up to 27,750*l.* at which bidding there was a stop. The auctioneer added 50*l.* and finally announced that the property was not sold.

GEELONG SURVEYORSHIP.—Mr. R. C. Young, builder, formerly of Gateshead, has been appointed town surveyor of Geelong, in the colony of Victoria, at a salary of 300*l.* a year. Mr. Young, it will be remembered, was a candidate for the same office in this town. He has been more successful at the antipodes.—*Gateshead Observer.*

BIRMINGHAM BRONZE CASTING.—The casting of a colossal equestrian statue of Lord Hardinge, the commander-in-chief, by Messrs. Elkington, Mason, and Co. was completed on Friday last. The statue, which weighs upwards of three tons, was modelled by Mr. J. H. Foley, A.R.A. and is destined for Calcutta.

STAINED GLASS.—A stained-glass window, to the memory of the late Rev. Henry Fardell, vicar of Wisbech, and one of the canons of Ely, has been placed in the north aisle of Ely Cathedral. The subjects in the two east openings are the six virtues,—"Hungry, and ye gave me meat," &c. In the others are the wise and foolish virgins. The work was executed by Mr. Ward, of London. At the entrance of the south aisle a screen with folding-doors, by Mr. Skidmore, of Coventry, has been put up.——The remainder of the glass from the old east window of Holy Trinity Church, Coventry, has been put in the windows of the south aisle; and in the south transept window a compartment has been put in by Dr. Phillips, in memory of his late father, Mr. E. Phillips, F.S.A. The subjects are,—the Crucifixion; Bearing the Cross; an Angel, in the centre; the Pelican; and the arms of the late Mr. Phillips. This church has now six windows partly filled with stained glass. At St. Michael's, the window at the east end of north aisle, in memory of the late Col. Grosvenor Hood, who fell in the trenches before Sebastopol, is about to be ordered.

PRESERVATION OF STONE.—A petition has been presented to the House of Commons, by Mr. Ewart, from Mr. John Benjamin Daines, stating that a preparation invented and patented by him had been successfully applied for the preservation of certain decaying portions of the stonework of the New Palace of Westminster, offering a license to continue the same, and praying that the application of the material may proceed beyond August next, when the two years appointed to test the success of the experiment will expire.

MORE PUBLIC FOUNTAINS AT LIVERPOOL.—In 1854 seven drinking-fountains were erected by Mr. Charles Melly, at his own expense, in the most crowded thoroughfares of Liverpool,—chiefly those near the docks. So greatly are these fountains appreciated, that on an average 1,976 persons drink daily at each,—in one case the number of drinkers being more than four persons each minute of the day. The corporation of Liverpool having refunded a portion of the cost, Mr. Melly, says the local *Journal*, has recently, at his own expense, erected fourteen additional drinking-fountains, two of cast-iron and twelve of polished Aberdeen granite. The stream of water pours from the mouth of a bronzed head into a basin, and the fountains are furnished with galvanized iron ladles. The granite for the fountains was supplied, at first cost, by Mr. A. McDonald, of Aberdeen. The water committee have supplied a constant flow of water to most of these lately erected fountains, and we believe they do not intend making any charge. So soon as water is obtained from Rivington Pike, Mr. Melly intends erecting twelve or fifteen more. It is much to be desired that some benevolent Mr. Melly would start up in London: sure we are that the names of such benefactors, engraved upon the fountains and ladles which they might contribute, would be held in grateful remembrance and celebrity for generations by tens of thousands of the daily traversers of London streets and parks. The want of such conveniences everywhere in London is disgraceful to the authorities and the Government, and contributes more than anything else probably to fill the beer-shops and gin-palaces, especially on Sundays and holidays, when the families of the working classes are walking to and fro in the heat of summer, or indeed at any season of the year.

TENDERS

For the new Welsh schools, to be built at Ashford, Middlesex. Mr. Henry Clutton, architect. Quantities supplied by Mr. Crocker:—

	£	s.	d.
Brass and Son (corrected afterwards to 13,563*l.*)	14,806	0	0
Piper and Son	14,630	0	0
Nicholson and Son	14,336	0	0
T. Anson	14,214	0	0
Lucas	13,558	0	0
Macey	13,110	0	0
Myers	12,914	0	0
Holland	12,848	0	0

For erecting a store, press-room, mould-loft, and smithy, at Messrs. Westwood, Baillie, Campbell, and Co.'s, London-yard, Poplar. Messrs. Morris and Son, architects:—

Hill	£2,055	5	0
Sutton	2,033	10	0
Gammon	2,025	0	0
King	2,009	0	0
Hack and Son	1,957	0	0
Salt	1,913	0	0
Jeffrey	1,903	0	0
Mundey	1,896	0	0
Billson	1,871	0	0
Payne	1,810	0	0
Watts (accepted)	1,783	0	0

For Mansion, at Blaenavon, near Pontypool. Mr. R. G. Thomas, architect. Quantities supplied:—

C. D. Hambleton (Pontypool)	£1,400	0	0
T. B. More (Newport)	1,297	0	0
T. Williams (Pontypool)	1,247	0	0
Stone (Cardiff) (accepted)	1,155	0	0

For the Congregational church and schools, South-street, Dorchester. Messrs. Poulton and Woodman (Reading) architects:—

Chinnock (Southampton)	£2,385	4	0
Mondey (Dorchester)	1,989	10	0
Young (Oxford)	1,913	0	0
Wellspring (Dorchester) (acc.)	1,785	17	0

For a new parsonage-house, at Leytonstone, Essex. Mr. Rhode Hawkins, architect:—

Wells	£1,750	0	0
Wilson	1,721	0	0
Holmes	1,544	0	0
White (accepted)	1,365	0	0

For pulling down and rebuilding the Sun public-house. Mr. R. W. Armstrong, architect:—

	General works.	Extra if east wall be built	Extra for Bathstone in lieu of brick and compo.
Lea	£1,000	£37	£35
Duncannon and Moultrie	1,538	30	10
Macey	1,485	30	21
Longmire and Burge	1,380	35	25
Wallbutton	1,280	40	25
Robson	1,283	33	22

TO CORRESPONDENTS.

"An Old Builder."—"Gradus" (send us address).—"C. B."—"Mr. C."—"Col. N." (parcel has been sent as directed).—"R. R."—"Americus" (the architect second on the list should now be referred to).—"Jacob" (address the chief commissioner, Duchy Office).—"Dr. B."—"W. H."—"J. B."—"T. M."—"P. and W."—"Mr. V."—"N. G."—"C. P."—"J. M."—"N. C."—"P. B."—"W. S." (present Building Act would not apply to the case).—"F. B. B."—"J. M."—"C. L. K."—"G. M. H."—"C. H. M."—"J. S. L."—"Justitia."—"W. B."—"E. H." Pall-Mall (packet arrived too late for present number).—"J. B. H."—"Young Engineer" (in type).—"T. F. T."—"F. R. S."—"J. D. B." (we should be afraid to use the stone in that position).

"Books and Addresses."—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

TO SURVEYORS AND DRAUGHTSMEN.

A GOOD DRAUGHTSMAN WANTED, as an assistant for a few months: one who has been accustomed to town surveys and levelling will be preferred. Address, stating qualifications and terms, to Mr. THOS. FENWICK, Borough surveyor, Tynemouth.

A VACANCY for a respectable Youth as PUPIL.—Address as above.

ENGINEER and BRICK-BURNER.—WANTED to MANAGE, a BRICK and TILE WORKS, near London, where machinery is used, a practical ENGINEER, experienced in brickmaking and burning. Testimonials required.—Apply to Mr. H. MOUNTAIN, Patent Brick Machine Company, 37, King William-street, London bridge.

THE LOCAL BOARD of HEALTH of PRESTON require the services of a DRAUGHT-MAN who can also be useful in the general routine of an engineer's office. Salary, 75*l.* a year.—Applications and testimonials to be addressed to R. ASCROFT, Esq. Clerk to the Local Board, Cannon-street, Preston, and must be lodged on or before the 15th of JULY next.

WANTED, in a Surveyor's Office, a short distance from Town, a YOUNG MAN of steady habits, good education, and respectable connections, who has served his articles to an architect and surveyor, and can be well recommended. He must be a good draughtsman, with other qualifications. One who is looking to future prospect, and would be willing to pay a premium for a share of a practice will be preferred. Address post paid, R. H. 1 Office of "The Builder," stating amount of salary per month required, and age, with other necessary particulars.

TO HOUSE DECORATORS &c

WANTED, by a PAPER-HANGER and DECORATOR, who has been used to the best work, a SITUATION in town or country.—Address, A. B. 29, College-street West, Camberwell.

TO HOUSE AND ESTATE AGENTS, ENGINEERS, &c.

WANTED, by a Young Gentleman, a SITUATION as WRITING or DRAWING CLERK, in town or country, having just left the Board of Works, and possessing much experience in both capacities. Salary expected a secondary consideration to a permanency.—Address, A. B. Mr Earl's, Bookseller, Castle street, Oxford-street.

WANTED, a SITUATION, by a Person who has a thorough practical knowledge of building, either for the whole or part of his time. He has had several years' experience in measuring, estimating and builders' book-keeping.—Address, H B No. 4, Wilmot-street, Bloomsbury.

TO CARPENTERS' AND JOINERS' FOREMEN

WANTED, a thorough practical Man, competent to take the management of a number of men, superintend the joiner's shop and builder's yard.—Application, by letter only, stating wages required, previous engagements, &c. to A. Z. 40, Sutton-street, Helvedere-road, Lambeth.

TO CARPENTERS, JOINERS AND BUILDERS

WANTED, to APPRENTICE a respectable LAD, aged 15, to the above business.—Apply, A. B. Post-office, Great Tew, Enstone, Oxon.

TO BUILDERS.

WANTED, by a Young Man, aged 21, a SITUATION, in a Joiner's Shop, as IMPROVER.—Address, A. B. 93, Dean-street, Soho.

TO ARCHITECTS, SURVEYORS, AND OTHERS

WANTED, a SITUATION, by a Young Man, thoroughly quanfied to get out fair, working, detail, and other drawings, and masterly assist in taking out quantities, measuring up works, &c. Salary moderate. Address, F. L. S. Mr. Hewell's, 35, Alfred-road, Westbourne green.

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TO ARCHITECTS, BUILDERS, &c.

WANTED by the Advertiser, a SITUATION as CLERK of WORKS, or Assistant in an Office, or for two or three days a week: is a good draughtsman and accountant, and has had considerable experience in farm buildings and villa architecture. Can have ten years' character and first-class testimonials, both from Government and private office.—Address, R. E. Office of "The Builder."

TO BUILDERS

WANTED, a SITUATION as CLERK, by a Young Man respectably connected, who is thoroughly conversant with the duties of the office. Can furnish unexceptionable references from last employer.—Address, A. D. 10, Richmond-street, St. George's-road, Southwark.

WANTED, by a respectable Young Man, a SITUATION as ENGINE DRIVER, or ENGINE DRIVER and STOKER, or the care of Boilers for Cooking, Washing, &c. Good reference if required. Direct to M. E. at Mr Bentley's, Tobacconist, New cross, Kent.

TO CARPENTERS AND BUILDERS.

WANTED, a MASTER for a Youth as INDOOR or OUTDOOR APPRENTICE.—Address (stating premium required) N. D. 3, Mount Vernon, Hampstead.

TO LAND AGENTS AND SURVEYORS

WANTED, by a highly respectable Young Man, an ENGAGEMENT as an ASSISTANT in the above office. Address, A. Z. Post-office, Old Charlton, Blackheath.

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THE Advertiser wishes for an ENGAGEMENT, to conduct a business in the above line. He is used to examining dilapidations, measuring work, making out estimates &c. Every satisfactory reference can be given.—Direct to C. N. No. 15, Orchard-market, Oxford-street, London. No objection to the country.

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TO BUILDERS

THE Advertiser, a thoroughly practical, middle-aged Man, of good experience, wishes for an ENGAGEMENT as SHOP or WORKING FOREMAN of JOINERS; he well understands setting out boards and is capable of undertaking any job. Good references given as to ability, honesty, and integrity.—Direct, F. J. No. 3, Sedgright-place East, Hackney-road.

TO ARCHITECTS AND SURVEYORS.

THE Advertiser is desirous of a SITUATION, at a moderate salary, in either of the above offices. Where he might after a period have an opportunity of purchasing a share in the business would be preferred.—Address, R. M 24, Westmoreland-place, City-road.

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TO BUILDERS, DECORATORS, &c.

A YOUNG MAN wishes for a CONSTANT SITUATION, being a good GRAINER, PAINTER, PAPER-HANGER, and has a good knowledge of the GENERAL BRANCHES, with nine years' character and good references.—Apply by letter, post-paid, to Z. Y. at Mr. Atwood's, 10, George's-terrace, Copenhagen-street, Broadbury-road, Islington.

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A GENTLEMAN, who has been accustomed to the management of an office under the direction of a principal, is desirous of an ENGAGEMENT, with a view to a partnership, either by purchase or otherwise.—Address, L. J. H. City News-rooms.

TO ARCHITECTS, ENGINEERS, &c.

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A GENTLEMAN, who has served his articles with an architect, and understands the usual routine of an office, wishes to procure another ENGAGEMENT.—Address, E. F Post-office, Greek street, Soho.

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AN ASSISTANT, who has a tolerable knowledge of surveyors' accounts and quantities, can prepare finished and working drawings from rough sketches, is open to an ENGAGEMENT, and wishes to enter a practical office, where he would have an opportunity of furthering his knowledge in the profession. Salary moderate. — Address, DELTA, care of Mr. Macneil, Chemist, 28, Princess-terrace, Ca donan-road.

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A YOUNG MAN, who has been twelve years in the above line, wishes for a SITUATION as HANDY MAN; he would be found very useful in the painting and glazing, and little jobbing about. Can have good reference if require l. No objection as to town or country.—Direct to J. B No. 3, Regent's Terrace, Londesbrook, Chelsea.

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A COMPETENT, practical, energetic Person, who is a good draught man, and well versed in construction, can take out quantities, &c. requires a SITUATION as CLERK of WORKS or GENERAL FOREMAN.—Address, ALPHA, 27, Murray-street, New North-road, Hoxton.

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A YOUNG MAN, a good draughtsman and accountant, used to taking out quantities, estimating, measuring, &c. and who has had the sole management of a builder and surveyor's business of some extent, wish s for an ENGAGEMENT in the country as CLERK or ASSISTANT MANAGER. Salary a secondary consideration. The highest references given.—Address H. A. C. Mr Creswick's, 8, John-street, Oxford-street.

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AN ASSISTANT, aged 31, wants a RE-ENGAGEMENT; he is fully able to set out contract and working drawings, &c and carry out works in every detail.—Address, A. W. Z. Davies's Newspaper Office, Edgeware-road.

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A FOREIGN ARCHITECTURAL DRAUGHTSMAN and SURVEYOR, a good designer, and well acquainted with the requirements of a first-class office is open to a RE-ENGAGEMENT. References and testimonials unexceptionable.—Address, W. C. 19, Bath-row, Birmingham.

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PARTNER WANTED, in a first-class Stove, Grate, and Furnishing Ironmongery Business, at the west-end of London, established upwards of thirty years. An energetic and practical man, of business habits, accustomed to the trade, and having had the control of workmen, possessing a moderate capital of not less than 3,000l would find an advantageous opportunity of establishing himself, as the proprietor is desirous of meeting with a partner who may be enabled to carry the business forward on its own ground in a few years. Letters (from principals only), stating where engaged, and how long, with such other information as may enable the advertiser to form some opinion as to the energy and ability of the applicant, may be addressed to X Y Z care of J. B Watson, esq. 9, Nottingham-place, West-road.

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FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Dunes-Inn, St. Clement's, Strand.

FREEHOLD GROUND, CHANCERY-LANE.—The Commissioners of Sewers of the City of London hereby give Notice, that they will MEET in the GUILDHALL of the said City, on TUESDAY, the 22nd of JULY next, at TWELVE at Noon precisely, to receive PROPOSALS for taking on BUILDING LEASE for EIGHTY YEARS, at a Ground Rent, certain PLOTS of GROUND, situate on the west side of Chancery lane, and near Fleet-street. Further particulars may be had, and plan seen, on application to Mr. HAYWOOD, Engineer to the Commission, at the e Offices in the Guildhall, where forms of proposal may also be obtained. The Commissioners will require a plan and elevation of the premises proposed to be built, to be submitted to them for their approval, and do not bind themselves to accept any proposal unless deemed advantageous Persons offering proposals must attend the above day, and the terms of their proposal is accepted will be required to execute an agreement at the time.

JOSEPH DAW, Principal Clerk.

Sewers Offices, Guildhall, June 3, 1856.

FREEHOLD BUILDING LAND at Norwood, Anerley grove and Palace-road Estates.—TO BE LET, or SOLD, eligible BUILDING SITES, in close proximity with the Crystal Palace and its railways.—At Hackney, within three minutes' walk of the Victoria-park station, for ninety-five years, at FORTY PLOTS, at ground-rents from 1s. per plot per annum upwards, being nearly equal to freehold. Roads and sewers on all the estates complete, and liberal advances to respectable builders. — Apply to Mr. JAS BRAGG, Devonshire-villa, Rotherhithe; at No. 98, Seymour-street, Eaton-square; and Valentine place, Anerley, near the land opposite the Crystal Palace Railway station.

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TO TIMBER, LEAD, GLASS, STONE, or Colour Merchants, Ironmongers, and Dealers in Building Materials generally.—TO BE SOLD, together or separately, TWO SEVEN-ROOMED HOUSES, in a delightful suburb of London, finished in a superior manner 150l. worth of materials will be taken as part of the purchase-money of each house, and the balance may be paid by instalments, extending over a few years to suit the purchaser's convenience.—Apply by letter, to V. A. K. Office of "The Builder."

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REFORM FREEHOLD LAND and BUILDING SOCIETY.—A BALLOT MEETING for rights to choose upon the Estates of the Society will be held at their HEAD OFFICES, 147, Cheapside (entrance in Foster-lane), on MONDAY, the 14th of JULY, 1856 Chair to be taken at SEVEN o'clock p.m.

Any party who may wish to go into the ballot can do so by paying the entrance-fee, and a month's subscription upon the number of shares taken.—By order of the Executive Committee.

TO BUILDERS AND OTHERS.

CLAPHAM-COMMON.—TO BE SOLD or LET with the option to purchase hereafter, FREEHOLD LAND in this very superior and delightful locality, in plots, adapted for the erection of villa and other first-class residences.—Apply by letter, post paid, to A. B care of Mr. Evans, Stationer, &c Clapham Old town.

LOUGHTON, ESSEX. — FREEHOLD BUILDING LAND, on the high road to Epping, TO BE LET on lease, one mile and a quarter from the terminus of the Loughton Railway, which will be opened on the 1st of July. Omnibuses will pass to and from the trains daily.—For particulars, apply to Messrs TARRING and SON, Architects, No. 21, Bucklersbury, City.

BATTERSEA-FIELDS.—TO BE SOLD, the FREEHOLD PREMISES, in New street, now used as a girls' and infants' school. Frontage 73 feet, depth 80 feet. Especially adapted for a large workshop or manufactory.—Apply by letter to Mr. W. J. LOAT, Estate and Agency Offices, 13, Churchbuildings, Chatham common.

HOLLOWAY. — Valuable BUILDING GROUND TO LET, with liberal cash advances, to respectable builders, admirably situated for good Villa Residences, which are much required in this favourite and highly respectable locality. The situation is most healthy, possesses beautiful and commanding views, and is accessible all parts of London easy. Property in this neighbourhood let and sold rapidly.—For further particulars, apply to Mr. GEO. CLARKSON, Surveyor and Land Agent, 48, Penton-street, Pentonville.

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VERY desirable FREEHOLD LAND TO BE LET on building leases at Regent's Norwood, Balham, and Paynder's-road, Clapham-park.—For terms and particulars, apply to Mr KNOWLES, 1, Raymond-buildings, Gray's-inn.

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BUSINESS PREMISES.—Capital Manu-facturing Premises TO BE LET, with or without House, suitable for a Carpenter, Builder, Cabinet or Pianoforte Maker, situate within three minutes' walk of Oxford-street and Regent-street. A valuable opportunity for any person commencing business in the Carpentering line, as a respectable tenant would be introduced to the customers of a gentleman retiring.—Address to H. A. C at Mr. Creswick's, 8, John-street, Oxford-street.

STRATFORD, ESSEX. — FREEHOLD LAND, within three miles of London, exonerated from land-tax and free of tithe, TO BE LET, on Lease, for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

GUILDHALL, 30th JUNE, 1856.—The Committee for letting the City's Lands will meet at Guildhall on WEDNESDAY, the 9th day of JULY next, at ONE o'clock precisely, to receive PROPOSALS for LEASES, in Lots, of several houses and premises, forming part of the Finsbury Estate, situate in Baldwin-street, Banner-square, Princes-court, Banner-street, Coleman-street, Hill-street, and Hill's-court, Phipps-street, Chapel-street (Curtain-road), Feathers'-place-court, and Prince's buildings, Featherstone-street, Martha's-buildings, Old-street, Tabernacle-row, and Cowper-street. Plans of the property may be seen, and forms of Tender obtained, upon application at the Architect's office, Guildhall.

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GROUND-FLOOR, Hanover-street, Han-over-square, TO BE LET suitable for architects or other professions, comprising two front offices, and large room behind, now used as a picture gallery.—LAHEE, 65, New Bond-street, Agent

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MR. T. S. SMITH has received instructions to SELL by PRIVATE CONTRACT a CHOICE MUSEUM of RARE and VALUABLE ANTIQUITIES, discovered in the City of London; Natural History, Roman Coins, Seals, Caffre, and other implements of Warfare; Library of Books on the above subjects; Oil Paintings, Plate, Household Furniture, and Effects. The purchaser can continue the tenancy of the residence, which is situate about eight minutes' walk from the railway station.—May be viewed, and catalogues had, of Mr. T. S. SMITH, Auctioneer and surveyor, 44, Lombard-street, and Upton, Essex.

MILTON, KENT.—To Builders, Capitalists Land Societies, and Others.—Twenty-one Acres of Freehold Building Land, land-tax redeemed

MR. T. S. SMITH has received instructions from the trustees under the will of the late Wm. Harvey, Esq. to DISPOSE OF, by PRIVATE CONTRACT, a very valuable FREEHOLD ESTATE, situate at Milton, Kent, within a short distance of the town of Gravesend; consisting of a desirable family residence, approached by a carriage-sweep, through a park-like paddock, gently undulated, and beautifully planted and dotted with fine ornamental timber, walled lawn, pleasure, kitchen garden, and orchard; in all about twenty-one acres, having good frontages to the old London road, and offering to capitalists and building societies an eligible site for the erection of villa or cottage residences, within a short distance of the North-Kent and Tilbury Railway stations.—Printed particulars and cards to view obtained of Mr. T. S. SMITH, Auctioneer, Surveyor, and Estate Agent, 44, Lombard-street, and Upton, Essex, where a plan may be seen.

TO BUILDERS and OTHERS.—Books and Accounts made up and adjusted. Balance-sheets prepared, and Statements to lay before Creditors, on moderate terms.—Apply to Mr. MARCH, Accountant, 18, Bedford-row.

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NOTICE.—To BUILDERS, MASONS, and the TRADE.—GREEN MOOR STONE WHARF, 42, BANKSIDE, SOUTHWARK, late in the occupation of Messrs. George Brown and William Rushy, who have discontinued the business, and it will in future be carried on by BROWN, BOOTH, and CO who beg most respectfully to solicit a visit, to inspect the very superior STOCK of all KINDS of STONE now put upon the premises.—Price Lists sent on application.

TO BUILDERS, MASONS, and CONTRACTORS.—OBSERVE!!! the CHEAPEST DEPOT in ENGLAND for MARBLE CHIMNEY-PIECES, of superior quality and workmanship is the WESTMINSTER MARBLE COMPANY'S PATENT WORKS, Earl-street, Holywell-street, Millbank. An inspection of their superior Stock of Statuary, Sienna, Black and Gold, Vein, and other Chimney-pieces, Tombs, Monuments, Tablets, &c. is earnestly solicited. The Trade supplied with Slabs, &c. &c. A Working Foreman Wanted.

TO BUILDERS, MASONS, AND OTHERS.

THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Bardilla, dove, black, black and gold, Sienna, St. Ann's, statuary, serpentine, verd antique, &c. Portland, Harehill, Park Spring, and other stone, in blocks, slabs, landings, and headstones. Yorkshire paving, granite curb, &c. All goods carefully packed and forwarde l to any part of England.—THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

BUILDERS! ARCHITECTS! and MASONS!—MARBLE.—The Italian Marble Company call the particular attention of Builders, Architects, Sculptors, and Masons to their PRESENT low prices, viz :—

Vein, in blocks of ordinary dimensions, 8s. 6d. per foot cube.
Sicilian " 8s. 6d.

An inspection of their well-assorted stock is solicited, at "The Depôt," Bridge-wharf, Millbank, adjoining Vauxhall-bridge.—Apply to MR. BAXTER, Wharf Foreman.

WILLIAM W. BONNIN, Secretary.

BRINE, BROTHERS, Marble and Stone Merchants, Great Northern Wharf, Canal-road, King's-cross, London, continue to supply the trade with all descriptions of Marble, in Block and Slab, at the lowest prices.—N.B. A good stock of Statuary Slab on hand, suitable for shelves.

Lloyd's Marble Wharf, Thames-bank, Pimlico, Adjoining Vauxhall bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

STONE! STONE! STONE!—To the TRADE The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Self-face Slab, Granite Pitching and Curb, Guernsey broken Granite, Materials, every other description of stone, at JOHN KNIGHT and SON'S, Devon Wharf, Mile-end. York tooled paving, 3s. 6d. per 100 feet; slab for hearths, 4d. per foot sup.; slab for chimney-pieces, 3d. per foot sup.; 8 by 3 window-sills, 6d. per foot run; 13 by 3 coping, 8d. per foot run; box chimneys (any opening), 8s. 6d. each. Terms cash on delivery.

TO CONTRACTORS AND OTHERS.

YORKSHIRE PAVINGS, LANDINGS, STEPS, COPINGS, CURBS, SILLS, SINKS, and CHANNELS; Hare-hill, Robin Hood, Park Spring, and Gayby, in Blocks, Headstones, or Slabs; Purbeck Paving, Sinks, Curbs, Kickstones, Pitchers, and Squares; Caithness Flags, Flagstone, Newcastle and Bilston Grindstones; Portland Stone in Blocks, Landings, Slabs, &c.; Darley Dale, Caen Stone, Bramley Fall, Bath, Huddlestone, Park-wood, and other Block Stones. Valentia Slate Slabs, Bangor Slates, Cornish, Aberdeen, Guernsey, and other Granites; Marble, in Block and Slabs, supplied from the Wharf, Millbank-street, City Basin, and Deptford: also direct from the quarries by vessel or rail.—Address, FREEMAN'S WHARF, 27, Millbank-street, Westminster

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, 7, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods SCOLES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS, MILLBANK-STREET, WESTMINSTER. Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall. London Agents—TREGELLES and TAYLOR, 3, Pinner's-court, Old Broad-street. Manager—JAS. J. TRATHAN, Liskeard This Granite is selected for the New Westminster-bridge.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Townhall.

YORKSHIRE STONE.—THOMAS TILNEY, Stone Merchant, Tanfield-place, Leeds begs to inform Builders, Surveyors, and Local Boards, that he can supply direct from his Quarries, by water or railway, Paving, Landings, Steps, &c. got out to sizes, on the most advantageous terms.—Prices sent on application.

YORKSHIRE STONE.

GEO. VINT and BROTHERS, IDLE, near LEEDS, Beg to inform Architects, Surveyors, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Paving, Bramley Fall, Park Spring, Robin Hood, Harehill, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

GATES and GEORGE, CAEN, AUBIGNY, and GENERAL STONE MERCHANTS, CAEN WHARF, ROTHERHITHE, LONDON.

RAWDON-HILL STONE.—Messrs. TRICKETT and PERKIN are prepared to execute orders to any extent for their much-admired Building Stone. Depôts, where large stocks are kept. No. 3, Stone-wharf, Great-Northern Railway Station, King's-cross; Victoria Stone-wharf, Millwall, Poplar. Blocks quarried to suit customers for columns, cornice, landings, steps, ledgers, headstones, cills, &c. Delivered to any part by vessel or railway trucks.

"This stone when better known, must come into extensive use I should think it exceedingly suitable for the London market."

C. L. DIBDEN, F.G.S.

Address, JOHN TRICKETT, Headingley, Leeds, Yorkshire; or, SAMUEL TRICKETT, Victoria-wharf, Isle of Dogs, London. N.B. A large quantity of Foundation Landings for sale.

J. CRABB begs to inform Architects and Builders, and the trade, that he has a very superior stock of GREEN MOOR SAWN SLAB, about 10 000 feet super. from 1 inch to 4, that is very suitable for headstones, chimney-pieces, steps, &c. and it is very durable, and of a very fine texture, and prices that will give satisfaction. Estimates given for masons' work.—No. 3, Thomas-place, Gravel lane, Southwark, within three minutes' walk of Blackfriars-bridge.

CHEAP and HANDSOME CHIMNEY-PIECES.—Chimney-pieces for dining and bed-rooms, equal in appearance to black marble and porphyry, considerably under the price of slate.—Specimens may be seen, and prices had, on application to G. CUMBERLAND, at the Works, 40, Bridge-place, Harrow-road, Paddington; or to Mr. J. PART, 41, Moorgate-street, City.

TWO large SLABS of RAGSTONE, remarkably hard, 6 inches thick, and sawn on both sides, FOR SALE, 8 feet 10 inches long, by 2 feet 4 inches wide; also two sets of mullions from two transom windows of Portland stone, lying near to the Midland Railway.—Apply to Mr. D. SLATER, Builder, Kettering.

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.

List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

PARIS EXHIBITION.—ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1849. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of loo-tables, chiffoniers, consoles, &c.; baths baptistries, altar-tablets, pilasters, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.

N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

SLATE CISTERNS, SINKS, and every description of Slate Slab Work, best Bangor Roofing Slates or Covering.—T. B. HANNAFORD'S Priced-list, which can be had on application, will be found lower than any other. Roofs covered with best Bangor Countesses within a four-mile circle, 9½. per square.—Trevalga Wharf, Ratcliffe-cross.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

LLANGOLLEN SLABS and SLATES. HOUSE CISTERNS, Sink-stones, Filters, Larders, Mangers, Ridging, Skirting, and Rough Core.

CISTERNS of LARGE DIMENSIONS for BREWERIES, DISTILLERIES, BLEACHING-HOUSES, and MANURE-TANKS.

Cattle-stalls, Pigstyes, and Troughs.

Paving for Railway Stations, Mall-houses, Breweries, Balconies, Conservatories, Warehouses, &c.

CHIMNEY-PIECES, Baths, Tombstones, Pedestals, Washing-tables, Urinals, and every other Article of Slabwork, PLAIN or ENAMELLED.

Self-faced Flags for Barns, Outhouses, or Street Paving.

In Stock at Paddington, SEVERAL FINE SLABS of 70 SUPERFICIAL FEET each

LLANGOLLEN FLAG AND SLATE COMPANY, PENTREFELIN WHARF, LLANGOLLEN, AND 4 WHARF, SOUTH WHARF-ROAD, PADDINGTON.

TO GRANITE MERCHANTS, PAVIORS, CAPITALISTS, and OTHERS.—A NEW-INVENTED SYSTEM of PAVING for many purposes, economical, simple, safe, and substantial, FOR SALE, or assistance will be paid for to carry it out.—Address the Inventor, SAMUEL BRETT, 22, Southwark-bridge-road.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.

PRICE 9d. PER SQUARE YARD.

Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.

Apply to JOHN PILKINGTON, Poleneean and Limner Asphalte Office, Monument-chambers, 14, Fish-street-hill, London.

N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner, or supplied in any quantity. Information for using forwarded with material. Post-office orders or reference in London promptly attended to.—Estimates given for every kind of the above work.

ASPHALTE.—THOMAS HARRISON, having completed his works for making by steam-power, is now in a position to execute orders for BLOCK ASPHALTE to any extent, at an hour's notice. Asphalte expressly prepared for barn and granary floors, and every description of agricultural buildings, for laying which plain instructions will be forwarded. Estimates given for every variety of Asphalte Pavement, Manure and other Tanks, Sea-Walls, Railway work, &c.—The trade supplied on advantageous terms.—THOMAS HARRISON, Asphalte and Whiting Works, Cambridge-heath Wharf, Hackney; and Sunderland Wharf, Rotherhithe.

CROGGON and COMPANY, Manufacturers of PATENT ASPHALTE ROOFING, BOILER, RAILWAY, SHEATHING and INODOROUS FELT, For Damp Walls, and Lining Iron Houses, 2, DOWGATE-HILL LONDON.

O. MCARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered to the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

BUILDING MATERIALS.

BECK'S WHARF, ISLEWORTH.—Builders having works to execute south-west of London, will find a good supply upon this wharf, on reasonable terms, with every convenience for speedy loading by travelling cranes, either into barges or carriages. Portland, Caen, Bath, and Yorkshire Block Stone, always in stock; Landings, Paving, &c. Also, Marble in Slab, Chimney-pieces, &c. Slab and Roofing Slates from the Penrhyn Quarries. Timber, Deals, Limes, Cements, Clay Goods, &c

N.B. This wharf is very near the St. Margaret's Estate.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS

W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf.

Contractors supplied to any extent.

TO BUILDERS AND OTHERS.

AT the LOWEST PRICES.—TIMBER, DEALS, MAHOGANY, and WAINSCOT. A large assortment of seasoned prepared FLOORING and MATCH-BOARDING of all descriptions. Also an extensive stock of Dry White Yellow, and Fine Cut Stuff, Slatings, Battens, Pantile Laths Oak Plank, Sash Cills, &c. Timber of all kinds, Planks, Deals and Battens, fetched from the docks, sawn by patent machinery in the best manner, and delivered at the shortest notice.—THOMAS JACKSON, Sawing and Planing Mills, Commercial-road, Pimlico, London.

NOTICE of REMOVAL.—EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton-road, Pimlico, to the KING'S-ROAD, CHELSEA, where their orders will be promptly executed as heretofore.—Please address, E. SIMMS, King's-road, saw-mills, Chelsea, opposite Manor-street.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory, the first of its kind ever established, a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from ¼-inch to 1¼-inch thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Sills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

MOULDINGS BY MACHINERY. Capping, Sash-bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to

E. SIMMS, SAWING, PLANING, AND MOULDING MILLS, KING'S-ROAD, CHELSEA.

GEORGE SMITH, TIMBER-MERCHANT, LONDON.—Address to No. 18, Binfield-road, Clapham-road, Stockwell; or Jamaica Coffee-house, City. Goods delivered from the Docks. PREPARED FLOORING, &c. from the Saw-mills. Goods in Bond for Exportation.

N.B. A large Stock of Dry Prepared Flooring, &c. from Two to Four Years Old.

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shop-fitters to his carefully selected MAHOGANY, suitable for Counter Tops, and to his seasoned Materials for builders, cabinet and blind makers, &c. Delivered, cartage free, to any of the London railway stations, or within three miles from Kennington Church.

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process.—JOHN COUMBE selects an inspection of his stock. The above process enables him to season his wood in a comparatively short space of time, he sells at prices generally observed for wet wood.—Address, PATENT WOOD SEASONING WORKS, Lady Lake-grove, Mile-end-gate.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Pine Flank, 3s. 6d.; Spruce Deals, 3s.; Mahogany, 6d.; 2d Yellow Battens, 12 10s.; P. Walnut, 7d. Cartage free in town.—T. FORMAN, 1, Wa mutree-walk, Lambeth-walk.

ACORN TIMBER WHARF and SAW MILLS, CANAL BRIDGE, OLD KENT-ROAD, LONDON. A Monthly Price Current forwarded on application. RICHARD MAY, Proprietor.

AT the LOWEST PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected Stock of the various descriptions of Deals, commencing at the following low prices:—

Yellow Deals, from	£90	0 per 120
Spruce ditto, from	18	0 "
Yellow Battens	13	0 "
Dry Pine Plank, from	21	0 "

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a postage stamp.—N.B. All sawn goods delivered within three miles free of cartage. Borough road, Southwalk, and Elm-street, Gray's-inn-lane.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS Commercial-road, London-fields. The Proprietor begs to announce to the Trade that they have completed their extensive arrangements, and will be happy to execute all orders entrusted to their care with dispatch and punctuality. Wet and dry docks, and powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring match boarding, &c. &c. always in stock at reduced prices.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NORES and CO invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:—

1-inch white, 13s. 6d. per square; 1-inch white, 15s. per square; 1-inch white, 18s. per square; 1-inch yellow, 15s. per square; 1½-inch yellow, 16s. 6d.; 1-inch yellow, 20s.

Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

TIMBER SAWING-MILLS, Belvedere-road, Lambeth.—ROBINSON and BARTRAM respectfully inform their friends in the Timber and Building Trades, that they have now completed their New Mill for Sawing building and other timber, and will be glad to receive their favours in this department of sawing. Full particulars will be forwarded on application, per post or otherwise. Timber up to 53 feet long can be cut at these mills.—N.B. A powerful Crane for landing timber on to carriages, at 1s. 3d. per load.

IMPORTANT to BUILDERS and PAINTERS.—Genuine White Lead, 32s. per cwt.; Linseed Oil, 2s. 8d. per gallon; Boiled ditto, 3s. per gallon; Turpentine, 2s. 7d. per gallon;

Fine Pale Oak Varnish, 7s. 6d. per gallon

For cash, at EDWARD PHIPPS'S Oil and Colour Warehouse, 45, Cobeshill-street, Pimlico.—Every article for the trade at the lowest price.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, spirit lackers, and finishing spirit. The present prices are, 6s. 6d. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 21, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

PAINT, certified by the Government Engineers and Contractors to be the CHEAPEST and BEST ever discovered for wood and iron, price 32s. per cwt.—Apply to the London Anti-Oxyde Paint Company, D. WALKER, Secretary, 15, New Bridge-street, Blackfriars.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosph re, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that 6cwts of Wolston's Torbay Iron Paint will effectually cover as much surface as 11cwts. of either White or Red Lead and that they resist atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all printing purposes the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 24, John-street, Bedford-row, will have immediate attention.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.—STEPHENS' DYES or STAINS for WOOD.

The following extract from a letter the Proprietor has obtained leave to make public:—"Northgate, Colchester, Feb. 5, 1855.—Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant,

"SAMUEL GRIMES, Builder.

"To Mr. Henry Stephens, 34, Stamford-street, London."

Samples and prospectuses free to any part of the kingdom.

KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade, and of the manufacturers, G. B. KENT and CO. 11, Great Marlborough-street, London. Established 1777. N.B. Kent's Painting Brushes are all stamped G. B. KENT & Co. Price Lists forwarded by post.

BRUSHES.—J. JEFFCOAT, from Messrs. Kent and Co's, many years a Practical Manufacturer of Painters' and Artists' Brushes, can now supply them at such prices as cannot fail to ensure the favour of all who wish to obtain a genuine article.—Samples may be had at the wholesale price.—Copper-bound distempers, 31s. per doz. the usual price 60s. per doz. at the Factory, 9, Middle Queen's buildings, Brompton-road.

TARPAULINS for COVERING ROOFS during Repairs, SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street City, Manufacturer, by appointment, to H.M. Majesty's Honourable Board of Ordnance.

NORWICH UNION FIRE INSURANCE SOCIETY.

(Amount Insured, £4,000,000.—Duty, 74,766.)

NOTICE.—That a BONUS has been declared upon all Premiums paid between the 24th of June, 1851, and the 23rd of June, 1855 which may be received on application at the Society's office, at the respective quarters at which the Policies are renewable. The BONUS will be equal to a reduction of 28 per cent on the current Premium to persons insured during the whole of the above period.

Insurers claiming returns upon lapsed or cancelled Policies, are requested to bring the Numbers of the Policies under which they claim.

6, Crescent, New Bridge-street, Blackfriars.—June, 1856.

THE STANDARD LIFE ASSURANCE COMPANY,

Established 1825. Constituted by Acts of Parliament.

6, St. Andrew Square, Edinburgh.

His Grace the Duke of Buccleuch and Queensbury, K.T. PRESIDENT.

The Right Honourable the Earl of Elgin and Kincardine.

LONDON

CHAIRMAN OF THE BOARD.

The Right Honourable the Earl of Aberdeen.

ORDINARY DIRECTORS.

Thomas H. Brooking, esq. 14, New Broad-street.
John Griffin Frith, esq. Austin Friars.
Alexander Gillespie, esq. Lombard-court.
Alexander Macgregor, esq. Upper Wimpole street.
John Scott, esq. 4, Hyde-park-street.
Sir Anthony Oliphant, C.S.
Francis Le Breton, esq. 3, Crosby-square.

MANAGER.—Will. Thos. Thomson, F.R.S.E.
RESIDENT SECRETARY.—H. J. Rokes Williams.
INSPECTOR OF AGENCIES.—William Bentham.

EDINBURGH, 3, George-street.
LIVERPOOL.—82, King William-street.

THE NEW BUSINESS transacted by this Company during 1855 exceeded that of any Assurance Institution in the United Kingdom, the Sums proposed for Assurance during the year being £716,368 7 11
And the Assurances accepted 609,323 7 11

A BONUS was declared on 1st May, 1856, varying from 27s. 10s. to 18s. per cent. on the sums assured. This was the Fifth Declaration of Profits.

EXAMPLES OF BONUS.

Date of Policy.	Sum in Policy.	Total Bonus Addition to 1855			Sum in Policy with Bonus Addition.		
15th Nov.	1825	£1,000	£1,132	0	0	£2,132	0 0
"	1840	1,000	667	1	0	1,667	1 0
"	1845	1,000	582	0	0	1,582	0 0
"	1850	1,000	347	0	0	1,347	0 0
"	1849	1,000	774	10	0	1,774	10 0
"	1850	1,000	64	1	0	1,064	0 0

The Income of the Company is about a Quarter of a Million.

NON-FORFEITURE OF POLICIES.

Important resolutions have been adopted as to Non-Forfeiture of Policies within the ten months from the date of payment of the premium under certain conditions.

SELECT ASSURANCE COVERING FOREIGN RESIDENCE WITHOUT EXTRA PREMIUM.

Policies of five years' duration are admissable to this class at the discretion of the Directors.

SURRENDER VALUES.

A Liberal Surrender Value is allowed after payment of One Annual Premium for Policies on the With Profit Scale, and after Three Premiums on the Without Profit scale.

Persons proposing to effect Assurances are invited to examine these important and peculiar conditions by applicant on to the Company's Office, where the fullest information may be obtained.

H. JONES WILLIAMS, Res. Sec.

London, 83, King William-street.

Copies of the Report of the Proceedings at the Meeting of 1st of May, 1856, are now ready, and can be had at the Office.

ANCHOR ASSURANCE COMPANY, for LIFE, FIRE, ANNUITIES, and ENDOWMENTS.

Capital—ONE MILLION. Established 1842.

Chief Offices, 57, Cheapside, London.

Chairman—WILLIAM LEE, Esq. M.P.

Every description of Life and Fire Assurance, Annuity and Endowment Business, transacted at the most moderate rates of premium. Fire Risks covered, and Policies granted with all charge.

THOMAS CAVE, Managing Director.

SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY. Established 1831.

The Annual Meeting of the above Society was held in Edinburgh on the 6th MAY. The report by the Directors stated that the number of policies effecting fire year ending 31st MARCH last, was 674, the sums assured thereby being 293,151; and the annual premiums thereon, 9 139.

The result of the investigation for the triennial division of profits was then announced. The surplus ascertained to have arisen amounted to 183,339, which wholly belongs to the members, but of which one-third (61,27 L) must, by the laws of the society, be set aside as a reserve for contingencies, leaving 122,226 for the next triennial division.

The Investing Funds of the Society amount to £2,925,281
The Annual Revenue to 160,400
The Existing Assurances to 4,764,949

Copies of the report may be obtained at the Society's Offices, 26, St. Andrew-square, Edinburgh; at the London Office, 126, Bishopsgate-street Within; and at any of the Agencies.

ROBERT CHRISTIE, Manager.
ARCHIBALD T. RITCHIE, London Agent

PHŒNIX FIRE ASSURANCE COMPANY, LOMBARD-STREET & CHARING-CROSS, LONDON, established in 1782.

TRUSTEES AND DIRECTORS.

Decimus Burton, esq.	Kirkman Daniel Hodgson, esq
Octavius Edward Coope, esq.	James Horne, esq.
William Cotton, esq.	William James Lancaster, esq.
John Davis, esq.	John Dorrien Magens, esq.
Geo. Holgate Foster, esq.	J. Masterman, esq. M.P.
George Arthur Fuller, esq.	John Timothy Oxley, esq.
Chas. Emanuel Goodhart, esq.	George Stanley Repton, esq.
James Alexander Gordon, esq.	Benjamin Shaw, esq.
Henry Grace, esq.	Matthew Whitting, esq.
Thomas Hodgson, esq.	Francis Wilson, esq.

AUDITORS

John Hodgson, esq. | Peter Marlineau, esq.
Henry Heyman Tulmin, esq.

SECRETARIES.

Wilmer Harris, esq. | George William Lovell, esq.

ARCHITECT AND SURVEYOR.—John Shaw, esq.
SOLICITORS.—Messrs. Dawes and Sons, Angel-court.

Insurances against loss by fire are effected by the PHŒNIX COMPANY upon every description of property, in every part of the world, on the most favourable terms.

Persons insuring with the Phœnix Company are not liable to make good the losses of others, as is the case in some offices.

Insurances with this Company expiring at Midsummer must be renewed within fifteen days thereafter, or they will become void.

Receipts are now ready at the principal offices, Lombard-street, and Charing-cross, and with the respective Agents throughout the United Kingdom

THE ASYLUM LIFE ASSURANCE OFFICE, 72, CORNHILL, LONDON.

Established 1834.

Policies on healthy and diseased lives, at home and abroad, for civil, military, and naval employments.

The Office being on purely proprietary principles, no partnership among policy-holders is allowed.

For prospectuses, proposal papers, &c. apply to
MANLEY HOPKINS, Resident Director.

THE LONDON and WESTMINSTER BANK issues CIRCULAR NOTES of 10l. each, payable at every important place in Europe. These notes are issued without charge, and they are cashed abroad free of commission. The Bank also issues, free of charge, Letters of Credit on all the principal cities and towns in Europe. These letters of Credit are issued only at the Head Office in Lothbury. The Circular Notes may be obtained at the Head Office in Lothbury, or at any of the Branches, viz.:—

Westminster Branch, 1, St. James's-square.
Bloomsbury ditto, 214, High Holborn.
Southwark ditto, 1, Wellington street, Borough.
Eastern ditto, 87, High-street, Whitechapel.
Marylebone ditto, 4, Stratford-place, Oxford-street.
Temple Bar ditto, 217, Strand.

The rate of interest allowed on deposits of 500l. and upwards, at the Bank or any of its Branches, is now 3l per cent.

J. W. GILBART, General Manager.

CHAS. MACINTOSH and CO. Patentees of the VULCANIZED INDIA-RUBBER, and GENERAL MANUFACTURERS of WATERPROOF, AIRPROOF, and ELASTIC RUBBER GOODS beg to inform all persons who desire to correspond with them direct, that their SOLE ESTABLISHMENTS are No. 3, Cannon-street West, London, and Cambridge-street, Manchester. This notice is necessary, as the terms Macintosh Depôt, Macintosh Warehouse, &c. is frequently adopted both in London and the country by venders of India-rubber goods, who deal in articles not of the manufacture of CHAS. MACINTOSH and Co. Goods manufactured by CHAS. MACINTOSH and CO. are stamped with the name of the firm.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Driving-bresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, at JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAY MOND JARVIS, Bart., YENTNOR, ISLE of WIGHT. —Second Testimonial.—"March 10th, 1853.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.

½	¾	1	1¼	1½	2	2½	3 in.
9d.	11d.	1s.	1s. 3d.	1s. 6d.	1s. 9d.	2s.	2s. 3d.

2½	3	3½	4	4½	5	6	inches.
2s.	2s. 3d.	2s. 6d.	2s. 9d.	3s.	per yard.		

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

½	¾	1	1¼	1½	2	2½	3 inches.
6d.	9d.	11d.	1s.	1s. 3d.	1s. 6d.	per yard.	

The hose is Burnettized at an extra charge of 3d. per yard Union Joints, Branch Pipes, and Jets, are also supplied.

FOUNDRY and SMITH'S BUSINESS.—TO BE LET, a SMALL IRON and BRASS FOUNDRY, with SMITH'S BUSINESS, in the country, in full work. Fixtures and plant at valuation; coming to moderate; rent low.—Apply, by letter, to A. Blue Minories, London.

AN old-established BUILDER'S, PLASTERER'S, and SLATER'S BUSINESS, within twenty miles of London, TO BE DISPOSED OF, with immediate possession. Low rented, on an unexpired term for nine and a half years. The stock to be taken at a valuation—about 2,000.—For further particulars, apply to CHARLES DAVY, Upholsterer, High-street, Watford, Herts.

WINCHESTER.—To PLUMBERS, GLAZIERS, and PAINTERS.—TO BE DISPOSED OF, a BUSINESS in the above line, established upwards of forty years; and from very convenient premises, with comfortable residence, may be rented on moderate terms. The situation is excellent, and, from the present proprietor's advanced age, every means is afforded for considering the entire trade at present occupied. The stock, which is very neat, and requisites of trade, may be taken at valuation. For further particulars, apply to Mr. GODWIN, Piazza, Winchester.

TO FURNISHING IRONMONGERS, WHITESMITHS, BELL-HANGERS, GAS-FITTERS, &c. TO BE DISPOSED OF forthwith, an eligible CONCERN in the above trades in a populous village about twenty miles from London, with a prospect of immediate railway extension. A great increase of building is anticipated. In the first instance, address letters of inquiry to A. Z. care of Mr. Weakley, Stationer, No. 91, Farringdon-street, London.

IRONMONGERY BUSINESS.—FOR DISPOSAL, a first-class BUSINESS, doing an extensive and lucrative trade in brick and furnishing ironmongery. The returns are about 10,000 per annum, a considerable proportion of which is for cash. The premises are in a commanding situation, in one of the leading thoroughfares in London, and a large sum of money has been expended within a few years in rendering them externally attractive, and in adapting the interior completely for the various branches of the business. The stock is all modern, and of the best description. About 10,000l. will be requisite to purchase and carry on the concern, 5,000l. of which may remain on security for two years; and to two or three active young men, who can command that sum, an opportunity is thus presented of purchasing a business, which is of the first class, of a high reputation, and capable of still further extension.—Apply (by letter only) to Messrs. FULLER and HORSEY, 13, Billiter-street, City.

TO POTTERS, BRICK-MAKERS, and OTHERS.—TO BE LET, ELEVEN ACRES of LAND, containing pipeclay, brickearth, loam, and fine sand, situate in a very desirable part of Hants, within a short distance of the most important commercial towns. The whole of the buildings, machinery, plant, and advantages to be Let, on moderate terms, or taken at a fair valuation.—For further particulars, apply to Mr. S. BROAD, 53, Above-bar, Southampton.

TO MANUFACTURERS and OTHERS.—A Gentleman, of mercantile experience and good connections, is desirous of meeting with a Gentleman commanding a capital of not less than 10,000l. to be invested in a sound and profitable Manufacturing Business of the most legitimate character. Principals apply to Mr. ELMSLIE, Solicitor, 47, Moorgate-street, City.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

31 George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and Co. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to su ply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling purposes, decorations &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, burnt and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 30, Old Broad-street, London; to Mr. MUNDAY, 1, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr. THOMAS WEEKS.

Agents in London, Messrs. GEORGE POTTER and CO. Limemerchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 10, North-wharf-road, Paddington.

FREEN and CO.'S PORTLAND CEMENT and LIME WORKS, WOULDHAM, near Rochester.—These Works having obtained Letters Patent for the Manufacture of Cement, by which very great and important advantages are obtained over the old method of manufacture, insuring at once uniformity of colour and quality. Merchants, Contractors, and Builders are informed that they can now be supplied with any quantity, either for home or foreign markets, for wholesale orders, on advantageous terms. Samples and prices forwarded, on application at the Works; or to Mr. W. C. ATKINSON, 62, Moorgate street, City; from whom also testimonials from eminent engineers as to quality may be obtained.

PORTLAND and BATH CEMENTS. TATHAM and CO. 14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT. Glazed Stoneware Sewage Pipes. Brick, Lime, and Cement Merchants, TATHAM and CO. 14, South Wharf, Paddington.

PARIAN CEMENT, reduced to 3s. per bushel, from 1st inst. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any add mixture of colour.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which their manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GREY STONE LIME WHARFS, 13, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in large quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 8 9d. per ton.

Small ditto, ditto, 4d. per ton.

Barges loaded in a few minutes.

Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

JOHNS and CO.'S PATENT PERMANENT SILICATED WASH (perfectly non-absorbent STUCCO), CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead; whilst the consumption of material is less than for one coat. It dries very fast and hard.

HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three-fourths the price.

HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and iron exposed to salt water; neither bilge water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, stamped, HUBBUCK, LONDON. PATENT; and when so marked the quality is guaranteed.

HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber coated with this Enamel is not attacked by the worm neither do barnacles attach to it.

Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.

OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either as his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs, Warehouse, No. 1, Wharf Paddington-basin

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal guager's pass, by which the purchaser may know the exact weight delivered. Orders addressed to the London Depôt, 16, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick

CHARLES RICHARDSON, 3 & 5, SOUTH-WHARF, PADDINGTON BASIN. COWLEY AND KENT BRICKS. PORTLAND, ROMAN, AND OTHER CEMENTS, TAMWORTH GLAZED SEWAGE PIPES BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 5 South Wharf, Paddington.

NOTICE.

CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

PLASTER of PARIS manufactured by J. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keen's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for ashpaths, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can load along-side the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle), Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation

General Office—No. 13, GEORGE-YARD, LOMBARD-STREET.

Letters addressed to Grays Essex, will meet with immediate attention.

TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane, Dulwich. Price of good stock bricks, 25s. per thousand on the field, for cash.—Application to be made to the Foreman, A. BANHAM, at the Works.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at R. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. R. D earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.

Malm Place, half washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing

Apply to HENRY DODD and CO. at the Countinghouse, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

TO CONTRACTORS.—The MEDWAY BRICK COMPANY are now ready to SUPPLY BRICKS from their Brickfields at Cuxton, near Strood, on the Medway, at the ordinary market prices. The superior quality of the Bricks made at the above works is well known to consumers.—Samples may be seen, and further particulars obtained on application to the Manager, at the Office of Messrs. G DENNY and CO. 29, Great St. Helen's, London; or at the Works.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented

HENRY C MOUNT, Sec.
37, King William Street, City.

THE PRIZE MACHINES of the UNIVERSE.—CLAYTON'S PATENTS.—CLAYTON'S PRIZE BRICK and TILEMAKING MACHINES will be EXHIBITED in OPERATION, during the Show of the Royal Agricultural Society of England, at Chelmsford, on the 15th, 16th, 17th, and 18th inst. month JULY.—Manufactory, Atlas Works, Upper Park-place, Dorset-square, London.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES.
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT.
J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, affording a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPÔT for this WARE is REMOVED to No. 28, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "Reviewers on Juries," page 581, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 15, South Wharf, Paddington, Manufacturers of Improved Plain and Ornamental Roofing, Ridge and Hollow Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for sanitary and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted impervishable, and to resist all acids and exhalations.

*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

HOGG'S GARDEN EDGE TILES.—The attention of persons engaged in laying out Gardens for Public Institutions is solicited to these Tiles, as an elegant, cheap, and permanent substitute for box edging. In colour they resemble Bath stone, are very hard, easily laid down, afford no shelter for vermin, and act as a drain to the paths. Price 13s. per 100, or about 4d. per yard run.—Full particulars on application to R. BLACKET, Witham, Essex.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSSLEY'S WHOLESALE WAREHOUSE, 32, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, at THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER-HANGINGS.—JEFFERY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, which in price, style, and colouring, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls.—Factory, 115, Whitechapel; Show-room, 509, Oxford-street.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at ROBSON'S MANUFACTORY, 20, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—THUMBLE and CO. Manufacturers, Leeds, beg to call the attention of the trade to their immense STOCK of PAPER-HANGINGS, at No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, and Machine goods. The whole being their own manufacture, can supply on the very best terms.

A. W. FABER'S POLYGRADE BLACK LEAD fine RED and BLUE PENCILS, and superior CRETA LÆVIS, to which were awarded the Prize Medals from the Great Exhibitions of All Nations, London, 1851, New York, 1853, Munich, 1854, and Paris, 1855, are sold by every respectable stationer and Artists' Colourman in town and country.—Sole Agent, A. HEINTZMANN, 25, Ironmonger-lane, City.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

January 1, 1855.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

CHARLES WM. WATERLOW AND CO.

MANUFACTURING JOINERS,

121, BUNHILL-ROW, FINSBURY, AND BOW, MIDDLESEX.

N.B. A large Stock of Joinery and Mouldings, suitable for immediate use, at the Warehouse, Bunhill-row.

SANDS AND EMERY,

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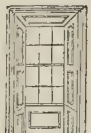
MANUFACTURED JOINERS' WORK AND MOULDINGS OF EVERY DESCRIPTION ON THE SHORTEST NOTICE, AND AT THE LOWEST PRICES, PACKED AND FORWARDED TO ALL PARTS OF THE COUNTRY.

Lists of Prices and Estimates forwarded on application.



BUNNETT AND CO.'S NEW PATENT

INTERLOCKING CURVILINEAR REVOLVING IRON SHUTTER

MADE OF THE BEST GALVANIZED IRON, IS GREATLY SUPERIOR TO ALL OTHERS FOR LIGHTNESS, STRENGTH, SECURITY, DURABILITY, AND CHEAPNESS.

A MODIFICATION FOR WAREHOUSES, COTTAGES, PORTABLE BUILDINGS, &c.

MUCH CHEAPER THAN THE COMMON REVOLVING WOOD SHUTTERS OF OTHER MAKERS.

PATENTEES OF METAL SASH-BARS AND MOULDINGS.

ORIGINAL PATENTEES OF IRON SHUTTERS, 26, LOMBARD-ST. LONDON; & DEPTFORD.

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SNOXELL'S

PATENT REVOLVING WOOD AND IRON SHUTTERS,

WITHOUT MACHINERY,

96, REGENT-STREET, AND AT HIS STEAM WORKS, 135, OLD-STREET.

Testimonials from Architects, Bankers, &c. of their security and durability, forwarded.

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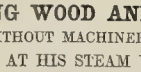
CHEAP AND DURABLE ROOFING.

By Her Majesty's  Royal Letters Patent.

F. McNEILL and CO. of LAMB'S-BUILDINGS, BUNHILL-ROW, LONDON, Manufacturers and ONLY Patentees of

THE PATENT ASPHALTED FELT, FOR ROOFING HOUSES, VERANDAHS, SHEDS, &c.

Patronized by

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HER MAJESTY'S ESTATE, ISLE OF WIGHT,
ROYAL BOTANICAL GARDENS, REGENT'S PARK,

And by the most eminent members of the Royal Agricultural Societies of England, Scotland, and Ireland; at whose great national shows it has been exhibited, and OBTAINED THE PRIZE, for being the best and cheapest article for roofing; also used for under slates at the Royal Agricultural Society's House, in Hanover-square. Its advantages are lightness, warmth, durability, and economy. It is impervious to rain, snow, and frost, and a non-conductor of heat and sound. The Felt can be cut to any length, by 23 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples, with full directions as to its uses and the manner of applying it, with TESTIMONIALS, some of them of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 25 per cent in fuel is effected. The TRADE are respectfully enjoined to send their orders DIRECT to the FACTORY, as the surest means of being supplied with the genuine article, and in lengths best suited to their roofs. They are likewise CAUTIONED AGAINST MISREPRESENTATION, as THE ONLY WORKS in Great Britain where the above roofing is made are F. McNEILL and CO.'S Manufactories, LAMB'S-BUILDINGS, BUNHILL-ROW. Roofs covered with the Felt may be seen at the Factory, also the new Vice-Chancellor's Courts the passages and offices leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

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PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 26, Soho-square.

PATENT and BRITISH PLATE GLASS.—JAMES HETLEY and CO. beg to inform Architects, Builders and the Trade generally, that their new Tariff of Prices for the above will be sent on application; they will also on receipt of particulars, furnish estimates for any description of Glass now manufactured.—Patent Plate, Sheet, Crown, and Ornamental Window Glass Warehouse, 35, Soho-square, London.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES at which PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; HOUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows suitable for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse 115, YORK-STREET.

BELGIAN WINDOW-GLASS, Wholesale and for Exportation.—LAROCHE, PUGNI, and CO Manufacturers and Importers of Belgian, Plate, Sheet, Crystal Coloured, and every other description of foreign Glass, respectfully inform merchants, dealers, &c that they have now on sale, a large supply of every kind of window glass suitable for the English market. Engraved, Embossed, and Ornamental Glass; Antique, Rouge, Cathedral, and other Glasses for Stainers. Estimates given and contracts supplied to any amount.—Warehouse, 3, Old [illegible] House, Watergate, Lower Thames-street.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 36s; 4ths, 30s.; squares in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 22 by 14, 2d.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

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By Royal Letters Patent.

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CCC CROWN, 18 Tables, per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 3d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d and PERFORATED VENTILATING GLASS, 1s 6d. per foot; CRYSTAL SHEET GLASS, 4d., 5d. and 6d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Tiles and Slabs from 6d. each. Sashes primed and glazed, 9d. per sq ft. HELY'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

Catalogues and Prospectuses free.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 36s.; 4ths, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½d. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3½d. per foot. Crown and Sheet British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

W. H. CONSTABLE, ARTIST on GLASS, Manufacturer of Ancient and Modern Windows, King's Old-buildings, opposite Clare College, Cambridge. Church and Heraldic Decorations. Designs and Estimates on application.

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IMPROVED REVOLVING SHUTTERS. FRANCIS RICKABY and DUNN are now enabled to offer the above at the following reduced prices:—IRON SHUTTERS, double riveted, with machine-cut worm gear, complete, at 4s. 6d. per foot. WOOD SHUTTERS, with worm gear complete, at 3s. 6d. per foot. Machine-drawn Brass Sash Bars and Stall-board Plates made to any design.—84, Gray's-inn-lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Son), JOINER to the TRADE, 7, Princes-street, Stanford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 110, Broadwall.

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MORTGAGES of ROCHESTER-BRIDGE ESTATES.—LOAN REQUIRED.—The Wardens and Assistants of Rochester-bridge will be ready, on THURSDAY, the 24th day of JULY, 1856, at their AUDIT-CHAMBER, at Rochester, in Kent, to open and consider TENDERS or PROPOSALS from persons willing to advance 10,000l. or any part thereof, in sums of not less than 100l. each, to be secured with interest payable half-yearly, by transfer by mortgage of the estates proper of the Bridge Corporation, in the prescribed form, and under the regulations and provisions of the Rochester-bridge Acts, 1846 and 1853, affecting such loans, and the repayment thereof. All sums so advanced are to be paid within one week next after the acceptance of the proposal shall have been notified to the party making the same. Further particulars and extracts from the Acts may be obtained on application to me. Proposals, in sealed envelopes, marked "Tender for Mortgage," stating the amount offered to be advanced, and the rate of interest required, may be sent to me at any time previous to ELEVEN o'clock in the forenoon of the said 24th day of JULY, 1856.

By order of the Wardens and Assistants,
GEORGE ESSELL, Bridge Clerk.

The Precinct, Rochester, June 30, 1856.

MONEY to LEND on EASY TERMS.—Builders, House-owners, and others requiring MONEY to complete their buildings and repairs, can be accommodated by applying to Mr. GREEN, No. 22, New Bridge-street, Blackfriars, any day between TEN and FOUR. No legal costs, no fines, no delay. Wanted to purchase, House Property.

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GREAT REDUCTION IN PRICES.

JAMES STIFF,

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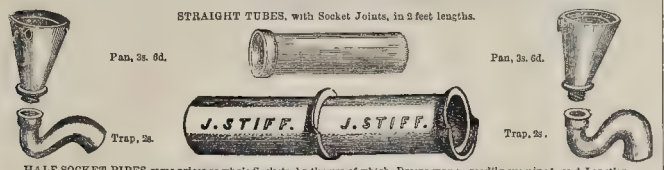
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz. :—

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Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. KITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
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Drawings, with Prices, will be forwarded free, on application.

REDUCTION IN THE PRICE OF CLOSET-PANS.

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

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LISTS OF PRICES FORWARDED ON APPLICATION.

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These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to

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Where a large stock is always kept on hand.

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Is the result of practical experiments and long experience; it is unfailing in its application. Entire houses have been papered a few days after plastering. In repairs of old plastering it is invaluable. A moderate room can be papered for 3s. 6d.

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STEAM-ENGINE.—TO BE SOLD, a capital STEAM-ENGINE, by Maudslay and Co. of 8-horse power, which will shortly be removed to make room for one of greater power. For price and particulars, inquire of Mr. EDWARDS, at Messrs. Spottiswoode and Co.'s, New-street-square (who will show the engine at work), or of Messrs. EASTON and AMOS, Grove, Southwark.

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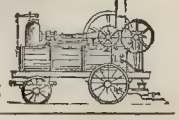
Contracts taken for pumping any quantity of water.



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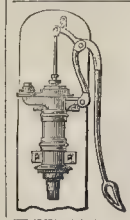

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which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.

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Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 28s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

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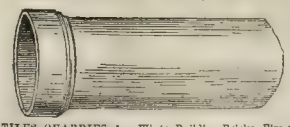
THE FARNLEY IRON COMPANY, WORTLEY, near LEEDS.



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Fountains, Vases, Pedestals, Capitals, Trusses, Brackets, &c., in great variety, which for beauty and elegance of design are unequalled

The designs of Architects modelled with the greatest exactness.

Also of PATENT GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, &c., well adapted for pressure, being made extra pressed under "Spencer's Patent." Superior White Glazed CLOSET PANS, TRAPS, &c.

The Works of the Company are situated in the immediate vicinity of the well-known bed of WORTLEY FIRE-CLAY, and their manufacture of BRICKS, for the use of Forges, Gas Companies, Foundries, Potteries, and Glassworks, is confidently recommended for all purposes where extreme heat is required. Their GROUND CLAY is also particularly adapted for the manufacture of CRUCIBLES, MELTING POTS, &c.

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BIRMINGHAM..No. 7, Easy-row; also 22, Cambridge-street, and Lawley-street.
BRISTOL .....No. 14, Nelson-street.
LIVERPOOL....No. 9, Russell-street, 83, Renshaw-street, and Shipping-wharf Leeds-street.
NEWCASTLE. ..W. B. Wilkinson and Co. Prudhoe street.
GRIMSBY.....P. G. Skipworth.
MANCHESTER..No. 45, Travis-street, and 23, 24, and 25, Birmingham-street, London-road.
HULL.....No. 60 Queen-street, and Wellington-street.
BRADFORD ....Horton-road.
LEEDS .....Wellington-street, adjoining the Midland Station; and Shipping-wharf, Victoria-works, Hunslet.
SUNDERLAND..W. B. Wilkinson and Co. Queen-street.
WARE.....G. E. Kins, Stone Merchant.

Where Drawings, with Prices, &c. may be obtained.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

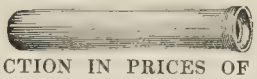
MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. M. PETTS, at the Works, Branksea Island, Poole, Dorset.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

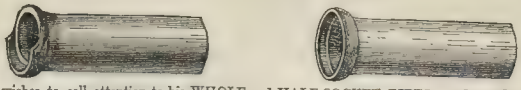
MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

UNDERHAY'S PATENT REGULATOR CLOSETS

for constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in fixing, and a better flush of water obtained in use.

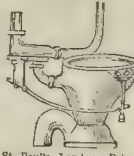
Pan, Valve, Self-acting, and Servants' Closets, on this principle, may be seen at the Works. They are very cheap, their efficiency is guaranteed. 5,000 of them have been sold, and no instance of failure has occurred.

These Stop-valves are cheaper, stronger, and more ornamental, than any other. Many thousands are in use, and greatly approved of.

Manufactured by CHARLES BOTTEN and SON, Brass Founders, Crawford-passage, Clerkenwell, London.

PATENT SELF-ACTING WATER-CLOSETS,

with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s., and perfect action guaranteed.



STONE-PIPES.—GLAZED STONEWARE

PIPES of the most superior quality, at REDUCED PRICES. E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, Pitt-road.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at			3d. per foot.
4	"	"	4d. "
6	"	"	6d. "
9	"	"	9d. "
12	"	"	1s. 3d. "
15	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES,

acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

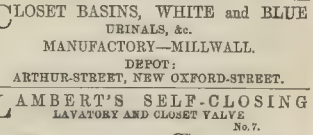
MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE

No. 7.



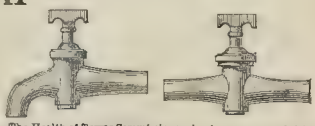
is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet; they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS. LAMBERT and SON, Brass Founders and Engineers, Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

TO WATER COMPANIES AND PLUMBERS

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

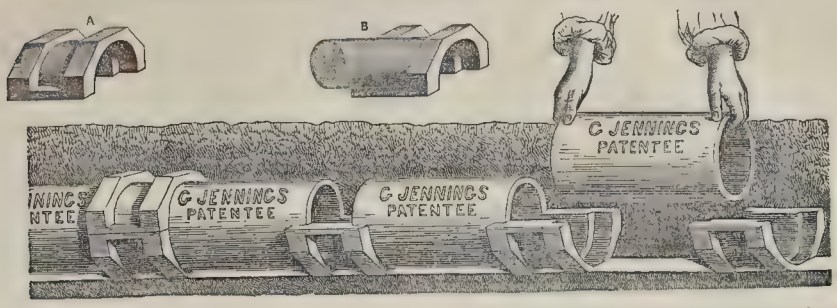
LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

ROYAL POLYTECHNIC.—Patron, H.R.H. Prince ALBERT.

—On Monday evening, July 7, at Eight, Henry Mayhew, esq. author of "The Great World of London," &c. will Lecture on the Successes of Industry.—On Monday, Wednesday, and Friday, at Four and Nine, the Grand Series of Views after David Scott, as published by Fullarton and Co. illustrating Bunyan's Allegory of the Pilgrim's Progress, with descriptive Lecture by the Rev. J. B. Brasted.—On Tuesday, Thursday, and Saturday, at Three, Lecture by J. H. Pepper, esq. on the Moon Controversy.—On the same days, at Four and Nine, the Historical Entertainment of Kenilworth; and at half-past Three and Eight, Performances by Mdlle. Maudie on the Cither, and Herr Arlom on the Child's Mouth-organ.

JENNINGS'S PATENT DRAIN-PIPES.



THE PATENT CHAIRS AND SADDLES above shown are to a line of pipes the SAME SUPPORT AS SLEEPERS TO A LINE OF RAILWAY, the base of each Chair being BROAD and STRONG. The pipes are simple cylinders, of uniform thickness, made without the usual socket; the drying and burning, in consequence, is much more perfect. Pipes thus made and connected will be found to BEAR ANY PRESSURE, and are in no way liable to derangement. The laying of these pipes, and the making of the joints, IS DONE AT ONCE, EACH PIPE BEING BEDDED AS IT IS LAID, and the space between allows the workman to strike up the joint, and the superintendent TO SEE that every pipe is ACCURATELY LAID and PROPERLY JOINTED.

A shows one of JENNINGS'S PATENT SADDLES OR COVERS, by means of which examinations are effected; B shows one of the PATENT JUNCTION COVERS, by which connections are made to finished lines of pipes, it being only necessary AT ANY TIME to remove a PLAIN Cover or Saddle, A, and substitute a Junction Cover, B, the Junction being THE SIZE of the Branch Pipe.

The favour with which these pipes have been received will no doubt give rise to many imitations, as it is much easier to COPY than to INVENT; but GEORGE JENNINGS hopes his sanitary patrons will give HIM CREDIT for being THE FIRST TO SHOW HOW JUNCTIONS MAY BE INTRODUCED, OR EXAMINATIONS MADE, TO FINISHED LINES OF PIPES. These important improvements, as above shown, are PATENTED; and GEORGE JENNINGS would caution those who desire TO PROFIT BY HIS IDEAS, NOT TO INFRINGE HIS PATENT RIGHTS, as they will not be allowed to do so with impunity, although he feels confident the ORIGINAL, for its SIMPLICITY and EFFICIENCY, will be preferred to any copy.

Prices of JENNINGS'S Drain Pipes, per foot run, including the Patent Chair and Saddle, are as follows:—4-inch, 6d.; 6-inch, 8d.; 9-inch, 1s. 1½d., 12-inch, 1s. 10d.; 15-inch, 3s.; 18-inch, 4s.; with the usual discount to the Trade.

JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.

Architects describing this Closet in their specifications will have a PERMANENTLY GOOD VALVE CLOSET, NOISELESS, and FREE FROM COMPLICATION. The Patentee has such confidence in its DURABILITY and EFFICIENCY, that he will guarantee every Closet for SEVEN YEARS.

JENNINGS'S IMPERISHABLE EARTHENWARE CLOSET AND TRAP.

This Closet has a large water surface, has no back to soil, is imperishable in its material, and the Trap and Closet is combined in one piece, suited alike for the PALACE or the COTTAGE.

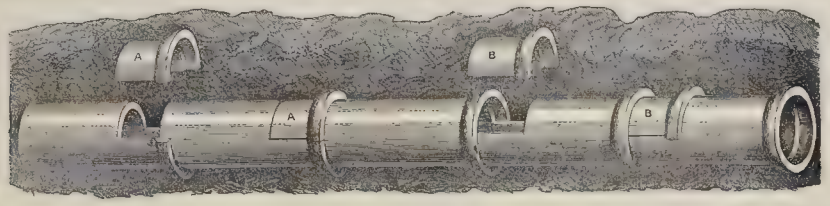
JENNINGS'S IMPROVEMENTS IN LIFT AND OTHER PUMPS.

These Pumps would well repay a visit to Jennings's factory, where may be seen Jennings's Lavatories, Urinals, Sluice Valves, Fire and Steam Cocks, of every size; Shop-Shutter Shoes; Gully, Area, and Sink Traps, and other sanitary goods.

Or Illustrations and Prices can be had free by post, if two stamps are enclosed to

GEORGE JENNINGS, SANITARY ENGINEER, 29, GREAT CHARLOTTE-STREET, BLACKFRIARS-ROAD, LONDON.

AYLESFORD POTTERY COMPANY'S PATENT DRAIN-PIPES.



THE above Company respectfully invites the attention of Engineers, Architects, Surveyors, Builders, &c. to an improved DRAIN-PIPE, whereby all stoppages may be cleared without disturbing the invert of the drain, by simply removing the cover (marked A or B) whichever may be preferred.

The cover (marked B) may be used in conjunction with whole or half-socket Pipes.

Pipes thus constructed may be laid at intervals in a drain of ordinary Socket-Pipes.

With the great advantage these Pipes offer, they are cheaper than any yet submitted to the public.

London Depôt—AYLESFORD WHARF, Belvedere-road, Lambeth.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.

WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 80, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

THE EXTENSIVE SHIP-BUILDING ESTABLISHMENT AND IRON WORKS OF MR. C. J. MARE, AT BLACKWALL.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees, with the consent of the Mortgagees, to OFFER for SALE by AUCTION, at the AUCTION MART, London, on the 30th of JULY next (unless an acceptable offer be previously made by private contract), in four lots, the extensive SHIP-BUILDING ESTABLISHMENT and IRON WORKS of Mr. C. J. Mare; together with the whole of the valuable fixed PLANT and MACHINERY. These works, which together occupy a site of 14a. 2r. 30p. are situated at Blackwall, on the opposite banks of Bow-creek, at its junction with the Thames, a portion of the works having a direct frontage next the Thames. The land frontages abut on Trinity-road and Orchard-place, Blackwall, and on the North Woolwich Railway, near the junction to the Victoria Dock Line, by means of which, and the North London Railway, direct communication with the northern and midland districts is established. The approach from the City is easy and frequent throughout the day, by the Blackwall and North Woolwich Lines, from their joint terminus in Fenchurch-street, by means of which the northern and southern division of the works are reached within half an hour; there is also a ferry across Bow-creek for the facility of communication. The resources of the establishment for the purposes of ship-building, conversion of iron, and general engineering works, are unequalled in the world, upwards of 36,000 tons of shipping having been built and launched in the years 1853 and 1854 from the yards, while from the forge and iron works upwards of 17,000 tons of iron have been hammered and rolled within the same period, and from the foundries upwards of 4,000 tons of castings delivered. The high character of the work executed has gained for the firm a world wide reputation. In the Ship-building Department, vessels have been built for the English, Turkish, Russian, Spanish, and Sardinian Governments, the Peninsular and Oriental, the General Screw, and the General Steam Navigation Companies, the Dover Mail Packet Company, the South-Western Railway Company, and others, unequalled in size, unsurpassed in speed, and without a failure in any one case. Among others may be named the renowned *Himalaya*, of 3,500 tons burthen, the *Pera*, the *Prince*, the *Candia*, the *Hydaspes*, the *Argo*, the *Crœsus*, the *Golden Fleece*, the *Indiana*, the *Jason*, the *Victor Emanuel*, the *Genoa*, the *Transit*, the *Perseverance*, with many others; also yachts for the Emperor of Russia and his Highness the Viceroy of Egypt; and such are the appliances and facilities afforded by existing arrangements, that the rapidity with which the works are carried on is perfectly surprising. The works executed at the forge have been equal in magnitude, including crank shafts upwards of 20 tons in weight, and forgings of the largest description for the principal engineers in London, the total weight of hammered iron produced in one year exceeding 1,000 tons. The Engineering Departments have executed a considerable portion of the Britannia Tubular Bridge, upwards of 1,000 tons of wrought-iron bridges for the East-India Railways, the wrought-iron bridges for the North London Railway, the beautiful iron roof for the terminus of the Blackwall Railway, and the portion of the iron work at present completed for the new bridge at Westminster; while in the Boilermakers' Department, marine boilers, equal to 4,000-horse power, can be produced annually.

The principal buildings are on the freehold portion of the property, and have been erected in the most substantial manner; they include the hammer and rolling-mills, the foundries, engineers' shops, smithies, press and pattern makers' shops, and are fitted with five Nasmyth's hammers from ten cwt. to five tons, the two larger ones having double cranes and furnaces, thus affording a two-fold capacity; two tilt hammers, three sets of rolling mills for plates and bars, worked by condensed steam-engines, equal to 150-horse power; powerful shearing and punching presses, bending rolls, planing and slotting machines, drilling machines, numerous self-acting lathes, several of which are adapted for the heaviest work; smiths' forges, plate, angle, and balling furnaces; fitters' lathes and tools, &c. The whole of the machinery, by the best makers, and with all the modern improvements, a considerable portion new within three years, a spacious boiler-makers' shop, fitted with forges, furnaces, shearing, punching, and drilling machines, steam rivetting machine, travelling cranes, &c.; an angle iron shop, with massive shaping plates, furnaces, &c., a capacious mould loft, a saw mill fitted with timber and deal sawing frames, planing, moulding, and morticing engines, worked by a 60-horse power steam-engine. In the ship-yard are twelve slips for building vessels of the largest tonnage, steam kilns, saw pits, mast house, boat-building and block-making shops, joiners' and carpenters' shops, rigging lofts, stores of various descriptions, offices, and other buildings. The situation of these works affords the greatest facility for the transit of goods by land or water carriage, as there is a siding on to the North Woolwich Railway, and several wharfs next the water side, with powerful cranes, one of them being a steam crane equal to twenty-five tons. The proximity of the East India and Victoria Docks is also of great advantage. The average cost of coals during the years 1854 and 1855 barely exceeded 17s. per ton, while the numerous termini of railways in the metropolis, from which a large quantity of worn rails are annually obtainable, together with the vast accumulation of waste iron from the different manufacturing establishments in London, ensure a constant and sufficient supply of scrap iron for the purposes of the mills and forge on the best possible terms. The construction of these works, the whole of which has been effected within the last fourteen years, has involved an outlay approaching 250,000l. expended under the immediate superintendence of eminent practical men. The result shows the formation of an establishment of great extent, enormous in its capabilities, unrivalled in situation, enjoying the highest reputation for the character of the works performed, possessing facilities for the transaction of business unequalled by any, and containing within itself all the accessories requisite to command a large and lucrative trade. The tenure of the property is partly freehold and partly leasehold.

The works may be viewed till the sale, by cards only, which may be obtained shortly, together with printed particulars, of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newbon and Evans, Solicitors, Wardrobe-place, Doctors' commons; of Messrs. Pullen and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, London.

SOUTHALL, MIDDLESEX. IMPORTANT to BUILDERS. An excellent Freehold Residence, seated in park-like grounds, and seventeen acres of rich meadow land, having valuable frontages to the high road, situate close to the station, with immediate possession.

CHINNOCK and GALSWORTHY have been favoured with instructions to SELL by AUCTION, on THURSDAY, JULY 24th, at TWELVE, at the MART (unless previously disposed of by private treaty), the important FREEHOLD (and small part copyhold) ESTATE, late the residence of Mrs. Serjeant Lawes, situate near the high road at Southall, comprising a good square-built family house, stable, double coach-house, delightful pleasure and kitchen gardens, fish-pond, park-like grounds, well timbered, and seventeen acres of superior meadow land in high cultivation: the whole lying in a ring fence, and having very valuable building frontages. Descriptive particulars, with plans, may be obtained of Thos. Browning, Esq. Solicitor, 1, Hatton-court, Threadneedle-street; of Geo. Wales, Esq. Surveyor, Great St. Helen's; and at the Auctioneers' Offices, 28, Regent-street, Waterloo-place.

PIMLICO.—MARBLE CHIMNEY-PIECES, &c.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, at the SHOW-ROOMS, Belgrave-wharf, Pimlico, on MONDAY, JULY 7th, at ONE, a selection of MARBLE CHIMNEY-PIECES, in every variety of style, also in alabaster and stone; Caen stone and alabaster monuments, tablets, &c.—May be viewed two days previous, and catalogues had on the premises, and of the Auctioneers, 40, Parliament-street, Westminster.

TO MARBLE MASONS, BUILDERS, SCULPTORS, AND OTHERS.

MESSRS. EVERSFIELD and HORNE have received instructions from Mr. Fabbricotti to SELL by AUCTION, at this WHARF, Thames Bank, Pimlico, on TUESDAY, JULY 8th, at TWELVE for ONE, a choice selection of MARBLE, recently imported, consisting of Statuary, Vein, Sicilian, Black and Gold, and Dove, in block and scantling.—May be viewed one week previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, Westminster, and Coal Exchange.

ACTON GREEN. Leasehold Estate of Cottage Property, with small Brewery, &c.

MESSRS. EVERSFIELD and HORNE are instructed by the lessee and his mortgagees, to SELL by AUCTION, at the MART, on WEDNESDAY, JULY 9, at ONE o'clock, a SMALL LEASEHOLD ESTATE; consisting of two brick-built cottages, producing 26l. a year, and the Acorn Brewery and Tavern; the latter being partly converted into two cottages, and the brewhouse, which is substantially built, stands upon sufficient ground for the erection of three more cottages (if thought desirable to convert it, and by which a rental of 90l. a year might be obtained). It is fitted with a plant of about three-quarters, which with the tenants' fixtures (if any) in or about the premises, are to be taken by the purchaser at a valuation in the usual way. Held on lease for a long term unexpired, at 25l. a year ground-rent.—May be viewed and particulars had of Mr. Edward Jennings, Solicitors, 12, New Boswell-court, Lincoln's-inn; also of Mr. Adamson, Turnham-green; at the Mart; and of the Auctioneers, 40, Parliament-street, Westminster; and Coal-Exchange.

THAMES-BANK.—Extensive Sale of Marble at Lloyd's Wharf.

MESSRS. EVERSFIELD and HORNE have received instructions to SELL by AUCTION, at LLOYD'S MARBLE WHARF, foot of Vauxhall-bridge, Thames Bank, on THURSDAY, JULY 10th, at ONE precisely, a choice selection of MARBLE, consisting of Statuary, Sicilian, Vein, Black and Gold, Dove, Emperor's red, and Bardilla, in block and scantling.—May be viewed three days previous, and catalogues had at the place of sale; and of the Auctioneers, 40, Parliament-street, Westminster, and Coal Exchange. N.B. Approved bills at six months from purchasers above 30l.

GOVERNMENT STORES, WESTMINSTER.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, at the STORE-YARD, Great Smith-street, Westminster, on FRIDAY, 11th JULY, at TEN for ELEVEN, by order of the Commissioners of Her Majesty's Works and Public Buildings, a large quantity of STORES and FURNITURE, comprising mahogany and other tables, stuffed chairs and settees, book-cases and shelves, carpets, oil-cloth, cocoa-fibre and other matting, red cloth, and cuttings of ditto, rope mats, bedsteads and bedding, curtains, office fittings, lamps, old metal, a 4-wheel carriage, with indicator, and various other effects.—May be viewed one day previous, and catalogues had at the Office of Works, &c. 12, Whitehall-place; at the Store-yard; and of the Auctioneers, 40, Parliament-street, Westminster, and Coal Exchange.

The Stock of a Timber Merchant and Builder.

MR. LEREW will SELL by AUCTION, on on the PREMISES, No. 42, Union-street, Somers-town, on MONDAY, JULY 7, at TWELVE, the excellent STOCK; comprising about 2,000 planks, deals and battens; 120 squares of flooring, 7,000 feet quartering, 10,000 feet wide pine board, dry-cut stuff, fifty doors, eight loads of oak and ash plank, 300 oak spokes, 400 ash felloes, four benches, ninety scaffold-poles, seventy-four boards and eight doz. cords, forty-two putlogs, ten ladders, barrows, and other useful stock.—To be viewed on the Saturday prior to the sale, when catalogues may be had on the Premises; and of the Auctioneer, Cardington-street, Hampstead-road.

Building Materials, Fetter-lane; Little Prescott-street, Minories; and Essex-street, Mile End.

PULLEN and SON are directed to SELL by TENDER, on MONDAY, JULY 7, in three lots, the BUILDING MATERIALS of No. 13, Fetter-lane, Fleet-street; No. 9, White Horse-court, Prescott-street; and the Premises known as the St. James's Union Asylum, in Essex-street, Devonshire-street, Mile End Old Town. The materials comprise good sound brickwork, lead gutters, boarded and timber floors and roofs; slates and tiles, sashes, doors, and interior fittings; stone-paving, stoves, &c.—May be viewed, and particulars had of PULLEN and SON, 80, Fore-street, Cripplegate, where Tenders may be sent before FIVE o'clock on MONDAY.

FREEHOLD BUILDING LAND, four miles from the City, close to the Forest-gate Station, Stratford, Essex.

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the MART, on MONDAY, JULY 28th, at TWELVE, in fourteen lots, unless an acceptable offer be previously made, TEN ACRES of eligible FREEHOLD BUILDING LAND, situate close to the Forest-gate Station, on the Eastern Counties Railway, near Wanstead Forest, and admirably adapted for the erection of villas and moderate-sized houses. The lots will have frontages varying from 590 feet to 80 feet each to well-made roads.—May be viewed, and printed particulars had at the Eagle and Child, Forest-gate; of D. B. Sladen, Esq. 2, King's Arms-yard, Moorgate-street; at the Mart; and of Messrs. H. Brown and T. A. Roberts, 22, Throgmorton-street.

FREEHOLD BUILDING LAND.—CARSHALTON, SURREY, near the Railway Station.

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the MART, on MONDAY, JULY 28, at TWELVE, in Ten Lots, unless an acceptable offer be previously made, about TWELVE ACRES of FREEHOLD BUILDING LAND, situate within a few minutes' walk of the Carshalton Station, on the Croydon and Epsom Railway, about eleven miles from London. The lots will have frontage varying from 400 feet to 80 feet each, and contain from half an acre to two acres each. The land stands on an eminence, commanding extensive views, is very dry, and desirably situate for first-class residences, the neighbourhood being particularly healthy.—May be viewed, and printed particulars had at the Melbourne Hotel, Carshalton; of D. B. Sladen, Esq. 2, King's Arms-yard, Moorgate-street; at the Mart; and of Messrs. H. Brown and T. A. Roberts, 22, Throgmorton-street.

HOUNSLOW and HESTON.—About 25 Acres of CAPITAL LAND, near the Staines-road, Hounslow, three acres in Cranford-lane, and one acre in the Spirt, freehold, and free from tithe and land-tax.

MR. PEISLEY will SELL by AUCTION, at the RED LION INN, Hounslow, on TUESDAY, JULY 15, at TWO, in Lots, a valuable FREEHOLD ESTATE, consisting of a cottage residence, with about 25 acres of first-rate arable land, well situate, adjoining the residence and grounds of Mr. Charles Eley, and very near the Staines-road, Hounslow. This ground is remarkable for growing some of the finest wheat in the county, and is admirably adapted for market gardens; it is also very eligible for building purposes, and a leading road (which is much required by the public) can easily be made from the Staines to the Bath road, with the consent of two other proprietors, who, it is presumed, will give every facility; also an excellent Meadow, of about three acres, well situate, in Cranford-lane, near Heston, and containing valuable brick earth; and a capital Meadow of about one acre, situate in the Spirt, near the last-named; the whole in the occupation of Mr. C. Eley and Mr. Peter Temple, as yearly tenants.—May be viewed by permission of the tenants; and particulars had at the Mart; of H. Farnell, Esq. Isleworth; of R. H. Wyatt, Esq. 28, Parliament-street; at the Castle Inns, Windsor, Sunbury, Richmond, Brentford, and Hammersmith; the George and Northumberland Arms, Isleworth; and of Mr. Peisley, Hounslow.

FREEHOLD LANDED PROPERTY near BRISTOL.—To CAPITALISTS, CONTRACTORS for PUBLIC WORKS, BUILDERS, STONE-MERCHANTS, and OTHERS.—The Dundry Downs Estate, with its valuable Freestone Quarries.

MR. F. G. DEBENHAM has received instructions from the mortgagee to SELL by AUCTION, at the MART, on WEDNESDAY, the 16th JULY, at TWELVE, in two lots, the important FREEHOLD ESTATE known as "Dundry Downs," comprising about eighty acres of excellent pasture land, situate on the summit of Dundry hill, 4½ miles from the city of Bristol, with the exceedingly valuable quarries, containing an immense quantity of the finest description of building stone, the quality of which has been tested by C. H. Smith, Esq. of London (one of the gentlemen appointed under the authority of the Lords Commissioners to select the stone used for the new Houses of Parliament), whose report has been published and is highly satisfactory. It is specially adapted for substantial and ornamental buildings, and possesses great durability; evidence of which is supplied by the excellent preservation of Dundry church tower, built with stone from these quarries in the thirteenth century. The quarry has been recently opened, and only a small additional outlay will be required to place it in full working order.

Lot 1 comprises SEVENTY ACRES, including two cottages, occupied by Mr. Charles Withey, Mr. Chard, and Mr. Carp; and produces a present rental of 90l. per annum; and

Lot 2, NINE ACRES of RICH PASTURE, let to Mr. R. Batt, at 20l. per annum, both forming solid landed investments, with the valuable prospective advantages, in addition, of the Royalties to be derived from the Quarries. The views from the summit of the hill can hardly be exceeded in extent and beauty.—Particulars with conditions of sale and plans may be obtained of Mr. R. Batt, Dundry, who will show the Estate; of Messrs. Ashmead and Son, Surveyors, Bristol; of Messrs. Cuddon, Norwich; of Mr. J. G. Hobbs, Solicitor, Bristol; and at Mr. Debenham's Auction and Estate Agency Offices, 80, Cheapside, London, where also specimens of the stone can be seen.

TO BUILDERS. Thirteen capital Brick-built Carcasses, in excellent positions, without reserve.

MESSRS. SPILLMAN and SPENCE will SELL by AUCTION, at the MART, on THURSDAY, JULY 24, at TWELVE, thirteen capital sound CARCASSES for ten and eight room houses, six having shops; also the Brunswick Arms, a substantial and imposing structure, nearly complete, well situate in Brunswick-place, Brunswick-road, and Whittington-place, in the high road, Upper Holloway, near the Archway Tavern, an undeniable locality—severally held for 99 years, at low ground-rents. Particulars and conditions of sale at the Mart; of Geo. Carlisle, Esq. Solicitor, 3, Sise-lane; James Peachey, Esq. Solicitor, 17, Salisbury-square, Fleet-street; and at the Auctioneers' Offices, 42, Bell-yard, Temple-bar.

CAPITAL ORGAN TO BE SOLD, a bargain. Eight stops, Venetian swell, three composition pedals.—Apply to Mr. W. D. CLARKE, 152, Trinity-square, Southwark.

THE HARROW FREEHOLD LAND TONTINE, to be established under a Deed of Settlement, to be enrolled in the High Court of Chancery. Capital, 84,000l. in 4,000 Shares of 21l. each, payable by instalments.

PROVISIONAL COMMITTEE OF MANAGEMENT.

Edward Samuel Alderson, esq. 2, New-square, Lincoln's-inn.
Vice-Admiral Sir Andrew Pellett Green, K.C.H. 9, James-street, Buckingham-gate.
Joseph Henry Good, esq. 21, Upper Hamilton-terrace, St. John's-wood.
Jasper Wilson Johns, esq. Lawrence Pountney-hill, Cannon-street.
William Ghrimes Kell, esq. 112, Westbourne-terrace, Hyde-park.
George Henry Smith, esq. H.E.I.C.S. Cleveland-square, Hyde-park.
Frederick Hale Thompson, esq. 4, Clarges-street, Piccadilly.
Edmund White, esq. 59, York-terrace, Regent's-park.

AUDITORS.

William Turquand, esq. 13, Old Jewry Chambers.
Joseph Radford, esq. 22, Gloucester-road, Regent's-park.

BANKERS.—The London and Westminster Bank.
ARCHITECT.—C. Octavius Parnell, esq. 5, Pall-mall.
SURVEYORS.—Messrs. Chinnock and Galsworthy, 28, Regent-street.

SOLICITORS.

Messrs. Pickering, Tompson, and Co. 4, Stone-buildings, Lincoln's-inn.
SECRETARY.—John Bennett, esq.
TEMPORARY OFFICES.—35, Ludgate-hill.

IMMEDIATE ADVANTAGES WITHOUT RISK.

The promoters of this Tontine have secured a valuable estate, consisting of 168 acres of very superior freehold land in the county of Middlesex, forming part of the Hermitage domain, eleven miles from London, and contiguous to the Harrow Station, on the London and North-Western Railway, with the view of building thereon villa residences, of the yearly value of 50l. each and upwards, fit for the reception of wealthy residents and respectable families of moderate income, whereby it is estimated a return of 9l. per cent. per annum will be secured upon the capital employed.

Residents will be entitled to the valuable privileges of Harrow School, which is within an easy walk of the estate; and the London and North-Western Railway Company offer to those persons who shall erect houses of approved elevation on this estate, and of the annual value of 50l. each, and upwards, one first-class free pass between the Harrow Station and Euston-square, for the occupier for the time being of each of such houses, during a period of eleven years.

Water in abundance, and of most excellent quality, is obtainable within very few feet of the surface of the land.

The shareholders will be entitled, during the lives of their respective nominees, to share in the annual profits of the undertaking, until seven-eighths in number of the lives originally nominated shall have fallen in, when the entire property of the Tontine will be divided among the then remaining shareholders: and until such division each shareholder will have a chance (if he shall think fit) of becoming an occupier, at a moderate rent, of a villa to be erected on the estate, and of obtaining, without cost, the possession of a free railway-pass as before mentioned, and likewise of enjoying the privileges of Harrow School.

Every shareholder will be entitled to nominate one life, of any age, for each share subscribed for by him, or he may subscribe for several shares on the same life, and the directors will be restrained by the deed of settlement from incurring liabilities beyond the amount of the funds for the time being available for the purposes of the Tontine, whereby the shareholders will incur no risk beyond the amount of the shares subscribed for.

Applications for shares may be directed to the Secretary, or to the Solicitors of the Company, in the form hereto annexed, and must be accompanied with a deposit of 1l. for every share applied for, which will be returned to the applicant with respect to such shares as shall not be allotted to him, and should all the shares in the Tontine not be allotted, the whole of such deposits will be returned without any deductions whatsoever.

The residue of the sum payable on the respective shares shall be paid by monthly instalments of 1l. each, to be calculated from the date of the allotment thereof.

Arrangements have been made with most respectable and responsible insurance offices to insure the lives of nominees at a moderate annual premium; and which insurances may be effected at the offices of the Tontine—whereby shareholders may guard against the possibility of loss, while they will enjoy the chance of gaining a large profit upon their investment.

FORM OF APPLICATION FOR SHARES.

THE HARROW FREEHOLD LAND TONTINE.

Be pleased to allot me   shares of 21l. each in the above-mentioned Tontine; and enclosed I send you a deposit of   l. per share thereon. And I undertake to accept such shares, or any less number that may be allotted to me, and to acquaint you with the names and full particulars of my nominee or nominees upon receiving notice of such allotment.

Dated this   day of   , 1856.

To the Provisional Committee of Management.

Name in full ....
Address ....
Occupation ....

Post office orders and checks may be made payable to the Secretary, JOHN BENNETT, Esq.; and prospectuses, with plans, may be obtained, and the reports of the architects and surveyors may be inspected, at the Company's Office.

NEW WINDSOR ESTATE.—Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences, with Stabling, which are much needed in this beautiful locality. The situation is the finest in or near Windsor, abutting on the Park and Long Walk, and commanding a splendid view of the Castle. Within ten minutes' of the Great Western, and fifteen minutes' walk of the South-Western Railway Stations. Advances can be had by responsible parties.—For particulars apply to Mr. WILLIAM SIM, Architect and Surveyor, 2, Danes-Inn, Strand.

London: Printed by Charles Wyman, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said Charles Wyman, at the Office of "The Builder," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, July 5, 1856.

The Builder,

A JOURNEY FOR THE

Architect, Engineer, Operative & Artist.

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WILL CLOSE ON THE 26th INSTANT.

ROYAL ACADEMY of ARTS, Trafalgar-square. The EXHIBITION of the ROYAL ACADEMY is NOW OPEN. Admittance (from Eight till Seven o'clock), One Shilling. Catalogue, One Shilling.
J. P. KNIGHT, R.A. Secretary.

WILL SHORTLY CLOSE.—SOCIETY of PAINTERS in WATER COLOURS. The FIFTY SECOND ANNUAL EXHIBITION is NOW OPEN, at their Gallery, 5, Pall Mall East (close to Trafalgar-square), from Nine till dusk. Admission 1s.; Catalogue 6d.
JOSEPH J. JENKINS, Secretary.

THE NEW SOCIETY of PAINTERS in WATER-COLOURS.—The TWENTY SECOND ANNUAL EXHIBITION is NOW OPEN, at their Gallery, 53, Pall-mall (near St. James's-palace) daily from Nine till dusk. Admission, 1s.; Season-tickets, 5s.
JAS. FAHEY, Secretary.

THE OPERATIVE MASONS' BENEFIT SOCIETY, held at The George, Great Chapel-street, Soho, Instituted 1810 Enrolled 10 Geo. 4. c. 56. The FORTY-SIXTH ANNIVERSARY of the above Society will be celebrated on TUESDAY, JULY 15, 1856, at the Manor House Tavern, Walworth. C. H. SMITH, Esq. in the chair. Dinner on table at HALF-PAST THREE o'clock precisely.

HONORARY SUBSCRIBERS.

Messrs. G. Baker and Son.
" W. Cubitt and Co.
" T. Piper and Son.
" W. and J. Freeman.
" Smith and Appleford.
" Thompson and Holmes.
T. Cubitt, esq.
T. Cowlishaw, esq.
R. Batterbury, esq.
J. J. W. Bird, esq.
G. Dyke, esq.
J. Foot, esq.
E. Fluester, esq.
E. Furrow, esq.
T. Grissell, esq.
W. Harding, esq.
S. Hancock, esq.
T. Jackson, esq.
G. Myers, esq.
T. Stirling, esq.
W. Wright, esq.
C. H. Smith, esq.

STEWARDS.

J. Britton, 28, Desborough-terrace, Harrow-road.
J. J. W. Bird, 3 Gloucester-road, North Camden-town.
R. Hassell, 9, Moreton-street, Belgrave-road, Pimlico.
Tickets to be obtained of the Stewards.

NOTICE is hereby given, that a GENERAL QUARTERLY MEETING of MEMBERS of the INSTITUTION of BUILDERS' FOREMEN and CLERKS of WORKS, will take place on WEDNESDAY evening next, at the Bay Tree Tavern, St. Swithin's-lane, for the purpose of transacting the usual Quarterly and other General Business.
W. ALLARD, Secretary.

THE ARCHITECTURAL MUSEUM, Canon-row, Westminster.—The annual CONVERSAZIONE will be held on WEDNESDAY, JULY 16th at EIGHT o'clock the Right Hon. the Earl De GREY, K.G. President, in the chair
GEORGE GILBERT SCOTT, Treasurer.
HENRY CLUTTON, Hon. Sec.

The entrance to the Museum is from the archway in Parliament-street, near Richmond terrace.
July 11th, 1856.

ARCHITECTURAL EXHIBITION. Exhibitors in the Department of Materials and Inventions connected with building, should apply immediately for space by letter, stating all particulars, to Mr. EDMESTON, as the committee are ready to allot the same as soon as a sufficient number of applications are made, and those who defer applying will be disappointed as on the last occasion. The Exhibition will open in DECEMBER next, at the Galleries, Suffolk-street.

JAMES FERGUSSON, F.R.A.S. } Honorary
JAMES EDMESTON, jun. } Secretaries.
29, Lincoln's-inn-fields.
5, Crown-court.

COMPETITIONS.

PARISH of BRIGHTON.—To ARCHITECTS and OTHERS.—The Brighton Burial Board are desirous of procuring DESIGNS for the ERECTION of TWO CHAPELS, RECEIVING HOUSE, SEXTON'S LODGE, and MEMORIAL GATEWAY, and are inquired with detailed working drawings, specifications, and estimates. The outlay must not exceed 2,250l. The Board will award to the author of the best design in their judgment, subject to the approval of the bishop of the diocese, the sum of 20 guineas; and to the author of the second best design the sum of 10 guineas. Designs for which premiums are awarded will become the property of the Burial Board, who will not bind themselves to employ the author to superintend carrying out the works. The Board will not pay either of the premiums, unless a sufficient Tender be made for the actual execution of the works at or within the stipulated sum of 2,250l. If the Board employ the author of the design to superintend the execution of the buildings, the premium will merge in the commission, which is not to exceed 5 per cent. on the lowest Tender accepted, including travelling and other expenses. A plan and section of the land may be inspected, and general instructions be obtained, at the office of the Burial Board, Parochial Offices, Church-street, Brighton, on application to Mr. MAYNARD, the Surveyor. Designs must be lithographed at the said offices, free of all expenses, on or before the 4th day of AUGUST next, marked with an emblem or motto, and accompanied by a sealed note, having the same emblem or motto on the outside, and enclosing the name and address of the author. The designs not approved will be returned to the authors on application.—By order of the Board,
July 4, 1856. SOMERS CLARKE, Vestry Clerk.

CONTRACTS.

TO BUILDERS.—WHITECHAPEL UNION WORKHOUSE.—The Guardians of the Whitechapel Union will meet at the Workhouse, in the Whitechapel-road, on FRIDAY, the 1st of AUGUST next, at THREE o'clock in the afternoon precisely, to receive TENDERS and CONTRACTS for BUILDING the FIRST PORTION of the NEW WORKHOUSE for this Union, in Charles-street, Mile-end New-town. The plans, specification, and conditions of Contract, may be inspected at the offices of the Architect, THOMAS D. BARRY, Esq. 15, Lincoln's-inn-fields, London, and 47, Bedford-street North, Liverpool, from the 14th to the 19th JULY next. Bui ders proposing to Tender, or their representatives, are invited to meet the Architect, at his office, 15, Lincoln's-inn-fields, London, on FRIDAY, the 4th of JULY next, for general explanation, and to receive particulars. Tenders must be delivered sealed and indorsed, "Tender for Workhouse," at the Whitechapel Workhouse, previous to the time of meeting; and the person whose Tender is accepted will be required to give satisfactory security in the sum of 2,000l. for the due performance of the Contract. The Guardians reserve to themselves the right not to accept the lowest or any Tender. By order of the Board,
G. ADAMS PARR, Clerk to the Guardians.

THE PUBLIC HEALTH ACT, 1848.—To CONTRACTORS and OTHERS.—The Local Board of Health for the district of Leamington, are prepared to receive TENDERS for the CONSTRUCTION of TWO COVERED RESERVOIRS (each capable of containing five millions of gallons of water), on the Newbold-hill, near Leamington, with the LAYING of WATER MAINS, 12 yards in length, of 12 inches and 9 inches internal diameter, and other works connected therewith; the plans for which may be seen, and further particulars thereof obtained, on application to Mr. JOSEPH PHILLIPS SHARP, Surveyor to the Local Board, at his Office, Town-hall, Leamington; and copies of the specification and form of Tender may be obtained on application to the Clerk, at his Office, Townhall, on payment of 1s. on and after MONDAY, the 7th day of JULY, 1856, to whom Tenders must be forwarded, endorsed "Tender for Reservoirs on Newbold-hill," on or before MONDAY, the 21st day of JULY, 1856. The Board do not bind themselves to accept the lowest or any Tender.—By order.
R. H. DAVIES, Clerk.

Town-hall, Leamington, June 17, 1856.

BOROUGH of LEEDS.—WANTED, by the Town Hall Committee of the Council of this Borough, plans, specifications, and estimates for WARMING and VENTILATING the TOWN HALL at present erecting in the said borough. All plans, &c. to be sent to the Town Clerk's Office, not later than THURSDAY, the 24th JULY next, addressed to "The Chairman of the Town Hall Committee," plans, &c. for warming and ventilating." A ground plan of the building may be seen, and any information obtained, at the Office of the Architect at the Works; but the Committee do not bind themselves to adopt the lowest estimate, or any plan which may be sent in.
By order,
JOHN A. IRIN, Town Clerk.

Leeds, June 27, 1856.

WARE LOCAL BOARD of HEALTH.—CONTRACT for PAVING, SUPPLYING MATERIALS, &c.—The Local Board of Health are prepared to receive TENDERS from parties willing to CONTRACT for LAYING DOWN PAVING, CURBING, and other WORKS required in forming Paths, &c. in the Town of Ware, and for Supplying best Aberdeen Granite Curb Stone, and Welch Rockmill Flagging for the same. Plans and specifications may be seen, and particulars and other information obtained, by applying to the Clerk, between the hours of ELEVEN and FOUR. Tenders to be sent to, or delivered at the Office of the Local Board, at Ware, on or before MONDAY, the 21st of JULY next. The Board do not bind themselves to accept the lowest, or any Tender.—By order,
NATH. COBHAM, Clerk to the Board.

Ware, June 24, 1856.

TO BUILDERS.—Persons desirous of CONTRACTING for the ERECTION of SIX HOUSES, in the CITY-ROAD, can see the plans and specifications, and obtain further particulars, at the Offices of the Architects, Messrs. WEIGHELL and ASHDOWN, 12, Charing-cross. The right is reserved to reject the lowest or any Tender.—Tenders to be delivered on the 24th inst. at TWELVE o'clock.

CONTRACTS.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, on or before FRIDAY, the 18th day of JULY next, from persons desirous of CONTRACTING with the War Department for ERECTING a GUNPOWDER MAGAZINE, at Upnor Castle, near Chatham. Plans and specifications of the works are to be seen, and forms of Tender obtained, on application at the Royal Engineer office, Chatham, between the hours of TEN and FOUR, till the 17th of JULY next, Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible sureties, jointly and separately to be bound, under a penalty of 5,000l. for the due performance of the Contract. Tenders to be addressed to "The Director-General of Contracts, War Department, Pall-mall, London," and to be delivered free, endorsed, "Tender for Works at Upnor Castle." No Tender can be admitted after the said 18th day of JULY, 1856.

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Chatham, 30th June, 1856.

TO BUILDERS, IRONFOUNDERS, &c. KENT COUNTY PRISONS, MAIDSTONE.—Persons desirous of CONTRACTING with the Justices of the County of Kent for the ERECTION of additional BUILDINGS at the NEW PRISON for FEMALES, may inspect the plans and specifications, and obtain all other information, at the Office of the County Surveyor, at Maidstone; or at the Office of Messrs. ASHPITEL and WHICHCORD, Architects, No. 2, Pietercorner, Westminster; and they are requested to deliver Tenders for the said Works to the County Surveyor, at Maidstone, sealed, and marked "Tender for Prison Buildings," before TEN o'clock in the forenoon of SATURDAY, the 19th day of JULY next, and to attend personally at the General Sessions, to be holden at the Court-house, at Maidstone, at HALF-PAST TWELVE o'clock in the afternoon, on MONDAY, the 21st day of JULY next. The lowest Tender will not necessarily be accepted, unless approved in all respects. Security will be required for the performance of the contract, and the names of the sureties proposed are to be named in the Tender
H. A. WILDES, Clerk of the Peace for Kent.

Maidstone, June 21, 1856.

N.B.—The quantities will be furnished.

CONTRACTS.—WAR DEPARTMENT.—To BUILDERS and CONTRACTORS.—The Commanding Royal Engineer at Aldershot hereby gives Notice, that sealed TENDERS will be received by the Director General of Contracts, War Department, Pall Mall, London, until TEN o'clock, on SATURDAY, the 9th AUGUST 1856, from parties willing to Contract for the ERECTION and COMPLETION of
Two wooden Buildings for chaplain's quarters.
One ditto for commissariat storekeeper's ditto.
Two Sachet-roof Privies.
Foundations for two Iron Stores.
Wooden Fitments to Barrack Store (to form one Tender); and
Two large Iron Stores, exclusive of Foundations (to form a separate Tender).

Plans may be seen, and specifications and forms of Tender obtained, on application at the Royal Engineer's Office, Aldershot, on and after the 18th instant.

The War Department reserves the right of rejecting the whole or any of the Tenders.

TO CONTRACTORS, BUILDERS, and OTHERS.—The Burial Board for the Parish of West Ham, in the county of Essex, require TENDERS from persons willing to CONTRACT for EN LOSING about TWELVE ACRES of LAND, situate near to the Wanstead Industrial School, Forest-lane, in the said Parish of West Ham, with a boundary wall iron railing and extensive iron gates, and for ERECTING TWO CHAPELS and a LODGE. The iron railing and gates to be tendered for separately. The Board do not require personal attendance, and will not bind themselves to accept the lowest or any other Tender, but the party whose Tender shall be approved will receive notice thereof, and will be called upon to execute an agreement, and to give bond with sufficient sureties for the due performance of the Contract, according to the plans and specifications, and to the satisfaction of Mr. T. E. KNIGHLEY, Architect, of No. 25, Cannon-street, City, of whom any further particulars may be obtained, and where may be seen daily, from TEN and FOUR o'clock, the said plans and specifications up to and including THURSDAY, the 24th instant. Every Tender is to be sealed, and marked "Tender for Works to West Ham Burial Ground," and is to be addressed to Mr. JOHN SUTTON, Clerk to the West Ham Burial Board, Robert's Hotel, Stratford, Essex, and to be delivered by TWELVE o'clock on FRIDAY, the 25th instant, after which hour no Tender will be received.
Dated 7th July, 1856.

WEST HAM CEMETERY.—The quantities are taken out for the above work, and may be obtained at the Architect's Offices, 25, Cannon-street, City.

THE BOARD of WORKS for the LEWISHAM DISTRICT.—Notice is hereby given, that at the meeting of the Board to be held on THURSDAY, the 24th JULY next, the Board will be ready to receive TENDERS for the EXECUTION of the SEWERAGE WORKS and parts of those first in length proposed to be constructed in Stanstead-road, and parts adjacent, within the said district. The works are submitted for tender in a second time, in consequence of the Board not having accepted any of the tenders sent in for the first time of asking. Plans, sections, and specifications of the works may be seen at the Board's Office, Lewisham, on and after Monday next, and tenders are to be made in accordance with the printed forms to be obtained at the Office; and to be sent in, or delivered at that Office, by or before FOUR o'clock in the afternoon of the same day. Parties do not need themselves to attend to tender personally.
OCTAVIUS C. TILSON EGGLETON, Clerk to the Board.
Grove-place, Lewisham, July 8th, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

LONDON and NORTH-WESTERN RAILWAY.—Crewe and Shrewsbury Railway.—CONTRACT for WORKS. The Directors are prepared to receive TENDERS for the CONSTRUCTION of the RAILWAY from Crewe to Wem, a distance of twenty-two miles, or thereabouts. The plans and sections, together with the necessary drawings, specifications, and forms of Tender will be ready for inspection at the Office of Messrs. LOCKE and FRINGTON, 15, Duke-street, Westminster, on and before the 25th JULY. Sealed Tenders must be delivered not later than THURSDAY, AUGUST 7th, addressed to the Secretary, at Euston Station, London.

By order of the Board,
CHARLES E STEWART, Secretary.
Euston Station, London, July 10, 1856.

LONDON and NORTH-WESTERN RAILWAY.—CONTRACTORS.—The Directors of the London and North-Western Railway Company are prepared to receive TENDERS from COMPETENT PERSONS for the BRANCH RAILWAY from North[illegible] desirous of Tendering may see the drawings, and obtain a statement of the quantities, at the Office of Mr. G. P. STEPHENS, 24, Great George-street, Westminster, on MONDAY, the 21st of JULY [illegible] Tenders [illegible] or before WEDNESDAY, the 23rd JULY, at TEN o'clock a.m. The Directors do not bind themselves to accept the lowest Tender.

By order,
CHARLES E. STEWART, Secretary.
Secretary's Office, Euston Station, London, July 10, 1856.

TO BUILDERS.—The Burial Board for the Parish of Tottenham, in the County of Middlesex, hereby give notice that they are desirous of receiving TENDERS for the ERECTION of a CHAPEL, with vestry, porch, entrance gates, and [illegible] in the Cemetery belonging to the said Parish, and that the Plans, Specifications, and Conditions may be seen at the Office of the Architects, Messrs. PRICHETT and SON, [illegible] Bedford Row.

Tenders are to be delivered to Mr. HUNNIS, Clerk to the Board, at Tottenham, on or before the 25th instant.

Tottenham, July 9, 1856.

WIGAN LOCAL BOARD of HEALTH.—WATERWORKS.—Contract No. 3.—TO EXCAVATORS, PIPE-LAYERS, and OTHERS.—Persons willing to CONTRACT for EXCAVATING the GROUND, and LAYING and JOINTING WATER PIPES, SLUICE VALVES, HYDRANTS &c. required for the Local Board of Health for the districts of Wigan, may see the Plans, Specification, and Forms of Tender, at the Office of the said Local Board, in Wigan, or at the Offices of ROBERT RAWLINSON, C.E. 34, Parliament-street, Westminster, and obtain duplicate copies of the Schedules, Bill of Quantities, and Forms of Tender, on the payment of the sum of Five Shillings, on and after the 10th day of JULY, 1856. Sealed Tenders must be delivered at the Office of the Local Board in Wigan, before TWELVE o'clock on TUESDAY, the 22nd day of JULY, 1856, indorsed, "Tenders for Pipe-laying, &c."

(Signed) WILLIAM ACKERLEY,
Wigan, June 30th, 1856. Solicitor to the Local Board.

TO BUILDERS, who may be desirous of delivering TENDERS for the ERECTION of a MASTER'S RESIDENCE and OFFICES for the Shareholders of the Bishop's Stortford Proprietary School. The Plans and Specifications may be seen on Mr. WARD'S Premises, Hertford-road, Wallington-road; or at Mr. MULLINGER'S, Bishop's Stortford, between the hours of NINE and SIX. The Tenders to be delivered to Mr. J. B. MULLINGER, Bishop's Stortford, Herts, on or before THREE o'clock on TUESDAY, JULY 22, 1856. The Shareholders do not pledge themselves to accept the Lowest or any Tender.

THE CONSERVATIVE LAND SOCIETY.
TRUSTEES.
Viscount Raincliffe.
Right Hon. R. A. C. N. Hamilton, M.P.
Hon. Col. Lowther, M.P.
J. C. Cobbold, esq. M.P.

To ROAD CONTRACTORS, &c.—The Executive Committee are prepared to receive TENDERS for CONSTRUCTING the ROADS, DRAINAGE, and FENCING, on the WOODSPRING PARK ESTATE, Tunbridge-wells, Kent. The drawings and specification may be seen at the Offices of Mr. N. E. STEVENS, Architect, Church-road, Tunbridge-wells; or of the Surveyor, Mr. GEORGE MORGAN, 46, Norfolk-street, Strand, London, on and after WEDNESDAY, 9th JULY, 1856, between the hours of EIGHT and TWO. Tenders are to be delivered on or before TWELVE o'clock on FRIDAY, JULY 25th, to the Surveyor, at his Offices as indorsed "Tenders for Roads &c. Tunbridge-wells Estate." The Executive Committee do not bind themselves to accept the lowest or any tender.

CHARLES LEWIS GRUNEISEN.
[illegible] Stone Buildings, Lincoln's Inn, London.

THE CONSERVATIVE LAND SOCIETY.
TRUSTEES.
Viscount Raincliffe.
Right Hon. R. A. C. N. Hamilton, M.P.
Hon. Col. Lowther, M.P.
J. C. Cobbold, esq. M.P.

To ROAD CONTRACTORS, &c.—The Executive Committee are prepared to receive TENDERS for CONSTRUCTING the ROADS, DRAINAGE, and FENCING on the MALDON ESTATE, Essex. The drawings and specification may be seen at the offices of Mr. HENRY CUDD, Solicitor, Maldon; or of the Surveyor, Mr. GEORGE MORGAN, 46, Norfolk-street, Strand, London, on and after THURSDAY, 10th JUNE, 1856, between the hours of EIGHT and TWO. Tenders are to be delivered on or before TWELVE o'clock on FRIDAY, JULY 18th, to the Surveyor, at his Offices, and endorsed "Tenders for Roads, &c. Maldon Estate." The Executive Committee do not bind themselves to accept the lowest or any Tender.

CHARLES LEWIS GRUNEISEN,
33, Norfolk-street, Strand, London.

TO BUILDERS.—A VESTRY HALL is required to be ERECTED for the Parish of Willesden. Persons willing to Tender for the same may see the Plans and Specification at the Offices of the Surveyor, Mr. [illegible] Tenders to be delivered at the Vestry Room, at the Office, on FRIDAY, the 18th, at TWELVE.

TO CARMEN, EXCAVATORS, &c.—TENDERS are required for CLEARING a PIECE of GROUND in Hammersmith, for which purpose Plans may be seen at Mr. [illegible] Office, No. 14, Parliament-street, Westminster, on MONDAY.

TO BUILDERS.—Parties desirous of TENDERING for the ERECTION of NINE [illegible] Cottages, to be built at Waltham, near Bishop's Waltham, Hants, may see the Drawings and Specification at the Office of Mr. BASSELL, Surveyor, Bishop's Waltham, on and after MONDAY, the 14th day of JULY, and Tenders must be delivered at the Office of Messrs. [illegible] 21, Exeter Hall, Strand, to whom the Tenders must be sent on SATURDAY, the 19th of JULY, at TWELVE o'clock. The lowest Tender will not necessarily be accepted.

NOTICE to BUILDERS and CONTRACTORS.—Any person desirous of CONTRACTING for the BUILDING of the [illegible] Cottages, Workmen's Dwellings, Outbuildings, and Boundary Walls, at WOOLWICH, may see the Plans and Specification at the Office of Mr. [illegible] Woolwich, on and after MONDAY, JULY 14th, and on TUESDAY, the 15th of JULY inclusive, between the hours of TEN and FIVE. The lowest or any Tender will not be bound to accept.

CONTRACTS.

NEWCASTLE-UPON-TYNE. — QUAYSIDE IMPROVEMENTS. To MILLERS, CAPITALISTS, &c. — The Corporation of Newcastle-upon-Tyne having purchased, by virtue of an Act of Parliament, the whole of the property on the Quayside, commanding the finest and most valuable portion of the surrounding property, for the purpose of improving that part of the town, and having laid out the same into several new streets, which, when built, will form the best business streets in the town, are now prepared to receive TENDERS for the purchase of the whole or any of the SITES on each side of the intended street, No. 1, and also a great portion of the parallel street, according to plans and conditions now settled by the Council. The great demand for offices, shops, for wholesale and retail purposes, and warehouses, in those particular parts of the town, ensure to capitalists a safe and valuable investment. Plans and conditions may be seen on application to the Town Clerk, the Town Surveyor or JOHN DOBSON, Esq. Architect. Notice of intention to Tender, marked "Tenders for Sites, Quayside," addressed to the Town Clerk, will be received not later than [illegible].

N.B.—A large quantity of old building materials on the ground will be sold to any purchaser of premises who require the same.

THE LUTON LOCAL BOARD of HEALTH are prepared to receive TENDERS for BUILDING an INTERCEPTING SEWER, 3 Lodged DRAINS, connected therewith, and for ERECTING the TANKS, ENGINE HOUSE and other WORKS required for deodorizing and precipitating the sewage of the township, according to the directions of a deposition, which may be seen at the Engineer's Office, at or MONDAY, the 30th inst. and printed copies of the specification, conditions, bill of quantities, and form of Tender may be had on payment of 10s. 6d by applying to Mr. T. L. EVANS, C.E. as above. Tenders, sealed, addressed to the Clerk to the Local Board of Health for Luton, Beds, and delivered at the Office, Luton, St. Cole on or before TUESDAY, the 15th day of JULY.

Dated June 18th, 1856. GEORGE BAILEY, Clerk

TO BUILDERS, CARPENTERS, and OTHERS.—COUNTY POLICE STATIONS.—The Magistrates for the several Parishes and Places hereinafter mentioned are prepared to receive TENDERS for the ERECTION of POLICE-STATIONS at the several places following, viz.:—

Abingdon,	Newbury,
East Ilsley,	Wallingford,
Farringdon,	Wantage.

Persons desirous of Contracting for the works may see the plans, specifications, and particulars, and obtain bills of quantities, at the County Police Station, Friar-street; at my Office, Broad-street, Reading; and as hereinafter specified, viz.:—

Abingdon ..... At the COUNTY GAOL.
Eastilsey..... At the Office of Mr. HULBERT.
Farringdon ..... At the Office of Mr. CROWDY.
Newbury ..... At the Offices of Messrs. GRAY and GODWIN.
Wallingford ..... At the Office of Messrs. REDDES.
Wantage ..... At the Office of Mr. ORMOND.

Sealed Tenders must be delivered at the Office of the Clerk of the Peace, Reading, on or before SATURDAY, JULY 19th instant, between the hours of TEN and FOUR. Separate Tenders for each Station, sealed and properly endorsed, to be set up under each, addressed to the Chief Constable, Berks Constabulary, Reading, on or before SATURDAY, JULY 26th instant. The lowest Tender will not necessarily be accepted.—By order of the Magistrates.

J. B. CLACY, Architect, County Surveyor.

Reading, July 4, 1856.

GUILDFORD UNION.—To BUILDERS and CONTRACTORS.—EXTENSIVE ADDITIONS and ALTERATIONS to the GUILDFORD UNION WORKHOUSE. The Guardians of the Guildford Union, in the County of Surrey, hereby give notice, that they are desirous of receiving TENDERS for BUILDING NEW SCHOOLS and DORMITORIES, a NEW HOSPITAL, and other additions and alterations to the Workhouse, at Guildford Union, according to the plans and specifications prepared by Mr. C. H. HOWELL, Architect of Godalming, Surrey, and of the Norwich Union Insurance Office, New Bridge-street, London. The plans and specifications may be seen at the Architect's Office, in London (entrance, 1A, Union-street, New Bridge-street), after FRIDAY, the 11th JULY instant. A copy of the bill of quantities may be obtained from Mr. CHARLES POLAND, Surveyor, 72, Margaret-street, Cavendish-square, upon the payment of 11s. The Contractor whose Tender may be accepted will be required to give security for the due performance of the Contract. The Guardians do not pledge themselves to accept the lowest or any of the Tenders.—Tenders, indorsed "Building Tenders," to be delivered to me by NOON o'clock in the evening of FRIDAY, the 25th JULY instant.

By order of the Board,
W. HAYDON SMALLPEICE, Clerk.

Guildford, July 1, 1856.

HASTINGS LOCAL BOARD of HEALTH.—To CONTRACTORS for PUBLIC WORKS.—The Local Board of Health of Hastings give notice, that they are prepared to receive TENDERS from competent persons for the DRAINAGE of part of their district. The Contract will comprise the CONSTRUCTING and LAYING of about fifty yards of 4 feet CAST-IRON CULVERTS; 100 yards of 15-inch CAST-IRON PIPES; all provided by the Local Board; about 2 147 yards of BRICK SEWERS, from 1 foot 6 inches to 4 feet; and about 1,47[illegible] yards of GLAZED STONEWARE PIPES of sizes from 9 inches to 15 inches. Also the necessary Gullies, Ventilating Shafts, Side Entrances, and Tide Flaps. The specification and conditions of Contract and Tender, with printed form of Tender, may be obtained, upon payment of five shillings, and the plans, sections, and drawings, may be inspected at the Office of the Town Clerk, High-street, Hastings, between the hours of TEN and FOUR, on and after the 12th instant. The Local Board will require the works to be completed within six months from their commencement; and they do not bind themselves to accept the lowest Tender. Sureties will be required. Sealed Tenders on the forms supplied by the Local Board, properly indorsed and addressed to "The Hastings Local Board of Health," must be delivered at the Town Clerk's Office, Hastings, before TWELVE of the clock at noon of FRIDAY, the 25th day of JULY next. Full particulars of quantities will be furnished at the cash By order of the Local Board,

JOHN G. SHORTER, Town Clerk.

Hastings, June 9, 1856.

NORWICH NEW WORKHOUSE.—NOTICE to ARCHITECTS.—The TIME for sending in Plans &c. is EXTENDED to the 29th instant.

By order of the Guardians,
E. C. BAILEY, Clerk.

9th July, 1856.

MIDDLESEX INDUSTRIAL SCHOOL. The Committee of Visitors have selected the Designs for the proposed Industrial School, by Messrs. AICKIN and CAPES, Mr. GEORGE HENDERSON, and Mr. W. B. MOFFATT, and have awarded the premiums accordingly. In making this award they sought for the combined principles in preparing and forwarding designs, most of which appeared to be works of great care and labour, the committee notify to them that their services will be returned on application, on any day between the hours of TEN and FIVE o'clock.—Scala-House, Clerkenwell, July 10, 1856.

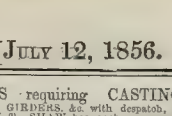
CHARLES WRIGHT, Clerk to the Visitors.

IRON FOUNDRY, Harrow-street, Lant[illegible]. — [illegible] W. R. BARTLETT, manufacturer of [illegible] Columns, Girders, and Bar Iron [illegible] Iron [illegible] Railings, Area Gratings, Sash Weights, [illegible] Weights, Pulleys, Pipes, Elbows, and Lathe Castings; Forge Backs, Furnace Bars, Rings, Pans, Pipes, [illegible] Patterns for castings from plans or drawings.

SELLING OFF.—STOCK of Rain-pipes, [illegible] Gutters, Sash weights, Railing-bars, Newels, Panel-, Sink-, [illegible] Weights, Chimney-pots, Slates, Iron Wire, Oil, Colours, &c. at 20 James-street, London-road, S. R. [illegible] Rain-pipes, per yard, 6½d.; Gutters, 6½d. per yard; Self-[illegible] Sash-weights, 3s. 6d. per cwt.; Sash-cords, 3s. 6d. per cwt.; Slates, 2s. per 100; Iron Wire, 1s. per cwt.; Oil, 2s. 6d. per gallon; Colours, 2s. per lb.; Rain-pipe shoes, 2d. each, &c. Illustrated Stock at 2d. per inch.

CONTRACTORS requiring CASTINGS, WROUGHT-IRON GIRDERS, &c. with despatch, and punctuality, MATTHEW T. SHAW has such arrangements that deliveries are made in a few days. Contractor for Plant and Stores of every description.—64, CANNON-STREET.

TO CONTRACTORS AND BUILDERS.
WROUGHT-IRON GIRDERS for BRIDGES and BUILDINGS, manufactured and guaranteed as to strength.
CAST IRON GIRDERS, for BRIDGES and BUILDINGS
Castings of every description.
ROLLED WROUGHT-IRON FLITCHES, for trussing between timber.



Orders executed in three days.
STORES, BOLTS & NUTS, SPIKES, RIVETS, CUT-NAILS, WROUGHT ditto, SCREWS, BOND HOOKS, CHAIN, &c.
CONTRACTORS' PLANT, RAILS, EARTH WAGGONS, and IRON WORK, for Wood Waggons, &c.

MATTHEW T. SHAW,
64, CANNON-STREET (late with C. J. Mare and Co.).

WROUGHT IRON GIRDERS, Steam Boilers, Gas Holders and Gas Apparatus, General Castings, Chains, Cables, and Contractors' Iron Work, Manufactured by MESSRS. HILL and JESSOP, Phœnix Works, Fir-hale, near Dudley.—London Office, 78, Hatton-garden.

MALLET'S PATENT BUCKLED PLATES.
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS,
No. 3, Mansion house-place, London, and No. 6, Berkley-street, Birmingham.
For Plan, Section, and Description, see "The Builder," May 17.

TUPPER and CARR,
Patent Galvanized and Uncalvanized
CORRUGATED IRON MANUFACTURERS,
IRON ROOF, SHED, AND STORE BUILDERS,
Electric Telegraph and Wire Fencing Contractors.
Works, BIRMINGHAM and BROMSGROVE.
Offices—3, MANSION HOUSE-PLACE, LONDON.
Iron of every description galvanized.

JOHN WALKER,
Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor,
IRON MERCHANT, &c.
Offices and Works—Millwall, Poplar, London.

PATENT GALVANIZING and CORRUGATING IRONWORKS Improved Process).
WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

JOHN HENDERSON PORTER,
ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one fifth as thick as Sheet Lead, is consequently much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

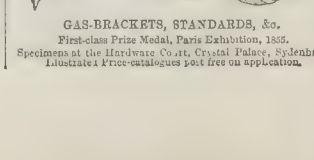
No. 11 gauge weighs about 18 oz. per foot super.			
12	"	20	"
13	"	23	"
14	"	26	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON,
to whom all letters must be addressed.

SKAIFE'S GALVANIZING WORKS,
Commercial-road, Limehouse, London.
Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where iron not liable to rust is required.
Patent Galvanized Iron supplied in every form.
Sheets plain and corrugated.—Roofs fixed complete.
J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.
An Allowance to the Trade.

A. MOREWOOD and CO.
(late Morewood and Rogers),
Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tubes, fine and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Bars, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

HART and SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London.



GAS-BRACKETS, STANDARDS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham.
Illustrated Price-catalogues post free on application.

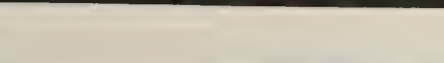
TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No 16	1¼	7s. 0d.
15	1½	7s. 6d.
15	1¾	8s. 0d.
15	2	8s. 6d.
15	2½	9s. 6d.



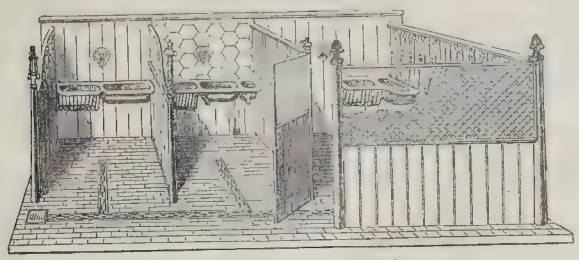
THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11 inches, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming REVERSED CLAWS, which are so bent that a direct end grain of the iron is presented longitudinally, and which become when built into the brickwork, embedded in the structure, by which means a COMPLETE and PERFECT DEAD TIE throughout the whole building is obtained.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.

London Depôt ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT-IRON RACK, united to an iron top plate, and forming one complete and useful fixture, having Cottam's Patent Noiseless Halter-Guide and Collar-Rein attached, the tail of which is taken to the back of the manger, and works with ease and freedom up or down the guide bar, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

Cottam's new Patent Seed-Box, of galvanized sheet iron, is an important addition to the above fittings, being simple in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined.

Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings, Cheap and Durable Corn-Bins.

Improved Surface-Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.

The new Illustrated Catalogue for 1856, and estimates given upon application to

COTTAM and HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

BARTON'S PATENT SAFETY STABLE FITTINGS, and ENAMELLED MANGERS.

THESE FITTINGS will be found to possess all the latest and most important improvements, and are of the best manufacture. All kinds of Stable-furniture in stock. Iron Hurdles, Gates, Fencing, Tomb-railings, &c. New illustrated Catalogues forwarded on receipt of two postage stamps.—JAMES BARTON, Ironfounder, &c. 370, Oxford-street, London.

PATRONISED BY H. R. H. PRINCE ALBERT.

S. HOOD and CO.'S REGISTERED

STABLE-FITTINGS, with FRONT REVOLVING ROLLER, plain or enamelled. GIRDERS (cast and wrought-iron), COLUMNS, Sash-Weights, Rain-Pipes, Eaves-Gutters, variously moulded. Ornamental Rain-Pipe Heads, of Gothic and other designs, and all castings connected with buildings, in London time, and at country prices.

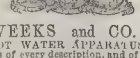
CASTINGS WAREHOUSE, 83, UPPER THAMES-STREET.

ECONOMIC COOKING-STOVE.—

DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and CO. opposite the Monument, London-bridge. Established A.D. 1700.

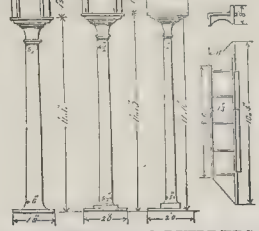
BATHS and HOT-WATER APPARATUS.

J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fixing given. J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road,

Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.



TO ARCHITECTS and BUILDERS.—TO

BE SOLD, a great Bargain, together or separately, 79 CAST-IRON COLUMNS, 23 GIRDERS, ANGLE IRONS, and SHOES, as shown in the drawing. Of the columns there are 26 of each size, adapted for a warehouse of three floors, or for any other purpose.—For particulars apply to WARLTERS and LOVEJOY, Auctioneers, 5, Chancery-lane, London.

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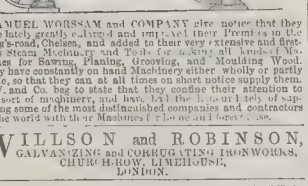

SAMUEL WORSSAM and COMPANY give notice that they have lately greatly enlarged and improved their Premises in the King's-road, Chelsea, and added to their very extensive and first-class Steam Machinery and Tools for making all kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand Machinery either wholly or partly made, so that they can at all times on short notice supply them. S. W. and Co. beg to state that they confine their attention to this sort of machinery, and have had the honour lately of supplying some of the most distinguished companies and contractors in the world with their Machines; if long and large enough.

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GALVANIZING and CORRUGATING IRONWORKS, CHURCH-ROW, LIMEHOUSE, LONDON.

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IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc Tube, and Copper Wire. Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Cornice-poles, Rings and Lacquered Case Tube for Picture Rods, Desk Rods, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. &c.

RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

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JOHN M'DOWALL and SONS, WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow, MANUFACTURERS of VERTICAL SAW-FRAMES (driven by straps),

For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached, circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a ½ of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power mortising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all dependages; sole-board machines, for hat-boxes, &c.; patent slide feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed from the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 30 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.

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R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.

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ESTABLISHED 1817.

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GREAT REDUCTION IN PRICES.

RAIN WATER CASTINGS, per yard

Sizes	2 in	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	10d.	1s. 1d.	1s. 3d.	1s. 7d.	1s. 10d.	2s. 4d.	2s. 8d.
Half-round Gutters		7½d.	8d	9d.	1s.	1s. 3d.	
O G Gutters				1s. 0d.	1s. 1d.	1s. 2d.	1s. 4d.
Ditto, with plain clips cast on				1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.
Ditto, with lion clips ditto				1s. 2d.	1s. 3d.	1s. 5d.	1s. 7d.

Sash Weights, 7s. 6d. per cwt; Air Bricks, 3s. 3d. per dozen.

Best Cut Clout Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d	16s.	15s.	14s. 6d.	14s per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
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Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

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A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler

30	32	34	36 inch,	
28s.	30s.	32s.	34s.	

Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—

34	36	38	42-inch,	
54s.	56s.	58s.	60s.	

Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 2½d.

Register Stoves, with Solid Bars, per inch, 5d.

Improved New Pattern Circular Check Register, with strong Bars and Trivits, 5d. per inch.

Best Solar ditto, with Fire Brick Back, per inch, 10d.

Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2	2½	3 inch.
	10d.	1s. 1d.	1s. 3d. per yard.
Cast Gutters—4 inch, 9d. per yard.			
O G Gutters	4		4½ inch.
	1s.		1r. 2d. per yard.

	2	3	4	5	6
Patent Line	3s. 6d.	4s.	5s.	7s.	9s. per gross.

6-inch Rd. Ward Mortise, with Best Furniture and Patent Spandles 2s. 9d. each. Light Elliptic and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.

Brick Moulds kept in stock. Any size made to order.

Best Cut Clasp and Rose Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 in.
16s. 6d.	15s. 6d.	15s. 6d.	15s.	14s. per cwt.

Best Sheet Cut Floor Brads ..... 14s. per cwt.
Best Cut Lath Nails ..... 16s. "

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LOCK and FIREPROOF SAFES, from the best and cheapest safe in the world against fire and robbery. Testimonials to be had of Messrs. Waterlow, Birchin-lane; at the Warehouse, 30, WALBROOK, CITY; and at the Works, 1, Hope-street, Hackney-road, London. Iron Doors for strong rooms and partitions 1s.

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A PRIZE MEDAL for SUPERIOR LOCKS

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UNITING LEAD TO LEAD WITHOUT SOLDER,

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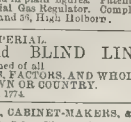

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Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
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2½ 2½ 3 2½ 2½ 3-in. & larger.
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Sicilian " 6s. 6d. "
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Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

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This Granite is selected for the New Westminster-bridge.

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List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

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ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
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BECK'S WHARF, ISLEWORTH.—Builders having works to execute south-west of London, will find a good supply upon this wharf, on reasonable terms, with every convenience for speedy loading by travelling cranes, either into barges or carriages. Portland, Caen, Bath, and Yorkshire Block Stone, always in stock; Landings, Paving, &c. Also, Marble in Slab, Chimney-pieces, &c. Slate and Roofing Slates from the Penrhyn Quarries. Timber, Deals, Limes, Cements, Clay Goods, &c.
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Contractors supplied to any extent.

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AT the LOWEST PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected Stock of the various descriptions of Deals, commencing at the following low prices:

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EXAMPLES OF BONUS.

Date of Policy.	Sum in Policy	Total Bonus Addition to 1855	Sum in Policy with Bonus Addition.
15th Nov. 1825	£1,000	£1,152 0 0	£2,152 0 0
,, 1830	1,000	837 0 0	1,837 0 0
,, 1835	1,000	582 0 0	1,582 0 0
,, 1840	1,000	347 0 0	1,347 0 0
,, 1845	1,000	174 10 0	1,174 10 0
,, 1850	1,000	64 0 0	1,064 0 0

The Income of the Company is about a Quarter of a Million.
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Important resolutions have been adopted as to Non-Forfeiture of Policies within thirteen months from the date of payment of the premium under certain conditions.
SELECT ASSURANCE COVERING FOREIGN RESIDENCE WITHOUT EXTRA PREMIUM.
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8,900l already advanced
BUILDING DEPARTMENT.
The premium for the advance is added to the principal, and not required to be paid down.
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S. W. SILVER and CO.—Works, North Woolwich.
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"GENTLEMEN,—We have been using almost exclusively, for the last three years, your Packing to our stuffing boxes and steam and water joints, prev ous to which time we tried all the sorts which came under our notice, but yours we consider decidedly the best and most economical.—We are, yours respectfully,
"JESSEL, SCHOFIELD and SONS."
"King and Queen Iron Works, Rotherhithe
"London, Nov. 11, 1854.
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"Works, Deptford, Jan 29, 1856.
"I have pleasure in stating that the Packing of Messrs. S. W. Silver and Co. has been in use in the various parts of the engines on board the steam-ships of the company, and given every satisfaction. "J. BEARDMORE, Engineer.
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No. 1 quality, inches diameter, and price per yard.							
¼	⅜	½	¾	1	1½	2	3 in.
9d.	11d.	1s.	1s. 3d.	1s. 5d.	1s. 7d.	1s. 9d.	2s. 2d.	2s. 8d.	2s. 9d.

Super-extra stout quality.

2	2½	2¾	3	3½	3 inches.	
2s.	2s. 3d.	2s. 6d.	2s. 9d.	3s. per yard.		

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

1	1½	1¾	2	2½	2½ inches.
6d.	10d.	11d.	1s.	1s. 3d.	1s. 6d. per yard.

The hose is Burnettized at an extra charge of 2d. per yard
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VOL. XIV.—No. 701.

PROTESTS on the part of the profession are being made against the proceedings of the Government in the case of Sir Charles Barry and the Houses of Parliament. The Royal Institute of British Architects, after deliberations which have extended over some time, have come to the following resolution:—

"That 5 per cent. upon outlay has been, and is, the only rate of charge recognized by the profession, as fairly remunerative in the average practice of architects.—That it is to be deeply regretted that it should be proposed to depart from the above rate in the instance of the New Palace at Westminster; a building involving in its design and execution the exercise of the highest professional attainments.—That the example which would be set by her Majesty's Government, should the course proposed be carried into execution (a legal appeal against their decision being practically impossible), is to be regarded as disastrous to the future prospects of architecture as a liberal profession in this country,—as calculated to lower the character of public monuments in England, and unworthy the Government of a great nation, whose obvious duty it is adequately to foster and protect the genius of its artists."

Notwithstanding this protest and expression of opinion on the part of the body, we fear we shall soon hear that Sir Charles Barry has been obliged to succumb to the Treasury. "My lords," otherwise Mr. Wilson, will not have an arbitration, knowing that they are inaccessible by law: and to force a decision will pay nothing further. Touching the bargain originally made with Sir Charles, on which the Lords of the Treasury rest, namely, that he would accept 25,000*l.* as payment in full, when the amount to be expended was 707,000*l.* (for the shell) and the works were to be executed in six years, it is not generally known that Sir Charles had received his appointment as architect, with the full belief that the remuneration would be of the customary amount, nineteen months before he had the first official intimation that such was not proposed to be the case. He had then made extensive and costly arrangements to enable him to carry on the works, and had no alternative. When, however, he assented to their decision, he said, —"In so doing, I cannot, in justice to myself and the profession to which I belong, refrain from expressing most decidedly my opinion, that the amount is very inadequate to the great labour and responsibility that will devolve upon me in the superintendence, direction, and completion of the intended edifice; and I trust when this is made manifest, as I feel sure it will upon the completion of any considerable portion of it, that there will not be any indisposition on the part of the Board (especially if the work should prove to be satisfactory to the public at large) to award to me the remainder of the remuneration which has hitherto been customary on similar occasions."

To force his ultimate compliance, for two years the architect has not been able to obtain from the Treasury *one farthing*, though by their own showing, even, 20,000*l.* are due.

The affair affords a fresh instance of might *versus* right, and is a curious illustration of freedom under a constitutional Government. We shall be very glad if the resolution passed by the Institute should aid in obtaining justice for Sir Charles Barry.

We understand that the council of the Institute have recently made another intercession with the Government, in which all are interested. Having been informed that several new consulates were about to be created in the East, under her Majesty's authority, they submitted to the principal Secretary of State for Foreign Affairs the eligibility of duly-qualified members of the profession to fill such appointments in Egypt, Syria, Palestine, Asia Minor, Rhodes, Cyprus, and Candia, in which the most interesting relics of antiquity demand investigation and conservation.

The rule of the French Government to appoint only men of education as consuls in such countries, and the happy results of M. Botta's researches, while French consul at Mossoul, in bringing to light the Ruins of Nineveh, were adduced in favour of the council's representation; and it was urged that architects who had diligently studied their profession would be fitted both to watch over commercial interests, and to secure for our national Museum such remains of antiquity as might, from time to time, be discovered in their respective localities.

The Earl of Clarendon has since informed the council that their request should be duly noted, but he regretted that, with reference to the places named in their letter, other arrangements had been already made.

It is too soon yet, we suppose, to expect our Government to give appointments to the *fittest men*. Let us hope, however, that the time will come.

Lord Harrington has been protesting in the House of Lords, on the part of British sculptors and architects, against the Scutari monument job. Lord Harrington said,—

To execute such a work the first sculptor of the day should have been selected. The gentleman actually chosen was Signor Marochetti, an artist of considerable talent, peculiarly famed for massive equestrian statues; in other branches respectable, but not like Mr. Gibson, and some others, holding a first place in art. As an architect Signor Marochetti was not known to fame; but, indeed, it would be difficult, if not impossible, to find one person equally skilled in architecture and sculpture, as in the days of Michaelangelo. There was nothing very remarkable about the Scutari monument. We had many in this country of the same description. It was very defective in its proportions, inasmuch as the pedestal was as high as the superstructure, whereas the base of Cleopatra's Needle was only one-third the height of the pillar itself. Many obelisks in England were superior to Signor Marochetti's Scutari monument. One point about it was very remarkable; the four unfortunate weeping angels could not possibly stand, for if they did, they must stand either upon their wings, which extend considerably below their feet, or in a flying position. They were in the same position as the statue in the Parthenon, with regard to which the observation had been made, that if it attempted to stand, its head would go through the roof. The sculptors of this country did not wish to disparage the talent and genius of Signor Marochetti, whom they all highly respected, but they complained that a system of favouritism had been adopted, and that equal justice had not been done to the sculptors and architects of this and other countries. Entertaining the same opinion, in justice to those sculptors and architects he would put the following questions to the Government: — 1. By whose authority the Scutari Monument had been undertaken? 2. Who had selected Signor Marochetti to undertake the work? 3. From what fund the payment was to be made? And 4. Why the work had not been subjected to public competition, so that the sculptors of England, France, Italy, and Germany might have sent in models, and an obelisk have been produced that would have immortalized our warriors and the sculptor for ages to come?

Lord Panmure in reply, said, the responsibility of the selection of the artist rested with the Government alone. As to public competition, the noble earl must be aware that the sculptors and artists of this country declined to furnish plans to compete for the erection of public monuments. (?) Signor Marochetti had been selected because he was famous on account of some colossal works that he had executed, and the design for the Scutari monument had commanded public favour, at least so far that he had heard very little complaint made about it, and he thought it had never been condemned in the manner in which the noble earl now condemned it. Baron Marochetti had gained so much reputation in this country, that he was now to be regarded rather as an English than as a foreign artist; but, even if he were a foreign artist, the noble earl, who wished to throw the work open to the competition of the artists of Italy, France, and Germany, could not make any complaint on that account.

A very lame reply, and one with which those who are interested in the advancement of the art of sculpture and architecture in this country ought not to be satisfied.

Westminster-bridge is exciting alarm, and has been taken in hand by Sir Benjamin Hall. The reports in circulation, we do not know on what grounds, speak of insufficient foundations. Be this as it may, on the 3rd, Sir B. Hall, in the House of Commons, obtained the appointment of a select committee on this bridge, to consist of Sir Benjamin Hall, Mr. Henley, Mr. Bramston, Colonel Boldero, Mr. Jackson, Mr. Ker Seymer, and Mr. Tite.—Mr. Locke contended that the House ought to initiate inquiry before the Board of Works undertook the subject.

Sir B. Hall said that due notice had been given that he would move for this committee, and the reference to the committee was made as wide as possible. He justified his own administration of this bridge, and challenged inquiry into his conduct.

The Chief Commissioner's letter to the Metropolitan Board of Works, returning the plans determined on by the Board for the drainage of London, has been severely commented on. Surely, however, the Board could not have expected any other result. Sir Benjamin Hall says, through the secretary, Mr. Austin,—

"By the Metropolitan Act, 1855, it is provided that 'the Metropolitan Board of Works shall make sewers and works for preventing all or any part of the sewage within the metropolis from flowing or passing into the Thames *in or near to* the metropolis.'

But the scheme submitted for the approval of the first commissioner actually provides that the sewage shall flow into the Thames at a point within the metropolis. It consequently follows, that before any such scheme can be carried out, it will be necessary to call upon Parliament to repeal so much of the Act of last session as provides for the purification of the River Thames within the metropolis."

And so, not being willing to do this, and considering that the scheme is entirely at variance with the intentions of the Legislature, he returned the plans which were submitted for his approval.

It is a triumph for Mr. Leslie, and not very creditable to the advising officers of the Board. The unfortunate result, of course, is the postponement of this vital question, at all events for a session.

At a meeting of the Board last week, a report was presented by the superintending architect, on the application of Mr. Munday, asking for the approval of the Board to the raising of an engine-chimney in Cox-square, Spitalfields. The report recommended that the chimney be not raised on the plan proposed, and the superintending architect suggested that the work should be done on a plan that he proposed.

This report led to a long and animated dis-

cussion as to the principle that was involved in it. On one side it was contended that the superintending architect, as the officer of that Board, was not called upon to suggest plans to be substituted for those submitted to him, as by so doing the Board would take upon themselves a great amount of responsibility, and especially so, if the work which was done under the recommendation of their architect should fall down. In that case there would be abundant evidence brought forward to show that those who performed the work did it under the express sanction of this Board, in opposition to the plan originally proposed, and it would then be said that if they had been allowed to do their work in their own way it would have stood, and there would have been no accident whatever. On the other side it was argued that if their superintending architect were to wrap himself up in official reserve, and refuse to explain his objections to a particular plan submitted to him, a hundred plans might be brought forward and not meet the particular point of his objection.

Ultimately the report of the architect was adopted by 13 to 11, establishing, it may be supposed, the principle that the superintending architect may suggest plans in lieu of those submitted to him to which he may object. Without reference to this incident, but as applying to their proceedings generally, which we have watched most carefully with kindly eyes, we must be permitted to say that the Board have yet to establish their reputation with the public as a practically working body. The power they have chiefly exhibited up to this time is that of negation.

WORTH CHURCH, SUSSEX.

THIS very interesting structure is about three miles from the Three Bridges Station, on the London and Brighton Railway, it has long been noted as one of the curiosities of the country, but has not been described at any length until recently. The eighth volume of the "Sussex Archæological Collections," relating to the history and antiquities of the county, recently published by the Sussex Archæological Society,* contains an account of the church, by Mr. W. S. Walford, with several engraved illustrations, which, by the kindness of the committee, we are enabled to reproduce. The general view from the south-east (fig. 1), shows the stone ribs or pilasters on the face of the exterior which distinguish it, and the massive buttresses at the east end added by later hands, that give a peculiar effect to that part of the church. It has a string course and curious base in two stages, bearing a rude resemblance to the graduated plinths of classical architecture. It will be seen by the plan (fig. 2), that it is a cross church without aisles, and that the chancel has a semicircular east end. There is no indication of any tower. A bell-chamber has been erected over the north transept. The walls would seem to consist of rubble, and are mostly plastered externally, with the exception of the stone ribs or pilasters, already referred to. The walls of the chancel are lower than those of the nave, but the roof is higher, being of sharper pitch, and serves to give it a continental aspect.

Within the walls, the nave is 59½ feet by 26½, and the chancel, including the archway connecting it with the nave, is 34 feet 9 inches by 21 feet. The chancel-arch is very effective, both from its size and its proportions. It is 14 feet 1 inch in span, semicircular, and of a single order, measuring at its highest point from the floor 22 feet 5¾ inches. "It springs, at the height of about 15½ feet, from massive semicircular jambs or piers, with remarkable imposts or capitals, each consisting of a flat cushion and a square abacus, with an intervening quarter-round moulding. (See fig. 3.) On the western face of it was a double square hood-moulding, the under member being in lower relief than the upper: of this member (the upper) only a small portion next the north capital remains. The eastern face has a single square hood-moulding, equal in width to the double one on the other. On the same face (*i. e.* the eastern) is a bold half-round moulding, descending from each capital to the floor. The piers and arch are about 3 feet thick, exclusive of mouldings, and the stones of which they are constructed extend through the whole thickness. The work is deficient in the neatness and regularity which are characteristic of Norman masonry. There is a want of parallelism and similarity in parts which should have been respectively parallel and alike. The two capitals, though at first sight alike, will be found dissimilar in their proportions and sectional lines, as if worked by different hands, without the ordinary care to secure likeness where the design did not contemplate diversity. The intended horizontal lines of the north abacus slightly converge, and the half-round descending from the capital deviates considerably from the perpendicular."

The windows and doors are of various dates, and are all insertions, with, perhaps, one exception. The font is described as consisting of two fonts, one upon the other, although this could scarcely be asserted from its appearance alone. They may both be ascribed to the beginning of the thirteenth century. It will scarcely be necessary to say that Worth Church is included in the list of churches, now much larger than it was formerly, ascribed to the Anglo-Saxon period. In most of the churches in this list, we find the walls of rubble, covered with plaster, having long and short blocks of hewn stone at the angles, and in many the narrow ribs, or square edged strips of stone, bearing resemblance to pilasters, and similar to those at Worth. The tower of Barnack Church, Northamptonshire; the church at Barton-upon-Humber, in Lincolnshire; Sompting Church, Sussex; and many others may be pointed to.

Anglo-Saxon MSS. confirm the views of those who ascribe the class of buildings here mentioned to the Anglo-Saxon period. In the illustrated paraphrase of Cædmon, executed about the year 1000, we find amongst the architectural details which appear, these stone ribs or pilasters, the long and short work, triangular-headed openings, and plain graduated footings as at Worth.

The fact that this church is not mentioned in Domesday is simply one evidence that that important record does not comprise all the churches in the county.

Worth Church is probably the most perfect in plan of all the Anglo-Saxon churches, as the original foundation does not seem to have been disturbed, although insertions in the walls, as we have already said, have been made. In Brixworth Church, a building ascribed to the seventh century, the chancel terminates as at Worth, with a semi-circular apsis.

Mr. Walford, although he concurs in the opinion that Worth Church is substantially Anglo-Saxon, sees no reason for believing it to be of earlier date than the first half of the eleventh century. "I incline," he writes, "to think the nave and chancel were not built at once; for the difference in the height of the string-courses upon them, not to mention the variation in form, suggests that the chancel was first erected. Being a forest country, there may have been a temporary wooden nave, which was shortly afterwards replaced by the present, for the interval cannot have been long. The string-courses on the transepts resemble that on the chancel; but then they were never free and independent strings, but were, I conceive, originally introduced merely to carry the roofs, or at least to mark to the eye the roof-bearing lines. Etheldred II. married, in 1002, a Norman princess, who afterwards became the queen of his successor, Canute. She was the mother of Edward the Confessor, by Etheldred. A Norman influence in architecture began to be experienced, it is believed, in this island several years before the Conquest, and it is said to have been encouraged by the Confessor, who had spent some years in Normandy."

His belief as to the date may be correct, but so far as we can learn, there is no sufficient reason why Worth Church may not be a building of the eighth or ninth century, at which time, as we know, stone churches of importance were erected in this country.

The grounds of the rectory-house adjoining form a charming adjunct to the church; and if the visitor would seek other objects of interest,—Wakehurst-place, an Elizabethan residence, the picturesque rocks at West Hoathly, the most beautiful place of its kind in the county, the church of West Hoathly, and the house of Anne of Cleves, will fill up his day pleasantly.

* London: John Russell Smith, Soho-square. The volume includes other matter of much interest, a full and valuable account of Dureford Abbey, by Mr. W. H. Blaauw; "The Families of Brasse of Chesworth, and Hoo," by Mr. W. Durrant Cooper; "Notice of the Abbey of Robertsbridge," by the Rev. George Miles Cooper; "On the Saxon College of Bosham," by the Rev Edward Turner, &c. It is a very good specimen of what the transactions of such societies as this should be.

ON THE APPLICATION OF NATURAL FOLIAGE TO ARCHITECTURE.

IN a popular French work on Mediæval Architecture, the author says, rather quaintly, in his introduction, that "There are people who have good eyes, but who, however, are not able to see that which exists immediately around them,—because they have not thought of or regarded attentively that which is before their eyes. We find men to whom all forms are alike, and who are not able to distinguish that which is beautiful from that which is ugly." He further goes on to say that such persons are imperfect,—they have not developed the faculties which have been given them by nature; and, further, he compares them to musical instruments which are deficient of some of their strings.

In my last I endeavoured to point out the same thing, although in other words,—this mental blindness and disregard of that which is lovely and beautiful, although it may be lying at our very feet. It is necessary to educate ourselves to learn to appreciate the beauty of form and the harmony of colour,—to learn to separate the beautiful from the ugly.

That we are not yet so educated and enlightened is plain from the very many questionable forms of design which surround us. Things which in the streets of this great metropolis meet us at every turn,—in our houses, our furniture, and our various manufactures; yet many of these we are satisfied with, and no one appears to attempt any improvement. Look at our stoves, for instance, and most of the ordinary things formed in cast-iron and intended to be "highly ornamental;" often described to be of "elegant and chaste design," of "superior character." Perhaps it is a cast-iron hunting-whip, with an accompaniment of foxes' heads, with the lash stiffened into loops to hold umbrellas, for this is an example of the wretchedly tame and worthless things we see turned out of the manufacturers' hands every day, under the name of new designs, and it would be a very simple and easy task to point out hundreds of others of a similar description. But such is not my purpose. I would turn to a far more instructive task: I would ask you to accompany me, and let us together endeavour to supply in ourselves some of those things of which the French author spoke that are deficient in us. Let us go heartily to work to cultivate that love and appreciation of the beautiful—the true—and the good which God has implanted in our bosoms,—so that we become better and wiser, and that our eyes may be opened, that we may shun that which is bad and false.

In my former lecture I pointed out the necessity of closely studying natural foliage, if you are at all desirous to put that life and beauty into your work, that freshness and vigour, which is the main cause why we see so much to admire in the sculpture and architectural decoration of every age: whether it be Egyptian, Assyrian, Greek, Moorish, or Gothic, no matter how rudely sculptured it may be, there is an indescribable something that stamps it as a successful application from nature,—no literal and minutely servile copy of mere natural forms, but a judicious adaptation to the purposes required.

On the present occasion I propose to treat more distinctly upon the application of natural foliage for decorative purposes, and I would here premise that it is a difficult matter to lay down rules to say how far nature shall be

WORTH CHURCH, SUSSEX.

Fig. 1.—*General View from the South-east.*

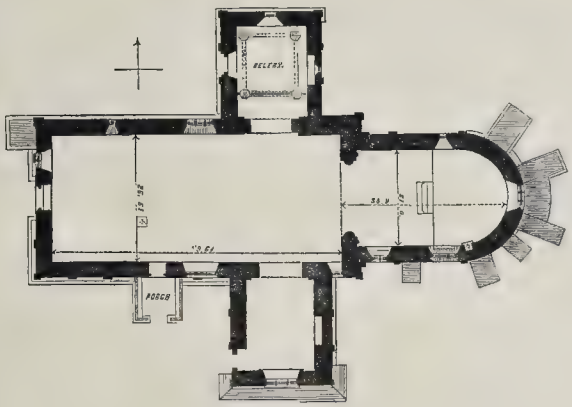


Fig. 2.—*Ground Plan.*

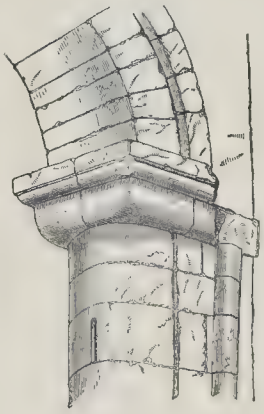


Fig. 3.—*Chancel Arch.*

adhered to, or how far it shall be departed from. This must after all, in a great measure, be left to the skill and fancy of the designer. Literal imitations of nature, although ever so beautiful in themselves, will never constitute architectural ornament. Nature must be followed as a guide, a principle, and wherever her laws are infringed, the work will become unnatural, and what is unnatural must be more or less ugliness.

In modern ornamentation the main idea appears to be, to give as much as possible for the money, no matter how bad it is, if but the quantity make up for the quality. Our chairs, sofas, sideboards, and looking-glasses are covered up with coarse-looking, badly-carved Louis Quatorze scrolls, all bolstering up one against another, as if for mutual support. In this style, too, there is a simple law of nature, which is constantly violated, that is, nearly every scroll is growing two ways—it is growing out at both ends at the same time. This is a fault which is carried to an excess in this style, and in the carvings upon our modern furniture, but it is also more or less common to all the classical styles: it exists in the Athenian ornament, and I am of opinion that it is the great fault in the Ionic volute. Mr. Ruskin has been most severe in the condemnation of this order, but with what justice I am unable to say: there is, however, something about the capital which always struck me as being stiff and unnatural. The two spirals of the volute both grow from the centre: one, as it were, grows out of the other, and gives the capital a remarkably stiff and unnatural appearace. Now, the Roman architects appear to have seen this defect, and often obviated it by discontinuing the volute across the front of the capital, but made them spring from behind the enriched moulding which comes immediately below the volutes, and placed a flower in the centre. This arrangement is also seen in the composite, which is taken from the Ionic.

There may be cases where it would be judicious, to some small extent, to break this rule, and make the foliage grow two ways; but there cannot be a doubt that where it is carried to excess, it leads to nothing but a style which is full of fantastic whims, but soon sinks into unmeaning tameness and insipidity, while those styles which adhere to nature's laws are ever fresh and beautiful. The Gothic styles are entirely free from this fault: I do not remember myself a single example but where the natural law is followed. But you may say, "How is it that the architects from whom we got the Louis XIV. or our picture-frame style, how is it they did not see that what they were designing was not natural?" Because their ideas were based entirely upon former styles, and they lost sight of the necessity of adhering to nature. They thought their conceits were far before nature, and they worked entirely according to whim and fashion. Hence the necessity for constantly studying and referring to nature, that we may at least be *aware* when we are infringing her rules. It is, therefore, highly necessary that we should all understand the simple rudiments of botany. For a book of reference upon this subject, I cannot do better than recommend to you, as I did in my last

lecture, Lindley's "School Botany," as it is a most excellent work, and extremely moderate in price. Botany as a science is rather an abstruse one, but a sufficient knowledge may be obtained by the carver or decorator without a vast amount of study, and it will be quite sufficient for his purpose if he merely studies the various classes from their English names. To a person not versed in Latin, unfortunately, the science is involved in a great deal of mystery by the difficulty of retaining names which are formed upon the Latin language.

It is extremely necessary to study the various kinds of leaves and flowers with the manner in which branches and leaves grow in different species. I will here go through some of the most prominent varieties, with their manner of growing, trusting you will take it up, and pursue the matter further, at your leisure.

Most plants and trees grow either with leaves and branches alternate, or opposite; that is, they are alternate when they spring out alternately at different places upon the stem, not opposite each other, as the ivy, oak, thorn, and the greatest number of plants and trees. They are said to be opposite when they spring off from the same point upon the stem in pairs, each leaf being opposite the other; and when seen upon the top, the branch presents a cruciform arrangement, as in the lilac, maple, nettles, and many other plants. Another mode is, that of growing in a whorl, that is, more than two leaves growing out from the same point upon the stem. The wood anemone, for instance, grows with the leaves issuing triangularly, and when seen from the top, with its triple leaves and six-petalled flower, presents a most interesting example, and a very elegant suggestion for coloured decoration. In Gothic architecture this arrangement was common, and was a favourite, and very natural one, for the foliage in trefoils. Cross wort has four leaves in a whorl, and goose-grass and wood-ruff eight.

The grasses and other plants of that class grow with the leaves issuing from knots, and sheathing the stem. The scrolls of the enriched friezes in Greek and Roman architecture usually issue from sheathed foliage in this manner.

The mistletoe grows in a very peculiar way, by forking or dividing into two at every knot, and the branch ending in two leaves, which fork in the same manner, the berries issuing from the intersections.

Here, then, we can soon see that a little simple knowledge of botany *may* give us a power of variety in the arrangement of the leaves of foliage which we could not possibly have possessed without this knowledge, when we were proceeding only according to our own fancy or at random, although it may happen that we cannot often take advantage of it, either from the smallness of the composition or the difficulty of circumstances in the arrangement; but, on the other hand, there may be cases where it would be of the greatest importance, and give to our compositions life and variety they could not otherwise possess. But perhaps, of all studies, that of the various leaves, of which there is an enormous and endless variety, embracing some of the most lovely forms in nature, presents the most important and the most interesting one.

There is nothing too minute that is not worth noticing, in the veins, ramification of net-work, crumpling of the surface, and many other matters; for although you are not going to imitate the minutiæ, nature in this respect is always immeasurably superior to every art of man. No matter how powerful the microscope, the more we look into her minute and secret ways, the more perfect only does she become; and it is possible that beauties may be seen under the microscope which would be well worthy of being transferred to our art at a much larger scale. Not that I mean to say you must study with a microscope, but only that I wish to point out, by means of this illustration, that there is nothing in nature which is too insignificant for study, and however small and unimportant to the eye, it may still conceal a beauty which would be immeasurably valuable to you in your art. Leaves are of course divided into different classes or kinds. First, there is the simple, undivided leaf, without distinct lobes, which, although so simple, still contains a great variety of forms. They are often used with good effect in carving, and some of them, although perfectly simple, are very beautiful. There is an example of their use in old work in a spandril from Southwell, where two different kinds of simple leaves may be seen in the same spandril; also an example of the hazel, from Winchester Cathedral.

Simple leaves are again divided into distinct lobes, as the *hepatica* and *herba benedicta*, which are divided into three. The beautiful foliage of the Early English period — the period of the thirteenth century—was mostly taken from triple leaves, which were no doubt adopted as being emblematical of the Trinity. The ivy, vine, maple, and many others are divided into five lobes: in the maple each lobe is again cut into three or more parts, and in the vine each lobe is serrated, that is, cut like the teeth of a saw, as is the case with many of the more simple leaves, as the Spanish chestnut, elm, and many others. The thorn, which is a valuable leaf to the carver, is sometimes divided only into three lobes, but more often into five, but sometimes as many as seven, and even nine.

The thorn was deservedly a great favourite among the artists of the fourteenth century, and they have left us many beautiful specimens of their manner of treating it, both in flower and in berry. There are several excellent examples of this in the Museum from the charming little Chapter-house at Southwell Minster, also some from the Continent. It was also the type of much of the foliage which was used at a later period, as at the Chapter-house at Ely, but which became far more conventional, and less like the natural type.

There are also beautiful examples of the use of the ivy, maple, vine, and other five-lobed leaves from Southwell and other places. But to return to the different kinds of natural leaves. The oak-leaf is irregular in the number of its lobes, sometimes having more on one side than the other. This is a leaf which has so much distinctive character of its own, and its being usually accompanied by its well-known fruit, the acorn, that it is usually recognized quicker than almost any other kind of foliage.

There is another kind of oak that has a very elegant leaf, which has been introduced into this country of late years, called the Turkey oak. There are several trees of this kind to be found in the Regent's-park. There are other kinds of leaves which have many lobes, as in the thistle and dandelion. I do not remember to have ever found the leaf of the dandelion in old carvings, but it is a very beautiful leaf, and one that I think might be used to great advantage. The thistle, from its sharp bristling crispness, was another of the old favourites, and was used even more on the Continent than it was in this country. There is a very fine example of a thistle crocket from Bourges Cathedral,—a cast of which is in the Museum.

These are still called simple leaves. A compound leaf consists of several leaves or leaflets, as they are then called, on the same stalk, as in the clover, laburnum, and strawberry, each of which consists of three distinct leaflets; also the rose, which has five leaflets, and sometimes seven. The horse chestnut, and many others, have five or seven leaflets, all issuing from one point on the stem, and are termed palmate, or like a hand.

The ash, acacia, and others have the leaflets in pairs on each side of the centre stalk, with a single one at the termination. Other leaves are doubly compound, as the parsley, which consists, first, of a centre stalk, from which issue other stalks, and from these again issue leaflets. Many of the fern-leaves, most of which are very elegant, are of this kind—that is, doubly compound.

Other leaves are trebly compound, as in double parsley, carrot, and others; but as these are mostly of too complicated a nature for the use of the carver, we need not pursue the subject farther. There are many varieties of the different kinds which I have mentioned, all of which you will find most interesting for the purposes of study. The same plants also will sometimes bear both simple and compound leaves, as in the *herba benedicta*, &c.

Another most interesting branch of study is that of flowers, both as regards arrangement and also general form: as a general rule, the forms are more simple than in leaves, but the arrangement is much more various. Flowers may, like leaves, be divided into simple and compound. A simple flower is either entire and undivided, as in bell flowers, or it consists of a certain number of leaves, or petals, as they are technically called, usually radiating from a centre. The most simple, except those which are entire, consists of three petals, as the snowdrop. Others are cruciform, of four petals, such as the wallflower and stock. But by far the most common number is that of five, as in the common primrose, dog-rose, and many others. We see the five petals in the ordinary Tudor rose, which is taken from the common dog-rose. The wood anemone and jonquil have six petals; pilewort crowfoot eight. The stichwort, or stellaria, has five petals, each petal being again almost divided into two, giving a star of ten points. The iris, from which the conventional fleur-de-lis is taken, consists of six petals, three of which turn upwards, forming a kind of crown, and three turn very gracefully downwards. The similarity to the conventional form of the fleur-de-lis is plainly seen, when one of the petals which turn upwards is brought in the centre. It is a beautifully symmetrical flower, and offers, I think, a fine suggestion, as no doubt it has often hitherto done, for a very elegant metal finial. It is a very common thing to make metal fleurs-de-lis consist only of three parts, two lower leaves and one in the centre, as they are represented in painting or sculpture; but what an improvement it would be if they were made triangular, with all six petals, as in the natural type.

The lilies also are of six petals, and are arranged much in the same manner as the wood anemone and jonquil. The lily has been from time immemorial the emblem of purity, and from its triple combination it is also a beautiful emblem of the Trinity: it is not surprising, therefore, to find that it was the type of many of the most beautiful forms in Gothic architecture, as the different varieties of the hexafoil triple bosses, spandrils, &c.

There are also a vast variety of flowers which do not radiate from the centre, as the heartsease pea, orchids, and a variety of others,—many of them offering beautiful suggestions in form and colour, and opening altogether a field for study, which, for decorative purposes, has been comparatively yet untrodden.

Compound flowers consist of a number of small flowers, or florets united upon a disk, as in the sunflower and daisy, or they form a cluster, called an umbel, as in parsley, a spike as in the fox-glove and lupin; or they are clustered together in various ways or forms, too numerous for me to mention.

In applying natural foliage to decorative purposes, the first thing to be laid down is the general lines, that is, the direction and disposition of the stems which are to be afterwards clothed with foliage. Great care should be taken that these are judiciously chosen: they must not too closely follow nature: there must be no broken or rustic foliage, such as we so often see in silversmiths' work: there must be a harmony, and an agreeable contrast with the boundary or surrounding lines. In architecture nearly all ornament is obliged to be arranged geometrically, for without it is so to some degree it will seldom harmonize happily with the architecture which it is intended to enrich. It may sometimes be departed from to a small extent to give variety, and to gain picturesque effect; but there must be a certain harmony kept up, and the lines of the foliage must not jar or clash with the mouldings, or other architectural lines which surround it. For instance, if we take a spandril, which is merely a triangular space left by the architectural lines in canopies and other places,—the most simple of all lines, to arrange the foliage upon, will be three lines issuing from the centre, and running to the points of the triangle. These lines are in harmony, because they do not approach too near, or in any way jar or interfere with the bounding lines, and they are simply a geometrical division of the triangle into three other triangles. In the same manner if we require the most simple lines for foliage in a

square, we have them immediately in lines proceeding from the centre to each of the angles, which give the ordinary diagonal lines. Next in the triangle we have a triangle introduced in the centre. In the square we may introduce the diagonal square, touching the centres of the sides of the larger square. This may be varied by introducing circles in place of the triangle or square: from this we arrive at the scroll in place of the complete circle. Commencing again with our first three lines, we can produce variety by uniting them by curves;—further, by branching as in parsley; by leaflets in pairs, as in ash and fern; branching alternately as in oak; and farther, if required, can be carried to any extent of elaboration and richness, by following the manner of subdividing of any of the more compound leaves, as in some of the most beautiful and delicately divided ferns. Although this subdivision may probably be too elaborate to carry out in stone or wood; yet I can conceive of its opening a beautiful field for decoration in other materials, such, for instance, as diaper for linen fabrics, carpets, gold and silversmiths' work, painted decoration, papers for walls, and many other works.

To return to our general lines, it is evident that variety can be gained by introducing scrolls, yet still keeping up all the original arrangement, until at last we arrive at a combination perhaps equal to the beautiful scroll spandril from Stone Church, Kent, which, perhaps, for the very charming manner in which it is arranged, is as successful as anything which can be met with.

Another simple mode of arranging the lines is that of simply radiating from the centre, as in flowers; the most simple being three radiations, or two threes, as in the lily, as I have already mentioned; four, two fours, and so on, as in flowers. Another mode is that of fan radiation, as in the lupin and horse-chestnut. Of this character are many of the Greek honeysuckle ornaments. If the surface is large, which is to be covered with foliage, it will be found highly advantageous to divide the surface into some pleasing combination of geometrical forms, afterwards filling in the spaces left with foliage. In this manner are some of the most exquisite wall diapers of the Alhambra. Geometrical combinations have this great advantage, they are all founded on forms in nature—there is no limit to the variety which can be produced, and they do not tire the eye like any confused or irregular arrangement. There is always a certain order and symmetry which are pleasing to the eye.

No better practice can be conceived in the study of decoration, than that of making skeleton diagrams of the general lines, or stems, merely, in the various compositions, both classic and Gothic, which are collected together in this museum: you will perceive what variety there is, and upon what principles they are laid out, and you will farther put yourself in a position to strike out other combinations which have not yet been developed.

In this study you should treat everything in the flat. If it be a capital, or a crocket, or a boss, unwrap it and lay it out in the flat, so as to study the first principles independent of the curved surface to which it is afterwards applied. Having well studied the stems or general lines, you will find the next step comparatively easy—that of clothing with leaves and flowers the general lines which you have laid down.

Here again you will find that the forms of leaves are intimately connected with geometry.—that they are based either upon the triangle, the square, the pentagon, or the circle; and that often the space to be filled in will suggest the kind of leaf to be used. You have then to study the light and shade, as I more particularly explained in my last lecture; and by following the matter up with a constant reference to nature, and without tying yourself down to copying old examples, looking at them more for the ideas they contain, and for the purpose of comparing them with nature, seeing what their designers took from the great book, and what they left, you will soon find that you are enabled to take a more comprehensive view of foliated design than you had ever before imagined, and you will begin to strike out new and independent beauties, which in time cannot fail of producing the happiest results. I feel certain myself that there is a field open to us in ornamental and foliated design of which we have yet no conception, going far beyond anything which has been already done. *I* cannot develope it, and *you* cannot develope it, individually—but it must be the work of an age, the work of all—all working in the right direction. We should thus produce something in art which would yet be a glory and a halo around the setting sun of the nineteenth century.* JAMES K. COLLING.

THE INSTITUTE AND THE ARCHITECTURAL ASSOCIATION.

THE letter recently addressed by the Council of the Royal Institute of British Architects to the Architectural Association, and printed in your paper last week, will, I trust, ultimately be the means of bringing about the fusion into one general institution of all the societies at present representing the architectural profession,—an institution which shall embrace within it all classes of the profession, and carry out under one general direction the various objects which existing societies, owing to limited resources and other causes at the present time, but imperfectly represent.

If, sir, we are to accept as genuine the expressions of sympathy which the Council of the Institute, in the letter referred to, evince towards the Architectural Association, we may reasonably infer the Institute desires the fusion of the members of the Architectural Association into their Society; and by the concluding paragraph in the letter, in which the Council expresses itself as follows,—"In conclusion, the Council desire to record their opinion, that every alienation among its members tends to a lowering of the social weight and position of the profession as a body, and that a policy of affiliation is infinitely to be preferred to one involving repulsion or isolation," we may reasonably infer that the Institute desires to make its own body the one into which all other existing societies belonging to the profession should be merged. But to effect so desirable an object, the Institute must take the initiative, and materially liberalize its constitution, or it will be useless for the Institute to attempt to incorporate within its own body those societies which at present exist external to and independent of it. But what says the letter to the Architectural Association upon this important point: "Slight modifications can be made in the bye-laws of the Institute, but no alteration can be introduced into the charter." Of what use, then, is it suggesting a fusion with the Architectural Association, or any other body, if the same exclusive management of its affairs is still to be maintained? Surely the laws of the Institute are not like the laws of the Medes and Persians, that they *cannot* be altered. Is it not rather the *will* than the power that is wanting?

If the Institute were a private society, it might be considered impertinent in me, or anybody else not belonging to it, to criticize its constitution or management; but now (whatever might have been its former status) it has obtained the recognition of the Legislature, and has been invested with powers of a character which places its proceedings out of the pale of a mere private society, I consider I have a perfect right, as one of a body whose interests it professes to represent, to criticize both its constitution and management. As it appears to me, the Institute, as at present constituted, only exists for the benefit of the elder members of the profession, viz. the fellows, the younger men being carefully excluded from all participation in its management. The grievance would not, however, be so great if those who assume the management of the Institute really did their duty to the profession, and were foremost in every good work set on foot for the benefit of our art; but such, unfortunately, is not the case, but the reverse. Take, for example, the Architectural Exhibition,—an institution which I do not hesitate to say has done more real good for the cause of architecture during the short period of its existence than has been effected by the Institute since its establishment twenty years since; and it is anything but creditable to the Institute that to this hour the Architectural Exhibition has not received one farthing support from it, although it was well known that for a considerable time its usefulness was impaired by the pecuniary difficulties with which it was encumbered.

The younger men in the profession have also a special ground of complaint against the Institute, considering the way they have been treated by that body. It is all very well for the Institute to express sympathy for the Architectural Association; but if the Institute had done its duty there never would have been any necessity for the establishment of the Architectural Association. Ten years ago, when the Architectural Association began its career, it might have been possible for its members to have carried on their studies under the guidance of the Institute, but most of those who were then students are now in practice for themselves, and do not now stand in need of the proffered sympathy of the Institute, which then would have been gratefully acknowledged; and while expressing myself thus, allow me to reiterate my humble testimony to the sympathy and support which you, sir, personally afforded the Architectural Association when it began its career. I am induced to refer to this subject because I consider you have been unjustly spoken against by some of our friends at Lyon's Inn Hall, who, in consequence of their having but recently joined our society, cannot be supposed to have such an intimate knowledge of the real state of the case as myself and others, who, as you know, were of the first in bringing about the establishment of the Architectural Association.

Depend upon it, sir, the Institute will never enlist the active earnest co-operation of the younger men of the profession until they abolish the invidious distinction at present existing between associates and fellows, and admit all alike, who, from ascertained competency, are qualified to act as architects, into full fellowship, and a due share of the management of the Institution. In my opinion, sir, the seven years' practice qualification for full fellowship is one of the most absurd as well as the most unjust that can possibly be conceived, and the abolition of it would be the most effectual means of drawing into the Institute all other societies at present existing independent of it.

As a practical illustration, suppose, for example, the case of two youths fresh from school, of equal age, and both of average abilities, articled in the same office,—the one the son of rich parents, and the other, with nothing to depend upon for advancement in after-life but his own unassisted talents. The term of articles expire, and the one, our well-to-do friend, mounts a brass-plate on his door, and dubs himself "architect and surveyor;" and, as the phrase goes, "gets into practice." The other, perhaps the most competent of the two, from want of interest to push him forward, is glad to engage with the other as his managing clerk. In progress of time our well-to-do friend is duly admitted a Fellow of the Royal Institute of British Architects, while his brother pupil, and now managing clerk, remains, as far as his status in the profession is concerned, in exactly the same position as when he was first out of his articles. This is no imaginary case, and I appeal to the experience of your readers as to whether I am over-stating it. If, then, what I assert is true, is it fair, is it just, that the distinctions maintained in the Institute should be continued?—or is it likely the younger men of the profession will earnestly and actively support an institution based upon such exclusive and selfish principles?

Only let the Institute so far liberalize its constitution, and admit all who are justly entitled to the distinction into full fellowship, and let personal competency alone be the test, and a practical solution of the diploma difficulty would be obtained; because the recognition by the Institute, or such a society as the Institute might become, after due examination, would be a virtual qualification for an architect to practise, and would justly entitle him to consideration and respect as such. But constituted as the Institute is at present, its highest

* Read at the Architectural Museum, Canon-row, Westminster, June 23, 1856. The publication of Mr. Burges's paper on Leadwork, which was read previously, has been delayed by the preparation of illustrations.

grade of membership confers no real honour, because to obtain it, good fortune rather than talent is what is most required by the candidate. A man has only to practise as principal seven years, I ought rather to say ostensibly practise, because he may carry on his business by deputy, and it makes no difference as to his qualification; and herein lies the chief injustice of the case, because it is notorious that many men who have a high reputation for talent as architects are the greatest Pecksniffs in existence, and are wholly dependent upon other and younger men for the reputation they possess; whereas, if a personal qualification was made the test by which a man became a fellow of the Institute, quackery would most effectually be kept out of the profession.

I have addressed myself to you, not so much because I can expect you will concur in all that I have said, but rather because I regard the *Builder* as the most suitable medium for discussing all subjects connected with architecture and the welfare of its professors: on this ground, therefore, I trust you will give insertion to my remarks.

CHARLES GRAY.

THE LATE MR. GEORGE GWILT, ARCHITECT.

MR. GEORGE GWILT, F.S.A. whose conscientious restoration of the choir and tower of the church of St. Mary Overy, in the borough of Southwark, and of the Lady Chapel belonging to the same edifice, entitles him to the grateful remembrance of archæologists and of all who take interest in the conservation of our ancient ecclesiastical architecture, expired on Thursday, the 26th ult. at his house in Union-street, Southwark.

Mr. Gwilt was the elder of two sons of Mr. George Gwilt, an architect and surveyor, also of St. Saviour's, Southwark, where his family have resided more than a century; the younger son being Mr. Joseph Gwilt, the well-known author of "The Encyclopædia of Architecture," and other important works.

Mr. Gwilt, sen. was surveyor for the county of Surrey; and, amongst other buildings, he erected Horsemonger-lane Gaol and Newington Sessions-house. He died on the 9th December, 1807. His son George was born on the 8th of May, 1777, and he was consequently in his eightieth year at the time of his death.

He was brought up to his father's profession of an architect, and succeeded his father in his professional practice on his death. His chief work, and that with which his name will always be worthily associated, was the restoration of the choir and tower of St. Mary Overy's Church, already referred to, and the Lady Chapel, which Mr. Gwilt executed with much taste and judgment; though as regards the choir and tower, at a very great expense to the parishioners of St. Saviour, who, although proud of their fine church, were not well pleased to have incurred a debt of 35,000*l.* for the restoration of a part of it. This work was performed between 1822 and 1825. With Mr. Gwilt such works were labours in which he delighted, and when, through the indefatigable exertions of the late Mr. Thomas Saunders, F.S.A. the Lady Chapel was rescued from destruction, and its restoration effected by means of a public subscription, exceeding 3,000*l.* Mr. Gwilt liberally undertook the professional direction and superintendence of the work, and performed it gratuitously.

This was completed in 1833, and the late Mr. Carlos, in a short description of it in the *Gentleman's Magazine* (March, 1833, p. 254), says, "When the former appearance of the building, dilapidated by the effects of time and neglect, and injured by partial and tasteless repairs, is forgotten, and the masonry of the new work shall have lost its freshness, then will the design be viewed with even greater satisfaction than at present, and few persons, strangers to the former state, will conceive that the antique-looking building before them is a restoration of the nineteenth century. Every praise is due to Mr. Gwilt for the scrupulous accuracy with which the mouldings and detail of the former design have been copied, and equally so for the care and attention which he has bestowed on the restoration of those parts which had been entirely lost: of this the gables are instances: of these only two remained in anything like a perfect state."

Mr. Gwilt was admitted a fellow of the Society of Antiquaries, on the 14th of December, 1815; but although he delighted in the collection of antiquities, and possessed a valuable store, as well of objects of interest as of information of a varied character, we do not find that he ever contributed anything to the "Archæologia."

He was, however, an occasional contributor to the *Gentleman's Magazine*, and amongst other articles there are two valuable communications from him in March and June, 1815 (pages 244 and 513), on the remains of Winchester Palace, Southwark. Letters from him have at different times appeared in our own journal.

We hope that his collections will not be dispersed without an opportunity being afforded of giving the antiquarian world an account of them, and Mr. Gwilt's own observations cannot but be of the greatest value in their illustration.

Mr. Gwilt had three sons and four daughters. Of the sons, George, the eldest, who died at an early age, was a young man of great promise in his profession of an architect. His early loss was much lamented. The second son, Charles Edwin, also an architect, died early. He contributed to the "Archæologia" an Account of the Remains of Part of the Prior of Lewes's-house, in Carter-lane, St. Olave's, Southwark (vol. xxv. p. 604). The third son, Alfred, survives.

For many years Mr. Gwilt had been subject to a painful complaint, but notwithstanding that circumstance and his great age, he was to the latest period of his life devoted to antiquarian pursuits; and so lately as the 12th of June last, he attended the meeting of the Surrey Archæological Society, at Croydon, being then in tolerable health. The loss of Mrs. Gwilt, however, who died but a few weeks before him, had been severely felt by him.

He was buried on Monday, the 7th inst. by special authority of the Secretary of State, in his own vault, on the south side (outside) of the choir of St. Saviour's.

WOOD, THE ARCHITECT.

THE BATH QUARRIES.

As your correspondent, "Wm. J. Green," has fallen into error in his communication in the last number of the *Builder*, allow me to set him right. He refers to Wood's "Essay towards a Description of Bath," as *published by himself*, in 1765. My copy of the essay, the second edition, was published in 1749. At all events, Wood died in 1754. As his obituary, which appeared in the *Bath Journal*, of May 27, in that year, is a curiosity in its way, it may interest your readers if given at length:—

"Last Thursday morning, about three o'clock, died, after a long and tedious illness, in the fiftieth year of his age, John Wood, Esq. one of his Majesty's Justices of the Peace for the county of Somerset, celebrated for his designs, plans, and skill in architecture, more particularly those in this and a neighbouring city,—the second great mercantile trading city in the kingdom: all which is well known to be the effect of his great genius, as well as undefatigable* study and application in this noble and useful science. Amidst a world of *calumnies*, *falsehoods*, and *discouragements*, which he bravely surmounted, he not only raised himself in the esteem of his superiors, but, in the compass of a few years, by an honest and commendable industry, obtained a handsome competency for himself and family. In a word, he had no enemies but those who either envied him themselves, or went too far in crediting the *defamatory reproaches* and *scandal* of others."

Your correspondent also states that the existence of a tram-road from the quarries on Hampton Down, "plainly shows the site of the quarries in possession of Mr. Allen." In an old print of Prior-park, which is now become rare, Allen's tram-road is shown to be a portion of the present carriage-road leading from the city of Bath to the mansion, and a stone waggon is represented as descending on the rails, while a coach, drawn by two horses, is proceeding up the hill in close proximity. The tram-road referred to by your correspondent was constructed for the purpose of conveying stone from the Hampton Down quarries to the Kennet and Avon Canal, which was not opened for traffic till nearly the close of the last century. Allen's wharf was on the banks of the Avon, nearly opposite the present Bath Railway Station; while the wharf at the termination of the Hampton tram-road was nearly three miles off, and the same distance above where the river Avon is navigable.

BATHONIENSIS.

* In original, as are the italics.

PROPOSED MEMORIAL CHURCH AT CONSTANTINOPLE.

WE are requested, by the honorary secretaries of the committee for building the memorial church at Constantinople, to give publicity to the following letter received by them from the honorary secretaries of the Royal Institute of British Architects, with the hope of facilitating the acquisition of the information therein suggested as desirable to be obtained:—

"We are instructed by the Council of this Institute to offer you their congratulations on the prospect of a church being erected in the East, which shall be a record at once of the faith and of the art of Western Europe.

The Council have urged on their fellow members of the Institute the propriety of vindicating, in their response to your invitation, the great capability for erecting works of a monumental character which they believe English architects of the present day to possess; and they will feel much gratification in co-operating in any other manner in the furtherance of your views.

As allusion is made in your programme to the qualities of the local materials, they would suggest that much practical advantage might result from your obtaining, if possible, specimens, with the prices and particulars of their relative excellence and durability.

The designs might also be made more appropriate for the site determined on if reference could be made to a map, showing the position, aspect, approaches, and extent, and to photographs, exhibiting the scenery and buildings of the immediate locality. Practical information as to native peculiarities of construction, and the modes of letting works to be executed, would also assist in rendering the results of the competition more satisfactory than they could possibly prove in the absence of such details.

Impressed with this feeling, the Council propose procuring, as far as they may be enabled, from their foreign correspondents, information of this kind for the benefit of those members of the profession who may be induced to compete.

In conclusion, the Council desire to express the pleasure with which they will receive and exhibit in these rooms specimens of materials, maps, photographs, price lists, and whatever farther practical particulars you may think it desirable to obtain from Constantinople; all of which, when received, would be at once brought under the notice of the profession.

With every hope that the results of the competition may prove satisfactory to the promoters, and favourable to the talent of this country,

We have the honour to remain," &c.

NATIONAL ORPHAN HOME, HAM, SURREY.

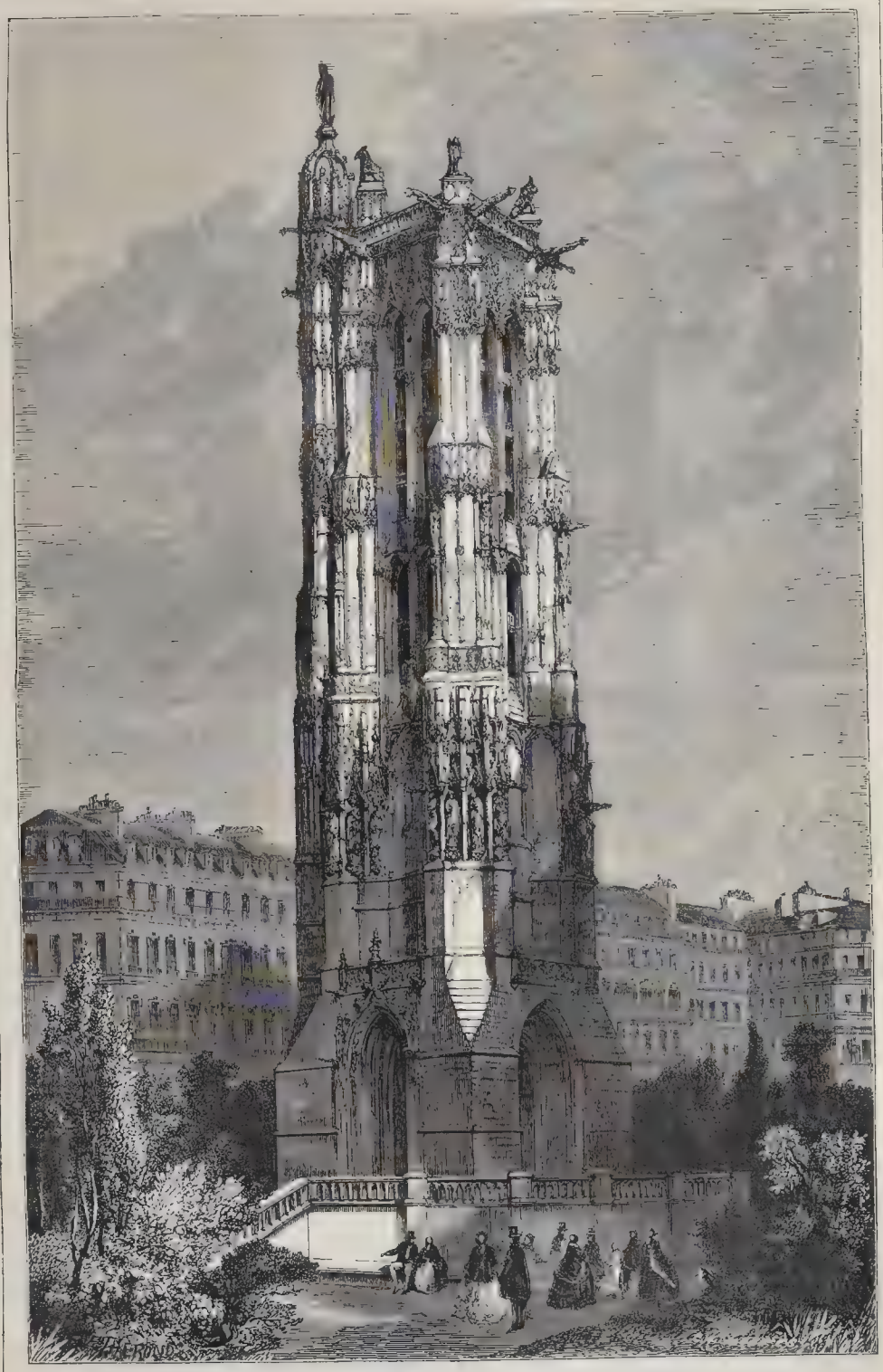
THE first stone of the new building of the National Orphan Home, Ham, Surrey, was laid on the 2nd inst. by the Marquis of Clanricarde (who presided in the absence of H.R.H. the Duke of Cambridge, through illness). Five hundred friends of the Institution sat down to a *déjeûner*, and at the table a collection was made of more than 1,000*l.* for the benefit of the Institution.

The new building is planned to accommodate 200 children, and contains on the ground-floor, two schoolrooms, 40 feet by 20 feet, with class-rooms adjoining each; two dining-rooms, 45 feet by 24 feet each; two lavatories; separate rooms for the matron, master, and assistants; also separate rooms for the committee, chaplain, secretary, lady and gentlemen visitors' rooms, &c. In the rear of the main building are the kitchen and offices. On the one and two-pair floors are the dormitories, with bath-rooms fitted up with hot and cold water. The two-pair floor is also fitted up with infirmaries, with spacious lead flats for the invalids to take airing exercise upon. The architect is Mr. E. C. S. Blake.

TOWER OF ST. JACQUES LA BOUCHERIE, PARIS.

ALL visitors to the old part of Paris will remember the picturesque tower of the church of St. Jacques la Boucherie. The church itself, of early foundation, was destroyed at the close of the last century, leaving only the tower, which was appropriated for the manufacture of shot. In 1836 it came into the market, and was purchased by the municipality. Recently it has been restored, and plantations formed around it, giving it the aspect shown in our engraving.

M. Guilhermy, quoting M. Vilain, the historian of the church, says the tower was commenced in the reign of Louis XII. 1508, and was not completed till 1522. The statue of St. James, the major, on the summit of the turret, thrown down on the pavement by the revolutionists, has been restored. Large sculptured animals occupy the other angles of the tower.



THE TOWER OF ST. JACQUES LA BOUCHERIE, PARIS.

PROVINCIAL NEWS.

Lynn.—The greater part of the new workhouse, in place of that which fell about two years since, has been finished. Messrs. Medland and Maberly, of London, are the architects; and Mr. Bennet, of Lynn, the contractor. The portion already completed is the main building, comprising the day-rooms and dormitories for the adult male and female paupers, the masters' and matrons' apartments, domestic offices and stores, and the dining-room and chapel, together with the work-rooms, washhouses, laundries, &c. and the boundary-walls surrounding them. The schools and dormitories for the children, forming a continuation of the main building, and the entrance buildings to the infirmary, are now in progress, and the erection of the lunatic ward will complete the design. Internally the chief feature is a corridor, running three ways from the entrance wall, viz.—north, east, and west, somewhat in the form of a cross. By this means it is intended that there shall be complete supervision over the whole building. The chapel has an open roof, with a large window at each end filled with tracery of the Perpendicular period of Gothic architecture. Warming by steam, with the ventilation, have been carried out by Messrs. Haden, of Trowbridge. The buildings externally may be said to partake of the Domestic style of architecture prevalent in the reigns of the Tudors. There is an arrangement of white and red bricks round the windows and doors and at the quoins and gables, and various designs of crosses and other devices are worked in red, white, and black bricks over various portions of the principal elevations. The entrance buildings now erecting contain the guardians' and clerk's apartments, together with the porter's-lodge and receiving-rooms. The centre of the main buildings is crowned by a large ventilating turret with a gilt vane, and on the extremities of the wings are other turrets of a similar character, but smaller dimensions. The chimney-shaft, upwards of 70 feet in height, is built of red bricks, with bands of white, plain, and in patterns worked at intervals up its entire height.

Spalding.—The foundations of the new butter and poultry-market houses have been excavated and some progress made in forming solid concrete for the erections.

Norwich.—At a meeting of the town council, last week, it was stated that an attempt is being made to get up a company to erect a new fish-market.

Chelmsford.—At the Essex quarter sessions, just held, the committee on the works at the Shire hall reported on the erection of the new stairs, and stated they had ordered that the corners of the grand jury-rooms should be rounded off, in the hope of improving the hearing. The estimate for one part of the work had been 150*l.*: it was completed for 127*l.* and the whole expense of what was done amounted to 366*l.* 11s. There were other matters of importance to be attended to in the building, and the committee was continued.

Hornchurch (Essex).—The opening of the new parochial schools in this place took place on the 29th ult. A description of the design for the buildings appeared in our journal on the occasion of laying the foundation-stone. Mr. F. Beesley was the architect. The work has been carried out by Mr. J. S. Hammond, of Romford, at a cost of about 1,100*l.* realised by voluntary subscriptions.

St. Albans.—Tenders for the new corn exchange at St. Albans were to be received on Tuesday, the building to be erected in Hertingdon white bricks with plinths, friezes, arches, &c. of Corsham Down Bath stone, or the whole of stone. There will be two entrances, one at each end, and seven windows on each side. Besides the light thus admitted, the segments in the ceiling will leave space for a half glass roof. It is intended to have the building finished during the present year.

Bedminster.—A new school was opened at Bishopsworth on Tuesday in last week. The building contains a school-room for 150 children, a class-room, and a master's residence.

Wolverhampton.—A temporary "people's park," intended for the recreation and amusement of the working classes of this town, was publicly inaugurated with some ceremony, on Monday in last week. The temporary park is a field of between eight and nine acres, lent until Christmas next by the proprietor. It is situate at Newbridge, on the Tettenhall-road, about a mile from the Market-place. Benches, quoits, &c. have been gratuitously provided.

Birmingham.—The foundation-stone of St. John's Schools, Ladywood, was laid on Thursday before last on a site contiguous to Monument-lane. The buildings will be erected by Mr. S. Briggs, of Birmingham, from designs by Mr. Teulon. It will afford accommodation for about 600 children. The estimated cost of the schools, with residence for master, &c. is 3,000*l.* and of this sum 2,652*l.* have been already subscribed. The land on which the schools are about to be erected has been partly given, partly purchased, 600 yards of it being given, and 1,065 yards purchased at a cost of 418*l.* The contract for the building of the schools, &c. amounted to 2,338*l.* a further expense of 244*l.* being incurred in the architect's plans and in law charges; making the total of 3,000*l.* The schools will be adapted for 200 boys, 200 girls, and 150 infants. The boys and girls' schools will be separated by a moveable partition, and the principal school-room, being 90 feet by 31, will be available for lectures, congregational gatherings, &c. The infant-school will be 40 feet by 20, and entrances to the different schools will be provided from different streets. The teacher's residence is to be erected in the immediate vicinity, where a site has also been secured, for the erection of other educational buildings, if required.

Warwick.—A meeting of the shareholders in the Warwick Corn Exchange was held on Saturday before last, to consider the propriety of enlarging the building, and increasing the capital of the company. The chairman stated that the directors had had two plans before them, one for carrying out the building to a greater length, but at the same width as at present; and the other for erecting a large room at the end of the present one, and completing it in an easterly direction, to the extent of the ground belonging to the company. By the first scheme they would get twenty additional stands, by the other twenty-eight. The estimate for the smaller extension was something like 1,000*l.*; for the larger, 1,600*l.* It was resolved to adopt the former plan, and to increase the capital of the company by 1,500*l.* in 750 new shares.

Liverpool.—The water from the new works at Rivington has not yet been brought to Liverpool, though it was to be ready for delivery by May, 1856. The deepening of the existing wells, to keep up the supply till the water is received from Rivington, has had the effect of draining dry several private wells in the outskirts.

Oldham.—The opening of the Victoria market, in Tommyfield, took place on Saturday last. The market has been erected by a company of sixty shareholders, at a cost of 5,000*l.* with power to increase their capital to 10,000*l.* and sell the market to the corporation if deemed desirable.——The new conduit of the Oldham Waterworks, leading from Besom Clough to the reservoirs of the company at Strinesdale, was also opened on Saturday.

Darwen.—The new Roman Catholic school at Over Darwen was opened on Sunday before last.

Yarm.—This town was lighted up with gas for the first time on 27th ult. The contractor was Mr. Wm. Wilson, of Castleford.

South Shields.—Mr. Ranger, superintending inspector to the General Board of Health, visited South Shields, last week, to examine the plans and sections for the drainage of a large portion of the borough, and after going over the district, says the local *Gazette*, he entirely concurred with the views taken by Mr. Thompson, the borough surveyor. Since then the plans have been forwarded to London in order to receive the consent and seal of the General Board of Health. The work will be commenced forthwith.——The lower portion of the Ogle estate, comprising Catherine, and all other side streets, has been sewered and drained, as well as the footpaths widened, and the streets paved, under the direction of the town surveyor.

Forres.—The local *Gazette* states that Forres House is being renovated. The oriel windows in the south-west front have been finished, and those corresponding at the east are in progress. The porch or porte-cochère is to be enlarged to harmonise with the other alterations. The internal finishings are said to be conducted on the most approved style of modern comfort and elegance,—pipes for water, hot and cold, fitted up,—with baths and other accommodations.

CHURCH-BUILDING NEWS.

Bourn.—The various works in connection with the improvement of Billingbay parish church being now complete, it is to be re-opened on the 22nd instant. Besides the sittings and furniture (Mr. Jordan, the contractor), an organ is about to be erected.

Peterborough.—The decoration of the altar ceiling of the cathedral, under the direction of Mr. Scott, is nearly completed. In the centre will be represented the figure of our Saviour and his twelve Apostles, six on each side. The whole is encircled by an elaborate border, around which is written, "I am the vine," &c. The vine has the appearance of being suspended in the air. The pattern is too large.——Progress is being made towards the completion of St. Mark's Church. The builders (Messrs. Ellis and Son) expect that the church will be ready in September. The workmen are busy in the interior dressing off the stone pillars and arches. The roof is also being stained, and the last coating of plaster laid on. The large window at the south entrance will contain the arms of each bishopric in England and Wales in stained glass, presented by Mr. Whalley, late M.P. for this city, and this will be the only stained window in the church. The tower has nearly reached the intended height, and if the design be carried out, will be surmounted by a spire, but the funds at present in hand, it is feared, will not admit of this.

Lymington.—A new church for Lymington is talked of.

Basingstoke.—A meeting of the Town Council, acting as the Burial Board for the town and parish, was held on 1st inst. when the town clerk reported that he had caused advertisements for plans, specifications, and estimates for the new cemetery to be inserted in the *Times*, the *Builder*, and the local papers, and laid before the meeting a draft memorial to the Lords of the Treasury, praying them to approve of the Burial Board borrowing a sum not exceeding 3,500*l.* for the purpose of providing the new burial-ground, which memorial was settled and approved, and directed to be forwarded to the Lords of the Treasury. It was then resolved that the burial-ground for Nonconformists should be on the east side of the new cemetery.

Frome (Somerset).—The parish church has been re-opened. The restorations of this church were commenced in 1846. An attempt was then made to bring back the chancel to what it used to be in former times. When the authorities came to overhaul the place they found that the parish engine occupied one chapel, and that the bell-ringers had taken possession of another. The chancel was taken down, and newly roofed in carved oak. There were five chapels discovered and restored. Several memorial windows were put in. A new communion rail was erected. The chancel is now fenced off. From the body of the church all traces of the galleries have been removed: the whitewash and plaster, &c. have been taken away, and a number of arches have been scraped and rubbed up. After the galleries went the pews, and the high-backed pews have been replaced by narrow, low-backed benches, without doors. Over the altar is a large stained glass window.

Devonport.—Wycliffe Chapel, for Independents, was opened on Thursday in last week. It is situated in the principal street of the town, is in the Early Pointed style, and consists of a nave and aisles, with a vestry at the south end. There is accommodation for about 640 persons, including the gallery (over the entrance vestibule), which is intended for the poor and the

children of the schools. The nave is separated from the aisles by an arcade of five bays, with arches springing from circular stone shafts (having moulded caps), and supporting a plain clerestory. The north end of the nave has a large five-light geometrical window: stained glass has been used sparingly in some of the smaller windows. The roofs are open and high pitched, and the timbers (together with the pews and doors) are stained, and will be varnished. The pews are to be uniformly cushioned throughout. Adjoining the chapel on the east side is a parsonage, containing ten rooms; and on the basement floor is a school-room for 400 children, with class-rooms and chapel-keeper's apartments below the aisles. These are, however, at present in an unfinished state: so also are the boundary walls. The materials used for the walls were the native limestone, with Bath stone dressings. The total cost of chapel, school, and house, exclusive of boundary walls, has been about 2,000*l.* The architect was Mr. James Hine, of Plymouth.

Barmouth (Wales).—On 24th ult. the new Wesleyan chapel in this town was opened for divine service. The chapel stands in the centre of the town. The contractor, designer, and builder was Mr. John Evans, of Llanfair-careinion.

Coventry.—Holy Trinity Church was re-opened for divine service on Sunday before last, after being re-seated and repaired. Mr. Scott was the architect, and Mr. Ruddle, of Peterborough, the contractor for the re-seating. Additional accommodation is provided by the alteration. The south side of the nave, from the pulpit to the west door, is free and unappropriated.——About 1,300*l.* are already promised towards the St. Michael's Chapel building fund.

Orston.—The following were the tenders lodged for the erection of a vicarage-house at Orston, near Nottingham. Mr. Baily, of Newark, architect:—

	Brick.	Stone.
T. Lane, Newark	£930	£965
J. S. Ferguson, Nottingham	920	...
Marshall and Henderson, Newark	914	944
C. C. and A. Dennitt, Nottingham	890	850
Wilson and Ashton, Retford	847	870
James E. Hall, Nottingham	860	840

Alvaston.—The new church of Alvaston, re-opened on Wednesday week, consists of a nave of four bays, north and south aisles, chancel and vestry, with a tower at the west end, the principal entrance being by a porch on the south side. The walls are of Duffield stone, and the dressings of Sydnope: the walls in the interior are lined with Ashlar, boasted on the face, with Bath stone for the carvings. The building is in the Gothic style of fifteenth century, the chancel partaking of the style of the fourteenth. The roofs are formed with trussed principals, resting upon carved stone corbels, the timbers being chamfered, stained, and varnished, with open ends throughout. The entire width of nave and aisles, measured in the interior, is 48 feet, and the length from the west wall of the tower to the east end of the chancel, is 80 feet, the chancel being 20 feet. The tower rises to a height of over 60 feet, and has at each of its four angles a pinnacle surmounted with a gilt vane. In the old edifice there were 179 sittings: in the new one there are 379—199 free. The chancel is paved with Minton tiles. Mr. H. I. Stevens, of Derby, was the architect, and Mr. G. Thompson the contractor. The original contract was for 1,400*l.*; additions afterwards increasing it to 1,605*l.* 18s. 9d. exclusive of heating apparatus, &c.

Keighley.—The new Independent chapel at Keighley, erected from a design and under the superintendence of Mr. Simpson, of Leeds, was opened on the 25th ult.

Hawes and Sedbergh.—The foundation of a new Wesleyan chapel has been laid at Hawes. The cost of the erection will be about 500*l.* The chapel will seat 350 persons.

Armley.—The foundation-stone of a new Primitive Methodist chapel and school-room was laid on Saturday before last at Armley. The chapel will contain sittings for 300, and the school-room will accommodate 200 children.

Skipton.—It has been suggested that a subscription should be raised for the purpose of restoring the ancient parish church of Linton, which is in a somewhat dilapidated condition. It is estimated that 500*l.* would go a long way towards the restoration.

Bedlington.—A piece of land, six acres in extent, having been given by the Bishop of Durham for a new burial ground at Bedlington, a rate and subscription were entered into for funds to erect a chapel, at an estimated cost of 260*l.* and for fencing, draining, &c. in all about 1,000*l.* The ground was consecrated on the 1st inst.

Wigan.—A stained glass window has been placed in the parish church of Standish, by Mr. C. B. Clayton, of Adlington Hall, in memory of his only son, who fell before Sebastopol. The subjects are the baptism, crucifixion, and ascension of our Saviour.

Carlisle.—The United Presbyterian church, Fisher-street, Carlisle, according to the local *Journal*, was opened for public worship on Sunday before last. The new church occupies the site of the former structure. It is built of brick, with a front of Prudham stone. Above the entrance is a stained glass window, presented by a few friends, composed of one large and two small perpendicular lights. Surmounting this is a circular window with designs emblematical of the Trinity. There are two flights of stairs leading to the gallery, and lighted by a couple of windows of cathedral glass. The interior of the church is lighted principally from the south side and by three oblong windows at the east end. The flooring is of wood, and the pews of stained wood. The church is heated by means of hot water pipes. The ceiling is flat, and is divided into panels by the cross beams supporting the roof. Beneath is a school-room, capable of holding about 200 children, — the church itself being calculated to accommodate about 600 persons. The structure is from the design of Mr. Stewart, architect. Mr. T. Jones was the builder: Mr. David Hall executed the woodwork; Mr. Rowell the painting and glazing; Mr. Ormerod the plastering; and Mr. Thompson the plumbing and gas fittings. The estimated cost was 1,000*l.*

Glasgow.— St. Aloysius's Roman Catholic chapel at Springburn was opened on Sunday in week before last. The architect was Mr. Charles O'Neil.

Drogheda.—The consecration of Hackett's-cross church took place on Sunday before last, according to the local *Argus*. The church is situated in a small hamlet. In the vicinity are the remains of the ancient church of Clogher, and the ruins of Glasspistole castle, and almost within sight is the spot upon which St. Patrick is believed to have landed. The chapel, built by Mr. Murray, of Dundalk, is in the Early English style, having twelve lancet windows on its sides, and in the chancel a large window, filled with enamelled stained glass. The proportions are 110 feet by 34 feet. The interior of the roof is open: the roof timbers are ornamented with Gothic tracery—pendants between the rafters, and wood panels stained of an oak colour. The walls are built with a smooth and variegated stone like marble, obtained at Clogherhead.

WHITEWASH ON SLATE.—PAINTS.

A CORRESPONDENT of the *Builder* has lately inquired for "a method of fastening whitewash upon slate," the object being to lower the temperature of the roofing by causing the solar rays to be reflected from its surface. I think a modification of the "lacboracic paint," as noticed in your journal for September 29th, 1855, would meet all the requirements of the present case: however, as I am told that the number in question is now out of print, I beg leave to make a few extracts from my former article on behalf of your correspondent.

The "lacboracic paint" is made by "boiling together for half an hour—Commercial shell-lac, 1 lb.; ditto borax (Tincal), 1½ lb.; and water, 10 lbs.=1 imp. gal.; allowing the solution to stand until quite cold, and then straining through bags of some strong, coarse material. The solution thus prepared should be mixed with from 6 to 8 lbs. of finely-ground dry white-lead, and raised once more to the boiling-point, with constant agitation. When cool, it may be stowed away in casks or carboys (or any description of vessel which will perfectly exclude the air), and will be fit for use at any time, with the simple preparation of stirring it well up. . . . . The only rule necessary for lacboracic painting is,—give the paint a stir every time you put your brush into it. . . . . The residue of crystallized borax and undissolved shell-lac left in the straining-bag, if boiled again in a small quantity of water, may be treated and made use of in the same way as the former solution."

If your correspondent uses the brushes secured by twine and glue for the lacboracic paint, their speedy disintegration will be the consequence: he may prevent this by paying attention to the following paragraph, which I extract from my second article upon the subject (*Builder*, Oct. 18, 1855):—

"Pour a quart of boiling-water upon 1 oz. of powdered nut-galls, and, when cool, pour off the clear, supernatant liquid: soak the brushes in the same for forty-eight hours, at the expiration of which time the glue they are fastened with will be entirely converted into leather, and consequently they are then quite unalterable by either oil or water paints."

For your correspondent's present purpose white lead would, I presume, be too expensive; but as there are numerous other whites and lime compositions to be had at a cheaper rate, he may readily choose one for himself.* I should myself recommend sulphate of baryta (constant white), which is easily prepared from "heavy-spar," by first digesting the pulverized mineral in dilute sulphuric acid, and then washing and grinding it.

My late experiments lead me to infer that the best people to apply to for sulphate of baryta are the manufacturers of white lead, as the former article appears to be a constant component of the latter. I may mention here, that in a series of nine analyses of different samples of white lead, *all* contained sulphate of baryta, the amount of adulteration varying from about four to twenty-two per cent. of the whole (the samples being ground in oil). If I ever meet with a specimen of the pigment *quite pure*, which is extremely improbable, I shall certainly publish the seller's name and address. The samples above-named were all "of the finest quality," "warranted genuine," "pure," &c. &c.!

The effect of whitewash upon slates would undoubtedly be to retard the absorption of radiant heat; but should the sun's rays continue to bear upon the roof, and after a time render it hot, it would (on the removal of the source of heat) take a much longer time to cool than if the surface of the slating was in its normal state.

I make this remark without comment, as worthy of consideration by your correspondent.

WENTWORTH L. SCOTT.

HOUSES AND GARDENS FOR THE PEOPLE.

To you, sir, who have so warmly sympathised with the condition of the poor, and so ably advocated their cause, no apology, I am sure, will be required for requesting the admission into your valuable columns of the following remarks on a subject which I, too, have deeply at heart. The larger half of my life has now gone by, and fain, ere I visit the invisible land, would I discern some material token of amendment. Something might be done. Something I feel assured *ought* to be done, to benefit more effectively the condition of the multitude.

HENRY MCCORMAC, M.D.

A great work awaits society, if not in our own, at least in the coming generation. The construction and reconstruction of the dwellings of the people are most urgently required. Houses are not adapted for health, use, or cheerfulness, as they ought to be. The general deficiency is unspeakably great. Either there is no provision, or no adequate provision, for the admission of light, air, and effective sewerage. Health and cheerfulness are not sufficiently promoted. The renovation of the houses of the multitude is of instant necessity. The executive, suitably enlightened by architects, mechanists, and medical men, should constrain the erection of suitable abodes. The dwellings of the working classes, whether they be the worn-out residences of the opulent, or houses built on speculation, are bereft of almost every desirable

* Possibly common whiting, or even old plaster images ground very fine, would answer.

convenience and amenity. Insects, vermin, dirt, and foul air alike infest them. Yet health, cheerfulness, and grace, as far as possible, should characterise every human abode. These are desirable in the first instance, and they would be found cheaper in the end. Every house should afford the thoroughest access to light and air. No living-room, no sleeping-chamber should have a borrowed light or borrowed air. Each of these all-important requisites should be directly supplied from the great fountains of both.

Every house ought to stand a little above the general level of the soil. No foulness, no dampness, should find access from below. Every possible provision, and in every the humblest dwelling, should be made for subserving cleanliness, decency, and propriety. The conditions of our animal nature impose these requirements imperatively, short at least of the alternatives of discomfort and disease. Every house might be rendered fireproof. It will be said that no house can be rendered absolutely fireproof. Let houses, then, be rendered approximately so. That there are ways and means of accomplishing this, every builder, every architect, is well aware. It is an outrage on human nature to construct abodes unnecessarily liable to fire. There are certain family requirements which the very humblest structure should not be without. At the head of these, perhaps, are sufficient sleeping accommodations. Exclusive of the living-room, which, in the lowest class houses, must of necessity be "kitchen and parlour and hall," there are required absolutely, for each several family, *three* sleeping apartments, one for the parents, one for the sons, and one for the daughters. The great bulk of the population have only two rooms for every purpose; a cooking-room and a sleeping-room; no further accommodation, no farther privacy! Some have only *one* room for *every* purpose. It is a subject on which it is impossible to enlarge without being awakened to feelings of sorrow and indignation. *Every window in every room should be made to pull down.* The whole casement should be provided with a double frame, so as to open on one side, like a door on hinges, and so allow a pane to be set in, or the glass to be cleaned, without the necessity of mounting a ladder, or standing or sitting outside for the purpose. A large and costly establishment that I am acquainted with has been recently fitted up in such wise, that of a multitude of windows not one can be cleaned, nor can a pane be replaced, without rearing a ladder to the different stories, and in all weather, outside, for the purpose! The absurd, costly, and dangerous practice of puttying up panes and going outside to clean windows, should be put a stop to. A simple arrangement, intelligible to every one—stripes of Indian-rubber and slips of wood secured with brass screws—should be substituted for the former, while windows, at once to pull down and open as doors, as aforesaid, would do away with the necessity of the latter.

Every house, even of the very humblest class, should have a washing-room, where there might be a stone or wooden bath and a good large drying-closet. This I would manage by having the kitchen fireplace in the party-wall instead of in the end wall. It is quite obvious how there might be a large boiler to supply both kitchen and washhouse. A space, too, could be boxed off behind the fire for the drying-closet, with a wooden horse or two to slide in and out at pleasure. The Americans have constructed a capital washing-machine, which I have had copied. It consists of an oblong box, raised by supports at the ends, above the ground. There is a lever above, at a certain height, hinged to a support in the middle. At one end of the lever is placed an iron equipoise weight. About the middle half of the near end depends a swinging rack, to which, by a simple contrivance, are attached the soiled clothes. By means of the weighted lever the clothes are plunged up and down in the hot lye of the box or tub, floating in which 150 balls of fir-deal, each 2½ inches in diameter, effectively discharge the duties of the washerwoman's wrists and fingers. This machine can be made double or on any scale of magnitude. It can be worked by any description of power, and really, cheaply realises a great saving of labour. A wringing-machine, for which I would propose a simple screw-press, would farther aid the poor housekeeper, and assisted by her family, these or other simple machines, among which a mangle must not be forgotten, would enable her, without the risk and expense attendant upon leaving her own house, to procure a copious, almost daily, supply of clean linen, with what unspeakable comfort and advantage it is needless to insist upon. Of course, these little arrangements, so simple yet so important, would imply an ample supply of water at constant high pressure, gas where practicable, and good drainage. A cinder-riddle, too, might be made to work, without the nuisance of dust, in a covered recess, with a winch-handle, which should impart a hopper-motion. Farther, a knife and fork cleaner, and likewise a boot and shoe polisher. This last only implies a brush-covered cylinder, with raised sides, working by means of a winch-handle in a close box, the periphery being made to open, so as to introduce the boots and shoes. The inner side of the cylinder might be arranged to clean shoes. Similar machines, but on a larger scale, would effectually cleanse clothes and carpets, without the noise and dust which at present accompany that disagreeable process.

The proper arrangement of a house, then, comprising air, water, and sewerage details, even on the most moderate scale, would imply the co-operation of distinct orders of experience and talent, not to be met with in one person. First, we must have the tasteful architect to plan, and the skilful builder to execute. The machine-maker and the mechanic must apply, in well-devised domestic appliances, a little of that skill which now runs to waste, as it were, in a thousand directions, rarely of equal importance. Lastly, the physician should see that no injurious condition should be present, and that nothing calculated to promote health and cheerfulness should be absent. *No house should be built without the direction of an architect*, and yet how many esteem themselves competent to act as architects. The fact is, that the great majority of human abodes are constructed without any—or almost any—reference to architectural or mechanical skill, or medical control. Now, model dwellings would tend to obviate all this, and a class of such being once constructed, nothing would be easier than to compel their universal imitation in all newly-built houses, gradually superseding the wretched dwellings which almost everywhere cumber the soil.

To the foregoing I shall only add that every house—certainly every house in the country—should have a garden. But, as gardens in towns are only sometimes practicable, I would surround all towns, at a convenient distance, with gardens. It would prove, I am assured, an admirable investment for speculators, were a space of ground divided into rectangular portions of a rood or more, and intersected with avenues right and left, whence the different garden-plots could be visited. Each group of gardens should be suitably enclosed, with a gate-house at the entrance, where a gardener and his assistants should reside. There, for a moderate outlay, the renter could obtain the aid he might require. In Ireland and Scotland, and even the greater part of England, there is too little of all this. Yet the practice, or a similar one, obtains to a great extent in Germany, and nearer home—about the great town of Birmingham. Even on so moderate a scale, the pot-herbs, the fruit, and the flowers which the merest stripe of a garden should furnish, would prove the greatest solace to young and old. Such an arrangement would prove a real boon—not to say resource—to the heads of families in our great cities; workers, with their wives and families, now condemned, year after year, to close abodes and working-places, without any outlet, perhaps, except the muddy or dusty thoroughfares, or any out-door weekly solace, except the drinking-shop.

CRYSTAL PALACE.

CERAMIC COURT.

THE Ceramic Court which has been for some time in course of formation, in the Crystal Palace, at Sydenham, under the care of Mr. Thomas Battam, F.S.A. has been opened. It is on the garden side of the nave, and contains magnificent specimens of Sevres, Dresden, Chelsea, Worcester, and other manufactures, from some of the most eminent collections in this country, besides many fine works by the principal English manufacturers. We shall take an early opportunity to mention it at greater length.

CHURCH OF ST. GEORGE, BASSETERRE, ST. KITTS.

THE church of St. George has been twice laid in ruins, during the present century, by the violence of earthquakes and hurricanes. It has been resolved again to erect the church, and Mr. Slater, architect, of London, has prepared a design, which is now in course of execution, the work having been commenced in May, under the superintendence of Mr. Mathew, who went from England for the purpose as clerk of works. As the principal church of the island, it was required to be of considerable size and dignity, whilst the peculiar and violent natural influences to which it will be subject forbade enriched ornament or lofty proportions. Adapting to the circumstances the style of the fourteenth century in England, the walls are made very solid, with largely-projecting buttresses, massive stone columns, and a low pitched open timber roof, so framed as to support the walls in any vibration to which they may be subject. The windows are placed low for the admission of air, and are deeply recessed from the outside, so as to place them as much as possible in shadow. They are filled with lattice or jalousies, with the addition of outside shutters, necessary for protection against hurricanes. The plan is cruciform, consisting of a nave, 24 feet wide, with aisles each 16 feet 6 inches wide, and a low tower attached outside the south aisle. The chancel is a continuation of the nave, with an apsidal termination, and with aisles, the transepts having a slight projection. The total inside length is 135 feet; the breadth across the transepts, 86 feet. Accommodation is afforded for 1,200 persons on the floor. The chancel will be fitted for choral service: these fittings, as well as a peal of bells, and stained glass for the east windows, will be manufactured in England. The cost of the works, exclusive of these supplementary items, will be about 7,000*l.* which is provided for by an Act of the Legislative Council of the island.

ST. SAVIOUR'S, SOUTH HAMPSTEAD.

THE Church of St. Saviour, South Hampstead, was consecrated by the Bishop of Oxford (acting for the Bishop of London), on Monday last. The plan is cruciform, with shallow transepts and chancel aisles, in one of which latter the organ is placed. The style adopted is Early English, and the windows have plain lancet heads. The tower and spire are to be at the west end of the south aisle, but the tower is only carried up at present to the height of the aisle roof. The walls are faced externally with Kentish rag and Bath stone. The seats, which are open and low, are of stained deal, and the reading-desk, which stands in the chancel, facing south and west, is of oak. The pulpit stands against the south pier of chancel arch, and is richly carved. It is constructed of Caen stone, and is ornamented with figures of angels bearing scrolls, and with columns of red marble. The font is also of Caen stone, with Minton's encaustic tiles let into the sides. The reredos under the east window is elaborately carved: the centre is of Caen stone, divided into three deeply carved and recessed panels, containing respectively a cross and the letters alpha and omega on either side, on a background of fruit and foliage, carved from nature. On each side of the centre composition, the wall is lined with a bold diaper of terra cotta, by Blanchard, of Blackfriars-road. The east window is a triplet, and is filled with stained glass, by Lavers, of Southampton-street, Strand. The centre light contains the figure of Our Lord, with the inscription, "I am the resurrection and the life;" and in the two side lights are figures of Saint Peter and Saint Paul. The floor of the chancel is paved with Minton's encaustic tiles, and the altar, which is raised several steps, stands on a footpace. The chancel arch and chancel roof are embellished with colour, and round most of the arches texts are painted, some upon gold grounds. The architect is Mr. Edward M. Barry, and Messrs. Lucas (Brothers) were the contractors. The amount of their contract was 4,000*l.* exclusive of foundations, pulpit, font, reredos, and decoration. The pulpit and reredos were carved by Earp, of Westminster-road, and the font and tile work were executed by Field, of Parliament-street. The church will accommodate 730 persons.

INFORMATION UNDER THE METROPOLITAN LOCAL MANAGEMENT ACT.

MR. LE NEAL, a licensed victualler, landlord of the Earl Grey, on the south side of the Mile-end-road, appeared before Mr. Yardley, at the Thames Police Court, on the 8th, to a summons, in which he was charged with having erected a building, booth, or shed, projection, or obstruction, in front of his house, which was an annoyance and nuisance to the neighbourhood, and rendered the passage or thoroughfare along the road less commodious; and whereas, notwithstanding a notice was given to him to remove or alter the same within fourteen days, the same continued a nuisance and an annoyance to the neighbourhood.

Mr. Huddleston stated, on the part of the vestry of Mile-end Old Town, that the summons was issued in conformity with the 119th section of the Metropolitan Local Management Act, and that the complaint against the defendant arose in consequence of a booth, or covered shed, being erected in front of the house, the effect of which was to cause the thoroughfare, as implied by the Act, to be less commodious, while, in consequence of the number of persons assembling in it, a considerable annoyance was caused to the neighbourhood, and the inhabitants made complaints of the nuisance. The defendant had received due notice from the vestry to remove the shed within 14 days, and not having done so, he was liable to a penalty of 5*l.*

Mr. Yardley.—Is it a question that the booth as an obstruction is on a part of the highway?

Mr. Huddleston.—I will be able to show that this is a portion of the highway.

Mr. Yardley observed, that supposing this to be a question of highway or not highway, he thought he

was not a proper tribunal to adjudicate on it, and that it ought to be taken to a superior Court.

Mr. Robinson, for defendant, said that the path on which the shed was erected belonged to the lord of the manor.

Mr. Huddleston remarked, that he would be able to show that the parish had repaired the path in question for years.

Mr. Yardley urged the learned counsel to refer a case of so much importance to another Court, and said that in order to give time for considering whether they would adopt that course, he would adjourn the case for a month.

This was agreed to.

MIDDLESEX INDUSTRIAL SCHOOLS COMPETITION.

It is, I believe, at last settled to which designs the premiums offered by the committee for the Middlesex Industrial Schools shall be given. I write to express a hope that, following the excellent example in the case of the late barracks' competition, the designs will be thrown open for public exhibition before they are sent back to the competing architects. If such exhibitions are of value to the public at large, and especially that portion of the public connected with institutions similar to the one about to be erected, much more are they advantageous to architects and the students of architecture; and it is on this ground that it is hoped, by other architects who competed as well as by myself, that you will use the influence of your journal to procure us this public benefit. FABER.

Miscellanea.

GAS-FITTERS' ASSOCIATION.—On Monday the annual dinner of the Gas Fitters' Mutual Association was held at the Plough, Blackwall. The President, Dr. Bachhoffner, in proposing success to the association, regretted that it had not met with that support the object merited, both for themselves as craftsmen, and for the public at large. He supposed he was expecting too much for a society yet in its juvenescence: he would, nevertheless, urge on them the need for their increasing their exertions, more especially with reference to supplying the want there was for a *locale*,—museum he would scarcely designate it,—where should be gathered models or specimens of such matters as are in present use, and of those each day added as science advanced. Many promises of assistance had been made extraneously, and it only remained with the association to make these promises fulfilments. Mention was also made of various lectures delivered during the last session, those by Mr. Lewis Thompson, Mr. Burnell, and Mr. Wright being more particularly alluded to. The value of a museum as proposed by the learned Doctor cannot be too strongly pressed; but it must be extended to something beyond simply the practical. Art must not be overlooked, there being, indeed, a very wide field open for improvement, if we bear in mind the tasteless fittings we see daily perpetrated.

THE FALL IN BIRKENHEAD.—We last week noticed the fall of a large hotel in Conway-street, and said it was from the foundation being bad, but we have since been informed that it was from the centres of the arches which were turned over the cellars being struck too soon, causing them to fall in, thereby bringing down that portion of the hotel over the large windows, as there were but brick piers at intervals, and the sudden fall of the cellar arch knocked them from their perpendicular: the remainder of the hotel where the outer walls were solid, was not at all shaken. The damage has since been repaired, but the arches have been dispensed with, and joists put in their stead. Mr. George Lacey is the builder and owner.

COST OF "REPAIRS" AT MELBOURNE.—The Melbourne people have been a good deal scandalized by the discovery that 29,183*l.* have been spent in "altering and repairing" the governor's residence at Toorak —a country mansion held on a five-years' lease! Some of the items seem monstrous, even for a gold country; 450*l.* for poultry-houses, and 181*l.* for repairing pigsties.

HOLBORN-HILL.—Your correspondent, "A Time-saver," has only suggested the project which I originated nearly twenty-eight years ago, as you will see by the accompanying lithograph. It was the last of three different designs, on which, above 8 feet long, and the detailed estimates, I expended much time and money, without any remuneration. An objection was at that time made to the authorizing of a company to take toll in the City, or I was prepared with a party who would have carried it into effect. As the houses proposed to be removed have been, I believe, since taken down, the estimated cost would be reduced, which might obtain for it more favourable reception.—T. F. TAYLOR.

THE GREAT PUBLIC WORKS IN THE BAY OF BENGAL.—The immense works begun in 1848 have been pushed forward with great vigour. An enormous dam has been carried across the Delta; seven navigable channels connect the weir with the coast; immense drains diminish the risk of inundation; eighty miles of embankments restrain the river in its proper bed; a safe harbour is being constructed; and several thousand men are now employed in improving the navigation of the Upper Godavery, and in opening a communication with the sea for 10,000,000 of people. These great results have been obtained at a comparatively small cost. The actual expenditure up to 1853 was only 180,000*l.* producing an increased revenue of 60,000*l.* or an annual profit of 33 per cent. Before the improvements of the Delta are completed, double that sum will no doubt be expended, and the investment will prove still more lucrative. It is to the Madras government the Indian public are indebted for these vast improvements. Colonel Arthur Cotton, late chief engineer of the Madras presidency, planned the works, which are certainly not very consistent with the stereotyped charge of neglect and do-nothing policy so frequently made as to our Indian affairs.

NEW DESCRIPTION OF KILN. — A new kind of kiln for drying grain, in which propulsion by machinery is a main feature, is said to have been invented by a Mr. Macdonald, of Portsoy. The *Banffshire Journal*, in describing a working model of the machine, says "it consists of a series of cylinders placed horizontally in a square funnel or shaft, heated by means of flues. . . . The grain is fed from a hopper through a feed-pipe into the end of the uppermost cylinder. The first screw, having a rotatory motion, takes the grain from the feed-pipe, and forces it along to the opposite end, where it falls through the connecting pipe, and enters the second cylinder, the spiral of which, revolving the contrary way, takes it back to the opposite end, or perpendicular to where it first entered, and so on through all the series, each successive spiral revolving the contrary way until the grain is delivered from the last through a spout into a hopper or couch prepared for its reception." The improvements achieved by this machine are said to consist of the exclusion of all smoke from the grain, a reduction in manual labour, a saving of fuel, and an increased power of drying.

THE FILTHIEST CITY ON THE FACE OF THE EARTH.—At a meeting of the Police Committee of Glasgow, on Monday, says last week's *Scotsman*, Councillor Moir read a letter from one of the members of the British Association in regard to the sanitary condition of Glasgow. The learned gentleman, who had been in Glasgow during the recent meeting of the association, stated that he was a foreigner and a traveller, and that he had been in almost every city in the habitable globe, but had seen none that could equal the metropolis of the west in filthiness.

STATISTICS OF COPPER, ZINC, AND LEAD. — A return, just obtained by order of Parliament, states that the copper ore imported last year amounted to 58,089 tons, and the regulus to 8,510 tons; while of unwrought copper in bricks, pigs, &c. there were imported 3,624 tons; of old copper fit for remanufacture, 1,168 tons; partly wrought, in bars, rods, &c. 4,419 tons; plates and coins, 269 tons; and copper manufactures and copper plates engraved, 513 tons. Of those countries which exported copper ore, the largest quantity, 22,425 tons, came from Cuba; from Chili, 11,845 tons; the United States, 5,139 tons; Spain, 3,773 tons; South Australia, 2,966 tons; Bolivia, 2,280 tons; British possessions (South Africa), 1,543 tons; Algeria, 1,207 tons; British North America, 1,078 tons; British West Indies and Guinea, 1,009 tons; Peru, 1,117 tons; France, 838 tons; Italy, 755 tons. The largest importation of regulus was from Chili—viz. 7,039 tons; from France, 673 tons; Norway, 367 tons; Holland, 271 tons. The exports of copper from the United Kingdom during the year 1855, was as follows:—Copper, 27 tons 10 cwt.; unwrought, 5,119 tons; coin, 6 tons 7 cwt.; sheets, nails, &c. 10,432 tons; wire, 16 tons 4 cwt.; other wrought copper, 1,084 tons. The foreign copper exported from the United Kingdom consisted, of unwrought 671 tons; part wrought, 278 tons; plates and coin, 93 tons. The imports of zinc amounted to 17,852 tons, and the exports to 2,516 tons of British and 2,636 tons of foreign. The lead (pig and sheet) imported in 1855, amounted to 7,246 tons, and the lead ore, 742 tons. The principal quantity of the lead imported (pig and sheet), came from Spain, amounting to 6,996 tons; and 371 tons of lead ore were imported from France. The British lead ore exported during the year 1855, consisted of 564 tons; pig and rolled lead, 20,466 tons; shot, 1,681 tons. Of the British lead ore exported, France took 463 tons; of pig and rolled lead there were sent to the United States, 9,264 tons; France, 4,359 tons; China, 1,993 tons; and Australia, 1,078 tons.

THE SHIPWRIGHTS' STRIKE AT MESSRS. YOUNG AND MAGNAY'S.—The workmen employed by Messrs. Young, Son, and Magnay, instead of those connected with the Shipwrights' Union, who struck work on the lunch question, are shamefully tampered with, harassed, and intimidated by those connected with the union, who seem to constitute a conspiracy to prevent fellow-workmen from earning a livelihood, much rather than a union for behoof of workmen. The employers have been compelled to take out warrants against workmen who have contracted with them but have fled from their work under the malign influence of these conspirators; and although pardoned after being sentenced to three months' imprisonment, with hard labour, not a few of them, after promising to return to their work, have still failed to do so, and now it comes to be a question whether the law or the union is the strongest. "Our yard," says Mr. Magnay, "is like a beleagured fortress. Men are constantly watching from a publichouse window all that is going on within: there are spies and scouts at the corner of every street near the yard: the men we engage in the country are intercepted at the railway stations; and we believe intimidation has been practised. There are plenty of men anxious to work for us, but they are prevented doing so by a tyrannical and inquisitorial tribunal which interferes with the freedom of labour, and has agents all over the kingdom."

CHURCHES STRUCK BY LIGHTNING. — Clapton Chapel was struck by lightning on Friday in week before last. One of the pinnacles of the building was broken, and large stones were dislodged, some falling on the roof, others upon the ground. The damage done is considerable. The chapel and the adjoining school-rooms were erected within the last four years at a cost of nearly 10,000*l.*——During the same thunder storm the parish church of Addlethorpe (Alford) was struck by lightning. A fire-ball appeared, says the *Lincolnshire Chronicle*, to come through the roof, and it exploded with a terrific report a few feet above the floor, about half-way between the reading-desk (where the Rev. E. H. Edman was at the time) and the west end of the church, leaving a strong sulphurous smell after it. Almost immediately after, the part of the roof on the north side of the nave, adjoining the tower, fell in with a tremendous crash, breaking through the seats below amid a cloud of dust. When thinking it safe to move, Mr. Edman went out, and, on reaching the porch door, he found a lamb lying dead against it, and a sheep also close by. The north-east pinnacle of the church had been struck by the lightning, the fall of which, together with the stonework at that corner as far as the moulding, had brought down that portion of the roof into the church. The porch door was splintered in several parts, and several other parts of the church were injured.

MONUMENTS.—A great open-air meeting has been held in the King's-park, Stirling, for the purpose of taking measures to raise a national monument to the memory of Sir William Wallace, to be erected on the summit of the Abbey Craig, near that city. Business was entirely suspended in Stirling on the occasion, and at least 10,000 persons were present in the park. The Earl of Elgin went down from London by express for the purpose of presiding at the meeting. The resolution proposed was unanimously carried. The design for the monument is to be submitted to public competition among native artists.——It is proposed to erect a monument to the late Sir Henry Bishop, over his grave, in the Finchley cemetery. A meeting was held, at the rooms of the Harmonic Society, Exeter Hall, last week, and was very numerously attended. Resolutions in favour of the object of the meeting were passed *nem. con.* and a subscription list opened. ——The proposal to erect a monument to Franklin at Lincoln, as a suitable site, has called forth a reply from Spilsby, in which it is stated that Spilsby, being the place of his birth, has prior claims to be the site of the proposed monument.

WILTS ARCHÆOLOGICAL SOCIETY.—It is intended to hold the next annual meeting of this society at Warminster, on Tuesday and Wednesday, the 5th and 6th August next. The Marquis of Bath has accepted the presidency of the meeting, and will throw open Longleat House and grounds to members of the society.

BATHS IN LONDON.—I cannot say much for the pluck of the Londoners in allowing such large places as the City, Islington, and Clerkenwell to be without public baths and libraries, when comparatively small country towns have adopted them long since. Men connected with the City leave tens and hundreds of thousands: how small a portion of their hoards would give an impetus to raise the necessary means to make thousands more cleanly and enlightened. 10,000*l.* as the corner-stone of a subscription for baths and libraries, with the addition of other benefactions and a small rate, would effect the object without impoverishing the next heirs.—G. H.

THE PROJECTED SUEZ SHIP CANAL.—The European Commission of Engineers assembled the week before last in Paris, to discuss the details of the plan for cutting a canal across the Isthmus of Suez, and have brought their labours to a close. The following is a summary of the resolutions agreed upon at the various sittings:—The commission have adopted the principle of a direct cutting from Suez to the Mediterranean. They have rejected the system of supplying the maritime canal from the fresh water of the Nile, and have adopted that which supplies it with sea water. At the close of their discussion, it was decided that the canal should not be embanked in its passage across the bitter lakes. As regards the port of Suez, on the Red Sea, the commission adopt the situation and direction given to the channel. A port for taking in stores, refitting, and repairing, will be created in Lake Meuzaleh.

THE STRIKE AT PEMBROKE DOCKYARD.—The strike of the masons employed by the contractors on the extensive works in progress at the royal dockyard at Pembroke has, to a certain extent, been broken up. The contractors, Messrs. Smith and Tregenna, have brought round from Dublin a body of 200 men, in order to supplant those who held out; and of this body a large number went to work. Some of the older hands also joined, so that the works have been fully resumed.

THE HEREFORD WATERWORKS.—The waterworks at Broomy-hill, under Mr. Moxon, the contractor, are very nearly completed. The engine-house, with its necessary appurtenances, is situated at the foot of the hill, and distant about 100 yards from the river. The engine is from the manufactory of Messrs. Simpson and Co. of London. It is on the beam principle, condensing, and working the steam expansively. It is capable of pumping 40,000 gallons of water per hour, raising it 103 feet high, through a 10-inch rising main, 500 feet long. The outlet of the rising main is brought up to the centre of the reservoir, 2 feet 6 inches above the top-water level. On the lower side of the reservoir—the capacity of which is 4,126,000 gallons—are the two filtering beds, situate 13 feet below its level. In the centre of each filter-bed is a square pedestal, surmounted by a vase, 4 feet high, through which an ornamental jet will play. The sewerage drains will be flushed with water from the reservoir, and the filtered water be preserved entirely for domestic purposes.

IMPROVEMENT IN IRON HOUSES.—Mr. W. Clarke, of Kingsland, has recently patented an improvement in the construction of iron houses, consisting of a malleable iron joint. Its principal value is held to consist in the facility for removing iron houses, as it can be adopted by persons unskilled in mechanical craft.

STREET WATERING AND FIRES.—A recent article in your valuable paper on "Street Watering," &c. recommending the use of "hydrants" in lieu of pumps, recalls to my memory an old idea of mine, conceived in 1847, on the occasion of seeing a turn-cock's arm broken at the corner of Cheapside, while turning on the main, which happens to be fixed in the centre of the road, opposite Allan, Badger, and Co.'s warehouse, near the General Post Office. I propose a hydrant, consisting of a lamp-post (with lamp fitted with coloured star in each side, so as to show by night); the base to contain a pipe, with nozzle from main; on the top of which, in a flat cast-iron tube, similar to that used for electric telegraph street wires, I run an endless chain, going round a wheel or pully on main, to turn on and off supply, either by butterfly or sliding valve, similar to a dock-gate valve: the chain goes up base of post, and round a smaller pulley, which would be fixed about the height of a yard from surface of pavement, so that the turncock would only have to insert a handle, a few turns of which open or close the mains. The hydrant would have a different shaped plug or tap, so that there need be no mistake. I think my plan offers the following among other advantages, viz. there is no iron plug-hole in the roadway, making uneven wear of paving, no unsightly "F. P. 14 ft." on Brown, Jones, or Robinson's house; no danger to turncock; no delay in cleaning out plug-holes, or in finding them at night when wanted, as the coloured lamp would indicate their situation. I have tried the experiment of what power it would require to work a valve on my plan, and find that with a pulley (working screw to raise valve in main), of 2 feet diameter, geared by chain, with one about 3 or 4 inches in post, a leverage of 2 feet would be amply sufficient. One experiment was tried with valve, at 70 feet distance, much farther than would usually be found, and with more turns and bends than could possibly accrue. There would be a considerable saving of weight for the turncock to carry, as he would only require one instrument (which need not weigh so much as the key), instead of the three he is now burdened with.—G. H. S.

COMPETITION.—With a view to the improvement of the Royal Hotel, Mall, Clifton, Bristol, various architects having been invited to compete anonymously for the commission, six plans were sent in,—to three of which premiums of twenty, fifteen, and ten guineas were awarded. The successful candidates were Mr. J. H. Hirst, Mr. S. B. Gabriel, and Messrs. Pope, Bindon, and Clark. After some consideration, the committee, on the recommendation of Mr. Medland, architect, of Gloucester, who was called in professionally to advise on the decision, determined upon the adoption of Mr. Hirst's design, as more in accordance with the conditions of the scheme they had submitted to the different architects.

THE CAVALIERE CANINA, the celebrated antiquary and architect, of Rome, has just arrived in London. He is on his way to Alnwick Castle, to direct, with Mr. Salvin, some of the decorations of the ceilings and other parts, which the Duke of Northumberland desires to be executed in the grand style of the Roman palaces. The Cavaliere is an honorary and corresponding member of the Royal Institute of British Architects.

REPORT ON NEWPORT DRAINAGE.—A report on the general drainage of Newport, Monmouthshire, has been prepared by Mr. Alfred Williams, C.E. in a printed form. The reporter states that the sewage of two-thirds of the borough may, by the proposed works, be brought to the Pillgwenlly outlet, and nearly all the remainder to same outlet by a further expenditure. No flushing will be required. The scheme contemplates about seven miles of new brick sewers, &c. the sewers varying in height from 14 inches to 4 feet 6 inches; all above 14 inches being egg-shaped, and the materials of the whole, radiating bricks, laid in mortar, with some in cement. The cost of new sewers, &c. and repairing old, is estimated at 13,000*l*. The number of houses in the borough is about 3,400, so that the average cost of the works would be about 3*l*. 16s. per house. The cost of sewers proposed to be made on lands not yet built on is estimated at 3,000*l*.

ROMAN CATHOLIC CATHEDRAL IN SOUTH AUSTRALIA.—The foundation-stone of the intended new Catholic Church of St. Francis Xavier, in Victoria-square, Adelaide, was laid on Monday, March 17. The day being the anniversary of Ireland's patron saint (St. Patrick), there was a large attendance to witness the ceremony.—*Australian and New Zealand Gazette.*

ANCIENT WELL DISCOVERED AT UTTOXETER.—As a party of workmen were engaged a few days since in digging the foundation for a new house in connection with a shop, in the Market-place, they discovered, underground, a curious old stone well, arched over, and about ten yards deep. The stones, of which it is built throughout, are worn away by the trickling of the water, and it is of very ancient, if not, as supposed, of Roman origin; but the Goths and Vandals of the place have filled it up with soil.

TENDERS

Delivered to the Guardians, Mint-street, Southwark, for industrial schools for the parish of St. George the Martyr, to be built at Mitcham:—

	Main Building.	Infirmary.	Porter's Lodge, &c.	Total.
	£.	£.	£.	£.
Humphreys	10,162	1,950	867	12,979
Taylor and Buckley	9,900	1,672	741	12,313
Pollock and Co.	9,723	1,639	617	11,979
Day and Co.	9,649	1,822	790	12,262
Tarrant	9,393	1,660	736	11,789
Myers	9,360	1,736	752	11,847
Hack and Son	9,237	1,697	737	11,671
Moxland	9,200	1,700	760	11,660
Rudkin	9,190	1,750	700	11,485
Little and Sons	9,188	1,670	726	11,584
Patrick	9,015	1,750	700	11,465
Harmer	8,906	1,671	727	11,304
W. Biggs	8,965	1,700	700	11,365
S. S. Wilson	8,865	1,729	744	11,338
Thompson	8,660	1,600	690	10,950
Adamson and Sons	8,598	1,713	721	11,032
J. Wilson	8,331	1,528	680	10,539

For erecting five houses, Orford-place, Hackney-road, for Mr. James. Mr. H. J. Hammon, architect:—

Brown	£2,737	0	0
Munday	2,610	0	0
Vinlow	2,599	0	0
Hopkins and Roberts	2,454	0	0
Dove, Brothers	2,446	0	0
Axford and Hall	2,322	0	0
Carter	2,174	0	0
Hocken	2,150	0	0
Nagol	2,150	0	0
Tarrant	2,136	0	0
Johnstone	2,019	0	0
Mears	1,973	0	0

For church in the Westminster-road. Mr. W. Rogers architect. Quantities supplied by Mr. Jarvis:—

Taylor and Buckley	£8,990	0	0
Gammon	8,750	0	0
W. Higgs	8,620	0	0
Lucas	8,322	0	0
Cubitt and Co.	8,290	0	0
Macey	8,140	0	0
Patrick and Son	7,944	0	0
Myers	7,683	0	0

For a new house in Cornhill, for the English, Scottish, and Australian Chartered Bank. Portland stone and part polished granite front. Mr. Henry Baker, of Upper Gower-street, architect:—

Ashby and Sons	£5,359	0	0
Cubitt and Co.	5,349	0	0
Lawrence and Son	5,299	0	0
Young	5,197	0	0
Batterbury	5,180	0	0
Mansfield and Son	4,950	0	0
Piper and Son	4,866	0	0

For eight houses, Islington. Mr. W. Rogers, architect:—

Hill	£2,835	0	0
Taylor	2,649	0	0
Gammon	2,561	0	0

For rebuilding two houses at Rufford's-buildings, Islington. Mr. Leicester, architect. Quantities supplied:—

Mansfield and Son	£1,375	0	0
Hill	1,297	0	0
East	1,297	0	0
Willson	1,237	0	0
Coleman	1,192	0	0
Fowler (accepted)	1,113	0	0

For erecting part of the carcase of a mansion at St. John's-wood. Mr. Joseph Springbett, architect:—

Unwin	£2,613	0	0
Holland and Co.	2,565	0	0
Hebb	2,475	0	0
Higgs	2,230	0	0
Clemence	2,204	0	0
Browne and Co.	2,112	0	0

TO CORRESPONDENTS.

Churches struck by Lightning.—The *Builder* almost every summer has recorded such cases; but dates would require a special reference.

Spring and Thames Water. Lime water is perhaps the best agent for softening spring water containing lime, which it precipitates by depriving it of carbonic acid. Thames water would require filtration through charcoal or other cleansing process, to render it fit to drink. The *Builder* has often treated of modes of softening and cleansing water, and to it we must make general reference.

"T. McA."—"W. I. R."—"Sir J. S. L."—"C. C. N."—"S. H."—"C. L. N."—"N. W. L."—"W. F. H." (we shall be glad to see it).—"G. R. C." (thanks)—"J. L."—"J. P."—"T. H. B."—"Morvah" (set forth your claim to the head of your department.)—"C. R. S."—"T. R. S."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

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Grey Friars, Reading, July 4, 1856.

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SAINT GEORGE the MARTYR, SOUTHWARK.—The Vestry of this parish will meet in the Boardroom, at the Workhouse, Mint-street, on MONDAY, the 14th day of JULY instant, at SIX o'clock in the Evening (exact time), to receive APPLICATIONS from CANDIDATES for the office of CLERK of the WORKS to the said Vestry. He will be required to take under his care the general superintendence of the sewers and drains department of the parish; to write a good business hand, and have some knowledge of accounts, to be competent to the taking of levels, the laying down plans and sections, and the making of working drawings, and to have a practical knowledge of the formation and construction of sewers and drains and the flushing and the cleansing of the same; and also to perform such other duties as the Vestry may require. The salary will be 2l. 2s. per week. All applications and testimonials to be sent in to the Vestry Clerk's Office as below on or before FOUR o'clock in the Afternoon of MONDAY, the 14th instant, and the applicants must appear personally at the Board room as above by SEVEN o'clock on that Evening.—By order of the Vestry.

FREDERICK TRITTON, Vestry Clerk.

49, Bridge-house-place, Newington-causeway,
8th July, 1856.

WANTED, a BUILDER'S CLERK.—He must be a good draughtsman, and thoroughly competent to take out quantities, and estimate for all kinds of work. Apply, by letter, stating salary required, and previous engagements, &c. to J. R. Y. Harding and Adams's, Broken-wharf, Upper Thames-street.—One who has a connection amongst surveyors preferred.

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Gas Works, Dorchester, July 8th, 1856.

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TO ARCHITECTS, BUILDERS, AND CONTRACTORS, &c.

A THOROUGH practical, energetic Man, who is a good draughtsman, can measure, &c. has first-rate testimonials, requires a SITUATION as CLERK of WORKS, or General or Shop Foreman to a Builder or Contractor.—Address BETA, 4, Robert street, Hoxton.

N.B.—Country not objected to, or to go abroad.

TO ARCHITECTS, ENGINEERS, &c.

AS CLERK of WORKS.—A respectable Man of much experience wishes for an ENGAGEMENT. Can give satisfactory references.—Address to M. A. N. Essex Coffeehouse, 98, Blackfriars-road.

TO ARCHITECTS.

A GENTLEMAN wishes to meet with an ENGAGEMENT. He is competent to design and prepare finished, perspective, and detail drawings. Would have no objection to assist architects temporarily, or accept an engagement for two or three days a week. First-class references in town and country.—Address, J. F. G. 58, Amwell-street, Middleton-square Pentonville, London.

TO ARCHITECTS.

A DRAUGHTSMAN, competent to prepare designs, perspective, finished, working, and detailed drawings, is open to a RE-ENGAGEMENT. No objection to assist architects in temporarily, but a permanency preferred. Good references. Salary, 2l. 2s. per week.—Address, R. T. C. 1, New Chapel-place, Kentish-town.

A FIRM doing a Wholesale Business with House and Ship Builders, Engineers, &c. &c. having an office in the City, is desirous to obtain an AGENCY from a Manufacturer of standing, whose business lies amongst the same class of consumers.—Address, A. B. at Messrs. Reece, Wilkins, and Blyth, Solicitors, 10, St. Swithin's-lane, London.

A PARTNER WANTED, in a first-class STOVE-GRATE and FURNISHING IRONMONGERY BUSINESS, at the west-end end of London, established UPWARDS of THIRTY YEARS. An energetic and practical man, of business habits, accustomed to the trade, and having had the control of workmen, possessing a moderate capital of not less than 2,000l. would find it an advantageous opportunity of establishing himself, as the proprietor is desirous of meeting with a partner who may be enabled to carry the business forward on his own account in a few years. Letters (from principals only), stating where engaged, and how long, with such other information as may enable the advertiser to form some opinion as to the energy and ability of the applicant, may be addressed to X. Y. Z. care of J. B. Watson, esq. 9, Nottingham-place, New-road.

ARCHITECTURAL and SURVEYING PRACTICE TO BE DISPOSED OF, on moderate terms, an old-established PRACTICE in the South of England.—Address ALPHA, 2, Murray-street, New North-road, Hoxton.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

FREEHOLD GROUND, CHANCERY-LANE.—The Commissioners of Sewers of the City of London hereby give Notice, that they will MEET in the GUILDHALL of the said City, on TUESDAY, the 22nd of JULY next, at TWELVE at Noon precisely, to receive PROPOSALS for taking on BUILDING LEASE for EIGHTY YEARS, at a ground rent, certain PLOTS of GROUND, situate on the west side of Chancery lane, and near Fleet-street. Further particulars may be had, and plan seen, on application to Mr. HAYWOOD, Engineer to the Commission, at their Offices in the Guildhall, where forms of proposal may also be obtained. The Commissioners will require a plan and elevation of the premises proposed to be built, to be submitted to them for their approval, and do not bind themselves to accept any proposal unless deemed advantageous. Persons offering proposals must attend on the advertised day, and the party whose proposal is accepted will be required to execute an agreement at the time.

JOSEPH DAW, Principal Clerk.

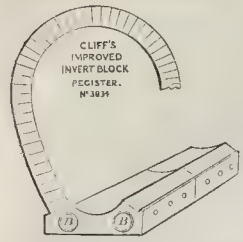
Sewers Offices, Guildhall, June 3, 1856.

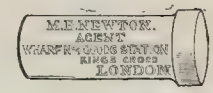
TO POTTERS, BRICK-MAKERS, and OTHERS.—TO BE LET, ELEVEN ACRES of LAND, containing pipe-clay, brick-earth, fire-clay, and fine sand, situate in a very desirable part of Hants, within a short distance of the most important commercial towns. The whole of the buildings, machinery, plant, and advantages to be Let, on moderate terms, or taken at a fair valuation.—For further particulars, apply to Mr. S. BROAD, 55, Above-bar, Southampton.

MAITLAND-PARK, HAVERSTOCK-HILL, HAMPSTEAD-ROAD, land tax redeemed.—TO BE LET, upon building leases, for ninety-nine years, desirable BUILDING SITES upon the above Estate. The continual demand for houses in this locality, and the picturesque position of the property, adjoining the grounds of the Orphan Working School, render this a desirable opportunity for builders or gentlemen wishing to erect villas for themselves.—For plans and terms apply to the Secretary of the Orphan Working School, 23, Ludgate hill; Messrs. TERRELL and CHAMBERLAIN, 30, Basinghall-street; the Architects, Messrs. WEHNERT and ASHDOWN, 2, Charing-cross; or at the Lodge attached to the School

THE ORIGINAL WORTLEY FIRE-BRICK, GAS-RETORT, and SANITARY TUBE-WORKS.

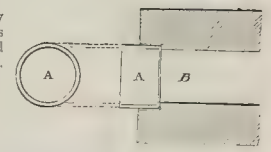
ESTABLISHED 1795.

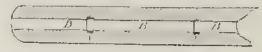




BY USE OF CLIFF'S IMPROVED INVERT

The uniform level of sewer is easier of attainment; greater rigidity is insured by the joints A A; the work is executed with more speed; the notched sides insure better support for the bricks; while the subsoil is more perfectly drained through the lateral apertures ° ° ° in connection with the down thoronghfares B B.





Mode of jointing with ring A as set.

NOTICE.—TO BUILDERS, MASONS, AND THE TRADE.

GREEN MOOR STONE WHARF, 42, Bankside, Southwark,

late in the occupation of

Messrs. George Brown and William Rushe, who have discontinued the business, and it will in future be carried on by

BROWN, BOOTH, AND CO.

who beg most respectfully to solicit a visit, to inspect the very superior STOCK of all KINDS of STONE now put upon the premises. Price Lists sent on application.

WATERSIDE PREMISES between Waterloo and Blackfriars-bridges with an extensive 15 600 feet, an unrestricted right of the river extending 120 feet, and a frontage communication with the Commercial-road.—To Mercantile Companies, Capitalists, Mer hants and Others This important Property TO BE LET on Lease for the term of nearly 20 years, together with the Buildings and Manufactories thereon It presents a valuable opportunity for the carrying out of any extensive undertaking where space and the facility of shipping is required. The Leases will have the power of erecting Warehouses or any other superstructure agreeably to their operations, with the option of purchase during the term.—Apply to Mr CHARLES PEATY, Estate Agent, Auctioneer and Surveyor, 11, Sherborne-lane, City.

TO TIMBER MERCHANTS, BUILDERS, MANUFACTURERS and OTHERS.—To BE LET or LEASE, EXTENSIVE PREMISES, near Mile-lane Hoo ton, consisting of a large Dwelling-house, Workshops, large Yard and Offices.—Apply to J. BALLINGALL, 34, Brook-street, New road.

TO CAPITALISTS

TO BE LET for BUILDING, in the first instance about EIGHT ACRES of GROUND, admirably adapted for the formation of a Marine Watering-place, on a much frequented part of the coast of South Wales. A good road has recently been made to the property, which is situated about six miles from a large town and station on the South Wales Rail way. It contains excellent quarries and an abundance of water; the building is good, and the scenery is celebrated for its beauty The desideratum of a watering-place upon this coast has long been felt by the numerous families that resort to it from the whole west of England. Distance from London by railway about six and a half hours.—For particulars apply by letter only, to Mr. Calder's Library, 1, Bat urst-street, Hyde-park-gardens, London.

FREEHOLD BUILDING GROUND.—TO BE LET or SOLD on advantageous terms, TWO PLOTS of GROUND, situate in the most preferable part of Saint John's Wood For particulars apply by letter, post-paid, to W LEWIS, 2, Craven-terrace, Craven-hill, Paddington.

BUILDING and BRICK-EARTH LAND, at Holloway, TO BE SOLD or LET, in large or small quantities —Apply to Mr. PEACHEY, 17, Salisbury-square, Fleet-street.

NEW WINDSOR ESTATE. — Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences with every amenity are much needed in this beautiful locality The situation is the finest in or near Windsor, adjoining on the Park and Long Walk and commanding a splendid view of the Castle The close proximity of the Great Western and fifteen minutes' walk of the South Western Railway Stations Advances can be had by responsible parties —For particulars apply to Mr. WILLIAM SIM, Architect and Surveyor, 2, Danes-inn, Strand.

FINCHLEY.—LAND fronting the Regent's Park-road, and Eastern-road, TO BE LET on Building Leases for ninety nine years, with power of entrance mad Plots from one to four acres for large villa residences; smaller plots for semi-detached houses, and plots for shops in the village NEW A BUILDINGS Mr. Architect, 8, Albert's place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Grays-inn square.

STRATFORD, ESSEX. — FREEHOLD LAND, within three miles of London, ev tersele from land-tax and free of tithe. TO BE LET, on Lease, for a long term of years, in large or small plots suitable for manufactories or building purposes. Apply to Mr W H DEAN, Architect and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

TO BUILDERS, BUILDING SOCIETIES, or GENTLEMEN, seeking sites for the erection of Villa Residences. TO BE SOLD, about 34 acres of valuable FREEHOLD BUILDING LAND, situated on an eminence overlooking the borough of Reading, beautifully ornamented with timber, and commanding magnificent views. It has a frontage of above 3,000 feet to fine roads; and being within a few minutes' walk of the borough, enjoys all its advantages, although free from all borough rates. -For particulars, apply to Mr LEDIARD, Reading, Berks.

TO BUILDERS and CAPITALISTS.—Houses from 50l. up to 300l. a year rental, and villa residences are greatly in demand near the Royal Medical College, at Epsom. The soil is very dry, chalk and gravel, and rents are well known to be in the highest degree healthful and beautiful, which has already been proved by the pupils and others connected with the college; and as the demand for houses of a respectable class is very great, and will increase year by year, it is confidently believed that enterprising builders would find this locality worth notice. The party recommended to insert this advertisement is—but they are only one among many—in urgent want of a good house near the College, at Epsom; and may be referred to by letter, addressed E J, care of Mr. Grey, Epsom.—Some places are overdone with building, but Epsom is underdone, and consequently presents a fair field for enterprise.

TO BE LET, a large FOUNDRY, at Manchester, with canal and street frontage accommodation. A steam-engine on the premises can be had if required.—Apply to Mr. EDGWEED, Architect, 12, Queen square, Bloomsbury.

TO BUILDERS.—TO BE SOLD, or LET, PREMISES in DUKE-STREET, Manchester-square, consisting of three houses, with above offices in rear. The remainder of the freeholder for a long term, at 70l. per year; and, if put into repair, would readily realize from 20l. to 250l. per year. To be let at a rental, or the lease sold. Payment made easy. Apply to Mr. W. HOPWOOD, Aldine-chambers, Paternoster-row.

BUILDING LAND TO LET, about SIX ACRES, or in lots to suit purchasers, main sewer made A delightful situation. A very favourable arrangement can be made for any one wishing to commence building. The "Favorite" omnibus runs within 150 yards of the estate.—Apply to Mr. SMITH, 2, Albert Villas, Seven Sisters-road, Holloway.

TO BUILDERS AND OTHERS

CLAPHAM-COMMON.—TO BE SOLD or LET, with the option to purchase hereafter, FREEHOLD LAND in this very superior and delightful locality, in plots, suitable for the erection of villa and other first-class residences.—Apply by letter, post paid, to A. B care of Mr. Evans, Stationer, &c, Clapham Old-town.

TO CARPENTERS, CASEMAKERS, AND OTHERS.

MESSRS. ABRAHAMS and CO. have to DISPOSE of this genuine, compact BUSINESS, doing 400l. per annum, with goodwill and fixtures, only 85l. Situate near a leading thoroughfare, Tottenham-court-road, with good house, and every convenience Possession may be had immediately.—Apply, Messrs. ABRAHAMS and CO Business Agents, 115, Great Portland-street, and 32, Mortimer-street, Cavendish square, or enclose stamp.

REAL and PERSONAL ADVANCE COMPANY.—Incorporated by Act of Parliament.—This Company ADVANCES LOANS upon the security of freehold, leasehold, and other property, for various periods to be repaid by small monthly payments. Personal security accepted in addition where an advance to the full value of the property is required. For forms of application and further particulars, apply at the Offices of the Company, 4, Beaufort-buildings, Strand. Office hours from Eleven till Five. ROBERT SANDERS, Secretary.

MONEY. — A Gentleman has several THOUSAND POUNDS to LEND, on HOUSE PROPERTY, of undoubted security.—Apply, with particulars, to Mr. LYNE, Solicitor, 12, Penonce-lane, City.

MORTGAGES of ROCHESTER-BRIDGE ESTATES.—LOAN REQUIRED — The Wardens and Assistants of Rochester-bridge will be ready, on THURSDAY, the 24th day of JULY, 1856, at their AUDIT CHAMBER, at Rochester, in Kent to open and consider TENDERS or PROPOSALS from persons willing to advance LOANS on any part thereof, in sums of not less than 100l each, to be secured with interest Payable half-yearly, by transferable mortgage of the estates proper of the Bridge Corporation, in the prescribed form, and under the regulations and provisions of the Rochester-bridge Acts, 18th and 19th Victoria, such loans and the repayment thereof. All sums so advanced are to be paid within one week next after the acceptance of the proposal shall have been notified to the party making the same Further particulars and extracts from the Acts may be obtained on application to me. Proposals, in sealed envelopes marked "Tender for Mortgage," stating the amount offered to be advanced, and the rate of interest required, may be sent to me at any time previous to ELEVEN o'clock in the forenoon of the said 24th day of JULY, 1856

By order of the Wardens and Assistants,
GEORGE ESSELL, Bridge Clerk.

The Precinct, Rochester, June 30, 1856

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER HANGINGS is CROSSS'S WHOLESALE WAREHOUSE, 29 GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators Dealers, and large consumers will do well to visit this establishment.

PAPER-HANGINGS. — JEFFERY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, which in price, style, and colouring, are equal to any that can be manufactured. -J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls. — Factory, 115, Whitechapel; Show-room, 500, Oxford-street.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 22, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—TRUMBLE and CO Manufacturers, beg to direct the attention of the trade to their immense STOCK of PAPER-HANGINGS, at No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, and Machine Goods. The whole being their own manufacture, can supply on the very best terms.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimen boards, patterns, and estimates at per foot super, together with every particular of its cost and adaptation, can be obtained of Mr. BURT, 2, Charlotte-row, Mansion House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

TO ENGINEERS, BOARDS OF HEALTH, &c.

PLUMBERS' WORK, ½ and ¾ inch Joints, 1s 6d. each; inch ditto, 2s.; 1½ inch, 3s. A Lead S Trap for 5s. 6d. Every description of plumbers' work executed in a first-class manner J GOODSON, 22, Hanover-street, Pimlico.

TO BUILDERS AND OTHERS

PLASTERING DONE, in all its Branches and Materials, with or without materials and scaffolding, at reasonable charges, in town or country.—Address, SAMUEL BRETT, 24, Southwark bridge-road.

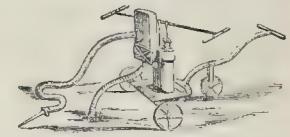
ARTESIAN WELLS, Boring for Water, Sinking Shafts, &c The Nobility, Gentry, Water Companies, Towns, Baths, Brewers, and Manufacturers of every description, may be supplied with any quantity by DAVID GREENLEY, Civil Engineer and Patentee of Boring Tools, 30, Cumming-street, Pentonville. Pumps and machinery for raising water from deep wells, boring tools, and well-pipes for exportation. Men and tools supplied to bore for railroads, minerals, &c.

TARPAULINS for COVERING ROOFS during Repairs, SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore street City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

CHUBB'S ILLUSTRATED LIST of LOCKS, FIRE-PROOF SAFES, CASH, DEED, and WRITING BOXES, with their sizes, fittings, and prices, will be sent by post on receipt of two stamps. Apply to CHUBB and SON, 57, St. Paul's churchyard, London.

TO BUILDERS and OTHERS.—Books and Accounts made up and adjusted, Balance-sheets prepared, and Statements to lay before creditors, on moderate terms.—Apply to Mr. MARCH, Accountant, 48, Bedford-row.

LEVER LIFT and FORCE PUMPS for SALE.—Two Three-inch Lever Lift and Force Pumps, and one ditto with crank and fly-wheel. The whole having brass barrels, and in first-rate order, being nearly new. They are admirably suited for a builder, or any person requiring a powerful and portable pump Two of them are set up on wheels.—MR. KNIGHT, Salmon's-lane Bridge, Limehouse.



B. FOWLER, HOLMAN, and CO.

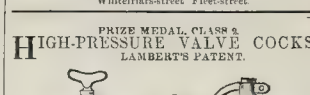
SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.

The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve ways three times usual size; made to suit layers of all kinds, hot or cold, is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

BENJAMIN FOWLER and CO. General Engineers, Whitefriars-street Fleet-street

PRIZE MEDAL, CLASS 9.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

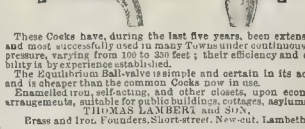
The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,
Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO WATER COMPANIES AND PLUMBERS

HIGH-PRESSURE COCKS & CLOSETS,



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from cast-iron, and applicable for all purposes and situations. Patent Closets and Basins with simply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—*Light, Dark, and Portland Cements* equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hard Lime, Laths, Slates and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Roofing &c. Paints, Stucco, &c. Marble Merchants and Importers. *Portzolano.*

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known Hard Stuccoes, dry quickly, and can be finished for use within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plaistering purposes, is a quick-setting Cement, that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel street, Liverpool.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties: that it is not affected by frost, and does not operate in damp situations. Actual COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT. Messrs ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company are on offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling purposes, decorations, &c. as having all the properties requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 80, Old Broad street, London; to Mr. MCNUMENT, 4, Caroline-place, Citycroad; to Mr. TINKWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr. THOMAS WEEKES.

Agents in London, Messrs. GEORGE POTTER and CO. Lime-merchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 19, North-Wharf-road, Paddington.

GREEN and CO.'S PORTLAND CEMENT and LIME WORKS, WOULDHAM, near Rochester.—These Works having obtained Letters Patent for the Manufacture of Cement, by which very great and important advantages are obtained over the old method of manufacture, insuring at once uniformity of colour and quality, Merchants, Contractors, and Builders are informed that they can now be supplied with any quantity, either for home or foreign markets, for wholesale orders on advantageous terms.—Samples and prices forwarded, on application at the Works; or to Mr. W. C. ATKINSON, 63, Moorgate-street, City; from whom also testimonials from eminent engineers as to quality may be obtained.

PORTLAND and BATH CEMENTS. TATHAM and CO. 14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT. Glazed Stoneware Sewage Pipes. Brick, Lime, and Cement Merchants, TATHAM and CO. 14, South Wharf, Paddington.

PARIAN CEMENT, reduced to 3s. per bushel, from 1st inst. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent. N.B. These Cements supplied for shipment, on advantageous terms.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GREY STONE LIME WHARFS, 12, UPPER CROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME, in any quantities from the above wharfs, or per barge, direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 8s. per ton.

Small ditto, ditto, 4d. per ton.

Barges loaded in a few minutes.

Wandsworth-hall Grey Stone Lime Works, on the Medway, near Rochester.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead; whilst the consumption of material is less than for one coat. It dries very fast and hard.

HUBBUCK'S BLACK BODY PAINT the same as the former, at three fourths the price.

HUBBUCK'S PATENT WHITE ZINC PAINT is ready for laid on for Iron Ships and iron exposed to salt water; neither bilge water, nor noxious vapours from cargo, nor heat of funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, stamped, Hubbuck, Leaper, Painter; and when so marked the quality is guaranteed

HUBBUCK'S COPPER COLOURED PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. The presence of which this Paint is not attacked by the warm weather do barnacles attach to it.

Full part culars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.

OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at the Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS

Manufactured by J. M. BLASHFIELD, at Millwall Isle of Dogs, Warehouse, No. 1, Wharf, Paddington-basin.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When lime is delivered by measure, the master has instructions to produce (on demand) the canal guarantee pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 16, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention. Quarries and Manufactories, Stockton, near Southam, Warwickshire

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime Depôt, Bath, and Lias Cement Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

CHARLES RICHARDSON, 3 & 4, SOUTH-WHARF, PADDINGTON BASIN, COWLEY AND KIRKBY BRICKS, PORTLAND, ROMAN, AND OTHER CEMENTS, FAMWORTH GLAZED SEWAGE PIPES, BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 4 South Wharf, Paddington.

NOTICE.

CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now lime in GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keene's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c.

THE BEST HERTFORDSHIRE MALM SECONDS; THE BEST WHITE SUFFOLK and RED FACINGS; WHITE SUFFOLK PERFORATED BRICKS; DEEP-RED RUBBING BRICKS

Also COWLEY and KENT STOCKS, in any quantities.

J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY

(Within a short distance of the five bridges).

THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity

Also, STOCKS, of FIRST QUALITY.

J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for asphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 300 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above named articles can also be procured, as well as all kinds of fire bricks, both Welsh and Scotch, Fire-clay, Blue burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation

General Office—No. 13, GEORGE-YARD, LOMBARD-STREET.

Letters addressed to Grays, Essex, will meet with immediate attention.

TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane Dulwich. Price of good stock bricks, 25s. per thousand on the field, for cash. Application to be made to the Foreman, A. BANHAM, at the Works.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good shape and quality, constantly on sale at H. D. DODS Brickfield, Wilton-road, Pimlico, a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and prices of bricks, &c.

Malm Pieces, half-washed Stock and Pale Pieces, also in sale, these pieces are good, well burnt, and nearly free from defects; a very large proportion of the stock being suitable for external facing.

Apply at the NAVIGATION Office, at the Coaling-house, Horseferry-road, Millbank-street, near the Rosemary Branch, Hoxton.

N.B. Eight-horse and Pair Boards of proved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power, one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856. Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

CHEAP WHITE BRICKS, for FACING HOUSES (Beal's Patent). These bricks are of excellent texture and colour, and impervious to frost, and do not vegetate or become green. For particulars, address, Patent Brick Works, Rugby, Warwickshire

FIRE-BRICKS, LUMPS, TILES, &c.—FURNACE-BUILDERS, GAS COMPANIES, and CONSUMERS of these Goods generally, can be SUPPLIED with every description from our Wharf here, on the most advantageous terms. TAYLOR and CO. 9, Bankside, Southwark.

BRICKS.—Mr. RYDON, having made more bricks than he requires for the builders on his estate, High-lane, New-park is willing to make arrangements for supplying Builders and others requiring first class STOCK or RED BRICKS on advantageous terms.—For particulars, apply at the Estate Office, Delf's-farm, Stoke Newington green.

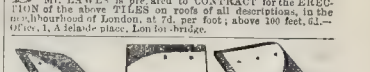
BRICKS.—Excellent hard-burnt RED BRICKS, of good colour and shape, suitable for facing or other purposes; also Malms, good Stocks, and a quantity of Grey Stock Place. J. C. W. TRICES Agricultural Drain-ing Tiles, from 1½ inch to 6 inches in the bore, and Arch Bricks suitable for culverts. The whole of the above may be inspected in large quantities on the Brentwood Railway Brick and Tile Work, and Wharf, Brentwood, Essex, adjoining the goods station of the Eastern Counties Railway Company, where they will be loaded into the trucks for any station on the line.—Address, Mr. LEVETT, Brentwood, Essex.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented!

HENRY COUNT, Sec. 37, King William Street, City.

THE PRIZE MACHINES of the UNIVERSE—CLAYTON'S PATENTS.—CLAYTON'S PRIZE BRICK and TILEMAKING MACHINES will be EXHIBITED in OPERATION, during the Show of the Royal Agricultural Society of England, at Chelmsford, on the 15th, 16th, 17th, and 18th day of this month (July).—Manufactory, Atlas Works, Upper Park-place, Dorset-square, London.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.



BEADON'S PATENT IMPERISHABLE GUTTER-TILES.

For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.

SOLE AGENT.

J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large piece of roofing, effecting a saving in slates, time, and. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

Price 4d. each, tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge includes tiles ordered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Ruby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Mancester-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 881, of the Great Exhibition, rank the Manufacture second to none as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 15, South Wharf, Paddington, Manufacturers of improved Plain, Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for sanitary and Railway purposes. They are extensively used on the Lancashire & Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted impermeable, and to resist all acids and exhalations.

*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Backets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Quoin Blocks, &c. Tividale, Staffordshire.

HOGG'S GARDEN EDGE TILES.—The attention of persons engaged in laying out Gardens for Public Institutions is solicited to these Tiles, as an elegant, cheap, and permanent substitute for box edging. In a fair they resemble Bath stone, are very hard, easily laid down, afford no shelter for vermin, and act as a drain to the paths. Price 1s. per lin. or about 40l. per rood run. Full particulars on application to R. BLACKLEY, Witham, Essex.

PAINT, certified by the Government Engineers and Contractors to be the CHEAPEST and BEST ever discovered for wood and iron, price 28s. per cwt. Apply to the London Anti-Oxide Paint Company, D. WALKER, Secretary, 29, New Bridge-street, Blackfriars.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without the least change. These Paints have been tested for five years, and are now being used in various parts of the Royal Arsenal at Woolwich, and have also been made use of in the Government Dockyards at Devonport, Portsmouth, and Pembroke, and in many of the Government Steamers, and have given the greatest satisfaction. Testimonials can be seen of the above, and of the Admiralty Contractors, who will certify that coats of Wolston's Torbay Iron-Paint will effectually cover as much surface as 3 lbs. of either White or Red Lead, and that it will protect atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B Prospectuses, with Prices and Testimonials, forwarded post-free, on application. Persons in want of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.

GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply a Description of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 42 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non-conductor

INODOROUS FELT, for damp walls and for damp floors, under carpets and floor cloths. Price ONE PENNY per Square Foot.

CROGGON and CO.'s PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing the radiation of Heat, saving 25 per cent. of Fuel and deadening Sound.

Samples, testimonials, and full instructions, on application to CROGGON and CO., 2, DOWGATE-HILL, LONDON.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Pipe, White-lead, Lead, Iron and Brass Pumps, Water-closet Cocks and Fittenders' Ironmongery, Paints, Colours, Oil, and Turpentines of the finest quality, at wholesale prices. Lists on application at THOS. MILLINGTON'S Warehouse, 87, Bishopsgate-street, London. Established more than 100 years.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 295, Soho-square.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 315, OXFORD-STREET.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 38s.; 4ths, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½d. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3½d. per foot. Crown and Sheet, British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

CRYSTAL SHEET GLASS, first, second, and third qualities, in cases of about 200 feet each, suitable for pictures and superior glazing, from 2d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s.; 4ths, 30s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 29 by 14, 2d.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

G FARMILOE and SON, 118, St John-street, West Smithfield

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 296, Oxford-street.

HELY and WARING, Managers.

CCC CROWN, in Tables, per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 9d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 18.6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Tiles and Slates from 6d. each. Sashes primed and glazed, 3d. per foot. HELY'S PATENT GLASS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

Catalogues and Prospectuses free.

W. H. CONSTABLE, ARTIST on GLASS, Manufacturer of Ancient and Modern Windows, King's Old-buildings, opposite Clare College, Cambridge. Church and Heraldic Decorations. Designs and estimates on application.

BELGIAN WINDOW-GLASS, Wholesale and for Exportation.—LAROCHE, PUGNI, and CO. Manufacturers and Importers of Belgian, Plate, Sheet, Crystal, Coloured, and every other description of foreign Glass, respectfully inform merchants, dealers, &c. that they have now on sale a large supply of every kind of window glass suitable for the English market. Engraved, Embossed, and Ornamental Glass; Antique, Rough, Cathedral, and other Glasses for Stainers. Estimates given and contracts supplied to any amount.—Warehouse, 3, Old Trinity House, Water-lane, Lower Thames-street.

ORNAMENTED WINDOW-GLASS.—Engine-turned and every variety of pattern in enamelled glass, prepared to size and are ready to sketch, at reduced prices by the Manufacturer, W. H. JAMES, jun., High-street, Camden-town, London.

IMPROVED REVOLVING SHUTTERS. FRANCIS RICKABY and DUNN are now enabled to offer the above at the following reduced prices.—IRON SHUTTERS, double riveted, with machine-cut worm gear, complete, at 4s. 6d. per foot. WOOD SHUTTERS, with worm gear complete, at 3s. 9d. per foot. Machine-drawn Brass Sash Bars and Solid Board Plates made to any design.—84, Gray's inn-lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, Fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock. By enclosing a post-office-stamp, a full list of prices will be returned.—Workshops, 150, Broadway.

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

STEAM-ENGINES for SALE.—First-rate London-made horizontal STEAM-ENGINES, from 6 to 25-horse power. These engines are constructed with great care and attention to economise fuel, attain great speed and power, and are twelve months' warranty given. For prices and further particulars, apply to JOHN MUSTO and CO. Engineers, Millwrights, and general contractors, Old London Iron Works, Wapping.

N.B. Gentlemen requiring any kind of machinery are respectfully invited to inspect the capabilities of the above works.

STEAM-ENGINE and STAND-PIPE.—TO BE SOLD, at the PREMISES of the WATER COMPANY, at Brighton, a 20-horse power STEAM-ENGINE, boiler, and fittings; also an arrangement of cast-iron stand-pipes, consisting of four 9-inch and one 12-inch pipes, 50 feet high. The above are not worked in consequence of the recent alterations. To be seen on the spot, or a drawing of the stand-pipe to be inspected at the office of Messrs. EASTON and AMOS, to whom TENDERS may be sent.

Grove, Southwark.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, Southwark, London.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars bridge (Surrey Side).

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. pointed.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

WARNER'S PATENT VIBRATING STANDARD PUMPS—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3	„ gutta percha	1 14
3 „	ditto 3 6	or cast iron	2 8 0
3½ „	ditto 3 6	flanged pipe,	2 12 0
4 „	ditto 3 6	as required.	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		3 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage. May be obtained of any Ironmonger or Plumber in the country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 9, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

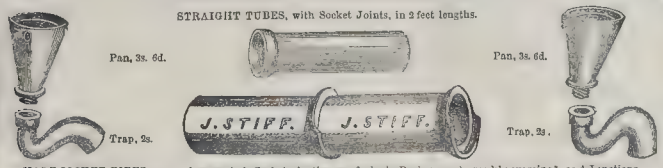
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



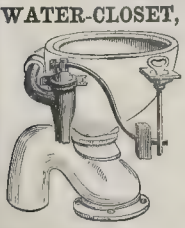
HALF-SOCKET PIPES same prices as plain Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz. :—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. KITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing,

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

WILLIAM NORTHEN'S

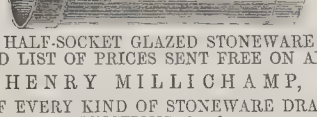
WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

GREAT REDUCTION IN PRICES



OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz. :—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dock-yard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.
W. F ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 95 Banksside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONE WARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

GROUND FLINT AND CORNISH STONE,

UNADULTERATED,

WILCOX & CO.

FLINT MILLS, MILLWALL, POPLAR.

STONE-PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES.—E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, slabs, steps, and copings, &c.—E. and W. STURGE, Bridge-wharf, City-road.

SUPERIOR GLAZED STONEWARE DRAIN-PIPES, &c.—The attention of Boards of Works, Contractors, and others, is invited to the MANUFACTURES of the DARFIELD Yorkshire STONE POTTERIES, with which for even cleanness of finish and imperishable quality few can compare. Tubes, bends, junctions, grids and stench traps, closet-pans, syphons, yard and street gully-sinks, with every article applicable to sanitary works, in any quantity, and immediately available, at the London Depôt, No. 4 Warehouse, Goods Station, Great Northern Railway. City Offices, 27, Bucklersbury, City, where Illustrated Price Lists can be obtained.
E. B. BEAUMONT, Proprietor.
J. D. JONES, Agent.

N.B.—Chimney-pots, roofing-tiles, ridgings, wall copings, flooring and paving tiles, fire-bricks, oven-bricks, bakers' lumps, cinder oven lumps and quarries.

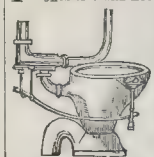
PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, and Mac-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 6d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 29, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.



WINDOW BLINDS.—Best Wire Blinds, 1s. 5d. per foot; Holland ditto 4d.; and every other kind of Inside or Outside Blind. Spring Rollers, &c. of best possible quality at proportionate prices. No extra charge for fixing in Town or Country. HENRY JINKS, late with R. JINKS and Co. Blind-makers to the Queen, Thames-bank Blind-factory, 4, Caledonia-street, near the Pimlico Steam-boat Pier.

WINDOW-BLINDS. — J. FULLER, Manufacturer, 29, Charlotte-street, Blackfriars-road. Established, 1850.—Venetian Blinds, from 10s. each, or 8d. per foot; Wire ditto, 7s. each, or 1s. 9d. per foot; Holland ditto, from 5s. each, or 5d. per foot. Every other description of Blinds equally low, warranted of the best manufacture. Discount to Builders and the Trade. Fixed complete.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner.—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 3s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application, post free.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.

H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 149, Fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

H H H H for drawing on wood.	F F light and shading.
H H H for architectural use.	F for general use.
H H for engineering.	B black for shading.
H for sketching.	B B ditto ditto.
H B hard and black for drawing.	B B B ditto ditto.
M medium.	B B B B ditto ditto

Sold by all the principal Stationers in town or country.

THE EXTENSIVE SHIP-BUILDING ESTABLISHMENT AND IRON WORKS OF MR. C. J. MARE, AT BLACKWALL.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees with the consent of the Mortgagees, to OFFER for SALE by AUCTION, at the AUCTION MART, London, on the 30th of JULY next (unless an acceptable offer be previously made by private contract), in four lots, the extensive SHIP-BUILDING ESTABLISHMENT and IRON WORKS of Mr. C. J. Mare; together with the whole of the valuable fixed PLANT and MACHINERY. These works, which together occupy a site of 14a. 2r. 30p. are situated at Blackwall, on the opposite banks of Bow-creek at its junction with the Thames, a portion of the works having a direct frontage near the Thames. The land frontages abut on Trinity-road and Orchard-place, Blackwall, and on the North Woolwich Railway, near the junction of the Victoria Dock Line, by means of which and the North London Railway, direct communication with the northern and midland districts is established. The approach from the City is easy and frequent throughout the day, by the Blackwall and North Woolwich Lines, from their joint terminus in Fenchurch-street, by means of which the northern and southern division of the works are reached within half an hour; there is also a ferry across Bow-creek for the facility of communication. The resources of the establishment for the purposes of ship-building, conversion of iron, and general engineering works are unequalled in the world, upwards of 6,000 tons of shipping having been built and launched in the years 1854 and 1855 from the yards, while the building, repairing and iron works are capable of 17,000 tons of iron have been hammered and rolled within the same period, and from the four fine upon its of machines of castings delivered. The high character of the work executed has gained for the firm a world-wide reputation. In the ship-building Department, vessels have been built for the English, Turkish, Russian, Spanish, and Sardinian Governments, for the Peninsular and Oriental, the General Screw, and the General Steam Navigation Companies, the Dover Mail Packet Company, the South-Western Railway Company, and others, many of which have attained a high character for speed and freedom from failure in any one case. Among others may be named the renowned *Himalaya*, of 3,550 tons burthen, the *Pera*, the *Prince*, the *Candia*, the *Hydaspes*, the *Argo*, the *Cressus*, the *Golden Fleece*, the *Inkerman*, the *Adventure*, the *Dover Packet*, the *Dover Pilot*, the *Dover Telegraph*, with many others; also yachts for the Emperor of Russia and his Highness the Viceroy of Egypt; and such are the appliances and facilities afforded by existing arrangements, that the rapidity with which the works are carried on is perfectly surprising. The works executed at the forge have been equal in magnitude, including crank shafts of vessels of 800 tons in weight, and forgings of the largest description for the principal engineers in London, the total weight of hammered iron produced in one year exceeding 2,000 tons. The Engineering Departments have executed a considerable portion of the Britannia Tubular Bridge, upwards of 1,000 tons of wrought-iron bridges for the East India Railways, the wrought-iron bridges for the North London Railway, the beautiful iron roof for the terminus of the Blackwall Railway, and the portion of the iron work at present completed for the new bridge at Westminster; while in the Boilermakers' Department, marine boilers, equal to 4,000-horse power, can be produced annually.

The prime pal buildings are on the freehold portion of the property, and have been erected in the most substantial manner; they include the hammer and rolling-mills, the foundries, engineers' and ship-wrights' shops, pleasant pattern-makers' shops, with numerous sliding doors from 6 feet to 12 feet wide, and are fitted with five Nasmyth's hammers from 2 cwt to five tons, the two larger ones having double cranes and furnaces, thus affording a two-fold capacity; two tilt hammers, three sets of rolling mills for plates and bars, worked by condensing engines of 100 horse power equal to 500 horses, with vertical shearing and punching presses, bending rolls, planing and slotting machines, drilling machines, numerous screw cutting lathes, to one of which are adapted for the heaviest work; smiths' forges, plate, angle, and balling furnaces; fitters' and turners' shops, fitted up for the use of makers, and with all the modern improvements. A considerable part is now within three years, a spacious boiler-makers' shop, fitted with fine furnaces, shearing, punching, and drilling machines, steam riveting machines, travelling cranes, &c., a plumbers' shop, with extensive sloping plate furnaces, &c.; a carpenters' mould loft, a saw mill fitt d with timber and deal sawing frames, planing, moulding, and mortising machinery worked by a 60-horse power steam-engine. In the ship-yard are twelve ships for building; vessels of the largest class can be launched into the river from the ship-building and block-making shops; and two capacious sheds, measuring 300 feet long by 60 feet wide, afford ample room for building vessels of the largest class, and also for the fitting out of an extensive establishment of great extent, embracing the highest reputation for the character of the works performed, possessing facilities for the transaction of business unequalled by any, and containing within itself all the necessaries requisite to command a large and lucrative trade. The tenure of the property is partly freehold and partly leasehold

The works may be viewed till the sale, by cards only, which may be obtained shortly, together with printed particulars, at the Offices of the Official Assignee, Aldermanbury; of Messrs. LAWRANCE PEARCE, and BOYER, Solicitors, Old Jewry; of Messrs. BOYER and HAWKINS, Solicitors, Warnford-court, Throgmorton-street; of Messrs. FULLER and HORSEY, Auctioneers, Cripplegate; and of Messrs FULLER and HORSEY, Billiter-street, London.

SOUTHALL, MIDDLESEX. IMPORTANT to BUILDERS.—An excellent Freehold Residence, seated in park like grounds, and sixteen acres of rich meadow land, having valuable frontages to the high road, situate close to the station, with immediate possession.

CHINNOCK and GALSWORTHY have been favoured with instructions to SELL by AUCTION, on THURSDAY, JULY 24th, at TWELVE, at the MART (unless previously disposed of by private treaty), the important FREEHOLD and LEASEHOLD ESTATE, late the residence of Mrs. Serjeant Lawes, situate near the high road at Southall, comprising a good square-built family house, stable, double coach-house, detached pleasure-ground and kitchen gardens, fish-pond, park-like grounds, well timbered, and seventeen acres of superior meadow land in high cultivation; the whole lying in a ring fence, and having very valuable building frontages. Descriptive particulars, with plans, may be obtained of Thos. Browning, Esq. Solicitor, 1, Hatton-court, Threadneedle-street; of Geo Wales, Esq. Surveyor, Great St. Helen's, and at the Auctioneers' Offices, 28, Regent-street, Waterloo-place.

FREEHOLD BUILDING LAND, four miles from the City, close to the Forest-gate Station, Stratford, Essex

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the MART, on MONDAY, JULY 28th, at TWELVE, in seven lots, eligible and desirable offer be previously made), TEN ACRES of eligible FREEHOLD BUILDING LAND, situate close to the Forest-gate Station, on the Eastern Counties Railway, near Wanstead Park, and admirably adapted for the erection of villas and moderate-sized houses. The lots will have frontages varying from 60 feet to 80 feet each to well-made roads. May be viewed, and printed particulars had at the Eagle and Child, Forest-gate; of D. B. Sladen, Esq. 2, King's Arms-yard, Moorgate-street; at the Mart; and of Messrs. H. Brown and T. A. Roberts, 23, Throgmorton-street.

FREEHOLD BUILDING LAND CARSHALTON, SURREY, near the Railway Station.

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the MART, on MONDAY, JULY 28, at TWELVE, in Ten Lots (unless an acceptable offer be previously made), about TWELVE ACRES of FREEHOLD BUILDING LAND, situate within a few minutes' walk of the Carshalton Station, on the Croydon and Epsom Railway, about eleven miles from London. The lots will have frontage varying from 300 feet to 600 feet each, and extending half a mile to two acres each. The land stands on an eminence, commanding extensive views, is very dry, and desirably situate for first-class residence, the neighbourhood being particularly healthy.—May be viewed, and printed particulars had at the M Bourne Hotel, Carshalton; of D. B. Sladen, Esq. 2, King's Arms-yard, Moorgate-street; at the Mart; and of Messrs. H. Brown and T. A. Roberts, 23, Throgmorton-street.

NO. 5, CASTLE-STREET, HOLBORN-BARS.—120,000 feet of VENEERS ABSOLUTE SALE.

MESSRS. HARDY have received instructions to SELL by AUCTION, on the PREMISES, on THURSDAY, JULY 24, at TWELVE o'clock, without reserve, in lots, suitable to all classes of buyers, about 120,000 feet of very superior WALNUT, Mahogany, Rosewood, Bird's-Eye Maple, and Dyewood Veneers.—Catalogues on the Premises; and of the Auctioneers, 32, Castle-street, Holborn-bars.

TO SHIP-BUILDERS, TIMBER-MERCHANTS, and OTHERS.—Important Sale of valuable Oak Timber, in the parishes of Farnham, Shereham, Chelsfield, and Farningham, Kent.

MR. WM. HODSOLL is favoured with instructions from Sir P. H. Dyke, Bart. and Wm. Waring, esq. to SELL by AUCTION, at the BULL INN, DARTFORD, Kent, on THURSDAY, JULY 24th, 1856, at THREE o'clock, 663 very superior OAK TIMBER TREES, including many of large meitings and excellent quality, lying in various woods in the above-named parishes. Also 131 oak tellers, 3 capital larch, and 3 large beech trees. 60 stacks of oak cordwood, about 4,000 oak-top faggots, 2,030 bavins, 830 bundles of spray, &c. The timber and underwood above named may be viewed at any time previous to the sale, and will be shown by Richard Packman, Crockenhill, Eynsford; Philip Taylor, of Mount Hall, Chelsfield; and James Dunnage, of Bull-street, near Farningham. Catalogues may be had eight days previously at the Inns in the neighbourhood; at the Place of Sale, of the persons who will show the timber; and of Mr. William Hodsoll, Auctioneer, &c. Farningham, Kent.

TO BUILDERS, WHEELWRIGHTS, CARPENTERS, and OTHERS.—Saw Mills, Eynsford, Kent. Sale of a large quantity of valuable Surplus Stock of Timber, &c.

MR. WM. HODSOLL is instructed to SELL BY AUCTION, at the EYNSFORD SAW-MILLS, on FRIDAY, JULY 25th, 1856, a large quantity of exceedingly useful TIMBER of various sizes, suitable for builders and a variety of purposes; comprising some excellent oak, sole, elm, ash, and deal boards, birch, and wheelwright's stuff, and English scantling, quantity of English fir, cut into halvings, &c. a variety of slabs, fencing stuff, rails, ash bats, useful wheelers' wax, many lots of firewood, &c. &c. May be viewed three days previous to the Sale, and catalogues had one week previously, at the Inns in the neighbourhood; at the Place of Sale; and of Mr. William Hodsoll, Auctioneer, &c. Farningham, Kent.

N.B. An Omnibus leaves the Dartford Station on the arrival of the London from Gravesend Station, for Farningham, which is 11 miles only from the Saw Mills.

Building Materials of Eleven Houses, No. 115 A and 116 A, High-street, Shoreditch, and Parish's court.

MR. GAIRDNER will SELL by AUCTION, on the PREMISES, on THURSDAY, JULY 17, at TWELVE, the MATERIALS, comprising 250,000 bricks, pan and plain tiles, timber flooring, lead and Zinc gutters, fittings and fixtures, plate-glass shop-front, and useful effects.—May be viewed the day prior and morning of Sale. Catalogues had at the Offices of Messrs. J. B. and H. Clutton, Whitehall-place; and of Mr. Gairdner, 159, Tottenham-court road.

TO IRONMONGERS, CABINET-MAKERS, and OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, the 22nd of JULY, at ELEVEN, at the SALE-ROOMS, No. 28, Leadenhall-street, in lots, without reserve, removed for the convenience of sale, a STOCK of IRONMONGERY, including 500 locks, wrought and cast hinges, an assortment of cabinet brass work, two tons cast and sheet steel, Sheffield and Lancashire tools, sixty Bristol grindstones, two tons castings, 200 fenders, register and Rumford stoves, black bollis-ware, two gas chandeliers, and a general assortment of ironmongery.—To be viewed on Monday previous to the sale, when catalogues may be had at the Rooms; and of Messrs. Fuller and Horsey, Billiter-street, City.

KENSINGTON-PARK, NOTTING-HILL.—Most important and eligible Plots of Freehold Building Land, in this admired Locality; the Roads and Sewers formed.

MR. ROBINS is instructed to SELL by AUCTION, at the MART, on THURSDAY, JULY 31, at TWELVE, in several lots, FREEHOLD BUILDING LAND, of an extremely attractive and important description, intended to form both sides of the Sussex road, leading from the Ladbroke-terrace, at Kensington-park, Notting-hill. The great beauty and advantages of this much admired locality have been most happily developed by the architect originally directed to prepare the plan for a building operation, which is now rapidly advancing towards successful completion, by the much-admired new church, now nearly finished, being in the vicinity. Residences of a superior character have been erected, and are in course of being finished. A glance at the plan will at once convey the intimate connection of the land with the whole of the most beautiful part of the estate, and the advantages to be derived from assisting to carry out the original scheme. The land will be offered in lots of moderate size and value, capable of being divided with advantage and profit; and the building public are invited to inspect the plans, and co-operate. The roads and sewers are already formed at great expense.—May be viewed, and plans had at the Mart; at the Clarendon Hotel, close to the land; of Messrs. H. and W. Lake and Kennall, Solicitors, 10, Lincoln's-inn-square; at the Mart; and at Mr Robins's Offices, Covent-garden.

TO CARPENTERS, BUILDERS, CABINET-MAKERS, COACH-BUILDERS, and OTHERS.—Timber Merchant's Stock.—Charles-street, Hungerford-road.

MR. W. R. GLASIER is instructed to SELL BY AUCTION, on the PREMISES as above on TUESDAY, JULY 22nd, at TWELVE for ONE, the capital dry and well-seasoned STOCK; comprising 1,100 best and second yellow pine planks, 1,200 feet wide pine deals and battens, 300 Christiana yellow and white deals; 5,500 feet Cuba and Honduras mahogany in various thicknesses, 2,000 squares white and yellow floor boards, 1,200 feet wide pine panel boards, pine and spruce quartering, &c.—May be viewed the day prior and morning of sale, and catalogues had on the Premises; at Garraway's; and of the Auctioneer, 41, Charing-cross.

MARBLE.

MESSRS. EVERSFIELD and HORNE are instructed by Mr. Farrarotti to announce that the SALE of MARBLE BLOCKS at CARRARA WHARF, Thames-bank, Chelsea, which, from the unfavourable state of the weather, was obliged to be postponed on Tuesday last, will take place on WEDNESDAY, JULY 23rd. — Catalogues may be had on the Premises, and of the Auctioneers, 40, Parliament-street.

Note.—Approved Bills will be taken in payment.

WEYMOUTH.—TO BE SOLD BY AUCTION, BY

MR. MILLEDGE, on WEDNESDAY, the 27th day of AUGUST, 1856, at Luce's Royal Hotel, Weymouth, at THREE o'clock in the afternoon (unless an acceptable offer shall be previously made by private treaty), by direction of the executors of the late William Thomson, Esq. a compact MARINE VILLA RESIDENCE, with garden, coach-houses, and greenhouses adjoining, forming a most unique and retired residence, combining the advantages of a small family, and combining the advantages of entire seclusion and privacy in the midst of the varied society of this salubrious watering-place. The house, which was built fifty years ago, is substantial and replete with convenience, stands in a pleasure-ground of above an acre, elegantly laid out with well-selected flowers and shrubs. One of the sitting-rooms opens into a conservatory, about 41 feet by 21, stocked with choice and rare plants. The furniture and plants may be taken at a valuation, at the option of the purchaser. The property adjoins Gloucester Lodge, formerly the residence of George III and his Court.

At the same time will be Sold, in separate lots, a Dwelling, with spacious store-rooms, used as a gardener's residence, and Sittings in St. Mary's Church.

The residence and pleasure ground are held in fee, the garden for one life, and the dwelling-house, premises, and sittings for terms of years. The property may be viewed by written orders only, to be obtained of Messrs. Jenkins, Phelps, and Bennett, 14, Red Lion square, London; or Mr. Milledge, auctioneer, &c. 4, Fisherick-place, Weymouth, from whom further particulars may be obtained.

TO BUILDERS.—Thirteen capital Brick-built Carcasses, in an excellent position, at Battersea-rise.

MESSRS. SPILLMAN and SPENCE will SELL by AUCTION, at the MART, on THURSDAY, JULY 24, at TWELVE, thirteen capital sound CARCASSES for ten and eight room houses, six having shops; also the Brunswick Arms, a substantial and imposing structure, nearly complete, well situate in Brunswick-place, Brunswick-road, and Whitton-road, in the high road, Upper Holloway, near the Archway Tavern—an undeniable locality—severally held for 99 years, at low ground-rents.—Particulars and conditions of sale at the Mart; of G. Cannell, Esq. Solicitor, 3, Basinghall-street, Fleet-street; and at the Auctioneers' Offices, 43, Bell-yard, Temple-bar.

Final Portion of the Valuable Stock of Messrs. Browne and Co. University-street, including Marbles, Bronzes, Mosaics, Chimney-pieces, Sculpture, Pedestals, a Stained Glass Window, Architectural Casts, &c.

MESSRS. RUSHWORTH and JARVIS beg to announce that the SALE of the final portion of the valuable STOCK of Messrs. Browne and Co. will take place on WEDNESDAY, the 30th of JULY, and two following days, at the GALLERIES, University-street, and will include VASES, STATUES and GROUPS, in marble and stone, adapted for gardens and pleasure grounds; two mobile marble baths (from Verona), a quantity of Italian paving-tiles, of mosaic and other description, many very beautiful statuary and pure coloured marble chimney-pieces, designed with great taste, and sculptured by first-rate artists, including two of superb character; fine specimens of sculpture in pedestals, candelabra, brackets, and ornaments; a collection of valuable architectural casts, from celebrated originals, worthy the attention of builders and architectural pupils; also a variety of objects of taste and utility, being the last portion of this well-known and tastefully-selected assemblage.—May be viewed two days prior to the sale, and catalogues had, on the Premises; and at the Offices of Messrs. Rushworth and Jarvis, Saville-row, Regent-street; and 19, Change-alley, Cornhill.

IRONMONGERY BUSINESS.—FOR DISPOSAL, a first-class BUSINESS, doing an extensive and lucrative Trade in Wines, and furnishing Ironmongery. The returns are about 15,000l. per annum, a considerable proportion of which is for cash. The premises are in a commanding situation, in one of the leading thoroughfares in London, and a large sum of money has been expended within a few years in rendering them externally attractive, and in adapting the interior commodiously for the various branches of the business. The stock is all modern, and of the best description. About 6,000l. will be requisite to purchase and carry on the concern, 5,000l. of which may remain on mortgage for a few years; and to two or three active young men, who can command that sum, an opportunity is thus presented of purchasing a business, which is of the first class, of a permanent character, and capable of still further extension.—Apply (by letter only) to Messrs. FULLER and HORSEY, 13, Billiter-street, City.

TO UNDERTAKERS, CABINET-MAKERS, and UPHOLSTERERS.—WEYMOUTH.—TO BE DISPOSED OF, in the above line, a highly respectable BUSINESS, many years established in its fashionable and daily improving seaport. The business being resigned in consequence of the decease of the proprietor, affords a desirable opportunity to any young man with capital and energy, being capable of considerable extension and improvement.—Apply to Mr C HANCOCK, Executrix, 62, St. Thomas-street, Weymouth.

TO BRICKLAYERS and PLASTERERS.—TO BE DISPOSED OF, for cash, an established, well-paying JOBBING BUSINESS, situate near the Regent's park. Any person wishing to enter the above line will find this worthy their attention, as every facility will be given for leaving the same. Address, A. B. Mr. Matthews, 19, Frederick-place, Hampstead-road.

TO MANUFACTURERS, particularly those engaged in Building.—CAPITALISTS have now a good OPPORTUNITY of EMBARKING in an OLD-ESTABLISHED CONCERN, in full work, principally a ready-money trade. The affairs will bear the fullest investigation, and, from circumstances, the concern is now to be disposed of. A capital of about 25,000l. will be required, the party taking to stock, machinery, and debts; but the amount would be considerably reduced, if the stock and debts were retained on account of the vendors.—Further information may be obtained by application to Messrs. WOODHOUSE and PARKIN, 8, New-square, Lincoln's-inn; or to Messrs. WARRY, ROBINS, and BARGES, 7, New-inn, London.

BUILDER'S BUSINESS TO BE SOLD. Has been established thirty years, and has a good jobbing trade. Coming in about 600l.—For full particulars apply to Mr. C. BROWN, House and Estate Agent, West Croft-place, Hammersmith.

TO FURNISHING IRONMONGERS, WHITESMITHS, BELLHANGERS, GASFITTERS, &c.—TO BE DISPOSED OF forthwith, an ELIGIBLE CONCERN, in the above trades, with convenient workshop and good trade accommodation, in a populous village, about twenty miles from London; in an excellent neighbourhood, with a prospect of immediate railway extension, and a consequent increase of building. In the first instance a large letter of inquiry to A. Z. care of Mr. WEAKLIN, stationer, No. 9, St. Paul's-churchyard, London.

TO PLUMBERS, PAINTERS, and GLAZIERS.—A genuine but small old-established BUSINESS, a short distance from London, producing 130l. per annum profit. The premises are small, but in good repair, and rent 15l.—Apply at the Pipe and Window Lead Warehouse, 52, Tottenham-court-road.

TO GLASS-CUTTERS, PLUMBERS, GLAZIERS, &c.—TO BE DISPOSED OF, a first-rate BUSINESS in the above branches, situate in a populous neighbourhood, and established nearly 30 years, with good connection. Rent and taxes only 30l. per annum. Full particulars may be obtained at the Savoy Glass Company's, 4 and 5, Savoy-street, Strand, or of Mr. THOMAS ENGELBACH'S, Glass-bender, Thrawl-street, Spitalfields.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, July 12, 1856.

The Builder,

A JOURNAL FOR THE

Architect, Engineer, Operative & Artist.

JULY 19, 1856.

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WILL CLOSE ON THE 26th INSTANT.

ROYAL ACADEMY of ARTS, Trafalgar-square. The EXHIBITION of the ROYAL ACADEMY is NOW OPEN. Admittance from Eight till Seven o'clock, One Shilling. Catalogue, One Shilling

J. P. KNIGHT, R.A. Secretary.

WILL CLOSE on SATURDAY, the 26th inst.—SOCIETY of PAINTERS in WATER COLOURS. The FIFTY-SECOND ANNUAL EXHIBITION is NOW OPEN at their Gallery, 5, Pall Mall East (close to Trafalgar-square), from Nine till dusk. Admission 1s.; Catalogue 6d.

JOSEPH J. JENKINS, Secretary.

EXHIBITION of ART-TREASURES of the UNITED KINGDOM, to be OPENED at MANCHESTER on the 1st MAY, 1857.

PATRONS.

Her Majesty the QUEEN.
His Royal Highness Prince ALBERT.

PRESIDENT.

The Earl of ELLESMERE, K.G. Lord lieutenant of Lancashire.

EXECUTIVE COMMITTEE.

Thomas Fairbairn, esq. Chairman.

The Mayor of Manchester.	Joseph Heron, esq.
Thomas Ashton, esq.	Edmund Potter, esq.
William Entwisle, esq.	Sigismund J. Stern, esq.

GENERAL COMMISSIONER.—John P. Deane, esq.

The object of the proposed exhibition is to secure a collection of the choicest and most instructive works which illustrate the Ancient and Modern Schools of Art: Oil Paintings, Water-colour Drawings, Engravings, Sculpture in Marble and Stone, Carvings in Ivory and Wood, Bronzes, Coins, and Works of Artistic Excellence in Gold, Silver, Steel, or Iron, in Glass and Earthenwares, Terra Cotta and Plaster, will necessarily constitute the main features of the Exhibition.

The Executive Committee respectfully invite communications from possessors of Art Treasures who may feel interested in the success of a scheme which aims at the worthy illustration of the art-wealth of the United Kingdom.

From the known catalogues of the resources of the country, thus extended, the committee propose, with the assistance of officers of acknowledged competency, to make such a selection as will enable them to place before the world an Art Exhibition not less valuable to the student from its chronological arrangement, than attractive to the public from its beauty and completeness.

The committee do not desire to elicit from manufacturers specimens of their productions, either for competition or sale.

The Exhibition Building will be erected on a site adjoining the Botanic Gardens, distant about two miles from the centre of the City, and quite free from atmospheric impurities. Great consideration has been given to the mode of lighting the halls for the display of pictures and sculpture, and every precaution will be taken to protect the works of art from injury.

In all cases where desired by the owners, the Committee will insure the art treasures contributed.

There will be railway communication from all parts of England, direct to the Exhibition Building, and contributions will be received from, and returned to their owners, free of expense.

Communications may be addressed to the Chairman, 100, Mosley-street, Manchester.—By order of the Executive Committee,

CHARLES H. MUNCHIN, Secretary.

Offices of the Exhibition, 100, Mosley-street, Manchester.

CHESHIRE AGRICULTURAL SOCIETY.

Patron and President for the year, Field-Marshal the Viscount COMBERMERE, G.C.B. &c.

ANNUAL MEETING at NANTWICH, SEPTEMBER 4, 1856.

The following PREMIUMS, the competition for which is not restricted to members of the society, will be given for the best ESSAYS on the following subjects:—

1st (given by E. D. Broughton esq.) for the best Essay on the most advantageous way of Wintering a Dairy stock.

2d, or Plate of that value, or the Society's Silver Medal, for the best Essay on the most profitable way of Managing a Clay Farm of 200 statute acres, consistently with good husbandry and the due maintenance of the freehold.

3d or Plate of like value, or the Society's Silver Medal, for the best Essay on the Construction of a Farmhouse, Cottages, and all other requisites necessary for a Dairy Farm of 200 statute acres, such Essay or Paper to be accompanied by a plan or model, together with a specification and estimate of the probable cost of erecting the same.

The Essays are to be sent to the Secretary on or before the 14th AUGUST next, and the writer of each Essay is requested to distinguish the same by a motto, and to enclose a sealed envelope therewith, containing a duplicate of the motto, and his name and address. These envelopes will not be opened until the prizes are awarded by the Chairman of the Committee.

RICHD. T. BECKETT, Secretary.

Oulton Farm, Tarporley, July 14, 1856.

ARCHITECTURAL EXHIBITION.

Exhibitors in the Department of Materials and Inventions connected with building, should apply immediately for space (by letter stating all particulars) to Mr. EDMESTON, junr. as the committee are ready to allot the same as soon as a sufficient number of applications are made, and those who defer applying will be disappointed as on the last occasion. The Exhibition will open in DECEMBER next, at the Galleries, Suffolk street.

JAMES FERGUSSON, F.R.A.S.,
20, Langham-place,
JAMES EDMESTON, Junr.,
5, Crown-court,
} Honorary Secretaries.

COMPETITIONS.

PARISH of BRIGHTON.—To ARCHITECTS and OTHERS.—The Brighton Burial Board are desirous of procuring DESIGNS for the ERECTION of TWO CHAPELS, RECEIVING HOUSE, SEXTON'S LODGE, and MEMORIAL GATEWAY accompanied with detailed working drawings, specifications and estimates. The outlay must not exceed 2,250*l*. The Board will award to the author of the best design in their judgment, subject to the approval of the bishop of the diocese, the sum of 20 guineas; and to the author of the second best design the sum of 10 guineas. Designs for which premiums are awarded will become the property of the Burial Board, who will not bind themselves to employ the author to superintend the carrying out the works. The Board will not pay either of the premiums unless a sufficient Tender be made for the actual execution of the works at or within the stipulated sum of 2,250*l*. If the Board employ the author of the design to superintend the execution of the buildings the premium will merge in the commission, which is not to exceed 5 per cent. on the lowest Tender accepted, including travelling and other expenses. A plan and section of the land may be inspected, and general instruction be obtained, at the office of the Burial Board, Parochial Offices, Church-street, Brighton, on application to Mr. MAYNARD, the Surveyor. Designs must be deposited at the said Offices, free of all expenses, on or before 4th day of AUGUST next, marked with an emblem or motto, and accompanied by a sealed note, having the same emblem or motto on the outside, and enclosing the name and address of the author. The designs not approved will be returned to the authors on application. By order of the Board.

July 4, 1856. SOMERS CLARKE, Vestry Clerk.

CONTRACTS.

CONTRACTS.—WAR DEPARTMENT.—To BUILDERS and CONTRACTORS.—The Commanding Royal Engineer at Aldershot hereby gives Notice, that sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall Mall, London, until TEN o'clock, on SATURDAY, 9th AUGUST, 1856, from parties willing to Contract for the ERECTION and CONSTRUCTION of

Two wooden Buildings for chaplain's quarters.
One ditto for commissariat storekeeper's ditto.
Two Rocket and Fives Courts.
Foundations for two Iron Stores.
Wooden Fitments to Barrack Store (to form one Tender); and
Two large Iron Stores, exclusive of Foundations (to form a separate Tender).

Plans may be seen, and specifications and forms of Tender obtained, on application at the Royal Engineer's Office, Aldershot, on and after the 18th instant.

The War Department reserves the right of rejecting the whole or any of the Tenders.

NOTICE to BUILDERS and CONTRACTORS.—ROYAL ENGINEER CONTRACT.—The Commanding Royal Engineer of the Woolwich District hereby gives Notice, that sealed TENDERS, in one sum, will be received at the Office of the Director-General of Contracts, Pall-mall, London, up the 9th of AUGUST, 1856, from such persons as may be desirous of CONTRACTING for the ERECTION, at Shoeburyness, of a HOSPITAL, with the necessary out-buildings, enclosure wall, &c. 24 quarters for the hospital servants and four for staff sergeants, and of a quarter for the Assistant Superintendent of Experiments; also for an extension of the present Guard-house, and the erection of contiguous thereto, of a store and offices. The specifications and drawings may be seen, on application at the Royal Engineer Office, Grand Depot, Woolwich, between the hours of TEN and FOUR, up to the 29th AUGUST, 1856, inclusive. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Grand Depot, Woolwich,
18th July, 1856.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London district hereby gives Notice that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall-mall, up to 9 o'clock of the 8th of AUGUST next, for BUILDING a STABLE and SUPERVISING a TANK, to contain 150 gallons of water, at the Wellington Barracks, St. James's-park. Printed schedules and forms of Tender may be obtained at the Royal Engineers' Office, No. 1, Somerset Place, Bath-street, between the hours of TEN and FOUR, from the 23rd of JULY to the 8th of AUGUST next inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineers' Office, 11, James-street, Pimlico,
16th July, 1856.

TENDERS are required for the proposed TAKING DOWN, REMOVING, and REBUILDING of a RAILWAY STATION, and the ERECTION of a SHED to same, for the Stockton and Darlington Railway Company, at Stockton-on-Tees. Parties willing to give in Tenders, may inspect the drawings and specifications, on application at the Railway Station, South Stockton, or at my Office in Bradford on and after WEDNESDAY, the 23rd instant, until WEDNESDAY, the 6th day of AUGUST, on or before which day, sealed Tenders are to be delivered at my Office aforesaid. The company do not pledge themselves to accept the lowest or any Tender.

E. MILNES, Architect, Bradford, Yorkshire.

CONTRACTS.

BOROUGH of LEEDS.—WANTED, by the Town Hall Committee of the Council of this Borough, plans, specifications, and estimates for WARMING and VENTILATING the TOWN HALL at present erecting in the said borough. All plans, &c. to be sent to the Town Clerk's Office, not later than THURSDAY, the 24th JULY next, addressed to "The Chairman of the Town Hall Committee—plans, &c. for warming and ventilation." A ground plan of the building may be seen, and any information obtained, at the Office of the Architects of the Work, but the Committee do not bind themselves to adopt the lowest estimate, or any plan which may be sent in.

By order,
JOHN A. IKIN, Town Clerk.

Leeds, June 27, 1856.

WARE LOCAL BOARD of HEALTH.—CONTRACT for PAVING, SUPPLYING MATERIALS, &c.—The Local Board of Health are prepared to receive TENDERS from parties willing to CONTRACT for LAYING DOWN PAVING, CURBING, and other WORKS required in forming Paths, &c. in the Town of Ware, and for supplying best Aberdeen Granite, Curb Stone, and Wick Rockhill Flagging for the same. Plans and specifications may be seen, and particulars and other information obtained, by applying to the Clerk, between the hours of ELEVEN and FOUR. Tenders to be sent to, or delivered at, the Office of the Local Board, at Ware, on or before MONDAY, the 21st of JULY next. The Board do not bind themselves to accept the lowest, or any Tender.—By order,

NATH. COBHAM, Clerk to the Board.

Ware, June 24, 1856.

TO BUILDERS.—The Burial Board for the Parish of Tottenham, in the County of Middlesex, hereby give notice, that they are prepared to receive TENDERS for the ERECTION of TWO CHAPELS, with vestries and lichgate, on their new burial ground adjoining Tottenham Cemetery, in addition, and bill of quantities, will be open to inspection at my house for in the morning of TUESDAY, the 15th, till the evening of FRIDAY, the 25th instant. Copies of the specification, together with a bill of quantities, may also be had on payment of 2s. 6d. or 2s. 8d. if sent by post.—Sealed Tenders, upon printed forms (copies of which and specification, will be received not later than SATURDAY, JULY 26. Any further information may be had on application to the Architects, Messrs. PRICHETT and SON, Darlington.—Recd pt.

W. B. HUNNINGS, Clerk to the Board.

Tottenham, July 9, 1856.

WIGAN LOCAL BOARD of HEALTH.

WATERWORKS.—Contract No. 8.—TO EXCAVATORS, PIPE LAYERS, and OTHERS.—Persons willing to CONTRACT for EXCAVATING, PIPE LAYING and JOINTING WATER PIPES, SLUICE VALVES, HYDRANTS, &c complete, for the Local Board of Health for the district of Wigan, may see the Plans, Specification, and Forms of Tender, at the Office of the Local Board, in Wigan, or at the Offices of ROBERT RAWLINSON, C.E. 34, Parliament-street, Westminster, and obtain duplicate copies of the Schedules, Bill of Quantities, and Forms of Tender, on the payment of the sum of Five Shillings, on and after the 16th day of JULY, 1856. Sealed Tenders must be delivered at the Office of the Local Board, Wigan, before TWELVE o'clock, on TUESDAY, the 22nd day of JULY, 1856, indorsed, "Tenders for Pipe-Laying, &c."

By order,
WILLIAM ACKERLEY,
Wigan, June 30th, 1856. Solicitor to the Local Board.

NEWCASTLE-UPON-TYNE. — QUAYSIDE IMPROVEMENTS.—To BUILDERS, CAPITALISTS, &c.—The Corporation of Newcastle-upon-Tyne having purchased, by virtue of an Act of Parliament, the whole of the property on the Quayside, damaged by the late fire, also a large portion of the surrounding property, for the purpose of improving that part of the town, and having laid out the same into several new streets, which, when built, will form the best business-streets in the town, are now prepared to receive TENDERS for the purchase of the whole or any of the SITES on such parts of the interal street, No. 1, and also a great portion of the parallel street, according to plans and conditions approved of by the Council. The great demand for offices, shops, for wholesale and retail purposes, and warehouses, in this particular part of the town will ensure to capitalists a safe and valuable investment. Plans and conditions may be seen on application to the Town Clerk, the Town Surveyor, or JOHN DOBSON, Esq. Architect, Newcastle-upon-Tyne. Tenders, marked "Tenders for Sites on Quayside," addressed to the Town Clerk, will be received until the 28th inst.

N.B.—A large quantity of old building materials on the ground will be sold to such purchaser of sites as may require the same.

TO BUILDERS, CARPENTERS, and OTHERS.—COUNTY POLICE STATIONS.—The Magistrates for the county of Berks are willing to receive TENDERS for the ERECTION of POLICE STATIONS at the several places following, viz.:—

Abingdon,	Newbury,
East Ilsley,	Wallingford,
Farringdon,	Wantage.

Persons desirous of Contracting for the works may see the plans, specifications, and particulars, and obtain bills of quantities, at the County Police Stations, Farringdon, as my Office, Bradford, Reading, and hereinafter specified, viz.:—

Abingdon ..... At the COUNTY GAOL.
East Ilsley ..... At the Office of Mr. HUBERT.
Farringdon ..... At the Office of Mr. GODWIN.
Newbury ..... At the Office of Messrs. GRAY and GODWIN.
Wallingford .... At the Office of Messrs. HIDDENS.
Wantage ..... At the Office of Mr. ORMOND.

after WEDNESDAY, JULY 16th inst. at, between the hours of TEN and FOUR. Separate Tenders for each station, sealed, and properly endorsed, to be sent under cover, addressed to the Chief Constable, Berks Constabulary, Reading, on or before SATURDAY, JULY 26th instant. The lowest Tender will not necessarily be accepted.—By order of the Magistrates,

J. B. CLACY, Architect, County Surveyor.

Reading, July 4, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

THE CONSERVATIVE LAND SOCIETY.—
Trustees.
Vyse and Ruscoe, Esqs.
Right Hon. B. B. R. A. C. N. Hamilton, M.P.
Hon. C. L. Lawrence, M.P.
J. C. Cobbold, Esq., M.P.

TO ROAD CONTRACTORS &c.—The Executive Committee are prepared to receive TENDERS for CONSTRUCTING the ROADS, DRAINAGE, and FENCING of the COUNTY of SURREY HEATH ESTATE, Tunbridge Wells, Kent. The drawings and specification may be seen at the Offices of Mr. N. E. STEVENS, Architect, Clement's Inn, Strand, London, and of the Surveyor, Mr. GEORGE MORGAN, 3, Norfolk-street, Strand. Letters, addressed after WEDNESDAY, 9th JULY, 1856, between the hours of ELEVEN and TWO, to be delivered at the Office of the Estate, by TWELVE o'clock, on FRIDAY, JULY 25th, to the Surveyor, at his Offices as indorsed "Tenders for Roads, &c. Tunbridge Wells Estate." The Executive Committee do not bind themselves to accept the lowest or any Tender.

CHARLES LEWIS GRUNEISEN,
38 Norfolk-terrace, Strand, London.

GUILDFORD UNION.—To BUILDERS and CONTRACTORS.—EXTENSIVE ADDITIONS and ALTERATIONS to the GUILDFORD UNION WORKHOUSE.—The Guardians of the Guildford Union, in the County of Surrey, hereby give notice that they are desirous of receiving TENDERS for BUILDING NEW SCHOOL and DORMITORIES, a NEW HOSPITAL and other Alterations in the Workhouse, according to the plans and specifications prepared by Mr. H. HOWELL, Architect of Godalming, Surrey, and of the Norwich Union Insurance Office, Pall Mall, Bridge-street, London. The plans and specifications may be seen at the Architect's Office, in London (entrance, 1A, Union-street, New Bridge-street), after FRIDAY, the 11th JULY inst., and a copy of the bill of quantities, may be obtained from Mr. CHARLES POLAND, Superintendent, Margaret-street, Cavendish-square, upon the payment of 1l. 1s. The Guardians do not pledge themselves to accept the lowest or any of the Tenders. Tenders, indorsed "Building Tenders" must be sent to me by SEVEN o'clock in the evening of FRIDAY, the 25th JULY instant.

By order of the Board,
W. HAYDN SMALLPEICE, Clerk.

Guildford Union, 1856.

THE VESTRY of the PARISH of ST. MARY, LAMBETH, TO SEWER CONTRACTORS and OTHERS.—The Committee for Sewers &c. hereby give Notice, that they are prepared to receive TENDERS for the necessary Contracts, and will be willing to enter into Contract for LAYING DOWN, CONSTRUCTING, and COMPLETELY FINISHING, Part, or the whole, of the BRICK SEWER, together with other Works in connection therewith, in Norwood-lane, in the Parish of Lambeth, and the maintenance thereof in complete repair, for twelve calendar months. Plans, sections, and a specification of the above works, may be inspected, and a form of Tender and further particulars obtained from Mr. HUGH WINTOUR, Surveyor of Sewers, at the Offices of the Vestry Hall, Kennington-green, between the hours of TEN a.m. and FOUR p.m. where sealed Tenders, addressed to the Clerk of the Vestry, and endorsed "Tender for Works in Norwood-lane," are to be delivered, on TWELVE o'clock on MONDAY, the 28th day of JULY. No Tender will be received after that hour. The Committee do not hind themselves to accept the lowest Tender, and two sureties will be required for due performance of the works.—By order,

THOMAS LOFFEY, Clerk to the Vestry.

Offices, Vestry Hall, Kennington-green, July 17, 1856.

TO BUILDERS and OTHERS. — The Directors of the Commercial Gas Company will meet on FRIDAY, the 1st of AUGUST, to receive TENDERS for the ERECTION of a HOUSE and other BUILDINGS at Sneyd. Plans and specification may be seen, and further information obtained, on application to the Company's Inspector, at the works, between the hours of TEN and FOUR o'clock.

By order of the Board,
GEORGE JAQUES, Secretary.

Sneyd, July 15, 1856.

NORTHAMPTON IMPROVEMENT COMMISSIONERS.—Notice is hereby given, that the commissioners for improving the Town of Northampton will at their meeting to be held at the Guildhall, on WEDNESDAY, the 6th day of AUGUST, at HALF-PAST SIX in the evening, receive sealed TENDERS for the SEVERING, the ROADS, and remaining sewerage works, of that portion of the said town, for the speedy carrying into operation the Act of AUGUST next. Sealed Tenders to be delivered at the Office of the Surveyor, and the persons making such Tenders will be required to attend at the said meeting, if they desire to enter into Contract for the due performance of the contract. The Commissioners do not bind themselves to accept the lowest or any Tender. Specifications, &c. may be seen at the Offices of the Surveyor, Wellington-street, Northampton, on and after the 21st day of JULY, and Tenders are to be delivered to the Surveyor at the Offices aforesaid, on or before TWELVE o'clock at noon of WEDNESDAY, the 30th day of JULY.

THE PUBLIC HEALTH ACT, 1848.—To CONTRACTORS and OTHERS.—The Local Board of Health, [illegible] district of Leamington, are prepared to receive TENDERS for the CONSTRUCTION of TWO COVERED RESERVOIRS and a suitable [illegible] of containing five hundred thousand gallons each. [illegible] LAYING the WATER MAIN [illegible] Leamington without the [illegible] and all necessary and other works connected therewith. Plans [illegible] may be seen, and further particulars thereof obtained, on application to Mr. J. FOX SHARP, Surveyor to the Local Board, at his Office, Town-hall, Leamington, [illegible] Tenders, and Form of Tender may be [illegible] of the Surveyor, at his Office aforesaid, on or before MONDAY, the 28th day of JULY, 1856, to whom Tenders must be forwarded, endorsed "Tender for Reservoirs on Newbold-hill," on or before MONDAY, the 28th day of July, 1856. [illegible] to be bound to accept the lowest or any Tender.—By order,

R. H. DAVIES, Clerk.

Town Hall, Leamington, June 17, 1856.

TO BUILDERS and OTHERS.—Notice is hereby given, that [illegible] CHURCH at ALMSHOUSE, [illegible] to be erected in the Parish of [illegible] Somerset, [illegible] MILLS, of [illegible] on MONDAY, the 28th of JULY, at [illegible] and persons willing to CONTRACT for the execution of the [illegible] WORKS, are requested to send [illegible] Tenders, addressed to Mr. MILLS, [illegible] square, Bristol, on or before 12th of AUGUST next, ensuring the [illegible] Tenders. [illegible] contractor will be required to enter into the usual bond, with two [illegible] sureties, for the [illegible] Works.

TO BUILDERS.—HIGHBRIDGE CHURCH.—Plans and specification for ROOFING of above CHURCH, may be seen on application to Mr. SAMUEL SANDERS, at Highbridge, from WEDNESDAY the 23rd to SATURDAY, the 26th inst.; or at the Office of the Architect, Mr. NORTON, 24, CHURCH-street, Weston-super-Mare, from MONDAY, the 28th, to SATURDAY, the 2nd of AUGUST. All persons wishing to CONTRACT for the execution of the [illegible] WORKS, are requested to send [illegible] Tenders, addressed to Mr. MILLS, [illegible] square, Bristol, on or before 12th of AUGUST next, ensuring the [illegible] Tenders. [illegible] contractor will be required to enter into the usual bond, with two [illegible] sureties, for the [illegible] Works.

TO BUILDERS.—ABERSYCHAN SCHOOLS, PONTYPOOL.—The Iron and Coal Company hereby invite Builders to submit TENDERS for the ERECTION of SCHOOLS, to [illegible] CHILDREN, with TEACHERS' RESIDENCES attached. Plans, elevations, and specifications may be seen at the Office of Mr. ROPER, architect and surveyor, Abersychan, from MONDAY next, and [illegible] TUESDAY, the 29th of JULY, on or after which day Tenders are to be sent, sealed and addressed, to the Architect, Mr. NORTON, 24, Bedford-street, London. The Company is not bound to accept the lowest or any Tender, as the satisfactory to their Architect.

CONTRACTS.

TO GAS CONTRACTORS and OTHERS.—The Commissioners and Contractor for Lighting and Watching the Town and Common with Gas, is willing to TREASPER the CONTRACT to any responsible party or parties who will contract with the necessary works, and erect all the requisite Lamps, Lamp-irons, and a contract has been entered into with the Gas Authorities for lighting the public lights for twenty years at the rate of 7s. 6d. per 1,000 cubic feet. The private consumers will pay [illegible] per 1,000 cubic feet. The price of coke will not exceed 20s. per ton.—Address, C. E. [illegible], Lodgers, Edenbridge, Kent, Post Office.

TO WELL-SINKERS.—VESTRY of CLERKENWELL, PENDLES are invited to SINKING a SHINING WELL, to be situate in Clerkenwell-green, agreeably to a specification which may be seen at the Vestry hall, Upper Rosoman-street, daily, from TEN till TWELVE o'clock. The Vestry do not bind themselves to accept the lowest Tender. Tenders to be sent to the Clerk's office sealed up.

By order, THOS. CROWELL, Clerk.

July 14, 1856.

TO BUILDERS and CONTRACTORS.—Builders selected to CONTRACT for the ERECTION and COMPLETION of a NEW EXCHANGE and MARKET-HOUSE, as proposed to be built in the Long Sale Ring in the County of Lincoln, can now see the drawings and specifications at the Office of Messrs. MOSSOP and WRIGHT, Solicitors, Lincoln, until the 26th instant, inclusive, and from the 17th to the 26th, inclusive, at our Offices, Spalding, between the Hours for such like plans, &c. to be left. Tenders to be addressed "Tenders for Corn Exchange and Market-house" to be delivered at the Offices of Messrs. MOSSOP and WRIGHT, Solicitors, Lincoln, on or before the 28th instant, not later than ONE o'clock, p.m. The Purchasers do not hold themselves to accept the lowest Tender.—By order,

BELLAMY and HOLT, Architects and Surveyors.

Offices, 16, Bridgate, Lincoln, July 11, 1856.

TO CONTRACTORS.—The Council of the City of Worcester acting as the Local Board of Health of the said City, hereby give Notice that they are prepared to receive separate TENDERS for the FOUR following intended CONTRACTS for WORKS:—

1. IRON PIPES, from 24 inches diameter, downwards (about 17 miles).
2. PIPE LAYING, about 17 miles.
3. TWO STEAM ENGINES and other APPARATUS.
4. SEWERS and WORKS connected therewith, about 15 miles.

Drawings and specification may be inspected by Mr. HAWKESLEY, Civil Engineer, Great George-street, Westminster, and may be seen at the Town Clerk's Office, Guildhall, Worcester, where bills of quantities and other particulars may be obtained, on and after MONDAY, the 21st day of JULY instant. Sealed Tenders, addressed to the Clerk of the Local Board, Guildhall, Worcester, under cover, must be delivered at the SAVOY-HALL, Worcester, on the 2nd day of AUGUST next, at one o'clock precise, when the Council will accept the lowest or any other Tender or Tenders.

Guildhall, Worcester, 10th July, 1856.

PIRACY of the MARKS of MOSELEY and SON.

"London, June 11th, 1856.

"Messrs. MOSELEY and SON, of London, having filed a Bill in Chancery against me, praying an injunction to restrain my selling their name and trade mark thereon, not made by them, and I having purchased the same in ignorance thereof, hereby express my regret at having done so, and of using such spurious articles, and undertake to cease such name and mark from all places on my premises, and not to use any plates so marked, engraved, and I agree to pay the costs of the said suit.

"Dated this 11th day of June, 1856.

"Witness, J. G. Lewis, 8, Leicester-place." "RALPH LAZARUS.

CAUTION.—We do hereby give notice, that legal proceedings will be forthwith commenced against all persons who shall strike any mark or marks referred to in the bill as used by us, and also against all parties who shall sell plates or other articles of cutlery, as Cutlery Manufacturers, 1, and 3, Newstreet, Quadrant, London.

ESTABLISHED 1810.

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSES, 19, Horseferry-road, and 1 New Peter-street, Westminster.

GREAT PRICES.
RAIN WATER CASTINGS, Painted.

Sizes	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Prices	1s. 4d.	1s. 6d.	1s. 8d.	1s. 10d.	2s.	2s. 2d.	2s. 4d.
Half-round Gutters	1s. 4d.	1s. 6d.	1s. 8d.	1s. 10d.	2s.	2s. 2d.	2s. 4d.
O G Gutters	1s. 6d.	1s. 8d.	1s. 10d.	2s.	2s. 2d.	2s. 4d.	2s. 6d.
Ditto with plain ears and [illegible]	1s. 8d.	1s. 10d.	2s.	2s. 2d.	2s. 4d.	2s. 6d.	2s. 8d.
Ditto, with lion clips ditto	1s. 10d.	2s.	2s. 2d.	2s. 4d.	2s. 6d.	2s. 8d.	2s. 10d.

Sash Weights, cast [illegible] Air Bricks, Gas Lamp Irons, &c.

	14 in.	16 in.	18 in.	20 in.	24 in.	3 to 6 ft.
Hip and Valley Boards	1s. 6d.	1s. 8d.	1s. 10d.	2s.	2s. 2d.	2s. 4d. per foot.
Best Cut Floor Brads	12s. 6d. per cwt.					
Best Cut 1 inch Nails	12s. 6d. per cwt.					
Best Zinc Slating Nails	2s. 6d. per lb.					
Best ditto	3d. per lb.					

A large Stock of Philippi and Rosser Stoves, and Kitchen Boilers of the newest and most approved Construction.

Estimates given for new Work in Wrought or Cast Iron Work [illegible].

TO IRONMASTERS, BUILDERS, AND OTHERS.

A TRAVELLER for SALE, complete, [illegible] nearly new, [illegible] fitted with [illegible] Tenders addressed [illegible] Iron Foundry, Bow, E. [illegible] to Messrs. THOMAS GREENWOOD & Son, Iron Merchants, Stratford, Essex.

SAVING IN GAS.—D. HULET, INVENTOR and PATENTEE.—The Mercantile Gas Regulator is the only [illegible] for [illegible] and [illegible] in Gas. [illegible] Gas Meter [illegible] Gas Burners [illegible] Gas Fittings [illegible] Manufacturers [illegible] Gas Fittings [illegible] A.

[illegible] PATENT.

PATENT SASH and BLIND LINE [illegible] Copemakers, Iron Mongers, Merchant Factors, and Wholesale Dealers, Town or Country.

ECONOMY and DURABILITY in BELL-HANGING.—Bell-hanging out of repair or where the pulls run with difficulty, [illegible] Bell-hanger, [illegible] Gas Fitter, [illegible] the bell-hanging. Estimates given for new work and general repairs on the lowest terms consistent with [illegible] Letters addressed [illegible] Bell-hanger, [illegible] Street, Portman-square, [illegible] Gas Fitting, [illegible] Orders [illegible] Wrought-iron, 6½ galvanized ditto, 30s.; cast iron, 35s. each, the latter as durable as the building. Iron Hurdles and Gates [illegible] Estimates [illegible] on receipt of [illegible] dimensions. Iron BARONS [illegible] Stable Fittings and enamelled Mangers.—Address, JAMES BARON, 307, Oxford-street, London.

VENTILATION.—J. KITE, Patentee for Ventilating and Smoke-curing Operations.—Churches, chapels, schools, public buildings, halls, shops, and offices, may be [illegible] by the [illegible] Also, the New Patent Air and Flame Grate, for the [illegible] Patentee to the Queen, 3, Market-place, Manchester. Address, J. KITE, [illegible] Manchester.

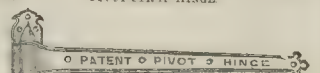
WARMING and VENTILATING.—ALFRED MAY begs to call the attention of Architects, Builders, and others to his system of WARMING by HOT WATER, Lunatic Asylums Workhouses, Churches and other Public and Horticultural Buildings, Mansions, and Offices.

A. M. having had great experience in the above, is enabled to guarantee the efficiency of such work as may be intrusted to him, by those persons he has just completed, to the entire satisfaction of the such testa; the warming and ventilation of the Baron's and Sir Anthony Rothschild's new mansions and conservatories.

Manufactory, Eagle-court, Dean-street, Holborn; and at 50, Dover-street, Piccadilly.

A Patent for tapping for drying linen on a very economical and effective system.

GERISH'S PATENT HARDENED PIVOT STRAP HINGE.



Suitable for Gates, Doors, &c. &c.

Architects, Builders, and the Trade in general, will find this a superior article, both in quality and cheapness, to any hitherto offered to the public, carrying the heaviest weight with the greatest ease, and no king-bolt or hardened pivot required to run double. The Hinges are made from 6 inches to 40 inches long, and in every variety of pattern.—Lists of Prices may be had of the Patentee and Manufacturer, F. W. GERISH, Eagle-road, Cityroad, London; and of all Factors and Ironmongers in the United Kingdom.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be hung off and replaced in an instant. Rising and double acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth," Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most efficient yet invented, is made by J. SMITH, of 16, Queen-street, Oxford-street, near Argyll-street, where a working model can be seen or will be sent for inspection at the shortest notice.

N.B.—Espagniolette Bolts of a superior quality, at reduced prices.

IRON CHURCHES, STORES, &c.—For SALE, Substantial Corrugated Iron Stores, Churches, Dwelling-houses and every description of Buildings, adapted to all climates. Iron Roofs constructed for all parts of the world. An Iron Church of 600 sittings, complete for hire or sale.—To be viewed, or further particulars apply to SAMUEL HEMMING, Cliff House Works, Bow, London.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure locks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 35, High Holborn.

CONTRACTORS requiring CASTINGS, WROUGHT IRON GIRDERS, &c. with despatch, and punctuality, MATTHEW T. SHAW has such arrangements that deliveries are made in a few days. Contractor for Plant and Store of every description. 64, CANNON-STREET.

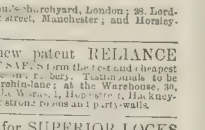
TO CONTRACTORS and BUILDERS.

WROUGHT-IRON GIRDERS for BRIDGES and BUILDINGS, manufactured and guaranteed as to strength.

CAST IRON GIRDERS for BRIDGES and BUILDINGS.

CAST IRON COLUMNS of every description.

WROUGHT-IRON PLATE GIRDERS, for trussing between timber.



Orders executed in three days.

SCREWS, BOLTS & NUTS, SPIKES, RIVETS, CUT-NAILS, Wrought ditto, SCREWS, BOND HOOPS, CHAIN, &c.

CONTRACTORS' PLANT, RAILS, EARTH MOVING and IRON WORK, for Works Abroad, &c.

MATTHEW T. SHAW,
64, CANNON-STREET (late with C. J. Mare and Co.)

WROUGHT IRON GIRDERS, Steam Boilers, Gas Holders and Gas Apparatus, General Castings, Columns and Roofing, Iron Work, Manufactured by M. SUTCLIFFE and SON, Bow Works, Tarrant, near the London Docks, E. Hatt-street.

CHUBB'S LOCKS, with all the recent improvements; STRONG FIRE-PROOF SAFES, CASH and DEED BOXES.—Complete lists of sizes and prices may be had of CHUBB and SON, 57, St. Paul's-churchyard, London; 28, Lord-street, Liverpool; 9, Market-street, Manchester; and Horsley-hill, Wednesbury.

JOHN TANN'S new patent RELIANCE Locks and FIRE-PROOF SAFES are from the best and cheapest sale in the world against housebreakers. Detailed lists to be had of Messrs. Waterlow, Birchin-lane; at the Warehouse, 30, WILLIAM-STREET, City; and at the Works, Hackney-road, London. Iron Doors for strong rooms and party-walls.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition 1851, and the same distinction has been awarded to Messrs. Bramah and Prestage, for the Stock of their Locks of all descriptions; Coins, Glass, and Wood Fasteners of all kinds, with Patent shifting Spindles; Dr. Arnott's Ventilator, 18s.; and the new registered Venetian Ventilator, which admits light, &c. 9d. each.

BRAMAH and PRESTAGE, 124, PICCADILLY, and BOOBBYER, established nearly 50 years, for the supply of Goods from the best Manufactories, at the lowest prices.

124, Stanhope-street, Clare-market, London.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show—every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list, 10s.—35 and 36, High Holborn.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

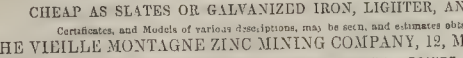
TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1¼	7s. 6d.
17	1½	7s. 6d.
16	1¾	8s. 0d.
15	2	8s. 6d.
15	2½	9s. 6d.



THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by a tooling at intervals of 1¼ inches, and turning one side of each alternate succession in a contrary direction to the reverse series of the iron, thus forming REVERSED CLAWS, which have at least their first bend crain of the iron is presented longitudinally, and when become when built into the brickwork, embedded in the structure, by which means a COMPLETE and PERFECT DETAIL TIE throughout the whole building is obtained.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.

London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

FIRE-PROOF CONSTRUCTION.—

FOX and BARRETT'S PATENT.

This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of everyone.

Further information may be obtained of the Proprietor of the patent,—Mr. BARRETT, 19, York-buildings, Adelphi.

FOUNDRY AND IRON WORKS,

65, DRURY-LANE, and CHARLES-STREET, DRURY-LANE

GLOVER, BROS.,

solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION either structural or ornamental.

Patterns of Girders, Columns, Balconies, Railing, Ornaments Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes Wheels, Pinions, Lathes, and Steam-engines; Range and Hot-plate Metal. An improved Soot Door, adapted for internal work.

A large stock of Rain-water Pipes, Plain and O G Gutters. Air bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings Hurdles, &c.

Plain and Ornamental Vases 20 per cent. cheaper than Terra cotta.

Estimates given for Iron Buildings, Wrought-iron Roofing, Greenhouses, Staircases, Wrought-iron Girders, Fireproof Doors Book safes and Strong Rooms, Tanks and Boilers, and every description of Ironwork to specification, and the work executed with every attention to quality and despatch.

GLOVERS' IRONWORKS,

162, DRURY-LANE, and CHARLES STREET.

CANNON IRON FOUNDRY, 80, Goswell-

street, St. Luke's.—JONES and BLAXTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain an Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Grat ngs, Fly and other Wheels, Wheel Plates, &c.

BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Range s, &c always in stock

IRON FOUNDRY, Harrow-street, Lant-

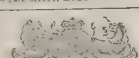
street, Southwark.—W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Railing, and Newel Bars, Iron Coping, Panels, Tomb Enclosures, Area Gratings, Sash Weights, &c. Also Fly and other Wheels, Rollers, Pinions, Engine and Lathe Castings; Forge Backs, Furnace Bars, Kilns, Pans, Pipes, Tank Plates, and other Castings, to patterns or drawings.

REGISTER STOVES, with PATENTED

IMPROVEMENTS.—DEANE, DRAY, and CO. invite the attention of purchasers to their Stock of STOVES for drawing and dining rooms; also a large assortment of PATTERNS, suita for arrangements where, be rooms, &c. In Fenders and Fire-irons, DEANE, DRAY, and CO are constantly put Rooms of ry novelty at the lowest prices. DEANE, DRAY, and CO Stove, Range, and General Ironmongery Warehouse, London-bridge. Established A.D 1700.

BATHS and HOT-WATER APPARATUS.

J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c., with application. Estimates and Plans for Fitting gives J. TYLOR and SONS, Manufacturers, Wednesbury, New-street, London

HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road,

Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be efficiently warmed by Hot Water. JOHN WEEKS and CO can give innumerable references of Churches, Dwelling Houses, Warehouses, &c., where they have fitted their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

TO BELL-HANGERS, GAS-FITTERS,

IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc Tube, and Copper Wire. Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Corrugated, Rising and Lacquered Case Tube for Picture Rods Desk Rails, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. at

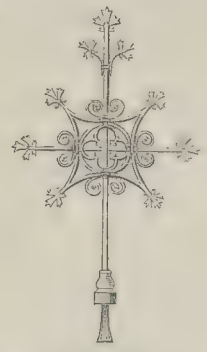
RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53. 54, 55, & 57, WYCH-STREET, STRAND,

London.



VANES, CROSSES, &c.

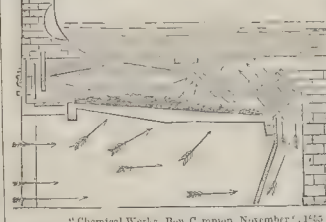
First-class Prize Medal, Paris Exhibition, 1855.

Specimens at the Hardware Court, Crystal Palace, Sydenham. Illustrated Price-list free on application.

LESS FUEL, MORE STEAM, NO SMOKE.

GARDNER'S PATENT SMOKE CON-

SUMER is SELF-ACTING, EASILY FIXED at a SMALL COST, IMPROVES the DRAUGHT, and SAVES FUEL. Applicable to all Furnaces, Boilers, Ovens, Locomotives, Marine Engines, and Open Fires.



"Chemical Works, Bow Common, November 1, 1855

"DEAR SIR,—In answer to your further inquiry concerning the saving of fuel in connexion with the use of your patent apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I now have to state that we are enabled without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coal. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.

"I remain, dear Sir, yours truly,

"To E. V. GARDNER, Esq." "FREDK. ALLEN.

Apply to the PATENTEE, 84, Norfolk-street, Middlesex Hospital; or to Messrs. BEARDOW and BEALY, 113, Great-street, Fleet-street; or Z. D. BERRY, Albion Works, Victoria-road, Pimlico.

Bakers' Ovens fitted for 5l. license included.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY,

PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK,

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

WOOD-CUTTING MACHINERY,

JOHN M'DOWALL and SONS,

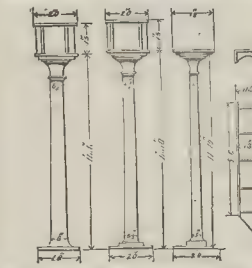
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,

MANUFACTURERS OF VERTICAL SAW-FRAMES

(driven by steam).

For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached; circular cross-cut radial sawing machines; patent inward and outward cross cut sawing machines, for heavy timber; planing machines, for working boards from a ½ of an inch thick to 6-inch deck plank; revolving cutters, for squaring and shaping heavy timber, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power mortising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; sanded board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr M'Dowall is the inventor and sole maker of the best improved vertical saw-frame for cutting the heaviest timber, and for the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders he has had (as well from the British and other European Governments and private establishments in almost all parts of the world, and from their large and commodious premises, and first-class plant made for every department of the work with great speed, the largest contracts can be executed with a regularity, accuracy, and despatch, which could not be excelled by any other firm in Europe. Applications as above for further particulars, will be promptly attended to.

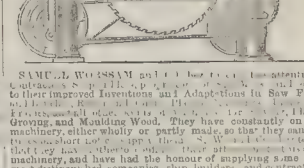


TO ARCHITECTS and BUILDERS,—TO

BE SOLD, a rare Bargain, together or separately, 78 CAST-IRON COLUMNS, 9 inches in diameter, 9 feet 6 inches high, and 9 inches in diameter, 10 feet 6 inches high, of each size, adapted for a warehouse of three floors, or for any other purpose. For particulars apply to WARNERS and LOVEDAY, Auctioneers, 61, Cannon-street, London.

MACHINERY for SAWING, PLANING,

MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Cabinet Makers, Builders, Engineers, Shipbuilders, and others, to their improved Inventions and Adaptations in Saw Frames, Planing, Moulding, Tenoning, Mortising, Dovetailing, Grooving, and Moulding Wood. They have constantly on hand machinery, either wholly or partly made, so that they can at all times execute orders at short notice. Working drawings and estimates of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in Europe; also by eminent Contractors, Builders, Shipwrights, Machine-makers, and other workmen in wood. Their machines are in every respect perfect, either for home and foreign use. One of their Saw Benches and also a smaller one, with Boring Apparatus, &c., are now at work at the Great Exhibition.

A descriptive Catalogue, with Drawings, may be had on application.

KING'S ROAD, Chelsea.

PATENT MACHINES for WORKING in

WOOD.—These celebrated Machines have been awarded a prize medal at the Great Exhibition, 1851, and have also been awarded by the Juries, Members, and Exhibitors present from all parts of Europe; also by eminent Contractors, Builders, Shipwrights, Machine-makers, and other workmen in wood. Their machines are in every respect perfect, either for home and foreign use. One of their Saw Benches and also a smaller one, with Boring Apparatus, &c., are now at work at the Great Exhibition. [illegible] Working drawings and estimates of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in Europe; also by eminent Contractors, Builders, Shipwrights, Machine-makers, and other workmen in wood. Their machines are in every respect perfect, either for home and foreign use. One of their Saw Benches and also a smaller one, with Boring Apparatus, &c., are now at work at the Great Exhibition.

A descriptive Catalogue, with Drawings, may be had on application.

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LOSH, WILSON, and BELL,

NEWCASTLE-ON-TYNE.

Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Locomotive Boilers, &c.

STEWART'S PATENT CAST-IRON GAS AND WATER PIPES.

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IRONMONGERY.

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THE LARGEST STOCK AT

THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).
WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

JOHN HENDERSON PORTER,
ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No.			
11 gauge weighs about	16	oz. per foot super.	
12	"	"	20 "
13	"	"	23 "
14	"	"	26 "

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

SKAIFE'S GALVANIZING WORKS,
Commercial road, Limehouse, London.
Skaife's process is the most effectual preventive against rust, and is extensively used for all purposes where Iron not liable to rust is required.
Patent Galvanized Iron supplied in every form.
Sheets plain and corrugated.—Roofs fixed complete.
J. Skaife is also Agent for Morewood and Rogers's Patent Galvanized Tinned Iron, Plumbic Zinc, and Tiles.
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(late Morewood and Rogers),
Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c., of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
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GALVANIZING and CORRUGATING IRONWORKS,
CHURCH-ROW, LIMEHOUSE,
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MALLET'S PATENT BUCKLED PLATES.
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS.
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Patent Galvanized and Ungalvanized
CORRUGATED IRON MANUFACTURERS,
IRON ROOF, SHED, AND STORE BUILDERS,
Electric Telegraph and Wire Fencing Contractors.
Works LIMEHOUSE and BIRMINGHAM.
Offices—3, MANSION HOUSE-PLACE, LONDON.
Iron of every description galvanized.

JOHN WALKER,
Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor.
IRON MERCHANT, &c.
Offices and Works—Mill-wall, Poplar, London.

PARK GATES, Cast-iron, Bronze, or Wood.
Parties having a Pair or Three for Sale can hear of a PURCHASER, by sending lowest cash price, size, and full particulars, to Mr. DOWLING, 36, Lombard-street, City.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 159, Shoreditch.
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler
30 32 34 36-inch.
22s. 20s. 22s. 24s.
Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—
34 36 38 42-inch
54s. 56s. 58s. 60s.
Strong Elliptic Stoves, with Extra Back and Solid Bars, per in 24d.
Register Stoves, with Solid Bars, per inch, 5d.
Improved New Pattern Circular Check Register, with strong Bars and Twists, 5d. per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2	3	4 inch.
	10d.	1s. 1d.	1s. 3d. per yard.
Cast Gutters—4 inch, 8d. per yard.			
O G Gutters	4		4½ inch.
	1s.		1s. 5d. per yard.

	2	3	4	5	6
Patent Line	3s. 6d.	4s.	5s.	7s.	9s. per gross.

6-inch Rd. Ward Mortice, with Best Furniture and Patent Spindles, 2s. 9d. each. Light Elliptic and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.
Brick Moulds kept in stock. Any size made to order.
Best Cut Clasp and Rose Nails.

1½ in.	1¾ in.	2 in.	2½ in. 3 in.
16s. 6d.	16s. 6d.	12s. 6d.	13s. 14s. per cwt.

Best Sheet Cut Floor Brads..... 14s. per cwt.
Best Cut Lath Nails ..... 16s. "

MALLEABLE IRON FOUNDERS,
HART and SON,
4, VINE-STREET, YORK-ROAD, LAMBETH.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot.
R. S. NEWALL and CO.'S Patent Copper Rope Conductor is being applied by architects, engineers, and scientific men in all parts of the world.
COPPER and IRON CORD for WINDOW SASH-LINES.
OFFICES, Gateshead-on-Tyne.
130, Strand, London.
67, Hyde-park-street, Glasgow,
27, Dale-street, Manchester.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.
JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, 2½d. per inch, and upwards.
Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
3 ft., 3l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3-feet Cottage Ranges, with ovens and back boilers, 32s. each.
3-feet self-acting ditto, ditto, 34s. each.
Air Bricks, 4s. per doz.
Best Town Grate, 5s. Ditto, Scotch, 6d. per cwt.
Best Fine Cut Clasp and Rose.

1½	1¾	2	2½	3-in. & larger.
16s. 6d.	16s. 6d.	12s. 6d.	12s 6d.	13s. 14s. per cwt.

And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter prepaid

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.
J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.
Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.
TUNED BY MACHINERY.
Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.
MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system which give superior tone and facility for ringing.

AT the LOWEST PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected Stock of the various descriptions of Deals, commencing at the following low prices:—

Yellow Deals, from	£20	0	per 120
Spruce ditto, from	16	0	"
Yellow Battens	12	0	"
Dry Pine Plank, from	22	10	"

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a postage stamp.—N.B. All sawn goods delivered within two miles free of cartage.—Borough-road, Southwark, and Elm-street, Gray's-inn Lane.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

MACHINE CARVING WORKS (Patent).
Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

COUNTER TOPS.—R. VIGERS, TIMBER MERCHANT, Kennington, Surrey, solicits the attention of builders and shop-fitters to his carefully selected MAHOGANY, suitable for Counter Tops, and to his seasoned Materials for builders, cabinet and blind makers, &c. Delivered, cartage free, to any of the London railway stations, or within three miles from Kennington Church.

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process. JOHN COUMBE solicits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he sells at prices generally charged for wet wood.—Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile-end-gate.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Pine Plank, 3s. 6d.; Spruce Deals, 3s.; Mahogany, 6d.; 24 Yellow Battens, 12. 10s.; F. Walnut, 7d. Cartage free in town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth-walk.

NOTICE of REMOVAL.—EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton-road, Pimlico, to the KING'S-ROAD, CHELSEA, where their orders will be promptly executed as heretofore.—Please address, E. SIMMS, King's-road, Saw-mills, Chelsea, opposite Manor-street.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of its kind ever established, a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from ¼-inch to 1½-inch thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses. Slating Battens, Pantile Laths, Oak Sills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

MOULDINGS BY MACHINERY.
Capping, Sash-bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to
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ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that they have completed their extensive arrangements, and will be happy to execute all orders entrusted to their care with dispatch and punctuality. Wet and dry docks, and powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring match boarding, &c. &c. always in stock at reduced prices.

SUN SAWING, PLANING, and VENEER-CUTTING MILLS, Canal-road, Kingsland-road.—A. COX and SON beg to call the attention of Builders, Timber Merchants, and the Trade in general, to the above Mills, and to inform them that they are now prepared to execute any amount of work with promptness and despatch, at the lowest possible prices. Full particulars may be obtained on application by post or otherwise.
The Premises abut on the Regent's Canal, and afford every facility for landing and piling goods.

TO BUILDERS AND OTHERS.
AT the LOWEST PRICES.—TIMBER, DEALS, MAHOGANY, and WAINSCOT. A large assortment of seasoned prepared FLOORING and MATCH-BOARDING of all descriptions. An extensive stock of Dry White Yellow, and Pine Cut Stuff, Slating, Battens, Pantile Laths Oak Sills, Sash Sills, &c. Timber of all kinds, Planks, Deals and Battens, fetched from the docks, sawn by patent machinery in the best manner, and delivered at the shortest notice.—THOMAS JACKSON, Sawing and Planing Mills, Commercial-road, Pimlico, London.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of FLOORING and MATCHED BOARDING, from ¼ inch to 1½ inches thick, seasoned, and ready for use; also, Mahogany, Moulding, Wainscot, and all kinds of Timber required for Building purposes.—Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.
STEPHENS' DYES or STAINS for WOOD:
The following extract from a letter the Proprietor has obtained leave to make public:—"Northgate, Colchester, Feb. 5, 1855.—Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, Sir, your obedient servant,
"SAMUEL GRIMES, Builder.
"To Mr. Henry Stephens, 54, Stamford-street, London."
Samples and prospectuses free to any part of the kingdom.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NOKES and CO. invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:—
¼-inch white, 13s. 6d. per square; ¾-inch white, 15s. per square; 1-inch white, 18s. per square; 1-inch yellow, 15s. per square; ¾-inch yellow, 16s. 6d.; 1-inch yellow, 20s.
Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

IMPORTANT to BUILDERS and PAINTERS.—Genuine White Lead, 23s. per cwt.; Linseed Oil, 3s. per gallon; Boiled Oil, 3s. 3d. per gallon; Turpentine, 2s. 7d. per gallon;
Fine Pale Oak Varnish, 7s. 6d. per gallon.
For cash, at EDWARD PRICE'S Oil and Colour Warehouse, 45, Coleshill-street, Pimlico.—Every article for the trade at the lowest price.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, spirit lackers, and finishing spirit. The present price is 6s. to 6s. 6d. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

BRUSHES.—J. JEFFCOAT, from Messrs. Kent and Co.'s, many years a Practical Manufacturer of Painters' and Artists' Brushes, can now supply them at such prices as cannot fail to ensure the favour of all who wish to obtain a genuine article.—Samples may be had at the wholesale price.—Copper-bound distempers, 51s. per doz. the usual price 60s. per doz. at the Factory, 9, Middle Queen's-buildings, Brompton-road.

THE STANDARD LIFE ASSURANCE COMPANY,
Established 1825. Constituted by Acts of Parliament.
GOVERNOR.
His Grace the Duke of Buccleuch and Queensbury.
DEPUTY-GOVERNOR.
The Right Honourable the Earl of Elgin and Kincardine.
LONDON.
CHAIRMAN OF THE BOARD.
The Right Honourable the Earl of Aberdeen.
ORDINARY DIRECTORS.
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LONDON,—82, King William-street.

THE NEW BUSINESS transacted by this Company during 1855 exceeded that of any Assurance Institution in the United Kingdom, the Sums proposed for Assurance during the year being ..... £716,383 7 11.
And the Assurances accepted 609,323 7 11
A BONUS was declared on 1st May, 1856, varying from 27l. 18s. to 18s. per cent. on the sums assured. This was the Fifth Declaration of Profits.

EXAMPLES OF BONUS.

Date of Policy.	Sum in Policy.	Total Bonus Addition to 1855.	Sum in Policy with Bonus Addition.
15th Nov. 1825 ..	£1,000	£1,352 0 0	£2,152 0 0
" 1830 ..	1,000	837 0 0	1,837 0 0
" 1835 ..	1,000	623 0 0	1,623 0 0
" 1840 ..	1,000	347 0 0	1,347 0 0
" 1845 ..	1,000	174 10 0	1,174 10 0
" 1850 ..	1,000	64 0 0	1,064 0 0

The Income of the Company is about a Quarter of a Million.
NON FORFEITURE OF POLICIES.
Important resolutions have been adopted as to Non-Forfeiture of Policies within thirteen months from the date of payment of the premium under certain conditions.
SELECT ASSURANCE COVERING FOREIGN RESIDENCE WITHOUT EXTRA PREMIUM.
Policies of five years' duration are admissible to this class at the discretion of the Directors.
SURRENDER VALUES.
A Liberal Surrender Value is allowed after payment of One Annual Premium for Policies on the With Profit Scale, and after Three Premiums on the Without Profit Scale.
Persons proposing to effect Assurances are invited to examine these important and peculiar conditions by application to the Company's Office, where the fullest information may be obtained.
H. JONES WILLIAMS, Res. Sec.
London, 82, King William-street.
Copies of the Report of the Proceedings at the Meeting of 1st of May, 1856, are now ready, and can be had at the Office.

A FIXED ALLOWANCE OF 6l. PER WEEK,
In case of Injury by
ACCIDENT of any DESCRIPTION,
or the Sum of
1,000l. IN CASE OF DEATH,
may be secured by an annual payment of 3l. for a policy in the RAILWAY PASSENGERS' ASSURANCE COMPANY.
A weekly allowance of fifteen shillings for injury, or 100l. in case of death secured by payment of ten shillings.
NO CHARGE FOR STAMP DUTY.
Forms of proposal, prospectuses, &c. may be had of the agents, of the clerks at all the principal railway stations, and at the head office, London, where also
RAILWAY ACCIDENTS ALONE
may be insured against by the journey or by the year as heretofore.
Railway Passengers' Insurance Company, empowered by a Special Act of Parliament.
WILLIAM J. VIAN, Secretary
Offices, 3, Old Broad street, London.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

January 1, 1856.

CLARK'S PATENT REVOLVING SHUTTERS.

CLARK AND CO.

Patentees and Manufacturers of

REVOLVING SHUTTERS, IN IRON AND WOOD, BRASS SASH-BARS, STALL-BOARD PLATES,

And every description of

METALLIC SHOP-FITTINGS.

Illustrated Prospectuses and Testimonials, with Prices, forwarded post-free.

CLARK AND CO. 15, GATE-STREET, LINCOLN'S-INN-FIELDS; AND LITTLE QUEEN-STREET, HOLBORN.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

CHARLES WM. WATERLOW AND CO.

MANUFACTURING JOINERS,

121, BUNHILL-ROW, FINSBURY, AND BOW, MIDDLESEX.

N.B. A large Stock of Joinery and Mouldings, suitable for immediate use, at the Warehouse, Bunhill-row.

SANDS AND EMERY,

CURSITOR-STREET, CHANCERY-LANE.

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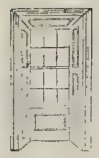

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The Builder.

VOL. XIV.—No. 702.

DURING the week, we have been requested to give some further information as to the actual state of the case with respect to the new Westminster Bridge, and willingly comply. On the 31st of March last, the Chief Commissioner of Works and Public Buildings requested Mr. Rendel and Mr. Simpson, engineers, to report to him on the works of New Westminster Bridge. The instructions were in the following terms:—

"The first Commissioner requests that you will report to him on the following points:—

1. The cost of the works up to the date of your report, or as near to that period as you can.
2. The progress which has been made in the work.
3. The time in which the first half of the bridge may be made ready for traffic.
4. The time necessary for the completion of the whole structure, and its probable cost under existing circumstances (also the probable cost of suitable approaches).
5. Your opinion as to the original scheme, and the exact nature of that scheme; and,
6. The desirability of proceeding with it.

Should your opinion be unfavourable to the prosecution of the present plan, I have to request that you will set forth most fully the reasons which induce you to arrive at such a conclusion, and that you will advise as to the course which you think it would be most desirable to adopt, taking into consideration all the various circumstances of the case, and bearing in mind that the object to be attained is to have a bridge of a permanent character."

Their report, dated June 28th, is now printed, and shows, with reference to the first inquiry, that the sum of 76,988*l.* 12s. 9d. had been paid on account of the new bridge up to May 31st, and that the works done, materials delivered, and plant, amount in value to 85,009*l.* 1s. As to inquiries 3 and 4, they consider that the first section now in progress will demand at least eighteen months from the resumption of the works, and the completion of the second section not less than four years from the opening of the first. The cost of completing it, in addition to what has been already paid, they put at 200,000*l.*; and the cost of approaches, including 70,000*l.* for property already belonging to the Bridge Estate, and 170,000*l.* for clearing away the block of houses on the south side of Bridge-street, at 384,800*l.* In reply to No. 5, they describe at some length the nature of the scheme, and arrive at the conclusion that it is defective in many of its details, especially in the construction of its piers below water. As to the desirability of proceeding with it (inquiry 6), they say the total loss which abandonment of the plan would occasion, would be about 42,000*l.* To found the piers of the bridge as now arranged, 85 feet wide, in the clay, and provide a temporary bridge, not contemplated in the present arrangement, would make the cost of the bridge above what has been paid, 304,000*l.* the cost of the approaches remaining the same. They then, however, go on to suggest that a diversion of the traffic is desirable, and recommend the construction of a second bridge from the Horseferry-road to Church-street, Lambeth, 60 feet wide, and the reduction of the new Westminster-bridge to that same width. The cost of this second bridge and approaches they estimate at 415,000*l.* The saving in Westminster-bridge and approaches by the reduction of width, is called 170,000*l.*; and placing this sum to the credit of Lambeth-bridge, together with the estimated cost of a temporary bridge then not required, would reduce the cost of Lambeth-bridge, they say, to 210,000*l.*

Let us look back to the objections which Messrs. Rendel and Simpson take to the present scheme. The new bridge is to occupy the site of the existing bridge, but is to be double the width. The addition, our readers will remember, is wholly on the south side; and this section is being built first in order to avoid the necessity for a temporary bridge, pending the construction of the other half of the new bridge on the site of the old.

"Again: the present scheme is devised with a view to the avoidance of the use of cofferdams or caissons for founding the piers and abutments. This is done by forming the piers below low water of a series of wooden piles, surrounded by a sheeting of cast iron, the space inclosed by this sheeting being filled in with concrete.

With a view to prevent the cast-iron piles being laid bare by the scour of the river beyond a fixed limit, namely, three feet below low water, it is proposed to surround them up to that height with a bank of concrete; and in order to guard the piers, masonry, as well as cast-iron piling, from accident by the fouling of barges, steamers, or otherwise, they are to be protected by floating fenders or booms."

On examination of the mode of construction, they consider that the foundations, on which the permanent character of the bridge will rest, are dependent on the combined action of several classes of materials, differing in their strength, as well as in the manner in which they are applied. Farther, the strength of each part is liable to suffer by the failure of any one, and in especial the fracture or the improper execution of any portion of the outer cast-iron casing might be productive in the end of very serious results. In fact, they say, supposing the principle on which these foundations are constructed to be a sound one, it is one that peculiarly requires a cofferdam; for this alone would ensure that careful supervision which is demanded by a class of work dependent for its permanence on its faultless execution. Again, they think it probable that the bottom of the river would not retain the peculiar form intended to be given to it; and that should this be the case, the concrete banks round the piers must in no long time be broken up, and the piers be weakened, first, by the increase of their unsupported height, and, secondly, by the diminution of the depth and solidity of the material through which the piles of which they mainly consist are driven.

Looking to the changes which have taken place in the bed of the Thames, and the disturbance of it especially at the site in question, in the various attempts to keep up the old bridge, they do not consider that any plan which does not comprise solid stone piers and abutments, carried down deep in the London clay, can be regarded as possessing a "permanent character." Further, that it specially demands the aid of cofferdams, and that the saving of the cost of a temporary bridge is not a sufficient compensation for the trouble, risk, and extra cost of constructing the bridge in two sections, as now proposed. At any rate they say, and justly, that if the present design be carried out, the foundations, masonry, and iron superstructure of the two sections, except the plates which carry the roadway, should be built entirely independent of each other, so as to reduce the consequences of unequal settlements in them, to the least possible evil.*

It will be seen that this is a very serious affair. Mr. Page should have the fullest opportunity afforded him for explanation and demonstration.

* A view of the proposed bridge and details will be found in vol. xiv., pp. 409.

THE ARCHITECTURAL MUSEUM.

THE annual *conversazione* in connection with this institution, took place on Wednesday evening, at the Museum, in Canon-row, Westminster. The Right Hon. Earl de Grey presided, and there was a very large attendance of visitors.

The chairman, in opening the proceedings, congratulated the meeting on the large assemblage he saw before him, which, he said, was a proof that the institution was increasing in interest, and therefore he hoped increasing in utility. Although it was started under less favourable auspices than many other institutions, it had been steadily progressing. He would not attempt to give any account of what the institution had already done, but would at once call upon the Treasurer to read a statement of the proceedings of the past year.

Mr. Scott (treasurer) read the report, from which we take the following:—

"Our great and primary purpose, and that which embraces all the others, is to promote the advancement of all the branches of decorative art which are connected with, and subsidiary to architecture. It would be worse than idle to attempt any concealment or extenuation of the fact that these arts had generally sunk, in this country, to a *very low ebb*. The inveterate love of cheapness had either banished decorative art altogether from our buildings, or placed it in the hands of a humble class of artizans, whose limited education and means rendered it impossible for them duly to study the arts they were called to practise, and even *their* works being considered too costly, they were rarely used fresh from their hands, but were mechanically repeated by casting or by machinery, till what merits they possessed became nauseating by continual repetition. Painting and sculpture, in their higher branches, had long been severed from their sister art, and the humbler branches, which yet deign to unite themselves with architecture, are of necessity left in the hands of workmen who from time to time emerge through their own talent and exertion from the ranks of the mechanical artizans, and these had no opportunity of visiting and studying works of former periods, nor of perfecting themselves in their respective arts. It was to aid this humble but meritorious class of artists that this museum was founded; and its purposes are to bring together within their reach specimens of the arts of various periods and styles, as carefully selected as our opportunities will permit; and further, to do all in our power, by courses of lectures and other means, to aid and encourage them in the study of what we place before them.

Let it not, however, be imagined that by bringing before them specimens of the arts of former periods, we wish to make these the models on which their own works should be founded. It is absolutely necessary to advancement that the artist should have a reasonable degree of knowledge of the attainments hitherto reached. Without this he has no foundation to go upon; he is ignorant of the levels already attained, and from which his own progress should commence; but once knowing what has been reached, and having made sure his own footing on that level, his motto must ever be 'Excelsior;' and to aid him in building upon the foundation laid by the works of former ages, we are constantly urging, in every possible way, that his own works should not be mere dead imitations of those of the past, but that he should only use them to aid and guide him in obtaining ever fresh supplies of taste and beauty from the fountain-head—the works of nature herself—that museum of art which belongs alike to all ages of the world, and to every family of man."

The progress of the society was referred to, the various donors named, and special reference of course made to the present of 50*l.* from Prince Albert, and to the fact that H.R.H had consented to become the patron of the Institution. The report concluded with an urgent appeal to the public for support.

The report having been adopted,—

The Rev. Dr. Wordsworth moved that a vote of thanks be given to the contributors of specimens to the museum, and in doing so dwelt at some length on the proper use to be made of those contributions which had been so liberally bestowed upon them: a great deal would depend upon the view taken by those for whose benefit these contributions had been made. But there must be something besides specimens,—there must be the infusion of a master-mind into them; if they were to be of any use, they must have cast around them something of the dignity of the profession of an architect. When they looked around them in that building, they were, so to speak, surrounded by dry bones, into which it was necessary to infuse a spirit, and make them live, as it were, before them. Casts and moulds would be of little use, unless they were presided over by a genius to regulate their application; for it was a source of great indignation to the true lover of the profession to see the gross misapplications of some of the finest specimens of his art. They sometimes saw casts from the most beautiful portions of sacred edifices abroad, applied to the most secular purposes at home. There was great reason to be alarmed at the prospect of the arts in this country now before us; and unless we cleared up our own views in regard to the application of the specimens such as he saw around him, much

mischief, instead of advantage, would be derived from their misappropriation. He could not too strongly condemn the want of sense and propriety exhibited at the present day in all branches of architecture; and considered, that in order to profit by the institution in which they were assembled, it was necessary to have genius presiding over the whole of it, in default of which, their collection of casts and specimens would be worse than useless. In returning thanks to those who had contributed these specimens, he would express a hope that those upon whom they had been bestowed would prove worthy of them.

Mr. Sydney Smirke seconded the motion, and expressed a hope that the contributors to that institution would not consider the reception they were enabled to give to the contributors as any measure of the gratitude felt; and he looked forward to the time when they would be able to leave the place in which they were assembled for one more fitted for the purpose for which the Institution was founded.

The motion was carried unanimously.

The Chairman said, that having thanked those at a distance from them, for the assistance they had given to the institution, it was their duty to come a little nearer home, and return thanks to those individuals in connection with the Institution without whom they would not have been able to go on at all. They had been kind enough to give their time and their energies to the undertaking, and were entitled to the most cordial thanks of all who took an interest in its success.

Mr. Cole then moved that the warmest thanks of the meeting be given to Mr. Scott, the treasurer, and to the other officers of the museum for their valuable services during the past year. He proceeded to draw a contrast between the new Houses of Parliament and the houses near the Abbey, in that locality, with the extremely humble building in which the architects of Great Britain, who produced that architecture, had thought fit to commence an Architectural Museum. For his own part, he rather approved the contrast; but still he could sympathise with Mr. Smirke in looking forward to the time when they should be in a more commodious and appropriate building. The officers of the institution had been most untiring in their exertion for its welfare and success during the past year; and, as had been pointed out in the report which had been read to them, their exertions had not been without much fruit. Mr. Scott had succeeded in procuring the assistance of Government in their undertaking; and although he (Mr. Cole) was rather averse to accepting such assistance in institutions of that nature as a principle, he considered that we are all so intent upon our own business, and so little disposed to undertake that which is not remunerative, that for some years to come the Government of this country must pay something out of the public purse towards promoting the interests of science and art. He wished it were otherwise; but it was a fact, that the largest amount of support given to the institution came from the public purse, through the hands of the Government, and it would depend very much upon the pressure from without whether that amount of assistance were increased or not. He was disposed to hope that the utility of that institution would become more widely recognized throughout the whole country, and that every art-workman would contribute his one shilling or his five shillings per annum to the support of an institution which has for its object the spreading a knowledge of that art by which he gains his daily bread; and that the very humble institution which they saw within those walls would expand into an institution which would be a credit to Europe. At the present moment he was not aware that there existed in any country of Europe an institution exactly analogous to that. It only required an extension of the spirit which had called together the collection which he saw around him for that institution to attain to the happiest results. They might hope that the foundation was laid of a great institution which would be of the utmost importance in aiding the progress of architecture, and inspiring its professors with a strong sense of that propriety which a previous speaker had alluded to as being wanting at the present day. But in order to get an institution which should stand at the head of all others of a similar nature in Europe, he did not think they should rely so much upon Government as upon the exertions of those who were more directly interested in the profession of architecture themselves. He had much pleasure in testifying to the most valuable services the officers of the institution had rendered, and he was sure the meeting would unite with him in returning them sincere thanks.

The Rev. Mr. Boutell seconded the motion. Having had an opportunity during the past year of becoming acquainted with the practical working of the institution, he could bear strong testimony to the claim of its officers to their warmest gratitude. The collections around him were by no means complete in themselves, but their real value very mainly depended upon the guiding spirit which presided over the institution itself; and he was quite sure he should have the acquiescence of the meeting when he said, that they had in their presiding spirit exactly what was required to infuse a life into the dry casts themselves. The art of architecture was safe under their direction. He had the greatest hope of the future success of the Museum, under the safe keeping to which it was entrusted. They desired to assemble their collection in that spot, in the first instance, in order that it might expand, and call for a more commodious receptacle; and that by showing what had been done in times past in that great art, and how these different results had been obtained, they might awaken a kindred spirit in our own time.

The resolution was carried unanimously.

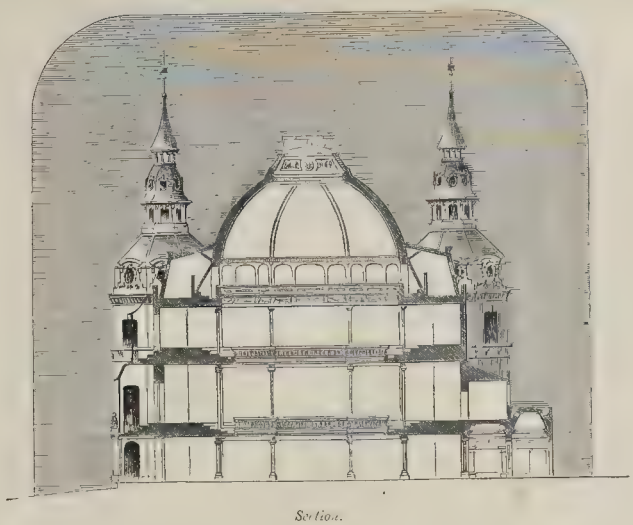
Mr. Scott, in returning thanks on behalf of himself and his collegues said, in reference to the assistance received from Government, he would indulge in the hope that the Department of Science and Art, under the Board of Trade, would, from the experience they had of those connected with the Museum, believe that they were most anxious to do all they could in return for that assistance, and he believed that practical value had already been given for such assistance.

Mr. Godwin rose to propose a resolution, which he was sure they would receive with acclamation, "that the thanks of the meeting be given to Lord de Grey, for his conduct in the chair." He had had the privilege for a number of years of experiencing the advantages of Lord de Grey's assistance at the Institute of Architects, of which, as they knew, he was president, and where he had always been ready for a long period of time, to aid any views which might seem promising for the advantage of their art, or even of the members. He (Mr. Godwin), could recognize in the manner in which his lordship had already taken up the Architectural Museum, an intention of pursuing precisely the same course there with precisely the same advantageous results to those connected with it. He did not know that he ought to detain them at that advanced period of the evening, as there were very many things to be seen, but still he would take the liberty of adverting, in two or three brief sentences, to some points that had occurred to him during the business of the evening. He thought it must be apparent to every architect that the advantages of the Museum were beginning to be felt out-of-doors. He had himself, on one or two occasions suggested to workmen in the country who were about to commence operations of importance the advantage of visiting that Museum; and on two special occasions—one in which a man had travelled 100 miles, and the other in which 140 miles had been travelled—he had seen the effect which a visit there for two or three days had had upon the workman. Every one could do something to assist the Museum—the churchwardens, the incumbent of every church in the country, could send something which would be of value; every architect in his own practice, if he would but bear them in mind, would be able to extend the usefulness of that Museum. Such extension could not possibly result from the exertions of a small number. They wanted a widely varied collection of casts. He was disposed to think we must look to eclecticism for progress in their art, recombining existing materials. The necessity for spreading abroad a knowledge of art was obvious. What a falling off was there in the arts of decoration in this our nineteenth century! Wonderful as it is in the way of electric telegraphs and steam-engines, still in point of decoration, no one could look at the works of past centuries without feeling that we had, in an extraordinary degree, deteriorated. Without enumerating other instances, let them glance even at the tombstones of our day, which, generally speaking, are of the plainest possible description, being quite devoid of anything in the shape of decoration—and form a striking contrast, not merely to the wonderful works of the mediæval artists, but to those even of the last century. The same remark applied to ironwork, as might be seen in a walk through the old parts of London. It was equally important to lead the public to appreciate as it was to induce the workman to strive after something better in art; because, as the patron so is the artist. If the public looked for beauty of form and harmony of colour, artists to produce these would not be wanting, and those who did produce them would be well remunerated by the public. Some allusion had been made to Government. He was not quite certain that our own Government always did exactly what was right in those things; in fact, he thought they often did what was very wrong. Mention had been made recently in Parliament of the manner in which English sculptors had been treated; the expression with regard to that had been so universal, that it needed no comments. There was not room for sculpture in our ordinary houses, and it needed State aid. To say that English artists were not capable of successful competition was absurd, remembering, as they did, what members of their own body had done at Hamburg and at Lille, against all Europe. Look at, if he might touch so delicate a subject, the structures now being erected at Brompton, to contain the Vernon Gallery and the Marlborough House collections. Those wretched, boiler-like erections that are now being put up there, he considered a reproach to our time, a great error on the part of the commission, and one which they ought to take immediate steps to rectify. However, he found he had wandered somewhat from the purpose for which he had risen, which was to move a vote of thanks to their noble chairman, which he was sure would meet with a hearty response.

Mr. Parker, of Oxford, seconded the resolution. They all knew the valuable services their chairman had rendered to the cause of architecture, and it was unnecessary for him to refer to them. He supposed he had been called upon to second the motion as the representative of the Oxford Architectural Association, which institution, he believed, was the first to contemplate a collection such as they saw around them, and was being productive of very good results.

The Chairman said it was perfectly true that he had been attached to the science of architecture for some years. He professed no science; he did not understand anything about it in a deep scientific point of view. He had the eye of a scene-painter, he believed; he knew what pleased him, and in that respect he had an architectural turn, and an architectural taste. Some years ago he was requested to take a part in the Institute of Architects, which had given him a certain degree of celebrity which he did not think he deserved. Believing that in such cases the mixture of different classes of society was of service, he accepted the office, and he had endeavoured to the best of his ability to discharge the duties of that office, and had done all he could to be of service to the noble art of architecture and its professors. The Architectural Museum was founded on the same principle as the institution to which he had just adverted; but there was this difference, that the humblest follower of the art might participate in the advantages offered by the Museum. They had heard from high authority that it was an institution peculiar to this country. There was not in France (although there might be many good institutions there) an institution to which the lowest workman—a man literally in his apprenticeship—might come for a mere trifle and be able to see collected together all the best specimens of every style of architecture in which it is possible for him to be employed. He

CONCERT HALL, SURREY GARDENS.—MR. HORACE JONES, ARCHITECT.



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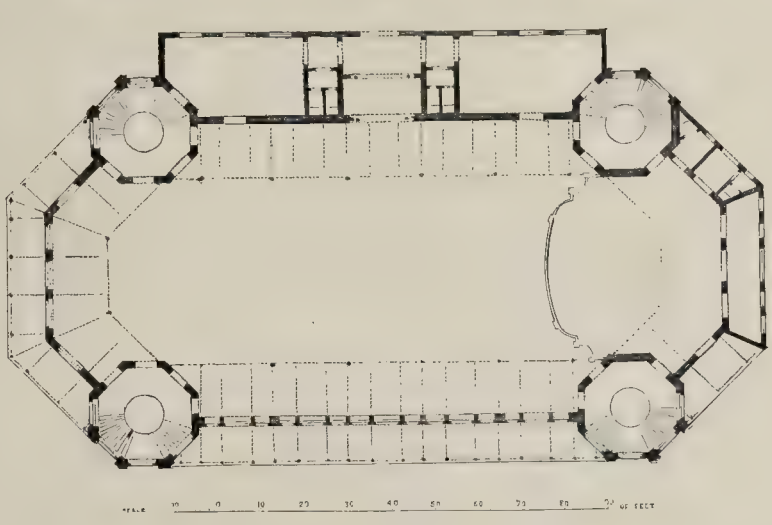


Plan.

(the chairman) recollected urging on one occasion, that those who were interested in the institution should not confine their specimens too much to one class. The Mediæval style was then coming into vogue in the country, and a larger collection of casts in that style had been made perhaps than in any other by private individuals. At that time he stated that an institution of that nature ought to be general. He believed that suggestion had been acted upon. It was perfectly true that the largest number of the specimens around them referred to the Mediæval period, but they were not exclusive. They were now confined for want of space; they had hardly the means of showing what they could do. They were, however, stimulating fresh individuals to come forward to assist them, and he hoped the time would come when they would stand in a more advantageous position. He strongly recommended that no effort should be spared to insure a continuance of the support received from the hands of Government; and concluded by thanking the friends of the institution for their past support, and calling upon them to increase rather than diminish that support, for the future. For himself, he could only say, that nothing on his part should be wanting in promoting the welfare of that excellent institution.

THE MUSIC-HALL AT THE SURREY GARDENS.

THE Surrey Gardens Concert Hall, which was opened with the first of a series of musical performances on Tuesday last, is a building of unusual dimensions and considerable constructional merit. As shown by the plan and section, it consists of one great hall, with three tiers of galleries, and the orchestra at one end, covered by an arched ceiling, with four stair cases octagonal on the plan, and the requisite refreshment and retiring rooms. At one side of the building, access is gained from two of the internal galleries, by numerous window openings, to external covered galleries looking towards the lake. The ends of the plan, it will be seen, are semi-octagonal; and the projections of the main front, the towers with the somewhat Eastern appearance of their terminations, and the high roof curved in section externally as internally, and surmounted by a continuous lantern with louvre boarding and iron railing at the top, combine to produce a certain effect. The materials are grey stock bricks, and red brick for the towers and window openings, Portland cement for mouldings and ornaments, and cut slates and zinc for the roof coverings, the latter material being also used for the dressings to the lucarne openings

of the towers, and the dormer windows of the curbed roof. The prominence of the roof, together with its main form, realize somewhat the expression of the feature in Palladio's Basilica at Vicenza. The material, zinc, laid with rolls, contributes its own peculiar character to the design; and where used turned up into ornamental work, suggests the possibility of an extensive application of this material for decorative enrichments. Zinc, of course, has, comparatively speaking, but moderate durability; but it is extensively used by the French, with whom it would seem to be not only better laid, but as material, to have much greater power of resistance to atmospheric changes. The question is certainly well worth special investigation; for, though galvanized iron has been used over large areas of roofing, as in the Houses of Parliament, the great difficulty which there is in preserving the edges from rust is a matter of serious consideration. The use of lead for the several roofs and flashings to the buildings now under notice, would, it is thought, have increased the cost about 1,000*l*.—At night time when the interior is lighted up, the effect from the exterior is one which is novel in London.

When there is some difficulty in describing a building through terms belonging to recognised styles, the chances are that the very difficulty arises from that which is part of the merit. Again, it is possible to use a bad style, as the leading one, and yet to gain effect in masses, and in general design. Some credit of that kind is due in the present case. The architect's favourite style seems to be the degenerate Italian, with a large infusion of French taste. Natural ornament is freely introduced. Piers at the base of each tower at the angles, however, support small groups of figures and ornament of very indifferent character. Some difficulty with the design of the towers is also obvious in certain window openings, where the stairs come in the way. But, full consideration of details by an architect himself, is impossible under the present system of executing works. The architect is not placed in a fair position; and happy may he feel, if, as in the present case, he can gain a measure of success in the decorative effect, and can escape a fatal omission or error as to his structure.

The general plan here, indeed—though not involving many requirements—must be considered as well chosen for effect, and as conducing to the structural sufficiency of the building. The only exception calling for serious regret, is that of the narrowness of the treads of the stairs next the hand-rail. Some alteration will, we fear, be required to prevent all likelihood of accidents. On the other hand, the provision of a large amount of staircase accommodation calls for especial praise. The staircases are each 21 feet in the clear, and the stairs are 6 feet wide, with a 9-feet well-hole. The landings are partly supported by tiers of iron columns,—precautions which, in long lengths of landing, are too often omitted.

The main entrance to the body of the hall is in the centre, where the principal refreshment-rooms are placed,—forming a projection from one side of the building of one story in height, the cornice of which will have placed along it a line of gas jets, and being surmounted by flower-vases. The dimensions of the hall itself are in the clear 153 feet 6 inches by 68 feet 6 inches, and the external dimensions, galleries and refreshment-rooms included, are 173 feet 6 inches by 99 feet. The external galleries along the side are in width, the lower one 8 feet 6 inches, and the upper one 5 feet 9 inches. The internal galleries of the hall are in width 16 feet 6 inches, except in the case of the upper gallery, which does not project in front of the general line of columns. The height of the hall is 77 feet in the centre, to the underside of the glass of the lights, and 70 feet deducting the lantern.

The iron columns to the upper tiers are hollow, and are reeded, and with a spiral band; and have enriched capitals, over which a shell is fixed on the front of the girder. The columns of the ground story, from the difficulty in getting other castings executed, are of the cross form of section, and are finished in cement. The capitals here are connected with the girder by a group of trusses. The curved fronts of the galleries are in ironwork, cast in patterns exhibiting musical instruments and other devices.

The divisions of the galleries and roof are into five bays. The roof-framing is composed of main and intermediate ribs, which spring from the floor level of the top gallery, and are cut to the curve, the main ribs being 13 inches by 6 inches, in four thicknesses of 1½ inch stuff, breaking joint and bolted together, and with a rib of wrought iron rivetted, in the centre—an addition which is perhaps not necessary. The upper ends of these ribs are notched or tenoned to a strong sill, at the base of the external lantern, and which sill running all round it, forms part of a system of framing after the manner of a queen-post truss. This system of roof is a modification of the well known arrangement revived at the Exhibition building in Hyde-park, the Great Northern Railway station, and other important works, and has been employed by the architect of the Surrey Music-hall in many instances, and successfully. It will be seen that particular care would be required as to the sufficiency of the sill or continuous member at the heads of the ribs, and to the manner of notching or tenoning to it; and which care in the present case has doubtless been taken. There is, however, a further important distinction between this roof and such as have the ribs built to compass the whole span. In the Hyde-park building the arched ribs were thought not to exercise thrust; and abutment, if provided, was, we believe, regarded only somewhat as a measure of precaution. In the other case, however, there being no tie, abutment is obviously the sole dependance for the safety of the structure. This the architect here has provided by bracing from the towers—that is by a system of framing, within the thickness of the gallery floor, and which may be compared to a trussed partition laid flat. In some degree, the contrivance resembles one used in iron, at the Crystal Palace at Sydenham. Further, the framing at the opposite sides is connected at the ends; and the whole principle and arrangement might seem free from objection. The district surveyor, however, thought that tie-rods were still necessary, and these now detract much from the effect of the interior. The main and intermediate ribs are covered with rafters laid purlinwise,—every fifth or sixth rafter being a deep one running through the whole thickness, and to these last the ceiling rafters cut to the curve are fixed. The purlin rafters are of course boarded for the zinc. The ceiling is relieved only by mouldings on the main ribs, and along the centre; but the apsidal form of the ends gives it a good effect. The central portion, from end to end, it will be understood, is flat,—here there are three deep octagonal apertures, panelled with perforated zinc, and glazed at the top. The lighting by night is by a line of gas jets round the main cornice, and by chandeliers under the galleries. The chandeliers, brought in a hurry from the glass warehouse, should be exchanged for something from the architect's own design. *Art* in such things will tell more than committees are aware of. A more serious deformity in the interior is supplied by two hideous boxes thrust into the lower gallery next the orchestra; and which we venture to assert the architect has had nothing at all to do with. Architects, however, should more frequently protest against things seriously detrimental to their work; and so, most unfairly injurious to their reputation.

We should state that the orchestra, as arranged for the opening, to accommodate 1,000 performers, has what we may call an upper story. The front of this is hung by iron rods from a strong truss above. Adjacent to the orchestra are refreshment and retiring rooms for the performers. Over all, is a great sounding-board,—the cornice decoration, which is of festoons and trusses, ranging across it. The orchestra generally is too plain in effect; but for decoration in colour in any part of the building there has been no time. Decorative painting should go ultimately further than the gilding of a few enrichments. Considering that four months have sufficed for what has been done, the architect, Mr. Horace Jones, deserves some praise. The work is creditable to Messrs. Scott and Cornwall, the contractors.

Exclusive of the orchestra, the building will accommodate about 10,000 persons; and 12,000 can be accommodated in all parts, and inclusive of the external galleries. The building was contracted for at 17,000*l*.; and 1,200*l*. more may be the cost of certain additions in the way of refreshment-rooms, ordered by the directors.

The gardens have been drained and altered under Mr. Forest's direction: Mr. Danson has painted a view of Constantinople, looking down the Golden Horn, and a representation of mountainous scenery; has contrived some elaborate machinery for allegorical representations; has completed a kiosk, in the gardens in an Eastern style, with some aid from particulars furnished by Mr. l'Anson; also an imitation of stalactite caverns, and a novel system of garden illumination,—the lights being placed along the borders of the grass, in oiled and painted canvass shades. M. Jullien holds the *bâton*, and we can only say that the company appear to well deserve success. How the management may handle their materials, however, has yet to be seen.

LODGING-HOUSES FOR THE INDUSTRIOUS CLASSES.

THESE foundations, having their origination in our time, and now assuming a national importance, have become essential to an improving generation. Based on philanthropic principles, their aim and object ought to be, to furnish dwellings for the labourer and his family, *in quality better than* those hitherto attainable, and *in cost more suitable to his means.*

To strike in at once upon the very best possible mode of arrangement and distribution of structure, or to afford accommodations at the lowest possible rates, could hardly be expected: it requires time, and application, and experience, to consummate these objects; and the wonder is, that so much has been so well done in so short a period.

It is manifest that, in order to be permanent and really utilitarian, all such institutions must be *self-supporting;* and as the abodes of the toiling millions—their hearths and homes whereat the manners and morals of their children are fashioned,—involve all that is valuable to humanity—their comfort, their self-respect, their independence—nay, their immortal interests,—it behoves the citizens of this wonderful metropolis, as well as the Government charged with the country's destinies, to encourage and promote the movement.

Some reference to what has been already done is necessary to determine what remains yet to be done: and if it happen that any fault be found with the realization of good intentions, it is not because there exists the smallest taint of suspicion as to the pure motives of the first benevolent and distinguished founders: no, their object was to do good, and *they* will not object to him who would do better.

The first model lodging-house, founded within seven years, was projected for the residence of *single men;* it stands in George-street, St. Giles's, is a solid building of five stories with *a basement*, having a frontage of 78 feet. There is no *curtilage in the rear*, which is built up solid, without windows, save in the staircase, the construction being (what is called) fireproof: every floor is bisected by the staircase, and forms two great chambers or lofts, plainly plastered, each chamber being about 32 feet by 25 feet, and 9 feet high: these are partitioned off by wainscoting, about 6 feet 6 inches high, into two ranges of chambers or forms, measuring 9 feet 6 inches by 1 feet 6 inches! Each chamber has a 3-foot bed, a chair, and washstand; and a corridor of 7 feet wide divides the two ranges: thus there are fourteen lairs in each of the ten rooms, making sleeping quarters for 140 men.

It rarely happens that there are two beds vacant at a time, and there are generally supernumerary candidates for an empty room. This is the best argument for the great utility of the establishment and for the sufficiency of its provisions, *quoad* bachelors; but the chief points of advantage are to be found in the large kitchen and its ample fire, always in full action for the service of every individual,—the warmth, cleanliness, and ventilation, together with gaslight, and not least in the consolation of a spacious reading-room, not ill provided in periodicals,

which answers as a saloon for the whole community.

By this mode of laying out, each room is open, above the height of 6 feet 6 inches, to the breathing supply of fourteen inmates. If there should be any one unruly, the system of the house corrects it: the minor grievances are compounded for,—2s. 6d. a week, *paid in advance*, being the total charge per head.

A single man, whatever be his earnings, must find great facilities under such a regimen; and seeing the difficulties which beset a workman or mechanic, ay, or a clerk on 70*l.* a year, when he incurs the expenses of matrimony; the support of a wife, with only *one child*; with the incertitudes of employment, and the misfortune of sickness sometimes superadded, we cannot wonder that all these berths are full.

A visit to the single rooms of married labourers, crowded with half clad, ill fed, and, perhaps, worse taught children, must certify to the political economist of London, how unhappy is the case of the father, how wretched that of the mother, who, yielding to the natural, the laudable, the virtuous impulses of our nature, have committed the mortal error (in their sphere) of canonized matrimony.

Accommodate, then, the bachelors: "make it comfortable to" them. From the above remunerating summary it will appear that a return must be obtained for the capital expended.

There are several other establishments since built by the Metropolitan Association for improving the Houses of the Industrious Classes, which company has obtained a royal charter, and has already completed five large concerns,—one at Bermondsey, one in the City, one in St. Giles's, one in New-street, Golden-square, and a very fine building in St. Pancras-road, all for families: of these, the last is decidedly the best as to healthful situation and construction. Standing on high ground in an open thoroughfare, it has a reserve of space (paved), in the rear, for drying linen, &c. and in the front for open air exercise, and the recreation of children. On inspecting the various houses, the difference in the infantine aspect is most remarkable. While at Golden-square (New-street), the poor nurslings have a wan complexion, and more subdued deportment; here they are animated, and although little better in attire, they seem less constrained. The purer air and larger range may have this influence, as upon the wild flowers, when transferred from laughing meadows to the smoked window cill. The little ones of Golden-square do look dislocated; for there there is no reserve of play-ground, except a courtyard, built around to 50 feet in height, like a Parisian hotel. There is an internal quadrangle, receiving sunlight at an angle of 45, and all around narrow lanes, athwart one of which the colossal brewery rises in obnubilated majesty. From the brewery a reek of fermenting vapours perpetually issues, and the stone vaults for 1,000 tuns traverse the basement of the lodging-house throughout: in fact, the inmates complain of the *incense* thus offered, and keep their windows close to exclude it.

Far be it from us to utter one word unjustly to the prejudice of any private interest; still the fact must be admitted that it was precisely here that the cholera raged with such unwonted violence, and the ranges just opposite to the model house were those where the heaviest visitations were felt.

The great barrack (for that is its character) erected here is 126 feet by 90 feet: it has frontages to four streets or lanes, is five stories, or about 60 feet in height, and encloses a paved court-yard, 72 feet by 30 feet. The entrances are all *internal*, which gives a gloomy and prisonlike aspect to the place. The breeze, if any, is denied access, and all aëration is from above. Still it cannot be denied but that these tenements are a vast improvement upon the former habitations of workmen who had been tenants of single rooms. The sets are arranged in suites of two and three rooms, with a scullery and water-closet to each tenement, the sitting-room being about 12 feet square and 8 feet high (8 feet 9 inches in the centre), and the sleeping-rooms about 10 feet by 8 feet 6 inches. The rent of three rooms is weekly, paid in advance, 6s. 4d.; and of two rooms, 5s.

There are in this building wash-houses in the basement, but the ventilation is so imperfect that the poor occupants are constrained to *dry their clothes in their rooms!* This is a hiatus in the precautionary care requisite for such an accumulation of mortality.

The central position of this house, and the paramount necessity which compels the artizan to fix in a location near to his employment, keeps it always full, even at these charges; but every one who will reflect that *twenty-five shillings a week* is about the standard wages of the workman (whatever be his trade), must admit that 6s. 4d. is more than can be spared from the staple support of, say, a wife and two children.

A good tradesman may earn 2*l.* or commonly 35s.; but is he not subject to the vicissitudes of ill-health, as well as change of employment? He must therefore reserve 5s. or 7s. a week for contingencies. This is, we fear, only done in exceptional cases; but set his income down at 30s. and then the rent is more than he can spare. The way, however, in which the excess of rent-charge is met is simply this: the frugal wife furnishes a bed-room—lets it, say at 2s. 6d. a week, and thus becoming landlady, shares her family's sitting-room, and saves thereby 2s. 6d. sitting down at a rent of only 3s. 10d.; but this arrangement brings down the lodger to the position of an occupant of only one room, and that in association with her family and guest.

That the committee of management know this is pretty clear, for a stranger on his *first* inquiry could not find it out unless it were palpable. There is nothing to blame in it, for it is a relief to the party making so great a sacrifice to imperious necessity,—but it proves that the rents are too high, and it also proves the more important fact that the "*Royal Metropolitan Association" does not answer the end for which it was chartered.*

The *Builder* proved, in various articles published long since, that lodgings for workmen ought to be had, and could be provided, for 1s. 6d. per week each room; and that, too, with all the accessories supplied by the company.

It is not the province of the investigator to inquire into the expenses of management of the company, what is the number of *employés*, nor what their salaries; nor what interest they allow for principal moneys laid out; much less, what may be the profits divided amongst subscribers to those admirable institutions: but it is his duty, and his anxious desire, to inform the public that *lodging-houses of a substantial and clean character, embodying all the comforts and improvements* (which he freely admits exist in the model-houses) so requisite for the English workmen and families of our day, *can be provided at the rate of 1s. 6d. per chamber*, and then leave seven per cent. to be distributed to shareholders or capitalists.

In order to fix beyond cavil the fact that such rents are sufficient, it is only requisite to *restate* that eight-roomed houses (the chambers being larger and better finished than those in lodging-houses) are to be had everywhere for 30*l.* a-year, which is 1*l.* 4s. under the charge of 1s. 6d. per room weekly; and these houses, be it understood, have gardens and fore-courts, together with neat fitments and register-stoves, &c. &c.

Pancras-square House, being remote from the business centre, is tenanted for the most part by persons less dependant on labour, and evidently above the class of operatives: some of the suites are handsomely and tastefully furnished: still, as in the others, handicrafts are carried on there also, and numerous families of four or more children, with their parents, are crowded together; in some cases with a lodger inmate also: the superior arrangements, however, of the building, its ventilation, clean staircases, with all the accessories of health therein provided, place it, even under such circumstances, far above the ill-constructed, tottering, and filthy dens of this, or the more central lodging streets of the old regime.

The area occupied is large, and the dimensions of the building are 222 feet frontage to Platt-street, 108 feet to St. Pancras-road, and about the same to Goldington-street, a reserve being paved and walled in at the rear, for a drying-ground. It has five stories, and contains 110 sets of chambers, being divided into eight houses: the rents vary here from 4s. for a long narrow room in the *basement*, to 7s. for the best set, the average price being 6s.; which would realize, provided all were let, an annual rental of 1,716*l.* Notwithstanding the eccentric position, all the chambers are occupied at present, save only fifteen, leaving ninety-five sets paying rent, leaving 1,482*l.* net.

Supposing that the structure, which is fire-proof, had cost 15,000*l.* and that the expenses of management were set down at the liberal allowance of 2½ per cent.; and that, after making allowance for a surplus of fifteen chambers, as unlet and unproductive, then still there would remain *seven and a half per cent.* as interest for the shareholders; no bad return this for money invested on a philanthropic association!

Lastly, for this occasion, comes the lodging-house for families in George-street, Holborn, which is erected much on the plan of the others, being five stories in height, with 174 feet frontage by 72 feet in depth, an internal space being reserved at the back, of 70 feet by 40 feet, which is paved and open above 20 feet: this, also, has a *basement*, opening to a narrow back area, and the rooms therein *are let!* The open-railed galleries, covered at top, which range along every floor, give a lightness and airiness that relieve its otherwise shut-in position. These conduct to the various locanda, as in an Italian Albergo, and divest the place of the barrack character; but the front is too close upon opposing houses, which darken the rooms, especially below; yet this house, from its vicinity to business haunts, is much in request, and *always full*. It contains fifty-six separate suites, and there are at this moment nearly as many *candidates for any vacancy that may occur!* So much as to the necessity for these establishments. Now for the profits.

Suites of apartment, in size and height similar to the Company's other houses, let say at 6s. each set, would produce 873*l.* 12s. per annum. On a calculation, hazarded in parity with the larger house, this establishment ought also to have a dividend, after paying all expenses of management, of 7½ per cent.!

Of the minor domestic advantages enjoyable by the inmates, such as a warm-bath and the use of a washhouse, at a very small charge per hour, little need be said: but the great object of such foundations, is, or ought to be, the providing of homes combined with every possible social advantage, and at the smallest possible cost, consistent with a fair return for interest on capital expended. Is this done? We say no. The struggling artizan, the poor labourer, the porter, and numerous others, subject to casual vacations, *cannot find an asylum there:* in truth, we discover that many persons with incomes fixed, and ranging far above the grades contemplated by the patron and founders of these Institutions, are the actual tenants, and have handsomely furnished domiciles therein.

What is wanted more particularly is that which is found only in the Bachelor's Home, in Endell-street, *a good kitchen*, supplied with a constant fire and hot water: there families and individuals might learn of each other the art of domestic and of *economic cookery;* and by this simple and useful appendage, large fires might be saved in private sitting-rooms, at all times sufficiently crowded, while the amenities of life should be preserved; thus transforming the private kitchen into a parlour, *tolerable in summer* for the family, or even for visitors; if, indeed, we can venture to foreshadow to that extent the ceremonials of conventual life amongst the humble.

One word on the subject of *Wild-court*,—the modernization of that formerly foul nest of lairs which had been cleared out; and the plan whereof was given in the *Builder*.

A commencement certainly was made to remodel these old houses, fourteen in number, occupying the whole range of the court, about 120 feet long: the outside was washed: closets were erected on every floor of each house: the interior also was washed, *painted woodwork and all, in distemper colours;* and they were let, as before, the front rooms at 3s. the back rooms at 2s. or 2s. 6d. weekly. Nothing, or very little, was done to the floors or staircases, which are in a state bad as any hay-loft. The old panelled

wainscoting covers still most of the walls, and affords an effectual shelter for the insect tribes that "multiply exceedingly" therein. The walls of many of the halls, kitchens, and staircases are of rough brick, old, and not plastered! And the basements, although unoccupied, are heaped with rubbish, and unusable! It is true that in the larger front rooms (at 3s.) a sort of bin for a bed is fenced off by a boarded partition 6 feet 6 inches high. This, too, has been washed in distemper colour! Surely, in their present state these houses cannot be considered complete, nor fit for the residence even of the poorest.

QUONDAM.

THE MANCHESTER EXHIBITION BUILDING.

THE five competitors, to each of whom the committee forwarded a cheque for twenty guineas, were—Mr. Owen Jones, London; Mr. H. A. Darbishire, London; Mr. J. E. Watson, Newcastle-upon-Tyne; Messrs. J. Holden and Son, Manchester; and Messrs. Hayley, Son, and Hall, Manchester.

The first named, as our readers know, whose design was in the first instance selected, returned the cheque. The selected design presents a repetition of the three steam-boilers, side by side, with which Brompton is disfigured, with an ornamental brick "front" attached to one end.

Prince Albert, in his letter to Lord Ellesmere, touching the exhibition, says,—"If the collection you propose to form were made to illustrate the history of art, in a chronological and systematic arrangement, it would speak powerfully to the public mind, and enable, in a practical way, the most uneducated eye to gather the lessons which ages of thought and scientific research have attempted to abstract; and would present to the world, for the first time, a gallery such as no other country could produce, but for which, I feel convinced, the materials exist abundantly in private hands amongst us.

As far as painting is concerned, I enclose a catalogue exhibiting all the different schools, with the masters who illustrate them, which able hands have compiled for me, and which was communicated to the National Gallery Committee of 1853, and printed by them with the evidence."

It is a very admirable suggestion, but whether or not it can be efficiently carried out, must, of course, depend on the extent to which owners of choice pictures respond to the invitation of the committee.

CHURCHES STRUCK BY LIGHTNING.

IN your last number you give two cases of considerable damage being done to churches by lightning, but no mention is made of lightning conductors. It would be very satisfactory to ascertain that churches and other buildings so struck have not been protected by conductors; or, if they have had any, the substance and material of the conductor, and where and how applied, would be valuable information. Facts of the kind gathered together, if they establish the advantage of applying conductors to large buildings, would lead to their more general adoption, and impart a confidence in their use, which can only be duly appreciated while the storm is thundering over our heads.

A few weeks ago the chimney of St. Jude's parsonage (Southsea) was struck, some of the slating shivered, and a sulphurous smell left in the house. The chimney was about 100 feet from the spire of the church, which is about 150 feet in height, and has a copper wire rope secured to the iron stem of the vane, passing downwards through one of the tower windows, and thence by a ¾ iron rod to and into the ground. It was thought that the presence of a conductor on a ofty building so near would have protected the parsonage, but it did not.

T. E. O.

GASWORKS AT BUENOS AYRES.

THESE extensive works were brought into operation for the first time on the occasion of the festivals, on the 23rd of May and two following days. On the evenings of these three days the streets were lighted by the gas-lamps intended for ordinary illumination, and the Plaza was brilliantly illuminated by ranges of gaslights, protected from the wind by glass globes, and the numerous arches of the Cabildo, or Casa del Justitia, had handsome chandeliers suspended therein. The contract for the buildings, machinery, mains, and lamps, amounting to nearly 50,000*l.* was entrusted to the firm of Messrs. Edward T. Bellhouse and Co. of Manchester, in June of last year, and is being completed under the personal direction of Mr. Wm. Bragge, engineer to the company. The inauguration of gas on the occasion mentioned was most satisfactory, and will prove an era in the march of civilisation and improvement in the regions of the Rio de la Plata.

NEW CONGREGATIONAL CHURCH AT DORCHESTER.
MESSRS. POULTON AND WOODMAN, ARCHITECTS.

NEW CONGREGATIONAL CHURCH, AT DORCHESTER.

THIS edifice is to be erected in South-street, Dorchester, from the designs of Messrs. Poulton and Woodman, architects. The walls are to be constructed of Ridgeway random walling, with Bath stone dressings. The edifice is 37 feet wide in the clear, and 65 feet from the front wall to the front of the chancel arch, and 76 feet from the front to the back wall of the chancel. The fittings are to be deal, stained. The pulpit is to be a raised rostrum, with iron railing round it. At the front of the church is the west gallery, which will accommodate the children. In the recess behind the pulpit stands the organ. The school-room, 26 feet 6 inches by 39 feet in the clear, is at the extreme end of the site; and the vestries, heating apparatus, and offices lie between the church and the school.

THE RIGHT TO THE NEW-RIVER WATER.

COMPENSATION CASE.

THE New River Company requiring 1a. 2r. 38p. of land forming a portion of an estate at Wood-green, near Hornsey, let on lease to Miss Harris for twenty-one years, for the purpose of constructing a tunnel or new cut from the Southgate-road to Wood-green-common, and the claimant and New-River Company not agreeing, the claimant called a jury before Mr. Under-Sheriff Burchell, in Red Lion-square, on the 9th inst. to assess the damage she would sustain. The amount claimed was 690*l.* being for the lessee's value in the land, for inconvenience of access to the common, and for residential damage by reason of the water being withdrawn from the present channel, and diverted into the proposed new cut. The counsel for the claimant were Serjeant Parry and Mr. Prentice; for the company, Mr. Hawkins. The claimant and other witnesses were called, and Mr. G. Prickett and Mr. J. Barnett, surveyors, supported the claim. The company did not call witnesses. The jury, after a lengthened inquiry, awarded 375*l.* exclusive of the claimant's right to the New-River water being supplied as heretofore enjoyed.

THE NEW APARTMENTS IN BUCKINGHAM PALACE.

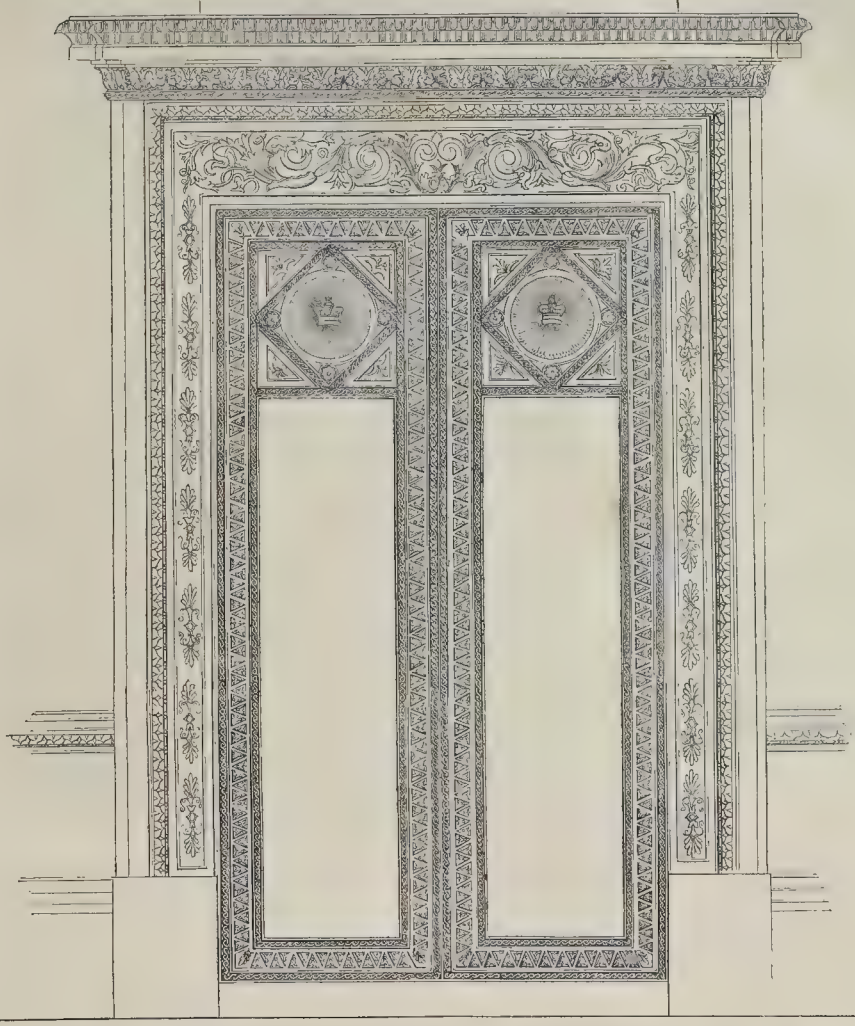
DOORWAY.

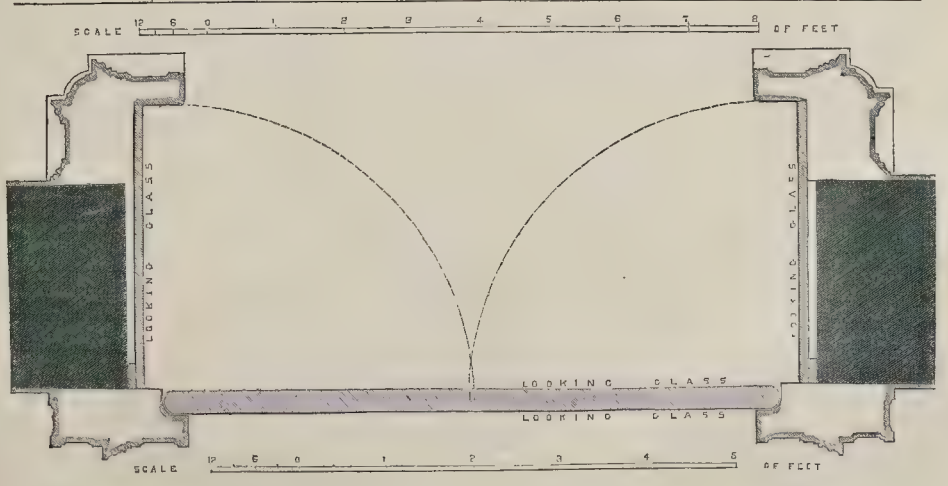
FOLLOWING up the description of the new state-rooms in Buckingham Palace, erected from the designs of Mr. Pennethorne, and the view of the ball-room, which have already appeared in this journal, we have engraved a view and plan of one of the doorways in the Supper-room. It will be observed, that when open the doors fold back in the reveal. The doors, with the jambs and soffit, are of mahogany: all the enrichments are of metal, gilded; and the upright panels are of looking-glass.

The door dressings are executed in Martin's cement, highly rubbed: the ornaments are of composition. They stand out as white and gold against a marble wall; but some little colour has been introduced.

TITLED LECTURERS.—The Earl of Caithness lectured on the 26th June, in the Free Church at Canisbay, on the steam-engine.

DOORWAY, NEW SUPPER ROOM, BUCKINGHAM PALACE.—Mr. Pennethorne, Architect.





TILE AND PORCELAIN WORKS OF MINTON AND CO.

IN describing an excursion recently made by the Liverpool Architectural Society, the Liverpool *Journal* gives some interesting particulars of Messrs. Minton's works, from which we take the following:—

In 1840, Mr. Prosser, of Birmingham, discovered that if the material of porcelain (a mixture of flint and fine clay), be reduced to a dry powder, and in that state be subjected to strong pressure between steel dies, the powder is compressed into about a fourth of its bulk, and converted into a solid compact substance of extraordinary hardness and density, much less porous and much harder than the common porcelain uncompressed and baked in the furnace. This curious, and, as it has since proved, very important discovery, was first applied to the manufacture of buttons, to supersede those of mother-of-pearl, bone, &c.; and the applicability of the process to the manufacture of tesseræ for pavements soon afterwards occurred to Mr. Blashfield, who made arrangements with Messrs. Minton and Co. for a supply of small cubes, made according to the new process. These he submitted to various trials and experiments; and, having found them in every respect suitable for the purpose, the invention has been since carried out on an extensive scale. Tesseræ of various colours and forms,—red, blue, yellow, white, black, brown,—quadrilateral, triangular, rhomboidal, hexagonal, &c.—have been manufactured on this principle in large numbers. Pavements of considerable extent have already been constructed with them, and they have been found to possess the following advantages:—First, being formed in similar steel dies they are of uniform size and shape, so that they can be fitted together accurately in the laying down of the most complicated designs: secondly, being all composed of the same material, variously coloured, they are of precisely equal hardness, so that pavements made with them are not likely to fall into hollows by use: lastly, owing to the effect of the intense pressure under which they are made, they are quite impervious to moisture, of a flinty texture throughout, and, in a word, to all intents and purposes absolutely imperishable.

The first department into which they were introduced was what is technically termed the "slip-making." Here were several men and boys engaged in grinding the clay which had been dug out of the natural soil in the neighbourhood (in some instances there is a compound of different qualities of such matter obtained from different soils). Mixed with water, and ground so as to become thoroughly incorporated, it is made to the consistency of cream, which, after being strained through sieves of fine silk lawn, in order to separate all gross particles, is allowed to rest until the earthy matter subsides to the bottom of the receptacle: then so much of the water as remains at the top is drawn off, leaving the earthy material in the state of soft mud, from which the redundant moisture is expelled by subsequent evaporation, until only so much of the water is retained as will, after it has been duly kneaded, leave the earthy matter in a plastic state, fit for the operation of being moulded or formed by the hand of the potter into the article intended to be produced in earthenware, porcelain, or encaustic tile.

After having been so formed of plastic clay, the moulded article requires to be effectually dried, in order to dissipate all remaining moisture before it can be submitted to the usual operation of firing; and during such drying the article always contracts in bulk, but with an extent of contraction which is uncertain. This is a difficulty appertaining to the potter's art which is avoided by Mr. Purser's patent of compressing the powdered clay into metal moulds. The machine for this purpose, in great part, is an ordinary screw press, such as is commonly used for cutting and compressing metals.

The manufacture of encaustic tiles is, however, the great attraction of the establishment. The substance of the tesseræ made by Messrs. Minton and Co. by the new process, is very similar to the celebrated Jasper ware invented and introduced many years ago by Mr. Wedgewood, the earthy material being a composition of alumina, silex, and barytes, with some suitable metallic oxide for colouring matter. The tesseræ are coloured throughout their whole substance, and with perfect uniformity of tint of the same colours.

The pattern, after leaving the designer's room, is moulded in plaster of Paris in such a manner as to make the groundwork of the cast a raised surface—the coloured figures, ornamentations, or letterings, as the case may be, remaining hollow. The squares being thus prepared, material of the same component parts reduced to the consistency of cream, and coloured with the requisite metallic oxide, is carefully poured into the interstices: the surface is then planed to remove inequalities, and the pattern appears in the same perfectitude presented from the designer's hands.

The next step in the progress of the work is the "firing." In the composition of the earthy material for forming the tesseræ, and also in the management of the kiln, great care is taken to avoid carrying the vitrification beyond the stage of semi-vitrification, in order that the tesselated pavement composed of such tesseræ may not be slippery to the feet. But, in case of similar tesseræ being made expressly for the purpose of ornamenting walls with tesselated work, the vitrification may be carried further, or they may be glazed, whereby greater brilliancy may be given to the colours than would be consistent with the condition of getting a firm footing on pavement.

In the several departments there are not less than 2,000 persons employed by the firm.

THE CANYNGES SOCIETY, BRISTOL.

THE annual meeting of this society established to aid in the restoration of the Church of St. Mary Redcliff, was held on the 8th inst. on which occasion the experiment was tried of substituting a *soirée* for a public dinner, and proved very successful. In the afternoon, the members of the society went to service in the church, the mayor also attending in state, and an admirable discourse was delivered by the Rev. Dr. O' Brien. The meeting in the evening was held at the Victoria-rooms, and was opened by the performance of a number of glees, in excellent style, by the Orpheus Glee Society.

The president of the society, Mr. J. G. Shaw, then made an interesting address of some length, in the course of which, referring to the want of support by the society, he said,—I cannot believe that we are about to allow the disgrace to attach to our age, which would accrue, if we permitted that noble structure, at once the pride and ornament of Bristol, to crumble into dust. What was Bristol, it was very properly asked by the preacher of to-day, what was Bristol when St. Mary Redcliff church was built by Canynges, as compared with what she is in the year 1856? Look at the extension of her borders in all directions. Remember her population; consider the accumulation of her wealth; reflect upon the advance she has made in the arts and sciences; view the increase of her manufactures, the extension of her commerce, and the addition to her trade; and am I to be told, that with all these superior advantages she is about to allow that great building for want of funds, to be neglected and become a ruin? I will not allow such a stigma to rest upon the citizens of Bristol, even in imagination, for one moment, for it is not the character of our city that she should allow any such reflections to fall upon her. She has earned, and she has richly earned, the appellation of a city of churches and charities. Whatever there be that could be produced for the benefit of the human race, is to be found in her streets, in her alleys, and in her courts. Where will you go and not find some building erected by the munificence of her people, and devoted to the great objects of kindness, benevolence, and charity? Has she not her hospitals for the sick, her infirmary for the maimed, her almshouses for the aged, her educational institutions for the young, and her reformatory schools for the outcast? In whatever direction you survey our city, you will find evidences of the sacrifices, the genius, and the kindness which have been displayed both in former days and by the present generation of our fellow citizens; and it is not to be conceived,—it is not to be expected,—it is not to be suffered,—that the citizens of Bristol should allow the committee of the Canynges Society to dissolve and give up their present proceedings. Great encouragement has been given to the committee, and great satisfaction to myself, by a new effort which has recently sprung up amongst the Commercial Travellers in this part of the country. I have had a great deal of practical knowledge of that class, and I believe the commercial travellers will do you great service in reference to the restoration of this church. They already talk about having a portion of it allotted to them, and I believe it will be found to be no very mean portion of that building which, to their honour, will be restored by the commercial travellers of England. The President, continuing his observations, said, seeing this room so well filled by ladies, I am bold enough to propose,—impudent enough to demand almost,—that they should claim a portion of this building for their own. I am not going to advise what proceedings they should institute, but I am going to request, as president for the year, that they lose no time in forming a ladies' association, and that they may speedily send in a claim, and that the committee may soon hear from them as to the portion of the building they may select for restoration.

Mr. Alderman Proctor then read the report of the committee, showing that the society had contributed since its last meeting 800*l.* to the restoration, but part of this sum was made up from the balance of former years, and the committee felt that unless a liberal response were made to their present appeal, they would be under the painful necessity of resigning their duties.

Mr. Wm. Powell next read a report from the Commercial Travellers' Committee, from which it appeared that "a few friends met on the 22nd February, 1856, and arranged rules for the guidance of this association. At that time they were able to report the amount of cash collected 60*l.* 17*s.* 6*d.* At the first quarterly meeting, on 29th March, 1856, the treasurer reported the cash collected (including the former sum) to be 90*l.* 16*s.* 6*d.* and at the second quarterly meeting, on 28th June last, the total amount to be 158*l.* 11*s.*"

Mr. Powell afterwards said that since the report had been drawn up he had met with another "*Nil Desperandum*," who proposed to put in the window of the Lady Chapel of St. Mary Redcliff, and that it only rested with the chairman and committee of the Canynges Society to take the necessary steps for the work to commence.

Various votes of thanks were moved and seconded by the Mayor, Mr. Alderman Phippen, Mr. R. P. King, Mr. Proctor, and the Rev. Canon Madan.

Mr. W. P. King, in seconding a vote of thanks to Dr. O'Brien, said that Dr. O'Brien, in one of his observations, had stated that he considered the building in a state of something approaching to decay. Now, he felt the truth of that remark, but still he did not consider that it was in such a desperate state of decay as would at first sight appear to a stranger, who was not aware of all they had been doing and of what the church had suffered for some years. They had been going on for years repairing the church, and had, in a great measure, arrested the decay, made good the foundations, and many parts of it, which had served to keep up the structure of the church, had been added, so that now they had no dread of an immediate downfall, as when they first began the work. The restoration had been a bit-by-bit concern, first at one point, and then another, and had not been proceeded with as a whole, which gave it more the appearance of a ruin than it was. He wished he could persuade their architect to join together all that he had been doing for many years. This was to be done by means of colour. On going into the church they saw the effect of their bit-by-bit operations, by finding a part restored adjoining another part covered by dust—a bright window in one place, and a dusty one in another, giving the church the appearance of a ruin. He would, therefore, advise their architect, with the first available funds that should come into his hands, to lay out as much in colour as would show uniformity in the building. He did not mean to advise anything like the meretricious colouring which adorned the Cathedral of Notre Dame, of Paris, but something like that which was adopted in the cathedral in Canterbury,—merely such a colouring as would give quite another idea of the building to strangers than what their eloquent preacher had that day conceived.

After a short pause for conversation and refreshments, the architect of the restoration, read a paper on St. Mary Redcliff Church. He gave a short his-

torical sketch of the building, and having pointed out many of its architectural beauties, referred to the admirable suggestion thrown out by the president, and which he hoped the ladies would act upon. Should they do so, he would recommend their taking that portion of the building which at once addressed itself to them—the Lady Chapel—the position of which was most prominent, and which he was sorry to say, was in a very bad state. In reference to the remark of Mr. King, that colouring should be used to tie together those parts of building that were finished, so as to give a complete aspect to the church, all he could say was, that he should be exceedingly glad to do it, if he only saw the way. They had heard of whitened sepulchres, and he was afraid the attempt to colour those portions of the church which needed restoration would rather retard the efforts of the committee, since the need of restoration would not be so apparent. He was afraid, too, that Mr. King took a somewhat too encouraging view of the condition of the church, which was still, he could assure them, in many parts in a positively dangerous state, and demanded not care when they could give it, but at once. The architect complimented Mr. Rice, the foreman of the works, on the manner in which he carried on the work of restoration. He trusted the committee would be provided with sufficient funds to carry on the restoration with renewed vigour, and that before long with the aid of the Commercial Travellers' Association, and with the Lady Chapel restored to its original beauty by the ladies, there would be no further reproach to the inhabitants of this city, and that they would see that glorious monument of their forefathers in a state fit for being handed down for another lengthened period.

A very satisfactory list of donations was announced, and the Orpheus Glee Club agreeably wound up a very pleasant evening.

PROVINCIAL NEWS.

Horncastle.—The new Corn Exchange here was opened on 3rd inst. The building is erected on the site of the Old Three Maids' Heads Inn, in High-street, where the corn market used to be held. The street front is of dark red brick, with stone dressings, and is formed into three compartments by pilasters on the ground floor, and columns with carved capitals on the upper one, above which runs an enriched cornice and balustrade. On each side of the entrance, which is in the centre of the building, is a broad segmental arched window. Over the doorway in the first floor is a large circular-headed traceried window, and in each side compartment there are two smaller windows. The first-floor of the frontage premises contains two rooms, which have been taken by the committee of the Mechanics' Institution, who propose moving the library, museum, &c. to these more central premises. In the rear is the Exchange-hall, 61 feet long by 33 feet broad, and 35 feet high (to the underside of the lantern). The walls are decorated with arches in low relief, and the roof is of an oblong domical shape, constructed of iron, with wood framing above, to form the covering, and receive the glass lantern, of a size proportionate to the building, and affording facilities for ventilation. The iron girders and other portions of the roof are decorated in diaper pattern, with colour, and relieved in parts with gilding. Across the north end of the room is a gallery several feet in width, which, in front, is ornamented by a bronze railing. The waterpipes for heating the room are placed above the floor, and being painted are rather ornamental than otherwise. The cost of the building will be about 2,000*l.* The works have been executed by Mr. J. Goddard and Mr. W. Hollingworth, jun. of Grimsby. The building was designed by and executed under the superintendence of Messrs. Maughan and Fowler, of Louth, architects.

Chelmsford.—At the last quarter sessions for Essex, the Rev. J. Cox moved a resolution, of which he had given notice at the previous sessions, to the effect, "that the office of county surveyor being virtually vacant, the court do consider the necessity of electing a new one." A letter was handed in from Mr. Hopper, in which he stated that when he became county surveyor, he gave security to the amount of 3,000*l.* and for forty years he had performed the duties zealously and faithfully, the business of the county having in no one instance been neglected: he had now the additional assistance of Mr. Bourne, an eminent architect, and he trusted he might be allowed to continue in the office, as it would be a testimony to his long services. After some discussion as to the state of Mr. Hopper's health, &c. the motion was withdrawn.

Kettering.—The following are the respective estimates tendered on the plan and specification approved of by the trustees for rebuilding the grammar school, master's house, and repairing the school and premises:—Mr. Young, 2,144*l.*; Mr. Wade, 1,898*l.*; Mr. Norman, 1,885*l.*; Mr. Henson, 1,826*l.*; Mr. Clarke, 1,700*l.*; Mr. Boddington, 1,695*l.*; Messrs. Bayes and Fisher, 1,671*l.* The last-named has, it is said, been accepted. The architect's estimated cost was 1,500*l.* and as this sum is not to be exceeded, the work will have to be diminished to meet it.

Henley-on-Thames. — The new schools, connected with the Independent Chapel, Reading-road, are to be erected on a site forming a parallelogram, 106 feet long, and 45 feet wide, at the extreme end of the chapel property, which includes chapel, burial ground, minister's house, and garden, to which will now be added the Sunday and day schools. The school building will contain two class-rooms on the ground-floor, and two over, for youths of both sexes, as a central and prominent feature. The large school-room will be separated from these by a corridor, extending the whole length of the building, containing the staircase, and affording access to all parts of the building under cover. The school-room will be 45 feet long, 25 feet wide in the clear, and 24 feet high to the apex of the roof, which will be open to the ridge. When required, the school-room will be divided by a folding partition, so as to form two school-rooms, for girls and boys, each having its distinct entrance, with yard, and proper offices in the rear. The large room is calculated to seat 250 persons, and will be ventilated on the principle patented by Mr. C. Watson, of Halifax. The buildings are designed in the Gothic style. The cost of the works, including earthwork, boundary walls, stoves, ventilation, &c. but exclusive of fittings, will be about 500*l.* Mr. R. Scott, of Henley, is the builder; and the architects are Messrs. Lander and Bedells, of London.

Ashford. — The new stock market will be opened to the public on the 29th inst. The works are progressing under the direction of Mr. Bulmer, architect. The siding now in the course of erection by the South Eastern Railway Company, will enable stock to be brought to and taken from the market to almost every town in Kent, the siding being in the market.

Cirencester.—The new museum building, recently erected by Lord Bathurst, for the reception of the Roman pavements discovered in 1849, in Dyer-street, will be open to the public during the visit of the British Association to this county next month.

Birkenhead.—The foundation stone of a new post-office was laid in Conway-street, Birkenhead, on Monday in last week, by a son of Mr. J. Craven, the builder and proprietor. The architect is Mr. J. Brattan, and the building will be in the Corinthian style of architecture. The ground floor will be devoted to the purposes of a post-office, and will contain a general office, 28 feet by 38 feet, a messengers' and letter-carriers' room, postmaster's room, and bedrooms. On the first floor there will be accommodation for the Birkenhead Free Public Library and Museum, the large room being intended to be 45 feet long by 32 feet wide, with a room for the librarian behind. The Government have leased the post-office for twenty years, with the option of renewing the lease for fifty years longer.

Stanley, near Liverpool. — The foundation stone of the new schools in connection with the Independents was laid on the 8th inst. The design is Italian. Mr. W. J. Mason is the architect, and Mr. Nicholson, of Stanley, the contractor.

Shields.—The first stone of the new building at the Diocesan Training School was laid last week. These buildings will include a house for the principal, and accommodation for twelve additional pupils. The whole cost will be about 1,500*l.* It is expected that the works will be completed before Christmas.

Elgin.—Our old Trades' Hall, says the *Elgin Courant*, is now among the things that were, and within a day or two the foundation of the North of Scotland Bank buildings will be laid. The directors of the bank have sold a portion of their frontage space to the office-bearers of Trinity Lodge Assembly Rooms, who are to build forward, thus making the Assembly Rooms buildings a complete square, and enlarging the front to the High-street. It was proposed at first to have the front of the new bank 12 feet back from the street; but it has now been resolved to build forward to the street, in a line with the Assembly Rooms, thus forming, as it were, a continuation of the same building, and the whole is to be in one style of architecture. On the other side of North-street the foundation of the Royal Bank of Scotland buildings has been laid, but little progress has yet been made, owing to the scarcity of masons, who appear to have taken advantage of this small stir at Elgin to strike work for an advance of wages, but have resumed work on terms offered, though some had left for Keith and other places.

CHURCH-BUILDING NEWS.

Merton.—Alterations and additions are to be made at Merton Church; Mr. F. Digweed, architect. Tenders have been sent in ranging from Elliott, 899*l.* to S. S. Wilson (accepted), 624*l.*

Croydon.—The consecration of the Church of St. John the Evangelist, Croydon, took place on Thursday in last week. The building is in the Gothic style. It has been erected by voluntary contributions. The entire cost will be somewhere about 5,300*l.* including tower and steeple now erected. The tower forms part of the church, its window facing that of the communion-table. Over the latter is a stained glass window, to the memory of John, Earl of Eldon, who died in 1854, and Louisa his Countess, who died in 1852. The roof of the church is an open one, formed of oak. The whole of the interior walls are formed of Ashlen or Godstone stone: there is no plaster. The building is calculated to accommodate 350 persons.

Braintree.—A tender for the proposed church restoration works from Mr. Parmenter, of Booking, builder (the only one sent in), was laid before the committee at a recent meeting, and, after a long discussion, some reduction having been assented to, was accepted, with an understanding that a portion of the works would be contracted for, and commenced as soon as the sum collected was deemed sufficient to warrant the committee in so doing.

Bury.—A painted window has recently been inserted at the east end of the south aisle of St. Mary's Church, to the memory of the late Mr. James Oakes. The window is of three lights, each light containing two subjects in panels. They are as follows:—The Entombment, the Resurrection, the Appearance to Mary (*Noli me tangere*), the Incredulity of St. Thomas, the Ascension, the Saviour in Glory. The ground of the window is ruby, with vine foliage in various shades of green and white. The ground of the subjects within the panels is deep blue, the border chiefly green and blue: the folintions of the upper part of the window are filled with angels playing on various musical instruments. The inscription runs at the base of the three lights. The subjects are drawn in accordance with the general style of the window, in imitation of the glass of the Decorated period. The artist is M. Gerente, of Paris, to whom the restoration of the painted glass of St. Denis has been entrusted. Some of his painted glass may also be seen in Ely Cathedral. Another compartment of the west window is about to be filled with stained glass.

Shirley.—The new church of St. John the Evangelist, Shirley, was consecrated by the Archbishop of Canterbury on Thursday in week before last. The new church was erected by Mr. Harris, of Croydon, from the designs of Mr. Scott. It is in the Early Gothic style, and is situated immediately to the east of the old building. The new edifice consists of a centre and two side aisles, a nave, and a chancel. Close to the entrance is the font. It is composed of red and grey Cornish marble, from the Lizard Serpentine Company, and is about 3½ feet in height. The

seats are of oak, and are covered with uniform carpeting (specially made by Lapworth). The interior walls are of ashlar work, and the arches of stone of alternate colour. The chancel is large and lofty, and from either side project the pulpit and the reading-desk. The east window, by Mr. Oliphant, was erected in memory of the late Lord and Lady Eldon. The window is of considerable height and width, and is composed of five large panes of glass, the centre one of which represents the Ascension, the two left the Crucifixion and the Agony in the Garden, and the two right, the Resurrection and the Entombment. The pulpit is of carved work. The seats (for 350 persons) are open, and uniform throughout, and all face the east. The flooring is of tesselated pavement.

Tiverton.—St. Peter's Church, Tiverton, was reopened on Thursday in week before last, after the completion of restoration works which have occupied nearly three years. In 1852 a committee was formed for rebuilding a great part of the fabric, and Mr. Ashworth, of Exeter, architect, was called upon to survey and report on the condition of the church, and shortly afterwards to prepare plans for reconstructing with enlargement the greater part of the edifice, the cost to be wholly defrayed by subscriptions. Contracts were entered into early in 1853 with Messrs. Gath and Williams, builders, and Mr. Parish, statuary, of Tiverton, for carrying out the plans, consisting of a new north aisle, 121 feet by 23 feet, from which opens a new organ-chamber, 15 feet by 31 feet, and corresponding with Greenway's chapel on the south side: adjoining the organ-chamber is a vestry. Whilst these works were being executed the construction of the nave and clerestory on new piers and arches of Farley Down stone, amounting to a literal restoration of the old, proceeded. In 1855 a great part of the south aisle walls were rebuilt, and an oak roof, copied from the artistic but decayed remains of the original construction, was completed. The tower underwent an extensive repair: the ruinous buttresses, strings, sculptured devices, &c. were replaced with new material. The west window has also been filled with painted glass. The rebuilding of the chancel, almost entirely, was not commenced till the present year. The original design has been improved upon by the introduction of a flooring to the sacrarium and a reredos of Minton's tiles under the east window, which is shortly to be fitted with painted glass, representing the Ascension, by Mr. Wailes. The whole of the church is now roofed with English oak, and the roofs covered with lead on double boarding. The north aisle pews are of new wainscot oak. The nave and south aisle have the former seating cut down and arranged to a suitable height with increased substance. There is a new pulpit in Caen stone. The church as now arranged is calculated to seat 1,060 persons.

Saltney.—In consequence of the rapidly-increasing population of Saltney, an increase in the accommodation for public worship was found to be requisite, and about six months ago the Wesleyan body commenced the erection of a chapel, which was opened on 29th ult. The cost of the building was about 700*l.* giving accommodation to 300 hearers. Mr. Penson was the architect, and Mr. Hitchen the builder.

Chorley.—On the 4th inst. the ceremony of laying the corner-stone of the cemetery chapel belonging to the Roman Catholics took place. Mr. Banks and Mr. Chester, the contractors, Mr. Derham, architect, Mr. Jowett, and other officials, were present.

Ashborne.—Okeover Church is now undergoing a complete restoration, at the sole expense of Mr. H. C. Okeover, from designs by Mr. Scott. The details of the restoration are a high pitched roof, a new porch on the north side, a carved chancel screen, and the whole building to be furnished with open seats in oak. The contractor is Mr. W. Evans, of Ellaston.

Edinburgh.—The town council have resolved to conclude the purchase of a site for the re-erection of the old stones of Trinity College Church, at Calton-hill Stairs, in the parish of South Leith.

Hamilton. — The mausoleum at Hamilton Palace is now approaching completion. The floor of the chapel has been inlaid with marble mosaic. The immense circular glass slab that crowns the dome, broken by a storm in February last, has been replaced. The ground environing the mausoleum has been terraced, levelled, and laid out.

RAILWAY MATTERS.

North Eastern,—Auckland Branch.—For the following details as to some of the principal works on this new branch line, we are indebted to the *Gateshead Observer*:—Starting at Leamside, where the new station will stand between the trunk and the branch, the latter line runs its course for Durham, and reaches the Wear at a distance of about a mile and a quarter, crossing the river at a height of 130 feet, by the Belmont viaduct, 694 feet long, and having nine arches of 60 feet span and 31 feet rise. The "high seam" of coal had been worked, on both sides of the river, by mines of whose operations no records exist. The ancient workings were carefully explored, and built up with brickwork, set in Roman cement. The masonry of the viaduct is of "rock-work." The interior of the arches is of brickwork, the bricks being made on the spot by steam machinery. The structure of the viaduct comprises,—250,000 cubic feet of ashlar, 119,000 cubic feet of rubble, 34,600 cubic feet of brickwork, 97,200 cubic feet of dry-filling over the arches. The Durham viaduct is the second great work on the line, and is of similar material and workmanship to the Belmont, with a Norman corbel table and parapet. It is 832 feet long and nearly 100 feet high, and crosses the new north road and the mill-burn. Its arches, eleven in number, are of the same span and rise as those of the rival viaduct. It was a most difficult task to obtain a sufficient foundation for this structure. Piles of great length were driven through peat-moss, quicksand, &c. by steam-power: the spaces between the piles were filled with concrete; and a framing of timber, laid upon the piles, carries the superstructure. The Durham viaduct, standing upon 21,300 feet of piling, contains 184,500 cubic feet of ashlar, 56,000 cubic feet of brickwork, 140,000 cubic feet of rubble, and 142,000 cubic feet of dry filling.

Bawtry Viaduct, on Great Northern.—The viaduct carrying the Great Northern over the Idle, a short distance beyond the station at Bawtry, is to be taken down and replaced by one of brick piers, supporting iron girders. The present viaduct is entirely of wood, and nearly a quarter of a mile in length. The contract has been given to Messrs. Holme, of Liverpool (who erected the plant works at Doncaster), for upwards of 15,000*l.* The time required to complete it will be thirteen months; beyond which period the Messrs. Holme are liable to a very heavy penalty per day. It is calculated that nearly 100 men will be employed; and 2,000,000 bricks also required to raise the projected piers, of which there will be sixty five. The work is to be commenced forthwith.

Railway through London.—A new prospectus has been issued of the Metropolitan Railway, a project for some time before the public. The line will be 4¼ miles in length, connecting the London stations of the Great Western, North Western, and Great Northern with the General Post-office, and is to be below the level of the existing streets. Of the capital of 1,000,000*l.* the Great Western Company are to take 175,000*l.* and the Great Northern Company 175,000*l.* leaving 650,000*l.* of which 150,000*l.* have been for a considerable period subscribed by the public. The remaining 500,000*l.* was subscribed and paid upon by the promoters; but these are now to be put forth to new applicants, under a guarantee of 6 per cent. from Mr. J. L. Ricardo, on condition of an equal division of all surplus profits. This guarantee will be secured by 100,000*l.* deposited by Mr. Ricardo in the London and Westminster Bank.

Railway Earnings.—The traffic on railways for the past half year exhibits a remarkable increase, and has resulted in an extraordinary rise in the value of this long-depressed property. Thus, the London and North-Western, with 553 miles of railway, has earned 70,000*l.* more than in the corresponding period of last year; Lancashire and Yorkshire, with 253 miles, 61,000*l.*; London and South-Western, with 258 miles, 52,000*l.*; Great Western, with 319 miles, 55,000*l.*; Midland, with 498 miles, 49,000*l.*; Great Northern, with 283 miles, 40,000*l.*; South-Eastern, with 290 miles, 38,000*l.*; North-Eastern, with 682 miles, 34,000*l.*; London and Brighton, with 173 miles, 33,000*l.*

Iron and Gutta Percha Carriages.—Somebody in Albany, says an American paper, is getting up a railroad car out of wrought iron and gutta percha. Such a car, it remarks, can be jammed but not broken: it may smash up, but can make no splinters, nor can it lacerate limbs.

Cast-iron Sleepers.—We are informed, says *Herapath's Journal*, that the report of the engineers on the cast-iron road laid in the years 1850 and 1851 (when iron was at a very low price), to the extent of 200 miles in England and Ireland, on Barlow's patent, are highly favourable. Wherever they were laid with new rails, amounting to ninety miles on the South-Eastern Railway, and above 100 miles on other lines, the experience is said to be satisfactory. In countries like India, where timber is expensive, and liable to rapid destruction, this system, it is expected, will be extensively adopted.

RECENT PATENTS.

THE following are selected from the lists regularly published in the *Mechanics' Magazine*:—

Page, H. C. An improved method of indurating marble and stone, and of permanently fixing colours therein, with variegated pattern, &c. (No. 2478). To indurate light-coloured stone and marble, the patentee proceeds as follows:—With a soft brush or sponge he wets the surface with a solution of two parts of lime and one pearl-ash: he then exposes the stone to a gradual heat until it is dried through, and has become sufficiently hot to melt white bees-wax, which he next passes quickly over the surface. The process for producing a variegated pattern or device in colours on marble and stone is as follows:—The surface should be clean and fine, but not polished, and the colouring matters are applied according to taste, after which the stone is subjected to a sufficient degree of heat to melt wax, and when wax is so applied the colouring matters become perfectly fixed.

Daines, J. B. An improved mode of treating surfaces of stone, plaster, and cement, for the preservation of the same from decay (No. 1765). This invention consists in coating surfaces of stone, plaster, and cement with a solution formed of one part (by weight) of sublimed sulphur and eight of linseed or other oil. The mixture is placed in an earthen vessel, and heated in a sand-bath to from 226 deg. to 278 deg. Fahrenheit, when the sulphur dissolves. The solution is laid on with a brush. *** The filing of this specification was delayed for more than a year in consequence of opposition.

Gilbee, W. A. Improvements in the application of silicate of potash to hardening and preserving stones and calcareous materials (No. 2343). This invention consists—1. In the process of impregnating stone and other calcareous materials with a solution of silicate of potash. 2. In determining the different degrees of strength to be given to the solution of silicate of potash. 3. In the means of drying the stone, either before or after the saturation, to insure a favourable result.

Hill, D. Preparing a material capable of resisting fire, and especially suitable for the interior of puddling and other furnaces (No. 2085). This invention consists in combining and melting limestone with ironstone, or with the cinder from puddling furnaces, or from ball-mill furnaces, and in running the same in moulds or otherwise.

Bessemer, H. Improvements in metal beams, girders, and tension bars, used in the construction of roofs, floors, and other parts of buildings, and in the construction of viaducts, and suspension and other bridges (No. 2323). The patentee puts refined or pig-iron into a puddling furnace, and there works it in the usual way, but leaves off the operation of puddling before the whole of the carbonaceous matters are driven off; or the metal may be puddled until the whole of the carbon is driven off, and the powdery iron resulting be afterwards converted into steel by cementation. Or the iron may be otherwise decarbonized and reduced to steel. In either case the metal is brought to a complete state of fusion in pots like those used in the melting of steel. The metal having been melted, he casts it into beams or girders, which are afterwards annealed; but when beams, girders, or tension bars are required of great length, or are to be very light in proportion to their dimensions, he casts the fluid metal in iron ingot moulds, and afterwards rolls the ingot to the desired thickness.

Taylor, W. An improvement or improvements in the manufacture of iron (No. 2439). This invention consists in treating iron at that stage of its manufacture in which cast iron is converted into wrought iron. The cast iron is introduced into the puddling furnace, and melted and puddled until it acquires a pasty consistence, and then discharged into a vessel of water. The iron is thus cooled in the shape of a spongy mass, the water at the same time preventing its oxidation by the air. The iron after being removed from the water is reduced to a powder, by being passed through rolls or otherwise, and the powder is separated into portions of different degrees of fineness by sifting. The several powders are then washed, and each portion is separately treated in a furnace, in which the iron is balled. The several powders produce iron of different qualities, the finest producing the best.

Swinburne, T. J. Improvements in furnaces or

apparatus used in the manufacture of glass (No. 2429). Claims.—The constructing of furnaces or kilns for annealing glass with flues or tunnels under their floors, and in the side-walls, for the purpose of admitting the passage of air through them, and causing the furnaces or kilns and their contents to be more rapidly and uniformly cooled.

Burridge, G. Improvements in the preparation of glass for ornamental purposes (No. 2481). By his process the patentee proposes to colour the glass on both sides, each side of a different colour, or he employs two sheets of glass of different colours, pressed together or otherwise united.

Tritton, H. An improved safety-apparatus for the protection of persons while painting the exterior of buildings and cleaning windows, which may be used as a balcony for holding flowers (No. 2387). This invention consists of a portable apparatus which may be readily affixed to a window, so constructed as to be perfectly safe for a person to stand upon, and so guarded as to render it impossible for any accident to occur by falling.

Platt, J. and J. Whitehead. Improvements in machinery or apparatus for preparing clay for the manufacture of bricks (No. 2389). Several arrangements for dividing "crude" or untempered clay into small particles, and for separating stones or other hard materials therefrom, are described by the inventors.

ARCHITECTURE AT UNIVERSITY COLLEGE.

THE distribution of prizes at University College, London, for the Session 1855-56, took place on Thursday, the 3rd of July, when Colonel Sykes, chairman of the East-India Company, presided. Professor Donaldson announced the awards as follows:—Fine Art, first year's class,—prize — George Mills, of London; certificates, E. Ransom, of Ipswich; John S. Daintree. Second year's class,—prize—Edward Lawrence; certificates, A. L. Spencer, W. F. Hooper. Construction, first year's class,—prize—Edward Ransom; certificates, James Schofield and George Mills. Second year's class,—prize—Alfred Spencer; certificates, E. Lawrence, W. H. Hooper.

Miscellanea.

GLASS.—Mr. Lavers has just prepared a very large window, in five lights and tracery, for the new church building at Umballah, East Indies. It contains illustrations of the Conversion of St. Paul, St. Paul healing the Cripple at Lystra, St. Paul preaching to the Athenians, the Raising of Eutychus, and the Imprisonment with Luke. These are large cartoons under canopies, with richly coloured general background and tracery. The church is nearly finished, and will be the largest and most handsome, it is said, in India.

THE EDINBURGH SCHOOL OF ART.—The prizes for the competition drawings, paintings, and models of the students attending the School of Design, under the auspices of the Board of Manufactures, were distributed at the National Gallery, in Edinburgh, on Monday in last week. Lord Murray occupied the chair, and the meeting was attended by many of the principal citizens of Edinburgh, from the Lord Justice General downwards. Mr. A. Christie read the report on the department of architecture and ornament, which stated that the number of students who attended the classes in this department during the session was 411, and the number during the previous session 314; showing an increase of 97. Among the students were—painters, 14; sculptors, 3; architects and engineers, 30; draughtsmen, 4; engravers, 6; house-painters, 8; ornamental painters, 1; general engravers, 10; ornamental engravers, 3; wood carvers, 16; glass stainers, 6; brassfounders, 3; joiners and cabinetmakers, 7; marble cutters and stone-carvers, 3; mechanical engineers, 3; pupil teachers, 37; schoolmasters, 3—total attendance on the male classes, 231. In the female classes there were—amateurs, 87; schoolmistresses, 20; and pupil teachers, 73—total female pupils, 180. The class for practical architecture had suffered from the severe illness of Mr. Christie during the winter, and the drawings were therefore few in number; but during the vacation the students in this class had executed a number of drawings, which Mr. Bryce examined. The report adverted to the want of accommodation in the present rooms. A report by Mr. Bryce was appended, in which that gentleman recorded his approbation of the whole of the drawings in the department of practical architecture. Mr. R. S. Lauder read the report of the antique and life departments. During the session, the number of students in these departments had amounted to ninety. In the antique, the progress of many of them had been very gratifying, and in general was very good. Lord Murray distributed the prizes.

BRITISH SCULPTORS AND COMPETITION.—In reply to Lord Panmure, who remarked, as we have already mentioned, that,—"As to public competitions the noble earl (Harrington) must be aware that the sculptors and artists of this country declined to furnish plans to compete for the erection of monuments,"—the veteran sculptor, Mr. E. H. Bailey, says,—"Can Lord Panmure, Lord Harrington, or any other noble lord, say there was want of response by the British artists for the Nelson Testimonial? Or, can it be said that British architects declined to compete for either the erection of the Parliament houses, or, more recently, for their decoration? Did they not cordially reply to the invitation of the City in the cases of the Peel and Wellington competitions? And lastly, did not two British sculptors out of four selected (one being a foreigner and the other Mr. Gibson) submit designs for the Government Wellington Monument, and, although rejected, offer again and again to provide other works? I, for one, never heard of the Scutari monument until I read in the public papers that it was completed, and I may say that, had I been applied to, I should most readily have met the views of the Government, and have been proud to have done so for the honour of England's arms and art."

ENGLISH DRAINING TILES IN FRANCE.—The *Moniteur* states that the Minister of Finances has decided that the machinery for the fabrication of drainage pipes, which hitherto has paid the entrance duty of machinery coming under the common head of steam-machinery, a duty equal to from 20f. to 25f. per kilogramme, shall henceforth be admitted under the head of agricultural machinery (15f. per kilogramme), whatever may be the weight of the machinery in question; but at same time that the machines for breaking the ground or for preparing it to be made into pipes, or any other accessory machines that do not form part of a complete set of machinery for the fabrication of drainage pipes, shall continue to pay the same entrance duty as machines coming under the head of steam machinery.

THE BRIGHTON BRANCH ASSOCIATION FOR IMPROVING DWELLINGS.—The report of the managing committee of this association states that it is most gratifying to them, on this fourth occasion of meeting the shareholders, to be able to confirm the favourable prospects held out in the last report. The net income since 31st March, 1855, to the same date in this year, after deducting rates, taxes, and all other expenses, amounts to 220*l.* 4s. 1d. From this source the committee recommend a dividend (free of income tax) as follows,—20s. per share payable on all shares excepting to shareholders who have only become such after March, 1855, and to these that a dividend be paid of 15s. and 10s. according to the respective quarter in which the 25*l.* per share has been paid. The committee wish to have it in their power, by an influx of new shareholders, to extend the benefits of this benevolent and useful association. At present there are two blocks of dwellings, one for twenty families and one for fifteen families and five single women. The whole has been constantly tenanted since the opening, and the health of the inmates has been excellent. A washhouse, with suitable coppers, &c. is about to be erected (in the yard in Church-street) for the comfort and convenience of the tenants in both the buildings.

ELECTRO-TELEGRAPHIC PROGRESS.—In course of some experiments with a telegraph invented by a Mr. Duncker, two distinct messages are said to have been sent by the same wire, and read off in an incredibly short space of time. Mr. Duncker has successfully tried his invention on a Prussian government line, and on a subterraneous line of 160 miles in England. The invention is said to be applicable to existing arrangements. It is calculated that the adoption of it would enable the telegraph companies to transmit messages at one-fourth of the usual rates, and with more chance of despatch. As remarked by the *Gateshead Observer*, it would be more correct, perhaps, to say, that while the wire transmits one message, the earth transmits the other; but, practically, one wire is made to do the work of two.

MECHANICAL SCIENCE.—A new feature of attraction has lately been added to the machinery department of the Crystal Palace. It consists of a series of lectures by Mr. Partington, illustrative of the labour-saving machinery of Messrs. Muir and Co. of Manchester. A shaping and planing machine was exhibited on Monday last. Rough blocks of iron were submitted to its action, which acquired, at the will of the operator, almost any imaginable form.

TIMBER-BENDING.—Among the new companies which have started into existence under the vivifying rays of the Limited Liability Act, we observe one for introducing to the English public an American patent for bending timber after a fashion, which, by causing the fibres to interlace, increases the strength of the wood, and, by pressing out the sap, seasons it in the course of an hour or so.

THE CENTRIFUGAL THEORY OF THE MOON.—To this theory we again for a moment revert, in order to adduce a new corroboration of its verisimilitude, which has just occurred to us, from astronomical facts or phenomena till now unaccounted for,—as the hovering of stars on the lunar disc while passing behind it had hitherto been. If the moon really have an atmosphere, with vaporous clouds and other aqueous forms, all centrifugalized to its exterior hemisphere under the influence of the revolving or centrifugal force, as it must act on and oblongate a sphere such as it is, always presenting, as it does, one and the same face or hemisphere away from the centre of its revolution,—can it be that the earth is *never* so situated in relation to that hemisphere, that atmosphere, *and these clouds*,—thus for ever, doubtless, placed beyond the *straight line* of our visible presence,—that, at all events, by some reflexion or refraction of light from the latter, as they float in the lunar atmosphere, these lunar clouds may, at least for a moment or so, become distinctly and actually visible to the earth's inhabitants? In such a case as that of a total eclipse of the sun, for example, by the intervention of the moon between it and the earth, ought not some of the lunar clouds to *appear* by refraction, as coloured streaks, *above* and around the black disc of the moon, and amid the ring of solar light thus left? Now, what else can those auroral or flame-hued, roseate, fantastic, and heretofore unaccountable streaks be which, in fact, *do* appear, above and around the black lunar disc, in the midst of the solar total eclipse, and which have hitherto excited so much astonishment and unrewarded curiosity amongst astronomers of all nations? Can these ruddy streaks be anything else than auroral cloud refractions from the lunar atmosphere, seen above and around the horizon of the hither side of the lunar ball, in a way not unlike those false (yet true) appearances, or simulacra, of ships and towns, above the earth's own horizon, by refraction, while yet in reality completely beyond or below that horizon above which they thus appear? And if these strange auroral cloud-spun streaks shall really prove to be the mere refractions of the lunar clouds, as they float in the lunar sun-lit atmosphere for ever beyond the direct line of our terrestrial vision, who shall, in the face of such proof, any longer doubt the existence of vegetable and even of animal and intelligent life on that far-off sunny side, as we may then poetically call it, of the lunar surface? That the *hovering* of stars ere they disappear behind the lunar disc, and the *appearance* of ruddy streaks just where these stars were known to hover, are both of them due to one and the same optical cause, and that cause the refraction of light in a lunar atmosphere behind and beyond its visible disc,—there seems to be very strong reason indeed to believe, apart altogether from the centrifugal theory which we have now broached,—the verisimilitude of which theory, however, both of these facts or phenomena seem clearly to corroborate, while they are themselves, reflexly, illuminated by its explanatory reasoning. It is precisely the chief merit of a new and truthful theory, that it affords satisfactory explanations of known facts or phenomena till then deemed inexplicable, or at least till then unexplained.

POSITION OF THE "COMMANDMENTS" IN CHURCHES.—The suit against the churchwardens of Tewkesbury, charging them with neglect in not putting up the Ten Commandments in the proper place, in conformity with the 82nd Canon, which had been pending since 1854, has been decided by the Judge of the Gloucester Consistory Court, C. J. Mark, esq. Tewkesbury Church, is an ancient abbey church, in which, it appears, service is performed only in the choir, separated at the east end from the outer wall by a stone screen distant from the outer wall about 22 feet: the Ten Commandments are not placed on the screen, but in an elevated position 22 feet beyond it. Formerly there was a second screen, 6 feet to the west of the stone screen, on which the tables of the Decalogue were placed; but in 1848 they were moved to their present position at the suggestion of the vicar. The Judge ruled that, as the Commandments in their present position might be read from different parts of the choir, the churchwardens, having found them in that position, had exercised a sound discretion in not removing them at the mere wish of a parishioner until the next Visitation, when they offered to act as the ecclesiastical authorities might direct; accordingly he dismissed them with their costs.

IRON, HARDWARE, AND METAL TRADES' PENSION SOCIETY.—A deputation, consisting of the Mayor of Sheffield, Messrs. Burton, Richard Stuart, and Joseph Nelstrop, waited upon his Grace the Duke of Norfolk, at the Farm, on Monday last, to present the resolutions of condolence, passed at a general meeting of the society, held at the London Tavern on the 30th ult. His Grace most cheerfully accepted the invitation of the society to succeed his late noble father and become its patron.

LABOUR IN CANADA.—The price of labour in Canada, notwithstanding the marked decline in provisions, remains steady, according to the *Canadian News*, at about the current rates of last year. Good carpenters receive 7s. 6d. to 8s. 9d.; and in some cases as high as 10s. Halifax currency, the 1s. being equivalent to 9½d. sterling; masons and bricklayers, 8s. 9d. to 10s.; common labourers, 5s. to 6s. 3d.; brickmakers, 6s. 3d. to 7s. 6d. per thousand; cabinet-makers about the same as carpenters, mostly by piece-work.

THE IRON TRADE.—It is not denied by the most eager upholder of prices, that they have very generally declined in the face of the quarterly resolve to maintain them at former rates, and these reductions are admitted to have gone even to the length of 20s. and 25s. a ton. The "settlement," too, of the prices, for the quarter, as it is called, is allowed not to have had the effect of bringing so many orders as were expected. The puddlers at the Elsecar Iron Works, unable to suffer the heat, have been shirking their work, and warrants to compel them to roast themselves alive having been issued against some of them, a general strike has been the result, 300 men having left the employment, which is therefore entirely at a stand. More roasting warrants have accordingly been issued, and fifteen of the puddlers are about to be brought to the stake.

MIDDLESEX INDUSTRIAL SCHOOL COMPETITION.—It may be well to mention that the Committee of Visitors selected the designs for the proposed Industrial School by Messrs. Aickin and Capes, Mr. George Henderson, and Mr. W. B. Moffatt, and awarded the premiums accordingly.

GAS.—From the voluminous accounts of the Liverpool Gas Company just published, it appears that the cost of producing the gas in 1855, was 66,968*l.* 3s. 3d.; the general expenses being 17,658*l.* The total receipts for the year, notwithstanding the decrease in the price of gas for six months, from 4s. 6d. to 4s. were 129,970*l.* 1s. 4d.; the total increase on the year being 5,858*l.* The increased consumption of gas during the year was 30,000,000 cubic feet. The shareholders will receive 10 per cent. dividend as usual, but the public, the directors hint, must not expect any further reduction for some time to come. They do not seem to want any more increases of 5,858*l.* per annum: indeed, this is actually the fact; they dare not divide more then 10 per cent. among them, and so have no farther interest in reducing the price, and thus increasing the profits.——It is in contemplation to erect new gas works on a more extended scale, at Chipping Norton, the present being found inadequate to supply the requirements of the town. ——At the annual meeting of the Kirriemuir Gas Company just held, the usual dividend of 8½ per cent. was declared payable on the 1st of August. As the rates paid for coal continued extremely high, it was said, no reduction in the price of gas was recommended at present.

NORWICH SCHOOL OF ART.—The annual distribution of prizes to the pupils of this institution took place on Thursday evening before last, at the school, the Mayor, Mr. J. G. Johnson, presiding. The walls were hung with the drawings and designs of the successful competitors, which were inspected with considerable interest by a number of the friends and supporters of the school. The Mayor, in opening the proceedings of the evening, said he was happy to state that at last the vexed question of the relations of the school with the corporation was settled: at their last meeting, the town council determined to make the school a corporate school, and, therefore, they might regard it as established so long as the corporation remained. The council had, moreover, pledged themselves to find the school a building, and they would shortly become their landlords. He trusted that the council would become something more,—their patrons; and that the example so liberally set by Mr. Chamberlin and Sir Samuel Bignold would be followed by succeeding mayors. It was always desirable to keep alive that love for art which distinguished a great and lasting, from an ephemeral people. To make a people something more than a mechanical, and pounds, shillings, and pence people, they must be made an artistic people, and that could only be done by an artistic education. Without depreciating former masters, he thought they had been fortunate enough to secure the services of gentlemen who had taken a lively interest in the welfare of the school: he would venture to say that no master had taken a more personal interest in the success of the students than Mr. Nursey. The Rev. A. B. Power read the report of the committee for the past year, which stated that the number of students had steadily increased in all the classes, and that a marked improvement was especially evident in the special ladies' class, which now comprised twenty-nine, against seventeen last year. The meeting was afterwards addressed by Sir S. Bignold, M.P. who delivered the prizes, and by other gentlemen present.

ROYAL NAVAL FEMALE SCHOOL.—The establishment at Richmond having been found too small for the accommodation of the increasing number of pupils, the committee have been for a long time looking out for new premises, and at length have come to an arrangement for the purchase of St. Margaret's Mansion, on the banks of the Thames, and about seven acres of the adjoining land, from the Conservative Land Society, the directors of which, rather than pull down the edifice, have lowered their price on behalf of this excellent institution.

APPEAL CASE AS TO BUILDING UNDER WATER.—An appeal was lately heard in the House of Lords,—William Bush plaintiff in error; and Sir Charles Fox and others, defendants in error.—The proceedings were brought upon a judgment of the Court of Exchequer Chamber affirming a judgment of the Court of Exchequer in an action for the infringement of a patent, dated in September, 1841. The plaintiff, William Bush, claimed to be the patentee of an invention of "improvements in the means of, and in the apparatus for, building and working under water." What he claimed in particular was the mode of "constructing the interior of a caisson in such a manner that the workpeople may be supplied with compressed air, and be able to raise the materials excavated, and to make or construct foundations for lighthouses and bridges." The defendants pleaded that the plaintiff was not the first inventor; that the invention was not a new manufacture, and that the invention was not a new invention as to the public knowledge thereof. The Lord Chief Baron, after testimony led, directed the jury to find for the defendants that "the invention was not one of any manner of new manufacture;" and the Court of Error sustained the direction and the finding. It was now contended that the fact of the new manufacture ought to have been left to the jury, and not made a matter of law by the judge, and that the working under water was sufficient to support the patent. The unanimous opinion of the judges was that the direction of the Lord Chief Baron was right. The plaintiff did not claim the foundations of piers or buildings, but the means of making them, and that was done by means of caissoons, according to the specifications of the patent granted to Lord Dundonald. The Lord Chancellor had no hesitation in advising their lordships to give judgment for the defendants in error. His lordship said he did not mean that the plaintiff might not, by a new specification, establish a title to an invention, but having claimed the air-tight caissoon, which was clearly the invention of another person, his present claim could not be sustained, for the action by means of these caissoons or chambers was precisely the same under water as under land. Judgment for the defendant in error.

FURNACE BRICKS.—Mr. David Hill, of Tipton, Staffordshire, has patented a material for resisting fire, consisting of limestone and ironstone, or the cinder from furnaces, melted together, and cast into moulds.

INSTITUTE OF BRITISH ARCHITECTS.—A special general meeting was held on Monday evening, the 14th instant, to consider and decide respecting the removal of the Institute from the rooms now occupied to certain localities named. No decision, however, was come to.

THE LATE MR. GEO. GWILT.—In your notice of my late brother (*Builder*, July 12), there is an error in the date of his birth, a correction of which, for accuracy's sake, you may like to correct. He was born on the 8th February, 1775, and therefore in his 82nd year.—JOS. GWILT.

TENDERS

For finishing a pair of houses, Hackney-downs, for Mr. West. Mr. J. H. Jones, architect:—

Dallas	£1,375	0	0
Mears	1,303	0	0
J. B. Hocken	1,272	0	0

For erecting two houses and gateway, Pownall-road, Dalston, for Messrs. Frith and Smith. Mr. John Young, architect:—

Dallas	£1,145	0	0
Smith	1,130	0	0
Wear	1,060	0	0
Harding	940	0	0
E. Mears	819	0	0
Cooper	799	0	0
J. B. Hocken	794	0	0
Cooper	792	10	0
H. Mears	770	0	0
Wood	744	0	0
Cheetham	710	0	0
Riley	680	0	0

For additions and alterations to Manila House, Peckham Rye, for Mr. J. Margetson. Messrs. Tillott and Chamberlain, architects. The quantities not supplied:—

Jennings	£1,034	0	0
Pritchard and Son	1,016	0	0
Brass and Son	967	0	0
Jas. Jones	930	0	0
Heath and Son	975	0	0
Wills (accepted)	873	0	0

For building the St. George's Schools, Battersea-park. Mr. Joseph Peacock, architect:—

Holland	£4,182	0	0
Wells	3,759	0	0
J. Wilson	3,700	0	0
Patman and Fotheringham	3,671	0	0
Piper and Son	3,586	0	0
Wills (Pimlico)	3,333	0	0
Pollock and M'Lennan	3,248	0	0
Thompson	3,234	0	0
Woodruff	3,105	0	0
Harmer	2,994	0	0

For carcass of Scotch Church in the Harrow-road, Paddington. Mr. Barnett, architect. Quantities supplied:—

				Extra for Spire.		
Myers	£2,580	0	0	£880	0	0
Pollock and M'Lennan	2,587	0	0	830	0	0
Higgs	2,620	0	0	630	0	0
Lawrence	2,270	0	0	396	0	0

For the Chesterfield, Tafton, and Calow cemetery chapels, lodge, reception-house, entrances, and boundary-walls. Messrs. Bidlake and Lovatt, architects, Wolverhampton:—

Miles Barber	£2,531	4	8
J. Rollinson	2,490	6	0
S. Walters	2,453	8	0
C. C. and A. Dennett	2,375	0	0
George Thompson	2,350	0	0
Peter Horner	2,305	0	0
Wm. Ferguson	2,290	0	0
Wm. Burkitt	2,177	0	0
Coates and Burrows (accepted)	2,166	0	0

For new church at Wheaton Aston, in the county of Stafford; the old materials in the present church allowed for the estimates. Same architects:—

	For Church without turrret and Spire.			For turret and Spire.		
John Elliott	£1,200	10	0	£116	10	0
Messrs. Higham	1,105	0	0	85	0	0
Gilbert	1,056	0	0	136	0	0
Godfrey (accepted)	1,022	10	0	75	11	0

For new Educational Institute, Wolverhampton; the old materials of present schools allowed for estimates. Same architects:—

Messrs. Higham	£2,150	0	0
John Elliott (accepted)	2,104	0	0

TO CORRESPONDENTS.

"*Preservation of Stone.*"—M. I. B. A. says,—"I shall be much obliged to any who can tell me of a good mode of preserving soft stone in a building now erected, and of the probable cost of the process" [one patented process is mentioned in our present number. The result of *experience* faithfully told is what we want.

"*Scagliola.*"—"I want to know the method and what materials are mixed with Keene's cement besides colouring matter to form scagliola, so as to polish it; or give me directi ons as to what work I can find such information in. I mix Keene's cement and colouring matter with quarter of an ounce of isinglass dissolved in half-pint of water, with a small quantity of muriate baryte; when dry, rub it down with pumice very fine, but cannot polish it with tripoli and oil. Any information will oblige.—D. W."

"H. T. B."—"Mr A."—"C. and A. G."—"T. O." "W. J. G."—"Jacobin."—"T. J. R."—"J. P. D."—"S. H."—"G. P."—"Sir W. J."—"W. F. H."—"J. W."—"J. L."—"W. R."—"T. P."—"D. J. H."—"J. M. W."—"Rev. A. S." (apply to the architect).

ERRATUM.—In the article on Reigate, in our number for July 5, for "Canning Town," near the Redhill Junction, read "Warwick Town."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

MONEY.—A Gentleman has several THOUSAND POUNDS to LEND, on HOUSE PROPERTY, or other good security.—Apply, with particulars, to Mr. LYNE, 8th Por. 12, Pentonville, City.

TO BORROWERS.—LOANS GRANTED on HOUSE PROPERTY, on New and Advantageous Terms.
1. Advances granted from 100*l.* to 5,000*l.*
2. No Legal Expenses payable on Lender's Solicitor.
3. Repayment on Building Society System, and moderate.
4. Redemption, or Exchange of Securities, easy.
5. The Term of repayment prorated or shortened in certain cases
6. No Fines.
Sums received, at deposit, at 5 per cent. interest payable half-yearly. Apply to the British Equitable Investment Company, 47, King William-street, London Bridge
Incorporated Capital, 100,000*l.*
W. S. GOVEN, Managing Director.

MONUMENTAL BRASSES, SEALS, DIES &c. in Medieval and modern styles. T. MORING, Engraver and Heraldic Artist, 44, High Holborn

TO BE SOLD, cost 250 Guineas, a splendid MONUMENT by WE-TMACOTT. May be observed regularly, on application to Mr. GILLINGHAM, Builder, 26 Goughstreet, Gray's Inn road, from ELEVEN till TWELVE each day.

TO ARCHITECTURAL STUDENTS and OTHERS.—TO BE SOLD, for 18*l.* a COLLECTION of TRACINGS and DRAWINGS of Churches, Chapels, Villas, Parsonages, Tracery, and numerous Working Drawings, the collection of an Architect, together with an oak Press of Shelves for holding the same, forming a nice piece of furniture for an office.—Address, G. L. Mr. Birch, Bookseller, Kensington.

TO PAINTERS, BUILDERS, &c.—LIVETT, FRANK, and SON No. 14, Borough London-bridge opposite the Brighton and South Eastern Railway Station, quote their present prices for cash—Linseed 3s. 10d.; boiled, 3s.; turpentine 2s. 8d.; oak varnish, 7s. 6d. per gallon; genuine white lead, 38s.; seconds, ditto 32s.; best town glue, 43s. per cwt.; colours, brushes, &c equally low.

MARBLE.

MESSRS. EVERSFIELD and HORNE are instructed by Mr. Fannucerri to announce that the SALE of MARBLE, BLOCKS at CARRARA WHARF, Thames-bank, which, from the unfavourable state of the weather, was obliged to be postponed on Tuesday last, will take place on WEDNESDAY, JULY 23rd.—Catalogues may be had on the Premises, and of the Auctioneers, 46, Parliament street.

Note.—Approved Bills will be taken in payment.

NOTICE.—To MAHOGANY MERCHANTS, CABINET-MAKERS, and OTHERS. The next LIVERPOOL PERIODICAL SALES by AUCTION of City St Domingo and Cuba MAHOGANY, and other furniture woods, Bahia and American white woods, will take place on FRIDAY, the 1st of AUGUST next, at TWELVE o'clock at noon, in the WOOD SALES SHEDS, Brunswick and Toxteth Docks, Liverpool. EDWARD CHALONER, Wood Broker and Measurer, No. 6, East side Queen's Dock, Liverpool.

Aldridge's, St Martin's lane—Clapton.—To Builders, Contractors, Coal Merchants, and Others.

MR. MATTAM (of Aldridge's) will SELL by AUCTION, on TUESDAY next, the 22nd JULY inst. at ONE o'clock precisely, on the PREMISES, Brickfields Clapton (by order of Messrs. Henry Lee and Sons, Southwark, and Brick-makers), TWELVE useful, active, firm, young CART HORSES with EIGHT Timber CARTS. These horses are in very excellent working condition, and can be strongly recommended, being of constant and fair work. The carts are town built, and in good repair.—On view Monday, July 21, and morning of Sale; catalogues on the Premises; and at Aldridge's, St. Martin's lane.

Warden Tunnel Brick Works, on the Leicester and Hitchin Railway.

MR. JOYCE will SELL by AUCTION, on FRIDAY, the 25th of JULY, 1856, at TEN for ELEVEN punctually, on the PREMISES, by direction of Mr. Proprietor, who is disposing of the same in consequence of the completion of the former works, Two Steam Engines, Ingram's Patent Brick Machine, Three kilns, capable of burning 60,000 brick each, fitted with Swaine's Patent Furnace and Feeders, Drying Sheds, with Furnaces and fitted with best Fire Bricks; Engine-Houses, Machine House, Clay Chamber, Blacksmith's Shop, and all the necessary Fittings and Tools; Seventy Brick Barrows, Waggons, Patent Hand Brick Machine, Planks Trestles, Timber, and every requisite for carrying on the above extensive works. The attention of contractors and others is respectfully solicited to the above valuable and comprehensive plant. It includes an horizontal high-pressure steam engine, 12-horse power; a beam engine, 8-horse power, with boilers of best manufacture, living gear, rackle and pump, Ingram's patent brick machine, capable of turning out 25,000 bricks per day, together with the whole working plant, now within these few years, embracing every recent improvement, and regardless of cost.—Catalogues may be had at the "Journal of Auctions" office, London; at the Old Bell Hotel, Hitchen; and of the Auctioneer, St Neot's, Hunts, who will forward the same by post on application.

Extensive Sale of Building Materials, Mile-End-road, To BUILDERS and OTHERS

MR. F. HALL will SELL by AUCTION, on TUESDAY JULY 22, at ONE for TWO, on the PREMISES, adjoining the Hemp Bight, Mile-End-road, near the Globe-bridge, an excellent assortment of MATERIALS, taken down and removed from three houses for the Canon-street Improvements; comprising 30,000 feet of clean match lining boards, sound timbers in joist, rafters, quartering, &c; clean floor-boards, handsome plate glass shop front, mahogany sashes, with large squares; plate glass doors and par lights; modern sashes and frames, partitions and wainscoting, 3000 capital ducheas slates, stone copings, and sills; stone paving, stoves, ranges, iron columns, firewood, &c. May be viewed and catalogues had on the Premises; at the Angel, Stratford; Henry Eighth, adjoining; or of Mr. F. HALL, Builders' and Building Materials Auctioneer Chester street, Kennington.

CHARLTON, DOVER. Notice of Auction Sale of the Machinery of the late Charlton Oil Mills, which, under the instructions received from the executors of the late William Knocker, Esq. deceased, will on TUESDAY, JULY 22nd, 1856 be submitted for PUBLIC COMPETITION, by

MR. JAMES B. TERSON, on the PREMISES, Charlton Mills, Charlton, Dover, the useful MACHINERY, of about 150 tons of IRON, BRASS, and LEAD, including six main cast-iron shafts, each 16 feet in length, with cleft bosses, thirty-six caps and bolts, large cast-iron spur and bevel wheels, 10 feet six inches wide, 9 inches wide, pinions, rollers with universal joints, cast iron presses, wrought iron cotter, plummer blocks, brass bearings and other machinery connected with the above mill; also two pairs of stones one pair 6 feet 6 inches, and one pair six feet with bed stones, upright shaft fitted with boxes, bevel wheels, &c. well adapted for driving said Mills for other manufacturers, lime and one grinders, and others; sundry brass taps, a quantity of sheet and pipe lead, brass force pump, barrels, cocks, &c. May be viewed on the MONDAY preceding the sale and from TEN until FOUR o'clock same to commence at ONE o'clock precisely. The whole of the above machinery will be fully particularized in detail bills of each, obtainable of the auctioneer, which may be obtained at the Place of Sale, and at the office of the Auctioneer, No. 6, Castle street, Dover.

THE ARCHITECTS', BUILDERS', ENGINEERS', and SURVEYORS' REGISTRY OPEN to EMPLOYERS (free), from TEN to FOUR o'clock.—Several thoroughly efficient Surveyors, Levellers, Clerks of Works, and Draughtsmen now on the Register. Efficiency ascertained before recommended.—Apply to Mr. RICHARDS, Engineer and Surveyor, 4, Trafalgar-square.

AN ARCHITECT and District Surveyor requires an ARTICLED PUPIL. Premium made to—Address, A. C. Warren's Library, London-street, Fitzroy-square.

AN ASSISTANT WANTED immediately, in an Architect's and Surveyor's Office. He must be a good draughtsman and quick leader, and able to assist in taking out quantities. If suitable, the situation would be a permanency.—Apply to T. L. S. City Architect's office Oxford.

BOROUGH of LEEDS.—WANTED, in the Borough Surveyor's Office, a CLERK, competent to square dimensions, keep accounts, and assist in measuring up work. A knowledge of drawing will be required.—Salary, 70l per annum, but no doubt needs to be augmented by the Clerk's Office, as desired by the Committee of the Streets and Sewerage Committee," not later than THIS SATURDAY, the 19th instant, by order. JOHN A. IRIN, Town Clerk.

Leeds, July 1, 1856.

LAND SURVEYOR.—WANTED, an active, experienced SURVEYOR'S CLERK, who has been accustomed to get up first-class sections. He must be a neat and expeditious draughtsman and writer, and accustomed to levelling. References as to character and ability will be required.—Applications, addressed "A Master Waterman and Son, Parliament-street, London, stating age, references, salary required, and when first-class surveyors as above will be attended to. The situation is intended for a term most.

N.B. No application as quoted which do not contain the particulars required.

TO HOUSE PAINTERS.

WANTED, immediately, TWO or THREE good HOUSE PAINTERS.—Apply to M. T. JEX, Albert-street, Hollow-lane, Hoxton.

WANTED, by a country Builder, a YOUNG MAN who has been accustomed to the general routine of a builder's office; also a WORKING SHOP FOREMAN. None but efficient workmen need apply.—Address, J. C. care of Mr. Skinmore, Stationer, Connaught-street, Nottingham.

TO GRAINERS AND WRITERS, &c.

WANTED, a steady, respectable Man, as GRAINER and WRITER, &c. Constant employment will be given. None need apply but men of taste and ability.—Apply to J. NIXON, 11, Lemm-road London.

WANTED, an ASSISTANT, who understands surveying, levelling, and mapping. One who has been experienced in railway surveys would be preferred.—Address, stating terms and references, to A. B. 4, Euston-grove, Euston-square

WANTED, a PERSON acquainted with the PIPE TRADE (and other articles supplied to builders) to superintend sales on a wharf, where the customers are chiefly of a retail cash character, and to be in other ways generally useful to the principals when required. Attendance at an early hour indispensable. A middle aged man, with some little expenditure, would find this a comfortable situation. Security required.—Address, B W. care of Mr. Moore, 105, Gwell road

TO BRICKMAKERS.

WANTED, a steady MAN, who understands brickmaking, in all its branches, to take charge of a BRICKYARD, and to CONTRACT for the MAKING of all GOODS. He will have to manage and take charge of steam-engine and brick machine. No one will be treated with unless he can produce satisfactory testimonials for good character and ability.—Address, S. B. W. Bishop Auckland, Durham.

TO SURVEYORS AND ARCHITECTS.

WANTED, in an Estate Agency Office, a YOUNG MAN, of strict integrity and business habits, to negociate purchases and sales, to prepare plans &c. Apply by letter, stating qualifications, references, and salary required, to Mr. W F GIBSON, Printer, Nottingham.

WANTED, SIX or EIGHT first-class PLASTERERS.—Apply, stating terms, to Mr. JAMES DIMENT, 9, St. James's-square, Bristol.

TO SLATERS AND SLATE MASONS

WANTED, an active, intelligent Man, as WORKING YARD FOREMAN. He must thoroughly understand both branches of the business, and give good references as to integrity, sobriety, and ability. Salary required.—Address, in own handwriting, to Mr. A. A. ROBINSON, Bow-bridge Slate Works, Stratford, near London

WANTED, a respectable Person who is acquainted with the trade, to take orders for an article of universal consumption by Builders and others. Satisfactory references required.—Apply by letter, post-paid, to J. B. Office of "The Builder."

WANTED, in a Builder's Office, a CLERK, competent to keep the books, measure up works, and the general superintendence of an office.—Apply by letter, stating age, &c, to A. B. 38, Brook street, New-road.

TO BUILDERS AND CARPENTERS.

WANTED EMPLOYMENT, by a respectable Young Man of twenty, as IMPROVER, and to keep books, take off quantities, &c. Prince at object to be well brought forward at the bench. Wages moderate. Good references. Town or country.—Address, BETA, Benbow's Post-office, Tottenham.

TO SAW-MILL PROPRIETORS AND OTHERS

WANTED, a SITUATION, as FOREMAN in SAW-MILL or TIMBER YARD, or as FOREMAN and SHARPENER, in a small concern, either in town or country.—Address, X. Z. Post-office, Crombie's row, Commercial-road East.

WANTED to APPRENTICE a respectable Youth, 15 years' of age, to a CARPENTER and JOINER, in London. A premium will be given.—Apply, by letter only, pre-paid, with full particulars, to Mr. CHARLES WILDMAN, 68, Wardour-st. Soho.

WANTED EMPLOYMENT, by an experienced BRICKLAYER; can be strongly recommended. Address, A. B. at Tanner's Newspaper Office, Boston-place, Dorset-square

TO ENGINEERS.

WANTED, a SITUATION, in an ENGINEER'S ESTABLISHMENT, as MANAGER or FOREMAN, by a married Man, who has had considerable experience in the management of men, machinery, mechanical drawing, estimates, prime cost, and general routine of a factory.—Address, A. Y. 175, Tottenham-court-road.

WANTED, by a first-rate Draughtsman, Plain and Ornamental Writer, of 10 years' experience, an ENGAGEMENT to make FINISHED PLANS, by contract or otherwise, of towns for sanitary purposes, maps of estates, parishes, &c. Plans on parchment executed with accuracy and dispatch. Reference to engineers of eminence. Maps and plans care fully and skilfully lithographed.—Address, THOS. GEORGE, Mr. Ruff's, 2, Blind-court, Fleet-street.

TO BUILDERS &c

WANTED, a SITUATION, by the Advertiser, to SUPERINTEND WORKS or the MANAGEMENT of a BUILDER'S YARD. Satisfactory references.—Address, E. B. Office of "The Builder."

TO WRITERS AND GRAINERS, &c

WANTED to APPRENTICE, a respectable YOUTH age 15, to the above as Out-door Apprentice. Has a taste for drawing, &c. A small premium given.—Address, stating particulars, premium required, and wages given, to H. VICKERS, 12, Prince-street, Westmins er.

TO MASTER POTTERS AND STONE-PIPE MANUFACTURERS

WANTED, by a Young Man who has served his time in the above trade, a SITUATION as WORKING FOREMAN: or would take a place at Throwing. Understands the getting up of salt-glazed sewerage pipe, and is acquainted with glazes. Country preferred.—Direct, W. W. 23, Richard's terrace, Lorrimore-road, Walworth, London.

WANTED, a SITUATION, as PAINTER, GLAZIER, and PAPER-HANGER. Can undertake any of generals as full in all its branches. Would not object to go abroad as permanent situation. Address, W. GRANT, 23 Frith street, Soho, London.

TO LAND SURVEYORS &c

WANTED, by a respectable Young Man, aged 20, a SITUATION in a LAND SURVEYOR'S OFFICE. He has a practical knowledge of surveying, levelling, mapping, and plan drawing. Salary not so much an object as a permanent situation. No objection to the country.—Address, C. L. 7, St. George's-road, Norland-road, Notting-hill.

WANTED, by a steady, useful Man, EMPLOYMENT in the painting, graining, writing, paperhanging, or any branch of the brush, that may be required. Not particular by day or contract work. Builders, landlords, house-agents, &c will find this worthy of notice, as good references from nine to fifteen years can be given.—Address, A. B. Mr. Melvin's, House Agent, 8, Southampton-row, Russell-square.

WANTED, a SITUATION as SHOP FOREMAN of JOINERS, by a thorough practical Joiner. Would have no objection to go abroad.—Address, L. M. Office of "The Builder."

WANTED, a SITUATION, as PLUMBER, by the Advertiser, who has a thorough knowledge of the plumbing business, both in theory and practice, of house and ship work. Has had for many years extensive experience in all the apparatus used in sanitary works. Gas fitting, if required. Satisfactory references.—Address, J. B. 5, Peat-office, 221, Blackfriars-road.

WANTED, an ENGAGEMENT, as STAIRCASE HAND. The Advertiser is capable of executing any description of staircase work.—Address, J. N. Office of "The Builder."

WANTED, by a practical Carpenter and Builder, who has lately come from abroad, a SITUATION as OUT-DOOR FOREMAN of general works. Country or abroad preferred.—Address, post-paid, G. H. L. 8, Church-street, Kensington.

TO BUILDERS AND DECORATORS.

WANTED, a SITUATION by an OIL GRAINER, either within, or a few miles off town. Wages not so much a consideration as a constancy. Respectable references as to character and ability can be given. Specimens may be had.—Address, care of B. G. 34, Totton-street, Stepney

TO PLUMBERS AND PAINTERS.

WANTED, by a lad, aged 17 years, a place as an IMPROVER in a general shop. Wages not so much an object as a permanent situation.—Address, post-paid, G. HANWELL, 28, Robert-street, Grosvenor-square.

TO BUILDERS.

THE Advertiser, a thorough practical Middle-aged Man, wishes for an ENGAGEMENT as SHOP or WORKING FOREMAN of JOINERS; has had good experience, and is a good draughtsman, capable of setting out any kind of joiner's work. Good references given as to character and ability.—Address, F. J. 3, Seabright-place East, Hackney-road.

TO BUILDERS.

THE Advertiser, a thorough practical Man, aged 38 years, wishes for a RE-ENGAGEMENT as SHOP or WORKING FOREMAN of JOINERS. Is capable of setting out any class of joiners' work, and can produce good testimonials. Address, A. W. 23, Park-street, Islington.

THE Advertiser, a good CARPENTER, and also having a thorough understanding of gas-fittings, wishes for a SITUATION, either in London, or to go abroad. Has lately returned from Turkey, and has a smattering knowledge of the Turkish language.—Address, Q care of O. J. 80, Charing-cross.

TO BUILDERS, CONTRACTORS, AND OTHERS.

THE Advertiser, middle age, and active person, is in WANT of EMPLOYMENT as COLLECTOR of RENTS, &c. Store Keeper, or Timekeeper. Good accountant, and acquainted with the building trades. Respectably connected. Security given. Salary moderate.—Direct to A. B. 35, Gower-place St. Pancras.

THE Advertiser, a good IRON-PLATE WORKER, lately returned from Turkey, wishes for a SITUATION in London, or to go abroad. Has a slight knowledge of the Turkish language. Address, W. D. 31, Bowling-street, Deans-yard, Westminster.

TO PLUMBERS.

THE Advertiser, a good PLUMBER, is in want of CONSTANT EMPLOYMENT. No objection to fill up his time with painting and glazing. Good references can be given. Address, G. S 8 Stanhope Westminster-bridge.

TO ARCHITECTS, &c

THE Advertiser, who has served his time, OFFERS his SERVICES to an ARCHITECT for a few months, with a view to an introduction to a partnership or otherwise.—Address, L. J. H. City News-rooms

TO CARPENTERS AND JOINERS.

THE Parents of a Youth, aged 14 years, wish to APPRENTICE him to the above trade, either in or out-door. Terms to be addressed to JOHN BROWN, 99, Queen-street, St. John's, Southwark.

TO ARCHITECTS.

THE Advertiser wishes for a RE-ENGAGEMENT, at a moderate salary. Is capable of getting out fair additional drawings, perspectives, &c and is well acquainted with Gothic architecture.—Address to J. B. Mr. Bertop's Advertising and Newspaper Office, South Molton-street, Oxford-street.

TO BUILDERS.

EMPLOYMENT WANTED in a Builder's Office, as CLERK of WORKS, or to take charge of a sawing business by the week or month. Has had a thorough practical knowledge of building in all its branches; can take out quantities, estimate, measure up and value works, fixtures, and do valuations, and wishes to make himself useful. Unexceptionable references for integrity and ability. Salary moderate.—Address, prepaid, to J. W. C. 71, John-street, Fitzroy-square.

TO BUILDERS, SURVEYORS, &c.

EMPLOYMENT WANTED, by a Young Man, as CLERK, UNDER FOREMAN, or TIMEKEEPER, brought up in the building line. Has a knowledge of plans, writes a good hand, and can keep accounts.—Address, T. Y. C. Cheltenham, Coffee-house, Westminster road.

AS FOREMAN of SMITHS.—The Advertiser, who has for several years been engaged in the above capacity with one of the largest London builders, where, in addition to smiths' work, the engineering, repairs of the machinery, &c was executed on the premises, and under his direction, is desirous of meeting with an ENGAGEMENT.—The highest reference as to ability, sobriety, &c.—Direct, pre-paid, to A. F. at Smith's, 53, Drury-lane

TO ARCHITECTS

A PRACTICAL SURVEYOR, of 20 years' experience, would be glad to enter into an ENGAGEMENT with Architects for the purpose of taking off quantities (which he guarantees making right), &c if required. References given to Architects.—Address, H. R. 8, Office of "The Builder."

TO ARCHITECTS.

A DRAUGHTSMAN is desirous of an ENGAGEMENT. Is competent to prepare perspective, finished working, and detail drawings, and to superintend the execution in the absence of the principal. Temporary assistance to architects, but a permanency preferred. Good references. Salary 2l. 10s. per week.—Address, R. M. B. Office of "The Builder."

TO ARCHITECTS, &c

A FOREIGN ARCHITECTURAL DRAUGHTSMAN and an excellent DESIGNER, wishes for a RE-ENGAGEMENT in an Architect's office. He is practically acquainted with all the details of building and construction. References if required. London architects. Salary moderate. Address, post paid, X. Y. Office of "The Builder."

TO LAND AGENTS AND SURVEYORS.

A SITUATION is WANTED by a Married Man, who has a thorough knowledge of all the duties devolving upon a Manager or Clerk, having acquired them in the offices of gentlemen holding very extensive estate and tithe agencies. Testimonials will be sent. — Address, RICHARD STOKES, Allerston, near Pickering, Yorkshire

TO ENGINEERS, SUGAR AND OIL REFINERS, CONTRACTORS, RAILWAY COMPANIES, AND OTHERS.

AN ENGINEER, who has had a long practical experience in the manufacture and erection of extensive machinery, steam-engines, furnaces, steam-heating, &c. of public buildings, is desirous of obtaining a RE-ENGAGEMENT as SUPERINTENDENT, &c. Would have no objection to go abroad The most satisfactory testimonials to qualification can be given.—Address, A. B. Mr. Tennant, Wine Merchant, Horseferry-road, Westminster.

TO ARCHITECTS.

A PRACTICAL CLERK of WORKS wishes a RE-ENGAGEMENT.—Address, J. C. New Military Depot, Wrexham.

TO ARCHITECTS, BUILDERS, AND OTHERS.

A PRACTICAL MAN of experience, who is a good draughtsman, &c. requires a SITUATION as CLERK of WORKS or general FOREMAN, on an estate or otherwise.—Address, ZETA, 14a, East-road, Hoxton.
N.B.—First rate testimonials

TO ARCHITECTS AND SURVEYORS.

A GENTLEMAN, aged 22, whose articles have recently expired, wishes to enter an office of good rank for IMPROVEMENT. No salary will be expected for six months. — Address, JOHN ROBINSON, 40, Princes square, Kensington.

AS SHOP, YARD, or OUT-DOOR FOREMAN.—WANTED, a SITUATION in the above capacity, by a Man, 34 years of age, a thorough practical carpenter and joiner, and well accustomed with every branch of the building trade. Has filled a similar situation, and can give good references as to ability, &c.—Address, C. C. 38, Great Hermitage, Wapping.

TO CARPENTERS AND BUILDERS.

A YOUNG MAN, aged 20, who has had four years' experience at the above business, wishes to obtain a SITUATION as IMPROVER in a JOINERS' SHOP, within half an hour's walk of the City.—Address by letter, post paid, to J. G. Office of "The Builder."

TO BUILDERS AND OTHERS.

A MEASURER, ESTIMATER, and BUILDERS' ACCOUNTANT, of very considerable practical experience in measuring, taking off quantities, estimating, pricing bills, quantities, &c. would be glad to undertake any business for builders upon reasonable terms (no charge if unsuccessful. Address, G. A. H. Office of "The Builder."

TO MASTER PLUMBERS, &c.

A YOUNG MAN wishes to ENGAGE HIMSELF for one or two years at a plumber's, as an improver. Wages not so much an object.—Apply to A. P 9, Johnstreet, Stoke Newington.

AS practical ASSISTANT SURVEYOR or SUPERINTENDENT of WORKS, at home or abroad. Has had much experience in setting out and constructing every variety of town works. Testimonials and references to eminent engineers, &c.—Address, Y. 1, Elm-road, West Derby-street, Liverpool.

TO BUILDERS, PLUMBERS, DECORATORS, &c.

A YOUNG MAN, who has been several years in business as General Writer, Painter, Glazier, &c. is desirous of a PERMANENT ENGAGEMENT in COUNTER, or general duties as above, being practised in accounts, correspondence, &c. Salary subordinate to appreciation of services. References unexceptionable.—Address, L. P. H. 4, Clarendon-place, Maida-hill.

A LIBERAL PREMIUM will be given to APPRENTICE a YOUTH, 14 years of age, to an Architect, Surveyor, Civil Engineer, Carpenter, Builder, Cabinetmaker, Optician, Pianoforte-maker, Locomotive or Marine Engineer, or any well established manufacturing trade. The amount of premium no object.—Address full particulars to G. 91, Piccadilly.

ROYAL POLYTECHNIC.—The Lectures and Dissolving Views as usual, from Twelve to Five and Seven to Ten. For One Week only, commencing Tuesday, the 22nd instant, Grand Exhibition of the fac simile of Raphael's masterpiece of "The School of Athens," painted by M. Paul Balze on 700 feet of canvas, for the Universities of Virginia, U.S. This enormous work of art, exhibited twice daily, between Ten and a Quarter to Twelve, and Five and a Quarter to Seven, and a Course of Five Lectures delivered thereon by W. A. Pratt, esq. Virginia, U.S. The artist, M. Paul Balze, has been engaged sixteen years in copying Raphael's works. Admission to the Picture, 1s.; or 3s. the Course of Five Lectures. Children and Schools half-price.

TO BUILDERS and OTHERS.—Books and Accounts made up and adjusted, Balance-sheets prepared, and Statements to lay before Creditors, on moderate terms.—Apply to Mr. MARCH, Accountant, 45, Bedford-row.

LEVELLING, Surveying, Drawing, Mapping, Estimating, for Railway or other Works; Enlarging, Reducing, Copying, Tracing, &c. undertaken by Mr. C. B. RICHARDS late an inspector of the Metropolitan Commissioners of Sewers). Surveyors to the District Boards of Works, or Local Boards of Health, will find him a useful auxiliary, from his experience in all the details of Sewage Works.—4, Trafalgar square.

ARCHITECTURE, CIVIL ENGINEERING, and SURVEYING CLASSES. Established by Messrs HYDE, SMITH, and LEWIS, Architects, Civil Engineers, Surveyors, &c. For Preparing Gentlemen for Architects, Builders Engineers, Surveyors, Draughtsmen, Measurers, &c. and for giving EVENING INSTRUCTION in Architectural, Civil Engineering, and Mechanical Drawing; Colouring, Shading and Tinting; Ornamental and Water-Colour Drawing; Perspective, Architectural and Geometrical Drawing, Making Finished and Working Drawings; Preparing Specifications, Taking out Quantities, Estimating, Measuring and Valuing Builders' Work, &c. &c. Terms: Day Pupils, Three Guineas per Quarter; Evening Pupils, One Guinea per Quarter. There are no extras, the terms include the whole of the above, with the use of Drawing Boards, T Squares, Plans, Drawings, Models, &c. Prospectuses and full particulars may be had at the Offices, 24, Guildford-street, Russell-square.

LITHOGRAPHY.—The cheapest in London. MR. T. J. RAWLINS continues to prepare and execute Architectural Designs and Drawings, with the utmost despatch, either in Coloured, Tinted, or Plain Lithography. A printed list of prices forwarded on application to his Establishment, 38, University street, University College, Lond-n.
Exhibition Drawings coloured as usual.

LITHOGRAPHY.—Every description of Maps, Plans of Estates, Engineering, and Architectural Drawings, Bill Heads, Circulars, &c. executed with despatch, at C. MOODY'S Drawing and Printing Offices 287, High Holborn.
N.B.—Artists supplied with every requisite for Oil and Water-colour Drawings, &c.

MATHEMATICAL DRAWING INSTRUMENTS.—JOHN ARCHBUTT, 20, Westminster-Bridge-road, Lambeth near Astley's Theatre, begs to call attention to his Stock of Instruments manufactured by superior workmen. The prices will be found considerably lower than are now charged for articles of similar quality and workmanship. Rules, scales, tapes, &c. at equally low prices. An illustrated price-list will be immediately forwarded, free, on application.
N.B. A few New and Second-hand Levels and Theodolites always for Sale.

TO BUILDERS, MASONS, AND OTHERS.

THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Bardilla, dove, black, black and gold, Sienna, St. Anns, statuary, serpentine, verd antique, &c. Portland, Harehill, Park Spring, and other stone, in blocks, slabs, landings, and headstones. Yorkshire paving, granite curb, &c. All goods carefully packed and forwarded to any part of England.—THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

THE LIZARD SERPENTINE COMPANY manufacture and sell in block and slab the beautiful stone now raised from the lower beds of their quarries. Chimney-pieces, Columns, Fonts, and ornamental works on view, at 20, Surrey-street, Strand.

HENRY COX, Manager at the Lizard.
F. W. RUFFLE, Agent in London.

BUILDERS! ARCHITECTS! and MASONS!—MARBLE.—The Italian Marble Company call the particular attention of Builders, Architects, Sculptors, and Masons to their PRESENT low prices, viz.:—

	s.	d.
Vein, in blocks of ordinary dimensions, 8s. 6d. per foot cube.		
Sicilian	6	6
An inspection of their well-assorted stock is solicited, at "The Depôt," Bridge-wharf, Millbank, fronting Vauxhall bridge.—Apply to Mr BAXTER, Wharf Foreman.		

WILLIAM W. BONNIN, Secretary.

Lloyd's Marble Wharf, Thames-bank, Pimlico, Adjoining Vauxhall bridge.

ITALIAN STATUARY, veined, Sicilian, dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY-PIECES lately imported from the Continent They comprise Statuary, Giallo di Sienna, Vert Rouge, Dove, Black and Gold, Rouge de Belmont, Bardiglio and other choice foreign marbles; and are designed with great taste, and executed by first-class artists—on sale in the show rooms of Messrs. EVANS, SON, and CO. King William-street, London-bridge.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT for Yorkshire Paving Portland and Derby Stone, Bangor Slates, Slabs, &c. Ale Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods SCOLES and WOOD invite the attention of Builders, Masons and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c cut on the shortest notice. Country orders promptly attended to

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab Marble mortars, &c.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms apply to Mr. C. HOAR, Haytor Granite Office, 4 Millbank-row, Westminster

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—PRIDEAUX and TAYLOR, 54, Old Broad-street. Manager—JAMES NATHAN, Liskeard
This Granite is selected for the New Westminster-bridge.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman, Carges shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 245, High-street, Southwark, near the Townhall

RAWDON-HILL STONE.—Messrs. TRICKETT and PERKIN are prepared to execute orders to any extent for their much admired Building Stone Depôts, where large stocks are kept: No. 1, Stone-wharf, Great Northern Railway Station, Kingsacross; Victoria Stone-wharf, Millwall, Poplar. Blocks quarried to suit customers for columns, cornice, landings, steps, ledgers, headstones, sills, &c. Delivered to any part by vessel or railway trucks.
"This stone when better known, must come into extensive use I should think it exceedingly suitable for the London market."
C. L. DIESSER, F.G.S
Address, JOHN TRICKETT, Heddingley, Leeds, Yorkshire; or, JAMES PERKIN, Stone-wharf, Isle of Dogs, London
N.B. A large quantity of Foundation Landings for sale.

BATH STONE DEPOT, BOX STATION.
ROBERT STRONG, STONE MERCHANT, Box, Wilts—Box Ground Stone, Scuffell Block, Ashlar, Rangework, &c. &c. Supplied direct from the Quarries; also every description of stonework for building purposes, both plain and ornamental, prepared ready for fixing, and forwarded to any part of the Kingdom. Vases in elegant variety always on view; Urns, Fountains, Chimney-pieces, Tombs &c. &c.

STONE! STONE! STONE! — To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Scaffolding Slab, Granite Pitching and Curb, Guernsey Broken Road Materials, and every other description of stone, at JOHN KNIGHT and SON'S, Devon Wharf, Mile-end, York tooled paving, 8s. 6d. per 100 feet; slab for hearths, 4d. per foot sup; slab for chimney-pieces, 3½d. per foot sup, 8 by 3 window-sills, 6d. per foot run; 13 by 3 coping, 8d per foot run; box chimneys (any opening), 8s. 6d. each. Terms cash on delivery.

TO CONTRACTORS AND OTHERS.

YORKSHIRE PAVINGS, LANDINGS, STEPS, COPINGS, CURBS, SILLS, SINKS, and CHANNELS Horsehill, Robin Hood, Park Spring, and Guyhy, in Blocks, Headstones, or Slabs; Purbeck Paving, Sinks, Curbs, Rickstones, Pitchers, and Squares; Caithness Flags, Firestone, Newcastle and Bilston Grindstones; Portland Stone in Blocks, Lond ngs, Slabs &c; Derby Dale, Caen Stone, Bramley Fall, Bath, Huddlestone, Park-wood, and other Block Stones. Valentia Slate Slabs, Bangor Slates, Cornish, Aberdeen, Guernsey, and other Granites; Marble in Block and Slabs, supplied from the Wharfs, Mill bank-street, City Basin, and Deptford; also direct from the quarries by vessel or rail.—Address, FREEMAN'S WHARF, 27, Millbank street, Westminster.

YORKSHIRE STONE.

GEO. VINT and BROTHERS, IDLE, near LEEDS,
Beg to inform Architects, Surveyors, Contractors, Builders, and Masons, that they can supply to any extent all kinds of YORK STONE, including Pavior, Bramley Fall, Park Spring, Robin Hood, Harehill, &c. of the very best quality, direct from their Quarries, to all Railway Stations and Ports in the Kingdom, on the most reasonable terms.

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

GATES and GEORGE, CAEN, AUBIGNY, and GENERAL STONE MERCHANTS,
CAEN WHARF, ROTHERHITHE, LONDON.

PARIS EXHIBITION.—ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts, 1846. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of lobe-tables, chiffoniers, consoles, &c.; baths baptistries, altar-tablets, sill-sters, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

SLATE CISTERNS, SINKS, and every description of Slate Slab Work, best Bangor Roofing Slates or Coverings.—T. B. HANNAFORD'S Priced-list, which can be had on application, will be found lower than any other. Roofs covered with best Bangor Countesses within a four-mile circle, 21s. per square.—Prevalgn Wharf, Ratcliffe-cross.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôt, at Bangor, or to transmit by railway. Also Slabs of all sizes Orders to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor.

CROGGON and COMPANY, Manufacturers of
PATENT ASPHALTE ROOFING,
BOILER, RAILWAY, SHEATHING and INODOROUS FELT,
For Damp Walls, and Lining Iron Houses,
2, DOWGATE-HILL LONDON.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING especially in damp situations.
FROM 2s. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PIKINGTON, Poloncean and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner, or supplied in any quantity. Information for using forwarded with material. Post-office orders or reference in London promptly attended to.—Estimates given for every kind of the above work.

ASPHALTE. — THOMAS HARRISON, having completed his works for making by steam-power, is now in a position to execute orders for BLOCK ASPHALTE to any extent, at an hour's notice Asphalte expressly prepared for lofts and granary floors, and every description of agricultural buildings, for laying which plain instructions will be forwarded. Estimates given for every variety of Asphalte Pavement, Manure and Cheer Tanks, Sea Walls, &c. &c.—The trade supplied on advantageous terms THOMAS HARRISON, Asphalte and Whiting Works, Cambridge-heath Wharf, Hackney; and Sunderland Wharf, Rotherhithe.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Mill screened or unscreened, by the yard, or per barge. Stocks, lime, and old bricks. Dry rubish delivered per barge, in any quantity, alongside the Thames.

BUILDING MATERIALS.

BECK'S WHARF, ISLEWORTH.—Builders having works to execute south-west of London, will find a good supply upon this wharf, on reasonable terms, with every convenience for speedy loading by travelling cranes, either into barges or carriages. Portland, Caen, Bath, and Yorkshire Block Stone, always in stock.—Landings, &c. &c. Also, Marble in Slab, Chimney-pieces, &c. Slab and Roofing Slates from the Penrhyn Quarries. Timber, Deals, Limes, Cements, Clay Goods, &c
N.B. This wharf is very near the St. Margaret's Estate.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.

W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf.
Contractors supplied to any extent.

TARPAULINS for COVERING ROOFS during Repairs, SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, BULL – Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

11 George-yard, Lombard-street, City

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days – Made and sold by JOHN BAZLEY WHITE and BROTHERS, Mill ank-street, Westminster

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement that requires no colouring, –Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel street, Liverpool.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements (read at the Institute of Civil Engineers); to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT, Messrs. ROBINS and Co. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

BATH, PORTLAND, and ROMAN CEMENTS.–The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 30, Old Broad-street, London; to Mr. MONUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr. THOMAS WEEKS.

Agents in London, Messrs. GEORGE POTTER and CO. Limemerchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 19, North-wharf-road, Paddington.

FREEN and CO.'S PORTLAND CEMENT and LIME WORKS, WOULDHAM, near Rochester.—These Works having obtained Letters Patent for the Manufacture of Cement, by which very great and important advantages are obtained over the old method of manufacture, insuring at once uniformity of colour and quality, Merchants, Contractors, and Builders are informed that they can now be supplied with any quantity, either for home or foreign use, at wholesale orders, on advantageous terms. Samples and prices forwarded, on application at the Works; or to Mr. W. C. ATKINSON, 62, Moorgate-street, City; from whom also testimonials from eminent engineers as to quality may be obtained.

PORTLAND and BATH CEMENTS. TATHAM and CO. 14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT. Glazed Stoneware Sewage Pipes. Brick, Lime, and Cement Merchants, TATHAM and CO. 14, South Wharf, Paddington.

PARIAN CEMENT, reduced to 3s. per bushel, from 1st inst. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by O. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 3, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GREY STONE LIME WHARFS, 19, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 8s. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO, CEMENT, STUCCO PAINT, – CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Offices, 4, George-yard, Lombard-street.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint One coat laid on as directed is equal to two coats of White Lead; whilst the consumption of material is less than for one coat It dries very fast and hard.

HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three-fourths the price.

HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and iron exposed to salt water; neither bilge water, nor noxious vapours from cargo, nor heat on founds of Steam Vessels can act upon it. Sold by the Wholesale Paint Dealers, in original packages, stamped, HUBBUCK, LONDON, PATENT; and when so marked the quality is guaranteed

HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation Timber coated with this Enamel is not attacked by the worm neither do barnacles attach to it.

Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.

OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs, Warehouse, No. 1, Wharf, Paddington-basin

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by b at, the master has instructions to produce (on demand) the canal gauger's pass, by which the purchaser may know the exact wei ht delivered.—Orders addressed to the London Depôt, 16, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention – Quarries and Manufactories, Stockton, near Southam, Warwickshire.

NOTICE.
SOUTHAM HYDRÁULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump into boats, at the Works.–Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRKSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

CHARLES RICHARDSON, 3 & 6, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 6 South Wharf, Paddington.

NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it may be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keen's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting Whitings Sand for sulphate, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and S uthend and Eastern Counties lines, or any railway connected with them Ve sels of 500 to 600 tons can load alongside the wharves at Grays. AT MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods, such as Welsh and Newcastle, Fire-clay, Fire-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.

General Office—No. 13, GEORGE-YARD, LOMBARD-STREET. Letters addressed to Grays Essex, will meet with immediate attention.

TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane, Dulwich. Price of good stock bricks, 35s. per thousand on the field, for cash. –Application to be made to the Foreman, A. BANHAM, at the Works.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings of good and sound quality, constantly on sale at H. DODD'S Brick fields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B Light-coloured Pit Sand, of approved quality, constantly kept on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 8-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856 –Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY. Entrance, Norwood end, Palace-road.—BRICKS of the first class. Red Malm Bricks, Cutters, Arch-rings, Facings, and Paviors, Clamped ditto, Yellow and Pale, Seconds Pavior and Pickings, Washed Stocks, Stocks, and Place –Apply to TRUMAN and CO. Norwood Lodge, Palace-road. Roupell-park, Lower Norwood, Surrey.

BRICKS.—Excellent hard-burnt RED BRICKS, of good colour and shape, suitable for facing or other purposes; also Malms, good Stocks, and a quantity of Grizzels and Place, at LOW PRICES. Agricultural draining Tiles, from 1½ inch to 6 inches in the bore, and Arch Bricks suitable for sewerage. The whole of the above may be inspected in large quantities on the ground, at the Brentwood Railway Brick and Tile Works and Wharf, Brentwood, Essex, adjoining the goods station of the Eastern Counties Railway Company, where they will load direct into the trucks for any station on the line.—Address, Mr LEVETT, Brentwood, Essex.

FIRE-BRICKS, LUMPS, TILES, &c.—FURNACE-BUILDERS, GAS COMPANIES, and CONSUMERS of these Goods generally may be SUPPLIED with every description from our Wharf here, on the most advantageous terms.—TRAQUAIR and CO. 9, Bankside, Southwark.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for hearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented

HENRY MOUNT, Sec.
37, King William Street, City.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c. Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability, Slabs and Tiles for Fireplaces and Hearths, Coloured for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent Staffordshire

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on any description of building, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile, and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

Price 4d. each tile (of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Ruabv.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for the TRADE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 281, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 15, South Wharf, Paddington, Manufacturers of improved Plain and Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. and Socket for Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved Warranted impershable, and to resist all acids and exhalations.

"‡" A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Quoins, Blocks, &c. Tividale, Staffordshire.

HOGG'S GARDEN EDGE TILES.—The attention of persons engaged in laying out Gardens for Public Institutions is solicited to these Tiles, as an elegant, cheap, and perfect substitute for box edging In colour they resemble Bath stone, are very hard, easily laid down, afford no shelter for vermin, and act as a drain to the paths. Price 13s. per 100, or about 1s. per yard run. – Full particulars on application to R. BLACKETT, Witham, Essex.

PAINT, certified by the Government Engineers and Contractors to be the CHEAPEST and BEST ever discovered for wood and iron, price 35s. per cwt.—Apply to the London Anti-Oxide Paint Company, D. WALKER, Secretary, 29, New Bridge-street, Blackfriars.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that 6lbs of Wolston's Torbay Iron-Paint will effectually cover as much surface as 112lbs. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Charlemont's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. DOULTON'S HALF SOCKET PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

Pan, 3s. 6d. Pan, 3s. 6d.

Trap, 2s. Trap, 2s.

HALF-SOCKET PIPES same prices as whole Sockets, by the use of which Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz. :—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.

Messrs. COLLS & SHADBOLT, and COE'S, St James and Thornhill Wharfs, Caledonian-road, Pentonville.

Messrs. MITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.

Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GENUINE SEYSSEL ASPHALTE.

ORSI AND ARMANI.

THE EXCLUSIVE SUPPLY OF SEYSSEL ASPHALTE (FRANGY)

DIRECT FROM THE MINES.

REDUCTION IN THE PRICE FOR VARIOUS WORKS FIFTEEN PER CENT.

AND THE

WORK GUARANTEED FOR THREE YEARS.

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

PATENT METALLIC LAVA.

A printed List of the important Works for Flooring, Roofing, Covering of Arches, &c. &c, executed from 1848 to 1852, with this Material, may be obtained at the Offices of

ORSI AND ARMANI.

THEIR PATENT METALLIC LAVA IS FIFTEEN PER CENT. CHEAPER THAN THE GENUINE SEYSSEL ASPHALTE OF MESSRS. O. AND A.

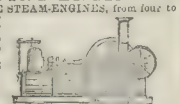
OR THIRTY PER CENT. LOWER THAN ANY OTHER MATERIAL CALLED BITUMEN OR ASPHALTE

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

STEAM PUMPING ENGINES.—

PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.



JAMES BURTON & SONS,

Engineers and Contractors, John's-place, Holland-street, Southwark, London.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices.

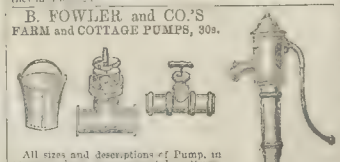
R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side.

CONTRACTORS' STEAM-ENGINES.—

TO BE LET, on HIRE, or for SALE, several NEW and SECOND HAND Steam Engines, Boilers, Pumps, Cranks, and Shafting, suitable for contractors generally. Apply to Messrs. MITCHELL and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

B. FOWLER and CO.'S

FARM and COTTAGE PUMPS, 30s.



All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps, Engine Frames, Horse-Gear Cranks, Pulley Blocks, Wrought Pails, and Iron and Basket Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJAMIN FOWLER and CO. General Engineers, Whitefriars-street Fleet-street.

STEAM DREDGING-ENGINE for SALE.

Apply to Messrs. LEE and SON, Belvidere-road, Lambeth.

R. RICHARDS and CO.

PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, turned on machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 36s per doz. painted.
Ditto .... 48s per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP, which is recommended for the simplicity of its construction, and the ease with which it works.

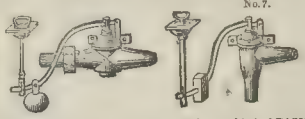
By the introduction of the vibrating standard, the cumbrous carriage and expansion-rod are found to be unnecessary, rendering the price considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE

No. 7.



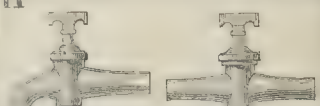
is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet; they are found to be exceedingly durable, and are cheaper than common ones. Manufactured solely by the Patentees,

THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, fixed, each.

TO WATER COMPANIES AND PLUMBERS

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

MACINTOSH INDIA-RUBBER WAGGON COVERS, at reduced prices. Stocks of different

sizes ready made, open to inspection at their Warehouse, MOSES, SON, and DAVIS, 11 and 12, Aldgate-High-street, and at the Factory India-Rubber Steam Works, Bow-common.

CHAS. MACINTOSH and CO. Patentees

of the VULCANIZED INDIA-RUBBER, and GENERAL MANUFACTURERS of WATERPROOF AIRTIGHT and ELASTIC INDIA-RUBBER Goods beg to solicit the persons who desire to correspond with them direct, that their SOLE ESTABLISHMENTS are No. 3, Cannon-street West, London, and 64, Dale-street, Manchester. This notice is necessary, as the term Macintosh Depôt, Macintosh Warehouse, &c. is frequently adopted by parties who have no interest in the vendors of India-rubber goods, and deal in articles not of the manufacture of CHAS. MACINTOSH and CO.—Goods manufactured by CHAS. MACINTOSH and CO. are stamped, each piece, with the name of the firm.

DURABILITY of GUTTA PERCHA TUBING. Many inquiries having been made as to the

Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT.

"Second Testimonial.—March 14th, 1856.—In reply to your letter, received this morning, I feel pleasure in stating that the Gutta Percha Tubing for Pump Service I ordered of you has given entire satisfaction, and answers perfectly. Many Builders, and other persons, have lately examined it, and have stated the advantages of its use over the old lead laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES,
18, WHARF-ROAD, CITY-ROAD, LONDON.

HOSE PIPING.—WAITHMAN'S

PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO., Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.									
¼	⅜	½	⅝	¾	1	1¼	1½	1¾	2 in.
9d.	11d.	1s.	1s. 3d.	1s. 5d.	1s. 8d.	2s.	2s. 3d.	2s. 6d.	2s. 9d.

Super-extra stout quality.

2	2¼	2½	2¾	3 inches.
2s.	2s. 3d.	2s. 6d.	2s. 6d.	4s per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

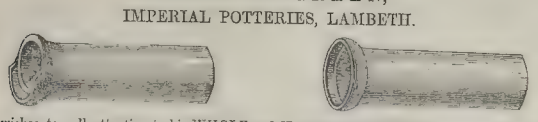
¾	1	1¼	1½	2	2½ inches.
9d.	10d.	11d.	1s.	1s. 3d.	1s. 6d. per yard.

The hose is Burnettized at an extra charge of 3d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

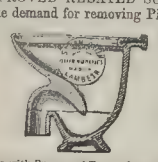
STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

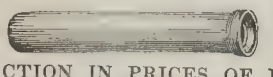


Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terracotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PEPYS, at the Works, Branksea Island, Poole, Dorset.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.—The New Cattle Market, Wellington and Chelsea Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—offer their goods to Contractors, the Trade, &c. of a first-rate quality and in manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

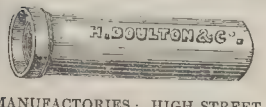
HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.

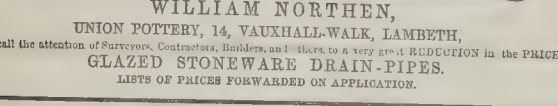


HALF-SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.



WILLIAM NORTHEN,

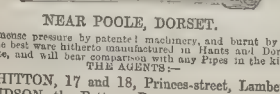
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS TRAPS, &c. at the



NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to THE AGENTS:—

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;

Where a large stock is always kept on hand.

STONE-PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES. E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, slabs, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.

SUPERIOR GLAZED STONEWARE DRAIN PIPES, &c. of the attention of Boards of Works, Contractors, and others, is invited to the MANUFACTURES of the DARFIELD Yorkshire STONE POTTERIES, with which for several features of finish and improvement of quality few can compare. Tubes, bends, junctions, grids and stone traps, closet-pans, siphons, yard and street gully-sinks, with every article applicable to sanitary works, in any quantity, and immediately available, at the London Depôt, No. 4 Warehouse, Goods Station, Great Northern Railway. City Offices, 27, Bucklersbury, City, where Illustrated Price Lists can be obtained.

E. B. BEAUMONT, Proprietor.
J. D. JONES, Agent

N.B.—Chimney-pots, roofing tiles, ridges, wall copings, flooring and paving tiles, fire-bricks, oven-bricks, bakers' lumps, under oven lumps and quarries.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR and FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore,	in 2 ft.	6 in. lengths,	at	3d.	per foot.
4	"	"	"	4d.	"
6	"	"	"	6d.	"
9	"	"	"	9d.	"
12	"	"	"	1s. 3d.	"
15	"	"	"	2s. 6d.	"

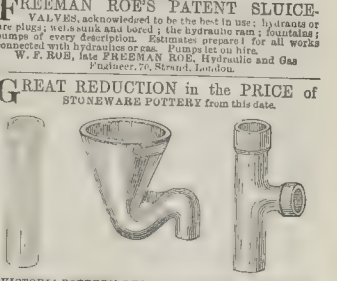
These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire plugs; well-sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps for hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 89 Blackfriars.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further relieved the public from the enormous duties and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb 11, 1856

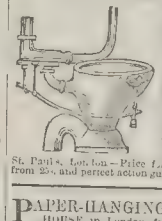
CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles distributing with powerful flush over the surface of the basin, a supply or quantity of water that is noiseless, modest, and totally prevents waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references to the highest respectability can be had, and from specimens which may be seen at and upon the Premises of the Patentee, W. PATTEN, 141 Fish-street, near St. Paul's, London.—Price for the Set and Apparatus complete, from 25s. and perfect action guaranteed.



PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is GROSSE'S WHOLESALE WAREHOUSE, 22, GREAT PORTLAND-STREET, Oxford-street, where purchasers may select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THREE FULL TRADE CHEAPER Dealers, and large consumers will do well to visit this establishment.

PAPER-HANGINGS. — JEFFERY, ALLEN, and CO. feel sure that the trade may have a large selection of their goods at their new premises, of all qualities, at the very low prices they are now offering them. Their best papers, which in quality, style, and colouring, are equal to any that can be manufactured, J. J. A. and Co. are the sole proprietors of the Gutta Percha Paper, which cannot be equalled for damp walls.—Factory, 16, Whitcomb-street, Saint Room, 600, Oxford-street.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—HALL, DIXON, and CO. Manufacturers, London, beg to call the attention of the trade to their immense STOCK of PAPER-HANGINGS, at No. 1, Oxford-street, to which is considered of both Flocks, Velvets, Satins, Marbles, Granites, and Much Woods. The whole being their own manufacture, can supply on the very best terms.

TO ARCHITECTS, BUILDERS, AND THE TRADE IN GENERAL.

THE ADAMANTEAN CLINKER, especially adapted for paving stables, yards, or any place where durability, neatness, and economy are studied—Price, in the Truck at King's-cross Station, Great Northern Railway, 3s. per ton inland.

N.B.—For samples, and further information, apply to Mr. S. DYBALL, Architect and Surveyor, 3, Steelhe, Bucklersbury, London; Mr. TOWERS, Builder, Richmond-street, Surrey; and to Mr. HINSON, at the Works, Little Bytham Station, Great Northern Railway.

FOR ABSOLUTE SALE.—THE EXTENSIVE SHIP-BUILDING ESTABLISHMENT AND IRON WORKS OF MR. C. J. MARE, AT BLACKWALL.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. FULLEN and SON, are instructed by the Assignees with the consent of the Mortgagees, to OFFER for SALE by AUCTION, at the MART, on WEDNESDAY, the 20th of JULY (unless an acceptable offer be previously made by private contract), in ONE LOT, the extensive SHIP-BUILDING ESTABLISHMENT and IRON WORKS of Mr. C. J. Mare, together with the whole of the valuable fixed PLANT and MACHINERY. These works, which together occupy a site of 14a. 3r. 30p. are situated at Blackwall, on the opposite banks of Bow-creek at its junction with the Thames, a portion of the works having a direct frontage next the Thames. The land frontages abut on Trinity-road and Orchard-place, Blackwall, and on the North Woolwich Railway, near the junction to the Victoria Dock Line, by means of which, and the North London Railway, direct communication with the northern and midland districts is established. The approach from the City is easy and frequent throughout the day, by the Blackwall and North Woolwich Lines, from their joint terminus in Fenchurch-street, by means of which the northern and southern division of the works are reached within half an hour; there is also a ferry across Bow-creek for the facility of communication. The resources of the establishment for the purposes of ship-building, conversion of iron, and general engineering works are unequalled in the world, upwards of 40,000 tons of shipping having been built and fitted in the period of 1854 from these yards, while from the forge and iron rolling mills works upwards of 17,000 tons of iron have been hammered and rolled within the same period, and from the foundries upwards of 3,000 tons of castings delivered. The high character of the work executed has gained for the firm a world-wide reputation. In the Ship-building Department, vessels have been built for the English, Turkish, Russian, Spanish, and Sardinian Governments, the Peninsular and Oriental, the General Screw, and the General Steam Navigation Companies, the Peter Mull Packet Company, the South-Western Railway Company, and others, unequalled in size, unsurpassed in speed, and without a failure in any one case. Among others may be named the renowned *Himalaya*, of 3,500 tons burthen, the *Peninsular*, the *Iberia*, the *Argo*, the *Ceylon*, the *Golden Fleece*, the *Golden Horn*, the *Indiana*, the *Jason*, the *Ivet e Emerald*, the *Genoa*, the *Trinacl*, the *Perseverance*, with many others; also yachts for the Emperor of Russia and his Highness the Viceroy of Egypt; and such are the appliances and facilities afforded by these extensive premises, that the engines with which the works are carried on is perfectly surprising. The works executed at the forge have been equal in magnitude, including crank shafts upwards of 20 tons in weight, and forgings of the largest description for the principal engineers in London, the total weight of hammered iron produced in one year exceeding 4,000 tons. The Engineering Departments have executed a considerable portion of the Britannia Tubular Bridge, upwards of 1,001 tons of wrought-iron bridges for the East-India Railways, the wrought-iron bridge for the North Kent Railway, the beautiful iron roof for the terminus of the Blackwall Railway, and the portion of the iron work at present completed for the new bridge at Westminster; while in the Boilermakers' Department, marine boilers, equal to 4,000-horse power, can be produced annually.

The principal buildings are on the freehold portion of the property, and have been erected in the most substantial manner; they include the hammer and rolling-mills, the foundries, engineers' shops, boiler-shops, and press and pattern makers' shops, and are fitted with five Nasmith's hammers from ten cwt. to five tons, the two larger ones having double furnaces, and thus affording a two-fold capacity; two tilt hammers, three sets of rolling mills for plates and bars, worked by condensing steam-engines, equal to 150-horse power; powerful shearing and punching presses, bending rolls, planing and slotting machines, drilling machines, numerous self-acting lathes, several of which are adapted for the heaviest work; smiths' forges, plate, angle, and bailing furnaces; fitters' lathes and tools, &c. The whole of the machinery, by the best makers, and with all the modern improvements, a considerable portion new within three years; a spacious boiler-makers' shop, fitted with forge, furnaces, shearing, punching, and drilling machines; steam riveting machine, travelling cranes, &c.; an angle iron shop, with massive shaping plate, furnaces, &c.; a capacious mould loft, a saw mill fitted with timber and deal sawing frames, planing, moulding, and mortising engines, worked by a 60-horse power steam-engine. In the ship-yard are twelve slips for building vessels of the largest tonnage, steam lifting saw-pits, mast house, boat-building and block-making shops, joiners' and carpenters' shops, rigging lofts, stores of various descriptions, offices, and other buildings. The situation of these works affords the greatest facility for the transmit of goods by land and water carriage at the junction of the North Woolwich Railway, and several wharfs next the water side, with powerful cranes one of them being a steam crane equal to twenty-five tons. The proximity of the East India and Victoria Docks is also of great advantage. The transactions of business negotiated by and through the firm during 1854 and 1855 have exceeded 2s. per ton, while the numerous terminii of railways in the metropolis, from which a large quantity of worn rails are annually obtainable, together with the vast accumulation of waste iron from the different manufacturing establishments in London, ensure a constant and sufficient supply of scrap iron for the purposes of the mills and forge on the best possible terms. The construction of these works, the whole of which has been effected within the last fourteen years, has involved an outlay approaching 250,000*l.* expended under the immediate superintendence of a practical man, who shows the formation of an establishment of great extent, enormous in its capabilities, unrivalled in situation, enjoying the highest reputation for the character of the works performed, possessing facilities for the transaction of business unequalled by any, and containing within itself all the accessories requisite to command a large and lucrative trade. The tenure of the property is partly freehold and partly leasehold.

The works may be viewed till the sale, by cards only, which may be obtained shortly, together with printed particulars, of CHARLES LEE Esq. Official Assignee, Aldermanbury; of Messrs. LAWRENCE, SHARPLES, and HOVES, Solicitors, Old Jewry-chambers; of Messrs. NEWTON and EVANS, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. FULLEN and SON, 80, Fore-street, Cripplegate; and of Messrs FULLER and HORSEY, Billiter-street, London.

TO IRONMONGERS, CABINET-MAKERS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, the 22nd of JULY, at ELEVEN, at the SALE-ROOMS, No. 28, Leadenhall-street, in lots, without reserve, removed for the convenience of sale, a STOCK of IRONMONGERY, including 500 locks, wrought and cast hinges, an assortment of cabinet brass work, two tops cut and clear steel, Sheffield and Lancashire tools, sixty Bilston grate-tops, two cast-iron dwarf fire-place register and Rumford stoves, black hollow-ware, two gas chandeliers, and a general assortment of ironmongery.—To be viewed on Monday previous to the sale, when catalogues may be had, at the Rooms; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO IRONFOUNDERS, IRON MERCHANTS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Assignees of R. J. Polehaze to SELL by AUCTION, at the AUCTION MART, Bartholomew-lane, on WEDNESDAY, JULY 30, 1856, at TWELVE o'clock, in lots without reserve, 250 tons RED CHERU SHELLS from 7 inches to 10 inches diameter, lying at Woolwich, made from cold blast and Scotch pig iron.—To be viewed in bulk, by permission, two days previous to the Sale. Catalogues may be had at the Mart; of Messrs. ASHLEY and TEE, Solicitors, 7, Old Jewry; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Highly finished Condensing Steam engine, by Nasmith

MESSRS. FULLER and HORSEY are instructed by the First Commissioner of her Majesty's Board of Works to SELL by AUCTION, on ROYAL LAND, Stepney, on THURSDAY, the 7th of AUGUST, 1856, at ELEVEN o'clock, a highly-finished, direct acting, condensing STEAM-ENGINE, by Nasmyth, with 14 inch cylinder, 3 feet stroke, D slide-valve, throttle-valve, and governors, air-pump and two feed pumps, with solid gun-metal eccentric, brass wrought-iron crank, double-surface condenser, and apparatus, made for the Houses of Parliament.—To be viewed on Wednesday previous to the sale, when catalogues may be had, on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO SHIP-BUILDERS, TIMBER-MERCHANTS, and OTHERS.

Important Sale of valuable Oak Timber, in the parishes of Egerton, Shorelam Chel-field, and Farningham, Kent

MR. WM. HODSOLL is favoured with instructions from Sir P. H. Dyke, Bart. and Wm. Waring, esq. to SELL by AUCTION, at the BULL INN, DARTFORD, Kent, on THURSDAY, JULY 24th, 1856, at THREE o'clock, 663 very superior OAK TIMBER TREES, including many of large melmge and excellent quality, lying in various woods in the above-named parishes. Also about 121 oak sellers, 5 ash trees, 9 capital larch, and 3 large beech trees. 80 stacks of oak cordwood, about 4,000 oak-top faggots, 2,030 bavins, 250 bundles of spray, &c. The timber at the property above named may be viewed at any time previous to the sale, and will be shown by Richard Packman, Crockenhill, Eynsford; Philip Taylor, of Hartfield Hall, Chelsfield; and James Dunmull, of Button-street, near Farningham. Catalogues may be had eight days previously at the Inns in the neighbourhood; at the Place of Sale; of the persons who will show the timber; and of Mr. WILLIAM HODSOLL, Auctioneer, &c. Farningham, Kent.

TO BUILDERS, WHEELWRIGHTS, CARPENTERS, and OTHERS.—Saw Mills, Eynsford, Kent.—Sale of a large quantity of valuable Surplus Stock of Timber, &c.

MR. WM. HODSOLL is instructed to SELL BY AUCTION, at the EYNSFORD SAW MILLS, on FRIDAY, JULY 25th, 1856, at ELEVEN o'clock, a quantity of excessingly useful TIMBER, of various sorts, suitable for builders and a variety of purposes: comprising some excellent oak, ash, elm, beech, spruce, and fir balk, and wainscot balk, foreign and English scantling, quantity of English fir, cut into halvings, &c. a variety of slabs, fencing stuff, rails, ash bats, useful wheelers' ware, many hundreds of firewood. May be viewed three days previous to the Sale, and catalogues had one week previously, at the Inns in the neighbourhood; at the Place of Sale; and of Mr. WILLIAM HODSOLL, Auctioneer, &c. Farningham, Kent.

N.B. An Omnibus leaves the Dartford Station on the arrival of the 10 a.m. train from London, for Farningham, which is 1¼ miles only from the saw Mills.

FREEHOLD BUILDING LAND, four miles from the City close to the Forest-gate Station, Stratford, Essex.

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the MART, on MONDAY, JULY 28th, at TWELVE, in fourteen lots, on convenient offer previously made), TEN ACRES of FREEHOLD BUILDING LAND, situate close to the Forest-gate Station, on the Eastern Counties Railway, near Wanstead Forest, and admirably suited for occupation of villa and other genteel residences. The lots will have frontages varying from 50 feet to 80 feet each to well-made roads. May be viewed, and printed particulars had at the Dale and Ould Forest-gate; of D. B. Mapleson, Esq. 2 Kings Arms-yard, Moorgate-street, at the Mart; and of Messrs. H. BROWN and T. A. ROBERTS, 22, Turogmorton-street.

FREEHOLD BUILDING LAND.—CARSHALTON, SURREY, near the Railway Station.

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the MART, on MONDAY, JULY 28, at TWELVE, in Ten Lots (unless an offer be previously made), about TWELVE ACRES of FREEHOLD BUILDING LAND, situate within a few minutes' walk of the Carshalton station, on the Croydon and Epsom Railway, about eleven miles from London. The lots will have frontages varying from 50 feet to 80 feet each, and contain from half an acre to two acres each. The land stands on an eminence, commanding extensive views, is very dry, and desirably situate for first-class residences, the neighbourhood being particularly healthy.—May be viewed, and printed particulars had at the Kilbourne Hotel, Carshalton; of D. R. Seaden, Esq. 2, King's Arms yard, Moorgate-street; at the Mart; and of Messrs. H. BROWN and T. A. ROBERTS, 22, Turogmorton-street.

NO. 5, CASTLE-STREET, HOLBORN-BARS.—120,000 feet of VENEERS. ABSOLUTE SALE.

MESSRS. HARDY have received instructions to SELL by AUCTION, on the PREMISES, on THURSDAY, JULY 24, at TWELVE o'clock, without reserve, in lots, suitable to all classes of buyers, about 120,000 feet of very superior WALNUT, Mahogany, Rose-wood, Bird's-Eye Maple, and Dyewood Veneers.—Catalogues on the Premises; and of the Auctioneers, 33, Castle-street, Holborn-bars.

SOUTHALL, MIDDLESEX.—IMPORTANT to BUILDERS.—An excellent Freehold Residence, seated in park-like grounds, and seventeen acres of rich meadow land, having valuable frontages to the high road, situate close to the station, with immediate possession.

CHINNOCK and GALSWORTHY have been favoured with instructions to SELL by AUCTION, on THURSDAY, JULY 24th at TWELVE, at the MART (unless previously disposed of by private treaty), the important FREEHOLD and small part Copyhold ESTATE, late the residence of Mrs. Sergeant Lawes, situate, near the high road at Southall, comprising a good substantial family residence, with double coach house, delightful pleasure and kitchen gardens, fish-ponds, park like grounds, well timbered, and seventeen acres of superior meadow land in high cultivation; the whole lying in a ring fence and having very valuable build ng frontages. Descriptive particulars, with plans may be obtained of Thos. Brownsing, Esq. Solicitor, 1, Hatton-court, Threadneedle-street; of Mr. Wm. Wales, Plan Surveyor, Great St. Helen's; and at the Auctioneers' Offices, 28, Regent-street, Waterloo-place.

LEASEHOLD ESTATES.

MR. PEAKE is ordered to SELL by AUCTION at the MART, on WEDNESDAY, JULY 30, 1856, at TWELVE o'clock, in lots, several LEASEHOLD ESTATES, situate in Southwark and Bermondsey, producing in the aggregate 630*l.* per annum, held at low rents.—Particulars obtained of Messrs. Symes, Teesdale, and Sandilands, Solicitors, 33, Penchurch-street; Messrs. Willoughby, Cox, and Lomb, Solicitors, 13, Cliff's-inn; Mr. Williamson, Solicitor, High-street, Borough; Messrs. Jones and Wright, Solicitors, 9, Lawrence Pountney-hill; Mr. Sunsers, Solicitor, 22, Hare-lane; at the Auction Mart; and at Mr. Peake's Offices, 44, Tooley-street, Southwark.

TO BUILDERS Thirteen capital Brick-built Carcasses, in excellent repair, without reserve.

MESSRS. SPILLMAN and SPENCE will SELL by AUCTION, at the MART, on THURSDAY, JULY 24, at TWELVE, thirteen capital sound CARCASSES for ten and eight room houses, six having shops; also the Brunswick Tavern and substantial and imposing stores, admirably complete, well situate in Brunswick-place, Brunswick-road, and Whittington-place, in the high road, Upper Holloway, near the Archway Tavern.—An undeniable locality—generally held for 99 years, at low ground-rents.—Particulars and conditions of sale at the Mart; of Geo. Carlisle, Esq. Solicitor, 3, Size-lane; James Prichet, Esq. Solicitor, 17, Salisbury-square, Fleet-street; and at the Auctioneers' Offices, 42, Bell-yard, Temple-bar.

Final Portion of the Valuable Stock of Messrs. Browne and Co. University-street, including Marbles, Bronzes, Mosaics, Chimney-pieces, Scagliola Pedestals, a Stained Glass Window, Architectural Casts, &c.

MESSRS. RUSHWORTH and JARVIS beg to announce that the SALE of the final portion of the valuable STOCK of Messrs Browne and Co. will take place on WEDNESDAY, the 30th of JULY, and two following days, at the GALLERIES, University-street, and will include VASES, STATUES, and GIRANDOLES, in marble and stone, adapted for gardens and pleasure grounds; two white marble baths from Venice, a quantity of Parian statuettes, chimney-pieces of various designs; many very beautiful statuary and rich coloured marble chimney-pieces designed with great taste and executed by first-rate artists, including a superb chimney-piece, five feet by six feet of scagliola, in pebble tints cameo'd ra, brackets, and ornaments; a collection of valuable ancient casts, from celebrated originals, worthy the attention of builders and architects; also a variety of objects of taste and utility, being the last portion of this well known and tastefully-selected assemblage. May be viewed two days prior to the sale, and catalogues had, on the Premises; and at the Offices of Messrs. Rushworth and Jarvis, Saville-row, Regent-street; and 19, Change-alley, Cornhill.

WEYMOUTH.—TO BE SOLD BY AUCTION, BY

MR. MILLEDGE, on WEDNESDAY, the 27th day of AUGUST, 1856, at LUCE'S ROYAL HOTEL, Weymouth, at THREE o'clock in the afternoon (unless an acceptable offer shall be previously made by private treaty), by one lot of the exceedingly desirable Within Tarte-le Leaf Contract MARINE VILLA RESIDENCE, with garden, hothouses, and greenhouses adjoining, forming a most unique and retired residence, admirably adapted for a small family, and combining the advantages of entire seclusion and privacy in the midst of the varied society of this salubrious watering-place. The house, which was built five years ago with much taste and regardless of expense, stands in a pleasure-ground of above an acre, elegantly laid out with well-selected flowers and shrubs. One of the sitting-rooms opens into a conservatory 25 feet by 12, stocked with choice and rare plants. The furniture and plants may be taken at a valuation, at the option of the purchaser. The property is in the occupation of the late William Turtle, Esq. and his Court.

At the same time will be Sold, in separate lots, a Dwelling, with spacious store-rooms, used as a gardener's residence, and Sittings in St. Mary's Church.

The residence and pleasure ground are held in fee, the garden for one life, and the dwelling-house, store-rooms, and sittings for terms of years.—The property may be viewed by written orders only, to be obtained from Messrs. Downes, Phelps, and Bennett, 14, Red Lion square, London; or Mr. Milledge, Auctioneer, &c. 4, Frederick place, Weymouth, from whom further particulars may also be obtained.

HAMMERSMITH; CHANCELLOR-ROAD.—Ten small-sized Residences, nearly ready for occupation, and Five unfinished Houses adjoining.

MR. ROBINS will SELL by AUCTION, by direction of the mortgagee, at the AUCTION MART, on THURSDAY, JULY 24, at TWELVE, in separate lots, TEN pleasant, small-sized RESIDENCES, nearly ready for occupation, being from No. 11 to 20, both inclusive, and FIVE UNFINISHED HOUSES, Nos. 21 to 25, near the railway, in the Chancellor-road, Hammersmith a short distance from the church and Broadway, and near steam-boat communication. The houses offer excellent accommodation for moderate-sized families and are held direct from the freeholder for about eighty years, at low ground-rents.—May be viewed daily, and particulars had at the Castle-tavern, Hammersmith; of J. Adonis, Esq. Solicitor, 27, Montpelier-place, at the Auction Mart; and at Mr. Robins's Offices, Covent-garden.

KENSINGTON-PARK, NOTTING-HILL.—Most important and eligible Plots of Freehold Building Land, in this admired Locality: the Roads and Sewers formed.

MR. ROBINS is instructed to SELL by AUCTION, at the MART, on THURSDAY, JULY 24, at TWELVE, in several lots, FREEHOLD BUILDING LAND, of an extremely attractive and important description, intended to form both sides of the Sussex road, leading from the Ladbroke-road: also a continuation of Clarendon-road North and Somerset-terrace, at Kensington-park, Notting-hill. The great beauty and advantages of this much-admired locality have been most capably described by the auctioneer, who directs it to be the plan for a building operation, which is now rapidly advancing towards successful completion, 14 houses having been already nearly finished, some in the vicinity. Residences of a superior character have been erected, and are in course of being finished. A planoeat the public will at once see the extreme eligibility of the land now offered for sale with the most beautiful part of the estate, and the advantages to be derived from assisting to carry out the original scheme. The roads and sewers will be offered in lots of moderate size and value, capable of being subdivided with advantage and profit; and the building public are invited to inspect the plans and correspond. The roads and sewers are already formed and will shortly be finished.—May be viewed, and particulars, with plans, had at the Clarendon Hotel, close to the land; of Messrs. H. and G. Lake and Kendall, Solicitors, 10, Lincoln's-inn-square; at the Mart; and at Mr. Robins's Offices, Covent-garden.

NORWOOD, SURREY.—Capitalists, Speculators, and Builders.

MR. MOXON will SELL, at the AUCTION MART, on TUESDAY, JULY 29, a very desirable FREEHOLD ESTATE, comprising a family residence, known as Camfrau House, with gardens, orchard, and several paddocks, well stocked with fruit trees, situate on a beautiful elevated spot, within a short distance of Norwood Church, a mile from the Crystal Palace, and close to an intended station on the West end and Crystal Palace Railway. The land has important double frontages, and contains very superior brick earth.—Particulars and plans are now ready.—3, St. Martin's-place, Trafalgar-square.

COPTHORNE COMMON, near the Three Bridges Station, on the London and Brighton Railway.

MR. MOXON will SELL, at the AUCTION MART, on TUESDAY, JULY 29th, by direction of the Mortgagee, SIX ACRES of valuable FREEHOLD LAND, eligible for building, three miles from the Three Bridges Station and two from the Reigate Station on the East Grinsted Railway.—Particulars of Messrs. Wadmow and Salmon, 30, Great George street; and of the Auctioneer, 3, St. Martin's-place.

TOTTENHAM Stock of a Builder, excellent Scaffolding, Van, Cart, active Van Horse, and Effects.

MR. A. RICHARDS will SELL by AUCTION, on the PREMISES, near the Plough Inn Tottenham, on TUESDAY, JULY 29, at TWELVE, by direction of Mr. A. G. Fidler, who has discontinued the BUILDING BUSINESS, comprising mahogany plank and board, dry deals, and other woods, planks, boards, and battens, of various thicknesses, oak trees, posts, planks, elm board, new 4-panel and other doors, sashes and frames, mouldings, &c. ironmongery, long scaffold poles, flooring boards and boards for hoarding and navigators barrows, variety of materials, implements, &c.—May be viewed the day preceding and morning of sale.—Catalogues obtained on the Premises, and of the Auctioneer, Tottenham.

THE CHE-TNUTS, TOTTENHAM, MIDDLESEX.—Valuable Freehold Building Land, with extensive frontages, land-tax redeemed.

MR. A. RICHARDS will SELL by AUCTION, at GARRAWAY'S, on TUESDAY, AUGUST 5th, at TWELVE o'clock, in one lot (unless previously disposed of by private contract), FOUR EIGHTH PARTS or SHARES of a very eligible FREEHOLD BUILDING LAND, in an excellent situation, near Tottenham High Cross, between the Great Eastern Tottenham Railway Station, having frontages to the Broad Road and Down-lane. A road can be formed through the estate, which would be the principal thoroughfare to the railway station. The estate is within 2 miles of Bishopsgate, and contiguous to the railway, presents a very favourable opportunity for a building speculation, there being a great demand for respectable residences in the above locality, viewed seven days previous to sale. Particulars may be obtained of Edwd. Stanford, Esq. Solicitor, 7, Sackville street, Piccadilly; at Garraways; and of the Auctioneer, Tottenham.

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The Builder.

Architect, Engineer, Operative & Artist.

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THE NEW SOCIETY of PAINTERS in WATER COLOURS WILL CLOSE their Twenty-second Annual Exhibition on SATURDAY next, the 26th JULY. Now open, at their Gallery, 53, Pall-mall, near St. James's Palace, daily, from Nine till dusk. Admission, 1s.; Season Ticket, 5s.
JAMES FAHEY, Sec.

BUILDERS' BENEVOLENT INSTITUTION.—The NINTH ANNUAL MEETING of the Subscribers and Friends of this Charity will be held at the London Tavern, on THURSDAY next, the 31st inst. at THREE o'clock in the Afternoon—CHARLES LUCAS, Esq. President, in the chair—to receive the Report for the past year; to elect the President, Treasurer, Directors, and Auditors for the year ensuing; and other matters connected with the welfare of the Institution.
A. G. HARRIS, Secretary.
24th July, 1856.

EXHIBITION of ART-TREASURES of the UNITED KINGDOM, to be OPENED at MANCHESTER in MAY, 1857.

PATRONS.
Her Majesty the QUEEN.
His Royal Highness Prince ALBERT.
PRESIDENT.
The Earl of ELLESMERE, K.G. Lord-lieutenant of Lancashire.
EXECUTIVE COMMITTEE.
Thomas Fairbairn, esq. Chairman.

The Mayor of Manchester.	Joseph Heron, esq.
Thomas Ashton, esq.	Edmund Potter, esq.
William Entwisle, esq.	Sigismund J. Stern, esq.

GENERAL COMMISSIONER.—John C. Deane, esq.

The object of the proposed exhibition is to secure a collection of the choicest and most instructive works which illustrate the Ancient and Modern Schools of Art Oil Paintings, Water-colour Drawings, Engravings, Sculpture in Marble and Stone, Carvings in Ivory and Wood, Bronzes, Coins, and Works of Artistic Excellence, in Gold, Silver, Steel, or Iron, in Glass and Earthenware, Terra Cotta and Plaster, will necessarily constitute the main features of the Exhibition.

The Executive Committee respectfully invite communications from possessors of Art Treasures who may feel interested in the success of a scheme which aims at the worthy illustration of the art-wealth of the United Kingdom.

From the known catalogues of the resources of the country, thus extended, the committee propose, with the assistance of the makers of acknowledged competency, to make such a selection as will enable them to place before the world an Art Exhibition not less valuable to the student from its chronological arrangement, than attractive to the public from its beauty and completeness.

The committee do not desire to elicit from manufacturers specimens of their productions, either for competition or sale.

The Exhibition Building will be erected on a site adjoining the Botanic Gardens, distant about two miles from the centre of the City, and quite free from atmospheric impurities. Great consideration has been given to the mode of lighting the halls for the display of pictures and sculpture, and every precaution will be taken to protect the works of art from injury.

In all cases where desired by the owners, the Committee will insure the art treasures contributed.

There will be railway communication from all parts of England, direct to the Exhibition Building, and contributions will be received from, and returned to their owners, free of expense.

Communications may be addressed to the Chairman, 100, Mosley-street, Manchester.—By order of the Executive Committee,
CHARLES B. MINCHIN, Secretary.
Offices of the Exhibition, 100, Mosley-street, Manchester.

COMPETITIONS.

PRIZE ESSAY on CANALS.—A PREMIUM of 100*l.* will be given by the Committee of the Canal Association to the Author of the BEST ESSAY on the PRESENT CONDITION and FUTURE PROSPECTS of CANALS and CANAL CONVEYANCE; with Suggestions as to the Points to which attention, with a view to improvement, should be principally directed. The Essay must be sent in on or before the 31st DECEMBER, 1856, to the Honorary Secretary, from whom further particulars may be had on application.
THOMAS WILSON, Hon. Sec.
Aire and Calder Navigation Office, Leeds, 1st July, 1856.

COMPETITIONS.

TO ARCHITECTS.—Weston-Super-Mare Improvement and Market Act, 1842 and 1851.—The Commissioners acting under and by virtue of the above Acts of Parliament are prepared to receive PLANS and SPECIFICATIONS for the ERECTION of a new TOWN-HALL over their Market-place, the cost of such building not to exceed 2,000*l.* A plan of the ground, if required, may be obtained by application to the Clerk. The drawer of the plan approved by the Commissioners will receive a premium of fifteen guineas, such plan to be the property of the said Commissioners. Plans must be sent, free of carriage, to the Office of the Clerk, No. 5 South Parade, Weston-super-Mare, aforesaid, on or before the 8th day of SEPTEMBER next.
WILLIAM SMITH, Clerk to the Commissioners.
Dated, Weston-super-Mare, July 18th, 1856.

CONTRACTS.

TO BUILDERS.—TENDERS are required for ERECTING a WAITING-ROOM and OFFICES attached at No. 27, Lower Shadwell. The drawings and specification may be seen at the Office of the Architect, 35 Bloomsbury-square, on and after MONDAY, the 28th instant. Tenders to be sent under Mr. WILLIAM PAGE, 3, Cross-lane, St. Mary-at-Hill, on or before FRIDAY, the 1st AUGUST. The lowest Tender will not necessarily be accepted
WILLIAM MUNT, Architect and Surveyor.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London district hereby gives Notice, that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall mall, on or before the 6th of AUGUST next, for BUILDING a STABLE and SUPPLYING a TANK to contain 10 000 gallons of water, at the Wellington Barracks, St. James's-park. Printed schedules and forms of Tender may be obtained at the Royal Engineers' Office, 11, James-street, Pimlico, between the hours of TEN and THREE o'clock, from the 23rd of JULY to the 5th of AUGUST next inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.
Royal Engineers' Office, 11, James-street, Pimlico,
18th July, 1856.

NOTICE to BUILDERS and CONTRACTORS.—WAR DEPARTMENT WORKS. Sealed TENDERS for the ERECTION of a FORT and BARRACK at Mount Tourville, Alderney, will be received by the Director-General of Contracts, War Department, Pall-mall, London, on or before the 30th day of SEPTEMBER next, after which date no Tender will be received. Detailed drawings may be seen, and every requisite information obtained, at the Royal Engineer's Office, Alderney, from the 7th to the 31st of AUGUST next, and at the Office of the Inspector-General of Fortifications, War Department, Pall-mall, from the 1st to the 31st of SEPTEMBER next. The terms of contract, specification for the works, and forms of Tender, can be procured at the Office of the Director-General of Contracts, War Department, Pall mall, London, and at the Royal Engineer Offices at Guernsey and Alderney. Each Tender forwarded must be attached to a copy of the terms of contract and specification. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders. Tenders for the above work to be addressed to "The Director-General of Contracts, War Department, Pall-mall, London, and endorsed "Tender for Erecting a Fort and Barrack at Mount Tourville, Alderney."

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The principal Officers of Her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following CONTRACT, viz.:—For the several works proposed in the ERECTION of ADDITIONAL BUILDINGS, together with other Additions and Improvements at the BARRACKS at BUGGAR'S BUSH, DUBLIN. Persons desirous of Tendering for the same, will receive every information on application at the District Commandant Royal Engineer's Office, Lower Castle-yard, Dublin, and may obtain specifications with the terms of Contract. The Soldiers' Quarters, Cooking-house, and Hospital to be completed on or before the 31st MARCH, 1857, and the remainder of the works on or before the 31st AUGUST, 1857. The letters of Tender with specifications to be sealed, and transmitted under cover to "The Director-General of Contracts, War Department, Pall-mall, London," so as to be received on or before the 5th day of AUGUST, 1856, and to be marked on the outside, "Tender for Works at Buggar's Bush Barracks, Dublin."
Commanding Royal Engineer's Office, Dublin,
July 17, 1856.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director-General of Contracts, at the War Department, Pall Mall, London, on or before MONDAY, the 8th SEPTEMBER next, from all persons desirous of CONTRACTING with the War Department for the ERECTION of a MILITARY HOSPITAL, at NETLEY, in the parish of Hound, in the county of Southampton. Plans and specifications of the work may be seen, and forms of Tender, and every other necessary information obtained, on application at the Surveyor's Office at the War Department, Pall-Mall, London, till the 6th SEPTEMBER, Sundays excepted, between the hours of NINE AM and FIVE PM. The site may be inspected, and information obtained on application to MAJOR RAVENHILL, Commanding Royal Engineer, Netley-cliff; or at the Royal Engineer's Office on the ground. The person whose Tender may be accepted, will be required to enter into a bond with two eligible sureties, jointly and separately to be bound under a penalty of 10,000*l.* for the due performance of the Contract. Tenders to be addressed, "The Director General of Contracts," War Department, Pall-Mall, London, and to be delivered free, endorsed, "Tender for Works for Military Hospital, Netley." No Tender can be admitted after the said 8th SEPTEMBER, 1856.
N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
R. O. MENNIE, Surveyor.
War Department, Pall-Mall, July, 1856.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives Notice, that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall-mall, London, on or before the 6th of AUGUST next, for PAVIATING and BUILDING FOUNDATIONS and BASEMENT STORY, up to plinth, of the Barracks to be erected at the Foreign ground, Kensington. Printed schedules and forms of Tender may be obtained at the Royal Engineers' Office, 11, James-street, Pimlico, between the hours of TEN and THREE o'clock, from the 31st of JULY to the 5th of AUGUST next, inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.
Royal Engineers' Office, 11, Jame-treet, Pimlico,
22nd July, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ROYAL ENGINEER CONTRACT. The Commanding Royal Engineer of the Woolwich District hereby gives Notice, that sealed TENDERS, in one sum, will be received at the Office of the Director-General of Contracts, Pall mall, London, on the 30th of AUGUST, 1856, from such persons as may be desirous of CONTRACTING for the ERECTION, at Shoeburyness, of a HOSPITAL, with the necessary out-building, enclosure wall, &c. of quarters for the Hospital steward and four staff-sergeants, and of a quarter for the Assistant Superintendent of Experiments; also for an extension of the present gun-shed, and the erection, contiguous thereto, of a store and offices. The specification and drawings may be seen, on application at the Royal Engineer Office, Grand Depot, Woolwich, between the hours of TEN and FOUR, up to the 6th AUGUST, 1856, inclusive. The War Department reserves themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Grand Depot, Woolwich,
15th July, 1856.

ROYAL ENGINEERS' CONTRACTS.—WAR DEPARTMENT.—The War Department being about to enter into a CONTRACT for ALTERATIONS and ADDITIONS to certain portions of the ROYAL ARTILLERY BARRACKS, at Woolwich, such persons as may be desirous of Tendering for the same may receive information thereto by applying to the District Clerk of Works, at the Royal Engineers' Office, Grand Depot, Woolwich, between the hours of TEN and FOUR, up to the 6th of AUGUST, 1856. Tenders to be delivered at the Office of the Director-General of Contracts, Pall-mall, London, on the 13th of AUGUST, 1856.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

AMBERGATE, NOTTINGHAM, and BOSTON and EASTERN JUNCTION RAILWAY and CANAL COMPANY.—To CONTRACTORS.—Notice is hereby given, that the Directors of the above Company will meet at their Office, Peterborough, Northamptonshire, on MONDAY, the 4th day of August next, at ONE o'clock in the afternoon, to receive TENDERS for the ERECTION of STONE PIERS, ABUTMENTS, and WING WALLS, ready to receive the wrought iron girders for a bridge to cross the Midland Railway and old Trent-lane, at Sneinton, near Nottingham, having a centre opening of about 30 feet, and two side openings each of about 20 feet, measured on the skew face. Drawings and specifications may be seen, and further particulars obtained, upon application to Mr. UNDERWOOD, the Engineer, at the Office of the Company, on or after the 29th instant. Bills of quantities, with the form of Tender, will be furnished upon payment of one guinea. All Tenders must be sealed and addressed to the Secretary. No Tender will be received after TWELVE o'clock at noon of the said 4th day of AUGUST.—By order,
JNO. GOUGH, Secretary.
Company's Offices, Nottingham, July 17, 1856.

TORQUAY WATERWORKS.—The Local Board of Health hereby give notice that TENDERS for the SUPPLY of about 600 TONS of CAST IRON PIPES, &c. of various sizes and weights, specified in the plans are requested for inspection at the Townhall, Torquay, the usual residence of the Engineers, Messrs. EASTON and AMOS, Grove, Southwark, London. Sealed Tenders, addressed to the undersigned, to be delivered at the Townhall, Torquay, on or before TWELVE o'clock on TUESDAY, the 5th day of AUGUST next. The Local Board do not bind themselves to accept the lowest or any Tender.
GEO. E. HEARDER,
Torquay, Devon, 19th July, 1856. Clerk to the Local Board.

TO BUILDERS.—Parties who are willing to TENDER to BUILD a HOUSE for R— W—, Esq. Surgeon, at Heale-de-green, Harewood, will learn, by calling, as the plans, &c. are Mr. THEBERTON'S, Joiner's shop, Heale-de-green, between the hours of TEN and FOUR, from the 26th of JULY to the 1st of AUGUST (both days inclusive), where further information will be given.
Kemsall-green, Harewood, 1856.

TO BUILDERS.—Persons willing to CONTRACT for the ERECTION of a PARSONAGE-HOUSE in Saint Michael's Parish, Lichfield, may see the drawings and specification on and after MONDAY, the 28th inst. at the Offices of the Architect, Mr. JOHNSON, Lichfield. Sealed Tenders, addressed to be sent to Mr. JOHNSON, on or before the 8th of AUGUST. The Committee do not bind themselves to accept the Lowest Tender.

TO BUILDERS.—BLANDFORD UNION. The Guardians of the Blandford Union are in TENDERS from persons desirous of CONTRACTING to BUILD a NEW WORKHOUSE, for the above Union. The plans and specifications for such new Workhouse may be seen on and after the 23rd inst. at the Office of the Union; and all information required can be obtained from Mr. C. G. CREEKE, Architect, Bournemouth, Hants. Tenders to be sent to the Clerk, on or before FRIDAY, the 8th of AUGUST next.—By order of the Board,
W. H. ATKINSON, Clerk to the Union.
Blandford, July 17, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

TENDERS are required for the proposed TAKING DOWN, RE-BUILDING, and REBUILDING of a RAILWAY STATION, and the ERECTION of a SHED to same, for the Stockton and Darlington Railway Company, at Stockton-on-Tees. Parties willing to give in Tenders may inspect the drawings and specifications, and the situations of the Railway Station and Shed, on or at my office in Bradford on and after WEDNESDAY, the 23rd instant, until WEDNESDAY, the 6th day of AUGUST, on or before which day, sealed Tenders are to be delivered at my office aforesaid.—The company do not pledge themselves to accept the lowest or any Tender.

E. MILNES Architect, Bradford York shire.

NEWCASTLE-UPON-TYNE. — QUAYSIDE IMPROVEMENTS.—To BUILDERS, CAPITALISTS, &c. — The Corporation of Newcastle-upon-Tyne having purchased, by virtue of an Act of Parliament, the whole of the property on the Quayside, damaged by the late fire, also a large portion of the surrounding property, for the purpose of improving that part of the town, and having laid out the same into several new streets, which, when built, will form the best business-streets in the town, are now prepared to receive TENDERS for the purchase of the whole or any of the SITES on each side of the Lateral street, No. 1 and also a great portion of the parallel street according to plans and conditions approved of by the Council. The great demand for offices, shops, for wholesale and retail purposes and warehouses, in this particular part of the town will ensure to capitalists a safe and valuable investment. Plans and conditions may be seen on application to the Town Clerk, the Town Surveyor or JOHN DOBSON, Esq. Architect Newcastle-upon-Tyne. Tenders, marked "Tenders for Sites on Quayside," addressed to the Town Clerk, will be received until the 29th inst.

N.B.—A large quantity of old building materials on the ground will be sold to such purchaser of sites as may require the same.

TO BUILDERS and OTHERS. — The Directors of the Commercial Gas Company will meet on FRIDAY, the 1st of AUGUST, to receive TENDERS for the ERECTION of a HOUSE upon the Company's works at Stenney. Plans and specifications can be seen, and particulars obtained upon application to the Company's Engineer on the works, between the hours of TEN and FOUR o'clock.—By order of the Board,

GEORGE JAQUES, Secretary

Stepney 14th July 1856.

NORTHAMPTON IMPROVEMENT COMMISSIONERS.—Notice is hereby given, that the Commissioners for Improving the Town of Northampton will, at their meeting to be held at the Guildhall, on WEDNESDAY, the 30th instant at HALF PAST SIX in the evening, receive TENDERS for the SCAVENGING of the ROADS, and removing of all sweepings ashes, &c within the limits of the said town, for the space of twelve months commencing on the 1st AUGUST next. Security must be given for the due performance of the contract; and the Commissioners do not bind themselves to accept the lowest or any Tender. Specifications, conditions, &c may be seen at the Office of the Surveyor, Wood-street, Northampton, up to the 29th instant. Tenders must be delivered to the Clerk to the Commissioners by TWELVE o'clock at noon of WEDNESDAY, the 30th inst.

TO BUILDERS.—HIGHBRIDGE CHURCH.—Plans and specifications for BUILDING the above CHURCH, may be seen on application to Mr. S. NORTON, at Highbridge, from WEDNESDAY, the 16th, to SATURDAY, the 26th inst.; or at the Office of the Architect, Mr. NORTON 24, Old Bond-street London. Tenders for the works will be received by GABRIEL S. POOLE, Esq. Bridgewater, not later than the 30th instant. The lowest tender will not of necessity be accepted. The site is near the Highbridge Station, on the Bristol and Exeter Railway

TO BUILDERS.—ABERSYCHAN SCHOOLS, PONTYPOOL.—The Ebbw Vale Iron Company hereby invite Builders to submit TENDERS for the immediate ERECTION of SCHOOL BUILDINGS for 800 CHILDREN, with TEACHERS HOUSES attached, at Abersychan. The plans and specifications may be seen on application to Mr. RODEN, at the Company's Office at Abersychan from MONDAY, the 21st inst. till SATURDAY, the 2nd of AUGUST, on or before which day Tenders are to be properly indorsed, and left at the Architect, Mr. NORTON 24, Old Bond street, London. The Company is not bound to accept the lowest or any Tender, unless satisfactory to their Architect.

BOROUGH of LEEDS.—To CONTRACTORS.—WANTED, by the Town-hall Committee of the Borough of Leeds, TENDERS for the ERECTION of a TOWER on the New Town-hall Plans and specifications may be seen at the office of Mr. CUTHBERT BRODRICK, Architect, Leeds, on and after the 28th instant, until sealed Tenders are to be sent in to the Town Clerk's Office, on or before the 12th AUGUST next, addressed "To the Chairman of the Town-hall Committee Tenders for Town-hall Tower." The Committee do not pledge themselves to accept the lowest Tender.—By order,

JOHN A. AIKIN, Town Clerk.

Leeds, 18th July, 1856

BOROUGH of LEEDS.—HOLBECK BURIAL GROUND.—CONTRACT A.—The Burial Grounds Committee of the Council of this Borough are prepared to receive TENDERS for the ERECTION of TWO CHAPELS, TWO LODGES a BOUNDARY WALL, and the Construction of Roads and Approaches to the above named intended Burial Ground. The plans and specifications may be seen, until the Mid-autumn, at the office of Mr EDWARD FILLITER, Borough Engineer and Surveyor 10, Brook-street, Leeds where all Tenders to be sent to the Town Clerk's Office addressed to "The Chairman of the Burial Grounds Committee," not later than TWELVE o'clock at NOON, on FRIDAY, the 1st day of AUGUST next. The Committee do not pledge themselves to accept the lowest Tender. By order,

JOHN A. AIKIN, Town Clerk.

Leeds, July 17th, 1856.

TO BUILDERS and OTHERS.—Notice is hereby given, that plans and specifications for a NEW CHURCH and ALMSHOUSE, in the parish of Bedminster, in the City of Bristol, will be lying at the Offices of Messrs MILES and KINGTON, 61 Queen-square Bristol, on MONDAY, 28th of JULY, and five following days, from TWELVE till FOUR o'clock. All persons willing to CONTRACT for the execution of the Works are required to send in sealed TENDERS, directed to Rev. R. H. W. MILES, 61, Queen-square, Bristol, on or before 12th AUGUST next, ensuing. The lowest Tender, or any, will not necessarily be accepted. The one they will be required to enter into the usual legal bond, with two good and approved sureties, for the due execution of the Works

KING'S LYNN HARBOUR.—The Trustees of this Harbour are prepared to receive TENDERS for the CONSTRUCTION of a new QUAY, in wood, along a new line of frontage side of the harbour. Plans and specifications of the proposed works may be inspected at my office, in King's Lynn, where sealed Tenders are to be delivered or sent by post, on or before the 1st day of JULY next. The Trustees do not bind themselves to accept the lowest or any Tender. By order,

EDWD. LANE SWATMAN, Clerk to the Trustees.

King's Lynn, June 17th, 1856.

SAINT MARY, Newington, Surrey. — To IRONMONGERS and BUILDERS.—The Burial Board of this Parish will meet at the VESTRY-ROOM of the Parish Church, Newington, on FRIDAY, the 1st day of AUGUST next, at TEN o'clock in the morning, to receive sealed Tenders for IRON FENCING with STONE COPINGS, &c. for the Parish Churchyard at Newington. Plans and specifications for the required work may be seen at my office. Sealed Tenders addressed to the "Burial Board of St Mary, Newington," are to be delivered to me on or before THURSDAY, the 7th AUGUST. The Board do not bind them selves to accept the lowest or any other Tender.—By order of the Board,

JOSEPH BURGESS, Clerk.

2, Keene's-row, Walworth, July 19, 1856.

CONTRACTS.

NETHERLANDS LAND INCLOSURE COMPANY.—The Directors of the Netherlands Land Inclosure Company are prepared to receive TENDER for the CONSTRUCTION of a SHIP CANAL to connect the East and West Scheldte, about five miles in length; together with LOCKS and other WORKS. Parties desirous of Tendering are requested to attend at the Office of Mr G. P. BIDDER, and Mr. GEORGE ROBERT STEPHENSON, 24, Great George-street, Westminster, at TWELVE o'clock on TUESDAY, the 29th JULY, in reference to the measurements. The Directors will receive the Tenders on the 30th day of AUGUST, 1856. The Directors do not bind themselves to accept the lowest Tender.—By order of the Board,

GEORGE PASSON, Secretary.

2, Moorgate-street, London, July 19 1856

NOTICE to BUILDERS.—Builders desirous of CONTRACTING for the ERECTION and COMPLETION of ST MATTHEW'S PARSONAGE, Smethwick, can inspect the drawings and specification by application to Mr. RAMSAY, Windmill-lane, Smethwick; and obtain any further information of the Architect, JOSEPH JAMES, Esq. 13 Farnwilliam London. Tenders are to be sent in to the Rev. G. GILBANKS Smethwick, not later than the 4th day of AUGUST next addressed to the Build ng Committee, who do not bind themselves to accept the lowest or any Tender.

WHITECHAPEL UNION.—PROPOSED NEW WORKHOUSE.—The Guardians of the Whitechapel Union having enlarged the time for receiving Tenders, will meet in the Board-room, at the Workhouse, in the Whitechapel road, on TUESDAY, the 19th day of AUGUST next at ONE o'clock in the Afternoon precisely, to receive TENDERS for the ERECTION of the FIRST PORTION of the PROPOSED NEW WORKHOUSE, in Charles-street, Mile End New Town, instead of on the 1st of AUGUST, as previously advertised. Further particulars may be obtained, and the plans and specifications inspected at the offices of THOMAS DUBARRY, Esq. Architect, 15, Lincoln's-Inn-fields, London; and 47, Bedford-street North, Liverpool.—By order of the Board,

G ADAMS FARR, Clerk.

2, Mount-place, Whitechapel, 23th July, 1856.

SHOREDITCH SCHOOL, BRENTWOOD. A Committee of Trustees for the Management of this School will meet in the VESTRY-ROOM, at St Botolph Church, on MONDAY, the 4th day of AUGUST, 1856, at SIX o'clock in the evening, to give PROPOSALS, and CONTRACT for the EXECUTION of certain WORKS, for altering and extending the Laundry, and Dry ng-rooms, and the School, the particulars and conditions of which may be known on application to Mr. T. E. KNIGHTLEY, Architect, &c 33, Canon-street, City. The persons offering Tenders must give the name and address of one or more eligible person or persons, who will become surety for the due performance of the works, in a sum equal to the amount of the Contract. The Trustees will not pledge themselves to accept the lowest or any one of the Tenders. Sealed proposals may be sent by post to me, at Shoreditch Workhouse.

July, 18 6 HENRY EDWARDS, Clerk.

TO IRON-FOUNDERS and GASHOLDER MAKERS.—The Directors of the Tunbridge-wells Gas Company will meet at their offices in Tunbridge-wells, on MONDAY, the 4th of AUGUST next, to receive TENDERS for the SUPPLY and ERECTION upon their Works in Tunbridge-wells, of a CAST IRON GASHOLDER TANK, 60 feet internal diameter, and 15 feet deep, and GASHOLDER, 60 feet in diameter, and 18 feet deep, with inlet and outlet pipes complete. The specification may be seen at the Office of Mr. J. G. BARLOW, 3, Parliament-street, Westminster, the Company's Consulting Engineer on and after the 2nd INSTANT, up to the 2nd of AUGUST; and the Tenders must be sent to, or delivered at the office of Mr J. READ, the Secretary to the Company, in Tunbridge-wells, on or before 8 o'clock, p.m. on MONDAY, the 4th of AUGUST, endorsed, "Tender for Gasholder Tank and Gasholder." The Directors do not bind themselves to accept the lowest or any Tender.

Tunbridge-wells, July 21, 1856.

DEEPING FEN DRAINAGE. — To BUILDERS and CONTRACTORS. — TENDER for WORKS.—The Trustees appointed to carry into effect the provisions of "The Deeping Fen Drainage Act, 1856," will be prepared at their next meeting which will be held at the Great Northern Hotel, in the city of Peterborough, on WEDNESDAY, the 6th day of AUGUST next, at TEN o'clock in the forenoon, to receive TENDERS for the CONSTRUCTION of a NEW SLUICE, with three Drainage openings, and other Works connected therewith, to be erected at the Eastern Outfall of Vernatt's Drain at the junction of the same with the Rivers Glen and Welland, in or near the parish of Pinchbeck, in the county of Lincoln, at a place called the Reservoir. Plans and specifications of the works may be seen at the Office of Mr. LEWIN, the Engineer, Bridge-street, Boston, on and after the 4th day of August next. The Contractors are to be prepared with their Tenders to enter into Bonds at the time of tendering. The Trustees will not be bound to accept the lowest Tender, nor any other, except otherwise deemed eligible.

Dated this 21st day of July, 1856.

By order of the General Joint Works Trustees,

JOHN CARTER, Clerk.

LANCASTER and CARLISLE RAILWAY.—To BUILDERS.—The Directors of the Lancaster and Carlisle Railway will meet at the CITADEL STATION, at Carlisle, on the 6th day of AUGUST, to receive TENDERS for the BUILDING of WORKSHOPS at CARLISLE. The drawings and specifications may be seen at the Office of the Engineer, at Lancaster, on the 23rd of JULY, both days inclusive, and at Carlisle on it from the 30th day of JULY to the 1st day of AUGUST, both days inclusive. Tenders to be addressed to the secretary at Lancaster, on or before the 2nd day of AUGUST, having endorsed on it "Tender for Work shops." The directors will receive Tenders for the works as a whole, or in separate lots, and to not bind themselves to accept the lowest tender. The Company will allow to workmen getting at Carlisle a pass on the Lancaster and Carlisle Railway, to and from Carlisle, once a week. All materials for the work, except stone, bricks, sand, and lime, will be carried free along the Lancaster and Carlisle r.

Lancaster June 17, 1856

TO BUILDERS, CONTRACTORS, and OTHERS.—The Committee for RUILDING NEW NATIONAL SCHOOLS with TWO RESIDENCES, at LUTON, Bedfordshire, are desirous of receiving TENDERS for the ERECTION of the same. The plans and specifications may be seen, and bills of quantities obtained on application at the Office of Mr. J. CUNDLAND, Architect and Surveyor, Luton; and of Mr. C. POLAND, Surveyor, 72, Margaret-street, Cavendish-square, London. The Tenders are to be addressed to the Rev. T. BARTLETT, M.A. the Vicarage, Luton, Bedfordshire, and endorsed, "Tender for National Schools;" and no Tender can be received after TUESDAY, the 5th day of AUGUST next. The Committee do not bind themselves to accept the lowest or any Tender.—Luton, July 24, 1856.

TO BUILDERS.—TENDERS are required by the Committee of the Soldiers' Infant Home for the ERECTION of a SCHOOL-ROOM and DWELLING attached, at Vine House Estate, Hampstead. The drawings and specification may be seen at the office of the Architect, 25, Bloomsbury-square, on MONDAY, the 28th inst., when printed forms of Tender are to be obtained upon the surveyor on their behalf to take out the quantities. Tenders to be sent in on or before TWELVE o'clock on MONDAY, the 4th of AUGUST next, addressed "Tender for School-house, Soldiers' Infant Home," and addressed to Major Fox Hood, R. POWYS, Wellington Barracks. The lowest or any Tender will not necessarily be accepted.

WILLIAM MUNT, Architect and Surveyor.

MALLEABLE IRON FOUNDERS, HAR and SON, 4, VINE-STREET, YORK-ROAD, LAMBETH.

CONTRACTORS requiring CASTINGS, WROUGHT-IRON GIRDERS &c with despatch, and punctuality, MATTHEW T. SHAW has such arrangements that deliveries are made in a few days Contractor for Plant and Stores of every description.—64 CANNON-STREET.

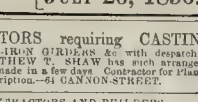
TO CONTRACTORS AND BUILDERS.

WROUGHT-IRON GIRDERS for BRIDGES and BUILDINGS, manufactured and guaranteed as to strength.

CAST IRON GIRDERS, for BRIDGES and BUILDINGS.

Castings of every description.

ROLLED WROUGHT-IRON FLITCHES, for trussing between timber.



Orders executed in three days

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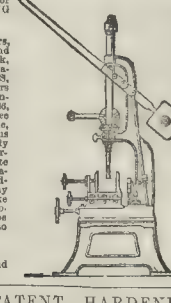

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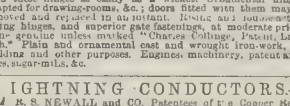

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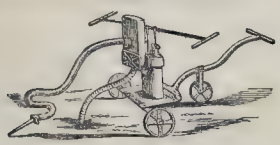

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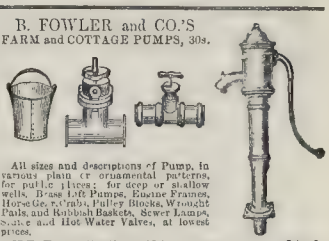

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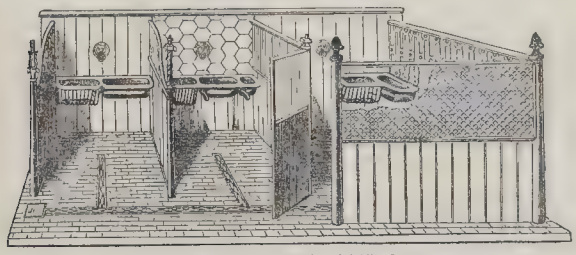

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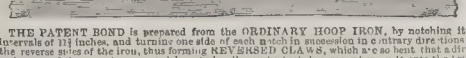

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11½ inches, and turning one side of each notch in succession in contrary directions on the reverse sides of the iron, thus forming REVERSED CLAWS, which are so bent that a direct end grain of the iron is presented longitudinally, and which become when built in brick work, embedded in the structure, by which means a COMPLETE and PERFECT DETAIL TIE throughout the whole building is obtained.

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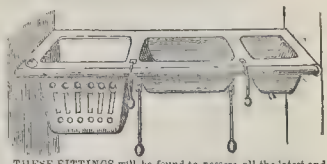

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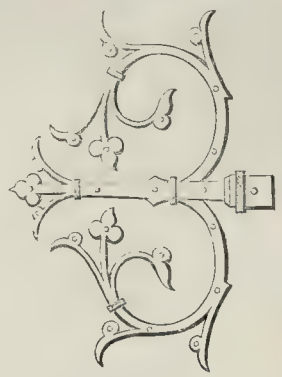

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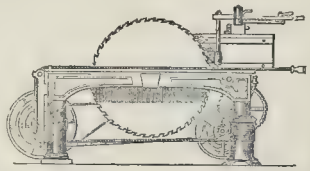

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RAIN WATER CASTINGS, per yard.

Sizes—3 in.	3½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	10½d.	1s. 1d.	1s. 2d.	1s. 7d.	1s. 10d.	2s. 4d. 2s. 8d.
Half-round Gutters	7½d.	9d.	9½d.	1s.	1s. 3d.	
O G Gutters		1s. 0d.	1s. 1d.	1s. 2d.	1s. 4d.	
Ditto, with plain clips cast on		1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.	
Ditto, with Rose Heads		1s. 2d.	1s. 3d.	1s. 5d.	1s. 7½	

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 2s. 3d. per dozen.
Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails ..... 15s. 6d. "
Best Zinc Slating Nails ..... 40s. "
Best Glues ..... 47s. to 53s. "
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Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

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A great variety of Ellipsis, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler

30	32	34	36-inch,
26s.	30s.	32s.	34s.

Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—

34	36	38	42-inch.
54s.	56s.	58s.	60s.

Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 3½d.
Register Stoves, with Solid Bars, per inch, 6d.
Improved New Pattern Circular Cheek Register, with strong Bars and Trivits, 5d. per inch.
Best Solar Grate, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2	2½	3 inch.	
	1s.	1s. 1d.	1s. 3d.	per yard.
Cast Gutters—4 inch, 8d. per yard.				
O G Gutters	4		4½ inch.	
	1s.		1s. 2d.	per yard.
	2	3	4	5
Patent Line	3s. 6d.	4s.	5s.	7s.

per gross.
6-inch Rd. Ward Mortise, with Best Furniture and Patent Spindles, 2s. 2d. each. Light Elliptic and Register Metal, 1s6. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.
Brick Moulds kept in stock. Any size made to order.
Best Cut Clasp and Rose Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 in.
16s. 6d.	16s. 6d.	15s. 6d.	15s.	14s. per cwt.

Best Cut Floor Brads ..... 13s. per cwt.
Best Cut Lath Nails ..... 16s. "

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Register Stoves, 5d 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
3 ft., 3l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s
3-feet Cottage Ranges, with ovens and back boilers, 29s. each.
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Air Bricks, 4s. per doz
Best Town Glue, 8d. Ditto, Scotch, 6½ per cwt
Best Fine Cut Clasp and Rose.

¾	1	1¼	1½	2	2½	3-in. & larger.
16s. 6d.	19s. 6d.	25s. 6d.	32s. 6d.	42s. 6d.	55s.	14s. per cwt.

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Steam and Hot-water Works, Jacks, &c. A strong Fly-press and 3-horse Engine for Sale.

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Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals
TUNED BY MACHINERY.
Stocked and wheels ready for fixing. Old Bells recast or taken in exchange
MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system which give superior tone and facility for running.

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MARBLE.—The Italian Marble Company call the particular attention of Builders, Architects, Sculptors, and Masons to their PRESENT low prices, viz.—
Wein, in blocks of ordinary dimensions, 8s 6d. per foot cube.
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FROM 2s. 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
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No.	1 quality, inches diameter, and price per yard.					
½	¾	1	1¼	1½	2	3 in.
9d.	11d.	1s.1d.	1s.3d.	1s. 5d.	1s.7d.	1s. 9d. 2s 2s. 3 d. 2s. 6d. 2s. 9d.

Super-extra stout quality.

2	2½	3	3½	4 inches.
2s.	2s. 3d.	2s. 6d.	2s 9d.	3s. per yard.

No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

1	1½	1¾	2	2½	2½ inches.
9d	10d.	11d.	1s.	1s. 3d.	1s. 6d per yard.

The hose is Burnettized at an extra charge of 3d. per yard
Union Joints. Branch Pipes, and Jets, are also supplied.

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Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.
Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.
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VOL. XIV.—No. 703.

BARRACKS, forts, and military hospitals are being built or prepared for in various places and it is of the utmost importance to the country that these works should be executed in the best possible manner,—that the structures may be efficient in the highest degree, combining all the most recent improvements, and at the same time that the public money should not be wasted. The question, therefore, arises, what is the condition of the Royal Engineer Department, to which the direction of these works is entrusted? Our information, so far as it goes, would lead us to give a very unsatisfactory reply. The department consists of two branches, as we have before now pointed out, one military, the other civil. The first consists of about 300 military officers, costing somewhere about 200,000*l.* per annum; and the second, or civil branch, comprises about 127 clerks of the works (as they are called), 154 foremen of works, and a few others, at a cost of about 76,000*l.* per annum.

The duties of the various military and civil members are laid down in a "Code of Regulations," and whilst it is there stated that the military officers should be at the head of affairs, and perform many of those professional duties which usually appertain to a civil engineer and architect, yet it also exacts to a great degree the qualifications of a civil engineer and architect from the clerks of works, and gives the superintendence out of doors to the foremen of works, who are therefore what in civil practice would be called clerks of works. These foremen of works, however, as we are told, are drawn from attending to the duties of superintending outside, and are employed in performing the officers' duties of drawing and estimating and measuring work, so that their more legitimate duties are frequently neglected, while the higher duties exacted from them are imperfectly performed. A jealousy exists beween the two branches, and from the civil half numerous complaints have reached us from time to time, which demand attention. We consider it our duty to bring the objections forward, and if sound it will be the duty of the country to provide a remedy. We speak, then, for the civil branch of the service,—not obstinately, because our information is to a certain extent *ex parte*, but with the belief that what the objectors say has truth in it.

To enable the engineer officer to maintain his position, it is thought necessary to make the public suppose that the designs for all sorts of buildings executed emanate from them. But is this the fact? We believe not. The education at Woolwich does not make the young officer competent for this position; and when he leaves the school, he is at once placed in command of what we are to suppose is a staff of experienced civilians, and gives at times, at any rate, as we happen to know, very nonsensical orders on matters of which he is positively ignorant. He is placed thus in a false position, and, with some few exceptions, remains in it.

This is what sometimes takes place. The inspector-general of fortifications in London is directed to forward designs for extensive works, and some young officers of engineers are employed, at the station where the work is to be carried out, to prepare them, who, after various attempts on the patience of the London authorities, give up the affair. Then a clerk of works, or a foreman, is set to the task, who is hurried to make up for the lost time; and as these civilians know that they are working for the credit of the military officer, and not for their own, they feel no particular interest in the matter; and so things are not so well arranged as they might be. When they have completed the plans and specifications and estimates, they bring them to the military officer, who kindly gives the advantage of his name and rank to crude productions, of which, perhaps, the civilians who drew them are ashamed.

In due course the project is approved, and money granted, on which three or four junior officers, lieutenants of Royal Engineers, and two or three foremen of works, are appointed. The latter act in the capacity of clerks of works, and complaints are made to us that the works are very little advantaged by the military overlookers. Collisions sometimes occur also with the contractor for the works, as the military officers are disposed to consider all civilians, the contractors and mechanics employed by him included, as so many private soldiers placed under their command. The works being finished, the clerk of works, or foreman of works, takes the measurements with the contractor, the military officer signs them on the last page, and then he is said to have projected, superintended, and finally to have measured up all the works; and if they have been executed without any very serious blunders apparent to the public, he is complimented as a most efficient engineer; but if the blunders should be too obvious, the unfortunate foreman of works is dismissed for not controlling his superior military officer, and bringing all due credit to him individually, and to the whole of the corps generally.

Unless we are misinformed, the military engineer officer, as a rule, is not qualified to perform civil engineering duties, or to prepare projects for such works, or even to organise and be at the head of any such works. He has been fortunate in surrounding himself for the last thirty years with professional civilian assistants, under some indifferent and inappropriate title, to keep them from public view, who have performed the greater part of the works of the department, very indifferently in many cases, because working without hope of credit. The clerks of works and foremen who have been many years in the office, have been gradually growing bolder in their demands for proper recognition. This was foreseen some years ago, and many efforts have been made to induce the younger officers to study, and become fit for the position they are supposed to fill, with what success, however, we are afraid to say. The symptoms in Lord Panmure's office seem to show that attention has been awakened there; and it is to be hoped will not be allowed to slumber again before something be done.

The permanent staff of the Royal Engineer department at Aldershott consisted of about thirty members, viz. — Sir Frederick Smith, Commanding Royal Engineer, and six or seven officers of Royal Engineers, eight clerks of works, ten foremen of works, and five clerks. Those who knew the department foresaw the result,—*utter confusion*. We have already told our readers something of the works there.

Agreeably with the "Code," the several clerks of works and foremen of works were told their duties at starting; and after they had been at work for some time, one did not know what the other close at hand was doing, or intended to do: each worked on his own hook, irrespective of the other's proceedings, each being independent of the other, and responsible to the engineer officer alone, who was incapable of guiding and regulating the whole. The consequence was, that one clerk of the works placed his huts where another should have put his; one drained a portion with a 9-inch drain, and then came the next one with a 12-inch drain for the same purpose, not knowing of what had been done in the matter till he accidentally cut through the work.

The financial affairs were in much the same state of chaos, till at length it became necessary to place the engineering matters in other hands. The drainage of the camp was entrusted to a London civil engineer, and Captain Collinson, Royal Engineers, took the place of Sir Frederick Smith. A surveyor was appointed at 500*l.* a year; an architectural clerk of works at 300*l.* per annum; two draughtsmen and a few others. But it must be evident that, unless there is a professional *head*, capable of setting all his staff to work, and knowing what every one is doing, with a view, as the camp is springing up in all directions, to a perfect whole, little improvement can result.

The new temporary professional appointments at Aldershott have given dissatisfaction to the various members of the permanent civil engineer staff, as they consider the failure is owing to the defective and antagonistic system of the department rather than to want of talent or attention on their part; and when the Government saw at length the absolute necessity of making these superior civil appointments, the qualified members of the department think they should have been selected to fill these offices.

We have, then, the singular spectacle of a public department so divided that one half is constantly struggling against the other half; the military branch being constantly obliged to coerce the civil branch into the performance of all the engineering work, in the office as well as outside, whilst the latter as strenuously resists as far as is compatible with the holding of their appointments.

An official committee of four or five members has recently been appointed to sit in London, on the civil branch of the Royal Engineer department: these members consist of one or two gentlemen from the Treasury, two from the Ordnance, and one engineer officer. The object of their deliberations is to get rid of this large permanent civil establishment if possible, or, if not, to re-organize it on some other footing,—a very difficult matter.

It would seem necessary either to leave the Military Engineering department to the military engineer officers, assisted by the Royal Sappers and Miners (which, its enemies say, would bring the department to the ground in a few months), or to create a new *Civil* Engineering department, on a similar plan to that of the Commissariat, Medical, and Ordnance departments. Under such a department, the engineering duties might be carried out in a prompt and satisfactory manner, in a spirit of greater fairness to the contractor and greater economy to the public.

We hear that a London architect has been employed by Lord Panmure to design the new officers' barracks at Dover, at which we cannot but rejoice, remembering some of the crude erections put up by the Royal Engineer department.

We have not by any means exhausted the subject, and shall have occasion very shortly to return to it: all that we can add, however, on the present occasion, is, that there are many most able officers in the department, and that these observations are addressed altogether to the system and the rule, and not to individuals.

THE BRUSSELS CONGRESS.—The Society of Arts' council have requested their chairman, Colonel Sykes, F.R.S. Mr. Thomas Twining, jun. vice-president, and Mr. T. Winkworth, to represent the society at the conferences to be held at Brussels in September next, when questions concerning the manufacturing and commercial relations of countries with each other, and the welfare of the working classes, will be discussed.

NOTES ON SCULPTURE WITH REFERENCE TO THE ROYAL ACADEMY EXHIBITION.

IT may be a question, whether the inhabitants of the little dungeon which is appropriated to the works in sculpture of our annual exhibition, do not afford us a better criterion of our actual position as regards art, both in its production and patronage, than the large rooms above-stairs, whose walls are covered with the works of votaries of the sister art,—painting.

There are many reasons why this should be so. In the first place, sculpture, as an art, has to struggle with more difficulties, and is submitted to more tests than painting, for it is a more expensive profession to the artist, a more tedious medium for the expression of his thoughts, subject to more accidents and injuries by the many operations it has to go through, and the variety of material it has to be worked in through successive changes. The natural result of these severe practical tests, and their consequent expense to the sculptor, is, that he is compelled to bring to bear upon his art a greater amount of thought in conception, greater care in execution, and more dependence on the æsthetic beauty of his composition than need characterize the work of the painter, whose art possesses the varied attractions of harmonizing colours, and the valuable aid of light, shade, and perspective, as well as the beauty of *form* and *subject*, which is the sole language in which the sculptor may express his thoughts.

The tediousness also of the practice and working of sculpture affords time for careful comparisons, and the corrections which must ensue; and these corrections must necessarily be very thoughtfully studied before they are carried into execution; for if not, the result of alteration, when a work is in its most advanced stage, may be fatal to the whole. Even this alone is a refiner's fire. It is not so with painting; for the canvass may be covered and re-covered, parts of a composition be altered, erased, and re-painted with probable advantage, and certainly without injury.

The result is a greater fickleness in painting than is to be observed in sculpture, an absence of gravity and responsibility; for neither of these will be felt where change seems to be necessary, and alterations are incessantly made with so little inconvenience.

Thus we see a greater evenness of excellence in sculpture, a more simple version of nature, a more reverent expression of great truths, a regularity of pulse which will most truly tell us of the health or disease of art amongst us. And this may have been the reason why sculpture should receive the name of the *holy art* in preference to painting; for in its purity and gravity there is a holiness and calmness ever present, whilst lightness, or anything fantastic, seems foreign to its aim and purpose.

It is upon this account that the sculpture which is annually exhibited at Trafalgar-square, deserves especial notice, as affording something more than information concerning the *number* of works executed during the past year, for it is a truthful index to our artistic progression.

In commencing a review, however short, of the more important works, it is impossible not to notice the competition of the two busts of the Queen (1221), by Baron Marochetti, and (1222) by J. Durham. This rivalry places both artists at a disadvantage, for the difference to be observed in the busts, though both something like her Majesty, makes one suspicious that they are neither very good portraits, whilst the calm quiet refinement of Mr. Durham's bust, contrasting with the *pluck* of Baron Marochetti's, changes the latter into impertinence, and reduces itself to something like tameness. 1224, by MacDowell, called "The First Thorn in Life," is a group of two children, happily arranged, both children exceedingly beautiful, but it is impossible to help wishing the artist was engaged on a subject better worthy of his chisel; something which, with a larger amount of mind in it, would give increased value to the marked beauty of workmanship to be observed in this group. 1232*, by Calder Marshall, called "Imogene asleep," is a reclining figure, full of poetic grace and purity. 1228, by E. G. Papworth, statue of a "Nymph Surprised;" 1229, "Venus and Cupid," by B. E. Spence; and 1234, "Group of Euphrosyne and Cupid," by E. B. Stephens, are all examples of that school of sculpture called the Classical. They are all instances of fine modelling, if we except the lower limbs of the last, totally missing the main purpose; at least so far as the purpose of sculpture consists in interesting the spectator, elevating his taste, and either inculcating love for some beautiful affection, or high and noble principle.

Our sculptors of the present day are certainly not happy in their selection of subjects. It is painful to observe the proportion of large figures, in the exhibition, which endeavour to illustrate a bygone creed and theology that men of the present day can never understand or thoroughly appreciate, for the simple reason that they are not believers in it.

(1242) "Resignation," by Baily, R.A. has all the characteristics and peculiarity of treatment that mark this artist's works, but will not increase his reputation.

(1255) "Maidenhood," by J. Hancock,—

> "Bear a lily in thy hand:
> Gates of brass cannot withstand
> One touch of that magic wand."

Concerning this and another of Mr. Hancock's works, both of which were in the Paris Exhibition, a celebrated French critic wrote, that "the 'Maidenhood' and the 'Beatrice' of Mr. Hancock, *possess* what Gibson's works *require*, viz. life," and if we examine minutely the expression of the face, the disposition of the drapery, and the modelling of the extremities,—the pure feeling displayed in the *posé* and general effect of this figure, comparing it with the numerous examples of the Gibsonian school which surround it, we shall be inclined to give full consent to the French verdict. It is an example of what may be done by an Englishman who has thrown overboard all servile imitations of the antique, and, acting solely on his own responsibility, produces a work of art of no school but that of nature. Note the delicate modelling of the face, hands, and feet, and it will be a lesson how perfection of detail may be made to enhance the general effect, and then compare this draped simple figure with the naked nymphs and Venuses and fat Cupids which abound on every side of it, and say which is most worthy of a Christian artist in a Christian country. 1253 and 1259 are models of colossal statues of War and Peace for the Guildhall monument to the Duke of Wellington, by John Bell. The former of these has been censured as too direct an appropriation of Michelangelo, and the latter seems to have escaped attention. Still, regarded as conventional treatments of the human figure for the subordinate parts of a monument, they have claims to attention. 1271, "Statuette of Robin Hood," by Miss Durrant, is a work which in many ways is excellent. The *posé* of the figure, and drawing of the parts, show an intimate knowledge of the human figure, whilst the workmanship displayed in its execution is of the very highest order. 1247, "The Milton Vase," by W. and T. Wills, is a work which should have interested architects, as an architectural feature worked out in a manner very much above the ordinary standard of such works. It is probably intended that the vase shall be executed in terra cotta. There is at present a great want of such ornaments for terraces and conservatories; and it is gratifying to see that this want has been felt by men holding the position of artists.

Thus having glanced at some of the more important works, it will be well, perhaps, to sum up these notes in a few remarks on the exhibition as a whole.

The real is certainly well represented in it; the ideal but very imperfectly. The wind blows still too much in the direction of Greece and Rome. A work in sculpture should either be simply a copy of Nature in her most perfect form, arranged in such a way as to exhibit the peculiar beauties of the subject in the most prominent manner, or it should take its stand on higher ground, and by selecting some natural incident, tell a tale instinctively known to every human being, appealing to our affections, and teaching us the greatness and the beauty of Nature's eternal truths.

The first of these would be *language*, the second, *expression*. The former is the A B C of the latter. Yet how few are those who know their alphabet, who ever learn to read. Of the first kind is the Venus de Medicis, which is simply the most beautiful form, exhibited in the most sensual manner, meaning nothing beyond its luxurious trick of attitude, and depending solely on its truth of imitation. This is language. But the man who did that work understood sculpture. He regarded it as it should be regarded, for though painting may be the thing of a country, sculpture is a thing of the universe. The Venus yet speaks, but in a language which only tickles the senses and pleases all, without improving them. Of the second class of subject, involving expression, we have but few examples, either in antique or modern sculpture. We look for it almost in vain in the present exhibition; and yet the reason of its absence is certainly not to be attributed to want of power. That our sculptors have; and let us hope that in future exhibitions they may apply it in a better way than they have in this.

WALTER SMITH.

THE CLOSED GRAVEYARDS.

DESTRUCTION OF MEMORIALS.

IT is satisfactory to find, on looking into some of the closed London graveyards, that pains have been taken to trim the grass and trees, and to plant flowers. In some instances the stones and other monuments seem to be allowed to remain in their original positions, and to be to a certain extent cared for. In other cases, however, the stones have been taken from their places and laid flat in regular order over the graveyards; and in others, the stones have been taken carelessly up and packed together in a corner. This is not right, for the ground marked by these memorials has been in every case handsomely paid for. Many of these stones cover the remains of well-known persons, and even those placed to the memory of people of less note have a value in the eyes of the families to whom they belonged. It should be remembered, too, that on many occasions the London tombstones have been found useful in settling disputed claims to property, and in clearing up doubtful points of genealogy.

In looking at the various monuments which crowd the metropolitan burial-grounds, it is painful to notice the rapid decay of the more perishable sorts of stone which have been selected for this purpose. On some tombs, not a century old, the lettering and sculpture are invisible: on others, of harder material, the lettering is as sharp as if only recently cut: those stones approaching to the nature of slate seem, in the open air, to be more durable than marble. A useful lesson may be gained by a visit to these receptacles of the dead, where the progressive decay of various kinds of stone is often marked with exact dates.

Many interesting monuments are in a deplorable state, and require the revival of the functions of "Old Mortality" to save them from destruction. We have already alluded to the tomb of Daniel De Foe, and could give a multitude of examples somewhat similar, but will for the present content ourselves with referring to the monument of Girtin, one of the first of our water-colour painters, the friend and fellow student of Turner. This artist, whose name will live in the history of English art, was buried in the churchyard of St. Paul's, Covent-garden, and his grave was marked, as the sexton states, by a stone, on which were some carved ornaments and an inscription: the ornamental part has been some time gone, but our informant believed that the lettering might still be made out. In this place the stones are all laid flat, but we tried in vain to find the name of Girtin upon one of them.

The cost of recutting and doing up a gravestone is but trifling, and in some cases—that, for example, of Joe Miller, in Portugal-street—the officers of the parish, much to their credit, revived the stone.

The gravestone of Woollett would by this time have been illegible, but that a few artists living in the neighbourhood clubbed together,

STOWING AWAY THE GRAVESTONES.

and had the stone repaired. We mention these instances, hoping that it may be the means of inducing the churchwardens and others of the metropolitan parishes, who have had their grounds put into order, to make a careful inspection, and discover those of note buried in each, and, where necessary, set about restoration. Something should also be done by those engaged in art, literature, &c. in preserving the memory of men who have been eminent in their respective departments. Those connected with the London stage ought not to lose sight of the gravestone of Joey Grimaldi; neither should the artist fail to preserve what marks the resting-place of Girtin, or the *literari* allow the tomb of Daniel De Foe—that admirable writer and patriotic citizen—to remain in its present condition.

After searching for the grave of Girtin, and looking into the church, we found, in the south wall, a small square marble tablet, without the least attempt at ornament, thrown out by a border of black paint, on which is the following inscription, in plain Roman letters:—"In the vault beneath and near this place are deposited the remains of William Turner, of this parish, who died September 21st, 1830. To his memory and his wife, Mary Anne, their son, J. M. W. Turner, R.A. has placed this tablet. August, 1833."

It may be mentioned, that our great landscape painter intended for many years to put up a monument in this church to the memory of his friend Girtin, and more than once had estimates given for the cost of such a work, but was not willing to go to the expense proposed,—a thing to be regretted, for a monument placed by Turner to the memory of Girtin would have been a relic of great interest.

Immediately adjoining the tablet to Turner's father is one placed by the friends of the veteran actor, Macklin, and which is much more decorated than that to the painter's father, on which is this inscription:—"Sacred to the memory of Charles Macklin, comedian (with the aid of public patronage), by his affectionate widow, Elizabeth Macklin. Obiit, July, 1797; Ætatis 107."

There is scarcely a London church or graveyard without memorials which, if kept, will have value in future years.

The monuments in these spots also show a phase in the progress of art. There are few stones out of doors in London dating back 200 years which can be deciphered; and yet on them may be traced elaborately wrought headings, similar to those to be met with in various parts of England and in Scotland. We have frequently in Scotland met with carved stones in deserted churchyards, of about the date of Charles the First and Second's time, which have been very boldly designed and artistically cut: some of the devices have been elaborate, and represent the resurrection, emblems of mortality, &c. In the graveyards of St. George the Martyr and St. George's, Bloomsbury,—two immense burial places which stretch from the neighbourhood of Hunter-street, Brunswick-square, in the direction of Gray's-inn-lane, now both closed, the grass and weeds in many parts were nearly 2 feet high. We noticed here amongst other large monuments an obelisk on an ornamental base, more than 20 feet high, surmounted by a vase. "They came to look at this, sir," said the man, "but were too late, the lettering is gone, and all that the parties could collect as regards this ambitious tomb, were traces of the armorial bearings of him who here rests." *Vanitas, vanitatis.* There were a few graves amid the general wilderness which showed marks of care—chiefly little graves, on which were planted rose-trees, lilies, and other suitable plants. One large grave was a complete garden. A very old, grey-headed man comes from a distant part of the country to visit this grave (that of his wife). He has been in the habit of doing so for many years. These burial-grounds are very picturesque: the trees are well grown, and compose nicely with the monuments, and with very little trouble these places might be made into beautiful gardens, where many living in the neighbourhood would be glad to while away an hour. At present they are deserted and neglected spots.

The other day we were in the neighbourhood of Golden-lane, St. Luke's, a district swarming with a poor struggling population. From Golden-lane numerous narrow courts, some of them of great length, run in various directions, each containing from a dozen to fifteen houses: few of these have any back yards or water-tanks: in consequence, the people depend for their water supply from a leaden pipe fixed in the court. In one of these courts there are thirteen houses, with only a half-inch pipe to supply the whole. The water comes in for about half an hour, and sometimes less, the people complain sadly of this: they cannot get sufficient in the time, and all manner of fighting and quarrelling takes place. Golden-lane is a picturesque-street, some of the houses are 300 years old at the least. There is a goodly array of barbers' poles, the black dolls of the rag-merchants, the projecting signs of the patten-makers and peg-top turners: there are also the representations of the Lombards, the publicans, and the coffin-makers, to be found in considerable numbers in this region. Playhouse-yard, and one or two other places in this locality, have interesting associations. It is gratifying to find a marked improvement here, in the manner in which the scavenger carries forward his work. The matter, however, to which we wish more particularly to direct attention, is a large burial-ground, called, the "City Bunhill-fields," or "New Bunhill-fields" Burial Ground. This ground, which is of considerable size, has been closed by order of the Government, the soil having been well packed with dead. The ground is entered by a large archway, above which was the name of the burial-ground, painted in large letters. This has been whitewashed out, and a notice stuck up that there are dry vaults "to be let below the chapel." The chapel is a large building placed in the centre of the ground: there is now not a grave to be seen, the whole having been brought to a sort of level. The experienced eye, however, detects certain raised portions, which show the great number of the tenants of these tracts. In the unwholesome looking soil, varied with a stunted sort of herbage, or fern bushes, blackened with the London smoke, and sickly looking,—an ancient horse, with his back turned to the wind, and a few black London sparrows, are the only living things visible. It is a dreary-looking scene. On finding the woman who is placed in charge of the place, we inquired what had been done with the gravestones? "What stone did you want, sir?" And on expressing a wish to see the whole of the stones which had formerly marked so many graves, we were directed to a corner of the ground, where the monuments taken from their original and rightful place were packed up against the wall, as in our sketch. Here, it is probable, they will be for a time allowed to remain, and then be still further dealt with.

Some of these stones have on them the date 1846, and others are even more recent. It is a breach of trust to remove these memorials from their proper places, and to level in such an indiscriminate manner, and with such indecent haste, so many graves.

One would almost think that it would be unnecessary to give a caution as to the danger of building on such places, but is has been done, and probably will be again attempted.

THE ARCHITECTURAL ASSOCIATION.

As a member of the Architectural Association, but unable to attend the meeting of the 27th, I have read with much interest your report, and especially the letter received from the Council of the Royal Institute of British Architects, which I think must, from its honourable and straightforward manner, bring the matter to a satisfactory conclusion, if an equally plain common-sense method is adopted by both parties in producing the result. As, of course, nothing can be done on the Association's side till next session, I think it might be of some use to state in your columns some of the difficulties to be got over so as to get opinions as to how the same might be best met eventually, and turned if possible to the advantage of both sides. I will, therefore, enumerate some

facts which belong to each, and which must, without destroying them, be made if possible to harmonize.

On the side of the Royal Institute of British Architects.

1. The charter of the Royal Institute of British Architects cannot be altered unless by Act of Parliament. [It must be by obtaining a fresh charter.]

2. The subscriptions are, for members, 4*l.* 4s.; associates, 2*l.* 2s; students, 10s.

3. There are certain persons who from sundry causes are ineligible.

On the side of the Architectural Association.

1. Any one may be admitted on being proposed, seconded, and balloted for according to rule.

2. The payment is 10s.

These are the true difficulties: any union can only be by reconciling these. Now, to do this, all that appears necessary is to incorporate the two, retaining in working the separate action of each. Say that the Royal Institute of British Architects passes a resolution admitting the Architectural Association in a body as students (they thereupon dropping the name of Architectural Association), and merge their own students in them, leaving to this body itself the right of electing students ever after, while they themselves reserve the same right as the Royal Academy has in regard to its students,—that of erasing from the students' list any student who shall do a disgraceful action. Then let these students (having the right of attending the Institute meetings) be permitted to meet on the alternate Monday with the Institute to read and discuss papers of their own. While the Class of Design, under its present rules, having swept up in its more energetic government the Royal Institute of British Architects' students' class, would meet, it might be as usual every alternate Friday. Under this system, the vice president of the students might be always elected along with the other members of the Royal Institute of British Architects, the members, &c. of that body voting for this election. The junior members would have full use of the Institute library, and also the publication of their own papers, and the use of its rooms, and the Royal Institute of British Architects would sweep up in this class all the general public who take an interest in its meetings and the success of architectural art,—a thing they have not yet, it is allowed, succeeded in; and that most vital principle, which has and ever will keep something of this sort afloat,—the subscription,—will be that amount which it is found is the most that can reasonably be paid by junior members. While they would thus be able to still blow off that most useful but somewhat superfluous steam through the safety-valve of their Monday, un-overawed by the elder Mammoth engines; while the older members of the profession would still exercise that influence which it is most desirable they should have over the real course of events, and which is impossible in the present alienated state of the two societies. As to the "antagonistic spirit displayed," it is well known in the Architectural Association that it has almost invariably been by men who were associates of the Royal Institute of British Architects, and generally found its strongest opposers in those who did not belong to or were even excluded by its rules from its halls. It is well to remember that some of the most distinguished members of the Architectural Association were men who were not architects at all, as Mr. Braithwaite, and that able member, Mr. Burt, whom Providence was pleased to remove.

J. T. IRVINE.

I am reminded by a letter from the secretary of the Association, that attention has not yet been fully directed to the letter which has been lately received from the secretaries of the Royal Institute of British Architects, and to the real merits of the proposal; and, in order that the matter should be carefully considered during the recess, I would call the attention of the members of both societies to some of the salient points in the discussion.

The notice afforded by the Institute certainly places the Association in a rather new position. It implies respect on the part of the former, and, as members of an honourable profession (I write as a member of the Association), we must at least show that in that respect we are their equals.

I can appreciate the pleasure and the pain with which the council profess to regard the proceedings of the Association, for I have myself felt them on more than one occasion. Therefore our reply ought not to slur over anything that the Architectural Association has done amiss, for we desire improvement; nor should our reply take too high a ground, for those whom we are addressing (I assume that we address the council) are our superiors in professional position, our seniors in the practice of the art. On the other hand, we have a position acknowledged by the Royal Institute of British Architects, of which we must not lose sight. The whole tenor of the letter we have received is an admission of *our* greater freedom of action than is compatible with *their* foundation.

When reference is made in our reply to the apparently "antagonistic feeling" shown by the Architectural Association to the Royal Institute of British Architects, it should be pointed out that this arises in a great measure from the diversity of object in the two societies, the necessary contrast between the aspiration of the younger members and the satisfaction of the older practitioners.

The desire expressed, that the exercises of the Institute should become more serious and extensively attended, should be echoed, and the want of any "*direction*" (see our former memorial) pointed out as a great cause of the present defect.

As regards "co-operation" or "fusion," the two are incompatible. Co-operation requires a separate basis: fusion implies incorporation, unity of government. The intention of the Institute is to give the established architect a name for recognition. The intention of the Association is to lend a helping-hand to all who are desirous of advance. So far the societies contrast: both, however, seek the advance of the science, and the increase of knowledge and information on subjects cognate with our art.

The practicability of any connection, so far as the Architectural Association can consider it, must depend upon the public expression on the part of the Royal Institute of British Architects, of their real intention to cultivate affinity with the student.

The object that draws most of us to the meetings of the Architectural Association is the reading and free discussion of papers, the meeting with friends, and the study of design, by comparing the ideas of others with our own. These are almost the only means the Architectural Association has been able to take to further the study of Architecture.

The Royal Institute of British Architects is an institution formed for the "general advancement of civil architecture and for promoting and facilitating the acquirement of the knowledge of the various arts and sciences connected therewith." The organization, as settled by the charter and bye-laws, forms a means for giving expression to the wishes of those devoted to the profession and for the acquirement of knowledge on cognate subjects. Their library is most valuable alike to the practitioner and to the student. Their opportunities of acquiring information from all quarters are most extensive. Everything, from their position and prospects, is most advantageous. The means at command, either functional or acquisitional, are not, however, as the Royal Institute of British Architects is at present constituted or carried on (I know not which) used to such an extent, nor is the earnest intention of advancing the art exhibited, as such a profession ought to be: such I believe to be the prevalent impression.

I do not know anything to be fairly subject of complaint in the bye-laws, the terms of membership, the several declarations or the subscriptions, the expenditure of the finances or the courteous behaviour of the secretaries and other officers; yet, with all this, I am satisfied that there is such a pressure of authority at all the meetings, something of so overbearing a character in the occasional inanities of the speakers, and such a want of any vigorous executive to put down that which does not "promote" or "facilitate" "the acquirement of knowledge" at the meetings of the Institute, that I should myself regret if it could be stated that this was all the opportunity accorded to the architectural student of London for the acquisition of information or the exercise of his communicative powers.

On the other hand, I should myself greatly prefer, instead of the meetings at Lyon's-inn Hall, meetings of young architects in the library or theatre of the Institute; and if the associates would, as a body, meet together at times distinct from those of the ordinary general meetings, I am confident great benefit would result. Such meetings might be held either for the study of design or for the discussion of papers, and the use of the library and casts belonging to the Institute would be of the utmost value.

I am not acquainted with the history of the two societies now amalgamated in the Institute: I should judge, however, from the "unity of action" of the combined mass, and the fact that its rate of motion is so small, that there must have been something antagonistic in the direction of the original bodies.

If it be possible for the members of the Association, as such, to meet at the rooms of the Institute, I can conceive great advantage to arise to the students. I suspect, from the feeling exhibited at the last special meeting, that the Institute is not disposed to take any more public position than it can avoid, but the "pledge of co-operation" now given is such as the Architectural Association cannot, without great discredit, avoid accepting to the utmost extent to which such co-operation is available. The purposes of the Royal Institute of British Architects and the Architectural Association are to a great extent the same. The Association expresses a somewhat warmer temperament than the Institute.

If the students' list at the Institute were open to all respectable students of architecture, without respect to age above fifteen, and at a subscription of the same amount as that of the Association, entitling to the use of the library and attendance at the meetings, then the objections to joining the two societies must be reduced to very few. The students might have their own meetings, at which associates should be permitted to take part, and so far as the present uses of the Architectural Association are concerned, such a class would better effect them.

The Architectural Association has, in its time, done much to assist the formation of the Architectural Exhibition. It has discussed and brought forward the competition question, but with little effect. It has recently memorialized the Royal Institute of British Architects for an examination. In these public matters it has been of service. As regards the last of these, a class of students of the Institute meeting as I have suggested, would have been equally effective. But as regards the other matters, as regards introducing before the architectural public questions of importance affecting the profession, some mode of giving expression to the opinions of the younger members is required. That class, represented by the associates of the Institute, ought to be heard, not only as an appendage to a body of advanced practitioners, but as the really thinking portion of the profession, those most vitally interested in obtaining that fair play which the exercise of our calling requires.

If the council of the Institute can overcome this difficulty, the task of union will not be of much difficulty; but when we consider the want of energy on the part of the Institute of late years, we can hardly wonder that many members of the Association are desirous that at least for this last-mentioned purpose there should remain a distinct body in the profession,—a society not tied in any way to another, more weighty and authoritative than itself, but one, situated in the metropolis, that can take up questions of a public nature, and can give public expression to its opinion; even though, while expressing the views of the younger members, they may be acting in opposition to the voice of the elder body.

THOS. M. RICKMAN, A.I.B.A.

PROVINCIAL NEWS.

Grimsby.—The dock company here have commenced excavating for the foundation of sixteen new offices, near the entrance of the new dock works. The Anglo-French Company will require large accommodation.——The surveyor to the local board, Mr. Micklethwaite, has resigned, having obtained an appointment under Mr H. Fowler, C.E. who is about to proceed to Algeria with a staff of English and French surveyors, to lay down lines of railway, by order of the French Government.

Norwich.—At a meeting of the town council a few days since, Mr. Gorell, adverting to the new free library, asked if there was any truth in the report that some beams had given way in the building? The City Surveyor replied, that an iron girder had given way from a flaw in the iron. It had been repaired, and was now put up again. Mr. Kerrison said, as the School of Design was to be held in the new building, and as probably 700 or 800 persons would have to go into it, he should like to have the building properly tested first. The weight of 700 or 800 persons would be 50 or 60 tons, and he thought some test should be applied. The City Surveyor said, the weight would not be all concentrated in one spot or room. Mr. Kerrison, admitting that, observed that before the Foundry-bridge was thrown open, it was tested by 40 tons being put upon it. The City Surveyor said, the girder which had proved defective had been tested with a weight of 40 tons. The girder had been repaired and extra trussed. It had before given way from a flaw in the iron, and not from any defect in the construction. Mr. Darkins said, he had some little to do with the Foundry-bridge, and he remembered, when it was first put across the stream, it was filled with Scotch bullocks. Mr. Bidwell, amid considerable laughter, asked whether a lot could not be got into the library building.

Lowestoft.—The continuation of the Esplanade to the extreme of the Wellington-terrace, is about completed. It will provide from the Royal Hotel an unbroken marine drive of upwards of three-quarters of a mile in length. A promenade has also been constructed quite

through Pakefield, with seats for pedestrians. The Wellington-terrace is drawing towards completion, and the grounds in front are being laid out. The band of the Norfolk artillery has been engaged to perform on the South pier every day, Sunday excepted.

Eye.—The corporation of this borough has resolved to take down the old Town-hall, and erect a new one, to correspond with the new Corn-exchange. Plans by Mr. Lamb, of London, architect, have been approved of. The estimates are about 1,500*l.* It will contain two reading-rooms, &c. on the ground floor: the magistrates' room will be upstairs, and there will be an approach through the principal entrance to the tower, with other conveniences. The Corn-exchange will be 74 feet in length, and 27 feet wide, with wood floor in diagonal patterns. The height of the tower, including the spire, will be 74 feet. The tower, when built, will contain the clock, which will show three or four dials, if required. The corner house in Broad-street, near the theatre, is in part taken down and a new house building, which will contain a magistrates' room, for the Hartismere Hundred, and two lock-ups, with residence for two policemen. These buildings are erected by Mr. E. Chenery, and let to the county of Suffolk, at an annual rent. The plans were furnished by Mr. Farrow, of Diss, architect.

Lynn.—The public baths were opened last week. There are eight slipper baths, two shower baths, one large swimming bath, and a superintendent's house. The cost, including extras, fittings, and the architect's fees, will be under 1,300*l.* The swimming bath and one-half of the slipper baths, are supplied with sea water.

Brighton.—A vestry meeting was held last week, to consider a report of a committee of directors and guardians, adopted by the latter, recommending that the present workhouse be altered according to plans prepared by the parish surveyor, at an estimated cost of 803*l.* and that new Industrial Schools, on plans also prepared by the surveyor, and approved by the Poor-law Board, should be erected, at an estimated cost of 7,899*l.* on a plot of land belonging to the guardians, lying between the reservoir and the Race-hill. After considerable discussion, the meeting was adjourned for a fortnight.

Leominster.—Shobdon Court, situated about eight miles from the town of Leominster, the seat of the Right Hon. Lord Bateman, is undergoing extensive alterations and improvements, under the direction of Mr. Alexander Milne, of Northampton. The works proposed are,—to renew entirely the whole of the windows with oak sashes and frames, and plate glass; new principal staircase of wainscot oak, and the interior fittings of the building to be reconstructed. A new terrace and orangery are to be added, the whole length of the south front. A contract has been completed with Messrs. Ruddle, of Peterborough, for 12,250*l.* for the execution of these works, which are expected to occupy about eighteen months in completion.

Liverpool.—The new landing-stage contractors. Messrs. Vernon and Son, are now proceeding with the work. Fifty-two of the sixty-one large air-tight floating tanks, or pontoons, on which the superstructure is to be supported, are placed in position. The kelsons, or retaining girders, are fixed over the fifty-two tanks, which are now ranged in position. The main timbers, or chief framing, are fitted, and placed over fifteen of the floating tanks, and a large additional portion of the main timber-work is in advanced progress. In accordance with the terms of the contract, according to the *Journal*, the new landing-stage is to be placed, and ready for use, at the Prince's Pier, in March next.

Preston.—On Monday before last, Mr. Ranger, superintending inspector of the General Board of Health, visited Preston to inspect the works in progress in connection with the supply of water to the town. The Local Board wanted the sanction of the General Board to borrowing more money to carry on the scheme. A sum of 40,000*l.* (sanctioned) has already been expended, together with an additional sum of 15,000*l.* making in all 55,000*l.* The General Board's consent is wanted for the 15,000*l.* and for a further sum of 25,000*l.* Mr. Ranger, accompanied by the town clerk and the engineer, went over the works. He visited the office of the Local Board with a view to ascertain the exact cost of the works now completed; but we understand, says the local *Guardian*, that he found the books in such a state that he could not obtain this information, and until a satisfactory account is rendered of the expenditure, he will not certify even as to the 15,000*l.* already spent. As regards a farther sum for works yet to be undertaken, it is added he required to see the working plans, sections, estimates, and probable cost, but was unable to obtain the necessary information, neither plans nor estimates being ready.

ON ORNAMENTAL LEADWORK.

At the present time, perhaps there is no metal considered less suited to the purposes of the fine arts than the subject of the present notice. However, the great artists of the Middle Ages thought very differently; then architecture was (and it always must be) eminently an architecture of figures and subjects, and accordingly they compelled even lead to bear its part in the great poem of Christian art. They cast it into ornaments, they hammered it into figures, and with the help of tin they executed imperishable paintings, which, when placed beyond the reach of man, have far more successfully resisted the ravages of time, than the crumbling sculpture or the worm-eaten dossel.

At the same time it must be confessed, that the intrinsic value of the material has but too often been the cause of its destruction; and although as citizens we can scarcely blame the French Government for melting even the historiated lead into bullets for the defence of the country, yet as artists we must ever deplore a necessity which has left us vestiges so few, that our curiosity is rather stimulated than gratified. I can only, therefore, pretend to give a very short notice of the various objects which our forefathers produced in tin and lead, beginning with those belonging to the church—the great art patroness of the Middle Ages.

ROOFS.

Let us imagine the architect has got up the carpentry of his roof, and then proceed to ascertain how he went to work to cover it: and here it may be premised, that his roof is a very different one to those designed by the ingenious Mr. Peter Nicholson; however, the only points of difference with which we have to do at present are, first, that there is no ridge-board, the rafters meeting one another at top, while they were kept in a straight line by means of a ridge-beam below. The second point of difference is, that the king-posts stand up above the roof for a considerable distance. In the thirteenth, and early part of fourteenth century, however, when continuous ridges were used, composed of isolated members, as at Amiens or Exeter, the ends of all the king-posts, except that over the apse, were cut off, as they would not be wanted for the support of the ridge.

Now the architect in those days, as in these, had the choice of tiles, slates, or lead, to cover his roofs with; but then, as now, the latter material was by far the more costly and the more esteemed. Still, even tiles and slates, under his hands, became beautiful: the tiles were covered with variously-coloured enamels, as at Mantes, while the slates had their edges cut into divers shapes, and were disposed in patterns according to their tints.

When lead was used it was generally very thick: that at Canterbury, I am told by Mr. Austin, runs about 12 lbs to the foot. The roof being boarded, it was laid on, much the same as at the present day, except that the sheets were somewhat narrower (about 2 feet between the rolls), and that these latter were formed by turning over the sides of the sheets of lead without the assistance of the wooden rolls used by the modern plumber. If there was no ridge the rolls were continued over the top of the roof, and a little way down the opposite side, so as to allow the sheets to hang well on. If, however, there was a ridge, the method was rather different; and here it may be observed, that during the Middle Ages everything susceptible of having a ridge applied to it had one; this was the case even with the miniature enamelled "Bahuts de Limoges," and still more so with regard to the large silver chasses for reliques, some of the crestings of which were most beautiful, though of course treated according to the different material employed. The tile roofs had the crestings, several of which have been discovered at Great Malvern;* but the slate roofs were treated in a similar manner as the lead ones, to which we now return. We have supposed the roof to have been boarded, and covered with lead, with the rolls continued over the apex. Now, as these rolls would interfere with the ridge, they must be suppressed, and accordingly the sheets of lead are made to finish at some little distance (one foot or more) from the top of the roof, where they are turned in and nailed to the underside of boarding. The apex was not generally covered by two boards butting up against each other: it was, on the contrary, thought better to cut a sort of trought out of the solid, and apply it reversed to the top of the ratters, so as to form as solid a foundation for the ridge as possible. Irons in the form of an inverted Y were nailed on this inverted trought at proper intervals, and then the piece of lead forming the ridge-piece having had corresponding holes cut in the middle was slipped over them. The next thing was to cast the various members of the cresting, to solder them together (for they could only be cast in halves), to slip them over the projecting irons, and, lastly, to solder their lower extremities to the leaden ridge-piece. Where nails were used, the heads were covered with a square piece of lead, soldered at one end, and as this solder extends some way down, and is marked with the iron at a little distance, the whole looks like a coat of arms with a chef. Fig. 1 is from Amiens, and affords an excellent example of the very simplest form of ridge; unfortunately, there is nothing to tell the date by, as the sides of the fleur-de-lys have been removed on one of those occasions when the French nation, wearied with kings, expelled the dynasty and defaced its badges. Most probably, it is a sixteenth-century restoration of the thirteenth-century ridge, for the spire was burnt down, and with it part of the roof, in 1527, and when these were restored a few years after, a very different form of ridge was in vogue.†

The next modification of these simple forms is to be seen at Nayen (Fig. 2), where a cusping is attached to the bottom of the trefoil, or fleur-de-lys; this cusping being supported on two sides, would have strength enough to keep straight, and not to sag by its own weight. This example is about the middle of the fourteenth century.

I must now go for authorities to the work of M. de la Querrière, who has given several specimens of ridges, but unfortunately has said nothing of their construction. They are all constructed upon the same principle, and we now see why the king-posts are carried up, for to them is nailed at some distance above the apex of roof, a bar of iron, covered loosely with lead. The ridge, which is always of an open and delicate pattern, is cast in two halves, as usual (except when it is very light and open), is then soldered at bottom to the ridge piece, and at the top to the lead pipe covering iron bar (see Fig. 3, from an ancient drawing, published in De la Querrière's work). Occasionally as in the Hotel de Bourgtheroulde, at Rouen, the cresting is divided into two parts, one of which is fixed above, and the other below, the iron bar. In this case the upper portion is always the lightest, but still should always be kept very subordinate, as on account of having nothing to support it, it is liable to sag. De la Querrière tells us that, in this instance, it has disappeared.

Where slates were used, another decoration to the ridge-piece was the application of long pointed strips of lead, alternately pointed and curved; these were cast, and soldered on to its

* "Journal of Archæological Institute," and Parker's "Glossary."

† At Rheims, the principal member of the cresting was 2 feet high and 1 foot 6 inches wide (French measure); that at Exeter is about 1 foot high by 10 inches wide. I am afraid that even the oldest part of the Exeter ridge must be considered as a sixteenth-century restoration of an earlier one. Mr. Cornish, who conducts the works of this cathedral, has presented one of them to th Architectural Museum, where it can be seen.

lower extremity; they occur at the Chateau Meillant (Seine Inférieure), at the house of Jacques Cœur, and at the Hotel Cujas, Bourges.

GIROUETTES.

One of the objects of permitting the king-posts of roofs, as well as the centre posts of spires and dormer windows, to project beyond the top of the roof, was to get something on which to fasten the girouette, epi, finial, or weathercock. These girouettes must have been one of the principal features in a mediæval town. Every house had one, if not several, and although there were laws occasionally passed, restricting particular forms of vanes to the nobility, there were none that I know of to prevent the bourgeoisie having theirs in the shape of animals, birds, &c. We may gain some idea of what the general effect of an assemblage of these vanes must have been from the illumination of Troy Town, published in Mr. Shaw's "Dresses and Decorations of the Middle Ages," vol. ii.

Girouettes, although remaining in far greater numbers than ridges, are, if anything, even more difficult to get at for the purposes of study, inasmuch as they are placed on the most elevated parts of the edifice, and nobody ever cares to take them down until the building itself is destroyed. However, I have been fortunate enough to meet with one in the possession of M. Benvignac, of Lille, who kindly afforded me every facility for examining and drawing it (fig. 4). The construction is as follows:—An iron rod, the length of the proposed girouette, is split at the end into four feet, which are made rather long and broad, so as to fix it securely on to the king post. This part is secured from the weather by a square hollow pyramidal covering of lead, resting on the rafters and ridge of the roof. The rest of the rod is covered by a lead pipe, to which are attached various ornaments. This principle applies to the construction of all girouettes, the only difference consisting in the ornaments, which in the larger ones will be found to be larger and more complicated. The lead pipe in these latter is made in several pieces, and each part of it is made to support itself upon the one below, which generally terminates with a flattened sphere, or some other ornament, adapted to the purpose. The upper piece of all, which rested on the top of the iron rod, had the plate of copper forming the vane soldered on to it; and Mr. Potter, of South Molton-street, informs me that in the ancient work these upper pipes had a piece of agate inside, so that there might be less friction on the top of the iron rod, but in the present day gun metal is used instead. The vane itself was painted with the arms of the proprietor, or else gilt.

It is a curious thing that Chaucer, as well as several other authors, mention the harmony made by the vanes as something to be admired.* Whether this is simply an exaggerated poetical expression for the creaking noise a number of vanes would collectively make; or whether each vane turned some mechanism concealed in the lead ornament below; or whether the vane being double, the wind, by blowing in between, produced a noise like that of an æolian harp; it is almost impossible at this time to decide.

The hospital at Beaune, in Burgundy, is the only building I am acquainted with, which has preserved the whole of its girouettes, and which can give us an idea of the effect produced by a number of these decorations; but inasmuch as they have all been restored and repaired, I can hardly consider them as quite safe guides with regard to the lead ornaments, although these latter, themselves, are pretty authentic, as several of the ancient chalk moulds are preserved and have been made to do duty again.

The general arrangement of the ornaments appears to have been this: the square pyramidal base was decorated at the sides with crockets; those in the Tournay specimen† are flat, cast in lengths of three, and then soldered on to the edges. In larger examples than this, the crockets resemble those placed in the upper part of the girouette, and described hereafter. A gilded sun, very thin and very open, was often fixed to the front of the base.

* For quotations, see "Hunt's Tudor Architecture."

† The girouette, in the possession of M. Benvigne, of Lille, came originally from Tournay.

The space between the base and the weather-cock is for the most part occupied by three tiers of ornaments: the lower consists of a flattened sphere from which project sundry squares or cylindrical short pipes, ending in stars, or quatrefoils, or masks, but more generally in a lozenge-shaped ornament, surmounted by a pediment (fig. 5); the several parts are all cast separately, and then soldered together. When this lower ornament is very large, as often happens, it requires to be supported by irons, which are attached to the centre (iron) stem; of course, in this case, the lead pipe is interrupted. The ornament in the second tier is often a repetition of the one below, only smaller; but occasionally it takes the form of an open vessel, and does duty as a bird's nest (fig. 6). They appear, indeed, to have been as fond of birds in the Middle Ages, as they now are of storks in Holland and Upper Germany, where a nest is regularly made up on the top of the house against the bird's return.

The last stage generally consists of a finial, formed of four or more crockets; these crockets are cast in halves, soldered together, the stems again soldered to lead pipe, and the inner leaves to each other. This will generally be sufficient to support them; if, however, they are rather large, each crocket has a large thin piece of iron covered with lead (copper will do alone), one end of which is soldered to lead pipe, and the other to extremities of crocket, as in the girouette on the gable of north transept, Amiens. While on this subject, it may be as well to show how the largest crockets, such as those on the spire at Amiens, which are 1 foot 6 inches in length, are managed. An iron, about 1¼ inch square, has its ends split into two parts, so that it resembles the letter T; the split part is nailed on to angle rafter, and the other, which juts out, is covered with lead. On the upper surface is soldered a piece of very thick lead, to which some of the upper leaves of the crocket are attached; the end leaves next the rafter, and the stalk are of course fixed to the lead covering of spire, as usual (fig. 7). Another way of treating the medium-sized crockets was, to make the iron in the form of an L, fixed in a similar manner; the projecting part covered with lead, as usual, is soldered to the inside of the back of the crocket, in the body of which two holes are bored to keep out the wet (fig. 8). The crockets running up the sides of dormers are usually executed in this manner.

But to return to the girouette. A very favourite ornament for the upper parts was four or more thick iron wires* covered with lead, the ends of which are fixed into a thick square horizontal piece of lead, soldered on to the pipe; a little higher there is another horizontal piece, of a circular form, to which they are again soldered; the extremities of the wires end with flowers or balls (fig. 9).

FIGURES.

Another very favourite finish for a roof, especially at the east end, was a figure of the patron saint beaten out in lead. The following extract, given by M. de Laborde,† from the accounts of St. Maclou, Rouen, gives us some information upon the subject, as well as the names of the artists:—

"1514. To John Pothyn, sculptor, for having carved a prophet in walnut-wood, to serve as a mould and pattern for the works in lead."

All then the plumber had to do was to hammer sheets of lead over the wood statue until they fitted to the shape. These were cut off and soldered together again with an iron framework inside, to prevent the figure from getting out of shape; this frame was likewise useful as a means of securely fixing the whole affair. At Paris, where several of these figures have lately been executed, for the Sainte Chapelle and elsewhere, cast-iron moulds are substituted for those in wood, as will be seen by the following notice, which I owe to the kindness of M. Gerente, of Paris:—

"You are correct in thinking the angel‡ at the chevet of the Sainte Chapelle is made of lead: wood and lead are the only materials used in the fleche. For all the flat surfaces cast lead is employed, but for the ornaments and figures milled lead is hammered on to cast-iron moulds. In a few instances lead castings are met with, such as the suns in the arcades: there is no zinc used at all. The moulds for the figures are made, of course, in several pieces. The different parts of the figure having been beaten up upon them, are joined together, soldered inside, and the joinings outside made with the hammer. As to the decoration, there is no tinning at the Sainte Chapelle, but merely gilding which is done with two coats of oil yellow-tint varnish, and over it gold in leaf."

There is one difference between the ancient and modern leaden figures which I think, perhaps, deserves to be noticed. The latter are soldered together like a modern work in bronze, *i.e.* the whole of the surface is homogeneous. Now as far as I could ascertain by reference to the figures on the spire at Amiens, the former (*i.e.* the ancient ones), although soldered in parts, are, nevertheless, in two or three pieces, the joint probably being made by means of a lap, as in roofs, and the places of junction concealed by means of the folds of the drapery. In fact, more like to the ancient bronze statues at Herculaneum.*

The same method was carried out in detached pieces of carpentry covered with lead, such as pinnacles, where one, if not two of the edges is made by a lap—never by solder. In fact, it would appear to have been a principle during the Middle Ages, to lay the lead as loose as possible, and to be very sparing in the employment of solder. It still remains to be proved which is the better of these two ways of constructing figures in lead; that of the moderns is certainly the strongest; the only fear would be the chance of its cracking for want of the necessary play for the expansion of the metal.

The figure most generally placed on the apside of a cathedral, was a gigantic angel,† which was so contrived, as to answer the purpose of a weathercock by means of the wind acting on its wings. There are examples at Chatres and Rheims: the former is modern, the latter doubtful. At Evereux, the crest ended in St. Michael and the Dragon; at Rouen, with a Saint George, but of all the leaden figures which have come down to us, few exceed those on the fleche, or spire, of Amiens Cathedral, which are as large as life, and represent Our Lord, the Blessed Virgin, St. Peter, St. Paul, St. James, St. Firman, and St. Ulpha. Above them are smaller figures of angels, bearing the instruments of the passion. This fleche is truly a *chef d'œuvre*, whether we consider it with regard to its carpentry, or its leadwork. Among the many beautiful spires still left us in France, it is beyond all comparison the best. Every decoration possible to lavish upon it in the way of leadwork, has been bestowed, and that with no sparing hand. Statuary, foliage, gilding, turning, painting, are all there, and well did it deserve its title of the golden steeple.‡

W. BURGES.

* Copper wires, as in the previous instance, can be substituted.

† Notice des "Emaux, &c. du Louvre," par M. de Laborde Paris, 1853.

‡ In some publication it is stated that this figure is in zinc.

* Several of the bronze statues in the Museo Borbonico, are made in two or more pieces, and rivetted together, the drapery, or an ornament concealing the junction.

† If I remember rightly, part of the wings of the ancient angel, are preserved in the Museum, at Chartres. They are formed of plates of copper, rivetted to one another, and pierced at certain intervals by small quatrefoils.

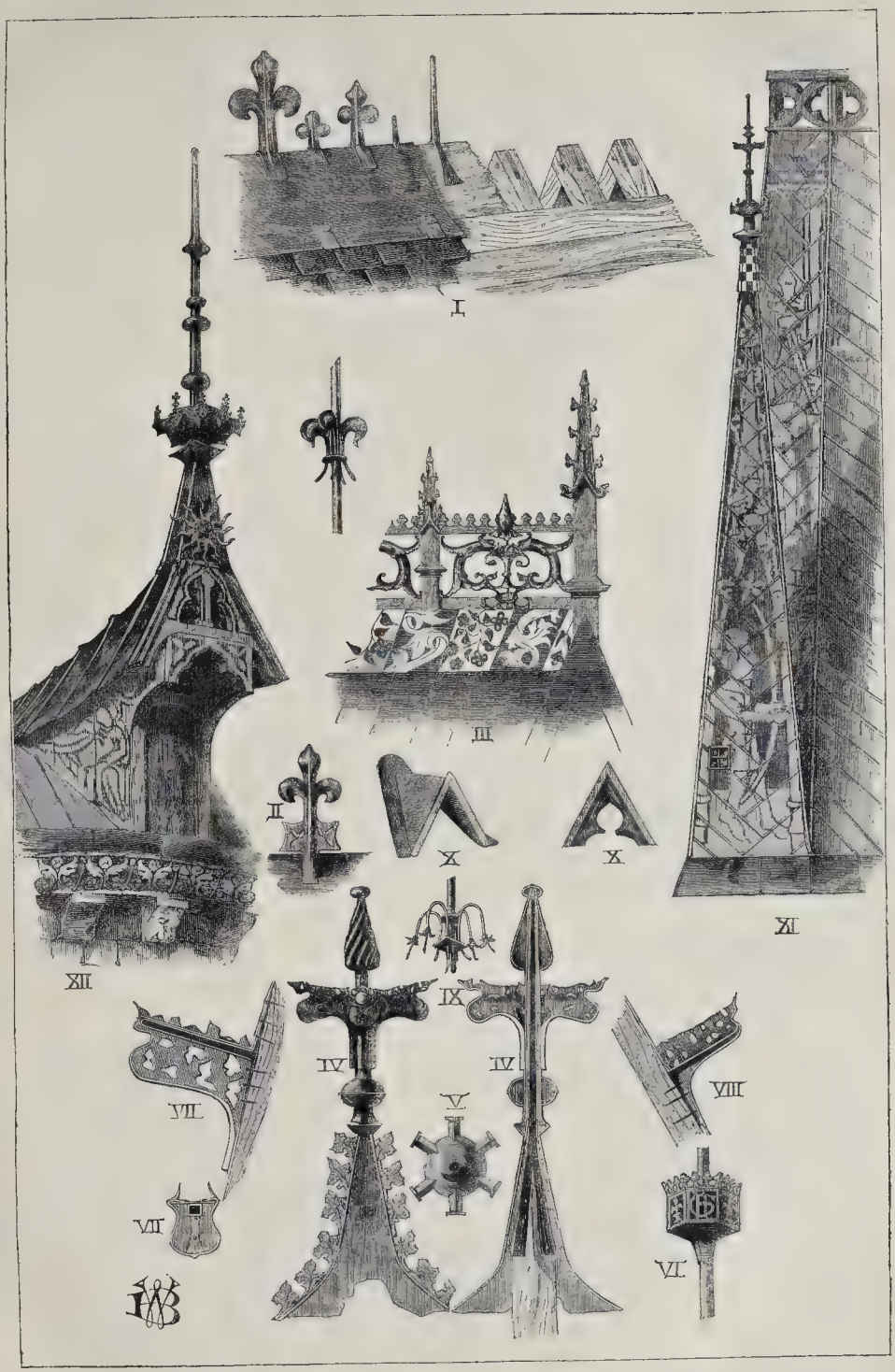
‡ To be continued. The foregoing was read at the Architectural Museum, Canon-row, Westminster.

CRYSTAL PALACE.

THE widow of the late Charles Geerts, sculptor, of Louvain, has sent to the Crystal Palace upwards of 100 of the original models of the statues he executed for the Hôtel de Ville, Louvain, and of the statuettes of saints which are in the halls, recently finished, in the cathedral of Antwerp. They are all Mediæval in character, and deserve attention.

The Picture Gallery has now a much better aspect than it had when we first saw it, and does credit to the energy and intelligence of Mr. Mogford. The light seems excellent.

DEARTH OF FREESTONE.—Several building works in Morayshire, according to the *Forres Gazette*, are at a stand-still for want of freestone. The demand at the different quarries has for some time been beyond the supply, and hands have been scarce. The material for the Keith Railway station is to be taken from Morayshire.



ANCIENT ORNAMENTAL LEADWORK.

CHURCH-BUILDING NEWS.

Hatfield Chase.—On the 8th, the dedication stones of two churches building in the Old Royal Chase, at Hatfield, from the plans of Mr. Joseph Clarke, the diocesan architect, were laid,—that of St. John's by Miss Chamberlayne, and that of Holy Trinity by the Master of Trinity College, Cambridge. Mr. Archer Houblon is contractor for both the churches. The church of Holy Trinity is Early English, with a tower and spire on the south side, and which will be covered with shingle from the forest. The walls will be of flint, lined with brick, and with Bath and Painswick stone dressings. The seating will be by open benches, and the chancel will have stall-seats laid on the encaustile tile floors. On the south side is the Selwyn Chapel, built by an old family in the neighbourhood. The Church of St. John is smaller, and has an apsidal termination, which it is hoped will be enriched at some future period with painted glass, &c. There is an open south porch, and a tower and bells are to be added at the west end. The materials will be the same as those of Holy Trinity Church. The Old Royal Chase is fast disappearing under the Enclosure Act.

Sibsey.—The village-church of St. Margaret, Sibsey, has now been restored. Messrs. Kirk and Parry, of Sleaford, who have acted as the architects, found, on clearing away the old work, that the church was in a more dilapidated condition than was imagined. It was found necessary to replace entirely the roof of the nave and north and south aisles, and to rebuild the chancel. The body of the church has also been re-seated in modern style, and the old cumbersome pews removed. About 2,500*l.* have been expended in the reparation of the nave and aisles. The chancel has been rebuilt at the sole expense of the lay impropriator, Mr. T. F. Gape, of St. Albans. There are three stained-glass windows, by Mr. Ward, of London. One in the steeple, presented by the Rev. G. Cape, vicar, and the Rev. T. L. Edwards, curate, is divided into two compartments, in one of which is represented our Saviour, and in the other St. Margaret. A second window, on the north side of the chancel, presented by Mr. W. Saul, churchwarden, in memory of a late daughter, represents the Resurrection of Lazarus, and Christ Healing the Sick and Lame. A third window, on the opposite side of the chancel, presented by Mr. E. B. Waite, churchwarden, also in memory of a daughter, represents Christ bidding little children to come unto him. The repairs in the nave and aisles have been executed by Mr. W. Webster, of Wyberton, and the rebuilding of the chancel by Mr. Whitworth, of Boston. The greater portion of the sum spent in these restorations has been raised by voluntary contributions.

Ipswich.—The report of the building committee of the burial board was presented for adoption at a meeting of the Board in week before last. The report stated, that while the amount of the contract for cemetery buildings was 1,284*l.* the actual cost, including extra work recommended by the committee, 204*l.* odds, and extra work ordered by the architects before the appointment of the committee, 231*l.* odds, had been 468*l.* odds beyond the amount of the contract, or, in all, 1,752*l.* odds. The architects, continued the report, had charged 5 per cent. commission on 1,750*l.* and travelling expenses, with costs of getting out quantities and extra plans furnished to Mr. Notcutt; making a total of 147*l.* 10s. There were also accounts from the contractors and others connected with the buildings, amounting to 122*l.* odds, and the total expenditure had been 1,874*l.* odds. Considerable dissatisfaction was expressed with the general result, in course of the discussion which ensued, Mr. Geard declaring his belief that the architects had cut the matter down below the mark, in order to get their plan accepted, intending, afterwards to put on the extras; and Mr. Gowing denouncing architectural competitions altogether as downright humbug, or something worse. The report was finally adopted.

Yarmouth.—On Wednesday before last the Church of England portion of the new cemetery was consecrated. The cemetery is to the north-east of the present churchyard, and contains altogether about 10½ acres; 6½ acres of which are appropriated to the Church of England, the remaining 4 acres having been set apart for Dissenters. It has been constructed at a cost of about 3,500*l.*

Enstone.—The church of Enstone having been restored, was reopened on 14th inst. By means of an estate for the repair of the church, aided by contributions of parish proprietors, the parishioners have been enabled to restore and refit the whole interior fabric of the edifice, to place a new roof on the north aisle, reseat the entire church with open seats, and otherwise to improve the building. The architect for the restorations (except for those of the chancel) was Mr. Street, and the builder Mr. George Wyatt, of Oxford.

Salisbury.—The late Alderman Smith has bequeathed the sum of 200*l.* towards placing a stained-glass window at the east end of St. Thomas's Church, in this city.

Bridgwater.—A chapel is to be erected at the Cemetery here for Dissenters. The designs have been furnished by Mr. Robert Down, architect, of this town, under whose superintendence the works are to be immediately carried out. The contract has been taken by Mr. Thomas Hutchings, builder.

Tiverton.—The outlay for the parish church restorations already noticed was about 6,000*l.* The materials used are Westleigh limestone, with Bath stone dressings. In the tower, which has had the exterior restored at an expense of about 500*l.* is a painted window by Mr. Wailes, the subjects allusive to the erection of Solomon's Temple, and a memorial to the late Mr. John Barne. Over the altar there is to be a painted window, the gift of the Rev. W. Rayer, also by Mr. Wailes, the subject being the Resurrection.

Chippenham.—Messrs. C. and A. Gibbs have executed an east chancel window for Littleton Dew Church, Chippenham, Wilts. It is in memory of the rector's brother. The window is arranged with obituary subjects and emblems

Chester.—The same artists have completed an ornamental window in St. Bride's Church, Chester, paid for by subscription, and dedicated to the memory of the Rev. Mr. Hutton, the late rector. It is placed in the east end of the church. The centre opening represents the Ascension of our Lord. The opening is 13 feet high and 5 feet wide, and the figures of the disciples are rendered of the size of life. The side openings are filled in with diaper work, on which the busts of the four Evangelists are stained.

New Brighton.—The consecration of St. James's Church, New Brighton, says the *Chester Chronicle* of week before last, took place on Thursday. The new structure is in the Pointed Norman style, and stands in a prominent position fronting the sea. It has short transepts, with side aisles to the nave, and has a full-timbered roof. The building has been constructed to accommodate 900, and of the sittings 250 are free to the poor, whilst 50 will be let at a mere nominal rental. The new church has cost 9,000*l.* in its erection, the principal portion of which has been contributed by the gentry and other inhabitants of New Brighton and its neighbourhood. Mr. Scott was the architect, and Messrs. Furniss and Kilpin, of Liverpool, were the contractors. In the east end of the building there are three stained glass windows, which were presented by Mr. Pilkington, of St. Helen's.

Clynnog Fawr.—The old church of Clynnog Fawr, near Carnarvon, has been re-opened after undergoing restoration, and the occasion was observed quite as a holiday. The open timber roofs of the building have been uniformly restored and stained. The fourteen windows have been all renovated. The outer walls are pointed in the joints with Portland cement—the inner uniformly plastered and coloured. The pews, with slight alterations, are as they were renewed some twenty-three years ago. There has been an entire refitting of the altar, rail, floor, and table. The ancient screen, supported by pillars between the chancel and transept, has been brought more into its original character, and an unsightly modern gallery above it has been removed. The ancient stalls have been restored. Four new limestone steps are placed at the bottom of the nave to ascend, and three corresponding ones at the altar. The entire floor of the tower, nave, and transepts, has been laid with new polished Yorkshire flags. The space in the chancel between the stalls and communion rail has been laid with Minton's encaustic tiles, and the space within the communion rail boarded and carpeted. The adjoining sacrarium has been restored in its groined ceiling, and made into a robing-room. A reredos for the wall behind the altar, with sacred monograms, the decalogue, &c. inscribed, and appropriate texts of Scripture over the table, are in course of preparation.

Birmingham.—The first stone of a new Presbyterian Church, to be erected in New John-street West, was laid by Mr. John Henderson, of London Works, on Monday in last week. The architect of the building is Mr. J. R. Botham, and the builders are Messrs. Hardwick and Son, all of this town. The building, which it is expected will be completed before the end of the year, is estimated to cost 2,000*l.* and will accommodate 800 persons, independent of galleries to be erected when necessary. The site cost 625*l.*

Weddington.—The parish church of Weddington, near Nuneaton, which has been under repair and restoration, was re-opened on Sunday before last. The cost of the repairs has been defrayed by the rector and the parishioners. The chancel and the altarpiece, representing the Crucifixion of our Saviour, have been restored by the rector. The Rev. W. H. Cooper and Mrs. Cooper, of Weddington-hall, have restored the transept. A Norman arch spans this transept, and two small coloured-glass windows have been introduced.

Wigton.—The portion of the new burial ground for the parish of Wigton, set apart for members of the Church of England, was consecrated on Friday before last, by the Bishop of Carlisle. The cemetery, says the *Carlisle Journal*, occupies a rising ground about a mile to the north-west of Wigton. Three acres of the ground are set apart for the use of members of the Church of England, and the remaining two for Nonconformists—the line of demarkation between the two being a broad walk and boundary stones, similar to those adopted in the Carlisle cemetery. The cemetery is enclosed by a freestone wall, 7 feet in height, except at the entrance, where a palisading is erected. On the right of the entrance-gate stands the Church of England chapel, with a vestry at one end; and on the other side are the curator's residence and the Nonconformist chapel. Both chapels are built in the Early English style, are 36 feet long by 16½ feet wide, and are fitted up in the interior with stained wood, and seats of the same material: the exteriors, however, are somewhat different. The whole of the buildings were designed and superintended by Mr. Stewart, of Carlisle, architect, and Mr. Jas. McKay was the builder.

West Hartlepool. — On Tuesday before last, the new Congregational church and schools at West Hartlepool were opened. The church is cruciform in plan, with nave, transepts, and tower. The narrow end of the triangle forms the tower which carries the stairs, and the broad end gives projecting transepts with side entrances to the vestry and boiler-house. The tower will be surmounted by a spire, now in progress, in alternate bands of red and white brick and stonework. Large schoolrooms are under the church, with vestry, boiler-house, and class-rooms attached. These will accommodate 500 children; while provision is made in the church for 800 sittings. Colour has been adapted to give relief to large flat surfaces and deepen the carved work of the screen, pulpit, and communion place. The wood work will be stained and varnished. The roof is open. The pews are low and sloping, but without doors. The windows are glazed with Hartley's patent quarry glass. The cost of the entire undertaking will be upwards of 2,500*l.* nearly 1,500*l.* of which are already subscribed. Mr. Oliver was the architect.

Sunderland.—The new cemetery at Monkwearmouth was consecrated by the Bishop of Manchester on the 27th ult. There are two chapels with belfries. The chapels are both alike, and capable of accommodating 100 persons each, with robing-rooms for the officiating clergy, and reception-houses for the dead attached. The

sexton's-house is at the entrance, connected with which is a covered gateway. The ground being high and undulating, it is walled in all round, except on one side, which is bounded by a water-course, advantage of which has been taken, and formed as a sunk fence, with waterfalls at intervals, terminating in an ornamental water. The buildings and walls are of unpitched stone, with dressed facings. The total cost, including the land, will be about 8,000*l*. Mr. Oliver was the architect.

FOREIGN INTELLIGENCE.

Novel Painting of a Market-hall.—The meat-market at Ghent is now completely free of the intolerable nuisance of flies. The simple remedy consists in the inner walls having been painted with laurel oil (*Oleum lauri nobilis?*), the smell of which the flies cannot support. Even gilt frames can be thus preserved unsoiled. The smell of the laurel oil is not unpleasant, and one easily gets accustomed to it.

Rome.—The column erecting by the Pope to the Virgin Mary, is near completion, but the sculptures are of a kind to raise pity. According to our informant, those who are accustomed to view sterling art, say that the basso-relievos which will surround the socle of the column will exhibit an utterly spoiled art taste, which must hide the poverty of the idea under a conventional drapery, and the tinsel of gilding. The Mary column will thus be one of the poorest, although the most expensive Roman monument.

Hamburg Art-Union.—The catalogue of this year's exhibition reaches 964 numbers, amongst which there are but few sculptures. This number is so considerable, that the space allotted to them will necessitate a change of specimens in the exhibition. Of Hamburg artists, fifty-three have sent in specimens, one from Rome, &c.

Berlin: Revulsion in the Labour Market of Europe.—To the draught on the European labour market, lately caused by the gold fields of the new continents, supervenes now that brought on by the re-opening of Russia, and the desire of developing her resources. The emigration of all sorts of mechanics to Russia has been, therefore, very great from Berlin, whence, amongst others, 400 cabinet-makers have left; so much so, that a deficiency of hands is already felt.

Berlin.—Hofbaurath Professor Starck was lately called to London by Prince Frederic William of Prussia. As the prince intends to re-build the palace inhabited by the late king, M. Starck brought the plans to England for inspection.—The seniors of the merchants have purchased the house, 25, Burgstrasse, to erect a new *börse* thereon. The plans have been approved, and the building is to be completed in two years.—The directors of the waterworks are obliged to have 1,300 waterspouts at the disposal of the fire-police, in case of conflagration, the cleansing of the streets, &c. A very systematic numbering, on coloured tablets, has just been introduced pointing out the places of these waterspouts.

THE DRAINAGE OF LONDON.

BOARD OF WORKS.

AT a meeting of the Metropolitan Board of Works, on the 22nd, the engineer's proposal to make the outfall for the main drainage in Erith Marshes, was negatived by an amendment proposed by Mr. Doulton, substituting Long Reach. On this amendment being put as a substantive motion, Mr. Alexander Wright moved, as an amendment, that it was desirable to carry the entire sewage by one tunnel to Sea Reach; and this being seconded by Mr. Wilkinson, Mr. Leslie laid before the Board his plan for effecting it. He showed that now, for the first time, the area on both sides of the Thames was made to form one metropolis, and he proposed the formation of one sewer on the south side from Putney to Sheerness. Providing otherwise for the storm waters, he calculated that a circular sewer, 10 feet in diameter, would answer the purpose, and he would bring the sewage of the north side across the Thames into it at two places, the Thames Tunnel affording one.

"The second question," to adopt the proposer's own words, "is, What would such a sewer cost? The various estimates I have obtained, including side entrances, &c. &c. &c. range between 15,000*l* and 20,000*l* per mile.

Let me, then, submit to your consideration the highest of these estimates, and multiply it by the longest calculated length, say 40 miles, and we have a sum of 800,000*l*.

"For which sum we should have an artificial channel from Putney, far down into Sea Reach, taking in its progress seaward the whole metropolitan sewage, and all the sewage of Erith, Dartford, Greenhithe, Northfleet, and Gravesend."

"My datum line is the bottom of the water on the bed of the Thames at Putney. From thence to Sheerness, in the river's circuitous line, is about 50 miles, and the fall in the bed of the Thames is about 33 feet. In the shortened straight line this would give me a natural fall of about 10 inches per mile, and I should have to add to this natural fall 14 inches per mile, to make up the uniform fall or inclination of the sewer to 2 feet per mile.

I should then have to raise at the terminus the sewage about 50 feet, equal to 1,200 horse-power. I have repeatedly adverted to the effects of our contemplated works on the navigation of the River Thames, and the effect upon that navigation by the abstraction of large quantities of sewage water. This important question to our commerce must occupy the serious attention of this Board, and, in the arrangement of the works which it is our imperative duty to carry out, we must endeavour to find a compensation for this loss of water in the river by the abstraction of the existing sewage water.

We must seek for this compensation by separating the storm and surface waters, and the waters for public purposes, fountains watering the streets, &c. &c. which every vestry, every district Board, and this Board also, under the 150th section may procure, and in this great metropolitan improvement is involved the total destruction of the monster nuisance of gully gratings throughout the metropolis."

At the conclusion of Mr. Leslie's statement the Board adjourned, until Tuesday next.

THE NATIONAL GALLERY.

I HAVE not felt surprised at the dissatisfaction which has been so widely expressed at recent additions which have been made to the National Gallery of Pictures, for the chief merit of the new paintings is that they are curiosities of art. It is, no doubt, to a certain extent, desirable to collect such works for the use of the students, in order that, by a knowledge of the schools of bygone times, they may be able to form a just estimate of the deficiencies and advantages of their own. In a collection, however, which is formed for the instruction and amusement of the multitude, as well as for the use of students, it scarcely seems advisable to gather together numbers of primitive works which to the great mass of visitors must seem "flat, stale, and unprofitable."

In a national collection we should above all things have a fair example of the works of our national painters, and at every sacrifice collect, when the opportunity serves, the gems of artists like Reynolds, Gainsborough, or Wilkie. At present, the first of these, our greatest English painter, is not fairly represented in our National Gallery; and what an opportunity has been missed at the late Mr. Rogers' sale. The "Strawberry Girl," and "Puck," pictures, which ought to have become the property of the nation at almost any price, have been allowed to go into private hands. Such works as these must yearly increase in value, and if these pictures are at a future time purchased for the National Gallery, the price will be greatly in advance of that at the last sale. No one can properly appreciate the genius of Reynolds until he has seen the two pictures to which I refer, and undoubtedly both artists and the public suffer a loss by the absence of these pictures, for which the addition of the curiosities will only in a very small way atone. Our sweet, elegant, and truly English painter, Gainsborough, has not been well cared for in our national collection; but I trust that better taste and judgment are coming.

AN ARTIST.

ARCHÆOLOGICAL.

THE Archæological Institute will hold their annual meeting this year at Edinburgh, from July 22nd to the 29th. After an examination of Edinburgh, aided by Mr. Robert Chambers, there will be excursions to the Tweedside Abbeys—Jedburgh, Melrose, Dryburgh; to Dirleton Castle, an early example of castellated architecture; to Dunblane, Stirling, Linlithgow, the Roman Camp at Ardoch, the Vestiges of the Wall of Antoninus, Borthwick Castle, Hawthornden, and Roslin.

The British Archæological Association will meet at Bridgewater, from Monday, the 25th of August, to Saturday, the 30th. Patrons—The Earl Portman, Lord Lieutenant of Somersetshire, and the Right Hon. and Right Rev. Lord Auckland, Bishop of Bath and Wells. During the week visits will be paid to Glastonbury Abbey, Wells Cathedral, Bath Abbey Church, and various churches and places of interest in the neighbourhood.

Part i. of Vol. V. of papers published by "The Norfolk and Norwich Archæological Society," contains a fully illustrated notice of excavations made at Burgh Castle, Suffolk, by Mr. Henry Harrod. Under the head of Norwich Pageants, Mr. Fitch contributes some particulars of the mysteries performed by the Company of Grocers, from their books between 1534 and 1570. In the list of "particulars" belonging to the company, in 1565, we find "A Pageant, y^t is to saye, a Howse of Waynskott, paynted and buylded on a Carte w^t fowre whelys."

The last published collection of reports and papers, read at meetings of the Northampton, York, Lincoln, Bedford, Worcester, and Leicestershire Architectural and Archæological Societies (vol. iii. part ii.), comprises a number of very interesting contributions, including a history of the Abbey Church of Peterborough, by Mr. G. A. Poole, a large number of illustrations, by Miss Ada Brereton, to a paper on St. Mary's Church, Kirkburn, by Mr. Charles Brereton; Christian and Classical Art contrasted, by the Rev. Brook Bridges; on Colour, by Mr. Street, and others. The best illustrated paper is one on the Churches in the neighbourhood of Newark-upon-Trent, by Mr. C. Baily.

SCENERY AND EXHIBITIONS.

Her Majesty's Theatre.—Admirably well managed, indeed, is the last scene in *Le Corsaire*,—the storm, the lurid sky, the sinking ship, and the escaping group. It is not, as some of our contemporaries called it, the "finest work of the scene-painter ever seen in England;" no one would dissent from such a remark more strongly than Mr. Charles Marshall himself: but it is, nevertheless, an excellent and effective piece of stage-mechanism and painting conjoined. Mr. Lumley has been indefatigable in providing a change of singers and dancers: the great success of the season, however, is undoubtedly Madlle. Piccolomini.

The Haymarket Theatre.—There are three very good scenes in the sparkling ballet of "The Captives," for the Spanish dancers,—the ruins of an aqueduct and distant country; the walls of the Alhambra; and the Court of the Lions in that palace-fortress, with its fountain, richly decorated walls, and columns, "which," as one of the Moorish inscriptions says, "when struck by the rays of the rising sun, one might fancy, notwithstanding their colossal dimensions, to be so many *blocks of pearl*," and this is just the effect the artist has given to those in the distance. Comedy and farce prevail here, and with good effect. Mr. Buckstone is always at home.

The Polytechnic Institution.—A full-sized copy of Raffaelle's "School of Athens," painted for the University of Virginia, United States, by M. Paul Balze, is now being exhibited at the Polytechnic, and may be usefully studied. Those who know the difficulties of art best appreciate Raffaelle. It seems to be a very good copy, but is marred by an ugly join in the canvas.

THE OPERATIVE MASONS' SOCIETY.

THE forty-sixth anniversary of the Operative Masons' Benefit Society was celebrated on Tuesday, 15th of July, at the Manor-house Tavern, Walworth, adjoining the Surrey-gardens; Mr. C. H. Smith, in the chair. At four o'clock, about seventy operatives, chiefly masons, sat down to an excellent dinner. The usual loyal toasts having been drank, the chairman proposed the health of "Sir Charles Barry and the Architectural profession collectively." Although masons were generally employed by the builders, it was to the master-mind of the architect that they were chiefly indebted for the superior part of their occupation. He (the chairman), had particularized Sir C. Barry as deserving their especial notice, because no other individual had done so much for the working mason, as that distinguished architect. The masons might conscientiously pray for the health and long life of Sir Charles, to enable him to complete the palace of Westminster; for as far as his (the

chairman's) knowledge of history and antiquities extended, he could not recollect any building, in any country, during any period of history, having been erected with such an amount of ingenious mason's work as that which is already executed, together with that which is contemplated, to finish the great work at Westminster. Thirty or forty years since, it was the popular opinion, that the art and mystery of constructing vaulted ceilings in stone, similar to those of King's College chapel, at Cambridge, or Henry VII.'s Chapel, at Westminster, was entirely lost; but under the able direction of the architect he had named, the masons of Westminster had erected an octagonal roof, 60 or 70 feet in diameter, over the central hall of the Houses of Parliament, presenting quite as much elegance of design, and, perhaps, greater constructional science in its execution, than is to be found in any building of the middle ages, proving that the operatives of the nineteenth century only wanted the opportunity to show that they were able and ready to carry out the most ingenious and beautiful conceptions of the architect, in a manner creditable to themselves, and advantageous to their employers. In the evening, the masons were joined by their relatives and friends, of the feminine gender, and dancing was continued until after midnight.

STREET PAVING.

A SPECIMEN of a new system of street paving has been recently laid down by the parochial authorities of St. George's, Bloomsbury, in Southampton-street, Holborn end, which promises, according to its promoters, to be a remedy for the evils arising from dust, mud, noise, and danger to horses.

The component parts of this paving appear to be wood and granite, in alternate rows, formed into blocks of about 2 feet in length by 1 foot in width, and 8 or 9 inches deep, cemented with asphalte. The wood having been impregnated with creosote is rendered impervious to water, and being combined with stone, the advantages of wood paving for carriage traffic are retained, without the disadvantage of danger to horses, which resulted from its absorption of water during wet weather: the broken granite, moreover, being hemmed in and cemented, appears to be less liable to that abrasion by traffic which so easily converts it into mud and dust.

If these advantages can be combined (as alleged by the friends of this system) with greater economy in laying down, greater facilities for removal, to get at gas and water mains, than have been experienced with blocks or McAdam, without a dverting to the absence of any necessity for taxing the rate-payers for such nuisances as water-carts in summer and mud-carts in winter, then indeed it would be an important step in the right direction towards mending the ways of the public in this great emporium of traffic. At present, however, we do not pretend to do more than chronicle the system.

SCAGLIOLA.

In reply to "D. W.'s" inquiry, scagliola is formed and manipulated as follows:—

The work (panel, &c.) is roughed in with gauged stuff (lime and hair and plaster), and when quite dry, Keene's cement is mixed in patches, each with a separate colour worked up with it,—chrome, sienna, black, Venetian red, &c. as may be required. It is then laid out the required thickness, and cut into triangular pieces, and pressed into the prepared ground with the fingers. Then, when quite dry, the surface is levelled down (if a pedestal, it is put into a lathe and turned), and then polished—first, with rough stone; second, with snake-stone; then flannel and putty powder, and finished up with beef fat and a linen rag. All holes must be made good with colour before polishing. THOS. GOODCHILD.

AMERICA.

THE North Baptist Church, at Hartford, Conn. now nearly finished, from the designs of Mr. Russell West, stands on a plot of ground which may be described as a rhomboid, 88 feet by 170 feet, with angles of 105 deg. and 75 deg. The site required the west front to be parallel with the line of the street, and the congregation desired to have the church and vestibules rectangular.

The walls are built of brown sandstone, uncoursed masonry; the facing neatly hammered and squared. The tower and spire stand at the south-west corner, 22 feet square at base, and 190 feet high. The vestibule is 32 feet by 37 feet, with columns, and carved capitals of Caen stone, supporting semicircular arches. The stairs in rear of the tower lead to a lecture room, 37 feet by 52 feet and 27 feet high, adjoining which is a small library in the tower. The church is 106 feet by 62 feet, and 43 feet high, divided by columns into a centre and aisles. Circular windows borrow light from skylights in the roof, and produce in the interior the effect of a clear story. Objections being made to the open timber roof, the ceilings are plastered, with ribs and enriched bosses, perforated for ventilation. The whole building is warmed by heated air from furnaces in the basement. There is an organ gallery at the west end. The side galleries are kept entirely behind the columns. The pulpit and bench ends are of oak, carved. Colour is not denied either to the casement or the walls. The semicircular arch is used throughout the building.

The glass staining was done by Mr. Henry Sharp, the decoration of the walls, by Mr. James Leslie, and carving by Mr. Aubé, all three formerly of London.

The ground is 7 feet lower at the east end than at the front. Advantage is taken of this to obtain well-lighted school-rooms in the basement. The whole cost will be about 70,000 dollars.

DEPARTMENT OF SCIENCE AND ART.

THE examination of candidates for the first certificate has this year extended to architectural drawing. The first examination took place on the 15th of July. The examination-paper was as follows:—

"1. What are the three principal mechanical actions to which building materials are subjected?

2. Name the two kinds of bond common in brickwork, and draw, in elevation, one quarter full size, the arrangements of the bricks in each case—giving the technical names for the ends and sides of the bricks.

3. To a scale of 1 inch to a foot, draw an oblong which shall represent a window space 6 feet high and 3 feet 6 inches wide: the wall above it to be carried by a *straight* brick arch 1 foot 6 inches deep. Give the names of the upper and under sides of the same, and also those at *c* and *c*; the lines *c c* forming an angle of 60 deg. with each other. Find the centre, and describe an arc showing the line of pressure in the arch. Below the opening show an inverted or discharging brick arch, the crown of which is 4 feet below the bottom of opening, and 9 inches deep. Show how the bricks would be laid, and state the object of these arches.

4. Explain by sketch the position of timbers used in single and also double framed floors, and give their names.

5. Give the names of all the timbers in the truss (a Queen's post roof), and state which are in compression and which in tension."

COMPETITIONS.

Cheltenham College.—Twenty-eight designs were sent in for a chapel to this college. The premium of twenty-five guineas has been awarded by the directors to Mr. Philip Boyce, the author of the design bearing the motto "Spes sua cuique." They have, nevertheless, returned to a design previously made by Mr. D. J. Humphris, who was connected with the institution, for execution, and have appointed the latter gentleman to carry it out. Their plea is that none of the plans sent in were suited to the site. The east side of the college has been decided upon as the site of the chapel, partly with a view to render that elevation of the building more complete, and partly with a view to giving the chapel a domestic character, in direct connection with the institution to which it will be attached.

BUILDERS' BILLS.

HORNER *v.* WARD.—The plaintiffs in this action (at the Marylebone County Court, before Mr. J. L. Adolphus) are surveyors, decorators, and house agents, of Hart-street, Bloomsbury; and the defendant is a merchant, of 3, George-yard, Lombard-street. The sum claimed was 16*l.* 17s. and defendant had paid 11*l.* into court in full satisfaction.

Mr. Horner, jun. stated that the defendant had an empty house, which they had on their books to let, and it requiring some repairs, the defendant instructed their firm to carry the alterations out. As a surveyor he could say, that the work was well done and the charges fair and reasonable.

Mr. C. King, surveyor, stated that he went over the work, and considered it well done and the charges very fair. By Mr. Keene.—Gave no notice on the other side of his intention to survey the work. The walls were not properly prepared for papering. The preparation of the walls would have incurred farther expense than what the defendant instructed plaintiff to do.

Mr. Keene said, the defence to the action was, that the whole of the work was improperly done and overcharged. His client did not dispute the claim as a matter of £. s. d but he felt bound to show builders that they could not put off scamping work upon the public, and charge first-class prices for it.

Mr. Ward said he submitted to Mr. Horner what repairs were required, and certain charges were agreed to. When it was done he was very much dissatisfied, and gave intimation to the plaintiff that he intended employing a surveyor to look at the work. The answer he received was, that they would neither meet himself nor a surveyor.

Mr. Aldridge, a master painter, said the staircase wanted another coat of varnish, as it had only had one coat. He thought it was pretty well done, but the charges were too high throughout, and the money paid into court would pay a tradesman very well.

Mr. Armstrong, architect, stated that Mr. Ward, at his suggestion, served notice to the plaintiff respecting his going over the work, but there was no one on plaintiff's part to meet him. New paper had been put on old paper, which should have been stripped off. At first sight the paper did not seem to have been varnished at all, it was so badly done: the paper hung loose and not workmanlike. He advised Mr. Ward not to pay 16*l.* as the work was so badly done. By Mr. Horner.—It is customary in their profession to send notice by letter. Mr. Ward sent notice to the plaintiff to say a surveyor was just then on the premises. Could get respectable tradesmen to do the work for the sum paid into court.

Mr. House, defendant's clerk, proved to defendant's always complaining of the work.

The Judge was of opinion that there was good ground of complaint, and gave a verdict for defendant, with full costs.

THE PUBLIC OFFICES.

THE Select Committee appointed for the purpose of considering the best means of providing accommodation for the various Public Departments in the neighbourhood of Downing-street say in their report,—

"Your committee are of opinion that it is most desirable for the public service, both as regards economy and efficiency in the transaction of business, that there should be a concentration of the public offices, and that such concentration should be effected in the immediate vicinity of Whitehall and the Houses of Parliament."

"Your committee have taken evidence as to the sum for which the property comprised in the area bounded by the back of Richmond-terrace, the north front of the Irish Office, and Downing-street, on the north; New Palace-yard and Great George-street on the south; the river Thames on the east; and St. James's-park on the west, can be obtained. That space includes, with the buildings in Downing-street, 825,275 square feet, one-half of which it is calculated must be devoted to open spaces, and the other half to new buildings. Of this area, 171,638 square feet will be required for the offices before alluded to; 42,600 square feet for the accommodation of the Admiralty business now conducted at Somerset House, and 151,535 square feet for the other offices enumerated in the schedule appended to the evidence, leaving for additional buildings likely to be required, 46,864 square feet."

"It has been shown by your committee that, for reasons set forth in the evidence, it would be an economical arrangement to acquire, at the same time, the property between the north side of Great George-street and the Broad Sanctuary, together with the west side of Princes-street.

"Your committee recommend that, in case Parliament should sanction the acquisition of the properties before referred to, the design of the different public offices to be erected on the proposed site should be submitted to public competition."

Notices of Books.

Geometry of the Three First Books of Euclid, by direct Proof from Definitions only. By HENSLEIGH WEDGWOOD, M.A. London: Walton and Maberly. 1856.

THE "Elements of Euclid" have hitherto held their position in this country as the best introduction to the science of geometry. This has arisen from the rigorous mode in which the subject is treated, and the clear way in which conclusions are made to depend upon premises. The only work which has in any way superseded Euclid is that of Legendre, which is read by students on the continent; but although his Elements may surpass those of Euclid in elegance, yet much of the rigour of the latter has been sacrificed thereto. Euclid's Elements are undoubtedly full of defects, but of such a kind as can be remedied by the teacher. Mr. Wedgwood's work is one which may be found useful by the teacher in suggesting modes of reasoning different from those employed by Euclid, but it is not a book which could be placed in the hands of the student as an introduction to geometry. The definitions on which the whole is founded are clear enough to those who are advanced in knowledge, but would not be sufficiently so to the elementary student. The method of proving the equality of two figures

by superimposing one on the other may be used with advantage much more frequently than we find it in the Elements; as, for example, in the celebrated *pons asinorum*, in the proof of which it is employed by Mr. Wedgwood, and in which it has also been used by eminent mathematicians. The indirect mode of reasoning called the *reductio ad absurdum* is one which Euclid generally employs in the proof of converse propositions, and is certainly as rigorous and, we believe, as clear to the understanding of the student as the direct method of proof: our author, however, appears to think that it should be avoided as much as possible; but the process of reasoning which he in some cases substitutes for Euclid's indirect proof is in reality itself only *indirect* proof under a disguised form. The mixing up the third with the first book is taking a liberty with Euclid which is not justified by the advantages supposed to be gained thereby.

VARIORUM.

"The World's Highway" is the title of a pamphlet published by Weale, Holborn, and containing a reprint from the *Calcutta Review*, for March, 1856, of an article on a project by Mr. R. M. Stephenson, the managing director of the East-India Railway Company, for what may be called a through route of railway to India. The scheme is twofold, the greater and more complete comprising a continuous line, *viâ* Constantinople, &c. through Aleppo and Bagdad to Bussorah, at the head of the Red Sea, thence along its north-eastern shores, and along the coast of Mekran to Hyderabad and Hindostan. On the large map descriptive of this scheme, another is even shadowed out in the future distance branching off near Constantinople, and running along the south coast of the Black Sea by Sinope and Trebizond, thence boldly plunging into the interior by Erzeroum, Teheran, Herat, and Afghanistan to the Punjaub. Both routes would be united with the European system through Belgrade and Vienna. The minor and less improbable scheme would have a great break at Bussorah, whence there would be the usual steaming down the Red Sea, and the railway would be continued from Kurrachee, and thence run to Bombay. We have seen quite enough in our day to induce us to hesitate before dismissing even the vastest of these schemes as impracticable, but we have even some hope of seeing the more moderately extensive one, or something like it, at least, fairly carried out in course of not very many years. The idea of carrying the iron horse, and the wonders of his iron way, into the regions of the Arabian Nights, is not so preposterous as it may appear as yet to some.——In the *Edinburgh Review*, for July, there is an interesting article on the Growth of the Map of London, treating mainly of Maps and Directories, statistics and provision, &c. In allusion to the nativity of London residents, the writer remarks, that few persons have the slightest conception of the extraordinary number of country people residing in London. He estimates the number of actual natives of London at less than one-half of the whole population: in other words, more than half of that population consists of country people! Who can speak of "London for the Londoners" after that? In fact, as we have before noted, London is an *omnium gatherum*, not only from all parts of England, Scotland, and Ireland, but from abroad as well, there still being an amalgamative process going on that reminds one strongly of the ancient origin of the Anglo-Saxon. There are no less than 110,000 Celts from Ireland in London. There are no less than 37,000 Devonshire people, 34,000 Hampshire people, and so on. The 30,000 Scots are really a modest contribution by comparison with the country English and the Irish in London; and the Scots seem scarcely, therefore, to merit the reputation they have for "coming south," so far as regards the great English centre at least. There are even 30,000 *foreigners* residents in London, 10,000 of them German and 7,000 French. As we have before pointed out, London actually contains more natives of certain English counties than the capital towns of these counties themselves contain.——"Social Delusions concerning Wealth and Want," is a suggestive little volume, by one who evidently thinks for himself, and whose thoughts, however much one may differ from him on many points, are well worthy of grave consideration. The author is Mr. Richard Jennings, of Trinity College, Cambridge, and author of a work on the natural elements of political economy. Messrs. Longman and Co. are the publishers of the present work. Mr. Jennings is no slavish disciple of any school of political economy: he rather aims at the introduction of a new system, on which we cannot well enter, but which it is both interesting and instructive to contrast with the old, whatever view one may feel inclined to take of either. We could pick out many points on which we think the author's views are wrong, but there is much on most important principles in which he is evidently right and our more established teachers mistaken; and, on all points, the book is well worth reading.——We are pleased but by no means surprised to learn that the first edition of Mr. Timbs's "Things not generally known familiarly explained," has been exhausted, and a second edition now published (Bogue, Fleet-street). The work is even improved on various points, and truly forms "a book for old and young."——"The Stereoscope: its History, Theory, and Construction, with its Application to the fine and useful Arts and to Education," by Sir David Brewster, has been published by Murray, of Albemarle-street. To those (and they must now be many) who desires to understand the mystery and the history of that new wonder of the day, the stereoscope, which affords amusement and instruction to so many thousands, there can be no better or more standard work to consult than this by Sir David Brewster. The present volume is illustrated with fifty wood engravings, and gives a complete account of the stereoscope in theory and practice, a short chapter on its application to sculpture, architecture, and engineering inclusive.——Two very useful little books for the young, whether at school or at home, have just been published by Messrs. Longman and Co. of Paternoster-row. One is titled, "A complete Catechism of the Descriptive Geography of England, compiled for the use of Schools and private Families," by T. Challener. The other is titled, "The Stepping-stone to Natural History," by James Owen; and contains an account (in the form of question and answer, like the other compilation just referred to) of the vertebrate or back-boned animals,—viz. mammalia, birds, reptiles, and fishes.

Miscellanea.

FALL OF WALL, HENRIETTA-STREET.—On Saturday night last, a party-wall, recently erected between a house about to be built at the corner of Bedford-street, Covent-garden, and the offices of the Board of Works for the Strand district, fell to the ground from the level of the one-pair floor. Fortunately no person was hurt. The accident is ascribed to the proceedings of the "old material men," who were taking down the house at the corner.

IRISH RAILWAY PROGRESS.—The opening of the Limerick and Foynes Railway took place on Thursday before last, the Lord Lieutenant and the directors of the line being present. Of the entire distance to Foynes—about thirty miles in extent—the line has been perfected as far as Rathkeale, a point 17¼ miles from Limerick. Mr. Dargan is the contractor, and Mr. Lefanu, engineer-in-chief to the undertaking.——Arrangements, it appears, have been recently made, which can hardly fail to secure the immediate construction of ample railway accommodation to the western and northern ports of Connaught. Two lines are said to be likely to be constructed—one leading from Athlone to Sligo, and another from Athenry to Castlebar. Some of the Galway interests are in favour of a line to Tuam, making Tuam the terminus, but those who take a more comprehensive view of the question wish to run the line to the confines of Mayo, there to meet the Castlebar continuation, and thus turn the whole tide of the Mayo traffic into the Galway line.——A prospectus for a direct railway from Newry to Armagh has been published.——The sum of 30,000*l.* will be lost, it is said, by the Great Southern Railway from Limerick to Cork, by the forgeries of the convict Knighting.——In consequence of the absorption of labour by the Roscrea and Parsonstown Junction Railway, some farmers and gentlemen in the neighbourhood of the new work, have had to increase the hire of their men to 1s. 6d. per day.

BUILDERS' BENEVOLENT INSTITUTION.—A meeting of the committee appointed to carry out the design of presenting a testimonial to Mr. Thomas Cozens, as the founder of the Builders' Benevolent Institution, was held at the offices of the Charity, the other day. Mr. G. Bird, the treasurer, presided. Mr. Jos. Bird, the hon. secretary, remarked that several parties had subscribed for the testimonial, and amongst them Mr. Alderman Cubitt, M.P. who had put down his name for 5*l.* 5s. It was to be hoped that gentlemen who are connected with the trades represented and relieved by this institution would at once come forward, as the list would shortly close.

NATIONAL WATT TESTIMONIAL.—Donations of materials for the Greenock monument were made last week from the quarries of Giffnock, Ward-hill, Nitshill, and Arden, amounting to 2,000 tons. Stones have arrived from Montreal, the Giant's Causeway, the Isle of Man, &c. &c. Valuable contributions are expected from Italy; and Cornwall and Tipperary will add to the mass. Several shipowners on the Mersey and Clyde have offered to transport, free of charge, from any port to which they trade, materials of any character or dimension tendered for incorporation in the Watt Testimonial. A contribution has just arrived in the form of a single stone of large dimensions from the Seneca Quarry, on the Potomac, Maryland, U.S. the gift of a former townsman, Mr. Gilbert Cameron, contractor for the erection of the Smithsonian Institution Buildings. The site of the intended monument has been marked out by Mr. David M'Intosh, of London, the architect who designed and carried out Sir Gabriel Wood's Mariners' Asylum, and the ground is in course of being levelled, previous to the excavation of the foundation.

THE METROPOLITAN TURNPIKE ROADS.—The Select Committee of the House of Commons have made their report. Impressed with the great inconvenience of the existence of tollgates in the populous districts of the metropolis, and of the importance of providing, if possible, some mode of remedying this inconvenience, the committee suggest their re-appointment next session for the purpose of completing the evidence. As a proof of the greatness of the grievance complained of we may quote the evidence of Mr. Arthur Ashpitel, an owner of land and house property in Hackney and Clapton. He shows that the vexatious and exorbitant tolls levied by the trustees of the Lea-bridge-road are a serious burden on his territory, and, in fact, operate to prevent the leasing of some of his property altogether, the tolls deterring persons from coming forward as tenants. There are so many gates that Mr. Ashpitel, in driving five miles, is often obliged to pay four gates, viz. the Lea-bridge-gate, the Clapton-gate, the Ball's-pond-gate, and the City-road or New North-road-gate. A heavy toll at Ball's-pond does not clear a second gate at Dalston, within about a mile and a half, and if the traveller try to evade this second toll by a by-road, he is stopped by a private tollbar at Hackney, set up by a special act of Parliament.

PUBLIC BATHS AND WASHHOUSES FOR THE CITY OF LONDON.—At the Court of Common Council, last week, Mr. Abraham moved "That the physical and moral condition of man is much influenced by cleanliness in his dwelling, person, and apparel; that the want of public baths and washhouses in this City is severely felt by the labouring and poor population; and that it be referred to the City Lands Committee, the Coal and Corn and Finance Committee, and the Improvement Committee, to consider and report to this court the best means of supplying the want alluded to, and the estimated cost thereof; and whether a suitable place can be found in the City of London for the erection thereof." Mr. Ross seconded the motion, and Mr. H. L. Taylor moved the previous question, by way of amendment. Mr. Bell seconded the amendment, and, after some discussion, the amendment was negatived by a majority of 12—the numbers being 30 and 18. The original motion was then carried.

SALE OF BUILDING SITES AT NORWICH.—The following is the result of a sale of building sites, last week, by auction. Lot 1, 1,265 square feet, having a frontage of 73 feet on London and Opie-streets, sold for 572*l.* Lot 2, 1,048 square feet, frontage 27 feet 6 inches, sold for 466*l.* Lot 3, 928 square feet, frontage 21 feet 6 inches, sold for 170*l.* Lot 4, 840 square feet, frontage 21 feet 6 inches, sold for 170*l.* Lot 5, 557 square feet, frontage 38 feet, sold for 175*l.* Making a gross sum of 1,553*l.*; being after the rate on an average of 6s. 10d. per square foot, or about 15,000*l.* per acre; the highest price being after the rate of 9s. 0½d. per square foot, and 20,000*l.* per acre.

ELEMENTARY DRAWING FOR CLASSES.—Mr. T. J. Rawlins puts in a claim for more consideration than he has obtained in respect of the adoption of his system of Elementary Drawing for Classes by the Government Department at Marlborough House. It has been used by him for many years, at St. Mark's College, Chelsea.

GAS.—The sudden and unexpected rise in the price of gas at Ware, from 4s. to 6s. per 1,000 cubic feet has induced the consumers to think of establishing a rival company. Complaints prevail, too, both as to the quality and the quantity of the article provided. The Limited Liability Act, it is thought, will facilitate matters, either as regards the formation of a new company or the bringing the old to reason.——The Limited Liability Gas Company in Stockton have purchased the works belonging to the old company, and thus put an end to the differences that existed between them. New and spacious works are being erected, and the old works are to become a gas depôt for the south end of the borough.——The builders of the large gasometer lately erected in the gas-works at Boston were last week engaged in making improvements and alterations, when a shore gave way, and the gasometer fell to the bottom of the tank, and was seriously damaged. This is the third accident, it is said, which has occurred since the erection of this gasometer, which is thought to be too large to be manageable.——The Cupar Gas Company directors have just announced a return of 10 per cent. to their shareholders, and a reduction of 10d. per 1,000 cubic feet to their customers. The price will now be 5s. 10d. The profits are said to be on the increase as the price decreases.——The fourth gas-work erected for the Sultan's palaces at Constantinople was put in operation on 19th May, at the new palace on the Bosphorus, on which occasion the large chandelier, weighing about 10 tons, with 464 lights (sent from London, and supposed to be the largest in the world), erected in the hall of audience, together with the gardens, orangeries, &c. were brilliantly lighted up, in the presence of the Sultan, the ladies of the harem, and officers of state; the whole presenting a most lively and interesting appearance. The engineer of the works, Mr. James Crawford, was personally complimented by the Sultan for the satisfactory manner in which the works and lighting-up had been completed. The work at the new palace consists of forty-two retorts and four gasometers. More extensive works, in connection with the Turkish government, are in course of erection, under the superintendence of the same gentleman, to light up Tophana, Galata, Pera, &c.

SUSSEX ARCHÆOLOGICAL SOCIETY.—The annual meeting of this society was held on Thursday in last week, at Bodiam Castle. A large assemblage proceeded at once to view the old church of Etchingham, the peculiarities of which were explained by Mr. Slater, architect. After the inspection, many of the party repaired to the rectory, where refreshments were provided for the members of the society. Omnibuses and other vehicles were in waiting to convey them to Bodiam, a distance of five miles from the railway. *En route*, a visit was paid to the old mansion of Haremare. On arriving at Bodiam, the members who had arrived by railway were met by many others who had reached by private conveyances. The first object viewed was the church, which has recently been restored and decorated at the expense of Mr. W. Cubitt. The castle was, however, the chief point of interest. After inspecting it, about 300 sat down to dinner, in a large booth in a field near the castle. In course of the evening, Mr. Mark Antony Lower read a paper on the descent of the manor and castle of Bodiam, a report of which appears in the *Brighton Herald*. The chairman, in the course of his speech, stated that there was a gentleman present who could prove that the Roman city of Anderida was not Pevensey, in Sussex, according to the views advocated by the society, but Newenden, in Kent. This remark called forth Mr. Lower, who dared the gentleman (whose name did not transpire) to the proof of his assertion. The challenge, however, was not taken up. Thirty-three new members were admitted at the Bodiam meeting.

GREENWICH.—On the 19th, Mr. Gutch, of Paddington, entertained a number of his brother-district surveyors, at the Trafalgar, including Mr. Donaldson, Mr. Foxhall, Mr. Kendall, Mr. Good, Mr. Howell, Mr. Henry Baker, Mr. Snooke, Mr. T. H. Wyatt, Mr. Charles Mayhew, and others. Such meetings of men engaged in similar duties, and, moreover, in other parts of their practice brought into collision with one another, have a beneficial effect, tending to produce uniformity of practice, and to remove asperities.——Her Majesty's ministers came to the same house, at the same time, to eat their white-bait dinner: they landed on a dirty old coal-barge, and were received by two or three men in dirtier shirt-sleeves. We are certainly a primitive, inartistic, and unpretending people. The only demonstration made on the occasion, was the arrival of four boat-loads of the boys of the Marine Society, who came out, apparently, to show how well they couldn't row, and to drink a certain amount of beer as their reward: they ought to be taught better.——Poor Bellot's obelisk is not well placed. It is squeezed into a small gusset-shaped piece of ground, surrounded by iron railing.

COLNEY HATCH ASYLUM FOUNDATIONS.—At a recent meeting of Middlesex magistrates, Mr. Northall Laurie said,—"Colney Hatch Asylum had only been open about five years, and had cost the county considerably over 200,000*l.*; and it was in circulation that the present state of that important building, of which so much had been said, was such that the committee had to call in Mr. Lewis Cubitt, the architect, to examine the same; that that gentleman had made a careful survey, and had sent in a report giving a most unsatisfactory account of the foundation of the asylum. There was a frontage of 1,700 feet, the whole of which he heard would require underpinning, and the roof and superstructure was in an equally unsatisfactory state. He wished to know if that was a correct statement, and if so, when the report of Mr. Lewis Cubitt would be submitted to the court?" Mr. Cottrell replied, that the committee had received reports on the subject, and had forwarded them to the architect of the asylum for his reply. However, he could not go the length of the statement of his learned friend (Mr. Laurie) that the whole of the foundations would require to be underpinned; but he understood that as a difficulty had been experienced in carrying off a large quantity of stagnant water, it had, to use the expression contained in the report, "eaten into the foundation," and had thus created a subsidence, followed by a sinking of the roof.

WOOD PLANING BY MACHINERY.—A planing machine of extraordinary dimensions has lately been manufactured by Messrs. John McDowall and Sons, of Johnstown, near Glasgow. It is capable of working all descriptions of wood, from ¼ inch to 6 inches in thickness, and from 3 inches to 12 inches in breadth, running through at the rate of 50 lineal feet per minute. The operations of planing, thicknessing, feathering, grooving, and jointing, are all performed at once.

MASONS' STRIKE, CARDIFF.—This strike is virtually at an end, the masters having succeeded, with one exception, in replacing the workmen from other places. Messrs. Rennie and Logan, it is stated, have yet room for a few hands on their contract for the wall at Cardiff gaol; but they expect in a short time to obtain all they want, as additional workmen are continually arriving. The principal cause of this termination is doubtless that the workmen demanded a higher rate of pay than the natural market rate. The wages of Cardiff previous to the strike were higher, our correspondent states, than in Newport, Merthyr, Swansea, Bristol, and all other places within a distance of fifty miles. They were also entirely unsupported by public opinion, and the unreasonable nature of their demands were pointed out in a former number of the *Builder*.

MR. RAWLINSON, C.E.—The *North and South Shields Gazette*, in a leading article commenting upon the distribution of marks of honour conferred for services during the late war, alludes to the Sanitary Commissioners, as having received the "cold shoulder from the incapables at the head of the medical department." The claims of Mr. Rawlinson are especially referred to:—"He laboured in the East earnestly and well; and however much the heads of the Army Medical Department may strive to shoulder aside their merit, there is no doubt whatever that to the Sanitary Commissioners mainly belongs the credit of placing the hospitals and the camp in the favourable position, as to public health, which they have since the spring of 1855 enjoyed. Mr. Rawlinson, we say, laboured earnestly and successfully in his duties, until struck down."

ARCHITECTS AND JURIES.—I have been summoned to form a jury at the Durham Assizes, where I shall probably be detained four or five days, some twelve miles away from home. This, I presume, I am bound to do; but does it not appear strangely inimical to justice and common sense that I should be held legally responsible for fatal accidents which may happen to occur on works erecting under my superintendence elsewhere, on the presumption that I ought to be always there, as in the case of Mr. Abrahams? I should be glad to do something, if I knew *what*. ARCHITECT.

[ADVERTISEMENT.]

TO THE EDITOR OF THE "BUILDER."

MESSRS. CLARK and Co. of 15, Gate-street, Lincoln's-Inn-fields, having erected at our premises two very large revolving-shutters, one weighing upwards of two tons, we feel much pleasure in recommending them, having acted exceedingly well during the whole of the three years they have been in use; also for the lowness of their charges and rigid punctuality, entitling them to the support of all those with whom durability is economy and time saved money made.

Our shutters may be seen nightly in active operation at eight o'clock.

SOWERBY, TATTON, AND COMPANY, Linendrapers. Regent-circus, Oxford-street.

TENDERS

For the erection of chapels, lodges, and entrance-gates in the new cemetery at Scarborough, were opened by the Burial Board on Tuesday last, and those marked * were accepted:—

Masonry—			
Wright and Peel, Bradford	£1,360	0	0
John Whitehead, Harrogate	1,253	10	0
Wm. Dove, Scarborough	1,163	12	2
*John Wilson, Scarborough	1,023	0	0
Joinery—			
Thos. Watson, Scarborough	387	0	0
John Kelly, Scarborough	330	0	0
Wright and Peel, Bradford	321	0	0
John Richardson, Scarborough	278	0	0
*James Kirby, Scarborough	276	1	0
Plastering—			
John Gilson, Scarborough	68	0	0
Wm. Sergeant, Scarborough	55	10	0
John Wilson, Scarborough	47	0	0
Wm. Dove, Scarborough	39	2	6
Croft and Braithward, York	37	0	0
*Benj. Smith, Scarborough	32	0	0
Plumbing—			
Geo. Underwood, York	64	5	0
Rich. Snowden, York	49	19	0
A. Gilson, Scarborough	46	0	0
H. Stephenson, Scarborough	44	8	6
*H. Hornsey, Scarborough	43	0	0
Painting—			
*R. Eastwood, Scarborough	27	10	0
Slating—			
Hill and Sotcliffe, Bradford	84	5	6
Wm. Dove, Scarborough	83	3	5
*Josh. Hardgrave, Scarborough	82	15	6
Ironwork—			
Thos. Whitehead, Scarborough	57	0	0
R. H. Peacock, Scarborough	56	0	0
*W. Ayres, York	40	0	0

For the erection of a carpet factory, for Messrs. Crane and Barton, Kidderminster. Mr. T. E. Bland, architect. Quantities supplied:—

Ferguson	£3,950	0	0
Barnsley and Sons	3,790	0	0
Thompson	3,786	0	0
Ankrett	3,560	0	0
Smith	3,550	0	0
Webb and Sons	3,489	0	0
Walker	3,264	0	0
Bruman	3,065	0	0

For extension of Messrs. H. T. Dixon and Co.'s carpet factory, at Kidderminster. Same architect. Quantities supplied:—

Barnsley and Sons	£2,350	0	0
Webb and Sons	2,110	0	0
Burkett	1,860	0	0
Walker	1,833	0	0
Ankrett	1,780	0	0

For the erection of the Leicestershire Banking Company's premises, at Market Harborough. Same architect. Quantities supplied:—

Lindley and Firn	£1,760	0	0
Herbert	1,697	0	0
Norman and Son	1,665	0	0
Burdett	1,615	0	0

For the erection of a villa residence, at Pinner, Middlesex, for Mr. Benjamin Weall, sen. Mr. Henry Mawley, architect. Quantities supplied by Mr. Lane:—

Patience	£1,932	0	0
Woodbridge	1,898	10	0
Anson	1,884	0	0
Mansfield	1,859	0	0
Matthews	1,847	0	0
J. Clemence	1,789	0	0

For the tanks and engine-house for deodorizing works, and main outfall sewer, for the township of Luton Local Board. Mr T. L. Evans, engineer:—

Williams	£3,720	0	0
Rowe	3,617	0	0
Coker and Oakes	2,760	0	0

For the erection of new county court and magistrates' rooms, &c. Alfreton, Derbyshire. Mr. Benj Wilson, architect:—

Lindley and Son, Mansfield	£1,400	0	0
Heath and Watts, Chesterfield	1,156	10	0
Joseph Evans, Greenhill-lane	1,040	0	0

For additions to the Pavement Chapel, Hoxton. Quantities supplied:—

	Vestries.			Total.		
Turner and Sons	£280	0	0	£2,556	0	0
Williams	282	7	8	2,497	16	2
Pinnager and Son	295	2	7	2,519	15	6
Humphreys	262	0	0	2,376	0	0
Keast and Moon	268	0	0	2,383	0	0
Day and Co.	285	0	0	2,353	0	0
Patman and Fotheringham	268	0	0	2,370	0	0
Little and Son	242	0	0	2,276	0	0
Tarrant	240	0	0	2,183	0	0
J. Wood and Son	228	0	0	2,164	0	0
Riley	275	11	6	2,232	3	6
Hocken	272	0	0	2,199	0	0
Ennor	239	0	0	2,061	0	0
Clever	240	0	0	2,040	0	0

TO CORRESPONDENTS.

"*Nelson, in Trafalgar square*." The statue of Nelson, in Trafalgar square, is made of stone similar in most respects to Craigleith: it came from a quarry belonging to the Duke of Buccleuch, at Granton, three or four miles from Edinburgh, in the same line of hills as the Craigleith. The stone is very like Craigleith, but not quite so hard, and but very slightly laminated.

"N."—"A. S. S."—"W. R."—"A Constant Reader."—"H. C."—"Mr. N."—"C. K."—"J. B. W."—"Sides" (the "Soane Medallion" is of course a valuable testimonial).—"G. G."—"Mr. M. E."—"F. W."—"J. E. B."—"R. D."—"E. C."—"P."—"J. C."—"F. D."—"G. T."—"A Painter."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

ADVERTISEMENTS.

THE ARCHITECTS', BUILDERS', ENGINEERS', and SURVEYORS' REGISTRY OPEN to EMPLOYERS' (free), from TEN to FOUR o'clock.—Several thoroughly efficient Surveyors, Levellers, Clerks of Works, and Draughtsmen now on the Register. Efficiency ascertained before recommended.—Apply to Mr. RICHARDS, Engineer and Surveyor, 4, Trafalgar-square.

TO SMITHS, &c

WANTED, a good FIREMAN, who thoroughly understands range and jack work, and can take the general routine of a jobbing shop. Unexceptionable references as to ability and character will be required.—Address, A. Z. care of Messrs. Wilson, Jasanner's, Wardour-street.

WANTED, an OUT-DOOR APPRENTICE to the MASONRY, in a respectable building establishment. A premium required. Progressive wages will be given.—Apply, in the first instance, to Mr. HAMILTON, 4 East Side, Comberwell.

WANTED, by a London Architect, a neat and expeditious DRAUGHTSMAN.—Address, SIGMA, No. 8, Clayton-place, Kennington-road, stating age, references, and salary required.

TO BUILDERS' FOREMEN.

WANTED, by a London Firm, a thoroughly experienced, active Person, to undertake the general SUPERINTENDENCE of a BUILDING.—Address, stating particulars, age, salary required, to N. R. Office of "The Builder."

WANTED, by a first-rate Draughtsman, Plain and Ornamental Writer, of 16 years' experience an ENGAGEMENT, to make FINISHED PLANS, by contract or otherwise, of towns for sanitary purposes, maps of estates, parishes, &c. Plans on parchment executed with accuracy and despatch. Reference to engineers of eminence. Maps and plans carefully and skilfully lithographed.—Address, THOS. GEORGE, Mr. Ruff's, 2 Bride-court, Fleet-street.

WANTED, by a respectable Young Man, aged 0, a SITUATION as IMPROVER to the GLASS WRITING and ENAMELLING. Terms moderate. Address, R. E. 50, Tunbridge Road, Brixton.

TO ENGINEERS.

WANTED, a SITUATION, in an ENGINEER'S ESTABLISHMENT, as MAN GER or FOREMAN, by a married Man, who has had considerable experience in the management of men, machinery, mechanical drawing, estimates, prime cost, and general routine of a factory.—Address, A. Y. 175, Tottenham-court-road.

TO BRICKLAYERS, BUILDERS, AND OTHERS

WANTED, EMPLOYMENT as an IMPROVER, by a Young Man; he is a good accountant, can take out quantities, measure up work, and would fill up his time at the books. No objection to the country.—Address, R. F. V Office of "The Builder."

WANTED, by a DRAUGHTSMAN, a SITUATION in an Engineer's or Architect's Office.—Address, OMEGA, Brassington's Library, Kensington.

TO BUILDERS AND CONTRACTORS

WANTED, a RE-ENGAGEMENT, as SHOP or OUT-DOOR FOREMAN. The advertiser has had the management out of several extensive jobs. Very good testimonials.—Address, H. H. P 19, Clayton street, Caledonia-road, Islington.

P.S. No objection to take a quantity of piece-work.

WANTED, by an experienced Man, 34 years of age, a SITUATION on a Nobleman's or Gentleman's Estate, as CARPENTER; or in a country shop. Has been for some time in the employ of the late Mr. T. Cubitt.—Apply to A. Z. Halkin-cottage, Ebury-square, Pimlico.

TO LAND AGENTS AND SURVEYORS.

WANTED, by a highly respectable Young Man, an ENGAGEMENT as an ASSISTANT in the above office.—Address, A. A. 281, Oxford-street, London.

SEWERAGE AND WATERWORKS

WANTED, by the Advertiser, a SITUATION as CLERK of WORKS, or Assistant over Sewerage of Waterworks. First-rate testimonials as to ability or character can be given.—Address, A. B 10 Queen's Head-row, Newington Butts.

WANTED, by a Young Man, 21 years of age, to ARTICLE HIMSELF for one or two years to a Builder or Carpenter. He has had four years' experience in the trade. Wages not so great an object as improvement. Address, post paid H. B. No. 8, Mead's-court, Dean-street, Soho.

TO MASTER PLUMBERS AND BUILDERS

WANTED, by a Young Man, a constant SITUATION as PLUMBER and GASFITTER; is a thorough good tradesman, and perfectly understands both and well work. No objection to the country.—Address, X. Y. 41, Praed street, Paddington.

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WANTED, to ARTICLE a respectable YOUTH (a quantity with French, German, and drawing, as resident pupil. A Dissenter's family preferred.—Address, stating particulars, E. C. BELLEFIELD, Chelmsford.

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WANTED, by a Practical Man, a SITUATION as FOREMAN of PIPE-LAYERS. Is well acquainted with pipes of the largest dimensions, excavating, tunnelling, reservoirs, and erecting of gas-works, &c. The highest reference given.—Address W. G care of Mr. William Atkinson, Builder, &c. Queen-street, Hammersmith, London.

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WANTED, by a Young Man, a permanent SITUATION as CARPENTER and JOINER. Is a good staircase hand. Full wages not so much an object as a permanency.—Address, W. G 17, Upper Feeding-street, Caledonian-road, Islington.

WANTED, a SITUATION, by a respectable Young Man, as ENGINE-DRIVER, or the care of boilers for cooking, washing, &c.; can work at iron or lathe. Good reference.—Address, M. L 2, King street, Long-acre, London.

WANTED, by a first-rate Draughtsman, Writer, and Colourist, an ENGAGEMENT to make finished maps and plans of estates, towns, parishes, railways, docks, drainages, &c. Has for eighteen years executed schemes and projects, in every variety, for the profession and the Government.—Apply, by letter, to K. THEODORE, 4, Trafalgar square, Charing-cross.

TO BUILDERS

WANTED, a RE-ENGAGEMENT as WORKING FOREMAN or JOINER, FIXER, or CARPENTER, by a young man having a good knowledge of the several branches of the building trade, and can give ten years' references.—Address, H. B. 4, Mile-end-place, Mile end-road.

WANTED, by a good JOBBING BRICKLAYER, constant EMPLOYMENT. Wages not less than 27s. per week. Can be strictly recommended.—Address, N. B. Wood's Coffee-house, Seymour place, St. Marylebone.

TO PLUMBERS, PAINTERS, AND OTHERS.

WANTED, by a Young Man, aged 22 years, a SITUATION as THREE-BRANCH HAND.—Address to G. S. 8, Henry-place, Cobourg road, Old Kent-road.

WANTED, a SITUATION as CLERK of the WORKS, by a thorough practical Man; is a good draughtsman, and has first-rate testimonials from previous engagements.—Address, C. D. 6, Lisle-street, James-street, Pall-mall.

TO PLUMBERS PAINTERS, GLAZIERS &c

WANTED, by a Young Man, who has been in business for himself, a SITUATION as CLERK, BOOK-KEEPER, or THREE-BRANCH HAND. Can measure and estimate, and would take the management of a business, if required.—Address, B. A. Mr. King, 10, Charles-street, Manchester-square.

TO ARCHITECTS &c

WANTED, by an ASSISTANT, a RE-ENGAGEMENT, in town or country. Good references as to ability and character.—Address, ARCHITECTURA, Post-office, New Brentford, Middlesex.

TO MASTER BUILDERS AND PAINTERS

WANTED, by a Young Man, a SITUATION, as THREE-BRANCH HAND. First-rate references.—Address W H 76, Hatton-garden.

WHITECHAPEL UNION.—To CARPENTERS and OTHERS.—WANTED, by the Guardians of the Whitechapel Union, a CARPENTER, or handy man, for their Industrial School, Forest-lane, West Ham, Essex. The Guardians of the Whitechapel Union will meet in the Boardroom at the Whitechapel Workhouse on TUESDAY, the 5th day of AUGUST next, at TWO o'clock in the afternoon precisely, to receive applications from persons desirous of filling the situation of Carpenter or handy man at their school as above, and at the same meeting, if considered desirable, to appoint a person to that situation. The person to be appointed must be competent to, and will be required to instruct the boys in the business of a carpenter, and execute general repairs, &c, and make himself generally useful, and a preference will be given to one capable of imparting a knowledge of the greatest number of trades, if qualified in other respects. The salary proposed is thirty-five shillings per week, without residence, rations, or other emolument. Applicants should be in the handwriting of the parties, and state in what trades the applicants are competent to instruct the boys, and with testimonials of character, are to be delivered at the Workhouse at the time of meeting when candidates will be expected to attend.—By order of the Board,

G. ADAMS FARR, Clerk.

2, Mount-place, Whitechapel, 23th July, 1856.

TO ARCHITECTS, BUILDERS, &c.

WANTED, by the Advertiser, a SITUATION as CLERK of WORKS or ASSISTANT in an Office; he is a good draughtsman and accountant, and has had considerable experience in farm buildings, villa architecture, &c. Has been ten years' character, and first-class testimonials both from Government and private offices.—Address, C. E. 21, Gayhurst-road, Hackney.

WANTED, a respectable Man as CLERK and ASSISTANT to a SURVEYOR and BUILDER; he must be able to keep books, make plans, take out quantities, measure up work and make himself generally useful. A member of some Christian Protestant Church and a Teetotaller will be preferred.—Address, with references and salary expected, to A. B. C Post-office, Chester.

TO ARCHITECTS, SURVEYOR, &c

WANTED, a SITUATION in either of the above Offices, by a highly respectable Young Man, who is a good accountant, neat draughtsman and understands the general routine of an office. Salary moderate; references of the first class.—Address, F. W Post-office, Chelmsford, Essex.

MASON'S FOREMAN.

WANTED, in a country business near London, as WORKING FOREMAN, a man who thoroughly understands his business, and his branches. He must have a knowledge of the prices of work and materials. An active intelligent person who can be well recommended for honesty, industry, and sobriety, will find the situation a comfortable one.—Address, Z. Office of "The Builder."—It is hoped no one will apply who does not answer the above description.

TO BUILDERS AND OTHERS

WANTED, by a respectable Young Man, a SITUATION as PLUMBER, PAINTER, and GLAZIER. Is thoroughly competent in his business. Respectable reference can be given, if required.—Address, J. H. E. Wade's Library, Kensington.

TO BUILDERS PLUMBERS, &c.

WANTED, a SITUATION, by a Young MAN, aged 29, as THREE BRANCH HAND. Has been in the business fifteen years.—Address, H. K 62, Walcot-square, Kennington-road.

TO BUILDERS AND CONTRACTORS.

THE Advertiser is in WANT of a RE-ENGAGEMENT as GENERAL FOREMAN; is a thoroughly practical man, with unexceptionable testimonials.—Address, HUGH FAUX, 19, Claudia-street, Caledonian-road, Islington.

TO BUILDERS.

THE Advertiser, a thorough practical Man, aged 39 wishes for an ENGAGEMENT as SHOP or OUT-DOOR FOREMAN. Good testimonials. Address, A. B. No. 33, Hackney-road.

TO ARCHITECTS, &c.

THE Advertiser, who has served his time, OFFERS his SERVICES to an ARCHITECT for a few months, with a view to an introduction to a partnership or otherwise.—Address, L. J. 10, City Prospect-place.

TO ARCHITECTS &c.

THE Advertiser, who has served his articles to a first-rate Architect in the City, and has been nine years' in the profession, wishes for an ENGAGEMENT.—Address, A. Z 2, St. Philip's-terrace, Richmond-road, Dalston.

TO BUILDERS.

THE Advertiser, a thorough practical, middle-aged Man, of no expensive wishes for an ENGAGEMENT as SHOP or WORKING FOREMAN or JOINER; he well understands setting out boards, and is capable of undertaking any job. Good references given as to ability, honesty, and integrity.—Direct, F. J. No. 20, Salisbury street, Strand.

TO BUILDERS, TIMBER MERCHANTS, AND OTHERS.

THE Advertiser, aged 30, is desirous of an ENGAGEMENT in the Counting-house of a Builder, or as Wharf Clerk to a Timber Merchant, or any other Situation where a good knowledge of accounts and the general routine of a Builder's Office, combined with the strictest integrity, are requisite. Security if required.—Address, A. W. Office of "The Builder."

TO BUILDERS AND PLUMBERS.

THE Advertiser, who is a respectable Young Man, wishes for constant EMPLOYMENT as a THREE-BRANCH HAND. Direct to K. E. 5, Grange-terrace, Saint-Michael's-place, Brompton.

TO HOUSE DECORATORS, GRAINERS, AND MARBLERS.

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EMPLOYMENT WANTED by a Young Man who has served his time in an Architect's office, and has since been engaged in railway and engineering establishments during which time he has had the management and responsibility of extensive works. He can take out quantities, and make finished or working drawings; and also understands levelling and surveying.—Address, M. A. S. Mr. Rowe, Stationer, 15, Cheapside.

ENGINEER or SURVEYOR'S ASSISTANT, CONTRACTOR'S AGENT, or SUB-CONTRACTOR. The Advertiser, who has had fifteen years' experience in surveying, levelling, laying out works, and other operations connected with engineering, and who has lately been engaged on several extensive sewerage, public and private drainage works, wishes to enter into an ARRANGEMENT with a party in either of the above capacities; is a good estimator, measurer, and accountant. Would have no objection to an engagement in Ireland. First-rate testimonials.—Address, X. X. Office of "The Builder."

EVENING EMPLOYMENT.—A Young Man wishes to employ his leisure after six p.m., in COPYING or PREPARING PLANS, SPECIFICATIONS, or getting up Small Designs for Builders, &c. at a nominal remuneration.—Address, SURVEYOR, City News Room, Cheapside.

CLERK of the WORKS WANTED, to superintend the Erection of a Small Chapel in a country.—Apply to Mr. C. F. HAYWARD, Architect, 8, Adam-street, Adelphi, and 2, St. John's-Terrace, Colchester.

TO BUILDERS AND CARPENTERS

A YOUNG MAN, aged 20, wants to BIND HIMSELF, for one or two years. Has been at the trade two years.—Address, A. B. 79, Leader-street, Chelsea.

AGENCY WANTED for BUILDING MATERIALS.—A Gentleman, having a first-rate London connection amongst builders and contractors, and doing business on his own account, is willing to undertake an AGENCY for any first-rate article. Riverside premises most advantageously situated.—Address, W. care of T. K. Edwards, esq. Laurence Pountney-hill, Cannon-street.

TO ARCHITECTS, BUILDERS, CONTRACTORS &c.

A THOROUGH PRACTICAL MAN, who is a good draughtsman, and well versed in construction, is open to an ENGAGEMENT as CLERK of WORKS or GENERAL FOREMAN on an estate or otherwise.—Address, A. Z. 37, Murray-street, New North-road, Hoxton.

N.B.—Unexceptionable testimonials.

TO WATERWORKS AND SEWERAGE ENGINEERS.

AN ASSISTANT, aged 31, WANTS a RE-ENGAGEMENT; is well qualified to get out plans, &c. or to superintend the construction of works in every detail. Testimonials and character unexceptionable.—Address, A. M. Z. Davie's Newspaper-office, Edgeware-road.

AN ACCOUNTANT, of ability and experience, understands to MAKE UP ACCOUNTS in arrear, and keep the books of builders, contractors, tradesmen, and others of so posted upon very new terms. First-rate references to character, &c. given.—Address, S. V. Office of "The Builder."

TO ARCHITECTS, &c

A FOREIGN ARCHITECTURAL DRAUGHTSMAN and an exc llent DESIGNER, wishes for a RE-ENGAGEMENT in an Architectural Office. He is practically acquainted with all the details of building and construction. References to eminent London architects. Salary moderate. Address, post paid, X. Y. Office of "The Builder."

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A YOUNG MAN wishes to ENGAGE himself for two or three years, to finish himself in the PLUMBING. No objection to fill up his time with painting, glazing, and common paper hanging.—Apply to S. F. 21, Pultenay-street, Barnsbury-road, Islington.

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A SITUATION is WANTED by a Married Man, who has a thorough knowledge of all the duties devolving upon a Managing Clerk, having acquired them in the offices of gentlemen holding very extensive estate and tithe agencies. Testimonials will be sent.—Address, RICHARD SAUD, Alleston, near Pickering, Yorkshire.

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A PRACTICAL CLERK of WORKS wishes a RE-ENGAGEMENT.—Address, J. C. New Military Depot, Wrexham.

A GENTLEMAN, having been engaged for a considerable time as clerk to an extensive stone merchant in London, is desirous of meeting with a PERMANENT SITUATION, either in town or country, or a similar character, or to undertake the management of any business where a knowledge of surveying might be required. Unexceptionable references can be given.—Address, E. M. Mr Madeley's, 3, Wellington-street, Strand.

A YOUNG MAN wants EMPLOYMENT as PLUMBER, PAINTER, and GLAZIER. Not particular as to town or country. Good reference can be had.—Apply to N. R. 17, Norfolk-place, Curtain-road, Shoreditch.

TO CIVIL ENGINEERS, LAND AGENTS AND OTHERS

A FIRST-RATE DRAUGHTSMAN, having part of the day disengaged, would be happy to ASSIST in plotting and planning land surveys, making Estate maps, plans, &c. &c.—Address, R. R. 281, Oxford-street, London.

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A FIRST-RATE GLAZIER, now disengaged, can be strongly recommended by his Advertiser, W. H. JAMES, at the Enamelled Glass Works, 37, High-street, Camden-town, London.

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FREEHOLD LAND in the CITY.—TO BE LET, on Lease for Sixty-one Years VACANT GROUND (the original) to the parish of St Botolph, Bishopsgate, situate in Halfmoon-street, Bishopsgate, suitable for the erection of dwelling-houses, stabling, warehouse, or factory. Frontage 41 feet, by 70 feet deep.—For particulars, apply to Mr. W. H. HEATH, Surveyor, 7, Great Winchester-street, Broad-street, City.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be SOLD for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's Strand.

FREEHOLD LAND TO BE LET, on the river Thames, between the river and the Victoria Docks, being very near the dock entrance, on building leases for ninety-nine years. This land has the double advantage of river frontage, but it is bounded on the land side by a branch of the Eastern Counties Railway, into which sidings can be made.—Plans of the property may be seen, and particulars had of Mr JOHN OAKLEY, Land Agent and Surveyor, No. 60, Great Ormond-street, and of Messrs. KINGSFORD and DORMAN, Solicitors, No. 2, Essex-street, Strand London.

TO BE SOLD, a most eligible PLOT of FREEHOLD BUILDING LAND (land-tax redeemed), near Clapham-park, on a high situation, sufficient for about forty-four houses, suitable for fourth rate houses each to be let with a large quantity of Sand. The houses readily let; or a portion of the Land will be Sold.—For particulars, apply to R. G. Cate of Mr Doyle, 4, Mecklenburgh-square, Brunswick.

EAST HAM and BARKING, ESSEX.—TO BE LET, on Building Leases, several desirable PLOTS of LAND, close to the Rising Sun Inn at East Ham, and near the Station at Barking. Frontage 60 feet; depth, about 150 feet. Well adapted for the erection of houses of from £25 to £35 a year. For particulars apply to RICHARD NICHOLSON, Esq. Solicitor, 4, Old Palace yard, Westminster; or to THOMAS SMITH, Esq. Architect, 26, Hatton-street, Hammersmith.

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BUILDING LAND, in eligible situations. One lot is in Kentish-town, partly covered; the other is at a railway station, eight miles from town, where there is an excellent opening for a good Public-house and Stabling, at the Station-gate. And also Lot 3, semi-detached Villas, let at £40 per annum, to 35s per annum. Money would be had if required.—Apply to THOMAS NUNN and SONS, 21, Lamb's Conduit-street, Foundling Hospital.

BUILDING LAND TO BE LET, at HALLSVILLE.... Term 1,000 years, for small cottages.
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Advances [illegible] per cent. on such estate
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STRATFORD, ESSEX. — FREEHOLD LAND, within three miles of London, exonerated from land-tax and free of tithe, TO BE LET, on Lease, for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 3, Bloomsbury-square London

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety-nine years, with power of enfranchisement. Plots from one acre for large residences, smaller plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BUCKNOLL, Esq. Architect, 6, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Gray's-inn-square.

BRIXTON.—TO BE LET, elegantly Furnished, or on lease, Unfurnished, a compact and very desirable detached VILLA RESIDENCE, with conservatory, large flower and kitchen garden, forcing-house, coach-house and stable, situate in Acre-lane, near the church, with omnibuses to the City and West-end every five minutes. Furnished, 140l.; Unfurnished, 80 guineas.—Apply at 27, Acre-lane, Brixton.

VALUABLE FREEHOLD LAND, Upper Holloway, near the Archway Tavern.—TO BE SOLD or LET on Building Lease for 99 years, direct from the freeholder, a piece of valuable LAND, near the Archway Tavern, Upper Holloway, having a front of about three hundred feet to the road, averaging to depth 100 feet to 135 feet. The party taking this land may build thereon an inn or tavern, a privilege not granted to the owners who have purchased the adjoining land.—A plan may be seen, and further particulars known on application to R. W. POWYS, Esq. Solicitor, 38, Russell square; or Messrs. DENT and SON, surveyors, 36, Southampton-buildings, Chancery-lane, and Camden-town.

BUILDING LAND, fronting a Main Metropolitan Road, at UPPER HOLLOWAY. — TO BE LET, on BUILDING LEASE, for ninety-nine years, a valuable PLOT of FREEHOLD LAND, with a frontage of 276 feet, by an average depth 115 feet. The sewer is built in front, and the land inclosed by brick walls. Views, Plans and particulars to be had at the Office of Messrs. DENT and SON, Surveyors, 36, Southampton buildings, Chancery Lane and Camden-town.

TO POTTERS, BRICKMAKERS, and OTHERS. — TO BE LET, ELEVEN ACRES of LAND, containing an inexhaustible supply of pipe-clay, brick-earth, fire-clay, and fine sand, situate near several commercial towns, in the county of Hants. The whole of the erections and plant can be rented at a moderate sum. Coming in for stock very trifling.—Specimens can be seen, and further particulars had, by application to Mr. S. BROAD, Auctioneer and Valuer, Above Bar, Southampton.

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WHARF TO BE LET.—To QUARRY PROPRIETORS, CONTRACTORS, STONE and SLATE MERCHANTS, and others requiring waterside premises. TO BE LET (the remainder of the lease), a WHARF, with good depth of water; also a substantial DWELLING and COUNTING-HOUSE on the same, situate on the south side of the river, below bridge, with immediate possession. Rent, low. Apply by letter, with real name and address, to A. Z. Mr. Syrett's, Stationer, 47, Old Broad-street, City.

WHARF and PREMISES.—TO BE LET, or the LEASE TO BE SOLD, a WHARF on the REGENT'S CANAL, having a frontage of about 140 feet, with large shed; the upper part adapted for a granary, dwelling-house, and range of stabling.—Apply to Mr. ST. QUINTIN, 36, Royal Exchange.

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BEAUTIFUL VILLAS, delightfully situated, with splendid views, in the Lawrie park. TO BE LET. They are fitted up with every modern convenience, are well drained, and within a few minutes' walk of the Sydenham Railway Station.—Apply to Mr. W. WEST, Rock Cottage, Sydenham.

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FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of FLOORING and MATCHED BOARDING, from 1 inch to 3 inches thick, dressed and ready for use; also, Mahogany, Moulding, Watnut, and all kinds of Timber required for Building purposes.—Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

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A Monthly Price Current forwarded on application.
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¼-inch white, 13s 6d. per square; ¼-inch, white, 15s. per square; ¼-inch white, 18s. per square; ¼-inch yellow, 15s. per square; ¾-inch yellow, 16s. 6d.; 1-inch yellow, 20s.

Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

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For cash, at EDWARD PRIOR'S Oil and Colour Warehouse, 4, Coleshill street, Pimlico.—Every article for the trade at the lowest price.

TO PAINTERS, BUILDERS, &c.—LIVETT, FRANK, and SON, No. 14, Borough, London-bridge, opposite the Brighton and South-Eastern Railway Stations, quote their present prices for cash:—Linseed-oil, 2s. 10d.; boiled, 2s. 9d.; turpentine, 2s. 8d.; oak varnish, 7s. 6d. per gallon; genuine white lead, 23s.; seconds, ditto 21s.; best tawn glue, 45s. per cwt.; colours, brushes, &c. equally low.

STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NO SIZING, and will stand the exposure to the weather. Price 8s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 44, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c. — A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, spirit lackers, and finishing spirit. The present price is for brown 6s. 6d. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SALTER, 87, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

JOHN HARDMAN and CO. BIRMINGHAM, Manufacturers of Mediæval, Church, and Domestic Furniture, Monumental Brasses, and Stained Glass. Decorations of all kinds executed.

Metal Works..... 168, Great Charles-street.
Stained Glass Works..... 45, Newhall-hill
London Offices..... 12, New Oxford street.
Agent—Mr. STEPHEN THOMPSON.

ARTESIAN WELLS, Boring for Water, Sinking Shafts, &c.—The Nobility, Gentry, Water Companies, Towns, Baths, Brewers, and Manufacturers of every description, may be supplied with any quantity by DAVID GREENLEY, Civil Engineer and Patentee of Boring Tools, 10, Cumming-street, Pentonville. Pumps and machinery for raising water from deep wells, boring tools, and well-pipes for exportation. Men and tools supplied to bore for railroads, minerals, &c.

TARPAULINS for COVERING ROOFS during Repairs. SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on hire or hire and purchase. Orders per post receive the most prompt attention.—WILLIAM PIGGOTT, 115, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

IMPORTANT to ENGINEERS, MILLOWNERS, &c. — NORTH WOOLWICH ELASTIC STEAM-PACKING (Canvas and India Rubber), at 1s. 4½d. per pound (Rings 3d per lb. extra), supplied to her Majesty's dockyards. CAUTION—None genuine unless stamped, thus—S. W. SILVER and CO.—Works, North Woolwich.

"Commercial Mills, Cornbrook, Manchester, Oct. 6, 1854.
"GENTLEMEN,—We have been using almost exclusively, for the last three years, your Packing for sealing the covers and steam and water joints, previous to which time we tried all the sorts which came under our notice, but yours we consider decidedly the best and most economical.—We are, yours respectfully,
"JOSHUA SCHOFIELD and SONS."
"King and Queen Iron Works, Rotherhithe.
"London, Nov. 11, 1854.
"GENTLEMEN,—We have tried your Patent Packing for some time in our steam-engines, and also in steam-pipe joints, and find it efficient and economical, and to be much superior to the ordinary hemp packing. It is especially serviceable in the slide valve.—Yours truly,
"HOWARD RAVENHILL and CO."
"Iron Works, Deptford, Jan. 30, 1856.
"I have pleasure in stating that the Packing of Messrs. S. W. Silver and Co. has been in use in the various parts of the engines on board the steam-ships of the company, and given every satisfaction.
"J. BYAROMORE, Engineer
"General Steam Navigation Company."

Copies of further testimonials forwarded on application to S. W. SILVER and CO. Nos. 3 and 4, Bishopsgate-street Within, opposite the London Tavern.

49 Great Marlborough-street.

MESSRS. DESACHY and CO. of Paris, invite the attention of Architects, Artists, Builders, and Patrons of the Fine Arts, to their COLLECTION of ANTIQUE STATUES from the various Museums of Europe. Reductions from the Antique by Colins, in plaster and bronze; architectural ornaments and decorations in every style. Messrs. DESACHY are also prepared to furnish designs, give estimates, and to enter into contracts for executing works of decorat on in plaster, cement, carton pierre, and other materials.

PUMPS and STEAM-ENGINES to BE SOLD.—A Set of Three 5-inch Pumps, with crank shaft, connecting rods, and rising main, suitable for an artesian well; also a Pair of 30 Centrifugal Pumps, lately used at Battersea-bridge; and Twelve Steam-Engines, from 1 to 20 horse-power; and a powerful Hydraulic Press.—Apply to D. W. ASH, 187, Southwark bridge-road, Swington-causeway, where the above may be seen.

TO BUILDERS, CONTRACTORS, AND OTHERS.
FOR SALE, a Variety of PLANT and MATERIALS, including one 9-inch powerful double-action Iron Lift-pump; two 6-inch and several Wood-pumps, all nearly new; a large quantity of Drain-pipes, Bends, and Junctions; twenty Casks of Blue Lias Lime; ten loads of Dantzic Timber, in lengths from 30 to 60 feet; a lot of granite Kerb; a powerful double-purchase Crab; about half a ton of Nails, and four builder's Carts.—Apply at 36, Bermondsey New-road.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.
Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.
Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—For IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter Length of Barrel.	Barrel.		£ s. d.
2½ in. short	1 ft. 7 in.	Fitted for lead,	1 10 0
2½ " long	3 "	gutta percha	1 14 0
3 " ditto	3 "	or cast iron	2 8 0
3½ " ditto	3 "	Banned pipe	2 12 0
4 " ditto	3 "	as required,	3 3 0
2½ " short,	with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in. long ditto	ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL. — Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

11 George-yard, Lombard-street, City

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also BLUE LIAS and KILN BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank street, Westminster

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Steel-street, Liverpool.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements (read at the Institute of Civil Engineers), to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 89, Old Broad-street, London; to Mr. MOMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr. THOMAS WEEKES.

Agents in London, Messrs. GEORGE POTTER and CO. Limemerchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 15, North-wharf-road, Paddington.

PORTLAND and BATH CEMENTS. TATHAM and CO. 14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT. Glazed Stoneware Sewage Pipes. Brick, Lime, and Cement Merchants, TATHAM and CO. 14, South Wharf, Paddington.

PARIAN CEMENT, reduced to 3s. per bushel, from 1st inst. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent. N.B. These Cements supplied for shipment, on advantageous terms.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 8.9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO CEMENT. STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road, Office, 4, George yard, Lombard-street.

16, South Wharf, Paddington, June 1st, 1856.

NOTICE.

GENUINE BLUE LIAS LIME.—J. D. BLYTH (late senior partner of the firm of Blyth Brothers, Plaster Works, Baldwin's-place, Gray's-Inn lane,) begs to inform his friends and the trade, that he has made arrangements with Mr. CHARLES NELSON, of Warwick, for the entire MANAGEMENT of his BUSINESS in London, in reference to the Sale of his Lump and Ground Blue Lias Lime, Portland and Lias Cements. J. D. B. trusts, that by prompt personal attention to all orders he may be favoured with, to meet a continuance of the patronage hitherto so liberally received by the late firm. Contracts to any amount can be undertaken, and a regular supply guaranteed.—Prices and terms forwarded to all parts of England and the metropolis.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead, whilst the consumption of material is less than for one coat. It dries very fast and hard.

HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three-fourths the price.

HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for iron Ships and iron exposed to salt water; neither bilge water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, stamped, Hubbuck, London, Patent; and when so marked the quality is guaranteed.

HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Tins or coated with this Enamel is not attacked by the worm neither do barnacles attach to it.

Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.

OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS

Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs, Warehouse, No. 1, Wharf, Paddington-basin.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime Cement. Portland, Bath, and Lias Cement. Works, at Harbury, Stockton, and Willmcote.—Office, at Warwick.

CHARLES RICHARDSON, 3 & 5, SOUTH-WHARF, PADDINGTON BASIN. COWLEY AND KENT BRICKS, PORTLAND, ROMAN, AND OTHER CEMENTS, FAMWORTH GLAZED SEWAGE PIPES BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 5, South Wharf, Paddington.

NOTICE.

CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keene's Cement, Tiles, Plasterers' Hair, Fan and Plain Tiles, Fire Goods, &c.

THE BEST HERTFORDSHIRE MALM SECONDS; THE BEST WHITE SUFFOLK and RED FACINGS: WHITE SUFFOLK PERFORATED BRICKS; DEEP-RED RUBBING BRICKS. Also COWLEY and KENT STOCKS, in any quantities. J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY (Within a short distance of the five bridges). THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity. Also, STOCKS, of FIRST QUALITY. J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for asphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above named articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle), Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and bare lime is packed in hogsheads, casks, jars, &c. for exportation.

General Office—No. 12, GEORGE-YARD, LOMBARD-STREET.

Letters addressed to Grays Essex, will meet with immediate attention.

TWO MILLIONS of STOCK, KILN, and other BRICKS FOR SALE, at the Crystal Palace Brick and Tile Company's Works, Lordship-lane, Dulwich. Price for good stock bricks, 25s. per thousand on the field, for cash.—Application to be made to the Foreman, A. BANHAM, at the Works.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 solid bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plate and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

BRICKS.—Excellent hard-burnt RED BRICKS, of good colour and shape, suitable for facing or other purposes; also Malms, good Stocks, and a quantity of Grizzels and Place, at LOW PRICES. Agricultural draining Tiles, from 1½ inch to 6 inches in the bore, and Arch Bricks suitable for sewerage. The whole of the above may be inspected in large quantities on the ground, at the Brentwood Railway Brick and Tile Works and Wharf, Brentwood, Essex, adjoining the goods station of the Eastern Counties Railway Company, where they will be loaded into the trucks for any station on the line.—Address, Mr. LEVETT, Brentwood, Essex.

FIRE-BRICKS, LUMPS, TILES, &c.—FURNACE-BUILDERS, GAS COMPANIES, and CONSUMERS of these Goods generally, can be SUPPLIED with every description from our Wharf here, on the most advantageous terms. TRAQUAIR and CO. 9, Bankside, Southwark.

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY. Entrance, Norwood end, Palace-road. — BRICKS of the first class. Red Kiln Bricks Cutters, Dressings, Facings, and Paviors, Clamped ditto, Yellow, and Pale, Seconds, Paviors and Pickings, Washed Stocks, Stocks, and Place.—Apply to TEULMAN and CO. Norwood Lodge, Palace-road, Roupell park, Lower Norwood, Surrey.

CHEAP WHITE BRICKS, for FACING HOUSES (Beard's Patent).—These bricks are of excellent make and colour, and imperishable from frost, and do not vegetate or become green.—For particulars, address, Patent Brick Works, Rugby, Warwickshire.

BLUE BRICKS and TILES, of superior quality, and in great variety of mould, for ornamental work, paving, coping, and general purposes.—GEO. C. HYLAND, Hailstone Wharf, Crescent Birmingham

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury New-park, would be willing to enter into arrangements with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Dell's Farm, Stoke Newington Green.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for the bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented

HENRY COUNT, Sec.
37, King William Street, City.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,

For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.

SOLE AGENT,

J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the place of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 2d. per foot. This charge to include tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WILARD, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REVERSE OF THE MEDAL," page 261, of the Great Exhibition, rank the Manufactories known so long as "The Tileries." Tunstall, Staffordshire, as the first of the kind in the world.

PANTILES, PAVINGS, &c. — J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 22s. 6d. per 1,000; floor bricks and 6-inch pavings, at 37s. 6d. per 1,000; 8-inch pavings, at 57s. 6d. per 1,000; plain tiles, at 32s. per 1,000, delivered. Cash prices.—Delivered on trucks in London or Eastern Counties Railway.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 15, South Wharf, Paddington, Manufacturers of Improved Plain and Ornamental Roofing, Ridge and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for sanitary and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted imperishable, and to resist all acids and exhalations.

*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Quoin Blocks, &c. Tividale, Staffordshire.

HOGG'S GARDEN EDGE TILES.—The attention of persons engaged in laying out Gardens for Public Institutions is solicited to these Tiles, as an elegant, cheap, and permanent substitute for box edging. In colour they resemble Dutch clinker, are very hard, easily laid down, afford a shelter for vermin, and act as a drain to the paths. Price 13s. per 100, or about 4d. per yard run.—Full particulars on application to R. BLACKETT, Witham, Essex.

PAINT, certified by the Government Engineers and Contractors to be the CHEAPEST and BEST ever discovered for wood and iron, price 35s. per cwt.—Apply to the London Anti Oxyde Paint Company, D. WALKER, Secretary, 29, New Bridge-street, Blackfriars.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that 62lbs. of Wolston's Torbay Iron-Paints will effectually cover as much surface as 112lbs. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Slapping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all graining purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

January 1, 1855.

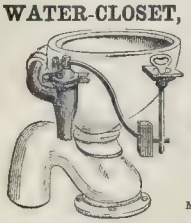
THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing,

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having for months past supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dock-yard, Her Majesty's Commissioners of Works, &c. and in all instances parties being thereby expressing themselves satisfied therewith, take this as a fair test of the quality of the articles supplied by them; and as they now feel the works established as Potters, beg to offer their wares to Contractors, the Trade, &c. of a first-rate quality in manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

FACING FOR BUILDINGS COMPANY.

TAYLOR'S PATENT.

TO ALL WHO CONTEMPLATE BUILDING, and desire, without additional expense, to have their residences or other erections perfectly resistant to wet, and the vicissitudes of a changeable climate which has not been hitherto attainable except by great thickness of the external walls, or the use of cement, requiring the constant expense of painting, this method, which has been sufficiently tested during the past few years in numerous buildings, is now with confidence offered as accomplishing this; at the same time it strengthens the ordinary construction, and is not more expensive than ordinary bricks, pointed.

THE FACING is manufactured of the superior clays of SUFFOLK, NORFOLK, SOUTHAMPTON, DORSETSHIRE, AYLESFORD, &c.; and is made of a form which admits of being perfectly burnt, it is almost indestructible. It requires dry upon the building that it never regrates, is so portable, that it can be sent a great distance at little cost of carriage, and can be used with the ordinary bricks of any quality, and by the ordinary workmen. It adds greatly to the appearance of the building, and admits of a great choice of colour, so as to suit the taste of the architect or others.

IT IS ALSO MANUFACTURED OF THE DIFFERENT BUILDING STONES, with which walls can now be faced without the necessity of iron ties and cramps, binding stones, or any artificial aid; and all injury to the stone ashlar, from being weighted by the settlement of the more mortar joints of the inside brickwork, is avoided.

THE APPLICATION OF STONE for this purpose is now by this method so facilitated and reduced in price, as will make it applicable as a general material for facing buildings, producing that effect so justly admired in Paris, Bath, and other stone localities, where the expense of carriage and other causes have so much combined.

Its application has upon this plan been found very desirable in the inside of churches and other buildings, and in dining-halls, cobbles, staircases, and other parts of private residences, instead of plastering; it is quickly dry, and all necessity for colouring and repairs is avoided.

A list of cases may be obtained by application, either personally or by letter, to JOHN TAYLOR, ARCHITECT AND PATENTEE, AT THE OFFICES OF THE COMPANY, No. 40, KING-STREET, CORNER OF CHEAPSIDE, OR SPRING-GROVE, HOUNSLOW, where the church can be inspected that has been faced with Bath stone, internally and externally, in this manner; also the other buildings and residences, and elsewhere: and the residents will speak as to the advantages and comfort of the plan.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 43 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non-conductor of heat.

INDORous FELT, for damp walls and for damp floors, under carpets and floor cloths. Price ONE PENNY per Square Foot.

CROGGON and CO.'S PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing the radiation of Heat, saving 25 per cent. of Fuel, and deadening Sound.

Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

BELGIAN WINDOW-GLASS, Wholesale and for Exportation.—LAROCHE FUGNI, and CO. Manufacturers and Importers of Belgian, Plate, Sheet, Crystal Coloured, and every other description and foreign Glass, respectfully inform merchants, dealers, &c. that they have now on sale a large supply of every kind of window glass suitable for the English market. Engraved, Embossed, and Ornamental Glass; Antique, Rough, Cathedral, and other Glasses for Stainers. Estimates given and contracts supplied to any amount.—Warehouse, 3, Old Trinity House, Water-lane, Lower Thames-street.

EDWARD and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, sized and of various qualities, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 113, OXFORD-STREET.

FOREIGN and English Sheet, Crown, Plate, Patent Plate, Patent Rolled, and Cast Glass of all sorts. Sheet lead, Pipe, White-lead, Lead, Iron and Brass Pumps, Water-closet Cocks and Plumbers' Brasswork, Paints, Colours, Oil, and Turpentine of the finest quality, at wholesale prices. Lists on application at THOS. MILLINGTON'S Warehouse, 87, Bishopsgate-street, London. Established more than 100 years.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 28, Soho-square.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s.; 4ths, 39s.; squares, in boxes, 100 feet each, 0 by 4 to 10 by 8, 1½d.; larger sizes, up to 20 by 14, 2½.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

G. FARMILOE and SON, 113, St. John-street, West Smithfield.

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 296, Oxford street.

HELY and WARING, Managers.

CCC CROWN, 18 Tables, per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 900 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 9d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 3d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; ORIENTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, in GROUND SHEET, 3½d. ENAMELLED, 5d. per foot. Tiles and Slates from 6d. each. Sashes primed and glazed, 3d. per foot. HELY'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

Catalogues and Prospectuses free.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 38s.; 4ths, 39s. Squares; in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½d. per foot. Larger sizes up to 24 by 14, 2½d. per foot. Ground Glass, in Cases, 3½d. per foot. Crown and Sheet British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

TO BE SOLD, cost 250 Guineas, a splendid MONUMENT by WE-TMACOTT. May be obtained reasonably, on applying to Mr. GILLINGHAM, Builder, 26, Gough-street, Gray's-inn-road, from ELEVEN till TWELVE each day.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.

These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

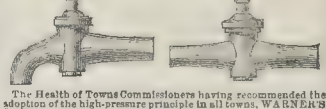
Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, Newcastle, Lambeth.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern. Cocks, or wire.

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JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

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H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 149, fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

H H H H for drawing on wood.	F F light and shading.
H H H for architectural use.	F for general use.
H H for engineering.	B black for shading.
H for sketching.	B B ditto ditto.
H B hard and black for drawing.	B B B ditto ditto.
M medium.	B B B B ditto ditto

Sold by all the principal Stationers in town or country.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

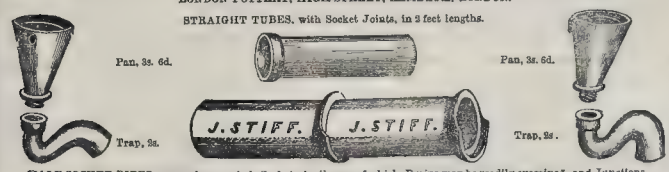
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf King's-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thorubill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.

GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY AND CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Brankses is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. S. PETTS, at the Works, Branksea Island, Poole, Dorset.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

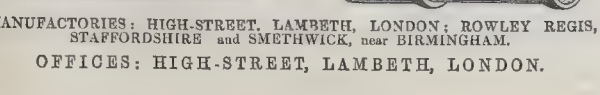
HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.



HALF-SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

STONE PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES. E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.

SUPERIOR GLAZED STONEWARE DRAIN-PIPES, &c.—The attention of Boards of Works, Contractors, and others, is invited to the MANUFACTURES of the DARFIELD (Yorkshire STONE POTTERIES, with which for even cleanness of finish and imperishable quality few can compare. Tubes, bends, junctions, grids and stench traps, closet-pans, syphons, yard and street gully-sinks, with every article applicable to sanitary works, in any quantity, and immediately available, at the London Depôt, No. 4 Warehouse, Goods Station, Great Northern Railway, City Offices, 37, Bucklersbury, City, where Illustrated Price Lists can be obtained.

E. B. BEAUMONT, Proprietor.
J. D. JONES, Agent.

N.B.—Chimney-pots, roofing-tiles, ridges, wall copings, flooring and paving tiles, fire-bricks, oven-bricks, bakers' lumps, cinder oven lumps and quarries.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Minc-Lima, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 3d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

GROUND FLINT AND CORNISH STONE, UNADULTERATED.

WILCOX & CO.

FLINT MILLS, MILLWALL, POPLAR.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

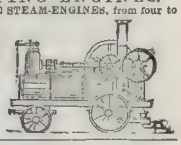
VICTORIA POTTERY LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 80 Bankside. DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1854.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATTEN, 22, Old Fish street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, Southwark, London.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND HAND STEAM ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEGWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

FOR ABSOLUTE SALE.—THE EXTENSIVE SHIP-BUILDING ESTABLISHMENT AND IRON WORKS OF MR. C. J. MARE, AT BLACKWALL.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees with the consent of the Mortgagees, to OFFER for SALE by AUCTION, at the MART, on WEDNESDAY, the 30th of JULY (unless an acceptable offer be previously made by private contract, in ONE LOT, the extensive SHIP BUILDING ESTABLISHMENT and IRON WORKS of Mr. C. J. Mare; together with the whole of the valuable fixed PLANT and MACHINERY.

These works, which together occupy a site of 14a. 2r. 30p. are situated at Blackwall, on the opposite banks of Bow-creek, its junction with the Thames, a portion of the works having a direct frontage near the Thames. The land fronts and abuts on Trinity-road and Orchard place, Blackwall, and on the North Woolwich Railway, near the junction to the Victoria dock line, by means of which, and the North London Railway, direct communication with the northern and midland districts is established. The approach from the City is easy and frequent throughout the day, by the Blackwall and North Woolwich Lines, from adjacent termini in Fenchurch-street, by means of which the northern and southern division of the works are reached within half an hour; there is also a ferry across Bow-creek for the facility of communication. The resources of the establishment for the purposes of ship-building, comprising engineering works, are unequalled in the world, and have produced, upwards of 48,000 tons of shipping having been built and launched in the years 1853 and 1854 from the yards, while from the forge and iron works upwards of 17,000 tons of iron have been hammered and rolled within the same period, and from the foundries upwards of 3,000 tons of castings delivered. The high character of the work executed has gained for the firm a world-wide reputation In the ship-building Department, vessels have been built for the English, Turkish, Russian, Spanish, and Sardinian governments, the Honourable East India Company, the Peninsular and Oriental, the Imperial Screw, and the General Steam Navigation Companies, the Dover Mail Packet Company, the South-Western Railway Company, and others, unequalled in size, unsurpassed in speed, and without a failure in any one case. Among others may be mentioned the renowned *Brandon*, of 2,200 tons burthen, the *Peru*, the *Prince*, the *Candia*, the *Holyoke*, the *Argo*, the *Crocus*, the *Golden Fleece*, the *Indiana*, the *Swan*, the *Victor Emanuel*, the *Crimea*, the *Transit*, the *Perseverance*, with many others also yachts for the Emperor of Russia and his Highness the Viceroy of Egypt; and such are the appliances and facilities afforded by existing arrangements, that the rapidity with which the works are carried on is perfectly surprising. The works executed at the forge have been equal in magnitude, including the crank shaft of upwards of 70 tons in weight, and forgings of the largest description for the principal engineers in London, the total weight of hammered iron produced in one year exceeding 1,700 tons. The Engineering Departments have executed a considerable portion of the Britannia Tubular Bridge, upwards of 4,000 tons of wrought-iron bridges for the East-India Railways, the wrought-iron bridges for the North London Railway, the beautiful iron roof for the terminus of the Blackwall Railway, and the portion of the iron work at present completed for the new bridge at Westminster; while the Boilermakers' Department, marine boilers, equal to 4,000-horse power, can be produced annually.

The principal buildings are on the freehold portion of the property, and have been erected in the most substantial manner; they include the hammer and rolling-mills, the foundries, carpenters' workshops, and are fitted with five Nasmyth's hammers of various sizes, the two larger ones having double cylinders and furnaces, thus affording a two-fold capacity; two tilt hammers, three sets of rolling mills for plates and bars, worked by controlling paining and slotting machines, drilling machines, numerous self-acting lathes, several of which are adapted for the heaviest work; smiths' forges, plate, angle, and bulling furnaces; fitters' shops, and other machinery. The whole of the machinery, by the best makers, and with all the modern improvements, a considerable portion new within the last few years. A sea-going boiler-makers' shop, fitted with forges, furnaces, shearing, punching, and drilling machines, steam riveting machine, travelling cranes, &c.; an angle iron shop, with massive shaping plates 24 inches, &c.; and morti-ine engines, worked by a 60-horse power steam-engine. In the ship-yard are twelve slips for building vessels of the largest tonnage, steam kilns, saw pits, mast house, mast building and block-making shops, joiners' and carpenters' shops, engineers' fitting shops, stores of various descriptions, offices, and other buildings. The situation of these works affords the greatest facility for the transit of goods by land or water carriage, as there is a siding on to the North Woolwich Railway, and several wharfs next the water side, with powerful cranes, one of them being a steam crane equal to twenty-five tons. The proximity of the East India and Victoria Docks to this, and of great advantage to the extensive coal trade during the years 1854 and 1855 nearly exceed 17s per ton, while the numerous termini of railways in the neighbourhood, from which a large quantity of steam coals are annually obtainable, together with the vast accumulation of waste iron from the different manufacturing establishments in London, ensure a constant and sufficient supply of scrap iron for the purposes of the mills and forge on the best possible terms. The whole combination of these works, the value of which has been effected within the last fourteen years, has involved an outlay approaching £50,000, expended under the immediate superintendence of their present proprietor, and the formation of an establishment of great extent and capabilities, unrivalled in situation, enjoying the highest reputation for the character of the works performed, possessing facilities for the transaction of business unequalled by any, and containing within itself all the accessories requisite to command a large and lucrative trade. The tenure of the property is partly freehold and partly leasehold.

The works may be viewed till the sale, by cards only, which may be obtained shortly, together with printed particulars, of CHARLES LEE Esq. Official Assignee, Aldermanbury; of Messrs. LAWRANCE, PLEW, and WHITEHORN, Solicitors, 5, Old Jewry-chambers; of Messrs. NEWMAN and EVANS, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. PULLEN and SON, 80, Fore-street, Cripplegate; and of Messrs FULLER and HORSEY, Billiter-street, London.

TO IRONFOUNDERS, IRON MERCHANTS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Assignees of R. J. Polehaze to SELL by AUCTION, at the AUCTION MART, Bartholomew-lane, on WEDNESDAY, the 30th of JULY, 1856, at TWELVE o'clock, in lots, without reserve, 350 tons REJECTED SHELLS, from 3½ inches to 6 inches diameter, lying at Woolwich, made from cold blast and Scotch pig iron.—To be viewed in bulk by permission, two days previous to the Sale Catalogues may be had at the Mart; of Messrs. ASHLEY and TEE, Solicitors, 7, Old Jewry; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Highly finished Condensing Steam engine, by Nasmyth.

MESSRS. FULLER and HORSEY are instructed by the First Commissioner of her Majesty's Board of Works to SELL by AUCTION, at ROSE LANE, Stepney, on THURSDAY, the 7th of AUGUST, 1856, at ELEVEN o'clock a highly-finished, direct acting, condensing STEAM-ENGINE, by Nasmyth, with 14-inch cylinder, 3-feet stroke, D slide-valve, throttle-valve, and governors, air-pump and two-feed pumps, with solid gun-metal eccentric, bright wrought-iron crank-shaft, fly-wheel, condenser, and apparatus, made for the House of Parliament.—To be viewed on Wednesday previous to the sale, when catalogues may be had, on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

FREEHOLD BUILDING LAND, four miles from the City, close to the Forest-gate Station, Stratford, Essex.

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the MART, on MONDAY, JULY 28th, at TWELVE, in fourteen lots (unless an acceptable offer be previously made), TEN ACRES of eligible FREEHOLD BUILDING LAND, situate close to the Forest-gate Station, on the Eastern Counties Railway, near Walthamstow Forest, admirably adapted for the erection of villas and moderate-sized houses. The lots will be so arranged as to carving from 200 feet to 300 feet each to well-made roads.—May be viewed, and printed particulars had at the Eagle and Child, Forest-gate; of D. B. SLADEN, Esq. 2, King's Arms-yard, Moorgate-street; at the Mart; and of Messrs. H. BROWN and T. A. ROBERTS, 22, Throgmorton-street.

FREEHOLD BUILDING LAND.—CARSHALTON, SURREY, near the Railway Station.

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the MART, on MONDAY, JULY 28, at TWELVE, in Ten Lots (unless an acceptable offer be previously made), about TWELVE ACRES of FREEHOLD BUILDING LAND, situate within a few minutes' walk of the Carshalton Station, on the Croydon and Epsom Railway, about eleven miles from London. The lots will have frontages varying from 60 feet to 80 feet each, and contain from 1,200 square feet to 2 acres each. The land stands on an eminence, commanding extensive views, is very dry, and desirably situate for first-class residences, being neighbouring to many noblemen's seats. May be viewed, and printed particulars had at the Melbourne Hotel, Carshalton; of D. B. SLADEN, Esq. 2, King's Arms yard, Moorgate-street; at the Mart; and of Messrs H. BROWN and T. A. ROBERTS, 22, Throgmorton-street.

Final Portion of the Valuable Stock of Messrs. Browne and Co. University-street, including Marbles, Bronzes, Mosaics, Chimney-pieces, Scagliola Pedestals, a Stained Glass Window, Architectural Casts, &c.

MESSRS. RUSHWORTH and JARVIS beg to announce that the SALE of the final portion of the valuable STOCK of Messrs. Browne and Co. will take place on WEDNESDAY, the 30th of JULY, and two following days at the GALLERIES, University-street, and will include VASES, STATUES, and GROUPS, in marble and bronze, adapted for gardens and pleasure-grounds; two noble marble busts (from Venice), a quantity of Italian paving-tiles, of mosaic and other design; many very beautiful statuary and richly coloured marble chimney-pieces, designed with great taste, and sculptured by first-rate artists, including two of superb character; fine specimens of scagliola, in pedestals, tazzas, brackets, and chimney-pieces; a collection of valuable architectural casts, from celebrated originals, worthy the attention of builders and architectural pupils; also a variety of objects of taste and utility, being the last portion of this well-known and tastefully-selected assemblage.—May be viewed the day prior to the sale, and catalogues had on the Premises; and at the Offices of Messrs. Rushworth and Jarvis, Saville-row, Regent-street; and 19, Change-alley, Cornhill.

WEYMOUTH.—TO BE SOLD BY AUCTION, BY

MR. MILLEDGE, on WEDNESDAY, the 27th day of AUGUST, 1856, at LUCES ROYAL HOTEL, Weymouth, at THREE o'clock in the afternoon (unless an acceptable offer shall be previously made by private treaty), in the room of the executors of the late William Tutt, Esq. a compact MARINE VILLA RESIDENCE, with garden, hothouses, and greenhouses adjoining, forming a most unique and retired residence, admirably adapted for a small family, and combining the advantages of entire seclusion and privacy in the midst of the varied scenes of this salubrious watering place. The house, which was built five years ago with much taste and regardless of expense, stands in a pleasure-ground of above an acre, elegantly laid out with well-kept lawn, and shrubbery. One of the sitting-rooms opens into a conservatory, about 41 feet by 21, stocked with choice and rare plants. The furniture and plants may be taken at a valuation, at the option of the purchaser. The property adjoins Gloucester Lodge, formerly the residence of George III. and his Court.

At the same time will be Sold, in separate lots, a Dwelling, with spacious store-rooms, used as a gardener's residence, and Sittings in St. Mary Church.

The residence and pleasure-ground are held in fee, the garden for one life, and the dwelling-house, store-rooms, and sittings for terms of years. The property may be viewed by writ on orders only, to be obtained from Messrs. ANSTEY, PHILIPS, and BENNETT, 14, Red Lion-square, London; or Mr. MILLEDGE, Auctioneer, &c. 4, Frederick-place, Weymouth, from whom further particulars may also be obtained.

NORWOOD, SURREY.—Two valuable Freehold Residences, with Pleasure-gardens, and Offices, and Meadow Land in the rear, the whole containing nearly Six Acres, and possessing very great advantages for building purposes.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to offer for SALE, at the MART, on FRIDAY, AUGUST 8, at TWELVE (unless previously sold by private contract), a very important and valuable FREEHOLD ESTATE, delightfully situate in Thurlow place, fronting the high road, at Lower Norwood, about 5½ miles from the City, near to Tulse-hill, and within five minutes' walk of a station on the West End and Crystal Palace Railway; comprising a detached cottage residence, with greenhouse, stabling, and offices adjoining, let to a respectable yearly tenant, at a low rental of 30l per annum, and an extra eligible meadow in the rear, abutting on the New Palace-road, running through Mr. Rendell's estate to Upper Tulse-hill, in the immediate vicinity of great improvement and extensive building operations; the whole containing nearly six acres. The estate possesses a frontage of about 200 feet to the high road; another frontage of 400 feet to the road leading to Streatham; extends in extreme length from north to south 800 feet; and presents to capitalists and freehold land and building societies an unusually eligible property for a first-class building speculation—Particulars may be had of CHARLES CHAMPION, Esq. Solicitor, 11 Austin-friars; at the Mart; of Messrs. NORTON, HOGGART, and TRIST, 62, Old Broad-street, Royal Exchange.

IN CHANCERY. "Edwards v. Crichton" — Leasehold, near Blackheath, Kent.—Valuable Freehold Estate with possession.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to offer for SALE, at the MART, on MONDAY, JULY 28, at TWELVE in one lot, pursuant to a decree of order of the High Court of Chancery, with the approbation of His Honour the Master of the Rolls, to whose branch of the High Court of Chancery this cause is attached, a valuable FREEHOLD ESTATE (land-tax redeemed), pleasantly situate in the Lee road, close to Lee Church, only ten minutes' walk from the Lewisham station, one mile from the Blackheath station on the North Kent Railway, and within half an hour's ride of the metropolis. It consists of a very comfortable and compact detached residence, known as Lee Lodge, standing upon a lawn, and approached by a carriage drive, containing six bedrooms, dining and drawing rooms, library, morning room opening into a conservatory, entrance hall, store-room, and other good domestic offices and cellarage, and every accommodation for a moderate-sized family, pleasure and kitchen gardens, stabling for four horses, and coach-house within a few minutes' walk of the Carshalton Station, on the Croydon and Epsom Railway, about eleven miles from London. The lots will have frontages varying from 60 feet to 80 feet each, and contain from 1,200 square feet to 2 acres each. The land stands on an eminence, commanding extensive views, is very dry, and desirably situate for first-class residences, being neighbouring to many noblemen's seats. May be viewed, and printed particulars had at the Melbourne Hotel, Carshalton; of D. B. SLADEN, Esq. 2, King's Arms yard, Moorgate-street; at the Mart; and of Messrs H. BROWN and T. A. ROBERTS, 22, Throgmorton-street.

HOUNSLOW, MIDDLESEX.—Valuable Freehold Orchard Land and Building Land, containing together about nine acres, having an important frontage of 700 feet, and giving votes for the county.

MESSRS. NORTON, HOGGART, and TRIST have received instructions from the Executors to OFFER for SALE, at the MART, on MONDAY, JULY 28, at TWELVE, in two lots, the first being a valuable FREEHOLD PROPERTIES, —A piece of freehold building and orchard ground, containing about six acres, slightly situate on the Wellington-road, Hounslow, Middlesex, only one mile from the Hounslow station, on the Windsor branch of the South-Western Railway. It possesses an important frontage of 700 feet to the road, and from its contiguity to the railway, and the increasing demand for house property in the neighbourhood, presents great advantages for building purposes. In the occupation of Mr. Gardner, upon lease, at 30l. per annum, but a satisfactory arrangement may be made for possession to be given, if required. Also, a valuable orchard near the above, containing about three acres, let to Mr. Chapman, upon lease, at a very low rental of 15l. per annum.—Particulars may be had of Messrs. BRACKENRIDGE and SON, Solicitors, 16, Bartlett's-buildings, Holborn; at the Inns at Brentford, Isleworth, and Hounslow; at the Mart; and of Messrs. NORTON, HOGGART, and TRIST, 62, Old Broad-street, Royal Exchange.

NORWOOD, SURREY. To Capitalists, Speculators, and Builders.

MR. MOXON will SELL, at the AUCTION MART, on TUESDAY, JULY 29, a very desirable FREEHOLD ESTATE, comprising a family residence, known as Cambrian House, with gardens, orchard, and several paddocks, in all about eight acres, situate on a beautiful elevated spot, within a short distance of Norwood Church, a mile from the Crystal Palace, and close to an intended station on the New Road and Crystal Palace Railway. The land has important double frontages, and contains very superior brick earth.—Particulars and plans are now ready.—3, St. Martin's-place, Trafalgar-square.

COPTHORNE-COMMON, near the Three Bridges Station, on the London and Brighton Railway.

MR. MOXON will SELL, at the AUCTION MART, on TUESDAY, JULY 29th, by direction of the Mortgagee, SIX ACRES of valuable FREEHOLD LAND, eligible for building, three miles from the Three Bridges Station, and two from the Rowland Station on the East Grinstead Railway.—Particulars of MATHEW and SALMON, 30, Great George-street; and of the Auctioneer, 3, St. Martin's-place.

LEASEHOLD ESTATES.

MR. PEAKE is ordered to SELL by AUCTION, at the MART, on WEDNESDAY, JULY 30, 1856, at TWELVE o'clock, in lots, several LEASEHOLD ESTATES, situate in Southwark and Bermondsey, producing in the aggregate 662l 10s per annum; held at low ground rents.—Particulars obtained of Messrs SYMES, TEESDALE, and SANDILANDS, Solicitors, 33, Fenchurch-street; Messrs. WILLOUGHBY, Cox, and LORD, Solicitors, 14, Cliff's-inn; F. WILLMOTT, Esq. Solicitor, High-street, Borough; Messrs. JONES and WILDEN, Solicitors, 8, Lawrence Pountney-hill; Mr. SUMNER, Solicitor, 22, Harp-lane; at the Auction Mart; and at Mr. PEAKE'S Offices, 44, Tooley-street, Southwark.

BARNSBURY.—To SMALL CAPITALISTS, BUILDERS, and OTHERS.—PEREMPTORY SALE.

MESSRS. KENNEDY and BONNY will SELL by AUCTION, at the Cock Tavern, Highbury, adjoining the Railway Station, on THURSDAY, JULY 31, 1856, at TWO for THREE o'clock, a small leasehold DWELLING HOUSE, containing five rooms, complete except painting and papering, also FIVE WOOD CASES of night soil, together with the Piece of Land in front of the same. The whole held under a lease for thirty-four years and three quarters (less twenty-one days), from Lady-day, 1854, at a ground-rent of 10l. per annum for each house, viz.: 6, 7, 8, and 10, Albion-terrace, Upper Barnsbury-street, Islington, near the Albion Tavern. A very eligible situation for a builder. The property may be seen at any time until the day of sale, at the Office of Mr. MCMILAN, Solicitor, 5, Barnard's-inn, Holborn. Particulars and conditions of Sale, may be had of Mr. MCMILAN, as above; at the Place of Sale; and at the Auctioneers' Offices Camberwell.

BUILDING MATERIALS, WESTMINSTER ROAD, LAMBETH.

MESSRS. EVERSFIELD and HORNE have received instructions to SELL by AUCTION, on the PREMISES, on the Westminster road, Lambeth, nearly opposite the Orphan Asylum, on TUESDAY, JULY 29, at ELEVEN for TWELVE, the valuable MATERIALS and FITTINGS of a PAIR of the usual description. Also a quantity of excellent DOUBLE DOORS, SASHES, and other WOOD FITTINGS.—May be viewed one day previous, and catalogues had on the Premises; and of the Auctioneers, 40, Parliament-street, Westminster, or Coal Exchange.

CORNHILL.—The VALUABLE MATERIALS of the George and Vulture Tavern, and Houses adjoining.

PULLEN and SON are instructed to SELL by AUCTION, on the Premises, on WEDNESDAY, AUGUST 6th, at TWELVE, in Lots the VALUABLE BUILDING MATERIALS of the George and Vulture Tavern, and several Houses adjoining, in St. Michael's-alley and Bell-yard, in the Parish of St. Michael, Cornhill, comprising about 300,000 sound bricks, several rows of lead, plain and pan tiles, and slates; oak and fir timber in roofs and floors, glazed sashes, doors, and fittings of wainscotting, marble chimney-pieces, sound flooring boards, shop fronts, iron railings, large iron doors, stoves, ranges, stone paving, &c. May be viewed the day previous. Catalogues may be had on the Premises; at Grade's-court Chaning Cross; and of PULLEN and SON, 80, Fore-street, Cripplegate.

MARK-LANE.—BUILDING MATERIALS of THREE LARGE HOUSES and WAREHOUSES.

PULLEN and SON are directed to SELL by AUCTION, on the PREMISES, on THURSDAY JULY 31st, at TWELVE, in lots, all the valuable BUILDING MATERIALS of the three large houses and warehouses, at the corner of Mark-lane and Tower-street, being Nos. 42 and 43, Mark-lane, and 69, Tower-street, comprising good sound brickwork, a large quantity of nearly new slates and tiles, including countess and oak and fir timber in roofs and floors, several tons of lead in flats, gutters, cisterns, and pipes, glazed sashes, doors, partitions, sound flooring and lining boards, and prime deal and pine shop front, with lofty doors, iron columns, stone paving, counters, and fittings, erection of large baker's oven, stoves, and useful fixtures and effects. May be viewed, and catalogues had of RICHARD BELL, Esq. Architect, 17, Gracechurch-street; and of PULLEN and SON, 80, Fore-street, Cripplegate.

PEMBROKESHIRE.—PEMBROKE DOCK and NEYLAND.—Important, Varied and Extensive Sales.

GEORGE N. HASSELL begs most respectfully to inform Railway Contractors, Colliery Proprietors, and Operative Agriculturists, that he has been instructed by Messrs. F. Conder and Co. whose contracts on the South Wales Railway are nearly finished, to SELL by AUCTION, at the BATTERY, Pembroke-dock, on MONDAY, AUGUST 4, 1856, at TWO p.m. the whole of the MATERIALS at that place; and on TUESDAY, AUGUST 5, 1856 at the TERMINUS of the South Wales Railway at Neyland, the whole of the MATERIAL at that place, at ELEVEN o'clock in the forenoon, consisting of about 150 Tons of RAILS and T-RAILS, about 150 BROAD and NARROW GAUGE WAGONS and TRUCKS, and all the general routine of articles, contained in an extensive Railway Outfit, to which is added, 6 serviceable cart horses.—Refreshments for Tuesday's Sale, will be on the table at Ha'post Ten o'clock, at the Railway Hotel, Neyland.—Haverford West, July 21, 1856.

DUMPY and LEVEL STAFF WANTED. Any person having a good and perfect SECOND-HAND DUMPY LEVEL and STAFF to DISPOSE OF, may hear of a purchaser, by forwarding description and lowest price, to X. Y. Z. Mr. Brown's, Stationer, 195, Strand.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Brothers) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, July 26, 1856.

The Builder.

AN ILLUSTRATED WEEKLY MAGAZINE FOR

Architect, Engineer, Operative & Artist.

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EXHIBITION of ART-TREASURES of the UNITED KINGDOM, to be OPENED at MANCHESTER in MAY, 1857.

PATRONS.
Her Majesty the QUEEN.
His Royal Highness Prince ALBERT.
PRESIDENT.
The Earl of ELLESMERE, K.G. Lord-lieutenant of Lancashire.
EXECUTIVE COMMITTEE.
Thomas Fairbairn, esq. Chairman.

The Mayor of Manchester.	Joseph Heron, esq.
Thomas Ashton, esq.	Thomas Potter, esq.
William Entwisle, esq.	Sigismund J. Stern, esq.

GENERAL COMMISSIONER.—John C. Deane, esq.

The object of the proposed exhibition is to secure a collection of the choicest and most instructive works which illustrate the Ancient and Modern Schools of Art Oil Paintings, Water-colour Drawings, Enamels, Sculpture in Marble and Stone, Carvings in Ivory and Wood, Bronzes, Coins, and Works of Artistic Excellence, in Gold, Silver, Steel, or Iron, in Glass and Earthenware, Terra Cotta and Plaster, will necessarily constitute the main features of the Exhibition.

The Executive Committee respectfully invite communications from possessors of Art Treasures who may feel interested in the success of a scheme which aims at the worthy illustration of the art-wealth of the United Kingdom.

From the known catalogues of the resources of the country, thus extended, the Committee propose, with the assistance of Officers of acknowledged competency, to make such a selection as will enable them to place before the world an Art Exhibition not less valuable to the student from its chronological arrangement, than attractive to the public from its beauty and completeness.

The committee do not desire to elicit from manufacturers specimens of their production, either for competition or sale.

The Exhibition building will be erected on a site adjoining the Botanic Gardens, distant about two miles from the centre of the City, and quite free from atmospheric impurities. Such consideration has been given to the mode of lighting the hall for the display of pictures and sculpture, and every precaution will be taken to protect the works of art from injury.

In all cases where desired by the owners, the Committee will insure the art treasures contributed.

There will be railway communication from all parts of England, direct to the Exhibition Building, and contributions will be received and returned to their owners, free of expense.

Communications may be addressed to the Secretary, 70, Mosley-street, Manchester. By order of the Executive Committee,

CHARLES H. MINCHIN, Secretary.

Offices of the Exhibition, 100, Mosley-street, Manchester.

COMPETITIONS.

PRIZE ESSAY on CANALS.—A PREMIUM of £61 will be given by the Committee of the Canal Association to the Author of the BEST ESSAY on the PRESENT CONDITION and FUTURE PROSPECTS of CANALS and CANAL CONVEYANCE; with Suggestions as to the Points to which attention, with a view to improvement, should be principally directed. The Essay must be sent in on or before the 31st DECEMBER, 1856, to the Honorary Secretary, from whom further particulars may be had on application.

THOMAS WILSON, Hon. Sec.

Aire and Calder Navigation Office, Leeds, 1st July, 1856.

TO ARCHITECTS.—Weston-Super-Mare Improvement and Market Act, 1842 and 1851.—The Commissioners acting under and by virtue of the above Acts of Parliament, are prepared to receive PLANS and SPECIFICATIONS for the ERECTION of a new TOWN-HALL over their Market-place, the cost of such building not to exceed £2,000. A plan of the ground, if required, may be obtained by applicants at the Clerk. The drawing of the plan approved by the Commissioners will receive a premium of fifteen guineas, such plan to be the property of the said Commissioners. Plans must be sent, free of carriage, to the Office of the Clerk, No. 5, South Parade, Weston-super-Mare, aforesaid, on or before the 8th day of SEPTEMBER next. WILLIAM SMITH, Clerk to the Commissioners.

Dated, Weston-super-Mare, July 14th, 1856.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London district hereby gives Notice, that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall mall, on or before the 6th of AUGUST next, for BUILDING a STABLE and SUPPLYING a TANK to contain 10,000 gallons of water, at the Wellington Barracks, St. James's park. Printed schedules and forms of Tender may be obtained at the Royal Engineers' Office, 11, James-street, Pimlico, between the hours of TEN and THREE o'clock, from the 23rd of JULY to the 5th of AUGUST next inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineers' Office, 11, James-street, Pimlico,
16th July, 1856.

NOTICE to BUILDERS and CONTRACTORS.—WAR DEPARTMENT WORKS.—Sealed TENDERS for the ERECTION of a FORT and BARRACK at Mount Tourville, Alderney, will be received by the Director-General of Contracts, War Department, Pall-mall, London, on or before the 30th day of SEPTEMBER next, after which date no Tender will be received. Detailed drawings may be seen, and every requisite information obtained, at the Royal Engineer's Office, Alderney, from the 7th to the 21st of AUGUST next and at the Office of the Inspector General of Fortifications, War Department, Pall-mall, from the 1st to the 21st of SEPTEMBER next. The terms of contract, specification for the works, and forms of Tender, can be procured at the Office of the Director-General of Contracts, War Department, Pall-mall, London, and at the Royal Engineer Offices, at Guernsey and Alderney. Each Tender forwarded must be attached to a copy of the terms of contract and specification. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders. Tenders for the above work to be addressed to "The Director-General of Contracts," War Department, Pall mall, London, and endorsed "Tender for Erecting a Fort and Barrack at Mount Tourville, Alderney."

NOTICE to BUILDERS. — ORDNANCE CONTRACT.—The principal Officers of Her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following CONTRACT, viz.:—For the several Works proposed in the ERECTION of ADDITIONAL BUILDINGS, together with other Alterations and Improvements in the BARRACKS at BEGGAR'S BUSH, DUBLIN. Persons desirous of Tendering for the same, will receive every information on application at the District Commanding Royal Engineer's Office, Portobello Castle-yard, Dublin, and may obtain specifications with the terms of Contract. The Soldiers Quarters, Cookhouses, and Hospital to be completed on or before the 31st MARCH, 1857, and the remainder of the works on or before the 31st AUGUST, 1857.—The letters of Tender with specifications to be sealed, and transmitted under cover to "The Director General of Contracts, War Department, Pall-mall, London," so as to be received on or before the 6th day of AUGUST, 1856, and to be marked on the outside, "Tender for Works at Beggar's Bush Barracks, Dublin."

Commanding Royal Engineer's Office, Dublin,
July 17, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ROYAL ENGINEER CONTRACT.—The Commanding Royal Engineer of the Woolwich District hereby gives Notice, that sealed TENDERS, in one sum, will be received at the Office of the Director-General of Contracts, Pall mall, London, on the 26th of AUGUST, 1856, from such persons as may be desirous of CONTRACTING for the ERECTION, at Shoeburyness, of a HOSPITAL, with the necessary outbuildings, enclosure wall, &c., of quarters for the hospital servants and four staff sergeants, and of a quarter for the Assistant Superintendent of Experiments; also for an extension of the present cookhouse and the erection, contiguous thereto, of a store and office.—The specification and drawings may be seen, on application at the Royal Engineer Office, Grand Depôt, Woolwich, between the hours of TEN and FOUR, up to the 6th AUGUST, 1856, inclusive. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Grand Depôt, Woolwich,
15th July, 1856.

ROYAL ENGINEERS' CONTRACTS.—WAR DEPARTMENT.—The War Department being about to enter into a CONTRACT for ALTERATIONS and ADDITIONS to certain portions of the ROYAL ARTILLERY BARRACKS, at Woolwich, such persons as may be desirous of Tendering for the same may receive information relative thereto by applying to the District Clerk of Works, at the Royal Engineers' Office, Grand Depôt, Woolwich, between the hours of TEN and FOUR, up to the 6th AUGUST, 1856, inclusive. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders. Sealed Tenders, addressed to the undersigned, will be received at the Office of the Director-General of Contracts, Pall mall, London, on the 26th of AUGUST, 1856.

Royal Engineer Office, Grand Depôt, Woolwich,
15th July, 1856.

TO BUILDERS.—Notice is hereby given, that TENDERS will be received at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on or before the 9th SEPTEMBER, 1856, from such persons as may be desirous of CONTRACTING with the War Department for BUILDING NEW BARRACKS to accommodate 39 officers, and 1,000 non-commissioned officers and privates, at Chatham, in the County of Kent. The buildings to comprise commanding officers' quarters, officers' quarters, quarters for staff-sergeants and married soldiers, laundry, workshops and stores, soldiers' barracks, guard house, canteen, stable for officers' horses, coal-yard, engine-house, &c.; sinking wells, constructing tanks, drains, sewers, enclosure walls, and iron railings; planting trees, &c. &c. Plans and Specifications, with forms of Tender, may be seen, and all other information obtained at the Royal Engineer Office, Gosport, any day (Sundays excepted), between the hours of TEN and FOUR, from the 18th of AUGUST to the 8th of SEPTEMBER, 1856. The whole of the works to be completed within 24 calendar months from the date of notification of acceptance of Tender. No notice will be taken of any Tender unless it be in the prescribed form. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders

Royal Engineer Office, Portsmouth, 30th July, 1856.

CONTRACTS.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the War Department, at their Office, Pall-Mall, London, on THURSDAY, the 28th day of AUGUST, 1856, from such persons as may be willing to undertake the ERECTION of a BARRACK for Married Soldiers, with OUTBUILDINGS, &c. at Portsea, in the county of Hants. The plans, specification, and quantities of materials, may be seen, and every information obtained, on application at this Office, on and after the 11th AUGUST, 1856, between the hours of TEN and FOUR each day, Sundays excepted. Tenders to be endorsed, "Tenders for the Erection of a Barrack for Married Soldiers, with outbuildings, &c. at Portsea, in the county of Hants."

Royal Engineer Office, Portsmouth, July 30, 1856.

NOTICE to BUILDERS.—Notice is hereby given, that PLANS and SPECIFICATIONS for REPAIRING the RECTORY-HOUSE at Chiswick, near Brentford, in the county of Hertford, will be lying at Mr. HEADS, Bookseller, High-town, Hertford, on MONDAY, the 4th of AUGUST, and three following days. All parties desirous of CONTRACTING for carrying out the works must send in sealed TENDERS on or before the 14th day of AUGUST, directed to the Rev. J. M. WARD, Chiswick Rectory, Brentford. The Tenders to be in the usual necessary form, with two good and approved sureties, for the due execution of the works, at his own expense.

AMBERGATE, NOTTINGHAM, and BOSTON and EASTERN JUNCTION RAILWAY and CANAL COMPANY.—TO CONTRACTORS.—Notice is hereby given, that the Directors of the above Company will meet at their offices, St. Peter's-gate, Nottingham, on MONDAY, the 11th day of August next, at ONE o'clock in the afternoon, to receive TENDERS for the ERECTION of STONE PIERS, ABUTMENTS, and WING WALLS, and also to receive the wrought iron girders for a bridge to cross the Midland Railway and old Trent-lane, at Beeston, near Nottingham, having a centre opening of about 70 feet, and two side openings each of about 50 feet, measured on the skew face. Drawings at specifications may be seen, and further particulars obtained, upon application to Mr. UNDERWOOD, the Engineer, at the Offices of the Company, on or after the 28th instant. Bills of quantities, with the form of Tender, will be furnished on payment of one guinea. All Tenders must be sealed and addressed to the Secretary. No Tender will be received after TWELVE o'clock at noon of the said 6th day of AUGUST.—By order,

JNO. COUGH, Secretary.

Company's Offices, Nottingham, July 17, 1856.

TORQUAY WATERWORKS.—The Local Board of Health are desirous to receive TENDERS for the SUPPLY of about 1,000 TONS of CAST IRON PIPES, &c. of various sizes and lengths, required in the Parish of Tor-quay. Specification to be seen at the Town Hall, Torquay, Devon, and at the Office of the Engineers, Messrs. EASTON and AMOS, Great Smith-street, Westminster. Sealed Tenders, addressed to the undersigned, to be delivered at the said Hall, Torquay, on or before TWELVE o'clock on TUESDAY, the 5th day of AUGUST next. The Local Board do not bind themselves to accept the lowest or any Tender.

GEO. E. HEARDER,
Torquay, Devon, 19th July, 1856. Clerk to the Local Board.

TO BUILDERS.—Persons willing to CONTRACT for the ERECTION of a PARSONAGE-HOUSE in Saint Nicholas Parish, Deptford, in the county of Kent, are desired to send specifications and offers on or before MONDAY, the 4th inst. at the Offices of the Architect, Mr. JOHN SLATER, Lambeth. Sealed Tenders, endorsed "Tenders for Parsonage-house, Deptford," to be sent to Mr. J. HANSON, on or before the 6th of AUGUST. The Committee do not bind themselves to accept the lowest Tender.

TO CONTRACTORS.—Notice is hereby given, that the Surveyor of the Highways of the Parish of Hillingdon is prepared to receive TENDERS for ERECTING a BRIDGE across the Frays River, at Little Britain, in the Parish of Hillingdon. Plans and a specification may be seen at the Office of Mr. GEORGE EVES, Surveyor, Uxbridge. Sealed Tenders to be delivered on or before TWELVE o'clock on THURSDAY, AUGUST 7th, 1856, at the Office of T. W. WALFORD, Esq. Uxbridge, and endorsed "Tender for Little Britain Bridge." The Survey of Highways does not bind himself to accept the lowest Tender, although he will do so unless there shall appear to him to be a good and sufficient reason to the contrary.

WILLIAM REID, Surveyor of Highways.

Hillingdon, July 16th, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

BOROUGH of SUNDERLAND.
SEWERAGE WORKS. CONTRACT No. 5 for IRON FOUNDERS and OTHERS. The Corporation of Sunderland are desirous of receiving TENDERS for the METAL and IRON WORK required in the Sewerage of the Borough, comprising—
CAST METAL CULVERTS.
CAST METAL PIPES.
CASTINGS FOR MAN HOLES,
GULLY TRAPS AND GRATES.
And other Iron or Metal Work required in the said work. The drawings and specifications may be seen at the Office of THOMAS DARBY, Esq. Architect, 16, Lincoln's-Inn-fields, London; and at the Office of the Borough Engineer, East Cross-street, Sunderland, to whom Tenders are to be addressed, and endorsed "Tender for the Metal Work for Sewerage of the Borough," on or before SATURDAY, the 16th AUGUST 1856. By order,
WILLIAM SNOWBALL, Town Clerk.
N.B. The Corporation is not bound themselves to accept the lowest or any Tender.
Sunderland, 30th July, 1856.

BOROUGH of SUNDERLAND.
SEWERAGE WORKS.—CONTRACTS Nos 4, 5, 6 and 7
To CONTRACTORS, MASONS, EXCAVATORS, and OTHERS. The Corporation are desirous of receiving TENDERS for the following SEWERS:—
Contract No. 4.—BOROUGH-ROAD SEWER.
" 5.—LOW-STREET SEWER.
" 6.—WILLIAM'S LANE SEWER.
" 7.—NEVILLE'S COURT and WHITBURN-STREET SEWER.
And any other Works in connection with the said Sewers that may be required. Plans and specifications may be seen on and after MONDAY, 28th day of JULY next at the Office of WILLIAM CROZIER, Esq. C.E. Borough Engineer, East Cross-street, Sunderland, of whom Tenders are to be addressed, and endorsed "Tender for the Sewerage Works, No. [illegible]," on or before SATURDAY, the 16th day of AUGUST next.
By order, WILLIAM SNOWBALL, Town Clerk.
N.B. The Corporation do not bind themselves to accept the lowest or any Tender.
Sunderland, 30th July, 1856.

KING'S LYNN HARBOUR.—The Trustees of this Harbour are prepared to receive TENDERS for the CONSTRUCTION of a new QUAY, in wood, along a portion of the north side of the Harbour. The specifications of the proposed Quay may be inspected at the Town Hall, Lynn, where sealed Tenders are to be delivered or sent by post, on or before the 31st day of JULY inst. The Trustees do not bind themselves to accept the lowest or any Tender.
EDWD. LANE SWATMAN, Clerk to the Trustees.
King's Lynn, July 15th, 1856.

TO BUILDERS, CONTRACTORS, and OTHERS.—Such persons as are desirous of CONTRACTING with the Justices of the Peace of the County of Middlesex, for the ERECTION of a STOREHOUSE at Leamington, for the 2nd Regiment of Warwickshire Militia, may inspect the plans and specifications of the works on application to Sergeant HART, at No. 1, Parks' cottages, Lambeth, any day from MONDAY to SATURDAY, the 28th of JULY inclusive, after which time Sergeant HART will not be at home. Sealed Tenders are to be delivered free of charge, to Mr. KINDALL, County Surveyor, Warwick, on or before Monday, the 11th of AUGUST, endorsed "Tenders for Militia Stores at Leamington." Persons tendering will be required to enter into recognizances, with two good and sufficient sureties, for the due execution of the works. The Justices are given to accept the lowest or any Tender unnecessarily.
Warwick, July 25th, 1856.

TO CONTRACTORS, BUILDERS, and OTHERS.—The Vestry of the Hamlet of Millwall-old-town will meet on WEDNESDAY, the 13th day of AUGUST next at the Town House Millwall, at SEVEN o'clock in the evening precisely, to receive TENDERS for the EXECUTION of the following SEWERS in the following streets, viz. Albert-road, Albert-street, East-street, James street, Ann-street, Essex-street, Charles-street, Prospect-street, Cotton-street, Cubitt-street, Ward-street, and John-street, commencing at or near the South Ward of the said Hamlet, as shewn delineated on a plan of the same to be seen and open to all persons desirous of tendering, at the Vestry Office, between the hours of TEN and FIVE, and the conditions of the contract to the Vestry. Every Tender will be required to be sealed up and delivered to the Vestry Clerk at the Office aforesaid, on or before TWO of the clock on the forenoon of the day of meeting, in the presence of two respectable persons, who are to be willing to bind with the contractor in the sum of £50 for the due performance of the works, and the Vestry will not be bound to accept the lowest or any Tender.
THOS PHILLIPS, Clerk to the Vestry.
Town House, Millwall-road, July 26, 1856.

DEEPING FEN DRAINAGE.—To BUILDERS and CONTRACTORS.—TENDER for WORKS.—The Trustees appointed under and by the provisions of "the Deeping Fen Drainage Act, 1856," will be prepared at the Office of Messrs. Bell and Grantham, Solicitors, Market Deeping, in the county of Lincoln, on WEDNESDAY, the 27th day of AUGUST next, at ELEVEN o'clock in the forenoon, to receive TENDERS for the CONSTRUCTION of a NEW SLUICE, with three brick drainage pipes, and other Works connected therewith, to be erected at the mouth of the Vernatt Drain, at the junction of the same with the River Glen, at Gosberton Clough, in the parish of Gosberton, in the county of Lincoln, as shewn on the Plan of the said Drainage, deposited with the Clerk of the Peace for the said county, and at the Office of Mr. LEWIN, the Engineer, Bridge-street, Boston, and at the Office of Mr. [illegible]. Each Tender is to be prepared with the name and residence of their sureties at the time of delivering the same to the said Trustees, and the lowest Tender, or any other, except otherwise ordered, will be accepted by the said Trustees.
By order of the Commissioners of Sewers.
JOHN CARTER, Clerk.

BOROUGH of LEEDS.—To CONTRACTORS.—WANTED, by the Town hall Committee of the Borough of Leeds, No. 8 Section [illegible] WORK of the Tower of the Town Hall, in accordance with the plans and specifications prepared by Mr. CUMBERLAND, Architect, Leeds, and after the 29th instant, and sealed Tenders are to be sent in to the Town Hall, Leeds, on or before the 12th day of August next, addressed to the undersigned, "Tender for Town-hall Tower." The Committee do not pledge themselves to accept the lowest Tender.
JOHN V. BRIGGS, Town Clerk.
Leeds, 19th July, 1856.

TO BUILDERS, CONTRACTORS, and OTHERS.—The Commissioners for BUILDING NEW CHURCHES with two Resident Curates at LUTON, Bedfordshire, are desirous of receiving TENDERS for the ERECTION of the same, in accordance with the plans and specifications prepared by Mr. C. G. PEARSON, Architect, and to be seen, at bills of quantities may be procured, at the Office of Mr. J. CUMBERLAND, Architect and Surveyor, Luton; and of Mr. C. POLAND, Surveyor, 72, Margaret-street, Cavendish-square, London. The Tenders are to be addressed to the Rev. T. BARTLETT, M.A. the Vicarage, Luton, Bedfordshire, endorsed "Tender for National Schools," and no Tender will be received later than TUESDAY, the 19th of AUGUST next. The Commissioners do not bind themselves to accept the lowest or any Tender.
Luton, 19th July, 1856.

TO BUILDERS.—BLANDFORD UNION.
The Guardians of the Blandford Union invite TENDERS from persons desirous of CONTRACTING to BUILD a NEW WORKHOUSE for the above Union, in accordance with plans and conditions for such new Workhouse can be viewed on application to the Clerk of the Union; and all information required can be obtained from Mr. G. D. CREEKE, Architect, Bournemouth, Hants. Tenders to be sent to the Clerk, on or before FRIDAY, the 8th of AUGUST next.—By order of the Board,
W. H. ATKINSON, Clerk to the Union.
Blandford, July 17, 1856.

CONTRACTS.

WHITECHAPEL UNION.—PROPOSED NEW WORKHOUSE.—The Guardians of the Whitechapel Union, having resolved to take into consideration the propriety of erecting a new Workhouse for the said Union, will meet at the Board room, at the Workhouse, in the Whitechapel-road, on TUESDAY, the 19th day of AUGUST next, at ONE o'clock in the Afternoon precisely, to receive TENDERS for the ERECTION of the FIRST PORTION of the PROPOSED NEW WORKHOUSE, in Charles-street, Mile End New Town, pursuant to, the Act of 21 Geo. 3, c. 64. Further particulars may be obtained, and the plans and specifications inspected at the Offices of THOMAS D. BARRY, Esq. Architect, 16, Lincoln's-Inn-fields, London; and of Basil-street North, Liverpool. By order of the Board,
G. ADAMS FARR, Clerk.
2, Mount-place, Whitechapel-road, 28th July, 1856.

TO BUILDERS and OTHERS.—TENDERS for the COMPLETION with fences &c. and for the PURCHASE (in small lots or parcels) of FOUR Third-rate DWELLING HOUSES and PARCANS, situate near the Wimbledon Railway Station, will be received until SATURDAY EVENING, AUGUST 9, at the Office of the Architect, Mr. WYATT PAPWORTH, 14a, Great Marlborough-street, Regent-street, where the specifications and conditions may be seen. The purchase may be completed by the Tenant, if required, by a Mortgage for part of the purchase money.

THE LOCAL BOARD of HEALTH for TOTTENHAM are prepared to receive TENDERS from persons duly competent for any of the following works:—
CONTRACT No. 1.—Making Two Roads, &c.
CONTRACT No. 2.—Laying Cast-iron Water-pipes and a Drain.
CONTRACT No. 23.—Delivering about 120 Tons of Cast-iron Water-pipes and Castings.
CONTRACT No. 24.—Erecting an Engine at Hunter House, &c.
CONTRACT No. 25.—Making and Erecting a High-pressure Expansive and Condensing Steam engine, &c.
The specifications, conditions of contract, drawings, and plans, may be inspected and further particulars obtained, by application at the Offices of the Board, or at the Offices of J. PILBROW, C.E. Engineer to the Board, Tottenham-green. Sealed Tenders (properly endorsed and addressed to the Local Board of Health, Tottenham, Middlesex), must be sent in on or before THURSDAY, the 31st of AUGUST, 1856. By order of the Board,
Tottenham, July 30th, 1856. WILLIAM HEATH, Clerk.

MIDLAND RAILWAY.—To BUILDERS and CONTRACTORS. The Directors of the Midland Railway Company are receiving TENDERS for the ERECTION of an ENGINE-SHED (to contain twenty-four engines), FITTING-SHOP, and other BUILDINGS, at the Locomotive Station, Sandiacre, for the ERECTION of an additional WORKSHOP, for the Locomotive Department at Derby.—Drawings and specification for the above may be seen at the Engineer's Offices, Derby Station, on and after WEDNESDAY, the 6th of AUGUST next. Tenders to be delivered to the Secretary at the Way and Works Committee, Derby Station, not later than TEN a.m. on TUESDAY, the 19th of AUGUST next. The Directors do not bind themselves to accept the lowest or any Tender.—By order,
Derby, July 30, 1856. JOSEPH SANDERS, Secretary.

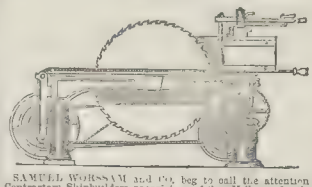
WINDOW-BLINDS.—J. FULLER, Manufacturer, 29, Charlotte-street, Blackfriars-road, Established, 1830.—Venetian Blinds, from 10s. each, or 8d. per foot; Wire ditto, 7s. each, or 1s. 9d. per foot; Holland ditto, from 5s. each, or 9d. per foot. Every other description of Blinds equally low, warranted of the best manufacture. Discount to Builders and the Trade. Fixed complete.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner. Venetian blinds, per square foot, 9d.; best Holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 3s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 3s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application, post free.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND, London.

DR. ARNOTT'S, SHERINGHAM'S, HART'S MODEL COTTAGE, and every description of VENTILATORS.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham. Illustrated Price Lists free on application.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Blades, Rolling and Chair Planing Machines, Radial Saw Frames, and all other kinds of Machines, for Sawing, Planing, Grooving, and Moulding Wood. They have constantly in hand machinery of every description, and can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace.—A descriptive Catalogue, with Drawings, may be had on application.
KING'S-ROAD, CHELSEA.

CHURCH FURNITURE.
JOHN HARDMAN AND CO.
BIRMINGHAM,
Manufacturers of MEDIÆVAL CHURCH and DOMESTIC FURNITURE, MONUMENTAL BRASSES, and STAINED GLASS.
Decorations of all kinds executed.
Metal Works—56, GREAT CHARLES-STREET.
Stained Glass Works—43, NEWHALL-HILL.
Specimens may be seen, and designs and every information may be obtained at the
LONDON OFFICES, 417, NEW OXFORD-STREET.
Mr. S. THOMPSON, Agent.

BUILDINGS HEATED BY HOT WATER.
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IRONWORKS, 191, DRURY-LANE.
DRYING CLOSETS for HOSPITALS, UNIONS, ASYLUMS, &c.
BATHS, RINGES, GAS-STOVES,
HOT-PLATES, STEAM and GAS-COOKING APPARATUS, for HOTELS, MANSIONS, &c.
G. B. C. has recently fitted up the Crystal Palace Kitchens with Gas-cooking arrangements upon the most extensive and most complete scale. Ornamental and Constructive Ironwork.

SKAIFE and POLLOCK,
Manufacturers of
PATENT GALVANIZED IRON.
Sheets, corrugated and plain, Fencing and Telegraph Wire, Bars, Rods, Hoops, Nails, Screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.
IRONWORK GALVANIZED.
Roofing orders promptly and carefully attended to.
Office.—Commercial-road, Limehouse, London.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).
GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

JOHN HENDERSON PORTER,
ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be painted, it is far cheaper and as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No.			
11	gauge weighs about 16 oz.	per foot square.	
13	"	20	"
14	"	24	"
16	"	30	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON,
to whom all letters must be addressed.

A. MOREWOOD and CO.
(late Morewood and Rogers),
Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles in Galvanized Iron in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Pipes, Gas and Water Tubing, Stamped and Galvanized Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
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MALLET'S PATENT BUCKLED PLATES.
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS,
No. 3, Mansion-house-place, London, and No. 6, Berkley-street, Birmingham.
For Plan, Section, and Description, see "The Builder," May 17.

TUPPER and CARR,
Patent Galvanized Deep-grooved
CORRUGATED IRON MANUFACTURERS,
IRON ROOF, SHED, AND STORE BUILDERS,
Electric Telegraph and Wire Fencing Contractors,
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Offices, 5, MANSION HOUSE CHAMBERS, LONDON.
Iron of every description galvanized.

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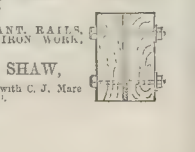
CONTRACTORS requiring CASTINGS, WROUGHT-IRON GIRDERS, &c. with despatch, and punctuality, MATTHEW T. SHAW (as above) can execute their orders to the best advantage. Large Contracts for Iron and Stores of every description—64, CANNON-STREET.

TO CONTRACTORS AND BUILDERS.
WROUGHT-IRON GIRDERS for BRIDGES and BUILDINGS, manufactured and guaranteed, as follows:—
CAST IRON GIRDERS, for BRIDGES and BUILDINGS.
Castings of every description.
ROLLED WROUGHT IRON FLITCHES, for trussing between timber.
Orders executed in three days.
SCORES, BOLTS & NUTS.
SPIKES, RIVETS, CUT NAILS, WROUGHT ditto.
SPRINGS, BOND HOOPS, CHAIN, &c.



CONTRACTORS' PLANT, RAILS, EARTH WAGGONS, and IRON WORK, for Wood Waggons, &c.
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ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWOR.

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

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THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

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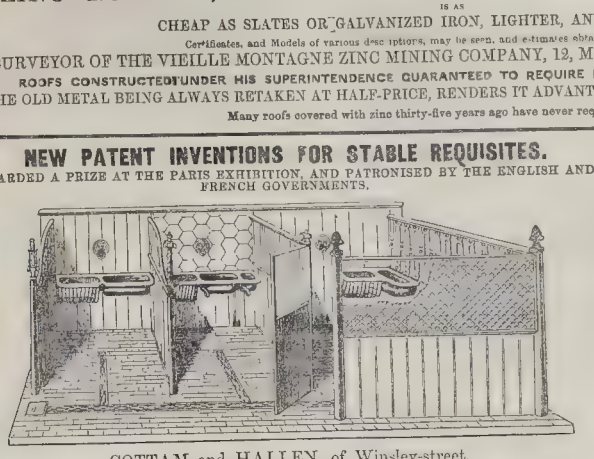

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Are the original inventors of the PATENT ENAMELLED MANGER, WATER TROUGH, and WROUGHT-IRON RACK, united to an iron top plate, and forming one complete and neat fixture having Soraan's Patent Noiseless Halter Hook and Collar attached, the ball of which is given to the back of the manger, and works with ease and freedom up and down the guide bar. Cottam's new Patent Feed-Box, of galvanized sheet-iron, is an important addition to the above fittings, constituting an economical, light, and durable, promotes cleanliness, and is so nominal in its results. Also, the Patent Double and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

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FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES

eyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No 16	1½	7s. 0d.
15	1¾	7s. 6d.
15	2	8s. 0d.
15	2¼	8s. 6d.
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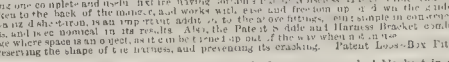

THE PATENT BOND is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11 inches, and turning one side of each notch in succession one storey deep from one end of the iron to the other, thus forming REVERSED CLAWS, which have so bent that a direct line from the reverse sides of the iron, if continued, would run out at the opposite end grain of the iron is presented lengthwise, and when built up in the course of work, united fed in the structure by which means a COMPLETE and PERFECT DETAIL TIE throughout the whole building is obtained.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.

London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

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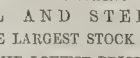
HEATING BY  HOT WATER.

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IRONMONGERY.

PFEIL AND STEDALL.

THE LARGEST STOCK AT

THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

TO IRONMONGERS, BUILDERS, &c.

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This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wood or metal in combination with concrete, constructed likewise, the floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the Kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as preventing the great deterioration of fire-proof constructions, even for ordinary dwelling-house and domestic buildings, with a trifling cost over the

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GLOVER, BROS.,

Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION either structural or ornamental.

Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes Wheels, Pinions, Lanterns, Screwing Dies, and all Hot-pressed Metal. An improved Soot Door, adapted for Industrial work.

A large stock of Rain-water Pipes, Plain and O G Gutters, Air grates, Sash Weights, Air-tight Coast Grates, Stable Fittings Hurdles, &c.

Plain and Ornamental Vases 20 per cent cheaper than Terra cotta.

Estimates given for Iron Buildings, Wrought-iron Roofing for Churches, Staircases, Wrought-iron Girders, Fire proof Floors Boilers and Smith-work Houses, and Boilers, and every description of ironwork for exportation, and the work executed with every attention to quality and despatch.

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BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

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LESS FUEL, MORE STEAM, NO SMOKE.

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"DEAR SIR, In answer to your letter in reference to the saving of fuel in connection with the use of your patented apparatus, to which inquiry I was hitherto, from incomplete observation, unable to reply, I beg now to state that we are enabled without difficulty and without smoke, to command a full supply of steam, and to generate it much quicker than we could previously. We employ an ordinary furnace coil. I feel satisfied there is a considerable saving of fuel, the precise amount of which we cannot at present determine.

"I remain, dear Sir, yours truly,

"To E. V. GARDNER, Esq." "FRED'K. ALLEN.

Apply to the PATENTEE, 21, Norfolk-street, Middlesex Hospital; or to Messrs. BURRIDGE and HEALY, 118, Dorset-street, Fleet-street; or Z. D. BERRY, Albion Works, Victoria-road, Pimlico.

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For cutting balks of timber, from 5 feet on the side down to the smallest batten size.

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GRILLAGE, CURTAIN PRICES

RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
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O G Gutters	1s. 0d.	1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.	1s. 8d.
Ditto, with plain edge cast on	1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.	1s. 8d.	1s. 10d.
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Best Cast Sash Cords.

11 in.	12 in.	2 in.	3 to 6 inch.
1s. 6d.	1s.	1s. 8d.	1s. per cwt.

Best Cut Flat Bolts ..... 12s. 6d. to 15s. per cwt.

Best Cut Lath Nails ..... 1s. 6d. "

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Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the interction of any foreign metal.
PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS

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N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

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IRON CHURCHES, STORES, &c.—For SALE, Substantial Corrugated Iron Stores, Churches, Dwelling-houses, and every description of Buildings, adapted to all climates. Iron Roofs constructed for all parts of the world. An Iron Church with sittings for 750 people, for sale or hire.—To view and for further particulars apply to SAMUEL HEMMING, Cliff House Works, Bow, London.

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A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Larger Oven and Boiler
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28s. 30s. 32s. 34s.
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Strong Elliptic Stoves with Extra Back and Solid Bars, per in. 2½d.
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O G Gutters { 3 in. 1s. 4 in. 1s. 9d. per yard.
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6-inch Rd. Ward Mortise, with Best Furniture and Patent Spindles, 9s. 9d. each. Light Elliptic and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.
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1½ in. 1¼ in. 2 in. 2½ in. 3 in.
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Best Sheet Cut Floor Brads..... 13s. per cwt.
Best Cut Lath Nails ..... 16s. "

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Elliptic Stoves, double backs, 2½d. per inch, and upwards.
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Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
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3-feet Cottage Ranges, with ovens and back boilers, 23s. each.
3-feet self-acting ditto, ditto, 34s. each.
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Best Town Grill ..... Ditto, Scotch, 64s. per cwt.
Best Fine Cut Clasp and Rose.
2 2½ 2¾ 3-in. & larger.
16s. 6d. 16s. 6d. 15s. 6d. 15s. 6d. 15s. 14s. per cwt.
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The Builder.

Vol. XIV.—No. 704.

FROM its cathedral, its castle, and its old houses, Rochester has long been an inviting place to the antiquary; and it has become otherwise interesting from some associations. Here, the learned members of the Pickwick Club first halted; and here an inscription still announces that "six poor travellers," "not being rogues or proctors, may receive gratis, for one night, lodging, entertainment, and fourpence each." Strood, opposite Rochester, on the near side of the Medway, has itself a few interesting remnants of domestic architecture. The old bridge, shortly to be removed, would just now claim a record—though most of the antiquities of Rochester have been spoken of, and illustrated from time to time in our pages. But the new bridge now completed, and the bridge for the East Kent Railway, in progress, which adjoins the other, present special features of interest—being truly worthy illustrations of the characteristics of the works of the present day, in the amount of scientific calculation and engineering design which enters into their projection and construction.

As will be observed by the plan,* the new "town-bridge" is in continuation of the line of the main street, whether on the Rochester or the Strood side of the river; whilst the old bridge carried the road by a very circuitous course. It is therefore curious that the site last referred to should at the time of the building of the bridge, have been considered "a better place" than the line of a still older bridge, which was, in fact, the same as that of the bridge just completed. Of the older bridge remains have been met with. The Strood pier there, indeed, is on the site of one of the piers of that old bridge; and in carrying out the works, as described in a paper by Mr. John Hughes, read before the Institution of Civil Engineers in 1851, a mass of Kentish rag-stone, of the nature of rubble, without mortar, was found for a depth varying from 13 feet to 25 feet below the present bed of the river. "Pieces of timber of considerable dimensions, and having been used as piles, or framing, occurred in this bed of rubble stone, penetrating a foot or two into the gravel, which proved to be 6 or 8 feet thick." On reaching the chalk, all traces of the kind were lost. The timber was oak, elm, and beech. All the timber was sound and tough except the beech, which last was "saturated with water, and had the condition of a soft pulp." It may be well to remark, that in the foundations of the London Custom-house, which failed from causes which have been adverted to in these pages, beech piles, used green with the bark on, are said to have been chosen advisedly, on the special ground of the durability of beech under water. In the remains of the Rochester bridge, fragments of iron showed that the piles had been shod with that material. A few of the pieces of timber "had evidently been burnt." These discoveries correspond with what is recorded of the old structure. The date of that bridge is unknown; but about 1115 a code of regulations for its maintenance and repair was recorded by the bishop; and from these it seems that the bridge was of wood, on stone piers. There were ten openings, and nine piers 43 feet apart from centre of pier to centre of pier, the roadway over each opening being supported by three "sullivas," or "beams" of large dimensions, that they might "well support the planks and the great weight of all those things that pass over them." But the openings on either side of the sixth pier were provided with each, two such beams only. Thick planks were laid on the beams, and there was a low "balustrade,"—the roadway being supposed to have been about 10 feet wide. A wooden tower, called a *fortification*, built with "marvellous skill," stood near the east end, or on the Rochester side. In 1264, in the Barons' wars, when Rochester Castle held out for Henry III. the upper works of the bridge were burnt by Simon de Montfort, Earl of Leicester. In 1281, it is recorded that some of the stone piers were carried away by ice, after which the structure was ruinous till 1344-5, when the passage was made safe, and a drawbridge and barbican were added on the Strood side; but hereupon the traffic became so great, that in 1347, the bridge was again deemed unsafe. Still forty years passed ere the now existing old bridge was commenced. Even of this work, indeed, little appears in our view. Such remains of the ribbed Gothic arches as there are, however, are interesting,—examples in old pontine architecture in this country being few in number. There is a Gothic bridge at Eltham, in Kent; but much smaller, and later in date. The original stone bridge at Rochester was erected by Sir Robert Knolles and Sir John de Cobham, in great part from the proceeds of the spoils of "towns, churches, monasteries, and cities," in France, obtained during the wars of the preceding reign; and it is in the statute enacted for the repairs of bridges, dating in 1392, that the "better place" of what was then the new bridge is referred to.*

Rochester-bridge had required to be patched and propped from a period commencing many years back: the foundations of the piers, put in on the old principle, were of course, liable to be undermined; and it will be seen by the plan, that the starlings greatly obstructed the waterway. A view taken in the year 1820, now before us, represents somewhat more of the old character than the view we give. But the centre opening is there formed of timber; many of the openings appear to be faced with semicircular arches, and the balustrade is as it now exists.—Just lately the stream has been widened, as shown on the plan,—the improvements imposing the provision of a navigation way to the above-bridge part of the Medway. This requirement has obliged the adoption of a swing bridge at the Strood end of the new structure; and a similar contrivance, of course, is also provided in the railway bridge. This latter bridge, closely adjoining the town bridge, from which it wholly differs in character,—appearing above it in one view, and hiding it on the other side,—whatever its merits otherwise, is certainly most unfortunately designed for the effect of its neighbour; and in the view and elevation of the town bridge we have ventured to omit it. A temporary bridge now joins on to the old bridge, and a new retaining wall to the Strood bank has been constructed, protected by piles. Since these works were executed, the old bridge is said to have given fresh signs of weakness.

The management of the affairs of the bridge rests with two "wardens" and twelve "assistants," annually elected, according to an Act of Parliament of the time of Elizabeth, passed subsequent to a commission of inquiry. The estates are reported to produce a considerable rental. Part of the property bounds the Rochester bank; and here it is just now proposed to form a broad esplanade, extending for some distance, and having a retaining wall, surmounted by the old balusters of the bridge. It is also proposed to widen the entrance to the High-street, at the end of the new bridge. The record-room or bridge chamber stands near to the end of the bridge, on the Rochester side, and beneath it is the site of a porch of a chapel, or chantry, founded by John de Cobham, at the time of the building of the bridge. The chapel, "formerly called Allesolven, or All Souls, was intended chiefly for the use of travellers; and three chaplains were appointed to officiate in it, at a salary of 6*l.* each, yearly, payable out of the income of the bridge estates."*

The new town bridge and the railway bridge each consists of three openings, besides the swing bridge, which there is to each. It is in the swing bridges and the method adopted in the foundations that the chief interest and merit of these works is to be observed. In that part of the town bridge which opens, the most elaborate system of contrivances is resorted to, to relieve the work from all strain in its ordinary position fixed for land traffic, and to attain the utmost durability in the working parts. Each of the swing bridges is formed of wrought-iron rivetted girders, strutted,—the centre, or pivot of the swing, in the case of the town bridge, being on the pier, so that the swing turns in direction up the stream,—whilst the centre in the case of the railway bridge is on the abutment, so that the swing turns down the stream. In the town bridge the moveable portion has six of the rivetted plate girders in the direction of the length,—the outside girders of the six being 7 feet 11½ inches deep, at one end, and 6 feet 0¼ inch at the other end,—the four intermediate girders being somewhat less. For the strutting, the girders are intersected by boiler plate—a row of plate passing by each side the centre pivot, for extra strength thereat—and elsewhere by cast-iron pipe-strutting, which gives the requisite strength with lightness. The footpath of this part of the bridge projects on cantilevers. The bearing-points are the pivot, formed with properly prepared iron and brass, and thirty wheels, or rollers, running on a circle, or roller path, 30 feet in diameter, which is accurately planed to a slight and even inclination,—the rollers being themselves fixed on the edge of what may be called a large horizontal wheel, which keeps them in their places. The motion is given to the bridge by an endless chain, stretched round the circle over the roller path, and also round a small toothed wheel,—which last is turned by two men, standing upon and carried with the bridge. The weight to be moved is over 300 tons. By a most ingenious contrivance, when the bridge is not open for river traffic, the weight can be taken off the central pivot.—At the outer end of the radius, there is, of course, a stop, to prevent forcing the bridge too far laterally in re-closing it,—and at the same end there are a number of "setting-up screws," to which motion is given by a windlass, for the purpose of taking off the weight which would otherwise exert great leverage upon the machinery; and there is here an horizontal stop, to prevent these screws from themselves forcing up the bridge too far. At the shorter end of the moving girders a considerable weight of stone is filled in the hollow parts under the level of the causeway, so as to get the proper counterbalance. Great nicety is of course required in the planning and arrangement of these swing bridges. Plans differing from that now adopted at Rochester have been tried,—and we believe here there was at one time a proposal

* See p. 422.

* See Mr. Hughes's paper, and "History and Antiquities of Rochester," compiled chiefly by the Rev. Samuel Denne, from Thorpe's "Registrum Roffense," Lambard, Stowe, and others. Published 1772, re-edited by Willash, 1817.

* Address by the late Ralph Bernal, Esq. at the opening meeting of the present year of the Archæological Association, at Rochester, *vide Builder* vol. XI. 185. In the same volume will be found other particulars of the antiquities of Rochester and the neighbourhood. At one of the meetings of the association, a long paper on the bridge by Mr. G. H. Adams, was read.

for having a reservoir of water in which a floating caisson should revolve. The contrivance now adopted seems to us to reflect great credit upon all concerned in scheming its working parts, and in carrying it out. In the railway-bridge a similar principle appears to be contemplated.

In the main portion of each bridge,—that is to say, town bridge and railway bridge—it has been shown that there are three openings and two piers. The railway bridge consists merely of wrought-iron rivetted girders, three in the width of the bridge, and continuous for the whole length of the piers and openings together. The centre girder is the deepest; and the three girders are fixed to one pier, whilst their other supports are by rollers, to allow of expansion and contraction. The timbers of the roadway are suspended from the bottom flange by two screw-bolts at each end,—this plan of course being adopted to ensure regular bearing, instead of the other alternative of straining one-half of the flange and outer girders. But it should be observed that the great dependence which in this now usual system is placed on the bolt-holes and heads of the bolts, would lead to the inference that further consideration of the subject might be desirable. This bridge is to carry the continuation of the North Kent line on to Canterbury; and great works are in progress in several parts, as about Chatham. Mr. Joseph Cubitt is the engineer of the railway bridge; Mr. Wm. Mills is the resident engineer; and Messrs. Fox and Henderson are the contractors.

The town bridge, of which, in addition to the general view, the centre and one of the side openings are shown geometrically, has three segmental arches of cast iron, and stone piers and abutments. The method adopted in the foundations here, and in the railway bridge, has excited so much attention, and involves so much ingenuity; and the question of foundations, both with reference to the method at Westminster-bridge, and generally, is now so interesting, that we propose shortly to return to the question,—to which time we defer a detailed description of the principle which appears to have been successfully carried out at Rochester. Let us remark, that the stone piers extend only down to the level of low water,—the pier, if it may be so called, below, being formed of a cluster of cylinder piles, filled with concrete,—there being fourteen piles to each pier, viz. six on each side and one to each of the cutwaters. These piles it was originally intended to sink on Dr. Potts's principle, or by exhausting the air, and allowing the pile to descend by its own weight. It was however found, in commencing at the Strood side, that the cylinder would not penetrate the bottom, and therefore a new contrivance, a modification of the diving-bell, was adopted for each cylinder, the air being compressed by an engine, so as to keep out the water, the pile descending by a weight placed at the top, and the men and materials passing in and out through valved chambers, according to an ingenious contrivance by Mr. Hughes, for which he obtained a patent. As in the instance of most valuable inventions, the priority of claim was disputed; and Mr. Bush, who commenced the sinking of a caisson, or cylinder, some time back on the Godwin Sands, has only just terminated his case,—which has been decided against him, in the House of Lords, mainly, as it would seem, because the real priority of claim would have been on the score of an invention by Lord Dundonald.

The strata at Rochester consisted of Kentish ragstone, gravel, soft chalk, and, lastly, in order of descent, hard chalk; and the cylinders were sunk in 9 feet lengths,—having to descend in some instances a total of 40 feet. The details of the work manifested great ingenuity.

Bed-plates were fixed on the top of the cylinders, and on these plates the masonry was laid. A portion of the pier corresponding with two courses of masonry, was formed by an iron curtain enclosing the piles, round the whole pier. After the foundations were completed, the works stood for some time before the superstructure was commenced. The total length of roadway, inclusive of the swing-bridge and abutments, is about 700 feet; but with the two approaches, and the land arches at the Strood end, the length would be somewhat greater. The girder framing of the swing-bridge measures about 99 feet along its sides, and 109 feet taking in the segments at each end. The length of the main portion of the bridge, or space of the three openings, is 482 feet, made up by the centre arch spanning 170 feet, two side arches, 140 feet each; and two piers, 16 feet each: and if the pier of the Rochester abutment, 40 feet, and the upper part of the pier only, next the swing-bridge, 34 feet, be added, we have a length of 556 feet for that part of the bridge. On the plan, the breadth between the parapets is 40 feet. The rise of the centre arch is 17 feet, and that of the side arches, 14 feet, or in each case, one-tenth.

There are six castings to the sweep of the centre arch and five to that of the side arches, and these castings are nutted and screwed together by flanges, the butting ends being carefully planed to get even bearing. On the plan there are eight of these arches in the breadth of the bridge, strutted by diagonal bracing-frames. The outside arches of the eight, in the 170 feet span, have the I form of section, 4 feet 6 inches in depth, with top and bottom flanges 14 inches by $2\frac{1}{2}$ inches, and a "web" of 2-inch metal. The inside arches are somewhat less in scantling. The decorative castings are screwed on, and, with the cornice and spandrils all in metal, and the iron parapet railing, are well designed for effect. At the upper angle of each spandril one inch is left for the expansion of the arch, which operates at that point, moving in direction towards the pier, in which a sinking is left to allow of such expansion. The arches spring from iron skewbacks, which pass through the pier,—that is, each arch where the piers occur butts against its neighbour.

The roadway and footpaths are carried by cast-iron plates fitted to the tops of the spandril castings. The roadway of the swing-bridge is of timber, where lightness is required.

The original contract provided for 2,500 tons of cast-iron, 35 tons of wrought-iron, 2,000 cube yards of brickwork in Portland cement, 850 cube yards of Portland cement concrete, 23,000 cubic feet of Bramley Fall stone in Portland cement, 9,000 superficial feet of 6-inch granite landings for foot paving, each stone 8 feet in length; 5,000 superficial feet of 6-inch York landings 4 feet in length, and 1,500 superficial yards of Scotch granite paving for the carriage-way, in regular courses 3 inches wide and 5 inches deep.

On the 10th June last, the three arches were all freed from their supporting centres,—when the drop of the crown of the middle arch did not exceed, even if it amounted to, one-eighth of an inch, and that of the side arches did not exceed one-sixteenth of an inch,—showing the excellence of the joinings of the ribs, and the soundness of the bedding on the skewbacks. Sir Wm. Cubitt is the engineer, and Mr. John Wright, the resident engineer. The foundations were put in by Messrs. Fox and Henderson, and the superstructure was contracted for by Messrs. Cochrane and Co.—Messrs. Lucas being sub-contractors for the masonry and brickwork.

At the landing-place on the Rochester side of the river, Mr. Wright is putting up what appears to be a well-contrived landing-stage. It is simply a hollow caisson, formed of rivetted plate-iron, and rises and falls in the direction of an inclined plane with the rise and fall of the tide,—being guided by wheels which run in chases in the masonry. Thus, descending a few steps, persons embarking can step immediately to a boat from a flat surface at all states of the tide. Some efficient contrivance has been long wanting at most of the landing-places on the Thames.

Of other improvements in Rochester, sanitary and otherwise, the necessity of which has been often remarked on in our pages, there is still much need. St. Nicholas's Cemetery, on the Maidstone-road, was opened not long ago, and comprises about three acres. Its formation and the chapels cost about 2,000*l.* but it does not appear to us that much taste has been exhibited in it.

The Archæological Institute.—The Congress has been held in Edinburgh: we shall give some particulars next week.

ON ORNAMENTAL LEAD-WORK.*

FLECHES.

The wooden flèche, or steeple, was one of the chief features of every cathedral in France, where we so seldom meet with the centre tower: Chartres formerly had two flèches, one in the usual place at the intersection of the transepts and the other between this last and the angel on the chevet. Its destination was to contain a bell, which was rung from inside, to warn the ringers in the great towers when to sound the great bells. There are still two beautiful flèches remaining at Rheims and Evereux:† the latter is pierced nearly all the way to the top. In fact, so solidly were these charming little edifices constructed, and so scientific was the application of the timber and the lead, that very few indeed have perished from the effects of time, compared with those destroyed by some disastrous fire; and yet in spite of this, it is proposed to put a roof and flèche of iron and zinc upon the restored cathedral of Cologne.

DORMERS, ETC.

The only thing now wanted to complete our roof, will be the dormers and air apertures. As to the former, it is simply an affair of covering the work of the carpenter with lead, with the addition of the cresting and girouette. They deserve notice, however, as it is on their recessed pediments, and on their sides, so well protected by the eaves, that the plumber applied his polychromy.

Of air apertures, there is a charming example at Beaune (fig. 10, p. 411, *ante*). It is in two pieces, the front one is cut out, beaten up, and soldered to that at the back, the flanges of which are inserted below the slates. It may best be described as a miniature dormer, entirely formed of lead, no wood being wanted to keep it in shape, as it is so very small.

At Lincoln, the lead of the gutter ‡ (which is relatively high up) is continued outside, over the stone parapet, where it is beaten up into an 8-foil ornament. I have been able to learn no particulars concerning this beyond the fact that part of it has lately been destroyed.

Water-pipes were a comparatively late invention, and can hardly be said to have been used in the Middle Ages: when, however, they did come into use, they were made ornamental, with colour and gilding.

POLYCHROMY.

The architect having thus finished his roof, which we may observe was an affair calculated to last for four or five centuries—not simply ninety-nine years more or less,—thought that as so much pains and expense had been taken to make it strong and beautiful, it was worth while to go a little farther, and give it all the advantages of colour. How was this to be carried out? Direct polychromy could only be used in the more protected parts; and oil gilding, although in some situations very effective, hardly contrasts sufficiently with the lead to make it desirable to employ it in large quantities, to say nothing of the excessive expense.

The problem was solved by the use of tin, whose imperishable brilliancy contrasted well with the dulness of the oxidized lead, and which being applied by fire, became part and parcel of the latter metal, and could neither be washed off by the rain, like the gilding, nor cracked by the sun like the oil painting.

The process of tinning is thus performed:—The lead being first of all covered with a tolerably thick coating of lamp-black and size, and the pattern traced with a point, all that part of the surface to be tinned is removed with a shave-hook, so as to leave it quite clean and bright: a little sweet oil is then rubbed over, and the solder applied and carefully spread with a copper bit in the usual manner. The process being thus effected, the next thing, of course, was to fix the lead in the position it was designed to occupy, for this tinning was done in the workshop, although occasionally it was performed when the lead had been up many years. Thus the spire of Notre Dame de Chalon, Chalon-sur-Marne (fig. 11) was probably constructed

* See p. 410, *ante*.

† The flèche at Evereux was repaired some few years back.

‡ In the Middle Ages, the gutters of a large church were generally so well constructed that it was unnecessary to line them with lead.

in the fourteenth century, but we must refer the tinning to at least a century later. In this case the process was the same, only much more tedious, as the workman was only able to apply so much tin as the end of his axe-bit would take up, and accordingly we find the work in the instance under consideration very coarse and rough, contrasting strongly with that on the dormer window at the east end of the same church (fig. 12).

All the lead-work of the roof was more or less susceptible of this decoration, but it was generally confined to the more ornate parts, such as the bases of the girouettes and dormer windows, but more especially to the ridge-pieces, which latter contrasted well with the long dark body of the roof, which was almost always left plain.* Almost all the principal mediæval edifices of France present more or less traces of this decoration, but I am not aware that any traces of it are to be found in England, although M. Durand who executed the lead-work for the Sainte Chapelle informed me that he had heard of some existing in England; he thought at Shrewsbury.

The places where gilding was applied are generally betrayed by the yellow or reddish colour mixed up with the oil formerly serving to attach the gold leaf,—now washed off by the weather in almost every instance,—however, the gilding has, in its turn, preserved the mordant, and we are thus enabled to detect its position. The large figures terminating the crests were formerly gilt, and, occasionally, the ridges. To such an extent was this practice carried on in the fifteenth century, that Charles IX. issued an edict, forbidding the inhabitants of towns to employ gilding on the exterior of their habitations.

It has been before observed, that the recessed pediments of the dormers, their sides (when protected by eaves), and other sheltered situations, received polychromatic decoration. The colours were not applied directly upon the lead, but upon a tinned surface, the lines alone being left to oxidize: the oil colours used upon the tinning were transparent, so that they might receive the full benefit of the brilliancy from underneath: these paintings were easy to restore, for their outline was unalterable. I should imagine the subject upon the cheeks of the dormer at Chalon-sur-Marne (fig. 12) to have been originally coloured, although only the tinning, and a few traces of the mordant of the gilding, remain. This supposition is rendered more likely from the relation of M. Barbar, an old inhabitant of the town, who told me that when a boy, at the beginning of this century, he lived close to the church, and that one night a piece of lead fell down from the roof into the yard, the which piece was enriched with a variety of positive colours, such as red, green, &c. The plumber to the hospital at Beaune also informs me, that traces of colour were found on the girouettes when under the process of restoration. According to his account the colour was thus distributed: the bases were painted in chevrons, in red (and tin); the stems had a ribband-pattern, the rondels were blue, and the ornaments gilt. At present the only perfect specimen of Polychromatic decoration upon lead I can refer to, is on the inside of the second stage of the Amiens spire.

WINDOW LEADS.

After covering the edifice, the next important employment of lead in ecclesiastical art will be found in the windows. Now, the old lead for this purpose was cast, not milled: it was also much narrower than the modern,† but contained, if anything, more metal: the consequences are, that much of it is good up to the present time, while our flat broad-milled window lead, having its grain broken by the milling, and presenting a very thin and very broad surface to the air, becomes rapidly deteriorated. At Beauvais I saw some lead, which was probably put up at the end of the last century quite in a state of oxidation; and at Tournay, where the whole of the immense windows of the choir have been filled with stained glass, a very large expense will have to be undergone, at no very distant period, to fresh lead them, as nothing better than the common cottage window lead has been employed. Theophilus, in his excellent Treatise (book ii. ch. 24, 25, 26) on the Arts of his Time, gives us a rather long description how these glazing leads were cast, two sorts of moulds being employed indifferently, viz. those in wood, or those in iron, of which the latter were, of course, preferred, on account of their superior durability: the lead was cast in pieces about a yard (ulna) long, and when wanted to be soldered together, the two pieces were anointed with wax, lead was rasped over the surface, and the tin applied with the soldering iron.

For the purposes of ventilation in domestic work it was customary to cast perforated leaden quarries. A specimen of these may be seen at the Architectural Museum, and another of a tracery pattern will be found engraved in the current number of the *Archæological Journal*.

FONTS.

Mr. Albert Way, in vol. vi. of the same publication, has enumerated no less than twenty-two leaden fonts as remaining in England: they are almost all referable to the Norman period, and present the same general features in the design, which consists for the most part of figures sealed within circular-headed arcades, with a band of foliage at the top and bottom of the composition: sometimes the figures are all the same, sometimes they alternate with scrolls, and sometimes a totally different arrangement was followed, as at Brookland, Kent, where there are two ranges of arcades, the lower containing the labours of the months, and the upper the signs of the zodiac.* At Llancaut and Tidenham, Derbyshire, are fonts both cast in the same mould. I suspect that in these fonts separate wood moulds of the arcades and figures were impressed on the sand,† and the whole cast flat, and subsequently bent into shape and soldered together. The finest lead font remaining is to be found at the cathedral of Mayence: it is of immense size, suitable for immersion: the date is the fourteenth century, and the ornaments consist of edge tracery and figures in relief.

In the museum at Amiens is a font which deserves particular notice, from the remarkable manner in which it is fabricated. All the ornaments, such as the tracery, the buttresses, the arch mould, label, and the figures can be detached by removing certain rivets: it in fact is treated exactly as if it were made of iron, not of lead.

COFFINS.

As our life begins with the font, so it ends with the coffin; and here we see the artists of the Middle Ages lavishing their pains and labour on an object which certainly stood the smallest possible chance of ever again being beheld. The ornaments on the coffins of the noblemen buried in the Temple Church are quite worthy of the golden period of art in which they were produced: they appear to me to have been executed much in the same manner as the ordinary lead fonts,‡ viz. by impressions of wooden moulds upon the sand, the sides, top, and bottom being cast separately, and then soldered. Some of the ornaments were formed by imprinting ropes in the sand, and the cist found at Lewes, containing the remains of Gundreda, the wife of Earl de Warren, was decorated with a lozenge pattern, cast from impressions of ropes.

Lead was also occasionally employed in filling up the incised lines of monumental slabs: there are several examples of this at Chalon-sur-Marne.§ But I must confess I do not see any advantage it affords over the dark cement generally used for the same object, for it is apt to oxidize, and if not continually swept gets indurated with dust, and ends in becoming almost the same colour as the stone itself.

Lead or pewter is also occasionally used instead of white enamel "argent" in armorial bearings, found on monumental brasses.

The joints of tracery, and other parts of the masonry where it was thought undesirable to wait for the setting of the mortar, are often found run with lead. This system obtains a good deal in France at the present day: for instance, the whole of the restored tracery in the triforium of Troyes Cathedral is set in lead. In some cases it cannot be said to be without its disadvantages, for in the chapter-house at Salisbury a very great many of the neckings of the columns of the arcades were found to be split off at the point where the hole had been drilled for the lead to run into.

Lead is occasionally found doing duty for carving in wood and stone, even during the Middle Ages. The practice is, I think, by no means to be recommended, and the less said about it the better.

LEAD FOR DOMESTIC USES.

There now remain a few words to be said upon lead and its alloys, as employed in the domestic life of the Middle Ages. When Etienne Borleau, in 1260, compiled his book of the trades of Paris, the workers in pewter were found sufficiently numerous to be divided into two companies, one called the "Potiers d'Estain," and the other the "Ouvriers de toutes menues Ouevres:" the former produced the pewter vessels so universally in use in the households of high and low, while the latter fabricated the mirrors, the pilgrims' tokens, the little bells for horse furniture, the charming little boxes* made of wood, and covered with perforated cast lead, the studs and ornaments for girdles, purses, &c.: in short, he was the jeweller of the poor.

In the latter part of the Middle Ages, the *potier d'étain*, or pewterer, became quite an artist, for the works of François Briot are sought after by collectors of the present day, with as much eagerness as those of Luca della Robbia: the latter in order to multiply his works, from a sculptor became a worker in clay; and the former, for similar reasons, quitted the profession of a goldsmith for that of a pewterer.

It is generally supposed that Briot's pewters are but proofs of his works in the precious metals, and that he never abandoned his former profession. In support of this, we are told that it was the custom of the goldsmiths to run proofs of their works in pewter, and that Cellini recommends the practice, and did the same thing. As regards the first argument, it is singular that we should have so many proofs (very often duplicates), of the works of Briot,† and none of his contemporaries; and as to Cellini, a reference to his work, "Trattati sopra l'orificiria," ch. xiii. will show that he only recommended sundry small ornaments (intended to be joined to repoussé work), to be modelled first in wax, then cast in lead, and finally cast in silver, for says he, "You can reduce the lead thinner than you can wax, and it will serve for another occasion." From the context it would appear that the articles cast were very small, and that the last intention of Cellini was to use them as an article of commerce.

We may, therefore, suppose that Briot, who was a contemporary of Cellini, was simply a "*potier d'étain*," but that he took the higher branch of it, viz. the manufacture of those pewter vessels which we find catalogued in the inventories as "*a façon d'argent*."

Few or none of the larger pewter vessels of the thirteenth, fourteenth, and fifteenth centuries have come down to us, beyond the half-decayed chalices and patens occasionally found in the tombs of ecclesiastics. The book of Etienne Boileau is quite sufficient to show that large quantities of them were manufactured: besides, we have the testimony of Theophilus, who gives a description as to how the ampullæ of tin were made (book iii. chaps. 87, 88, 89). No doubt the fusible quality of the material has been the cause of the deficiency; yet we can scarcely regret its being melted into such works as Briot and his contemporaries have left us.

There were two articles manufactured by the

* Specimens of patterns tinned upon lead are deposited at the Architectural Museum, Canon-row, where they can be seen. They are executed by Mr. Potter, of South Molton street.

† Mr. Winston, in his excellent work on Stained Glass, gives sections of ancient and modern window lead, side by side.

* There are casts of these in the Museum of the Archæological Institute.

† It is quite possible that they might have been moulded in wax, and cast like bronzes.

‡ These coffins have been published by Mr. Richardson, the sculptor. The casts from which Mr. Richardson's plates were taken are in the possession of Mr. Sasse, the architect.

§ One also in the church of St. Mary Redcliff, at Bristol, which has worn well.—Ed.

* An exquisite top of one of these little boxes, representing six of the labours of the year, is preserved in the British Museum, with a large collection of pilgrims' tokens, as well as of other little objects in lead, principally from the museum of Mr. Roach Smith.

† If they were only copies of gold and silver work, we should find engraving.

lesser pewterer, which call for some little notice. 1. The counters, or mereaux, which are supposed to have done duty instead of copper coinage. 2. The mirrors. These latter we are assured by Vincent de Beauvais * were made by pouring hot lead over glass, and it is just possible that such a method might succeed if the glass were kept up to a sufficiently high temperature. Whatever might have been the process, it is a certainty that glass mirrors, with lead applied behind them, were well known articles during the Middle Ages.†

From Theophilus (book i. ch. 32), we learn that manuscripts were ornamented by means of tin ground into powder, and applied with gum much in the same manner as we now use gold shell. A varnish composed of saffron completed the imitation of the more valuable metal. Tin was likewise beaten out, and used instead of gold leaf,—varnished, of course; but the most curious application of it was to form the ground of what the good monk calls a translucid picture. A surface covered with burnished tin-foil had a subject painted upon it, with transparent oil colours,—a procedure which I suspect was followed with regard to the blank windows painted in imitation of stained glass in the cathedral at Florence.

Thus we have seen, although in a very imperfect manner, how important a part even the vilest of the metals played during a period when art was universal, and applied to all the purposes of life. The history of a metal becomes, under these circumstances, the history of almost all the arts. At present, unfortunately, we have no distinctive art; and, although much might be written concerning the useful purposes to which lead and tin are applied, I am afraid the art-history would be very small indeed. However, within the last few years we are beginning to amend; and, indeed, it would be folly to despair of an age which can produce such a picture as the Huguenot of Mr. Millais.

W. Burges.

THE LILLE CATHEDRAL COMPETITION.

Notwithstanding the fairness with which this competition was conducted to a certain point, with such honourable results to England, the committee have not proved true to the belief they inspired. On the ground of "the exigencies of public opinion," and the necessity for having the directing mind on the spot, they have placed the selected design in the hands of a local architect, and have made their bow to the authors of it, Messrs. Clutton and Burges, in some letters which are admirable specimens of what one part of the United Kingdom would call "blarney;" first, too, getting from the authors explanations and suggestions as to various proposed modifications.

The objections to the employment of an English architect urged by the committee, must have been evident to them before the programme was issued, and if so, they had no right to challenge the architects of England to compete; knowing as they must do, that it is not for the sake of the premium that an artist enters the list, but for the honour and profit of carrying his design into execution. The defrauded architects will find little consolation in the promise conveyed to them on the part of the committee, that their original idea being carefully preserved in the modified plan, will attach their names "to the edifice about to be erected, and be the means of transmitting them from age to age to posterity, surrounded by a glorious aureole."

Considering it would be undignified to continue longer to urge their claims to carry out their own design, our countrymen have closed the correspondence. It will be a subject of deep regret to all who wish well to art, that this competition which, in the first instance bore promise of being conducted with all the chivalrous spirit of the thirteenth century, will form no brighter spot in the history of art in the nineteenth, than the long list of disappointing, if not disgraceful, competitions which have preceded it. The Lille committee have had more praise than usual for what they did right in the first instance, and should not escape universal castigation for their ultimate breach of faith. We understand that the Lady Chapel has been commenced.

* In the cup attributed to him in the Print-room of the British Museum (why is it kept in the Print-room?), only one piece appears to have been cast, it is that containing the three small kneeling figures: this was wanted to be stronger than the rest, as the screw immediately adjusts it.

† See M. de Laborde, "Emaux du Louvre," vol. ii. article "Vase."

MIDDLESEX INDUSTRIAL SCHOOLS COMPETITION.

Messrs. S. Smirke, P.C. Hardwick, and F. Pownall, who were commissioned by the magistrates to report on the designs sent in competition, pointed out seven, as the best, and showed, as we are told, various objections to each of these. The committee of magistrates put these aside, with one exception, and awarded the premiums as follows:—1st, to a design by Messrs. Aickin and Capes; the 2nd, to a design by Mr. Henderson (understood to be the steward of the Colney-Hatch Asylum); and the 3rd, to Mr. Moffatt, the last being one of the seven selected by the architectural referees. Further inquiry, however, showed the committee, it seems, that neither of these three designs was what they wanted; and they now have before them a design by Mr. C. Barry, which was neither one of the architect's seven, nor of their own three! Nothing, however, is yet settled.

After perusing this statement, readers will not be surprised to hear that we have received some strong remonstrances against the whole affair. It seems so strange a proceeding, indeed, that we shall wait to hear if the architectural referees have anything to say on the subject.

Many of the designs sent in were for prisons, we are told, rather than for schools, and in others ventilation, so important in a building intended to receive hundreds of children, was little thought of.

DEVIZES CORN-EXCHANGE COMPETITION.

Twenty-six sets of designs having been sent in for the proposed Corn-Exchange, two were selected, one by Mr. Phipps, of Bath, the other by Mr. Hill, of Leeds; and of these the former was chosen, and the premium, 20*l.* was voted to Mr. Phipps. No sooner, however, was this done, than some members of the committee entered into communication with the author of the second design, and at an ensuing meeting his plan was reproduced, with modifications; when the committee reversed their former decision, and passed a resolution in favour of Mr. Hill's design, leaving the premium in the hands of Mr. Phipps. The estimated cost of the selected design is 1,500*l.*

How much longer will architects degrade their art by submitting themselves to the caprice and ignorance of such tribunals. It used to be a belief that when things came to the worst, they would begin to mend; but we have been so long at what must surely be the worst as regards competitions, that we have lost faith in the maxim.

BASINGSTOKE CEMETERY COMPETITION.

At a meeting of the town council on Tuesday, the 22nd of July, thirteen designs and estimates for the new cemetery and buildings were considered, and ultimately the designs of Messrs. Poulton and Woodman, of Reading, were chosen. The chapels are in the decorated style of architecture, 30 or 40 feet in length, with steeples 70 feet high. The well-known ruins of the Holy Ghost Chapel will form the foreground of the whole. The second premium was awarded to Mr. W. C. Birch, of London.

NEW WESTMINSTER-BRIDGE.

The committee appointed in consequence of Messrs. Rendel and Simpson's observations on the scheme of the proposed bridge, and the desirability of proceeding with it, have made their report. They have "examined Messrs. Rendel and Simpson, and also Mr. Stephenson, Mr. Hawkshaw, and Mr. Fowler, all civil engineers. The two gentlemen last named were selected by Mr. Page, who was also examined.

A written statement has also been put in by Mr. Page, who also had every opportunity of suggesting such questions as he deemed fit to the witnesses."

The report goes on to say:—

"The evidence has satisfied your committee that the proposed piers are of strength amply sufficient to bear the weight proposed to be placed upon them; that the piers will be secure so long as the iron casting remains sound; that the iron casting can be replaced whenever it may decay or be destroyed; that such a mode of construction is less permanent and secure than granite piers, founded deep on the London clay by means of cofferdams; but it is less expensive, and can be carried out in a shorter period of time, and causes less obstruction to the navigation of the river.

The changes that have taken place in the bed of the river and in the flow and ebbing of the tides of late years ought to have due consideration before determining the mode of construction and the headway under the bridge.

The witnesses examined before your committee differed somewhat in opinion as to the amount of any probable future change in these respects.

The report of the Select Committee on Public Offices, presented to the House during the sitting of this committee, contemplating extensive changes in the immediate neighbourhood and approaches to Westminster-bridge, has been brought to the notice of your committee.

Your committee are of opinion that, subject to the consideration of responsible professional advice to be obtained by the First Commissioner of Works, as to the security of the old bridge, the further progress of the works of the new Westminster-bridge should remain suspended until the Government have had an opportunity of considering and deciding on the advice to be offered to Parliament upon this last subject, when the site of the new bridge might be reconsidered in connection with any general plan of alteration and improvement of the neighbourhood, as well as the all-important subject of the headway under the new bridge.

Your committee, finding that upwards of 50 000*l.* have been already expended, subject to the foregoing remarks, subject also to some of the modifications and alterations suggested by the witnesses, are of opinion that the plan proposed might have been carried out."

NOTES ON THE INTERIOR DECORATION OF ENGLISH HOUSES.*

In our last paper we mentioned that tapestry and other ornamental work had to a great extent disappeared after the reign of George I. and that amongst the masses the unsatisfactory though wholesome practice of whitewashing had supplied the place of more artistic matters. Engravings had fortunately to some extent come into use, and in a degree helped to supply the deficiency. There were also the framed portraits of this period painted in oil,—better by far in style than the common kind to be met with in publicans' parlours, at present.

The casts supplied by the Italians, who then as now wandered with them from place to place, were much admired, and we gave a sketch of a group of them a short time ago;† and it is a curious circumstance that the poll parrots, and painted cats, which thirty or forty years since were considered decent ornaments by people of tolerably good condition, although by them now repudiated, are reproduced and extensively sold amongst those whom art at the former time had not reached.

The effect of works of art placed familiarly in view is undoubtedly good, not only to the rising generation, but to those of mature years, who, though they may know nothing of art, cannot fail to be improved by the works of genius which daily front them in their breakfast and dining rooms. It may, therefore, be hailed as a fortunate era when Woollett, that famous English engraver whom no foreigner has yet equalled—Bartolozzi, and the man who combined with so much skill the functions of the moralist, painter, and engraver—diffused their works from one end of the kingdom to the other. The greater part of the engraved prints of this time were, however, too expensive to be common amongst the lower or middle classes.

No man in his generation did more to promote the distribution of works of art throughout English dwellings than William Hogarth, who was a Londoner, born in a court in the Old Bailey, and who in due time was apprenticed to a sort of general engraver in Doctors'-commons. Like other great men, Hogarth had difficulties to contend with, and liked, when by industry and application he had got into a good position, to speak of the times when, after a course of dinners with Duke Humphrey, he has, on the completion of a plate for the publisher, buckled on his sword, and marched to see the life in town; on such occasions no doubt gathering up part of the valuable knowledge of human nature which he afterwards so ably used.

* See p. 317, *ante*.

† See p. 306. The benefits which have resulted from the labours of the itinerant Italians, in the diffusion of taste in both art and music in this country, has not been sufficiently acknowledged.

With his skill as an artist, Hogarth combined no small amount of shrewd business habits, which caused his ability to be doubly useful to the community. At the sign of the "Golden Head," in Leicester-square, he for many years disposed of his works in a manner which will be understood by the following quotation from one of the prints of the day:—

"Mr. Hogarth is publishing, by subscription, a print representing the March to Finchley in the year 1746, engraved on a copper plate, 22 in. by 17, price 7s. 6d. Subscriptions are taken at the Golden Head, in Leicester Fields, till the 30th of this inst. and not longer, to the end that the engraving may not be retarded.

"Note.—Each print will be half-a-guinea after the subscription is over. In the subscription book are the particulars of a proposal whereby each subscriber of 3s. over and above the said 7s. 6d. for the print will, in consideration thereof, be entitled to a chance of having the original picture, which shall be delivered to the winning subscriber as soon as the engraving is finished."

The subscription-list was closed, 1,843 chances being subscribed for. Mr. Hogarth gave the remaining 167 chances to the Foundling Hospital, and the fortunate chance was 1,941, which belonged to the hospital. Mr. Hogarth the same night delivered the picture to the governors of the institution.

The following list will show more clearly the prices at which Hogarth distributed his works:—

The Distressed Poet, 3s; four etchings of different characters of heads in groups, viz.: Chorus of Singers, a Pleased Audience at a Play, Scholars at a Lecture, and Quacks in Consultation, price 6d. each; Morning, Noon, and Night, and a Company of Strolling Players, for one guinea.*

	£.	s.	d.
Six Harlot's Progress, at 14 guineas each	88	4	0
Eight Rake's Progress, at 22 guineas each	184	16	0
Morning, 20 guineas	21	0	0
Noon, 37 guineas	38	17	0
Night, 26 guineas	27	6	0
Strolling Players, 26 guineas	24	6	0
	£427	7	0

In 1751 Hogarth published two large prints, Beer-street and Gin-lane, at 1s. each; a number printed in better manner, 1s. 6d. each; also four prints on the subject of cruelty, price and size the same. Hogarth said:—"N.B. As the subject of these prints was calculated to reform some reigning vices peculiar to the lower classes of the people, in hopes to render them of more extensive use, the author has published them in the cheapest manner."

In addition to the good done by Hogarth by the production of his prints, both English art and artists were benefited by the exertions which he made to secure an enactment for the protection of the copyright of pictures and engravings.

In 1735, an Act of Parliament was passed, which to a considerable extent protected the engraved works of artists from piracy. In acknowledgment of this, Hogarth engraved a small emblematical device.

The passing of this Act caused the artist to proceed with renewed vigour with his works. This enactment did not, however, effectually protect Hogarth's works from piracy, and he allowed authentic copies of some of his prints to be made on a small scale, which were sold by the booksellers at 2s. 6d. the set.

Amongst the engravers of the last generation, whose works were much appreciated, was John Scott, who did also good service by the productions of some fine prints, large and small, of sporting subjects, which are still highly prized. The way in which this artist learned his art, is encouraging to young men who may have an instinctive feeling for art. Mr. Scott, when a lad, was apprenticed to a tallow-chandler at Newcastle-on-Tyne. By some chance he had seen an engraver at work, and was anxious to make an attempt to follow his example. He procured a graver, but could get no polished copper to work upon. This obstacle he overcame by beating out pennypieces, which he carefully prepared, and in course of time by practice acquired considerable skill, and eventually found his way to London, where for many years he was extensively employed.* Since the time of Bartolozzi, Hogarth, and Woollett, English engravers have, by the multiplication of good pictures, added much to the adornment of English houses.

Before the days of Thomas Bewick and his brother Robert, illustrated literature was by its high price confined almost entirely to the affluent. Most families had a folio Bible, in which were descriptive prints: these, however, were purchased by careful saving, at a great price. The course of these talented men was soon followed by several worthy examples, and wonderful indeed has been the increase in both knowledge and taste which has been caused by the plentiful and still increasing supply of cuts and engravings. Every lover of elegance and refinement, and all who have at heart the success of this nation, both in art and manufactures, must consider this result with satisfaction. The general advancement of taste must improve the designs of goods required for domestic and other purposes. In many instances manufacturers of good taste themselves are obliged, contrary to their will, to send into the market abominable things, because more likely to find purchasers than better works.

The introduction of stencilling, or *stabdashing*, as it used to be called, effected a lively change in a multitude of English dwellings; and many of the patterns worked on the prepared wall, although simple and unpretending, produced what was needed, namely, a broad and harmonious effect, which affords relief without intruding in patches upon the eye,—a fault of many of the papers used on walls at present. We will give an instance which first comes to our recollection. A small room, about 15 feet square—a size very common in London—is covered with a large florid and distinct pattern of Louis Quatorze style: four and a half of these ornaments reach to the ceiling, and six and a half from side to side; the flowing lines are of a very pale, sickly grey, with white catching lights, thrown out by a dark background of indigo. This destroys the beauty of the best prints, drawings, or pictures. The room, small as it is, is made to look much smaller; and the eye wanders without repose painfully from place to place.

We could give scores of instances of the bad taste shown in the choice of patterns on our walls. The difficulty would be to find many in which it is not.

In the choice of paper for the walls of rooms, it ought to be borne in mind that in most instances the covering of walls is only a background for prints, water-colour drawings, or paintings: rooms may be seen hung with valuable drawings, papered with the gayest coloured flowers. The force and beauty of works of art are completely destroyed by such a mounting. In addition to the bad choice of the paper, much damage is often done to prints and pictures, which now supply the place of the ancient tapestry, by the style of the frames.

Although the graceful care of women has a greater influence on the homes of England now than in the days of our Saxon ancestors, and during the Middle Ages, still the actual amount of female handiwork is comparatively small; the production of tapestry may be said to have died out with Miss Linwood, that persevering artistic needle woman. These works differed from the old wall coverings, and were endeavours to imitate paintings in oil, rather than to produce an effect suitable to the particular material.

Mr. Timbs tells us that Miss Linwood worked her first picture when 13 years old, and the last piece when she was 78. The designs were executed with fine crewels, dyed expressly for her, and were entirely drawn and embroidered by herself. In 1785 the pictures were exhibited to the royal family at Windsor; next in the Pantheon, Oxford-street; removed in 1798 to the Hanover Square-rooms, and then to Leicester-square. The collection consisted of sixty-four pictures, including a portrait of Miss Linwood, at 19, from a crayon painting by Russell; "Head of St. Peter" (Guido); "Woodman in a Storm" (Gainsborough), &c. The pictures were sold by auction by Christie and Manson, at Saville-house, April 23, 1846, when the "Judgment upon Cain," which occupied ten years working, sold for 64*l.* 1s.; the price of neither of the other pictures exceeding 40*l.*; the original, "Hubert and Arthur," by Northcote, sold for 38*l.* 17s. The entire sale did not realize 1,000*l.*

* The original picture of the Strolling Players was sold to Francis Beckford, Esq. for 27*l.* 6s. and by him returned in consequence of its high price; it was afterwards sold for the same sum to Mr. Ward, of Littleton.

* About this time it was fashionable, especially amongst sporting gentlemen, to wear buttons of large size, which were often beautifully engraved with original designs. Scott, Bewick, Hogarth, and other eminent engravers, engraved on this description of work, for which large prices were paid.

METROPOLITAN BOARD OF WORKS.

At a meeting held on the 29th of July, Mr. Thwaites in the chair, the motion proposed by Mr. Doulton, and seconded by Mr. Hows, as mentioned in our last,—

"That the engineer be directed to prepare a plan, section, and estimate, for extending the main outfall sewer on the southern side, to a point in Long Reach, below Erith, and so as to be discharged at and after high water only,"

was carried; the amendment thereon, proposed by Mr. Wright, and seconded by Mr. Wilkinson,

"That the engineer be instructed to report on the desirability of carrying the entire sewage of the metropolis by means of one large tunnel to Sea Reach,"

being lost.

An amendment proposed by Mr. Carpmael,

"That the plan recommended by the engineer in his report of the 7th of July, be now adopted, with the proviso that the sewage shall be discharged into the river within one hour after high water, so as to preclude the return of any part of it within the limits of the metropolis, as defined in the Metropolis Local Management Act,"

was withdrawn *pro tempore*, to be brought forward as a substantive motion hereafter.

Mr. Wright's motion,—

"That the low-level sewer, as delineated on the northern side of the metropolis, be adopted, subject to a variation from Hungerford to Loudon-bridge, in case the Thames embankment be carried out within such period as will enable this Board to comply with the requirements of the Metropolis Local Management Act,"

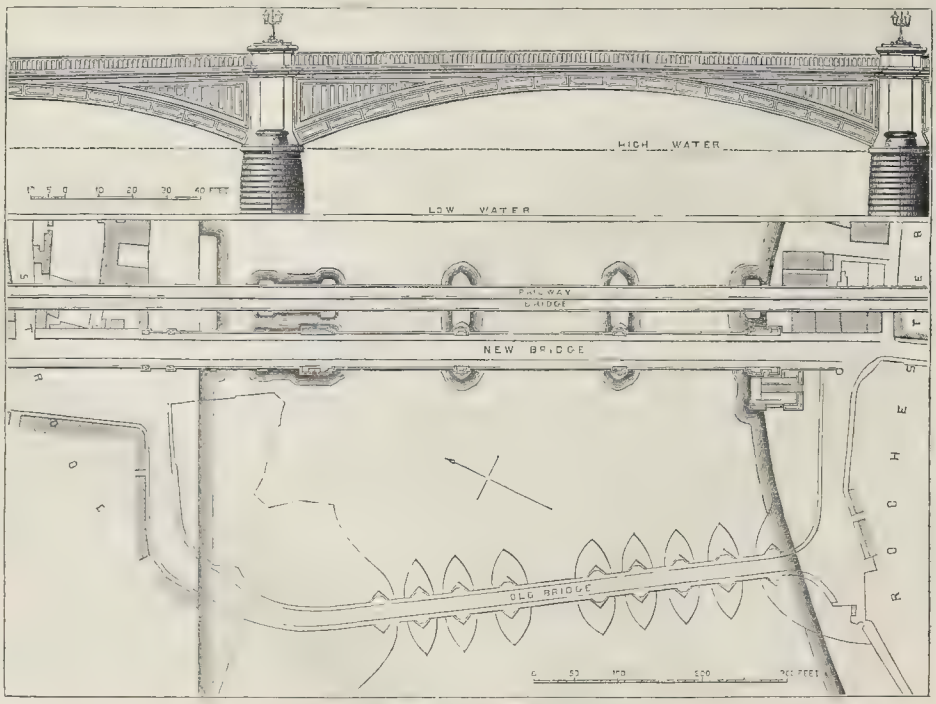
was carried by 21 for, to 7 against.

We confess ourselves quite unable to divine what the real views and intentions of the Board on the subject are, and we are forced to come to the inference that, feeling themselves incompetent to the task of draining and improving London,—no one could have expected they of themselves would be,—and having lost confidence in their engineer, if they ever had any, they are seeking a chance of escape in delay. The clear-headed portion of the Board cannot seriously believe that their present plan for the drainage of the northern side of the metropolis, with its erroneously-stated details, proposed outfall, and monster cesspool of thirty acres, will be carried into execution; and doubtless grieve in their hearts when they review the proceedings of the Board during the seven months it has been in existence. They must feel that up to this moment, however good its intentions may have been, the Board has simply proved an obstruction to improvements of all kinds: there has been no end of talk and no beginning of work. With the kindest possible feeling we would urge upon them the immediate and pressing necessity for an opposite course; at the same time, nevertheless, reminding them that in their case it would be better, so far as the public are concerned, even to continue doing nothing than to do wrong. We will venture upon this one prognostication, that if they persevere in their present plan of drainage, and go with it to the Chief Commissioner, the existence of the Board will be terminated on the re-assembling of Parliament. They must rescind what they have already done, and begin *de novo*.

The Cardiff Masons' Strike.—We have received a communication, signed "Mark Williams, Strike Secretary," to the effect, that the Cardiff strike is *not* virtually at an end. All we can say is, we are very sorry if it be not.

THE OLD BRIDGE AT ROCHESTER.

ROCHESTER NEW BRIDGE: ELEVATION OF PART.



Part showing position of the Old and the New Bridge.

ROCHESTER NEW BRIDGE.—Sir William Cubitt, Engineer.

[See p. 417, *ante*.

THE ANTIQUITIES OF THE CRIMEA, FROM THE LATEST OFFICIAL RUSSIAN SOURCES.*

It is now upwards of thirty years since private individuals, as well as the Russian Government, made excavations on both sides of the Kimmerian gulf and the interior of the shores of the Mœotis, amid the ruins of the old Hellenic and Miletus colonies. Among them, Pantikapœum (Kertch) occupied the first place. It was there where the deputies of all the surrounding nations assembled for the deliberation of public affairs, and it was thence that Grecian merchants extended their immense commerce beyond even the Cobi desert. It was at Pantikapœum that Herodotus collected his information relating to the uttermost countries north and east, whose caravans stopped at this first outpost of European civilization. Under such circumstances, it may be considered fortunate that many of the art-treasures successively found at Kertch were transferred to the Imperial collections of St. Petersburg. Still many specimens, too unwieldy for such a lengthy transport, were destroyed during the events of the last war. The chief objects of this kind, however, had been deposited in the new museum, which the late emperor was building for ten years, under the direction of M. Von Klenze, and there was an especial department devoted to this purpose by the architect.†

This work, published with the greatest typographic care, far excels every other description or delineation of Crimean antiquities; and it is to M. Piccard, the French artist, that the credit is due of so ably depicting these fine ornaments of Grecian art. Besides him, a Russian artist, M. Solatzeff, has figured the vases and other objects of clay, glass, wood, &c. The text is compiled by several members of the Imperial Russian Academy. The explanations of the Greek inscriptions are by M. Stephani, one of the conservators of the Museum of St. Petersburg.

It was about the year 1802, that some coins of Olgia, Theodosia, Pantikapœum, &c. were found in the Crimea; and in the year 1805, M. Koöhler described the mausoleum of Queen Camosarya. This monument, of the highest interest, has been destroyed, and it is also obvious that all similar buildings subsequently discovered were left to their fate, after the officers in charge of these excavations had removed every object of value. The drawings preserved of them in the work before us, show that these edifices were mostly built within the folds of those hills and mountains which cover the Crimea, and then became, as it were, hidden between them in the lapse of time. They consist mostly of vaults, built either in a circular or square shape, similar to buildings of this character found in Greece; the so-called *Thesaurus* of Agamemnon, at Mycene, having been entirely preserved. The square blocks of stone, very regularly cut, lap one above the other, and form an oval vault, the upper opening of which is closed by a stone, especially shaped for that purpose. Pausanias says, that by it *harmony* and completion were brought into the building.

Successively excavations increased from year to year; especially important were those of M. Dupru in 1816, M. Stempgrowski in 1831, and finally, M. Blaramberg, who was particularly successful in finding gold ornaments. Finally, these endeavours were crowned by the discovery of the great and splendid mausoleum of *Raoul-Oba* (mountain of cinders), which fully confirmed the belief that the highest specimens of Hellenic art existed on these shores, inhabited by Scythian barbarians. The Raoul-Oba monument was erected in the square form, and it would have been easy to preserve it by means of beams, &c. One glance convinced the searcher, that they had penetrated into the grave of one of the kings of Pantikapœum, as the skeletons of the king and queen lay there in all the array of ornaments which followed them to their last resting-place; diadems, neck-chains—all of the finest gold and workmanship—together with arms, vases, utensils and figures of amber, forming a mass sufficient to fill up a whole museum. But as no sentries had been placed around after its being opened, much of its contents was carried away and purloined. One of the hillocks now open, called *Aldem-Oba*, the Gold Mountain, shows by its name the fabulous amount of treasure found in these oldest lands of the Golden Fleece. The illustration of these ancient art-relics will occupy eighty-six large folio plates, and they follow according to the material of which they are made—gold, amber, ivory, silver, bronze, glass, burnt clay, vases and other figures, wood, besides inscriptions and coins. Of iron, there is a helmet of the most curious composition, unique in its way. Most interesting are the specimens of gold: diadems, crowns made of leaves, of which there are enumerated twenty-one; carvings of endless variety of human and animal form; neck-chains, agraffes, arm-chairs: most of these are ornamented with cut stones. Among them even shines forth the breast-covering of the queen, which consisted of several rows of ornaments: on its upper part appears a great medallion, representing Pallas Athene, which, as is duly observed, corresponds with the description given by Pausanias of the head of Pallas by Phidias in the Parthenon of Athens. It corresponds also with the *entaglio* of Aspasius, represented by Stosch in his famous work. If we take into account the high and pure style of these costly ornaments, we cannot doubt that they appertain to the best period of Greek art, and had been brought from Athens for the Royal house of Pantikapœum. The period alluded to is that of the end of the Peloponessan war and of Phidias, whose colossal toretic Palladion at the Athens Acropolis might have been the pattern of this imitation in a precious metal. We may observe that at that very time King Leukon, of Pantikapœum, was an ally of the Athenians, and had been honoured by the citizenship of Athens.

* "Antiquités du Bosphore Cimmérien." Antiquities of the Cimmerian Bosphorus, preserved in the Museum of the Hermitage. Published by order of His Majesty the Emperor. St Petersburg: Printed at the Printing-office of the Imperial Academy of Sciences. 1854. 3 vols. fol. Plates.

† *Vide* an anterior vol. of *Builder*.

PROVINCIAL NEWS.

Saltash.—An accident, says the *Devonport Independent*, occurred, on Monday before last, to the cylinder in which the centre pier of the Saltash bridge is being built. For the convenience of the workmen, some of the stays had been removed from the internal part of the cylinder, and the upper part collapsed under the immense pressure from the force and weight of the tide. Fortunately no one was injured. A telegraphic message was sent off immediately to Mr. Brunel, the engineer. It also fortunately happens that the pier is 2 feet above low water-mark.

Tavistock.—The opening the new British Schools here took place on Saturday before last, in presence of the Duke and Duchess of Bedford, Lord John Russell, and others. The building is in the Old English style of architecture, and consists of three school-rooms, one appropriated to boys, a second to girls, and a third to infants of both sexes. The boys' room is 65 feet by 31 feet, the girls' 58 feet by 25 feet, and the infants' 50 feet by 25 feet, in addition to which large class-rooms and lavatories are attached to each school. Large playgrounds are also provided for recreation. Accommodation is thus afforded for about 650 children. The space of ground occupied by the building is 164 feet by 170 feet. The cost of the erection, defrayed by the Duke of Bedford, amounts to 3,000*l.* The schools were built by Mr. Goslin, of Torquay, on the design of Mr. Rundle, of Tavistock, architect; the plans had been previously approved of by Mr. Bowstead, one of her Majesty's inspectors of schools.

Worcester.—Mr. Hawksley's specifications for the water-supply and drainage works of this city were left at the town-clerk's office last week, for the inspection of persons wishing to tender, and applications from London, Glasgow, Staffordshire, Chester, Derbyshire, Worcester, and other places, have been made for particulars. Those connected with the water-supply are divided into three separate portions, one for the engines and works connected therewith, another for the iron pipes, and a third for laying down the pipes. They are voluminous, and being printed, form three books. The specifications for the drainage works and proposed forms of tender make two books of about thirty pages each. Altogether, there will be 15½ miles of drains and sewers to be laid down. Tenders are to be sent in by the 9th of August.

Baltsall Heath.—The foundation-stone of new schools for this district was laid on 17th ult. by Mr. W. F. Taylor, of Moseley-hall, on a site of land purchased for the building in Vincent-street. The schools are to be named St. Paul's, and will be erected by Mr. W. Smith, from designs by Mr. F. Empson. They will include boys' and girls' schools, each about 80 feet by 18 feet; an infants' school, 50 feet by 24 feet; three class-rooms, and a master's house. The main features of the design are Tudor, but the infant school gable will be pierced with a triple lancet. This gable will be surmounted by a bell turret. Each of the school-rooms will be open timber roofed. The material throughout will be brick, with stone dressings. The estimated cost is about 1,700*l.*

Saltley.—The building intended to be used as a public library and museum approaches completion. It is Venetian in character, and was designed by Mr. Street, of Oxford. A bazaar is intended to be held in August, in the Town-hall, to provide funds for the endowment and furnishing of the museum.

Birmingham.—The new museums at Queen's College are now nearly completed. On the site of the former edifice a suite of museums have been built, consisting of three rooms, each about 40 feet square. The first or lower room, which is 20 feet high, is entered from the quadrangle of the college: it is intended for anatomical preparations, and will have galleries on three sides, and be lighted by large mullioned windows, looking into the quadrangle. The second (or ground floor on the Paradise-street level) is similar to the lower museum, but of less height. It is intended for mechanical models and other objects connected with the engineering department, the professors in which will also use it as a lecture-room. The third, or upper museum, is the principal apartment, being 40 feet square, and about 40 feet high. It is surrounded by two tiers of galleries, and is lighted from the roof. This museum, which will be open to the public, is destined to receive the general collection of the college. The ceiling is divided by intersecting ribs into sixteen panels, with open tracery in each. The walls have piers projecting about 18 inches, and about 6 feet apart, running the whole height of the room. Between these piers are to be placed the glass cases for specimens, an arrangement which extends to all the museums. In front of each of the wall piers in the different museums pedestals will be placed to receive busts of eminent scientific men. The warming and ventilating are proposed to be carried out on the most complete system that can be adopted. The designs for the building were furnished by Mr. J. J. Bateman, the architect of the college. Further alterations and improvements to a considerable extent are contemplated. The cost of the new museums will be upwards of 2,000*l.* for which donations are still being solicited.

Lichfield.—The new schools erected in the village of Shenstone, were formally opened on 23rd inst. The schools are three in number, and are calculated to hold 130 children daily, and, together with a master's residence, are erected upon ground presented by Mr. T. Bagnall. The architect was Mr. W. Baker, of Birmingham; and the builder was Mr. T. Hassall, of Shenstone.

Lincoln.—Notwithstanding the great demand for houses in Lincoln, and the rapidity with which the same are being run up, building land, says the local *Chronicle*, is being brought into the market in such large quantities, that prices have receded to a point which enables all to purchase. Within the last few weeks, numerous lots, within a short distance of the centre of the city, have been sold at auction by Mr. R. Hall, at an average price of 5*s.* per square yard; and lots on the Conservative Land Society's estates were taken at 18*d.* a yard, and many lots in St. Botolph's have been sold at 2*s.* Building land in Newport can be had at 3*s.* per yard; and Above-hill, in the Bail, several houses are to be let. Building land, therefore, in Lincoln, can now be purchased at a reasonable rate, and it is

anticipated that an amount of building will shortly take place.

Shields.—It is said to have been determined by the Piers and Public Works Committee of the Commissioners of the river Tyne to submit to that board a project for going to Parliament next session to procure powers to make another new public dock on the river for shipment of coal. The site projected is the Coble Dene in Shields harbour; and, if made, it will be principally used in shipping steam coal from the Hartley coalfield. The Northumberland Dock, which is being made by the Commissioners for the same purpose, is making progress, and it is anticipated will be opened in the spring of 1857. When the works of the Jarrow Docks, which the North-Eastern Railway Company is making upon the Durham side of the Tyne, are finished, it is anticipated that facilities will be afforded for the shipment of above 3,000,000 tons of coal in the year. Those extensive marine works, the north and south piers at the mouth of the Tyne, which have been undertaken by the River Tyne Improvement Commissioners, are being proceeded with this summer. The public works now in hand upon the Tyne, and projected, are estimated at above 3,000,000*l.* sterling.

Kirkaldy.—The harbour repairs are proceeding, though slowly—men being rather scarce. Good masons are getting 5s. a day at the erection of Lochgelly Free Church. Mr. Russell, manufacturer, is rearing a mansion on his property adjoining Oswald's Wynd. Mr. Nairn, manufacturer, has also broken ground for a dwelling-house on the green flat of ground adjoining the harbour branch of the Edinburgh, Perth, and Dundee Railway Company.

Derry.—The construction of a new line of quays at Derry has been commenced by the contractor, Mr. William M'Cormick.

County Down.—A new Crown Court-house for Down is to be constructed in that portion of the Court-house at present occupied by the offices of the treasurer, clerk of the crown, and secretary, to be of the same size as the present Record Court; and new offices built in the rear. The present hall is to be increased in size, and to have a public staircase leading to the grand jury-room, secretary and county surveyor's offices, and the galleries of the Crown and Record Courts. The grand jury-room will occupy the same position as in the present building, but be increased in size, and have staircases leading to the Crown and Record Courts. A portion of these alterations will be proceeded with as soon as possible, in order that the courts, grand jury-room, and judges' rooms should be ready for occupation at the next assizes. The total cost of the alterations is estimated at about 4,000*l.*, 3,000*l.* of which are at present in the hands of the treasurer, and available for the purpose of the alterations.

MR. PENNETHORNE, ARCHITECT AND SURVEYOR OF H.M.'s PARKS, PALACES, AND PUBLIC BUILDINGS.

The following gratifying memorial has been addressed to Mr. Pennethorne by a large number of his professional brethren. We give publicity to it with great pleasure:—

London, 1st July, 1856.

Dear Sir,—Your professional brethren are anxious to congratulate you on the successful completion of your design for the western wing of Somerset-house, in which, at the same time that you have adhered to the taste and style of the original edifice, and have done full justice to the genius of Chambers, you have adapted these additions to a difficult site with great propriety, and thereby produced a striking architectural feature in the entrance to London by Waterloo-bridge.

We avail ourselves of this opportunity to express our sense of the ability with which you have treated various other public buildings, which you have been called upon to erect as an officer of the Crown, and carried out the metropolitan improvements confided to your management.

During a long professional career, many of us have had occasion to transact public business with you in your official capacity. On every occasion we have experienced from you the readiest access, as also the greatest courtesy and frankness. While every application has been met with all the facility that your office could afford, we have had to recognise the skill and intelligence which you have habitually brought to bear upon complicated and difficult questions of a technical nature, and the most anxious attention to protect the public interests in the very extensive purchases of property entrusted to your care.

Impressed with these feelings, we desire to offer you a mark of our cordial respect for your character as an architect and surveyor, and for your bearing as a gentleman; and understanding that the "Art-Union of London" have in preparation a medal of Sir William Chambers, with a representation of the Strand front of Somerset-house on the reverse, we have applied to the council of that body, and have received their consent to have an impression *struck in gold*, which, as soon as executed, we shall request you to accept, as a mark of the kindly feeling of regard borne to you personally by your professional brethren.

Signed by—

Samuel Angell
Thomas Bellamy
William Tite
Arthur Ashpitel
John J. Cole
Philip Hardwick, R.A.
C. R. Cockerell, R.A.
Sydney Smirke, A.R.A.
Charles Barry, R.A.
Thomas Henry Wyatt
George Pownall
Edward I'Anson
Charles Mayhew
H. Mawley
George Mair
Edward C. Hakewill
Charles Barry, jun.
Charles Charnock Nelson
William Snooke
John Hammack
Henry Clutton
Frederick Marrable
W. J. Gardiner
Ambrose Poynter
J. H. Good, jun.
James Howell
George Smith
Samuel Beechcroft
Harry Oliver
George B. Williams
Sancton Wood
Henry Clutton, Whitehall-place
James Bell
J. H. Lewis
J. J. Scoles
Talbot Bury
W. J. Booth
Martin Joseph Stately
J. H. Good, church commissioner
Charles Parker
A. Salvin
John Shaw
John Henry Hakewill
George Godwin
Owen Jones
Henry Baker
M. Digby Wyatt
Andrew Moseley
John Gibson
John Davies
Decs. Burton
H. E. Kendall
Henry Harrison
P. C. Hardwick
Benjamin Ferrey
William Railton
Henry Garling
Robert Hesketh
Edward M. Foxhall
George Gutch
Charles Beachcroft
Thomas L. Donaldson
James Thomas Knowles
Charles Fowler
William Hosking
William Mosely
William G. Habershon
Edward Habershon
Francis Edwards
David Mocatta
Ewan Christian

CHURCH-BUILDING NEWS.

Dorchester.—St. Peter's Church, which has been undergoing a process of restoration for the last eight or ten months, has been reopened. The subscriptions to begin with amounted to about 800*l.* The preparation of the necessary designs was entrusted to Mr. John Hicks, of Dorchester, under whose superintendence as architect the restoration has been carried out by Mr. John Wellspring, builder. The restoration includes the taking down the old east end, and the building of the new one, by which an addition is gained in length to the chancel of some few feet, and forming the eastern elevation, in the centre of which has been placed a traceried window, in common with the other characteristics of the edifice. This window is a gift of one or two private individuals. Carved heads of her Majesty and the Bishop finish the hood-moulding round the east window. The marble monument to Lord Holles, which once stood at the eastern extremity of the south chapel, thus blocking up the window therein, has been removed to the western extremity of the north aisle. The whole of the arches and piers have been made good with Caen stone, and the inside jambs, mullions, and tracery heads of the windows have been replaced by new ones in Bath stone, except where, in the chapels, they were of Hamhill stone, and have been replaced by similar material. The whole of the plastering has been removed and renewed, the ceilings whitened, the two semicircular and unecclesiastical dormer windows on the north and south of the nave, giving light to the old gallery (which is now removed), have been done away with, and the roofing continued. The chancel is raised one step above the church floor. The flooring is laid with Minton's encaustic tiles. The monuments throughout have been cleaned, and arranged uniformly between the windows, which have likewise been reglazed with new lead diamond lights, which portion of the work has been executed by Mr. W. Durden. The west or tower window is filled with stained glass, from Messrs. Bowden and Co.'s establishment, at Bristol, being the gift of Mr. Herbert Williams. The east window has been filled with stained glass, representing "The Ascension of our Lord," with emblematical figures in the tracery, by Mr. Hardman, of London. A new roof has been placed on the chancel, of a semicircular form, plastered between the ribs, which are stained in oak. The church has been refloored, and repewed with deal open benches, capable of accommodating upwards of 460 adults, about 200 being free. The old ringing floor has been taken down, and a new one placed over the crown of the tower arch, the underside forming a ceiling, which is stained and varnished. The organ is now placed in the north chapel, raised on a platform, and was removed, repaired, and refixed by Mr. H. Jones, organ builder, Brompton. The apparatus for warming the edifice consists of a Dorset stove, burning charcoal—the architect's invention—which has been placed in a reservoir under the pavement in the middle aisle, covered by an ornamental open ironwork plate, the draught of air being brought in by means of pipes under the floor, so that no room is lost in the church. Some other necessary works have been omitted for want of funds, and at least 500*l.* will be yet required to complete the restoration.

Warwick.—A new church has been opened in the parish of St. Nicholas, Warwick. The church, dedicated to All Saints, stands on a site presented by the Earl of Warwick. It is built in the Decorated style of architecture, and consists of nave, south aisle, chancel, south chancel aisle, and north and south transepts. A vestry is on the external north side of the chancel. On the western side of the south transept is the tower, the principal entrance to the interior, and intended to be hereafter surmounted by a spire. The interior, calculated to afford accommodation for 580 persons, is fitted with open benches, and the chancel with stalls. Two-thirds of the sittings are free. The walls are constructed of brick, with blue lias stone facing and moulded work. The tracery and other dressings, internal and external, are of Bath stone. The roofs are constructed of open framing of Memel timber, stained and varnished, and are covered externally with tiles. The architect was Mr. James Murray, of Coventry. The contract for the whole was 3,100*l.*

Hatfield Chase.—We are asked to state that Mr. Archer Houblon was a liberal donor in respect to the new churches to be erected at Hatfield Chase, and not the "builder" of them.

Eridge-green. — The chapel at Eridge-green, some time since built at the sole expense of the Earl of Abergavenny, was consecrated on Wednesday before last, by the Bishop of Chichester. A district of some extent, taken partly from the parish of Frant, and partly from the parish of Rotherfield, has been annexed to it by an order of council, and by the act of consecration it has become a district church by the name of the Holy Trinity. A burial ground for the use exclusively of the inhabitants of the district has been also given.

Birmingham.—A memorial window, designed by M. Alfred Gerente, of Paris, was some time since inserted in the eastern end of Holy Trinity Chapel, to the north of the altar. The corresponding window, south of the altar, has recently been filled with stained glass by the same artist, in memory of the late Mr. Isaac Marshall. The design consists of scenes from the life of the Saviour, enclosed within quatrefoil-shaped medallions, placed on a decorated floral ground. Amongst the scenes chosen are the Baptism, the Transfiguration, the Agony in the Garden, the Ascension, and the raising of Lazarus. In the head of the window is placed the Agnus Dei, and at the foot is an inscription setting forth the object of the memorial.

Magherafelt. — On St. Swithin's-day, the foundation stone of a new church, was laid in Magherafelt, according to the *Coleraine Chronicle*. The site was granted by the Salters' Company, together with the sum of 4,000*l.* to assist in the building. The work is progress-

ing under the superintendence of the contractors, Messrs. Henry and Sons. The edifice is to be named St. Swithin's Church.

Berwick-upon-Tweed.—The new burial-ground here has been consecrated by the Bishop of Manchester. The consecrated chapel is lighted by a five-lighted traceried window at the east end, three two-light windows on the south side, and one on the north. The unconsecrated chapel is lighted by seven traceried windows of varied design. Each chapel will accommodate about fifty persons. The buildings are all constructed of the local building stone, except the window tracery and finer portions of the work, which are from Swinton. The buildings and the laying out of the ground are from a plan furnished by Mr. Robert J. Johnson, of Newcastle, and selected from twenty-five plans submitted to the Burial Board.

LONDON AND MIDDLESEX ARCHÆOLOGICAL SOCIETY.

This society held its first annual general meeting on Thursday, 24th July, at the Architectural Museum, Canon-row. Lord Robert Grosvenor, M.P. occupied the chair in the morning, when it appeared from the balance-sheet that the total receipts, including a donation from Lord Londesborough of 20*l.* amounted to 202*l.* 3s. 6d.; the total expenditure was 108*l.* 12s. 3d. leaving a balance in hand of 93*l.* 11s. 3d. The members and visitors then adjourned in a body for the purpose of visiting Westminster Abbey, under the guidance of Mr. Scott and the Rev. Charles Boutell, M.A.

At eight o'clock the members and their friends again assembled in the Architectural Museum, where a *conversazione* was held; the Rev. Thomas Hugo in the chair.

The first paper read was by Dr. Bell, upon the royal badges which appear upon the royal monuments of the abbey. The second was by the Rev. Thomas Hugo, on the structures which preceded the present Abbey Church. A letter was then read from Mr. W. H. Cowper, upon some Roman remains which were discovered during the early portion of the spring in making some excavations at Mr. Hemming's Iron Works, at Bow (close to the line of the old Roman road).

THE METALS.

The iron trade as yet shows no tendency to an increased state of activity. "Considerable interest," says the *Wolverhampton Chronicle*, "is felt as to the propable course of the trade. Orders have not come in so freely as was expected, and stocks of pig-iron are increasing. Since the introduction of hot-blast the powers of production have vastly increased, when compared with former years. In 1750 the entire annual production was 75,000 tons; in 1800, 180,000 tons; in 1825, 600,000 tons; and in 1851, 2,500,000 tons: the production of the United Kingdom last year was 3,000,000 tons. The cessation of hostilities has at present left this enormous make without an adequate market. The consequence is that pig-iron has receded in price, and good mining pigs may now be quoted at 4*l.* 10s. per ton. The anticipations of the trade have not been realised as regards foreign orders, from America in particular. There have been none of any account for a considerable period. American dealers, no doubt, are holding off as long as they can, expecting a reduction in price."

Messrs. Fox and Henderson have undertaken the execution of public works in Sweden, which will require a considerable time for their completion.

The copper and brass manufactures continue in some degree disturbed by the recent reduction and present unsettled state of the price of copper. This suspense, according to the *Times*, is felt, however, more by the makers of the smaller descriptions of articles than by the large founders. The copper tubing and wire businesses are said to be brisk, and to be less influenced than could have been expected from so sudden a fall. The order for the brass boiler tubes for the monster steamship now building at Millwall has been given to Messrs. Everitt and Sons, of the Kingston works. The quantity required is from 30 to 40 tons.

Aris's Birmingham Gazette has published some forcible articles on the copper monopoly. The smelters' combination have, it appears, done just as they liked with the prices of copper. They have increased their share—the lion's share—for charges and profits from 9*l.* odds in 1843 to actually no less than 43*l.* in 1856 under the very same pretences! Well may they be able to come down 18*l.* 10s. per ton at a single stroke, as they lately did. Miners and manufacturers have hitherto been equally at their mercy, and the paper alluded to proposes to break up this unconscionable monopoly by means of a new company of smelters, under the Limited Liability Act. Have not the old smelters already had the fear of some such rivalry under the new Act in their eye, when they so unexpectedly and unaccountably reduced the price of copper recently from 126*l.* per ton down to 107*l.* 10s.? The gross amount of the fortunes realized of late years by the smelters, may be roughly guessed from the following statistics given in *Aris's Gazette*:—The total quantity of copper ore raised in Cornwall during the year from June 30, 1855, to June 30, 1856, was 209,305 tons, producing 13,274 tons 15 cwt. of fine copper. The amount of money produced by this quantity of ore was 1,283,639*l.* 8s. 6d.; the average price per ton was 6*l.* 2s. 6d.; the average produce 6⅜; the average standard 140*l.* The result of the Welsh copper produce differs considerably from that of Cornwall. The total quantity of ore raised was 46,481 tons; the quantity of fine copper produced 6,470 tons 11 cwt. the amount of money 698,418*l.* 6s.; the average produce per ton 13⅜, the average price paid to the miners, 15*l.* 0s. 6d.; and the average standard 124*l.* 2s. 6d. The total quantity of copper ore raised in both Wales and Cornwall was 255,785 tons, producing 19,745 tons of fine copper, costing 1,982,057*l.* 14s. 6d." It may be desirable, adds the same authority, to inform persons not conversant with trade terms, that the meaning of the word "standard," so constantly used in connection with copper, is this:—It denotes the estimated value of the fine copper per ton, considered, from the various assays, to be in the ores sold; less a fixed sum per ton, namely 2*l.* 15s. which is deducted for the cost of smelting. [The actual outlay of the smelters, we presume, on which they base their superstructure of "charges."] Since the improvements in obtaining the pure metal from the ores on the large scale are greater than the assays would show, copper is now usually sold under the standard, which fluctuates considerably, and is really, for general purposes, a very fallacious guide to the value of the metal.

PREVENTIVE SYSTEM AGAINST INUNDATIONS IN FRANCE.

In an able and business-like letter to M. Rouher, the French Minister of Public Works, the Emperor treats of the late inundations, and suggests preventive measures to render their future recurrence less likely. No claim to originality is made; the principal sources of the suggestions, on the contrary, being clearly indicated; only the Emperor, in elucidating these principles, with the aid of common sense, shows his determination that what had heretofore only been talked of, and in a fragmentary way, shall now be done, and on a great and effective scale.

The letter thus broaches the subject:—

"Monsieur le Ministre,—After having examined with you the ravages caused by the inundations, my first object of consideration has been to find the means for preventing similar disasters. According to what I saw, there are in the greatest number of the localities secondary works, indicated by the nature of the ground, and which skilful engineers might readily execute. * * * * But as to a general system to be adopted in order to protect for the future, from such terrible scourges, our rich valleys traversed by large rivers, that is still wanting, and must be absolutely and immediately found.

"At the present time every one calls for a dyke, being satisfied with diverting the water from himself and throwing it on his neighbour. The system of dykes is only a palliative, ruinous for the state, and imperfect for the interests to be protected; for, in general, the sand which is brought down constantly elevating the bed of the rivers, and the dykes tending to narrow them, it is necessary to be constantly adding to the height of those dykes, to be prolonging them along both banks, and to subject them to a constant superintendence."

The Emperor then proceeds to point out the cause of such inundations to be chiefly mountain rains.

"Everything, therefore," he continues, "consists in retarding the running off of the water. The means of effecting this is to erect on all the tributary streams of rivers, at the mouths of the valleys, weirs, leaving in the centre only a narrow passage for the waters, and thus keeping them back when their volume increases, and forming reservoirs which could only empty themselves slowly. It is necessary to do on a small scale what nature has done on a large one. If the lake of Constance and the lake of Geneva did not exist, the valley of the Rhine and that of the Rhone would only form two vast sheets of water."

After entering more minutely into the details of the system suggested, the emperor gives orders that it shall be forthwith examined on the spot, with a view to its being carried into effect without loss of time, attention being also drawn to special works requisite at various points along the route of the late inundation, as at Lyons, &c., and a wish expressed that in the promotion of engineers regard shall be had to their previous local experience, so that the state may not lose the advantage of such special knowledge by promotion to or employment in other services in which it would be of little or no avail.

What about the bridges?

RIPLEY'S HOSPITAL, LANCASTER.

The first stone of this new hospital was laid by the Bishop of Manchester, assisted by the Bishop of Chester and a numerous body of clergy.

The late Mr. Thomas Ripley, of Liverpool, had often expressed his desire to bestow some lasting memorial of his regard for Lancaster, and after his decease, his widow, Mrs. Ripley, resolved to devote a considerable share of her means in carrying out the expressed wish of her husband, who appears to have had in view the endowment of an hospital; and it is in pursuance of this resolution that the foundation has now been laid of a new hospital at Lancaster.

The site is about a quarter of a mile from the town. The building is to be in the Early Pointed style.

The plan is somewhat in the form of the Roman capital letter E, *i.e.* with a side and two wings. It fronts the north-west, the centre line of the building being through the centre of John o'Gaunt's Tower in the castle. The side between the wings is 195 feet in length, and is divided into three equal spaces by a bold projection in the centre, which rises to the height of four stories (68 feet). The two side spaces rise to the height of three stories (60 feet). In the centre division of the side is the principal entrance and staircase leading to the committee-room, upper hall, matron's room, and waiting-room; and in the top story is the infirmary, nurse's room, &c. At the back are the kitchen offices, three stories high (45 feet). Over the infirmary, in the middle of the front projection, rises a clock-tower, 18 feet square, and 98 feet high, pierced with three tall lancet lights on each side. At the north-west angle of the tower is an octagonal turret, with spiral stair. The two side spaces and adjoining wings are respectively appropriated—the one to boys and the other to girls—having each their separated play-rooms and grounds. From the centre projection on each side to the wings extend arched or cloistered corridors, communicating with the wings and side divisions by broad stone stairs. The wings on each side are 130 feet long, each four stories high (68 feet), and are terminated at the north-west extremities by houses, one for the schoolmaster on the boys' side, and the other for the schoolmistress on the girls' side. The two wings are each calculated to contain fifty children, making thereby for each division of the building accommodation for 150 boys and 150 girls, or 300 altogether. The material chosen for the exterior of the building is white sandstone from adjacent quarries. The spaces between the hewn parts are to be filled in with inserted rubble. The architect is Mr. J. Cunningham, of Liverpool, and the contractor is Mr. Charles Blades, of Lancaster. The estimated cost is nearly 25,000*l.*

THE VENTILATION OF ALL BUILDINGS.

It is a disgrace to the boasted civilization of our age, that ventilation has not been made imperative on landlords in all rooms, whether inhabited or not. How many human beings have wasted their lives in sickness, to a great extent from inhaling foul and unwholesome air (aided, it is true, by the shopkeeping poisoners and adulterators), we may not be able to learn; but if it could be got at, I believe the numbers would be found to be enormous. Thousands of men, women, and children are compelled by stern necessity to live, eat, and sleep in one apartment—the only means by which they can get fresh air being by the doors or windows: these are both liable to objections, especially in winter time, as too large a volume of cold air is admitted by these means; and in summer it is nearly as bad, especially if the weather be wet or windy. Ventilators made of *iron*, and on the same principle as those used by publicans to carry off the smoke of tobacco, are simple, and would be found, it is believed, efficacious; such as the perforated discs or plates, one sliding over the other, to cover the apertures when deemed necessary. No apartment in any house should be without them. Cellars, also, would be free from mephitic vapours and noisome smells, which often enter the dwellings to which they are attached.

Pure air (or as pure as we can get it in large towns like London, &c.), is as necessary as the light. The sluggishness with which many of us arise from our beds to perform the avocations of life, tell plainly enough the ill effects, in most instances. He among our representatives who shall introduce a Bill into Parliament to make their introduction impera-

tive, and liable to fine if omitted, would deserve and receive the grateful thanks of many a poor artisan who may, with his wife and several children, be the occupants of *one* apartment. I humbly suggest that it would be preferable that they should open into the open air direct, and *not* through the chimney, for obvious reasons, one of which is, that should the smoke be driven down by high winds, the apartment would be filled with smoke if they communicated with the chimney; and if they opened direct into the atmosphere, one perforated plate would probably be sufficient. Two ventilators, one placed above the other, would be better still, the upper one for the egress of the rarefied air, and the lower for the entrance of fresh air. YOUNG ENGINEER.

CONSOLIDATION OF THE PUBLIC OFFICES.

THE following is a summary of the proposals contained in Sir C. E. Trevelyan's evidence relative to the consolidation of the public offices:—

"That a building be erected between the Banqueting-house and the river for the War Department (including the head-quarter offices at the Horse Guards), according to Inigo Jones's designs for Whitehall Palace, or an adaptation of them, having one face towards the Houses of Parliament, another towards Charing-cross, and a third towards the river.

That the Horse Guards and Lady Dover's house be then removed, in order that Whitehall Palace may be opened to St. James's-park, and that St. James's-park may be extended, on either side of Whitehall-Palace, to the Thames.

That the Somerset-house and Whitehall branches of the Admiralty be brought together in a block of buildings to be constructed between the site of the Horse Guards and Charing-cross, in extension of the existing Admiralty, having one face towards the street and another towards the park; and that the houses in Spring-gardens be removed, and an opening made between St. James's-park and Charing-cross.

That the existing line of the public offices be extended from the corner of Downing-street to the corner of Great George-street, forming one side of a spacious square, the other sides of which would be towards the Abbey, the park, and the Admiralty.

That the civil departments of the Government be accommodated in this square, with their dependent offices grouped around them. Thus, the General Pay Office and the superintending establishments of the different branches of the public revenue would be brought into immediate connection with the Treasury; the Chief Secretary for Ireland, the Lord Advocate of Scotland, the Board of Health, the Convict Department, and the Inspectors of Prisons, Mines, and Factories, with the Secretary of State for the Home Department, and so forth.

That the space between the line of civil offices and the river, and between her Majesty's ancient palace of Westminster and Whitehall-palace, be then cleared of buildings.

That Somerset-house, which would be left tenantless by these arrangements, be re-appropriated as may be most for the public advantage. If it should be determined to make provision for the courts of law (including the Court of Chancery, and the Ecclesiastical, Testamentary, and Admiralty jurisdictions), at Somerset-house, it might be done out of the surplus unsued legal deposit funds, and the existing buildings at Somerset-house, would furnish accommodation for the various legal offices, including the registries of wills, judgments, &c.

That, in order to bring the Houses of Parliament and the public offices into immediate connection with the courts and inns of law, and with the City, and to relieve the existing overcrowded thoroughfares, a railway be constructed, according to the most approved arrangements, along the river-bank from Westminster to the City, in connection with the works for purifying and embanking the Thames; and that the most ready means of communication by electric telegraph be established between the courts of law and the inns of law and Houses of Parliament.

That a committee be appointed, consisting of persons carefully selected as best qualified on account of their experience and ability, to advise the First Commissioner of Works and the Government in respect to—

1. The relative situation of the different offices.
2. The order of time in which they should be built, the precedence being given to the War Department and the Foreign Office; and
3. The most convenient interior arrangements for the several offices, and

That the following steps be taken in reference to all the new buildings:—

First. That general specifications of the several buildings be published, and the architects of every country be invited to send in plans and elevations.

Secondly. That when received, these designs be exposed for a sufficient time to public view, and that the selection be made after full discussion and mature deliberation.

Thirdly. That when the plans and elevations have been resolved upon, detailed specifications and working drawings be prepared, in order that the construction of the buildings may be put up to competition in suitable portions; and

Lastly. That everything connected with this undertaking be done upon the sole personal responsibility of the First Commissioner of Works acting under the Executive Government; early and full information relating to every important step being submitted to Parliament."

Notices of Books.

Practical Astronomy, Navigation, Nautical Astronomy, and Meteorology. By various Authors. Houlston and Stoneman, Paternoster-row; and Orr and Co. Amen-corner. 1856.

THIS really extraordinary five-and-sixpence worth of useful knowledge consists of the several treatises named, which originally appeared in a serial form as part of "Orr's Circle of the Sciences." The authors are Mr. J. R. Young, late professor of mathematics in Belfast College; Mr. Hugh Breen, of the Royal Observatory, Greenwich; Mr. J. Scoffern, M.B.; and Mr. E. J. Lowe, F.R.A.S. of the Highfield House and Beeston Observatories,—all competent men.

The volume is plentifully illustrated, and each treatise is actually worth the price of the whole, were it not that the paper is, perhaps, rather thin; but how can it be otherwise at such a price?

In dipping into the several treatises here and there, the graphic and familiar illustrations of the expansion of iron by heat happen to suggest an idea which it may be worth while to note here, though with no critical view as regards the book itself. Various attempts are being made to "supersede steam" by means of still rarer or more expansive vapours, such as ether, chloroform, &c. as well as by other forces, such as the hydraulic. Did it ever occur to any one to try the other end of the scale of physical substance, and in place of vapours, gases, or fluids, to consider what might be done with solids as a source of power, at least applicable to some purpose or other? Iron, when heated, expands both in length and thickness, and in cooling again, contracts and shortens with a force of immense and irresistible intensity. Could not this force be put into the harness of machinery, and by the aid of levers, great wheels and small ones, cranks and spindles, be compelled to work for humanity? It is easy to see that there are some difficulties in the way of making such a force available, but cannot these difficulties be overcome by some ingenious device or other? This is to be noted, that the *modus operandi* of such a force is, more than any other, analagous to the operation of that animal power—that muscular force of contraction—with which the great Author of all endows the living machinery or mechanism of his own wondrous works. It is even now believed by physiologists that the exercise of the muscular force consists simply in the cutting off from the muscle of that nervous stimulus (or rather we should say of that nervous expansive force, analogous to heat itself) which keeps the muscle relaxed, leaving a mere physical contractile force to operate in its absence, through an internal organism beautifully adapted for facility of action, and hence to contract the muscle, and move the levers of the limbs to practical purposes. The restoration of great walls to the perpendicular is not the only *purpose* to which the contractile force of cooling iron might be put.

VARIORUM.

A SHILLING PAMPHLET "On the Introduction and Progress of the Screw Propeller, with Statistics of the Comparative Economy of Screw Ships and Paddle Vessels for Her Majesty's Service," &c. has been published by Messrs. Longman and Co. It consists mainly of a reprint of various forcible articles on the title of Mr. Smith to be regarded as the introducer of the screw,—a title which, as we have before said, cannot well be disputed. The question of its invention is one which cannot be so easily settled. We have shown that even Watt, though he suggested its adoption in ships, was not the originator of such an adaptation, the Chinese having from time immemorial applied the screw to the propulsion of vessels. Of course, facts such as these do not in the least diminish the merit of the Middlesex farmer as the introducer of the screw into the navigation of European and American nations. It was only by the utmost pertinacity and exertion that Mr. Smith succeeded, and no man we know of can lay claim to a prior and successful exercise of such endeavours. The Government have recognised Mr. Smith's claim in rather a shabby way by according him a pension of 200*l.* a year; but it is to be hoped this is not all he will eventually gain by the sacrifices and the exertions he has made for the service of his fellow-men. ——Wilson, of the Royal Exchange, London, has issued a sort of blue book, titled the "Principles of Railway Construction analyzed in reference to their Financial Effects on Shareholders, and on British and Indian Interests." It is, in fact, a report by Lieutenant-Colonel J. P. Kennedy, as engineer in chief and managing director of the Bombay, Baroda, and Central India Railway Company, to his constituents, on the principles and procedure which ought to be adopted (as well as on those which have been adopted), in reference to the introduction of railways into India; and it contains a great deal of valuable and useful matter. "The object, from first to last, of this paper," says the author, "is not to impugn rights, or criticise measures, but to investigate principles at the outset of a most extensive expenditure, with a view to avoid in India those grievous failures that have so generally characterized a like expenditure in England." One chief modification of ordinary principles in the introduction of railways into India, he urges, should be that the remuneration of directors and professional advisers or executive officers ought in part to be dependent on the success of their operations. The absence of this principle in England goes far, he thinks, to account for the numerous failures that have occurred. The reporter, we may add, contemplates an extensive use of iron instead of wood, as for sleepers, viaducts, &c. and he estimates the probable cost of the new lines at 4,369*l.* to 6,000*l.* only a mile.——A small volume on "The Language of Specifications of Letters Patent for Inventions," with authorities and decisions in recent cases of importance, by Mr. John Macgregor, of the Inner Temple, barrister-at-law, has been published by Benning and Co. of 43, Fleet-street, law booksellers. No inventor or intending patentee should be without such a work as this while considering how he ought to describe his invention, so as safely to steer through all the subtleties and quibbles of the law in preparing his specifications of patent. No patent agent can be a sufficient substitute for such a work to an inventor, for it is impossible that any patent agent can have the substance of what is here presented, condensed and pithy though it be, at his tongue tip or fingers' end, so as to guard his client against every flaw in those descriptions, qualifications, claims, and disclaimers which the inventor must first of all provide his agent with: a conscientious agent, indeed, would rather, we should think, advise his client to study well just such a work as that under notice before he submitted his invention to him either verbally or in writing.

Miscellanea.

ST. LEONARD'S, SHOREDITCH.—The interior of St. Leonard's Church, Shoreditch, has been restored, under the superintendence of Mr. Kneightly: the painting and decorative works were executed by Mr. Kuckuch, and are just completed. The church was re-opened for divine service on the 20th ult.

OUR GRAVEYARDS.—In the *Builder* of July 26, you have an engraving of the stowing away of gravestones at Golden-lane Burying-ground. You might have had a sketch some days ago of a similar stowage away at Tottenham-court-road Burying-ground, but now it is too late, for a few nights since, after dark, the stowage was cleared out, and the stones carried off, to where?—and echo asks where? Such shameful deeds ought to receive a world-wide exposure.

AN INHABITANT OF MARYLEBONE.

Australian Workmen.—The workmen employed on the Sydney Railway have just presented the contractor, Mr. W. Randle, with a vase of pure Australian gold (20 carats), weighing 80 ounces, as a testimonial of their esteem for him as an employer. This magnificent present cost the workmen 700 guineas. It is 17½ inches high.

The Warm-water Apparatus by which England is warmed.—A review compares the way in which the north-western parts of Europe are warmed by the Gulf stream to the method of warming buildings by hot-water, and calls the Torrid Zone the furnace, the Caribbean Sea and the Gulf of Mexico the boilers, the Gulf stream the conducting pipe, the great hot-air chamber being from the banks of Newfoundland to the shores of Europe, whence the heat is taken up by the prevailing west winds. Owing to the influence of the Gulf stream, Ireland is clothed in robes of evergreen grass; while, on the American shore, in the same latitude, is the frost-bound coast of Labrador. The port of Liverpool has never been closed with ice in the severest winter. The Laplander cultivates barley in a latitude which, in every other part of the world, is doomed to sterility. Were the Isthmus of Panama broken through by some convulsion of nature, and the Gulf of Mexico no longer a gulf, the equatorial current of the Atlantic passing through into the Pacific instead of being reflected back to England, Britain, as the writer remarks, might then become a Labrador, and would cease to be the seat of a numerous and powerful people.

Manchester Exhibition of Art Treasures.—In a circular recently issued by the Executive Committee, they say,—"Our design is to exhibit in one building not only examples of the chief works of all the great masters of painting and sculpture, both of the ancient and modern schools, but specimens of artistic excellence or of antiquarian interest, illustrative of the past and present state of art in every quarter of the world; and we contemplate the compilation of a catalogue which will leave a permanent record, useful alike to the artist and to the patron of art, and interesting to every observer of the intellectual progress and refinement of nations." And they make a strong appeal to all who can assist them in their object. The committee would find an advantage in connecting with their undertaking the names of some few men known to have a knowledge of art.

Metropolis Act Amendment Bill.—This Bill, as sent down from the House of Lords to the Commons, provides, by clause 1, That in parishes where church rates were made in any open vestry, or in any meeting in the nature of an open vestry, such power shall be exercised in the same manner as before the passing of the Act of 1855. Clause 2 provides that nothing in this Act, or in the Act of 1855, shall affect vestries created for ecclesiastical purposes only. Clause 3. Other duties performed by vestries shall be performed by the new vestries, created under the Act of last session. The election of such vestries remains untouched, and remains the same as provided by Hobhouse's Act, and the Act of 1855. Clauses 4, 5, and 6, provide that compound householders may vote. Clause 7. The payment of parochial rates as a qualification for voting, shall not be taken to include church rates. Clause 8 provides that the qualification of vestryman shall be determined by "the rateable value" of his premises, and not by "the gross estimated rental." Clause 9 regulates the calling of meetings of vestries, and simplifies the mode of so doing. Clause 10 enables the Metropolitan Board of Works to make application to parliament for the purpose of providing places of recreation for the public, and removes doubts as to the power of purchasing such places as Hampstead Heath, &c. Clause 11 enables district boards and vestries to take land by gift or agreement. Clause 12. The Act of last session and the Act of this session shall be construed as one Act.

Edinburgh.—Extensive alterations in connection with the Advocates' Library at the Parliament-house, Edinburgh, have been for some time in contemplation, and have just been approved by the faculty of advocates or barristers. The plans were originally prepared by Mr. Playfair, and have been adapted to existing circumstances by Mr. Matheson, of Her Majesty's Works: operations for carrying them out are to be immediately commenced. These alterations and additions consist mainly in extending the corridor library by the removal of the wooden enclosures at its eastern end, and in the removal and reconstruction of the law library adjoining. The corridor will thus be lengthened to about one hundred and twenty feet, and extend to the great hall of the Parliament-house, from which it will have a direct and suitable entrance. The law library will be entirely reconstructed, partly on its present site, and partly on that of the lock-up house, which is about to be removed. The library will be about fifty feet long and forty in breadth, and will be lighted by large oriel windows, and from the roof.

Society of Arts.—Election of Assistant Secretary.—There were 100 candidates for the office of assistant secretary. To reduce this number the council appointed a committee (on which no examiner was placed) to investigate the antecedents and claims of the various candidates. This committee reported the names of 16 gentlemen as fitting candidates for the office. The candidates were examined by a committee of examiners, chiefly professors from King's College, who returned the names of the five following gentlemen as having acquitted themselves the best in the trial—Edward Holmes, Charles Critchett, equal; M. H. Wilkin, Dr. Henry, J. P. Bidlake. The council have elected Mr. Critchett to the office.

North Oxfordshire Archæological Society.—A meeting of this Society was held at the Mechanics' Institute on Tuesday in last week. Although during the last twelve months the Society has been in abeyance, and consequently inoperative, excepting getting out the volume of Transactions, which has just been issued, it was resolved, that the excursion should take place in the week beginning on the 20th of August, if the secretaries find that arrangements to that effect can be made.

Exeter Diocesan Architectural Society.—A meeting of the Plymouth Committee of this Society was held last week, the Rev. W. J. Coppard in the chair. A paper, by Mr. Charles Spence, on the ancient chapel of St. Nicholas, on Rame Head, was read. The next excursion meeting of the society was fixed for Tuesday, 29th July, when many members of the society from Exeter were expected to join the local committee in visiting the new churches at Devonport, the Keyham Docks, Buckland Monachorum church and abbey.

The Salford Baths and Washhouses.—The baths and laundries at Salford are far advanced towards completion. They are situated in Collier-street, Greengate, Salford, and are erected by the "Manchester and Salford Baths and Laundries Company," incorporated in 1855. The building is of brick and stone. The architect is Mr. Thomas Worthington, of Manchester; and the contractor, Councillor Neill, of Strangeways. The façade of the building, which is in Collier-street, presents a length of frontage of about 140 feet, and is two stories high, the centre rising an additional story. The style is Italian. The building was commenced in November, and is expected to be publicly opened in August.

The Russian Carpenters.—Baron Von Haxthausen, in his "Russian Empire," thus speaks of the rude skill of the Russian carpenters:—"The correctness of eye, the ease, dexterity, and rapidity with which they detect and turn to account every advantage, is wonderful with these people, or rather with the whole Russian nation. The genuine Russian plotuik properly carries no other implement than an axe and a chisel. With the axe in his belt, he traverses the empire from one end to the other, and seeks and finds employment. It is incredible what he can do with his axe: all the manifold instruments of our accomplished artisans are quite unknown to him; and still his work is not inferior, nay, is often better adapted to the purpose, than that of our more highly-educated workmen. It is often difficult to believe that such charming decorations and carvings as are found on Russian ships and houses can have been produced with a clumsy axe and mere common chisel. The genuine plotuik in the interior despises even the use of the saw, which, however, the workman in Moscow knows well how to use. In the north, where wood is still in superfluity, he hews down a whole tree when he wants a plank, and cuts away at both sides of it, until only the part which he wants remains."

Drainage of Sunderland.—An extensive system of sewerage is about to be carried out in this town according to the plans, and under the direction of Mr. William Crozier, C.E. the borough engineer. It comprises eight miles of brick sewers, with stoneware invert blocks, and forty-six miles of pipes, exclusive of all house drains. The contracts were considered a fortnight ago, and the tender of Messrs. H. Doulton and Co. of London, for their glazed stoneware-pipes, was accepted. This, we believe, is the largest contract for pipe-drainage which has yet been let, and the tenders were from all parts of the country, the samples amounting to about 300 pipes: these were submitted to various tests to show their absorption when whole, and when broken, and also the internal pressure they would bear. The maximum pressure sustained by the pipes selected, Mr. Crozier found to be 160 lbs. to the square inch; and the absorption of these pipes, when broken, was not quite 1 per cent.; while some of the samples submitted absorbed 10 per cent. and the broken pipes in some instances double the quantity they did when whole. The trials were made by Mr. Crozier, at the Sunderland Water Works, where there is a fine machine for testing.

The Chester Surveyorship.—Mr. G. A. Bell, the Chester City Surveyor, has tendered his resignation, it appears, on account of certain meddling and vexatious practices adopted by individual members of the Improvement Committee of the City Council.

Jerusalem and Egypt.—It is to be hoped that some enterprising publisher may lead Mr. Seddon to continue his Illustrations of the Holy Land with a view to publication. The drawings he has already made, and which have been exhibited to many persons in London, convey a more correct idea of the country than anything that has yet been done, and show the admirable spirit that animates the artist. His principal view of the country round Jerusalem is a monument of patient perseverance tributary to skill.

Shakspeare's House, at Stratford-on-Avon.—A gift of 500*l.* by Mr. John Shakspeare, of Langley Priory, near Ashby-de-la-Zouch, has now been made over to trustees, for the purchase of certain property on each side of Shakspeare's house, and the restoration of the Swan and Maidenhead to its original state. It is intended to remove whatever does not form an integral part of "the house" property on the White Lion side, and also Mr. Gill's house in the opposite direction. Mr. Shakspeare also, it is said, contemplates some farther donation in aid of the proposed improvements and restorations.

TENDERS

For building three houses in the Denbigh-road, Kensington, for Mr. W. Ford; Mr. W. Pocock, architect. Quantities supplied:—

Hunt and Gill	£3,298	0	0
E. O Symons	3,045	0	0
Higgs	2,828	0	0
J. and C. W. Todd	2,749	0	0
George Todd, jun.	2,587	0	0
Smith	2,496	0	0
Adamson and Sons	2,460	0	0
Copeland	2,415	0	0
S. S. Wilson	2,294	0	0

For the erection of six houses, Anderson's-buildings, City-road; Messrs. Wehnert and Ashdown, architects. Quantities furnished by Messrs. Balam and Lee:—

T. D. Carter	£4,554	0	0
W. Pritchard and Co.	4,200	0	0
Stevenson	3,999	0	0
J. Harmer	3,894	0	0
John Jay	3,880	0	0
Pollock and McLennan	3,857	0	0
Wm. Higgs	3,838	0	0
Day and Co.	3,800	0	0
Wm. Smith	3,643	0	0
G. L. S. Williams	3,512	0	0
G. Nagle	3,500	0	0
Humphreys	3,464	0	0
Keast and Moon	3,363	0	0
Purkiss	3,295	0	0
G. F. Smith	3,131	0	0
Hocken	2,900	0	0
Fraser and Kelly	2,869	0	0
Hall and Son	2,760	0	0
T. B. Cooper	2,534	0	0
J. Ashton (Holloway)	2,396	0	0

For New Prison for Females for the county of Kent; Messrs. Whichcord and Son, architects:—

Bricklayer and Mason's work—			
W. Cobb	£4,698	0	0
G. Chambers	4,662	0	0
J. Goodwin	4,560	0	0
Thos. Thompson	4,489	0	0
Sutton and Walter (accepted)	4,104	0	0
Smith and Founder—			
Handyside	866	0	0
Drury and Biggleston	710	0	0
Weeks and Petman (accepted)	695	0	0
Plumber, Glazier, and Painter—			
Sutton and Walter	436	0	0
Chambers	423	0	0
Court	417	0	0
Ashdown	399	0	0
Hyles	388	0	0
Foord (accepted)	375	0	0

For building new schools and dormitories, new hospital, &c. at the Guildford Union Workhouse; Mr. C. H. Howell, architect. Quantities supplied by Mr. Poland:—

Daly	£8,844	0	0
Carlisle	7,468	11	9
Mills and Son	7,290	15	2
Jas. Ive and Son	7,200	0	0
Moon and Son (Guildford)	6,890	0	0
W. and T. Smith	6,876	17	0
Hopkins and Roberts	6,800	0	0
Moon and Son (Godalming)	6,640	0	0
Pollard	6,550	0	0
Nye	6,497	0	0
Woodruff	6,460	0	0
Henry John Ive	6,450	10	0
James Smith	6,302	0	0
O. S. Ellis (accepted)	5,947	0	0

TO CORRESPONDENTS.

"*Gilding on Glass*"—A constant reader says: "Having a number of letters to be gilded on glass, what process is required for preparing the glass to receive the gold, so as to prevent its coming off in course of time?"

"L. J."—"H. C."—"S. B. H."—"A Young Observer" (the locality is excellent, the position a bad one)—"S. H."—"Young Engineer."—"W. T."—"G. G. S."—"C. McK."—"J. M." (we cannot refer)—"H. O. M." (we are not disposed to return to the subject)—"C. K."—"J. M. T."—"J. McC."—"J. C."—"Tallesin."—"W. E."—"Mr. H."—"Mr. W."—"C." (all right)—"S. S."—"J. W."—"L."—"J. B."—"W. J. C."—"M. W."—"P. G."—"J. A."—"S. B. H."—"Goth"—"A Working Man."

ADVERTISEMENTS.

THE ARCHITECTS', BUILDERS', ENGINEERS', and SURVEYORS' REGISTRY OPEN to EMPLOYERS (free), from TEN to FOUR o'clock. Several thoroughly efficient Surveyors, Levellers, Clerks of Works, and Draughtsmen now on the Register. Efficiency ascertained before recommended. — Apply to Mr. RICHARDS, Engineer and Surveyor, 4, Trafalgar-square.

A CIVIL ENGINEER has a VACANCY in his Office for an OUT DOOR PUPIL. For further particulars apply, by letter only, to A. B. MILLER, Newsman, No 1, Little College-street, Westminster

A GOOD DRAUGHTSMAN is WANTED in an Architect's Office for a few months. Address, stating qualifications and terms, to Mr. CHARLES E. DAVIS, Bath.

CLERK of the WORKS WANTED, immediately, to superintend masons' and paviours' works, &c. Salary, two guineas per week. He must be practically acquainted with all descriptions of such works, the setting out and the performance thereof, a good judge of materials, active and industrious, and his character must be of the strictest investigation.—Apply, by letter only, to C. D. care of Mr. Clements, Stationer, Woodstreet, City

GREAT GRIMSBY. — To SURVEYORS. The Grimsby Local Board of Health require a SURVEYOR, competent to undertake the management of the Highways of the district, and to execute the other duties imposed on Surveyors of Local Boards of Health by the Public Health Act, as specified in the minutes of instruction of the General Board of Health, for the use of Local Boards of Health, with reference to the powers and duties of such Boards and their officers. The person appointed will also be required to act as Surveyor to the Corporation, under the Great Grimsby Improvement Act, and will be allowed, with the permission of the Local Board, to undertake any other professional work in the town and neighbourhood, that does not interfere with the efficient discharge of the duties of his office. The salary will be 100*l.* per annum.—All applications for the above appointment are to be made in writing, and sent (if by post, prepaid), together with the testimonials of the parties applying, to the Town Clerk of the Borough of Grimsby, on or before SATURDAY the 9th day of AUGUST next.—By order, GEO. BABB, Town Clerk,
and Clerk to the Grimsby Local Board of Health.
Town Clerk's office, Great Grimsby, July 25, 1856.

OFFICE BOY WANTED, by an Architect. He must be able to trace, and write a good hand, and should not be less than fifteen years of age.—Apply, in own handwriting, stating qualifications, terms, and references, to E. B. 1, Old Palace-yard, Westminster.

WHITECHAPEL UNION.—To CARPENTERS and OTHERS.—WANTED, by the Guardians of the Whitechapel Union, a CARPENTER, or handy man, for their Industrial School, Forest-lane, West Ham, Essex. The Guardians of the Whitechapel Union will meet in the Boardroom at the Whitechapel Workhouse, on TUESDAY, the 5th day of AUGUST next, at TWO o'clock in the afternoon precisely, to receive applications from persons desirous of filling the situation of Carpenter or handy man at their school as above, and at the same meeting, if considered desirable, to appoint a person to that situation. The person to be appointed must be competent to, and will be required to instruct the boys in the business of a carpenter, and execute general repairs, &c. and make himself generally useful, and a preference will be given to one capable of imparting a knowledge of the greater number of trades, if qualified in other respects. The salary price — a thirty-five shillings per week, without residence, rations or other emolument. Applications should be in the handwriting of the parties, and state in what trades the applicants are competent to instruct the boys, and with testimonials of character, are to be delivered at the Workhouse at the time of meeting when candidates will be expected to attend.—By order of the Board,
G. ADAMS FARR, Clerk.
2, Mount-place, Whitechapel, 25th July, 1856.

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WANTED, immediately, a competent CLERK of WORKS, to superintend the ERECTION of FARM BUILDINGS. He must have previously filled a similar situation.—Apply, by letter only, stating age, salary, and particulars, to H. J. Y 19, St. Johns-rect, Oxford. No foremen need apply.

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WANTED, by an experienced Man, a SITUATION, who has filled the situation as Carpenter, Plumber, Painter, Glazier, Paperhanger, and Colourer, in the repairs of houses. He has had good experience in shop fronts, sashes, shutters, sashes and frames &c. Can make out working drawings, and measure up work. Salary moderate. Address, DERWICK, 33, John-street, Waterloo-road.

WANTED, a SITUATION as ENGINE-DRIVER, by a Young Man, or the care of Boilers for Cooking, Washing, &c. &c. Can work at vice or lathe. Good reference. Address, M. E. 2, King-street, Long acre, London.

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TO BUILDERS, RAILWAY CONTRACTORS, AND ESTATE AGENTS.

AS WORKING FOREMAN of BRICKLAYERS, an active Man, aged 36, or as GENERAL FOREMAN. Can estimate and measure up work; was engaged on public works on the Continent nine years. The lowest wages taken if for a permanency. Brickwork done satisfactorily at 32s. per rod. The highest references given.—Address, C. M. 22, Russell-place New North-road Islington.

TO BUILDERS.

A YOUNG MAN, a thorough Joiner, and one who has been in the habit of taking piece work for the last eight years, would be willing to CONTRACT for any quantity of JOINERS' WORK, in or out only, either first class or common house-work or to superintend the same.—Good references. Address, A B 5, Mile-end place, Mile end-road.

A CLERK of WORKS, who has just completed extensive works, with first-rate testimonials, is open to a RE ENGAGEMENT.—Address, X. L. Mr. Low's, Stationer, Aldchurch. lane, City

TO WATERWORKS AND SEWERAGE ENGINEERS.

AN ASSISTANT, aged 31, WANTS a RE-ENGAGEMENT Well qualified to get out plans, &c or to superintend the construction of works in every detail Testimonials of character unexceptionable —Address, A. M Z. Davies's Newspaper office, Edgware road.

A FIRM doing a Wholesale Business with House and Ship Builders, Engineers, &c &c having an office in the City, is desirous to obtain an AGENCY from a Manufacturer of standing whose business lies amongst the same class of consumers.—Address, A. B. at Messrs. Reece, Wilkins, and Blyth's, Solicitors, 10, St. Swithin's-lane, London.

LLOYD'S MARBLE WHARF, Thames-bank, Pimlico, adjoining Vauxhall-bridge. Italian Statuary, Veined, Sicilian, Dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

BUILDERS! ARCHITECTS! AND MASONS!

MARBLE.—The Italian Marble Company call the particular attention of Builders, Architects, Sculptors, and Masons to their PRESENT low prices, viz :—
Veins, in blocks of ordinary dimensions, 8s. 6d per foot cube.
Sicilian " 8s 6d "
An inspection of their well-assorted stock is solicited, at "The Depôt," Bridge wharf, Millbank, adjoining Vauxhall-bridge.—Apply only to Mr. BAXTER, Wharf Foreman.
WILLIAM W. BONNIN, Secretary.

MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY-PIECES lately imported from the Continent They comprise Statuary, Gallo di Sienna, Vert Rouge, Dove, Black, and Gold, Rouge de Belmont, Bardiglio, and other choice foreign marbles; and are designed with great taste, and executed by first class artists. On sale, in the show rooms of Messrs EVANS, SON, and CO King William-street, London-bridge.

TO BUILDERS, MASONS, AND OTHERS.

THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Bardilla, dove, black, black and gold, Sienna, St. Ann's, statuary, serpentine, verd antique, &c. Friland, Harefell, Park-spring, and other stone, in blocks, slabs, landings, and headstones. Yorkshire paving, granite curb, &c. All goods carefully packed and forwarded to any part of England. THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace —Supplied by the Haytor Company under Royal Charter—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—TREGELLES and TAYLOR, 54, Old Broad-street. Manager—JAS. J TRATHAN, Liskeard
This Granite is selected for the New Westminster-bridge.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôt—Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Townhall

GATES and GEORGE, CAEN, AUBIGNY and GENERAL STONE MERCHANTS, CAEN WHARF, ROTHERHITHE, LONDON.

RAWDON-HILL STONE.—Messrs. TRICKETT and PERKIN are prepared to execute orders to any extent for their much-admired Building Stone. Depôts, where large stocks are kept, No. 3, Stone wharf, Great-Northern Railway Station, King's-cross; Victoria Stone-wharf, Millwall, Poplar Blocks quarried to suit customers for columns, cornice, landings, steps, ledgers, headstones, cills, &c. Delivered to any part by vessel or railway tricks.
"This stone when better known, must come into extensive use I should think it exceedingly suitable for the London market."
C. L. Dressing, F.G.S.
Address, JOHN TRICKETT, Hendreles, Leeds, Yorkshire; or, SAMUEL TRICKETT, Victoria-wharf, Isle of Dogs, London.
N.B. A large quantity of Foundation Landings for sale.

WELSH GRANITE.—The Welsh Granite Company, Carnarvon, supplies Pitching and Paving Sets of this Material to order The Sets, which have for several years been extensively used in Manchester, Bristol, and other large towns, combine in a higher degree than any others, the qualities of roughness in wear and durability The stone is also well adapted for foundation courses, plinths, &c for public buildings, and for mill stones; it will also take a fine polish.

BATH STONE DEPOT, BOX STATION.
ROBERT STRONG, STONE MERCHANT, Box Wilts
Box Ground Stone, Scalled Block Ashlar, Rangework, &c &c. Supplied direct from the Quarries, also every description of stone work for building purposes, sawed, plain and ornamental, prepared ready for laying, and forwarded to any part of the Kingdom. Vases in elegant variety always on view; Urns, Fountains, Chimney-pieces, Tombs &c &c

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary ones. Full particulars furnished on application to Mr. FRED RANSOME, Whitehall-wharf, Cannon row, Westminster; or Patent Stone Works, Ipswich

MARKET-WHARF, REGENT'S-PARK-BASIN,—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Alcester Lime, Cement, Plaster, Tiles, Laths, and Fire Goods SCOLES and WOOD have removed from the yard of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c cut on the shortest notice. Country orders promptly attended to

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab, Marble mortars, &c.

STONE! STONE! STONE! — To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Sett-face Slab, Granite Pitching and Kerb, Guernsey Flake Road Materials, and every other description of stone, at JOHN KNIGHT and SONS, Devon Wharf, Mile-end, York roofed paving, 3½ Ct per 100 feet; slab for hearths, 4½ per foot sup; slab for chimney-pieces, 9½ per foot sup, 8 by 4 window-sills, 6d per foot run; 11 by 4 capping, 8d. per foot run, box chimneys (any opening), 8s. 6d each Terms cash on delivery

TO CONTRACTORS AND OTHERS.

YORKSHIRE PAVINGS, LANDINGS, STEPS, COPINGS, CURBS, SILLS, SINKS, and CHANNELS, Horse-hill, Robin Hood Park Spring, and Deepdale, in Blocks, Headstones, or Slabs; Purbeck Paving, Sinks Curbs, Rickstones, Pitchers, and Scanters; Caithness Flags, Firestone, Newcastle and Bilston Grindstones; Portland Stone in Blocks, Landings, Slabs, &c; Purley Dale, Caen Stone, Brumley Fall, Bath, Doulting, Parkwood, and other Block Stones, Valent a Slate Slabs, Bangor Slates, Cornish, Aberdeen, Guernsey, and other Granites; Marble, in Block and Slabs, supplied from the Wharf, Millbank-street, City Basin, and Deptford; also direct from the quarries by vessel or rail.—Address, FREEMAN'S WHARF, 27, Millbank street, Westminster

ROWLEY RAGSTONE and YORKSHIRE STONE, for paving and road making, at GEORGE CRYLANDS, Hailstone Wharf, Crescent, Birmingham. Paving executed by experienced workmen. Board of Works and Contractors supplied with Ragstone direct from the quarry

BATH STONE.—HENRY STONE, having understood that some parties have been offering for sale a sort of stone called Hampton Down, H. S. begs to inform Architects, Builders, and others that he is able and can supply that article Having, about two years since, at considerable expense) re-opened the well-known Hampton Down Quarries, he is happy to state that he can now supply it stone to any extent Since opening the quarry, H. S. has supplied considerable quantities for the new churches and other public buildings COMBE DOWN and BOX GROUND WEATHER STONE on the most reasonable terms. Residence, WIDCOMBE, BATH. Cargoes shipped and delivered to any part round the coast.

BATH STONE OF BEST QUALITY.
RANDELL and SAUNDERS,
QUARRYMEN AND STONE-MERCHANTS,
BATH.
List of prices at the quarries and depôts, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office Corsham, Wilts

PARIS EXHIBITION. — ENAMELLED SLATE—TWO FIRST-CLASS MEDALS.—Mr MAGNUS is the only exhibitor whose productions received this double honour; as the Prize Medal at the Great Exhibition of 1851, and the Medal of the Société des Arts, in 1855. This beautiful material and handsome and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other product on that can at all compete with it. It is applicable to a variety of useful and ornamental purposes, for manufactures to be separately specified. Among the chief are chimney pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the level of tables, cupboards, chests of drawers, bath tops, stoves, &c. &c. Also for hall pavements, altar-tablets, pulpits, columns, vases, desks and benches, school-slates, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality They have been used at the British Museum, National Gallery Bethlem Hospital, various Lunatic Asylums, the Ordnance Works Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock to large quantities by Messrs FREEMAN, Millbank-street; also by Messrs Sharpe, Tooley-street, and at Messrs Braby's, Belvidere road, where terms may be obtained.

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôt, at Bangor, or to transmit by railway Also Slabs of all sizes Orders to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor

CROGGON and COMPANY, Manufacturers of
PATENT ASPHALTE ROOFING,
BOILER, RAILWAY, SHEATHING and INODOROUS FELT,
For Damp Walls, and Lining Iron Houses,
2, DOWGATE-HILL LONDON.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON Established 1854 — TRINIDAD, SEYSSEL, and DUNLOP, BRITISH ASPHALTES, manufactured by Sole in town, land or country, for using, transmitting or supplying in any quantity. Information for using forwarded with tenders Post-office orders or reference in London promptly attended to Estimates given for every kind of the above work.

ASPHALTE. — THOMAS HARRISON, having completed his works for making by steam-power, is now in a position to execute orders for BLOCK ASPHALTE to any extent, at an hour's notice Asphalte expressly prepared for barn and granary floors, and every description of agricultural buildings for laying which plain instructions will be forwarded. Estimates given for every variety of Asphalte Pavement, Mastic and other Tanks, Sea-Walls, Raimay work, &c —The trade supplied on advantageous terms.—THOMAS HARRISON, Asphalte and Whiting Works, Cambridge-heath Wharf, Hackney; and Sunderland Wharf, Rotherhithe.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
FROM 2s. 9d PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PIRKINGTON, Poloneeau and Limmer Asphalte office, Monument-chambers, 34, Fish-street hill, London.
N B Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover

O. McCARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

BUILDING MATERIALS.

BECK'S WHARF, ISLEWORTH.—Builders having works to execute south west of London, will find a good supply upon this wharf, on reasonable terms, with every convenience for shipping by travelling cranes, either into barges or carriages. Portland, Caen, Bath, and Yorkshire Block Stone, always in stock; Landings, Paving, &c Also, Marble in Slab, Chimney pieces, &c Slate and Roofing Slates from the Penrhyn Quarries. Timber, Deals, Limes, Cements, Clay Goods, &c.
N.B This wharf is very near the St Margaret's Estate.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, FARMERS, &c.

W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No 21 Wharf, Harrow-road, to 9, North Wharf-road, Paddington have now got the finest imperishable Terra-Cotta, at Midwall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington basin.

DURABILITY of GUTTA PERCHA TUBING Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter.—FROM SIR RAYMOND JARVIS, Bart., YENTNOR, ISLE of WIGHT. —Second Testimonial.—"March 10th, 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and their remark is, that the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here"
N B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.
THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD CITY-ROAD LONDON.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky will wear longer, and is about 40 per cent cheaper than the leather hose pipe Manufactured only by WAITHMAN & Co. Bentham, Lancaster

No. 1 quality, inches diameter, and price per yard.

½	¾	1	1¼	1½	2	3 in.
9d.	11d.	1s.1d.	1s.5d.	1s.7d.	1s.9d	2s.	2s.3d.	2s.6d.	2s.9d.

Super-extra stout quality.

2	2½	3 inches.
2s.	2s.3d.	2s.6d.	2s.9d.	3s. per yard.

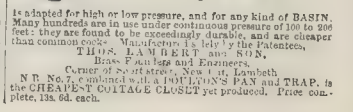
No. 0. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

¾	1	1¼	1½	2	2½	3 inches.
6d.	10d.	1s.	1s. 3d.	1s. 6d per yard.

The hose is Burnett tested at an extra charge of 1d per yard. Union Joints Branch Pipes, and Jets, are also supplied

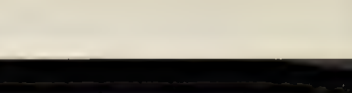
MACINTOSH INDIA-RUBBER WAGGON COVERS, at reduced prices. Stocks of different sizes are always ready, and can be inspected at the Warehouses, MOSES, SON, and DAVIS, 31 and 15, Aldgate High-street, and at the Factory, India Rubber Steam Works, Bow-common

TO WATER COMPANIES AND PLUMBERS
HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.
LEAD, IRON, and TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London

LAMBERT'S SELF-CLOSING LAVATORY and CLOSET VALVE No 7.



is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,
THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Scotland-street, New Inn, Lambeth
N B. No. 7, combined with a DOLTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. ROOPE, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days. Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, burial work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements tried at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank street, Westminster, who prepare one quality only of Portland Cement.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lime and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 26, Old Broad-street, London; to Mr. M. NUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works for THOMAS SUTCKER.
Agents in London, Messrs. GEORGE PUTTER and CO. Limemerchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 19, North-wharf-road, Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 8, Upper Thames-street, London; and also at the manufactory, Faversham, Kent. N.B. These Cements supplied for shipment, on advantageous terms.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 8s. 6d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

16, South Wharf, Paddington, June 1st, 1856.
NOTICE.
GENUINE BLUE LIAS LIME.—J. D. BLYTH (late senior partner of the firm of Blyth & others, Plaster Works, Baldwin's-place, Gray's Inn-lane, begs to inform his friends and the trade, that he has made arrangements with Mr. CHARLES NELSON, of Warwick, for the entire MANAGEMENT of his BUSINESS in London, in reference to the Sale of his Lump and Ground Blue Lias Lime, Portland and Lias Cements. J. D. B. trusts, that by prompt personal attention to all orders he may be favoured with, to merit a continuance of the patronage hitherto so liberally received by the late firm. Contracts to any amount can be undertaken, and a regular supply guaranteed. Prices and terms forwarded to all parts of England and the metropolis.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead, whilst the consumption of material is less than for one coat. It dries very fast and hard.
HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three-fourths the price.
HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and iron exposed to salt water; neither bilge water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in oriental packages, stamped, HUBBUCK, LONDON, PATENT; and when so marked the quality is guaranteed.
HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber coated with this Enamel is not attacked by the worm neither do barnacles attach to it.
Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.
OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs.
Warehouse, No. 1, Wharf Paddington-basin

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump into bins, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford line of the Great Western Railway, at Banbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Banbury, Stockton, and Wilmcote.—Office, at Warwick.

CHARLES RICHARDSON,
3 & 5, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT STONE BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 5 South Wharf, Paddington.
NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now supplying BREAVES'S BLUE LIAS LIME per the Great Western Railway from Banbury to Bull's bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.
All applications for prices and terms will meet with prompt attention.
N.B. Please observe the lime is ground at the works, not in London

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keen's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
SUPER-RICH RUBBING BRICKS
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building, and pottery work, Fine dry Loam, Whiting, Whiting Sand, for sulphate, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'s Wharf at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 200 tons can load alongside the wharf at Grays. MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex. The above-named articles can also be procured, as well as all kinds of fire goods, both Welsh and Newcastle, Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and bone lime in packed in hogsheads, casks, jars, &c. for exportation
General Office—No. 12, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. D. BRICKFIELDS, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.
Main Place Bull-nosed, Stock, and Place Bricks, also on sale. The place bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand of approved quality constantly on sale, upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

PRIZE BRICK-MAKING MACHINE.—Chamberlain's Patent.—This portable machine will make 20,000 gault bricks per day, of far superior quality to hand-made, with 3-horse power; one man to feed the machine with clay, and boys to remove the bricks. For a plete and description, see "Practical Mechanic's Journal," for January 1st, 1856.—Any further information, or the machines seen at work, on application to Mr. HUMPHREY CHAMBERLAIN, Kempsey, near Worcester.

TO BRICKMAKERS, &c.—WANTED, several Hundred Feet of MOULDED WHITE BRICK COPING, for 9-inch and 14-inch boundary walls, to be throated, &c.—Direct, with description of same, to Mr. W. PURKIS, Builder, &c. Kentish-town.

BRICK EARTH.—TO BE LET, EIGHT or TEN ACRES of very superior CLAY, all in working order, in Essex, close to a Railway Station, 12 miles from London. Apply to Mr. KNIGHT, Surveyor, 14, Argyle-street, Regent-street.

BLUE BRICKS and TILES, of superior quality, and in great variety of mould, for ornamental work, paving, coping, and general purposes.—GEO. C. RYLAND, Hailstone Wharf, Crescent, Birmingham.

FIRE-BRICKS, LUMPS, TILES, &c.—FURNACE-BUILDERS, GAS COMPANIES, and CONSUMERS of these Goods generally, can be SUPPLIED with every description from our Wharf here, on the most advantageous terms.—TRAQUAIR and CO. 9, Bankside, Southwark.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury New-park, would be willing to enter into arrangements with builders or others for supplying first-class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Dell's Farm, St. ke Newington Green.

EXCELLENT STOCK BRICKS for SALE. Apply to Mr. MARSH'S Agent, at the Field, Wells-road, Sydenham; or at Mr. MARSH'S Offices, 2, Charlotte-row, Mansion-House

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY. Entrance, Norwood-end, Palace-road.—BRICKS of the first class. Red Kiln Bricks Cutters, Pressings, Facings, and Paviors, Clamp-burnt, Yellow and Pale, Seconds, Paviors, and Pickings, Washed Stocks, Stocks, and Place.—Apply to TRUMAN and CO. Norwood Lodge, Palace-road, Roupell-park, Lower Norwood, Surrey.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements can be made with the owner for leaving it for a better from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine in extent.
HENRY C. MOUNT, Sec.
37 King William Street City

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the EREC-TION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repairs as long as the building itself. It will bear the weight of any ladder, so no case of accident a labourer can repair it. It occupies the room of a large amount of pointing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in towns, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if ordered, fixers can be sent to fix them at 5d. per foot. This charge includes tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgewater, and Ruthy

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability, Slabs and Tiles for Fireplaces and Hearths, Cottage and Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent Staffordshire

PEAKE'S TERRO-METALLIC TILES, Patented, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for the WARE is REMOVED to No. 31, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietors; and, thirdly, that the "Reasons of the Judges," page 381, of the Great Exhibition, rank the Manufactories Kloster-dine as "The Thirties," Tunstall, Staffordshire, as the first of the kind in the world.

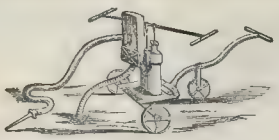
PANTILES, PAVINGS, &c.—J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 32s. 6d. per 1,000; floor bricks and 6-inch paving, at 37s. 6d. per 1,000; 8-inch pavings, at 57s. 6d. per 1,000; plain tiles, at 30s. per 1,000. Rail Cash prices. Delivered on trucks in London or Eastern Counties Railway.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 1, Scott-wharf, Paddington, Manufacturers of Improved Plain and Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for Towns and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted imperishable, and to resist all acids and exhalations.
*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Quoit Blocks, &c.
Tividale, Staffordshire.

PAINT, certified by the Government Engineers and Contractors to be the CHEAPEST and BEST ever discovered for wood and iron, price 38s. per cwt.—Apply to the London Anti-Oxyde Paint Company, D. WALKER, Secretary, 29, New Bridge-street, Blackfriars.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gas, Acid, Sea Vapours, Damps, and the Salt Water; also, intense heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that 28lbs. of Wolston's Torbay Paint will effectually cover as much surface as 112lbs. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all painting purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.



B. FOWLER, HOLMAN, and CO.

SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.

The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances, as the valves three times usual size, and so to suit the case of all kinds of solid matter in it. It is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

BENJAMIN FOWLER and CO.

FIT UP HEATING-APPARATUS OF ALL KINDS,

For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,

And for every purpose where artificial heat is required.

They also erect DRYING ROOMS for ASYLUMS, UNIONS, DISTILLING, and MANUFACTURING PURPOSES, upon the most improved principles, and upon the largest or smallest scale.

STEAM-COOKING and BATH APPARATUS FIXED;

Also PUMPS, for DEEP or SHALLOW WELLS,

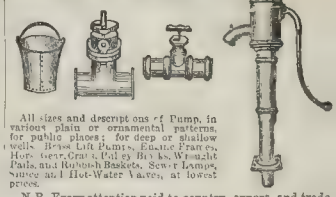
To be worked by hand, horse, or steam-power;

AND ALL KINDS OF

ENGINEERS', MILLWRIGHTS', or SMITHS' WORK, for Public or Private Establishments.

The most ample references from a long experience in the above branches can be given.

B. FOWLER and CO.'S FARM and COTTAGE PUMPS, 30s



All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Lever Lift Pumps, Garden Engines, Horse-Gear, Crabs, Pulley Blocks, Wrought Pails, and Rubbish Baskets, Sewer Lamps, Sinks, and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJAMIN FOWLER & CO. GENERAL ENGINEERS, WHITEFRIARS-STREET, FLEET-ST.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS TRAPS, &c at the

NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to

THE AGENTS:—

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;

Where a large stock is always kept on hand.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.

THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of JAMES PILBROW, Esq. Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspector of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly seven years, and having supplied DRAIN-PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Metropolitan Cattle Market, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances particularly referred to, they are desirous of calling attention to the fact that all the pipes supplied by them are from their own Clays, and are manufactured at Aylesford, by which they offer their goods to Contractors, the Trade, &c. of a first-rate quality, and of manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,

which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, fitted to machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

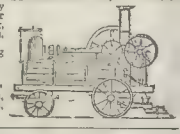
N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

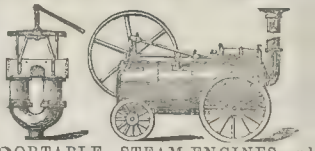
Upper Ground-street, Blackfriars Bridge, Surrey Side.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.



JAMES BURTON & SONS,
Engineers and Contractors,
John's-place, Holland-street,
Southwark, London.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or FOR SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally. Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

EIGHT-HORSE ENGINE and BOILER, with shaft and pulley complete, as used for driving sheds with 8 pairs of saws, and recently used for cutting the Regent's canal. Inquire of T. N., 2, Wharf, Harford-road, Kingsland.

STEAM ENGINE.—FOR SALE, a PORTABLE STEAM ENGINE, of two-horse power, and Boiler, with Furnace apparatus complete, and fitted for immediate use. May be seen at Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

STEAM-ENGINE and MORTAR-MILL. TO BE SOLD, an 8-horse high pressure table bright-finished ENGINE, and a MORTAR-MILL, nearly new.—May be seen at work, and particulars obtained of Messrs. WILLIAM and FRAS. BADFORDS, Builders, Hall-street, Notting-hill, close to the turnpike. No objection to take on exchange for good stock bricks, or other useful building materials.

TARPAULINS for COVERING ROOFS during Repairs, SCAFFOLD CORD and every description of ROPE used by Builders upon the lowest terms. Marquees and temporary Awnings on sale or hire. Orders per post receive the most prompt attention.—WILLIAM PIGOTT, 10, Fore-street, City, Manufacturer, by appointment, to her Majesty's Honourable Board of Ordnance.

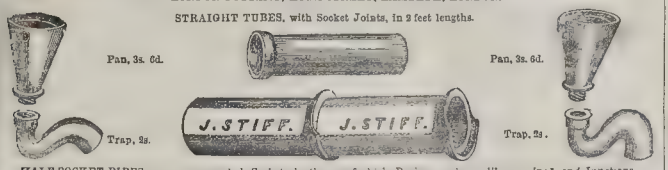
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Dowers wharf, Chelsea; Pratt-wharf, Kingsland-road, Shoreditch.
Messrs. COLES, SHABBOLT, and CO'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free on application. Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.

GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET

HALF-SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

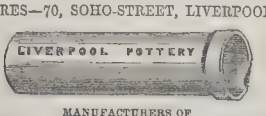
OFFICES: HIGH-STREET, LAMBETH, LONDON.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.



MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 3d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use: hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

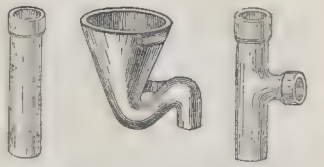
STONE PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES.—E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.

SUPERIOR GLAZED STONEWARE DRAIN-PIPES, &c.—The attention of Boards of Works, Contractors, and others, is invited to the MANUFACTURES of the DARFIELD Yorkshire STONE POTTERIES, with which for even cleanness of finish and impermeable quality few can compare. Tubes, bends, junctions, grids and sketch traps, shoe traps, syphons, yard and street gully sinks, with every other applicable to sanitary works, in any quantity, and immediately available, at the London Depôt, No. 4, Warehouse, Goods Station, Great Northern Railway, City Office, 37, Bucklersbury, City, where illustrated Price Lists can be obtained.

E. B. BEAUMONT, Proprietor.
J. D. JONES, Agent

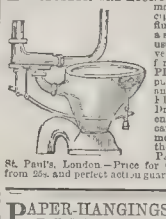
N.B.—Chimney-pots, roofing-tiles, ridgings, wall copings, flooring and paving tiles, fire-bricks, oven-bricks, bakers' lumps, cinder oven lumps and quarries.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 80, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Is suitably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen fixed upon the Premises of the Patentee, W. PATEN, 23, Old Pancras-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.



PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is JONES'S WHOLESALE WAREHOUSE, 29, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER-HANGINGS. — JEFFERY, ALLEN, and CO. beg to inform the trade they have a large selection of Paper-Hangings of the most tasteful designs of all qualities, and at very low prices. They so forcibly, in addition to their best papers, which in price, style, and colouring, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls.—Factory, 115, Whitechapel; Show-room, 500, Oxford-street.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—TRUBBLE and CO. Manufacturers, Lessees, &c. &c. call the attention of the trade to their immense STOCK of PAPER HANGINGS, at 29, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, and Miscellaneous Goods. The whole being their own manufacture, can supply on the very best terms.

CARTS, VANS, WAGGONS, LADDERS, BARROWS, &c.—Price Lists for the undermentioned may be had on application:—

No. 1. Carts, Vans, Waggons, Drays, and Trucks.
No. 2. Wheels and Repairs.
No. 3. Ladders, Barrows, &c.
No. 4. Hire of ditto

G. ELL, 3, Tottenham-court, and 3, Palace-row, New-road, St. Pancras, near the Hampstead-road.

SALES BY AUCTION.

CORNHILL The Valuable Materials of several Houses in St. Michael's-alley and Bell-yard

PULLEN and SON are instructed to SELL by AUCTION, on the Premises, on WEDNESDAY, AUGUST 6th, at TWELVE, in LOTS, the VALUABLE BUILDING MATERIALS of the Premises formerly the northern portion of the George and Vulture Tavern, and several Houses adjoining, in St. Michael's-alley and Bell-yard, and belonging to the Parish of St. Michael, Cornhill; comprising about 300 feet run and bricks, several tons of lead, plain and pan tiles and slates, oak and fir timber with moulded doors, glazed sashes, doors, portland-stone, marble chimney-pieces, sound and fine floor boards, shop fronts, iron railing, large iron door, stoves, ranges, stone paving, &c. May be viewed the day previous. Catalogues had of S. Wood, Esq. Architect, 10, Craig's-court, Charing cross; and of PULLEN and Son 80, Fore-street, Cripplegate.

NORWOOD, SURREY. Two valuable Freehold Residences, with Pleasure-gardens, and Offices, and Meadow Land in the rear, the whole containing nearly Six Acres, and possessing very great advantages for building purposes.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to offer for SALE, at the MART, on FRIDAY, AUGUST 8, at TWELVE (unless previously sold by private contract), a very important and valuable FREEHOLD ESTATE, delightfully situate in Thurlow place, fronting the high road, at Lower Norwood, about 5 miles from the City, near to Tulse hill, and within five minutes' walk of a station on the West End and Crystal Palace Railway; comprising a detached cottage residence, with greenhouse, stabling, and offices of every description, placed in delightful pleasure-grounds and productive garden, of double front, and possessing a frontage of 200 feet to the high road; another frontage of 400 feet to the road leading to Streatham; extends in extreme length from north to south 800 feet; and presents to capitalists and freehold land and building societies an unusually eligible property for a first-class building speculation—Particulars may be had of CHARLES CHAPMAN, Esq. Solicitor, 11, Austin-friars; at the MART; and of Messrs. NORTON, HOGGART, and TRIST, 69, Old Broad-street, Royal Exchange.

PEMBROKESHIRE—PEMBROKE-DOCK and NEYLAND.—Important, Varied and Extensive Sales.

GEORGE N. HASSELL begs most respectfully to inform Railway Contractors, Colliery Proprietors, and Operative Agriculturists, that he has been instructed by Messrs. F. Conder and Co. (whose contracts on the South Wales Railway and her Majesty's Royal Dockyard are completed), to offer for SALE by AUCTION, at the BATTERY, Pembroke-dock, on MONDAY, AUGUST 4, 1856, at TWO p.m. the whole of the MATERIALS at that place; and on TUESDAY, AUGUST 5, 1856, at the TERMINUS of the South Wales Railway, Neyland, the whole of the MATERIALS at that place, at ELEVEN o'clock in the forenoon, comprising about 100 TONS of BRIDGE and RAILS, about 100 BROAD and NARROW GAUGE WAGGONS and TRUCKS, and all the general routine of articles, contained in a railway contractor's plant, with flip, shaft, doe cart, and saddle horses. Refreshments for Tuesday's Sale, will be on Deck on at Half-past Ten o'clock, at the Railway Hotel, Neyland.—Haverford West, July 21, 1856.

PADDINGTON.—To Timber Merchants, Builders, Carpenters, Cabinet-makers, and Others.

MR. LEREW will SELL by AUCTION, on the PREMISES, Ironsate Wharf, Praed street, on MONDAY, AUGUST 11th, at TWELVE, the undermentioned STOCK, comprising 3,000 yellow deals, and nine planks, deals and battens, 100 squares of prepared flooring, 5,000 feet scantling, 3,000 feet wide pine board, dinsly four-panel and other doors, dry cut stuff, fifteen loads of oak timber, and other useful stock.—May be viewed on Saturday prior and morning of Sale, and catalogues had on the Premises, and of the Auctioneer, Cardington street, Hampstead-road.

AT GARRAWAY'S COFFEE-HOUSE, CORNHILL, FRIDAY, 8th AUGUST, 1856, at FOUR.

WAINSCOT LOGS.....	223 Fresh Riga.
FIR TIMBER.....	200 Loads Dantzic.
	200 " Best Riga.
DEALS and BATTENS	30,000 Quebec Yellow Pine.
	40,000 New Brunswick White Spruce.
	50,000 Baltic, Yellow and White.

With other valuable goods.

H. FREEMAN, Broker, 3, Crooked-lane, Cannon-street.

TO ENGINEERS, BOILERMAKERS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on THURSDAY, AUGUST 7, at ELEVEN, on the PREMISES, Rotherhithe, near Stepney, in lots, ENGINEERS' TOOLS and MACHINERY, including a capital set of bending rolls 7 feet wide, a powerful cutting and punching machine, a horse power and portable steam-engine, a 4-horse power vertical ditto, four steam boilers, two self-acting drilling machines, one lathe to centre 16 inches, one ditto 14 inches self-acting, 15 others, punching machine, 60 feet wrought-iron shafting, with riggers, quantity of useful machinery on the bank, about three tons of square timber, quantity of Portland cement casks, a set of timber wheels for a waggon, and numerous other effects. The premises on view by permission on the day of sale, and catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO LATHE AND TOOL MAKERS, MACHINISTS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Executors to SELL by AUCTION, on TUESDAY, AUGUST 5, at ELEVEN o'clock, on the PREMISES, 13, King street, Goswell-street, in lots, without reserve, the TOOLS and STOCK of the late Mr. Bryant, an eminent amateur lathe-maker, including a new 5-inch amateur's lathe, one fusee engine, one wheel-cutting engine, a very complete tool-maker's lathe for fine work, a powerful 15-inch sliding lathe, 10-foot lathes of various dimensions, one wheel cutting lathe, screw press, self-acting wheel-cutting lathe, several drilling machines, a large assortment of tools, smith's forge, anvil, and tools, wood and metal patterns, iron safe, chaise, a few lots of household furniture, and other effects. To be viewed on MONDAY previous to the sale, when catalogues may be had at the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Seventh Sale of the Surplus Property of the North London Railway Company.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, on TUESDAY, AUGUST 12, at TWELVE precisely, in one lot, a valuable Plots of FREEHOLD BUILDING LAND, fronting the Church-road, in the parish of St. John, Hackney. Also 11 lots of highly desirable Building Land, fronting the St. Paul's road, and close to the railway station at Highbury. Some well-secured Ground Rents, and several desirable Shops, with residences, let to respectable tenants, at moderate rents, situate in Frederick's-place, Great Ilford-street, Great College-street, Hunter-street, near the railway station, Camden-town. Particulars may be obtained of Messrs. BEADEL and SONS, 25, Gresham-street, Guildhall-yard; at the Auction Mart; and of Messrs. BEADEL and Sons, 25, Gresham street

No. 10, Marlborough-road, St. John's-wood. First-class Leasehold Investment.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, on TUESDAY, AUGUST 19, at TWELVE, in one lot, a valuable VILLA RESIDENCE, known as Laxfield Villa, and being No. 10, Marlborough road, St. John's-wood; held for a term of 70 years, from Michaelmas, 1845, at a peppercorn rent, and at present let to a respectable tenant, at the rent of 85l. per annum. Particulars may be obtained at the Auction Mart; and of Messrs. BEADEL and SONS, 25, Gresham-street, London.

SALES BY AUCTION.

HIGHGATE-HILL, AT THE JUNCTION OF MAIDEN-LANE.—Very valuable Freehold Estate, comprising a capital old-fashioned Family Residence, with coach-house, stabling, gardens, and Paddocks, the whole comprising about six acres, full of sand and brick earth, and, from its position, one of the most important and valuable building estates in the vicinity of London.

MESSRS. FAREBROTHER, CLARK, and LYE are instructed to prepare for SALE, at GARRAWAY'S COFFEE HOUSE, on WEDNESDAY, the 27th of AUGUST, at TWELVE o'clock, in one lot, a very valuable FREEHOLD ESTATE, situate on Highgate-hill, at its junction with Maiden-lane, and close to the town; comprising a capital old-fashioned family residence, containing dining and drawing rooms, numerous bed rooms and servants' offices, with garden, with coach-house, stabling, and brew-house. Adjoining the residence is a conservatory, opening to the lawn and pleasure-grounds with spring pipes, and paddock, with pond of water, the whole containing about six acres. The views from the property over London are most extensive, and from the great frontage, both to Highgate-hill and Maiden-lane, would make one of the most eligible building sites ever offered. The estate is full of brick earth, and sand, and being raised the whole might be easily converted to brick prior to building on the property. May be viewed by cards only, which, with particulars and plans, may be had of D. Hudson, Esq. Solicitor, Gresham-street, City; at Garraway's; and at the Offices of Messrs. FAREBROTHER, CLARK, and LYE, Lancaster-place, Strand.

STAMFORD HOUSE, CHURCH STREET, CAMBERWELL. Surplus Stock of a Builder, and the remaining portion of the excellent Materials of the above Mansion.

MR. C. F. SMYRK will SELL by AUCTION, on the PREMISES, on TUESDAY, JULY 8th, and following day, at ONE for TWO, punctually, 300 lots of dry, white, and yellow CHRISTIANIA and other DEALS and BATTENS, of superior quality, in various lengths and thicknesses; 200 squares of dry prepared batten flooring, scantlings of all dimensions, new joiners' work, quantity of Elizabethan Gothic sash frames, doors, cashes and frames; 600 slates, 1,000 feet stone paving, and an infinite variety of useful materials.—On view two days prior and mornings of sale. Catalogues on the Premises, or of the Auctioneer, 5, Tufnell-park terrace, Upper Holloway.

PIMLICO IMPROVEMENT.—Building Materials.—King's-row, Pimlico.

MR. W. R. GLASIER is instructed by the Commissioners of Her Majesty's Works and Public Buildings to SELL by AUCTION, on the PREMISES on TUESDAY, AUGUST 12th, at TWELVE for ONE, the BUILDING MATERIALS of FIVE HOUSES, being the Contractor's property, Arabella-row, and Nos. 1, 2, 3, and 4, King's-row; three small houses in Arabella row; and seven small houses in Queen's-court, comprising 500,000 capital stock bricks, several tons of lead, in gutters, pipes, flats, & crystal flooring, doors, sashes, and frames, &c. slat ne, pan and plain tiles, stone paving, Yorkshire and other paving and the usual requisite fittings. May be viewed the Saturday previous and on prior of Sale and catalogues had at the Office of the Works, 12, Whitehall-place; of JAMES PENNETHORNE, Esq. 7, Whitehall-yard; at Garraway's, Change-alley, Cornhill; on the Premises; and of the Auctioneer, 11, Charing-cross.

BUILDING MATERIALS OF FIVE HOUSES, KNIGHTS-BRIDGE

MR. W. R. GLASIER will SELL by AUCTION, on the PREMISES, on THURSDAY, AUGUST 14, at TWELVE for ONE, the valuable BUILDING MATERIALS of Nos. 16, 17, and 17, St. George's-place, Knight-bridge, the White Horse Tavern, and Cottage adjoining, comprising 1,000,000 stock bricks, pan and plain tiles of the several sizes of lead, iron pipes, cisterns, sinks, & timber, slate, rafters, &c. capital flooring, wainscoting, doors, and sashes and frames erection of water-closet with mahogany seat and user, complete, Hunter and Barker's patent, excellent register and other stoves, ranges, iron railings, bay-window, piers, &c. Yorkshire and other stone, in steps, curb, paving, coping, &c. stone sinks, quantity of well-seasoned and prepared deals, &c. May be viewed Monday and Tuesday and morning of sale and catalogues had of F. R. Bassov, Esq. Architect, 21, Northumberland-street, Strand; at the Gloucester Arms, Stanhope-street; on the Premises; at Garraway's; and of the Auctioneer, 41, Charing-cross.

TO BUILDERS, IRONMONGERS, OIL AND COLOUR MERCHANTS, AND OTHERS. — Twenty Register Stoves, Fenders, Iron and Tinned Goods, Cutlery, Guns and Spokes, Oils, Colours, and Varnishes, and about Fifty Lots of Household Furniture, Books, &c.

MR. PEAKE is ordered by the Executors, to SELL by AUCTION, in lots, at his ROOMS, 44, Poland-street, Soho-square, on TUESDAY, AUGUST 5, at TWELVE, a considerable portion of STOCK, suitable for the above trades, without reserve. May be viewed the morning of sale, and catalogues obtained at Mr. PEAKE'S Offices, 44, Poland-street, Soho-square.

TO BUILDING MATERIAL DEALERS AND OTHERS.

MR. MARSH has received instructions to SELL by AUCTION, on the PREMISES, Beal's Wharf, Teeles-street, on MONDAY next, AUGUST 4, at TWELVE, the SURPLUS MATERIALS, consisting of 5 engines and chain of various dimensions, second-hand, consisting of 1 locomotive, 1 ditto, 2 tenders, tubes, cranks, and other useful parts, 1 set of screwing tackle, part of 2 ditto, and other effects. On view the morning of Sale, and Catalogues had on the Premises; and at Mr. MARSH'S Offices, 2, Charlotte-row, Mansion-house.

TO STONE MERCHANTS, PAVIOURS, CONTRACTORS, AND OTHERS.

MESSRS. EVERSFIELD and HORNE are instructed by Mr. John Gaywood to SELL by AUCTION, at KING'S and QUEEN'S WHARF, near the Surrey Docks, Rotherhithe, on MONDAY, AUGUST 11th, at TWELVE precisely, about 1,000 superficial yards of Granite KERBS, QUEEN'S OR SQUARE PAVING, and a quantity of Purbeck PAVING and FLAGGING, in lots to suit purchasers.—May be viewed, and catalogues had on the Premises; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

Old Materials, Rolt's-yard.

MESSRS. EVERSFIELD and HORNE are instructed by the Commissioners of Her Majesty's Woods and Public Buildings to SELL by TENDER, on TUESDAY, AUGUST 5, at ELEVEN, on the Premises, Rolt's-yard, Kennington, a quantity of OLD MATERIALS, consisting of Timber, Deals, Battens, Doors, Sashes, Frames, Iron Railing, Lead, Slates, Tiles, Bricks, Stone, and other Materials. May be viewed, and Tenders to be sent in to EVERSFIELD and HORNE, 40, Parliament-street.

OLD STONE PAVING, Chelsea Hospital.

MESSRS. EVERSFIELD and HORNE are instructed by the Commissioners of Her Majesty's Works and Public Buildings to SELL by TENDER, on TUESDAY, AUGUST 5th, a quantity of PURBECK FLAGGING and SQUARES, YORK LANDKE (Old UPPERS), Curb and the Lot of Old Cast Iron Railing. May be viewed, and Tenders to be sent in to George ELEVEN, on TUESDAY, to the Office of the Contractors, Parliament street.

TO BUILDERS AND OTHERS.

CLAPHAM COMMON.—TO BE SOLD or LET (with the option to purchase hereafter), FREEHOLD LAND in this very superior and delightful locality, in plots, suitable for the erection of villas and other first-class residences.—Apply by letter, post paid, to A. B. care of Mr. Evans, Stationer, &c. Clapham Old Town

FREEHOLD LAND, DULWICH. — TO BE SOLD, SIXTY ACRES of LAND, in a fine situation, offering a very desirable site for a building speculation. Also LAND TO BE LET, for building, with frontage, on Holmwood-common, Dorking.—Apply to F. B. NEWMAN, Esq. Architect, 12, Pump-court, Temple.

HAMPTON COURT.—About Eight Acres of BUILDING GROUND TO BE LET, on 99 years' lease, or SOLD, in small or large plots, near the above Palace and Railway, at very moderate rents and prices. An advance of say 50 per cent on the outlay will be made for respectable parties taking a considerable frontage.—For terms, &c. apply to Mr. F. LETT, Architect, 34, Essex-street, Strand

ST. JOHN'S, SOUTH HACKNEY.—A FREE GOLD BUILDING FRONTAGE, land-tax redeemed, of 168 feet, to an average depth of 87 feet, and about 40 feet wide; situate about ten minutes' walk from the Hackney Railway Station and Victoria-park, Eye and five-roomed House, will LET immediately, being a short remove from two large factories. Price 30l.—Apply at No. 6, Bourne's-road, Cambridge-heath

ELIGIBLE GROUND-RENTS.—The CONSERVATIVE LAND SOCIETY.—NINETEEN LEASED PLOTS, at 7l. and 10l. each per annum, for nineteen years, will be OFFERED in the BRIGHTON ESTATE, together with other eligible Building Plots for which first-rate ground rents may be obtained, on THURSDAY, AUGUST 7, at the OFFICES, 33, Norfolk-street, Strand. Some valuable plots at the original prices will also be allotted on St. Margaret's, near Richmond; the Woodbury-park, Tunbridge Wells; Seven Sisters, Tottenham; Oaklands, Wealdstone; Downshire-square, Reading; West Malvern, Malvern Hills; Brookley Hill Park, Forest Hill; Hounslow, Hertford, Woodgreen, Hornsey, and the Enfield New Estate. Prospectuses may be had at the Offices, as also prospectuses of the Society as an investment for capital and savings without taking land,

CHARLES LEWIS GRUNEISEN, Secretary.

ROTHERHITHE.—TO BE LET, on Building Lease, a PLOT of GROUND, situate at the Corner of Cookham, Trinity-street, for a term of 70 years, by TENDER, to be made by letter, on or before the 20th day of AUGUST next, addressed to Mr. TOWELL, Atlas Assurance Office, 29, Cheapside, of whom all particulars may be obtained.

FREEHOLD LAND FOR SALE.—12½ ACRES at East Barnet, situate on an eminence, with a frontage to high road, and commanding delightful and extensive landscapes of the surrounding country. It is peculiarly eligible for building purposes, being easy of access from Town by omnibus or railway, and is suitable for the erection of villas for gentlemen desirous of enjoying the comforts of retirement in the country.—Apply to Mr. BICKELL, 70, Goswell-road.

FREEHOLD LAND in the CITY.—TO BE LET, on Lease for Sixty one Years, VACANT GROUND being part of the parish of St. Botolph, Bishopsgate, situate in Halfmoon-street, Bishopsgate, suitable for the erection of dwelling-houses, shops, warehouses, or factory. Frontage of 50 feet by 30 feet depth.—For particulars apply to Mr. W. H. HEATH, Surveyor, 7, Great Winchester-street, Broad-street, City.

FREEHOLD LAND TO BE LET, on Building Lease for ninety nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

FREEHOLD LAND TO BE LET, on the river Thames between the river and the Victoria Docks, Limehouse, near the Commercial Road, for long or short terminable years. This land has not only the advantage of river frontage, but it is bounded on the land side by a branch of the Eastern Counties Railway, and is therefore very eligible. Plans of the property may be seen, and particulars had of Mr. JOHN OAKLEY, Land Agent and Surveyor, No. 60, Dougliis-street, and of Messrs. KING and LOCKE and DORMAN, Solicitors, No. 21 Essex-street Strand, London.

VALUABLE SITE for BUILDING, TO BE LET, or SOLD.—The Directors of the Western Bank of London are prepared to receive TENDERS for a PRIMA BUILDING GROUND, in BROOK-STREET, adjoining the Bank-house, in Hanover-square.—Particulars may be had on application to Messrs. MURRAY, HYMER and JACKSON, 12, Hanover street, Hanover square, to whom the Tenders may be addressed.

BUILDING LAND, in eligible situations. One lot is in Kentish-town, partly covered; the other is at a railway station, eight miles from town, where there is an excellent opening for a Coal and Timber Merchant, at the Station. Also a SHOP and DWELLING-HOUSE, TO LET, at about 10l. per annum. Money could be laid out upon the latter.—Apply to THOMAS SUNN and SONS, 21, Lamb's Conduit-street, Foundling Hospital

STRATFORD, ESSEX. — FREEHOLD LAND, with three roods of Land in a field from land-tax and free of tithe, TO BE LET, on Lease, for a long term of years, in large or small plots, suitable for manufactories or building purposes. Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for thirty-one years, with power of option to purchase. Plots from one to four acres for large villa residences; smaller plots for semi-detached villas, and a plot for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 6, Waterloo-place, Pall-mall, or to Messrs. BARKER, BOWKER, and PEAKE, 1, Grosvenor-square

VALUABLE FREEHOLD LAND, Upper Holloway, near the Archway Tavern.—TO BE SOLD or LET on Building Lease for 99 years, direct from the freeholder, a portion of valuable LAND, fronting the Archway Road, Upper Holloway, having a frontage to an intended new street of about 500 feet, average in depth 150 feet to 165 feet. The purchaser or lessee may build thereon as an investment, a privilege not granted to the owners who have purchased the adjoining land.—A plan may be seen, and further particulars known on application to R. W. POWYS, Esq. Solicitor, 38, Bedford-square; or Messrs. DENT and SON, Surveyors, 4, Southampton-buildings, Chancery-lane, and Camden-town.

BUILDING LAND, fronting a Main Metropolitan Road, at UPPER HOLLOWAY. — TO BE LET, on BUILDING LEASE, for ninety-nine years, a valuable PLOT of FREEHOLD LAND, with a frontage of 200 feet, having a depth of 150 feet to a sewer in front, and all the necessary Drains and Sewers laid down. Lease direct—Plans and particulars of the boundaries, &c. of Messrs. DENT and SON, Surveyors, 4, Southampton-buildings, Chancery-lane, and Camden-town.

NEW WINDSOR ESTATE. — Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences, with Stabling, which are most eligibly situate in a healthy locality. The situation is at or near Windsor, abutting on the Park and Long Walk, and commanding splendid views of the Castle. Within ten minutes' walk of the Great Western and fifteen minutes' walk of the South-Western Railway Stations. A plan can be had by intending purchasers.—Apply to Mr WILLIAM SIM, Architect and Surveyor, 2, Danes-Inn, Strand.

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The Builder.

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Architect, Engineer, Operative & Artist.

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COMPETITIONS.

TO ARCHITECTS.—Weston-Super-Mare Improvement and Market Act, 1842 and 1851.—The Commissioners acting under and by virtue of the above Acts of Parliament, are prepared to receive PLANS and SPECIFICATIONS for the ERECTION of a new TOWN-HALL over their Market-place, the cost of such building not to exceed 2,000*l*. A plan of the ground, if required, may be obtained by application to the Clerk. The drawer of the plan approved by the Commissioners will receive a premium of fifteen guineas, such plan to be the property of the said Commissioners. Plans must be sent, free of carriage, to the Office of the Clerk, No. 5, South Parade, Weston-super-Mare, aforesaid, on or before the 8th day of SEPTEMBER next.

WILLIAM SMITH, Clerk to the Commissioners.

Dated, Weston-super-Mare, July 18th, 1856.

TAMWORTH UNION.—To ARCHITECTS—INTENDED WORKHOUSE for the TAMWORTH UNION.

Plans and general specifications are required for a Workhouse, to be erected on land near Tamworth. A plan of the site may be seen, and all other particulars known, on application to the Clerk to the Union. The whole to be done in a plain and substantial manner. The maximum sum proposed to be expended on the building is 4,000*l*. The plans to be sent under a motto, and the names under seal, to the Clerk, on or before the 29th day of August next.

The Architect producing the best plan in the estimation of the Board of Guardians will, subject to the approval of the Poor Law Board being obtained to such plan, be employed at a sum not exceeding 5 per cent. upon the outlay. The plans not selected or approved of will be returned with as little delay as possible after the selection. The guardians do not bind themselves to accept any of the plans which may be submitted.

Accommodation is required for 300 inmates, with wards, yards, and other conveniences, suitable for their complete classification in proportions as follows, namely:—

Men, infirm from age or other cause	25
Able-bodied Men and Youths above fifteen	15
Women, infirm from age or other cause	25
Able-bodied Women and Girls above fifteen	15
Boys under fifteen	30
Girls under fifteen	50
Lying in Women	2
Sick Males	10
Sick Females	8
Detached Wards for Vagrants of both sexes.	
Receiving Wards.	

A Board-room for 30 Guardians, with a Clerk's Office contiguous and a strong closet.

Accommodation will also be required for a Master and Matron and Schoolmaster and Schoolmistress, conveniently situated with reference to their respective duties.

A Dining-hall, suitable for the whole of the inmates to dine at one time.

Separate Schoolrooms, Workrooms, and Dormitories for Infants.

The Guardians particularly desire that the plans be so framed that the children may be kept totally apart from the adult inmates.

The sleeping accommodation for the inmates in health to be not less than 300 cubic feet of space for each inmate, and 600 cubic feet for each sick person.

A Well in the able-bodied men's yard, with a Pump to be fixed therein, to be worked by manual labour, of sufficient power to supply the establishment with water.

Cisterns for cold water, with requisite fittings.

Tanks under ground, to store the rain water from the roofs, with flushings to the drains.

Pumps in the washhouses, and reservoirs for the drainage.

The requisite fittings in the lavatories and water closets.

The house to be provided with open fire-places and a complete system of ventilation.

Stabling for about four horses.

The house to be built of bricks.

Any further extension of the buildings must be provided for with due regard to uniformity.

By order of the Board of Guardians,

JOHN SHAW, Clerk to the Guardians.

Tamworth, 16th July, 1856.

EXHIBITION of ART-TREASURES of the UNITED KINGDOM, to be OPENED at MANCHESTER in MAY, 1857.

PATRONS

Her Majesty the QUEEN.
His Royal Highness Prince ALBERT.

PRESIDENT

The Earl of ELLESMERE, K.G. Lord-lieutenant of Lancashire.

EXECUTIVE COMMITTEE

Thomas Fairbairn, esq. Chairman.	
The Mayor of Manchester.	Joseph Heron, esq.
Thomas Ashton, esq.	Edmund Potter, esq.
William Entwisle, esq.	Sigismund J. Stern, esq.

GENERAL COMMISSIONER.—John C. Deane, esq.

The object of the proposed exhibition is to secure a collection of the choicest and most instructive works which illustrate the Ancient and Modern Schools of Art Oil Paintings, Water-colour Drawings, Engravings, Sculpture in Marble and Stone, Carvings in Ivory and Wood, Bronzes, Coins, and Works of Artistic Excellence, in Gold, Silver, Steel, or Iron, in Glass and Earthenware, Terra Cotta and Pinder, will necessarily constitute the manufactures of the Exhibition.

The Executive Committee respectfully invite communications from possessors of Art Treasures who may feel interested in the success of a scheme which aims at the worthy illustration of the art-wealth of the United Kingdom.

From the known catalogues of the resources of the country, thus extended, the committee propose, with the assistance of officers of acknowledged competency, to make such a selection as will enable them to place before the world an Art Exhibition not less valuable to the student from its chronological arrangement, than attractive to the public from its beauty and completeness.

The committee do not desire to elicit from manufacturers specimens of their productions, either for competition or sale.

The Exhibition Building will be erected on a site adjoining the Botanic Gardens, distant about two miles from the centre of the City, and quite free from atmospheric impurities. Great consideration has been given to the mode of lighting the halls for the display of pictures and sculpture, and every precaution will be taken to protect the works of art from injury.

In all cases where desired by the owners, the Committee will insure the art treasures contributed.

There will be railway communication from all parts of England, direct to the Exhibition Building, and contributors will be received from, and returned to their owners, free of expense.

Communications may be addressed to the Chairman, Mosley-street, Manchester.—By order of the Executive Committee,

CHARLES H. MINCHIN, Secretary.

Offices of the Exhibition, 100, Mosley-street, Manchester.

CONTRACTS.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director-General of Contracts, at the War Department, Pall-Mall, London, on or before MONDAY, the 8th SEPTEMBER next, from all persons desirous of CONTRACTING with the War Department for the ERECTION of a MILITARY HOSPITAL, at NETLEY, in the parish of Hound, in the county of Southampton. Plans and specifications of the work may be seen, and forms of Tender, and every other necessary information obtained, on application at the Surveyor's Office at the War Department, Pall-Mall, London, till the 6th SEPTEMBER (Sundays excepted), between the hours of NINE A.M. and FIVE P.M. The site may be inspected, and information obtained on application to MAJOR RAVENHILL, Commanding Royal Engineer, Netley-cliff; or at the Royal Engineer's Office on the ground. The person whose Tender may be accepted, will be required to enter into a bond with two eligible securities, jointly and separately to be bound under a penalty of 10,000*l*. for the due performance of the Contract. Tenders to be addressed, "The Director-General of Contracts," War Department, Pall-Mall, London, and to be delivered free, endorsed, "Tender for Works for Military Hospital, Netley." No Tender can be admitted after the said 8th SEPTEMBER 1856.

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

R. O. MENNIE, Surveyor.

War Department, Pall-Mall, July, 1856.

ROYAL ENGINEERS' CONTRACTS.—WAR DEPARTMENT.—The War Department being about to enter into a CONTRACT for ALTERATIONS and ADDITIONS to certain portions of the ROYAL ARTILLERY BARRACKS, at Woolwich, such persons as may be desirous of Tendering for the same may receive information relative thereto by applying to the District Clerk of Works, at the Royal Engineers' Office, Grand Depôt, Woolwich, between the hours of TEN and FOUR, up to the 16th of AUGUST, 1856. Tenders to be delivered at the Office of the Director-General of Contracts, Pall-mall, London, on the 19th of AUGUST, 1856.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

NOTICE to BUILDERS.—CONTRACT for the ERECTION and COMPLETION of a MILITARY HOSPITAL, with Outbuildings and Enclosure Wall, at Sheerness.—The Command in Royal Engineer Office, Sheerness, will RECEIVE SEALED TENDERS at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 21st day of AUGUST, 1856, from such persons as may be desirous of CONTRACTING for the ERECTION and COMPLETION of a SOLDIERS' HOSPITAL, with OUTBUILDINGS and ENCLOSURE WALL, at Sheerness. The plans may be seen, and printed specifications and forms of Tender obtained, by persons fully competent to undertake the work (none others need apply), at this Office, between the hours of TEN and FOUR o'clock, from THURSDAY, the 7th, till WEDNESDAY, the 20th of AUGUST, 1856, Sundays excepted. The party whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 3,000*l*. for the due performance of the contract. Tenders for the above works to be addressed to "The Director-General of Contracts, Pall-mall, London," and endorsed "Tender for Military Hospital, Sheerness." No Tender can be admitted after the said 21st day of AUGUST, 1856.

N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Sheerness, Aug. 2, 1856.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—WAR DEPARTMENT WORKS.—Sealed TENDERS for the ERECTION of a FORT and BARRACK at Mount Tourville, Alderney, will be received by the Director-General of Contracts, War Department, Pall-mall, London, on or before the 30th day of SEPTEMBER next, after which date no Tender will be received. Detailed drawings may be seen, and every requisite information obtained, at the Royal Engineer's Office, Alderney, from the 7th to the 21st of AUGUST next, and at the Office of the Inspector-General of Fortifications, War Department, Pall-mall, from the 1st to the 21st of SEPTEMBER next. The terms of contract, specification for the works, and forms of Tender, can be procured at the Office of the Director-General of Contracts, War Department, Pall mall, London, and at the Royal Engineer Offices, at Guernsey and Alderney. Each Tender forwarded must be attached to a copy of the terms of contract and specification. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders. Tenders for the above work to be addressed to "The Director-General of Contracts," War Department, Pall mall, London, and endorsed "Tender for Erecting a Fort and Barrack at Mount Touraille, Alderney."

TO BUILDERS.—Notice is hereby given, that TENDERS will be received by the War Department, at their Office, Pall Mall, London, on THURSDAY the 28th day of AUGUST, 1856, from such persons as may be willing to undertake the ERECTION of a BARRACK for Married Soldiers, with OUTBUILDINGS, &c. at Portsea, in the county of Hants. The plans, specification, and contract can be seen, and every information had, on application at this office, on and after the 11th AUGUST, 1856, between the hours of TEN and FOUR each day (Sundays excepted). Tenders to be endorsed, "Tenders for the Erection of a Barrack for Married Soldiers, with Outbuildings, &c. at Portsea, in the county of Hants."

Royal Engineer Office, Portsmouth, July 30, 1856.

NOTICE to PAINTERS, CONTRACTORS, and OTHERS.—ROYAL ENGINEER CONTRACT.—The War Department being about to enter into a CONTRACT for PAINTING the Exterior Woodwork, &c. of the Buildings, &c. of the Royal Military Barracks at Woolwich, such persons as may be desirous of Tendering for the same may inspect the specification, and receive every necessary information relative thereto, by applying to Mr. CARTWRIGHT, Clerk of Works at the Royal Engineer Office, Grand Depôt, Woolwich, between the hours of TEN and FOUR, up to the 23rd AUGUST, 1856. Tenders to be delivered at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on the 28th of AUGUST, 1856. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Grand Depôt, Woolwich, 4th August, 1856.

TO BUILDERS.—Notice is hereby given, that TENDERS will be received at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on or before the 8th SEPTEMBER next, from such persons as may be desirous of CONTRACTING with the War Department for BUILDING NEW BARRACKS to accommodate 30 officers, and 1,000 non-commissioned officers and privates, at Gosport, in the County of Hants. The buildings to comprise commanding officers' quarters, officers' quarters, quarters for staff-sergeants and married soldiers, laundry, workshops and stores, soldiers' barracks, guard house, canteen, stable for officers' horses, coal-yard, engine-house, &c.; sinking wells, constructing tanks, drains, sewers, enclosure walls, and iron railings; planting trees, &c. &c. Plans and Specifications, with forms of Tender, may be seen, and all other information obtained at the Royal Engineer Office, Gosport, any day Sundays excepted, between the hours of TEN and FOUR, from the 2nd to the 14th of AUGUST to the 8th of SEPTEMBER, 1856. The whole of the works to be completed within 24 calendar months from the date of notification of acceptance of Tender. No notice will be taken of any Tender unless it be in the prescribed form. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Portsmouth, 30th July, 1856.

TO BUILDERS.—CHELTENHAM COLLEGE.—The Board of Directors of the Cheltenham College are willing to receive TENDERS for the ERECTION of a CHAPEL, in connection with the Institution. The drawings and specifications may be seen, and further particulars learned on Mr. W. L. BAILY, or Mr. JAMES HUMPHRIS, Architect, Cheltenham. The Tenders, which are to be sealed, and endorsed "Tender for New Chapel, Cheltenham College," must be delivered on Mr. W. L. BAILY, at the College, on or before the 1st day of SEPTEMBER next. The Directors do not pledge themselves to accept the lowest Tender.

D. J. HUMPHRIS, Architect.

London road, Cheltenham.

BRECON.—To BUILDERS.—Persons desirous of TENDERING for the RESTORATION and ENLARGEMENT of the Parish Church of St. Mary, Brecon, may see the plans and specifications, and obtain forms of tender, at the Architect's, No. 8, Bedford-square, London; or at their local Offices at Newport or Cardiff respectively; and also at Brecon, on or after AUGUST 13th. Tenders to be delivered to the Architect, No. 8, Bedford-square, London, or at their local Offices at Newport or Cardiff respectively, on or before THURSDAY, AUGUST 28th at HALF-PAST TWO o'clock precisely. They do not bind themselves to accept the lowest or any of the Tenders.

TO BUILDERS.—LITTLE BRICKHILL PARSONAGE, near Fenny Stratford.—Persons willing to CONTRACT for the ERECTION of a PARSONAGE HOUSE and OFFICES at the above place, may inspect the plans, &c. at Preston, and obtain Bills of Quantities on the 20th inst. at Mr. ARTHUR BILLING'S, 21 Buckingham-street, Adelphi, London, between the hours of TEN and FOUR, to whom sealed Tenders are to be delivered on or before the 26th inst. The quantities will be supplied. The Incumbent reserves the right of rejecting the lowest or any Tender. The Contractor will be required to enter into the usual bond, with two sureties, and approved sureties, at his own expense, for the due execution of the works.

[For remainder of Contracts see next page.

CONTRACTS.

BOROUGH of SUNDERLAND.
SEWERAGE WORKS.—CONTRACT No. 4. To IRON FOUNDERS and OTHERS. The Corporation of Sunderland are desirous of receiving TENDERS for the METAL and IRON WORK required in the Sewerage of the Borough, comprising—
CAST METAL PERFORATED PARTS.
CAST METAL PIPES.
CASTINGS FOR MAN HOLES,
GULLY TRAPS AND GRATES.
And other Iron or Metal Work required in the said work. The drawings and specifications may be seen on and after MONDAY, 28th day of JULY next, at the Office of WILLIAM CROZIER, Esq. C.E. Borough Engineer, East Cross-street, Sunderland, to whom Tenders are to be addressed, endorsed "Tender for Iron and Metal Work for Sewerage of the Borough," on or before SATURDAY, the 16th AUGUST, 1856.—By order,
WILLIAM SNOWBALL, Town Clerk.
N.B. The Corporation do not bind themselves to accept the lowest or any Tender.
Sunderland, July 24th, 1856.

BOROUGH of SUNDERLAND.
SEWERAGE WORKS.—CONTRACTS Nos. 4, 5, 6 and 7.
To CONTRACTORS, MASONS, EXCAVATORS, and OTHERS.
The Corporation of the Borough of Sunderland are desirous of receiving TENDERS for the EXCAVATING and MASONRY required for the following Sewers:—
Contract No. 4. BURDON-ROAD SEWER.
" 5.—LOW STREET SEWER.
" 6.—WELLINGTON-LANE SEWER.
" 7. NORTH QUAY and
WHITBURN STREET SEWER.
And any other Works in connection with the said Sewers. Plans and specification may be seen on and after MONDAY, 28th day of JULY next at the Office of WILLIAM CROZIER, Esq. C.E. Borough Engineer, East Cross-street, Sunderland, to whom Tenders are to be addressed, endorsed "Tenders for Sewerage Contract, Nos. 4, 5, 6, or 7," as the case may be, on or before SATURDAY, the 16th day of AUGUST 1856.
By order WILLIAM SNOWBALL, Town Clerk.
N.B. The Corporation do not bind themselves to accept the lowest or any Tender.
Sunderland, 24th July 1856.

DEEPING FEN DRAINAGE.—To BUILDERS and CONTRACTORS.—TENDER for Works.—The Trustee appointed to carry into effect the provisions of the Deeping Fen Drainage Act is desirous to be prepared at their next meeting which will be held at the Great Northern Hotel, in the town of Peterborough, on WEDNESDAY, the 27th day of AUGUST next, at TEN o'clock in the forenoon, to receive TENDERS for the CONSTRUCTION of a NEW SLUICE, with three Drainage openings and other Works connected therewith, to be erected at the outfall of the Vernatto Drain at the junction of the same with the River Welland in or near the parish of Pinchbeck, in the county of Lincoln, at a place called the Reservoir. Plans and Specifications of the same may be seen at the Office of Mr. LEWIN, the Engineer, Boston-street, Boston, on and after the 4th day of August next. The Contractors are to be prepared with the name and residence of their Surety at the time of tendering. The Trustees will not be bound to accept the lowest Tender nor bound to accept otherwise deemed eligible.
Dated this 21st day of July 1856.
By order of the General Board and Works' trustees,
JOHN CARTER, Clerk.

CARDIFF, GLAMORGAN.—TO BUILDERS.—Persons desirous of TENDERING for the ERECTION of TWO first-class semi-detached VILLAS at Canton, with walls, offices, &c.; also for TWO other VILLAS of similar character in another part of the town, for THREE HOUSES connected together, with walls and offices in each house, master drawings and specifications, and also a quantities, at the offices of the Architects, Messrs. W. and E. HABERSHON, 38, Bloomsbury-square, London; or at their local offices at Newport, Monmouthshire, by application to their resident clerk, Mr. DIXON; or at Cardiff, to their resident clerk, Mr. WELKINSON, on or after AUGUST 8th. Tenders to be delivered to Architects at Cardiff, on THURSDAY, AUGUST 28th, which do not bind themselves to accept the lowest or any of the Tenders.

THE LOCAL BOARD of HEALTH for TOTTENHAM are prepared to receive TENDERS from persons willing to contract for any of their Works, viz.:—
CONTRACT No. 20.—Making Two Barrows &c.
CONTRACT No. 21.—Laying cast-iron Water-pipes and a Drain.
CONTRACT No. 22.—Delivering about 40 Tons of Cast-iron Water-pipes and Castings.
CONTRACT No. 23.—Erecting an Engine and Boiler House, &c.
CONTRACT No. 24.—Making and Erecting a High-pressure Expansive and Condensing Steam-engine, &c.
The specifications, conditions of contract, drawings, and plans, may be inspected and further particulars obtained by application at the Offices of the Board, or at the Offices of PILBROW, C.E. (Engineer to the Board), Tottenham-green. Sealed Tenders properly endorsed and addressed to the Local Board of Health, Tottenham, Middlesex, to be sent in on or before THURSDAY, the 21st of AUGUST last. By order of the Board,
WILLIAM HEATH, Clerk
Tottenham, July 24th 1856.

AMBERGATE, NOTTINGHAM, and BOSTON and EASTERN JUNCTION RAILWAY and CANAL COMPANY.—Persons desirous of CONTRACTING for the ERECTION of the GOODS WAREHOUSE proposed to be built at the Nottingham Terminus, are informed that the drawings and specification may be seen at the Offices of Mr. T. C. HINE, Nottingham, from AUGUST 12th to the 20th inclusive. Sealed Tenders, addressed to the Secretary, to be delivered at the Company's Office, Saint Peter's-gate, Nottingham, on or before AUGUST 25th. Printed quantities will be supplied by the Architect, at whose Offices particulars may also be had with reference to the Contracts for the booking and parcels offices, refreshment-rooms, &c.
THOMAS C. HINE, Architect.
The lowest Tender not necessarily accepted.
Nottingham, 5th August 1856.

TO PUBLIC COMPANIES, CONTRACTORS, and OTHERS.—DEODORIZING SEWAGE.—The Southampton Local Board of Health being desirous of avoiding the discharge of the contents of the Sewers into the Tidal Waters, hereby give Notice that they are willing to enter into ARRANGEMENTS, upon liberal terms, with any Public Company or any responsible party, who may be prepared to ERECT the WORKS required for DEODORIZING the SEWAGE of the TOWN for the purposes of MANURE. Further information may be obtained on application to Mr. ANTHONY MORGAN, the Superintendent of the Sewerage Works; or of the Clerk, at the Public Health Office, Southampton.
CHARLES E. DICKON,
Clerk to the Local Board of Health.
Southampton, July 23, 1856.

MIDDLESEX and ESSEX TURNPIKE ROADS.—Notice is hereby given, that the Trustees of these roads are willing to receive PROPOSALS and to CONTRACT for 1,000 Tons of blue GUERNSEY GRANITE, of the best and hardest quality, broken to a gauge of two inches and one-half inch, and to be free from dust; and also, for the supply of 1,500 Tons of the best picked Scottish Flints, broken to the above gauge. The materials are to be delivered alongside the wharf of Messrs. Tyler and Barrel, at Dept. Essex, within eight weeks from the Tender being accepted, the Trustees to pay the expense of unloading the barges. If agreed upon, the said Granite and Flints be of the sort and size as instructed for, and delivered within the aforesaid time, payment will be made for the said material on the 15th of OCTOBER next. Any material not according to the above specification will be rejected and not paid for. Tenders sealed and endorsed "Tender for broken Granite," or "Tender for Kentish Flints," to be sent to this Office, on or before TUESDAY, the 19th of AUGUST next, with a sample of each description of stone, and of each sample is not so delivered in to the Office, the Tender will be rejected. The Trustees do not bind themselves to accept the lowest or any specific offer that may be made to them. The penalty for non-performance of the Contract is to cease to be set.
GEORGE DACRE, Solicitor and Clerk to the said Trustees.
Turnpike Office, Bow, July 28, 1856.

CONTRACTS.

MIDLAND RAILWAY.—To BUILDERS and CONTRACTORS.—The Directors of the Midland Railway are desirous of receiving TENDERS for the ERECTION of an ENGINE-SHED (to contain twenty four engines), PITTING-SHOP, and other BUILDINGS, at the Locomotive Station, and also for the ERECTION of an additional WORKSHOP for the Locomotive Department at Derby.—Drawings and specification for the above may be seen at the Engineer's Offices, Derby Station, on and after WEDNESDAY, 6th AUGUST next. Tenders to be delivered to the Secretary to the Way and Works Committee, Derby Station, not later than TEN a.m. on TUESDAY, 12th of AUGUST next. The Directors do not bind themselves to accept the lowest or any Tender.—By order
Derby, July 30 1856. JOSEPH SANDERS, Secretary.

TO BUILDERS and OTHERS.—The Paving Committee of the Vestry of Saint Mary, Newington, Surrey, will meet at the VESTRY-ROOM, in the Parish Church, on MONDAY the 18th AUGUST instant, at SEVEN o'clock in the evening, to receive TENDERS from persons willing to CONTRACT for converting an open shed and tool house at the Stone-yard of the Vestry, in Deanscl-mews, Cockspur-lis into STABLES, of three and four stalls respectively, and also for the ERECTION of a SHED at the before-mentioned Stone-yard. A specification of the work required to be done, may be seen at the Office of the Clerks to the Vestry.
H and E. CHESTER, Joint Clerks to the Vestry.
1, Church row, Newington-butts.

THE GREAT NORTHERN RAILWAY COMPANY.—To CONTRACTORS and BUILDERS.—The Directors are prepared to receive TENDERS for the ERECTION of FIFTY COTTAGE DWELLINGS, at New England, near Peterborough. Parties disposed to Tender may obtain the drawing, specification, and form of Tender (on which form only Tenders will be received) on payment of 5s. per set upon application at this Office, on or before WEDNESDAY, the 6th AUGUST. Tenders sealed up and marked "Tenders for Cottages," must be lodged at this Office before TWELVE o'clock at noon on TUESDAY, the 26th AUGUST instant, when parties tendering must be in attendance.
N.B.—The Directors do not bind themselves to accept the lowest or any Tender.
By order.
J. R. MOWATT, Secretary.
Secretary's Office, King's-cross Station, London,
5th August, 1856.

TO BUILDERS.—EAST and WEST KENT MILITIA STORE HOUSES, to be built at Canterbury and Maidstone.—Persons desirous of CONTRACTING with the Justices of the County of Kent for the ERECTION of MILITIA STORE HOUSES at Canterbury and Maidstone may inspect the plans and specifications, and obtain all other information, at the Office of the County Surveyor at Maidstone, on and after THURSDAY, the 14th instant, for the West Kent; and at the County Sessions House at Saint Augustines, for the East Kent, on and after MONDAY, the 18th instant; and they are requested to deliver Tenders for the said works to the County Surveyor at Maidstone, sealed and marked "Tender for Militia Store-houses," before TEN o'clock in the forenoon of SATURDAY, the 30th day of AUGUST instant, and to attend personally at the General Sessions, to be held at the Town Hall at Maidstone, at HALF-PAST TWELVE o'clock in the afternoon of that day. The lowest Tender will not necessarily be accepted unless approved in all respects. Security will be required for the performance of the contract, and the names of the sureties proposed are to be named in the Tender.
H. A. WILDES, Clerk of the Peace for Kent.
Maidstone, August 6, 1856.
N.B. The quantities will be furnished.

TO CONTRACTORS.—The Local Board of Health for Kingston-upon-Hull having determined to let the execution of ALL WORKS by CONTRACT, are prepared to receive TENDERS from parties willing to undertake the following WORKS for STREET PAVING and SEWERING, viz.:—About
7,000 yards super. of Foundations to Roadways.
4,700 " Paved Roadways.
3,900 " Macadam Roadways.
4,800 " Tooled Yorkshire Flagging and Flags, relaid
1,500 " Asphalted Footways.
3,100 yards lineal of Channels and Edge Curb.
350 " Glazed Fireclay Pipe Sewers.
Together with other Works, such as Manholes, Street-gates, and Gullies, &c. &c. connected therewith. Certain materials for the above will be supplied by the Board, and the works may be Tendered for in one or more Contracts. The drawings may be inspected, and every information obtained, at the Offices of the Surveyor to the Board, on and after MONDAY, the 11th inst. and until MONDAY, the 25th inst. when all Tenders must be delivered, sealed, signed, endorsed, and addressed to the undersigned. A printed copy of the specifications, with form of Tender, schedule of prices and abstract of quantities, may be had upon payment of 5s. The Board does not bind itself to accept any Tender, and the Tender accepted will have to be guaranteed by sufficient sureties, on the signing of the contract. By order of the Works Committee
C. S. NEWMAN, C.E. Surveyor to the Local Board.
Sculcoates-Hall, Hull, 4th August, 1856.

COUNTY of WORCESTER.—To BUILDERS and OTHERS.—Persons desirous of TENDERING for the several WORKS required in taking down the present and erecting a NEW EAST WING, also for the erection of a THREE-CLASS DEBTORS' PRISON, at the Worcester County Gaol, may inspect the plans and specifications, and obtain any information in reference to the same, at my Office, 47, Foregate-street, Worcester. Sealed Tenders to be forwarded to me on or previous to the ensuing Quarter Sessions, on FRIDAY, the 26th inst. endorsed "Tender for East Wing and Debtors' Prison." No pledge is given to accept the lowest or any Tender unless satisfactory.
HENRY ROWE, Jun. County Surveyor.
Worcester, August 7th, 1856.

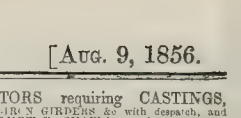
BOROUGH of LEEDS.—To CONTRACTORS.—WANTED, by the Town-hall Committee of the Borough of Leeds, TENDERS for the ERECTION of a TOWER on the New Town-hall. Plans and specifications may be seen at the Office of Mr. CUTHBERT BRODRICK, Architect, Leeds, on and after the 24th instant, and sealed Tenders are to be sent in to the Town Clerk's Office, on or before the 13th AUGUST next, addressed "To the Chairman of the Town-hall Committee." Tender for Town-hall Tower. The Committee do not pledge themselves to accept the lowest Tender.—By order,
JOHN A. IKIN, Town Clerk.
Leeds, 18th July, 1856.

ROYAL POLYTECHNIC.—Patron, H.R.H. Prince ALBERT. — On Monday, August 11th, at Eight p.m. Henry Mayhew, Esq. author of "London Labour and London Poor," will lecture on "The Humours of Street Life." Lectures by J. H. Pepper, Esq. on "Chemistry," and "The Moon Controversy."—Dissolving Views, illustrating the Pilgrim's Progress, Kenilworth, and the Destruction of Covent-garden Theatre. Engagement of Angelo Bellairini, Esq. and the Misses Bennett, for their Scottish Musical Entertainment, every Tuesday, Thursday, and Saturday Evening, at Eight.—Admittance 1s.; Children and Schools half-price.

SOUTH WALES RAILWAY.—Notice is hereby given, that the next HALF-YEARLY ORDINARY MEETING of the PROPRIETORS of this Company will be held at the Great Western Royal Hotel, Paddington, on TUESDAY, the 26th day of AUGUST next, at ONE o'clock precisely, for the general purposes of business.
A resolution will be submitted to the meeting for the purpose of authorising the conversion into stock of shares in the capital of the Company.
The transfer books will be closed on the 6th August, and will not be re-opened until after the said Half-yearly General Meeting on the 30th August.
By order, FRED. G. SAUNDERS, Secretary.
Offices, South Wales Railway Company,
10, Eastbourne-terrace, Paddington, July 29, 1856.

CONTRACTORS requiring CASTINGS, WROUGHT-IRON GIRDERS &c with despatch, and punctuality, MATTHEW T. SHAW has such arrangements that deliveries are made in a few days. Contractor for Plant and Stores of every description.—64, CANNON-STREET.

TO CONTRACTORS AND BUILDERS.
WROUGHT-IRON GIRDERS for BRIDGES and BUILDINGS, manufactured and guaranteed as to strength.
CAST-IRON GIRDERS, for BRIDGES and BUILDINGS.
Castings of every description.
ROLLED WROUGHT-IRON FLITCHES, for trussing between timber.
Orders executed in three days
STORES, BOLTS & NUTS, SPIKES, RIVETS, CUT NAILS, WROUGHT ditto, SCREWS, BOND IRONS, CHAIN, &c.



CONTRACTORS' PLANT, RAILS, EARTH WAGGONS, and IRON WORK, for Wood Waggons, &c.
MATTHEW T. SHAW,
64, CANNON-STREET (late with C. J. Mare and Co.)

WROUGHT IRON GIRDERS, Steam Boilers, Gas Holders and Gas Apparatus, General Castings, Chains, Cables, and Contractors' Iron Work, Manufactured by MILLHOSE and HUSSEY, Phœnix Works, Tividale, near Dudley.—London Office, 73, Hatton-garden.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one fourth or one fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.			
13	"	20	"
18	"	23	"
14	"	26	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

A. MOREWOOD and CO. (late Morewood and Rogers), Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.
PLAIN or CORRUGATED, and Curved, of all Gauges. Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

WILLSON and ROBINSON, GALVANIZING and CORRUGATING IRONWORKS, CHURCHILL-ROW, LIMEHOUSE, LONDON.

MALLET'S PATENT BUCKLED PLATES.
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS,
No. 3, Mansion-house-place, London, and No. 6, Berkley-street, Birmingham.
For Plan, Section, and Description, see "The Builder," May 17.

JOHN WALKER, Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor
IRON MERCHANT, &c.
Offices and Works—Mill-wall, Poplar, London.

BUILDINGS HEATED BY HOT WATER.
G. B. COOPER,
IRONWORKS, 191, DRURY-LANE,
DRYING CLOSETS for HOSPITALS, UNIONS, ASYLUMS, &c.
BATHS, HANGES, GAS-STOVES,
HOT-PLATES STEAM and GAS-COOKING APPARATUS, for HOTELS, MANSIONS, &c.
G. B. C. has recently fitted up the Crystal Palace Kitchens with Gas-cooking arrangements upon an extensive and most complete scale. Ornamental and Constructive Ironwork.

SKAIFE and POLLOCK,
Manufacturers of
PATENT GALVANIZED IRON,
Sheets, corrugated and plain, Fencing and Telegraph Wire, Bars, Rods, Hoops, Nails, Screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.
IRONWORK GALVANIZED
Roofing orders promptly and carefully attended to.
Office Commercial-road, Limehouse, London.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).
WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

JOHN HENDERSON PORTER, ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

IRONMONGERY.
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.
TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's improved ventilators.—HULETT and CO. 53, High Holborn.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

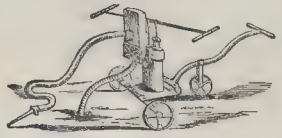
ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

ON SALE AND HIRE,
SINGLE AND DOUBLE PUMPS
IN WROUGHT IRON
TO ANY DEPTH,
FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.
Sizes, from 3-inch to 15-inch barrels.

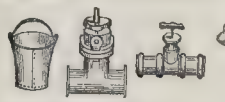
N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.



B. FOWLER, HOLMAN, and CO.
SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.

The simplest, cheapest, and best thing of the kind before the public; admirably adapted for all substances; valve ways three times usual size, made to suit liquors of all kinds, hot or cold; is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

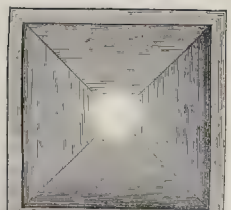
B. FOWLER and CO.'S
FARM and COTTAGE PUMPS, 30s



All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps, Engine Frames, Horse Gear, Crabs, Pulley Blocks, Wrought Pails, and Ribbon Baskets, Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJAMIN FOWLER & CO. GENERAL ENGINEERS, WHITEFRIARS-STREET, FLEET-ST.



Plan and Section of Buckled Plate: Convex Side.

MALLET'S PATENT BUCKLED PLATES.

TUPPER AND CARR,

SOLE LICENSEES AND MANUFACTURERS.

THESE Plates are applicable to every purpose where strong, rigid, light, and durable load-sustaining surfaces are demanded; as for the Flooring of Bridges, Viaducts, Jetties, Fireproof Floors for Buildings, Fireproof Partitions, Bulkheads, Doors, and Shutters; the Plating in betwixt Iron Piling for Wharf or Dock Walls; the Covering of Iron or other Roofing, as for Building-Slips in Dockyards, for Railway Stations, &c. The construction of Iron, Military, Colonial, or other Huts, Stores, and Iron Buildings of all sorts; the Formation of Water-Tanks; the Covering of Reservoirs of Waterworks; and, generally, to every purpose to which Corrugated Iron has been applied, besides many others to which that is inapplicable, as, for example, the Construction of Balcony or Cantilevered Galleries, Projecting Footways, &c. the Plates deriving their support solely from themselves and the walls

BUCKLED PLATES may be united to each other, or to the frame of the structure they cover, by either lap or butt joints, and either by screw bolts, rivets, or wood screws (to timber), and the joints are made absolutely water-tight when required, by rivetting and chinking up, or by interposed strips of felt saturated in oil cement, or in tar and pitch, or by strips of vulcanised India-rubber, or by a thin layer of oil putty.

The sizes of the Patent Buckled Plates are—4 ft. by 4 ft.; 3 ft. by 3 ft.; 4 ft. by 2 ft.; and 3 ft. by 1 ft. 6in.

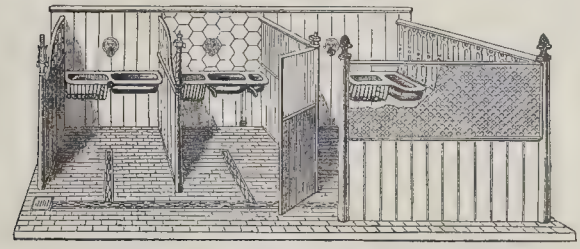
Other sizes by agreement.

For further particulars, prices, &c. apply to the Licensees,—

TUPPER AND CARR,
3, MANSION-HOUSE-PLACE, LONDON, AND 6, BERKLEY-STREET, BIRMINGHAM.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT-IRON RACK, united to an iron top-plate, and forming one complete and useful fixture, having Cottam's Patent Noiseless Halter-Guide and Collar-Rein attached, the ball of which is taken to the back of the manger, and works with ease and freedom up or down the guide-bar. Cottam's new Patent Seed-Box, of galvanized sheet-iron, is an important addition to the above fittings, being simple in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings. Cheap and Durable Corn-Bins.

Improved Surface-Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.

The new Illustrated Catalogue for 1856, and estimates gratis, upon application to

COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

FLAVEL'S PRIZE KITCHENER.

The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

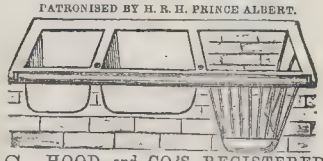
The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

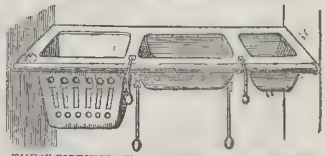
SOLE AGENTS:
BENHAM AND SONS,
19, WIGMORE-STREET, LONDON;
and at the Crystal Palace, Sydenham.

PATRONISED BY H. R. H. PRINCE ALBERT.



S. HOOD and CO.'S REGISTERED STABLE-FITTINGS, with FRONT REVOLVING ROLLER, plain or enamelled. GIRDERS (cast and wrought-iron), COLUMNS, Sash-Weights, Rain-Pipes, Eaves-Gutters, variously moulded. Ornamental Rain-Pipe Heads, of Gothic and other designs, and all castings connected with buildings, in London time, and at country prices
CASTINGS WAREHOUSE, 68, UPPER THAMES-STREET.

BARTON'S PATENT SAFETY STABLE FITTINGS, and ENAMELLED MANGERS.



THESE FITTINGS will be found to possess all the latest and most important improvements, and are of the best manufacture. All kinds of Stable-furniture in stock. Iron Hurdles, Gates, Fencing, Tomb-railings, &c. New illustrated Catalogues forwarded on receipt of two postage-stamps. JAMES BARTON, Ironfounder, &c. 370, Oxford-street, London

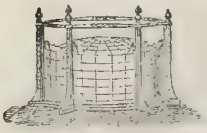
COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axle-trees, sugar-mills, &c.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, supply Lightning Conductors, with the patent, at all stages complete for fixing, at one shilling the foot. R. S. NEWALL and CO.'S Patent Copper Rope Conductor is being applied by architects, engineers, and scientific men in all parts of the world.

COPPER and IRON CORD for WINDOW SASH-LINES.

OFFICES, Gateshead-on-Tyne.
139, Strand, London.
67, Hyde-park-street, Glasgow.
27, Dale-street, Manchester.

STEVENS AND SON,
ENGINEERS,
IRON AND BRASS FOUNDERS AND MANUFACTURERS;
CONTRACTORS
FOR THE
ERECTION OR ALTERATION OF GAS-WORKS FROM TWENTY LIGHTS UPWARDS,
With Buildings, Mains, Meters, Service-Pipes, Lamp-Posts, Lamps, and Gasfittings
WATERWORKS FOR THE SUPPLY OF TOWNS,
WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.



Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds; these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c.
Gas Cooking Stoves and Ranges on the most improved principles.
GAS-FITTING IN ALL ITS BRANCHES.
GAS CHANDELIERS OF ALL SIZES, IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS.
DEVICES FOR GAS ILLUMINATION.
IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.
These Turnstiles have been selected for the Entrances of the Great Exhibition, New York.
PATENTEES OF THE SEMAPHORE RAILWAY SIGNAL.
Signals for communication between Guard and Engine Driver. Railway Stores and Lamps of every description.
DARLINGTON WORKS, 16 to 19, SOUTHWARK-BRIDGE ROAD, LONDON.

TYERMAN'S PATENT HOOP-IRON BOND,
FOR BUILDING PURPOSES.
ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

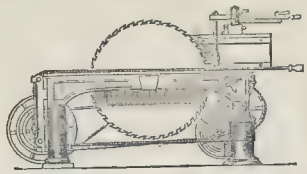
TARIFF OF PRICES
Beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1¼	78. 4d.
15	1½	78. 6d.
15	1¾	88. 0d.
15	2	88. 4d.
15	2½	98. 6d.

THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches) is now being extensively used in the leading GOVERNMENT WORKS, DOCKS, BUILDINGS, BRASS, ASYLUMS, BRIDGES, VIADUCTS, PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in London and in all parts of the kingdom.

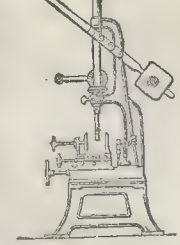
Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.
London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Roller and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines, for Sawing, Planing, Groving, and Moulding Wood. They have constantly on hand machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, shipbuilders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches, and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace.—A descriptive Catalogue, with Drawings, may be had on application, KING'S-ROAD, CHELSEA.

NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

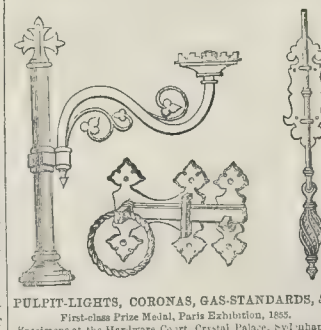
HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea. HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be efficiently warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

TO IRONMONGERS AND THE TRADE GENERALLY.

D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show—every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list, 16s.—93 and 95, High Holborn.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London.



PULPIT-LIGHTS, CORONAS, GAS-STANDARDS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham.
Illustrated Price-catalogues post free on application.

WOOD-CUTTING MACHINERY,
JOHN M'DOWALL and SONS,
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,
MANUFACTURERS of VERTICAL SAW-FRAMES
(driven by strap),
For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached, circular cross-cut radial sawing machines; patent portable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from ¼ of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power morising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first class workmanship. Mr M'Dowall has been in the engineering and millwright business for upwards of 36 years, but during the last 21 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work, without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe. Applications as above for further particulars, will be promptly attended to.

TO ARCHITECTS AND BUILDERS.
HAWKINS'S REGISTERED COPPER and TINNED IRON SASH-CHAIN is greatly approved for its strength, durability, and facility in running over pulleys; and when work'd at its warranted load, will be found one of the most useful and efficient inventions for hanging window sashes of any weight up to 4 cwt.—May be obtained from every respectable ironmonger in the kingdom. Manufactory, No. 27, Dale-end, Birmingham.

LOSH, WILSON, and BELL,
NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and
STEWART'S PATENT CAST-IRON GAS and WATER PIPES.
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Ditto, with plain clips cast on	1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.	1s. 8d.	1s. 9d.
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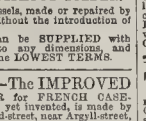

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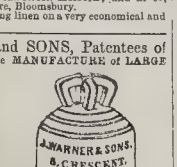

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The importance of this invention, to which the Directors of the Timber Bending Company desire to call the attention of ship-builders, can hardly be over-estimated, for it effects great saving of time and money in the manufacturing of wood, a raw material which, from its increasing employment, ranks next to cotton and iron in the amount of capital it engages, and the variety of purposes for which it is used.
The Directors have fully investigated the merits of the invention, and submit the following statement, based on reports from practical and scientific men (W. Fairbairn, George Rennie, Dr. Hooker, &c.), as a confirmation of their opinion as to its great value and importance:—
The strength of the wood is much increased by the operation at the patent, and prepared in the form as not in any way injured; the wood becomes almost impervious to damp, whilst its increased density renders it less liable to take fire; its rigidity, hardness, and durability are increased.
The present expensive method of cutting and shaping timber will be superseded, and an actual saving of from one to three-fourths of the material will be made by employing this invention.
The present method of bending timber is exceedingly limited, expensive, and by no means satisfactory, while those parts of the wood where the curvature is greatest are rendered invariably the weakest; whereas, by the new system, timber of any description, and of almost any size, can be bent inexpensively, with the most perfect results, and a great increase of strength at the very point where strength is most required.
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The owners of the patents are to receive 12,000 paid-up shares for all interest in the patents for Great Britain and Ireland. The remainder of the capital will be applied to the general business of introducing the invention into the chief cities and ports of the United Kingdom.
Prospectuses and forms of applications for shares may be obtained of the Secretary, at the Offices of the Company, Greshamhouse; or of Messrs. HICHENS, HARRISON, and CO. 21, Threadneedle-street.
Applicants will be required to pay the sum of 5s. per share on the shares applied for, to Sir SAMUEL SCOTT, Bart. and CO. or the Bank of London, to the credit of the Company, when a amount will be retained on account, and a further sum of 15s. on allotment. The remaining 4l. will be called up at such periods and in such manner as the Directors may appoint. Should not all the shares applied for be allotted, the amount deposited in respect of those refused will either be returned, or credited to the applicant, on account of the above sum, of 5s. per share on the shares allotted.

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The Builder.

Vol. XIV.—No. 705.

MORNING may be spent very profitably in the newly-arranged *Ceramic Court* in the Crystal Palace, at Sydenham. The Greek term from which "ceramic," or, more strictly, "keramic," is derived, was applied to every sort of manufacture in which plastic clay was used, whether bricks or vases. We accordingly find in this collection the rude pottery of the Celts, the Mexicans, and the Peruvians; the mortuary vases of the Italo-Greeks, and the unglazed pottery of Rome, as well as the exquisite enamelled work of Luca della Robbia, the Majolica ware of the Renaissance, and the delicate productions of Sèvres. In many respects it is a collection of value unprecedented as a public exhibition. There are illustrations of a class such as many manufacturers never saw before, and which they had not considered within the capabilities of the manufacture; and the publicity given to these will be greatly influential in aiding the progress of this branch of our manufacture.

Hereafter, we shall hope to see the collection made more complete with regard to terra-cotta as applied to architectural decoration, the study of which could scarcely fail to produce good results. Taste gives value to the commonest material. A pound of clay touched by a cunning hand is made worth much more than that weight of gold. As an enthusiastic Frenchman of the beginning of the last century wrote of Fayence ware, —

> "Mieux que l'or elle garde et sa forme et sa grace,
> Sur l'argile jamais la couleur ne s'efface:
> Non, le temps qui détruit la pierre et le métal,
> Ne sçauroit altérer ni l'azur, ni l'émail."

Let us look at the modern art a little historically. When the Crusaders had taken Majorca in the twelfth century, they brought Moorish pottery into Italy, and porcelain plates, part of the spoil, are found decorating the façades of buildings in Pisa and elsewhere. No attempt to produce similar pottery was made for a long time: the earliest specimens of Majolica made in Italy belong to the fourteenth century. Coloured plates of earthenware were made at Pesaro about that time, for the express purpose of decorating the fronts of churches. It was at the end of this century that Luca della Robbia, to whom ceramic art is greatly indebted, began his experiments. Luca was born in 1388, and was one of the sculptors employed on Giotto's Campanile, at Florence. Ultimately he gave up working in marble and bronze, and devoted himself wholly to terra cotta. His frieze of The Singers, in another part of the Crystal Palace, is of itself sufficient to give him fame as a sculptor. The improvement in ceramic art introduced by Luca della Robbia, consisted in the use of a thin opaque glaze in place of the old clay veneer. The glaze was produced by tin and sand, with a small quantity of antimony and other metals. His nephews carried out his process to the sixteenth century, and when they died, or soon after, the process was forgotten.

An artist known as Maestro Giorgio initiated a series of processes which greatly benefited the art. "Their chief peculiarity," says Mr. Wyatt, "is that of a very simple body, covered with tin enamel, and floated over with a white glaze, on which, in free colours, the artist painted a design, the draperies of which glow with a brilliant ruby colour, the secret of the preparation of that pigment being known only to himself. On the completion of the painting, the whole was frequently covered with a strong colourless glaze, almost identical in appearance with that forming the surface of the celebrated terra-cottas of Luca and Agostino della Robbia."* The son of Master Giorgio carried his father's processes to a yet higher perfection. Giorgio's, and similar wares, attained their greatest degree of popularity between 1520 and 1560, when the designs of Raffaelle and Julio Romano were transferred to plates and dishes.

The collection of M. Soulages, of Toulouse, which has been obtained for this country at the price of 11,000*l.* by the guarantee of a number of lovers of art, will be found, according to the report of Mr. Webb, who valued it, to contain "specimens of most of the celebrated potteries of Italy: amongst them will be found no less than fifty-two plates and dishes attributed to Maestro Giorgio, one quite unique, and of great value, representing the portrait of Perugino, after a drawing said to have been furnished by Raffaelle to the fabric at Urbino; also various interesting vases and cups of the same character, one of which is of the rarest beauty." "The Palissy ware, though confined to a few specimens, boasts of a ewer or vase remarkable for its finish, beauty, and colour; and the like is not now to be met with. In every section, indeed, there is something to mark a superior character to anything that can be obtained at the present moment."

Bernard Palissy, just named, must not be overlooked in our sketch: some specimens of his ware are in the new Court, and will serve to recall the memory of a man of rare talents and of great perseverance. Every one has heard how that, having spent all the money he had borrowed to construct a new furnace, he burnt the floor-boards of his house and his own furniture, to carry on experiments: and how he persisted, in spite of the lamentations, not to say abuse, of his wife, and ultimately achieved fame and fortune. Becoming a Protestant, however, he was thrown into the Bastille, where he died in 1589, at the age of ninety. In the fine collection at the Hôtel de Cluny, Paris, there are numerous specimens of the curious and well-known ware more especially characteristic of him, which shows plates and dishes covered with objects in relief and coloured, intended rather as sideboard ornaments than for use, since to eat a dinner off a plate occupied by a fish, a snake, a dozen shells, and sea-weeds *ad libitum*, all hard and in high relief, could scarcely be convenient at any period.

Palissy was a naturalist, it should be noted, and moulded his works from nature. He adhered scrupulously, too, to the shells, reptiles, and plants of the Paris basin. At the sale of the Bernal collection, one of his dishes, 12 inches across, with a lizard in the centre, was sold for 162*l.*! This might have comforted his wife in her distress, if she could have foreseen it.

Majolica ware now brings fabulous prices. Plates have been thought cheap at 50*l.* a-piece, and a dish, 15¾ inches in diameter, was knocked down at the Bernal sale for 142*l.* It is true this had the metallic lustre, and bore the mark of Maestro Giorgio, the artist. Think of a Sèvres cup and saucer being worth 160*l.* and a small vase and cover, 87*l.* 10s.! At all events, these were the sums paid for two such lots at the same sale. Four Sèvres vases, not many inches high, brought at the sale of the same collection, the enormous sum of 3,360*l.*; and the Queen has three small vases, for which a dealer once told us he would willingly give 4,000 guineas! We are getting on, however, a little too fast.

The first European porcelain manufactory was at Meissen, near Dresden, under the direction of John Böttcher, originally an apothecary's assistant, at Berlin. It was a little before 1706 that he discovered the composition of porcelain. He was appointed director at Meissen in 1710, and succeeded in making perfect porcelain in 1715. His life is a romance. He is described as keeping his workmen awake during experiments in the furnace, which lasted three and sometimes four days, by his gay and rattling conversation.* The proceedings at the manufactory were concealed with the greatest care, and every workman was sworn to secresy: one of the foremen, however, escaped to Vienna, and the secret spread over Germany.

The French term, *Faience*, or *Fayence*, under which term Majolica ware was included in France, is derived by some from Faenza, in Italy, and by others, amongst whom we are disposed to place ourselves, from Fayence, in the department of the Var, not far from Cannes, in France. The authorities on the question, such as they are, are quoted by Mr. Marryat in his "Collections."

It was only 100 years ago—namely, in 1753—that Louis XV. who had become interested in the success of a new establishment possessing the secret of the composition of *Pâte tendre*, or soft clay, took a share in the concern, and conferred on the works the title of the Royal Manufactory. In the following year the operations were transferred to Sèvres, where a large manufactory had been erected for the purpose; and in 1760 the king paid off his partners and became the sole proprietor. The precise admixture of the material, which was a vast improvement over that of the Italian Majolica ware, engrossed the attention of the best chemists of France, and its adornment was confided to the best artists. A change was now about to be made in the material. A long-pursued examination of Oriental china, which was imported into Europe at the beginning of the sixteenth century, led to a knowledge of its constituents, kaolin and feldtspar; but it was not till the commencement of the eighteenth that the proportions in which these were mingled, and the sources from which similar materials could be procured, were determined. Manufactories were then established in Dresden and Vienna. Accident showed that there was a good supply of kaolin at Saint Yrieix, in France; and in 1768 the fabrication of *porcelaine dure* was established at Sèvres, and soon superseded altogether the *porcelaine tendre*. Maintained at the cost of the state, and prosecuted solely with a view to the credit of the country, works of great beauty and value have been produced there.

The exhibition of the specimens comprised in the collection at Sydenham cannot fail to aid materially the progress of English manufacture in a branch of art which has of late years made important advances. Many of the works are of a character rarely if ever submitted to public inspection, and which have hitherto been confined to the cabinets of the connoisseurs. Their almost fabulous value, and the fragile nature of their material, made it a matter of doubt whether such a collection could be formed; but this has been accomplished by the assiduity and management of Mr. Thomas Battam, and it affords a gratifying proof of the growing disposition on the part of collectors of rare works of art, to allow the educational influence they possess to be made available for the purposes of national improvement.

The Court itself is divided into two compartments, which are thus appropriated: — The inner space, which is on the terrace side of the building, is devoted to an historical collection

* "Industrial Arts of the Nineteenth Century."

* Marryat's Collections towards a History of Pottery and Porcelain. Murray.

of Pottery, chronologically arranged. The outer space, opening on the nave, contains a selected epitome of the finest works of various manufactures, so grouped as to present their beauties and peculiarities most favourably. The historical collection contains examples of the ancient and modern pottery of Egypt, of the early Etruscan ware from Chiusi, lent by Sir Gardner Wilkinson, and Italo-Græco and early Peruvian, from the collection of Arthur Anderson, Esq.

The examples of the Italian Majolica are very numerous and valuable. They illustrate the manufactures of Pesaro, Castel Durante, Faenza, Gubbio, and Urbino; in the works of Andreoli, Maestro Giorgio, Orazio Fontana, Patanazzi, and others. The specimen of the gold and ruby lustres of the inventor, Giorgio, are of extraordinary brilliancy. The greater portion of these examples are from the private collection of Mr. Isaac Falcke.

There are also examples of the enamelled ware of Lucca della Robbia, an interesting series of the stone pottery of the Rhine (fourteenth century), and illustrations of the works of Bernard Palissy.

An interesting series of the early pottery of Staffordshire, lent by the committee of the Stoke-upon-Trent Athenæum, will be arranged in a few days.

In porcelain, the examples include those of the Oriental era, illustrated by vases and miscellaneous articles, lent by the Duke of Devonshire and Lady Rolle. One pair of vases, about 5 feet high, lent by Mr. David Falcke, are very important works; as is also a large vase of Oriental enamelling on copper.

Porcelain of Persia; Böttcher's first porcelain, made at Meissen (red); and that subsequently produced at Nymphenburgh, will also be found.

The French commence with examples of the first soft porcelain of St. Cloud, Chantilly, Sèvres (both soft and hard), Tournay, Courbelle, and Angoulême. Lady Molesworth has lent several valuable examples of Capo di Monte, Nymphenburgh, Dresden, and Chelsea porcelain.

Let us now look specially into two or three of the cases which illustrate more particularly those portions of the history of the art we have sketched.

Of *Dresden* china there are numerous valuable examples, in groups of figures,—birds life size—and vases. It will be observed that the figure painting of the Marcolini period is especially fine. The group of Apollo and the Muses is a very important example of this manufacture. So is the group representing the Temple of Bacchus, with figures of Bacchus and Ariadne, and Fauns, formerly used as a plateau upon the tables of the Electors of Saxony.

Of the *Vienna* work there are some examples wherein the figure painting is of high quality. The gilding in some of these specimens, both as to style and its peculiar manipulation, stands quite alone in its excellence. Some of our leading manufacturers should study this work and turn it to account. We are aware that gilding so executed must be costly, but we feel assured that, produced with equal success, it would find purchasers. It is surely worth the trial.

The *Berlin* specimens display figure painting of great merit,—highly elaborated. It is in this respect that we fail comparatively. Our material and our glaze are as good, but we cannot command artists for the painting.

St. Petersburgh supplies a pair of very large vases, more than 3 feet high, presented by the Grand Duchess to Lady Rolle, by whom they are lent. These exhibit painted subjects of considerable merit; doubtless, however, the products of artists from Sèvres.

Of the *Sèvres* manufacture there are numerous works of the very highest class and value, including the *pâte tendre* of old Sèvres. The figure paintings, portraiture, and jewelled designs upon this ware, from the collection of General the Hon. Edward Lygon, are of the rarest excellence. Compare them with the best of the recent works in England, good as these are, and the great beauty of the former is made more apparent. Mr. David Falcke has lent several pieces of the celebrated service of *pâte tendre*, executed at Sèvres by order of Louis XVI. and exhibited at the Fête of Versailles in 1783. The figure painting is by Popon and Guet. Corresponding pieces are in the possession of her Majesty, at Windsor Castle. Several of the plates exhibited cost 250 guineas each. General Lygon's larger dish would probably fetch 600 or 700 guineas. The smaller dish, jewelled Sèvres, is a most brilliant specimen. The little teapot, too, with a female head upon it is a gem.

Some specimens of the *Fulham* ware and *Chelsea* ware serve as reminders of attempts which were not met by the public as they should have been, and, conjoined with the works of Wedgwood, must make all regret that, so much having been achieved in England, the art was suffered to collapse.

The manufactory at Fulham, was established in 1684, by Mr. John Dwight, an Oxfordshire man, who had a patent for certain wares. The proprietor at Chelsea, was a silversmith by profession: he has left on record a memorial, setting forth, that unless the law against the admission into England of foreign china otherwise than for private use be enforced, any attempt to establish a manufactory there, including that at Chelsea, must be ruined. The works at Chelsea were established in the middle of the last century. Several fine examples now exhibited will stand comparison with foreign works of the same period. One pair of vases, about 30 inches high, of *gros bleu*, with gold birds, are very remarkable, both for size and quality. These are lent by W. Pole Thornhill, Esq. M.P. The gilding in the Chelsea specimens is very good.

Then we find some examples of *Early Worcester*—a manufacture which also takes a high position. The figure-painting on some of the examples is extremely good—fully warranting the early fame attaching to this manufactory. This fame, judging from the admirable specimens sent by Messrs. Kerr and Binns, the present proprietors, is likely to be revived and extended. Their jewelled ware is of the highest class of excellence. In their adaptations of the Limoges enamelling upon porcelain, including the duplicate of a tazza executed for her Majesty, the drawing is admirable. These works are, of course, costly: the plates are priced at about 25 guineas each.* These manufacturers have been at large expense in training artists to this work, and it is hopeless for them to expect a remuneration unless its excellence receives a public acknowledgment.

The career of Wedgwood, at Burslem, in the middle of the last century, was an extraordinary one: he brought the art of a Flaxman to bear on clay for domestic purposes, and gained for his manufacture before he died (in 1795) a world-wide reputation. Examine carefully the two cases here of what we may call Wedgwood-Flaxman ware; notice the beauty of the designs, the grace and elegance of the modelling. Some of the cameos are as delicate as if executed in wax. There is nothing in the Court more purely beautiful than these works, and their value commercially is considerable: one of the cups and saucers in the collection cost eighty guineas.

Foremost in the collection of modern works, evidences of the successful endeavours which have been recently made in England to retrieve our position in the art, are the productions of Minton and of Copeland, productions which in the Paris Exhibition showed, whatever might be the case with respect to the very highest branches of the art (for the promotion of which abroad Government care in training and Government subsidies have been long applied), that in wares which administer to the comfort and enjoyment of the masses the English manufacturers were superior. In 1850 Mr. Minton, to whom pottery in England owes so much, was led, by becoming possessor of a frieze ascribed to Lucca della Robbia, to make many endeavours to imitate the material, and was very successful in his endeavours. He exhibits on the present occasion very excellent samples of majolica ware, vases, tripods, and figures. Mr. Copeland has a vase 5 feet high, which, so far as regards the material and the firing, is an achievement. The service of jewelled ware executed for the Queen is beautiful, and the specimens of *gros bleu*, with Grecian designs in gold, should not escape notice. Amongst the works in statuary porcelain, the early development of which is due to the Art-Union of London, the bust of Clytie, the full size of the original in the British Museum, may be pointed to as a remarkable production.

With a word of praise to Messrs. Ridgway and Bates, for their ordinary ware, some of which is excellent, and to Mr. Battam for his successful exertions in forming and arranging the collection, we must here terminate our notice. We have said enough to show that we consider this exhibition likely to assist materially the progress of Ceramic art in England, and we commend it heartily to the serious consideration of manufacturers, the Government, and the public.

* The Shakspeare dessert service, exhibited by the same firm, although open to criticism, demands commendation as a most praiseworthy effort.

THE ARCHÆOLOGICAL INSTITUTE IN EDINBURGH.

The meeting in Edinburgh must be considered a successful one. Many valuable papers were read, and the temporary museum contained a number of rare and interesting matters, making all necessary deductions for the "Cromwell Pot," called Bruce's helmet, and the flint musket, exhibited as the identical weapon with which Hamilton of Bothwellhaugh shot the Regent, in 1573. This may have been the musket used in Mr. Angelo Slous' play, founded on the occurrence, but could scarcely have been handled by the veritable Hamilton.

The weak place in the conduct of the congress was that with reference to the excursions. These were ill-managed, and have led to many complaints. Without attempting to give any connected account of the proceedings, we note some of the communications likely to interest our readers. Mr. Robert Chambers gave great assistance, and hospitality was not wanting. At the opening meeting, after Lord Talbot de Malahide's speech, Dr. Collingwood Bruce read a paper showing the advantages to be gained in practical every-day matters from the study of antiquities. "The Romans," said he, "were great builders. Many of their works which have come down to our day are remarkable for their magnitude and their durability. How vast a structure is the Coliseum at Rome—how very remarkably do the lofty walls of Richborough and Pevensey hang together. One cause of the durability of their erections is the excellence of the mortar which they employed. If we had studied their method of making and using it, our buildings would not have the tendency to fall to pieces which they have. I have been informed that when the Durham County Prisons had been built at very great expense a gentleman requested to be locked up in one of the cells, and to be furnished with a piece of an iron hoop. In the course of an hour he liberated himself. This he could not have done if the mortar had possessed a proper degree of tenacity. The necessities of our present railway system have compelled our engineers to pay attention to the subject of mortar, and in all our great works a material is now used as good as that which was prepared by the Romans; but a study of antiquities would probably have caused the revival of this important part of the craft of a builder to have been earlier effected. When the station of Hunnum on the wall of Hadrian was being pulled to pieces some years ago, an eminent architect in Newcastle, Mr. Dobson, carefully examined the buildings which it contained. He noticed with considerable interest the mode in which the flues were brought up the sides of the walls from the hypocausts below. The hint was not lost upon him. He was at the time engaged in building a house in a damp situation, and he was anxious to devise some means of preventing the wet forcing itself through the walls. He at once resolved to substitute a thin brick wall instead of the ordinary wooden stoothing on the inside of the main stone wall, leaving a small space between them, but tying them together at intervals. The plan answered admirably, and he has adopted it ever since. He named it to Mr. Smirke, who also adopted it.

ANCIENT EDINBURGH.

In the evening, Mr. Robert Chambers read a paper on "The Ancient Buildings of Edinburgh and the Historical Associations connected with them." Mr. Chambers said Edinburgh was not a town of much consequence till the latter part of the fourteenth century. Froissart speaks of it in 1385 as the Paris of Scotland. He says, it did not contain so many as 4,000 houses, meaning, beyond a doubt, 400, for it then consisted of but a single street. No houses of that era survive to prove how small, rude, and frail they were. Wood continued to be a large material in the domestic architecture of our city throughout the fifteenth century, during which Edinburgh was gradually becoming a town of importance, a frequent seat of Parliament, and the residence of the monarch. A house had an inner stone fabric, but there was always a wooden front 6 or 7 feet in advance, formed by projecting beams. We do not probably possess in Edinburgh any houses of older date than the close of the fifteenth century. About that time the Cowgate was building (a name which appears to be a corruption of "Sou'gate," *i.e.* Southgate), as a new town or suburb for the accommodation of the higher classes of people. A few of the primitive houses of the Cowgate, built about 1490 or 1500, still exist. They are the contemporaries of many castles, the ruins of which are now scattered over the country. The style of door seen in all these early wooden houses must be pronounced greatly superior in elegance to any doors given to modern houses either in Edinburgh or London. The next stage of house-building gives us the same form, with merely a little more elevation and the addition of some ornamental work. About 1540, houses were three and four stories high. The gallery in front of the first floor was usually open. There the family could promenade and enjoy the open air in privacy and comparative safety. Of the wooden-fronted houses of about 1540 we have still several interesting specimens, serving to recall to us Mary's reign. There is a fine example at the head of the West Bow. The covered space in front of the booths is still open and used for the exhibition of merchandise, though of a humble kind. In this respect, the house forms a last surviving fragment of what the High-street was, in mercantile respects, in the sixteenth century. Three or four specimens of this form of house are still to be seen along the north side of High-street. The characteristic features of all are alike—the strong skeleton-work of stone, with the wooden front 6 or 7 feet in advance, the outside stone stair projecting into the street, and the handsome moulded doorway. One handsome specimen opposite the head of Niddry-street is worthy of special notice on account of its double form. In 1572, when the castle and the city were in possession of the Queen's party and beleaguered by the troops of the Regent, the exigencies of the people for fuel led to the demolition of many of the timber buildings. The latest example of houses with wooden fronts is in the Netherbow, dated 1600. The mediæval custom of putting inscriptions on houses was displayed in full vigour in Edinburgh, but not so much before the Reformation as after. Having given many interesting specimens of these, the paper went on to state that houses wholly composed of stone, which before the reign of Mary had been rare exceptions, began after that period to become common. The earliest examples of these were built by wealthy citizens.

EARLY SCULPTURED MONUMENTS OF SCOTLAND.

Mr. John Stuart, secretary of the Society of Antiquaries of Scotland, read a communication "On the Early Sculptured Monuments of Scotland." The paper stated that these monuments might be considered the earliest existing expressions of the ideas, and the most genuine records of the skill of the early inhabitants of the country. He referred to the general use of pillars as memorials of events from the earliest period, and to the occurrence of such pillars in Scotland, both singly and in circular groups, as sepulchral memorials. The earliest notices furnished to us by our national historians serve only to show that the purpose and meaning of the sculptured pillars had been quite forgotten before the time when they were written. According to Boece, the hieroglyphic figures on them were borrowed from the Egyptians, and were used by the natives in place of letters; and both he and subsequent historians have assigned a Danish origin to many of them—an idea which is quite repudiated by the present race of Danish antiquaries. Mr. Stuart stated that the class of stones which he had presently in view comprised about 160 specimens. These consisted either of rude unhewn pillars, on which were sculptured various symbolic figures; of oblong dressed slabs, having crosses and other figures cut on their surface; and in a few cases of cruciform pillars with sculpture. Of those stones between the Dee and the Spey by far the larger number were rude pillars, having incised symbols without crosses; while in the country, on either side, the stones combined elaborate crosses with the symbols as well as with scenes of various kinds, exhibiting in many cases minute pictures of dress, armour, hunting, and other subjects. The symbols, except in two cases, were not found in the country south of the Forth, and were thus confined to the ancient country of the Picts. Mr. Stuart then pointed out various points of analogy and difference between the Scotch crosses and those in Ireland, Wales, and the Isle of Man. He adverted to the striking similarity of the style of ornament on the Scotch crosses to that in the ancient Irish and Saxon manuscripts, and drew the conclusion, that while there were many points common to the crosses of all the countries referred to, yet those in Scotland bore most strongly the impress of Irish art, as exhibited on remains of various sorts, ranging in point of date from the seventh to the eleventh century.

THE ANCIENT CORONATION-STONE OF SCOTLAND.

On Monday Mr. Joseph Hunter read a paper on the Scottish coronation-stone in Westminster Abbey, containing various historical incidents and charges connected with its reception at London. With reference to the genuineness of the stone, which had been controverted by some antiquaries, he stated his belief that the stone now in Westminster Abbey was the ancient coronation-stone of the Scottish monarchy, and that it had been carried away from Scone by Edward I.

Some conversation ensued, in which Mr. Cosmo Innes referred to the proposal made some ages later to restore the stone to Scotland, which was resisted by the citizens of London; and Mr. Joseph Robertson and others made some remarks on the question whether the stone was a throne or a pedestal for inauguration, the words in the ancient chronicle, "on which the kings were *set*," being rather ambiguous in this respect.

EDINBURGH CASTLE BEFORE 1573.

Mr. Robert Chambers then read a paper on Edinburgh Castle as it existed before the siege of 1573. He said that in the present Edinburgh Castle, under the mask of a modern military station and barrack, were the broken and degraded remains of a national fortress and royal residence of the old days of Scottish independence. He traced the history of the principal old buildings, and showed as far as possible what the castle was before the great alterations which it sustained in consequence of the memorable siege of 1573. Previous to that time the buildings of the castle were less numerous than now, as it showed scarcely any beyond the limits of the upper platform of rock or citadel towards the east. On the lower and wider platform, towards the north and west, there was little beyond a wall of defence running along the summit of the cliff, with turrets placed at intervals, and having in it a postern whence it was possible to descend the face of the rock. Notwithstanding its limited accommodation, however, it appeared to have been proposed in 1523 to have a garrison of 400 soldiers within the castle. On the upper platform were various buildings, some of which still existed, while others had been demolished in the siege referred to, or had given way to more common-place structures. At the north-east angle was a palace which had been used by successive Scottish sovereigns before Holyrood existed. We had no means of tracing this palace to a very early date. The saintly Queen Margaret, consort of Malcolm Canmore, lived in Edinburgh Castle at the end of the eleventh century, but none of the existing buildings could be safely identified as of her time, save the small chapel standing detached on the loftiest pinnacle of the rock, which, after a long period of neglect, had been repaired a few years ago. The massive series of buildings which rose from the rock at the south-east angle of the upper quadrangle or parade square, constituted strictly what remained of the palace as existing previous to 1573. The paper concluded with some remarks as to the origin of the name of *Castrum puellarum*, or Maiden Castle, given by early writers to Edinburgh Castle, a name which was common to many ancient ruins both in Scotland and England. It had been suggested by the late Mr. Chalmers, of Auldbar, that the derivation was from Mai-dun, a fort commanding a wide plain or district.

ST. MAGNUS'S CATHEDRAL, ORKNEY.

Sir Henry Dryden made a verbal communication regarding the antiquities of Orkney and Shetland, and described various interesting remains of a very ancient date. He in particular referred to the cathedral of St. Magnus, Kirkwall. He described the state of disrepair into which it had fallen previous to Government spending some thousands upon it a few years ago. He then spoke of some differences which had arisen between Government and the Burgh Council, the latter having now taken the matter into their hands, and committed, as the Institute must consider, some most barbarous outrages. They had entirely screened off the choir from the nave, in order to use the former as a parish church, the screens closing up the spaces between three of the finest arches. They had raised the floor 4 feet, thus hiding all the bases of the pillars, and had put in a gallery that hid the capitals, and the erection of which had knocked off a good deal of the foliage.

FRENCH AND SCOTTISH ARCHITECTURE.

Mr. J. H. Burton read a paper "On the Analogy of French and Scottish Architecture." No Englishman can take a general survey of the baronial residences he meets in Scotland without being forcibly struck by some national peculiarities which broadly distinguish them from the corresponding class of buildings in England. The peculiarities are varied, but their predominating characteristic is the spiral or rocket-shaped turret. I shall not say that this is a feature of which English architecture is totally divested. The luxuriant beauties of the English mansions are the spoils of every school, and where the Scots took their examples English architects would study. The turret is a prolific architectural device, susceptible of infinite variety. The Gothic turret or pinnacle is common both in ecclesiastical and baronial edifices, but it is distinguished from our turrets by its angularity and its crocketed decorations. Some buildings in England show a nearer approach to the Scottish turret. For instance, at Knebworth, in Hertfordshire, the ancestral mansion of Sir Bulwer Lytton's family, there are rich polygonal towers terminating in circular spiral roofs with that ogee curve which sometimes but not frequently is seen on the Scottish turret. At Wollaston Hall, in Nottinghamshire, the angular buttresses swell into circular abutments with curved spiral roofs, which give them a strong general resemblance to some of the turrets in Scotland; for instance, to those of Pinkie. But it may safely be said that there does not exist on the English side of the Border even *one* of these Oriental-looking clustered masses of tall chimneys, narrow crow-stepped gables, and numerous conical turrets, which are found strewed over Scotland from the Border to Inverness. While he notices these characteristics of the baronial residences of a comparatively late age, many of them still habitable, the stranger will find that the deserted and ruinous castle of the preceding period is often a simple, rude, square block, which will remind him of the Norman keep or donjon. On inquiry, however, he will find that the two are separated from each other by centuries, and by radical differences both in the external conditions in which they arose, and the internal character of their architecture. To account in some mea-

sure for these two phenomena—for the bare, square towers of the older period; for the fantastical, turretted mansions of later times—is the object of the society notices I have the honour to lay before this meeting. * * * The most natural primitive shape of a fortress is a square block. We find it in the Roman Wall, in the Wall of China, in Arabia, and among the earliest forms used in Europe. The Normans were by no means bigotted to this form, in their eager scramble for places of strength, they occupied the ponderous tombs left by the Romans and they would have occupied the Egyptian Pyramids and the Eastern mosques for the same purpose had these fallen in their way. The French antiquaries seem to think that many of the castles of their own country were begun by the Normans, and that the square Norman tower was hence the legitimate descendant of the Roman arx or citadel. Their evidence that some of these were built in the Roman cities at a moment of extreme emergency for defence against the invasions of the barbarians—evidence resting on their use of statuary, tombs, and whatever stones were available, to strengthen the walls—is exceedingly curious and interesting. It is enough here, however, to know that Rome stamped her architecture on the details, if not on the structural character, of the earliest feudal castles, in those characteristics which are called Norman or Romanesque work. Such were the earliest castles of England. But the fact already alluded to in the learned paper of Mr. Robertson is, I think, extremely striking and suggestive—the fact, namely, that there is not one known specimen of the kind of work called Norman or Romanesque—I mean early round arched work—in any baronial remain in Scotland. That there never was any of it, it would be preposterous to maintain, but the tendency of the negative evidence is to show that, as the earliest castles of England were planted there by the Normans, so the earliest feudal castles in Scotland were likewise those that were planted there by the Normans in a later age, and consequently a later style. It is remarkable, indeed, that when one castle—the Goblin Hall of Haddingtonshire—was built, just a little before the event which it is convenient for me to call the Scoto-Norman Conquest, the building of such an edifice was deemed an incident important enough to be commemorated in history. I am not prepared to say that there was not one castle in England before the Conquest—that Koningsburgh, and one or two others, have no claim whatever to Saxon origin. But I believe that, generally speaking, the residence of the Saxon gentleman was the fossed and palisadoed arena, with its numerous wooden buildings, so well described by Scott in Rotherwold, the abode of Cedric the Saxon. The castles which started up all over England immediately after the Conquest were, generally speaking, the simple square tower, without any flanking-work. As the simple square tower with round arches is the deposit of the Norman conquests of the eleventh century, so the screen with round towers at intervals, and pointed arches, is the deposit of the Norman conquests of the thirteenth century. Thus, our oldest castles in Scotland are undoubtedly of the later style of Norman-English. The prostration of Scotland from the War of Independence, is a matter pretty well known in history. There was no rearing of costly edifices, whether ecclesiastical or baronial, until long after that struggle was over. When lairds or chiefs in Scotland were again rich enough to build, they had to fall back upon the primitive square tower; hence it is that, as I have already said, there are many of them throughout Scotland which have a general external resemblance to the Norman keep, but are entirely distinct from it both in historical connection and architectural detail. The Scottish tower is generally much smaller and ruder than the Norman; and it is, of course, destitute of those peculiar features which form the connecting link between Gothic and Roman architecture. It was still of consequence to the Scottish laird to have flanking defences to his keep. He could not afford the princely round towers of the Edwardian baronial period, but he found an economical substitute creditable to his ingenuity. The projecting parapet was, of course, an available means of attack from above. At the angle, it was enlarged into a sort of machiculation or bastion. This is a common feature in many kinds of defensive architecture, but nowhere is it so confirmed and systematic as in the Scottish square towers of the fifteenth and sixteenth centuries. To see how Scottish architecture again emerged from the humble condition, it is necessary briefly to describe historical conditions which would be familiar to every one if our history, instead of being a mere parochial register, were written in the Catholic spirit of denoting Scotland's condition among the European States. After the War of Independence—which it is more just to consider the struggle of the Saxons in Scotland against Norman aggression than a national contest—Scotland arose, a separate nation, hating England. That metropolitan influence which it would naturally have received from the centre of British advancement in London was drawn from Paris. The Civil Law and French feudality were introduced. The Church, the Parliament, and the courts of justice were French. The Universities were French to the nicest peculiarity, and in the remote colleges of Aberdeen, the fresh students were called *bejeants*, just as they were in the University of Paris. Everything in Scotland might be said to have become French, except the language and the national character, and at last the countries were deemed so closely united, that it was discussed in Paris, as a matter of business, whether Scotland should be attached to the crown of France, or become an appanage for a cadet of the House of Vallois. It is now necessary to cast a glance at the progress of baronial building in France. The Edwardian form—consisting of screens and round towers—was there very prevalent. But a feature was superadded to it, not known in England, by the mounting of lofty cones, sometimes on the round towers, sometimes on the central building. There are instances of large separate round towers, on which such cones were subsequently mounted, as, for instance, the donjons of Guise and Semur. Sometimes the cone springs flush from the wall, sometimes it was raised behind the rampart. A good example of the latter may be found in Holyrood — our latest adaptation from the French. In its completion by Sir William Bruce, it was almost a direct copy from Chantilly, the abode of the Condés. In Paris, there were two fortresses of awful notoriety—the Temple, built by Hubert, the treasurer of the Order, who died in 1222, and the more recent Bastile. The latter, an excellent specimen of the Edwardian form as it continued for a long period in France—retained its original simplicity and gloom; but the Temple was decorated with a central spire, and a cone on each of its four flanking round towers. The conical form thus became an inveterate feature in the baronial architecture of France. When flanking works of a smaller and less costly character than towers were thrown out from the corners of buildings, they naturally assumed the conical shape, and thus the French chateau of the sixteenth century was encrusted with quantities of the rocket-shaped turrets already referred to. The architecture of our ancient allies when it reached this form was accurately copied in Scotland, and it is impossible for buildings to be more like each other than the French chateau of the middle of the sixteenth century and the Scottish mansion of about eighty years later.

SCIENTIFIC MATTERS IN FRANCE.

The French *Académie des Sciences* lately gave their sanction to various improvements, of which Doctor Henry Roger, one of the Professors, has published a succinct synopsis. Some of these matters are of high interest in England, and we give a portion of the synopsis.

The Dead Sea.—An analysis of the water of the Dead Sea was chemically prepared by M. Boussingault.

An Arab proverb declares, that "any one who loves his life will avoid the risk of moving over this sea." The caution of this proverb excited the curiosity of some daring travellers, who determined on exploring it scientifically. It is called "the Dead Sea," because its water is salt to such a degree that no fish can live therein; and it is also named "the Asphaltite Lake," because from time to time asphalte is found floating on its surface: it is the limit of an enormous crevice, or fissure of the earth, into which the River Jordan flows, at a level far deeper than the Mediterranean Sea. This profound sinking of the soil, in an extensive district of Southern Syria, at sixty miles' distance from the Mediterranean, is in itself such an extraordinary phenomenon, that even the persons who observed the facts, appear at first to have had doubts of their own correctness. Lieutenant Symonds, of the British navy, in the year 1841, by a triangulation, definitely fixed at 100 yards, the difference of the level between the two seas.

The ordinary proportion of the salts contained in the water of the ocean is not more than from 4 to 5 per cent. Various analyses have been chemically effected from 1789 to 1854, by Lavoisier, Klaproth, Gay-Lussac, Boutron-Charlard, and O. Henry, &c. who have given to the water of the Dead Sea a much larger figure,—such as 14, 26, and even 14 per cent. of saline matters. In the expedition of 1847, conducted by Lieut. Lynch, of the United States, some sailors, in two metal boats, went from the Jordan into the Asphaltite Lake, while in a state of violent agitation, they were soon covered with a saline incrustation, of which the pungent acritude produced very painful sensations, especially on the lips and eyes.

The mountains around are composed of enormous saliferous deposits, and isolated cylindrical blocks or columns of salt are common enough to justify the statement as to Lot's wife. In the bosom of these mountains of mineral salt,—in the midst of these salt deserts, one might find more than 200 wives, like her of Lot.

During the trip made by Lieutenant Lynch, the sea was at night covered by a phosphorescent scum, and the waves, when broken, exhibited in a sort of sepulchral haze, the dead wood and the lumps of rock scattered along the shore. This was accounted a remarkable phenomenon; since, to explain this phosphorescence, there were no microscopical animalculæ to be found in the water of the Asphaltite Lake. A sulphurous smell was, however, often felt, arising not from the waters of the lake, which have no odour whatever, but from the sulphurous springs, and the surrounding marshes.

The navigation of the Dead Sea is very dangerous, not merely from mephitic exhalations, but from other causes. Very few days passed in this excursion were enough to prove not only to the tourists, but to the men of science who accompanied them, that they could soon be mortally punished for their rash and daring curiosity. On the desolate shores, where the ruins are mouldering of the two impure cities that were annihilated by fire from heaven, the heat is excessive. During the expedition of 1847, the heat in the month of April rose to 43 centigrade, in the shade; and on the 26th of that month, as Lieut. Lynch states, "at four o'clock in the morning, the thermometer marked 30 degrees. The party was then at a short distance from the mountain of Usdom, and in the presence of a scene of vast desolation. On the one side was an imposing mass of mineral salt, and on the other the barren rocks of Moab. To the south was the salt plain, in which the Israelites several times defeated their enemies; and to the north, was the sea, veiled by a purple fog, and covering over the ruins of Sodom and Gomorrha. The brilliancy of the light was painful to the eyes, and breathing was almost impossible in an atmosphere of flame. Not one bird could be seen passing through the rarified air, nor was there a fish visible in the mysterious element over which we were moving, and which alone, of all the works of the Creator, did not contain a living being."

Chemists have tranquilly analysed in their laboratories the pestilential water brought from the Asphaltite Lake at the cost of such labour, of such pains, and even of so many lives. Their analyses do not always agree together; but the differences may be explained by the various depths at which the liquid was taken, and by the difference of the seasons of the year. The most striking results from these researches and experiments, and particularly from those of

M. Boussingault, are, besides the considerable quantity of saline matters, the absence of nitrates, and the strong proportion of bromine; a cubic yard contained from 6 to 8 lbs. of bromide of magnesia. If it ever happens that bromine shall be rendered applicable to a great extent for industrial purposes, it will be necessary to go for it to the Dead Sea.

Engraving on Copper.—Artists practised in this branch of science are fully aware of the difficulties that, as it were, compromise all works of art, which, after they have been used for some time, require to be retouched. Those inconveniences have been experienced to their fullest extent in the labours of the topographical map of France. The fact is, that a sheet raised at the 40,000th may be placed in the hands of the artists who are required to engrave for the 80,000th, and then at least two years of preparatory labour become necessary: the work of the engravers requires from five to eight years, with a cost of from 1,200 to 2,000 francs, so that when the copper-plate is completed at a heavy expense, an interval will have elapsed, since the last works on the ground, of ten years, and frequently more.—And still, as it has been remarked by Marshall Vaillant, in a note addressed to the Academy of Sciences, the objects which ought to be represented by the engraving in a topographical map are not always as invariable as a painting. The rectifications of roads, the opening of railways, the digging out of canals, the efforts of industry, and administrative modifications, bring about continual transformations, which the map ought to produce, under penalty of being looked upon as old at the period of its birth, and of becoming useless on the very day of its being distributed to the public. Thus, at the moment when the plates of the map of France appear, it will be requisite to change them; and, from the times of activity and mobility in which we are now living, corrections become necessary at least once a year. Up to the present period, these changes were executed solely from time to time and under the pressure of absolute necessity. For the future they will be effected by a new process, without delay, without trouble, and almost without expense; and this improvement in the art is due to Mr. George, an engraver in the war depôt.

As we cannot here enter into the technical detail of this new invention, we may say that it consists in an extension and perfecting of the galvanoplastic process, which has been already introduced into the reproduction of the plates of the map of France.

By the aid of this improvement, the corrections are confined to the defective spots; the false features are replaced by a metal brought into union, without any force or violent blows, without any general alteration of the plate, and which adheres in a perfect manner; the burin is not required to re-engrave the part which was good at first; the time and the expense are reduced to a minimum, and corrections of every kind will for the future be looked upon as operations as sure as they are easy, in all descriptions of engraving.

Mr. George (we may rely on his minister for the facts) has thereby rendered a great service to the war depôt, to topography, and to the art of engraving on metals, whatever may be the applications of it.

The Red of Adrianople.—Some important researches of industrial chemistry on the oils necessary for the fabrication of the Adrianople red, have led M. Pelouze to conclude "that these oils are mixtures of neutral oils with fatty acids; and that similar oils are equally adapted for producing the red of Turkey, either by the spontaneous acidification of the oils in the presence of the matters which accompany them in the grains, or by the direct mixture of the neutral oils of commerce and the fatty acids, particularly the oleic acid, resulting from the manufacture of stearine candles."

"It is extremely probable," adds M. Pelouze, "that the treatment of certain oils, and more especially of rape oil, by some hundredth parts of their weight of sulphuric acid, would give birth to mixtures of neutral oils and fatty acids, which, when properly washed, might be adapted to the fabrication of the Adrianople red.

THE CITY AND ITS STRUCTURES.

Every great city is characterised by its public buildings, more than by the style of its private houses. Whatever the condition of Rome, so long as the shrines of Peter and the other patron saints may stand, it will be sacred, for the dignity of successive empires and popedoms is consecrated by genius in alliance with high art. Cæsar, Trajan, Constantine, and the pontiffs, acquired power, wealth, and absolute dominion. Pliny, Tacitus, Buonarotti, and Raffaelle, with the poets and painters, upheld all that can endure of their glory.

All the principal Italian cities possess such monuments for perpetuity. Venice, notwithstanding the prostration of an age, is still magnificent in her decadence: nearly the same may be said of Florence, Milan, Bologna, and others. The no less valuable but more able performances of high art, in paintings, sculpture, and of perfectioned taste, may be transferred; but the structures which it took ages to accomplish must remain so long as matter endures; and these, while they breathe, for they do breathe, will record the fame of their projectors, and instruct posterity in arts to be lost no more.

Our London, too, has treasures already amassed sufficient to qualify a claim to the same distinction: the vast and the magnificent may not belong to her edifices so truly as the ornate and the elegant. St. Paul's is fairly entitled to both; the old Abbey and the new Palace of St. Peter fairly realize much of what human skill, taste, and science, can accomplish. We have, however, many structures, little noticed, never boasted of, which, not being colossal, are little observed in the multitude of churches. A passer by occasionally glances at St. Mary-le-Strand: he exclaims, sometimes—pretty! occasionally—beautiful! But that is the foreigner. How rarely is it asked,—Who is the architect? How few could answer,—James Gibbs! So of others in our daily walk. We ask not in St. Marylebone who designed their handsome parish church: there is no inscription (visible) to record the fact that it was Thomas Hardwick: the entablatures of Roman remains are inscribed, "Imp. Cæs. Div.;" but the names of the real founders, of those who planned and executed the achievements, are lost. This was not so in ancient Greece, for their architects and sculptors were (amongst them) hyper-canonized: they were reputed demigods. If there is no Pantheon *here*, nor niches reserved for the heroes of art, there ought to be an entablature in imperishable bronze, to preserve the name of the originator.

It is impossible to particularize the names of all the artists that abound in this great metropolis; still the auto-registration recommended would in future evidences assure the old dictum, "By their works ye shall know them."

We can stand the test of comparison with most capitals as to the number of churches, fine public buildings, and monuments contained within the precincts of the old city, which might, on that account, be deservedly designated "La sancta Civita;" but when we scan more closely the huddled position of some, partially, very meritorious sacred structures, we find the greater part stand between two houses of business, sometimes in close connection with mercantile stores—the monitor clock projecting from the house of God—the crane and its pendent hook from that of Mammon! The temples indicated are familiar (as to their externals) to the merchants of 'Change: who knows anything of the in'ernal arrangements?

Often have those who glide down the stream, in the *Daisy* and *Forget-me-Not*, felt happy in the contemplation of the varied spires and steeples which afforest London's fog. There is a glory in their fantastic aspirations, of which even Britons may feel proud. The ever graceful Bride's; the rival Bow; the four-pointed gloomy Dunstan; and then the nameless perforated spires that hold guard in conflict round St. Paul's. Is it possible to fancy for a moment that all these shall ever be swept away? To do so would be to desecrate the nation. Let the steeples stand.

Towering above the smoke, the majestic dome of St. Paul's is visible from all parts, and when there is sunshine, its gilded cross glitters in state, as seen from Leith-hill, twenty-five miles in a right line. This edifice is not, perhaps, so gorgeous as St. Peter's, as to the interior, for there we have no mosaic designs, nor the costly marbles, nor the numerous excellences of art so abundant in Italy: but we have a *unity* of exterior which no building of its kind, not even St. Peter's, possesses.

Sir Christopher Wren struggled hard to insulate his buildings. He succeeded so far as St. Paul's is concerned, and by the purchase of a house in advance, he brought St. Mary-le-Bow out to the street range. He, too, had his opponents and his detractors! in the work which occupied nearly all his life: there were found those who were base enough to *publish* that he protracted the labour in order to reap the advantage of a miserable salary of 200*l.* a year (equal at that time to about 500*l.* of our money). In our own day there are some who grudge to a distinguished architect the fair professional returns of his vocation: the British Parliament can never be obnoxious to such an imputation!

There are, besides the churches, many other buildings which boast of excellences, as well as many which reflect no credit upon either founders or architects; and those least seen and least known have much to recommend them. One of the most prominent, the Mansion-house, which ought to be a model both for exhibition and study,—one, too, which occupies the very centre of the City,—has least of all to claim admiration. It was begun in 1739, and finished in 1753; and although Lord Burlington sent in a design by Palladio, the plan of a shipwright was adopted, whence comes the Lugger character of the style, two stories being superimposed on the cornice, giving it the character of a mansion, with residential chambers above, and a festive temple below, the basements being rusticated donjoned, parted in cells, and grilled!

Not apprehending the merits of Palladio, a *common* councilman asked, "Was he a Papist?" The aspersion could not be denied, and the wardmote carried it in favour of the naval architect.

Enlarged principles and more enlightened views suggested the selection of a more competent architect for the Royal Exchange, now pre-eminently the most important performance within the City. This building would be anywhere illustrious, and for the sake of convenience to the negotiators in universal transactions there, it is to be hoped that the great quadrangle may be inclosed by a glass roof, so as to shield merchants from the vicissitudes of climate, and to guard the interior, which is ornate enough for a grand chamber, from spoliation by the London atmosphere.

To allude to the public buildings, good, bad, and indifferent; or to the foundations, old and middle-aged, would be more than this whole paper could admit of; but, as a general observation, it is apparent that, with the exception of the old Tower, the India House, and the Southsea House, all the metropolitan structures are too much congested and compressed together.

London now comprehends the whole region between Greenwich and Hampstead,—between Hammersmith and Hackney. The intervals are filled in with four and six roomed cottages and factories. They have all a common centre, common sewage, common gas and water mains, and a common polity: should they not have common protection and privileges in common?

There is in the City, doubtless, much to be done, but has not the Town, which is ten times the extent, much which calls for modernization! There, too, many parts need amendment, and very many liberties need conservation: nothing but unity of action, subordinate to *professional competency*, can effect this.

In the old fastness the line of Farringdon-street and Smithfield, &c. &c. remains in abeyance: in the *alentours* Hampstead-heath is threatened with inclosure and excision; and then the sewage—then the Thames embankment and quay-walls—then the bridges; to say nothing of the conservancy of the Thames and the Commissions of Oyer and Terminer. It is too much for a small knot of commercialists, already too busy in individual callings.

As to the continuation of Farringdon-street, that causeway running towards Islington offers an opportunity for a grand issue from the City,

direct from Blackfriars-bridge. The old arena where Bartholomew Fair was formerly held has been long opened, and forms a noble street; but the continuation northward is designed to be only half the width; and a stack of two houses has been erected which blocks off the view at Holborn-hollow, barely revealing a narrow aperture. This is not wise. A beginning ought here to be made of a Broadway worthy of the time and occasion.

It is amazing that lodgings of the poorest kind being so dear in the centre, this fine situation has not been long ago allocated. More may be made of the space by giving a liberally wide street, and by building, as elsewhere, larger houses, than by narrow stinted lanes and miserable tenements. A reference to Victoria-street, or to the new causeways of the West-end might elucidate this point better than argument.

Although only one metropolis, the Town and the City are obviously distinct and opposite in character: the marked features of both may be hereafter blended under common observations.

FOREIGN ART INTELLIGENCE, &c.

The Effigies of General Washington.—M. F. de Lasteirie has published on this interesting subject some remarks worthy of notice. One of the marble busts of Washington was made by the Italian sculptor Joseph Ceracchi, a zealous Republican and friend of Canova, who undertook the busts of all the great founders of American liberty. After many fates, it has been now deposited in one of the villas on the Hudson. Another bust of Washington, not less esteemed, is by the sculptor Mr. Hamilton. But most regarded is the fine statue made by Houdon. Having come to America with Franklin, he was introduced by him to the President, from whom he obtained several sittings at Mount Vernon. The statue, completed in France, is now one of the chief ornaments of the capitol of Richmond, Virginia. The bust made by Flaxman is not without merit, but cannot claim the merit of an original.

Monument to Arnold Winkelried.—Gigantic Rock Sculptures.—The Government of the Swiss Republic has directed that a monument should be erected to Arnold Winkelried, who for the sake of breaking the power of a forest of Austrian spears levelled at the Swiss at the battle of Morgarten, advanced single-handed, and, by burying a number of spears in his body, opened a street to his countrymen. The idea of M. *Schlött*, of Basle, has been accepted by the committee, which consists of a huge rock sculpture, like those of Egypt, India, &c. It represents a Swiss warrior lying slain on the ground. Upon him, as it were, lies the noble peasant Winkelried, the Austrian lances in his breast. Mortally wounded, he yet turns towards his people, inciting them to strive. And, indeed, a youthful warrior, the sword high in air, rushes into the opening made by the hero's deed, and portends a happy issue to the great battle. The monument will be placed on a fine, quiet, arboured meadow (*Matte*), through which runs a clear brook of water, on this side of Stantz, coming from Stantzstadt. For additional pictures, a huge hall, to be erected in the vicinity, will afford sufficient space.

Stuttgardt. New Buildings.—In this part of Germany building is carried on very energetically. The principal is the exterior of the Royal Library, counting 400,000 volumes. Two new wings, built of stone, will be added towards Archive-street, and then the building towards Neckar-street will be replaced by one of greater architectural beauty. The Museum of the Fine Arts had been erected with the view of further extension, which has become now necessary, as the King has added to the collection the Venetian Galleria Breganze.

Prize Competition.—The Academy of Sciences, Belles Lettres and Arts, at Bordeaux, has proposed a prize gold medal of 300 francs for the solution of the following question: "Inundations and their causes; the means of preventing them, with an especial application to the *bassin* of the Garonne."

Magdeburg. Restoration of a Mediæval Statue, 1,000 years old.—There stands on the old market-place of Madgeburg—the statue of Emperor Otto the Great, almost 1,000 years old, beside which are the statues of his two wives. Remarkable for their great antiquity, and as they have withstood even the destruction of the city in 1631, they are undergoing a thorough renovation.

Brussels.—Monument to Dierick Martens.—M. J. Geefs, the famous sculptor, has just concluded the statue of Martens, who first introduced the art of typography into Belgium. He printed first in 1473, and died in 1534, in Alost, where a tablet had been erected to his memory.

Right-Royal Liberality.—The late Baron Sina, a native of Greece, and of humble extraction, has left 1,000,000 of drachms (at 10s. a piece) to his fatherland, to be expended in the following manner:—540,000 drachms to be spent in the erection of a building for the Academy of Athens, the plans of which have been already made by M. Theophilus Hansen, of Vienna, the architect who erected the Otto University and the Observatory in the Greek capital; 200,000 drachms are to be capitalised to increase the salaries of the professors at the Academy; 60,000 drachms for the completion of the Cathedral of Athens, &c.

The newest Works of A. Wolff, of Berlin.—This artist has been ordered to make a *pendant* to the Amazon of Kiss for the second platform of the staircase leading to the Museum. After a labour of several years the clay model has been, at last, exhibited. It represents a buoyant young warrior, with a spear high in air, on the point of inflicting from the height of his spirited horse the finishing stroke to a wounded lion. In a year more the plaster of Paris model will be ready for the casting in bronze. Another work of Professor Wolff is to be executed in marble, after the model of clay now completed. Two genii support a figure in a flying position. The group, of life size, will form a bronze candelabrum for the palace of Remplin, in Mecklenburg.

Freemasons in Turkey.—It is only lately that it has been ascertained that there exist in Turkey Mahomedan Freemasons, very analogous to those of Europe. These so-called *Beklashi Dervishes* were hitherto considered as a prohibited religious sect, and their property confiscated. Some steps have been now taken by our Turkish brethren to have these restrictions rescinded in consequence of the new *Hatti-Humayons*.

PECUNIARY AID TO STRUGGLING WORKMEN.

There are striking differences in the social condition of working men resident in cities and large towns, and those in villages and small market towns. The former are exposed to contingences, from which the latter are exempt. The fluctuations of trade, in what are called the "seats of industry," inflict an amount of social misery scarcely conceivable, and the struggles and miserable expedients resulting from extended periods of enforced idleness, have the most injurious and deadening effect upon the moral and intellectual character of the man. In large towns it is not an unfrequent case for a mechanic to be without employment for one, two, or three months at a time. He wanders about day after day, an unknown "unit in the mighty throng," and when night comes returns to his anxious wife and family, foot sore, and heart sick: food must be had, the weekly rent must be paid. He has not, like his brethren in the country, a patch of garden-ground, or the run of one belonging to a sympathising friend,—but for every morsel of food money must be forthcoming, and in thousands of cases there is only one resource,—the pawnshop,—and that is a degrading one: a man with any sensibilities, cannot enter one of these establishments without a sense of degradation clinging to him. Society generally, is little aware of the extent to which these places are frequented, and the vast sums paid by the working classes for pecuniary accommodation,—sums amounting to more than 300,000*l.* it is said, per annum.

We are disposed to think, indeed, that this estimate is much below the reality, some shops taking three or four hundred pounds per day! so that we shall not be far wrong, if we say the working classes of London pay not less than half a million of money annually for pecuniary accommodation. That a large proportion of this is paid by the reckless and improvident is perfectly true; that much of it might be avoided is true; but it is quite as true that many are, from such circumstances as we have named, or the illness or death of a wife or child, absolutely compelled to procure temporary accommodation at a most exorbitant interest,—an interest so pressing, that in nine cases out of ten the unfortunate pledger, after paying interest for a few years, until he has paid more than the original sum, loses all hope of ever redeeming them, and resigns his property, for which he only received about one-third its value.

Is there no possibility of establishing a loan society for the advance of small sums to working men of good character? Could not something of this kind be done on a similar plan to Arneway's Charity, with the difference that the money should be repaid by weekly instalments? If a few benevolent and wealthy individuals were to advance a sufficient capital to establish such a charitable loan fund, the borrowers to pay a sufficient interest to cover the expenses of management, it would, under careful and judicious supervision, become a powerful instrument in inculcating a spirit of independence amongst the working classes. Of course such a society would be open to imposition; but if charity is to stay at home until no impostors are to be found, why, we may as well hold our peace at once about elevating the working classes. What we want to see is, that the means for *self-elevation* shall be placed within the reach of the labouring classes. We do not believe in any plans for improving the condition of the workman, which are to be carried into effect without an effort on the part of the parties to be benefited.

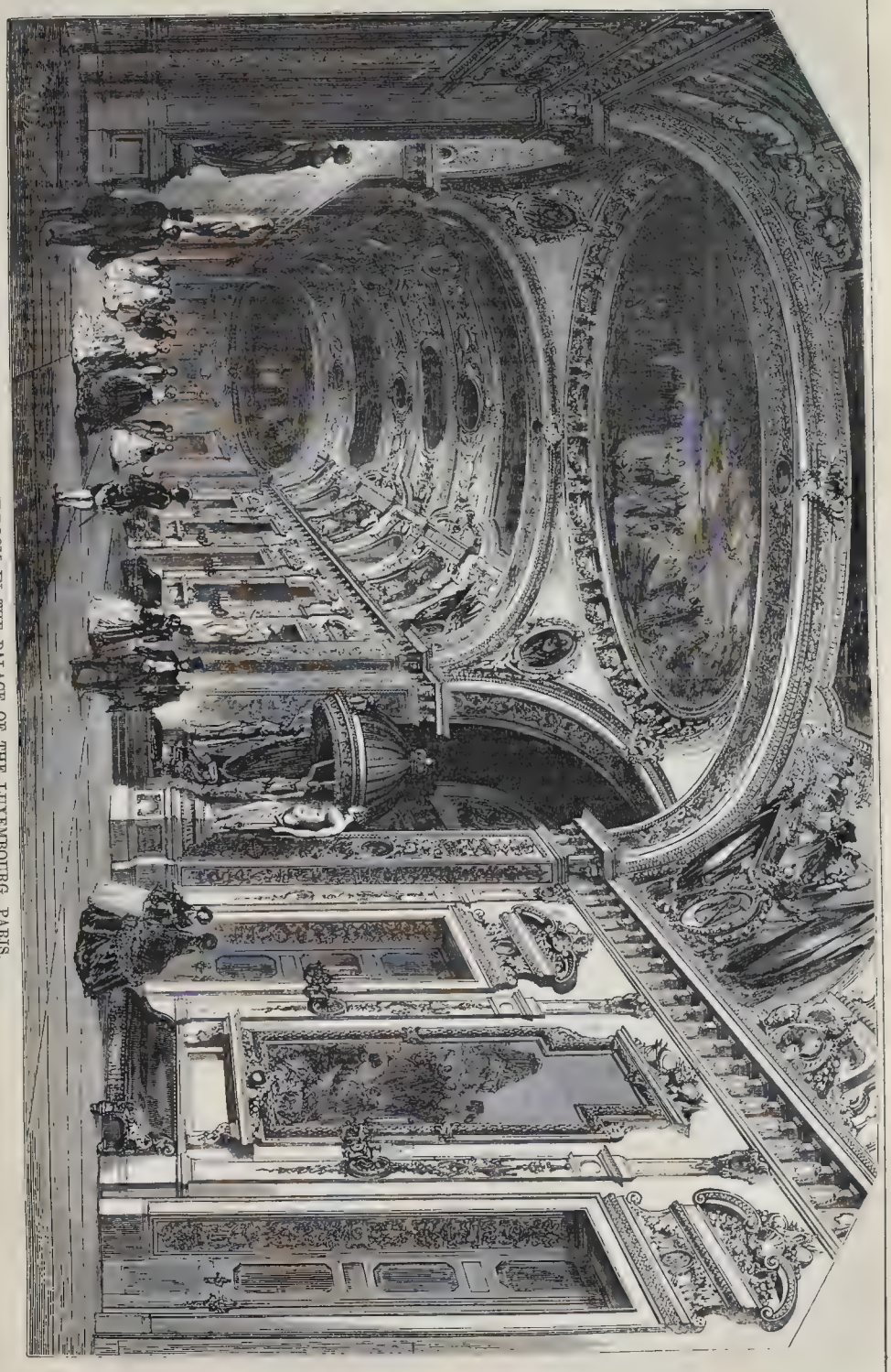
Again. How often do opportunities present themselves to men, which, if they could raise a few pounds, would place them beyond the fear of want. Many an honest industrious man has missed such an opportunity for the want of a sympathising friend, and he has gone on toiling to the end of his days; whereas he might have placed himself in such a position as would have enabled him to spend the declining years of life in peace and comfort. We know that some would say, if working men neglect to make provision for these contingencies of life, let them suffer the consequences: there are men who by manual labour have, without assistance, placed themselves and families in circumstances of comfort: and if one can do it, why should not another? Such parties are ignorant of the education and the training of the working man, of his trials and his temptations; but we are not desirous of superseding such praiseworthy efforts. We are asking, that the man who has slipped down, shall have a chance of rising and recovering his social position. The elevation of the working classes is a problem of vital interest to society, and demands the consideration of all.

NEW THRONE-ROOM IN THE LUXEMBOURG PALACE, PARIS.

In 1611, Marie de Médicis purchased the Hôtel de Luxembourg, and employed Jacques de Brosse to construct there the palace we now see. The works occupied from 1615 to 1620. Most visitors to Paris will remember the saloons in this palace appropriated to works of modern artists.

Under the present Emperor of France that part of the State known as the Senate has held its sittings here, and various improvements and additions to the building have been made. Among these is the new Salle du Trône, just now finished, of which we give an engraving from a drawing made for us on the spot. It is an apartment of very considerable length, elaborately ornamented.

Works at Shoreditch Church.—We are asked to say the architect was Mr. Knightley, not Kneightly.



NEW THRONE-ROOM IN THE PALACE OF THE LUXEMBOURG, PARIS.

CHURCH-BUILDING NEWS.

Horsham.—The ancient parish church of St. Andrew, Nuthurst, near Horsham, has been partially restored, and entirely reseated with oak; a new oak pulpit and desk by the Wood Carving Company placed under the chancel arch on the north side, and the communion enclosure paved with Minton's ornamental encaustic tiles. The church is now about to be considerably enlarged westwards, and a turret, to contain a peal of three bells, surmounted by a spire covered with oak shingle, is to be erected upon the roof, with the main timbers springing from stone wall shafts inside. The roof of the nave will be waggon-headed, boarded with oak boarding, and divided into panels by mouldings, with carved bosses at the intersections. The windows will be glazed with cathedral and white glass in patterns. The work is to be carried out to correspond in every respect with the old building, the style of which is Decorated. Mr. James G. Smither, of London, is the architect, and Mr. Dewdney, of Horsham, the builder.

Margate.—The cemetery for Margate is progressing towards completion. The site is at a short distance from the town on the Minster-road. The boundary walls enclose eight acres, which are being laid out, from the designs and under the superintendence of Mr. Cormack, of Southampton. The two chapels (Episcopal and Dissenters') are in the Early English style of architecture, of Kentish ragstone, with Bath stone dressings, and the roofs covered with ornamental tiles. The lich-house is of same description. The lodge at the entrance is a red brick building, also covered with ornamental tiling. The entrance-gates will be of mediæval ironwork. The front boundary wall is to be a dwarf brick wall, surmounted by ironwork resembling the gates. The whole of the works are being performed by Mr. E. W. Smith, of Ramsgate, and it is expected that the cemetery will be ready for consecration in the beginning of September.

Salisbury.—The chapter-house of Salisbury Cathedral has been restored, as a memorial of the late Bishop Denison. Mr. Clutton, of London, as our readers know, was the architect employed. The work first done was the enlarging and strengthening the buttresses, so as to allow of the removal of the iron tension-rods, which were a great disfigurement to the interior. The central pillar has been taken down and rebuilt, and the decayed stone-work, Purbeck marble shafts, and sculptures below the bases of the windows, restored. Care has, it is said, been taken to retain the original features of the building, and not to retouch any of the old work, but simply to replace the parts broken away. The funds at the disposal of the committee have not enabled them to carry the decorative part of the restoration beyond the polychromy of the vaulting and the polishing of the Purbeck marble shafts. The works thus far executed, including a mosaic tile pavement which has been laid down, have entailed an outlay of 4,821*l.* 10s. 10d.; and as the amount of subscriptions received is 4,586*l.* 14s. 5d. the expenditure has exceeded the receipts by 234*l.* 16s. 5d. The works which are still required to complete the restoration are, the restoring of the vestibule, the entrance doors to the vestibule from the cloisters, the stained-glass windows, and the polychromatic decoration of the arcades, and of the sculptures above them. Of this last, a specimen has been finished, the traces that remained of the original decoration having enabled the artist (Mr. Hudson, who executed it gratuitously) to reproduce the colours. It is estimated that the works remaining to be done will require an additional outlay of 3,000*l.* Mr. White, of Vauxhall-bridge, was the contractor, and Mr. J. B. Philip the sculptor.

Bristol.—A memorial window has been erected in the Elder Lady Chapel, Bristol Cathedral, on the north side, facing College-green, by a few friends of the late Canon Harvey. There are seven medallions, set in the cusp foliage of the period, on very light glass, after the manner of the five sisters of York, representing some of the chief miracles of our Lord. At the bottom of the window is the inscription.

Stafford.—St. Chad's Church, says the *Staffordshire Advertiser*, has been re-opened after having been partially restored. The chancel was the first part commenced upon, and on the plastering being removed on the north side, and the brickwork broken through, a Norman arcade of six arches was discovered, and although dilapidated from neglect, and mutilated by portions having been destroyed to make room for the brick casing, they were still in such a state as to admit of their being restored to their original condition. Above the arcade were found the remains of a string course, with the zig-zag moulding upon it, and two single-light Norman windows, all of which were very much decayed, but capable of restoration. On the south side of the chancel a similar arcade, and remains of Norman windows, and piscina were also found: but the arcade and windows were in a much worse condition than those on the north side. The arcade had been nearly all cut away, as had also the windows, two plain stone windows having been inserted in their place. These parts have all been restored, a new three-light east window of stained glass, the gift of Mr. Justice Williams and Miss Clarke, having been put in, and the Norman windows also filled with stained glass, the gift respectively of Mrs. Barlow and Mr. R. W. Hind. The whole has been re-roofed, and the floor of the chancel laid with encaustic tiles. The interior of the tower has been repaired, the Norman capitals of the columns of the east archway restored, and a new belfry floor and ceiling put in. The walls of the nave, which to all appearance were nothing better than plain bricks plastered over, were found, when stripped, to enclose some Norman work, and proved that the church formerly included side aisles. The north and south walls were found to contain each four Norman arches, one of which, on the south side, has been restored. Clerestory windows were also found above the arches, one of which has been restored, and the others laid bare for future restoration. On the plaster ceiling of the nave being knocked down, an oak timbered ceiling was disclosed to view, all in good preservation except the boarding, which has been replaced. The nave has been fitted up with open seats, free, oak reading desk, and lectern, and a pulpit of Ancaster stone. Provision has been made for lighting the church with gas. The work of restoration has been carried as far as the funds subscribed would permit; but the committee have also in view the immediate repair of the buttresses of the tower, and the re-erection of the south transept, which will require a sum of 500*l.* beyond the amount for which they have already rendered themselves liable.

Colwich.—The parish church of Colwich has been restored and reopened. The entire fabric has been put in repair, and the tracery restored to the windows. The ceiling of the old building has been removed (except that of the north aisle of the nave, which presents an unsightly appearance), and a new ornamental open roof, covered with tile, substituted. All the pillars of the church have been rebuilt from the foundation, and the interior has been fitted up with new solid oak sittings, including accommodation for the poor. Rather more than 2,100*l.* have been expended in the restorations and additions (including two grants from the Incorporated and Diocesan Church Extension Societies), the principal portion of which has been raised by the parishioners.

Loughborough.—The foundation-stone of the cemetery chapels for this town has been laid. The site of the cemetery is on the road to Leicester, about a mile from the town, and contains about seven acres. The chapels are divided by cloisters or groined archways, a vestry being provided at the porch of each. The centre archway is surmounted by a tower and octagonal spire, with carved pinnacles, the height of the spire being about 90 feet. The chapels stand upon a terrace at an elevation of about 2 feet, approached by a road 15 feet wide. There are also two octagonal dead houses, with tool houses, and other conveniences. The ground is entered by a pair of gates of iron and wood. On one side is a lodge of red brick and Bath stone facings—and on the other a smaller lodge or waiting-room. The architects are Messrs. Bellamy, of Lincoln; and the contractor, Mr. J. Sudbury, jun.

Mansfield.—The consecration of the new church of St. John took place on Tuesday before last. The church is in the decorated style of the fourteenth century, and will afford sitting accommodation for upwards of 1,000 persons, two-thirds free. The extreme length of the building is 172 feet, and the width 66 feet. It consists of a nave, 57 feet, and two side aisles, 48 feet high. There is a tower at the west end, surmounted by a spire, the whole 165 feet in height, access being had to the belfry by means of a spiral staircase, situate at the north-west angle of the tower. The entrances are on the east side of the chancel, through a porch, beneath the tower on the south side of the building, and a priests' entrance on the west side of the chancel. The walls are composed of Mansfield stone, with Ancaster stone facings. The body of the church is fitted with plain stained deal sittings, with square bench-ends. Provision has been made for an organ on an elevation some feet from the base of the tower. The architect is Mr. Stevens, of Derby. The practical details have been carried out by the following:—Interior fittings,—Messrs. Lilley, of Measham, near Ashby-de-la-Zouch; masonry,—Mr. Elliott, Ashby-de-la-Zouch; and the carving by Mr. Mowsen, of Birmingham. The font is presented by Messrs. Lindley and Son, builders, Mansfield.

Liverpool.—The foundation stone of a new synagogue for the Hebrew congregation of Hardman-street was laid on Tuesday in week before last, with appropriate ceremonial. The edifice is to be erected in Hope-place, immediately to the east of the Hebrew schools. The building, which, along with the site, is to cost 3,100*l.* is to be erected from designs by Mr. Wylie, of this town, and has been contracted for by Mr. Isaac Dickson. When completed, says the *Journal*, it will present to Hope-place a front of Oriental character, a conspicuous feature of which will be a lantern-light of large dimensions, covered by a dome,—interlacing arches forming a predominating characteristic of the structure, and, along with the breaking of the general outline, conferring on it an aspect somewhat Saracenic. —— The foundation-stone of a new Congregational chapel, in Berkley-street, Toxteth-park, in lieu of the Hanover Chapel, destroyed by fire on 1st June, 1855, was laid on Tuesday before last. The building will be in the form of a parallelogram, 81 feet long and 43 feet 8 inches wide, interior measurement. The basement will contain a school and class-rooms, which will have 13 feet clear height, and be lighted with ten large windows. The chapel will be entered by two flights of steps, leading up to an open porch, formed by a large archway: from this the inner porches and staircases give access to the interior. The seats on the ground-floor will be arranged to have a centre aisle and two side aisles, the latter being formed against the side walls. Behind the pulpit is a chancel, containing a gallery for the organ and singers. This gallery will be at a level half-way between the ground and gallery floors. The main gallery occupies two sides and one end of the chapel, and will be supported on oak corbels, built into the walls and resting on iron pillars disposed at a distance of 4 feet from the walls, and continued upwards to carry the hammer beams of the roof, from which spring the arched timbers which span the nave. The roof will not be entirely open, but the upper part is ceiled off, and forms a space for ventilation. The chapel will have no windows under the galleries, except some small star-like apertures in each bay, but will be lighted by twelve tall windows, and one large west window placed above the galleries. A gable will be formed over each window, and thus there will be no eaves gutter over the windows. The front to Berkley-street will be divided into three parts, with two buttresses, terminated above the roof with battlements and crocketed spires, altogether 80 feet high. The centre part of this front will have a large five-light window above the porch-entrance, filled in with tracery of the Decorated period. The whole of the exterior, except the back, will be faced with Huyton wall-stone, and all the door and window dressings will be of white Stourton stone, so as to form a contrast. The woodwork will be stained and varnished to imi-

tate dark oak. It is expected that the building will be completed by next February, and the total cost, including architects' commission, will not exceed 2,500*l.* The architects are Messrs. Moffatt, Smith, and Grundy, of Manchester; and the builder is Mr. Joseph Hughes, of Liverpool.

Pendleton.—The consecration of St. Paul's Church, Pendleton, took place on Saturday before last. The new edifice is in Ellor-street, Paddington, and has been erected in the Early Decorated style, at a cost of 4,000*l.* chiefly raised by subscriptions. The work of erection was commenced, according to the *Manchester Courier*, about this time last year, from designs by Mr. Edwin Hugh Sherrard, of Manchester, architect. The edifice, which is of stone, consists of a nave and side aisles, with pointed roofs, forming nearly a parallelogram. The chancel or principal front, as seen from Ellor-street, says the paper just named in describing the building, presents two gables, the larger roof covering the chancel, and the other the vestry and organ-chamber. Between the two gables rises an octagonal stone bell-turret, 56 feet 6 inches high, crowned with a spire, supported on small stone pillars and arches. A bell, of 4 cwt. is suspended in the turret, cast by Mr. Mears. The large chancel-window faces Ellor-street: it consists of five lights, with tracery in the head, and moulded jambs. The gables and turret are surmounted with stone crosses. There are porches on the north and south sides, but no entrance from Ellor-street. The north side of the body of the church, facing the schools, exhibits the building to the best advantage, there being five large Pointed windows of three lights each, and tracery in the upper part, with buttresses at intervals. The south side presents a somewhat similar appearance. The west end exhibits three Pointed gables, with a window in each. In the interior the nave is divided from the aisles by five moulded Pointed arches upon each side, supported on octagonal columns. The woodwork of the roofs of the nave and chancel is stained dark oak colour, and exposed to view, having ornamental arched trusses. There is a gallery at the west end, opposite the chancel, with seats for 240 children, and having a separate entrance, convenient to the schools, adjoining. The church contains 880 sittings, all low and open, and one-half free.

Lincoln.—The new cemetery and chapels at Lincoln were consecrated by the bishop of the diocese on Wednesday in last week.

Walton.—The chancel of the village church of Walton-on-the-Wolds having been rebuilt by the rector, the Rev. A. Packe, the church was re-opened on 18th ult. The design of the new chancel was furnished by the rector himself, and the work was carried out by Messrs. Broadbent and Hawley. The style is that of thirteenth century; the materials are brick, with stone dressings. Two side windows are filled with stained glass. The altar window is a triplet, and filled with stained glass representing the crucifixion. On the south side of the chancel is a new vestry, approached by a Gothic doorway.

PROVINCIAL NEWS.

Lincoln.—A number of tenders for the erection of a school-house and teacher's residence at Bardney, in conformity with the plans prepared by Messrs. Bellamy and Hardy, the architects, says the *Lincolnshire Chronicle*, were given in last week. The successful offerers are Messrs. Fox and Fotherby. They have contracted for the completion of the buildings at the sum of 620*l.*—this estimate being 100*l.* under the highest which was given in.

Aston (Oxon).—The foundation-stone of the new school-house and teacher's residence in this parish was laid on Tuesday in last week, by Mrs. Adams, wife of the Rev. Dacres Adams, of Bampton. The school-room, which will afford space for seventy-two boys and girls, will be 43 feet by 18 feet; class-room, 15 feet by 12 feet; and the rooms in the teacher's residence will be in accordance with the instructions issued by the Committee of Council on Education. The building will be plain, the funds for its erection being very limited. Mr. James Castle, of Oxford, is the architect, and Mr. Robert Plaster, of Bampton, is the builder.

Lye Waste, near Stourbridge.—Contracts have been signed for the immediate erection in this much neglected district of buildings for the Mechanics' Institute, lately organised here: the plan consists of an octagon reading-room and library, 30 feet in diameter, with top light, two class-rooms, and a cottage. Mr. Smalman Smith is the architect. The fronts of the building will be chromated in character, and executed in the blue, white, and red bricks of the locality. The Right Hon. Lord Ward has contributed 100*l.* towards the erection of the buildings, and other sums have been received.

Wolverhampton.—Mr. Hughes, an engineer whom the corporation of this town employed in the matter of procuring a supply of water for the town, has brought an action against them for the amount of his bill, 1,224*l.* 10s. 1d. and obtained judgment against them (the corporation abandoning the defence) for that sum and costs, in all 1,394*l.* 19s. 7d. But there is no fund, it is said, out of which this amount can be legally paid.

Birmingham.—A concert to test the acoustic qualities of the new Music-hall, in Broad-street, was given by the directors last week. The style of the building is Gothic, of the fourteenth century, and it has been erected by Mr. Briggs, from designs by Mr. Cranston. The decorations of the roof, walls, galleries, and other parts of the building were done by Mr. Whitworth, of Birmingham. The experiment, as far as sound went, seems to have given satisfaction. The least vibration, whether for good or evil, was conveyed with distinctness to the auditory, although a great deal of sound was absorbed by the unfinished and empty organ-case. The new organ, just completed by Gray and Davison, at a cost of nearly 3,000*l.* was to be submitted to the London public on Thursday and Friday of the present week, before being placed in the hall.

Liverpool.—"In obedience to the spirit of centralization," says the *Albion*, "the merchants and brokers of Liverpool are crowding to the neighbourhood of the Exchange, in the vicinity of which splendid piles, chiefly in the Italian style of architecture, are rising in every direction. The natural result is an increase of rents to fabulous prices. A contemporary states that 750*l.* a year have been refused for a floor in the handsome edifice now running up in Water-street; and that a floor in Mr. Bailey's new temple, lower down in the same street, will be 1,000*l.* a year. In the trading streets shop architecture is rivalling, or rather surpassing, in taste the commercial edifices near the 'Change, and Bold-street in a few weeks will be the handsomest street of shops in any city or town in Great Britain. The Health Committee are desirous of erecting splendid public offices in Dale-street, the probable cost of which is set down at 100,000*l.*"

Bootle.—The opening of the United Presbyterian school-room, Derby-road, Bootle, took place on the 24th ult. The schools, says the *Liverpool Journal*, have been erected on a piece of ground leased from the Earl of Derby, on the east side of the Derby-road, near the Mersey Hotel, and consist of school-master's house, large school-room, vestry, library, and session-room. The ground is about 60 yards in frontage, and 34 yards in depth, bounded by an intended new street on the east side. The design is in the form of a quadrangle, the school-master's house and school forming the north flank; the library, session, and vestry forming the east; and the intended new church will form the south flank of the square, leaving the west open to Derby-road. The buildings are in the English Pointed style, from designs by Messrs. Hay; the dressed stone from Mr. Wells's quarry, near Wrexham, and the facing-stone from the Yorkshire quarries, set in courses and clean fractured, without any chisel marks. The school is 74 feet by 27 feet, fitted up temporarily as a church for 400 worshippers until the intended church is proceeded with. The masonry and brickwork were executed by Mr. Wells; the plumbing, painting, and glazing by Messrs. Knight and Son; and the plaster and slate work by Mr. Goodall.

Manchester.—The city surveyor's plans for the enlargement of the gaol have been approved of by Sir George Grey. The enlargement will consist in extensions of the wings for male and female prisoners, with accommodation for warders, provision for an infirmary, additional washhouse room, and a new store for raw material. The wing of the building occupied by the female prisoners at the Hyde-road end will be extended about 160 feet in length, 100 feet in a right line, and 60 feet at a right angle; and will afford cells for 134 prisoners on the silent system. The extension will be four stories high, and uniform with the rest of the building. A similar addition, but in a direct line, will be made to the male prisoners' wing, on the opposite side of the gaol, next the railway, furnishing room for 160 more inmates, and as many cells. A portion of the new building will be set apart for the infirmary. A one-story building, 90 feet by 54 feet, will be erected in the debtors' yard as a store for matting, &c.; and the washhouse will be enlarged to about double its present size. Tenders for the works have been advertised for, and a bond of 3,000*l.* will be required for the due performance of the contract. The estimated cost of the extension is 24,000*l.*——The new road from the centre of Manchester to Cheetham-hill, planned by the city surveyor, is progressing. The extensive works at Ducie-bridge, in the construction of a "high level" viaduct over the river Irk will soon be completed. The viaduct consists of two large arches, bridging the Irk and Walker's Croft, each of 40 feet span, and about the same height from the river and roadway to the crown of the arch. In the construction of the arch over the Irk, says the local *Courier*, an accident happened in the breakage of three or four of the stone corbels, which were built into the side walls to serve as partial supports to the scaffolding. Contrary to orders, these corbels were made the sole support for the heavy woodwork and the superstructure of stone and brick; and the result was that the immense weight caused some of the corbels nearest Ducie-bridge to snap off, and a great portion of the scaffolding was precipitated to the bed of the river. Fortunately the arch was finished, and none of the workmen were injured. In building the second arch the contractor erected adequate supports to the corbels. The roadway here will be ready in two or three weeks, but it will take as many months to complete the stone parapet, and it is not intended to use the road until the whole route is finished, which the Improvement Committee have resolved to effect, if possible, by May next, in time for the opening of the Manchester Art-Exhibition. The work of demolition has been commenced amongst the mass of old and poor dwellings on the south side of Long Millgate, through which the road will pass, cutting into a dense mass of squalid habitations similar to those demolished by the improvements in Charter-street, Cross-street, and other parts of the city.

Huddersfield. — The Milnsbridge Schools, which have just been erected under the direction of Mr. Tarn, architect, were opened on Tuesday before last. The schools are in the Early Gothic style. The principal school is 60 feet long by 30 feet wide, and covered by an open hammer-beam roof, the timber of which is varnished a dark oak colour. The roof is surmounted by a bell turret, 25 feet high, which will also serve as a ventilator. A class-room to hold fifty children adjoins the principal room, and separate lobbies are provided for boys and girls. An infant-school is also attached, 44 feet long by 21 feet wide, capable of holding 120 infants. The master's house occupies the space between the main school and the infant school, and connects the two together so as to form one building. The cost of the buildings, including everything, has been about 1,400*l.*

New Convict Prison at Chatham.—The large new convict prison building at Chatham is nearly completed, and when ready 500 prisoners will be sent there to commence the foundation for the large steam basin and floating docks to be built at Chatham dockyard. The new prison will accommodate 1,000 convicts, who are all to be employed in forced labour at Chatham dockyard.

SCAVENGING THE RIVER THAMES.

"Who shall scavenge the River Thames?" It is a great highway up and down which thousands travel daily. Why should sight and smell be offended by bloated offensive carrion oscillating with the tides in a midsummer sun? Dead dogs, dead cats, and floating offal are not only offensive—they are injurious to public health. It must be the duty of some one to free the river from these horrid objects, just as it is the duty of parish scavengers to cleanse the streets. The conservators, who receive river tolls and dues are the parties who ought to be made to do this work. There should be scavengers' barges just as there are scavengers' carts. All dead animals and floating refuse should be removed regularly from the river at once, and be buried beyond the metropolitan district. The health and convenience will be worth the cost. In the harbour at Balaclava scavenger-barges were established under the orders of the Sanitary Commission. All dead animals, garbage, and refuse were taken to sea and sunk. Whole carcasses were slashed and cut so as to prevent any generation of gases; and, by daily scavenging, the harbour was kept clean and wholesome. We ask again,—Who shall scavenge the River Thames? It should be done at once.

ART-UNION OF LONDON EXHIBITION.

To make our list of the principal works purchased by the prizeholders complete, we give the following:—

From the Royal Academy.—Hampstead Heath, G. C. Stanfield, 60*l.*; Bianca, F. C. Cary, 60*l.*; Sunday Morning, J. Dearle, 50*l.*; At Ghent, A. Montague, 35*l.*; a Mill-Stream, N. O. Lupton, 30*l.*; Haymaking, N. Lupton, 25*l.*; Near Coniston, T. F. Hardy, 20*l.*; A Labour of Love, J. W. Haynes, 15*l.*

From the National Institution.—In the Marshes, G. A. Williams, 60*l.*; A Welch Stile, Bell Smith, 35*l.*; Cottages near Pyrford, F. W. Hulme, 35*l.*; Faith, Jno. G. Naish, 35*l.*; Moel Siabod, F. H. Hulme, 35*l.*; Morning on the Thames, G. A. Williams, 20*l.*; The Burnie Side, Bell Smith, 20*l.*; A Bright Day on the Thames, J. Dearle, 20*l.*; September, A. J. Stark, 20*l.*; At Laindon, Essex, J. E. Meadows, 20*l.*

From the Society of British Artists.—Loch Long, G. Cole, 100*l.*; The Weald of Sussex, G. Cole, 75*l.*; St. Goar and Goarhausen, P. Phillips, 25*l.*; The Gloveress, J. Kyd, 15*l.*; The Undercliff at Eastweir Bay, J. J. Wilson, 15*l.*; The By-way, W. W. Gosling, 15*l.*; Near Criner, G. Stubbs, 15*l.*; On Hampstead Heath, A. Collins, 15*l.*

From the British Institution.—Clovelly, J. Webb, 35*l.*

From the New Water-Colour Society.—On Craig-y-Barns, J. H. Mole, 60*l.*; Near Denham-bridge, P. Mitchell, 25*l.*

The Exhibition will be opened to the subscribers and their friends on Monday next, in the Suffolk-street Galleries, and will be found an interesting one. Tickets may be obtained, free, by any lovers of art, on application at 444, Strand.

AUSTRALIAN NEWS.

The Cathedral of St. Francis Xavier, which the Roman Catholics are erecting at Adelaide, is designed, according to the *Adelaide Observer*, on the model of Byland Abbey Church, Yorkshire, in the Early English style of architecture. The entire length, "when the cathedral is completed," will be 180 feet by about 60 feet wide, and it will consist of entrance porch, with tower and spire, which will be about 200 feet high; a nave and side aisles, divided by cluster columns, with basis about 3 feet in diameter; a chancel, with a chapel on either side; and a sanctuary. The sacristy will be the eastern side of the building. The height to the ridge over the nave will be 56 feet, and the side aisles will be 30 feet high. Only a portion of the building will be erected for the present, extending from the chancel northwards, about 80 feet, and will cost somewhere between 8,000*l.* and 10,000*l.* occupying two years in erection. The structure will consist of uncoursed stone rubble, with cut stone facings of fine freestone from Teatree-gully. The foundation-stone, from the same quarry, was a fine specimen, containing about 30 cubic feet.

The foundation-stone of the Masonic and Public hall, in Brougham-place, North Adelaide, "one acre westward from O'Connel-street," was, on 29th March, to be very shortly laid with Masonic honours, arrangements having been then about to be made for the purpose.

The materials of the long-talked of cast-iron city bridge over the Torrens were, about that date, being deposited on the northern bank of the river, near the present bridge. A memorial to the Government had been prepared, and numerously signed, praying that the present bridge might be reconstructed at the Paradise-ford.

The lavish expenditure on the late (deceased) governor's five-years' leased house at Melbourne, was still exciting attention, and various new items are quoted, such as 1,036*l.* for painting, papering, and graining; 5,596*l.* for a new range of offices; 2,350*l.* for a new coach-house; 559*l.* for cellars (to hold the sour beer served at the levees, an ill natured fellow remarks); 548*l.* for a new verandah; 2,114*l.* for fences; 3,263*l.* for roads within the premises, and 1,195*l.* for paving; 95*l.* for an additional front door; 123*l.* for a kitchen-range, "complete;" and 133*l.* for cooking furnaces, &c. &c. The governor's income of 15,000*l.* included 5,000*l.* for "house allowance." It is alleged that "the total expenditure lavished on Toorak (the house in question), from first to last, has been over 44,000*l.* which will be lost to the public in five years," and the cost of building a permanent Government-house has yet to be incurred. The "lease," we dare say, is not likely to be renewed on previous terms.

Much interest is excited by the discovery and working of iron ores in Australia. Iron has been discovered in various parts, in immense quantities, and some local companies have commenced operations on a grand scale, which, assisted by powerful machinery from England, it is expected, will prove highly remunerative as well as beneficial to the country.

ST. ANDREW'S PRESBYTERIAN CHURCH, SHEFFIELD.

This church, of which the foundation-stone was laid with Masonic honours on the 10th of July, 1835, by Dr. Hugh Wood, Worshipful Master of the Britannia Lodge, No. 62, is now upon the verge of completion, and was to be opened on the 3rd instant. Messrs. Flockton and Son are the architects. The style adopted is the Geometrical. The building consists of nave, 62 feet 8 inches in length by 20 feet in width, and 52 feet high; side aisle, tower spire, 115 feet high; school-room, 54 feet by 20 feet, with session room over, 16 feet 6 inches by 15 feet 6 inches, and all necessary conveniences. The church is warmed by Sylvester's patent hot-air apparatus, laid down by Messrs. Stuart and Smith. The following were the contractors for the building:—mason, Mr. James Powell; carpenter and joiner, Messrs. Moss and Robertson; plumbers, glaziers, and painters, Messrs. Drury and Smith; plasterer, Mr. G. Taylor; slater, Messrs. Law and Co.; and the carved work has been executed by Mr. James Mowbray. The total cost has been about 3,500*l.* Accommodation is provided for about 550 persons. The fittings have been executed in pitch pine, oiled, sized, and varnished. The roofs are open, and boarded.

BUILDERS' BENEVOLENT INSTITUTION.

The ninth annual general meeting of the friends and subscribers to this useful institution was held on the 31st ult. at the London Tavern; Mr. Charles Lucas, the president, in the chair.

Mr. Lucas having briefly opened the proceedings,

Mr. A. G. Harris (the secretary) read the report, which stated that the subscriptions and donations during the past twelve months amounted to 1,354*l.* 1s. and 700*l.* stock had been added to the sum invested in the Three per Cent. Consols, as follows:—250*l.* stock to the relief fund, and 450*l.* stock to the building fund, making the total amount 5,450*l.* stock; viz. 3,500*l.* to the relief fund, and 1,950*l.* to the building fund. The annual ball, held at Willis's Rooms, again kindly superintended by Mr. Joseph Bird, as hon. secretary, produced to the funds of the institution a surplus of 108*l.* and new subscriptions and donations to the amount of 31*l.* 14s. The supporters of the institution will be gratified to learn that the total amount received from this source alone, since its commencement, is 828*l.* 13s. 4d. The total number of recipients enjoying the bounty of this society is thirty-five; viz. twenty males and fifteen females. The report, after thanking the subscribers for their past exertions, called upon those who had not hitherto subscribed to come forward, and by their subscriptions enable the committee to relieve the deserving and aged tradesman, so that he might end his days contented in the assurance that his former respectability and good conduct in life have, notwithstanding his misfortunes, saved him from the pressure of want and neglect in his declining years. The report, in conclusion, stated that Mr. Alderman William Lawrance had consented to become the president for the ensuing year.

The report having been adopted, thanks were voted to the late president.

Mr. George Bird (in answer to a vote of thanks to the treasurer) said he was not satisfied with what the builders had done during the past year. He was ready to admit that the times had been bad, but still there were many of the larger builders who, he was sorry to say, refrained from coming amongst them. He trusted that he should shortly have an opportunity of telling them so. He had seen many men who had lived in the best of style come to want the means offered by this charity, and he therefore trusted that those who stood aloof would at last come forward and support this, one of the most useful and benevolent institutions of which the metropolis could boast.

The Chairman (in reference to a conversation which ensued, relative to the creation of almshouses, brought forward by Mr. Isaac Bird, for which 500*l.* or 600*l.* are required to raise the amount to 2,500*l.*) said it was a disgrace to the builders that they should be talking of such an amount, while the cheesemongers and other trades had raised most magnificent almshouses, and endowed them. The sum to be expended in the erection of such buildings should be nothing less than from 40,000*l.* to 50,000*l.*

PROFESSIONAL REMUNERATION VIEWED IN A NEW LIGHT.

At a meeting of the Bradford town council, held in July, it was proposed to fix the borough surveyor and engineer's salary, at 300*l.* on which Mr. Rawson "urged that just in proportion as they raised the salary, they diminished the chance of getting a return in work from the officer they appointed; a high salary invariably meaning the least modicum of work in return: the more money a person received the more time he would require to spend it in."

Some persons are very liable, to use a common expression, to measure other peoples' corn by their own bushel. Whether Mr. Rawson has done so or not in this case, it is not for me to say. He will know best. Was he ever on the look out for a situation? If so, did he desire his intended employers to give him a low salary, as otherwise he would not be able to do them justice? We should rather suppose that having been born "with a silver spoon in his mouth," he has, by carrying out his novel idea, by grinding his employed, and reducing their salaries to the lowest possible, succeeded in laying up for himself stores of "worldly treasure," but not in obtaining the goodwill of those who are the victims of his peculiar creed.

The general belief is, that a good article always fetches a good price—that the labourer is worthy of his hire. The oracle of the Bradford town council tells a different tale: according to him, a high salary means little work in return! Oh! Stevenson and Brunel! Knowing that a man possessing just enough to keep life and soul together would have done better service to his employers (since having next to nothing to spend, he would require next to no time to spend it in), than you could, have you not much to answer for? Do not your consciences accuse you of the awful duplicity of which you have been guilty?

Mr. Rawson seems to consider that civil engineers are destitute of all probity and honour,—that after spending the best part of their lives, and considerable sums of money, in acquiring the knowledge requisite for successfully undertaking engineering works, they should feel highly thankful for a mere pittance doled out with a niggardly hand. His estimate of our profession does not tend to advance his own worth in the eyes of right-thinking men.

> "Oh! wad some power the giftie gie us
> To see oursels as ithers see us!
> It would frae many a blunder free us,
> And foolish notion."

Taliesin.

CARNAC IN BRITTANY.

Brittany offers attractions to tourists in search of the picturesque. The Druidical monuments of Carnac, although they have been described by several writers, are comparatively little known. A correspondent of the *Literary Gazette* says, justly,—"The Druidical monument of Carnac must be seen to be fully appreciated. No description can convey an adequate idea of the effect produced by these rude and gigantic blocks, extending in eleven lines along the undulating plain, with occasional interruptions and breaks, for a distance of nearly two miles and a half. It consists of three distinct groups, the spaces between which do not appear to have been occasioned, as in other cases, by the wilful removal or destruction of the granite blocks. I believe they were always thus detached, inasmuch as in each of them the stones increase in size from east to west, until they finally reach those gigantic proportions which baffle all our calculations as to the means by which the ancient Celts or Gauls could have transported them, and finally place them in position. Then the mysterious lines, which, when perfect, appear to have been eleven, suddenly cease, and after a short space again recommence with stones of smaller dimensions, gradually increasing in size until we reach the next terminal point. Another remarkable feature in this monument is, that two of the groups, viz.; the first

and third, from east to west, terminate in a semicircular cromlech, the stones of which appear to have been originally placed close to each other. Many have been now removed, but enough remain to mark the line of the original semicircle: this, however, does not exactly meet or correspond with the two outer rows or lines of stones. The centre group, which does not terminate in a semicircle, is not, however, for that reason less interesting. Here the granite blocks are, if possible, still more gigantic, more unwieldly, more imposing. They stand, too, on a wild heath, and thus produce a more striking effect than those near Menec, many of which are built into the walls separating the small properties and allotments into which the land is subdivided. Two other groups of rows of stones exist to the westward —the one near the village of Ste. Barbe, and another still farther off at Esteven: the latter I did not see. They are very inferior to the groups of Carnac. Some writers and archæologists have endeavoured to show that these five groups belonged to one great temple or monument running across the country in a serpentine line, and thence supposed to be a draconticum, sacred to serpent worship. They also suggest that the monument crossed an arm of the sea near Cherispere, and was thence continued as far as Loc Maria Ker. I do not think there is any foundation for these suggestions. The monuments of Ste. Barbe and Esteven belonged, no doubt, to the same system of temples, but they were never continuous, nor are they in the same line."

Notices of Books.

Elements of Practical Hydraulics for the Use of Students in Engineering. By S. Downing, M.A. London: Longman and Co. 1855.

Hydraulics is the science which treats of the motion of fluids in general, including under that term both liquids and gases; the former being called incompressible or inelastic fluids, as water, and the latter elastic fluids, as air. The present work confines itself to the former, taking water as the most important to the engineer.

In the first chapter is discussed the discharge of water from a reservoir, the surface of the water being at a constant level. If water is allowed to issue from a thin vessel by a simple orifice, without any pipe attached, it is found that the fluid is contracted just above the orifice, and that the quantity which issues is less than would result from calculation, according to the size of the hole: but if a pipe in the form of a truncated cone is attached to the hole by its larger extremity, the flow of water will then be greatly increased.

This conical pipe is termed an *adjutage*, and is of great importance in the case of jets of water. The flow of water over weirs or waste boards is only a particular case of the discharge by orifices in general, the orifice being at the upper part of the reservoir: this subject, therefore, comes under notice in the first chapter.

In the second chapter the water is supposed to have a variable head, which is the more common in practice. The velocity of the issuing fluid of course diminishes with the head of water. The same subjects are discussed as in the former chapter, but the varying height of the surface makes the formulæ more complicated, and demands the use of the differential calculus. We have some excellent practical applications of the several formulæ obtained in these two chapters, which will enable the engineer to use them, although he may not be acquainted with the higher mathematics.

The third and last chapter is devoted to the flow of water through pipes, channels, and rivers; a subject as important to the architect as to the engineer, including as it does the theory of drainage. One of the laws of fluids passing through pipes being, that the resistance is proportional to the surface exposed to the action of the fluid, it follows from geometry that the pipe must be circular, if we desire to convey the greatest possible quantity of fluid with a given area of section: hence the usual circular form of drain-pipes is the most correct.

Mr. Downing's work will be a great boon to the hydraulic engineer, since the subjects are much simplified, and do not demand a large knowledge of mathematics in order to apply them to practice.

Miscellanea.

Proposed Railway from Buntingford. — A meeting was held at the George Inn, Buntingford, on August 1st, to take into consideration the propriety of constructing a railway from Buntingford to Hertford or Ware. Mr. Abel Smith, M.P. for Hertfordshire, in the chair. The chairman explained the great advantage of such railway communication, and his desire to support such a scheme; and having called upon the engineer, Mr. H. P. Stephenson, to state his views, it appeared that the line would be thirteen miles long, with favourable curves and gradients; and that by closely following the valley of the Rib and the surface of the ground, and adopting timber structures, a single line of railway might be constructed at a cost under 6,000*l.* per mile: it was proposed, however, to take a capital of 100,000*l.* Resolutions were passed in favour of the proposed line, and a committee appointed to ascertain the views of the landed proprietors and others in the district, and to report to an adjourned meeting, on August 28th, how far it would be expedient to take steps for the formation of a company to carry out such line of railway.

Concerts for the People.—Some twelve or fifteen years since a regular series of threepenny concerts for the people was established at Glasgow, and proved eminently successful, — thousands literally flocking to the great City-hall, which was usually crammed to the doors. In all probability these concerts still continue, and at all events there are such in many other towns throughout the country; and why London should not have its well established and in every way profitable people's concerts, not only in some one central district, but in many, we have long felt at a loss to conceive. It is with no ordinary satisfaction, therefore, we observe that a series of such concerts has been organized in the Philharmonic Hall, 14, Newman-street, Oxford-street, under the patronage of Viscount Raynham, Mr. H. Mayhew, Mr. Charles Mackay, and other gentlemen interested in the welfare of the working classes. The charges for admission are 2d. for the body of the hall, 4d. for the side galleries, 6d. for reserved seats, and 1s. for stalls. The concerts commence at eight o'clock. There is good instrumental as well as vocal music, and other entertainments are introduced. The series doubtless requires a little outlay at the commencement, and ought to be well supported by the higher classes who fill the stalls and reserved seats; but we have every confidence that once fairly set agoing and fully advertised, these concerts will shortly not only be highly successful, but yield such a profit as will enable the patrons and managers to establish other concerts in various districts of the metropolis. The influence of such amusements in withdrawing the working classes from the public-house and its concerts is most desirable, and we doubt not will effect the object in view.

Sale of Mr. Mare's Ship-building Establishment.— The extensive ship-building establishment and ironworks of Mr. J. C. Mare (bankrupt), the well-known Government contractor of Westminster-bridge, &c. together with the fixed plant and machinery, which occupy a site of upwards of 14 acres at Blackwall, were submitted to public competition last week, by order of the assignees under the bankruptcy, and with the consent of the mortgagees. Many engineers, contractors, and others attended the sale. The auctioneer described the property as covering 14a. 2r. 30p. the principal portion of the buildings being freehold, and comprising foundries, smithies, engineers' shops, &c. and fitted with five Nasmyth's hammers, from 10 cwt. to 5 tons. The recent construction of the works had involved an outlay of nearly 250,000*l.* The biddings were kept up with spirit until they reached 55,000*l.* at which price the whole of this vast property was sold.

The Art-Union at Edinburgh. — In the last report of the Royal Association for the promotion of the Fine Arts in Scotland, it is stated that the committee have much pleasure in announcing that the annual funds are continuing steadily to increase. The amount of the subscriptions last year, which was larger than that of any previous year since 1847, has been exceeded this year by 655 guineas. The sum is 4,938*l.* From the late (being the 30th) Exhibition of the Royal Scottish Academy, and from the studios of five of its members and exhibitors, they have purchased thirty-seven works of art, at a cost of 1,855*l.* These included paintings by the following academicians and associates:—J. Noel Paton, Erskine Nicol, Edmund T. Crawford, James Eckford Lauder, Horatio Macculloch, Gourlay Steell, Arthur Perigal, John C. Brown, James Giles, James Drummond, John A. Houston, and R. T. Ross; and by the following exhibiting artists, whose works held a distinguished position in the Academy Exhibition: — Samuel Bough, Waller Paton, John C. Wintour, Thomas Clark, Alexander Fraser, J. Milne Donald, and Edward Hargitt.

Leeds School of Practical Art.—A lecture was delivered in the Leeds School of Practical Art, last week, by Mr. John White, the newly-appointed master of the school, on the "Importance of Art-Instruction." There was a large audience. Mr. W. B. Denison, chairman of the committee, presided. After giving a sketch of the antiquity and early history of the fine arts, the lecturer proceeded to inquire into the reason why an art of so much importance and usefulness as picture-writing was not more generally studied and employed. The reason, he thought, was, because very few persons learnt any of the principles of the art—nothing, in fact, beyond mere copying. Drawing, however, should surely form a part of the education of every one. Reading was taught as a means of acquiring knowledge; then writing as a means of retaining and extending that knowledge; and drawing should be taught conjointly with the latter, and to the same intent. The difficulty of attainment was one alleged objection, but this was more imaginary than real; for with a proper knowledge of the true principles, governed by well-directed study, skill in art was within the reach of every one who desired to possess it.

Suffolk Institute of Archæology.—The summer meeting of this society was held on Thursday in last week, on which occasion the members and their friends made an excursion on the rivers Orwell and Stour, landing at various places to visit the objects of most interest on the banks. Mr. C. F. Gower, of Ipswich, acted as president for the day, in the absence of the Rev. Lord Arthur Hervey, the president of the Institute. The secretary read a paper on Freston Tower, before leaving the vessel, instead of on the spot. The party then landed at the Redgate Hard, and walked to the tower, noticing in their way the favourite village inn of the artist Gainsborough; and from the tower, through a picturesque park, to Woolverstone-hall and grounds. The company having re-embarked, sat down to a collation on deck, under an awning, and afterwards landed at Erwarton, where they were met by the Rev. C. Berners, the rector, and conducted by him over the church and through the rectory-grounds to the old hall. Some observations on the three earliest monumental memorials in Erwarton Church, by Mr. Edw. Blore, architect, were read by the rector. The company then re-embarked, and returned to Bury.

Jobson's Chair-moulding Machine.—This machine for moulding railway chairs, which, by reducing their manufacture to a simple mechanical operation, independent of all handicraft, ensures accuracy and uniformity, seems to deserve attention. The process is simply the withdrawing by machinery of all the parts of the pattern abutting on the core, after which the pattern can be removed from the sand in the same way as in any ordinary piece of uncored work.

The Sanitary Condition of Bermondsey.— Dr. Challice, the officer of health appointed under the Local Management Act, has just issued his report to the Board of Works, showing the great improvements made in Bermondsey since the awful visitations of cholera in 1849 and 1853 in that district. He says that "the absence of any general sickness, and the diminution of deaths, are remarkable, which must chiefly be assigned to the improvement in the quality of the water, as now it is exercising a salutary influence upon the consumers, and is quite a contrast to the filthy and abominable fluid supplied until lately in this district, which aggravated to a great degree the ravages of cholera among us in 1849. Happily, as regards quality, the evil with us is past; but complaints from numerous parts of the district reach me of scanty supply."

Gas.—It has been resolved to establish a company, under the Joint-Stock Companies Act, for the purchase of the Hertford Gas Works, the present proprietors having offered to dispose of the works to the inhabitants of the town. A committee has recommended that a company be formed, with a capital of 13,000*l.* in 1,300 shares, of 10*l.* each, only 8*l.* per share to be called up. It is estimated that the profits will pay a dividend upon the paid-up capital of 6*l.* per cent. per annum.——The Chipping Norton Gas Company have determined to remove the gas works from the present site, to one between the railway station and Mr. Bliss's new mill. Additional shares of 10*l.* each are to be issued, on which the lessee guarantees dividends of 5 per cent. for fourteen years. The works will be enlarged and built in accordance with plans prepared by Mr. Hedley, of Banbury, civil engineer, and the tender of Mr. A. Kimberley, of Banbury, has been accepted. The new works are to be in operation by the 1st of October next.——The *Independance Belge* states that the omnibuses and diligences in the neighbourhood of Lyons have adopted the use of portable gas, which is carried in a cylinder under the feet of the coachman, and communicates by means of a pipe with a lamp inside the vehicle.

Masters and Operatives.—A blue book, just issued, contains the report of the select committee appointed to inquire into the expediency of establishing equitable tribunals for the amicable adjustment of differences between masters and workmen. A majority of the witnesses examined concur in expressing themselves in favour of the establishment of boards of arbitration between masters and workmen, but they differ as to the constitution of the proposed boards, and still more as regards their jurisdiction. The existing law on the subject of arbitration (the Act of 5th George IV. cap. 96) is examined, and found to be nearly inoperative, as hardly anybody resorts to it, and few are aware of its existence. To obviate objections, it has been proposed to establish in the various manufacturing districts "Courts of Conciliation," like the "Conseils de Prud'hommes," in France. The committee believe that the formation of such courts in the country, more especially in the large commercial, manufacturing, and mining districts, would be beneficial, and suggest the introduction of such a measure as an amendment in the present Arbitration Act, by enabling masters and operatives to choose referees from their own class or calling, equal in number, and presided over by a chairman unconnected with either party, to be elected by the referees. The committee think it would be impossible to give these or any other tribunals any power whatever of forcibly regulating the rate of wages.

The Electric and International Telegraph Company.—At the half-yearly meeting of the Electric and International Telegraph Company, just held, the balance-sheet, for the half-year ending June 30th, was produced, showing the revenue for that period to have been 78,516*l.* 1s. 8d. and the expenditure 53,606*l.* 10s. 2d. leaving a balance of 24,909*l.* 7s. 6d. which permitted the payment of a dividend at the rate of 6 per cent. per annum on the consolidated stock of the company, and left 3,677*l.* 0s. 7d. to be carried over to the next half-year's account. It appeared from the engineer's report, that during the half-year ending June 30th, the telegraph had been extended over 76½ miles of entirely new line, nearly all for railway purposes. The length of wire was 459 miles. The mileage of the company was 5,303 miles, and of wire 28,352 miles. Telegraphs had been constructed on the Perth and Dunkeld, the Nayland Extension (South Wales), the Alton and Ardwen branches (South Western), and Salisbury branch (Wilts and Somerset) Railways. The only commercial work of any importance had been the laying down of a direct wire from London to Hull, *viâ* Great Grimsby, including a submarine cable two miles in length across the Humber. Telegraphs are in the course of erection on the Forth and Clyde Railway, and Wilts and Somerset branch. A communication is also being established between the East and West-India Docks and the London office. Three of the Dutch submarine cables have been repaired, and are now in use. The fourth has been picked up, and is being coiled on board at Lowestoft, and will in a few days be again submerged. The report and statement of accounts were adopted, and a dividend at the rate of 6 per cent. per annum declared.

Sale of the Panopticon, Leicester-square.—Our fear, pretty loudly and not seldom expressed, that the Panopticon, in Leicester-square, would not long continue open under the scheme and management on which it set out, has unfortunately been but too soon justified. The premises, we observe, are now advertised for sale by Messrs. Chinnock and Galsworthy, on the 25th instant, with plant, fixtures, and adjoining dwelling-houses. A sum of no less than 80,000*l.* has been expended upon it and its accessories, and it is conceived that the building might be so altered as to provide a splendid concert-hall on a level with the organ, as well as to enable the original design to be more effectually carried out than it has hitherto been. For a theatre or opera-house it is considered to be well adapted, or at least easily convertible. It is to be hoped that a building on which so much money has been expended will fall into good hands, and be converted to some use for the public advantage as well as that of its proprietors.

Smoke Nuisance Abatement (Metropolis) Act, 1853, Amendment.—By this Act, which received the Royal assent on the last day of the session, the exemption, in the Act 16 and 17 Victoria, of glassworks or potteryworks from its operation, is repealed. All steam-vessels plying between Londonbridge and the Nore, and all public baths and washhouses in the metropolis, are also made liable to the operation of the Act 16 and 17 Victoria.

New Congregational Church, Islington.—On the 5th inst. the foundation-stone of a new congregational church was laid in the Offord-road, near the New Cattle-market, Islington, by Mr. Apsley Pellatt, M.P. for Southwark. Messrs. Lander and Bedells are the architects, and Messrs. Dove, Brothers, the builders.

The Smoke Act at Wandsworth.—Mr. C. L. Francis, cement manufacturer at Nine Elms, was summoned before Mr. Ingham on 28th ult. at the instance of the superintendent of the V division of Police, under the Smoke Consuming Act. Mr. Bodkin appeared on behalf of the Crown, and stated that this was an information against the defendant for having eight furnaces upon his premises without any appliances to consume the smoke. There were eleven furnaces altogether, and there were now only three remaining fitted up with smoke consuming apparatus. A professional gentleman, for the defendant, stated that they had tried every means, but all interfered with the manufacture, and he contended that the Act was not intended to stop trade. The ovens for the baking of the cement had been in existence for fifty years, and there was no other house using ovens for the baking of that particular cement. They had applied Mr. Gray's patent, but it was found that it took off the heat from the cement, which became "soaked" and useless. They then tried Mr. Larkins's, next Messrs. Beaufoy's, the distillers, and had then used Welsh coal,—in fact, they had tried every means they could, such as condensing the smoke, as at Messrs. Cubitt's, &c. and had gone to a great expense, but they could not succeed in their trade if they had to consume the smoke. At Messrs. Cubitt's they manufactured plaster of Paris, but not the cement as manufactured by the defendant. They had written to the Treasury, stating that they were willing to adopt any plan the Government might recommend. He thought that they were entitled to a dismissal of the summons, as they had applied the best practical means to consume the smoke within the meaning of the Act. Finally the summons was allowed to stand over for a month, for the purpose of instituting inquiries as to whether there were any means that could be applied.

Dangerous Buildings at Bayswater.—Mr. C. Reeves, the metropolitan police surveyor, attended at Hammersmith Police Court a few days since, in support of four summonses taken out under the new Building Act, against the owner or owners of four dangerous buildings, near the Duke of Cornwall public-house, St. Colomb-road, Westbourne-grove, Bayswater, for not having obeyed an order of Sir Richard Mayne, that they should be pulled down within seven days. The owners of the houses did not appear. The magistrate made an order for the walls, &c. that were in a dangerous state to be pulled down within fourteen days. In the event of non-compliance, they will be pulled down by the police surveyor.

The Liverpool Timber Trade.—The circular of Messrs. Duncan, Ewing, and Co. states that, "since the 1st of February, the supplies to this port of North American colonial wood, have been brought in eighty-one vessels, viz. seventeen from Quebec, forty-one from St. John, N.B. and twenty-three from other ports, which have occupied a tonnage of 63,819: during same period last year there arrived 103 vessels, the tonnage being 74,863. The average amount for the like time in four years previous to this, has been 70,840 tons. From the North of Europe thirty-seven vessels, 12,718 tons, wood laden, have arrived; whilst, for the like time last year, fifteen vessels, 4,216 tons arrived, the average of four years being 9,150 tons. The supplies of square timber from the North American colonies amount to about an average; but of deals the quantity falls considerably short of an average." The arrivals during the last month from the North of Europe sum up three vessels from Danzic with timber, and one from Sweden deal laden. The importation from the Baltic since the opening of the season gives an excess over an average of years of 3,500 tons of shipping. The circular states that "there has latterly been an improved feeling manifested in the market, both with regard to timber and deals."

Fall of a Gable at Edinburgh.—On Thursday in last week the gable of a house in Leith Wynd suddenly fell in, exposing the interiors of the dwelling-houses contained in no less than six flats. No lives were lost, although every flat was crowded with sleeping apartments thus laid open in the middle of the night.

Purification of Gas by Clay.—Our readers may recollect of our calling attention to a very promising application of common clay to the purification of gas at Wakefield. We have now the gratification of stating that our anticipations have been completely justified by the result of another year or two's experiments, as well those of practical gas manufacturers as of scientific chemists, such as Professors Brande and Taylor, Dr. Letheby, and others. Gas at Wakefield was steadily raised in illuminative power and value from 12½ to 15½ sperm candles by its use. At Huddersfield, where it has also been tried, it was found to remove (as at Wakefield) impurities which lime could not touch, and especially ammonia, so as palpably to increase the brilliancy of the gas. Dr. Letheby and Professors Brande and Taylor, moreover, have found that besides ammonia it separates certain "sulphur compounds contained in gas which lime cannot entirely separate;" and Dr. Letheby expresses his belief that the very noxious bisulphuret of carbon is one of these compounds. Since these experiments have been made, a new sort of proof of the power of clay to abstract ammonia and other ingredients from gas, even already purified by lime, has occurred in the vicinity of Wakefield, where the contaminated or impregnated clay appears to have been found to constitute a most potent manure, producing, for instance, five crops of grass, in one season, so thick in the pile that it had scarcely room to grow; and in other instances, where it was used in a certain quantity for the purpose, utterly destroying all vegetation where so used, while producing luxuriant crops in the same field where used in small and properly proportioned quantity. Indeed, no one who ever smelt the strongly offensive clay of our streets when impregnated by impurities from our "purified" gas, can doubt the power of clay to withdraw such impurities from gas, or even its power as a manure. The clay in the Rev. Mr. Bowditch's patented process, we may add, is used alternately with lime in gas purification.

Asylum for Fatherless Children. — The foundation stone of this building was laid on the 5th, on a piece of land between the Croydon and Stoat's-Nest Stations, on the London and Brighton Railway, by the Lord Mayor. It will have a frontage of 350 feet, and a depth of 200 feet. It will be Italian in style, constructed of freestone, with dressings of Devonshire marble. Mr. Moffatt is the architect, and the contract has been taken by Mr. Pollard, builder, at 18,000*l.* The arrangements for the ceremony were not very satisfactory.

London Thoroughfares.—On reading a late number of your publication, I see that you have been meditating, not among the tombs, but where they used to be. Now, sir, permit me to tell you what we want in that locality, and I hope you will give us your assistance, and that is, a new street from the Eastern Counties Station to Victoria-street, if not along to New Oxford-street. However, I should be glad to see it from the station to Aldersgate-street for the present: it would open up that awful nest of filth in Redcross-street, Whitecross-street, and Golden-lane. I would bring it straight through Castle-street, past the end of the new buildings about to be erected in the City-road, the end of which buildings might have a good front towards the new street. Then I would advise that all the houses in the new street should be for the working classes, with three and four rooms on each floor, like those in Glasgow (not great red and black buildings like a workhouse, but every house to have a shop with complete little houses on each floor): they would pay well, and be very comfortable for the tenants. I believe if the parish would take this scheme up, with the sanction of the Board of Works, it would be the greatest blessing possible for that neighbourhood, besides adding very much property to the parish. If you will look at it, you will see there is nothing stands in the way but a few grave-stones at the back of the Artillery-house; and as they are removing out of one yard, I suppose there would not be much difficulty about the other. But, independent of that, we want a street from the City-road to the station. It is the greatest difficulty to get to it now—only through narrow crooked lanes, so that two cabs can scarcely pass; and I have often wondered that the railway company never made a move in that direction, it is so much wanted, and would do so much good. I hope you will look on this scheme with your wonted favour on behalf of the working man.—J. Walker.

[Advertisement.]

Messrs. Clark and Co.

15, Gate-street, Lincoln's-inn-fields.

Gentlemen,—After eight years' trial of your Patent Revolving Shutters, erected here, I can safely pronounce them most effectual in their action, and they have given me the utmost satisfaction,

I am, Gentlemen, yours, truly,

Geo. Downe.

155, Leadenhall-street, August 7th, 1856.

To Correspondents.

"T. C. C." (under our amount).—"H. P. S."—"T. and T."—"J. S." (we were unable to fix a time on the days named).—"S. P. K."—"W. D." (not received in time).—"H. C."—"J. G. S."—"Butt Joint" (measure superficial area and allow one-seventh for waste).—"X. Y. Z." (we avoid giving opinions on special cases. Plastic being an oil cement it is of course necessary that the work on which it is put should be perfectly dry).—"R. R."—"R. H."—"E. E."—"Constant Reader."—"A Sub."—"G. G. A."—"J. G. H." we shall be glad to see them.—T. McA."

"Books and Addresses."—We are forced to decline printing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the Editor, and not to the Publisher.

ADVERTISEMENTS.

TO LEAD GLAZIERS OF STAINED GLASS

COMPETENT Persons may obtain EMPLOY, and liberal wages, by applicati n to Mr. WARRINGTON, Stained-Glass Works, 42, Berkeley-street West, London. Country hands will be preferred

N.B. None belonging to the "Glaziers' Combination Club, or Society," will be employed.

WANTED, by a Builder, a practical, working Man, to act as CLERK and FOREMAN. None need apply who se character will not bear the strictest investigation. Apply, immediately, at St. Paul's lodge, St. Paul's road, Camden New Town

WANTED, a thoroughly competent Person, accustomed to MOULDING by MACHINERY. He must be strictly sober, and able to produce satisfactory references, State terms and where last engaged Apply to C. BAKER and CO City Saw-mills, Canon's-marsh, Bristol.

WANTED, in an Architect and Surveyor's Office, in the country, a competent ASSISTANT.—Application, stating terms, referen c, and qualification, to be made to Mr. KNIGHT, 84, George's-place, Cheltenham.

TO BUILDERS' FOREMEN.

WANTED immediately, a thoroughly practical and experienced general FOREMAN Apply by letter only, prepaid, to H. G. M. 3, Melbourne-terrace, Prattstreet, Camden town

WANTED, a CLERK of WORKS, for about three months, to superintend the construction of a Brick Main Outfall Sewer, under the direction of the Engineer; a party accustomed to the work would be preferred.—Applications, stating salary required, and enclosing testimonials, to be addressed to the Chairman of the Luton Local Board of Health, on or before the 18th instant, indorsed "Clerk of Works." Luton, August 6th, 1856.

WANTED, immediately, a FOREMAN of BRICKLAYERS State age, wages, and references—Address, A. Gardner's Library, Guildford.

WANTED, by the Advertiser, a SITUATION as an ASSISTANT to a BUILDER or ARCHITECT, at a moderate salary; he is a good draughtsman, perfectly acquainted with the duties of an office, can superintend work, and prepare working drawings.—Address, X. O. Office of "The Builder."

TO LAND SURVEYORS, ENGINEERS, &c.

WANTED, by a respectable Young Man, aged 19 a SITUATION as ASSISTANT. He has a knowledge of surveying, levelling, mapping, and plan drawing. Salary not so much an object as improvement and a permanent situation No objection to the country.—Address, M. C. L. 7, St. George's-road, Portland road, Notting hill.

WANTED, an ENGAGEMENT as CLERK or otherwise, by a clever, active, and gentlemanly man, in his 23th year. Has a thorough practical knowledge of business generally, accounts, book-keeping, and correct ondence. References from one of the first houses in London.—J. G. 15, King William-street, City.

TO DECORATORS AND BUILDERS.

WANTED, by a good Tradesman, a SITUATION as PAINTER, GLAZIER, and PAPERHANGER. Can fill up best of Plumbing Address, A. B. 24, Tennison-street, Broad-street, Lambeth Good references

TO PLUMBERS AND BUILDERS

WANTED a SITUATION, as PLUMBER, by a young Man, who has a good knowledge of the trade, and will turn his hand, if required. Town or country. Address, C. B. 28, Thomas-street, Gibson-street, Lambeth.

WANTED, by a Young Man, who has been in business for himself in the country, a SITUATION as BOOKKEEPER, CLERK, &c He is quick at measurements, and can produce good testimonials from parties in the first station. As he is desirous of immediate employment in an office in London, salary at first would not be so much an object.—Address, W. C. 7, Richmond-street, St. George's-road, Southwark.

TO BUILDERS, &c.

WANTED, by a thorough practical Man, a SITUATION, as OUT-DOOR FOREMAN. Would not object to take charge of country. Best of testimonials.—Address, A. B. No 20, Peter-street, Hoxton road

TO PLUMBERS, BUILDERS, AND OTHERS

WANTED, by a first-rate PLUMBER, a constant SITUATION. No objection to town or country. Good reference if required.—Address, J. C. L. No. 25, Mill street, Mansion-street

WANTED, by a Young Man (a good workman), recently from the country, a SITUATION as BENCHMAN in a good joiner's shop Address, stating terms, A. B. 21, John-street, Pentonville, London. Town made can be had if any extent

TO PLUMBERS, PAINTERS, GLAZIERS &c

WANTED, by a Young Man from the country, a permanent SITUATION, where he could receive general improvement in the above branches Would be glad to fill up his time in the office.—Address, W. A. O. 68, Dean-street, Soho.

TO ARCHITECTS, ENGINEERS, AND OTHERS.

WANTED, an ENGAGEMENT with an ARCHITECT or others. The advertiser is a fair draughtsman, and is anxious to obtain a situation in an office transacting large business Salary not an object.—Address X. Y. Z. 16, New-road, Hammersmith.

TO ARCHITECTS, ENGINEERS, AND OTHERS.

WANTED, an ENGAGEMENT with an ARCHITECT or others by a DRAUGHTSMAN and GENERAL ASSISTANT. The advertiser is a first-rate draughtsman and colourist, and familiar with office practice. References given.—Address, X. Y Z. Post-office, Starch-green, near London.

TO BUILDERS, SMITHS, GASFITTERS, BELLHANGERS, AND OTHERS.

WANTED, by the Advertiser, an experienced man, a PERMANENT SITUATION in any of the above branches; has a thorough knowledge of all kinds of hot water apparatus Address, T. TAYLOR, 3, Albert-place, Hornsey-road, Holloway, Islington.

TO PLUMBERS, BUILDERS, GASFITTERS, AND OTHERS.

WANTED, by an experienced Young Man, a SITUATION as PLUMBER, GASFITTER, or PAINTER and GLAZIER. A permanent situation particularly required. No objection to the country —Address, T. JONES, 8, Albert-place, Hornsey-road, Holloway.

TO PLUMBERS AND BUILDERS.

WANTED, by a Young Man, a Permanent SITUATION as PLUMBER and GASFITTER; can undertake the painting and glazing, if required. - Address to W. R. No. 6, Gloucester-street, Blackfriars-road.

WANTED, by a Practical Man, a SITUATION as CLERK of WORKS, or GENERAL FOREMAN. Is well acquainted with the various building trades, and is a good draughtsman. Unexceptional testimonials. No objection to the country.—Address, A. B. No. 4, Carthusian-street, Charterhouse-square, City.

TO BUILDERS AND OTHERS.

THE Advertiser is desirous of taking BRICKWORK at per Rod, including labour and scaffolding, or labour only.—Address, M. B. 1, Cumberland-place, Hammersmith gate

TO STONEMASONS

THE friends of a respectable Youth, aged 17, wish to APPRENTICE him to the trade (for perfection), for two years A moderate premium will be given.—Address, Mr. BUSH, Architect, 15, Clifford street, Bond street

TO ENGINEERS OR ENGINEERING CONTRACTORS

THE Advertiser, who has had seventeen years' experience on general works, wishes to meet with an ENGAGEMENT. Is a good draughtsman, and well acquainted with measuring works, taking out quantities, levelling, &c &c. First-rate testimonials No objection to go abroad.—Address, A. G. W. Office of "The Builder."

TO BRASSFOUNDERS, HYDRAULIC ENGINEERS, BEER-ENGINE MAKERS, AND OTHERS.—WANTED, a SITUATION as CLERK, COLLECTOR, TRAVELLER, or combined. Has been used to the management of an establishment as above; has a practical knowledge of the same, and can make plain drawings for patenting &c. Unexceptionable references and security.—Address, F. M. Post-office, Watling-street, City.

TO ARCHITECTS.

THE Advertiser, who is a neat and expeditious DRAUGHTSMAN, and has had five years' experience in preparing Gothic, general, and working drawings, is desirous of meeting with a PERMANENT ENGAGEMENT in London.—Address, D. E. F. 9, High-street, Camden-town.

TO LAND AGENTS, SURVEYORS, AND OTHERS.

THE Advertiser, a neat DRAUGHTSMAN, is desirous of obtaining an ENGAGEMENT as an ASSISTANT in a Land Agent and Surveyor's Office.—Address, A. A. 961, Oxford-street, London.

THE Advertiser, a Young Man, is desirous of a SITUATION as FOREMAN to a small Builder or Carpenter. He understands is keeping accounts, can prepare all kinds of drawings, and measure up work No objection to work at the bench or at buildings.—Address, R. P. Office of "The Builder."

TO ARCHITECTS AND SURVEYORS

THE Advertiser, who has completed his Articles in the office of an Architect and Engineering Surveyor in the country, is desirous of an ENGAGEMENT.—Address, A. B 7, Southwood-lane, Highgate.

TO ARCHITECTS, &c.

THE Advertiser, a good DRAUGHTSMAN and DESIGNER in ECCLESIASTICAL and GOTHIC ARCHITECTURE together with Italian, &c and who is well accustomed to the preparation of working drawings and details, perspectives, and a good hand at it, is open to an ENGAGEMENT in town No objection to a clerkship of the works. Address, N.A. Post-office, Osnaburgh-street, Regent's park.

TO LITHOGRAPHERS, WOOD ENGRAVERS, AND OTHERS

THE Uncle of an Orphan Boy, aged 15, is desirous of APPRENTICING him to either of the above business As the advertiser's means are limited, the premium must be small.—Addre s, post-paid, W. W. Post-office, Millbank-street.

TO ARCHITECTS.

A PRACTICAL CLERK of WORKS wishes a RE-ENGAGEMENT.—Address, J. C. Office of "The Builder."

AN ACCOUNTANT, of ability and experience, undertakes to MAKE UP ACCOUNTS in arrear, and keep the books of builders, contractors, tradesmen, and others close posted upon very low terms First-rate references to character, &c given.—Address, S. V. Office of "The Builder."

TO ARCHITECTS

AN experienced CLERK of WORKS being about to finish large public works, is desirous of a RE-ENGAGEMENT with the highest of testimonials.—Address, W. W. Mr Lyons's, Princes-street, Westminster.

TO ARCHITECTS.

A GOOD DRAUGHTSMAN is desirous of a RE-ENGAGEMENT; he is competent to prepare perspective, finished, working, and detail drawings, with the usual routine of an office. Temporary assistance given for long or short periods, but a permanency preferred. Good references.—Address, G. B. C. Office of "The Builder."

A YOUNG MAN who has studied in Paris three years as Ornamental Modeller for the different branches of manufactures, is open to an ENGAGEMENT. - Address, P. T. Mrs. J. Mabley, 143, Strand.

TO BUILDERS.

A PRACTICAL MASON is open to CONTRACT for the STONEWORK of any public job or private buildings—labour only. The most satisfactory references as to character and ability. No objection to the country —Address, M. D. Mr Kay's, Stationer, Bishop's road, Paddington.

TO ARCHITECTS, SURVEYORS, ENGINEERS, &c.

A SUPERIOR Architectural and Engineering FOREIGN DRAUGHTSMAN and excellent Designer, wishes a RE-ENGAGEMENT, in a London Office. He is practically acquainted with all the branches of building and construction. References to eminent London architects. Terms moderate.—Address, W. W. Office of "The Builder."

TO PLASTERERS AND BUILDERS.

A YOUNG MAN, who has served four years to the above, is desirous of being BOUND for another THREE YEARS; improvement being of more consequence than wages.—Address, A. B., J. Mesnard's, 10, Church-passage, Chancery-lane.

TO ARCHITECTS.

A YOUNG GENTLEMAN, in his 21st year (whose engagement will shortly expire), is desirous of meeting with a SITUATION in an ARCHITECT'S OFFICE. He thoroughly understands perspective, and can make either tinted or coloured drawings. Reference given. Terms moderate. Address, Y. L., 31, George-street, Leicester.

TO ARCHITECTS AND OTHERS

AN EFFICIENT CLERK of WORKS is at liberty. Testimonials unexceptionable.—Address, post-paid, to T. L. S. in care of Mr. Butterworth, Stationer, &c. York-road Lambeth.

TO ARCHITECTS AND OTHERS

AS CLERK of WORKS, or SUPERINTENDENT on an ESTATE, where a number of WORKMEN are employed, the advertiser offers his services. Good references can be produced.—Address, X. Mr. Judd's, Bookseller, Colthorpe place, Gray's-inn-road.

TO BUILDERS, &c.

A THOROUGH BUILDER'S CLERK, with extensive practical experience and references of several years' standing, is open to an early ENGAGEMENT in town or country. Address, A. B. 13, Eastcheap, City.

TO SAW MILL PROPRIETORS AND OTHERS.

A YOUNG MAN wishes EMPLOYMENT as SAW SHARPENER, in town or country. A good Benchman.—Address, E. G. 132, Winchester-terrace, Agar Town.

TO BUILDERS AND OTHERS.

A THOROUGH practical BUILDER'S FOREMAN is open to an ENGAGEMENT. Understands every branch of the business.—Address, Mr. E. WRIGHT, Sutherland-place, Bilston-road, Wolverhampton.

TO BUILDERS, &c.

AN ASSISTANT, of much experience in all matters relating to building, desires an ENGAGEMENT in an Office, to make plans, take out quantities, make estimates, attend to the books, and measuring up of works, &c. Good references. Salary moderate.—Address, R. S. 12, Parkstreet, Camden-town

TO BUILDERS AND CONTRACTORS.

A MEASURER, ESTIMATOR, and QUANTITY SURVEYOR, of great practical experience, offers temporary ASSISTANCE to BUILDERS; is also a good draughtsman. Terms reasonable (no charge if unsuccessful).—Address, Mr. WILLIAMS, Office of "The Builder."

A GENTLEMAN, at present travelling on Commission for a respectable house, through the Northern and Midland Counties, and calling upon Builders, Cabinetmakers, &c, is desirous of obtaining a few additional AGENCIES. Address, W. C. B. Post-Office, Manchester.

A YOUNG MAN, who is engaged in an architect's office during the day time, is desirous of EVENING EMPLOYMENT Understands the general routine of an office. Address, D. D. H. 227, Maida-hill, Edgeware road.

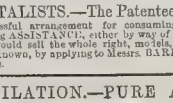
TO ARCHITECTS, SURVEYORS, AND BUILDERS.

A YOUNG MAN, having a FEW HOURS in the EVENING at leisure, wishes to EMPLOY them as DRAUGHTSMAN, and in assisting in preparing drawings, specifications, &c. Remuneration no object, it being more for practice than otherwise.—Address, S. R. 66, Cheapside.

TO CAPITALISTS.—The Patentee of a new and successful arrangement for consuming smoke, is desirous of finding ASSISTANCE, either by way of Partnership, Royalty, or he would sell the whole right, models, &c.—May be seen, and terms known, by applying to Messrs. BARLOW and CO. 89, Chancery-lane.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an



EXTERNAL WALL.

With single pulley, from 8s. each; with leading pulley, from 8s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of apartments without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fre h air is most required HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

H. DOULTON & CO'S.

TERRA-COTTA CHIMNEY-TOPS

Will withstand the action of the Weather and Sea Breezes, and are

QUITE IMPERISHABLE.

Prices not much higher than Cement.

DOULTON & CO.'S

TERRA-COTTA POTS, &c.

Erected in London upwards of 20 years since, are now as sharp and perfect as when first manufactured

Drawings on application to

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ANNUAL DIVISION OF PROFITS.

GREAT BRITAIN MUTUAL LIFE ASSURANCE SOCIETY,

14, Waterloo-place, London, and 30, Brown-street, Manchester.

DIRECTORS.

THE CHISHOLM, Chairman.

RICHARD HARTLEY KENNEDY, Esq. Alderman, Deputy-Chairman.

This Society is established on the tried and approved principle of Mutual Assurance. The funds are accumulated for the exclusive benefit of the Policy-holders, under their own immediate superintendence and control. The profits were divided annually, and applied in reduction of the current premiums. Policy-holders participate in profits after payment of five annual premiums.

The Annual General Meeting was held on the 28th May, 1856, when a highly satisfactory Report of the state of the affairs and progress of the Institution was presented to the Members. During the last three years, upwards of 1,200 new assurances have been effected, yielding an increase of premium income of more than 20,000l. per annum; and although a general high rate of mortality has prevailed among Assured in Britain for the last two years, it has not been deemed necessary to reduce, in the slightest degree, the allowances previously awarded to the Policy-holders.

The Members present at the meeting were fully satisfied with the Report, and resolved unanimously that a reduction of 3½ per Cent. should be made in the current year's Premium payable by all Policy holders now entitled to participate in the Profits.

Credit is allowed for half the annual Premiums for the first five years.

A. R. IRVINE, Managing Director.

14, Waterloo-place, London.

2nd June, 1856

ORGAN TO BE SOLD, at a SACRIFICE, as it must be moved before the 29th instant. To be seen at Mr. G. SMITH'S, 8 Park row, Greenwich. It was built within the last five years, by Berrington and sons, builders of the price organ, Crystal Palace, Paris Exhibition. It contains 9 stops, viz. open and stopped diapason, and stopped diapason bass, dulciana, flute, principal, fifteenth, hautboy, and sesquialtra; foot and hand blower, 3 composition pedals and swell, and 2½ octaves of German pedals. It is built of mahogany, has a handsome front of gilt pipes, and is an exceedingly sweet harmonious instrument; height 8 feet 8 inches, width 6 feet 10 inches, and depth 3 feet 7 inches Price 100l.

TO BE DISPOSED OF, a quantity of ORNAMENTAL FLOORING, from the Austrian department of the Exhibition of 1851.—Apply to Messrs. PATMAN and FOTHERINGHAM, 68, Theobald's-road, Bloomsbury

ONE HUNDRED capital OAK TIMBER TREES, some containing upwards of 100 cubical feet, all of great lengths, straight, clean, and of excellent quality, to be DISPOSED OF by private contract, at ALFRED JOHNSON'S Timber Yards, near the Railway Station, Cambridge.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of FLOORING and MATCHED BOARDING, from 4 inch to 1½ inches thick, seasoned, and ready for use; also, Mahogany, Moulding, Wainscot, and all kinds of Timber required for Building purposes. — Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

AT the LOWEST PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected Stock of the various descriptions of Deals, commencing at the following low prices:—

Yellow Deals, from	£20	0	per 120
Spruce ditto, from	18	0	"
Yellow Battens	13	0	"
Dry Pine Plank, from	22	10	"

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a post or current note. N.B. All sawn goods delivered within two miles free of cartage.—Borough-road, Southwark, and Elm-street, Gray's-inn lane

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A machine for cutting Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford bridge

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process. JOHN COUMBE solicits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he sells at prices generally charged for wet wood. Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile-end-road.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Pine Plank, 3s. 6d.; Spruce Deals, 3s.; Mahogany, 6d.; 24 Yellow Battens, 1M 10s.; F. Walnut, 7 l. Carriage free in town.—T. FORMAN, 1, Wansteed-walk, Lambeth walk

NOTICE of REMOVAL. — EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Walton-road, Pimlico, to the KING'S ROAD, CHELSEA, where their orders will be promptly executed as heretofore. Power Mills, E. SIMMS, King's-road, Saw mills Chelsea, opposite Manor-street

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from 4-inch to 1-inch thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Sills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

MOULDINGS BY MACHINERY. Capping, Sash-bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to

E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S ROAD, CHELSEA.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s. per foot super (together with every particular of its cost and adaptation), can be obtained of Messrs. H. P. BURT and CO. 2, Charlotte-row, Mansion-House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that they have completed their extensive arrangements, and will be happy to execute all orders entrusted to their care with dispatch and punctuality. Wet and dry docks, and 5 powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring match boarding, &c. &c. always in stock at reduced prices.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NORES and CO. invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:—

¾-inch white, 12s. 6d. per square; ¾-inch, white, 15s. per square; 1-inch white, 15s. per square; 1-inch yellow, 15s. per square; ¾-inch yellow, 10s. 6d.; 1-inch yellow, 20s.

Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application

STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NOSIZING, and will stand the exposure to the weather. Price 2s. per gallon. Varnish for W. NAILDRIS Stains may be had at the Factory, 44, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

TO BUILDERS, PAINTERS, &c.—OAK GRAINING in OIL 4d. per yard, in quantities not less than 60 yards. Church writing done in the Elizabethan style. No objection to the country, if expenses are paid. References given.—Apply to CHARLES PETTET, 5, Princess-street, Edgware-road.

GRAINING by MACHINERY.—The present system of graining is far surpassed by the use of BELLAMY'S PATENT GRAINING MACHINES, by which an ordinary workman can produce first-class work, and at an immense saving of time. The designs are perfect imitations of the choicest specimens of fancy woods and patterns of the first artists.

The Patent Graining Company are now prepared with a large and well assorted stock of instruments, which they offer to grainers, painters, builders, and others without inequality.

Grained paper in imitation of all kinds of fancy woods of the choicest descriptions, in the piece, or in sets for panels, &c. wholesale and for exportation. Pattern-boards and cards for the trade in great variety.

Painters, grainers, decorators, merchants, and others are respectfully invited to inspect the patterns, and see the process at the Company's Offices, 34, Minories, and Bull's-pound, Islington, London.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c. — A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, spirit lackers, and finishing spirit. The present price is 6s. to 6s. 6d. per gallon; white French polish, 12s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

TO PAINTERS, BUILDERS, &c.—LIVETT, FRANK, and SON, No. 14, Borough, London-bridge, opposite the Brighton and South-Eastern Railway Stations, quote their present prices for cash:—Linseed oil, 3s. 3d.; boiled, 3s. 6d.; turpentine, 2s. 8d.; oak varnish, 7s. 6d. per gallon; genuine white lead, 33s.; seconds, ditto, 31s.; best town glue, 43s. per cwt.; colours, brushes, &c. equally low. Lists of prices on application.

KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade, and of the manufacturers, G. B. KENT and CO. 11, Great Marlborough-street, London. Established 1777.
N.B. Kent's Painting Brushes are all stamped G. B. KENT & CO.
Price Lists forwarded by post.

BEST PAINTING-BRUSHES.—J. B. TYLOR, Painting-brush Manufacturer, 2, Bury-court St. Mary-Axe, London, invites the attention of Painters and Builders to his Brushes and Tools both Metallic, Jetting, and, which, being manufactured on his own premises, and of bristles of the best quality, he can recommend as a superior article. Price lists forwarded on application, post-free.

MACINTOSH INDIA-RUBBER WAGGON COVERS, at reduced prices. Stocks of different sizes are always ready, and can be inspected at our Warehouse, MOSES, SON, and DAVIS, 14 and 15, Aldgate High-street, and at the Factory, India-Rubber Steam Works, Bow-common.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hose-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order

N.B. All communications and orders punctually attended to, and addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in submitting to the full examination of their Customers the following letter from SIR RAYMOND JARVIS, Bart., PLANTATION, ISLE of WIGHT.—Second Testimonial.—"March 10th, 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES,
18, WHARF-ROAD, CITY ROAD, LONDON.

HOSE PIPING.—WAITHMAN'S PATENT FLAX HOSE PIPING will sustain a greater pressure, is lighter, less bulky, will wear longer, and is about 60 per cent. cheaper than the leather hose pipe. Manufactured only by WAITHMAN & CO. Bentham, Lancaster.

No. 1 quality, inches diameter, and price per yard.

½	¾	1	1¼	1½	2	2½	3 in
9d.	11d.	1s.	1s. 3d.	1s. 7d.	1s. 11d.	2s. 4d.	2s. 9d.

Super-extra stout quality.

2	2½	3 inches.
2s. 2s. 6d.	2s. 9d.	per yard.

No. 6. A cheaper hose, to bear a low pressure for gardens and agricultural purposes, at greatly reduced prices.

½	¾	1	1½	2 inches.
6d.	10d.	1s.	1s. 3d.	1s. 6d. per yard.

The hose is Burnettized at an extra charge of 3d. per yard. Union Joints, Branch Pipes, and Jets, are also supplied.

WANTED, THIRTY EARTH WAGGONS and FORTY or FIFTY TONS of SECOND-HAND TEMPORARY RAILS, delivered at Chatham.—Full particulars to be addressed to Mr. STUMP, Contractor's Office, North-square, Cavalry Barracks, Brompton, Chatham

CARTS, VANS, WAGGONS, LADDERS, BARROWS, &c.—Price Lists for the undermentioned may be had on application:—

No. 1. Carts, Vans, Waggons, Drays, and Trucks.
No. 2. Wheels and Repairs.
No. 3. Ladders, Barrows, &c.
No. 4. Hire of ditto.

GELL, 3, Tottenham-court, and 2, Palace-row, New-road.
St. Pancras, near the Hampstead-road

BURNT BALLAST FOR SALE. — About [illegible] yards of well-burnt BALLAST TO BE SOLD cheap. Apply at the Brewery, Caledonian-road, from Nine to Six.

WINDOW-BLINDS. — J. FULLER, Manufacturer, 29, Charlotte-street, Blackfriars-road (Established 1850).—Venetian Blinds, from 10s. each, or 3d. per foot. Were 4 feet 7 in. each, or 1s. 9d. per foot, Holland ditto, from 3s. each, or 9d. per foot. Every other description of Blinds equally low, warranted of the best manufacture. Discount to Builders and the Trade. Fixed complete.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 6d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application, post free.

A FIXED ALLOWANCE OF £2 PER WEEK,
In case of Injury by
ACCIDENT of any DESCRIPTION,
or the Sum of
1,000l. IN CASE OF DEATH,
may be secured by an annual payment of £3 for a policy in the RAILWAY PASSENGERS ASSURANCE COMPANY.
A weekly allowance of fifteen shillings for injuries, or 100l. in case of death secured by pay ment of ten shillings.
NO CHARGE FOR STAMP DUTY.
Forms of proposal, prospectuses, &c. may be had of the agents of the clerks at all the principal railway stations, and at the head office, London, where also
RAILWAY ACCIDENTS ALONE
may be insured against by the journey or by the year as heretofore.
Railway Passengers' Assurance Company, empowered by a Special Act of Parliament.
WILLIAM J. VIAN, Secretary.
Offices, 3, Old Broad-street, London.

TO BUILDERS and OTHERS.—H. PIGGOTT has now on hand FOR HIRE, a spacious TENT, adapted for the laying of foundation stones for public buildings, &c. Also for Sale a quantity of Cocoa Matting for Churches, at greatly reduced prices.—Apply to H. PIGGOTT, 115, Fore-street, City.

TO BE SOLD, the PLANT of a small BUILDER, consisting of poles, two ladders, boards, padlocks, cords, screen, sieves, tools, barrows, one T-square, 8-foot rod, 66-foot tape, &c. From 20l. to 30l. will purchase the whole.—Apply at Mrs. WARNER'S Nursery, between the hours of Ten and Two, King's-road, near St. Pancras Workhouse.

TO PLUMBERS, GLAZIERS, PAINTERS, OIL and COLOUR MEN.—TO BE DISPOSED OF, in a rapidly rising suburban neighbourhood near London, possession immediately, a BUSINESS in the above line; small premium; stock and fixtures at a valuation; doing a highly respectable trade, capable of great extension with capital; good reasons can be given for its being sold (ill health). Apply for particulars to Mr. W. SMITH, Auctioneer, Estate Agent, and Surveyor, 8, Serle-street, Lincoln's-inn, London, and West-street, Boston.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSSLEY'S WHOLESALE WAREHOUSE, 23, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom. THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER-HANGINGS. — JEFFERY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper-Hangings of their own manufacture, of all qualities, and at very low prices. They confidently invite attention to their best papers, both in price, style, and colouring, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gutta Percha Paper, an efficient remedy for damp walls.—Factory, 11c, Whitechapel; Show-room, 600, Oxford-street

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—TRUMBLE and CO. Manufacturers, Leeds, beg to call the attention of the trade to their immense STOCK of PAPER HANGINGS, at No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, an: Machine Goods. The whole being their own manufacture, can supply on the very best terms

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

WARNER'S PATENT BARRELLING STANDARD PUMPS. PATENT CAST IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.	[Fitted for lead,]	£ s. d.
2½ in.	short 1 ft.	1 in. [	1 10 0
2½ "	long 3	3 "	1 14 0
3 "	ditto 3	6 "	2 8 0
3½ "	ditto 3	6 "	2 12 0
4 "	ditto 3	6 "	3 3 0
2½ "	with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses, with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, lower the stage. May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of leads, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

PRIZE-MEDAL GLASS'S HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.

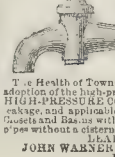
These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,
Brass and Iron Founders (Prize-medal), New-cut, Lambeth.

TO WATER COMPANIES AND PLUMBERS.
HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD PIPE AND TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

THE PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, DEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO.'S MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr. THOMAS WEEKS. Agents in London, Messrs. GEORGE PORTER and Co., Lime-merchants, Purfleet-wharf, Earl street, Blackfriars, and No. 15, North wharf-road, Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs, Warehouse, No. 1, Wharf, Paddington-basin.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Par e White, Mastic, Hair, Lime, Laths, Slates and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.
11 George-yard, Lombard-street, City.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days. Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes as a quick-setting Cement, that requires no coloring.—Sold wholesale only by JOHN BAZLEY WHITE and BROTHERS, Millbank street, Westminster; and Seel street, Liverpool.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it can safely seeds them in its cementitious properties, that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements used at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all mouldings, cornices, decorations, &c as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 80, Old Broad-street, London; to Mr. MONUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 6, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stuccoing and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be painted in a week or days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale or retail, at his wharf, 6, Upper Thames street, London, in front of the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO, CEMENT, STUCCO PAINT, CLARK and BEVOCOCH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George yard, Lombard-street.

16, South Wharf, Paddington, June 1st, 1856.
NOTICE.
GENUINE BLUE LIAS LIME.—J. D. BLYTH (late senior partner of the firm of Blyth Brothers, Plaster Works, Robinson-place, Gray's Inn-lane, begs to inform his friends and the trade that he has made arrangements with Mr. CHARLES NELSON, of Warwick, for the entire MANAGEMENT of his BUSINESS in London, in reference to the Sale of his Lump and Ground Blue Lias Lime, Parian and Lias Cements. J. D. B. trusts, that by prompt personal attention to all orders he may be favoured with, to merit a continuance of the patronage hitherto so liberally received by the late firm. Contracts to any amount can be undertaken, and a regular supply guaranteed.—Prices and terms forwarded to all parts of England and the metropolis.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead, whilst the consumption of material is less than for one coat. It dries very fast and hard.
HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three-fourths the price.
HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and iron exposed to salt water; neither bilge water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, stamped, HUBBUCK, LONDON, PATENT; and when so marked the quality is guaranteed.
HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber coated with this Enamel is not attacked by the worm, neither do barnacles attach to it.
Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.
OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side).
7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 8d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump into boats, at the Works—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRKSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Hearn, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the stations on the Great Western Railway—Greaves's Blue Lias Lime Depôt-lands, Bath, and Lias Cement Works, at Harbury, Stockton, and Wilmcote Office, at Warwick.

GREY and CHALK LIME.—W. T. ALLUM and CO. late of the firm of Thos. Preen and Co.), Grey and Chalk Lime Burners, on the Medway. Agents for the Wouldham Patent Portland Cement, and Dealers in Roman Cement, Plaster of Paris, &c. &c.—27, Wharf-road, City-road.

CHARLES RICHARDSON, 3 & 8, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 8 South Wharf, Paddington.
NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.
All applications for prices and terms will meet with prompt attention.
N.B. Please observe the lime is ground at the works, not in London.

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keene's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c

CHEAP WHITE BRICKS, for FACING HOUSES (Beard's Patent).—These bricks are of excellent make and colour, and impervious to frost, and will not vegetate or become green.—For particulars, address, Patent Brick Works, Rugby, Warwickshire.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
WHITE SUFFOLK PERFORATED BRICKS;
DEEP RED DUBBING BRICKS.
Also COWLEY and KENTSTOCKS, in any quantities
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the fire bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whitine Sand for asphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 300 to 500 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods, both Welsh and Newcastle. Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c for exportation.
General Office—No. 13, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.
Malm Place Half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BLUE BRICKS and TILES, of superior quality, and in great variety of mould, for ornamental work, paving, coping, and general purposes.—GEO. C. KYLAND, Hailstone Wharf, Crescent, Birmingham.

EXCELLENT STOCK BRICKS for SALE. Apply to Mr. MARSH'S Agent, at the Field, Wells-road, Sydenham; or at Mr. MARSH'S Offices, 2, Charlotte-row, Mansion-House.

FIRE-BRICKS, LUMPS, TILES, &c.—FURNACE-BUILDERS, GAS COMPANIES, and CONSUMERS of these Goods generally, can be SUPPLIED with every description from our Wharf here, on the most advantageous terms.—TRAQUAIR and CO. 9, Bankside, Southwark.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury New-park, would be willing to enter into arrangements with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms. For particulars, apply at the Estate Office, Dell's Farm, Stoke Newington Green.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.
BRICK MOULDS (improved), Steel-face Stocks, and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Hay & Mill Work and Implements. J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney road, London

TO POTTERS, BRICKMAKERS, and OTHERS.—TO BE LET, ELEVEN ACRES of LAND, containing an inexhaustible supply of pipe-clay, better than fire-clay, and pure sand, situate near several commercial towns, in the county of Hants. The whole of the erections and plant can be rented at a moderate sum. Coming in for stock very trifling.—Specimens can be seen, and further particulars had, by application to Mr. S. BROAD, Auctioneer and Valuer, Above Bar, Southampton.

ROUPELL-PARK BRICKFIELDS LOWER NORWOOD, SURREY. Entrance, Norwood end, Palace-road.—BRICKS of the first class. Red Kiln Bricks Cutters, Pressers, Facings, and Paviors, Clamp-burnt ditto, Yellow and Pale, Seconds, Parrot, and Pickings, Washed Stocks, Stocks, and Place.—Apply to THUMAN and CO. Norwood Lodge, Palace-road, Roupell park, Lower Norwood, Surrey.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for hearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Warlingham (close to the field), leave at 6 and 9.30 a.m. and 4 p.m.; return at 9.55 a.m. and 5.5 and 7.55 p.m.
HENRY C. MOUNT, Sec.
37, King William-street, City.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES.
For Spouting Roofs of all sizes (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder, and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. Is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 23 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles delivered in Aycroft's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Ruabby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "Reports of the Jurors," page 501, of the Great Exhibition, rank the Manufactories known so long as "The Titeries," Tunstall, Stafford-shire, as the first of the kind in the world.

PANTILES, PAVINGS, &c.—J. H. ANDREWS, Wisbech, Cambridgeshire, begs to offer pantiles at 52s. 6d. per 1,000; floor bricks and 6-inch pavings, at 37s. 6d. per 1,000; 9-inch pavings, at 57s. 6d. per 1,000; plain tiles, at 75s. per 1,000, delivered. Cash prices.—Delivered on trucks in London on Eastern Counties Railway.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 15, South Wharf, Paddington, Manufacturers of Improved Plain and Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for Sanitary and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted imperishable, and to resist all acids and exhalations.
*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Garden Books, &c.
Tividale, Staffordshire.

PAINT, certified by the Government Engineers and Contractors to be the CHEAPEST and BEST over discovered for wood and iron, price 45s. per cwt.—Apply to the London Anti-Oxyde Paint Company, D. WALKER, Secretary, 29, New Bridge-street, Blackfriars.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water, also intense heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that Cells of Wolston's Torbay Iron-Paint will effectually cover as much surface as 112lbs. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON PAINT and OIL WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf, Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

January 1, 1855.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

SNOXELL'S

PATENT REVOLVING WOOD AND IRON SHUTTERS,

WITHOUT MACHINERY,

96, REGENT-STREET, AND AT HIS STEAM WORKS, 135, OLD-STREET.

Testimonials from Architects, Bankers, &c of their security and durability, forwarded.

MANUFACTURER OF METALLIC DRAWN SASH-BARS, STALL-BOARD PLATES, &c.

BUNNETT AND CO.'S NEW PATENT

INTERLOCKING CURVILINEAR REVOLVING IRON SHUTTERS

ARE GREATLY SUPERIOR TO ALL OTHERS,

Also cheaper, and suited in various modifications and price, for Public Buildings, Offices, Shops, Warehouses, Private Residences, and for Exportation.

BUNNETT and CO. are the ORIGINAL INVENTORS and PATENTEES of REVOLVING IRON SHUTTERS, and the only Patentees of any real improvement there on

Works: DEPTFORD, KENT.—Office: 26, LOMBARD-STREET, LONDON.

Branch for Scotland. No. 135, PARLIAMENTARY-STREET, GLASGOW.

Descriptive Illustrated Prospectuses and all necessary information forwarded on application.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person. 5th. From its lightness, weighing only about 42 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non-conductor

INODUROUS FELT, for damp walls and for damp floors, under carpet and floor cloths. Price ONE PENNY per Square Foot.

CROGGON and CO.'S PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c. and

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing the radiation of Heat, saving 25 per cent. of Fuel and deadening Sound.

Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET. HALF-SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s.; 4ths, 30s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 3½d.; larger sizes, up to 32 by 14, 9½.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

G. FARMILOE and SON, 113, St. John-street, West Smithfield.

BELGIAN WINDOW-GLASS, Wholesale and for Exportation.—LAROCHE PUGNI, and CO. Manufacturers and Importers of Belgian, Plate, Sheet, Crystal, Coloured, and every other description of Glass, respectfully inform merchants, dealers, &c. that they have now on sale a large supply of every kind of sound glass suitable for the British market. Enamelled, fomb sand, and Ornamental Glass; Antique, Rough, Cathedral, and other Glasses for Screens. Estimates given and contracts supplied to any amount. Warehouse, 3, Old Trinity House, Water lane, Lower Thames-street.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 26, Soho-square.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 315, OXFORD-STREET

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 226, Oxford-street.

HELY and WARING, Managers.

CCC CROWN, 16 Tables, per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOUNDRY SHEET, 20s. feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 3d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Tiles and Panels from 7s. per foot. Glass stained and silvered, 9d. per foot. HELY'S PATENT GAS SHADES REFLECTING AND INDICATING and ADVERTISING at NIGHT.

Catalogues and Prospectuses free.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot; also Cases of 150 and 300 feet, assorted sizes. Belgian Sheet Glass, in Cases 200 feet each, 3rds, 38s.; 4ths, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 3½d. per foot. Larger sizes up to 24 by 14, 9d. per foot. Ground Glass, in Cases 3½d. per foot. Crown and Sheet, British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

IMPROVED REVOLVING SHUTTERS. FRANCIS RICKABY and DUNN are now enabled to offer the above at the following reduced prices:—IRON SHUTTERS, double riveted, with machine-cut worm gear, complete, at 4s. 6d. per foot. WOOD SHUTTERS, with worm gear complete, at 3s. 6d. per foot. Machine-drawn Brass Sash Bars and Stall Board Plates made to any design.—54, Gray's-inn-lane, Holborn.

JAMES FISHER and CO. 56 and 57, Cornwall-road, Lambeth. Manufacturing Joiners.—Shop Fronts and Office Fittings on the shortest notice. Sashes and Frames, from 7½d. per foot; four-panel doors, from 6s. each. A quantity of well-seasoned doors and sashes, &c. in stock. Estimates and lists of prices on application.

DUNCAN and CO. MANUFACTURING JOINERS, 81, Lower Marsh, and 36, James-street, Lambeth.—Joinery of all descriptions, with seasoned materials and sound workmanship, supplied on the shortest notice and lowest possible prices. A detailed list forwarded on application, prepaid. A quantity of doors, &c. in stock, suitable for immediate use

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford street, Lambeth. Shop-fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 110, Broadwall.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.

H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 149, Fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

H H H H for drawing on wood.	F F light and shading.
H H H for architectural use.	F for general use.
H H for engineering.	B black for shading.
H for ruling.	B B ditto ditto.
H B hard and black for drawing.	B B B ditto ditto.
	B B B B ditto ditto
M medium.	

Sold by all the principal Stationers in town or country.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving Facing Bricks, Coping, Kerbing and other Sorts. Chimney Shafts and Tops and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent impervious Terra-Cotta, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—they now feel themselves established as Potters, best to take this as a fair test of the quality of the articles supplied by them; and as they manufacture, and at the lowest possible prices, NOT BEING offer their goods to Contractors, the Trade, &c. of a first-rate quality and in any way connected with the London Potters' Association.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

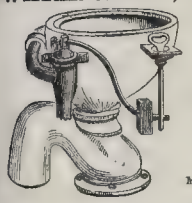
MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

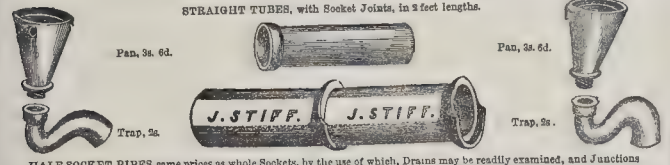
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES.

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey
Messrs. COLES, SHAPBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Horton.

Drawings, with Prices, will be forwarded free, on application.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES, DOULTON'S HALF-SOCKET PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS.

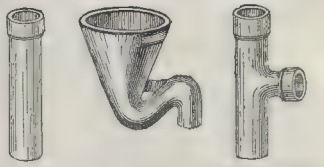
TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

SUPERIOR GLAZED STONEWARE DRAIN-PIPES, &c.—The attention of Boards of Works, Contractors, and others, is invited to the MANUFACTURES of the DARFIELD (Yorkshire) STONE POTTERIES, with which for even cleanness of finish and imperishable quality few can compare. Tubes, bends, junctions, gride and stench-traps, closet-pans, syphons, yard and street gully-sinks, with every article applicable to sanitary works, in any quantity, and immediately available at the London Depôt, No. 4 Warehouse, Goods Station, Great Northern Railway. City Offices, 27, Bucklersbury, City, where Illustrated Price Lists can be obtained.

F. B. BEAUMONT, Proprietor.
J. D. JONES, Agent.

N.B.—Chimney-pots, roofing-tiles, ridgings, wall copings, flooring and paving tiles fire-bricks, oven-bricks, bakers' lumps, cinder oven lumps and quarries.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, Bankside. DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to ironmongers and others, STONEWARE PIPES &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. Feb. 11, 1856.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Greys, Essex. Sold by them, and by FRANCIS, BROTHERS, Mr. Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 3d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F. ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

STONE PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES.—E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price. A list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.

PATENT SELF-ACTING WATER-CLOSETS, with ECONOMIC WATER-REGULATORS, manufactured on the newest principles, distributing with powerful flush over the surface of the basin, a smaller quantity of water than is usually needed, and effectually preventing waste. Admirably adapted for RAILWAY STATIONS, HOSPITALS, WORKHOUSES, and all public establishments. Also HIGH and LOW-PRESSURE powerful FLUSHING WATER-CLOSETS. Drawings, testimonials, and references of the highest respectability can be had on application. Specimens of each can be seen, fixed upon the Premises of the Patentee, W. PATTEN, 29, Old Fish-street, near St. Paul's, London.—Price for Closet and Apparatus complete, from 25s. and perfect action guaranteed.

GROUND FLINT AND CORNISH STONE, UNADULTERATED.

WILCOX & CO.

FLINT MILLS, MILLWALL, POPLAR.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,

Engineers and Contractors, John's-place, Holland-street, Southwark, London.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground street, Blackfriars-bridge (Surrey Side).

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND HAND STEAM ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MAUDSLAY and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

SALES BY AUCTION.

The Royal Panopticon of Science and Art, Leicester-square, with the valuable Plant, Fixtures, and Two Dwelling-Houses adjoining, for Sale: important to Theatrical Managers and others.

CHINNOCK and GALSWORTHY have been favoured with instructions from the Mortgagees to SELL BY AUCTION, at the MART, on MONDAY, AUGUST 25, at TWELVE, that magnificent edifice the ROYAL PANOPTICON, Leicester-square, acknowledged to be, as an architectural monument, one of the chief ornaments of the metropolis. The structure is one of the most substantial character, vast in capacity, elegant in design, and profusely, and elaborately beyond description in decoration. The style of architecture is the Moorish of the fifteenth century, so rich in colour and pure in taste. It is impossible within the limits of an ordinary advertisement to do justice to the details of so extensive an establishment as this: a visit to the building alone can convey an idea of its grandeur and capabilities. The Panopticon was established by a public company, under a royal charter of incorporat on, as an institution for the promotion and development of science and art, and the exhibition of scientific objects and mechanical inventions, in connection with manufactures, and of works having for their object the extension of the fine arts: also as a music and lecture hall, and generally as a place for popular instructive entertainments. The structure is admirably adapted for these purposes, a sum of upwards of 80,000l having been expended upon the building and its permanent and valuable accessories. Among the many important properties connected with the edifice, coming under the denomination of plant, may be mentioned the grand organ, acknowledged to be one of the finest instruments in the world. It was constructed by Messrs. Hill and Co. and is one of the most powerful in existence, consisting of four manuals, each from CC to A in alto, and a pedal organ from CCC to F (thirty notes); being made for several as well as a single performer, it is capable of producing all the grand effects of the most celebrated continental organs. The wind is supplied by six bellows worked by steam power

There is also the crystal cistern, for subaqueous and diving experiments, the galvanic electrical machine, the largest ever constructed, having a plate 10 feet in diameter, and a conductor 6 feet in length, producing enormous effects; a 10-horse power steam-engine, with double boiler, and extensive hydraulic and gas apparatus and fittings; numerous instruments for the illustration of modern scientific discoveries, includ ng those connected with the microscope, the chronoscope, the kaleidoscope, dioramas, cosmoramas, &c. The Panopticon has tended much to promote public instruction in the department of science and art. Some alterations in the building and in the character of the exhibition, which have been suggested and approved of, would more effectually carry out the original design of this most useful institution, by which its resources would be greatly developed, and there is in addition to the main building, with its splendid galleries, there are two large lecture-theatres, machinery-rooms several workmen's offices, store-rooms, engineer's rooms, laboratories, and two dwelling-houses. —Detailed particulars, plans, and mode of sale, may be obtained at the Auction Mart, City; of Sir. BARR SLADEN, Esq. Solicitor, 14, Parliament-street, Westminster; Messrs. ALEXANDER, WILLIAMS, and JONES, Solicitors, St. Mildred's-court, Poultry; JOHN HARPER, Esq. Solicitor, 8, Barkham-terrace, Southwark; Messrs. VALLANCE and ALLARD, Solicitors, 20, Essex-street, Strand; and of Messrs. CHINNOCK and GALSWORTHY, Auctioneers and Surveyors, 28, Regent-street, Waterloo-place, London.

Seventh Sale of the Surplus Property of the North London Railway Company.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, on TUESDAY, AUGUST 19th, at TWELVE, in 20 lots, numerous valuable Plots of FREEHOLD BUILDING LAND, forming the Churches d, in the parish of St. John, Hackney. Also 13 l ots of highly-desirable Building Land, fronting the St. Paul's road, and close to the railway station at Highbury. Some well-secured Ground Rents, and several desirable Shops, with residences, let to respectable tenants, at moderate rents, situate in Brecknock-place, Great Raid Ipl-street, Great Ormond-street, Prince-terrace, near the railway station, Camden-town.—Particulars may be obtained of Messrs. TEBBUTT, PAINE, and BAYTON, Solicitor, Guildhall-yard; at the Auction Mart; and of Messrs. BEADEL and Sons, 25, Gresham-street.

No 19, Marlborough-road, St. John's-wood.—First-class Leasehold Investment.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, on TUESDAY, AUGUST 19th, at TWELVE, in one lot, a valuable VILLA RESIDENCE, known as Lexfield Villa, and being No. 19, Marlborough-road, St. John's-wood; held for a term of 76 years, from Michaelmas, 1845, at a Peppercorn rent, and at present let to a respectable tenant, at the rent of 85l. per annum. Particulars may be obtained at the Auction Mart; and of Messrs. BEADEL and Sons, 25, Gresham-street, London.

HIGHGATE-HILL, AT THE JUNCTION OF MAIDEN-LANE.—Very valuable Freehold Estate, comprising a capital old-fashioned Family Residence, with Stabling, Garden, and Paddock, the whole comprising about six acres, full of road and fine old earth, and, from its position, one of the most important and valuable building sites in the vicinity of London.

MESSRS. FAREBROTHER, CLARK, and LYE are instructed to prepare for SALE, at GARRAWAYS COFFEE HOUSE, on WEDNESDAY, the 27th of AUGUST, at TWELVE o'clock, in one lot, the very valuable FREEHOLD ESTATE, situate on Highgate Hill, at its junction with Maiden-lane, and close to the town; comprising a capital old-fashioned family residence, containing dining and drawing rooms, numerous bed rooms, and servants' offices, stable-yard, with coach-house, stal ing, and brewhou e. Adjoining the residence is a conservatory, leading to the lawn and pleasure-grounds, kitchen garden, and paddock, with pond of water, the whole containing about six acres. The views from the property over London are most extensive and from the great frontage, both to Highgate-hill and Maiden-lane, presents one of the most eligible building sites ever offered. The estate is full of brick earth and road, being near the wood, and might be readily converted to bricks prior to building on the property. May be viewed by cards only, which, with particulars and plans, may be had of D. Stevens, Esq. Solicitor, Gresham-street, City; at Garraway's; and at the Offices of Messrs. FAREBROTHER, CLARK, and LYE, Lancaster-place, Strand.

PADDINGTON.—To Timber Merchants, Builders, Carpenters, Cabinet-makers, and Others.

MR. LEREW will SELL by AUCTION, on the PREMISES, Irongate Wharf, Praed-street, on MONDAY, AUGUST 25th, at TWELVE, the well-assorted STOCK, comprising 2,000 pieces white, red, and pine planks, deals, and battens, 200 squares of prepared flooring, 6,000 feet scantling, 8,000 feet wide pine board, ninety four-panel and other doors, six cot sash, seven heads of oak sash, and other lots. May be viewed on Saturday prior and morning of Sale; and catalogues had on the Premises, and of the Auctioneer, Cardington street, Hampstead Road.

MINORIES.—Building Materials and Fittings of a Baptist Chapel, Pews, Pulpit, Rostrum, Windows, Doors, &c.

PULLEN and SON will SELL by AUCTION, on the PREMISES, on FRIDAY, AUGUST 29th, at TWELVE, in lots, by order of the Directors of the London and Blackwall Railway Company, all the valuable BUILDING MATERIALS and FITTINGS-UP of the BAPTIST CHAPEL in Little Prescot-street, Minories; comprising good sound brickwork, large quantity of pantiles, Flat oak an. Deal cei ing roof and floors, glazed sashes, doors, flooring-boards, about 100 feet run of wainscot pewing, with desks, panelled dados, architraves, erection and fittings of gallery, capital iron tank, 7 feet 6 inches by 5 feet, eight-day dial, hot-air stove, gas-fittings, and useful fittings-up. May be viewed the day previous, and catalogues had of Mr. ALLEN and Son, 85, Fore-street, Cripplegate.

SALES BY AUCTION.

PIMLICO IMPROVEMENT.—Building Materials.—King's-row, Pimlico.

MR. W. R. GLASIER is instructed by the Commissioners of Her Majesty's Works and Public Buildings to SELL by AUCTION, on the PREMISES, on TUESDAY AUGUST 19th, at TWELVE, the ONE, the BUILDING MATERIALS of SIX large HOUSES, being the Goat public-house, Arabella-row, and Nos. 1, 2, 3, 4, and 5, King's-row; three small houses in Arabella-row; and six small houses in Queen's-court, comprising 50,000 capital stock bricks, several tons of lead, in gutters, pipes, flats, &c. cast al flooring, doors, sashes and frames, dados, &c slating, pan and plain tiles, stone coping, Yorkshire and other paving, and the usual fittings and fixtures.—May be viewed the day prior and morning of Sale, and catalogues had at the Office of Works, 12, Whitehal l-place, of JAMES PEPPERCORN, Esq. 7, Whitehall-yard; at Garraway's; or on the Premises; and of the Auctioneer, 41, Charing cross.

DERBY.—To CONTRACTORS and BUILDERS.—BANKRUPTS' EFFECTS. Eight-horse power pumping engine on wheels, pile-driving machine, travelling crab with crane, centrifugal pump to throw up 500 gallons per minute, two treble-action cast iron pumps, with driving-wheel complete, twelve double and single action iron pumps, iron and wood pumps, eighteen 4-inch and other cards, timber drays, stone trolleys, derricks, 3,000 foreign poles and 3-inch scaff le-planks, 120 wheelbarrows, cart-horses, fifteen sets of shaft gears, with an immense variety of other property, described in catalogues, TO BE SOLD by AUCTION, on TUESDAY and WEDNESDAY next, the 19th and 20th of AUGUST, on the PREMISES of Mr. Thomas Cooper, Builder, Derby, a bankrupt, by order of the assignees. To commence at ELEVEN each morning. Catalogues may be had of Mr. BRADLEY, Auctioneer, at his Offices, Cornmarket, Derby.

FOR SALE, to pay a Purchaser 8 per cent. several Ten-roomed Private DWELLING-HOUSES, held from the Freeholder for 99 years, and let for short terms to highly respectable tenants at 45l. per year, each subject to a small ground-rent. This property is situate within five miles of London, and lately completed.—For further particulars apply to Mr. J. C. HOOK, Land-agent, 13a, Great George-street, Westminster, where plans may be seen.

TO BUILDERS.—FARNHAM, near the Camp.—CARPENTER'S SHOP, YARD, and commodious DWELLING-HOUSE TO BE SOLD, eligibly situate at Farnham, within three miles of the permanent barracks now erecting at Aldershot for 20,000 men, and in the midst of a locality pressing hard upon the energies of the builders of the district to supply i s rapidly increasing wants, but of which highly advantage in prospects the present proprietor is unable, from severe indisposition, to avail himself. It has been in the family nearly a century, is a *bona fide* business, and will be with the attention of any young man about to commence.—To view, and for further particulars, apply to Mr. EVANS, Solicitor, Farnham.

TO BUILDERS and OTHERS.—A very eligible opportunity is offered to a Young Man desirous of commencing business, or an established one requiring to extend his premises.—The Very excellent PREMISES TO BE LET, consisting of a store for timber, parlour and kitchen on the ground floor, over which is a workshop (perfectly lighted) capable of accommodating several car enters, and above and counting-house, with fittings, &c. at a rental of 30l. per annum. The Stock, consisting of timber, ironmongery, five good benches, and tools of every description, to be disposed of at a valuation, worth about 60l. or 70l. The business has been established some years, but the late occupier is recently deceased.—For further particulars apply, by letter, to JOINER, care of Mr. McNeil, Stationer, 23, Moorgate street, City.

GROUND-FLOOR, Hanover-street, Hanover-square, TO BE LET, suitable for Architects, Artists, or other professional persons, having two front offices, and large room behind, now used as a Picture Gallery.—LAHEE, 65, New Bond-st et, Avent (1475).

WHARF TO BE LET.—To QUARRY PROPRIETORS, CONTRACTORS, STONE and SLATE MERCHANTS, and others requiring waterside premises.—TO BE LET (the remainder of a TERM of 21 YEARS), with good depth of water; also a substantial DWELLING and COUNTING-HOUSE, on the same, situate on the south side of the river, below bridge, with immediate possession. Rent low.—Apply by letter, with real name and address, to A. Z. Mr. Syrett's, Stationer, 57, Old Broad street, City.

WATFORD, HERTS.—FREEHOLD LAND, in Church road, near the railway station, TO BE SOLD, or LET in Building Leases. Apply to Mr. E. WILSHIN, Waxwell Farm, Pinner, Middlesex.

WILLESDEN, the only rural parish within five miles of London.—Some very desirable FREEHOLD LAND TO BE LET on BUILDING LEASES, adjoining the turnpike-road to Harrow, and within a few minutes' walk of the railway station. The ground can be subdivided, if desired.—For further particulars apply to RICHARD WRIGHT, Esq. 37, Lincoln's-inn fields

ELIGIBLE BUILDING GROUND to LET, suitable for third and fourth-rate villas, where the same are much required, within ten minutes' walk of the Camden road Station, on the North London Railway. Roads made, sewers and drains in. For particulars apply to J. WRIGHT, Esq. 25, Bedford row; and Mr. R. RICHARDSON, St. Paul's Lodge, St. Paul's-road, Camden New Town. Money advanced if required.

HAMPTON-COURT.—About EIGHT ACRES of BUILDING GROUND TO BE LET, on Ninety-nine Years' Lease, or SOLD, in small or large Plots, near the above palace and railway, at moderate rents and prices. An advance of say 50 per cent. on the outlay would be made to respectable parties taking a considerable frontage.—For terms, &c. apply to Mr. F LETT, Architect, 36, Essex-street, Strand.

WANTED to PURCHASE several eligible PLOTS of GROUND, to Build on, in or within four miles of London, north preferred. Plots must not be less than 30 feet frontage, and 60 feet deep (if single). Particulars, with price, to be sent to Mr. T. J. HILL, Architect, 15, Old-street, City-road.

GREAT GRIMSBY, LINCOLNSHIRE.—BUILDING LAND.—TO BE LET, on lease, on advantageous terms, very eligible SITES, for the erection of Villa Residences, and first-class houses. The situation is excellent, being on rising ground, commanding a fine view of the surrounding country, and close to the town. Plans may be seen, and particulars obtained, on application to C. AINSLIE, Architect, 16, Old Jewry-chambers, City.

CLAPHAM.—Elegant Freehold Villa Residences.—TO BE SOLD, by Private Treaty, at moderate prices, that elegant and compact substantially built detached FREEHOLD RESIDENCE, in Park-hill-road, Clapham, between Clapham New Park and Clapham Common, containing in all about 3 acres, and comprising entrance hall, dining-room, library, five good bed-rooms, and dressing-room, a two-stall stable and coach-house, with rooms above, and garden in the rear. Now let for a term of 21 years, at 100l. per annum, but by an arrangement with the tenant, possession will be given to the purchaser if required. Also, Two Freehold semi-detached Italian Villas close to the above, containing kitchen and cook and drawing rooms, library, seven good bed-rooms, and dressing-room, and garden in the rear.—Apply to Mr. JOHN BARTON, House Agent, 31, Park-road, Clapham; or to THOMAS JOHNSTON, Esq. 5, Raymond-buildings, Gray's-inn.

TO BUILDERS AND OTHERS.

CLAPHAM-COMMON.—TO BE SOLD or LET (with the option to purchase hereafter), FREEHOLD LAND in this very superior and delightful locality, in plots, suitable for the erection of villa and other first class residences.—Apply by letter, post paid, to A. B. care of Mr. Evans, Stationer, &c Clapham Old Town.

FREEHOLD LAND FOR SALE.—12½ ACRES at East Barnet, situate on an eminence, with frontage on high road, and commanding delightful and extensive landscape views of the surrounding country. It is peculiarly eligible for building purposes, being easy of access from Town by omnibus or railway, and is suitable for the erection of villas for gentlemen desirous of enjoying the comforts of retirement in the country. Apply to Mr. BICKELL, 70, Goswell road.

FREEHOLD LAND TO BE LET, on Building Lease for ninety nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes, in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

FREEHOLD LAND TO BE LET, on the river Thames, between the river and the Victoria Docks, Lesney very near the dock entrance, on building leases for ninety-nine years. This land has not only the advantage of river frontage, but it is bounded on the land side by a branch of the Eastern Counties Railway, into which sidings can be made.—Plans of the property may be seen, and particulars had of Mr JOHN OAKLEY, Land Agent and Surveyor, No. 60, Doughty-street, and of Messrs. KINGSFORD and DORMAN, Solicitors, No. 25, Essex-street, Strand, London.

FREEHOLD or LEASEHOLD PROPERTY.—The Vestry of St. George the Martyr, Southwark, are desirous of obtaining a suitable SITE in the Parish, for the purpose of erecting a VESTRY-HALL, or premises already built, which can be adapted for such purpose. Persons willing to dispose of the same by sale or otherwise, are requested to send full particulars thereof, to Mr. F. TRITTON, Vestry Clerk's Office, No. 49, Bridge House place, Newington-causeway.

FREEHOLD LAND, TO LET, on building lease. The Rev. WILLIAM FORD and Mr HENRY WEBBER, executors of Richard Basford, esq. late of Tollington-park, have to offer TWO valuable PLOTS of FREEHOLD LAND, for building leases, for a term of ninety years, in Barford-street, Liverpool-road, Islington. The Land-tax is redeemed, and the sewer is made For particulars apply to Mr. HENRY WEBBER, Timber Merchant, 31, Old street, St. Luke's.

FREEHOLD and other LAND to be LET, on Building Lease, situate at Wandsworth, Croydon, and Norwood. Also districts required in 1000l. 2000l. 3000l. 4000l. 5000l. 6000l. and several small sums.—Apply to W. J. HOLT, Esq. Solicitor, 13, Chatham-place, Blackfriars. Agents need not apply.

VALUABLE SITE for BUILDING; TO BE LET, or SOLD.—The Directors of the Western Bank of London are prepared to receive TENDERS for the SURPLUS BUILDING GROUND, in BROOK-STREET, adjoining the Bank and Manager's House. Portion of the ground laid out in addition to Messrs RYMER, MURRAY, RYMER, and JACKSON, 12, Hanover-street, Hanover square, to whom the Tenders may be addressed.

BUILDING LAND, in eligible situations. One lot is in Kentish-town, partly covered; the other is at a railway station, eight miles from town, where there is an excellent opening for a Coal and Public-house and Stabling, at the Station-gate. And also for semi-detached VILLAS. TO BE LET, at 20l. to 35l. per annum. Money could be had if required.—Apply to THOMAS NUNN and SONS, 21, Lamb's Conduit-street, Foundling Hospital.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety years, with power of enfranchisement. Plots from one to four acres for large villa residences; smaller plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BOULTON'S, Esq. Architect, 5, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Gray's-inn-square.

BUILDING LAND TO BE LET, at HALLEVILLE.—Term 1,000 years, for small cottages.

CANNING TOWN	1,000	for small cottages.
NORWOOD	1,000	for villa residences.
SUTTON	100	for small cottages.
POPLAR	99	for fourth-rate houses.

Advances 70l. to 80l. at 5 per cent. on each cottage.
Apply to Mr. Wm. ELLISON, Architect, Stainsby-road, Limehouse.

STRATFORD, ESSEX. — FREEHOLD LAND, within three miles of London, excoriated from land tax, TO BE LET, on Lease, for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

NEW WINDSOR ESTATE. — Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences, with Stabling, which are much needed in this beautiful locality. The situation is the finest in or near Windsor, abutting on the Park and Long Walk, and commanding a splendid view of the Castle. Within ten minutes of the Great Western and fifteen minutes' walk of the South-Western Railway Stations. Advances can be had by responsible parties.—For particulars apply to Mr. WILLIAM SIM, Architect and Surveyor, 3, Danes-Inn, Strand.

WANTED to PURCHASE, a BUILDING SITE or PREMISES in London, west of Temple-bar (either freehold or long leasehold), in or near a leading thoroughfare in a central situation, suitable for a charitable institution.—Letters (post paid), stating full particulars, to be addressed to Mr. E. GOULD, 8, Craig's-court, Charing-cross.

BERKHAMPSTEAD. — FREEHOLD LAND. TWELVE PLOTS for SALE, adapted for villas of moderate size; soil, situation, and aspect rarely equalled. A first class Villa will be let for twenty one years if required to persons building houses of a suitable character, and of the value of 50l. a year. Fine Free Grammar School also within very great advantages to residents.—For a plan of the land and further particulars, apply to Mr. BALDWIN, High-street, Berkhampstead.

WHARFS and STORES in the Adelphi.—TO BE LET, for a term, or by the year, together or separately, TWO WHARFS, each having house, counting house, stores, and stabling; one with dock for fifteen barges and the other for twenty-five barges, and each with a dry-dock. Rent moderate. Possession immediate. Reference for further particulars to be made to Mr. C. PALMER, General Railway Office, 41, Gresham street, City.

LONDON. Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," in York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, August 9, 1856.

The Builder,

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COMPETITIONS.

KNARESBOROUGH UNION.—To ARCHITECTS and OTHERS.—The Guardians of the Knaresborough Union are desirous of procuring PLANS for the ERECTION of a WORKHOUSE, to accommodate 200 Inmates, classified according to the requirements of the Poor Law Board. To be sent in on or before the 1st day of SEPTEMBER next. A Premium of 50l. will be given for the approved plan.—For particulars apply to

EDWIN SMITH, Clerk to the Guardians.

Knaresborough, 6th August, 1856.

TO ARCHITECTS.—BOROUGH of NEW WINDSOR.—Notice is hereby given, that the Council of this Borough, as the Board Board thereof, are ready to receive PLANS and DESIGNS for TWO CHAPELS, a CURATOR'S HOUSE, and ENTRANCE-GATES, and the WALLS and FENCES, which will be required to be erected on the Burial-ground for this Borough. The Council do not pledge themselves to adopt any of the plans and designs which may be furnished, but should any of them be adopted, and the architect preparing the same not be employed in carrying out the works, he will be paid 10l. for the plans and designs, and the rest of the plans, &c. will be returned to the various parties within fourteen days after the same shall have been delivered to me. All plans and designs must be delivered to me on or before TWELVE o'clock, on MONDAY, the 25th day of AUGUST instant. A plan of the ground may be seen, and all further information obtained, at my Office, Pilgrim-place, Windsor.—By order.

HENRY DARVILL, Town Clerk.

Windsor, 8th August, 1856.

CONTRACTS.

NOTICE to BUILDERS.—CONTRACT for the ERECTION and COMPLETION of a MILITARY HOSPITAL, with Outbuildings and Enclosure Wall, at Sheerness. The Commanding Royal Engineer gives Notice that TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 21st day of AUGUST, 1856, from such persons as may be desirous of CONTRACTING for the ERECTION and COMPLETION of a SOLDIERS' HOSPITAL, with OUTBUILDINGS and ENCLOSURE WALL, at Sheerness. The plans may be seen, and printed specifications and forms of Tender obtained, by persons willing competent to undertake the work (none others need apply), at this Office, between the hours of TEN and FOUR o'clock, from THURSDAY, the 7th, till WEDNESDAY, the 20th of AUGUST, 1856, Sundays excepted. The party whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 3,000l. for the due performance of the contract. Tenders for the above works to be addressed to "The Director-General of Contracts, Pall-mall, London," and endorsed "Tender for Military Hospital, Sheerness." No Tender can be admitted after the said 21st day of AUGUST, 1856.

N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Sheerness, Aug. 2, 1856.

NOTICE to PAINTERS, CONTRACTORS, and OTHERS.—ROYAL ENGINEER CONTRACT.—The War Department being about to enter into a CONTRACT for PAINTING the Exterior Woodwork, &c. of the buildings, &c. of the Royal Artillery Barracks at Woolwich: Such persons as may be desirous of Tendering for the same may inspect the specification, and receive every necessary information relative thereto, by applying to Mr. CARTWRIGHT, Clerk of Works at the Royal Engineer Office, Grand Depôt, Woolwich, between the hours of TEN and FOUR, up to the 23rd AUGUST, 1856.—Tenders to be delivered at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on the 25th of AUGUST, 1856. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Grand Depot, Woolwich, 6th August, 1856.

CONTRACTS.

TO BUILDERS.—Notice is hereby given, that TENDERS will be received by the War Department, at their Office, Pall Mall, London, on THURSDAY, the 28th day of AUGUST, 1856, from such persons as may be willing to undertake the ERECTION of a BARRACK for Married Soldiers, with OUTBUILDINGS, &c. at Portsea, in the county of Hants. The plans, specification, and conditions of Contract, may be seen, and every information obtained, on application at this Office, on and after the 11th AUGUST, 1856, but not on the hours of TEN and FOUR each day (Sundays excepted). Tenders to be endorsed, "Tender for the Erection of a Barrack for Married Soldiers, with Outbuildings, &c. at Portsea, in the county of Hants."

Royal Engineer Office, Portsmouth, July 30, 1856.

WAR DEPARTMENT.—Such Persons as may be desirous of TENDERING for the SUPPLY and ERECTION of a GAS HOLDER and TANK, with FITMENTS complete, at the Royal Small Arms Factory, Enfield Lock, may receive information relative thereto, by application at the Royal Engineer Office, Enfield Lock, up to the 25th AUGUST, 1856. Tenders to be delivered on the 26th AUGUST, 1856, addressed to the Director-General of Contracts, War Department, Pall-Mall. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Enfield Lock, August 11, 1856.

TO BUILDERS.—Notice is hereby given, that TENDERS will be received by the War Department, at their Office, Pall-Mall, London, on MONDAY, the 8th day of SEPTEMBER, 1856, from such persons as may be willing to undertake the ERECTION of a BOMB-PROOF MAGAZINE, to contain 10,393 Barrels of Gunpowder, at Tipner, near Portsmouth, in the county of Hants. The plans, specification, and conditions of Contract, may be seen, and every information obtained on application at this Office, on or after the 18th day of AUGUST, 1856, between the hours of TEN and FOUR each day (Sundays excepted). Tenders to be endorsed, "Tender for the Erection of a Bomb-Proof Magazine, at Tipner, near Portsmouth, in the county of Hants."

Royal Engineer Office, Portsmouth, August 7, 1856.

CARDIFF, GLAMORGAN.—TO BUILDERS.—Persons desirous of TENDERING for the ERECTION of TWO first-class semi-detached VILLAS at Cardiff, with walls, offices, &c.; also for TWO other VILLAS of similar character in same town; also for THREE HOUSES connected together, with walls and offices in same town, may see drawings and specifications, and obtain quantities, at the Offices of the Architects, Messrs. W. G and E. HABERSHON, 38, Bloomsbury-square, London; or at their local Offices at Newport, Monmouth, by application to their resident clerk, Mr. DIXON; or at Cardiff, to their resident clerk, Mr. FAULKNER, on or after AUGUST 8th. Tenders to be delivered to Architects at Cardiff, on THURSDAY, AUGUST 28th, who do not bind themselves to accept the lowest or any of the Tenders.

ABERGATE, NOTTINGHAM, and BOSTON and EASTERN JUNCTION RAILWAY and CANAL COMPANY.—Persons desirous of CONTRACTING for the ERECTION of the GOODS WAREHOUSE proposed to be built at the Nottingham Terminus, are informed that the drawings and specification may be seen at the Offices of Mr. T. C HINE, Nottingham, from AUGUST 11th to the 30th inclusive. Sealed Tenders, addressed to the Secretary, to be delivered at the Company's office, Saint Peter's-gate, Nottingham, on or before AUGUST 23th. Printed quantities will be supplied by the Architect, at whose Offices particulars may also be obtained relative to the Contracts for the booking and parcels-offices, refreshment-rooms, &c.

THOMAS C. HINE, Architect.

The lowest Tender not necessarily accepted.

Nottingham, 9th August, 1856.

TO PUBLIC COMPANIES, CONTRACTORS, and OTHERS.—DEODORIZING SEWAGE.—The Southampton Local Board of Health, being desirous of avoiding the discharge of the contents of the SEWERS into the Tidal Waters, hereby give Notice, that they are willing to enter into ARRANGEMENTS, upon liberal terms, with any Public Company, or any responsible party, who may be disposed to ERECT the WORKS requisite for DEODORIZING the SEWAGE of the TOWN for the purposes of MANURE.—Further information may be obtained on application to Mr. ANTHONY MORGAN, the Superintendent of the Sewage Works; or of the Clerk, at the Public Health Office, Southampton.

CHARLES E. DEACON.
Clerk to the Local Board of Health.

Southampton, July 23, 1856.

TO BUILDERS. — CHELTENHAM COLLEGE. The Board of Directors of the Cheltenham College are willing to receive TENDERS for the ERECTION of a CHAPEL, in connection with the Institution. The drawings and specification may be seen and further particulars obtained at the Office of Mr. DANIEL JAMES HUMPHRIS, Architect, Cheltenham. The Tenders, which are to be sealed, and endorsed "Tender for New Chapel Cheltenham College" must be delivered at the New Office of the Secretary, on or before the 1st day of SEPTEMBER next.—The Directors do not pledge themselves to accept the lowest Tender.

D. J. HUMPHRIS, Architect

London road, Cheltenham.

BRECON. — To BUILDERS. — Persons desirous of TENDERING for the RESTORATION and ENLARGEMENT of the Parish Church of St. Mary, Brecon, may see the plans and specifications, and obtain copies of the quantities, at the Office of the Architect, 38 Bloomsbury-square London; or at their local Offices at Newport or Cardiff respectively; and also at Brecon, on or after AUGUST 12th. Tenders to be delivered to the Architects, at Brecon, on TUESDAY, AUGUST 26th, at HALF-PAST TWO o'clock precisely, who do not bind themselves to accept the lowest or any of the Tenders.

CONTRACTS.

TO BUILDERS.—EAST and WEST KENT MILITIA STORE HOUSES, to be built at Canterbury and Maidstone.—Persons desirous of CONTRACTING with the Lords-Lieutenant of the County of Kent for the ERECTION of MILITIA STORE-HOUSES, at Canterbury and Maidstone, may inspect the plans and specifications, and obtain all other information, at the Office of the County Surveyor at Maidstone, on and after THURSDAY, the 14th instant, for the West Kent; and at the County Sessions House at Saint Augustine's, for the East Kent, on and after MONDAY, the 18th instant; and they are requested to deliver Tenders for the said works to the County Surveyor at Maidstone, sealed and marked, "Tender for Militia Store-houses," before FIFTEEN o'clock in the forenoon of SATURDAY, the 30th day of AUGUST instant, and to attend personally at the General Sessions, to be holden at the Court house at Maidstone, at HALF-PAST TWELVE o'clock in the afternoon of that day. The lowest Tender will not necessarily be accepted, unless approved in all respects. Security will be required for the performance of the contract, and the names of the sureties proposed are to be named in the Tender.

H. A. WILDES, Clerk of the Peace for Kent.

Maidstone, August 6, 1856.

N.B. The quantities will be furnished.

TO CONTRACTORS.—The Local Board of Health for Kingston-upon-Hull having determined to let the execution of ALL WORKS by CONTRACT, are prepared to receive TENDERS from parties willing to undertake the following WORKS for STREET PAVING and SEWERING, viz.:—

About

7,600	yards super. of	Foundations to Roadways.
4,760	"	Paved Roadways.
3,900	"	Macadam Roadways.
4,500	"	Tooled Yorkshire Flagging and Flags, reland.
1,500	"	Asphalted Footways.
3,100	yards lineal of	Channels and Edge Curb.
300	"	Glazed Fireclay Pipe Sewers.

Together with other Works, such as Manholes, Stormgrates, and Gullies, &c. &c. connected therewith. Certain materials for the above will be supplied by the Board, and the works may be Tendered for in one or more Contracts. The drawings may be inspected, and every information obtained, at the Offices of the Surveyor to the Board, on and after MONDAY, the 11th inst. and until MONDAY, the 25th inst. when all Tenders must be delivered in, sealed, suitably endorsed, and addressed to the undersigned, on printed copy of the specifications, with form of Tender, schedule of prices and abstract of quantities, may be had upon payment of 3s. The Board does not bind itself to accept any Tender, and the Tender accepted will have to be guaranteed by sufficient sureties, in the sum of £ being 1/4 of the contract.—By order of the Works Committee,

JAMES NEWMAN, C.E. Surveyor to the Local Board.

Salcoates-Hall, Hull, 4th August, 1856.

THE GREAT NORTHERN RAILWAY COMPANY. To CONTRACTORS and BUILDERS. The Directors are prepared to receive TENDERS for the ERECTION of FIFTY COTTAGE DWELLINGS, at Peterborough, near Peterborough. Parties disposed to Tender may obtain the drawings, specification, and form of Tender (on which form only Tenders will be received), on payment of 5s. per set, upon application at this Office, on or after WEDNESDAY, the 6th AUGUST. Tenders sealed up and marked "Tenders for Cottages," must be lodged at this Office before TWELVE o'clock at noon on TUESDAY, the 26th AUGUST instant, when parties tendering must be in attendance.

N.B.—The Directors do not bind themselves to accept the lowest or any Tender. By order,

J. R. MOWATT, Secretary.

Secretary's Office, King's-cross Station, London, 5th August, 1856.

COUNTY of WORCESTER.—To BUILDERS and OTHERS.—Persons desirous of TENDERING for the several WORKS required in taking down the present and erecting a NEW EAST WING, also for the erection of a THREE-CLASS DEBTORS' PRISON, at the Worcester County Gaol, may inspect the drawings and specifications, and obtain any information in reference to the same, at my Office, 47, Foregate-street, Worcester. Sealed Tenders to be forwarded free of expense to the County Gaol, on or before FRIDAY, the 29th inst. endorsed "Tender for East Wing and Debtors' Prison." No pledge is given to accept the lowest or any Tender, unless satisfactory.

HENRY ROWE, Jun. County Surveyor.

Worcester, August 7th, 1856.

TO DUST CONTRACTORS.—The Vestry of the Parish of Chelsea will meet at the Board-Room, Manor House, King's-road, Chelsea, on TUESDAY, the 2nd day of SEPTEMBER next, at ELEVEN o'clock in the forenoon, precisely, to receive TENDERS from persons willing to contract from the 25th day of SEPTEMBER next, up to and including the 25th day of SEPTEMBER, 1857, pursuant to the terms of a Draft Contract now lying at my Office as above, for COLLECTING and REMOVING the DUST, ASHES, and RUBBISH from the houses and other places within one or more of the several districts within the said parish. Sealed Tenders to be sent to the proposed Contractor, with the names and descriptions of two sufficient sureties for the performance of his Contract, to be left at my Office, on or before SATURDAY, the 30th instant. The lowest charges of the Contract to be paid by the Contractor upon the quantity of the same. The Vestry do not bind themselves to accept the lowest or any Tender; and none will be received or less made in one of the printed forms to be obtained at my Office, on application.

CHARLES LABEL, Vestry Clerk.

Offices of the Vestry, Manor House, King's-road, Chelsea, August, 1856.

TO BUILDERS and OTHERS.—Persons willing to CONTRACT for the ERECTION of a HOUSE, &c. at Lee, in Kent, may see plans and specification on MONDAY next, at Mr. GEO. GATES, Surveyor, 8, Eton grove, Lee.

[For remainder of Contracts see next page.

CONTRACTS.

FILEY WATERWORKS COMPANY.—To CONTRACTORS.—The Directors of the Filey Waterworks Company are desirous of receiving TENDERS for the CONSTRUCTION of a RESERVOIR capable of containing about 4000 gallons of water and their work in Rochdale, situated one mile from the Hunmanby station, on the North Eastern Railway, and one mile from the sea-beach. The plans and specification will be open for inspection of parties willing to Tender, and after the 18th day of AUGUST, 1856, at the Office of Mr. JOSIAH F. FAIRBANK, Civil Engineer, of Scarborough, to whom Tenders must be sent, endorsed, "Tender for Reservoir at Rochdale," on or before MONDAY, the 1st day of SEPTEMBER, 1856. No pledge is given that the lowest Tender will be accepted, although the Directors will do so, unless there is a sufficient reason to the contrary. A printed copy of the specification, with form of Tender, may be obtained on payment of ten shillings.—By order of the Directors.

JOSIAH F. FAIRBANK, C.E.
Engineer to the Filey Waterworks Company.

Scarborough, August 5 th, 1856.

RICKMANSWORTH CEMETERY.—To BUILDERS and CONTRACTORS.—Notice is hereby given, that it is the intention of the Burial Board for the Parish of Rickmansworth, in the County of Hertford, to enter into a CONTRACT or CONTRACTS for the ERECTION and COMPLETION of a DWARF-WALL, with OPEN IRON RAILING, forming a fence round the burial-ground, which comprises two acres, under the Burial Acts. The plans, drawings, and specifications can be seen at the offices of the Clerk to the Board, at Rickmansworth aforesaid, on and after MONDAY, the 11th instant. Any person or persons willing to undertake the said Contract or Contracts is or are invited to send in a Tender or Tenders directed to the Clerk to the said Board at Rickmansworth aforesaid on or before THURSDAY, the 4th day of SEPTEMBER next.—The Board do not pledge themselves to defray any expenses incurred in the preparation and submission of the said Tender or Tenders, nor to accept the lowest or any one of such Tender or Tenders in particular.

Rickmansworth, 6th August, 1856.

MACHINERY-TOOLS, &c.—The DOVER LOCAL BOARD of HEALTH are willing to receive TENDERS for the supply of certain MACHINERY TACKLE and TOOLS required for their Water and Drainage Works at Dover. Copies of the Schedules, with lists of the articles required, may be obtained on application at my office. Further particulars may be had at the Office of the Surveyor of the Local Board. Tenders to be delivered at my Office on or before WEDNESDAY, the 27th instant.

T. B. BASS, Town Clerk.

Dover, 8th August, 1856.

COUNTY of DURHAM LUNATIC ASYLUM.—To BUILDERS, ENGINEERS, CONTRACTORS, and OTHERS.—The Committee of Visitors are prepared to receive TENDERS for the whole or any part of the several WORKS required to be done in the ERECTION of the County of Durham LUNATIC ASYLUM, near Sedgefield, in the county of Durham. The plans, specifications, and conditions may be inspected at the Office of the Architect, Mr. JOHN BOWES, Grand Court, Durham, where further particulars may be ascertained, and of whom detailed measurements and form of Tender may be obtained. Sealed Tenders endorsed "Tender for County Lunatic Asylum" addressed to ROWLAND BURDON, Esq., Chairman of the Committee of Visitors must be sent to Mr. HODGSON'S offices, on or before TUESDAY, the 23rd day of SEPTEMBER next. The party whose Tender may be accepted will be required to enter into a bond, with two satisfactory sureties, for the due performance of the contract. The Committee do not pledge themselves to accept the lowest or any Tender.

JOHN WATSON, Clerk to the Committee.

Durham, July 28th, 1856.

TO CONTRACTORS. — WAVERTREE LOCAL BOARD of HEALTH.—The Wavertree Local Board of Health are desirous to receive TENDERS for the CONSTRUCTION of SEWERS within the district of the Local Board of Health of Wavertree according to the plans and specifications prepared for the purpose. Tenders to be sent in addressed to "The Chairman of the Wavertree Local Board of Health, Public Offices, Wavertree, near Liverpool," according to the usual form, and delivered at the Office of the undersigned, before the hour of MONDAY the 25th day of AUGUST instant. The plans and specifications may be inspected at the Office of Mr. ISAAC ATHERTON, Solicitor, Liverpool, and copies obtained from him by MONDAY the 18th instant, where forms of TENDERS may be obtained on application. A large quantity of good Arch Bricks may be obtained within a mile of the sewers to be constructed. The Board do not pledge themselves to accept the lowest or any Tender.

ISAAC ATHERTON, Law Clerk.

Prince's Buildings, North John-street, Liverpool,
August 12, 1856.

METROPOLITAN BOARD of WORKS.—To BUILDERS, CONTRACTORS, and OTHERS.—The Metropolitan Board of Works are prepared to receive TENDERS, on the 28th instant, for the [illegible] and COMPLETELY FINISHING a certain [illegible] STREET, [illegible] Ward, in the district of [illegible], with [illegible] and [illegible] thereto, with [illegible] in the line of the [illegible] Street, [illegible] North Bridge, in the vicinity of [illegible]. The Contractor will be required to enter into a Bond with [illegible] Sureties, for the due performance of such Works in complete repair for Twelve Calendar Months.—Plans, sections, and a specification [illegible] with the Form of Tender, [illegible] and [illegible] placed ready at the Office of the Board of Works, [illegible], between the hours of NINE and [illegible] on [illegible] instant.—Tenders, [illegible] to the Metropolitan Board of Works, must be left at the Office of the Board, No. [illegible], Strand, on or before [illegible] on the 28th instant, when Tenders will be received after that hour.—The Board do not bind themselves to accept the lowest or any Tender, nor to pay any expenses incurred by Tenderers in preparing their Tenders.

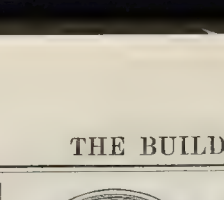
E. W. BOLLACH, Clerk of the Board.

[illegible]

TO BUILDERS and CONTRACTORS.—Persons desirous of TENDERING with the Right Honourable [illegible] for the [illegible] of the NEW [illegible] at [illegible], may [illegible] on application to [illegible] Office, [illegible] Street, [illegible] on and after [illegible] next, between the hours of [illegible] and [illegible]. Tenders must be delivered at the Office of the Board, [illegible] Street, [illegible] on or before [illegible] next, addressed to the Clerk of the Works, and endorsed "Tender for [illegible]."

WINDOW-BLINDS. — J. FULLER, Manufacturer, 29, Charlotte-street, Blackfriars-road. Established [illegible] Venetian Blinds [illegible] Wire [illegible] each [illegible] per foot. Every description of Blinds equally low.—[illegible] the best workmanship. Discount to builders and the Trade. Fixed gratuitously.

WINDOW BLINDS.—TYLOR & PAGE, Window Blind Manufacturers, 104, New Bond-street, and 4, Devonshire-street, [illegible]. [illegible] WINDOW BLINDS [illegible], they can recommend as being made in the best manner:—Venetian blinds, per square foot, 8d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and directions to builders and the trade, forwarded on application, post free.



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FIRST-CLASS MEDAL
WAS AWARDED TO
F. EDWARDS, SON, and CO.
AT THE
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For the SPECIMENS they exhibited of
DR. ARNOTT'S
SMOKE-CONSUMING GRATE,
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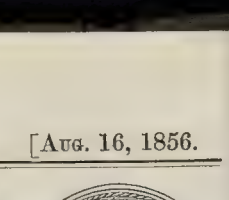
COOKING APPARATUS.



F. EDWARDS, SON, and CO. beg to inform the public that their STOCK of GRATES is ENTIRELY REFORMED, and consists SOLELY of GRATES on the SMOKE-CONSUMING PRINCIPLE. A large variety in real Bronze, Ormolu, Steel, and Berlin Black, suitable for Drawing-rooms, Dining-rooms, and Libraries, from 7l. to 30l.

The following are the prices of those for ordinary use:—
Black Grates, for Parlours, Offices, &c. from 4l. to 8l. 10s.; for Bed-rooms, Offices, &c. from 2l. 10s.

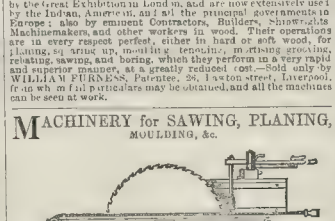
By the Grates on this principle, as properly constructed by F. Edwards, Son, and Co. smoky chimneys are avoided, an arrestable fire is maintained, with one-half the trouble attending the ordinary grate, and a saving of from forty to fifty per cent is effected in the consumption of fuel.

PROSPECTUSES, WITH FULL PARTICULARS AND TESTIMONIALS, SENT ON APPLICATION.

To be seen in daily operation at the Show Rooms, 42, Poland-street, Oxford-street, London.

PATENT MACHINES for WORKING in WOOD.—These celebrated Machines have been awarded a number of prize medals in many cases in the countries, and also by the Great Exhibition in London, and are now extensively used by the Indian, American, and all the principal governments in Europe; also by eminent Contractors, Builders, Shipwrights, Machinemakers, and other workers in wood. Their operations are in every respect perfect, either in hard or soft wood, for planing, sawing up, moulding, tenoning, mortising, grooving, rebating, sawing, and boring, which they perform in a very rapid and superior manner, at a greatly reduced cost.—Sold only by WILLIAM FURNESS, Patentee, 26, Lawton-street, Liverpool, from whom full particulars may be obtained, and all the machines can be seen at work.

MACHINERY for SAWING, PLANING, MOULDING, &c.

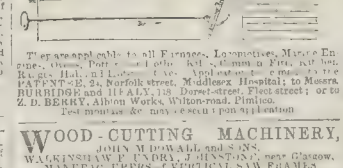


SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Rolled and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines for Sawing, Planing, Moulding and Mortising Wood. They have on hand machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have in their employment their attendants to this sort of machinery, and have had the honour of supplying some of the most distinguished personages, public bodies, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches and also a smaller one with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace.

A descriptive Catalogue, with Drawings, may be had on application.

KING'S-ROAD, CHELSEA.

GARDNER'S PATENT STEAM GENERATOR and SMOKE CONSUMER produces dry steam with less than one-fourth of fuel, and entirely prevents smoke. These patented improvements are highly recommended for the economy, durability, and great economy. The are self-acting, have no main parts, therefore require no external aid.



They are applicable to all Furnaces, Locomotives, Marine Engines, Ovens, Potters' Kilns, Chemical Pots, Boiling, Raising, Hatching, Drying, and Heating Apparatus. Apply to PATENTEE, 24, Norfolk street, Middlesex Hospital; to Messrs. BURRIDGE and HEALY, 128, Dorset-street, Fleet street; or to Z. D. BERRY, Albion Works, Wilton-road, Pimlico.

Test models &c. may be seen upon application.

WOOD-CUTTING MACHINERY, JOHN M'DOWALL and SONS, WALKINSHAW FOUNDRY, RENFREW, near Glasgow, MANUFACTURERS of VERTICAL SAW FRAMES (brass bushed),

For cutting balks of timber, from 6 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with [illegible] and [illegible] feed motions; patent [illegible] saw-guides; patent [illegible] saw-tables, [illegible] timber, planing apparatus for [illegible] boards from 4 to 12 inch thick to 6 inch deck planks; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c; patent curvilinear sawing machine, for resawing circular cutting, with adjustable [illegible] bevel bars; power for raising and turning logs; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent deck feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed on the best principles, and of the best materials, and for prices to suit the times. Mr M'Dowall has been in the employment of the above firm for upwards of eighteen years, and during the last 14 years has had the entire management, particularly to the manufacture of wood-working machinery, as referred to by the number of patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every improved article of the work, with a retard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe. Applications as above for further particulars, will be promptly attended to.

CONTRACTORS requiring CASTINGS, WROUGHT-IRON GIRDERS, &c. with despatch, and punctuality, MATTHEW T. SHAW has such arrangements that deliveries are made in a few days. Contractor for Plant and Stores of every description, 64, CANNON-STREET.

TO CONTRACTORS AND BUILDERS.

WROUGHT-IRON GIRDERS for BRIDGES and BUILDINGS, manufactured and guaranteed to [illegible] strength

CAST IRON GIRDERS, for BRIDGES and BUILDINGS.

ROLLED WROUGHT-IRON FLITCHES, for trussing between timber.

Orders executed in three days.

STORES, BOLTS & NUTS, SPIKES, RIVETS, CUT-NAILS, WROUGHT ditto, SCREWS, BOND HOOPS, CHAIN, &c.

CONTRACTORS' PLANT, RAILS, EARTH WAGGONS, and IRON WORK, for Wood Waggons, &c.

MATTHEW T. SHAW,
64, CANNON-STREET (late with C. J. Mare and Co.).

WROUGHT IRON GIRDERS, Steam Boilers, Gas Holders and Gas Apparatus, General Castings, Chains, Cables, and Contractors' Iron Work, Manufactured by MUDGE and CHESEN, Phœnix Works, Tividale, near Dudley.—London Office, 78, Hatton-garden.

FOUNDRY AND IRON WORKS, 85, DRURY-LANE, and CHARLES-STREET, DRURY-LANE.

GLOVER, BROS.,

Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION either structural or ornamental.

Verandah Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathes, and Steam-engines; Ranges and Hot-plate Warehouse, Area and Stable Gratings, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Weel Pates, &c.

BRASS WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

IRON FOUNDRY, Harrow-street, Lant-street, Southwark.—W. R. BARTLETT, manufacturer of [illegible], Lamp, Cantilevers, Railing, and Weel Bars, Iron Gates, Palings, Tomb Enclosures, Area Gratings, Sash Weights, &c. Also Fly and other Wheels, Raggers, Pinions, Engine and Lathe Castings, Furnace Bars, Kilns, Pans, Pipes, Tank Plates, and other Castings, to pattern or drawings.

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS' WORK, SHOVEL and RANGE MANUFACTORY, and IRONMONGERY DEPOT, 241 and 241 a, WARD'S-HOUSES, 19, Horseferry-road, and 1, New Peter-street, Westminster.

GREAT REDUCTION IN PRICES.

RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	3 in.	4 in.	5 in.
Pipes	1s. 4d.	1s. 10d.	2s. 4d.	2s. 9d.
Half-round Gutters	2s.	2s. 6d.	3s.	3s. 6d.
O G Gutters	1s. 8d.	2s. 1d.	2s. 6d.	3s. 4d.
Ditto, with plain projection	1s. 9d.	2s. 3d.	2s. 9d.	3s. 6d.
Ditto, with [illegible] ditto	1s. 9d.	2s. 3d.	2s. 9d.	3s. 6d.

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.

Best Cut Clasp Nails

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
1s. 1d.	1s. 2d.	1s. 3d.	1s. 4d.	per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.

Best Cut Lath Nails ..... 1s. 6d. "

Best Cast Slating Nails ..... 2s. "

Bevelled ..... 2s. 6d. to 3s. "

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges at the lowest possible prices.

Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

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D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show—every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list, 10s.—6s and 5s. High Holborn.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

ST. PANCRAS IRONWORKS,

OLD ST. PANCRAS-ROAD, OPPOSITE THE OLD CHURCH, LONDON.

TO ARCHITECTS, ENGINEERS, BUILDERS, AND CONTRACTORS.

HER MAJESTY'S
ROYAL LETTERS PATENT.

IMPROVEMENTS IN THE CONSTRUCTION OF
CORRUGATED IRON BUILDINGS
AND ROOFS,
As erected for and approved of by Government.
FOR ENCLOSURES,
This Patent is as Strong, as Durable, and much Cheaper, than
BRICK WALLS,
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CASTINGS,
HEAVY AND LIGHT,
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WROUGHT
IRON-WORK,
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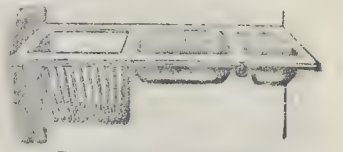
OF
EVERY DESCRIPTION.
SPECIMENS MAY BE SEEN AT THE WORKS.



ENAMELLED MANGERS,
From 17s. 6d.
Patentees of the latest Improvements in Manger and Rack, and Manger, Rack and Water Trough, approved of by the
ROYAL VETERINARY COLLEGE
EVERY DESCRIPTION OF STABLE FURNITURE.

IRON ROOFING OF EVERY DESCRIPTION. CORRUGATED IRON, PLAIN OR GALVANIZED, AT PER CWT.
ESTIMATES BY POST, OR ON APPLICATION. PRICES EQUAL TO ALL COMPETITION.
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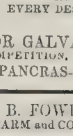
ON SALE AND HIRE,
SINGLE AND DOUBLE PUMPS
IN WROUGHT IRON
TO ANY DEPTH,
FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.
Sizes, from 3-inch to 15-inch barrels.

N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

BENJAMIN FOWLER and CO.
FIT UP HEATING-APPARATUS OF ALL KINDS,
For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,
And for every purpose where artificial heat is required.
They also erect DRYING-ROOMS for ASYLUMS, UNIONS, DOMESTIC and MANUFACTURING PURPOSES upon the most improved principles, and upon the largest or smallest scale.
STEAM COOKING and BATH APPARATUS FIXED;
Also PUMPS, for DEEP or SHALLOW WELLS,
To be worked by hand, horse, or steam power;
AND ALL KINDS OF
ENGINEERS', MILLWRIGHTS', or SMITHS' WORK, for Public or Private Establishments.
The most ample references from a long experience in the above branches can be given.

B. FOWLER and CO.'S
FARM and COTTAGE PUMPS, 30s



All sizes and descriptions of Pump in various plain or ornamental patterns, for public places; for deep or shallow wells. Bass Lift Pumps, Iduna Pumps, Horse Gear Cranes, Pulley Blocks, Wrought Pails, and Rubbish Baskets, Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJAMIN FOWLER & CO. GENERAL ENGINEERS, WHITEFRIARS-STREET, FLEET-ST.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.
ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES
Beyond the current Price of Hoop-iron.

Gauge.	In wide.	Per 1,000 ft
No. 16	1½	7s. 0d.
15	1¾	7s. 6d.
15	2½	8s. 0d.
15	2	8s. 6d.
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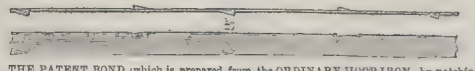

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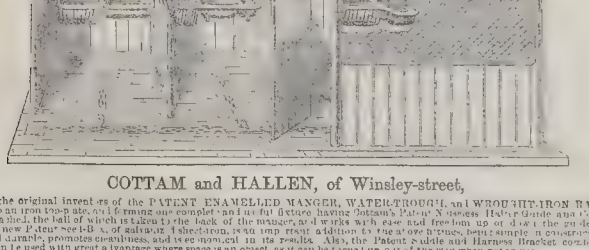

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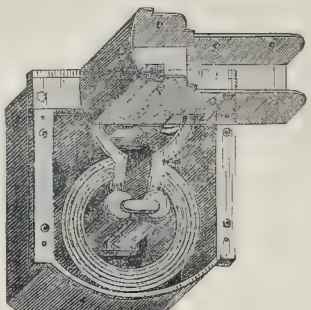

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MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods BOILES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab, Marble mortars &c.

STONE! STONE! STONE!—To the TRADE.—The cheapest place in London for Portland and Bath Stone, York-hire Landings, Steps, Curb, Paving, Self-face Slab, Granite Pitching and Curb, Guernsey; random Materials, and every other description of stone, at JOHN KNIGHT and SONS', Devon Wharf, Mile-end. York tooled paving, 3s. 6d. per 100 feet; slab for hearths, 4d. per foot sup; slab for chimney-pieces, 3½d. per foot sup.; 8 by 3 window-sills, 6d. per foot run; 12 by 3 coping, 8d. per foot run; box chimneys (any opening), 8s. 6d. each. Terms cash on delivery.

RAWDON-HILL STONE.—Messrs. TRICKETT and PERKIN are prepared to execute orders to any extent for their much-admired Building Stone. Depôts, where large stocks are kept, No 3, stone-wharf, Great-Northern Railway Station, King's-cross; Victoria Stone-wharf, Millwall, Poplar. Blocks quarried to suit customers for columns, cornice, landings, steps, ledgers, headstones, cills, &c. Delivered to any part by vessel or railway trucks.

"This stone when better known, must come into extensive use I should think it exceedingly suitable for the London market."
C. L. DRESSER, F.G.S.

Address, JOHN TRICKETT, Headingley, Leeds, Yorkshire; or, SAMUEL TRICKETT, Victoria-wharf, Isle of Dogs, London.
N.B. A large quantity of Foundation Landings for sale.

BATH STONE DEPOT, BOX STATION.—ROBERT STRONG, STONE MERCHANT, Box, Wilts.—Box Ground Stone, Scallett Block, Ashlar, Rangework, &c. &c. Supplied direct from the Quarries; also every description of Stonework for building purposes, both plain and ornamental, prepared ready for fixing, and forwarded to any part of the Kingdom. Vases in elegant variety always on view; Urns, Fountains, Chimney-pieces, Tombs, &c. &c.

ROWLEY RAGSTONE and YORKSHIRE STONE, for paving and road-making, at GEORGE C. RYLAND'S, Hailstone Wharf, Crescent, Birmingham. Paving executed by experienced workmen. Board of Works and Contractors supplied with Ragstone direct from the quarry.

TO CONTRACTORS AND OTHERS.

YORKSHIRE PAVINGS, LANDINGS, STEPS, COPINGS, CURBS, SILLS, SINKS, and CHANNELS; Hore-hill, Robin Hood, Park Spring, and Gayby, in Blocks, Headstones, or Slabs; Purbeck Paving, Sinks, Curbs, Rickstones, Pitchers, and Scourers; Caithness Flags, Firestone, Newcastle and Bilston Grindstones; Portland Stone in Blocks, Landings, Slabs, &c.; Darley Dale, Cacn Stone, Bramley Fall, Bath, Huddlestone, Park-wood, and other Block Stones. Valentia Slate Slabs, Bangor Slates, Cornish, Aberdeen, Guernsey, and other Granites; Marble, in Block and Slabs, supplied from the Wharfs, Millbank-street, City Basin, and Deptford; also direct from the quarries by vessel or rail.—Address, FREEMAN'S WHARF, 57, Millbank-street, Westminster.

BATH STONE.—HENRY STONE, having understood that some parties have been offering for sale a sort of stone, calling it Hampton Down, H. S. begs to inform Architects, Builders, and others, that he is the only person that can supply that article. Having, about two years since (at a considerable expense) reopened the well-known Hampton Down Quarries, he is happy to state that he can now supply that stone to any extent. Since opening the quarry, H. S. has supplied a considerable quantity of it to several churches and other public buildings. COMBE DOWN and BOX GROUND WEATHER STONE on the most reasonable terms. Residence, WIDCOMBE, BATH. Cargoes shipped and delivered to any part round the coast.

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.

List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts

PARIS EXHIBITION. — ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1848. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of loo-tables, chiffoniers, consoles, &c.; baths; lavatories, slop-tablets, pilasters, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality They have been used at the British Museum, National Gallery Bethlem Hospital, various Lunatic Asylums, the Ordnance Works Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; also by Messrs. Sharpe, Tooley-street; and at Messrs. Braby's, Belvidere road, where terms may be obtained.

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôt, at Bangor, or to transmit by railway. Also Slabs of all sizes.—Orders to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor.

ROOFING SLATES or Covering, Slate Cisterns, Sinks, and every description of Slab work in Slate. Builders will find they are consulting their own interests in forwarding their orders to T. B. HANNAFORD, inasmuch as they not only can rely on first-class materials and workmanship, but that his prices are as low as to be entirely unapproachable.—Trevalga Wharf, Rat-liff cross

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner, or supplied in any quantity. Information for using forwarded with material. Post-office orders or reference in London promptly attended to.—Estimates given for every kind of the above work.

ASPHALTE. — THOMAS HARRISON, having completed his works for making by steam-power, is now in a position to execute orders for BLOCK ASPHALTE to any extent, at an hour's notice. Asphalte expressly prepared for barn and granary floors, and every description of ornamental buildings, for laying which plain instructions will be forwarded. Estimates given for every variety of Asphalte Pavement, Manure and other Tanks, Sea Walls, Railway work, &c.—The Trade supplied on advantageous terms.—THOMAS HARRISON, Asphalte and Whiting Works, Limehouse-heath Wharf, Hackney; and Sunderland Wharf Rotherhithe.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
FROM 2s. 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Potsonean and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

CROGGON and COMPANY, Manufacturers of
PATENT ASPHALTE ROOFING,
BOILER, RAILWAY, SHEATHING and INODOROUS FELT,
For Damp Walls, and Lining Iron Houses,
2, DOWGATE-HILL LONDON

O. MCARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

BUILDING MATERIALS.
BECK'S WHARF, ISLEWORTH.—Builders having works to execute south west of London, will find a good supply upon this wharf, on reasonable terms, with every convenience for speedy loading by travelling cranes, either into barges or carriages. Portland, Caen, Bath, and Yorkshire Block Stone, always in stock; Landings, Paving, &c. Also, Marble in Slab, Chimney-pieces, &c. Slab and Roofing Slates from the Penrhyn Quarries. Timber, Deals, Limes, Cements, Clay Goods, &c.
N.B. This wharf is very near the St. Margaret's Estate.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.

W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No 31 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf.
Contractors supplied to any extent.

ON SALE by PRIVATE CONTRACT, FIFTY LOADS of OAK TIMBER TREES averaging Ten Feet.—For particulars apply to Mr. G. G. DIXON, Park-corner Farm, Henley-on-Thames.

TO BUILDERS AND OTHERS.

AT the LOWEST PRICES.—TIMBER, DEALS, MAHOGANY, and WAINSCOT. A large assortment of seasoned prepared FLOORING and MATCH-BOARDING of all descriptions. Also an extensive stock of Dry White Yellow, and Pine Cut Stuff, Slating, Battens, Pantile Laths Oak Plank, Sash Cills, &c. Timber of all kinds, Planks, Deals and Battens, fetched from the docks, sawn by patent machinery in the best manner, and delivered at the shortest notice.—THOMAS JACKSON, Sawing and Planing Mills, Commercial-road, Pimlico, London.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of FLOORING and MATCHED BOARDING, from ¾ inch to 1½ inches thick, seasoned, and ready for use; also, Mahogany, Moulding, Wainscot, and all kinds of Timber required for Building purposes.—Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

AT the LOWEST PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected Stock of the various descriptions of Deals, commencing at the following low prices:—

Yellow Deals, from	£20	0 per 120
Spruce ditto, from	18	0 "
Yellow Battens	13	0 "
Dry Pine Plank, from	23	10 "

Prepared Flooring, &c. at equally low prices. A list forwarded on receipt of a postage stamp.—N.B. All sawn goods delivered within two miles free of cartage.—Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens, Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process.—JOHN COUMBE solicits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he sells at prices generally charged for wet wood.—Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile-end-gate.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Pine Plank, 3s. 6d.; Spruce Deals, 3s.; Mahogany, 6d.; 21 Yellow Battens, 12l 10s.; F. Wait, 1, 7d. Carriage free in town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth-walk.

NOTICE of REMOVAL. — EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton-road, Pimlico, to the KING'S-ROAD, CHELSEA, where their orders will be promptly executed as heretofore.—Please address, E. SIMMS, King's-road, Saw-mills, Chelsea, opposite Manor-street.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of its kind ever established, a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from ¾-inch to 1¼-inch thick, in Waste or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Sills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

MOULDINGS BY MACHINERY. Capping, Sash-bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to
E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S-ROAD, CHELSEA.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s. per foot super. together with every particular of its cost and adaptation, can be obtained of Messrs. H. P. HUNT and CO. 2, Charlotte-row, Mansion-House: or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that they have completed their extensive premises, and will be happy to execute all orders entrusted to their care with dispatch and punctuality. Web and dry docks, and powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring match boarding, &c. &c. always in stock at reduced prices.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road. GEORGE NOKES and CO invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:—
¼-inch white, 13s 6d. per square; ¼-inch white, 15s. per square; 1-inch white, 18s. per square; ¼-inch yellow, 15s. per square; ¼-inch yellow, 16s 6d.; 1-inch yellow, 20s.
Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.

STEPHENS' DYES or STAINS for WOOD. The following extract from a letter the Proprietor has obtained leave to make public:—"Northgate, Colchester, Feb. 5, 1856.—Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant. "SAMUEL GRIMES, Builder.

"To Mr. Henry Stephens, 54, Stamford-street, London."
Samples and prospectuses free to any part of the kingdom.

TO BUILDERS, PAINTERS, &c.—OAK GRAINING in OIL, 4d. per yard, in quantities not less than 80 yards. Church writing done in the Elizabethan style No objection to the country, if expenses are paid. Estimates given.—Apply to CHARLES PETTET, 5, Princes-street Edgware-road.

TO PAINTERS, BUILDERS, &c.—LIVETT, FRANK, and SON, No. 14, Borough, London-bridge, opposite the Brighton and South-Eastern Railway Stations, quote their present prices for cash—Linseed oil, 3s. 2d.; boiled, 3s. 6d.; turpentine, 3s. 8d.; oak varnish, 7s. 6d. per gallon; genuine white lead, 33s.; seconds, ditto, 31s.; best town glue, 43s. per cwt.; colours, brushes, &c. equally low. Lists of prices on application.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c. — A considerable reduction has been made in the prices of French polish, white and fine pale spirit varnishes, stain sticks, &c., and fine lute spirit. The present price is 6s. to 6s. 6d. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and sold at the lowest prices. A detailed list forwarded on application to JAMES SLIPPER, 57, Leather-lane, and Vine-court, Fleet-street, London.

KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade and of the manufacturers, G. B. KENT and CO., 31, Great Marlborough-street, London. Established 1777.
N.B. Kent's Painting Brushes are all stamped G. B. KENT & CO.
Price Lists forwarded by post.

BEST PAINTING BRUSHES.—J. B. TAYLOR, Painting Brush Manufacturer, 2, Barrett-court, St. Martin's-le-Grand, begs to solicit the attention of Painters, Builders to his Brushes and Tools, both Metropolitan and Provincial, which, being manufactured on his own premises, and of better quality, he can recommend as a superior article. Price lists forwarded on application post free.

PAINT, certified by the Government Engineers and Contractors to be the CHEAPEST and BEST ever discovered for wood and iron, price 28s. per cwt.—Apply to the Iron and Oxide Paint Company, D. WALKER, Secretary, 29 New Broadstreet, Bucklersbury.

WOLSTON'S TORBAY IRON-PAINTS, warranted to resist exertion of the Atmosphere Steam, Gases, Vapours, Lime, and Salt Water (see letter from Messrs. Penn), and to be superior to Red Lead, Brown Oxide, or any other Paint for Iron Work, whether new or much surface rusted. Also for Wood, Brick, Stone, Cement, Felt, or Canvas. Also Wolston's Torbay Cement for Roofing, Sloping Flats, Wood or Iron Sheeting. Cement for Fire-proof Floors, and Paint for Wood, secured. To Builders and Painters for painting purposes the same will be supplied Merchants at the TORBAY IRON PAINT and CEMENT WORKS, Brixham, Devon; 4, London Depot, Chamberlain's Wharf, Upper Thames-street, London; and orders addressed to Mr. WOLSTON, at the Works, or No. 54, John-street, Bedford-row, will have immediate attention.

MONEY.—THE REAL and PERSONAL ADVANCE COMPANY, Incorporated by Act of Parliament, 6 and 7 Victoria, cap. 110, for England, Ireland and other parts of the United Kingdom, and the Colonies. For further particulars apply at No. 4, Bartholomew-close, Chief Office, or to the Branch Offices, 24, Guildford-street, Russell-square.

MONEY WANTED.—The Council of Foreign Bondholders are desirous of BORROWING under the powers of their Act of Parliament, 9 and 10 Vict., cap. 170, the sum of £20,000, for the purpose of paying the Coupons of Interest due on the 1st of January next on the Bonds of the Republic of Peru, pursuant to the Contract for that purpose. Any persons disposed to lend the same, and on what terms, are requested to communicate their views for that purpose, addressed to the Town Clerk, Mansion-house, London, July 31, 1856.

MONEY.—1,000*l.* will be offered to the MEMBERS of the TEMPERANCE PERMANENT LAND and BUILDING SOCIETY, on MONDAY, SEPTEMBER 1st. All persons desirous of becoming Members may Transfer their Subscriptions, or part of them, above The premium for the accommodation required. The high monthly payments of upwards of £1 per £100 advanced are taken. The interest payable to Members upon the Shares remains unpaid each year. Forms of Tender, prospectuses, and any further information may be had on application to the Office, 21, Paternoster-row, or to HENRY J. PHILLIPS, Secretary to the Society.
Offices, 54, Moorgate-street, London.
Nearly 1,000*l.* already advanced.

MACINTOSH INDIA-RUBBER WAGGONCOVERS, at reduced prices. Stocks of uniform sizes always on hand, and can be had at the Patent Waterproof Works, MORISON, SON, and DAVIS, Patentees, Albion-street, and at the Factory, Holland-street, Blackfriars-road, Surrey.

DURABILITY of GUTTA PERCHA TUBING.—Many improprieties have been made as to the durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in calling attention to the following letter.—FROM SIR RAYMOND JARVIS, Bart., WYKE, near ILE of WIGHT.—Second Test-mould. "March 14th, 1856. In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump suction, I am glad to be able to state, in answer, that it has completely fulfilled my expectations, having been now nearly seven years in use, and I am informed that it is the first laying down, now several years, and I am informed that it is the adopted generally in the houses that are being erected here."
N.B. From this Testimonial it will be seen that the COMPOSITION WATER of the ISLE of WIGHT is no effect on Gutta Percha Tubing.
THE GUTTA PERCHA COMPANY, PATENTEES,
18, WHARF-ROAD, CITY-ROAD, LONDON.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS ENGINE PACKING, both round and flat, and SOCKET-RINGS for Hot-water pipes. Vulcanized Rubber Sheets and Sheet Rings. Red Rubber Valves for all sizes of any shape. Pump Cushions and Rubber Strips cut to any pattern for bookbinders' use. Driving-dresses of superior make, and improved Vulcanizer Rubber Soup, for preparing.
Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions, inflating Portable Baths, Round Cushions, and Articles of this kind made to any Patentee's order.
N.B. All communications and orders punctually attended to and addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-street, Gower-street, and London.

PAPER HANGINGS! PAPER HANGINGS! PAPER HANGINGS!—Builders in the Trade, Country Dealers, and others, will find an immense STOCK and choice of PATTERNS of all grades of PAPER HANGINGS, at W. CLOBB'S MANUFACTORY, 29 Lowther Arcade, Charing-cross, for the Spring and Summer Trade, both in the blue and block printing, to be arranged by any Paper in Limited Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms Cash.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER HANGINGS is CROSS'S WHOLESALE WAREHOUSE 29 GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large Consumers will do well to visit this established.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—The Wholesale and Co. Manufacturers beg to call the attention of the trade to their immense STOCK of PAPER HANGINGS, at No. 3, Oxford-street, Lowther-arcade-end, which, for style, colour, taste, Marbles, Grounds, and Machine Goods, the whole being their own manufacture, can supply on the very best terms.

PAPER-HANGINGS. — JEFFERY, ALLEN, and CO. beg to inform the trade, they have a large selection of Paper Hangings of their own manufacture, of all qualities, and every pattern they are prepared liberally to give attention to their best papers, which, in price, style, and colour, are equal to any that can be manufactured.—J. A. and CO. are the sole proprietors of the Gothic Fresco Paper, an efficient remedy for damp walls.—Factory, 115, Whitechapel; Show-room, 300, Oxford-street.

TO ARCHITECTS AND OTHERS.
MR. EDWARD L. PARAIRE is desirous of Meeting Gentlemen who require COLOURED ARCHITECTURAL DRAWINGS (External, Internal, Isometrical Perspectives and Sections, Plans of any locality, Elevations, Sections, Detail, and Working Drawings.—Mr. E. L. P. makes a consideration in his charge where competition drawings prove unsuccessful.
Address, 5, Baldhone place.

TO ARCHITECTS AND COMPETITION DRAWINGS, coloured or tinted, and superior LITHOGRAPHY, in its various branches, executed by Mr. T. J. HAWLINS (Author of "Elementary Drawing Copies," adopted at Marlborough House, Outlines of Sculpture, Modern Architecture, &c.), 38, University-street, University College, London.

LEVELLING, Surveying, Drawing, Mapping, and Estimating, for Railway or other works; Enlarging, Reducing, Copying, Tracing, &c. in short kept by Mr. G. H. RICHARDS (late an Officer of the Metropolitan Commissioners of Sewers), Agent to the Imperial Patent Board of Works for Local Boards of Health), and find him a useful assistant, from his extensive experience in all the details of Sewage Works.—4, Trafalgar-square.

ARCHITECTURE, CIVIL ENGINEERING, and SURVEYING CLASSES, Established by Messrs. HYDE, SMITH, and LEWIS, Architects, Civil Engineers, and Surveyors, &c., for Preparing Gentlemen for Architects, Builders, Engineers, Surveyors, Improvers, Assistants, &c., and for the Evening Instruction in Architectural, Civil, Engineering, and Mechanical Drawing; Colouring, Shading and Tinting; Ornamental and Water-Colour Drawing; Perspective, Isometrical, and Geometrical Drawing, Making Finished and Working Drawings; Preparing Specifications, Taking out Quantities, Estimating, Measuring and Valuing Builders' Work, &c. &c. Terms—Day Pupils, Three Guineas per Quarter; Evening Pupils One Guinea per Quarter. There are no extras, the terms include the whole of the above, with the use of Drawing Boards, T squares, Plans, Drawings, Models, &c. Prospectuses and full particulars may be had at the Offices, 24, Guildford-street, Russell-square.

MATHEMATICAL DRAWING INSTRUMENTS.—JOHN ARCHBUTT, 20, Westminster-Bridge-road, Lambeth (near Astley's Theatre), begs to call attention to his Stock of Instruments, manufactured by superior workmen, for the use of the Architect, Engineer, &c., which he can offer at the following low prices, viz.:—Best Cases of Instruments, with Pen, Pencil, and Compasses, Three Guineas per Quarter; Ditto, Two Guineas per Quarter; Ditto, One Guinea per Quarter. These are no extras, the terms include the whole of the above, with the use of Drawing Boards, T squares, Plans, Drawings, Models, &c. Prospectuses and full particulars may be had at the Offices, 24, Guildford-street, Russell-square.

MATHEMATICAL DRAWING INSTRUMENTS.—JOHN ARCHBUTT, 20, Westminster-Bridge-road, Lambeth (near Astley's Theatre), begs to call attention to his Stock of Instruments, manufactured by superior workmen. The prices will be found exceedingly low, lower than ever charged for articles of similar quality and workmanship. Rules, scales, boxes, &c., at equally low prices. Illustrated price-list will be immediately forwarded on receipt of application.
N.B. A few New and second-hand Levels and Theodolites always for Sale.

THE ARCHITECTS', BUILDERS', ENGINEERS', and SURVEYORS' REGISTRY OPEN to IMPROVERS (late Hay's Patent), for the Registration of several thousand Names and Addresses. Letters (Post Paid) for Engagements Town or Country, Free. Applicants can send in their Terms. Forms for returning to character, &c. given.—Address, 5, Victoria-street, Parliament-street.

MONUMENTAL BRASSES, SEALS, DIES, &c. in Mediæval and modern styles.—T. MORING, Engraver and Heraldic Artist, 44, High Holborn.

A FIXED ALLOWANCE OF 6*l.* PER WEEK,
ACCIDENT of any DESCRIPTION, or the sum of
1,000*l.* IN CASE OF DEATH,
may be secured by the payment of £2 7*s.* 6*d.* per annum in the RAILWAY PASSENGERS' ASSURANCE COMPANY.
A weekly allowance of fifteen shillings for injury, or 1,000*l.* in case of death, is secured by one premium.
Forms of proposal, prospectuses, &c. may be had of the agents of the clerks at all the principal railway stations, and at the head office, London, where also
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may be insured against by the journey or by the year as heretofore.
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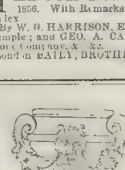
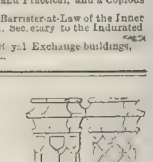

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The Builder.

Vol. XIV.—No. 706.

THOUGH matters which appeared more immediately pressing have occupied our columns of late, we continue to think that the "Recent History of Architecture"—as not having been directly treated elsewhere—is a subject which it is desirable to pursue,—and considering that it is only by recalling to our minds what has led up to the existing state of art, that we can grasp the circumstances of the present and fix upon the best course for efforts towards the future. Where we last parted with the subject,* it might be seen that a singular combination of influences was at work throughout Europe, leading to the actual condition of architecture,—a condition which has been pronounced unprecedented, and which in our nation is thought to tell discreditably for public taste and the qualifications of our architects. That such opinions are commonly exaggerated indeed, we think also may have appeared,—as also that the circumstances were only such as were likely to supervene on influences anterior to the nineteenth century. It will not do, however, to take shelter from the possible adverse criticism of posterity under any excuses; but we should rather admit that our age, whilst singular in the character of its works, has been singular also in the number of its advantages, and that the error has really been in not knowing how to use an unusual wealth of materials. If we believe that the contemporaneous imitation or adaptation of a great number of opposite styles is not the course best fitted to the growth of *art*, be it recollected that nowhere has such system been so much fostered as in the capital of Bavaria. True, thirty to forty years ago, it might fairly be allowed that more of art was infused into buildings of a particular style and class in Germany, than into corresponding works in England. But, at the same time, if anything could reconcile us to our demerits, it would be found in what could be done by those very men whose reputation stands so high on the continent. Presuming that mere experimentalism—as seen in our own country in the use of several different styles by each architect—constitutes interference with that directness of aim which goes to make productive *power* in art—we shall find that a similar mistake was committed by Schinkel, and even by Klenze. The fame in this country, of both the great Germans, has rested upon their adaptations of Greek architecture,—in which they seem to have preserved all that is valuable in association as to an old style, whilst they developed and enlarged its resources, invented new forms, and infused fresh elements of art and beauty. But, not content to work on this theme—though one sufficiently expansible for a lifetime, and enough for one race of admirers to do justice to—they sought out new fields where they could not be equally successful. Klenze, perhaps, did not adopt his several styles of his own accord. Amongst his works are specimens in the old Greek, new Greek, and Greco-Italian (following one order of classification applied to them), and in the Byzantine, Gothic, and other styles. In all these he has some taste and skill, though not the likewise requisite knowledge of examples. Schinkel also manifested originality, and some taste, in a number of his works, which cannot be referred to any recognized style. But the changes of manner by both these artists, it appears to us, were unfortunate both as to their own powers and the public capability of appreciating. The Gothic of Schinkel is bad beyond the power of description; and Klenze fails in the same style almost as much as his brother artist. It is clear that if the initiative in a design is taken in the manner, or on the basis of an old style, there is always, to some extent, danger that the work will be either deficient in art by the very accuracy of imitation, or it will appear a mere caricature of the old style and proclaim the ignorance of its author. Such danger may, indeed, be inseparable from any active course. But it follows that complete knowledge of the old style *is required*,—on the one hand, even to gain the *art*,—and, on the other, to avoid the caricature. For this knowledge in the case of Gothic architecture, the mediæval buildings of England are the best school; and the continental architects to this day, seem hardly to have perceived the main characteristics of the general style. The mistake in England formerly was similar: it is now of the opposite nature. In short, it must be allowed that the demands upon the *artist*-architect are somewhat conflicting. Novelty is fairly demanded for its own sake; yet novelty alone is not art-work: it is not beneficial to public taste to lead it to an opposite channel: some relationship must there be to old style; yet knowledge of that must be used for the very purpose of *avoiding* the mere semblance of its monuments. From this difficulty then, in a certain class of works, it has resulted that there has been only offensive caricature, or accurate reduplication. Omitting any comparative estimate of the German Greek architecture, it may be asserted that some of its chief works are successful to the extent of our basis of criticism. It may likewise be affirmed, that in works of a similar class of England, ground is being established for similar commendation. We need but name St. George's Hall, at Liverpool, as an obvious instance. In Gothic architecture there has been also progress, though not wholly of the right character. But, on the continent, the progress in the same style seems to us less perceptible in any direction, unless we were called upon to include mere restorations of existing buildings.

However, the development of *art* which above has been more especially referred to, has reached this country somewhat later than it did the continent. We have seen some of the reasons of this. The influence of the Burlington school we believe to have been prejudicial. The greater amount of original *art* in the works of Chambers, Sir Robert Taylor, and even of Soane and Adam, was either limited to them, or it was exceptional in its effects. Henry Holland, and one or two others, had the right feeling; but James Wyatt and his school were but feeble imitators of one style; or such *art* as they could infuse into their Gothic works is unobserved, by reason of the obtrusion of forms, which they would clearly have avoided, with better knowledge of what had previously been done,—whilst also the results of their efforts to grasp too wide a field were unfortunate for the reasons before referred to. In the architecture of England, art had suffered a long *hiatus*; and even yet the whole reasons have not been perceived, which prevent our getting again into the right groove. Till very lately, the number of architects at all qualified for the direction of public works, bore no sort of relation to the demand for such works. The number *now* is in excess of the expressed demand; though it is not in excess of the requirement for good architecture and buildings. Our profession, formerly, had to learn how much the world then required in architecture; the public has now to learn how much of art the profession can and should supply

To realize good architecture at any time, a happy conjunction of elements must contribute to the process of design. The building must group well *en bloc*,—considering tasteful outline, "breadth," and massing of shadow, irrespective of other elements for consideration: it must have beauty and novelty—yet a certain degree of synchronism, elegance, and harmony of all associations in its details: its forms of structure and its forms of art must be in no antagonism with each other; its building materials must have the like harmony from the observance of their distinctive physical properties: the colour and surface must be such as light and shadow, as the chief sources of beauty, will tell upon (and with which light and shadow, shining surface, or depth of colour, may be so much interference): and the value of colour itself must not be left out of consideration. To omit none of such points, and still to keep them before the mind in logical sequence, may not be given to men of ordinary mould or ordinary acquirements. But, for that very reason, no less than on the score of those other *desiderata* in practical architecture which are obvious, should the subject of professional requirements and education no longer be in abeyance. There is error in the present state of taste as there was error before, in the regarding only a section or two of the positive essentials of good architecture. The mistake may not be the same mistake; but it is of fatal character. Some writers, and with reason, are not quite satisfied with the growing tendency which it is thought there is from the use of light towards that of darker-coloured materials,—seemingly passing, without consideration, the mistakes made through the medium of cement, as ordinarily used; whilst others, regarded as influential with the public, hail the appearance of coloured brickwork in street architecture as a thing newly discovered, and as though itself *per se* good architecture.

Some of the imperfections in the architecture of Nash have been already pointed out,—such as his forgetfulness of the unison required between decoration and structure, his erroneous application of cement, and the errors in details which resulted from the defects of his early education. He, however, recognised the value in art, of novelty other than the specious novelty expressed through mere changes of *style*; and he also set some value upon outline and grouping, as in themselves deserving of thought,—points which recently, during the study of details, there has been a tendency to get away from. Mr. Gwilt remarks, that Nash "was beyond doubt a person of great taste," and that had he "been enabled in his youth to have seen the works of Palladio, and to have studied them," he is "confident that the new street he formed would not have been exceeded in beauty by many in Europe." Truly, he adds,—"As far as he understood it, he was a follower of the Venetian school; but his great neglect of detail, and the little care he bestowed upon profiling his orders, arising from the deficiency of his early education as an architect, destroyed the effect of almost all his works. His columns are sometimes outrageous in their proportions, and his cornices rarely much larger than decent-sized copings. He was heedless of propriety in the application of his orders; and, from want of learning in his art, was unable to execute with any certainty the ideas of a very bold imagination." But he also remarks, that in the architecture "of his villas, he was far more successful than in his street architecture."

We apprehend that we might differ from Mr. Gwilt, not as to the value of the works of Palladio, but as to the principle upon which many

* *Vide* vol. xiii. p. 562-7, "Nash and Schinkel: Education of Architects."

of the English architects have approached them,—for it has unfortunately been with certain architects—as it has been sometimes remarked of painters—that they have come back from Italy worse *artists* than they were before. But taking the opinion of Mr. Gwilt as it is, we shall, perhaps, not be considered far wrong in our estimate of Nash. Could we hope that our exertions might have influence on future art, it would be important that our critical view should be even minutely correct. It is allowed that, whatever there may be of merit in particular buildings, and whatever squares and open spaces we may possess, London in effect of *street architecture* is miserably deficient. The first important effort was made in Regent-street; and nothing commensurate with it have we got to, since. There is Victoria-street: it is simply a line of roadway,—debouching, we are not sure, at the right place—considering the original plan, and the position of the great tower of the Houses of Parliament,—and it has nothing whatever, in the course of its length, made conducive, through plan of it and grouping of its buildings, to the street architecture. The merits of the particular buildings are not really part of the immediate question.

Nash, however, did feel the value of the important element in the result—plan. Thus, masses of his buildings combine towards a general effect, though varied from one another; whilst the several blocks carry out the principle of attention to plan. The defects of the architecture are great; and the praise of Regent-street, which at one day appeared in print, was inflated and ridiculous: but we must not allow defects to interfere with any lessons to us from such meritorious characteristics as there are. To show the value of grouping of masses, and of a certain amount of uniformity—without attention to which, what we mean by the effect of general *street architecture* is not gained—it would be sufficient to compare the view along Portland-place with that of Oxford-street. In the former locality, the work of the Adams (who preceded Nash in studying the important points referred to), in spite of the weakness of details, bears with it a particular element of impressiveness,—perhaps not very readily analyzed, but the want of which we painfully feel in Oxford-street; and which cannot be supplied by cement and greater pretension in decoration, details of better character, or even the occurrence of some superior designs. Returning to Regent-street,—the circuses, the crescent at the top of Portland-place, the general grouping of Waterloo-place, and the introduction of the Quadrant, demonstrate at least what no one else has produced,—with the exception of the architect Wood, of Bath, who lived some time previously. There are similar evidences in the grouping of the terraces in the Regent's-park. The Quadrant, according to one story, was the result of accident. It is said that ground on which the County Fire Office stands, intended to form part of the line of street, was obtained by the office unexpectedly, so that the street could not take its origiually designed course. Without knowing the authority for the story, we should doubt it,—because the prolonged line, though better, perhaps, with reference to the Regent's-park, could hardly so well as the present line effect a junction with the foot of Portland-place. But whether the design of the Quadrant was the original one, or made to get over an accident, it is equally deserving of praise. Again, the Church of All Souls', Langham-place, is effective in its plan and its position; and each of these is admirably well adapted to the other. That there are defects in the building is sufficiently obvious; but that design has, perhaps, suffered most from the caricature wherein the architect was represented pierced through by his own spire.

There are fashions in theorising, as there are fashions in dress: one day, an architect is all that is great; shortly afterwards, the element of effect in which he happened not to excel comes into fashion, and straightway nothing good is believed of his works. This is unfair, and is most ill-advised for *art*. In every case the criticism is wrong which estimates on the basis of only one of such ingredients as we have shown must join to form a perfect work of art in architecture. Indiscriminate praise of Nash, or want of perception of such merits as he had,—either of these would mark immature knowledge of first principles. That there are essential constituent parts of good living architecture, without reference to systems of detail and styles, none will question. Yet what some of these are is from time to time forgotten both by architects, and by those who claim to instruct the public: one element is held in favour, to the exclusion of others; and the greater part of what would constitute *art* is disregarded for the pursuit of mere styles. What, however, are the essentials of good architecture should no longer on any side be misunderstood. First principles at least might be made familiar to all. They should be so made if the art is to be estimated, and if it is to advance. And, the duties and requisite qualifications of the architect should be somewhere set forth, so as alike to be called into use, and to be better responded to and supplied than they can be at present; and above all, no further delay should there be in establishing the first step to success—a well-arranged system of professional education. We referred to this latter point some time since, when we endeavoured to show the advantage which Schinkel had in that respect over Nash.—Nash, however, had some valuable personal qualities. He was an excellent "courtier;" or, as one would rather say, a *gentleman;* but there is no necessity to impute to him "sycophancy," to account for his success. Even more than that amenity of manner which some one has said is the best letter of introduction in the world, is required in the constitution of the practical architect. To sink your own opinions formed by study, whenever they are opposed, and appear to take up what you cannot believe, may indeed be neither conscientious nor politic for the common end of art. But to succeed as a practical architect, you must be more than artist or man of science. You must know *men*. True, there are those with whom no assiduity and probity on the part of an architect would protect him from unworthy suspicions, or interference prejudicial to the client's own interest. And there are those calling themselves architects who depend more upon their knowledge of men's weaknesses, than upon technical knowledge and skill. But we say, that, assuming a common aim and mutual forbearance, it will require knowledge of character on the architect's part, to secure the common end, whether through unanimity of opinion or deference to him. No professional man can be expected to give elaborate reasons at every step; but on the other hand, reasoning men will not give confidence till it has been won; and the most able artist and conscientious architect may promote all ends best through knowing what would be the likely current of thought in particular cases, in the mind of his client. The painter, in the mere professional business of his calling, may need such aptitude to less extent. If he possess the fitting artist's qualifications, he produces a painting, and has only to sell. Yet the architect, with corresponding qualifications, may never realize a conception, simply because he lacks the power to put the just view of his own case. Logic, the art of using reason well, is for the architect certainly no less than every other follower of a calling, the first of arts. And the knowledge of how men should, and of how individuals would decide, are closely related to each other. Hence comes the true secret of "unsuccessful great men." But Nash was more than a man of pleasing manners, or good business habits. His success was due in great degree to extraordinary habits of perseverance. This is illustrated by an anecdote. It is said that when very young, he was in a subordinate capacity in Sir Robert Taylor's office,—straining paper, copying letters, and the like. A sudden pressure of work came, and help was wanting. Nash, who had not had any employment previously in drawings, petitioned to be allowed to try his hand. More by way of amusement for his superiors than anything else, as it would seem, he was allowed to try. The result was, that after extraordinary exertions he completed a drawing, in such style that Sir Robert Taylor is said to have remarked,—"That boy will be an eminent man some day;" or, in other words, prognosticated his future success. Good lives of our later architects are much wanted.

During the period of Nash's career several foreign refugees came over, and became connected with him in various ways. Amongst the number was Augustus Pugin, a Protestant, who had no particular knowledge of architecture, but soon began to execute drawings in body colour, married a Miss Welby, took pupils, and was often engaged with his whole staff in assisting Nash. Mr. Ferrey, Mr. Talbot Bury, and Mr. Dollman were amongst Pugin's pupils. Mrs. Pugin was a lady of great energy, and it seems had pretty much the direction of the office. Mr. George Repton, who married one of the daughters of Lord Eldon, was amongst the pupils of Nash.*

Though Nash's style may be regarded as generally belonging to the Palladian school, in its day it was almost an exotic. Bad in detail and in the structural element of *architecture*, unfortunate in the treatment of shop-fronts, and in the manner of use of the lately-invented cement, the profuse employment of which led the late Alfred Bartholomew to call the Regent's-park-terraces "mortar-skimmings by the mile," it was yet not unworthy of commendation for one element in good architecture—scenic effect. But whilst with that object in view, the architectural efforts of our country at the time were not undeserving of notice, it could scarcely be otherwise than that they should be inferior to the works of the continent. To produce great works, commanding abilities are required in the artists; and we have seen how the Germans were ever educating themselves for the demands upon them which were to arise. No similar course had been pursued, or none to the like extent, by the English architects, or even could be. But there is a further contrast afforded. Architects cannot work till employment is given to them; and on the *manner* in which what is called "patronage" is exercised, as much as upon the labour of artists, the great works of a country depend.

THE MANUFACTURE OF BRICKS BY MACHINERY.†

The manufacture of bricks is a subject embracing so great a diversity of treatment, from local circumstances, the varying chemical quality of the earths or clays, and the great number of improvements lately introduced, as well as from the multifarious processes under which the manufacture is carried on, that I am obliged to abandon describing the principle best suited to each particular class of earth, and merely to give a general idea of the manufacture and the mechanical contrivances invented for its improvement; nor will the limits of this paper allow of more.

The process of brickmaking is one of the most ancient manufactures in the world. We are told in Scripture that the tower of Babel was built with well-burnt bricks; that the walls of Babylon were of a similar construction; and that the Israelites, during their oppression by the Egyptians, were employed in brickmaking. The ancient Romans were brick and tile makers: excellent specimens of their manufacture still remain. In England, bricks were not generally used until the middle of the fifteenth century. The Lollard's Tower, Lambeth Palace, built in 1454, is about the most ancient brickwork in London. The old part of Hampton Court was built in 1514.

I have given this glance at the antiquity of the process to show that, although so ancient, it has received scarcely any improvement from the aid of machinery until within the last few years.

* A well-informed correspondent, who wrote us with reference to our previous notice of Na-h, says, "After leaving Sir Robert Taylor's, where he was at the same time with Mr. Cockerell, he practised in London as a measurer and a speculative builder. Then he retired to a property at Carmarthen, and associated with all the best men in the county, and at last took to architecture on a sudden impulse, instigated by a visit from Mr. Cockerell, who went down to Carmarthen in a chaise-and-four, while Mr. Nash was comparatively a poor man, for he had taken all the woods of Tallharries, in conjunction with one named Saxon, and, perhaps, lost money. He had a private theatre, among other things, and old Charles Matthews was one of his private company. His two first works were St. David's Cathedral, and a lodge (or some little thing), for Mr. Johns, of Hafod, a very intimate friend, and then he rapidly got business when it was known that he had resumed his profession. He never was a miniature painter, and I never even heard such a story before. He had the elder Pugin and Foul-n, and Morgan, of the Regent's Canal (still alive), as his first clerks."

† Read by Mr. Humphrey Chamberlain, Draining Engineer, at the Society of Arts.

At the present time bricks are manufactured in the most primitive way. Those made by hand are generally of very inferior quality to machine-made ones. The numerous titles of the London bricks best illustrate the state of this manufacture. There are wash bricks, grey stocks, rough stocks, paviours, pickings, grizzles, place, shuffs, and numerous other titles. Now, there should be but one quality, if the process was carried out with good machinery, in a suitable manufactory, and those all best bricks. A very few experiments will prove a clay, as to what preparation or mixture of other earths it requires, and the temperature at which it burns to the best colour and soundest article. From the London makers so strictly adhering to the old system of handmaking and clamp burning, they have opened a market for makers by machinery over the country, who, from the superiority of their ware, command such a price that they can now afford to send bricks by railway, 80 and 100 miles, to the metropolis.

One great check to improvement, both here and at Manchester, is the existence of clubs amongst the men, but these must give way as other districts advance.

The importance of the brick trade is illustrated by the following:—

The quantity of bricks made per annum in this kingdom is about 1,800,000,000. Of this quantity Manchester alone makes about 130,000,000 per annum. What are termed the London makers produce about the same quantity, but bricks are sent to the metropolis from a circuit of 100 miles: it is, therefore, impossible to give exactly the consumption. Taking bricks at the low average of three tons per 1,000, the annual make exceeds in weight 5,400,000 tons, and the capital employed must be upwards of 2,000,000*l.* sterling.

Before entering on the manufacture by machinery, I will briefly describe the present process of making by hand, as practised in the neighbourhood of London.

The clay is dug in the winter, and spread over a large surface of ground, to expose it as much as possible to weather, more particularly to frost, to act on the compact tough mass, and so divide it into as small particles as possible, that during the summer or making season, labour may be saved in working in that quantity of water which is necessary to bring it into a ductile mass. This clay is thrown out in layers, over which are spread coal-ashes, or what is termed breeze, which perform several functions. First, they make the clay of a more porous and open character, which is attained by using sand in the country; secondly, they prevent the clay shrinking too much, and the sun and the wind cracking the bricks when drying; and thirdly, they are useful in the firing of the ware, by assisting to burn the bricks. Chalk is also added, for the sake of colour, and acts as a flux on the silica of the clay in burning. This is tempered by hand into an even mass of soft clay or mud, which is effected by turning it over several times with wooden spades, and at each turn working in as much water as possible. This operation is not considered complete until all the clay has absorbed an equal quantity of water, and becomes a thick plastic mud: to effect this pug-mills are also used, and chalk-mills, but the latter is more for the sake of colour, and is only a local practice. This clay is made into bricks by an artisan called the moulder, who is supplied by an attendant lad with a lump of the material, rather more than sufficient to fill a small box, in shape a parallel-opipedon, called a mould, containing about 150 cubic inches, in some parts of the country nearly 200 cubic inches, varying a little in size in most districts. The art of the brickmaker, or moulder, is the knack with which he throws, or drops, this soft clay into the mould, so as to fill up every corner. This is apparently a very simple process, and is the one to which I shall have to draw your attention this evening, and the accomplishing of which by machinery has caused a vast expenditure of time and money, and occupied the attention of many leading mechanics for some years. These moulds are emptied by being turned over on a board called a pallet-board. The material used being soft clay, and the mould kept constantly wet by dipping in water between each charge (which is called slop-moulding), or sprinkled with sand or dust, the brick easily drops from the mould on its being held over the pallet-board. The bricks, when moulded, are carried or wheeled away to the hacks, or drying-floors, where they are placed edgeways, about half an inch apart, or the thickness of the pallet-board, one row on another until they form a wall six or eight bricks high: they are then covered up and left to dry, ready for the burning. This latter process we shall discuss in a succeeding paper.

The number of patents taken out, connected with the manufacture of bricks, has been obligingly supplied to me by Mr. Carpmael: they exceed 230. It would be impossible to describe each particular machine, and I, therefore, propose to illustrate, as clearly as I can, the several principles which have been attempted by these inventors, and with what success. I shall not occupy you by references to the earliest inventions, as we know they were not successful, or they would be worked at the present day; but will notice those principles now before the public.

Before commencing with the manufacture of the brick, we must prepare the raw material,—clay.

There are few places on almost the whole of the geological strata of this country, which do not possess alumina in combination with silica and other earthy matters forming a clay from which bricks can be manufactured. That most generally worked is found on or near the surface in a plastic state. Others are hard marls on the coal measures, new red sandstone, and blue lias formations. It is from these marls that the blue bricks of Staffordshire and the fire bricks of Stourbridge are made. Marl has a greater resemblance to stone and rock, and varies much in colour,—blue, red, yellow, &c. From the greatly different and varying character of the raw material, there is an equal difference in the principle of preparation for making it into brick; while one merely requires to be turned over by hand, and to have sufficient water worked in to make it subservient to manual labour, the fire-clays and marls must be ground down to dust, and worked by powerful machinery before they can be brought into even a plastic state. Now these various clays also shrink in drying and burning from 1 to 15 per cent. or more. This contraction varies in proportion to the excess of alumina over silica, but by adding sand, loam, or chalk, or (as is done by the London brick-makers) by using ashes or breeze, this can be corrected.* All clays burning red contain oxides of iron, and those having from 8 to 10 per cent. burn of a blue, or almost black colour. These bricks are exposed in the kilns to great heat, and when the body is a fire-clay, the iron melting at a lower temperature than is sufficient to destroy the bricks, gives the outer surface of them a complete metallic coating. These bricks are common in Staffordshire, and when made with good machinery (that is, the clay being very finely ground), are superior to any in the kingdom, particularly for docks, canal or river locks, railway bridges, and viaducts. Other clays contain lime and no iron: these burn white, and take less heat than any other to burn hard enough for the use of the builder, the lime acting as a flux on the silica. Many clays contain iron and lime, but where the lime is in excess, the bricks are of a light dun colour, or white, in proportion to the quantity of that earth present; if magnesia, they have a brown colour. When iron is in excess, they burn from a pale red to the colour of cast-iron, in proportion to the quantity of metal, as I before explained.

There are three classes of brick earths:—

1st. Plastic clay, composed of alumina and silica, in different proportions, and containing a small per centage of other salts, as of iron, lime, soda, and magnesia.

2nd. Loams, or sandy clays.

3rd. Marls, of which there are also three kinds; clayey, sandy, and calcareous, according to the proportions of the earths of which they are composed, viz. alumina, silica, and lime.

Alumina is the oxide of the metal aluminium, and it is this substance which gives tenacity or plasticity to the clay, having a strong affinity for water. It is owing to excess of alumina that many clays contract too much in drying, and often crack on exposure to wind or sun. By the addition of sand this clay would make a better article than we often see produced from it. Clays contain magnesia and other earthy matters, but these vary with the stratum or rock from which they are composed. It would be impossible to give the composition of these earths correctly, for none are exactly similar; but the following will give an idea of the proportions of the ingredients of a good brick earth;—silica three-fifths, alumina one-fifth, iron, lime, magnesia, manganese, soda, and potash forming the other one-fifth.

The clay, when first raised from the mine or bed, is, in very rare instances, in a state to allow of its being at once tempered and moulded. The material from which fire-bricks are manufactured has the appearance of ironstone and blue lias limestone, and some of it is remarkably hard, so that in this and many other instances which I shall have to notice, in order to manufacture a good article, it is necessary to grind this material down into as fine particles as possible.

Large quantities of bricks are made from the surface marls of the new red sandstone and blue lias formations. These also require thorough grinding, but from their softer nature it can be effected by less powerful machinery.

The principal machines which have been worked for this purpose are three—1st. The pug-mill. 2nd. The wash-mill. 3rd. The rolling-mill.

The pug-mill is a cylinder, sometimes conical, generally worked in a vertical position, with the large end up. Down the centre of this is a strong revolving vertical shaft, on which are hung horizontal knives, inclined at such an angle as to form portions of a screw, that is, the knives follow each other at an angle forming a series of coils round this shaft. The bottom knives are larger, and vary in form, to throw off the clay,—in some mills vertically, in others horizontally. Some have on the bottom of the shaft one coil of a screw, which throws the clay off more powerfully where it is wished to give pressure.

The action of this mill is to cut the clay with the knives during their revolution, and so work and mix it that on its escape it may be one homogeneous mass, without any lumps of hard untempered clay; the clay being thoroughly amalgamated, and in the toughest state in which it can be got by tempering. This mill is an excellent contrivance for the purpose of working the clay, in combination with the rollers, which I shall describe presently; but if only one mill is worked, I should not adopt it generally, for, although it tempers, mixes, and toughens, it does not extract stones, crush up hard substances, or free it from all matter injurious to the quality of the ware when ready for market. This mill can be worked by either steam, water, or horse-power; but it takes much power in proportion to the quantity of work which it performs. If a brick is made with clay that has passed the pug-mill, and contains stones, or marls not acted on by weather, or lime-shells (a material very common in clays), or any other extraneous matter injurious to the brick, it is apparent from the action of this mill that it is not removed or reduced. The result is this, the bricks being when moulded in a very soft state of tempered material, or mud, considerably contract in drying, but the stones or hard substances not contracting cause the clay to crack; and even if they should not be sufficiently large to do this in drying, during the firing of the bricks there is a still further contraction of the clay, and an expansion of the stone from the heat to which it is subjected, and the result is generally a faulty or broken brick, and on being drawn from the kilns the bricks are found to be of inferior quality, commonly termed addled—that is, having no ring or metallic sound when struck—liable to great waste from breakage in carriage and otherwise deteriorating the ware. In the case of lime, on exposure to the atmosphere these shells, from absorbing moisture, lax or swell, forming lime powder, and in so doing burst the brick to pieces.

* Before commencing to work a bed of clay, in the first place it is necessary to ascertain its contraction in drying and burning; secondly, how this can be corrected at the least expense if in excess. The necessary proportion of sand, lime, or chalk, would so vary with the clays, that no rule could be laid down, and it must be left to actual style.

Next is the wash-mill; but this I must merely glance at, as it cannot be practically worked for the manufacture of common bricks on a large scale, but only for front bricks. By a general adoption of good brick machinery, and a more general knowledge of the preparations of clays, we should have all our bricks equal in quality to what are now termed front bricks. This mill is a large circular trough, round which is a horse-walk. The clay is worked in this trough with water by harrows, drawn by one or two horses, until it is all thoroughly mixed up into a fluid state. It is then let off into a pit at a lower level through a grating, or a series of gratings, which extract all stones and coarse undivided particles. In proportion to the fineness of these gratings or sieves, so is the quality of the clay. It is there left to subside; the water is then let off from the top, and the clay, when sufficiently stiff, is thrown out for work. By this means clay can be prepared of the finest quality. This is the principle on which china and earthenware clays are prepared after grinding. The expense would prevent its becoming general with brickmakers; and in the case of fire-clays, marls, or any such earths as produce our best materials, it would be useless until they were ground down. It also consumes a large quantity of water, which could not be had in sufficient abundance in many districts.*

MECHANICS APPLIED TO PURPOSES OF WAR.

If dread war is to continue a stern necessity, civilised man must make it, as much as possible, mechanical. Huge ships of war are propelled by steam and screw: gun-boats, by aid of the same potent power, will "glide wherever it is a little damp;" and there is no reason why in our next war an army shall not have its field machinery as well as its field artillery. Portable steam-engines may be made to do the work necessary in war, as effectively as they now aid in all the requirements of peace. This has been proved by Sir S. M. Peto; as, amidst the thunder of artillery at Sebastopol, might be heard the panting of the steam-engine, the clanking of the forge, and the whizzing of the circular-saw. It is to this use we wish to direct attention now in time of peace, that experiment and training may perfect machines, and allow time to learn their full use. Portable steam-engines may grind, bore, saw, pump, and in many other ways aid the sapper and artizan soldier. We take it for granted, the army works corps of Sir Joseph Paxton will be matured into a permanent military body. There is a prejudice amongst military men against new appliances of a civil character. Even after the terrible winter in the Crimea, the best joke (in their opinion) certain staff officers made was, that the railway had carried all it was made to carry, and all it was fit for, namely, a baronetcy to Sir S. M. Peto. It would have been as well if some of these gentlemen had as honestly earned their honours.

The steam-boat workshop, steam-boat bakery, the railway, and the army works corps, nicknamed "the army drudges corps," did good service, and it is to be hoped sneers from ignorant officials will not retard the use of machinery, but that all possible means will be taken to make steam do the work of flesh and blood. Steam aids in manufactures, in agriculture, in navigation, in naval war, and may be made to aid in field war.

If all our ships of war having steam-power on board have (to a limited extent) circular-saws, planing-machines, mortising machines, &c. to be used in time of need, neither vessel nor crew will be less efficient for actual war. If portable steam-engines go out with the sappers, they need not be more difficult to carry along than field artillery. Timber for huts, for gun-platforms, for temporary bridges, for stockades, and for all other the purposes of war, may then be cut and converted in an enemy's country. The Black Sea is bordered by as fine timber as any in Europe or Asia: the Black Sea fleet lay months idle, with an immense steam-power idle also: will it be considered treason, if we hint that some of this timber might have been cut, and might, by the dormant steam-power, have been converted to use for the siege? Let us prepare ourselves to do better next time.

* To be continued.

MIDDLESEX INDUSTRIAL SCHOOLS COMPETITION.

Your statement in the *Builder* of the 2nd instant, with reference to the plans sent to the committee of magistrates, is perfectly correct. Out of forty-one plans, the professional referees selected seven as being the best, or rather the least bad; and of those seven one received the lowest premium.

The plain truth is, that the competition greatly disappointed the magistrates, and unless I am much mistaken the referees were astounded at the worse than mediocrity displayed by the competitors. As you state, even those they selected were all open to objection in their professional view, while in a practical point of view they were deplorably defective.

The main results sought for in such a design are thorough ventilation and good light, facilities for supervision, and easy communication from all parts to central offices and workshops, preserving complete separation for sections of the inmates, according to the paper of instructions. I do not profess to have much skill in architectural elevations, but a large number of the plans presented very curious resemblances to old plans of prisons and workhouses, with new faces of the florid Cockney school, pastry-cooks' Gothic, and Elizabethan beershop style. There were a few which displayed some little confidence in the simplicity of a large mass of buildings; but the accompanying details were wanting in nearly all that was requisite.

Now, what is a committee to do? I feel confident that no committee ever deserved success more than ourselves. We offered liberal premiums, sought professional aid to assist our judgment, and the result is an utter failure. If we had confided the commission to any one architect, there would have been a yell from the profession against a flagrant and scandalous job. Eminent architects will not compete; but in the discharge of a public trust we felt we should best satisfy public or professional jealousy by an open competition.

I have come to the conclusion that the proverb, as to the intellectual condition of those persons who "build," as contrasted with those who "buy," is quite as much at the service of the profession as of the public.

P. Northall Laurie.

*** The present position of the affair is shown by the following determinations of the committee on the 21st and 28th of July.

"21*st July*, 1856.—The committee having heard the explanations of the three architects to whom the premiums have been awarded, in regard to the objections made to the respective plans, are not at present prepared to recommend any one of the three, and they therefore will entertain and consider any other plan that may be brought before them by any individual member of the committee."

"28*th July*, 1856.—Resolved, that this committee do now adjourn to Monday, 4th October next, and that any further plans which any member of the committee may wish to propose in pursuance of the resolution of the 21st inst. be sent to the Sessions House, Clerkenwell, on or before Monday, the 25th August next."

We are curious to learn on what grounds the committee justify their disregard of the recommendation of the professional referees. Are we to suppose that the committee are better judges than the architects to whom they referred the selection? They passed over designs selected by their own referees, and rewarded designs which they find they cannot recommend for adoption. The proceeding is certainly most irregular. As to the demerits of the designs submitted, or the justice of the referees' selection, we can say nothing of ourselves, no opportunity having been afforded us to see the drawings.

Manchester Mechanics' Institution.—The new building, erected and just completed for the Manchester Mechanics' Institution, is to be opened on the 19th proximo, with an exhibition including statuary, pictures, various fine art manufactures, and a collection of machinery in motion.

CHURCH-BUILDING NEWS.

Grantham.—The cemetery buildings are progressing. Mr. Wilson is the builder. The new road and bridges are also in a state of forwardness. The line of road has been altered for the second time at the curve. The last alteration, we understand, is made for the accommodation of the proposed road to the militia barracks or storehouses.

Braintree.—The contractor for the restoration works at Braintree Church, Mr. Parmenter, has commenced building the scaffolding preparatory to the repairs of the tower and spire, the portion of the proposed works which the committee have resolved shall be first executed.

Tunbridge.—The Local Burial Board, on considering the designs sent in for the chapel to be erected in the new cemetery, decided on adopting that furnished by Mr. Messenger, of Folkestone, architect.

Burwash.—The Burwash parish church, which has been restored, and adapted for the accommodation of the inhabitants, was reopened on 30th ult. for divine service. The chancel has been entirely rebuilt on the old foundation, and the details of the windows have been copied from the originals. In most cases the old stones have been re-worked. The roof is panelled, and the original pitch has been adhered to. The chancel-arch has been repaired. The aisles have been rebuilt and widened,—the windows and doors copied from the originals. The nave and aisle roofs, which form one continuous line, have also been restored. The tower, which forms the most ancient portion of the church, being of very early Norman, if not Saxon, architecture, has also been restored. Before the alterations there were doors and a modern staircase leading to the belfry, but the tower arch has now been thrown into the church, and a ringing-floor above provided, and an external turret-staircase on the south side, entered from the churchyard. There is a porch at the western end of the tower of the same date as that of the north arcade, viz. about 1360, and which has been entirely rebuilt, the same details as that of the original being followed. The restoration has been undertaken by the Rev. J. Gould, the rector, assisted by a rate and subscriptions. The east window, executed by Mr. Ward, of London, from the cartoon of Mr. Clayton, is the result of a special contribution for that purpose. The churchwardens, Messrs. Telly and Hyland, says the *Surrey Standard*, intend filling the two windows in the west end of the tower with stained glass. The works have been carried out from the designs and superintendence of Mr. William Slater, of London, architect, as successor to the late Mr. Carpenter, who had made a survey and plan of the church. The works were executed by Mr. Pannett, builder, Tunbridge. The whole expense of the restoration will be about 3,000*l.*

Winchester.—Lords Redesdale, Saye and Sele, and Tenterden, the Speaker of the House of Commons, Mr. Justice Erle, Sir William Heathcote, Bart. and various other M.P.s and other gentlemen have formed themselves into a committee for raising a subscription amongst Wykehamists for the purpose of erecting, near the chantry of William of Wykeham, in Winchester Cathedral, a memorial window and tablet in honour of those of their brother Wykehamists who died on the field, or from sickness, during the late war.

Warwick.—A new church has been opened in the parish of St. Nicholas, Warwick. The church, dedicated to All Saints, stands on a site presented by the Earl of Warwick. It is in the Decorated style, and consists of nave, south aisle, chancel, south chancel aisle, and north and south transepts. There is a vestry on the north side of the chancel. On the west side of south transept is the tower, containing the principal entrance to the interior, and intended to be hereafter surmounted by a spire. The interior, calculated to afford accommodation for 580 persons, is fitted with open benches, and the chancel with stalls. Two-thirds of the sittings are free. The walls are constructed of brick, with blue lias stone facing and moulded work. The tracery and other dressings, internal and external, are of Bath stone. The roofs are constructed of open framing of Memel timber,

stained and varnished, and are covered externally with tiles. The architect was Mr. James Murray, of Coventry. The contract for the whole was 3,100*l.*

West Littleton.—The church of West Littleton, which, says the *Bristol Mirror*, is the third in the same parish that has been restored and enlarged within the last three years and a half, was re-opened on 31st ult. The works connected with it have been carried on, as were those of Tormarton and Acton Turville, by Mr. Miller, of Seagry, under the direction of Mr. T. H. Wyatt, of London, architect. The only part remaining of the original edifice are the walls of the chancel: all the rest, including the bell-turret, it was found necessary to reconstruct. A new and larger nave and porch and vestry-room have been built. The whole of the interior has been re-arranged and made capable of containing more than double the former number of worshippers. A new font, of Tormarton-stone, has been erected. The stained glass window at the east end is the work of Mr. Miller.

Wrexham.—The laying of the foundation-stone of St. Mark's Church, Wrexham, took place on Monday before last. The church, which is partly built, having been begun two months ago, is situate in the Hope-road, not far distant from the new Roman Catholic chapel, now in course of erection. The ground was given by Sir W. W. Wynn (who also subscribed towards the erection), and measures 100 yards by 50 yards. There will be 800 sittings, and a tower and spire. The church will be in the Early Decorated style (from the designs of Mr. Kyrke Penson, of Swansea), and will consist of a nave, two aisles, two transepts, a chancel, and vestry, with a bell-turret adjoining the vestry. The extreme length will be 132 feet, and the width of the nave and aisles 57 feet. The roof of the nave will be 68 feet, that of the transepts 56 feet high: the roof will be an open timber one. The sittings will consist of open stalls, and at present it is not proposed to have galleries. At the south-west corner of the building it is intended to erect the tower and spire, 168 feet high.

Nantwich.—For some time past the ancient parish church of Nantwich has been undergoing the process of restoration by Mr. Scott. The projected, and now only partially completed, restoration is on a large scale, 8,000*l.* being the architect's total estimate for what was required to be done. Towards this sum about 4,000*l.* have been raised, and applied to the thorough renovation of the nave of the church. The transepts will next occupy Mr. Scott's attention, and subsequently the chancel and other subordinate points.

Capenhurst.—The first stone of Capenhurst Church was laid on Wednesday before last, by the Rev. R. Richardson, of Capenhurst Hall. The building is to be erected at his own expense, for the accommodation of his tenantry and those of the adjoining township of Ledsham. He is also to endow the church. The church is in the Decorated style of architecture, designed by Mr. Harrison, of Chester, architect, and it is to accommodate 200 persons. Mr. J. D. Williams, of Chester, is the builder.

Manchester.—A new window, from designs by Mr. Speakman, architect, has just been inserted in the tower of St. Paul's, Higher Broughton. It has three lights, with tracery of the Early Perpendicular period. It has been filled with stained glass by Messrs. Edmundson and Son, of this city, who have been commissioned to supply a similar window for the north transept of the same church.

Maryport. — Crosscanonby Cemetery, near Maryport, was consecrated on Wednesday before last, by the Bishop of Carlisle. The ground is situated about 1¾ mile from Maryport, on the Netherhall road, in view of the sea. The soil is gravelly. It is enclosed by a red stone wall, which, on the west side of the ground, will be surmounted with a palisade. The cemetery is still in a rough state. The entrance is by an archway, on either side of which a curator's lodge, and a board-room and office, are in course of erection. On the opposite side of the ground are two chapels, one for the Church of England, and the other for Nonconformists. They are both of red stone, and in the Norman style. Each will accommodate about 100 persons. Both chapels have porched entrances, supported by three arches. The interiors are fitted up with stained wood, and are lighted by small windows of cathedral glass. At one end is an apse, or rounded projection, which in the Church of England chapel answers for the purposes of a chancel, and in the Nonconformist chapel contains the reading-desk. Each chapel is also provided with bell-turrets, in which it is intended to hang bells. They are both flagged, with the exception of the apses, which are paved with Minton's tesselated pavement. The whole has been designed by Mr. Charles Eaglesfield, of Maryport, architect, who is also about to lay out the ground. The contractors for the work were Messrs. Fraser and Brotherton, of Workington.

AN ATTEMPT TO ACCOUNT FOR THE MOON'S ROTATION.

Observing that you have recently extended your already world-wide influence, and have gone so far as to treat of the architecture of the moon, perhaps you will be induced to find space for the lucubrations of a brother architect, the mundane character of whose thoughts have been disturbed by the recent controversy on the motions of the noctural luminary.

I am not deeply read in the objections of Mr. Jelinger Symons, yet I cannot but think that the defenders of the received theory have been somewhat too positive, and, in some instances, a little superficial in their replies.

Nothing can be more obvious than that the moon's motion involves, *by implication* (if I may use the expression), a rotation upon her axis as well as a motion in an orbit; that is to say, that had she received, when launched into space, these two impulses, precisely agreeing in their periods, the result would be just what we now observe. It is equally obvious, that had she then received only a single impulse (that in her orbit), and no other cause or force interfered with the motion thus communicated, her motion would *not* have been what it now is. This the simplest experiment or the mere consideration of the laws of motion would suffice to prove.

It does not, however, follow that because a motion may be shown to be resolveable into two or more others, it is therefore actually *the result* of such motions. It may be that it is also resolveable into some quite different motions; and we should then have to choose to which we should actually attribute the result. Any ball on the earth's surface (or at least on the equator) has every twenty-four hours a motion precisely like that of the moon, and may, on the same principle, be said to rotate on its axis; but put such a ball into a hollow sphere (as, for instance, an orange into a glass globe) and the same argument will prove it not only to rotate upon its own axis, but, as it is now become a portion of the larger sphere, it will, on the same principle, rotate upon *its* axis, or on those of any number of spheres in which you may imagine it to be enclosed. In the same manner the moon may be proved to rotate upon an *infinite number of axes*,—indeed, upon any line at right angles with the plane of her orbit, provided only that that line be supposed to accompany her in her motion round the earth: and, though her own axis is the most likely one for her to choose, it is clearly somewhat arbitrary to assert, *as self-evident from the nature of her motion*, that she actually does rotate upon it.

The question, however, of most interest, is, what is the actual cause or origin of her peculiar motion? As in the rotation of the primary planets we are able to perceive an object of the very highest importance, it is natural to conclude that it was a part of the original impulse communicated to them by their Creator; but we find no exact proportion between the periods of their rotation and of their orbit, much less a precise coincidence between them. This coincidence, however, so utterly without analogy in the motions of the primary planets, seems to be the constant rule among the secondary planets or satellites, which all appear to move round their primaries, turning to them from age to age one and the same face; or, in other words, to have just the same motion round them as a ball whirled round at the end of a string.

Surely, then, this exactness of coincidence between their rotation (if it be really such) and their motion of revolution, so unlike anything else observed among celestial bodies, and, as far as we are capable of judging, unconnected with any purpose founded on utility, must be the result of some mechanical necessity common to all the satellites. My object in troubling you is, though not without some hesitation, to suggest such a cause.

Imagine the moon when first launched into space to have had but one motion—that in her orbit. She would then *apparently* have had a rotatory motion, as she would not, as now, keep one face steadily towards the earth, but would in turn present every part of her surface. Imagine her, again, to have been, as our own earth appears once to have been, and as the appearance of the moon's surface seems still more strongly to suggest, either wholly or to a considerable depth, in a *state of fusion*. The gravitation of the earth would produce on this liquid mass a tidal wave. The diameter directed towards the earth would be elongated, and as she moved in her orbit the elongated diameter would be constantly changing, producing on either side a fiery wave always following the earth, as the watery wave on our globe ever follows the moon. This wave, from the sluggishness of the matter composing it, would linger behind as our tidal wave now lingers behind the moon; and it strikes me that the attraction of the earth, ever striving to draw forward the sluggish wave to its proper place, would tend in the course of time to generate a quasi-rotatory motion in the moon herself; at first very minute, but increasing till it superseded the necessity for motion in the tidal wave, and caused the elongated diameter to be stationary, and constantly pointing towards the earth; in which position it would continue, as we now find it to exist, when at length the molten surface became solid.

Let it not be supposed that I am claiming any very enormous result for the cause I have imagined. The rotatory motion of the moon (if it be properly so called) is but a slow one after all; for while the earth at its equator moves, in its diurnal circuit, at the rate of 1,000 miles an hour, the moon's equator does not go faster than a respectable stage-coach.

If this explanation be correct, the moon's motion may or may not be said to involve a proper rotation, but, to say the least, it is a rotation of a very different kind and a very different origin from that of the primary planets. S.

DEPARTMENT OF SCIENCE AND ART.

The third report of the United Department has been published. Under the head of Geological Surveys, it shows that in Great Britain during the past year, the total field-work extends over nearly 1,700 square miles. "One sheet and fifteen quarter sheets of the trigonometrical survey, geologically coloured, have been published since the last report. These embrace an area of about 2,400 square miles, and comprise parts of the counties of Worcester, Salop, Chester, Stafford, Leicester, Nottingham, and Derby."

In the training school seventy-nine masters, in training, have attended during the last year. At the sale of the Bernal collection, 730 lots were purchased for Marlborough House. The average price amounted to 11*l.* 7s. per lot, while the average price of the entire number of lots (4,294), was 14*l.* 11s. Reference is made to the establishment of what have been called trade schools. "The object of these schools is to impart to the sons of tradesmen, artizans, workmen, and others a knowledge of those principles of science and art on which *all* trades and manufactures are founded, and to give a thorough insight into the elements of those things with which they will constantly have to deal in after-life. They do not, however, propose to have particular trades taught, or to interfere between the master and the apprentice."

The first school of this kind was organised at Wandsworth, and we find under the head "Building Trades," the following course of instruction set down:—

"1. *Builder's Drawing.*—Or, the drawing to a scale, plans, elevations, and sections of buildings.

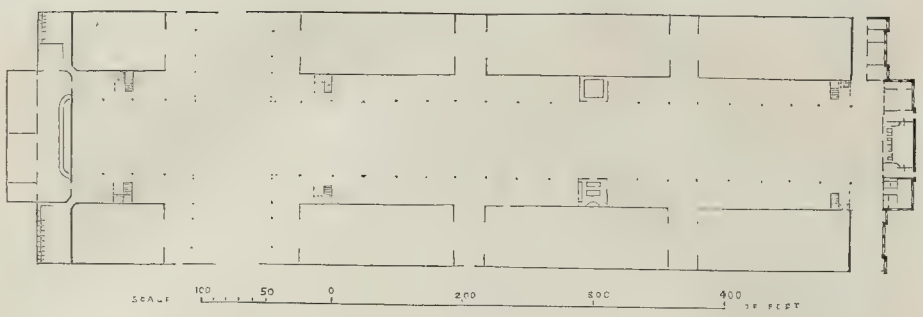
2. *Builder's Arithmetic.*—Or, the principles of making estimates for the cost of constructions and contracts.

3. *Builder's Geometry.*—Or, the measurement of the sites, the levels, the workmanship, and the materials of buildings.

4. *Builder's Mechanics.* — Or, the principles of the stability of structures, the selection, strength, and economy of materials.

5. *Builder's Natural Philosophy.* — Or, the principles of ventilation, sewerage, and heat and light, as applied to buildings."

A list of subjects for design is given, including paperhangings, pottery, and wall decoration, for which both money and medals will be awarded.



Plan of the Manchester Exhibition Building.

THE MANCHESTER EXHIBITION BUILDING.

The works for the building at Trafford, for the exhibition of "Art-Treasures," are now being proceeded with in earnest. The first pillar has, we believe, been raised, and we now lay before our readers a plan of the building and a view, showing the appearance the interior will take. The plan of the building, it may be seen, will be rectangular, 656 feet long and 200 feet broad, exclusive of a 24 feet projection at both east and west ends, which will give a total length of 704 feet. It will be divided longitudinally into a central hall, 104 feet wide, and two side halls or galleries, each 48 feet wide. The offices, refreshment-rooms, and other conveniences, will be arranged at the end, as shown upon the plan.

The second-class refreshment-rooms and offices are not shown upon the plan, as their disposition depends upon the arrangements to be made in connection with the railway accommodation.

The front will be constructed of white fire bricks, and decorated with red bricks. The railway corridor will meet the façade, and the design of this corridor will be in harmony with the front. There will be therefore a total frontage of about 600 feet. The sides of the building, which will be made of corrugated iron, will be supported by uprights of cast-iron, 8 feet apart, the corrugations running horizontally: the principals supporting the roof of the side galleries will be 12 feet apart, covered with corrugated sheets, excepting a portion of the centre, which will be of glass. The centre hall, 104 feet wide, will be divided by columns 24 feet from the sides, bearing 56 feet in the centre, which will be covered by a semicircular roof, also covered with corrugated sheets, and lighted in the centre. The whole of the roofs and walls will be lined with boarding, which will be covered with canvass and paper designed for the purpose. Galleries will extend round the west end of the building and transept, and there will be a smaller one at the east end of the building. Mr. E. Salomons is the architect; Messrs. C. D. Young and Co. the engineers and contractors.

As regards the kernel of which this is to be the shell, the prospects are said to be very satisfactory. To this, however, we shall have other opportunities of referring. Mr. John Deane is the general commissioner, and Mr. Minchin is the secretary.

The catalogue, which will be *raisonné*, is to be edited by Mr. Peter Cunningham.

THE PENNETHORNE TESTIMONIAL.

We understand that many architects have expressed their regret that they had not the opportunity to append their names to Mr. Pennethorne's testimonial. The list is not yet closed, and any of the profession can communicate to either of the subscribers on the list, or doubtless the honorary secretaries of the Institute would receive and transmit the names of those who may wish to take part in this honourable testimonial to the worth and merits of this distinguished architect.

THE LITHOTEMER, OR STONE-CUTTING MACHINE.

The great annoyance and expense caused by the repeated strikes of stone-cutters have been a serious drawback to the rapid execution of contract works. This evil has been more particularly felt in the Ordnance and Admiralty works now in course of construction at Milford-Haven, and has induced Mr. Williams, one of the contractors for Dale Point Works, to apply himself to the construction of a machine for cutting stone which shall render contractors less dependent. After several trials and experiments, he has so far matured his ideas, we are told, as to produce a machine, simple in principle, and containing the requisite power for the object desired, and has taken out a provisional protection for his invention.

The following is an outline of the plan of operation:—The stone is first fixed on a horizontal table to have its bed dressed: this is effected by cutters placed on an iron cylinder, or drum, whose axis is horizontal, and which revolves over the stone. The cutters are fixed on the drum in several series of rows, with vacant spaces between each series, so that when one series of cutters has done its work, and the vacant space is over the stone, the table on which the latter is fixed is moved forward to present a fresh surface for the next series of cutters, and so on until the bed is dressed. When both beds are finished, the stone is removed to have its face and joints dressed in a similar manner by another drum, arranged with cutters like the above, but with its axis vertical.

This machine is capable of dressing 20 superficial feet of limestone per minute, or a much larger quantity of any softer stone in the same time.

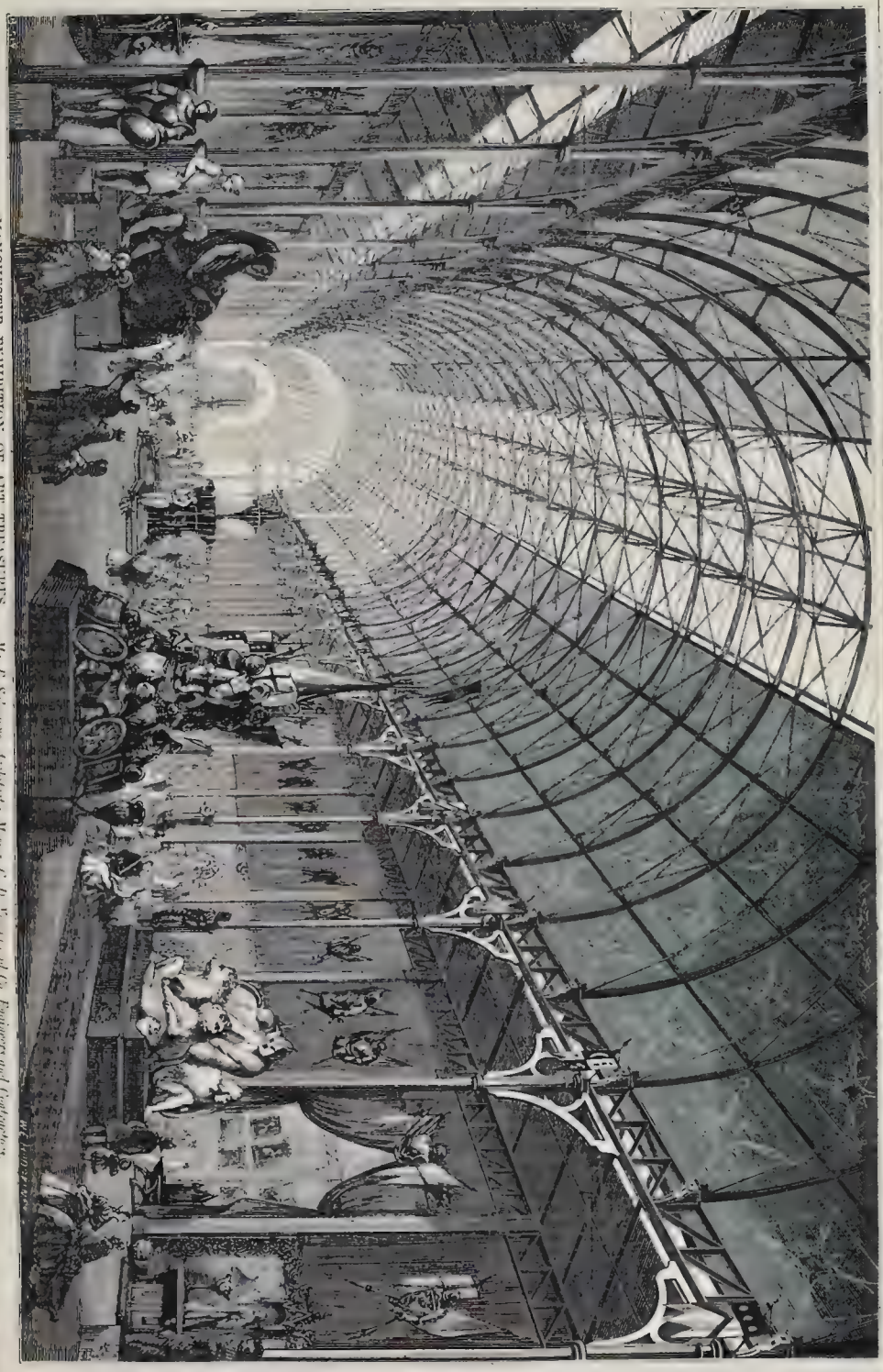
THE MODERN STRUCTURES IN THE BOTANICAL GARDEN, CARLSRUHE.

The botanical garden of Carlsruhe is one of the oldest, if not in Europe, at least in Germany. Caspar Bauhinus, the great botanist of the sixteenth century, speaks of the garden of Durlach—the former residence of the Grand Dukes of Baden, the treasures of which were subsequently transferred to Carlsruhe. When the present Regent assumed the reins of the country, he resolved to supplant all repairs by thorough new buildings, which, besides their practical adaptation, should be architectural works of art. Baudirector Hübsch, a gentleman known by theoretical and practical works, was entrusted with the erection of these structures. On the borders of the gardens of the castle stands the new greenhouse (*Orangerie-Haus*). As the orange-trees of the establishment are numerous and high grown, a large space was required. The building is 250 feet long, 50 feet broad, and of an adequate height. The side which turns towards Stephanie-street is ornamented by the principal elevation, above which rises a high cupola of glass, under which is a hall for festivals (*Festsaal*). The other part of the greenhouse is connected under a right angle with the whole remainder of the buildings, and ends at the palace, so that the passage from the palace to the end of the houses is uninterrupted, in a length of 1,400 feet. Almost in the middle of that line stands a high pavilion, through which passes the road from the botanical garden to the pleasure-grounds (*Erglische Anlagen!*) of the gardens of the palace, above which is a saloon affording a fine view over the town and gardens. A residence for the director, a palm-house, and a caldarium for exotic water-plants lie also in this line. The other portion of the building forms an arcuated gallery. In front of this gallery is a winter-garden, which forms one of the pleasantest parts of the whole. We find here trees and shrubs, which require protection during winter, but now stand quite free as in their native land. The length of this winter-garden is 400 feet by 40 feet in breadth. The great advantage of this arrangement of M. Hübsch is, that he has known how to manage things so that not even a vestige of the beams and spars of the winter protection is to be seen in summer, which was accomplished by the winter-garden having in its rear the long gallery, in the walls of which the contrivances for making the walls and roof of the winter-garden could be immitted without leaving any vestige behind when not required. The caryatides of the palm-house are made of the fine Durlach stone.

STATUE OF GENERAL SIR CHARLES NAPIER.

The hoarding which has been put up at the south-west corner of Trafalgar-square, marks the allotted site for a statue in bronze of the late General Sir Charles Napier, the cost of which has been raised by private subscription. The statue will stand nearly in a line with the vacant pedestal for an equestrian statue, and will put both sides of the square into the position of wanting completion. The statue, executed by Mr. G. C. Adams, is 12 feet 6 inches high, and has been cast in bronze at Messrs. Thompson's foundry, Pimlico. The pedestal will be 16 feet 6 inches high. The figure stands well, and the likeness is strongly marked. Simplicity and breadth characterise the treatment, and these are admirable qualities. We must, nevertheless, be permitted to say, rather with reference to works to follow than to this, that carried to extremes, especially in bronze, these qualities result in baldness and insipidity.

The Iron Trade.—An "Ironmaster," who gives a weekly account of the state of this trade in the newspapers, suggests that a reduction of 20s. might be desirable. Others are of opinion that in September there must be a considerable reduction, unless the present inactive state of the trade be very much changed. The intense heat has pretty nearly fulfilled the intent of our suggestion, that puddling should be regarded as an impracticability in hot weather. No increase of American orders as yet.



MANCHESTER EXHIBITION OF ART TREASURES.—*Mr. E. Salomons, Architect; Messrs. C. D. Young and Co., Engineers and Contractors.*

DECAY AND PRESERVATION OF STONEWORK.

A mode of efficiently hardening soft stone, and of staying from decay the various stones most commonly used amongst us for building purposes, is a desideratum of the greatest importance. The majority of our readers, doubtless, observed that, just before the close of the session, Lord Lyndhurst presented a petition from Mr. J. B. Daines, setting forth that he had patented an improved and effectual mode of preserving stone, plaster, cement, and other buildings from decay, indurating and protecting them from atmospherical influences, and neutralizing the tendency to alkaline efflorescence, the efficiency of which the authorities had declared would be decided upon in two years. He had himself seen a report from Sir C. Barry, which stated that the result of the invention, which had been tested upon 1,400 square yards of the house, had been entirely satisfactory. He desired that a committee should be appointed to inquire into the matter, but the Government thought it was too late in the session to do so.

In a letter to the *Journal* of the Society of Arts, Mr. Daines says that his attention having been awakened by an article in the *Builder* on the decay of stonework, he was led to examine the state of various stone buildings in the metropolis, especially with a view of first discovering the cause of the premature decay. He continues:—

"My experience, after a variety of tests and trials, leads me to the conclusion that alkaline efflorescence is the primary cause of the decay in stonework: this efflorescence is the result of chemical agency, not the least of which will be found in the cement or mortar employed for 'bedding' or jointing the work, as in all cases it may be observed that crystals are found commencing at the angles or joints of the work before the walls are thoroughly dry; and, in the first instance, the disintegration which follows proceeds from the alkaline matter contained in all cements and mortars now in general use. In many cases it is accelerated by the employment of sea or salt sand, which is too often used, as the damp developed on the internal walls of many of our buildings plainly testifies.

If pieces of Bath or Caen stone, an inch thick, be set with a layer of Roman cement between, and be exposed to the action of the air, it will be found, in the course of three or four years, that the cement will have so acted upon the stone as to render it capable of being crushed by pressure between the thumb and finger, in consequence of its decomposition by the chemical action of the cement. A proof of the destructive effect of salt upon stonework may be observed in any seaport town. The stone buildings which are exposed to the sea-breezes show plainly this effect. In London and large manufacturing towns the various chemical matters combined with the air form other prolific sources of decay in stonework. In certain localities, where the atmosphere is comparatively free from these influences, vegetation may be observed as accelerating the progress of decay, as instanced by the stonework of Hampton-court Palace, and the monumental work in the various cemeteries at a distance from the metropolis and large towns. Such are some of the various causes of decay in stonework.

I have endeavoured to find a remedy, and I believe that I have succeeded. I employ a solution of one part, by weight, of sublimed sulphur, in eight parts of linseed oil, heated in a sand bath to a temperature of 278 degrees Fahrenheit, by which process the vegetable mucus of the oil is precipitated, and the watery particles evaporated, and their place supplied by the sulphur, which is readily taken up by the oil at the above temperature. The solution is applied with a common painter's brush to the surface of the stone, until it will absorb no more. Sulphur is stated by ancient and modern chemists to be insoluble in water, and to suffer no change by exposure to air; and, further, it is known to be a decided foe to vegetation, and its use in bleaching is well known. For these reasons I have selected it as the basis of the indurating medium. The stone so treated becomes extremely hard, almost equal to granite, and, so far as I have been able to test its preserving qualities, a period of four years shows, not only that no decay has taken place, but time seems actually to increase its hardiness. It is simple and inexpensive in its application."

The process appears to be similar, if not the same, as that patented by Barrett, and which has been mentioned in our pages on various occasions.

PROVINCIAL NEWS.

Lynn.—The following were the tenders for construction of the quay along the Marine Parade:—Mr. W. D. Harding, Lynn, seconds timber, 3,200*l.*; best middling ditto, 3,350*l.* Mr. C. Clare, Watlington, 2,991*l.* Messrs. W. Nurse and D. Hart, Lynn, seconds timber, 2,901*l.*; best middling, ditto, 3,115*l.* 11s. Mr. James Crittle, Lynn, 3,100*l.* Mr. W. Sissons, Lynn, 3,126*l.* The tender of Messrs. Nurse and Hart for seconds timber was accepted,—the works to be completed by 25th March next, under a penalty of 20*l.* per week.

Norwich.—Thirty sets of plans have been received for the new workhouse. They have been referred to a committee for arrangement and exhibition to the local guardians and others.

Great Yarmouth.—The General Board of Health have approved the plans for the new Marine Esplanade, after suggesting certain minor modifications. Mr. Ranger, one of the inspectors to the Board, in recommending that the local authorities should be allowed to borrow 1,700*l.* on the security of the rates, for the purpose of carrying out the works, says:—"The esplanade to be made will be about 2,300 feet in length: the carriage-drive will be 26 feet. There will be two footpaths at the sides thereof: that on the eastern or sea side will be 11 feet in width; the other, near the houses, 7 feet and upwards. The drive and walks are to be supported on the seaward side by a retaining wall of concrete, 6 feet in height above the level of high-water mark, with a breast wall 2 feet in height, for a distance of about 500 feet, to stop the drifting of the sand into the houses. The retaining wall is to be coped with Yorkshire stone."

Abingdon.—The tender of Mr. J. Thomas for the erection of the new station-house for the Berks Constabulary at Abingdon, for the sum of 1,312*l.* 9s. 5d. (out of which 150*l.* is to be deducted for old materials) has been accepted.

Gloucester.—Public baths are about to be provided for Gloucester. Plans have been prepared, and it is intended to construct the building on the most approved principles. There will be first and second-class baths for ladies and gentlemen, and a swimming-bath about 70 feet long and 50 feet wide, with a fountain in the centre. The building has been designed by Messrs. Jacques, of Gloucester. The erection, however, depends on the contingency of a subscription list being filled up.

Shenstone.—The new schools erected in the village of Shenstone have been formally opened. The architect was Mr. W. Baker, and the builder, Mr. Thomas Hassall, of Shenstone.

Boston.—A new school is in course of erection near the church at Algarkirke, for the use of the Algarkirke and Fosdyke parishes, the Rev. B. Beridge being at the whole cost. The foundation-stone was laid by Mrs. Beridge. The building is progressing under the superintendence of Mr. Webster, of Wyberton; the style to correspond with the church. The building will be large, the school being in the centre, with a residence at each end for the master and mistress, with proper conveniences attached. It is to be constructed of brick, fronted with worked and chopped stone, from the Ancaster pits.

West Hartlepool.—The foundation-stone of a new bank at West Hartlepool, was laid in week before last. The building will be of brick, with stone dressings, and will be fire-proof. The plans were drawn by Messrs. Pritchard and Son, of Darlington.

South Shields.—The scheme has been revived in the South Shields Council to build a new Town-hall, in the Market-place, at an outlay of some 5,000*l.* or 6,000*l.* The funds, it is stated, will be derived from the dues and tolls collected in the market. This however, is opposed; it being argued that the surplus of the tolls collected in the market, after paying principal and interest, should be applied to improvements in that square.

Airdrie.—The foundation-stones of the Court-houses, the Market-house, and the Railway Station, of the town of Airdrie, were laid with masonic ceremonial on Thursday in week before last.

METROPOLITAN BUILDING ACT.

Decision of Magistrate that Section 13 *and the* 1*st Rule of the* 1*st Schedule were modified in the case by the Board of Works.*

Pickford, a builder, erected a one-story shop on the fore court of a dwelling-house in the Bermondsey New-road, up to the public way, to which the district surveyor objected that it was not inclosed in front with wall of brick, stone, or other hard and incombustible substances.

At the hearing of the case on Friday, 1st of August, before Mr. Secker, the magistrate sitting at the Southwark Police Court, it was shown by the district surveyor that with the exception of the brick footings and 18 inches in height of brickwork on the bres-summer, no portion of front was inclosed in conformity with the 1st rule of the 1st schedule, and that the quantity of brickwork was far less than half the front, as required by section 13, which restricts any openings to half the area of the wall. He put in a tracing signed by the chairman of the Metropolitan Board of Works and the superintending architect, and a letter from the latter, informing him that the Board had sanctioned the projection of the shop under the 143rd section of the Local Management Act, which sanction the builder seemed erroneously to consider as authorizing the construction intended to be shown by the tracing. To this the builder replied that his communication from the Board of Works differed from, and went much further than that to the district surveyor,—and he read his application to the Board, mainly requesting, under the 56th section of the Building Act, their sanction to the construction of the shop-front in woodwork, as shown on the tracing put in by the district surveyor, and only in the second place asking for leave to make the projection, it being really no projection at all. He then read the reply he had received from the Board, which gave a complete sanction to all his application, without reference to any particular Act or section.

The district surveyor argued that the Board could never have intended to sanction the drawing *in toto*, as it was insufficient to explain the construction, and that a modification of express rules of the Act under section 56, would be made in a more formal manner, reference being specially made to the enabling provision of that section.

The magistrate ruled that the Act itself requires the front to be of incombustible materials, according to the 1st rule of the 1st schedule, and that section 13 restricts the openings to the extent of one-half the area of the front, which was greatly exceeded in this instance. As, however, the tracing was signed by the chairman and superintending architect, it must be looked upon as a document of authority; and from it, as well as from the application of the builder, and reply thereto, it was a fair inference of the builder that the Board allowed all the openings which were shown by the drawing. He therefore adjudged that the builder was entitled to make the doors, sashes, and frames, as shown in the drawing, though exceeding the area allowed by the special rules of the Act; but he ordered that the builder should comply, in other respects, with the requisition of the district surveyor, by building the remainder of the front of the substances mentioned in the 1st rule of the 1st schedule, within a month.

THE BRITISH ASSOCIATION.

The general meeting at Cheltenham opened on Wednesday in last week, at the Proprietary College, with a full attendance, when the Duke of Argyll resigned the presidentship to Dr. Daubeny, and the meeting was addressed by these and various other gentlemen. The meetings in the Sections on the successive days comprised a good many valuable papers, but few requiring any special notice from us. Dr. Augustus Voelcker read one "On the Corrosive Action of Smoke on Building Stones." Mr. Duncan M'Pherson gave an account of some researches in the Crimean Bosphorus, and on the site of the ancient Greek city of Pantecapæum, at Kerch, regarding which we lately gave some notes in the *Builder*. Colonel Sir H. Rawlinson lectured on the Friday evening in the College, "On the recent Discoveries in Assyria and Babylonia, with the Results of Cuneiform Research to the present time." Mr. Tite, at Bath, we may here remark, early in January of this year, in the course of reading a paper in the Guildhall of that city on these discoveries, reproduced before his auditors, in moist clay, a portion of the inscription at Ecbatana, containing the names and titles of Xerxes. Indeed, the process is so simple that any one may repeat it. The arrow-headed character is simply made up of the form of an ancient arrow-head somewhat elongated—generally moderately so, but in the Babylonian inscriptions more extravagant in that particular. If any one desirous of repeating the

experiment will take a smooth surface of moist clay and a piece of wood about three-quarters of an inch square and 3 inches long, cut square at the ends, he will find, on pressing the angular point into the clay, he can reproduce any of the characters with the most perfect facility; and if the surface of the clay be of sufficient size, he can reconstitute, as Mr. Tite did, the Hamadan inscription. It is probable that in the cylinders and tablets this impress was made by a metallic tool or style, and of course on the sculptures and rock inscriptions the original character was only imitated; but Colonel Rawlinson has shown that the impressions on the bricks found at "Ur of Chaldees" were marked with the name of a king which he thinks identical with the Chedorlaomer of Genesis, and at least 2,000 years before Christ. On the Saturday there was an excursion to Cirencester, including a visit to the Royal Agricultural College there, and the Roman remains discovered at Cirencester. On Monday business was resumed, with a good attendance, still, in the sectional departments. Amongst the papers read was one by Mr. P. J. Worsley, "On a New Process for Making and Melting Steel;" another by Mr. W. Bessemer, "On the Manufacture of Iron and Steel without Fuel;" and another by Dr. Greene, "On a Method of uniting Iron with Iron, and other Metals, without welding," invented by M. Sisco, of Paris. Mr. Baker, the founder of the Hardwicke Reformatory, also read a paper "On Economic Science and Statistics;" and in the evening Mr. Grove discoursed "On the Correlation of Physical Forces."

METROPOLITAN BOARD OF WORKS.

The Board met in the Council Chamber, Guildhall, on the 12th inst. to consider a report from the engineer of the Board on the extension of the main outfall sewer on the southern side of the River Thames to a point in Long Reach, below Erith. The engineer said in his report;—

"I recommend the construction of a sewer, 10 feet 6 inches in diameter, 7½ miles in length, and with a fall of 2 feet per mile, commencing in the Plumstead-road, at the east end of Woolwich Arsenal, where it forms a junction with the main outfall sewer, which was adopted by the Board on the 26th May last. The extension line continues thence along the north side of the North Kent Railway, through Erith, under the river Darent, to the Thames at Little Powder Creek, which is about the centre of Long Reach, one mile below Purfleet, two miles above Greenhithe, and nineteen miles below London-bridge."

"I recommend that for eleven months in the year the discharge of the sewage into the river should take place at high water, and during the first half of the ebb-tide, and that for the remaining twenty or thirty days of heavy rain, the discharge of the then diluted sewage should also take place one or two hours before high water, by which means a reduction of the size of the covered reservoir from 15 acres to 4 acres might be effected, and an increase of its depth obtained, so that it would contain about 2¼ million cubic feet."

"The foregoing instructions, however, direct the preparation of a plan for the discharge of the sewage at, and after high water only. I therefore beg to report, so sudden and unequal are the quantities of rain that fall, that to avoid the discharge of the sewage before high water on the twenty or thirty wet days per annum, would necessitate the construction of a reservoir of double the size now proposed at an increased estimated cost of about 40,000*l.*"

"My estimate of the proposed extension to Long Reach is	£297,620
Less the cost of the sewer and reservoir across Plumstead Marshes	114,580
	£183,040
This added to the estimate of the southern drainage	831,696
Gives a total of	£1,014,736

The chairman said he should like to make a suggestion to the Board with reference to the subject before them. He said the engineer was of opinion that by lowering the sewer on the south side of the Thames, that by increasing the sewage it would take into the Thames, and in forming junctions as the case might be, it would enable him to proceed, as the Board might direct, farther down the river with the sewage of the whole metropolis *in one line*. The question arose whether it was not worth the consideration of that Board to provide the Board with some information as to the cost of carrying the sewage down to the northern district, and getting rid of a pumping station at Deptford Creek, crossing it by one line underneath the Thames; whether that information should not be before the Board while they were discussing the question of where the point of discharge should be. There was one other point which the engineer had repeatedly made, namely, that he felt a difficulty in taking in the western area on the northern side; the engineer thought that the upper towns would go upon the principle of deodorising, and that there would be an advantage in cutting off the western district.

After more than four hours' talk, the greater part of it worse than useless, the whole question of the drainage of the metropolis was referred back to the engineer.

The engineer said, in reply to questions, that he had already advised what he believed to be the best plan, but he could place before them other proposals, and the Board could then decide between them.

Mr. Nicholay presented a memorial from Mr. J. R. M'Clean, setting forth a scheme for conveying the sewage of the metropolis to a point on the lee shore of Essex, between the estuaries of the Crouch and Blackwater Rivers, and for the utilization of the same as manure, and effectually to cause the purification of the Thames.

The consideration of it was deferred.

MEMORIAL OF THE GREAT EXHIBITION OF 1851.

I addressed a communication to you on the above subject some time since, complaining, that although funds had been collected for its purpose years ago, nothing had yet been done; and in consequence, I am gratified at length to learn, through the columns of the *Daily News*, that "the money subscribed for a memorial of the Great Exhibition *is* to be devoted to the purpose for which it was subscribed;" and I further notice, that two gentlemen known to the public, and who are named, have consented to act as honorary secretaries. This certainly looks like business, and holds out somewhat solid hopes that the "consummation devoutly to be wished" will now shortly be carried out.

Nothing, I am somewhat disappointed to perceive, is definitely stated as to the *locale* of the memorial, although this is an all-important feature in the matter. The spot, in Hyde-park, on which the Great Exhibition itself stood, is the only appropriate one to embody the sentiment given birth to in the movement, as well as satisfy the requirements of the subscribers. Pray advocate this in your own language, at an early opportunity, otherwise I have some misgivings that the monster "red tape" may even now take some pains to raise objection to its being placed there. Member of the Society of Arts.

*** Beyond the resuscitation of the committee, and the enlistment of two honorary secretaries, anxious that the money raised should be applied to the advantage of *art*, nothing has yet been done. The first steps taken will doubtless be to obtain if possible permission to erect the memorial on the site of the Exhibition building.

GILDING ON GLASS.

In reply to your correspondent, glass may be prepared to receive any coating, metallic or otherwise, by etching out the parts intended to be coated with hydrofluoric acid. The commercial solution of the acid may be used for the purpose, or its vapour may be evolved from a mixture of fluor-spar and concentrated sulphuric acid by the aid of heat.

In either case, those portions of the vitreous surface *not* intended to be corroded must be protected from the action of the acid by a film of some resinous substance—such as caoutchouc, from its solution in benzole, or bees-wax to which has been added a little ordinary colophony or resin.

The slightly roughened surface produced by hydrofluoric acid on glass affords a good hold for metallic depositions. Wentworth L. Scott.

SANDERSON'S PROCESS FOR REFINING IRON.

The objects of this process are—1. To reduce the loss of metal, and to use coal as fuel instead of coke.—2. To effect a uniform decarbonisation of the pig-iron without the aid of blast.—3. To use a chemical re-agent capable of giving out oxygen during its decomposition, which taking up and uniting with the carbon evolved from the metal produces carbonic oxide gas, which acting upon the earthy compounds contained in the pig-iron precipitates the metal contained in them.—4. To effect a greater facility, and also to produce a greater economy in the cost of manufacturing refined metal, by decarbonising it, and at the same time clearing away the unreduced or earthy matter with which pig-iron necessarily becomes mixed during its descent through the blast-furnace; and, further, to effect an economy (by using a purer metal so obtained) in the manufacture of malleable iron, causing less waste in puddling, and also in the subsequent re-heating required for producing bar, rod, or sheet iron. In reference to this process the *Mining Journal* says,—"The inventor appears to have succeeded in effectually accomplishing that which Karsten and others have pronounced as impracticable. He has left unnoticed in his specification all the various plans which have been patented for the use of chemical re-agents in the puddling furnace; but when the iron is in a fluid state he uses certain re-agents, which are of such a nature as to fulfil the object specified: he purifies the metal, and frees it from its deleterious matter, and at this stage he runs it out into a mould, thus taking advantage of its fluidity to separate the scoria from the metal. Instead of charging common pig-iron into the puddling furnace, and producing from it malleable iron, which is largely amalgamated with those deleterious substances which such pig-iron contains, Mr. Sanderson uses this refined metal as a raw material, which, being perfectly pure, produces a tougher, stronger, and cleaner iron than that usually made, and that also with greater economy, since the waste of metal during the processes of manufacture is less when a pure metal is used instead of an impure one. We have obtained a small sample of this refined metal, and shall be glad to show it to any one, particularly those who are engaged in this great staple of our empire. We are informed that the cost of producing this metal does not exceed 6*s.* to 7*s.* per ton, including the royalty, and that the furnace used by the inventor will refine the crude iron as quickly as the blast furnace can produce it. No blast is used; no coke: the waste in refining is not one-fourth of that experienced upon the old plan."

Notices of Books.

The Lost Solar System of the Ancients Discovered. By John Wilson. In two volumes. Longman and Co. London. 1856.

The title of this book gives not the slightest idea of the true nature of its contents. Curiosities of architecture and engineering throughout the world in all ages, but especially in ancient times, and connected with religious observances, make up the most of its contents. These are strung together occasionally by means of a weak and loose thread of most fanciful speculation, in an algebraic form, according to which ancient pyramids, towers, teocallis, pagodas, temples, obelisks, &c. were built to represent the laws of gravitation, the distances between the earth and the moon and the sun and the earth, the earth's circumference, &c.: no amount of measurement appears to have come wrong to the industrious author: if the sum of all the measurements of a building do not amount to the precise distance between the earth and the moon, or to the exact circumference of the earth itself, they form ⅛th or ¼rds, or $\frac{1}{15}$th, $\frac{1}{17}$th, or any other fractional portion of the whole amount. Perhaps there may be some little vestige of truth in this wild speculation, as for instance, where the author endeavours to prove the Egyptian obelisk to represent in its tapering form the law of increasing force, according to which bodies fall to the earth in successive moments, but such a fabric as he has reared, on premises so fanciful and vague, surely never before appeared in print. And yet, the author is by no means original in his idea that the religions of ancient heathen nations were closely connected with astronomy. It is long since such ideas were first maintained; indeed, even ancient authors as well as modern, at a loss to explain the meaning of the mysteries practised amongst the Chaldeans, Egyptians, Greeks, &c. have adopted the astronomical theory,—if it may be so called; and the "sun" worshippers of the far east, as well as those of the far west,—those of America as well as those of Asia,—gave, perhaps, quite sufficient occasion in their outward observances for such a belief; but their higher initiations told another tale. The "sun" of these mysteries was no less an inward and a spiritual light than the "sun of righteousness" himself, whom, indeed, these secret rites, heathen though they were, distinctly *represented*. To suppose that the "heaven," and the "heavenly host," who were anciently worshipped, were no other than the outward stars and planets, sun and moon, was to ignore all those records of secret doctrine which have been handed down to us, and which clearly show that the "heaven" to which the eyes of the initiated worshippers, even amongst the heathen, were turned, was no more "outward" than the "heaven" of the Bible which is "within" the human organism,—as much so, indeed, as is the "sun" which is to "arise upon" that organism, to shine within it, and to make it a luminous and "glorious body," "full of light as when the bright shining of a candle giveth *us* light."

The author of the singular book now under notice, takes the Tower of Belus as the grand archetype of all other "high places" through-

out the earth, and he shows a strong analogy between that tower and many other structures devoted to religious observances, both in the "old" world and the "new." The tower and temple of Belus or Baal, according to Herodotus, who saw it while at Babylon, stood in the holy place dedicated to Jupiter Belus, on one of the banks of the Euphrates, where the city stood. The tower consisted of eight towers, one within and above another, with a winding staircase to the top, and a lodge and seats midway up,—for temporary rest or repose, as it would seem, by the way. On the topmost tower was a chapel, and in the chapel a golden table near to an elegant bed on which *by night* reposed a woman, chosen by the god Bel, or, in fact, as it may be truthfully explained, in whom, as in an oracle, "the god" appeared, in this his temple, "house," or chapel; for similar edifices, on the analogous Mexican teocallis, are known to have been called "the house of the god." Diodorus Siculus states that the temple at the summit of the tower of Baal or Belus, had an altar, but in all probability this altar may have been the bed described by Herodotus, if not the golden table. Diodorus also speaks of three statues, which he named Jupiter, Juno, and Rhea; but Herodotus saw no statues, although he speaks of the "chosen" woman, or priestess, who reposed on the bed or couch. Strabo describes the tower of Bel as a pyramid, one stadium in height, and one stadium in breadth at base. The pyramid or tower of Babel is also described as having been a tomb as well as a temple.

Now Diodorus certainly reports that the temple at Babylon served the Chaldeans as an observatory, and Pliny remarks that Belus was regarded as the inventor of astronomy; but let us see whether it be at all likely that the pursuit of astronomical science, or the worship of "the heavenly host," physically and literally speaking, was the chief purpose of the erection of such a structure. In the first place, we know from Scripture that the main purpose of the erection of the original tower of Babylon was an attempt thus to reach "heaven." Taking the word heaven in its literal and not in its scriptural sense, how was the repose of a woman on an elegant bed likely to promote either the observation of the stars, or the upward progress towards the firmament itself? The idea is too gross and absurd to be for a moment credited in the face of such an account of the tower at Babylon as Herodotus has given. That account, however, is in perfect accordance with an endeavour to reach that inward "heaven" of ecstatic repose and "divine absorption" which to this day constitutes the earnest desire of such eastern devotees as those of India and China. And that the doctrines of other ancient and wide-spread religionists partook of such aspirations after heavenly rest and perfection, and aimed at the realization of them by just such means as those betrayed in the paraphernalia of the little temple, chapel, or "house of the god" at Babylon, could be here easily and fully shown were this a fitting place for the proof. An instance or two, however, may be adduced. As respects the Druidical religion, which at one time prevailed over vast tracts of the earth's surface, Davies thus translates the account which Taliesin, a Druidical noviciate, gives of his probation: "I was first *modelled* in the form of a *pure man* in the hall of Ceridwin, who subjected me to penance. Though small *within my ark*, and modest in my deportment, *I was great. A sanctuary* carried me above the surface of the earth. Whilst I was enclosed within its ribs, *the sweet Awen rendered me complete.*" Davies thence infers that the Kist-vaen (such as Kit's Cotty-house in Kent) was very probably the *ark* here referred to: the kist-vaen, like other Druidical monuments, is found in parts of the world widely separated. There is said to be one on the banks of the Jordan which resembles Kit's Cotty.

In "Scenes and Impressions of Egypt," the author, while on a visit to the Temple of Dendera, and in allusion to affinities between the Hindoo and the Egyptian worship, says,—"While on the staircase, the priest and the sacred *ark* must have reminded him, and strongly, of the Brahmins *and the palanquin litter* of his native country,"—a remark which, as we shall now endeavour to show, all at once transports us from the ancient and obsolete worship of the Egyptians, Druids, and Chaldeans, to the extant,—living worship of the Chinese at this very day.

In the *Morning Herald*, of 23rd or 24th September, 1854, is a curious article on the religious tenets of the Chinese insurgents, in the shape of a translation, by the well-known Chinese scholar and missionary, Mr. W. H. Medhurst, of an official statement made under the authority of the Celestial and other "kings" of the revolution. From this official document we shall make but a single extract, illustrating its meaning by help of a note by the translator.

"The servant said, 'The eastern prince is enjoying *repose* in the *sedan*, and I do not dare to disturb him.' The chamberlain of the northern palace hearing that the eastern prince was enjoying repose, did not presume to repeat the inquiry, but hastened back to inform the northern prince. The northern prince hearing that the eastern prince was enjoying repose, hastily descended from his sedan, and proceeded on foot to the middle of the road, where he *knelt* down and *inquired*, saying,—'Has the *Heavenly Father* troubled himself to *come down to this world* again?' To which the Heavenly Father replied in the affirmative, telling the northern prince to convey the sedan into the *Hall* of *Audience*. The northern prince replied, 'I will obey the injunctions of the Heavenly Father;' whereupon he hastily commanded the female officers of the court to inform the Celestial King of the circumstance; which done, he, together with the ministers of state and the other officers, conveyed the sedan of the eastern prince within the gates of the palace. The Celestial King, Thae-ping-wang, having heard the message which the female officers brought from the northern prince, intimating that the Heavenly Father had taken the trouble to come down into the world, hastily went on foot to the second gate of the palace to receive the Heavenly Father [who had thus *appeared* in the body of the *reposing* inferior of the "Celestial King"]. The last-named [the Heavenly Father], on his arrival, was angry with the Celestial King, saying, Sew-tseuen! You are very much in fault: are you aware of it? The Celestial King, kneeling down with the northern prince and all the officers, replied, saying, 'Your unworthy son knows that he is in fault, and begs the Heavenly Father graciously to forgive him.'"

In order to enlighten the West on the subject of this strange proceeding in the East, Mr. Medhurst says,—

"There is here some need of explanation in order to assist the general reader to understand the subject. The eastern prince, it appears, had seated himself in his sedan, and was about to proceed to the court of Thae-ping-wang, when it was said, all of a sudden, that he *was enjoying repose, which means, that he had fallen into a* TRANCE. While in that state it is pretended that the Heavenly Father had taken possession of his body, and, without the individual affected being conscious of the fact, he says and does things which are supposed to be the sayings and doings of the Heavenly Father. The northern prince seems to have been aware of the supposed possession as soon as he heard of the *repose* of the eastern prince, and therefore alighted from his chair, knelt down in the middle of the road, and asked if the Heavenly Father had *come down*. The colloquy that ensued was between the eastern prince—personating the Heavenly Father—and the northern prince (and Celestial King). The trance over, exhaustion succeeded, and the eastern prince was informed of what had happened, of which he himself pretended to be unconscious. *Such pretended possessions are common in China.*"

They are also common to this day in India, and not uncommon even amongst the native Americans. Now, whether this be all imposture, delusion, or truth, is a matter of not the slightest importance, so far as regards the object we have in view, which is, to shed some new light on the true meaning and the actual purposes of those ancient structures devoted to religious or to quasi-religious observances, more especially in ancient times. Indeed, that object is better served on the hypothesis that it is delusion than on that which implies its truthfulness. Let us at once take for granted that all such practices were a delusive similitude only of the truth as regards divine possession: still in these delusive practices we find the true key to all the mysteries of magical and heathen temple rites. The *bed* in the chapel of the tower of Baal at Babylon was, like the sedan or palanquin of the eastern prince, the place in which the entrancement of the chosen tabernacle, or body, of the oracle, took place. That chosen one was often a female, as in the Theban and the Delphian Oracles, as well as in the Oracle at Babylon. Iamblichus, while treating of the Egyptian invocation of the God in him who "reposes on the "beautiful couch" (as in the "elegant bed" at Babylon), says that, in uttering the invocation, the invoker [on the couch] "became, as it were, a divine person," or a God. This is in perfect accordance with the Chinese idea as illustrated by Mr. Medhurst.

The practice of entrancement in China, referred to by this gentleman, is a practice closely connected with the Buddhist religion which *comprises a full half of the whole human race*, and is hence well worthy of serious investigation and consideration with reference to their temple worship, especially when we recollect that even the Apostles of the Christian religion, "as they prayed *in the temple, fell into many trances.*" The Buddhist practice of entrancement responds to, and is identical with, the absorbed state of the Brahminical religion or philosophy of India, and with the enchantments practised in the temples of the Magi, in Chaldea, and also in Egypt, where there were dark temple chambers devoted to the sanitary "temple sleep" of the Egyptian Æsculapius. The Brahminical state of entrancement is held, by "the enlightened twice-born," or Brahmins, to be a third and separate state, of unworldly or spiritual existence, co-ordinate and co-equal with, though in these times rarer than, the two ordinary states of waking and sleep, and is regarded by them as an awful state of death or of self-annihilation and "absorption" into "the divine abyss," a metamorphosis effected, like the spiritual marriage of the Rosicrucians, by the exercise of fasting, watching, prayer, and contemplative abstraction, as taught even by Plato and Plotinus in ancient times, and as practised, or pretended or supposed to be practised, as well as preached, by the living generation of Brahmins and Fakers in India; constituting, in fact, the very same thing as those desired and anxiously prayed for flights of the "winged" soul to "heaven" (in the nightly "repose" of entrancement or ecstatic "rest" *in* the veiled "glory" of the Isiac "midnight sun"), the *restitution* of which the ancient Egyptian hierophants explicitly declared to be the grand object and end of their religion; so that to suppose anything connected with the mere astronomy of the outward heavens to have been the actual subject of religious worship or observance in ancient times and temples, is expressly to contradict the evidence of tradition so far as regards the Egyptians. There are even modern magi in Egypt who, like the Chinese, still evoke the state of entrancement, especially in youths, by help of fumigations with incense and other processes, for the purpose also of causing them to see visions or have optical illusions, as Mr. Lane narrates in his work on the modern Egyptians; and the same thing occurs in India, and also in Thibet and Tartary amongst the Buddhist Llamas, priests, or monks.

It is by pursuing the hints here thrown out to their vast and comprehensive issue, and not by fanciful astronomical theories, measurements, and calculations, that the real objects, purposes, and significations of the *imposing* and *astonishing* structures of ancient engineering and architectural science and skill throughout the world will be elucidated; and to that end the work now before us is highly capable of contributing, notwithstanding the ill-spun and fragile thread of astronomical hypothesis which pervades it; for it contains an extensive collection of curious detail totally unconnected with any such hypothesis,—ill-arranged certainly, but of decided value to every one interested in the Cyclopean and other works of extreme antiquity, and in the magical and other doctrines with which these great works were really connected.

FATAL ACCIDENT AT EDINBURGH.—In demolishing the tenement in Leith Wynd, the gable of which lately fell down, several persons have been killed and others severely injured by the fall of the front wall. A woman and two children were also seriously injured in the house opposite, which was partly knocked down by the fall of the ruin.

Miscellanea.

Fire at Messrs. Broadwood's Factory.—A disastrous fire occurred on the 12th inst. at the Piano-forte Factory of Messrs. Broadwood. The origin of it is unknown, but in an establishment where so much polishing work must go on, and hence so much oil, and cotton, turpentine, &c. must exist in mutual contact, even spontaneous inflammation may have caused it. Several hundred workmen will be thrown out of employment, and a great number have lost their tools, some of which were insured, but many not. It is much to be regretted that workmen will not adopt this easy mode of securing the value of their property. There is no difficulty whatever in doing so. It is a practice we have often urged, and we hope that experience, such as the present, will at length induce the general observance of tool insurance as a rule with but few exceptions.

Wolverhampton School of Practical Art.—The annual meeting in connection with this Institution, was held on Monday before last. The walls were covered with the drawings of the pupils in various stages of progress. A considerable number of the drawings shown represented parts of the human figure and architectural ornaments drawn from casts, Mr. R. Kettle, one of the vice-presidents, took the chair, in the absence of Lord Hatherton, the president of the Institution. The secretary read the report, which stated that the evening classes numbered sixteen less pupils than at the same time last year, partly owing to the establishment of a class at the Free Grammar School, conducted by Mr. Chittenden, the master of the school of art. The day classes had considerably increased in numbers, and the aggregate fees had been increased from 162*l.* 10s. 9d. in 1855 to 170*l.* 9s. in the year now terminated. Eighteen pupil teachers connected with the various parochial schools of the town and neighbourhood were under training in the school, and were admitted for half the usual fees. The annual subscriptions were 17*l.* less, which was attributed to the pressure of national and local taxation. An effort had been made to relieve the Institution from debt, and nearly 700*l.* had been contributed. There still remained, however, 450*l.* to be paid off. After some other proceedings, the prizes were distributed by the chairman.

Electro-telegraphic Progress.—The Hughes Printing Telegraph Instrument, says the *New York Commercial Register*, is now finished, and will be placed upon the line between this city and Philadelphia. This invention, it adds, may be called a printing-press and telegraph instrument combined, for it prints all messages in plain Roman capitals, with unerring correctness, and at an almost incredible rate of speed, averaging in the ordinary despatch of business from 20,000 to 25,000 letters per hour. It also demonstrates the practicability of sending and receiving messages in opposite directions over the same wire at the same time.——It now seems really probable that the scheme for uniting America and Europe by means of the electric telegraph may very shortly be realized. The *New York Times* of 8th July states that a small steamer, the *Arctic*, had left that port to take soundings preparatory to laying the submarine cable from Newfoundland to Valencia Bay, on the western coast of Ireland. Between these two points the bed of the ocean rises in a long level plateau, running east and west, of considerable width, and composed of sand and shells, presenting a remarkably level surface. Lieutenant Maury calls it the telegraphic plateau.——It was found the other day, according to the *Dumfries Courier*, that the wires of the magnetic telegraph betwixt Carlisle and Dumfries would not work properly, and an examination of the line having been made, it was discovered that near Gretna, where a portion of the iron tube in which the wires are enclosed is not covered with earth, the great heat had warmed the metal to such a degree as to soften the gutta-percha which encased the wires, and these coming in contact with each other the magnetic current was broken. It is supposed that other parts of the line have been similarly affected.

Sanitary Improvement in the City.—It is gratifying to observe, that those blots on the fair fame of the metropolis in its courts and alleys, to which years since we pointed attention, both in the *Builder* and in "London Shadows," are gradually being erased by the City authorities. The state of Fox and Knott-court, for instance, has just formed the subject of a portion of one of the City officer of health's reports to the City Sewers Commission. This court, it appears, has at length been thoroughly inspected, and orders have been issued for "such improvements as the place will admit of." The short supply of water is specially referred to, and the necessity of remedying this admitted as very urgent. The whole court, adds Dr. Letheby, must, from its dilapidated state, ere long be brought under the notice of the surveyor. Progress is also being made towards the amendment of other courts and alleys.

Lowestoft *v.* Yarmouth. — At Ipswich, before Mr. Justice Coleridge, the case of Preston *v.* the Norfolk and the Eastern Counties Railway Companies came on upon 30th ult. This was an action brought by the commissioners of Yarmouth harbour in the name of their clerk, pursuant to the direction of the Master of the Rolls, in which the plaintiff complained that the defendants had wrongfully diverted and abstracted the waters of the rivers Yare, Wensum, and Waveney, which of right ought to flow into and through Yarmouth harbour, and had turned the same into Lake Lothing, and thence into the sea, through Lowestoft harbour. From the opening statement of council for the plaintiff, it appeared that plaintiff filed a bill in Chancery to compel the reparation of the locks, and to restrain the defendants from diverting any of the waters of the rivers for the supply of the cut between Lake Lothing and the sea, which they advanced a right to do under their Acts. The Master of the Rolls held that the defendants were bound to repair the locks as a public duty, and he ordered them so to do. He, however, expressed an opinion that they were entitled to take some water through them for the supply of all the cuts, including that into the sea, but did not define the quantity, leaving the plaintiff to bring such action at law as he might be advised, for ascertaining the precise rights of the parties in this matter, and the exact damage, if any, done by default of the defendants. Hence this action, in answer to which the defendants pleaded separately— 1. Not guilty. 2. That the plaintiff was not entitled to the waters in question. 3. A justification under the Norwich and Lowestoft Act—each company alleging in its plea that the acts complained of by the plaintiff were done by them as the servants of and under the orders of the other. After much discussion, the terms of a reference to Mr. Biggs Andrews, Q.C. were arranged, the defendants undertaking to repair the locks at once, and to proceed speedily, the plaintiff being let in to complain of acts of omission, as well as of commission, on the part of the defendants. A verdict was then taken for the plaintiff, subject to the special case.

Institution of Mechanical Engineers.—The general meeting of the members of this Institution was held on Wednesday in last week, at the house of the Institution, in Birmingham, Mr. S. Lloyd, in the chair; when the secretary, having read the minutes of the previous meeting, and a number of new members having been elected, a paper was read "On the application of Steam-power to Agricultural Purposes," by Mr. William Waller, of Lincoln. The next paper was a description of a "Double Traversing Drilling Machine," by Mr. Thomas Forsyth, of Manchester. The last paper was on an improved "Water Meter," by Mr. O. William Semens, of London, and was a supplement to a previous paper on the subject. The chairman then announced that the next meeting of the Institution would be a special meeting in Glasgow, in the middle of September, which it was contemplated to continue periodically.

Church struck by Lightning.—During a thunder storm on Thursday week, the lightning struck the tower of Holy Trinity Church, in Stretford New-road, Hulme, Manchester. It fractured one of the pinnacles on the top of the steeple, large pieces of which fell through the roof of the tower in two places, and through the church ceiling into the church below. The whole of the pinnacle was shaken down to the roof of the tower, and several pieces of stones were hurled into the road. The damage is being repaired by Messrs. Eastwood and Son, builders. The cost will be about 20*l.* There is no lightning conductor to the church, and this is generally the case where such accidents happen, as we have often pointed out; and even where a conductor may exist, there is usually something defective in it under such circumstances. Surely a conductor will now be put up at the church under notice.

South Shields Burial Ground Competition.—Some competitors complain that, having submitted designs for the South Shields Burial Ground, and the first premium having been awarded long since, they have not been able to obtain information as to the second premium, and when the drawings would be returned.

Sale of Land.—An allotment of nineteen leased plots on the Roundhill-park Estate, Brighton, took place on Thursday, the 7th inst. at the offices of the Conservative Land Society. The plots are leased at the yearly rents of 7*l.* each for four of the plots, and 10*l.* 10s. each for the remaining fifteen plots, for the term of ninety-nine years; and the prices fixed were 84*l.* each for the former and 126*l.* for the latter. The competition was animated, and the whole of the leased plots were taken by members holding rights of choice within the first 100 numbers on the register; 20*l.* premium for each right, it is said, being paid in many instances. Other plots were sold on the St. Margaret's Richmond, Maldon South Essex, and Woodbury-park, Tunbridge Wells, West Kent, estates.

Norwich Free Library. — We have received some printed comments on this building of a not very flattering description, put forth as the "Observations of an Architect." These serve to show that the building must be of an odd character, but are couched in such strange language as to forbid much faith in the dictum of the writer. Take a specimen:— "In the first place, the Antea being raised upon a brick plinth instead of a wrought stone Podiam and Stylobata, and the Antea being greatly and disproportionately diminished from one-third of its height upwards to the cap in front; and the same in the profile, which not only conveys deformity in effect, but is contrary to the practice shown in any specimen of legitimate architecture. And the stone entablature (viz. the architrave and frieze), are sunk in the red brick wall without any projection, whereby it conveys no idea of support from the Antea, and is, therefore, contrary to every prevenient example. And the corona of the cornice is of an extravagant and disproportionate projection,—and the chambranle, or stone margin, which surrounds three sides of the apertures, are too trifling and diminutive to produce their proper effect,—and the sagitta, or keystones of the arches, are wrought vermicular on the face, a practice in the present date entirely exploded and obsolete with professional architects, and never was at all in character with any of the orders of architecture, but is supervacaneous and form an entire anomaly therewith; and sinking of the stone subsills on the face, which always appear as solids, is contrary to all precedence in existence."

Wiltshire Archæological Society. — The annual *réunion* of the members of this society commenced on Tuesday in last week, at Warminster, and was attended by a large number of the archæologists of the county. The public proceedings commenced at one o'clock, by the general meeting of the members in the Town Hall. In the absence of the Marquis of Bath, the president of the society, the chair was taken by the Rev. Prebendary Fane, Vicar of Warminster. The chairman, in opening the proceedings, explained the objects of the society. Mr. Lucas then read the council's report for the year, which stated that there was little to add to the last year's report. Mr. Sydney Herbert was elected president of the society. The Rev. J. O. Picton then delivered an address on archæology, and the members adjourned to the National School-room, where a dinner was provided for the party, which filled the large room. In the evening a *conversazione* was held in the Townhall, in the course of which papers were read, and next day the members of the society were to assemble at the Town-hall, at ten o'clock, when the Rev. J. Wilkinson was to read a report "On a Scheme for the Parochial History of Wilts, with Notices of Broughton Gifford;" after which (by permission of Mr. Temple), an excursion was to proceed to Battlesbury and Scratchbury, under the direction of the Rev. J. Baron; and an excursion to Longleat was also to take place, visiting first Clay-hill, and proceeding thence, by way of Prospect-gate, to the Marquis of Bath's mansion, at which the members and subscribers were to be received by the president. A paper, "On Longleat," was to be read by the Rev. Canon Jackson, secretary, after luncheon. On the return route to Warminster, Woodhouse Castle (of which Mr. Wansey was to read a brief notice on the spot), and Horningsham church, were to be visited.

Greenwich and Deptford.—The sanitary state of Greenwich and Deptford appears to be very bad. At a late meeting of the District Board of Works, the medical officer presented a report as to the condition of the poor inhabitants of the locality. It appeared that at Griffin-street, Deptford, where the cholera raged fearfully in 1854, the houses are occupied by six or seven families in each, and that in one house four deaths had taken place from typhus fever; also that one of the City missionaries who visited the house caught the disease and died. At Greenwich, in the eastern district, seventy-six houses derived their supply of water from tubs sunk in the marshes, the water in them mixed with the contents of stables and cesspools. It was resolved that the owners of these houses should provide a proper water supply, and the state of Griffin-street, Deptford, was referred to a committee.

Protection of Metallic and other Surfaces.—Mr. G. E. Cook, of Greenock, has invented a composition for protecting exposed surfaces, or surfaces liable to oxidation, deterioration, or decay, and which is said to be applicable to all kinds of ironwork, brickwork, stonework, plasterwork, Roman cement, and, amongst other things, to mirrors or silvered glasses. In making up this composition, from two to six pounds of gum shellac are dissolved in every gallon of methylated spirit; or, instead of methylated, wood spirit may be used. The dissolved gum may then be mixed with any suitable colouring matter, and is to be applied to the surface to be protected like ordinary paint or varnish.

British Archæological Association. — The proceedings of the Congress to be held at Bridgewater, on the 25th, will be opened with a public meeting in the Town-hall. Introductory Sketch of the Antiquities of Somersetshire, by Mr. Pettigrew. —Examination of Churches, &c. — Evening Meeting at the Town-hall, for papers, and on each following evening.—On the 26th, Visit to Glastonbury Abbey, Church, Abbot's Kitchen, the George Inn, &c.—Wells Cathedral, Close, Palace, St. Cuthbert's Church, &c.—27th. Visit to Martock — Stoke-sub-Hamdon—Stoke Church—Hamdon-hill—Montacute, remains of the Cluniac Monastery—The Church—Brympton Church—Yeovil Church.—28th. Visit to Clevedon Church, Walton Castle and Church, Weston in Gordano Church, Canenor Court, Clapton in Gordano Church, Cadbury Camp, Tickenham Church, Clevedon Court. On the 29th they go to Bath. Reception at the Bath Royal Literary Institution—Examination of various Churches—Conversazione; and on the 30th, there will be an Excursion to Hampton Down, Belgic Settlement—Bath-Hampton Church—Batheaston Church—Langridge Church—Waller's Entrenchments—The Camps—Chapel on Lansdown, with the closing meeting.

The Bell for the New Palace at Westminster.—On the 6th instant, the great bell for the Clock-tower of the New Palace at Westminster was cast at Messrs. Warners, Lucas, and Barrett's furnaces, at Norton, near Stockton-on-Tees. The mould had been in course of preparation for the previous six weeks, and two reverberatory furnaces, capable of melting 10 tons of metal each, had been built expressly for the purpose of casting this monster bell. The furnaces having attained the requisite heat, their doors were opened, and the operation of charging, or putting in the metal, commenced, occupying about one hour, and, in less than two-and-a-half hours, the whole of the metal required (18 tons) was in a state of fusion. On the signal being given, the furnaces were tapped, and the metal flowed from them into a pool prepared to hold it, before being admitted into the bell-mould: the shutter or gate was then lifted, and the metal allowed to flow, which in five minutes completed the casting of the bell.

Monumental Window at the Army and Navy Club.—A memorial window, in commemoration of officers who have fallen in different battles, is about to be erected on the principal staircase of the Army and Navy Club, Pall-mall. The window will be composed of the "Brilliant-cut Glass," invented by Messrs. Mark Bowden and Co. of Bristol, to which firm the manufacture has been entrusted. It will be in the Venetian-Italian style, and will exhibit a number of tablets bearing the arms of the club and the names and dates of the engagements. The architraves will be of Sienna marble, with panels of black marble, on which, in letters of gold, will be inscribed the names of the fallen officers.

Metropolitan Association of Medical Officers of Health.—The medical officers of health recently elected in the metropolis under the Local Management Act of Sir Benjamin Hall, have formed themselves into an association for the purposes of mutual assistance and the advancement of sanitary science. Mr. Simon, of the General Board of Health, has been elected the president for the present year; Dr. Thomson and Mr. Liddle, vice-presidents; Dr. Aldis, treasurer; and Dr. Hillier, secretary. Provisional committees have been appointed to inquire into various subjects affecting the public health, such as the sale of unwholesome meat, the condition of the vaults under the metropolitan churches, &c. There are in the metropolis at present forty-seven medical officers of health.

The New Church of St. John, at Isleworth. —This church is situate at Woodlands, near Springgrove, and is in the Perpendicular style, from the design of Mr. Deason, architect. The chief materials are Kentish rag, with Bath stone dressings, and the edifice is ornamented at the south-west angle by a tower, 80 feet high. One of the principal features is an open timber hammerbeam roof. The pulpit is of Caen stone. Messrs. Dove, Brothers, of Islington, are the builders. The church is calculated to hold upwards of 800, and has been erected at a cost exceeding 5,000*l*.

Kilkenny Archæological Society.—The July meeting of this society was held at Kilkenny on the 2nd ult. when fifteen new members were elected, and various presentations to the library and museum of the society made. A communication was then read on the Insignia of the Corporation of Cork by Mr. R. Caulfield. Fac-similes of remarkable autographs were sent by Mr. H. J. Hoare, from the State Paper Office. A communication on the antiquity of clay tobacco-pipes was received from Mr. G. Bem, of Liverpool. Other papers were afterwards submitted to the meeting, which then adjourned to the first Wednesday in September.

Street Pavement.—In the number of the *Builder* for July 27th is an article on street paving. I have thought much on this subject, and I would suggest the following:—A lime concrete foundation 6 inches thick, on which place lines of wood blocks, each block 10 inches deep, 4 inches thick, and 10 inches long, and dowelled together endways, leaving a space 4 inches wide between each line of wood blocks: fill up between these rows, from lime concrete foundation, with Portland cement concrete 8 inches high, and on the top of that lay 2 inches deep of asphalte: strew over the whole small shingle. This last should be renewed now and then. The wood blocks to be impregnated with creosote, to make them impervious to water; the cross joints of wood blocks to be broken half-way of length of block each alternate row of blocks. The Portland cement concrete swells as it sets, and the asphalte, when the shingle works into it and the wood, increases both, and presses all firmly together.—S. P. H.

Highfield Adjustable Circular-Saw.—This invention consists in securing a circular-saw to its spindle in an oblique direction, so as to make a saw of the common construction to cut grooves or rebates of any required widths. Between the saw and the collar on the spindle are two bevilled washers, each capable of being turned round independently of the other; and on the opposite side is a plain washer, having a concave recess for receiving a convex nut, which screws on to the end of the spindle and secures the saw firmly thereto. The whole is so arranged that by changing the relative positions of the two bevilled washers, a surface more or less oblique with the axis of the spindle is presented for the saw to be screwed against. Thus the obliquity of the saw with the axis of the spindle may be varied at pleasure, and grooves or rebates of various widths cut into the wood submitted to its action.

Manufacture of Bar-iron.—Mr. W. Clay, of Liverpool, has patented a process relating to the employment of rolling pressure for the conversion of bar-iron of various sectional figures, as, for example, plain, straight, square bars, or bars of angle iron, or T or channel grooved or trough iron, into taper bars, the object being to impart to bars of iron so made different strengths or powers of resistance at different points. The invention also relates to the adaptation of rolling pressure to the formation of bars, with sudden as well as gradual irregularities of depth or thickness, by which means it is proposed to form projections, protuberances, or indentations on or in the bars at different points, according to the particular purposes for which the iron may be required.

Credence Table.—A writer in *Notes and Queries* says,—"I saw it stated in one of our quarterly periodicals in 1852, that 'credence table' was derived from an obsolete German verb, *Kredenzen*, to taste, owing to the elements being placed on the credence table with a view to their being publicly tasted (before consecration) by a person appointed for that purpose, whenever the monarch was about to communicate, lest poison intended to destroy the monarch should be mixed with the bread or wine."

Trinity High-Water Mark.—In reply to "An Old Subscriber," of the 5th ult. I beg to state, 1st. Trinity high-water mark is placed in various parts of London, as described in the "Register of Tides in the River Thames," printed by order of the Honourable Court of Commissioners, of the 26th of October, 1849, and every bench-mark in London is shown in feet and decimals of feet above an oblate spheroidal datum plane, decreasing in radii towards the north pole from the centre of gravity between the parallels of latitude at London and Liverpool, about 2·02 feet, or 24¼ inches, which is evidently worthy of consideration, at a rate of 2 feet to the mile in 40 miles of sewer. 2nd. The difference at Liverpool is also given in the aforesaid report; and this may prove of public utility if reported on by the engineer employed in the levelling of the main drainage of London. The Ravensbourne drainage is a specimen of such levelling. 3rd. The information concerning the old dock-sill at Liverpool is in the possession of Mr. Newlands, borough engineer, of Liverpool. 4th. The approximate mean water at Liverpool is 12½ feet below the level of Trinity high-water at London, as described identical with the level of the datum plane of the Ordnance survey of London, which is also 12½ feet below the level of Trinity high-water mark. And all the information required is given in the aforesaid report, and has been published through the medium of the *Builder* in 1849, pp. 458 and 586. I agree with your subscriber in the desirability of a clear understanding, and it may not be improper here to observe that, where the medium of gravitation is resorted to as the agency to effect the grand object in draining London, the difference of altitude of the mean tide at the equator and the north pole is 22 miles, and in the same ratio of an oblate spheroidal figure between the parallels of latitude of the extremities of any sewer, &c. James M'Cleary.

Building Notes—Edinburgh.—The Dean of Guild Court have objected to the new plans for the Life Association's Offices in Princes-street, and operations have again come to a perfect stand-still. The last architect whose plans have been approved of by the Association was Sir Charles Barry. No fewer than three architects have been engaged on the plans, and their different designs have each been received, tried, and found wanting. A projecting cornice in the last plans, which would be prejudicial to the appearance of the adjacent buildings, has raised the opposition of the members of the New Club, who have accordingly determined to do everything they can to prevent the erection of the intended building. It has also been objected that it was proposed to raise the building six stories high, three being in entresol. This runs contrary to the regulation that no house should be more than five stories high. Operations have been recommenced for the completion of Melbourne-place. The corner adjoining Victoria-terrace will be entirely built, and will finish the original plan of the Improvement Commissioners in this part. We are not sorry to find that, after so many years of inactivity, the half-built appearance of George the Fourth Bridge may now be partially removed. The erection of Dr. Alexander's church, and the probable enlargement of the County Buildings, together with the present operations, will go far to assist in this desired object, and may perhaps induce other parties to come forward and purchase some of the vacant building stances. The new buildings are, as before, by George Smith, architect—Mr. Steven being builder and proprietor—and will be of the same Elizabethan character as the other part of the street. In digging the foundation, the builders have come on some of the old walls and cellars of the closes which formerly occupied this spot, and which had been built over in the direction of the bridge.—*Building Chronicle.*

Dust in Railway Travelling.—The New York Central Railway directors have nearly completed arrangements intended to obviate the inconvenience occasioned by dust in transit. The plan is simply to box in the running gear down to within two or three inches of the rail, and to extend tarpaulins over the open space between each car. Advantage is also gained in deadening the sound of the wheels.

"The Royal Gallery of Art."—No. XVIII. of "The Royal Gallery of Art" (Colnaghi and Co.) the last published, contains, "Charity," by Van Eycken, very well engraved by Lightfoot; "The River Bank," by Vander Heyde; and F. Mieris's "Teasing the Pet," engraved by R. C. Bell. The last is not a very excellent specimen of the master, but his works are rare. The previous part contained, amongst others, "The Scene from Midas," by Maclise.

[Advertisement.]

27 and 28, Bishopsgate-street, Aug. 1st, 1856.

Gentlemen,—After twelve years' experience of your Patent Iron Revolving Shutters, I have much pleasure in testifying to their great superiority over all others; and if I were to put in a new front to-morrow, I should most decidedly give them the preference.

I am, Gentlemen, yours, &c.

Robert Alex. Rooney.

Messrs. Clark and Co. 15, Gate-street, Lincoln's-inn-fields, Engineers.

TENDERS

For Chambers to be erected in Fenchurch-street, City. Mr. E. I'Anson, architect:—

Holland	£18,624	0	0
Cubitt and Co.	18,473	0	0
Mackenzie	18,400	0	0
Todd	17,999	0	0
Wilson	17,550	0	0
Lucas	16,773	0	0
Ashby and Horner	16,650	0	0
Piper and Son	16,292	0	0
Thompson	16,240	0	0
Ryder	15,840	0	0
Jay	15,716	0	0

For the erection of a New Wing, and sundry other works, at the Westminster Bridewell. Mr. F. Pownall, architect. The quantities supplied by Mr. C. J. Shoppee:—

Lawrence	£11,040	0	0
Hayward and Nixon	11,700	0	0
Lucas	11,560	0	0
Jay	11,540	0	0
Myers	11,490	0	0
Dove	11,233	0	0
Piper	10,490	0	0
Pollock and McLennan	10,087	0	0

For the National Schools, Luton. Quantities supplied by Mr. C. Polard. Mr. J. Cumberland, architect:—

Greigg	£3,600	0	0
Longman and Co.	3,476	0	0
Dales	3,449	0	0
Woodroffe	3,419	0	0
Quarterman and Co.	3,294	6	0
Clark	3,000	0	0
Hopkins	2,853	15	0
Kirkby	2,845	0	0
Smart	2,750	6	7

For the Buildings and Walls, West Ham Cemetery, Mr. Knightley, architect :—

	With Brick Facing.	Kentish Rag Facing.
Rivett	£5,891	£5,965
Scott and Cornwall	5,420	£5,442
Hack and Son	4,680	—
J. and J. Coleman	4,555	4,618
Morter	4,430	4,475
Smith, W.	4,190	4,310
Wallburton	4,160	4,260
Wood and Sons	3,934	3,962

FOR THE IRONWORK.

Glover, Brothers	£800	0	0
Perry and Sons	772	0	0
Cottam and Hallen	766	0	0
Bullock and Co.	749	6	3
Davidson	700	0	0
Hill and Smith	674	2	2
Ford, jun.	646	0	0
Scott and Cornwall	640	0	0
Tyler and Co.	635	0	0
Cottam, jun. and Co.	630	0	0
Hodd and Son	630	0	0
J. and J. Coleman	629	0	0
Allan, son	528	10	6
Barningham	500	0	0
Gerish	495	2	0

For building a House, at Harlesden-green, for Mr. R. Whitby, surgeon. Mr. D. Johnson, architect. Quantities supplied by Mr. James :—

Wheeler	£1,375	0	0
Evans	1,537	0	0
Leach and Robson	1,336	0	0
Stevens and Co.	1,190	0	0
Springhall	1,051	0	0
Adamson and Sons	1,016	0	0
Stevenson	1,011	0	0
Sands and Emery	980	0	0
Stevens	934	0	0
Richards	918	0	0

TO CORRESPONDENTS.

"J. W. N."—"Messrs. Y."—"X. Y. Z."—"Constant Subscriber."—"Lieut. C."—"T. H. and Sons."—"E. S."—"E. W."—"G. B." (we have not the reply list)—"T. and C." (under our limit)—"J. B."—"J. W."—"J. S. D."—"E. C."—"T. B."—"J. J. C."—"M. B."—"J. T. I."—"J. G. H."—"G."—"R. R."—"W. S."—"J. W."—"D. J."—"J. V."—"G. P."—"C. G." (next week).

"*Books and Addresses.*" We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

Important and extensive Sale of valuable Building Materials.—To BUILDERS, CONTRACTORS, STONEMASONS, BRICKLAYERS, PROPRIETORS of PLEASURE GARDENS, and OTHERS

MR. F. HALL has received instructions from the Contractors to SELL by PUBLIC AUCTION, on the PREMISES, Park-place, Eastcheap, Walworth, on TUESDAY and WEDNESDAY, AUGUST 19 and 20, at TWELVE precisely, the ground being cleared for build ng purposes, the whole of the STOCK and MATERIALS of a BUILDER and CONTRACTOR, comprising timber in sticks, banks, deals, battens, planks, joists, floor, feather-edge boards, lining and other boards, rafters, and scantling; the materials of several large temporary buildings, comprising the Royal Surrey Zoological Gardens, built of the best materials, comprising several thousand feet of yellow deal posts, plates, rafters, planks, floor, feather-edged, lining, and other boards, six, four, and two panel doors, made in sashes and frames, panelled and glazed partitions, wrought and moulded skirtings, cupboard fronts, screens, gardon rails, nash and cyclinder rails and forms, stoves, copper, range, registers in various sizes, cement and plaster in casks, sheet zinc, & c.; stock of bricks, Portland and other stone in blocks, slabs, landings, coping, string, pitchers, and pebble paving, 100 feet of York and Purbeck pavers, steps, kit hen sinks, &c. &c. of firewood, and a vast accumulation of various materials, all useful to persons repairing and building. On view two days prior and mornings of sale, and catalogues had of F. R. Easton, Esq., Architect, 21, Northumberland-street, Strand; at the Gloucester Arms, Stamford-street; on the Premises; at Garraway's; and of the Auctioneer, 41, Charing-cross.

CLERK of the WORKS WANTED.—The Burial Board of the Parish of Eastbourne require a Clerk of the Works, to superintend the erection of the chapels on the new burial ground, which will probably be finished in about three months.—Applications in writing, stating the terms and the time which would be devoted, accompanied by testimonials to be sent to Mr. J. H. CAMPION OGLE, Clerk to the Burial Board, Eastbourne, on or before THURSDAY next, the 21st AUGUST instant.

LOCAL BOARD of HEALTH for the BOROUGH of BRADFORD.—To SURVEYORS and OTHERS WANTED, in the Office of the Surveyor and Waterworks Manager of this borough, a competent person as CHIEF CLERK and ASSISTANT. He must be capable of taking levels, and must be a neat and expeditious draughtsman. A person having had experience of the method of conducting business in the Surveyor's Department under a Local Board of Health, and possessing a knowledge of the most approved methods of drainage, will be preferred. He will be required to devote himself exclusively to the duties of the appointment. Salary 120*l.* per annum. Applicants may be forwarded, stating age and previous occupation, to be addressed to the undersigned, on or before the 6th of AUGUST instant.—By order,

W. H. HUDSON, Town Clerk.

Bradford, Yorkshire, August, 1856.

A SURVEYOR WANTED.—The Local Board of Health for the District of "Waterloo with Seaforth," near Liverpool, wish to ENGAGE a PERSON to undertake the duties of SURVEYOR, as required by the provisions of the Public Health Act, 1848, and the Local Board's by laws regulating the duties and conduct of that officer. He will also be required to undertake the duties of Inspector of Nuisances, as imposed by the above Act and By-laws.—Applications for such office, stating the salary and terms upon which the aforesaid duties would be undertaken, accompanied by satisfactory references and testimonials of qualification, must be addressed, under seal, to the Chairman of the said Local Board, and sent to the Office of Mr. MASON, Solicitor, 30, Castle-street, Liverpool, on or before the 21st day of AUGUST instant, when and where at the usual hour will be given any further information and particulars required.—By order,

JOSH. MASON, Clerk to the said Local Board.

A YOUTH WANTED, in the TIMBER TRADE, who understands book-keeping, reducing deals &c.—State full particulars, per post, to B. H. 5, Gwynne's-place, Hackney-road.

TO JOINERS

WANTED, immediately, several GOOD WORKMEN. To steady men constant employment will be given.—Apply to Mr. JOHN WELLSPRING, Builder, Dorchester, Dorset.

WANTED, in a Surveyor's Office, a WRITING CLERK. It is essential that he should write well and quickly, and that he should be able to print plans with the greatest neatness.—Specimens of handwriting to be sent to G. P. at Messrs. Warr's, 61, High Holborn.

TO BUILDERS' CLERKS AND ACCOUNTANTS.

WANTED, a PERSON, competent to Measure, Price, and Make up the BOOKS of a CARPENTER and BUILDER, deceased. Apply, by letter only, post paid, to A. Z. 6, Hanover-place, Regent's-park, stating terms and where last employed.

WANTED, a thorough BUILDER'S FOREMAN. He must be active and competent to carry on extensive works with energy and accuracy; none other need apply. Apply at 34, Osnaburg-street, New-road, from EIGHT to NINE a.m. or SIX to SEVEN p.m.

WANTED, by the Son of a Builder in the Country, a SITUATION as CLERK of WORKS or otherwise, under a Builder. Is thoroughly acquainted with the business.—Address, T. Mr. G. Williams, No. 76, Stanley-street, Pimlico.

TO MASTER PAINTERS, PLUMBERS, BUILDERS, &c.

WANTED, by a respectable Young Man that perfectly understands his business, a SITUATION as PLUMBER, PAINTER, and GLAZIER, &c.—Can have good reference from his last situation. Letters addressed to X. Y. Z. at Mr. Howe's, Plumber, Church-street, Stoke Newington.

TO BUILDERS.

WANTED, by a practical Man, a RE-ENGAGEMENT, to superintend the execution of buildings, &c. Good references can be given. Locality no object. Apply to J. H. 211, Upper White cross street, City.

TO MASTER MASONS, &c.

WANTED, by a steady MAN, a SITUATION, as a MASON and LETTER-CUTTER. Has had sixteen years' experience as a letter-cutter and setter, on stone, marble, &c. both in plain and ornamental writing, and would be willing to make himself useful in any department of the business, to the interest of his employer. Understands drawing and colouring.—Address, A. B. Mason, care of Mr. Bonny, Crown Inn, Reigate, Surrey.

WANTED, a SITUATION as General or Shop FOREMAN, with good reference. Age 33. Address, J. H. B. 34, Upper Ebury-street, Eaton-square.

TO ARCHITECTS AND SURVEYORS

WANTED, a SITUATION, by a Young Man who is a neat Draughtsman and quick Accountant; well acquainted with measuring and estimating; also land surveying, leveling, mapping, &c. Good reference can be obtained from late employers. Salary not so much an object as a permanent situation.—Address, A. Z. Office of "The Builder."

WANTED, a SITUATION as CLERK of WORKS. Is a good draughtsman, and competent to prepare working drawings; is well experienced in all the branches of building, and has first-rate testimonials from gentlemen for whom he has executed numerous extensive works.—Address, X. C. 3, Bloomsbury-terrace, Vauxhall-road, Pimlico.

WANTED, a permanent SITUATION, by a first-rate GRAINER and MARBLER.—Address, post paid, B. H. N. Office of "The Builder."

TO CARPENTERS, BUILDERS, &c.

WANTED, by a Young Man that has been used to the general work of a shop, a permanent SITUATION.—Address, W. L. 14, James-street, Devonport-street, Commercial-road East.

WANTED, a SITUATION as ENGINE-DRIVER; a competent, steady, sober Young Man, of good character and recommendations.—Address, T. B. S. 8, Thornhill-street, Caledonian road, Islington.

TO PLUMBERS, BUILDERS, &c.

WANTED, a permanent SITUATION, by a Young Man, aged 28, as PLUMB R, PAINTER, and GLAZIER. Good references.—Address, T. B. 18, Chandos-street, Covent-garden.

WANTED, an ENGAGEMENT as GENERAL FOREMAN or CLERK of WORKS, by an experienced Man, who has had the superintendence of very extensive fire-prf. buildings.—Ample testimonials as to ability, sobriety, and attention to business can be had, if required.—Address, P. Q. R. Office of "The Builder."

TO ARCHITECTS, ENGINEERS, AND OTHERS.

WANTED, an ENGAGEMENT with an Architect or others. The Advertiser has a knowledge of architectural drawing, and is anxious to obtain a situation in an office in which he would have opportunities of improvement. Salary not an object. Address, X. Y. Z. 16, New-road, Hammersmith.

TO ARCHITECTS, ENGINEERS, AND OTHERS

WANTED, an ENGAGEMENT with an Architect or others, as Draughtsman and General Assistant. The Advertiser is a first-rate draughtsman and colourist, and familiar with office practice. Satisfactory references given. Address, X. Y. Z. Post-office, Starch-green, near London

TO BUILDERS, SURVEYORS, AND OTHERS

WANTED, by a respectable Young Man, a SITUATION as PLUMBER, PAINTER, and LEAD GLAZIER, &c. He has well experienced in the above business having carried out jobs of large extent. Address, H. A. 11, Georgecourt, Piccadilly

WANTED, by a Young Man (recently from the country), a SITUATION, in a good Builder's Shop, either as BENCHMAN, or otherwise. Address stating terms, A. B. 38, Warren-street, Islington.—Unexceptionable testimonials if required.

TO ENGINEERS OR ENGINEERING CONTRACTORS

THE Advertiser, who has had seventeen years' experience on general works, wishes to meet with an ENGAGEMENT. Is a good draughtsman, and well acquainted with measuring works, taking out quantities, leveling, &c. &c. First-rate testimonials. No objection to go abroad.—Address, A. G. W. Office of "The Builder."

TO ARCHITECTS AND SURVEYORS.

THE Advertiser, having been nearly eight years in the profession, is desirous of a RE-ENGAGEMENT. He is capable of making designs, together with finished and working drawings, estimating, conducted with the general business of an architectural surveyor's office, including land surveying, and can be well recommended. Would not object to be engaged as clerk of the works.—Address, A. B. to be left at the Lodge, Crosby Hall Chambers, Bishopsgate-street.

TO ARCHITECTS.

THE Advertiser is desirous of an ENGAGEMENT as ASSISTANT, to a London architect. He has been accustomed to prepare finished, working, and detailed drawings, and has had experience in measuring and superintending works.—Address A. G. W. 15, Lower Eaton-street, Pimlico.

TO TIMBER MERCHANTS, BUILDERS, AND SAW-MILL PROPRIETORS.

THE Advertiser desires EMPLOYMENT in either of the above trades. He has been engaged for several years in extensive building operations, and has a complete familiarity with the timber trade and markets, as well as the management of large saw-mill works, and the general conversion of wood. He is also a good accountant. To any person having a suitable opening his services would be found valuable.—Address, A. B. Messrs. Worsam and Co.'s, Saw-Mill Manufacturers, King's-road, Chelsea.

TO PLASTERERS AND BUILDERS.

EMPLOYMENT is WANTED by a Young Man from the country, who has had good practice in the Plastering Trade.—Address, A. B. at No. 20, William-street, Regent's-park.

BUILDER'S CLERK.—WANTED, EMPLOYMENT, by a Young Man, aged 21, of five years' good experience in a builder's office.—Address, W. H. care of Mr. Perry, Estate Agent, Malvern-street, Belgrave-square.

TO BUILDERS, PAINTERS, AND GRAINERS

A YOUNG MAN, a Painter and Grainer, wants a CONSTANT SITUATION. Wages, 27*s.* per week. Apply to J. W. Office of "The Builder."

TO ARCHITECTS, SURVEYORS, OR BUILDERS.

A GENTLEMAN wishes to ENGAGE with a respectable firm, where he will be fully employed. He has had eight years' experience, and has no objection to the country.—Address, QUERY, 13, Church-street, Chelsea.

TO CARPENTERS AND BUILDERS.

A YOUNG MAN, 21 years of age, wishes for a SITUATION as IMPROVER. He has been brought up principally in the cabinet line. Address, post-paid, F. C. 24, Belvidere-road, Lambeth.

TO BUILDERS AND CONTRACTORS.

A MEASURER, ESTIMATOR, and QUANTITY SURVEYOR, of great practical experience, offers temporary ASSISTANCE to BUILDERS; is also a good draughtsman. Terms reasonable (no charge if unsuccessful).—Address, Mr. WILLIAMS, Office of "The Builder."

TO BUILDERS, &c.

AN ASSISTANT, of much experience in all matters relating to building, desires an ENGAGEMENT in an Office, to make plans, take out quantities, make est mates, attend to the books, and measuring up of works, &c. Good references. Salary moderate. Address, R. S. 12, Parkstreet, Camden-town

A YOUNG MAN, of good general experience in the profession, is desirous of meeting with a Gentleman or Employer requiring the services of a perseving and trustworthy person, in any department connected with building operations. The superintendence of an estate, or general management of an office, would be suitable. Address, L. H. Mr. Kirkey's, 118, Whitech pel-road.

TO COUNTRY BUILDERS AND OTHERS

A SHOP or GENERAL FOREMAN.—An experienced Man, who wishes to leave London on account of the ill-health of family, wishes to meet with a SITUATION in the country, where he can go to a country job. Satisfactory testimonials as to ability, sobriety, &c. can be given. Salary very moderate.—Address, CARPENTER, Office of "The Builder."

TO BUILDERS AND CONTRACTORS.

AN experienced BUILDERS' CLERK wishes for a RE-ENGAGEMENT. Most respectable references and testimonials can be given.—Apply to W. S. care of Mr. Hills, 12, John-street, Old Ipbi

TO BUILDERS AND OTHERS.

A THOROUGH PRACTICAL BUILDER'S FOREMAN, acquainted with the trade in all its branches, is open to a RE-ENGAGEMENT. Address, Mr. WRIGHT, Sutherland-place, Bilston-road, Wolverhampton.

TO ARCHITECTS, BUILDERS, AND CONTRACTORS.

AN experienced, practical, energetic person, well versed in construction and Gothic details, is a good draughtsman, can measure, &c. requires a SITUATION as CLERK of WORKS, or General or Shop Foreman. No objection to a country town, or to go abroad.—Address, ALPHA, 41, Robert-street, Hoxton.

N.B.—Unexceptional testimonials.

TO ARCHITECTS

A PRACTICAL CLERK of WORKS, having just completed a large public work, wishes a RE-ENGAGEMENT. Address, C. J. 3, Wenlock-street, New North-road.

A PLASTERER, acquainted with all the branches and materials, requires a JOB at PIECE WORK in town or country. Good references.—Address, X. Z. Office of "The Builder."

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A RESPECTABLE YOUNG MAN, aged 28, wishes for CONSTANT EMPLOYMENT in the above line; would be of service to any small builder, being capable of measuring. The Advertiser has also an opening for a well-educated industrious youth, as an ARTICLED PUPIL. From one about 15*l.* guinea.—Address, C. E. 12a, Great George-street, Westminster.

A SITUATION WANTED by a first-rate PLUMBER, who is capable of taking charge of work or any place where confidence is required. Good reference if desired.—Apply to A. B. C. Mr. Larking, No. 2, High-street, Maidstone, Kent.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Portzolano.

11 George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel street, Liverpool.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not effected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

BATH, PORTLAND, and ROMAN CEMENTS. The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 20, Old Broad-street, London; to Mr. MONUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington, or to the Works, Dunball Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be covered in a cycle of days. A finer quality, if rose a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail at his wharf, 8, Upper Thames street, London; and also at the manufactory, Faversham, Kent. N.B. These Cements supplied for shipment, on advantageous terms.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Isle of Dogs, for the manufacture of Portland CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Millwall, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall Isle of Dogs. Warehouse, No. 1, Wharf, Paddington-basin

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs ROBINS and Co. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and Co. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr. THOMAS WEEKS.
Accents in London, Messrs. GEORGE PUTTER and CO., Limemerchants, Purfleet-wharf, Earl street, Blackfriars, and No. 19, North-wharf-road, Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Basil and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce on demand the canal cauger's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 18, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead, whilst consumption of material is less than for one coat. It dries very fast and hard.
HUBBUCK'S STONE COLOUR PAINT is the same as the former, at three fourths the price.
HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for iron ships and iron exposed to salt water; neither bilge water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, sham'ed, Brunswick, London. Patent; and when so marked the quality is guaranteed
HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a preventation from rust and incrustation. Timber coated with this Enamel is not attacked by the worm neither do barnacles attach to it.
Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.
OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

CHARLES RICHARDSON,
3 & 6, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS COPINGS, PIPES, &c

3 & 6 South Wharf, Paddington.

NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.
All applications for prices and terms will meet with prompt attention
N.B. Please observe the lime is ground at the works, not in London.

GREY STONE LIME WHARFS,
12, UPPER GROUND-STREET, Blackfriars (Surrey side),
7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME to any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 8/6d per ton
Small ditto, ditto, 6d. per ton
Barges loaded in a few minutes.
Woulbam-hall Grey Stone Lime Works, on the Medway, near Rochester

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump lime, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime Portland, Bath and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick

GREY and CHALK LIME.—W. T. ALLUM and Co.'s Lime from the firm of Thos. Green and Co.'s Grey and Chalk Lime Burners on the Medway. Agents for the Woulbam Patent Portland Cement, and Dealers in Roman Cement, Plaster of Paris, &c. &c. Wharf and Office road

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for asphaltic Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick making, &c. &c. sent by barge from Messrs. MERSON and CO.'s works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station in the London and Southend and Eastern Counties lines, or can be now connected with them. Vessels of 500 to 600 tons can lay along side the wharves at Grays. At MERSON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire good, both Welsh and Newcastle Fire-clay, Flare burnt Lime, and Marble and Temper Lime; and direct Lime in casks from Aberthaw, casks, &c. for exportation
General Office—No. 4, GEORGE YARD, LOMBARD-STREET.
Letters addressed to Grays, Essex, will meet with immediate attention

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.
Malm Place half-washed Stock and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facings.
Apply to HENRY DODD and CO. at the Countess-house, Hoxton Brickfield, Green-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand of a proved quality constantly on sale upon reasonable terms. This Sand, from its not containing any calcareous matter, is acknowledged to be preferable to river sand

BLUE BRICKS and TILES, of superior quality, and in great variety of mould, for ornamental work, paving, coping, and general purposes. GEO. C. RYLAND, Hailstone Wharf, Crescent, Birmingham

FIRE-BRICKS, LUMPS, TILES, &c.—FURNACE-BUILDERS, GAS COMPANIES, and CONSUMERS of these Goods generally, can be SUPPLIED with every description from our Wharf here, on the most advantageous terms.—TRAGAIR and Co.'s, Bankside, Southwark.

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keene's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c

TO BE SOLD, cheap, the BRICKWORK of TWO BOILERS. Also the Boilers, Furnace Fittings, &c., nearly new.—Apply at 127, High-street, Shoreditch, opposite the Church.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury New-park, would be willing to enter into arrangements with builders and others for supplying first class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Bell's Farm, Stoke Newington Green.

THE BEST HERTFORDSHIRE MALM SECONDS:
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED PERFORATED BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey Canal-bridge, Old Kent-road Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS for SALE.—Apply to Mr. MARSH'S Agent, on the Field, Wellsroad, Sydenham; or at Mr. MARSH'S Offices, Charlotte-row, Mansion-House

TO BRICK MERCHANTS.
WANTED, TWO HUNDRED and FIFTY THOUSAND of STOCKS, half-and halves, delivered into carts at the nearest wharf to the York and Albany, Camden-town. Lowest price and terms to Mr. R. H. MOORE, Architect, 4, Queen's terrace, Primrose hill.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.
BRICK MOULDS (improved), Steel-face Stocks, and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References who is using Brick Mill Work and Implements.—J. LEACH, Millwright and Engineer, 5, St. Peter's-square, Hackney-road, London.

TO POTTERS, BRICKMAKERS, and OTHERS.—TO BE LET, ELEVEN ACRES of LAND, containing an inexhaustible supply of pipe-clay, brick-earth, fire-clay, and fine sand, situate near several commercial towns, in the county of Bucks. The whole of the erections and plant can be rented at a moderate sum. Coming in for stock very trifling.—Specimens can be seen, and further particulars had, by application to Mr. S. BROAD, Auctioneer and Valuer, Above Bar, Southampton

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY. Entrance, Norwood end, Palace-road. BRICKS of the first class. Red Kiln Bricks Cutters, Dressings, Facings, and Paviors, Clamped ditto, Yellow and Pale Seconds, Grey Seconds, Picktops, Washed Stocks, Stocks, and Place. Apply to TRUMAN and CO. Norwood Lodge, Palace-road, Roupell park, Lower Norwood, Surrey

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Warlingham close to the field, leave at 6 and 9.30 a.m. and 3 p.m.; return at 9.35 a.m. and 5.6 and 7.55 p.m.
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TO BRICKMAKERS, BALLAST BURNERS, and OTHERS.—GAS BREEZE, of superior quality, TO BE SOLD, in large or small quantities, on the Regent's Canal. Apply to RANDELL and EVANS, Ide Works, Maiden-lane, King's cross.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, affording a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

MAW and CO.'S ENCAUSTIC TILE PAVEMENTS, form a highly decorative and durable substitute for ordinary floorings, and their enrichable oil cloth coverings, for entrance halls, porches, conservatories, verandahs, passages, &c. &c. Priced pattern-book forwarded, post-free, and without charge, accompanied by estimates, on application to MAW and CO. Benthall Works, Broseley, Salop.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Bakeries, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability, Slabs and Tiles for Fireplaces and Hearths, Coverings for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 31, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REWARD OF THE JURIES," page 581, of the Great Exhibition, rank the Manufactories known as long as "The Tileries." Tunstall, Staffordshire, as the first of the kind in the world.

PANTILES, PAVINGS, &c.—J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 32s. 6d. per 1,000; 9 inch paving, 8 inch paving, at 57s. 6d. per 1,000; plain tiles, at 30s. per 1,000, delivered. Cash prices.—Delivered on trucks in London or Eastern Counties Railway.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 15, South Wharf, Paddington. Manufacturers of Improved Plain and Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for sanitary and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted imperishable, and to resist all acids and exhalations.
*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

A CLERK of WORKS, with the highest testimonials, is open to a RE-ENGAGEMENT.—Address, D. S. 2 Beaumont-street, Marylebone.

A GRAINER wishes for a permanent SITUATION. Specimens can be shown. He will fill up his time with Painting, &c. Country preferred.—Address, B. Office of "The Builder."

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

FREEHOLD LAND.—A few ACRES WANTED, on Lease for about 80 years, for the erection of a small rural residence. Distance from London not to exceed 15 miles, and near a Station.—Direct, stating rent per annum, and situation, with order to view, to O. P. the Housekeeper, 50, King-street, Chepside.

FREEHOLD BUILDING LAND TO BE SOLD. A very eligible Plot for the erection of about Sixty Houses, which fronts to three roads, and has four frontages. The sewers are already built, and the neighbourhood is far advanced. Inquire of X. Y. care of Mr. Baker, Ironmonger, Camden-town.

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FREEHOLD BUILDING LAND at Norwood, Anerley-grove, and Palace-road Estates.—TO BE LET, or SOLD, eligible BUILDING SITES, in close proximity with the Crystal Palace and its railways.—At Hackney, within three minutes' walk of the Victoria-park station for ninety-five years at FORTY PLOTS, at ground-rents from 18s. per plot per annum upwards, being nearly equal to freehold. Roads and sewers on all the estates complete, and liberal advances to respectable builders.—Apply to Mr. JAS. BRAGG, Devonshire Villa, Rotherhithe; at No. 96 Star-street, Edgware-road; and Vale Cottage, Anerley, near the land opposite the Crystal Palace Railway station.

N.B.—A Plot of Freehold Land, in an eligible situation, with about 3,000 feet of building frontage, to be Let for 100 years, at one shilling per foot per annum, nearly 200 feet deep, with privilege of purchasing the freehold.

HAMPTON-COURT.—About EIGHT ACRES of BUILDING GROUND TO BE LET, on Ninety-nine Years' Lease, or SOLD, in small or large Plots, near the above palace and railway, at moderate rents and prices. An advance of say 30 per cent. on the outlay would be made to respectable parties taking a considerable frontage. For terms, &c. apply to Mr F LETT, Architect, 36, Essex-street, Strand.

STRATFORD, ESSEX.—FREEHOLD LAND, within three miles of London, exonerated from land-tax and free of tithe, TO BE LET, on Lease, for a long term of years, in large or small plots, suitable for manufactories or building purposes.—Apply to Mr. W. H. DEAN, Auctioneer and Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, 37, Bloomsbury-square, London.

NEW WINDSOR ESTATE.—Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences, with Stabling, which are much needed in this beautiful locality. The situation is the finest in or near Windsor, abutting on the Park and Long Walk, and commanding a splendid view of the Castle. Within ten minutes of the Great Western and fifteen minutes' walk of the South-Western Railway Stations. Advances can be had by responsible parties. For particulars apply to Mr. WILLIAM SIM, Architect and Surveyor, 3, Danes-Inn, Strand.

TO BUILDERS AND OTHERS.
CLAPHAM-COMMON.—TO BE SOLD or LET (with the option to purchase hereafter), FREEHOLD LAND in this very superior and delightful locality, in plots, suitable for the erection of villa and other first-class residences.—Apply by letter, post paid, to A. B. care of Mr. Evans, Stationer, &c. Clapham Old Town.

BUILDING LAND, in eligible situations. One lot is in Kentish-town, partly covered; the other is at a railway station, eight miles from town, where there is an excellent opening for a good Public-house and Stabling, at the Station-gate. And also for semi-detached VILLAS, TO LET, at about 30l. to 35l. per annum. Money could be had if required.—Apply to THOMAS NUNN and SONS, 21, Lamb's Conduit-street, Foundling Hospital.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety-nine years, with power of enfranchisement. Plots from one to four acres for large villas residences; smaller plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 5, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Grays-inn-square.

WANTED to PURCHASE, a BUILDING SITE or PREMISES in London, west of Temple-bar (either freehold or long leasehold), in or near a leading thoroughfare in a central situation, suitable for a charitable institution.—Letters (post paid), stating full particulars, to be addressed to Mr. E. GOULD, 8, Craig's-court, Charing-cross.

BUSINESS PREMISES.—Capital Manufacturing Premises TO BE LET, with or without House, suitable for a Carpenter, Builder, Cabinet or Pianoforte Maker, situate within three minutes' walk of Oxford-street and Regent-street. A valuable opportunity for any person commencing business in the Carpentering line, as a respectable tenant would be introduced to the customers of a gentleman retiring. Address to D. G. 14, Duke-street, Portland-place.

TO BUILDERS.—VILLA RESIDENCE, SOUTHPORT.—Persons desirous of TENDERING for the ERECTION of a VILLA in this neighbourhood, can inspect plans, specifications, and conditions of contract between the hours of TEN and FOUR o'clock), at the Office of Mr. RICHARD WRIGHT, Agent, Southport, to whom sealed TENDERS are to be delivered on or before SATURDAY, 23rd AUGUST. The advertiser does not bind himself to accept the lowest Tender.

WHARF and PREMISES.—TO BE LET (or the Lease to be Sold), a WHARF, on the Regent's-canal, near the Victoria-park, having a frontage of about 140 feet, with large shed (the upper part adapted for a granary), dwelling-house, and range of stabling.—Apply to Mr. ST. QUINTIN, Auctioneer, 36, Royal Exchange.

WHARFS and STORES in the Adelphi.—TO BE LET, for a term, or by the year, together or separately, TWO WHARFS, each having house, counting-house, stores, and stabling; one with dock space for fifteen barges and the other for twenty-five barges, and each with a dry-dock. Rent moderate. Possession immediate. Reference for further particulars to be made to Mr. C. PALMER, General Railway Office, 4, Gresham-street, City.

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THE EXCLUSIVE SUPPLY OF SEYSSEL ASPHALTE (FRANGY)
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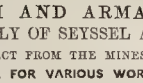
ORSI AND ARMANI.
THEIR PATENT METALLIC LAVA IS FIFTEEN PER CENT. CHEAPER THAN THE GENUINE SEYSSEL ASPHALTE OF MESSRS. O. AND A.
OR THIRTY PER CENT. LOWER THAN ANY OTHER MATERIAL CALLED BITUMEN OR ASPHALTE
Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

CHEAP AND DURABLE ROOFING.
By Her Majesty's  Royal Letters Patent.

F. McNEILL and CO. of LAMB'S-BUILDINGS, BUNHILL-ROW, LONDON, Manufacturers and only Patentees of
THE PATENT ASPHALTED FELT, FOR ROOFING HOUSES, VERANDAHS, SHEDS, &c.
Patronized by
HER MAJESTY'S WOODS AND FORESTS,
HER MAJESTY'S COMMISSION OF CUSTOMS,
HONOURABLE EAST-INDIA COMPANY,
HONOURABLE BOARD OF ORDNANCE,
HER MAJESTY'S ESTATE, ISLE OF WIGHT,
ROYAL BOTANICAL GARDENS, REGENT'S PARK,
And by the most eminent members of the Royal Agricultural Societies of England, Scotland, and Ireland; at whose great national shows it has been exhibited, and OBTAINED THE PRIZE, for being the best and cheapest article for roofing; also used for under slates at the Royal Agricultural Society's House, in Hanover-square. Its advantages are lightness, warmth, durability, and economy it is impervious to rain, snow, and frost, and a non conductor of heat and sound. The Felt can be cut to any length, by 32 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples, with full directions as to its uses and the manner of applying it, with TESTIMONIALS, some of them of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 25 per cent. in fuel is effected. The TRADE are respectfully enjoined to send their orders DIRECT to the FACTORY, as the surest means of being supplied with the genuine article, and in lengths best suited to their roofs. They are likewise CAUTIONED AGAINST MISREPRESENTATION, as THE ONLY WORKS in Great Britain where the above roofing is made are F. McNEILL and CO.'s Manufactories, LAMB'S-BUILDINGS, BUNHILL-ROW. Roofs covered with the Felt to be seen at the Factory, also the new Vice-Chancellor's Courts, the passages and offices leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

TO BE LET, or LEASE TO BE SOLD, very extensive PREMISES in Bermondsey, and within ten minutes' walk of London bridge, well adapted for a contractor or builder. They consist of a large yard, twelve-roomed house, including two offices, with garden in rear, joiners' shop for twenty to thirty benches, scaffolding for deals, &c. upwards of 200 feet long, two saw-pits, two large sheds, stabling for twenty horses, the whole containing nearly an acre of ground, and will be let at a very low rent.—Apply to ROBERT WARD and SON, Timber Merchants, 8, Oxford-street.

ONE HUNDRED ACRES of LAND, with good newly erected HOUSE, TO BE SOLD, one mile from Farnham, and three from Aldershott Camp. The house is on a dry soil, pleasantly situate in the centre of its own grounds, and contains drawing and dining rooms, five bedrooms, kitchen, washhouse and cellar, capacious out-offices, with man's room over, and convenient offices. The land is in a ring-fence, 40 acres of which are planted with fir-trees now of four years' growth, about 50 acres in cultivation, and the remainder in heath. Price, 2,500 guineas.—Apply to Mr. RUDGE, Estate Agent, Farnham.

BERKHAMPSTEAD.—FREEHOLD LAND.—TWELVE PLOTS for SALE, adapted for villas of moderate size; soil, situation, and aspect rarely equalled. A first-class railway ticket for twenty-one years is offered to persons building houses of a suitable character, and of the value of 50l. a year. The Free Grammar School also affords very great advantages to residents.—For a plan of the land and further particulars, apply to Mr. BALDWIN, High-street, Berkhampstead.

TO BUILDERS.—A BUSINESS TO BE SOLD, that has been established forty years, in a respectable neighbourhood, within 2½ miles from the bridges, on the Surrey side. Purchase-money, 150l. including scaffolding and other utensils. The owner is about to retire from business.—Apply to Mr. PARRY, 5, Dean's-row, Walworth-road.

GRAINING by MACHINERY.—The present system of graining is far surpassed by the use of BELLAMY'S PATENT GRAINING MACHINES, by which an ordinary workman can produce first-class work, and at an immense saving of time. The designs are perfect imitations of the choicest specimens of fancy woods and patterns of the first artists. The Patent Graining Company are now prepared with a large and well-assorted stock of instruments, which they offer to grainers, painters, builders, and others without royalty.
Grained paper in imitation of all kinds of fancy woods of the choicest descriptions, in the piece, or in sets for panels, &c. wholesale and for exportation. Pattern-boards and cards for the trade in great variety.
Painters, Grainers, Decorators, Merchants, and others are respectfully invited to inspect the patterns, and see the process at the Company's Offices, 30, Minories, London.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Quoin Blocks, &c.
Tividale, Staffordshire.

TO WATER COMPANIES AND PLUMBERS.
HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.
LEAD, IRON, and TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

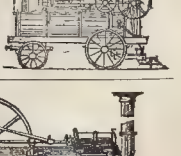
R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.
Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.
Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

TO BUILDERS AND PLUMBERS.
The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP, which is recommended for the simplicity of its construction, and the ease with which it works.
By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the prices considerably less than Pumps made on the old plan.
Beer and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.
JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.
Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,
Engineers and Contractors,
John's-place, Pentland-street, Southwark, London.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Maufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

FACING FOR BUILDINGS COMPANY—TAYLOR'S PATENT.

TO ARCHITECTS AND OTHERS WHO INTEND BUILDING.

BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,

REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL. STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond stones, and the Stone Ashlar never improperly weighted by the settlement of the Mortar Joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences. It can be had ready for fixing from the quarries at a small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and full particulars obtained, of

Mr. JOHN TAYLOR, ARCHITECT, OFFICES OF THE COMPANY, 40, KING-STREET, CORNER OF CHEAPSIDE.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.

CHARLES WM. WATERLOW AND CO.

MANUFACTURING JOINERS,

121, BUNHILL-ROW, FINSBURY, AND BOW, MIDDLESEX.

N.B. A large Stock of Joinery and Mouldings, suitable for immediate use, at the Warehouse, Bunhill-row.

SANDS AND EMERY,

CURSITOR-STREET, CHANCERY-LANE.

MANUFACTURED JOINERS' WORK AND MOULDINGS OF EVERY DESCRIPTION ON THE SHORTEST NOTICE, AND AT THE LOWEST PRICES, PACKED AND FORWARDED TO ALL PARTS OF THE COUNTRY.

Lists of Prices and Estimates forwarded on application.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded on receipt of a stamped Direction. Manufactory of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, Complete, with Seat and Rim, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES at their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufactures, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 315, OXFORD-STREET.

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 326, Oxford-street.
HELY and WARING, Managers.

CCC CROWN, 18 Tables, per crate, 30s.; H 15 oz. SHEET, 3d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 9d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Tiles and Slates from 6d. each. Sashes primed and glazed, 2d. per foot. HELY'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.
Catalogues and Prospectuses free.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 16ths, 38s.; 48ths, 30s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 22 by 14, 2d.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c., Sheet Lead, Pipe, White Lead, Oils, Colours, &c.
G. FARMILOE and SON, 118, St. John-street, West Smithfield.

BELGIAN WINDOW-GLASS, Wholesale and for Exportation.—LAROCHE, PUGNI, and CO. Manufacturers and Importers of Belgian, Plate, Sheet, Crystal, Coloured, and every other description of foreign Glass, respectfully inform purchasers, dealers, &c. that they have now on sale a large supply of every kind of window glass suitable for the English market. Engraved, Embossed, and Ornamental Glass; Antique, Rough, Cathedral, and other Glasses for Stainers. Estimates given and contracts supplied to any amount. Warehouse, 3, Old Trinity House, Water Lane, Lower Thames-street.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 26, Soho-square.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot. Also Patented Rough and Ribbed Plate, Rough Plate, Belgian Sheet Glass, in Cases 200 feet each, 32nds, 38s.; 48ths, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½d. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3½d. per foot. Crown and Sheet, British, and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

IMPROVED REVOLVING SHUTTERS. FRANCIS RICKABY and JOHN are now enabled to offer the above at the following reduced prices:—IRON SHUTTERS, double riveted, with machine-cut worm gear, complete, at 4s. 6d. per foot. WOOD SHUTTERS, with metal rear complete, at 3s. 6d. per foot. Machine-drawn Brass Sash Bar and Sash Board Plates made to any desired size. Grayle-terrace, Holborn.

DUNCAN and CO. MANUFACTURING JOINERS, 81, Lower Marsh, and 6, Johnson-street, Lambeth.—Joinery of all descriptions, with seasoned materials and sound workmanship, supplied on the shortest notice and lowest possible prices. A detailed list forwarded on application, prepaid. A quantity of doors, &c. in stock, suitable for immediate use.

JAMES FISHER and CO. 56 and 57, Cornwall-road, Lambeth, Manufacturers of Joiners' Shop Fronts and Office Fittings of the shortest notice. Sash-bars, Frames, from 7d. per foot; four-panel doors, from 6s. each. A quantity of well seasoned doors and sashes, &c. in stock.—Estimates and lists of prices on application.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 119, Broadwall.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Perron Facing Bricks, Coping, Kitt-heads, Colour Slabs, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent impermeable Terra-Cotta, at Millwall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street Paddington basin.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, CHADBOLT, and CO.'S, St. James's and Thorulhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

SALT-GLAZED STONEWARE PIPES, BENDS, JUNCTIONS, CLOSET-PANS

TRAPS, &c. at the

NEAR POOLE, DORSET.

These Pipes being made under immense pressure by patented machinery, and burnt by intense heat to an unusual degree of hardness, are very far superior to the best ware hitherto manufactured in Hants and Dorset; they are made of clay of the finest quality, the produce of the estate, and will bear comparison with any Pipes in the kingdom, and can be had upon application to

THE AGENTS:—

Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth, London;
Mr. J. S. HUDSON, the Pottery, Bournemouth, Poole;

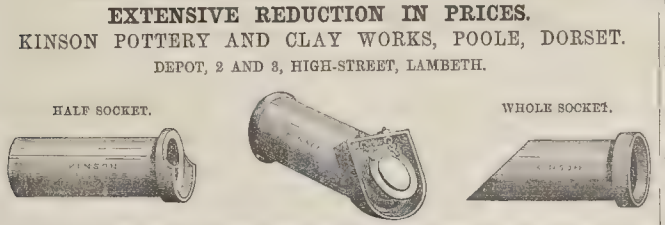
Where a large stock is always kept on hand.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.



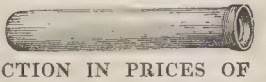
Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

PATENT DRAIN-PIPES, UNGLAZED

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, and Near-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.
4	"	"	"	"	4d. "
6	"	"	"	"	6d. "
9	"	"	"	"	8d. "
12	"	"	"	"	1s. 3d. "
15	"	"	"	"	2s. 0d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO LOCAL BOARDS OF HEALTH AND GAS AND WATER COMPANIES.

FREEMAN ROE'S PATENT SLUICE-

VALVES, acknowledged to be the best in use; hydrants or fire-plugs; wells sunk and bored; the hydraulic ram; fountains; pumps of every description. Estimates prepared for all works connected with hydraulics or gas. Pumps let on hire.

W. F ROE, late FREEMAN ROE, Hydraulic and Gas Engineer, 70, Strand, London.

STONE PIPES.—GLAZED STONEWARE

PIPES of the most superior quality, at REDUCED PRICES. E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.

SUPERIOR GLAZED STONEWARE

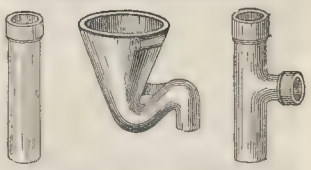
DRAIN-PIPES, &c.—The attention of Boards of Works, Contractors, and others, is invited to the MANUFACTURES of the DARFIELD (Yorkshire) STONE POTTERIES, with which for even cleanness of finish and imperishable quality few can compare. Tubes, bends, junctions, grids and stench traps, closet-pans, syphons, yard and street gully-sinks, with every article applicable to sanitary works, in any quantity, and immediately available at the London Depôt, No. 4 Warehouse, Goods Station, Great Northern Railway. City Offices, 27, Bucklersbury, City, where Illustrated Price Lists can be obtained

E. B. BEAUMONT, Proprietor.
J. D. JONES, Agent.

N.B.—Chimney-pots, roofing-tiles, ridgings, wall copings, flooring and paving tiles, fire-bricks, oven-bricks, bakers' lumps, cinder oven lumps and quarries.

GREAT REDUCTION in the PRICE of

STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Faxon Wharf, 81, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb 11, 1856.

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LAVATORY AND CLOSET VALVE

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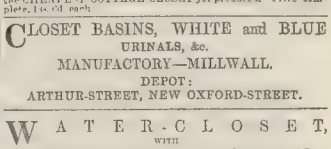

Is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 10 to 200 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 14s. 6d. each.

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WATER-CLOSET,

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FOR HIRE, a SPACIOUS TENT, adapted

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Apply to H. PIGGOTT, 113, Fore-street, City.

CARTS, VANS, WAGGONS, LADDERS,

BARROWS, &c.—Price Lists for the undermentioned may be had on application:—

No. 1. Carts, Vans, Waggons, Drays, and Trucks.
No. 2. Wheels and Repairs.
No. 3. Ladders, Barrows, &c.
No. 4. Hire of ditto.

G. ELL, 3, Tottenham-court, and 3, Palace-row, New-road, St. Pancras, near the Hampstead-road.

SALES BY AUCTION.

Seventh Sale of the Surplus Property of the North London Railway Company.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, on TUESDAY, AUGUST 19, at TWELVE, in 46 lots, numerous valuable Plots of FREEHOLD BUILDING LAND, fronting the Church-road, in the parish of St. John, Hackney. Also 13 lots of highly desirable Building Land, fronting the St Paul's road, and close to the railway station at Highbury. Some well secured Ground Rents, and several desirable Shops, with tenements, let to respectable tenants, at moderate rents, situate in Brecknock-place, Great Randolph-street, Great College-street, Frances-terrace, near the railway station, Camden-town.—Particulars may be obtained of Messrs. TURRELL, PAINE, and LAYTON, Solicitor, Guildhall-yard; at the Auction Mart; and of Messrs. BEADEL and SONS, 26 Gresham-street.

No. 10, Marlborough-road, St John's-wood. First-class Leasehold Investment

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the MART, on TUESDAY, AUGUST 19, at TWELVE, in one lot, a valuable VILLA RESIDENCE, known as Latchell Villa, and being No. 10, Marlborough road, St. John's-wood; held for a term of 76 years, from Michaelmas, 1845, at a peppercorn rent, and at present let to a respectable tenant, at the rental of £32 per annum. Particulars may be obtained at the Auction Mart; and of Messrs. BEADEL and SONS, 26, Gresham-street, London.

BANKRUPTCY.

MR. ALFRED DAY has received instructions from Messrs. Roland and Evans, bankrupts, to SELL by AUCTION on the PREMISES, Peckford-street and Arling-ton-street New North-road, on TUESDAY AUGUST 26, 1856, at TWELVE, (unless in the reserve, the FIRST PORTION of the STOCK and UTENSILS in TRADE of a BUILDER, comprising an 8-horse power steam-engine, a 3-horse ditto, a 10-horse power boiler, circular saws, tables, up and down frame ditto, planing tables, grooving-machine, mortise ditto, moulding ditto, tenoning ditto, drying apparatus, Spanish mahogany plank, 70 pine plank, 1000 yellow deals, Dantzic and Christiana ditto, two square of flooring, 20 stacks of timber, 3 000 feet of sounding, sheet and pipe lead, 5,000 scaffold boards, 1,500 scaffold boards, ditto putlocks, 5 000 dozen of cord, 36 ladders, 31 firkins of white-lead, turps, oils, colours, glass paper, paperhangings, four excellent cart-horses, two nag horses, three brick-carts, five spring-carts, spring van, timber carriages, several sets of harness, ironmongery, bags of nails and brads, pullies, stash-weights, and fasteuings; bolts, caps, rain-water pipe, window glass, seventy carpenter's benches, cramps, erection of force, troughs, blocks, stakes, bellows, vices, drilling-machine, scales, weighing-machine, quantity of iron, iron frames, blocks, and falls; five powerful crabs, Caen, Bath, Portland, and Kentish rag stones, in blocks and landings; pan tiles, office fittings, sashes, and effects. May be viewed on Saturday and Monday preceding the sale. Catalogues to be had of Messrs. Abbott and Fitzroy, Solicitors, 16 Gresham-street, City: J. Nicholson, Esq. Official Assignee, 34, Basinghall-street; and of the Auctioneer, City-terrace, City-road, near the Eagle Tavern.

LEYTONSTONE, ESSEX, TO RAILWAY CONTRACTORS, BUILDERS, and OTHERS.—Important Sale of Railway Materials.

MR. J. GOWER has been directed by Thos. Brassey, esq. to SELL by AUCTION at the STATION, Leytonstone, Essex, on WEDNESDAY, AUGUST 27, the residue STOCK of HORSES, and his entire PLANT, comprising 190 tons contractors' rails, 42lbs to the yard; 340 earth wagons, timber dogs, dobbin, two wheel and other carts, 500 sleepers, wheels and axles; a quantity of wheeling planks, wheel-barrows, battens centres, pug-mills, and brickmaking materials, temporary fencing, crabs, weighing-machines, force, iron, and other pumps, box-bones, gang-ladders, an immense quantity of boarding slabs and miscellaneous timber, firewood, and other materials, too numerous for insertion. The temporary buildings, comprising stabling for upwards of 200 horses, smiths' and carpenters' shops, stores, cottages and office, carpenters and smiths' tools, with forges and fittings complete cast and wrought iron, harness, &c., which has been erected in forming the Woodford and Loughton Railway, sold in consequence of the same being completed and open for traffic. Leytonstone is within two miles of Stratford, and parties can view the premises and assist themselves free of carriage to all parts of the country, at a cheap rate of carriage.—On view two days prior. Catalogues had on the Works at the Station, and of Mr. Gower, at his Repository, Barbican, London.

REDHILL, near REIGATE, SURREY.—Valuable Freehold Building Land, or Villa Sites, containing about Eight Acres

MESSRS. NORTON, HOGGART, and TRIST have received instructions to OFFER for SALE, at the MART, on THURSDAY, AUGUST 28, at TWELVE, in one lot, a very valuable ENCLOSURE of FREEHOLD BUILDING LAND, containing nearly eight acres, situate fronting the estates of Lord Monson and Norman Wilkinson, Esq. on the road from Redhill to Reigate, and in the parish of Nutfield, a delightful and fine healthy part of the country, and the pleasant walks from the Redhill Station on the Brighton and South-Eastern Railways, and about three-quarters of an hour's ride from the metropolis. The property is on the rise of a hill, commands extensive views of the surrounding highly picturesque scenery, it has an important frontage of 500 feet to the road, extending 1100 feet in depth, and is admirably adapted for the erection of a gentleman's residence of a superior class, or for small semi-detached villas.—May be viewed, and particulars had at the Queen's Head Inn, Nutfield; at Laker's Hotel, Redhill; the White Hart, Reigate; of Messrs. Evernden, Wood, and Darvill, Solicitors, 22 and 23, Clement's-inn, Strand; of Mr. G. Pennington, Esq. 91, Newman-street, Oxford-street; at the Mart; and of Messrs. Norton, Hoggart, and Trist, 42, Old Broad-street, Royal Exchange.

HIGHGATE-HILL, AT THE JUNCTION OF MAIDEN-LANE.—Very valuable Freehold Estate, comprising a capital old-fashioned Family Residence, with Stabling, Gardens, and Paddocks, the whole comprising about SIX ACRES, full of said and brick earth, and, from its position, one of the most important and valuable building sites in the vicinity of London

MESSRS. FAREBROTHER, CLARK, and LAY are instructed to present for SALE, at GARRAWAYS COFFEE-HOUSE, on WEDNESDAY, the 20th of AUGUST, at TWELVE o'clock, in one lot, a very valuable FREEHOLD ESTATE, situate on Highgate-hill, at the junction with Maiden-lane, and close to the town; comprising a capital old-fashioned family residence, containing three parts and drawing rooms, nursery, seven bedrooms, and usual domestic offices, with coach-house, stabling, and brewhouse. Adjoining the residence is a coachmen's cottage, opening to the lawn and pleasure grounds, kitchen garden, paddock, and productive brick-field, the whole containing about six acres. The views from the property, over London and more extensive and from the great frontage, both to Highgate-hill and Maiden-lane, presents one of the most eligible building sites ever offered. The estate is full of brick earth and sand, and, being raised, the whole might be easily converted to brick purposes. Building plans may be viewed by cards only, whilst, with particulars and plans, may be had of D. Hudson, Esq. Solicitor, Gresham-street, City; at Garraway's; and at the Offices of Messrs. Farebrother, Clark, and Lay, Lancaster-place, Strand.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on the PREMISES, Bridge-street, Greenwich, on TUESDAY, AUGUST 19, at ELEVEN, in lots, without reserve, the TOOLS and STOCK in TRADE of Mr. MOORE, including a 10-inch self-acting screw-cutting lathe, with 18 feet 6 inch bed, by Sandilands, Beacock, and Tannett; one 10-inch break lathe; self-acting planing machine to take in 10 feet by 3 feet, powerful self-acting boring-mill, one 15-inch double-geared surfacing lathe, small screw-cutting lathe, several small lathes of various dimensions, self-acting screw-cutting machine, drilling machine, two high pressure pendulous steam-engines, of 5 horse and 10 horse power, two steam boilers, a new horizontal steam engine of 2½ horse power, new washing machine, portable forges, blowing machine, vices, benches, and tools, a valuable assortment of patterns. Rend other requisites for the business.—To be viewed on MONDAY previous to the sale, when catalogues may be had on the Premises; of Messrs. Linton and Mason, Solicitors, 81, Basinghall-street; and of Messrs. Fuller and Horsey, Billiter-street, City.

SALES BY AUCTION.

TO BUILDERS, CONTRACTORS, SAW-MILL PROPRIETORS, ENGINEERS, AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, at the FACTORY, Ranelagh-road, Thames-bank, Pimlico, on MONDAY, SEPTEMBER 8, and following day, at ELEVEN, in lots, without reserve, the valuable MACHINERY, Plant, and Tools of a Builder's Factory, by the best makers, and with all the modern improvements, including a very powerful rack bench with saws and gearing two iron circular saw benches, one iron vertical-saw frame, planing-machine by Parsons, an American thicknessing-machine, American mortising, tenoning mitreing, and moulding machines, a very superior double-cyl inder steam-engine of 25 horse power, two tubular steam-boilers, 90 feet turned shafting with riggers and straps, a powerful overhead travelling crane, two self-acting screwing-machines (one by Whitworth) to cut from 2 inch to 14 inch bolts and from 2 inch to 2 inches, a self acting slide lathe with iron bed 20 feet long, vertical drilling-machine, two cutting and punching presses, two smaller lathes, fan and pipes, set three-throw pumps with metal barrels, gas fittings, fifty vices 5 inches, cramps, screw jacks, stocks and dies and steel tools, 200 scaffold boards, fifty navvy-barrows, crab-cranes, trolly, six smiths' forges, anvils, smiths' tools, an assortment of valuable patterns, and many other effects. To be viewed on Friday and Saturday previous to the sale, when catalogues at 6d. each may be had at the Works, and of Messrs. Fuller and Horsey, Billiter-street, City.

TO BUILDERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, at the FACTORY, Ranelagh-road, Thames-bank, Pimlico, on WEDNESDAY, SEPTEMBER 10th, and following day, at ELEVEN, the STOCK of well seasoned DEALS, fir, from 1 inch to 9 inches, spruce feet 1 inch, match boards, 15 feet run oak and mahogany, 20 feet run spruce and pine plank, 500 feet mahogany and wainscot plank, 40 cubic feet Dantzic timber, 10 squares 11 inch pre-ared flooring, 50 feet moulding and beading, 150 panelled doors, 200 pairs sashes and frames, 500 oak sills, 100 prepared window linings, a stock of builders' ironmongery in oak pallets, hinges, bolts, locks, nails, screws, files, &c. 3 tons best round rod iron, 5 cwt. gun metal, 1 ton sheet iron, brass cabinet work, and other effects.—To be viewed on Friday and Saturday previous to the Sale, when catalogues at 6d. each may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

TO ENGINEERS AND OTHERS

MESSRS. FULLER and HORSEY are instructed by the Proprietor, who is retiring to SELL by AUCTION, on the PREMISES, Herbert-road, Waterloo-road, on TUESDAY, SEPTEMBER 23, and following days, at ELEVEN, in lots, without reserve the MACHINERY, Tools, and Stock in-Trade of a LATHE and TOOL MAKER (the tools principally by Smith Beacock, and Tannett, of Leeds), including fourteen self-acting lathes, one 18-inch and one 10 inch screw-cutting, with beds 22 feet and 12 feet long, seven screw-cutting, from 58 inches to 84 inches centre; four surfacing lathes, to take in surfaces from 4 feet to 7 feet diameter; two boring-mills, thirty engine and hand-turning lathes, with slides; five self-acting planing-machines, the largest to take in 3 feet wide and 12 feet long; three self-acting shaping-machines, three self-acting drilling-machines, slotting machine, screwing machine, wheel-cutting machine, oscillating steam-engine of 14-horse power, Cornish steam boiler, 18 feet long; 300 feet turned bright shafting, overhead motions, riggers, straps, and driving gear; fifty steel work-benches, boring-bars and heads, steel tools stocks, and dies; forges, anvils, &c. 3 lots of fine cast and shear steel, ten tons of bar and rod iron, and numerous other effects.—To be viewed on Saturday and Monday previous to the sale, when catalogues may be had on the Premises; or of Messrs. Fuller and Horsey, Billiter-street, City.

Highly finished Condensing Steam-Engine, by Naysmyth.

MESSRS. FULLER and HORSEY are instructed by the Right Honourable the Lords Commissioner of her Majesty's Board of Works to SELL by AUCTION, at HERBERT'S BUILDINGS, Waterloo-road, on WEDNESDAY, SEPTEMBER 24, at ELEVEN, the well finished direct acting, CONDENSING STEAM-ENGINE, by Naysmyth, with launch expander, 2 feet stroke, D slide-valve, throttle-valve and governors, air-pump and two feed pumps, 12 inch and 6 inch metal eccentric, bright wrought-iron crank-shaft, fly-wheel, condenser, and apparatus, made for the Houses of Parliament.—To be viewed on Tuesday previous to the sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

IMPORTANT WATER-SIDE PROPERTY, ON THE THAMES, IN THE CITY OF LONDON

MESSRS. FULLER and HORSEY are instructed by William Crawshay, Esq. to SELL by AUCTION, on WEDNESDAY, OCTOBER 15, at TWELVE, at the MART (unless an acceptable offer is previously made by private contract), the valuable and important FREEHOLD WHARF, Upper Thames-street, in the city of London, having a frontage of 133 feet, and occupying a superficial area of about 34,000 square feet, a site unrivalled in the metropolis, either as a depôt for landing and housing goods or for carrying on any wholesale business for which extensive waterside premises are desirable. George-yard is universally known as the London establishment of Mr. Crawshay, the eminent ironmaster, and has been in the occupation of himself and predecessors for more than a century. The trade carried on ranks among the first in the City, the returns are very large, and, to any firm wishing to occupy the premises for the same business, a large proportion of the connexion may doubtless be secured. In the year 1842 the occupier expended many thousands of pounds in the erection of a massive pile of buildings, 100 feet in length by 50 feet in width, abutting to the river, the structure is of the most substantial character, and, if needful for the purposes of warehousing goods, the foundation and walls are quite equal to support an addition of several stories above those already erected. The building is one lofty ground-floor, with gallery supported on iron girders and columns, and constructed to carry any weight. There is also a stack of warehouses, abutting on the river, 75 feet in length, of two floors, and a stack of warehouses, 65 feet in length, of three floors, abutting on Thames-street. A commodious dwelling-house in the yard, the lower part occupied as offices for clerks and principals. A comfortable dwelling-house in Thames-street, and spacious paved yards, with two separate outlets into Thames-street, and convenient for loading and drawing goods. The whole held on lease from the Corporation of London, for a term which will expire in the year 1900, subject to the rent of 1,300 per annum. Two small warehouses adjoining, of three floors, with frontage of 133 feet in Castle-yard, may be added, if desired, at a rent of 150 per annum To be viewed till the sale. Particulars, plans, and conditions of sale shortly be ready, and may be obtained at the Mart; of Messrs. Crowders and Mackrell, Solicitors, 57, Coleman-street; and of Messrs. Fuller and Horsey, Billiter-street, London.

TO TIMBER MERCHANTS, BUILDERS, SAW-MILL PROPRIETORS, AND OTHERS.

MR. MARSH has been favoured with instructions from the Mortgagee, to submit to PUBLIC COMPETITION, at the PREMISES, 128, Arch. Globe-road, Mile-end, leasehold Mile-end Station (the Eastern Counties Railway), on THURSDAY, the 21st of AUGUST, at ONE precisely, the following first-rate NEW MACHINERY, planing machine, re-sawing machine, cross saw-frames, circular-saws, circular saw benches, bands, buckles, and other useful Plant, and a large quantity of useful quartering, and 100 squares of prepared floor-boards.—Catalogues obtained of the Auctioneer, Philpot-street, Commercial-road East.

Timber Trees at Hampstead, close to Downshire-hill.

MESSRS. HAMMOND and EILOART will SELL by AUCTION on the PREMISES, adjoining Mrs. Hoare's, close to Downshire-hill, Hampstead, on TUESDAY, AUGUST 19, at TWELVE for ONE, FIFTY LIME-TREES, SIX ELM, TEN FIR, and TWO CHESTNUT, some of very large size; also, hard woods, holly, elder, laburnum, cherry, &c.; fire-wood roots, butts, tops, &c. The timber is thrown and lying in a meadow, with a good road, only 200 yards from the high road at Hampstead.—Can be viewed any time before sale; and catalogues had at the Red Lion, adjoining the Premises; and at the Auction Offices, 38, Chancery-lane, London.

SALES BY AUCTION.

REIGATE. Important and Valuable Freehold Estate, approaching 70 acres. Free from land-tax. A most attractive investment for residence or speculative enterprise, near to the Railway Station, at Red-hill.

MR. WILLIAM THORNTON is instructed to submit to PUBLIC COMPETITION at the MART, on FRIDAY, AUGUST 29, the unsold and preferable portion of this very desirable PROPERTY, lying within a ring fence, and beautifully studded with timber, park like in appearance, and commanding extensive and picturesque views over the Vale of Holmsdale, Gatton park woods forming a prominent feature in the foreground. It is difficult to overrate the importance of this estate, either for a public institution, or as a source of certain and most profitable investment for any building operations of magnitude. The property is bounded on the west by the estate of Lord Monson, and on the south by the recently purchased residential estates of Norman Wilkinson, esq. and H. T. Gurney, esq. The well known salubrity of the air of the district has become a proverb. The railway, a few hundred yards distant, offers a daily choice by 190 trains for communication with all parts of England, and the metropolis is reached in thirty-five minutes. Superior building stone underlies a considerable portion of the estate, and brick earth and sand are also found. There is also a large old-roomed house, with various agricultural buildings, garden, orchard, &c. In addition to these advantages, it may be mentioned that it is the only freehold estate of the same extent and proximity to the railway in the market, and that the demand for land has caused an increase, it is daily rising in value and public estimation. Since the property was first offered for sale, 35 acres have been disposed of; it will now be first offered in the entirety, and if a satisfactory price be not thus obtained it will be submitted in three lots. Full descriptive particulars will shortly be issued having conditions of sale and plans annexed, and they may be obtained at the Junction Hotel, Redhill; Old Ship, Brighton; Calverly Hotel, Tunbridge-wells; Crown, Tunbridge; Grayshott House, Portsmouth; Star and Garter, Hyde Park-corner; Swan, Kingston; Swan, Staines; Waterloo, Cobham; Swan, Sevenoaks; of Mr. Morrison, Son, and Sir, G. Murrell's, Solicitors, Reigate; of Messrs. Drewe and Wilkinson, and Fell, Solicitors, Croydon; at the Auction Mart; and of Mr. Wm. Thornton, Land Agent, Surveyor, and Auctioneer, Reigate

WORTH, SUSSEX.—Valuable Freehold Building Land, in extent upwards of thirteen acres, in the district now popularly known, and in most request as Ifield-park, within about three miles of the Horley, or Three Bridges Stations, on the Brighton Railway.

MR. WILLIAM THORNTON is instructed to submit to PUBLIC COMPETITION, at the MART, on WEDNESDAY, AUGUST 20, at TWELVE, in One Lot, a valuable AREA of BUILDING GROUND, in all fairly situate, adjoining the high road leading from Barstow to Three Bridges, to which it has a very extensive frontage, as also to the new road leading from thence to East Grinstead, and in actually the preferable part of this district. The situation is rural ground, commanding singularly picturesque views, and the neighborhood is proverbially healthy, many detached villas have been already erected in the immediate vicinity of the property, and a plan has been prepared, and may be inspected at the office of the Auctioneer, for rendering it available for erecting detached villas, with gardens, for which it is exceedingly eligible, a brickyard being situate within a few minutes' walk of the spot, and the approach by excellent roads. Conditions of sale will be produced and read in the Sale-room, and may be seen previously at the Office of the Auctioneer, Whitehall-place, London, readily give any further information that may be desired. Auction and Estate Offices, Reigate.

Extensive Brick-built Factory, with steam Yard, Manor-street, King's-road, Chelsea

MR. OUGHTON will SELL by AUCTION, at the COMMERCIAL-HALL, King's-road, Chelsea, on THURSDAY, AUGUST 21, 1856, at ONE for TWO o'clock, by order of the mortgagee, the first eighty-three years unexpired, held direct from the Freeholder, of the substantial, nearly new, lofty, two floor brick built FACTORY, 74 feet long by 36 feet wide, and large walled Yard, desirably situated, with a frontage of 100 feet, to Manor-street, from Manor-street, King's-road, Chelsea, suitable for a Builder, Cabinet-maker, Ironfounder, or others requiring space. For particulars and conditions of sale, apply to Messrs. Blake, Son, and Farebrother, Solicitors, 23, Bedford-row, Holborn; or of Mr. Oughton, Auctioneer, Fulham-road, Chelsea.

TO TIMBER MERCHANTS, BUILDERS, ENGINEERS, WHEELWRIGHTS, AND OTHERS.—By

MESSRS. WHITE and SONS, on the PREMISES, Belmont-wharf, Maiden-lane, King's-cross, on MONDAY, AUGUST 25th, 1856, and the following day, if not previously disposed of by private contract, the valuable converted STOCK of a TIMBER MERCHANT. The very useful stock comprises a large quantity of excellent oak, elm, horse-beam, and cherry plank, about 30 tons of yellow deals respectively, capital ash, and beech plank, also fir and oak quarterings, ash poles, ash planks, gravel planks, gas and fence posts, about 200 loads of rough ash, ash halvers, and ash and elm scantlings, also a quantity of beech rails, ash halvers, at the same place, a capital new canal barge, constructed in the best manner to carry seventy tons. The lots may be viewed on the Premises, and at the City of York Tavern, near thereto; at the Canal Bridge Wharf, Regent's-canal, of Mr. Weakley, Station-clerk, 91, Farringdon-street, London; and of the Auctioneers, 11, Bush-street, Bethnal-green, who will forward them to applicants by post.

TO BRICKBURNERS, BUILDERS, SPECULATORS, AND OTHERS. Ash-common, adjoining Ash Timber Wharf.—Upwards of TWO ACRES and a HALF of Valuable FREEHOLD Hand-made and Machine BUILDING LAND, and a Three-hole close Scotch Kiln, in full work, with a brickburner's cottage and sand-house, and upwards of 2,000,000 fine building bricks, 5,000 waste bricks, 1 parcel earth for moulding, 20,000 tiles, and 15 square yards of drain tiles, the working plant, &c. TO BE SOLD BY AUCTION, by

MR. DRURY, at the sign of the CHESTERS ARMS, South-Eastern Railway Station, Ash, on MONDAY, the 25th of AUGUST, 1856, at THREE for FOUR o'clock, in One Lot, by order of the proprietor, Mr. Andrew Fey, subject to such conditions as will be produced at the time of the sale, immediate possession may be had. The above is well supplied with water from a well on the ground. The property is most desirably situate for building purposes, having a commanding view of the Alderman's Hill, only one mile from the camp, half a mile from the South-Eastern Railway station, and one mile from the South-Western Railway station. It also possesses the advantage of water carriage, being close to the Basingstoke canal, and a capital hard road for land-carriage, with a frontage for building to the high road of 60 feet, and a depth of 420 feet, bounded by the canal.—May be viewed at any time preceding the sale, on application to Mr. Drury, keeper of the property; and further particulars known of Mr. George White, Solicitor, Wandsworth; and of the Auctioneer, 70, High-street, Guildford, Surrey.

BOROUGH-ROAD.—Well executed Stone Figures, Vases, Fountains, &c. in Artificial Stone.

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, 124, Borough-road, South side, on WEDNESDAY, SEPTEMBER 3, and following day, at TWELVE for ONE, the remaining portion of the extensive STOCK, comprising Statuary, Vases, groups, pedestals, centre flowers, &c. To be sold without reserve.—May be viewed two weeks previous, and catalogues had at the Premises and of the Auctioneers, 34, Parliament-street Westminster.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX Brothers & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," in York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, August 16, 1856.

The Builder.

Architect, Engineer, Operative & Artist.

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ART-UNION of GLASGOW.—Exhibition of Prize Paintings: admission free.—The EXHIBITION of PAINTINGS and other Works of Art, purchased for distribution among the Members of the Society for the present year is now OPEN, at the Gallery of the Old Water-Colour Society, 5A, Pall-mall East.

ROBERT ALEXANDER KIDSTON, Acting Secretary Art-Union of Glasgow.

COMPETITIONS.

TO ARCHITECTS.—BOROUGH of NEW WINDSOR.—Notice is hereby given, that the Council of this Borough, as the Burial Board thereof, are ready to receive PLANS and DESIGNS for TWO CHAPELS, a CURATOR'S HOUSE, and ENTRANCE-GATES, and the WALLS and FENCES, which will be required to be erected on the Burial-ground for this Borough. The Council do not pledge themselves to adopt any of the plans and designs which may be furnished, but should any of them be adopted, and the architect preparing the same not be employed in carrying out the works, he will be paid 10*l.* 10*s.* for the plan and designs, and the rest of the plans, &c. will be returned to the various parties within fourteen days after the same shall have been delivered to me. All plans and designs must be delivered to me on or before TWELVE o'clock, on MONDAY, the 24th day of AUGUST instant. A plan of the ground may be seen, and all further information obtained, at my Office, Pilgrim-place, Windsor.—By order,

HENRY DARVILL, Town Clerk.

Windsor, 8th August, 1856.

THE PARISH of LEWISHAM, in the County of Kent.—To ARCHITECTS and OTHERS.—The Burial Board for the Parish of Lewisham, in the County of Kent, are desirous of procuring DESIGNS for LAYING OFF the GROUND, and the ERECTION of TWO CHAPELS, SEXTON'S LODGE, and ENTRANCE-GATES, accompanied with detail working drawings, specifications, and estimates. The outlay for the chapels, lodge, and gates must not exceed 2,000*l.* The Board will award to the author of the best design, in their judgment, subject to the approval of such design by the Bishop of the Diocese, the sum of 20*l.* The design for which the premium is awarded will become the property of the Burial Board, who will not bind themselves to employ the author to superintend carrying out the works. The Board will not pay the premium unless a sufficient Tender be made for the erection of the chapels, lodge, and gates at or within the stipulated sum of 2,000*l.* If the Board employ the author of the design to superintend the execution of the buildings, the premium will merge in the commission, which is not to exceed five per cent. on the lowest Tender accepted, including travelling and other expenses. A plan of the land may be inspected, and general instructions be obtained, at the Office of the Clerk of the Board, in Grove-place, Lewisham, where the designs must be deposited, free of all expenses, on or before the 8th day of SEPTEMBER next, marked with an emblem or motto, and accompanied by a sealed note, addressed to the Board, having the same emblem or motto on the outside, and inclosing the name and address of the author. The designs not approved will be returned to the authors on application.—By order of the Board.

OCTAVIUS C. FRYON EAGLETON, Clerk.

Grove-place, Lewisham, August 19, 1856.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The Trustees for Sale of a Freehold Estate of 17 acres, including the Bodish Sea, and near the Crystal Palace, require PLANS for LAYING OUT the SAME for building purposes, showing the necessary roads, sewers, &c., the whole to be clearly defined and approved in suitable lots, and laid down to a scale of an inch to an inch, from actual admeasurement. The following premiums are offered:—For the plan adjudged the best by the trustees, 150 guineas; for the second, 100 guineas; for the third, 50 guineas. The plans to which the above premiums shall be awarded, will be returned by and be the property of the trustees.—Further particulars may be obtained of Mr. PEACOCK, Builder, near the Jolly Sailor Station, Norwood; close to the property. The trustees will meet on the 20th day of OCTOBER next, to examine the plans, which are to be previously forwarded, enclosed and sealed, to the Secretary's Office, Auction Mart, London, addressed to the Trustees of the White Horse, Norwood, Estate.

COMPETITIONS.

CITY of LICHFIELD.—The Corporation of Lichfield having determined to establish a MUSEUM and LIBRARY, under the Public Libraries Act, 1855, architects are invited by the committee to offer a plan and estimate, with specification, for a suitable building, and are requested to send them to the Town Clerk's Office, on or before the 22nd of SEPTEMBER. The first outlay will not exceed 1,000*l.* Further information as to the site, required accommodation, in the first instance, and other particulars, may be had on application personally or by letter.

CHARLES SIMPSON, Town Clerk.

CONTRACTS.

TO BUILDERS.—Notice is hereby given, that TENDERS will be received by the War Department, at their Office, Pall-Mall, London, on THURSDAY, the 28th day of AUGUST, 1856, from such persons as may be willing to undertake the ERECTION of a BARRACK for Married Soldiers, with OUTBUILDINGS, &c. at Portsea, in the county of Hants. The plans, specification, and conditions of Contract, may be seen, and every information obtained, on application at this Office, on and after the 31st AUGUST, 1856, between the hours of TEN and FOUR each day (Sundays excepted). Tenders to be endorsed, "Tenders for Soldiers, with Outbuildings, &c. at Portsea," and addressed to the Director-General of Contracts, War Department, Pall-Mall.

Royal Engineer Office, Portsmouth, July 30, 1856.

WAR DEPARTMENT.—Such Persons as may be desirous of TENDERING for the SUPPLY and ERECTION of a GAS HOLDER and TANK, with FITMENTS complete, at the Royal Small Arms Factory, Enfield Lock, may receive information relative thereto, by application at the Royal Engineer Office, Enfield Lock, up to the 23rd AUGUST, 1856. Tenders to be delivered on the 26th AUGUST, 1856, addressed to the Director-General of Contracts, War Department, Pall-Mall. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Enfield Lock, August 11, 1856.

TO BUILDERS.—Notice is hereby given, that TENDERS will be received by the War Department, at their Office, Pall-Mall, London, on MONDAY, the 8th day of SEPTEMBER, 1856, from such persons as may be willing to undertake the ERECTION of a BOMB-PROOF MAGAZINE, to contain 10,368 Barrels of Gunpowder, at Tipner, near Portsmouth, in the county of Hants. The plans, specification, and conditions of Contract, may be seen, and every information obtained on application at this Office, on or after the 18th day of AUGUST, 1856, between the hours of TEN and FOUR each day (Sundays excepted). Tenders to be endorsed, "Tender for the Erection of a Bomb-Proof Magazine, at Tipner, near Portsmouth, in the county of Hants."

N.B. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Portsmouth, August 7, 1856.

Royal Engineer Office, Portsmouth, 13th August, 1856.

TO BUILDERS.—Notice is hereby given that TENDERS will be received at the office of the Director-General of Contracts, War Department, Pall-Mall, London, on or before the 15th SEPTEMBER, 1856, from such persons as may be desirous of entering into an agreement with the War Department for CONSTRUCTING and REPAIRING FOUR POWDER MAGAZINES to contain 25,000 barrels, and EIGHT SHOEING-SHEDS, together with boundary walls, rolling stage, and earth traverse, at Marchwood, in the county of Hants. Plans and specifications, with forms of Tender, may be seen, and all other information obtained, on application at this Office, any day (Sundays excepted) between the hours of TEN and FOUR, from the 25th AUGUST, 1856, to 14th SEPTEMBER, 1856. The whole of the work to be completed within eight calendar months from the date of notification of acceptance of Tender. No Tender will be taken of any Tender unless it be on the prescribed form. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

BASINGSTOKE CEMETERY.—To BUILDERS, CONTRACTORS, and OTHERS.—The Burial Board for the Parish of Basingstoke are prepared to receive TENDERS for the FORMATION of ROADS and PATHS, and the ERECTION of CHAPELS, LODGE, ENTRANCE-GATES, BOUNDARY FENCES, &c. on the site of the proposed Cemetery at Basingstoke. The plans, drawings conditions, and specifications can be seen, and information and bills of quantities obtained at the Offices of the Architects, Messrs. PULTON and WOODMAN, 1, Grey Friars-road, Reading, between the hours of TEN a.m. and FIVE p.m. from WEDNESDAY, SEPTEMBER 3rd, to MONDAY, SEPTEMBER 8th. The estimates to be prepared separately, as follows:—No. 1. Formation of Roads and Paths; 2. Erection of Chapels, Lodge, and Entrance; 3. Boundary Fences. Each contractor may tender for one or more of these divisions of the work. All Tenders are to be sealed up, endorsed, and sent in to the Clerk to the Board, on or before TUESDAY, SEPTEMBER 9th, at TWELVE o'clock at noon. The Board do not bind themselves to accept the lowest or any of the Tenders.—By order,

J. C. SHEBBEARE, Clerk to the Board.

Basingstoke, August 18, 1856.

THE GREAT NORTHERN RAILWAY COMPANY.—To CONTRACTORS and BUILDERS. The Directors are prepared to receive TENDERS for the ERECTION of FIFTY COTTAGE DWELLINGS, at New England, near Peterborough. Parties disposed to Tender may obtain the drawing, specification, and form of Tender, which form only Tenders will be received, on payment of 5*s.* per set, upon application at this Office, on or after WEDNESDAY, the 6th AUGUST. Tenders sealed up and marked "Tenders for Cottages," must be lodged at this Office before TWELVE o'CLOCK at noon on TUESDAY, the 26th AUGUST instant, when parties tendering must be in attendance.

N.B.—The Directors do not bind themselves to accept the lowest or any Tender.

By order,

J. R. MOWATT, Secretary.

Secretary's Office, King's-cross Station, London, 5th August, 1856.

CONTRACTS.

TO DUST CONTRACTORS.—The Vestry of the Parish of Chelsea will meet at the Board-Room, Manor House, King's-road, Chelsea, on TUESDAY, the 2nd day of SEPTEMBER next, at ELEVEN o'clock in the forenoon, precisely, to receive TENDERS from persons willing to Contract from the 29th day of SEPTEMBER next, up to and including the 29th day of SEPTEMBER, 1857, pursuant to the terms of a Draft Contract now lying at my Office, for COLLECTING and REMOVING the DUST, ASHES, and RUBBISH from the houses and other places within one or more of the several districts within the said parish. Sealed Tenders, signed by the proposed Contractor, with the names and descriptions of two sufficient sureties for the performance of his Contract, to be left at my Office, on or before SATURDAY, the 30th instant. The legal charges of the Contract to be paid by the Contractor upon the execution of the same. The Vestry do not bind themselves to accept the lowest or any Tender; and none will be received unless made on one of the printed forms to be obtained at my Office.—By order,

CHARLES LAIRE, Vestry Clerk.

Offices of the Vestry, Manor House, King's-road, Chelsea, August, 1856.

COUNTY of DURHAM LUNATIC ASYLUM.—To BUILDERS, ENGINEERS, CONTRACTORS, and OTHERS.—The Committee of Visitors are prepared to receive TENDERS for the whole or any part of the several WORKS required to be done in the ERECTION of the County of Durham LUNATIC ASYLUM, near Sedgefield, in the county of Durham. The plans, specifications, and conditions may be inspected at the Office of the Architect, Mr. JOHN HOWISON, County Courts, Durham, where further particulars may be ascertained, and of whom detailed measurements and form of Tender may be obtained. Sealed Tenders, endorsed "Tender for County Lunatic Asylum," addressed to ROWLAND BURDON, Esq. Chairman of the Committee of Visitors, must be sent to Mr. HOWISON's Office, on or before TUESDAY, the 2nd day of SEPTEMBER next. The party whose Tender may be accepted will be required to enter into a bond, with two satisfactory sureties, for the due performance of the contract. The Committee do not pledge themselves to accept the lowest or any Tender.—By order,

JOHN WATSON, Clerk to the Committee.

Durham, July 12th, 1856.

BRECON.—To BUILDERS.—Persons desirous of TENDERING for the RESTORATION and ENLARGEMENT of the Parish Church of St. Mary, Brecon, may see the plans and specifications, and obtain forms of the quantities, at the Office of the Architects, Messrs. W. G. and E. HABERSHON, 38, Bloomsbury-square, London; or at their local Offices at Newport or Cardiff respectively; and also at Brecon, on or after AUGUST 25th. Tenders to be addressed to the Vestry, Brecon, on TUESDAY, AUGUST 26th, by TWELVE o'clock precisely, who do not bind themselves to accept the lowest or any of the Tenders. The day of opening Tenders is postponed till FRIDAY, the 29th, from TUESDAY, the 26th.

CARDIFF, GLAMORGAN.—TO BUILDERS.—Persons desirous of TENDERING for the ERECTION of TWO first-class semi-detached VILLAS at Cardiff, with walls, offices, &c.; also for TWO other VILLAS of similar character in same town; also for THREE HOUSES connected together, with walls and fittings in stone, may see drawings and specifications, and obtain quantities, at the Offices of the Architects, Messrs. W. G. and E. HABERSHON, 38, Bloomsbury-square, London; or at their local Offices at Newport, Monmouth, by application to their resident clerk, Mr. DIXON; or at Cardiff, to their resident clerk, Mr. FAULKNER, on or after AUGUST 25th. Tenders to be delivered to Architects at Cardiff on THURSDAY, AUGUST 28th, who do not bind themselves to accept the lowest or any of the Tenders.

TO BUILDERS.—Persons desirous of CONTRACTING for the ERECTION of NEW PHILOLOGICAL SCHOOLS, in the Newport, may see the plans, and specification at the Offices of the Architects, Messrs. W. G. and E. HABERSHON, 2, Bloomsbury-square, London; application on and after MONDAY next. Tenders to be delivered to Mr. Griffiths, at the Queen's Head Inn, Commercial-street, Newport, on TUESDAY, AUGUST 26th, by TWELVE o'clock, on MONDAY next, SEPTEMBER 1st.—The Committee do not bind themselves to accept the lowest or any of the Tenders.

TO BUILDERS.—Persons desirous of CONTRACTING for the ERECTION of a NEW CHAPEL at Ripon, Yorkshire, may see the plans, specifications, and obtain the quantities prepared for the Architects, Messrs. WM. G. and E. HABERSHON, London, or at their Local Offices at Newport and Cardiff respectively. Tenders to be delivered at the Office of the Architects, on THURSDAY, AUGUST 28th, by TWELVE o'clock at noon, the day on which they will be opened at the Ripon Union, in presence of all those who may desire.

THREE first-class AUGUST 28th, by TWELVE o'clock at noon, the day on which they will be opened at the Ripon Union, in presence of all those who may desire.

NOTICE.—CONSTRUCTION of a CANAL in DENMARK.—The Royal Danish Ministry for Home Affairs offers to public COMPETITION the FORMATION of a SHIP CANAL, together with the necessary Harbour conditions may be had at the Office of the Royal Danish Consulate-General, for inspection; also of the Danish General Consuls in Hamburg, Berlin, and Paris. Sealed written schemes must be addressed to the "Ministry for Home Affairs," and there must be written thereon "Tender for the Construction of Limfjord Canal," which are then forwarded to the Ministry for Home Affairs, before TWELVE o'clock a.m. on the 22nd of NOVEMBER next, which time they will be opened at the Ship Canal Office in presence of all those who may desire.

Royal Ministry for Home Affairs, Copenhagen, August 11, 1856.

Danish Consulate General, London, August 19, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

METROPOLIS LOCAL MANAGEMENT ACT.—TENDERS will be received by the Vestry of Paddington, on or before the [illegible] of SEPTEMBER next, from parties willing to CONTRACT for the EXECUTION of the DAY and JOBBING WORKS of every kind required to be performed in Constructing, Altering, Re-building or Cleansing Sewers, Drains, Gullies, Water-closets, Privies, &c. within the Parish of Paddington. Specification and schedule of prices, together with the form of Tender, may be had, [illegible] and other particulars obtained, at the Vestry Hall, Harrow-road, between the hours of TEN and TWELVE [illegible] of SEPTEMBER. The Vestry do not bind themselves to accept the lowest or any Tender, and the party whose Tender may be accepted will be required to provide two sureties, in the sum of [illegible] jointly and severally, for the due performance of the works.—By order,

FREDK. AVELING, Vestry Clerk.

Paddington, August 19, 1856.

TORQUAY WATER-WORKS.—The Local Board of Health are desirous to receive TENDERS for LAYING about EIGHT MILES of TEN-INCH PIPE, SIX MILES of NINE-INCH, and ONE MILE of SEVEN-INCH; and for MAKING RESERVOIRS and other WORKS. Specifications and plans are deposited for inspection at the Town Hall, Torquay, [illegible] at the [illegible] Engineers, Messrs. EASTON and AMOS, Grove, Southwark, London, on and after the [illegible] instant. Sealed Tenders, [illegible] to the Local Board, to be delivered at the [illegible] Hall, Torquay, on or before TWELVE o'clock on TUESDAY, the [illegible] of SEPTEMBER next. The Local Board do not bind themselves to accept the lowest or any Tender.

GEORGE E. HEARDER, Clerk to the Local Board.

Torquay, [illegible]

TO ENGINEERS and OTHERS.—The Guardians of the Poor of the Hackney Union are desirous of SINKING a WELL, on their premises in Homerton, for the supply of the Union-house with water. Persons desirous of CONTRACTING for all the requisite APPARATUS as per plan and specification, which the Board may approve, are requested to apply for particulars to Mr. C. H. PULLEY, the Clerk to the Guardians, at the Hackney Union-house, on or before WEDNESDAY, the [illegible] instant, at TWELVE [illegible]. By order of the Board.

CHAS. HORTON PULLEY, Clerk.

TO WELL-SINKERS and OTHERS.—The Guardians of the Poor of the Hackney Union are desirous of SINKING a WELL on their premises in Homerton, for the supply [illegible] with water. Persons desirous of CONTRACTING for the same, are requested to apply for particulars to Mr. C. H. PULLEY, the Clerk to the Guardians, at the Hackney Union-house, on or before WEDNESDAY, the 27th inst. at TWELVE o'clock. By order of the Board of Guardians,

CHAS. HORTON PULLEY, Clerk.

NEWARK-UPON-TRENT IMPROVEMENT ACT, 1856.—To CONTRACTORS, PAVIORS, and OTHERS.—The Commissioners under the above Act are desirous of receiving Tenders from persons willing to contract for the supply of MATERIALS and [illegible] Works in certain streets in the town of Newark-upon-Trent. The works will consist of [illegible] granite, Mountsorrel and Boulder paving and kirb stone. Specifications and forms of Tender may be seen, on and after the [illegible] instant, on application at the Offices of Mr. C. BAILY, Surveyor, Kirk-gate, Newark. Sealed Tenders must be sent to the Clerks to the Commissioners, [illegible] SEPTEMBER next. The contractors will be required to give satisfactory security, and the Commissioners do not pledge themselves to accept the lowest or any Tender.—By order,

TALLENTS, B[illegible], and GRIFFIN,
Clerks to the Commissioners.

Newark-upon-Trent, August [illegible]

TO BUILDERS.—CHELTENHAM COLLEGE.—The Board of Directors of the Cheltenham College, are willing to receive TENDERS for the ERECTION of a CHAPEL, in connection with the Institution. The drawings and specification may be seen, and further particulars obtained at the Offices of Mr. DANIEL JAMES HUMPHRIS, Architect, Cheltenham. The Tenders [illegible] "Tender for New Chapel, Cheltenham College," must be delivered to Mr. W. L. BAIN, the Secretary, on or before the 1st day of SEPTEMBER next.—The Directors do not pledge themselves to accept the lowest Tender.

D. J. HUMPHRIS, Architect.

London-road, Cheltenham.

NETHERLANDS LAND ENCLOSURE COMPANY.—The Directors of the Netherlands Land [illegible] CONSTRUCTION of a SHIP CANAL to connect the East and West [illegible] at the Office of Mr. G. P. BIDDER and Mr. GEORGE ROBERT STEPHENSON, 24, Great George-street, Westminster, in reference [illegible] the lowest or any Tender [illegible]

GEORGE [illegible], Secretary.

2, [illegible]-street, London, [illegible]

BOARD of WORKS for the STRAND DISTRICT.—To DUSTMEN, SCAVENGERS, and CONTRACTORS [illegible] thing that may be swept up, or otherwise collected in or upon the several foot and carriage ways in the district; and also for the [illegible] DUST, ASHES [illegible] houses, sheds, and other places in the district, for the term of three years, from Michaelmas-day next, determinable at the ex[illegible] of a specification which may be seen daily at the Board's Offices, No. 23, Henrietta-street, Covent-garden, from TEN till FOUR. [illegible]

JAMES H. F. LEWIS, [illegible]

TO BUILDERS.—The Committee give notice [illegible] FRANCIS ASHPITEL, or at the Offices of the Architect, [illegible] Old Broad-street, [illegible] Tender.

COUNTY of WORCESTER.—To BUILDERS and OTHERS.—Persons desirous of TENDERING for the several WORKS required in taking down the present and erecting a NEW EAST WING, also for the erection of a T[illegible] DEBTORS' PRISON, [illegible] Worcester County Gaol, may inspect the drawings and specifications, and obtain any information in reference to the same, at my Office, 47, Foregate-street, Worcester. Sealed Tenders to be forwarded, free of expense, to the County Gaol, [illegible] "Tender for East Wing and Debtors' Prison." No pledge is given to accept the lowest or any Tender, unless satisfactory.

HENRY ROWE, Jun. County Surveyor.

Worcester, August [illegible]

CONTRACTS.

HEANOR (DERBYSHIRE) WATER-WORKS.—The Local Board of Health for this District are prepared to receive TENDERS for the supply of GALVANIZED WROUGHT-IRON TUBES and FITTINGS, to be applied and used as Consumers' Service Pipes. The tubes must be capable of sustaining a working pressure of 250 feet, and must be proved to a pressure equal to a column of water of 500 feet altitude. The quantity of tubing to be delivered by any contractor to be not less than [illegible] to be apportioned of several sizes varying from [illegible] of an inch to two inches internal diameter, as the Local Board may determine. Any further information may be obtained on application to Mr. JNO. S. NORRIS, of Nottingham, the Engineer to the Local Board; and sealed Tenders, with samples of Tubes accompanying them, must be delivered at my office, at Basford, near Nottingham, on or before FRIDAY, the [illegible] day of AUGUST.

R. B. SPENCER, Clerk to the Local Board.

August 18th, 1856.

BOARD of WORKS for the LIMEHOUSE DISTRICT.—To BUILDERS, CONTRACTORS, and OTHERS.—The Board of Works for the Limehouse District give Notice, that they will be ready on the [illegible] of SEPTEMBER, 1856, to receive sealed TENDERS from parties who may be willing to contract for the LAYING DOWN, CONSTRUCTING, and COMPLETELY FINISHING certain [illegible] BRICK and PIPE SEWERS, 1,150 feet in length, or thereabouts, with other works in connexion therewith, in Gun-lane, Jamaica-place, and Rich-street, in the parish of Limehouse; and in William-street and Henry-street, in the hamlet of Ratcliff; and for the maintenance of said works in complete repair for twelve calendar months. Plans, sections, and specifications for the above works, together with a form of Tender, may be inspected, and other particulars obtained, at the Office of the Board, White Horse-street, Commercial-road East, between the hours of TEN a.m. and FOUR p.m. until the 2nd SEPTEMBER next. Tenders addressed to the Limehouse Board of Works, must be delivered at the said Office before FOUR o'clock p.m. on the said 2nd SEPTEMBER, and no Tender will be received after that hour. The Board do not bind themselves to accept the lowest or any Tender, and the party whose Tender shall be accepted will be required to provide two sureties for the due performance of the works. The attendance of parties tendering will be required at the meeting of the Board on WEDNESDAY, the 3rd day of SEPTEMBER next, at the Board-room of the Ratcliff Workhouse, York street West, Commercial-road East, at THREE o'clock p.m.

THOS. W. RATCLIFF, Clerk of the Board.

White Horse-street, Commercial road East, 20th August, 1856.

MACHINERY-TOOLS, &c.—The DOVER LOCAL BOARD of HEALTH are willing to receive TENDERS for the supply of certain MACHINERY TACKLE and TOOLS required for their Water and Drainage Works at Dover. Copies of the conditions, with lists of the articles required, may be obtained on application at my office. Further particulars may be had at the Office of the Surveyor of the Local Board. Tenders to be delivered at my Office on or before WEDNESDAY, the 27th instant.

T. B. BASS, Town Clerk.

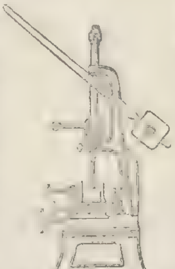
Dover, 8th August, 1856.

WASHING-MACHINES.—The Vestry of the Parish of St. Pancras, in the county of Middlesex, being about to erect a Steam Laundry, are desirous of receiving from Patentees and Manufacturers of WASHING-MACHINES particulars and descriptions of their respective machines setting forth in detail the method of cleansing the clothes, a description of the machinery and the cost thereof, steam-engine and boiler, including erecting and fixing, the estimated annual charges (wear, tear, and repairs), the annual working expenses, labour, soap, fuel, &c.) and all particulars. Average number of inmates of house, [illegible], weekly number of articles washed, between 6,000 and 7,000.—Further information may be obtained, on application to the Chief Surveyor, as under, to whom the particulars, to be accompanied by testimonials of efficiency are to be forwarded, on or before THURSDAY, the 28th inst.—By order,

WM. BOOTH SCOTT, Chief Surveyor.

Department of Works, [illegible], Edward-street,
Hampstead-road, Aug. 19, 1856.

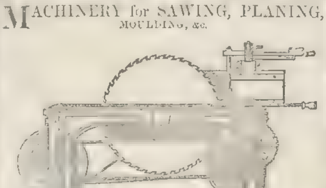
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing [illegible] separate [illegible] of work by one machine; and as it is self-feeding, it does not require any [illegible] like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery [illegible]

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of [illegible] Adaptations in Saw Frames, [illegible] Planing Machines, Endless [illegible] Machines for [illegible] Wood. They have constantly on hand [illegible] and are therefore enabled at all times on short notice supply them. S. W. and CO. beg to state that [illegible] machinery, and have had the honour of supplying some of the [illegible] the world with their machines, for home and foreign use. One of their Saw Benches and also a smaller one, with Boring Apparatus [illegible] Machinery Department, Crystal Palace. A descriptive Catalogue, with Drawings, may be had on application. [illegible] KING'S ROAD, CHELSEA.

AUSTIN'S IMPERIAL

PATENT SASH and BLIND LINE can be obtained of all ROPEMAKERS, IRONMONGERS, MERCHANTS, FACTORS, and WHOLESALE HOUSES, in TOWN or COUNTRY. Established 1[illegible].

NAILS and IRONMONGERY

From BIRMINGHAM direct.

Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the

LOWEST BIRMINGHAM PRICES.

A complete LIST of which will be forwarded upon application.

BLYTH and BIANCHI,

Nail Manufacturers and General Factors, BIRMINGHAM; or at 16, Gresham-street, LONDON.

WOOD-CUTTING MACHINERY,

JOHN M'DOWALL and SONS,

WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,

MANUFACTURERS of VERTICAL SAW-FRAMES (driven by straps),

For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

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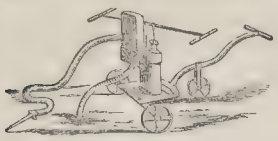

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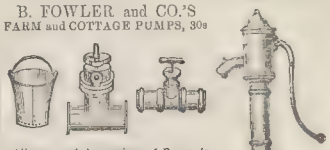

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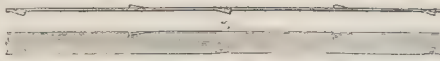

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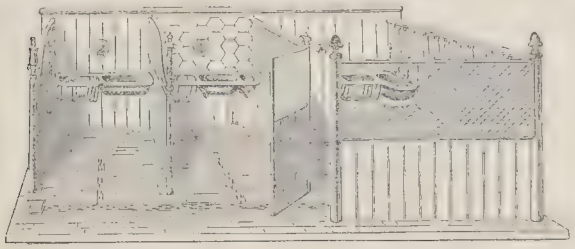

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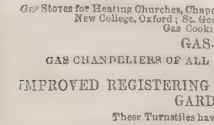

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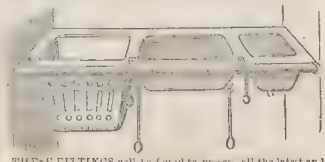

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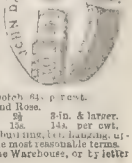

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No. 11 gauge weighs about 18 oz. per foot super.			
12	"	20	"
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Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
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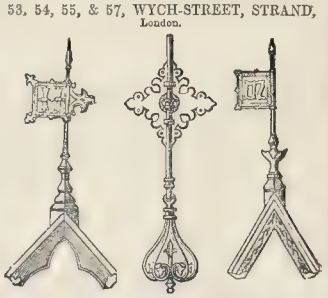

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AMERICAN OILSTONES, superior to all other Oilstones for sharpening Edge Tools. Can be cut to any shape or size. AMERICAN OILSTONE DUST, 2s 6d. per lb. Patentee of the Emerald Ratchet Drilling Brace, from 21s. Each. JOSEPH PENN, Tool Manufacturer, 105, Newgate-street, London.

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SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôt at Bangor, or to forward by railway. Also Slabs of all sizes. Orders to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor

SLATES.—For immediate SALE, at J. CULVERHOUSE'S, Kentish-town Wharf, Kentish-town, a large quantity of best quality SLATES, all sizes, for cash. Also, best Stock, Grisell, and Place Bricks, Sand, Ballast, Gravel, Flint, Guernsey, and Bombay Granite, Carting, &c. at equally low prices. Any quantity of roads made by contract.

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FROM 2s. 9d PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
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Contractors supplied to any extent.

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Pine Planks, 12 feet by 3 in. by 11 in. from	£21	0	per 120.
Yellow Battens, from	11	10	"
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Prepared Flooring, &c. equally low. A list of prices forwarded on receipt of a postage stamp.—N.B. All sawn goods delivered within two miles free of cartage.—Borough-road, southwark, and Elm-street, Gray's-inn-lane.

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ONE HUNDRED LOADS of BEST PETERSBURGH CEILING LATHS for SALE, price 33s. nett, and TWENTY-FIVE LOADS of ditto, 38 inches long; Ceiling Ditto, 30s. per load; nett; and some thousand tons of Blue Elvin GRANITE for Macadamizing Roads, for Sale. A sample may be seen at Mr. T. NEWTON'S Wharf, Hertford-road, Kingsland-basin.

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PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Floor, so extensively used in Paris and other continental cities, is now introduced into this country—an extensive assortment of specimens and patterns commencing at 1s per foot superficial, together with every particular of its cost and adaptation, can be obtained of Messrs. H. P. BURT and CO. 3, Charlotte-row, Mansion-House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

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A Monthly Price Current forwarded on application.
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Vol. XIV.—No. 707.

BRICK was the principal material for building with during the Mediæval period in many parts of Europe, and numerous effective and beautiful structures formed of it remain, especially in the north of Italy and the north of Germany. Attention is being awakened in this country to the capabilities of brick construction, partly as we are able to assert through our own endeavours, and we may hope before long to see good results.

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Architects are blamed, and not without cause, for repeating in modern times the details and elevations of buildings many centuries old: nothing has been forgotten, nothing learned. We hope this will not be the case in our brick revival. With improved means of manufacture, let us hope to have something new, but at the same time something appropriate, in brickwork. The student must learn from the past: he must study the buildings of the Italians from the times of the Romans, as also the admirable brick buildings to be seen in Germany. Some of our old county towns contain specimens of brick construction, the study of which is worth a pilgrimage: and there are many country mansions to which the same remarks will apply. The term "cunning" may with justice be given to the workers in brick of three centuries ago, as most of the mouldings and ornaments were cut by hand after the bricks were set,—and artistically cut too. It is not advisable, however, to recommend brick-cutting for imitation. All the mouldings and ornaments, to be enduring, should have an unbroken fire-skin surface when set. The moulding and ornament should be produced in the soft, or partially dried, material, before it is finally burned in the kiln.

In using bricks of various colours in the same building, the colour of the mortar for the beds and joints should be considered: cream-coloured bricks may be set in ordinary mortar, which is generally of that tone. The railway entrance at the Crystal Palace affords a good example. Red bricks should be set in red mortar, and so for other varieties of colour: there need not be any difficulty in making mortar of the required tints; pounded brick refuse mixed with mortar in place of sand will always give the tone of the brick to the mortar; and for pointing, cheap mineral colours may be added so as to match; smiths' ashes, ground with lime, may be made to give any shade of tone from grey to black. Mortar made either with pounded brick or with smiths' ashes is generally found to be stronger than if made with sand. The addition of mineral colours is also strengthening. There may be cases in which the architect wishes to have bricks of one colour and mortar of another colour,—as red bricks with white beds and joints,—cream-coloured bricks, with dark beds and joints; such work is common—too common; it may be seen in buildings, new and old. At the Crystal Palace railway station, with the example of light bricks and light mortar giving breadth, and therefore harmony, the red bricks are set in light mortar, and are "tuck pointed" beds and joints, with white "putty" mortar, breaking up the whole surface most painfully, as contrasted with the light-coloured portion.

The hiding of beds and joints is not advocated. We simply ask, that the architect shall not thoughtlessly throw away all chance of breadth and keeping in a front where colour is introduced.

There are many examples of buildings in which stone or marble, or both, are used with bricks. Such combinations may be advantageous, or they may be the reverse, accordingly as they are managed. Combinations of stone with bricks can only be made efficiently when used in courses or bands; each course or band being all brick, all marble, or all stone. Brick fronts with stone quoins, stone window-jambs, and stone mullions, in which there are several beds of brickwork to one bed of stone, do not make strong work. All mortars and cements either swell or shrink in setting; hence there is not that character of homogeneousness necessary to strength. Bricks should be set with bricks: there should be brick quoins and jambs. Stone should be set with stone, and should be backed up with stone in true course, if the building is to have durability.

The great constructive defect in much of the mediæval architecture consists in the builders having set stones on edge, to carry up or serve for several courses of wall-stone. Quoins, jambs, and mullions were reared up, having little or no bond; and from this cause many buildings have gone to decay. The oldest Roman and Norman towers now standing have no quoins, but equal courses; Lancaster Castle, Newcastle, and others, will serve as examples.

The oldest brick buildings have no stone quoins or other mixture of stone to break the bond and weaken the structure.

Many architects specify to have thin beds of mortar: the oldest buildings in existence (with some exceptions — Egyptian and Cyclopean) have thick beds of mortar. Many of the great buildings in Asia and in Europe have been constructed with thin bricks or tiles and thick beds of mortar—almost as much mortar as brick. The Romans understood the use of mortar, and did not spare it. The steam-engine and mortar-pan of our day will make better and stronger mortar than the Romans ever used. We can make better bricks too, and we ought therefore to make better and stronger work.

Do we?—Not exactly.

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NEW WESTMINSTER BRIDGE.

The completion of Rochester-bridge; the recent investigation into the sufficiency of the foundations of the New Westminster-bridge; and the growing want of adequate means of communication between different parts of this metropolis, combine to interest us in a review of some of the inventions and proposals made relative to bridge-building, and their special applicability to the River Thames and the convenience of London. The question as to Westminster-bridge seems now to stand with reference to what would be the best line of route for traffic, rather than upon the interests of holders of property, or of the shopkeepers in or about the approaches. The probable erection of Government offices, north of Bridge-street and Great George-street, is made an additional argument for reconsidering the matter of site. The problem of reconciling adequate headway with the effect of the Houses of Parliament (which last, it may now be conceded, should never have been rebuilt on so low a site), to some appears to point the same way. The wants of London, indeed, require all the new bridges that have been of late years talked about,—such as the bridge in line with Old Change; one between Hungerford-bridge and the present site of Westminster-bridge; and one higher up, from the Horse-ferry to Lambeth, as again proposed in the report of Messrs. Rendel and Simpson.

The actual site of Westminster-bridge does seem to be about the last line that should be selected, if we considered alone the direction of the traffic to it on the Middlesex side, and the interference of the traffic to the Houses of Parliament. It is not very satisfactory that such a conclusion as that which the committee have hinted at, could not have been made before 85,000*l.* and odd had been expended on an opposite basis; and we are leaving out of consideration the enormous expenditure upon this site within the last twenty years,—in works of maintenance which have proved abortive, and in works of extension to a ruinous structure, which have never been brought to completion. We will blame no one in this instance; but there is defective reasoning as to these ever-recurring cases, somewhere; for, as much is *wasted* about Government and public works in the course of very few years, as would bridge the Thames from Richmond to Blackwall, pay for two or three Houses of Parliament without one stiver taken from architect's remuneration, and provide for Government offices the grandest architectural work in Europe.

Since, then, the subject of bridge communication generally should receive increased attention; the subject of structural improvements in bridge-building is very important. We propose, however, to confine our present observations to the vital matter of foundations.

The method adopted at Rochester-bridge, and that used by the engineer of the Westminster and Chelsea bridges assume to supply good or better foundations than those of the old system, and save the enormous outlay of coffer-dams. At the same time, obstruction to the water-way is reduced,—in the construction of the bridge, by the absence of the dam,—and perhaps even in the finished pier and foundation.

The progress of structural science in bridge-building, we may remark, has been great in modern times—without referring to the use of iron in its various forms. The increase of span in arches is attended with a diminution of impediment to the stream, which must be considered as a great gain,—notwithstanding that unlooked-for changes have resulted in the case of the bed of the Thames,—from the very alteration at London-bridge,—which have caused serious injury at Blackfriars as well as Westminster, and, it has been said, at other bridges. In bridge-building, as in every kind of superior work, the aim is to provide liberally against all contingencies, though to do no more: but any principle of construction, however economical in appearance, in which the platform of foundations should be less permanent than in the best of the London bridges, would be ill-adapted to the river Thames.

The destruction of the piers of a bridge may arise from two chief causes. First, the ground on which they stand may be unsuitable, or the footings may go to such slight depth as to be undermined; and, secondly, the material itself of the piers may fail under the weather, and the various abrasions and concussions to which the piers of bridges are subject. But whilst the former is a radical defect in any system of founding, the second may be of sufficiently remote occurrence that economical reasons may be allowed to modify the design,—though even here it should be remarked that mistakes have been made, as in the use of timber for piers, now abandoned even where the superstructure is of the least durable material. The Select Committee on new Westminster-bridge, struck out a paragraph in their draft report, which went to state their opinion, that "it would have been more desirable to build a bridge of such importance over such a river, in the most permanent manner," though only by a majority of one. Mr. Tite was against the clause, Sir Benjamin Hall being for it. Allowing that "the changes that have taken place in the bed of the river, and in the flow and ebbing of the tides of late years, ought to have due consideration before determining the mode of construction, and the headway under the bridge," and that the witnesses examined (whose evidence is not yet published) "differed somewhat in opinion, as to the amount of any probable future change

in these respects," and even concluding that such a mode of construction as that adopted in the new Westminster-bridge, "is less permanent and secure than granite piers founded deep on the London clay, by means of coffer-dams," the committee, finding the piers could be repaired, yet attach due importance to the arguments that it is "less expensive, and can be carried out in a shorter period of time" than the coffer-dam system, as well as that it causes less obstruction to the river,—feeling also satisfied that the plan which was in course of progress at Westminster might in the main have been carried out, and that "the proposed piers would have been of strength amply sufficient to bear the weight proposed to be placed upon them." These conclusions were formed after hearing the opinions of the engineer himself (Mr. Thomas Page), and of Mr. Robert Stephenson, Mr. John Hawkshaw, and Mr. John Fowler, in addition to those of the reporters to the First Commissioner of Works, Mr. J. M. Rendel and Mr. James Simpson. The question in the case of Westminster-bridge is complicated by points connected with the foundations of the old bridge,—the removal of which, the reporters appeared to have considered would alone occasion a large outlay,—their ultimate conclusion having been that the system of foundations used in the new works was not only defective structurally, but did not provide, as coffer-dams would have done, in their opinion, for the safe, expeditious, and cheap removal of the foundations of the old bridge. The estimated cost of the bridge, as in progress, would be 224,228*l.*; whilst the estimate, with deeper foundations and piers differently constructed within coffer-dams, would be 326,000*l.* But the former estimate Messrs. Rendel and Simpson appear to think would be inadequate, considering the cost of removing the foundations of the old bridge: they would add on that score 40,000*l.*; so that the figures would then stand 264,228*l.* against 326,000*l.*—exclusive of 35,000*l.* for a temporary bridge in the latter case, and of the cost of approaches in both cases. Thus, assuming the highest estimate in one case, and the lowest in the other, Mr. Page's system would appear to cost 62,000*l.* less than the other, in the case of the present site,—whilst in ordinary cases there would seem to be a diminution of expense by the adoption of the new system, even greater in proportion.

Having thus probably shown the interest and especial importance now of the subject of bridge foundations, we shall not be deemed tedious if we succeed in describing more clearly than has been done, wherein presumed improvements consist.

The chief means available in bridge foundations have involved the application of platforms of timber, or fascines; concrete and "beton;" and timber piles,—to which of late have been added iron piles; and—still more recently—screw piles, and pneumatic cylinder piles sunk in different ways. Hitherto, two principal modes have been adopted in laying the foundations, where the stream could not be diverted, or use made of the diving-bell, or diving-dress. These methods have required the use of coffer-dams, or of caissons. The coffer-dam is a temporary structure circumscribing a water-space, and which being formed of piles and clay-puddling, will allow the water to be pumped out, and the bed of the river to be laid dry. Thus the foundations can be laid in the best manner: the soil can be excavated to any depth, and piling can be driven from that lower level. Such was the method adopted in the chief of the London bridges. At Westminster-bridge, however, in 1740, caissons had been introduced,—these consisting of what may be called boxes of carpentry, raised round a framing of timber upon which the pier was built,—the whole sinking till the bottom was reached—when the water was let in, and the sides were set free. In a modification of that principle, iron caissons are used,—the sides and bottom, however, in that case, being permanently attached; and this plan, we believe, has been adopted by Mr. Brunel and others with success. It must be seen, however, that whilst using caissons, the character of the bed of the river should be understood,—accurate *level* should be found, or made by dredging, and a *solid bed* should be procured at whatever depth. The use of boring tools would now offer facilities for this object, which were not at hand during the the original building of Westminster-bridge. It is impossible for us at present to inquire into all the varying circumstances which might affect the choice of one or other method of construction; or to ascertain whether, by the aid of the diving-bell and dredging, what seem to be disadvantages of the caisson system, could be so far overcome as to allow of its use generally. What, however, seems clear, is this, that a platform esteemed perfectly unchangeable during all time, has in all important cases been sought for—sometimes by excavation, till solid ground was reached; sometimes by the aid of the resistance which the sides of piles afford to their sinking, and sometimes by piling below an excavation—itself at great depth. The one serious error in any of the London bridges was committed at Westminster-bridge by Labelye, though in the means adopted rather than in the principle of the caisson,—for in 1838 or 1839 coffer-dams had to be formed, and the framed platforms of the piers protected from further subsidence by sheet piling driven around them.

It is obvious that although in other classes of works a foundation may be found at a lower depth, worse than one above, in bridge building depth is of peculiar importance, because of the eddies, and the current next the piers.

Either piles or concrete can form excellent foundations. But since the use of concrete was revived, it has been much the habit to regard it as a kind of talisman or shield against all otherwise defective construction arising in choice of foundations,—in short, as though any soil could be made to uphold any heavy structure by the simple interposition of a thin stratum of artificially compounded rock. Another application of concrete which has been made, is that of building with it above ground; but for this, its advantage is doubtful, if exposed to the weather—as with frost it gradually peels away and is destroyed. It has, however, been used extensively for the sea-wall at Brighton. We think it may be taken as an axiom, that concrete should not be employed in any critical position above ground unless faced with some other material. All these are points which, when we come to speak of the system used at New Westminster-bridge, it will be admitted should be taken into consideration. Of that system we have expressed no present opinion.

One of the earliest suggestions of the class of improvements in bridge-building to which we are now more especially referring, is contained in the specification of a patent granted to John Nash, the architect, in 1797. The patent is entitled, "A method of constructing bridges of plate iron, either wrought, cast, framed, or put together, so as to form hollow bodies, masses, or cubes capable of being filled up with earth, sand, stone, gravel, or other materials, to make the same solid bodies, masses, or cubes; or not being filled, have the semblance of solid bodies, masses, or cubes," &c. The proposed method as to the arch, consisted in the use of hollow iron boxes for the voussoirs or segments, which boxes might be filled as referred to in the title, or not. It did not attempt to positively dispense with the coffer-dam, or an inclosure intended to answer the same purpose as the ordinary one of timber and puddling. The "dam" was proposed to be formed "by piles of plate-iron, grooved, rebatted and dovetailed into each other; which when fixed into each other, form a hollow box; and when driven or inserted into the bed of the river, form a dam for the pier." After the pier was built, these piles were to be "driven home to the bed of the river," making "a box of dovetailed piles inclosing the ground on which the pier stands, and securing it from being undermined by the water passing through the arch." The piers were to be "hollow like the boxes" of the arch, and filled up solid, or not; and were to be of plate iron, either wrought or cast, and framed or put together; and they might be cast in one piece and of any form, or in several pieces, as cylinders, or squares, or triangles, on plan—which pieces might be cast with the hollow frame forming the piers, or be fastened to them, as in the drawings illustrating the specification, where the spaces are shown filled with masonry.*

In 1811 a patent was granted "to Samuel Bentham, esq. of Hampstead, civil architect and engineer of his Majesty's navy," for a certain invention of a secure, economical mode of laying foundations, and in some cases of proceeding with the superstructure of works,—particularly applicable to the projection of wharfs and piers into deep water, to the construction of bridges, harbours, and the erection of buildings in bad ground. The invention is not very clearly described in the specification,† but appears to apply to the construction of hollow caissons, which are to be sunk to form the foundations. A subsequent notice of the same invention may, we believe, be found in "Weale's Quarterly Papers on Engineering."

In the system adopted at new Westminster-bridge, great importance must be attached to the iron piling and casing to the concrete, of which with timber piles, the lower portion of the piers consists. The first record of the introduction of iron piling is contained in the specification of a "patent granted to Peter Ewart, of Manchester, C.E." (afterwards of Woolwich), in 1822, for a new method of making coffer-dams. Plates or piles, each strengthened by a rib at the back, were driven close together, so as to present a plain flat surface externally; and the butting joints in cross section show hooked edges, dovetailing with the like parts of a narrow pile slid down at the back. A contrivance was introduced at certain distances to allow of expansion and contraction. This invention had, however, been preceded by one in which the piles were formed of a single pattern, with semicircular ends, hooking together, and presenting on the face the appearance of alternate round piles and flat plates. Other inventions succeeded; but in all there were difficulties in driving the thin piles or plates in a direct line and without injury to them, until, by the use of round hollow piles by Mr. Sibley, the requisite area for percussion was provided, and means adopted by boring through the hollow of the pile to ease the course of descent. The round piles were cast with grooves to receive the flat piles. One of the first of the important applications of iron piling which were made was at the Brunswick Wharf, Blackwall, of which a notice will be found in the "Transactions" of the Institution of Civil Engineers.‡

The question of the durability of iron in water is only touched upon in the memoir; but has its importance recognized. In salt water, there is ample evidence that the decomposition is rapid. But, this very action with cements, or any siliceous matter, produces a new substance of exceeding hardness and durability. So that, whilst decay might go on at the exterior of iron casing, the interior, by the access of water and the corrosion, might become only more firmly consolidated.§

We shall proceed in our next to describe fully the mode of construction adopted for Westminster-bridge, and to make such observations upon it as may seem desirable.

THE MANUFACTURE OF BRICKS BY MACHINERY.‖

I now come to the rolling-mill, which is by far the most practical of all, and its general adoption throughout the kingdom would do more to improve the quality of our bricks than any other process. It consists of a pair or pairs of horizontal cylinders running near together, between which the clay is crushed. When bricks are made by hand, or a machine is used which does not pug the clay, I recommend the use of the pug-mill, combined with the rolling-mill. The clay passing first through the rollers, and then through the pug-mill, is ready for use.

All practical men must agree that you cannot

* "Repertory of Arts and Manufactures;" first series, vol. vi. p. 361.

† "Repertory of Arts," second series, vol. xx. p. 1.

‡ "Memoir on the Use of Cast Iron in Piling, particularly at Brunswick Wharf, Blackwall." By Michael A. Borthwick, C.E.—*Transactions*, Institution of Civil Engineers. Vol I.

§ In the "Papers" on subjects connected with the duties of the Corps of Royal Engineers, Vol. III. is one "On the Decomposition of Metallic Iron in Salt Water, and its Reconstruction in a Mineral Form." By Colonel Sir W. Reid, R.E.

‖ See page 442, *ante*.

have the clay in particles too finely divided, and this very fine division cannot be effected by that universally-used pug-mill. The first process is to crush or grind your material, and then to pug or work it. These mills are—in the case of fire-clays, or any very hard rough substance, such as marls—series of pairs or rollers (generally three pairs) driven by steam. The clay is thrown into the top pair, which are set rather wide apart: the next pair are nearer together, and run at a greater speed; and the third, or bottom pair, are nearly close, and run sufficiently fast to take all the clay as the top pair throw it down. The clay enters these rollers a hard rocky material, and escapes from them entirely ground to a fine dust. For general works, a good single pair of rollers is sufficient. If a marl or hard substance is to be ground, the rollers must be larger in diameter than for unctuous clays, that their larger circumference may bite the marl and draw it in. If the diameter is too small, the lumps would ride between the rollers, and not be crushed without some trouble. For general brickworks a pair of rollers, 3 feet in length, and from 2 feet to 3 feet in diameter, will be found sufficient. The quantity of clay which can be prepared by these mills will be four times as much as can be done by the pug-mill with the same power, and much better, as no portion of it can escape being crushed and minutely divided. These rollers are too often geared to run each at the same surface speed, but I have found that by running the one roller three times as fast as the others (that is, gearing the wheels which connect the rollers at three to one), a double action is obtained, not only crushing the clay, and all hard substances into the finest particles, but also a rubbing action, which more thoroughly divides and amalgamates it, giving also more power to crush up a hard substance than by the pinch of equal rollers. The nature of clays varies so greatly, that no fixed rule can be laid down for their preparation, or whether a combination of rolling mills and pug-mills is necessary, yet this process is most essential if a good article is required. In some works it is necessary to pass the clay through four pairs of rollers and two or three pug-mills, while in another, at no considerable distance, from the difference of the clay, as fine a state of the material may be produced by passing it through a single pair of rollers. I dwell on this subject, as it so materially affects the action of machines and the quality of the ware when made: in fact, this is the groundwork of brickmaking, as it is of all pottery, from china downwards. If we look at pottery, the beautiful stoneware now produced, the large glazed socket pipes used in our town drainage, &c. these are made by machines, but the quality depends more on the preparation of the clay, or the fineness to which it is ground or crushed, than on the machine which moulds it. In most cases a good brick-machine should take the clay after it has been crushed through rollers, and thoroughly amalgamate, or pug and work it, during its manufacture into bricks. Some clays require for a good brick-machine little or no preparation; but these are rare, and they are fortunate who possess them. I have, therefore, only treated of those clays which are most difficult and most expensive to work.

There is a system of preparation called screening; but this only answers for tilemaking, and that on a very small scale. A pair of rollers would do more, at less expense, and better.

If the London brickmakers would use rollers, and crush their clay and ashes altogether, so fine that no hard substance could be felt with the hand, their bricks would be of a very superior quality to what they now are.

There are other systems of preparation; but I have treated of those most universally adopted.

The next process is the manufacture of this clay into bricks; and I cannot refrain here from mentioning what an injurious effect the present system of hand-making has on the habits of men. The brickmakers (that is, the moulders and their attendants), men and lads, are, throughout the kingdom, employed at their trade only during six or seven months in the year, except where bricks are artificially dried in the neighbourhood of collieries. In the winter season, the bricks would be destroyed by frost; neither could they then be dried. They therefore work early and late; and from their having no winter occupation, and on account of their dirty and laborious work, they have such a price per thousand as to compensate them. The result is generally, among this class of men, that, although they are so well off in the summer time, they spend all they earn, leaving the winter to provide for itself. At that season, when they require most to sustain both themselves and their families, as well as fuel, they have nothing to fall back upon, and in too many instances no employment; for, as they earn so good wages in the summer, they do not willingly come down to the price of ordinary labour. These are the men whom the introduction of machinery will affect.

Before entering on the manufacture by machinery, I should state that brickmaking was carried on till within the last few years with comparatively few attempts at improvement. Until the duty was taken off, in 1850, the regulations of the Excise were so strict that any attempts at progress were frustrated; but since the above date most rapid strides have taken place. Machinery has been constructed on all seemingly possible principles to produce this ware in greater quantity, and of superior quality; so that, as far as mechanical make is concerned, it may be called a new manufacture. Although machinery had been worked for many years, it attracted little attention, from its frequent failures in practice. For this reason, new plans have been introduced for the forming of clay into bricks. I shall therefore feel it my duty, in describing these machines, to point out those parts of the several principles adopted which have prevented their being more generally used.

Brick-machines are now very cautiously watched by the makers, which is a matter of no astonishment; for so many machines have been brought out without a due consideration in their construction of what is required by the brickmaker, and many have been introduced by mechanics not at all conversant with brickmaking generally. When they had succeeded in forming a block of earth of the required size, they thought they had attained all that was necessary. I would recommend all, before purchasing, to see a machine in regular every-day work, and to minutely examine the ware which is being sent out for use, the production of the machine.

In a former part of this paper I have mentioned that we wish to manufacture by means of machinery a rectangular block of clay, about 10 inches long, $4\frac{3}{4}$ inches wide, and $3\frac{1}{4}$ inches deep, containing some 154 cube inches, into as compact, hard, and durable a material as a block of stone.

There are four principles on which these machines effect this, one of each I shall briefly describe:—1st, by moulding the dry clay (that is, clay containing only sufficient moisture to allow its particles to adhere, when subjected to considerable pressure) by powerful machinery; 2nd, by imitating the old process of hand-making, filling moulds with soft-tempered clay like mud; 3rd, by forcing clay in a stiff plastic state through dies or apertures the size of a brick, endways or edgeways (a die is a plate with a hole cut in it of the shape which is desired to be given to the clay); and, lastly, forming a stream of clay to the desired shape by rollers.

I will, before explaining these in detail, describe the general principles on which clay is forced into or through these dies and moulds.

The oldest plan of working clay down, and pressing it off through any given aperture, is the pug-mill, which I have before described in the preparation of the clay. This mill is used by both classes of inventors to fill moulds traversing under its delivery, to express the clay through dies, or to fill the material into boxes in which work plungers or pistons to force the clay out through a die as soon as it has received its charge. Next, we have pistons worked by all sorts of mechanical contrivances, of wheel-work and racks, cranks, eccentrics, screws, &c. forcing the clay from boxes or cylinders in which they traverse backwards and forwards, and so by their downward passage force the clay through any given aperture or die. These machines lose much time, as during the up or return passage of the piston all brickmaking is at a stand. Another expressing machine, the patented invention of Mr. Ainslie, is a pair of rollers or horizontal cylinders, driven at a like surface speed, having one side closed, in front of which is the die. The rollers being driven, draw the fed clay through between them, and force it out in one continuous stream of the desired shape.

The next, and, as I have found in my experiments, the most powerful, is a screw fixed on a shaft hung through the centre of a cylinder. The screw in revolving carries the clay down its thread, and not only forces it on with immense power, but so works the clay in its onward passage as to be equal to the pug-mill when used in combination with a rolling-mill. The clay naturally adheres to the stationary surface of the cylinder, and the screw by its revolutions keeps it in a constant state of motion, and rolls and works it, and when it arrives at the end it is forced on through any required orifice. An example of this is before you in the pug-mill part of my machine, but with the addition of knives on the thread of the screw.

To explain the whole of the mechanical contrivances invented for forcing and expressing clay, either through orifices or into moulds, would not aid us in the practical manufacture of bricks, and would, without drawings, occupy too much space.*

The first plan adopted which I propose to discuss is, that of moulding dry clay, or clay as dug from the earth. This has been worked on several principles. The dry clay American machine is about the best example of this class. The clay is merely dug from the earth, and ground through rollers, from which it falls into the hopper of the machine. The bottom of this hopper is a cast plate in which are fourteen brick-moulds. This mould-plate is rather more than double the length of the hopper, and travels backwards and forwards, being driven by wheel-work; so that while one-half of the plate, containing seven moulds, is being filled under the hopper, the other seven are being emptied outside. The moulds have moveable bottom-plates or pistons, which are forced up by an inclined plane as soon as they are free from the hopper, and throw out the bricks contained in them. The moulds are filled as they traverse backwards and forwards by having to pass under a wheel which presses the clay into them. This wheel is hollow, and is filled with steam to heat it, so that the clay may not adhere. I have known an instance on a railway, where the bricks, made of blue lias clay by this machine, were so smooth on the mortar surface, that bridges had to be taken down and rebuilt, because the mortar would not adhere to them. Others force the clay down cylinders into moulds by means of a screw, and some by hydraulic pressure produce a brick ready for the kilns. But these machines are not likely to come into general use, for they have to exert so great a force in order to press the comparatively dry material into the moulds so as to fill all corners (here is the difficulty and the consumption of power), and at the same time so to compress the clay, as to make it sufficiently firm, not only to adhere, but also to withstand the weight of thirty or forty deep, one row on another in the kilns. There must necessarily be an immense amount of power consumed for the purpose of obtaining what is considered a more solid and durable brick. But this is an error which I shall shortly explain. This class of machinery is very expensive. The American, with the engine, costs upwards of 1,400*l*. These machines average the consumption of 20-horse power to drive them. A breakage with this large machinery is very serious, and of too frequent occurrence. I shall be met by the promoters of these machines with the advantage of working up dry clay, saving the whole process of drying the bricks, the labour of carrying to the drying-ground, and again removing to the kilns; also with being able to work all the year uninterruptedly, and independently of seasons. But with how few clays can this be accomplished! The clay is not really dry: it has sufficient moisture to allow it to adhere and give it toughness to support the weight of the stack in the kilns. The great pressure to which

* I recommend a continuous delivery, with a good preparation of the clay; and that on the principle absorbing least power.

it has been subjected in the machine makes it so compact a mass, that it would take a long time thoroughly to dry it. The result would be, in plastic clays, if this principle were generally adopted, that when the firing of the ware was commenced, the outer surface would be dried, but from its close texture the moisture in the centre could not evaporate. The greater heat, as the process of firing proceeds, makes the brick hot, and the moisture in the centre, forming steam, would in most cases blow it to pieces. In many clays the outer surface will shell off, but in others of a more open character, that is, of a more loamy kind, it would be only partially rent, and this would generally cause the bricks to be less solid and compact than those made from tempered plastic clay, which in drying has become sufficiently porous to allow this steam to escape. The firing of the ware made on this principle is as great a drawback as the expensive machinery necessary. The clay, being so powerfully compressed into the moulds, is held on every surface by adhesion. When the pressure is taken from the top, and the piston or bottom of the mould begins to rise, the outer surface of the brick adheres so tightly to the inner surface of the mould, that it takes great power to move it. The centre of the brick, in some clays, rises a little the first, and causes one mortar surface to become slightly concave. The outer edges drag, from the great friction they have to encounter in being freed from contact with 90 inches, or a square surface of more than half as many superficial inches as there are solid inches in the brick itself. These machines are better adapted for marly than plastic clays.

I will now take the working of clay in a soft state, or of the same temper as for hand-making.

The machines for this purpose have all necessarily adopted the principle of moulding, which is much more easily performed than with dry clay, as not more than about four-horse power is required. We have the same duty to perform as with dry clay, viz. to fill each corner of the mould and to expel all the air. A machine of this class was introduced some few years since by Messrs. Ransome, of Ipswich, from America (Hall's machine). This was a pug-mill, which forced the clay into a series of six moulds. A man in attendance, by wheel-work, gave the clay a pressure into the moulds with one leverage, and with another drew out from under the machine the six full moulds, the same action replacing them with six empty ones. Although largely used in America, it did not become general here. The difficulty in this class of machinery is, that while the moulds are being drawn from under the pressure of the clay, directly one part of the mould is clear, the pressure, which is on that part of the brick still under the machine, lifts or forces the clay upon that side or end which is free from pressure; and when delivered, the bricks are of unequal thickness.

One machine, the London Company's Brick Machine, corrects this by striking or cutting off this superfluous clay after it has left the mill or pressure.

Machines working soft clay have several disadvantages for the brick-field: the material being in such an almost fluid state, the bricks are very subject to be injured in form in being carried off. Nor are these machines sufficiently portable to be easily moved each day as the drying ground is filled round them. The clay being worked in so soft a state, the great evaporation in drying leaves the bricks very porous, if it is a loamy clay, or causes them to undergo an excessive contraction if a strong one. Neither are they sufficiently stiff to be delivered from the mould by the machine, but would have to be taken off by hand and emptied, which is a very slow process, and incurs considerable manual labour, as the machine requires not only to have the mould taken from it and emptied, but also to be fed with the clay again. In brick-making by machinery, we should employ as little labour as possible, but should give the machine the raw material and take away the manufactured article without any intermediate labour. It is, in my opinion, a serious objection to have to feed a machine with moulds, as is generally done in this class of machinery. In making 15,000 bricks a day, and calculating the moulds to weigh 4 lbs. each, which is a low average, as they are generally made of metal, we have to employ the extra manual labour of taking off, and again feeding on the machine (two removals) rather more than 53½ tons of iron, or of whatever materials the moulds may be composed; while the whole weight of clay for the day's work is not more than seventy-five tons. Unless the machines can be easily moved from day to day as the drying-ground is filled, great additional labour will be incurred; for the softness of the clay will not allow the bricks to be roughly wheeled, and they must be transported very carefully.*

I now come to brickmaking by machinery with clay in a plastic state, but of such a stiffness that the bricks, when made, are too firm to lose their form in carriage or removal from the machine to the drying ground, or in that state of temper in which it will make, in most clays, the best and soundest article, if properly mixed and prepared, having only sufficient moisture to allow of its being thoroughly amalgamated. This clay will make bricks which, when well burned, will have a very metallic sound on being struck; and this is the best proof of their solidity and close texture.† Bricks are made with clay in this state by moulding; by pressing through dies; by forcing through dies with tongues or cores (making hollow or perforated bricks); and, lastly, on the principle of my own machine, by taking the stream of clay from any expressing machinery, and forming it into a block by rotating surfaces. Moulding is subject to the same difficulties which I have described in soft clay,—the lifting in the end or side of the mould first relieved from pressure, though not to the same extent. But it takes considerably more power to drive the machines, and to fill the clay into the bottom corners of the moulds. In these machines the bricks are delivered from the moulds by pistons, as in dry clay, but are more subject to swell on the upper mortar surface, and to drag on the sides of the moulds.

There are many principles on which the moulding of the clay is worked; but the limits of this paper will not allow of my explaining them. The system of forcing the clay through dies the size of a brick, edgeways, and then dividing the stream of clay into bricks by a frame of wire 3 inches, or the desired thickness of the brick apart, has been tried by several; but here arises another difficulty—viz. to get a good smooth square corner or edge to the stream of clay as it escapes from the die. The large aperture through which it is forced, 50 square inches, does not offer a sufficient resistance to force the clay into the angles of the die. Clay, when expressed through an aperture such as this, travels fastest in the centre, having less friction or resistance through its own substance than over the smoothest metal, wood, or any fixed matter. Clays travel, when forced, in the same manner as water running through the same space. The centre of the stream, having the least friction, travels fastest; while the outside, from the friction of the stationary surface which it has to travel over, does not flow so fast. So it is with clay; that which escapes through the centre, meeting with no resistance, travels as fast as the power forces it forward; but the outward surfaces are constantly dragging against the stationary metal or wood of the die, and more particularly so at the corners, the clay escaping with jagged or saw-like edges. The corners of the square die have the smallest body of clay to contend with the largest amount of friction. To remedy this, Mr. Heritage brought out his patent water die, which is a double die, or escaping aperture, with the intervening space filled with water. The clay, after leaving the actual die with a rough edge, passes through the water, and then through the second smaller die, which greatly improves it. Another machine, Mr. Clayton's, was introduced to obviate the difficulty of a rough edge, by having the two ends of the die to rotate. This was an improvement in the right direction. When the clay is delivered from machines on this principle, it has yet to be divided into bricks. The stream of clay is, in most instances, in constant motion, and in order to make 15,000 bricks per day, must travel 7 feet per minute. The machines hitherto introduced cut off these bricks while in motion at right angles to the die, but having no compensating motion for the onward movement, they depend entirely on the speed with which the man can pass the frame of wires through the stream of clay. It is therefore impossible for them to make a square cut, and if at all nearly correct, they must work so slowly that the advantage of the machine is lost. A brick machine, to be perfect, should effect this, and not depend on manual labour. If the clay is travelling at the rate of 5,000 bricks per day, a man cannot cut them off square, while in motion, with a cutting apparatus working at right angles to the die. If there is a compensating motion on the wire frame, we have still equal difficulties to contend with: either the stream of clay escaping from the die does not travel at one uniform speed from irregular feeding, or the man in attendance draws his wires too slowly or too quickly to cut correctly. We have an example of this cutting in the Ainslie Company's tile-machine, and a brick machine was exhibited at the Royal Agricultural Society's meeting at Carlisle last year on this principle, by Messrs. Porter, Hind, and Porter. The machine itself must do this with mechanical truth.

The most universally used die machine which has been extensively worked up to the present time is Mr. Beart's patent for perforated bricks. This gentleman, who is practically acquainted with these matters, in order to remedy the difficulties I have mentioned in expressing a mass of clay through a large aperture or die, hung a series of small tongues or cores so as to form hollow or perforated bricks. By this means the clay was forced in its passage through the die into the corners, having the greater amount of friction now in the centre. Still, the bricks came out rough at the edge with many clays, or with what is termed a jagged edge. The water die was afterwards applied to this machine, and the perforated bricks, now so commonly used in London, are the result. In Mr. Beart's machine, which is a pug mill, the clay is taken after passing through the rolling-mill, and being fed in at the top, is worked down by the knives. At the bottom are two horizontal clay-boxes, in which a plunger works backwards and forwards. As soon as it has reached the extremity of its stroke, or forced the clay of one box through the die, the other box receiving during this time its charge of clay from the pug-mill, the plunger returns and empties this box of clay through a die on the opposite side of the machine. The result is, that while a stream of clay is being forced out on one side of the machine, the clay on the opposite side is stationary, and can, therefore, be divided into a series of five or six bricks, with the greatest correctness by hand. Some of these machines have both boxes on one side and the plungers worked by cranks. This machine cannot make bricks unless the clay has previously passed through rollers, if coarse, for anything at all rough, as stone or other hard substance, would hang in the tongues of the die. But the clay being afterwards pugged in the machine, is so thoroughly tempered and mixed, that the bricks when made cannot be otherwise than good, provided they are sufficiently fired. As to the utility of hollow or perforated bricks, that is a matter more for the consideration of the architect or builder than for the brickmaker. Perforated bricks are a fifth less in weight than solid ones, which is a matter of some importance in transit; but it takes considerably more power to force the clay through those dies than for solid brick-making. In the manufacture of perforated bricks there is also a royalty or patent right to be paid to Mr. Beart.

Having thus explained the principles on which mechanics have attempted the manufacture of bricks, and not considering any of them quite perfect, I turned my attention to what was the cause of failure in these several principles.

In the moulding of clays in a dry state by machinery, we have to employ great power and large expensive machines to force the clay into the corners of the moulds, and to sufficiently press it, so as to make it adhere. When we do

* Since writing the above, I find the Patent Brick Machine Company have improved their machines; and, according to a circular received from the secretary, Mr. Mount, they now work the clay in a much drier state than it can be moulded by hand. It should not, therefore, come under that class of machines in which I have placed it. It is also portable.—H. C.

† There are exceptions, but this is generally the case.

succeed in making from the clay a nice true block, in appearance all we could wish, it has then to go through the ordeal of firing, from which with but few clays it would come out sound. Nor must we forget the serious and too frequent losses by breakage of these machines.

Next in moulding clays in a medium or stiff plastic state, and also in a soft plastic state, when the mould escapes from the pressure of the clay, that part which first leaves the machine is apt to be forced up above the mould, causing that end or side to be thicker, and in those which lift the brick out of the mould by pistons, from the clay dragging, that is, adhering so tenaciously to the inner surface of the moulds, an effect is produced of making one mortar surface concave. There is also a great wear on the moulds, from the pistons which lift the brick travelling in the grit of the clay: this soon cuts them larger, and the pistons must require frequent renewal.

Those machines which force the clay through dies to make solid bricks should deliver it the length and depth of a brick edgeways, so as to cut every 3¼ inches, that the rough surface left by the wire may be the flat of the brick which forms the mortar joint. We have traced the difficulties of the dies, and also the imperfections of the cutting arrangements generally used. I came to the conclusion that for a brick machine to become generally useful it should embrace the following advantages, and these I have attempted to realise. First, it should be portable, in order to save labour in carrying off. It should amalgamate or pug the clay, and then form it into a stream of material the size of a brick edgeways, and divide it into bricks by the action of the machine itself. It should have no cessation, but be intermittent in its action: it should work at great speed, that is, deliver off its bricks as fast as it is possible to remove them. To produce 15,000 per day we have to to pass seventy-five tons of clay through the machine, and to make solid and hollow, or perforated bricks, with equal facility; in fact, I do not consider any machine perfect which requires assistance in cutting off or otherwise. As I before remarked, a machine should be fed with the raw material, and deliver out, without any assistance, the manufactured article, with the consumption of as little power as possible.

I shall now explain the action of my own machine, an example of which is before you.

The clay is fed into a pug-mill, placed horizontally, which works and amalgamates it, and then forces it off through a mouth-piece or die of about 65 square inches, or about half an inch deeper and half an inch longer than is required for the brick, of a form similar to a brick on edge, but with corners well rounded off, each corner forming a quarter of a 3-inch circle, for clay will pass smoothly through an aperture thus formed, but not through a keen angle. After the clay has escaped from the mill it is seized by four rollers, covered with a porous fabric (moleskin) driven at a like surface speed from connection with the pug-mill.* These rollers are two horizontal and two vertical ones, having a space of 45 inches between them: they take this larger stream of rough clay and press or roll it into a squared block of the exact size and shape of a brick edgeways, with beautiful sharp edges, for the clay has no friction, being drawn through by the rollers instead of forcing itself through, and is delivered in one unbroken stream. The rollers in this machine perform the functions of the die in one class of machinery, and of the mould in the other. They are, in fact, a die with rotating surfaces.† By hanging a series of mandrills or cores between these rollers, or by merely changing the mouthpiece, we make hollow and perforated bricks without any alteration in the machine. The pulley which drives the belt working these rollers is not of sufficient diameter to be able to draw the clay away from the mouthpiece, if the man feeding the machine should neglect his work. This small pulley runs loose in its strap, leaving all the details of the machine stationary until more clay is fed into the mill, when it again immediately resume its functions. The bottom roller carries an endless belt, on which the stream of clay is delivered to the cutting-frame. This carries a wire, which is constantly traversing at a compensating angle, while the clay is in motion, and thereby makes a square cut. After it has divided one brick, it changes its action and cuts off the succeeding one at the opposite angle to that which it had previously traversed. This wire is put in motion from gearing in connection with the rollers, which press the block of clay into the shape of a brick, and thereby acts with mechanical correctness. For if the smallest portion of clay escapes from the mill, motion must be given to the rollers, or rotating die by the driving strap, and from them to the cutting wire. The bricks, as fast as made, are passed on by the machine to boys in attendance, who receive them on pallet boards, and remove them to the drying floors or hacks. It will be seen that I form my brick or squared block of clay with less power and friction than by moulds or dies, that no resistance is offered to the clay, but that, on the contrary, it is impelled forward by the driven rollers; that from the machine itself cutting off the bricks at an angle, compensating for the onward movement off the clay, not only a true cut is made, but also the intermediate labour required by most other machines is saved. This machine, with four-horse power, will throw of bricks, if fed with clay, faster than it is possible to remove them. Another advantage in the pug-mill is that the clay is thoroughly amalgamated. Bricks can be made by this machine for one-half the cost of hand-making. If it was employed for thirteen weeks, making only 15,000 a day, the saving of labour would purchase the machine; and each machine occupied throught the year would effect a saving of 600*l.* per annum. Besides this, the superiority of the bricks made by it commands a higher price in the market. Four hundred of these machines occupied throughout the year would make all the bricks required for the use of this country, and effect a saving of 240,000*l.* a year in labour.

* The feeding these rollers with a stream of clay by means of the die falls within the claims of a patent taken out by Mr. Clayton. I have, therefore, made arrangements with that gentleman for the use of that part.

† The original inventor of using rollers to compress the clay into any desired shape was the Marquis of Tweedale.

PROPOSED GOVERNMENT OFFICES.

The Government have determined to build, with as little delay as possible, two new public offices, one for the Foreign Secretary, and the other for the War Secretary. These buildings are to be erected on a site between Charles-street and Downing-street. Plans are to be sought, too, for laying out the remainder of the ground lying between Whitehall on the north, Great George-street and New Palace-yard on the south, the Thames on the east, and St. James's-park on the west.

It is intended to invite architects of all countries to offer designs for these undertakings, and we understand that particulars and instructions to competitors are in course of preparation.

THE VICTORIA MILITARY HOSPITAL, AT NETLEY, ON THE SOUTHAMPTON WATER.

On the 19th of May last, her Majesty the Queen, as we mentioned at the time, laid the first stone of the new military hospital, at Hamble Cliff, a little more than a mile from the ruins of Netley Abbey, and wrote her name upon the plans in the fine bold hand we all know.* It is intended for 1,000 men (may it never be full), who are distributed between two blocks of buildings, each complete in itself, as will be seen in the plan and view appended: one of the blocks will be more especially devoted to medical, the other to surgical cases. The view shows the whole extent of the hospital: the plan for the sake of size is confined to one block of buildings (the other being exactly similar), and the central building appropriated to the management and to sick officers. To be precise,—

The ground floor of one wing, contains—

1	ward, to accommodate	.....	16	patients.
8	do.	,, ...	9	,, each.
1	do.	,, ...	7	,,
4	do.	,, ...	4	,, ,,
1	do.	,, ...	6	,,
5	do.	,, ...	2	,, ,,

Waiting-room, wardmaster's and assistant ward-master's quarters, principal medical officer's and clerk's offices, medical officers on duty, library and reading room, librarian and chaplain's retiring-room.

The buildings in the rear,—Engine-room, boiler-room and coal store; kitchen, scullery, pantry, larder, room for arranging dinners, with lift to dining-rooms above; steward's quarters, bedding and provision stores, medical officers' room, medical registry and appliances room, dispensary, drug-room, and surgery man's room; cellars in the basement for steward's stores.

The outbuildings,—Orderlies' rooms, itch wards, contagion wards, pack stores, cook's and engine-man's quarters; coal stores and store-rooms; *post mortem* room and dead house; wash-house and ablution-rooms: sluice conveniences, and ash-pits. Since our view was made it has been determined to build these two stories in height.

The first-floor wing contains—

2	wards, to accommodate	.....	16	patients each.
10	do.	,, ...	9	,,
2	do.	,, ...	8	,,
2	do.	,, ...	7	,,
2	do.	,, ...	6	,,
6	do.	,, ...	2	,,

Medical registry and assistant ward-master's rooms, dining-room, cook's room, and scullery.

The second floor—

1	ward, to accommodate	.....	16	patients
10	do.	,, ...	9	,, each.
2	do.	,, ...	8	,, ,,
2	do.	,, ...	7	,, ,,
2	do.	,, ...	6	,, ,,
2	do.	,, ...	3	,, ,,
6	do.	,, ...	2	,, ,,

Operating theatre, medical registry, and assistant ward-master's room.

In the centre block on the ground floor are,—Wardmaster's quarters, waiting-room for 200 men, orderly and medical officer's room, offices for principal medical officer and clerks, apothecary's office, purveyor's office and purveyor's clerks', Chelsea Board-room and ante-room, baths of every description, bath man's room, fatigue man's room; chapel, to accommodate 800, with vestry and book-rooms.

On the first floor and second floor respectively,—Six rooms, each to accommodate one sick officer; one day-room for officers, mess kitchen, servants' rooms, &c.; three rooms, each to accommodate two sick officers' servants; surgeon's and assistant surgeon's quarters; kitchens, servant's rooms, larders, &c. attached; large store-rooms for apothecary or purveyor's stores; bath-room for officers.

The corridor is to be 12 feet wide throughout: the windows to open for the circulation of air. All the wards, it will be seen, have attached to them water-closets, bath, and scullery, and also an ablution space, differing in size according to the number of patients in the wards, which vary from two, the smallest, to sixteen, the largest.

A nurse's or orderly's room is to open off each ward, with a doorway only leading into them;—"no *door*, because, if capable of being closed, irregularities are more likely to take place; and as there is no fireplace, the orderly will be interested in looking to the fire and comfort of the ward for himself, as well as for the patients."

The wards for four men, according to the official statement, give 1,315 cubical feet to each patient; the wards for two men, 1,406 feet; and the wards for seven men, 1,800 feet: this largest quantity, by the way, is less than some authorities consider necessary. Arrangements are made for the supply of fresh air irrespective of the windows: and there are flues and exhausting shafts for the removal of that which is vitiated.

The beds are to be arranged between the windows as much as possible; with 4 feet between them laterally, and between the ends, in the small wards, 10 feet,—in the larger, 18 feet; allowing each bed 7 feet in length.

The contract for the foundations up to the plinth is being carried out by Mr. E. Smith, of Woolwich. The remainder of the building is not yet contracted for. The exterior of the

* The stone bears the following inscription:—"This stone was laid on the 19th of May, in the year of our Lord, 1856, by her Most Gracious Majesty Victoria, Queen of Great Britain and Ireland, to be the foundation-stone of the Victoria Military Hospital intended for the reception of the sick and invalided soldiers of her army."

hospital is to be of red brick, with dressings of Portland cement.

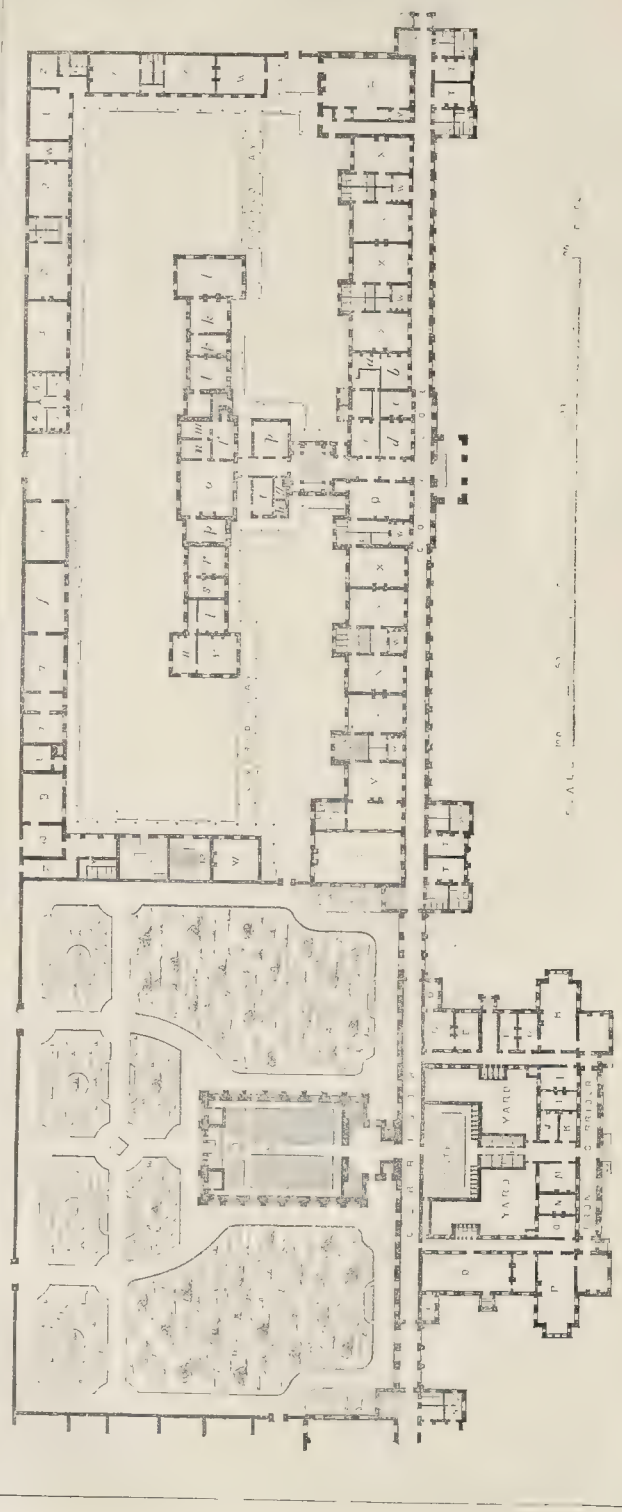
The building was designed by Mr. Mennie, the surveyor of the Royal Engineer's department in Pall-mall, under the direction of Colonel O'Brien, the assistant quartermaster-general; Dr. Mapleton, of the 15th Hussars; and the deputy-inspector-general of fortifications, to whom, as a committee, the subject was referred by Lord Panmure.

In an ensuing number we shall speak of the arrangement of hospitals in general, with especial regard to the plans of some abroad.

The following will serve to show the appropriation of the several apartments in the Victoria Hospital, marked on the plan.

References.

A. Chapel.
B B. Lifts.
C. Purveyor's clerk's office.
D. Closet.
E. Purveyor's office.
F. Fatigue-man.
G. Ante-room.
H. Chelsea Board-room.
I I. Ward-master's-room.
J. Ward-master's kitchen.
K. Porter's room.
L. Baths.
M. Kitchen.
N. Apothecary's room.
O. Principal medical officer's room.
P. Principal Medical Officer's clerk's room.
Q Q. Waiting-rooms.
R. Office.
S S S. Baths, latrines, &c.
T T. Ward; 4 men.
U. Ward; 16 men.
V. Ward; 7 men.
W W W. Wards; 2 men.
X X X. Wards; 9 men.
Y. Chaplains.
Z. Library and reading-room.
a. Assistant wardmaster's kitchen.
b. Assistant ward-master.
c. Medical officer on duty.
d. Principal medical officer and clerk.
e. Ward-master's living-room.
f. Store.
g. Engine-room.
h. Coals.
i. Boiler-room.
j. Bedding store.
k k. Provision store.
l. Steward's living-room.
m. Larder.
n. Pantry.
o. Kitchen.
p. Room for arranging dinners.
q. Scullery.
r. Medical officers' room.
s. Engine-man's room.
t. Medical registry,
u. Drug-room.
v. Dispensary.
w w. Orderlies' rooms.
x x. Wards; 6 men.
y. Urinals and latrines.
z z. Dust.
1. Shed.
2. Contagion; 8 men.
3. Pack store.
4 4. Cooks' rooms.
5 5. Engine-man's.
6. Coals store.
7. Clothes store.
8. Desiccating-room.
9. Post-mortem-room.
10. Dead-house.
11. Wash-house.
12. Ablution-room.

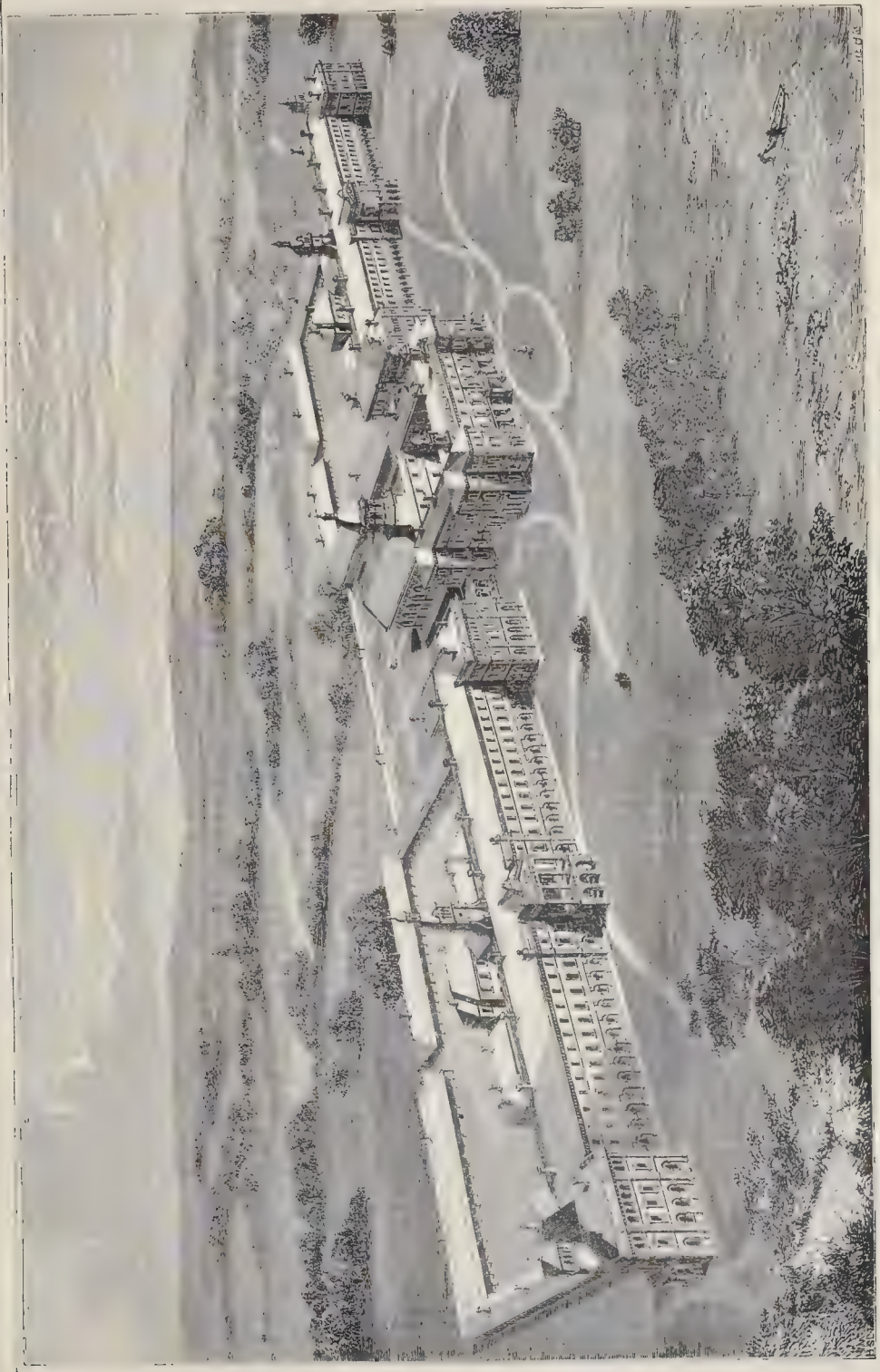


THE VICTORIA MILITARY HOSPITAL: PLAN OF GROUND-FLOOR.

COMPETITIONS.

Highbury Chapel.—Seven designs were submitted for a Wesleyan chapel, to be erected on the Park-hill Estate. Two designs were selected, the authors being Mr. Pocock, of Chelsea, and Mr. C. Laws, of Doughty-street: ultimately the committee decided in favour of the latter. The building is in the Gothic style,—the basement being formed for Sunday-schools. The estimated cost is 3,600*l*. It is also proposed to erect day-schools in connection, after the completion of the chapel, at an additional cost.

Norwich Workhouse.—We understand that about thirty designs have been sent in for the proposed new workhouse, on the Dereham-road, and have been exhibited during the past week. The local paper speaks well of some of them.



THE VICTORIA MILITARY HOSPITAL, NEAR SOUTHAMPTON.—Mr. Messil, Architect.

SIR CHARLES BARRY AND THE GOVERNMENT.

The architect of the new Houses of Parliament, as we said would be the case, has been forced to yield to the decision of the Treasury. A copy of the protesting resolution passed by the council of the Royal Institute of British Architects having been forwarded to Mr. Wilson, elicited the following reply:—

"Treasury Chambers, 15th July, 1856.

Gentlemen,—The Lords Commissioners of her Majesty's Treasury have had before them the resolution passed at your meeting on the 5th instant, on the subject of Sir Charles Barry's professional remuneration as the architect of the New Palace at Westminster, which were [*sic*], enclosed in your secretaries' letter of the 9th instant.

Although my Lords cannot recognise your right to call upon Parliament or her Majesty's Government to conform to the regulations or opinions of the society, in arrangements which may be made with professional gentlemen undertaking public works, their Lordships are anxious that no misunderstanding should exist in the minds of the respectable body which you represent on the subject of the remuneration of Sir Charles Barry as architect of the New Houses of Parliament.

Their Lordships have therefore directed me to transmit to you herewith the enclosed copy of their minute of the 4th instant, in order that you may be informed of the views by which this Board has been governed in the matter.

You will learn from that minute that this Board has not in its recent correspondence with Sir Charles Barry proposed any new principle with regard to the professional remuneration of architects employed on public works, but have [*sic*], on the contrary, endeavoured to carry out in a liberal spirit an arrangement made in 1838, in consequence of opinions expressed in Parliament, and acquiesced in by Sir Charles Barry in the following year, as shown by the correspondence quoted in the enclosed minute which took place in 1838 and 1839, and you will observe that the only objection then raised by Sir Charles Barry regarded the amount of remuneration proposed, and not the principle on which it was based. Their Lordships feel that you might, with greater propriety, call upon a member of your own body for an explanation of the motives by which he was governed, rather than address a remonstrance to her Majesty's Government against the deviation, acquiesced in by him in 1839, from the rate of charge recognised by the profession.—I am, &c.

(Signed) James Wilson."

There will be but one opinion, we conceive, as to the *generous* tone of the last part of this reply amongst those who remember the manner in which Sir Charles Barry was coerced into an arrangement at a moment when refusal on his part was impossible, and that his request "to be favoured with the particulars of the principle upon which the proposed sum," as a remuneration, was recommended (in order that he might object to it), was peremptorily refused!

The terms insisted on by the Treasury, it will be recollected, are a commission of 3 per cent. on the amount expended (to apply also to future works), 1 per cent. on the same amount for measurement, and such a sum as remuneration for services rendered in the warming, lighting, and ventilating arrangements as might be determined. This point, together with the question as to the works upon which the architect should hereafter be allowed the commission of 1 per cent. for measuring, was referred to the Chief Commissioner of Works, who thus reported:—

"As to the first point, I am of opinion that Sir C. Barry is entitled to receive, as a remuneration for his services under that head, a payment of 4,925*l.*; and I arrive at this amount by allowing him 300*l.* per annum, from January, 1840, to April, 1847, in respect of the preparation of plans and estimates for the various schemes suggested by Dr. Reid, which were either abandoned or greatly modified previously to carrying into effect the existing arrangements, and 500*l.* per annum from April, 1847, to November, 1852, for a continuance of the same duties, and also for taking charge of the warming, ventilating, and lighting apparatus throughout the entire building, with the exception of the House of Commons.

Upon the second point, I am of opinion that an allowance for measurement of 1 per cent. should, for the future, be made only upon such accounts as require the services of a surveyor for their preparation, unless the architect should be authorised in writing by the First Commissioner of this Board, and with the approval of your Lordships' Board, to make any special charge for special services so authorised."

The following is the letter, addressed to Sir C. E. Trevelyan, with which the architect has closed the dispute:—

"Old Palace Yard, 15th July, 1856.

Sir,—I have to acknowledge the receipt of your letter of the 10th inst. transmitting to me, with reference to my letter to Mr. Wilson of the 23rd ult. copy of a farther minute of the Lords Commissioners of Her Majesty's Treasury, dated the 4th inst. relative to my remuneration as the architect of the New Palace at Westminster.

It is with the deepest regret and disappointment that I find their Lordships have put aside my proposal, to refer all matters in dispute between us to arbitration. Their Lordships must be perfectly aware that no individual in my position could with the least chance of success contend with the Government, and therefore that the power of decision virtually rests with themselves: but this very circumstance, I had hoped, would ensure their determination to refer the case to some authority the impartiality of whose decision could not be impugned.

However, as their Lordships have thought fit to determine otherwise, and as it is evident, from the tenor of their minute of the 4th inst. that no further arguments in support of my claim could alter their determination, I have no course left but to yield to necessity, and accept the terms dictated to me; in effect, to submit to a sacrifice of what I fully believe to be fair and legitimate claims, amounting, exclusive of a large sum for interest on payments delayed, to 20,000*l.* at the least.

But while thus compelled to yield to the decision of their Lordships, I feel it due to myself and to my profession to state that I do not admit the fairness of the arguments, or the accuracy of the statements, upon which it is manifest this decision has been founded; and further, that after a reconsideration of the whole case, and especially of all the reasons which have been urged on the part of the Government, I remain firmly convinced that the arrangement forced upon me in 1839 has been entirely set aside by the non-fulfilment of any one of its conditions, and my claim ought in justice, to say nothing of liberality, to have been allowed in full.

With respect to the completion of the works in hand, I beg to add, that as every other architect employed on public buildings has been and is still being paid his full commission, nothing would induce me to continue my services upon the reduced rate of commission proposed, but the strong and natural desire I have to complete a work, which, by the devotion of so many years of labour and anxiety, I have endeavoured to render not unworthy of the country.

I am, &c.

(Signed) Charles Barry."

We repeat the expression of our conviction that Sir Charles Barry has been very ill treated by the governing powers, and that the profession at large has been injured by the same blow.

FOREIGN ART-NEWS, &c.

The new Danube Sluice, Battina.—When about fifty years ago the Francis canal was built, a desideratum remained to have it prolonged to the Danube, as otherwise it could not be used permanently. By the building of the new sluice, now completed, this desideratum has been obtained, and even the largest Danube steamers can navigate the whole extent. The work is a huge one, and can be only compared with the bridge over the Lagunes of Venice. The walls, extending to the length of 100 fathoms, present a uniform mass, as nothing but *Béton* (*mortier hydraulique*) has been used, consisting of a chemical composition of silicious acid with lime and clay, which becomes hardened in the contact with water. M. Mihalik, Austrian engineer, is the builder of the Danube sluice.

The Tuileries and the Tuileries Gardens.—Even this admirable creation of Le Nôtre is to be remodelled. The whole *circus* of that historical park is to be heightened, the two fine terraces on the Seine and the Rue de Rivoli are to be demolished, and the garden transected by a large avenue leading from the Place Vendome to the banks of the river. This avenue will receive an iron bridge (for foot passengers), which will lead to the Quai d'Orsay and the Faubourg St. Germain. The garden will receive an addition of marble and bronze statues, busts, vases, &c.; to be illuminated by 10,000 gas-lamps, like the Champs Elysées, and be open until eleven p.m. The latter improvements are desirable, still the work of Le Nôtre deserves some consideration. It is also asserted, that the rebuilding of several parts of the palace of the Tuileries, as the Pavillon de Flore, the great gallery on the Seine, up to the Carrousel gateway, has been sanctioned.

Chinese Works on the Manufacture of Porcelain.—When the late M. Ebelmen was director of the manufactory of Sèvres, he engaged M. Stanislas Julien to publish in French the Chinese works on the making of porcelain, existing at Paris. M. Julien has consulted three works of the French Imperial Library. 1. A Mémoire used by P. d'Entrecolles, published in 1325 (?), and which up to 1823 had passed through twenty-one editions. 2. A Dissertation of Tchou-thou tch'ouen, from about the middle of the last century. 3. A History of the Porcelain of King-ching, where the Imperial manufactory is situated. This work contains the following chapters:—Examination of old porcelain, porcelains of King-te-chin; explication of procedures; description of ovens, workmen, artists, enamel, colours, varnish, &c. From the type of characters found on some old china, it is evident that it had been made in that country some time before the Christian era.

Probable Stoppage to the Export of Pictures in Upper Italy.—The Austrian Government have ordered the purchase of the remainder of the picture gallery, *Manfrin*. The exportation of such treasures as the sketch-book of Giovanni Bellini, the mechanical drawings of Leonardo da Vinci, &c. has led to the determination to save the remnants of that famous gallery from a similar fate.

France: Provision for those employed on public Works.—The sums derived from the sale of the Orleans property are to be spent in a most beneficial manner. There will be established in the forest of Vesinet, near St. Germain, a hospital of 300 beds, where every person who has been employed on public works will be received in case of accident, illness, &c. The sum to be expended on this establishment is 1,300,000 francs. Masters also will be allowed to send their workmen to the hospital, if they pay a certain insurance rate for each of their men. Another workmen's hospital is to be erected at Vincennes, for convalescents, to contain also 300 beds, four patients only to be placed in one room.

CHURCH-BUILDING NEWS.

Stamford.—St. John's Church will be re-opened on the 23rd of September. The works are progressing. The stained glass for the east window, which is in the hands of Mr. Oliphant, of London, is completed: that for the west window is nearly completed; and both windows will be inserted before the re-opening.

Risholme.—The roof has been placed on the new parsonage-house at Risholme, near Lincoln, which is being erected by the Rev. W. F. J. Kaye, the rector. The building is in the Mediæval style, of white brick, with red brick weatherings, and the arches of red and white brick alternately, with strong courses of red, white, and blue. It is erected in a shady position, and presents an air of great quietude. The works are executed by Mr. Charles Ward, builder. On Saturday night before last the rev. gentleman treated the whole of the workmen engaged on the works (about thirty in number) with a bountiful supper.

Braintree.—On Monday, in last week, the ceremony of consecrating that portion of the new cemetery, at Braintree, specially set apart for the interment of those connected with the Established Church, took place, the Bishop of Rochester officiating. The ground selected for the cemetery is about half a mile from the centre of the town, on the London road. It stands upon the side of a hill, and comprises 5 acres 1 rood, of which about 3¾ acres are devoted to the purposes of interment. The line of separation is simple and unoffensive. There is only a gravel walk, about 18 feet wide, with unobtrusive iron fencing about 3 feet 6 inches high on either side. At the entrance is the keeper's lodge, and next the road an iron fencing, with brick piers, stone-capped. About the centre stands the chapel, built in the Gothic style, with red brick facings, and Caen stone dressings, whilst from the porch in front rises a stone turret and spire, 60 feet high. The two chapels are combined in one building. The main entrance to each chapel is at the side, the Episcopal one also having an entrance at the front; and each chapel is provided with a vestry. The whole building is under one roof, with a divi-

sional wall in the centre. The total cost is about 3,000*l.* and includes—chapel and lodge, 1,300*l.*; ground and fencing, 850*l.* The architect, from whose designs the buildings were erected, is Mr. Johnson, of Bury St. Edmund's; the builder, Mr. J. Brown, Bocking; clerk of the works, Mr. T. Howell; and Mr. Davidson, landscape gardener, of London, laid out the grounds.

Deddington.—On Tuesday before last the corner-stone of the church of St. John the Evangelist, about to be built at Milton, in the parish of Adderbury, was laid by the Rev. E. Payne, rural dean. Mr. Butterfield is the architect.

Windsor.—The new cemetery ground (in quantity five acres) has been staked out, and the necessary buildings will be immediately commenced. The site is considered desirable, and the difficulty of the drainage has been remedied.

Greenhithe and Gravesend.—The Bishop of Rochester will consecrate the church which has just been erected at Greenhithe, on the 26th instant. The edifice is dedicated to St. Mary the Virgin. Last week his lordship consecrated Christ Church, Gravesend, just erected.

Cradley. — The consecration of the new Church of St. John the Evangelist, Storridge, Cradley, took place last week. The new edifice lies close by the turnpike-road from Worcester to Hereford, near the eighth mile-stone. There is also a new parsonage, the latter a quaint arrangement of various coloured bricks and stucco. The church is constructed of the light-coloured stone from Cradley quarries, and is in the decorated style of fourteenth century. It comprises a nave 55 feet long and 22 feet wide; a chancel 26 feet by 16 feet, and a tower at the west end, surmounted by a broach spire, which rises to the height of 105 feet from the ground. The porch is on the south side of the nave. The walls are built in hammer-dressed range work, with rubbed quoins and dressings. The roof is covered with Broseley tiles. The spire is provided with a lightning conductor. The roofs of the nave, chancel, and porch are open to the ridge: that of the nave rises 38 feet from the ground. The chancel has two single-light windows on either side. In the nave there are one single and two double-light windows on the north, and the same on the south side. All the windows except the east are filled with thick plain glass. The east window is of three lights, the centre one being considerably broader than the two on the other side; but the space thus gained has given the architect greater scope in the treatment of the stained glass which fills the window. The chancel has ornamental oak benches placed as stalls, and the nave is furnished with open benches of stained deal. The wall space around the chancel arch is decorated with inscriptions in colour. The stonework, where it is spayed at the windows, is pointed with red mortar. The wall behind the altar has a deep crimson reredos, and the altar rail is supported by foliated ironwork, painted in the richest colours. The east window is also full of colour. The subjects treated in the stained glass are as follow:—The east window, the glass of which was designed and painted by the architect, represents the Crucifixion, symbolically treated; the most prominent object in the centre light being the figure of our Lord upon "a Cross of Glory," which also represents "the Tree of Life," as described in the Apocalyptic Vision, from the stem of which issue branches "bearing twelve manner of fruits." Our Lord is crowned with thorns: around his loins is thrown the purple garment of Bozra: his feet crush the head of the Serpent, which is entwined round the lower stem of the Cross. St. John the Evangelist is seated at the foot of the Cross. On either side of the Evangelist are two of the early converts to Christianity, namely, St. Mary Magdalene, St. Paul, Cornelius, and the Ethiopian Eunuch, bearing texts charged with appropriate inscriptions, in exemplification of the text at the foot of the central light, "And I, if I be lifted up from the earth, will draw all men unto me." Over the title I. N. R. I. in the head of the light surmounting the Cross, is suspended the Crown of Glory. The side lights contain, right and left of the Cross, beneath low canopied niches, the Virgin and St. John the Evangelist. The upper parts of the side lights contain angels in adoration, with instruments of music. The Glory of the Sacrifice of the Cross is farther symbolised in the tracery of the window, by the Adoration of the Lamb, represented as standing on the altar of burnt sacrifice, placed on the Holy Mount, from the sides of which proceed four rivers, symbolising the four Evangelists. The remainder of the tracery contains angels with "golden vials full of odours, which are the prayers of saints." The architect, who designed and superintended the erection of the church and parsonage, is Mr. Frederick Preedy, of Worcester. He also designed and executed the figures in the coloured glass of the east window. Mr. George M'Cann, of Malvern, is the contractor. The founders and endowers of the church are three ladies, sisters of the Very Rev. C. S. Luxmoore, deceased, late rector of Cradley and Dean of St. Asaph. The site of both buildings, as well as land for the churchyard and glebe, have also been provided by these ladies, and the parsonage erected at their expense.

Pembroke.—The churches at Warren and Bosherston, in the county of Pembroke, have been lately restored (Mr. D. Brandon, architect) and reseated, all the seats being free for the use of the poor of both parishes. The chancel of the former was rebuilt at the cost of the bishop of the diocese, but the funds for the rest of the work, and also for the restoration of Bosherston Church, were provided by the Earl of Cawdor, who has likewise liberally supplied the means for restoring several other churches in the neighbourhood.

Capenhurst.—The first stone of Capenhurst Church was laid on Wednesday in week before last, by the Rev. R. Richardson, of Capenhurst Hall. The building is to be erected at his own expense, for the accommodation of his tenantry and those of the adjoining township of Ledsham. He is also to endow the church. The church is to be in the Decorated style of architecture, designed by Mr. Harrison, of Cheshire, architect, and is to accommodate 200 persons.

Hulme.—The new church of St. Mary, Moss Side, Hulme, appears to be not far from being completed. The spire is finished: it is about 240 feet high from the floor of the church, the tower being 24 feet square. The tower contains a belfry, with large double windows on each side and pinnacles at the corners. The spire contains four heights of windows, each of two lights, with canopied tops, and crosses at the apex. The vane is of iron and copper, 18 feet high. The builders, Messrs. Ellis and Hinchliff, had finished the spire and fixed the lightning conductor before the late thunderstorms, when a church in the neighbourhood (Holy Trinity), which was not furnished with a conductor, was injured. The lightning conductor on St. Mary's is a copper rope five-eighths of an inch in diameter, which is fastened to the outside of the spire on the north, and we hope communicates with the iron and copper work of the vane. The body of the church, consisting of a nave and two side aisles, is not yet roofed, and there will be several months' work to complete the edifice, which was commenced in November, 1854. The style of architecture is Early English. Mr. Crowther, of Manchester, was the designer. Mr. Foggatt, of Cheetham-hill, is the contractor for the woodwork, &c. There is a large chancel, also an organ-chamber. The walls are of brickwork and the pillars of stone. The roof of the chancel is finished in open timbered work, and the roof of the nave will be similarly constructed, with carved figures at the ends of the hammerbeams. The clerestory is lighted by five double windows on each side, and four staircases in the pillars will lead to the roofs. The east window is finished to the extent of the stonework: the west window is in course of construction. The church owes its existence to the liberality of the late Mr. Wilbraham Egerton, of Tatton-park.

Applethwaite.—The consecration of St. Mary's Church, Applethwaite, Windermere, took place on Friday in last week.

Edinburgh.—The restoration of old Greyfriars' Church is nearly completed, so far as its plain exterior is concerned, and the internal fitting up has been commenced. The intermediate pillars have all been removed, both on account of the injury they received in the fire, and their unsuitability for a Presbyterian place of worship. The building, therefore, seems to be one large Gothic hall, lit by an oriel window, and by lesser windows at the sides, and covered in with a high vaulted ceiling, supported by beams springing from the wall, and tying the roof at various points. The windows are to be of stained glass, executed by Messrs. Ballantyne and Allan, at the cost of the congregation, less the expense of the ordinary windows allowed by the town council. The church will be seated for 600 persons. The pews will be open, the sides being in the form of a pillar and panel. The pulpit, or rather rostrum (for the design partakes of the character of a lecturer's platform or desk, rather than of the usually confined limits of the pulpit), will be placed under the eastern window. The access to the church will be through the porch at the north-west corner, as at present. Within the porch will be a waiting lobby, and in the corresponding corner the vestry, the intermediate space consisting of a lobby screened off from, though within, the place of worship. Within this lobby will stand the ancient tombstones discovered in the recent excavations. The church, which is restored at the expense of the town council, supplemented by the congregation to the extent of several hundred pounds, is expected to be ready for re-opening early in the ensuing winter.

PROVINCIAL NEWS.

Yarmouth.—At a recent meeting of the Haven and Pier Commissioners, the clerk said, in reference to the bridge contracts, that he had received Messrs. Grissell's bill for the construction of the bridge. He had sent the original to Messrs. Walker and Burgess, the engineers under the contract for the commissioners. The total amount which Messrs. Grissell now claimed was 32,334*l.* 5s. 7d. The amount of the bridge contract was 23,734*l.* 10s. and Messrs. Grissell had received on account 23,467*l.* 5s. but they now claimed 8,599*l.* 15s. 7d. for extras. A committee was appointed to examine Messrs. Grissell's accounts, confer with the engineers, and appoint an arbitrator under the contracts, &c.

Windsor.—The *Windsor Express* states that the erection of several large villas will shortly be commenced on the Crown lands near Spittal; and that a scheme has been started for the erection of public baths, on a bye stream of the river leading to Clewer.

Brighton.—Tenders have been received for national schools, class-rooms, and offices, to be erected in George-street, Hove, under Mr. James Woodman, architect, Brighton. They ranged as follows:—Crowley, Hove, 970*l.*; Wisden and Anscombe, Brighton, 920*l.*; Fabian, Brighton, 890*l.*; Parsons, Hove, 890*l.*

The Lye.—According to the *Worcester Herald*, the Mechanics' Institution at the Lye, which now comprises about 100 members, have resolved to erect a proper building for the purposes of their institution. The foundation-stone was laid on Monday in last week, and the day was held as a holiday in that populous district. The design has been furnished by Mr. F. Smallman Smith, architect. The building is to have a front elevation of two stories in height, and to be built of red, blue, and white brick in pattern. It is to contain four rooms for the librarian, two good-sized class-rooms, an octagonal room in the rear, open to the roof, 30 feet in diameter and 28 feet in height. This room is also to be provided with a gallery to seat sixty persons. There will also be a lavatory, store-rooms, and all necessary conveniences. Mr. Ault, builder, Stourbridge, has taken the contract to erect the work (less the gallery) for 700*l.* The ground has been obtained on favourable terms. The subscription-list is in hopeful progress.

Cardiff.—The works in connection with the extension of the East Bute Docks are being pushed forward by the contractors, Messrs. Hemingway and Pearson. The present contract comprises 2,000 feet in length by 500 feet in width: the depth of the water when completed will be 25 feet. The quay-wall on one side is already finished. This part of the docks opened last year is about 1,000 feet long by 3,000 feet

wide. The contractors intend completing their present contract by November next.

Kidderminster.—The contractor for building the carpet warehouse and shed about to be erected for Messrs. Crane and Baston, in Vicar-street, is Mr. H. Ankrett, builder, Kidderminster, and the extension of the shed of Messrs. Dixon and Co. has been given also to Mr. Ankrett. The extension of this shed will be carried out at the back, for the purpose of accommodating about a score more steam Brussels looms, which require much space. The work has already been commenced. Messrs. Crane and Baston's ground will be nearly covered with compactly-arranged buildings, though not on a large scale; the front abutting upon Vicar-street, with a width of about 44 feet; the rear looking upon the Stour. The length from Vicar-street to the Stour is nearly 200 feet. The roof of the shed will be supported by iron girders and columns, after the usual fashion. The castings will be made at the foundry of Messrs. Austin and Brown, Clensmore. The chimney-stack will be 90 feet high, circular and tapering, with bands of blue and white brick, and an ornamental cap. The front elevation of the warehouse will be ornamental in its details, although in the peculiar character of a place of business. It will be four stories in height. This warehouse adds another to the many improvements in the street architecture of Kidderminster, introduced within the last few years.

Manchester.—The slow progress of the infirmary improvements, says the *Courier*, is becoming a standing joke in Manchester, and a by-word of reproach to the city. Certain improbable events are often prophesied as likely to occur when the fountains on Piccadilly are set playing. Some steps have recently been taken to forward the work, but the progress has seemed very slow to the public. The Peel Statue has long been doomed to a change, to satisfy the critical eyes of the lovers of art, who have complained of its want of elevation. It is to be raised 3 feet 6 inches, by adding another step to the pedestal, which will then be 15 feet high, and more consonant in appearance and proportion to the pedestal recently erected at the other end of the area for the Wellington monument. Mr. William Buxton, Great Bridgewater-street, has contracted for the alterations. The granite will be brought from Aberdeen, and it is shortly expected. The improvement will be made under the superintendence of Mr. Shorland, the city surveyor, the executive committee of the Peel Statue having handed over to the improvement committee of the city council the balance from the statue fund, that they might proceed with the alteration, subject to the approval of the sculptor, Mr. Calder Marshall. The figures will need a good cleaning before their re-erection, for they are begrimed with Manchester smoke.

Bradford.—The interior of St. George's Hall has lately undergone a renovation by Messrs. Briggs and Mensforth. The plaster ceiling, the pilasters, and walls have all been decorated, gold and colours having been applied. Several improvements have also been introduced in the interior arrangements. The erection of the large organ has necessitated the remodelling of the orchestra. It is now brought farther forward and carried higher up than at the last festival, and will be lighted by three coronas of light on each side, borne from the wall between each pilaster by large female figures. The benches on each side in the gallery have also been raised. A musical *soirée* was held last week with the view of trying the capabilities of the new organ, and the result, according to the local *Observer*, was satisfactory.

Scarborough.—A scheme is in progress for providing increased accommodation at Scarborough for bathers, in the shape of large swimming-baths (one for ladies and another for gentlemen), to be continuously supplied with sea water. Baths of every description will also be procurable at low charges. A large public assembly-room for concerts and balls, reading-rooms, and a winter garden, will also form part of the attractions of this new building. The Sanitarium, or Winter Garden, is to be formed out of the roof of the building, which is to be of glass.

Stockton.—This place is slowly assuming a new aspect. Within the last four or five years a good many improvements have been effected. A new gas company has been formed, and steam shipping companies established. Two iron-ship yards have been erected, as well as a new borough-hall and court of justice. A race-course has been laid out, and the town has been drained and rid of cesspools. The street and shop architecture is improving, and baths and washhouses are in contemplation.

Carlisle.—The new Industrial Schools at Harraby-hill were opened on 6th inst. by the guardians of the union, who have had them erected for the industrial education of children of the poor in Carlisle and its vicinity.

Alderney.—The Admiralty harbour works of the western pier are progressing, and the wall now measures 5,000 feet in length, from the tower on Grosnez Fort to the outer end. Twelve hundred workmen and sixty horses are employed on the pier and quarries; and four locomotive engines, two steam tugs, and a flotilla of boats and barges, are used to convey materials. A commencement has also been made with the eastern pier, which springs from the new fort at Château à l'Etoc, and is intended to run straight out to meet the extremity of the western pier, thus enclosing the two natural bays of Braye and Saye, except an entrance, 500 feet in width, facing the north-east. On the completion of this design, the harbour of Alderney, hitherto dreaded by mariners, will be all that can be desired as regards security, depth of water, and facility of entry, at all states of tide. The vote sanctioned by Parliament for the current year was 90,000*l*. The system of fortification pursued by the Royal Engineers from the War Department has been to erect a work on each of the headlands, so as to command the intervening bays by cross fire. Thirteen works of this character, mounting 160 heavy guns and mortars, have already been constructed: two are in progress, and others are projected to complete the system; while the cliffs on the southern shore, where not altogether precipitous, are proposed to be made so as to render the island inaccessible on all sides. The two forts in progress are on Mount Touraille and on Essex-hill; the former an extensive work, to carry thirty-five guns, with accommodation for 500 men, and overlooking the harbour and entrance; the latter, a reserved barrack for 250 men. The new works on Touraille and Essex-hill employ nearly 700 workmen, making a total of 1,900 men employed on the public works of the island. The population of Alderney, numbering 1,000 souls in 1846, is now increased to 6,000.

NEW CHURCHES.

The 36th annual report of Her Majesty's Commissioners for Building New Churches, says:—

"Her Majesty's Commissioners in their last report stated that 597 churches had been completed, in which accommodation had been provided for 581,155 persons, including 350,349 free seats for the use of the poor.

They have now to state that eighteen churches (in addition to those then reported) have been, by the aid of grants from the funds placed at the disposal of Her Majesty's Commissioners, since completed, at the following places, viz.—At Cinderhill, in the parish of Basford, in the county of Nottingham; in the parish of St. George, Birmingham, in the county of Warwick; in the district of Tonge, in the parish of Bolton-le-Moors, in the county of Lancaster; in the district of St. Paul Pudsey, in the parish of Calverley, in the West Riding of the county of York; in the district chapelry of Smethwick, in the parish of Harborne, in the county of Stafford; at Mildmay-park, in the parish of Islington, in the county of Middlesex; in the district of St. Andrew, in the district parish of St. John, Lambeth, in the county of Surrey; in the district of Brewery Field, in the parish of Leeds, in the West Riding of the county of York; in the parish of Milton-next-Gravesend, in the county of Kent; at Craven-hill, in Warwick-road, and in Westbourne Park-road, all in the parish of Paddington, in the county of Middlesex; in the district of St. Matthew, Chadderton, in the parish of Prestwich, and at Pinfold, in the parish of Rochdale, both in the county of Lancaster; in the district parish of St. Mary Haggerstone, Shoreditch, in the county of Middlesex; at Balham, in the parish of Streatham, in the county of Surrey; at Brampton Bierlow, in the parish of Wath-upon-Dearne, in the West Riding of the county of York; and in the parish of Whitby, in the North Riding of the county of York.

In these eighteen churches accommodation has been provided for 14,963 persons, including 7,290 free seats for the use of the poor, as far as the same can be at this time exactly ascertained.

Thus, in the whole, 615 churches have now been completed, and provision has therein been made for 599,118 persons, including 357,639 free seats for the use of the poor."

LONDON IMPURITIES.

The Registrar-General, in his last Return, after showing that the inhabitants of London are not in an average state of health, and speaking of the evils of smoke and of the dust of the street, says,—

"The third class of atmospheric impurities is invisible, but it arises from the long retention of the excrement of London under the houses and in the sewers. According to the estimate of Mr. Lawes, London could supply the farmers of England daily with 29 tons of ammonia, 51 tons of carbon, 14 tons of phosphates, 32 tons of mineral matter, and 14 tons of other matter, making in the aggregate 140 tons of dry manure, dissolved naturally in about nineteen times its weight of water. The country requires this precious manure, which London is anxious to get rid of at any reasonable cost, as it is now known to be as insalubrious as it is offensive.

The problem for the engineer to solve is, How can 3,000 tons of town guano be returned daily to the disinfecting soil, from which it was chiefly taken, with the least offence to health, and with the least cost? Shall it be distributed by pipes, or by railways? Shall it be disinfected by water, earth, ashes, or any chemical compound?

Under the present arrangements some hundreds of thousands of tons of this matter lie in store in London, putrefying in cesspools and percolating the streets, while the residue is thrown into the Thames at great cost.

All these impurities of the air we breathe in London have evidently a natural tendency to increase more rapidly than the population, and can only be removed by the vigilance, intelligence, and energy of the Board of Works.

Every substantial sanitary improvement they effect will be as evident as the diminution in the mortality of the districts which now receive a purer water, and which will, it may be expected, ere long receive it on the system of constant supply."

MIDDLESEX INDUSTRIAL SCHOOLS COMPETITION.

The letter in your last number, signed by Mr. "P. Northall Laurie," enables us to appreciate at their proper value the thanks which the committee gave by their advertisement to those who had furnished them with the designs, which, according to Mr. Laurie, were so "complete a failure," and the "worse than mediocrity" of which so "astounded" the referees.

It is not of course for me to say how far Mr. Laurie's accusations are well founded, but when he blames the competitors for want of "confidence," he does not assuredly lay himself open to a similar imputation, as he hesitates not to pronounce most dogmatically on the merits of designs which, I will engage to say, have cost their authors far more time and thought than Mr. Laurie has thought it necessary to expend in order to qualify himself to condemn them so sweepingly.

Mr. Laurie states, with much *naïveté*, and as a claim, I suppose, for being considered just and impartial, that out of the *seven* selected by the referees, *one* received the *lowest* premium: he does not give us any idea why the committee overruled the decision of their professional advisers, as regarded the *two first* premiums; nor does he attempt to explain how it happens that the committee have themselves chosen the two first designs (which were not among those selected by the referees as being, according to Mr. Laurie, the "least bad"), and have then decided that these designs are not worthy of adoption.

Mr. Laurie seems disposed to adopt the tone of an ill-used man, but when any person complains that every one quarrels with him, we are not long in

appreciating the real state of the case. Mr. Laurie quarrels with all the forty-one competitors: he quarrels with the referees: he quarrels with the recipients of the premiums; and, finally, seems disposed to quarrel with the whole profession, and even with every one who builds. Surely, it might have occurred, even to a Middlesex magistrate, that it was just possible that all these different personages might not be so entirely wrong, and he alone completely in the right!

A Competitor.

SCOTTISH ARCHITECTURE.

I had thought that in the present day both the architecture and the history of Scotland were pretty well known; but it would seem, judging from Mr. J. H. Burton's paper, read, as I see by your pages, at the meeting of the Archæological Institute at Edinburgh, there is still a pretty wide field of information open to be gone over. As to his wild theories of the War of Independence being a struggle of Saxons against Norman aggression, it would be only making waste paper of your valuable space to bring against it the information every one has at command; while also the real examination of the baronial castles themselves would have shown that in almost every case the peculiarities of the style were forced on the builders from the materials at their command and the requirements for space inside, taken in connection with the state of society for the time being. Look at a piece of Scottish and a piece of English corbelling, and observe the difference. See how the Scot, not tied for stone, corbelled out in quarter-round and fillet, again and again. See how the English architect made the most of his by making a bracket here and there, and bridging between, and so on throughout the whole of these buildings. At the same time, as in England, there are a few buildings which may have been derived from abroad; but even in Scottish ecclesiastical architecture, when we might naturally have supposed this to be the case, it does not very often occur. A list of a few on the east side of Scotland, may give an idea of about the proportion.

Part of Holyrood Chapel, Early French. At St. Andrew's, the entrance lobby to Chapter-house, including door into same, but not Chapter-house, Early French Decorated. A base in south transept, French Late Flamboyant, and part of west front same date as lobby. At Aberdeen, columns to central tower, German Decorated. Stalls to King's College, Perpendicular, seemingly north Holland work; as also is the Rood Screen (painted), at Foulis Easter, in Forfarshire. At Elgin, the only foreign bit is a bishop's tomb, in the south aisle of choir (probably a Stewart), which appears to be German Early Perpendicular. All the rest of these buildings, as others, such as Haddington, St. Giles, Linlithgow, Stirling Church, St. John's, Perth, Pluscardin, &c. appear to have nothing foreign in them. I leave out Roslyn as being by an architect brought from abroad, and a very exceptional case, and St. Magnus, at Kirkwall, which was almost entirely Norwegian. Indeed, the last has peculiarities never found in France, as in its unique (I conjecture ?) foliaged columns, and its dragon ornamented bases.

A Descendant of one of those anything but Saxon Men who had the honour of fighting against the First Edward.

METROPOLITAN ASSOCIATION FOR IMPROVING THE DWELLINGS OF THE INDUSTRIOUS CLASSES.

I read with much interest the article on lodging houses in your valuable publication of the 19th ult. in which "Quondam" states that "The Royal Metropolitan Association does not answer the end for which it was chartered," and alludes to the high rent of the Ingestre Buildings.

The same reason, viz. the central position of these houses, which your correspondent says keeps them always full, enhances the value of ground-rent payable in such localities, and necessarily increases the rent to the tenants.

Your correspondent also alludes to the building in Platt-street, Old St. Pancras-road, and supposes 2½ per cent. a liberal allowance for expenses of management. On reference to the reports and audited accounts, taking an average of three years, you will find the charges and necessary outgoings upon these buildings amount to 4⅗ths per cent. exclusive of their proportion of office expense, amounting to ¾ per cent. which latter sum is, in fact, the cost of management.

Looking at what this association has accomplished, and is still engaged in carrying out, and bearing in mind that it was the pioneer of this movement, now assuming a national importance, I am instructed by the Directors to address this letter to you, differing in opinion as they do with your correspondent, whose letter you have inserted.

Charles Gatliff, Secretary.

THE ARCHITECTURAL MUSEUM, CANON-ROW.

This collection has been recently increased by another addition of highly-interesting casts from Notre Dame, Paris. The committee have secured these specimens through the influence of M. Gérente, of Paris, one of their corresponding members, who took advantage of the opportunity offered for such a purpose during the decoration of the cathedral for the baptism of the Imperial Prince.

METROPOLITAN BUILDING ACT.

EXEMPTED BUILDINGS.

On the 7th inst. Mr. John Kirtland appeared before Mr. Dayman, at the Hammersmith Police Court, to answer an information under the Metropolis Building Act, charging him with having erected certain buildings without having given the usual two days' notice to the District Surveyor, whereby he had incurred a penalty of 20*l*. The district surveyor for South Kensington said the buildings in question, which were now in the course of erection, were in an avenue leading from the Warwick-road. He received no notice of the intended building, and only heard of it by a "discovery."—The defendant said the reason he did not give notice was, that he was employed under the London and Birmingham Railway Company, and he understood that he was not bound to give notice. There was a clause in the Act which exempted him from giving notice when the building was for the use of a railway.—The surveyor said, as far as he understood, these buildings were offices of the South Yorkshire Coal Company. The offices were not built for the Birmingham Company, but for another, and a coal company.—Mr. Dayman said that if that were the case, he was of opinion that a notice must be given, for it could not be contended that they were erected for the use of the West London Railway.

The question was adjourned, and on the 14th was heard again, when it was contended, on the part of the district surveyor, that the buildings or offices were not for the use of the Birmingham Railway, but for the benefit of the South Yorkshire Coal Company.—Capt. Huish, the general manager of the London and North-Western Railway, stated that the West London Railway was leased to the London and North-Western. The offices in question were erected by the latter company for the convenience of the coal-dealers to carry on their trade. They received no remuneration for the use of the offices, and they would have to pay for the erection of them. The only remuneration they received was by the tolls chargeable upon carrying the coals upon their line.—The district surveyor said, as a public officer, he had considered it his duty to bring this case forward. When he discovered the buildings in the course of erection he wrote to the builder that he was entitled to notice, and that he had not received any. No answer was returned, and the only course he had to pursue was to summon the defendant to prove his exemption.—Mr. Dayman considered the exemption had been proved, and dismissed the summons, but refused to allow any costs to the defendant, on the ground that he had not given the information to the surveyor.

Notices of Books.

The New Law and Practice of Joint-Stock Companies, with and without Limited Liability. By Mr. Edward W. Cox, Barrister-at-law. Second Edition. John Crockford, Essex-street, Strand. 1856.

Mr. Cox calls his well-timed volume a second edition, but it is in truth a new book, the law lately passed for the regulation of Joint-Stock Companies having compelled the re-writing of nearly the whole of it. Especial reference is made to Limited Liability, and pains are taken to show how an individual trader may avail himself of it, to compete with companies who would otherwise have an advantage over him. This is the plan:—

"It is founded upon the peculiar feature of the new law, which does not assign any certain number or amount of shares, nor the subscription of any number of the shares, or of any portion of the capital, as a preliminary to incorporation and the commencement of business.

Bearing in mind this state of the law as it is now, let it be supposed that a trader, say a draper or a grocer, desires to secure the privilege of limited liability, and so to fight on even terms with his rivals having that privilege. He can do so, in effect, thus. Let him convert his business into a Limited Liability Company, with so much capital as he is willing to stake, say 1,000*l*. in 1,000 shares of 1*l*. each. As the company must consist of seven persons at least, he has but to give one 1*l*. share to each of his children (if of age), brothers or sisters, parents or servants, and keep the remaining 994 shares himself, and so he will obtain the advantages of incorporation, and the privilege of not being liable for any of his debts or contracts beyond the 994*l*. or whatever the sum might be, at which he has fixed his own liability; and if this is paid up or registered as paid, he has no liability at all.

It is not even necessary that he should take up all the shares. If he desires further to restrict his liability, he has only to take a portion of them."

It is to be hoped that only the honest may avail themselves of it.

The name of Mr. E. W. Cox gives this book assurance of correctness.

Painting with both Hands; or the Adoption of the Stereoscopic Principle in Art as a Means to Binocular Pictures. By John Lone. Chapman and Hall, Piccadilly. 1856.

"Let not thy left hand know what thy right hand doeth," is the significant motto of this somewhat curious and original pamphlet. Perhaps the apocryphal "lawyer's clerk" might have found still better or more appropriate ones in the Apocrypha than in the orthodox Scriptures, as for example,—"All things are double, one against another," for "two are better than one; for when they fall the one will lift up his fellow,"—at all events, the apocryphal texts would have well assorted with the apocryphal idea; but though this idea may be regarded by many as a doubtful one, there is really some verisimilitude in it. Perhaps the moot question whether it be possible to produce stereoscopic effects with a single photograph should have first been decided in the affirmative (if it ever *will* be) ere such an idea were started; but it cannot be difficult for some artist to test the truth of Mr. John Lone's idea: indeed, although as yet almost exclusively speculative, he tells us that one artist *has* put the matter to proof, and with good approximative effects; but not exactly by any of the methods he himself had in view; the artist having used the brush with both hands at once, thus, decidedly, not only letting the left hand know what the right hand was doing, but allowing it to help "its fellow" to do it. This is really but a modification of Mr. Lone's principle, however, after all, and he anticipates various ways of carrying it out, as by using the left eye along with the left hand exclusively in working out the left sides of the stereoscopic picture, and the right eye with the right hand for the opposite sides. The author adduces in favour of his idea such facts as that "straight, sharp, and manifestly *single* lines have no place in works of art,"—that pictures painted virtually by one eye and one hand are best seen by shutting one eye and entubing the other,—that such pictures are often looked at in reverse in a mirror, in order that their right-handedness may be reversed, and their accuracy or truthfulness to nature be judged of,—and so on. Fanciful as the idea may be, it is clever, and the pamphlet is well written.

Miscellanea.

Moveable Wooden Houses for the Poor of Paris.—The working population, chased from their homes by the demolishers of Old Paris, are told, says the Paris correspondent of the *Morning Herald*, that the question concerning lodgings for the poor is at last in the way of being settled. M. Teiret, a Swiss manufacturer, has presented models of moveable wooden houses, which have been approved of in the highest quarter. According to the system proposed, a wooden house, capable of lodging two large families or four small ones, may be had for 600 f. a year. By this method a family will only pay 300 f. a-year rent, or four workmen without families may be well lodged for 150 f. each.

Fall of a Chimney at Manchester.—On Thursday in last week the chimney of the "Old Factory," Miller-street, a square stalk 100 feet high, fell, and caused narrow escapes to the lives of several persons. New buildings were in course of erection on the site of the old factory, and it was intended to pull down the chimney. In excavating for the new premises the foundation of the chimney had been undermined. A stable and some premises adjoining were completely demolished, and a pony in the stable was killed.

Chronological Arrangement of Tapestries.—In an able and very interesting article on "The Tapestry of the Middle Ages," in the current *Journal of the British Archæological Association*, Mr. Planché makes a suggestion which ought to be carried out into a fact. Mr. Planché says,—"It is much to be desired that specimens of the twelfth, thirteenth, and fourteenth centuries should be procured when opportunities occur, and placed at Hampton-court, to complete a series. There are, or were, other tapestries in the royal palaces of Windsor and St. James's, of the seventeenth century; relics of the time of the Charles of England and Louis of France. Examples of the later establishments of Mortlake and St. Cloud, which, with one of the geographical pieces woven at Burcheston (some fragments are reported to have been in Walpole's collection at Strawberry-hill), would, chronologically arranged, form, with those above mentioned, a collection of the greatest interest to the antiquary, the artist, and the manufacturer. The importance of such classified exhibitions has been proved in several recent instances. The magnificent display of objects of mediæval workmanship at the rooms of the Society of Arts, in the Adelphi, 1850, was a triumphant experiment; but its success, however great as a spectacle, would not have been so beneficial as it has proved to art, so instructive as it was admitted to be to all, had not the arrangement facilitated comparison, and exhibited so clearly the progress of design and execution, the spirit of beauty struggling through the dark ages, and asserting the power of genius under the most disadvantageous circumstances."

Ephesus, and the Temple of Diana.—Ephesus, the port of Ionia, situate on the river Cayster, was, during the whole period of classical antiquity, a place of the highest importance. Owing to its favoured situation it became the mart of commerce of Asia Minor, and here was exchanged the produce of Greece and Egypt with that of the Persian empire and inner Asia. Its final destruction, which happened A.D. 262, cannot fail to impress the mind of the philosopher and the Christian, who think of its former glory, its Christian celebrity, and its final desolation. The early colonists introduced with them the worship of the Goddess Diana; but owing to the connection of Ephesus with central Asia, an Oriental character was gradually given to her rites. Her temple, built at the joint expense of all Asia, was esteemed one of the seven wonders of the world, not merely from the engineering difficulties which its builders had to overcome, but on account of its magnificence and grandeur, the purity of its architecture, the beauty of its sculptural adornments, and the extraordinary collection of works of art, in painting and sculpture, which it contained. Mr. Edward Falkener has prepared a work illustrative of the city of Ephesus and its world-famous temple, and only waits for a certain number of subscribers to send it to press. We may safely recommend the lovers of classical art and learning to send him their names.

Gas.—The Bury St. Edmund's Gas Company have declared a dividend of 10 per cent. on their shares, free of income-tax.——The new gas-works at Chipping Norton are in progress. They are to be in full work by the 1st of October.——The gas consumers at Shoreham have been very indignant with the West Brighton Gas Company for continuing to charge them 7s. 6d. for their gas while reducing the price to the Brighton consumers to 5s. On publicly remonstrating with the directors, a reduction of 1s. was granted; but this was not considered sufficient, and nearly every gas consumer in the town signed a requisition for a further reduction, which, however, the directors are said to have refused.——Arrangements are being made by which tallow will be superseded by the introduction of gas into the workings of the Balleswidden mine.

Alnwick.—The Duke of Alnwick is having quite an architectural re-union at Alnwick, the Cavaliere Canina being there, as also Messrs. Salvin, Cockerell, and Donaldson. It is said that the duke purposes affording the members of the Institute every opportunity of visiting the castle, and seeing the works now in progress.

The late Mr. Thomas Hopper, Architect.—We must content ourselves on the present occasion with simply noting the death of Mr. Hopper, at an advanced age, and will take another opportunity to place before our readers some particulars of his career.

Stone-cutting.—In April, last year, Messrs. J. and P. Hunter, Leysmill, patented a stone-cutting machine, which it is said materially simplifies manual labour. The machine is 11 feet in diameter: upon it there are twenty-four tools, or teeth, fastened, as the patent runs, to an equal number of holders—and, at the rate of 7 inches per minute, it cuts a stone (the "old red sandstone" of Forfarshire, for instance) be it in thickness an inch or 5 feet. The machinery is very complicated in appearance, but, after explanation, is easily managed.

The Statue in the Royal Exchange.—Pray notice the neglected statue, in the Royal Exchange, of our excellent and gracious Sovereign. What a shameful and dirty state it is in, nearly as black as coal: it would puzzle an antiquary to give an opinion of what it is composed. It is much to be lamented that this work of art should remain in its present state, and by no means creditable to the taste of the authorities.—J. W.

The Wallace Monument.—The subscriptions for this Scottish monument are said to be readily flowing in. There are already 1,000*l.* on the Stirling books, and a large sum has been collected in Glasgow. Letters have been received from our American and other colonies sympathizing with the movement: influential colonial committees are being formed, and large subscriptions are anticipated. It is said that several English artists of eminence have visited Stirling to examine the proposed site, with the view of giving designs; and that Mr. Noel Paton has resigned his place on the committee, and announced his intention of entering the lists as a competitor.

Lord Mayor's New Court.—The City Corporation has decided on building a new court for the Lord Mayor. Workmen are laying the foundation of the new building at the west-end of Guildhall. The ancient crypt is to be appropriated as a museum.

Westminster-bridge and the Vestry of St. Mary's, Lambeth.—At a vestry meeting, held on the 14th inst. a motion by Mr. Frederic Doulton was considered, to the effect that the proposal in the report of Messrs. Rendel and Simpson, to stop entirely the thoroughfare over Westminster-bridge during five years, while the new bridge is constructing, and to divert the traffic over a new bridge between the Horseferry-road and Church-street, Lambeth, is one calculated to inflict enormous injury upon the inhabitants of Lambeth, and to cause very great inconvenience to the public generally; that the present condition of the bridge is dangerous in the extreme, and there is great risk that the bridge will give way, without any provision whatever for temporary accommodation to the public; and that the navigation of the river is most prejudicially affected by the present state of the bridge. The motion concluded with a proposal to appoint a committee of eight vestrymen to consider and report on the best means to prevent the carrying out of Messrs. Rendel and Simpson's proposal. Mr. Doulton, in supporting the terms of his motion, suggested that the committee should urge on Government the necessity of having a temporary bridge while the new one was constructing, and which would cost about 35,000*l.* Mr. R. Taylor said he hoped the committee to be appointed would keep in view the necessity of building a bridge between Horseferry-road and Church-street, Lambeth, and also of re-building Westminster-bridge on the present site. The motion was ultimately agreed to, and the committee appointed.

Lincoln Architectural Society.—The annual meeting of the Architectural Society for the diocese of Lincoln, will be held at Mansfield towards the end of September.

New Church and Schools at Holloway.—The new Metropolitan Cattle-market at Holloway, having induced many persons to commence building in that neighbourhood, Mr. Thomas Poynder has given a site sufficient for a church, schools, and parsonage-house; and Mr. Alfred Batson, the proprietor of an estate in the district, has given 1,000*l.* towards the erection of the church. The Incorporated Church Building Society has also made a liberal donation.

Paris Crystal Palace Company.—A meeting of this company has been called for the 26th inst. to consider a proposal for selling the undertaking to the State, and dissolving the company.

The Steel Monument, Carlisle.—At a meeting of the town council of Carlisle, on 12th inst. Mr. Beadle moved, "That the design for a monument to the late James Steel, Esq. submitted to this meeting be approved of." After some discussion, the motion was carried against an amendment by a majority of 16 to 12. A site in the market-place, where some old buildings were lately pulled down, has been granted for the purpose of erecting the proposed statue there.

Stained Glass.—Mr. Wilmshurst, of Foley-place, has just completed and fixed a memorial window in Sydenham Church. It contains four subjects, namely,—the Nativity, the Offerings of the Magi, the Presentation in the Temple, and Christ Disputing with the Doctors,—each subject surmounted by a canopy.

Scavenge the Thames.—The question is asked in the *Builder* of the 9th, "Who shall scavenge the River Thames?" I think the convicts might be profitably set to work, both to scavenge and deepen the river, believing it would give general satisfaction to the public in thus employing the pests of society.

W. P.

Casting Iron and other Metals.—Mr. Henry Adcock, of the City-road, has invented an improvement in casting, which consists in employing highly-heated moulds, and in causing such moulds to be heated on all sides and at the bottom, by the heated air in the oven or muffle. After the moulds are dried, the fire is to be increased, until they are brought to a very high degree of heat, when the iron or other metal is run into them.

Antiquarian Discovery at Yarmouth.—A painting in distemper in good preservation has been discovered in South Burlingham Church, whilst some workmen were scraping the south chancel wall. It represents the assassination of Thomas A'Becket. The figures are outlined on the stucco, and three-quarter life size. St. Thomas is depicted in the act of kneeling before an altar (in a Gothic building), on which is a chalice: a cross-bearer—probably the faithful Edward Gryne—holds a processional cross in his left hand, his right being elevated in amazement and horror. Four armed knights are assailing A'Becket. On the extreme right is a tree. The armour is depicted in the style of the reign of Richard II. of which time the painting probably dates. All the details are minutely represented.

On Railway Signals.—We are told that the following mode of signalising has just been introduced into America by an Englishman, who could not get the consent of any company in London to its being adopted on their lines, even at the expense of the inventor. It is intended to supersede the use of coloured signals on posts, dependent on the eye alone, where often one false blink or inattention might hurry hundreds into eternity. To obviate the use of the eye, the ear is called into requisition. Each train is furnished with a swinging flap hanging down in front of the locomotive and break-van, nearly the *width* of the rails, and within a few inches of the ground. The upper part of this iron swinging door is connected with chains or rods, by cranks or pulleys, to a whistle on the engine, or to a bell or gong on the break-van, &c. so that any obstacle placed between the rails, whether premeditated or otherwise, must cause the flap-door in front to be lifted up in passing over it, and in doing so must pull the crank and sound the alarm to arouse the officials to a sense of their duty, &c. Then instead of the coloured signals on posts being used, and which entirely depend upon a good look-out, it is proposed to remedy that plan by fixing at certain places simple iron cranks longitudinally between the rails, so that when danger is ahead, these temporary elevations are raised, which must be struck by the pendulous door of the passing train, thereby causing the whistle or bell to sound the alarm, whether in rainy, foggy, or dark weather, without the necessity of being perpetually dependant on the sight to ascertain danger ahead, &c.

Metropolitan Street Tramways.—Several correspondents urge that we should recal attention to the fact, that the street tramways for horse carriages or omnibuses and other traffic, advocated in a leading article the other day in the columns of our great contemporary the *Times*, have from time to time been advocated in our columns, and particularly at the Great Exhibition time. As we have before noted, such a system does not require to stand trial as an entire novelty, having years since been introduced into the streets of the principal cities and towns of the United States of America. In Paris also it has been introduced. Lines of rail flush with the surface of the street, might be laid so as not to be in the way of the general traffic, but rather for its behoof, while also more particularly used by a special class of passenger and other carriages. A trial on a limited scale might easily be made without the least interference with the general traffic of the streets except in laying down the tramways.

TENDERS

For first portion of Whitechapel Workhouse. Mr. Thomas D. Barry, architect. Quantities supplied by Mr. Richard Roberts and Mr. Charles Poland.

Longmire and Burge	£18,280	0	0
J. Pritchard and Son	18,215	0	0
Scott and Cornwell	18,154	5	0
John and Benjamin Dales	17,563	0	0
J. and C. W. Todd	17,479	0	0
M. A. Wood and Sons	17,026	16	0
Pollock and McLennan	16,589	0	0
John Wood and Son	16,260	0	0
J. H. Tarrant	15,880	0	0
Thompson and Crosswell	15,871	0	0
J. and L. Coleman	15,848	0	0
Patrick and Son	15,768	0	0
Hack and Son	15,256	0	0
Wm. Hill	15,029	0	0
Thos. Ennor	14,983	0	0
W. F. Purkiss	14,741	0	0
J. Perry (accepted)	14,460	0	0

For the school-house and dwelling for the Soldiers' Infant Home, at Hampstead. Mr. Munt, architect:—

T. B. Cooper	£4,300	0	0
G. H. Clowser	4,170	0	0
T. Clowser	3,775	0	0
Hill	3,476	0	0

For a new church, Clapham. Mr. Bury, architect :—

Nicholson	£8,885	0	0
Mansfield	8,200	0	0
Higgs	7,998	0	0
Little	7,940	0	0
Dove	7,680	0	0
Wilson	7,632	0	0
Holland	7,610	0	0
Piper	7,187	0	0
Myers	7,139	0	0

TO CORRESPONDENTS.

"R. R."—"A Loiterer in the Suburbs."—"J. W. R."—"H. E. K."—"G. G."—"T. D. R."—"G. F."—"C. and G."—"J. W."—"P. L. D."—"H. J. N."—"C. B. A."—"H. C."—"F. P."—"E. B."—"P. N"—"Mr. R."—"Mr. T."—"T. P."—"J. D."—"J. T. L"—"M. J. L."—"J. J. L"—"J. K. jun"—"Foreman to Builder."—"J. B."—"E. W."—"W. H. B."—"C"—"J. M."—"A. M. D."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

LOCAL BOARD of HEALTH for the BOROUGH of BRADFORD.—To SURVEYORS and OTHERS.—WANTED, in the Office of the Surveyor and Waterworks Manager of this borough, a competent person to act as CHIEF CLERK and ASSISTANT. He must be capable of taking levels, and must be a neat and expeditious draughtsman. A person having had experience of the method of conducting the business in the Surveyor's Department under a Local Board of Health, and possessing a knowledge of the most approved methods of drainage, will be preferred. He will be required to devote himself exclusively to the duties of the appointment. Salary 120*l* per annum. Applications may be forwarded stating age and previous occupation, accompanied by testimonials of character and competency, on or before the 30th of AUGUST instant.—By order, W. H. HUDSON, Town Clerk.

Bradford, Yorkshire, August, 1856.

ROTHERHAM and KIMBERWORTH LOCAL BOARD of HEALTH.—WANTED, a SURVEYOR, competent to discharge the duties arising under the Public Health Act, 1848, in the said parish, which comprises the townships of Rotherham and Kimberworth. Information as to the precise nature of the duties may be obtained on applying to the Clerk. Candidates are to state their age, previous occupation, and the salary they would expect to receive, but are not required to attend personally until summoned. All applications for the above appointment are to be made in writing, and sent, together with the testimonials of the parties applying, to the Clerk, on or before THURSDAY, 28th instant.—By order,

JNO BARRAS, Clerk.

Howard-street Rotherham, 20th August 1856.

N.B The person appointed will be restrained from acting as architect or surveyor within the district.

A BUILDER has a VACANCY in his Office for a JUNIOR CLERK.—Address, by letter only, stating age, and where last employed, to T. O. M. Post-office, 179, St. Pancras-street, Chelsea.

AN ARCHITECT and SURVEYOR in the Midland Counties has a VACANCY in his Office for a PUPIL of steady habits and good ability. A moderate premium required. References exchanged.—Address, "CLERICUS," 7, Chapman Brown's, Bookseller, "Bible and Crown," Fleet-street.

AN ASSISTANT WANTED, in an ARCHITECT'S OFFICE, well acquainted with the different styles of architecture, and quite competent to make out finished and detail drawings. He must also have a taste for design, and a knowledge of construction.—Address, stating full particulars of qualification, where recently engaged, and salary required, to C. D. No. 62, Berners-street, Oxford-street.

TO PARENTS AND GUARDIANS.

MESSRS. BALAM and LEE, Surveyors, No. 15, Buckingham-street, Adelphi, London, have a VACANCY for an articled PUPIL. For particulars apply by letter.

WANTED, by an ARCHITECT, an ASSISTANT, well acquainted with the practical part of the profession, and a neat draughtsman.—Apply, by letter, stating terms, and where last or may be engaged, to X. X. Mr. Lock's Library, Gray's-inn lane, Holborn.

TO PAINTERS AND DECORATORS.

WANTED, immediately, a trustworthy and experienced MAN, either to take the management of, or as principal foreman, in a House Decorator's Establishment. He must have a good address, be a good grainer, marbler, &c. and have a thorough knowledge of the business of a house decorator in all its branches. The situation will be permanent, and the wages liberal. No person need apply who is not able to procure good testimonials as to character and abilities.—Address, stating wages expected, to G. GEORGE COOPER, Northumberland Decorative Works, Newcastle-on-Tyne.

WANTED, in a Country Timber and Building Yard, a YOUNG MAN of business habits, to effect sales, superintend the work, and keep part of the books. Hours from 7 to 6. One accustomed with the retail department would be preferred.—Apply, by letter, in own handwriting, stating age, reference, previous occupation, and expected salary, to W. W. Post-office, Maldon, Essex.

WANTED, one or two first-rate SASH-MAKERS, to take the sashes, frames, and shutters of four first-class houses. A reference to some known firm will be required. Apply by letter to "A." Miss's News Office, Hampstead.

WANTED, an ENGAGEMENT as GENERAL FOREMAN or CLERK of WORKS, by an experienced Man, who has lately had the superintendence of very extensive Sewer of buildings in London.—Ample testimonials as to ability, sobriety and attention to business can be had, if required.—Address, P. Q. R. Office of "The Builder."

TO MASTER-PAINTERS, BUILDERS, &c.

WANTED, a constant SITUATION, by a Young Man, a PAINTER; can turn his hand to a little graining. Wages, 4*s.* per day.—Address, C. C. Office of "The Builder."

TO SAW-MILL PROPRIETORS.

WANTED, by a steady, middle-aged Man, a SITUATION as SAW SHARPENER; he has had charge of one, and has done the repairs for the last three years. The best references given, in town or country.—Address to WM. BROWN, at Mr. White's, No. 101, Brook-street, Ratcliff.

TO MASTER-BUILDERS, &c.

WANTED, by a Young Man, EMPLOYMENT in the PAINTING and GLAZING, &c.; can make himself useful at the plumbing, &c.; or he engage himself as a Plumber's as an improver, in town or country. Wages not so much an object.—Apply to B. P. 3, Jubilee-street, Mildmay-park, Stoke-Newington.

TO SAW-MILL PROPRIETORS, BUILDERS, AND OTHERS.

WANTED, by the Advertiser, a SITUATION as FOREMAN; he is practically experienced in engine-work, saw-sharpening, and all kinds of saw mill machinery; is strictly sober. First-rate testimonials.—Address, G. W. No. 31, Brunswick street, Cross-street, Blackfriars-road, Surrey.

TO BUILDERS, OR OWNERS OF SMALL HOUSE PROPERTY.

WANTED, a SITUATION, by a steady Married Man, by trade a Painter, but has had great practice in the general repairs of small house property. Will be glad to make himself generally useful. Wages not so much an object as a permanent situation.—Address, by letter, A. B. Mr. Hoods, Grocer, Notting-dale, Kensington.

TO PLUMBERS, PAINTERS, AND OTHERS.

WANTED, by a Young Man, aged 23 years, a SITUATION, in a GENERAL SHOP, where he can make himself generally useful in plumbing, painting, and glazing. Can give good reference if required.—Address, C. B. No. 9, Union street, Walcot place, Kennington-road.

TO PLUMBERS, BUILDERS, AND THEIRS.

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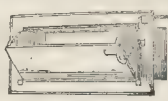

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Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs.
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THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851 are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first class quality, for the home and foreign trade. Portland Cement manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr. THOMAS WILD.
Agents in London, Messrs. GEORGE POTTER and CO. Limemerchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 19, North-wharf-road, Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cements, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and he also has reason to believe that their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When they wish to deliver by rail, the master has instructions to produce (on demand) the canal gauger's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 16, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead; whilst consumption of material is less than for one coat. It dries very fast and hard.
HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three fourths the price.
HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and Iron exposed to salt water; neither bilge water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in oriental packages, stamped, HUBBUCK, LONDON, PATENT; and when so marked the quality is guaranteed
HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber coated with this Enamel is not attacked by the worm neither do barnacles attach to it.
Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.
OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

CHARLES RICHARDSON, 3 & 6, SOUTH-WHARF, PADDINGTON BASIN.
GOWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 6 South Wharf, Paddington.
NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now building GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.
All applications for prices and terms will meet with prompt attention.
N.B. Please observe the lime is ground at the works, not in London.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, a 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few hours' notice.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

PLASTER of PARIS manufactured, by T. P. BLATH, Baltwin's-place, Gray's-inn-lane, Holborn. The trade and suppers supplied on advantageous terms. Roman and Keen's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting Whiting Sand for asphaltic, Land Drain Pipes, Patent Drain Pipes, Sand for bricklaying, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the abovenamed articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle). Fire-clay, Flare-burnt Lime, and Mortle and Cement Lime; and here lime is packed in bags, heads, casks, jars, &c. for exportation.
General Office—No. 12, GEORGE-YARD, LOMBARD-STREET
Letters addressed to Grays Essex, will meet with immediate attention.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Perkins's good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.
Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, HOXTON Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand of a proved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river Sand

BLUE BRICKS and TILES, of superior quality, and in great variety of mould, for ornamental work, paving, coping, and general purposes.—GEO. C. RYLAND, Limestone Wharf, Crescent, Birmingham.

FIRE-BRICKS, LUMPS, TILES, &c.—FURNACE-BUILDERS, GAS COMPANIES, and CONSUMERS of these Goods generally, can be SUPPLIED with every description from our Wharf here, on the most advantageous terms. TRAQUAIR and CO. 9, Bankside, Southwark.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the fire bridges).
THE BEST MALM CUTTERS, SECONDS, PAVINGS and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

CHEAP WHITE BRICKS, for FACING HOUSES (Beard's Patent).—These bricks are of excellent make and colour, [illegible] and do not crack or become green.—For particulars, address, Patent Brick Works, Rugby, Warwickshire.

BRICKS for SALE.—Apply to Mr. MARSH'S Agent, on the Field, Wells-road, Sydenham; or at Mr. MARSH'S Offices, Charlotte-row, Mansion-House

TO BRICK-MERCHANTS.—WANTED, FIVE HUNDRED THOUSAND STOCKS, half-and-halves, delivered into carts at Bow-bridge. Lowest price and terms to W. F. STEVENSON, 1, Melbourne terrace, Pratt-street, Camden-town.

REMOVED FROM CRITCHILL PLACE, NEW NORTH-ROAD, HOXTON.
BRICK MOULDS (improved), Steel-face Stocks, and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References where in use. Brick Mill Work and Implements.—J. LEACH, Millwright and Engineer, 9, St. Peter's-square, Hackney-road, London.

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY. Entrance, Norwood road, Palace-road.—BRICKS of the first class. Red Kiln Bricks Cutters, Dressers, Facings, and Paviors, Clamped ditto, Yellow and Pale, Seconds, Paviors and Pickings, Washed Stocks, Stocks, and Place.—Apply to TRUMAN and CO. Norwood Lodge, Palace-road, Roupell park, Lower Norwood, Surrey.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers to refer to letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Wallington (close to the field), leave at 6 and 9.30 a.m. and 1 p.m.; return at 9.55 a.m. and 5.5 and 7.35 p.m.
HENRY C. MOUNT, Sec.
37, King William-street, City.

TO BRICK CARTERS, CONTRACTORS, and FARMERS.—TO BE SOLD, TWENTY-FIVE SETS of good, useful, second-hand CART HARNESS, viz. Thirteen Thill, and Twelve Trace.—Apply to W. E. WILLIAMS, Saddler and Harness-maker, High-street, Wandsworth, Surrey.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 10 feet, 6d.—Office, 1, Adelaide place, London bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
PATENT.
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large height of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 6d. per foot. This charge to include tiles (delivered in Acre's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

MAW and CO.'S ENCAUSTIC TILE PAVEMENTS, form a highly decorative and durable substitute for ordinary floorings, and their peculiarly oil cloth surfaces, for entrance halls, porches, conservatories, verandahs, passages, &c. &c. Priced pattern-book forwarded, post-free, and sketches of the various designs and colour combinations, supplied without charge, accompanied by estimates, on application to MAW and CO. Benthall Works, Broseley, Salop.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "Terro-Metallic," as the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 681, of the Great Exhibition, rank the Manufactories known so long as "The Tileries" Tunstall, Staffordshire, as the first of the kind in the world.

PANTILES, PAVINGS, &c. — J. H. ANDREWS, Wisbench, Cambridgeshire, begs to offer pantiles at 45s. 6d. per 1,000; floor bricks and 6-inch pavings, at 37s 6d. per 1,000; 8-inch pavings, at 57s. 6d. per 1,000; plain tiles, at 35s. per 1,000, delivered. Cash price.—Delivered on trucks in London or Eastern Counties Railway.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 18, South Wharf, Paddington, Manufacturers of Improved Plain and Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for Sanitary and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted unfreezable, and to resist all acids and escalations.
*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Queen Blocks, &c.
Tividale, Staffordshire.

ROYAL POLYTECHNIC.—Patron:—H. R. H. PRINCE ALBERT.
Now Open with the Society of Arts.
Evening Classes in Arithmetic, Algebra Geometry, Mensuration, Mechanics and Mechanism, History and Literature, Geography, Political Economy, Chemistry, French, and German, will open in September. The teachers of these classes will be paid out of the fees, and gentlemen desirous of conducting a class in one or more of the above subjects are requested to apply, by letter only, to Mr. BUCKMASTER, Polytechnic, 309, Wandsworth-road.
JOHN HENRY PEPPER, Sole Lessee and Manager.

TO BUILDERS AND OTHERS.
PATENT FOR SALE. — EABONE and ROBINSON, Engineers, &c. Clement-street, Birmingham, having patented an Invention for holding Nuts, &c. in all Public Buildings, which they find present considerable difficulty to carry out, the same not being altogether in their line of business, wish to dispose of their right. They take this opportunity of stating that this is a rare chance for any person that can introduce the article into churches and public places, it being so very useful and simple, can be made at almost a nominal cost, and sold cheap.
Apply as above.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet

Diameter of Barrel	Length of Barrel		£ s d
2½ in.	Short 10 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 3	gutta percha	1 15 0
3 „	ditto 4 6	or case iron	2 0 0
3½ „	ditto 3 6	flannel pipe,	2 12 6
4 „	ditto 3 6	as required,	3 5 0
2½ „	ditto 6 6		2 15 0

attached, ready for fixing 2 14 0
2½ in. Long ditto ditto 3 3 0

The short barrel Pump is very convenient for fixing in situations of limited space, for the supply of expets and sinks in washhouses with soft water from underground tanks, from tank, forcing, and pump houses, they may be fixed, when covered, under the stage. May be obtained of any Ironmonger or Plumber in whose country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SON'S, No. 8, Crescent, Jewin-street, London. Every description of Machinery for Raising Water, by means of wheels, from deep well tanks, &c. Also, Fire and Garden Engines, &c. &c. Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS

Pumps in Wrought and Cast Iron and Brass, of every description, and fitted in the best possible manner, suitable for steamboats, roads, breakwaters, farms, gardens, stables, liquid manure, ships, barges, wells, mines, &c. &c. adapted for any depth. Hydraulic Pumps for deep wells

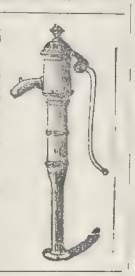
PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 48s per doz. painted.
Ditto .... 48s. per doz. galvanized.

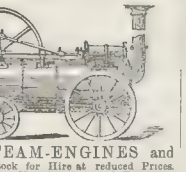
Upper Ground-street, Blackfriars Bridge, Surrey Side.

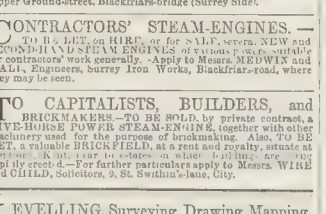


STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, Southwark, London.





PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

CONTRACTORS' STEAM-ENGINES. — TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM ENGINES of various powers, suitable for contractors' work generally.—Apply to Messrs. MEGWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

TO CAPITALISTS, BUILDERS, and BRICKMAKERS.—TO BE SOLD, by private contract, a FIVE-HORSE POWER STEAM-ENGINE, together with other machinery used for the purpose of brickmaking. Also, TO BE LET, a valuable BRICK-FIELD, on a moderate royalty, situate at Deptford. Apply, near to estates, where building are now rapidly erected.—For further particulars apply to Messrs. WIRE and CHILD, Solicitors, 9, St. Swithin's-lane, City.

LEVELLING, Surveying, Drawing, Mapping, Estimating, for Railway or other works; Enlarging, Reducing, Copying, Tracing, &c. undertaken by Mr. C. D. RICHARDS (late an Officer of the Metropolitan Commissioners of Sewers). Surveyors to the District Boards of Works, or Local Boards of Health, will find him a useful auxiliary, from his experience in all the details of Sewerage Works, Draining, &c.

ARCHITECTURE, CIVIL ENGINEERING, and SURVEYING CLASSES. Established by Messrs HYDE, SMITH, and LEWIS, Architects, Civil Engineers, Surveyors, &c. For Preparing Gentlemen for Architects, Builders, Engineers, Surveyors, Draughtsmen, Measurers, and Clerks of Works. EVENING INSTRUCTION in Architectural, Civil Engineering, and Mechanical Drawing; Colouring, Shading and Tinting; Original Design; Working Drawings; Perspective; Sketching from Nature; Practical Masonry; Practical Working Drawings; Preparing Specifications, Taking out Quantities, Estimating, Valuing, and Practical Surveying. Terms, Three Guineas per Quarter; Pupils, Three Guineas per Quarter; Evening Pupils, One Guinea per Quarter. The most extensive collection in the world of all of the above, with the use of Drawing Boards, T Squares, Plans, Drawings, Models, &c. Prospectuses and full particulars may be had at the Offices, 26, Gate House-street, Westminster.

MATHEMATICAL DRAWING INSTRUMENTS. JOHN ARCHBUTT, 265, Westminster Bridge-road, opposite Astley's Theatre, begs to call attention to his Stock of Instruments manufactured by superior workmen. The prices will be found considerably lower than ever charged for articles of similar quality and workmanship. Rules, scales, tapes, &c. at very low prices. An illustrated price-list will be forwarded free on application.

N.B. A few New and Second-hand Levels and Theodolites always for Sale.

THE ARCHITECTS', BUILDERS', ENGINEERS', and SURVEYORS' REGISTRY OPEN to EMPLOYERS free, from TEN to FOUR o'clock. — Several thoroughly efficient Surveyors, Levellers, Clerks of Works, and Draughtsmen now on the Register. Efficiency ascertained before recommended. — Apply to Mr. RICHARDS, Engineer and Surveyor, 4, Trafalgar-square.

FIRST-CLASS ENGRAVING. — T. DAVIS, 17, Liverpool-street, City, near the Royal Exchange. Engraver, Die Sinker, Letter Cutter, Seal, Bottle, and Endorsing Stamp Manufacturer, Zinc and Brass Door plates, Letter, Gold-numbers, and Tradesmen's Card Plates, Arms, and Heraldic Engraving. Stamps and Dies for marking Linen, Packages, &c. Illustrations and Ornaments, Letters, for Shop Bills. Letter-cut, of all descriptions, for every purpose, Cash.

AN ACCOUNTANT, of ability and experience, undertakes to MAKE UP ACCOUNTS in arrear, and keep the books of builders, contractors, tradesmen, and others, on moderate terms. Address, with full particulars, to Mr. C. A. Z., 6, Cheapside, London.

BRITISH EQUITABLE INVESTMENT COMPANY.—Capital, 100,000l.—Chief Office, No. 47, King William-street, London-bridge.

1. A share of the money lent on mortgage of unobjectionable security.
2. For any term of years not exceeding fifteen.
3. Repayments on the plan of the best building societies improved. Periods for repayment may be lengthened or shortened by a moderate charge for the option, without fee or cost at the borrower. Quarterly repayments to liquidate principal and interest.
4. Company pays expense of security to company.
5. Redemption at any time to meet the wishes of borrowers.

Quarterly repayments to liquidate an advance of 100l. to cancel principal and interest:

In five years	£21 3 9
In ten years	11 11 2
In fifteen years	8 11 1

W. S. GOVER, Managing Director.

LOANS, from 10l. 10s. to 100l. Advanced, without deposit, upon Life Policies, repayable weekly or otherwise, at 2d. per cent. for twenty-five weeks, and 5 per cent. for fifty weeks. Forms, price 2d. by post, three postage stamps to be enclosed.—METROPOLITAN LOAN COMPANY, 1, Cravenstreet, Strand: established 1839. Office hours from TEN to FOUR o'clock. ROBERT NORTON, Secretary.

MONEY.—THE REAL and PERSONAL ADVANCE COMPANY, Incorporated by Act of Parliament, advances LOANS upon security of Freehold, Leasehold, and other property, to be repaid by instalments. For further particulars apply at No. 2, Regent-buildings, Strand. Office hours from 11 till 5. ROBERT SANDERS, Secretary.

MONEY WANTED.—The Council of Hastings are desirous of BORROWING, under the powers of their Improvement Act, the sum of 4,000l. or to that amount in sums not less than 100l. The said several sums will be repaid, with interest, within the period of 20 years, pursuant to the said Improvement Act. Any parties desirous of lending the full sum, or any part thereof, are requested to communicate their terms for interest, &c. addressed to the Town Clerk, Hastings.

Hastings, July 8th, 1856.

IMMEDIATE CASH ADVANCES.—Money Lent on Personal Security, Leases, &c.—Sums from 10l. to 1,000l. advanced in three days. Repayments by two years, one year, six months, three months, weekly, or by the City quarterly instalments; and good bills discounted. Charges moderate, and strict private advice given. Apply to Mr. Lewis and Pennington, & Co. Company, private office, 69, Gaswell-road, London. Open daily from Nine till Six, Thursdays excepted. Personal application or letter.

Pamphlet, explanatory, sent on receipt of stamped envelope

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

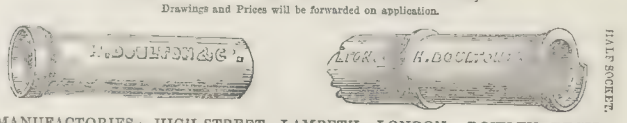
GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.



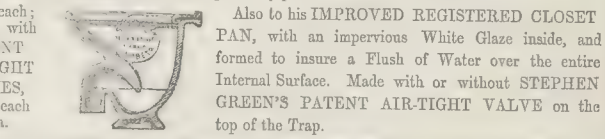
MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

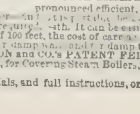
STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.



Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, for carriage-free delivery to any Railway Station in London, of STEPHEN GREEN'S PATENT IMPROVED FLUSHING CLOSET, complete, with Seat and Rose, 3l. 3s.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor of heat, and keeps buildings cool in summer and warm in winter.—2nd. It is light, the timber usually required being one-fifth. It can be easily applied by any unpractised person.—3rd. From its lightness, weighing only about 42lbs. to the square of 100 feet, the cost of carriage is small.—4th. Under slate, metal, or tiles, it is a most effective non-conductor.

INODOROUS FELT, for damp walls, floors, damp sheets under carpets and bed-ticks. PRICE ONE PENNY per square Foot.

CROGGON and CO.'S PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., prevents the radiation of Heat, saving 25 per cent. of Fuel, and deadening Sound.

Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

ANNUAL DIVISION OF PROFITS.

GREAT BRITAIN MUTUAL LIFE ASSURANCE SOCIETY,

14, Waterloo-place, London, and 19, Brown-street, Manchester.

Instituted 1849.

THE CHAIRMAN.

RICHARD HARTLEY KENNEDY, Esq. Alderman, Deputy-Chairman.

This Society is established on the tried and approved principle of Mutual Assurance. The funds are accumulated for the exclusive benefit of the Policy holders, under their own immediate superintendence and control. The profits are divided annually, and applied in reduction of the current premiums. Policy-holders participate in profits after payment of five annual premiums.

The Annual General Meeting was held on the 28th May, 1856, when a highly satisfactory Report of the state of the affairs and progress of the Institution was presented to the Members. During the last three years, upwards of 1,200 new assurances have been effected, yielding an Income of premiums of more than 30,000l. per annum; and although a general high rate of mortality has prevailed among Assured lives during the last two years, it has not been deemed necessary to resort, in any slightest degree, to the allowances previously awarded to the Policy-holders.

The Members present at the meeting were fully satisfied with the Report, and resolved unanimously that a Bonus of 4 per Cent. should be added to the current year's Premium payable by such Policy holders as had then participated in the Profits.

Credit is allowed for half the annual Premiums for the first five years.

A. R. IRVINE, Managing Director.

1, Waterloo-place, London.
Dated June, 1856.

A FIXED ALLOWANCE OF 6l. PER WEEK, In case of Injury by

ACCIDENT of any DESCRIPTION, or the sum of 1,000l. IN CASE OF DEATH,

may be secured by the payment of 3l. for a policy in the RAILWAY PASSENGERS' ASSURANCE COMPANY.

A weekly allowance of fifteen shillings for injury, or 100l. in case of death, may be secured for fifteen pence.

NO CHARGE FOR STAMP DUTY.

Forms of proposal, prospectuses, &c. may be had of the agents, of the clerks at all the principal railway stations, and at the head office, London, where also

RAILWAY ACCIDENTS ALONE

may be insured against by the journey or by the year as heretofore

Railway Passengers' Insurance Company, empowered by a Special Act of Parliament.

WILLIAM J. VIAN, Secretary.

Offices, 3, Old Broad-street, London.

CLERICAL, MEDICAL, and GENERAL LIFE ASSURANCE SOCIETY,

26, Great Russell-street, Bloomsbury, London.

NOTICE is hereby given, that the usual Dividend of Five per Cent. (free income-tax) on the paid-up Capital on the Shares of the Society, will be PAYABLE at the Office on and after WEDNESDAY, the 20th day of August instant.

GEORGE H. PINCKARD, Resident Secretary.

N.B. The SHAREHOLDERS' Annual Meeting will be held in January next. The last Report, giving a detailed statement of the affairs of the Society can be obtained free on application.

FOR SALE, Fifteen CONSERVATORIES, HOT-HOUSES, GREEN-HOUSES, &c. of Wrought Iron, and Patent Galvanized Iron, of various forms and sizes, best materials and workmanship; now standing at E. BENCH'S Patent Horticultural Works, Granby Nursery, Mornington-place, Hampstead-road.—Horticultural buildings to order, and can be supplied to fit and hot-water apparatus with coppers and cisterns, combined. Price lists and references to any extent.—and at Kings-road, Chelsea.

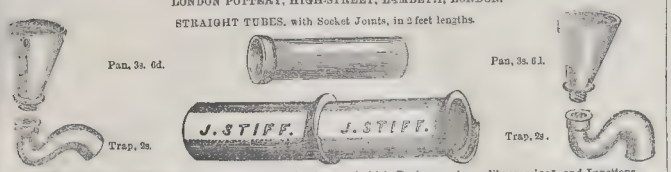
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLLS, SHADBOLT, and CO.'S, St James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Downgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. DOULTON'S HALF-SOCKET PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing,

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

SUPERIOR GLAZED STONEWARE DRAIN-PIPES, &c.—The attention of Boards of Works, Contractors and others, is invited to the MANUFACTURES of the BANFIELD, Yorkshire STONE POTTERIES, with which for even cleanness of finish and impermeable quality few can compare. Tubes, bends, junctions, gris and trench traps, closet-pans, syphons, yard and street gully sinks, with every article applicable to sanitary works, in any quantity, and immediately available, at the London Depôt, No. 4 Warehouse, Goods Station, Great Northern Railway. City Offices, 27, Bucklersbury, City, where Illustrated Price Lists can be obtained.

E. B. BEAUMONT, Proprietor.
J. D. JONES, Agent

N.B.—Chimney-pots, roofing-tiles, ridgings, wall copings, flooring and paving tiles, fire-bricks, oven-bricks, bakers' lumps, cinder oven lumps and quarries.

GROUND FLINT AND CORNISH STONE, UNADULTERATED,

WILCOX & CO.

FLINT MILLS, MILLWALL, POPLAR.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

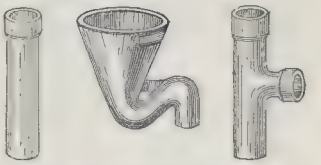
PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot.		
4	"	"	"	"	4d.	"	
6	"	"	"	"	6d.	"	
9	"	"	"	"	9d.	"	
12	"	"	"	"	1s. 3d.	"	
18	"	"	"	"	2s. 6d.	"	

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Roue, Babylon, Nineveh, &c. &c.

STONE PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES.—E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, St Saviour's Dock.—DAVID ROUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1854.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

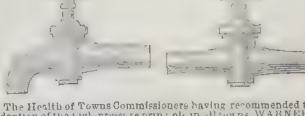
W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 260 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,
Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

SALES BY AUCTION.

TO BUILDERS, CONTRACTORS, SAW-MILL PROPRIETORS, ENGINEERS, AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, at the FACTORY, Ranelagh-road, Thames-bank, Pimlico, on MONDAY, SEPTEMBER [illegible], and following day, at ELEVEN, in lots, without reserve, the valuable MACHINERY, Plant, and Tools of a Builder's Factory, by the best makers, and with all the modern improvements, including a very powerful rack bench with saws and gearing, two iron circular saw benches, one iron vertical saw frame, planing machine by Parsson, an American thicknessing-machine, American mortising, tenoning, mitreing, and moulding machines, a very superior double-cylinder steam-engine of 25-horse power, two tubular steam-boilers, 300 feet of [illegible] shafting with riggers and straps, a powerful overhead travelling crane, two self-acting screwing-machines [illegible] by Whitworth, to cut from ¼ inch to 1½ inch and from ½-inch to 2 inches, a self-acting slide-lathe with iron bed 20 feet long, vertical drilling machine, two cutting and punching presses, two smaller lathes, fan and [illegible], three pumps, [illegible] metal [illegible] gas fittings, forty joiners' benches, cramps, screw-jacks, stocks and dies and steel tools, [illegible] scaffold boards, fifty [illegible] barrows, [illegible] cranes, [illegible], six smiths' forges, anvils, smiths' tools, an assortment of valuable patterns, and numerous other effects. To be viewed on Friday and Saturday previous to the sale, when catalogues at 6d. each may be had at the Works, and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO BUILDERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, at the FACTORY, Ranelagh-road, Thames-bank, Pimlico, on WEDNESDAY, SEPTEMBER 10th, and following day, at ELEVEN, the STOCK of well seasoned FITTINGS and MATERIALS, including [illegible] feet of deal boards, from [illegible] to [illegible] inches, [illegible] feet ¾-inch match boards, 11,000 feet run oak and deal plank, 2[illegible] feet run spruce and pine plank, 800 feet mahogany and wainscot plank, 500 cubic feet Dantzic timber, 150 squares 1½-inch prepared flooring, 30,000 feet moulding and beading, 1,[illegible] moulded and other doors, 200 pairs sashes and frames, 500 oak sills, 100 prepared window linings, a stock of builders' ironmongery in axle pulleys, hinges, bolts, locks, nails, screws, files, &c. 10 tons bar and rod iron, 5 cwt. gum metal, 1 ton sheet iron, brass cabinet work, and other effects. To be viewed on Friday and Saturday previous to the Sale, when catalogues at 6d. each may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Proprietor (who is retiring) to SELL by AUCTION, on the PREMISES, Herbert's-buildings, Waterloo-road, on TUESDAY, SEPTEMBER 23, and following days, at ELEVEN, in lots, without reserve, the MACHINERY, Tools, and Stock in-Trade of a LATHE and TOOL MAKER, the tools principally by Smith, Beacock, and Tannett, of Leeds, including fourteen self-acting lathes, one 15-inch and one 10-inch screw-cutting, with beds 20 feet and 22 feet long, seven screw cutting, from 5½ inches to 8½ inches centre; four surfacing lathes, to take in surfaces from 4 feet to 7 feet diameter; two boring-mills, thirty engine and hand-turning lathes, with slides; five self-acting planing-machines, the largest to take in 3 feet wide and 12 feet long; three self-acting shaping-machines, three self-acting drilling-machines, slotting machine, screwing machine, wheel cutting machine, oscillating steam-engine of 14-horse power, Cornish steam boiler, 18 feet long; 300 feet turned bright shafting, overhead motions, riggers, straps, and driving gear; fifty vices, work-benches, boring bars and heads, steel tools, stocks, and dies; forges, smiths' tools, Lloyd's fan, five tons of cast and shear steel, ten tons of bar and rod iron, and numerous other effects.—To be viewed on Saturday and Monday previous to the sale, when catalogues may be had on the Premises; or of Messrs. FULLER and HORSEY, Billiter-street, City.

IMPORTANT WATER-SIDE PROPERTY, ON THE THAMES, IN THE CITY OF LONDON.

MESSRS. FULLER and HORSEY are instructed by William Crawshay, Esq. to SELL by AUCTION, on WEDNESDAY, OCTOBER 1, at TWELVE, at the MART (unless an acceptable offer is previously made by private contract), the splendid MERCANTILE PROPERTY, held under the Corporation of London, known as George yard, Upper Thames-street, in the city of London, having a frontage next the Thames of 133 feet, and occupying a superficial area of about 34,000 square feet, a site unrivalled in the metropolis, either as a depôt for landing and housing goods or for carrying on any wholesale business for which extensive water-side premises are desirable. George-yard is universally known as the London establishment of Mr. Crawshay, the eminent ironmaster, and has been in the occupation of himself and predecessors for more than a century. The trade carried on ranks among the first in the City, the returns are very large, and, to any firm wishing to occupy the premises for the same business, a large proportion of the connexion may doubtless be secured. In the year 1842 the occupier expended many thousands of pounds in the erection of a massive pile of buildings, 160 feet in length by 65 feet in width, abutting on to the river; the structure is of the most substantial character, and, if needed for the purpose of warehousing goods, the foundation and walls are quite equal to support an elevation of several stories above those already erected. The building is one lofty ground floor, with gallery supported on iron girders and columns, and constructed to carry any weight. There is also a stack of warehouses, abutting on the river, 75 feet in length, of two floors, and a stack of warehouses, 60 feet in length, of three floors, abutting on Thames-street. A commodious dwelling-house in the yard, the lower part occupied as offices for clerks and principals. A comfortable dwelling-house in Thames street, and spacious paved yards, with two separate entrances, affording every convenience for loading and drawing goods. The whole is held on lease from the Corporation of London, for a term which will expire in the year 1900, subject to the rent of 1,200*l.* per annum. A stack of warehouses adjoining, of three floors, with frontage of 132 feet in Castle-yard, may be added if desired, at a rent of 150*l.* per annum. To be viewed till the sale. Printed particulars and plans will shortly be ready, and may be obtained at the Mart, of Messrs. CROWDER and MAYNARD, Solicitors, 57, Coleman-street; and of Messrs. FULLER and HORSEY, Billiter-street, London.

VICTORIA-STREET, WESTMINSTER.—Important Sale of new Building Materials, Plant, Stock, and Utensils of a Builder.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, SEPTEMBER [illegible], and following days, at ELEVEN [illegible] each day, on the PREMISES, Victoria-street, Westminster, in lots, without reserve, the important stock of well seasoned NEW BUILDING MATERIALS, partly prepared, adapted for first-class buildings; including 2,000 feet 2-inch sashes, glazed with plate-glass; 3,000 feet ditto, glazed with sheet-glass; 4[illegible]0 feet 2-inch marginal sashes, with ornamental glass, [illegible] feet ditto, not glazed, 6,400 feet 2-inch sashes, 4,000 feet 2 inch sashes and frames, 1,000 feet 2 inch Venetian sashes and frames, [illegible] Venetian sash frames, [illegible] [illegible] feet moulded architraves, 1,500 feet 6 by 1½ door frames, [illegible] Portland [illegible] paving, 5,000 feet self-faced [illegible] York [illegible] feet cube York stone, 1,700 feet [illegible], [illegible],000 stock and fire-bricks, 400 yards cast-iron [illegible] [illegible] marble chimney-pieces, 15 slate cisterns, 10 open baths, 10 gas stoves, 30 coils iron-pipe, 8 galvanized tanks, gas brackets and pendants, 10,000 feet iron tubing, an assortment of [illegible] varnishes, 20 cwt. red and white lead, and colours; 200 pieces paper-hangings, 5 tons sheet and pipe lead, traps, service boxes, &c. 4 cwt. brass tube, 10 cwt. of brass castings, dusters, brushes, pencils, &c. The plant and tools include a Gough's portable steam-engine, an hydraulic lift, 7 hoisting machines and chains, mortar mill, sweeping machine, 5 stone trucks, 7 Asphalte pots, crab-cranes, blocks and falls, [illegible] scaffold poles, 1[illegible] scaffold poles, 10 to 40 feet; 1,000 feet run 3-inch plank, 500 dozen scaffold cords, 60 ladders, 20 benches, barrows, 6 brass-finishers' lathes, smiths' forges, vices, anvils, benches, air furnace, moulding troughs, and tongs, 2 painters' machines, 24 pair steps, and trestles; an assortment of boxes; stocks and dies, steel tools, 50 dozen new files, 100 pair gas [illegible], an assortment of wood patterns, and numerous other effects. To be viewed four days previous to the sale, when catalogues, at 6d. each, may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street.

SALES BY AUCTION.

Ornamental Fountains and Vases, Garden pumps and Engines, Hydraulic Rams, Gas-fittings, and Effects.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on the PREMISES, [illegible]-street, [illegible], on FRIDAY, AUGUST 29, at ELEVEN, in lots, the STOCK in TRADE and TOOLS of an HYDRAULIC and GAS ENGINEER, including ornamental fountains and vases, garden-engines, pumps and syringes, force-pumps, gas fittings in chandeliers, pendants, and brackets, composition and iron pipe, elbows, bends, T's, &c.; brass stop and other cocks, washers, valves, &c., twenty-one sluice-cocks, (3, 4, and 5 inch), two Parsay's pumps, water closets, bar and rod iron, several tons of cast iron, 15 cwt. of old gun metal and brass. The tools include several slide lathes, drilling machines, vices, benches, steel tools, portable forge, smiths' tools, driving-wheel, lachet braces, twenty dozen of files, a large assortment of wood patterns, and other effects.—To be viewed on Thursday previous to the Sale, when catalogues may be had on the Premises, and of Messrs. FULLER and HORSEY, Billiter-street, City.

RED HILL, near REIGATE, SURREY.—Valuable Freehold Building Land, containing about Eight Acres.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to OFFER for SALE, at the MART, on THURSDAY, AUGUST 28, at TWELVE, in one lot, a very valuable ENCLOSURE of FREEHOLD BUILDING LAND, containing nearly eight acres, situate adjoining the estates of Lord Monson and Norman Wilkinson, Esq. on the road from Reigate to Bletchingly, in the parish of Nutfield, a delightful and fine healthy part of the county of Surrey, only ten minutes' walk from the Redhill Station on the Brighton and South-Eastern Railways, and about three-quarters of an hour's ride from the metropolis. The property is on the rise of a hill, commands extensive views of the surrounding highly picturesque scenery, it has an important frontage of [illegible] feet to the road, extends 1,000 feet in depth, and is admirably adapted for the erection of a residence of a superior class, or for small semi-detached villas.—May be viewed, and particulars had at the Queen's Head Inn, Nutfield; at Laker's Hotel, Redhill; the White Hart, Reigate; of Messrs. FAIRFOOT, WEBB, and D'AETH, Solicitors, 12 and 13, Clement's-lane; of E. G. PENNINGTON, Esq. 91, Newman-street, Oxford-street; at the Mart; and of Messrs. NORTON, HOGGART, and TRIST, 62, Old Broad-street, Royal Exchange.

HIGHGATE HILL, AT THE JUNCTION OF MAIDEN-LANE.—Very valuable Freehold Estate, comprising a capital old-fashioned Family Residence, with Stabling, Gardens, and Paddocks, the whole comprising about six acres, full of sand and brick earth, and, from its position, one of the most important and valuable building sites in the vicinity of London.

MESSRS. FAREBROTHER, CLARK, and LYE are instructed to prepare for SALE, at GARRAWAY'S COFFEE-HOUSE, on WEDNESDAY, the 27th of AUGUST, at TWELVE o'clock, in one lot, a very valuable FREEHOLD ESTATE, situate on Highgate-hill, at its junction with Maiden-lane, and close to the town; comprising a capital old-fashioned family residence, containing dining and drawing rooms, numerous bed rooms and servants' offices, stable-yard, with coach-house, stabling, and brewhouse. Adjoining the residence is a conservatory, opening to the lawn and pleasure-grounds, kitchen garden, and paddock, with pond of water, the whole containing about six acres. The views from the property over London are most extensive, and from the great frontage, both to Highgate hill and Maiden lane, presents one of the most eligible building sites ever offered. The estate is full of brick earth and sand, and, being raised, the whole might be easily converted to bricks prior to building on the property. May be viewed by cards only, which, with particulars and plans, may be had of [illegible], Esq. Solicitor, Gresham-street, City, at Garraway's; and at the offices of Messrs. FAREBROTHER, CLARK, and LYE, Lancaster place, Strand.

REIGATE.—Important and Valuable Freehold Estate, approaching 70 acres. Free from land-tax. A most attractive investment for residence or speculative enterprise, near to the Railway Station, at Red-hill.

MR. WILLIAM THORNTON is instructed to submit to PUBLIC COMPETITION, at the MART, on FRIDAY, AUGUST 29, the unsold and preferable portion of this very desirable PROPERTY, lying within a ring fence, and beautifully studded with timber, park-like in appearance, and commanding extensive and picturesque views over the Vale of Holmsdale, Gatton-park woods forming a prominent feature in the foreground. It is difficult to overrate the importance of this fine estate, either for a public institution, or as a source of certain and most profitable investment for any building operations of magnitude. The property is bounded on the west by the estate of Lord Monson, and on the south by the recently purchased residential estates of Norman Wilkinson, esq. and H. L. Gurney, esq. The well known salubrity of the air of the district has become a proverb. The railway, a few hundred yards distant, offers a daily choice by 120 trains for communication with all parts of England, and the metropolis is reached in thirty five minutes. Superior building stone underlies a considerable portion of the estate, and brick earth and sand are also found. There is also a nine-roomed house, with various agricultural buildings, garden, orchard, &c. In addition to these advantages, it may be mentioned that it is the only freehold estate of the same extent and proximity to the railway in the market, and that the demand for land being greatly on the increase, it is daily rising in value and public estimation. Since the property was first offered for sale, 35 acress have been disposed of; it will now be first offered in its entirety, and if a satisfactory price be not thus obtained it will be submitted in three lots.—Full descriptive particulars will shortly be issued having conditions of sale and plans annexed; and they may be obtained at the Junction Hotel, Redhill; Old Ship, Brighton; Calverly Hotel, Tunbridge-wells; Crown, Tunbridge; Grayhound Inns, Croydon and Sutton; White Hart, Mitcham; King's Arms, Westerham; Crown, Sevenoaks; of Mr. MORRISON, Sen. or Mr. G. C. MORRISON, Solicitor, Reigate; of Messrs. DRUMMOND, [illegible], and [illegible], Solicitors, Croydon; at the Auction Mart, and of Mr. WM. THORNTON, Land Agent, Surveyor, and Auctioneer, Reigate.

NOTICE.—To MAHOGANY MERCHANTS, CABINETMAKERS, and OTHERS.—The NEXT LIVERPOOL PERIODICAL SALES, by AUCTION, of ST. DOMINGO and CUBA MAHOGANY, HAVANA CEDAR, and other Furniture Woods, Baltic and American White Woods, will take place on WEDNESDAY MORNING, the 3rd SEPTEMBER next, at ELEVEN o'clock, in the WOOD SALES SHEDS, Brunswick and Toxteth Docks, Liverpool.

EDWARD CHALONER, Wood Broker and Measurer,
No. 6, East-side Queen's Dock, Liverpool.

BANKRUPTCY.

MR. ALFRED DAY has received instructions from the Assignee of Messrs. Rowland and [illegible], to SELL by AUCTION, on the PREMISES, Prebend-street and Arlington-street, New North-road, on TUESDAY, the 26th day of AUGUST, 1856, at TWELVE, without reserve, the FIRST PORTION of the STOCK and UTENSILS in TRADE of a BUILDER, comprising an 8-horse power steam-engine, a 3-horse ditto, a 10-horse power boiler, circular saw-tables, up and down frame ditto, planing tables, grooving-machine, mortise ditto, moulding [illegible], tenoning ditto, [illegible] of flooring, [illegible] feet of scantling, sheet and pipe lead, [illegible] scaffold boards, ditto putlocks, [illegible] dozen of cord, 36 ladders, [illegible] firkins of white-lead, turps, [illegible], colours, glass paper, paperhangings, [illegible] carpenter's benches, cramps, [illegible] forge, troughs, blocks, stakes, bellows, vices, drilling-[illegible] weights, smiths' tools, quantity of bar iron, iron [illegible], blocks, and falls; five powerful crabs, Caen, Bath, Portland, and Kentish rag stones, in blocks and [illegible] gas fittings, and effects.—May be viewed on Saturday and Monday preceding the sale. Catalogues to be had of Messrs. [illegible] and [illegible], Solicitors, [illegible], Gresham-street, City; J. NICHOLSON, Esq. Official Assignee, 24, Basinghall-street; and of the Auctioneer, City-terrace, City-road, near the Eagle Tavern.

SALES BY AUCTION.

STRATFORD, within a few hundred yards of the Station.—To SMALL CAPITALISTS, BUILDERS, and OTHERS.

MR. DEBENHAM will SELL, at the MART, on FRIDAY next, AUGUST 29, at TWELVE, in two Lots, THREE HOUSES (one with shop), Nos. 1, 2, and 3, Windham-terrace, Ashton street, [illegible], let at rentals amounting to [illegible] per annum, and for which a lease will be granted direct from the freeholder for a term of [illegible] years at a ground-rent of [illegible] per annum, and seven unfinished Houses, unusually well and substantially erected, desirably situate in the main thoroughfare, and known as Nos. 7 to [illegible] inclusive, Dorset place, Angel lane. A lease of these will be granted for a term of [illegible] years, at a ground-rent of 21*l.* per annum. Also a Plot of Building Ground in the rear, sufficient for the erection of eight more houses, subject to a further ground rent of 14*l.* per annum. Particulars on the Premises; of A. A. WALTER, esq. Solicitor, Church-row, Commercial-road East; at the Mart; and at Mr. DEBENHAM's Offices, 80, Cheapside.

The capital Timber Fittings of several Vessels lately engaged in the Transport Service to the Crimea.

MESSRS. MOORE and TEMPLE will SELL by AUCTION, at the WATERLOO BRIDGE WHARF, Commercial-road, Lambeth, on MONDAY, AUGUST 25th, at ELEVEN, on account of the number of lots (removed from Deptford for convenience and absolute sale), the valuable seasoned MATERIALS, in deals, planks, battens, floor and lining boards, horse decks, scantling, quartering, timber ends, oak, elm, American ash, forty fathoms of clean firewood, and a large assortment of useful materials for repairing and building purposes. On view two days preceding and morning of sale.—Catalogues on the Premises, close to Waterloo-bridge; at the King's Head, Belvedere-road; and of Messrs. MOORE and TEMPLE, Auctioneers, 4, Blomfield-street, City.

ESSEX and SUFFOLK.—Valuable Freehold Estates—Great Henny, Ballingdon, Foxearth, and Cavendish.—TO BE SOLD by AUCTION, by

MESSRS. COOTE and SON, at the ROSE and CROWN HOTEL, Sudbury, Suffolk, on THURSDAY, AUGUST 28th, 1856, at THREE for FOUR p.m. by direction of the Trustees of the late R. A. Allen, esq. in nine lots:—A valuable FREEHOLD ESTATE, known as [illegible] Farm, situate at Great Henny, on the fertile banks of the Stour, with residence, homestead, and 48 a. 2 r. 21 p. of rich arable and pasture land. An important Freehold Mercantile Property, with residence and grounds attached, known as the Ballingdon brewery, offering a valuable opportunity for an enterprising man with moderate capital, to secure with ease a considerable income. A Freehold Family Mansion, with gardens and grounds, known as Ballingdon House, in the occupation of G. Tate, esq. Two Freehold Residences adjoining, occupied by Mr. Quaife and Mr. Hart. A valuable Enclosure of Pasture or Accommodation Land near, occupied by Mr. Ellison, and Freehold House Property at Sudbury, Foxearth and Cavendish. Particulars and conditions of sale may be obtained at the Offices of Messrs. [illegible] and [illegible], Solicitors, Sudbury; and of Messrs. COOTE and SON, Witham.

TO TIMBER MERCHANTS, BUILDERS, SHIP-BUILDERS, COACH-MAKERS, CABINET-MAKERS, PIANOFORTE-MAKERS, ORGAN-BUILDERS, AND OTHERS.—On the Premises, Snow's-fields, King-street, Borough, and Robinson's Saw-mills, Swan street, Grange road, Bermondsey.

MR. PEAKE is favoured with instructions from the Executors of the late Thos. Elstow, esq. to SELL by AUCTION, on the PREMISES, on TUESDAY, SEPTEMBER [illegible], 1856, and two following days, at TWELVE o'clock each day, his well known, superior, and well seasoned STOCK in TRADE; comprising 25,000 feet Spanish and Honduras mahogany, in planks and boards; about 18,000 planks, deals, and battens; flooring boards, match lining, 1,000 feet wainscot, Spanish, Honduras, and walnut veneers; [illegible] feet Spanish curl logs, a large quantity of perfectly dry wide pine, Honduras boards, oak [illegible], twenty loads of Oak Timber, &c.—May be viewed Monday previous and mornings of sale. Catalogues obtained on the Premises, at Robinson's Saw-mills; and at Mr. PEAKE's Offices, 144, Tooley-street, Southwark. Approved bills at three months will be taken from purchasers to the amount of 20*l.* and upwards. Luncheon provided.

TO TIMBER MERCHANTS, BUILDERS, ENGINEERS, WHEELWRIGHTS, and OTHERS. By

MESSRS. WHITE and SONS, on the PREMISES, Belmont-wharf, Maiden-lane, King's-cross, on MONDAY, AUGUST 25th, 1856, and the following day, if necessary, commencing at ELEVEN o'clock punctually, the capital converted STOCK of a TIMBER MERCHANT. The very useful stock comprises a large quantity of excellent oak, elm, hornbeam, and cherry plank, about ten and twenty loads respectively of capital ash and beech plank, [illegible] feet oak quartering, oak sash sills, pales, gravel planks, gates and posts, about [illegible] larch rails, ash halves, [illegible] elm stocks, [illegible] &c. Also, at the same place, a capital new canal barge, constructed in the best manner to carry seventy tons. The lots may be viewed on and after Thursday, August 21st, and catalogues, with conditions of sale, may be obtained seven days prior to the date thereof, on the Premises, and at the "City of York" tavern, near thereto; at the Canal Bridge Wharf, Kingsland-road; of Mr. WEAKLIN, Stationer, 91, Farringdon-street, London; and of the Auctioneers, High-street, Dorking, who will forward them to applicants by post.

Valuable Building Materials, [illegible] [illegible] Bricks, in Stacks, at [illegible], Old Brompton.

MR. F. HALL has been favoured with instructions to SELL by AUCTION, as above, on TUESDAY next, AUGUST [illegible], at ONE for TWO, the excellent MATERIALS of large HOUSES and OFFICES, all nearly new: comprising [illegible] feet long, [illegible] feet of excellent clean flooring-boards, twenty four-panel doors and frames, handsome French casements, sashes and frames, duchess slates, 5,000 pantiles, stone paving, iron pallisading, 10,000 feet of quartering, [illegible] rafters, plates, and partitions, 600 feet of close boarded fencing, 100,000 good sound bricks, a quantity of firewood, and other excellent effects. May be viewed, and catalogues had at the [illegible], Old Brompton; [illegible], Fulham-road; and of Mr. F. HALL, Building Material and Builders' Auctioneer, [illegible]-street, Kensington.

BOROUGH-ROAD.—Well executed Groups, Figures, Vases, Fountains, &c. in Artificial Stone.

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, 7[illegible], Borough-road, Southwark, on TUESDAY, SEPTEMBER [illegible], 1856, at TWELVE for ONE, the remaining portion of the extensive STOCK; comprising fountains, vases, groups, pedestals, centre flowers, &c. To be sold without reserve.—May be viewed one week previous, and catalogues had on the Premises and of the Auctioneers, 40, Parliament-street, Westminster.

Old Materials, Burlington House, Piccadilly.

MESSRS. EVERSFIELD and HORNE are instructed by the Commissioners of her Majesty's Works and Public Buildings to SELL by TENDER, on WEDNESDAY, AUGUST 27, at FOUR, a quantity of LOOSE FITTINGS, [illegible], Ironwork, [illegible] on TUESDAY [illegible]. Tenders are to be delivered at the Auctioneers' Office, 40, Parliament-street, before FOUR o'clock on WEDNESDAY, AU[illegible].

A DEAL FRAME for SALE, in perfect working order.—To be seen at Mr. CHAMBERS'S, Vernon Mews, [illegible]-road, West [illegible]-grove.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing Office of COX BROS. & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, August 23, 1856.

The Builder.

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ARCHITECTURAL EXHIBITION,

Suffolk-street, Pall-Mall East. The following local honorary secretaries will be happy to furnish information to parties applying to them in their several neighbourhoods:—

BIRMINGHAM	W. W. BATEMAN, Esq.
BISHOP'S STORTFORD	G. E. PRITCHETT, Esq.
BRISTOL	S. C. FRIPP, Esq.
BURY ST. EDMUND'S	JOHN JOHNSON, Esq.
CAMBRIDGE	R. REYNOLDS ROWE, Esq.
CHELMSFORD	F. CHANCELLOR, Esq.
CHESTER	JAMES HARRISON, Esq.
COLCHESTER	C. FOSTER HAYWARD, Esq.
CORK	R. R. BRASH, Esq.
COVENTRY	JAMES MURRAY, Esq.
DERBY	H. SHAW PEACH, Esq.
DURHAM (and county of)	J. P. PRITCHETT, Esq. of Darlington.
EXETER	EDWARD ASHWORTH, Esq.
EDINBURGH	W. MILLER, Esq. Hon. Sec. Arch. Inst. Scotland.
GLASGOW	
HUDDERSFIELD	CHARLES PRITCHETT, Esq.
IPSWICH	FREDERICK BARNES, Esq.
LANCASTER	E. G. PALEY, Esq.
LEEDS	W. REID CORSON, Esq.
LIVERPOOL	J. BOULT, Esq.
LLANDAFF	J. P. SEDDON, Esq.
MANCHESTER	THOMAS BIRD, Esq.
NEWCASTLE-ON-TYNE	J. S. WATSON, Esq.
NEWARK	CHARLES BAILY, Esq.
NORWICH	R. KITTON, Esq.
NOTTINGHAM	T. C. HINE, Esq.
OXFORD	J. LIPSCOMB SECKHAM, Esq.
PLYMOUTH	W. H. REID, Esq.
READING	CHARLES HENMAN, Esq.
STOKE-UPON-TRENT	C. LYNAM, Esq.
SUTHERLAND	THOMAS OLIVER, jun. Esq.
TAUNTON	C. E. GILES, Esq. Hon. Sec. Somerset Arch. Assoc.
TUNBRIDGE WELLS	N. E. STEVENS, Esq.
WOLVERHAMPTON	E. BANKS, Esq.
YORK	GEORGE E. JONES, Esq.

The Committee think there must be many other important local ties in which it would be desirable that the Exhibition should be represented, and would be glad to hear from those who are willing and able thus to assist.

JAS. FERGUSSON, F.R.A.S. } Hon. Secs.
JAS. EDMESTON, jun. }

ARCHITECTURAL EXHIBITION and COLLECTION of MATERIALS, PATENTS, and MANUFACTURES connected with Architecture.—All Drawings, Models, Photographs, &c. must be delivered at the Galleries, Suffolk-street, Pall-mall East, on the 1st and 2nd of DECEMBER next. The printed rules may be had on application to the Hon. Secretaries.

The Committee announce with much satisfaction that the Rev. Mr. Boutell, Mr. R. W. Billings, Mr. Owen Jones, Mr. George Scharf (unless circumstances in the mean time should interfere), and other gentlemen, have kindly promised Lectures for the Tuesday Evenings, as on the last occasion. Full particulars will be published as soon as arrangements are complete. Season tickets, admitting at all times to the Exhibition and to all the Lectures, will be half-a-crown, as before.

DEPARTMENT for MATERIALS.—Persons desirous to make their inventions known, will find this the best and indeed only way of bringing them under the notice of the whole body of Architects in London and the country; and the Committee request that applications for space (directed to Mr. JAMES EDMESTON, Jun. Hon. Sec. may be made at once, as full two-thirds of the two rooms devoted to this purpose has been already applied for, and many who delay will certainly be disappointed.

Intending subscribers should send their names to the Secretaries; and it is requested that unpaid subscriptions for last year may be forwarded at once, as the issue of the balance-sheet is delayed until these are received.

JAMES FERGUSSON, F.R.A.S. } Honorary
30, Langham-place, } Secretaries.
JAMES EDMESTON, jun. }
5, Crown-court, Old Broad-st. }

BUILDERS' BENEVOLENT INSTITUTION.—The NINTH ANNIVERSARY DINNER will be held at the LONDON TAVERN, on WEDNESDAY, 29th OCTOBER next, Mr. Alderman WILLIAM LAWRENCE, President, in the Chair.

Gentlemen desirous of promoting the interests of the Institution by becoming Stewards, will be pleased to forward their names to the Treasurer, Mr. GEORGE BIRD, 38, Edgware-road; or to the Secretary, at the Offices, 19, Southampton-street, Bloomsbury.

A. G. HARRIS, Secretary.

BUILDERS' BENEVOLENT INSTITUTION.—An ELECTION of PENSIONERS will take place 27th NOVEMBER next. Candidates may obtain forms of application (to be returned on or before 29th SEPTEMBER) at the Offices of the Institution, 19, Southampton-street, Bloomsbury.

Pensions: 24*l.* per annum for males, and 24*l.* for females.

August 28, 1856. A. G. HARRIS, Secretary.

COMPETITIONS.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS. The Trustees for Sale of a Freehold Estate of 50 acres, including the Revhall Spa and near the Crystal Palace, require PLANS for LAYING OUT the SAME for building purposes, showing the necessary roads, sewers, &c. the whole to be clearly defined and approximate in suitable lots, and laid down to a scale of two chains to an inch, from actual admeasurement. The following premiums are offered:—For the plan adjudged the best by the trustees, 100 guineas; for the second, 100 guineas; for the third, 50 guineas. The plans to which the above premiums shall be awarded, will be returned by and be the property of the trustees. Further particulars may be obtained of Mr. PEACOCK, Builder, near the Jolly Sailor Station, Norwood, close to the property. The trustees will meet on the 30th day of OCTOBER next, to examine the plans, which are to be previously forwarded, enclosed and sealed, to the Secretary's Office, Auction Mart, London, addressed to the Trustees of the White Horse, Norwood, Estate.

CITY of LICHFIELD.—The Corporation of Lichfield having determined to establish a MUSEUM and LIBRARY, under the Public Libraries Act, 1855, architects are invited by the committee to offer a plan and estimate, with specification, for a suitable building, and are requested to send them to the Town Clerk's Office, on or before the 23rd of SEPTEMBER. The first outlay will not exceed 1,000*l*. Further information as to the site, required accommodation in the first instance, and other particulars, may be had on application personally or by letter.

CHARLES SIMPSON, Town Clerk.

CONTRACTS.

BASINGSTOKE CEMETERY.—To BUILDERS, CONTRACTORS, and OTHERS.—The Burial Board for the town of Basingstoke are prepared to receive TENDERS for the FORMATION of ROADS and PATHS, and the ERECTION of CHAPELS, LODGE, ENTRANCE-GATES, BOUNDARY FENCES, &c. on the site of the proposed Cemetery at Basingstoke. The plans, drawings conditions, and specifications can be seen, and information and bills of quantities obtained at the Offices of the Architects, Messrs. POULTON and WOODMAN, 1, Grey Friars-road, Reading, between the hours of TEN a.m. and FIVE p.m. from WEDNESDAY, SEPTEMBER 3rd, to MONDAY, SEPTEMBER 8th. The estimates to be prepared separately, as follows:—No. 1. Formation of Roads and Paths; 2. Erection of Chapels, Lodge, and Entrance; 3. Boundary Fences. Each contract may tender for one or more of these divisions of the work. All Tenders are to be sealed up, endorsed, and sent in to the Clerk to the Board, on or before TUESDAY, SEPTEMBER 9th, at TWELVE o'clock at noon. The Board do not bind themselves to accept the lowest or any of the Tenders.—By order, J. C. SHEBBEARE, Clerk to the Board.

Basingstoke, August 19, 1856.

TORQUAY WATER-WORKS.—The Local Board of Health are desirous to receive TENDERS for LAYING about EIGHT MILES of TEN INCH PIPE, SIX MILES of NINE-INCH, and ONE MILE of SEVEN-INCH; and for MAKING RESERVOIRS and other WORKS. Specifications and plans are to be settled for inspection at the Town-Hall, Torquay, Devon; and at the Office of the Engineers, Messrs. EASTON and AMOS, Grove, Southwark, London, on and after the 22nd instant. Sealed Tenders, addressed to the undersigned, to be delivered at the Town-Hall, Torquay, on or before TWELVE o'clock on TUESDAY, the 9th day of SEPTEMBER next. The Local Board do not bind themselves to accept the lowest or any Tender.

GEORGE E. HEARDER, Clerk to the Local Board.

Torquay, Devon, August 18, 1856.

TO BUILDERS.—CHELTENHAM COLLEGE.—The Board of Directors of the Cheltenham College, are willing to receive TENDERS for the ERECTION of a CHAPEL, in connection with the Institution. The drawings and specification may be seen and other particulars obtained at the Office of Mr. DANIEL JAMES HUMPHRIS, Architect, Cheltenham. The Tenders, which are to be sealed up, endorsed "Tender for New Chapel, Cheltenham College," must be delivered to Mr. W. L. BAIN, the Secretary, on or before the 1st day of SEPTEMBER next. The Directors do not pledge themselves to accept the lowest Tender.

D. J. HUMPHRIS, Architect.

London road, Cheltenham.

TO BUILDERS, CARPENTERS, and OTHERS.—Persons desirous of TENDERING for the CONSTRUCTION of about 1500 FEET superficial of DUNDARY FENCING, on the estate of the Catholic Orphanage, at Norwood, Surrey, may see the specifications at the Offices of Mr. WARDELL, Architect, 11, Parliament-street, on and after MONDAY, the 1st of SEPTEMBER, between the hours of TEN and FOUR o'clock. Tenders to be delivered to Mr. WARDELL, on MONDAY, the 8th of SEPTEMBER, at TWO o'clock. The lowest Tender will not necessarily be accepted.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover district hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-Mall, London, on or before WEDNESDAY, the 10th day of SEPTEMBER, 1856, from persons desirous of CONTRACTING for TAKING DOWN and REBUILDING portions of the SCARP WALLS of the CITADEL, Dover. A specification of the works to be executed, may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Dover, between the hours TEN and FOUR o'clock, from MONDAY, the 1st of SEPTEMBER, to TUESDAY, the 9th of SEPTEMBER, 1856 (Sunday excepted). The party whose Tender may be accepted for the work, will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 500*l*. for the due performance of the Contract. Tenders for the above work to be addressed to the Director-General of Contracts, Pall-Mall, London, and endorsed "Tender for Repairing Scarp Walls, Citadel, Dover."

N.B. The War Department reserves to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, August 23, 1856.

TO BUILDERS.—Notice is hereby given, that TENDERS will be received by the War Department, at their Office, Pall-Mall, London, on MONDAY, the 8th day of SEPTEMBER, 1856, from such persons as may be willing to undertake the ERECTION of a BOMB-PROOF MAGAZINE, to contain 10,368 Barrels of Gunpowder, at Tipner, near Portsmouth, in the county of Hants. The plans, specification, and conditions of Contract, may be seen, and every information obtained on application at this Office, on or after the 18th day of AUGUST, 1856, between the hours of TEN and FOUR each day (Sundays excepted). Tenders to be endorsed, "Tender for the Erection of a Bomb-Proof Magazine, at Tipner, near Portsmouth, in the county of Hants."

N.B. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Portsmouth, August 7, 1856.

Royal Engineer Office, Portsmouth, 14th August, 1856.

TO BUILDERS.—Notice is hereby given that TENDERS will be received at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on or before the 16th SEPTEMBER, 1856, from such persons as may be desirous of undertaking the Work Department for CONSTRUCTING and ERECTING FOUR POWDER MAGAZINES (each containing one barrel), and EIGHT SHOOTING SHEDS, together with Drain and Wall, Railing, Gates, and Earth traverse, at Marchwood, in the county of Hants. Plans and specifications, with forms of Tender, may be seen, and all other information obtained, on application at the Office, any day (Sundays excepted), between the hours of TEN and FOUR, from the 20th AUGUST, 1856, to 13th SEPTEMBER, 1856. The whole of the work to be completed within eight calendar months from the date of notification of acceptance of Tender. No notice will be taken of any Tender unless it be on the prescribed form. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

NOTICE to CONTRACTORS and BUILDERS.—TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, on or before the 6th OCTOBER next, from such persons as may be willing to enter into a CONTRACT for the CONSTRUCTION of a FORT, near the village of Eson, in the county of Hants. Plans and specifications may be seen, and every information obtained on application at the Royal Engineer Office, Gosport, between the hours of TEN and FOUR daily, from the 25th SEPTEMBER to 4th OCTOBER, 1856. No notice will be taken of any Tender unless upon the printed form. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Portsmouth, August 20, 1856.

BOARD of WORKS for the LIMEHOUSE DISTRICT.—To BUILDERS, CONTRACTORS, and OTHERS. The Board of Works for the Limehouse District give Notice, that they will be ready on the 2nd day of SEPTEMBER, 1856, to receive sealed TENDERS from parties who may be willing to contract for the TAKING DOWN, CONSTRUCTING, and COMPLETELY FINISHING certain intended BRICK and PIPE SEWERS, 1,150 feet in length, or thereabouts, with other works in connection therewith, in Gill-lane, Jamaica-place, and Rich-street, in the parish of Limehouse; and in William-street and Henry-street, in the hamlet of Ratcliff; and for the maintenance of such works in complete repair for twelve calendar months. Plans, sections, and specifications for the above works, together with a form of Tender, may be inspected, and other particulars obtained, at the Office of the Board, White Horse-street, Commercial-road East, between the hours of TEN a.m. and FOUR p.m. until the 2nd SEPTEMBER next. Tenders addressed to the Limehouse Board of Works, must be delivered at the said Office by FOUR o'clock p.m. on the said 2nd of SEPTEMBER, and no Tender will be received after that hour. The Board do not bind themselves to accept the lowest or any Tender, and the party whose Tender shall be accepted will be required to provide two sureties for the due performance of the works. The attendance of parties tendering will be required at the meeting of the Board on WEDNESDAY, the 3rd day of SEPTEMBER next, at the Board-room of the Ratcliff Workhouse, York street West, Commercial-road East, at THREE o'clock p.m.

THOS. W. RATCLIFF, Clerk of the Board.

White Horse-street, Commercial-road East, 20th August, 1856.

TO BUILDERS.—Persons desirous of TENDERING for the CONSTRUCTION of a WHARF VIADUCT and GOODS SHEDS, and the ERECTION of WEIGHING MACHINES, and the performing of other works, on a Wharf, at Gainsborough, may receive information relative thereto, by applying to Mr. HANCOCK, Civil Engineer, 30, Great George-st. S.

[For remainder of Contracts see next page.

CONTRACTS.

BOROUGH of LEEDS.—HOLBECK BURIAL-GROUND CONTRACT. [illegible] TENDERS wanted for providing and [illegible] IRON FENCE and ENTRANCE GATES to the [illegible] ground at Holbeck [illegible] at the Office of Mr. EDWARD FILLITER, Borough Engineer and Surveyor, [illegible] street, Leeds. Sealed Tenders to be sent to the [illegible] not later than TEN o'clock at noon on WEDNESDAY, the 10th SEPTEMBER next, addressed to "The Chairman of the Burial-ground Committee, Tender for [illegible] works." By order, JOHN A. IKIN, Town Clerk.
Leeds, August [illegible]

TO BUILDERS, GARDENERS, and OTHERS.—LOUGHBOROUGH CEMETERY.—The Burial Board for the parish of Loughborough, in the county of Leicester, are prepared to receive TENDERS for PLANTING, SURFACE DRAINING, MAKING TERRACE ROADS and PATHS, [illegible] LAYING OUT and [illegible] the NEW [illegible] CEMETERY GROUND [illegible] [illegible] SEPTEMBER next [illegible] SEPTEMBER next [illegible] Bills of particulars may be had [illegible] Messrs. BELLAMY and HARDY, 3, Broadgate, Lincoln, on payment of their charge of [illegible].—The Board do not bind themselves to accept the lowest Tender.—By order,
W. H. STONE, Clerk to the Burial Board.
Loughborough, [illegible] August [illegible]

BOROUGH of NEWCASTLE-ON-TYNE. [illegible] TENDERS are wanted for the MALLEABLE IRON GIRDERS required [illegible] Buildings.—For particulars apply to Mr. JOHNSTON, Architect, No. 12, Clayton street West, Newcastle-on-Tyne.

LIGHTNING CONDUCTOR.—The Directors of the ABNEY-PARK CEMETERY, Stoke Newington, are willing to receive TENDERS for supplying a LIGHTNING CONDUCTOR for the Chapel in the Cemetery, and CONSTRUCTING a WELL to receive the lower end of the same, such Conductor to be fixed from the top of the spire to the bottom of the building, and convey it to the well at a proper distance therefrom [illegible] of the materials, size of rod, mode of fixing, depth of well [illegible]. The work to be done properly and efficiently, and to the satisfaction [illegible]

FARM BUILDINGS and DWELLING-HOUSE. Persons desirous of CONTRACTING for the ERECTION [illegible] Watford, Herts.
1. FARM BUILDINGS [illegible] in the parish of Nayne, [illegible]
2. FARM BUILDINGS [illegible] in the parish of Stebbing, near Dunmow, Essex.
3. A DWELLING-HOUSE, at Walkern Park, in the parish of Walkern, near Stevenage, Herts.
All Tenders must be delivered to Mr. HUMBERT on or before the 23rd day of SEPTEMBER, on which day at noon they will be opened at his Office. The Advertiser does not bind himself to [illegible]

TO BUILDERS and OTHERS.—Persons desirous of contracting for the ERECTION of a POLICE STATION [illegible] SEPTEMBER next.—The [illegible] not necessarily be accepted.

PERSONS willing to CONTRACT with the [illegible] CHAPELS, ENTRANCE LODGE, and BOUNDARY WALL, [illegible] specifications prepared by Mr. J. MESSENGER, Architect [illegible] SEPTEMBER next, must deliver Tenders for the same at my [illegible] to themselves the right of rejecting the lowest or any other Tender.
[illegible], Clerk to the Board.

TO BUILDERS and CONTRACTORS.—NEWARK CHRIST-CHURCH SCHOOLS.—Persons desirous of CONTRACTING with the Committee, for the ERECTION of NEW INFANTS' and GIRLS' SCHOOLS, in PORTLAND STREET, in the PARISH of NEWARK-UPON-TRENT, [illegible] after WEDNESDAY, SEPTEMBER 3rd, until WEDNESDAY, SEPTEMBER 17th, on which day sealed Tenders endorsed [illegible] themselves to accept the lowest or any of the Tenders sent in.
CHARLES BAILY, Architect.

BOARD of WORKS for the STRAND DISTRICT.—To DUSTMEN, SCAVENGERS, and CONTRACTORS.—The Board hereby give Notice that they are prepared to receive TENDERS from persons who may be willing to CONTRACT for the REMOVAL of all SOIL, SLUSH, SNOW, ICE, STRAW, LITTER, REFUSE, and any other matter or [illegible] several foot and carriage ways in the district; and also for the [illegible] at the expiration of the first and second year, agreeably to the provisions of a specification which may be seen daily at the Board's Offices, [illegible] The Contractor will be required to enter into a bond, with two approved sureties for the due performance of the Contract. The [illegible] Offices, 23, Henrietta-street, Covent-garden, before FOUR o'clock [illegible] executed by the party whose Tender shall be accepted.—By order,
JAMES H. F. LEWIS, Clerk to the Board.

TO CIVIL ENGINEERS and SURVEYORS. The Local Board of Health for the District of Waterloo, with Seaforth, near Liverpool, will be glad to [illegible] DISTRICT, with detailed plans, upon scales to be prepared [illegible] approval.—Such Tenders to be addressed and [illegible]
[illegible] MASON, Clerk to the said Local Board.
Liverpool, August [illegible]

CONTRACTS.

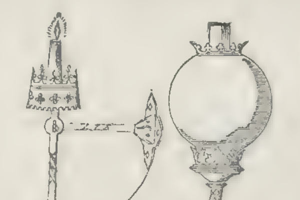
TORQUAY BATH COMPANY. — The Directors of the above Company are desirous of receiving TENDERS for the SUPPLYING and FIXING of a 6 horse power STEAM ENGINE, BOILERS, PUMPS, APPARATUS, the LAYING of PIPES, and all other necessary works, required in the fitting up of [illegible] bath-rooms.—Specifications may be seen and information obtained at the office of EDWARD BANKS JULIAN, Architect and Engineer, 11, Waldon terrace, Torquay, on and after the 1st day of SEPTEMBER next. Sealed Tenders addressed to the [illegible] of the Company on or before the [illegible] day of SEPTEMBER next. The Directors do not pledge themselves to accept the lowest or any Tender.
By order of the Directors,
JOHN C. STARK, Secretary.
Dated Company's Office, 13, Strand, Torquay, Devon, August 23, 1856.

SOUTHAMPTON LOCAL BOARD of HEALTH.—To STONE-MERCHANTS, CONTRACTORS, and OTHERS.—Notice is hereby given, that the Southampton Local Board of Health are prepared to receive TENDERS from any person or persons willing to supply them with about [illegible] TONS of BROKEN GUERNSEY GRANITE STONE, for re-[illegible] the Macadamized streets [illegible] Specification may be seen and information obtained on application to Mr. POOLE, Surveyor to the Local Board of Health, Southampton. Sealed Tenders (according to the form mentioned in the specification), must be delivered at my Office on or before the 19th day of SEPTEMBER next. No pledge is given to accept the lowest or any other Tender.—By order of the Local Board of Health,
CHARLES E. DEACON, Clerk.
Public Health Office, Southampton, August 27, 1856.

COUNTY of DURHAM LUNATIC ASYLUM.—To BUILDERS, ENGINEERS, CONTRACTORS, and OTHERS.—The Committee of Visitors are prepared to receive TENDERS for the whole or any part of the several WORKS required to be done in the ERECTION of the County of Durham LUNATIC ASYLUM, near Sedgefield, in the County of Durham. The plans, specifications, and conditions may be inspected at the Office of the Architect, Mr. JOHN HOWISON, County Courts, Durham, where further particulars may be ascertained, and of whom detailed measurements and form of tender may be obtained. Sealed Tenders, endorsed "Tender for County Lunatic Asylum," addressed to ROWLAND BURDON, Esq., Chairman of the Committee of Visitors, must be [illegible] day of SEPTEMBER next. The party whose Tender may be [illegible] Tender.—By order,
JOHN WATSON, Clerk to the Committee.
Durham, July 19th, 1856.

SCINDE RAILWAY COMPANY.—CONTRACT for PERMANENT WAY MATERIAL. The Directors of this Company are prepared to receive TENDERS for the SUPPLY of 4,000 TONS of RAILS, 1,500 TONS of CHAIRS, 200 TONS of FISHING-PLATES, 160 TONS of BOLTS, NUTS, SPIKES and WASHERS, [illegible] WOOD KEYS [illegible] and after SATURDAY, the 30th inst. Tenders in sealed covers, [illegible] Office, before TWELVE o'clock, on FRIDAY, the 5th day of [illegible]
[illegible], Secretary.
Scinde Railway Office, Gresham House, Old Broad street, August 28, 1856.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, & 57, WYCH-STREET, STRAND,
London



VANES, CROSSES, GAS-STANDARDS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the [illegible], Sydenham [illegible] free on application.

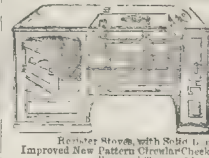
CONTRACTORS' RAILS FOR SALE.—[illegible] condition. 12 to 14 lbs. to yard.—MATTHEW T. SHAW, 64, Cannon-street, City. Contractor for Railway Plant and Stores.
P.S.—A quantity of Wheels and Axles, and Ironwork for Tip Waggons, complete.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.
ANDREW CLARK and COMPANY, PLUMBERS
THE BEAR GARDEN LEAD WORKS, SOUTHWARK.
[illegible]

UNITING LEAD TO LEAD WITHOUT SOLDER.
[illegible] OLD LEAD, on the LOWEST TERMS.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO., Patentees of the Copper Rope Lightning Conductor, supply Lightning Conductors, with the points and all staples complete for fixing, at one shilling the foot.
R. S. NEWALL and CO.'S Patent Copper Rope Conductor is being supplied by architects, engineers, and scientific men in all parts of the world.
COPPER and IRON CORD for WINDOW SASH-LINES.
OFFICES, Gateshead on-Tyne.
1[illegible], Strand, London.
67, Hyde park street, Glasgow.
27, Dale street, Manchester.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 159, Shoreditch.
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.



Improved Self acting Cottage Ranges, with Large Oven and Boiler
30 33 33 36-inch.
28s. [illegible]
Best Self acting Ranges, with Oven and Back Boiler, bright Wrought Bars—
34 36 38 40-inch
54s 56s 58s 60s
Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 2½d.

Register Stoves, with Solid bars, per inch, 5d.
Improved New Pattern Circular Cheek Register, with strong Bars and Trivets, 5d. per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2	2½	3 inch.
	10d.	1s. 1d.	1s. 3d. per yard.

Cast Gutters—4 inch, 8d. per yard.

O G Gutters	4	4½ inch.
	1s.	1s. 2d. per yard.

	2	3	4	5	6
Patent Line......	3s. 6d.	4s.	5s.	7s.	9s. per gross.

6 inch Rd Ward Mortise, with Best Furniture and Patent Spindles, 2s. 9d. each. Light Elliptic and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.
Brick Moulds kept in stock. Any size made to order.
Best Cut Clasp and Rose Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 in.
16s. 6d.	16s. 6d.	15s. 6d.	15s.	14s. per cwt.

Best Sheet Cut Floor Brads .... 1[illegible]s per cwt.
Best Cut Lath Nails .... 1[illegible]s. ..

IRON CHURCHES, STORES, &c.—For SALE. Substantial Corrugated Iron Stores, Churches, Dwelling-houses and every description of Building, adapted to all climates. Iron Roofs constructed for all parts of the world. An Iron Church with sittings for 75 people, for hire or sale.—To view and for further particulars apply to SAMUEL HEMMING, Clift House Works, Bow, London.

SAVING IN GAS.—[illegible] HULETT, INVENTOR and PATENTEE.—The Mercurial Gas Regulator [illegible] preventing any irregularity in the height of the flame.—D. HULETT and CO., High Holborn, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron, Railway Bars, Forge and Engine [illegible]
STEWART'S PATENT CAST IRON GAS and WATER PIPES.
Office, No. 7, [illegible], London.

TO IRONMONGERS AND THE TRADE GENERALLY.
D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show, every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price list [illegible] High Holborn.

IRONMONGERY,
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSS'S WHOLESALE WAREHOUSE, 22, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER-HANGINGS.—To BUILDERS, PAINTERS, and the TRADE generally.—TRUMBLE and CO. Manufacturers, Leeds, beg to call the attention of the trade to their immense STOCK of PAPER-HANGINGS, at No. 3, Oxford-street, London, consisting of Gold, Flock, Satins, Oaks, Marbles, Granites, and Machine Goods, [illegible] manufacture, can supply on the very best terms.

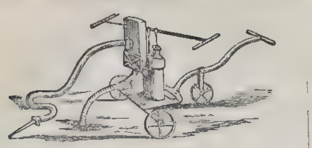
PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others [illegible] STOCK and every variety of all classes of PAPER HANGINGS, at W. CAUSEY'S MANUFACTORY, 22, Lowther Arcade, Charing-cross, [illegible] Patterns [illegible] Cheapest house for panel decorations. Terms, Cash.

CARTS, VANS, WAGGONS, LADDERS, BARROWS, &c.—Price Lists for the undermentioned may be had on application:—
No. 1. Carts, Vans, Waggons, Drays, and Trucks.
No. 2. Wheels and Repairs.
No. 3. Ladders, Barrows, &c.
No. 4. Hire of ditto.
G. ELL, 3, Tottenham-court, and 2, Palace-row, New-road.
[illegible]

TO CARMEN and CONTRACTORS.—Between 4,000 and 5,000 yards of RUBBISH to be DUG and CARTED at Whitechapel. Parties wishing to give a price for same, apply to Mr. J. PERRY, Builder, Bridge House, Hackney.

THE NEW SKETCHING TENT, 6 feet 6 inches high, 6 feet wide, by [illegible] deep at the base. Weight under 8 lbs. Easily pitched and struck; very portable and complete [illegible]
[illegible] NEWTON'S, [illegible]

FOR HIRE, a SPACIOUS TENT, adapted for the Laying of Foundation Stones for Public Buildings, &c.
Also, for Sale, a Quantity of Cocoa Matting for Churches, at [illegible]
Apply to H. PIGGOTT, 115, Fore-street, City.



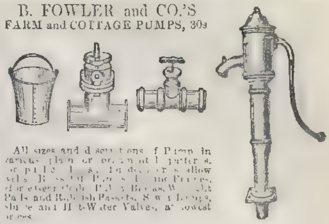
B. FOWLER, HOLMAN, and CO.
SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.

The simplest, cheapest, and best thing of the kind before the public; [illegible] quantity at small [illegible]. A really good article, combining [illegible].

ON SALE AND HIRE,
SINGLE AND DOUBLE PUMPS IN WROUGHT IRON
TO ANY DEPTH,
FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.
Sizes, from 3 inch to 15-inch barrels.

N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

B. FOWLER and CO.'S
FARM and COTTAGE PUMPS, 30s



All sizes and descriptions of Pumps in [illegible] Pails and Rubbish-baskets, [illegible] Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH or DRYING APPARATUS.

BENJAMIN FOWLER & CO. GENERAL ENGINEERS, WHITEFRIARS-STREET, FLEET-ST.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

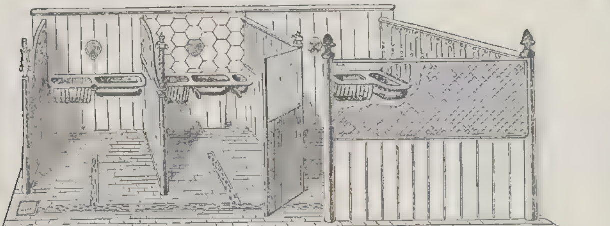
ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER TROUGH, and WROUGHT IRON RACK, [illegible] light and durable, [illegible] which can be used with great advantage where space is an object, [illegible]

Improved Harness Holders, for preserving the shape of the harness [illegible]. Patent Loose-Box Fittings [illegible]

Improved Surface [illegible] safety cover, Sanitary Traps, and every article for the harness-room and stable, kept in stock, [illegible]

The new Illustrated Catalogue for 1856 and estimates gratis, upon application to

COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES
Based the current Price of Hoop-iron.

Gauge.	In wide.	Per 100 ft
No. 16	1¼	7s. [illegible]
15	1½	7s. 6d.
15	1¾	[illegible]
15	2	[illegible]
15	2¼	[illegible]

THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of [illegible] inches) is now being extensively used [illegible] Works, in London and all parts of the kingdom.

Sole Manufacturers — THOMAS PERRY and SONS, Highfields Works, Bilston.
London Depôt ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

FENDERS, STOVES, and FIRE IRONS.— Buyers of the above are requested, before finally deciding, to visit WILLIAM S. BURTON'S SHOW-ROOMS. [illegible] sell at such very reduced charges [illegible]

Firstly, [illegible] the frequent and extent of his purchases; and Secondly—From those [illegible] being made exclusively for cash.

Illustrated catalogues sent (per post) free.

39, OXFORD-STREET; 1, 1A, 2, and 3, NEWMAN STREET; 4, 5, and 6, PERRY'S-PLACE, London. Established 1820.

WARMING and VENTILATING.— ALFRED MAY [illegible] to call the attention of Architects, Builders, and others to his system of WARMING by HOT WATER, Lunatic Asylums, Workhouses, Churches, and other [illegible]

Manufactory, [illegible] Devonshire-street, Queen-square, Bloomsbury.

A trial at heat applies for [illegible] an economical and effective system.

HEATING BY

HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. [illegible] Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE [illegible] Warwick-lane, Newgate-street, London.

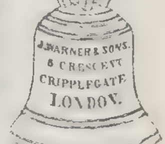
COLLINGE'S PATENT HINGES.— Manufacturers, CHARLES COLLINGE and Co. [illegible] Builders and Locksmiths, where a great variety are always on view [illegible] trees, sugar-mills, &c.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c. [illegible] Brass and Iron; [illegible] Tube for Picture Rods, Brass Rods, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. &c.

RICHARD EVERED'S Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, [illegible] London.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.



J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently [illegible] and patented a new [illegible] Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.

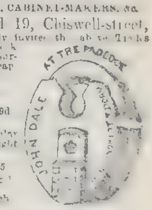
TUNED BY MACHINERY.

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved clappers, and arranged on a new system, which gives superior tone and facility for ringing.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the attention of the trade to the inspection of his immense stock [illegible] cheap [illegible] by any house in London.



Elliptic Stoves, double backs, 2½d. per inch, and upwards.

Register Stoves, [illegible] 7d. 8d. and 9d. per inch.

Self acting Ranges, with circular ovens and back boilers [illegible]

Best Town Glue, [illegible] Best Fine Cut Clasp and Rose [illegible]

List of Prices [illegible] on application at the Warehouse, [illegible] prepaid.

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, [illegible] IRONMONGERY, METAL, and ZINC WAREHOUSE, [illegible] Horseferry-road [illegible] Westminster.

GREAT REDUCTION IN PRICES.

RAIN WATER CASTINGS [illegible]

[illegible]

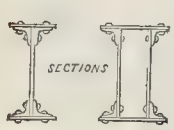
Estimates [illegible]

PATENT SASH and BLIND LINE [illegible]

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; [illegible] HUGHES [illegible] High Holborn.

WROUGHT AND CAST IRON GIRDERS, &c.



WROUGHT-IRON GIRDERS for BRIDGES And BUILDINGS,
MANUFACTURED AND GUARANTEED AS TO STRENGTH.
CAST-IRON GIRDERS for BRIDGES and BUILDINGS.
Castings of every description.

ROLLED WROUGHT-IRON FLITCHES For TRUSSING BETWEEN TIMBER.
SPIKES, RIVETS, CUT NAILS, WROUGHT DITTO, SCREWS, BOND HOOPS, CHAINS, &c.
CONTRACTORS' PLANT, RAILS, EARTH WAGGONS, And IRON WORK for WOOD WAGGONS, &c.

MATTHEW T. SHAW, 64, CANNON-STREET (late with C. J. Mare & Co.)
Such arrangements are made for Despatch and Punctuality that Orders can be executed in a few days.

JOHN HENDERSON PORTER,
ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No.			
11	gauge weighs about	18 oz.	per foot super.
12	" "	20	"
13	" "	23	"
14	" "	26	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

A. MOREWOOD and CO. (late Morewood and Rogers), Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON

WILLSON and ROBINSON,
GALVANIZING and CORRUGATING IRONWORKS,
CHURCH-ROW, LIMEHOUSE,
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MALLET'S PATENT BUCKLED PLATES.
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS.
No. 3, Mansion-house-place, London, and No. 5, Berkley-street, Birmingham.
For Plan, Section, and Description, see "The Builder," May 17.

JOHN WALKER,
Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor.
IRON MERCHANT, &c.
Offices and Works—Mill-wall, Poplar, London.

BUILDINGS HEATED BY HOT WATER.
G. B. COOPER,
IRONWORKS, 191, DRURY-LANE.
DRYING CLOSETS for HOSPITALS, UNIONS, ASYLUMS, &c.
BATHS, RANGES, GAS-STOVES.
HOT-PLATES, STEAM and GAS-COOKING APPARATUS, for HOTELS, MANSIONS, &c.
G. B. C. has recently fitted up the Crystal Palace Kitchens with Gas-cooking arrangements upon an extensive and most complete scale. Ornamental and Constructive Ironwork.

SKAIFE and POLLOCK,
Manufacturers of
PATENT GALVANIZED IRON.
Sheets, corrugated and plain; Fencing and Telegraph Wire, Bars, Rods, Hoops, Nails, Screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.
IRONWORK GALVANIZED.
Roofing orders promptly and carefully attended to.
Office Commercial-road, Limehouse, London.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).
WORKS GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

TUPPER and CARR,
Patent Galvanized and Unralvanized
CORRUGATED IRON MANUFACTURERS,
IRON ROOF, SHED, AND STORE BUILDERS,
Electric Telegraph and Wire Fencing Contractors.
Works—LIMEHOUSE and BIRMINGHAM.
Offices—3, MANSION HOUSE-PLACE, LONDON.
Iron of every description galvanized.

PATENT MACHINES for WORKING in WOOD.—These celebrated Machines have been awarded a number of prize medals by many scientific institutions, and also by the Great Exhibition in London, and are now extensively used by the Indian, American, and all the principal governments in Europe; also by eminent Contractors, Builders, Shipwrights Machinemakers, and other workers in wood. Their operations are in every respect perfect, either in hard or soft wood, for planing, squaring up, moulding, tenoning, mortising, grooving, rebating, sawing, and boring, which they perform in a very rapid and superior manner, at greatly reduced cost.—Sold only by WILLIAM FURNESS, Patentee, 26, Lawton-street, Liverpool, from whom full particulars may be obtained, and all the machines can be seen at work.

CANNON IRON FOUNDRY, 80, Goswell-street, St. Luke's.—JONES and BLAKTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wheel Plates, &c.
BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

FOUNDRY AND IRON WORKS,
85, DRURY-LANE, and CHARLES-STREET, DRURY-LANE
GLOVER, BROS.,
solicit the attention of the Trade to their extensive stock of PATTERNS for CASTINGS of EVERY DESCRIPTION either structural or ornamental.
Patterns of Girders, Columns, Balconies, Railing, Ornaments Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes Wheels, Pinions, Lathes, and Steam-engines; Range and Hot-plate Metal. An improved Soot Door, adapted for interal work.
A large stock of Rain-water Pipes, Plain and O G Gutters, Air bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings Hurdles, &c.
Plain and Ornamental Vases 20 per cent. cheaper than Terra cotta.
Estimates given for Iron Buildings, Wrought-iron Roofing Greenhouses, Staircases, Wrought-iron Girders, Fireproof Doors Book safes and Strong Rooms, Tanks and Boilers, and every description of ironwork to specification, and the work executed with every attention to quality and despatch.
GLOVERS' IRONWORKS,
163, DRURY-LANE, and CHARLES STREET.

IRON FOUNDRY, Harrow-street, Lant-street, Southwark—W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Railing, and Newel Bars, Iron Coping, Panels, Tomb Enclosures, Area Gratings, Sash Weights, &c. Also Fly and other Wheels, Riggers, Pinions, Engine and Lathe Castings; Forge Backs, Furnace Bars, Kilns, Pans, Pipes, Tank Plates, and other Castings, to patterns or drawings.

JOHN TANN'S NEW PATENT RELIANCE LOCK and CHEMICAL FILLED WROUGHT-IRON FIRE-PROOF SAFES, DOORS, ROOMS, &c. Manufacturers of cash, deed, and paper boxes, embossing and copying presses, letter balances, and every description of iron locks and street-door latches. To be had at the General Lock and Safe Warehouse, 30, Walbrook, City. List of prices on application.

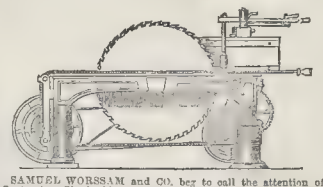
A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. 6s. 6d. each.
J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 100 years, for the supply of Goods from the best Manufactories, at the lowest prices.
14, Stanhope-street, Clare-market, London.

CHUBB'S LOCKS, with all the recent improvements; STRONG FIRE-PROOF SAFES, CASH and DEED BOXES.—Complete lists of sizes and prices may be had on application
CHUBB and SON, 57, St. Paul's-churchyard, London; 28, Lord-street, Liverpool; 16, Market-street, Manchester; and Horsley-fields, Wolverhampton.

GARDNER'S PATENT STEAM GENERATOR and SMOKE CONSUMER produces more steam with lessened consumption of fuel, and entire removal of smoke. These patented improvements are highly recommended for their simplicity, durability, and great economy. They are self-acting, have no moving parts, therefore require no external aid.

They are applicable to all Furnaces, Locomotives, Marine Engines, Ovens, Pottery and other Kilns, Common Fire, Kitchen Ranges, Hall and Hot-air Stoves.—Application to be made to the PATENTEE, 34, Norfolk-street, Middlesex Hospital; to Messrs. BURRIDGE and HEALY, 31B, Forset-street, Fleet-street; or to Z. D. BERRY, Albion Works, Wilton-road, Pimlico.
Testimonials, &c. may be seen upon application.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Roller and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines, for Sawing, Planing Grooving, and Moulding Wood. They have constantly on hand machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches, and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace.—A descriptive Catalogue, with Drawings, may be had on application,
KING'S-ROAD, CHELSEA.

WOOD-CUTTING MACHINERY,
JOHN M'DOWALL and SONS,
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,
MANUFACTURERS of VERTICAL SAW-FRAMES
(driven by steam),
For cutting balks of timber, from 3 feet on the side down to the smallest deal frame.
Patent vertical saw-frames, of the foregoing dimensions, with steam-power attachet, circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from 1/2 of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps and straight cutting, well adapted for ship builders; power mortising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines; for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 30 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without resard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.

REGISTER STOVES, with PATENTED IMPROVEMENTS.—DEANE, DRAY, and CO. invite the attention of purchasers to their Stock of STOVES for drawing and dining rooms; also, a large assortment of PATTERNS, suitable for sitting-rooms, offices, bed-rooms, &c. In Feuders and Fire Irons, DEANE, DRAY, and CO are constantly introducing every novelty at the lowest prices.—DEANE, DRAY, and CO. Stove, Range, and General Ironmongery Warehouse, London-bridge. Established, A.D. 1700.

FIRE-PROOF CONSTRUCTION.—
FOX and BARRETT'S PATENT.
This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.
The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.
The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.
Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as being the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.
Further information may be obtained of the Proprietor of the patent,—Mr. BARRETT, 12, York-buildings, Adelphi.

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RAIN PIPES, &c.—F. A. TIDDEMAN and CO. 81, St. Ann's Wharf, Earl-street, City, near Blackfriars-bridge, keep a large stock of Rain Pipes, Heads, Shoes, Elbows, &c. half-round and O-G Gutters, Socket Pipes for Water or Gas, Flange Pipes, Hot Water Pipes and Connections, Sash Weights, and other castings; Iron-work for Bakers' Ovens of every description, fitted complete, to be had in sets or in parts.—Prices equal to all competition. Contracts taken to any extent. Goods landed. A powerful crane.

TO BUILDERS, CONTRACTORS, and OTHERS.—WANTED, a light, well-made TRAVELLING JENNY or CRAB, from 20 feet to 33 feet between the bearings, and capable of lifting five tons in the centre.—Apply to CUTLER and SONS, Iron Founders and Engineers, 18, Great Queen-street, Lincoln's-inn fields.

WANTED, a second-hand WHARF CRANE, capable of lifting five tons.—Apply by letter, stating price required, to Mr. F. TURNER, 15, Parliament-street, Westminster.

IRON TANKS.—WANTED, a new or second-hand cast or wrought-iron TANK, about 14 feet square, to hold say 3,000 gallons.—Address, stating price and full particulars, to SANDERS and WOOLCOTT, 54, Doughty-street, Gray's-inn-road.

IMPERISHABLE WROUGHT-IRON WATER-TANKS for household use (also suitable for oils or spirits) are the cheapest, most durable, and wholesome. They can be made in flat plates for the country or for exportation, and screwed together at their destined position. Steam and Hot Water Works, Baths, Ranges, Jacks, &c.
HENRY FROST, Engineer, 17, Rathbone-place, London.
N.B. Several double-action Lifts, a 3-horse Table-engine, and a strong Fly Press for sale.

NAILS and IRONMONGERY
From BIRMINGHAM direct.
Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the
LOWEST BIRMINGHAM PRICES.
A complete LIST of which will be forwarded upon application to BLYTH and BRANCH,
Nail Manufacturers and General Factors, BIRMINGHAM; or at 19, Gresham-street, LONDON.

TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most effectual yet invented, is made by T. SMITH, of 14, Queen-street, Oxford-street, near Argyll-street, where a working model can be seen or will be sent for inspection on the shortest notice.
N.B.—Espagniolette Bolts of a superior quality, at reduced prices.

WROUGHT IRON GIRDERS, Steam Boilers, Gas Holders and Gas Apparatus, General Castings, Chains, Cables, and Contractors' Iron Work, Manufactured by MELROSE and RUSSEY, Phœnix Works, Tividale, near Dudley.—London Office, 78, Hatton-garden.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

FACING FOR BUILDINGS COMPANY—TAYLOR'S PATENT.

BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,

REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.

STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

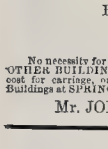
No necessity for Iron Cramps and Bond-stones, and the Stone Ashlar never injuriously weighted by the settlement of the Mortar-joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences. It can be had ready for fixing from the quarries at a small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

Mr. JOHN TAYLOR, ARCHITECT, OFFICES OF THE COMPANY, 40, KING-STREET, CORNER OF CHEAPSIDE.

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at 131, UPPER THAMES-STREET.—WORKS: SEVRES, NEAR PARIS.



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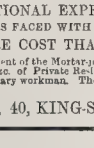
CURSITOR-STREET, CHANCERY-LANE.

MANUFACTURED JOINERS' WORK AND MOULDINGS OF EVERY DESCRIPTION ON THE SHORTEST NOTICE, AND AT THE LOWEST PRICES, PACKED AND FORWARDED TO ALL PARTS OF THE COUNTRY.

Lists of Prices and Estimates forwarded on application.



PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington basin.

TO CARPENTERS, IRONMONGERS, AND OTHERS.

WANTED, to LET a quantity of CARPENTER and JOINER WORK. Also, WANTED, a quantity of IRONMONGERY. Those who are willing to do the same, and take one or more well-roomed carcases in payment for the same, may apply to BAUGHAN and MILLS, top of Carlton-road, Kentish-town. Money advanced if required.

THE PATENT CRYSTAL WINDOW BARS, for shop-fronts and other windows, skylights, conservatories, verandahs, exhibition and counter cases, fern cases, aquariums, &c.—Manufactured by LLOYD and SUMMERFIELD, Park Glass works, Birmingham.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 26, Soho-square.

IMPROVED REVOLVING SHUTTERS. FRANCIS RICKABY and DUNN are now enabled to offer the above at the following reduced prices:—IRON SHUTTERS, double riveted, with machine-cut worm gear, complete, at 4s. 6d. per foot. WOOD SHUTTERS, with worm gear complete, at 3s. 6d. per foot. Machine-drawn Brass Sash Bars and Stall-board Plates made to any design. 84, Gray's-inn-lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 116, Broad-wall.

DUNCAN and CO. MANUFACTURING JOINERS, 81, Lower Marsh, and 26, James-street, Lambeth.—Joinery of all descriptions, with seasoned materials and sound workmanship, supplied on the shortest notice and lowest possible prices. A detailed list forwarded on application, prepaid. A quantity of doors, &c. in stock, suitable for immediate use.

TO BUILDERS.—All kinds of Joiners' Work prepared at 5, Alfred-terrace, Cambridge-road, Bethnal-green, at the lowest remunerative prices. Some well made and well-seasoned four-panel doors on hand at 6s. each. Sashes and frames 7½d. per foot.—Terms, cash.

FOR SALE, an OAK REREDOS, carved in the Gothic style, suitable for a small Church or Chapel. Length, 13 feet, height, 10 feet. Also, an Oak Reading-stand to match, five feet high.—To be seen at C. CHAPMAN'S, Upholsterer, 44, St. Anne-street.

JOHN HARDMAN and CO. BIRMINGHAM, Manufacturers of Mediæval, Church, and Domestic Furniture. Monumental Brasses, and Stained Glass. Decorations of all kinds executed.

Metal Works..... 166, Great Charles-street.
Stained Glass Works.... 43, Newhall-hill.
London Office..... 403, New Oxford-street.
Agent—Mr. STEPHEN THOMPSON.

PATENT and BRITISH PLATE GLASS.—JAMES HETLEY and CO. beg to inform Architects, Builders, and the Trade generally, that their new Tariff of Prices for the above will be sent on application; they will also on receipt of particulars, furnish estimates for any description of Glass now manufactured.—Patent Plate, Sheet, Crown, and Ornamental Window Glass Warehouse, 45, Soho-square, London.

BELGIAN WINDOW-GLASS, Wholesale and for Exportation.—LAROCHE FUGNI, and CO. Manufacturers and Importers of Belgian Plate, Sheet, Crystal, Coloured, and every other description of foreign Glass, respectfully inform merchants, dealers, &c. that they have now on sale a large supply of every kind of window glass suitable for the English market. Engraved, Embossed, and Ornamental Glass; Antique, Rough, Cathedral, and other Glasses for Stainers. Estimates given and contracts supplied to any amount.—Warehouse, 3, Old Trinity House, Water-lane, Lower Thames-street.

SUPERIOR BRITISH PLATE GLASS, at VERY LOW RATES.—The Union Plate-glass Company, having recently completed considerable improvements and additions to their works, respectfully inform their friends that they are now able to supply orders without delay, and invite the attention of the trade to the low rates at which their now much esteemed manufacture is sold.—Lists of prices may be obtained on application at the Works, Pocket Nook, St. Helen's, Lancashire; the Warehouse, 99, Hatton-garden, London, and 45 Piccadilly, Manchester; Messrs. C. and J. MALLOCH, 30, Turner's-court; Glasgow; Messrs JOHN DIX and CO. Bank-street, Bristol; Messrs. H. SIBTHORPE and SON, Cork-hill, Dublin; Messrs. FORREST and BROMLEY, 23 and 25, Lime-street, Liverpool; Mr. WILLIAM HENRY HOLMES, Westgate-street, Newcastle-on-Tyne.—Rough Plate Glass from ¼ in. to ¼ in. thick for windows, roofs, mechanics' shops, market-halls, railway stations, &c.—Beautiful and highly-finished polished plate-glass for shop-fronts and all other glazing purposes, and for silvering.—Superior silvered Plate-glass Mirrors of all sizes.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES at their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 315, OXFORD-STREET

By Royal Letters Patent.

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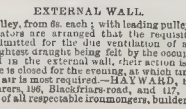

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The Builder.

Vol. XIV.—No. 708.

IN our last we offered some information on the subject of foundations for Bridges, with more especial reference to those which were being put in for the proposed bridge at Westminster. Captain Moorsom (who, in a letter published the other day, applies a term to the new structure not justified by the report of the committee, or the actual state of affairs) once claimed, we believe, to have made an application of the iron-plate and concrete system of building piers, prior to its use in the Chelsea and Westminster Bridges. In his bridge for the Birmingham and Gloucester Railway, over the Avon, near Tewkesbury, completed in 1840, caissons were formed of cast-iron flanged plates, ⅜ inch thick, screwed together by bolts, and having the joints made with iron cement. The site of each pier was first prepared with a scoop-dredger, worked from a platform erected on piles. The lower row of plates for the caisson was put together and suspended in the water by iron rods, while the other rows were added; and the whole was gradually lowered as the work proceeded, till the bottom rested on the bed of the river. Clay was then thrown round, externally; and this formed a joint impervious to water,—so that the caisson was emptied in six hours. Subsequently, as we understand the account, excavations went on inside the caisson; which was next filled for the first 12 feet with solid masonry and concrete; and upon this, hollow masonry was laid to support the "cap-plates," carrying eight pillars in each pier. The caissons taper upwards for part of their height.* The suggestion of the use of this method of construction originated with Mr. Ward, of Falmouth, who was the resident engineer. The method was represented as cheaper than "coffer-dams and stone piers."

But, judging from the account, it may be doubted whether the coffer-dam principle was really dispensed with; for certainly the description of Captain Moorsom's bridge and that of the new Westminster-bridge differ in some important particulars. Mr. Page, in the course of his statement to the committee, has given a long list of bridges founded without coffer-dams, with piers similar to, or less durable than those of his own design. In the Westminster-bridge the piers below low-water are formed of a series of wooden piles, with concrete filling to the inter-spaces, inclosed by an external casing of cast-iron to the pier. In each pier are 145 elm piles, chiefly in rows transversely of three and five alternately. These piles average 29 feet 6 inches in length, and are driven through the gravel, and about 19 feet into the solid London clay, here said to lie at from 28 to 32 feet below Trinity high-water mark, with a uniform surface. The cast-iron piles are of two kinds, namely, hollow round piles, of 15 inches diameter, with grooves or flanges cast on them, and plate or flat piles, cast with flanges for strength. These two kinds of piles are placed alternately, the flat piles being driven down after the round piles between the grooves or flanges of the latter; and thus, say the reporters, "it is proposed to inclose within an iron case not only the wooden piles and concrete deposited inside the piers, but also the bed of the river, gravel, and clay, to the depth to which the plate piles are driven, that is, to 21 feet below low-water." The loose mud and sand are then removed from the inclosed space down to the gravel: by aid of the diving dress the opposite cast-iron piles are then united by strong wrought-iron tie-bolts in two tiers; and lastly, the concrete is deposited between the wooden piles, or throughout the unoccupied area of the pier within the casing, up to the level of low-water. It is, however, explained, that the heads of the cast-iron plate piles are driven 6 feet below low water, whilst those of the round piles stand 1 foot above low water. "The spaces so occasioned in the iron casing are filled up with granite slabs, 18 inches thick, the lower end of the slabs resting on the head of the plate piles, and the upper standing 2 feet above low water, ready to receive the first course of masonry. These several works completed, the wooden piles are cut off to an uniform level of 6 inches above low water; a block of stone, 18 inches thick and 4 feet area, is solidly bedded on the head of each bearing pile; the spaces between these blocks are filled in with concrete, and the whole surface of the piers, including the granite slabs, is levelled off to the height of 2 feet above low water, to receive the first course of masonry." This first course is of solid granite, 2 feet thick. Above, the piers are faced, only, with granite, the interior being filled in with brickwork. The masonry of the piers terminates 2 feet above Trinity high-water line, from which level the iron arches spring.

Our engravings on the next page represent the plan of half of one of the piers, showing the top of the iron sheathing-plates and the tie-rods, part of the longitudinal section, and a transverse section of one pier. These differ somewhat from the illustrations given in the report of Messrs. Rendel and Simpson, but show correctly the real intentions of the engineer. Originally it was intended to have an iron curb all round the pier, above the bearing piles, but this has been abandoned, and it is proposed further that the granite plinth course should be made to project sufficiently to protect the piles.

Various modes have been adopted in other bridges for directing the current, and as supplementary precautions against the undermining of piers. We may refer to paving the bed of the river, or the laying an inverted arch; to the depositing stones, or the encasing the platform of foundations with sheet-piling. Mr. Page, however, proposes to dredge the channel out beneath each arch to a regular curve, commencing at 3 feet below low water at the piers,—laying bare the clay at the centre, so as to give a low-water depth there of about 12 feet. Afterwards, all round the piers, for a width of about 6 feet, the gravel is to be dredged out down to the clay, and the trench or excavation thus formed is to be filled with concrete.

Taking the permanent character of the bridge to depend upon the soundness of the foundations below low water, the reporters objected to the method of construction, that the sub-structure of such piers is dependent on the combined action of several classes of materials, differing in their strength and manner of application; that the strength of each part is liable to suffer by the failure of any one; and especially that the fracture, or the improper execution of any portion of the outer cast-iron casing might entail very serious results. Supposing the principle of the sub-structure were a good one, they conceive a coffer-dam would be peculiarly requisite to carry it out with proper supervision, and to ensure the faultless execution which they say the permanence of such a class of work would demand. They question whether the bottom of the river would retain the peculiar form intended to be given to it, and think that the concrete banks round the piers must in no long time be broken up, and the piers weakened "by increase of their unsupported height" and the diminution of the depth and solidity of the material through which the piles of which they mainly consist are driven." They have other objections to the particular scheme of New Westminster-bridge, as proposed by Mr. Page, and irrespective of the system of foundations, and appear to doubt the economy resulting from the construction of the bridge, half at a time, intended to save the cost of a temporary bridge, and on the whole, they "do not feel that any plan which does not comprise solid stone piers and abutments, carried down deep into the London clay, can be regarded as possessing a permanent character."

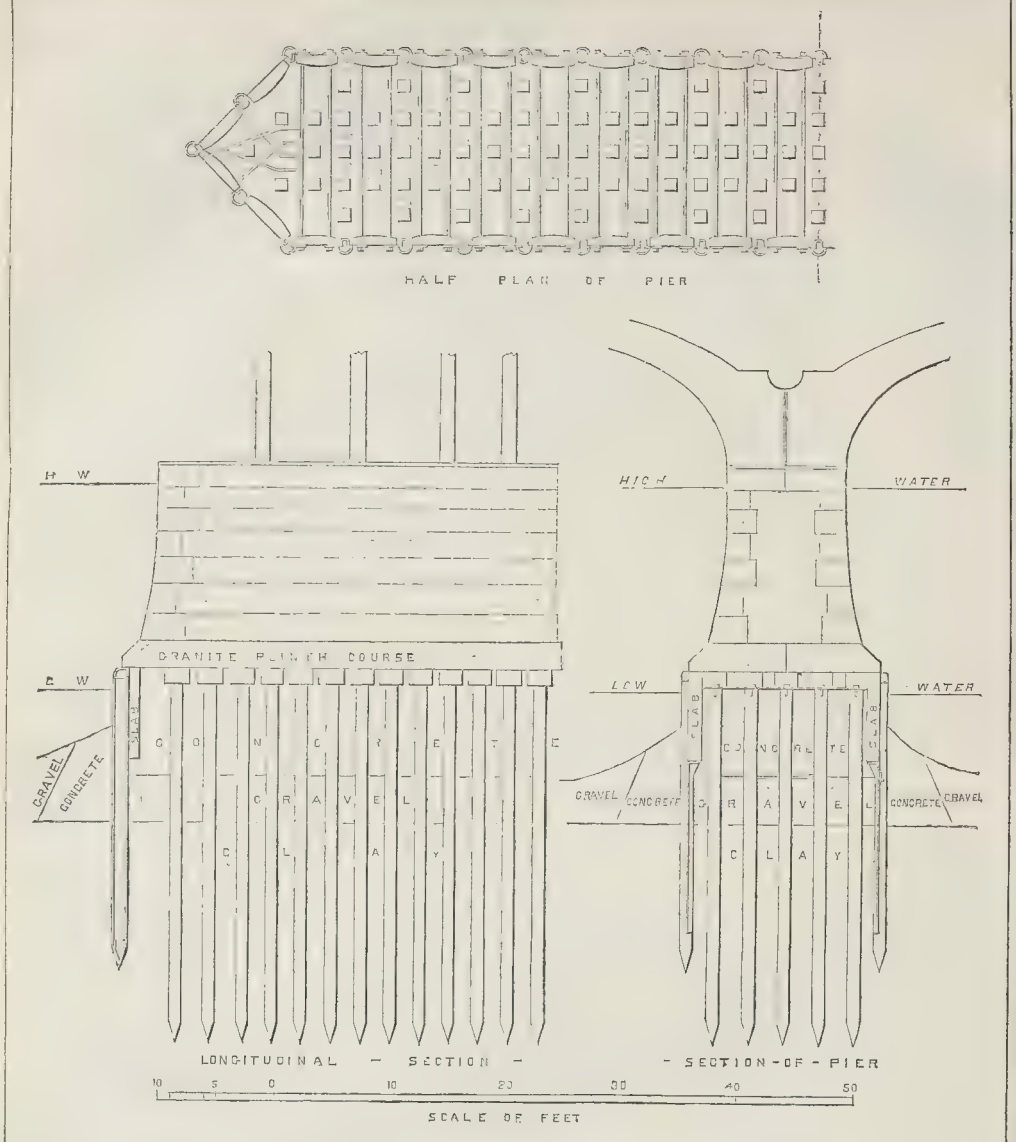
On looking at the specification of London-bridge, we find that the earth for the foundation there, was required to be excavated to such depth that the tops of the platforms of foundation should be not less than 40 feet below Trinity high-water mark, in the case of the two side piers, and 43 feet in the case of the middle piers; and that when the earth had been excavated, piles were to be driven to sustain the weight of those platforms and the superstructure, as much as 18 feet below the lower side of the platforms, — elaborate contrivances being further provided in their construction, as by the connection of the heads of the piles, filling in of the spaces, and the laying of planks, 6 inches in thickness, bedded in mortar, and by the addition of sheet piling round the circuit of the platform. Thus, a depth of 43 feet, plus 18 feet, or perhaps 20 feet, equal to 63 feet, at a fair computation, may be set down as attained, measured from the level of high-water mark; whereas, in the plan being pursued in new Westminster-bridge, a total depth from the same point, of 48 feet for the bearing piles of timber, and of about 43 feet for the round piles of iron has been considered sufficient,—supplementary protection being sought for by the banking of concrete, which we may take as in lieu of the deep-seated sheet piling of the other case. But, the bearing piles in New Westminster-bridge, do pass nearly 20 feet into the clay,—though they stand about 11 feet above it, or 7 or 8 feet above the gravel. The round piles may be stated as extending 12 or 13 feet into the clay, and as having the same height above. It is possible that a greater depth might have been secured without the aid of coffer-dams. Thus, the question of the advantage of the system of founding and building piers, depends upon other elements in the investigation. The permanance of the iron casing seems to be the chief subject for notice.

Mr. Hawkshaw, in his evidence, stated, Mr. Mallett's experiments showed that the mean corrosion of iron in what he calls clear fresh river water was one grain per square inch of surface. "Now the weight of a cubic inch of iron is 1,700 grains, and this was the amount of corrosion in two years. The result of that would be, that supposing only one surface of cast-iron plate were exposed, then it would take 3,362 years totally to corrode a plate an inch thick; but if both surfaces were exposed, it would take 1,681 years to eat through a plate an inch thick,—of course assuming that experiment as the basis."

The result of an experiment where cast iron was immersed in foul sea-water was, that it would take 506 years to eat through an iron plate, acting upon one surface, and 253 years to eat through it acting on both surfaces. Any irregularity of action, as arising from the quality of the iron, might, of course, lead to a different result.

Mr. Hawkshaw, we may add, thought the work had been done exceedingly well, and that the foundations were fully equal to what they had to do. He did not think the embanking of the Thames would affect the bed of the river at

* Minutes of the Institution of Civil Engineers. Vol II., 1844, p. 60.



THE FOUNDATIONS FOR PROPOSED BRIDGE AT WESTMINSTER.—Mr. Page, Engineer.

this particular point; and further, was of opinion, that the increased water-way which would be given by the new bridge would lessen the tendency to scour.

Some action on the iron, reverting to the other part of his evidence, can hardly be avoidable: and though that element of weakness may be of trifling moment in the case of wharf-walls, where a mere casing can be renewed, it would be deserving of more notice in what is designed and required to be of still more durable character, and where the substance of the pier would be acted upon but for the presence of the outer shell.

Mr. Page, however, from his own observations of the action of water on cast iron, says "a deposit of oxide of iron is formed on the surface, which actually protects the iron itself;" and Mr. Mallet, who has made experiments in great detail, states that iron coated with purified gas-tar will last for ages.

As to the resistance to concussion by fouling of barges or otherwise, that of course is a very important point. The proposal of the engineer included protection to the piers by floating fenders or booms, and perhaps this provision has created more than its share of prejudice. Such measures of precaution might be thought desirable in any case. The question is, how far any positive dependence is placed upon them.

However, the committee inquiring into the sufficiency of the piers "to bear the weight to be put upon them, and how far such a construction can be considered permanent," have decided "that the piers will be secure so long as the iron casing remains sound," and that the "casing can be replaced whenever it may decay or be destroyed."

The importance of the structural question is great: it has to do with the sufficiency of the Chelsea-bridge, if not other bridges and foundations, and with the course which should be adopted in many future cases.

Let us look at the answers that were given to the main objections raised by the reporters. Mr. Robert Stephenson, on his second examination, when he had looked into the matter more thoroughly than at first, felt perfectly certain

that the scouring could not take place, and that there was no reason whatever to apprehend any change in the bed of the river. Then, as to the use of coffer-dams, Mr. Stephenson said that if he had been called upon to design a bridge in that situation, he should have the spans as large as possible, and have used coffer-dams; "*but*, to use a coffer-dam now, with such spans, would actually fill the river up; you could not do it. Therefore, if you once fix the spans to be adopted, you negative the adoption of coffer-dams." Now, as it seems that the small spans were fixed for Mr. Page (very foolishly as we have always thought, and as we noticed long ago when giving a view of the proposed bridge), Mr. Page can scarcely need a more complete exoneration in this respect.

Desiring homogeneity, Mr. Stephenson further stated, he would not put any weight upon the iron and granite casing, and he believed that the piers wholly detached from this were amply sufficient to bear the weight. He saw no insuperable obstacle to building the second half of the bridge as proposed, and first suggesting some additional provision with regard to the expansion and contraction of the iron, he thought there was nothing to fear in going on with the work. The greatest inconvenience that might arise, whether it was 50, 100, or 150 years hence, he thought would be from the decay of the iron which might have to be replaced.

After very full consideration of the subject, we have arrived at the same conviction, and we trust that Mr. Page will be permitted forthwith to carry out his design to completion, with such improvements as may have been suggested, or have suggested themselves, during the inquiry, and that, so far from finding any additional cold water to contend with, beyond that provided by Father Thames, he will be strengthened and encouraged by the good wishes of his professional brethren, and the generous confidence of the governing powers.

ON THE DRYING AND BURNING OF BRICKS.*

In the preceding paper I arrived at that stage of the manufacture in which machinery may be considered to have rendered us all the aid that we require of it, and left the plastic clay formed into bricks. In proceeding with the manufacture, we have next, by means of evaporation, to get rid of the water with which it was necessary to work the clay for the purpose of making it ductile. The oldest system is that of laying the bricks, as moulded, on floors or flats. These are spaces of ground worked very smooth, of a slightly convex form, from six to ten yards wide, and of any desired length. The bricks are exposed on these flats until they are stiff enough to bear being removed by hand: they are then walled or hacked on each side of the floors, from six to twelve high, one row on another, with a space of from half to three-fourths of an inch between each brick, to allow a current of air between them. They are then covered with roofing tiles, or tiles made on purpose, and, in some instances, with straw; then left until they are sufficiently dry for the last process—burning. In some works the bricks are hacked as they are made, by the use of pallet-boards, and as explained in the making by the machine. This is the general system of the present day, and the reason why the manufacture is restricted to one season of the year. For during the winter, the late autumn, and the early spring, on account of the lower temperature of the atmosphere, shorter days, and absence of sun, the bricks would be a very long time in drying, and a frost would totally destroy all containing any moisture. In dull, damp seasons, this process is very slow and tedious. The bricks are also much deteriorated in quality from the washing of the rains on the floors, or against the ends of them in the hacks. In such seasons, a brickmaker, in order to get over his usual amount of work, often requires double the extent of drying ground, each moulder occupying about half an acre of land for this purpose only; and the extent of ground required gives to brick-works near London the title of brickfields, and in the country that of brick-yards. Bricks are sometimes dried in hacks under sheds, but for large works, in which machinery is used for making them, the quantity of shedding required would be so great, that it would be better to erect more improved constructions.

When the brick is partially dry, and quality is a consideration, it is the practice in some works, where hand-making is adopted, to dress a portion of the bricks by hand with boards called tappers, or by means of a small machine called a brick-press, of which there are many excellent ones made. The brick is placed in a metal mould, and by means of a powerful leverage is subjected to considerable pressure, which gives it a very smooth face, and produces the best front bricks. Some of these machines have single and others double moulds. I prefer the latter, as, while one brick is being pressed, the brick previously dressed is removed, and another fed in, which saves much labour and time over the single-mould press. Although these machines do not exert a tithe of the force employed by the dry clay making machines, we often see the bricks pressed by hand only, when made from plastic clays, blown to pieces, and their outer surfaces shelled off, from their not being able to be dried entirely throughout. Brick-makers should select their most loamy earths for making bricks which are afterwards to be pressed for front stocks. Pressed bricks must be thoroughly dried previously to their being placed in the kiln. A good machine produces bricks of such a quality as renders the above process unnecessary.

The drying of bricks ready for burning is a matter of great importance, and requires more attention than it generally receives. From hand-made bricks we have to evaporate some 25 per cent. of water before it is safe to burn them. In a work requiring the make of 20,000 bricks per day, we have to evaporate more than twenty tons of water every twenty-four hours. Hand-made bricks lose in drying about one-fourth of their weight, and in drying and burning about one-third. The average of machine bricks—those made of the stiff plastic clay—do not lose more than half the above amount from evaporation, and are, therefore, of much greater specific gravity than hand-made ones.

The artificial drying of bricks is carried on throughout the year uninterruptedly in sheds having the floor heated by fires; but this can only be effected in districts where coal is cheap. The floors of these sheds are a series of tunnels or flues running through the shed longitudinally. At the lower end is a pit, in which are the furnaces: the fire travels up the flues under the floor of the shed, giving off its heat by the way, and the smoke escapes at the upper end, through a series of (generally three or four) smaller chimneys or stacks. The furnace end of these flues would naturally be much more highly heated than the upper end near the chimneys. To remedy this, the floor is constructed of a greater thickness at the fire end, and gradually diminishes to within a short distance of the top. By this means, and by the assistance of dampers in the chimneys, it is kept at nearly an equal temperature throughout. Bricks that will bear rapid drying, such as are made from marly clays or very loamy or siliceous earths, will be fit for the kilns in from twelve to twenty-four hours. Before the duty was taken off bricks, much dishonesty was practised by unprincipled makers, where this drying could be carried on economically. Strong clays cannot be dried so rapidly. These sheds are generally walled round with loose bricks, stacked in between each post or pillar that supports the roof. The vapour given off from the wet bricks, rising to the roof, escapes. This system of drying is greatly in advance of that in the open air, for it produces the ware, as made, without any deterioration from bad weather; but the expense of fuel to heat these flues has restricted its use to the neighbourhood of collieries. In 1845 I turned my attention to the drying of bricks, and carried out experiments in drying the ware with the waste heat of the burning kilns. The caloric, after having passed the ware in burning, was carried up a flue raised above the floor of the shed, and gave off its spent heat for drying the ware. A model of my kiln and drying-shed was exhibited at the Royal Agricultural Society's meeting at Northampton, in 1847, by Mr. Bullock Webster, who was so pleased when witnessing it at work, that he asked my permission to have the model made to be exhibited. Although this kiln was most useful in proving that the waste heat of a burning kiln is more than sufficient to dry ware enough to fill it again, I was obliged to abandon it on account of the construction of the kiln not being good. This difficulty is now entirely removed, by a kiln which I shall have to describe presently.

Another system of drying is in close chambers, by means of steam, hot water, or by flues heated by fire under the chambers. I will, therefore, briefly describe the steam chamber as used by Mr. Beart. This is a square construction, or series of tunnels or chambers, built on an incline of any desired length; and at some convenient spot near the lower end is fixed a large steam-boiler, at a lower level than the drying-chamber. From the boiler the main steam-pipe is taken along the bottom or lower end of the chamber, and from this main, at right angles, run branch pipes of 4 inches diameter up the chamber, 2 feet apart, and at about 3 feet from the top or arch. From there being so close and shallow a chamber between the heating surface of the pipes and the top, and so large an amount of heating surface in the pipes, the temperature is soon considerably raised. At the top and bottom ends are shutters or lids, which open for the admission of the green ware at the upper end, and for the exit of the dry ware at the lower end of the chamber. Over the steam-pipes are fixed iron rollers, on which the trays of bricks, as brought from the machine, are placed, the insertion of one tray forcing the tray previously put in further on, assisted in its descent by the inclination of the construction. The steam being raised in the boiler, flows through the main into those branch pipes in the chamber, and from the large amount of exposed surface becomes condensed, giving off its latent heat. From the incline given to the pipes in the chamber, and from the main-pipe also having a fall towards the boiler, the whole of the warm water from the condensed steam flows to the boiler to be again raised to steam, sent up the pipes, and condensed intermittently. The steam entering at the lower end of the chamber, it is, of course, warmer than the upper end. Along the top end, or highest part of the chamber, is a series of chimneys and windguards, through which the damp vapour escapes. The bricks from the machine enter at this cooler end charged with warm vapour, and as the make proceeds, are forced down the chamber as each tray is put in. Thus, those which were first inserted, reach a drier and warmer atmosphere, and on their arrival at the lower end come out dry bricks, in about twenty-four hours, with the strongest clays. In some cases the waste steam of the working-engine is sent through these pipes and condensed. Bricks will dry soundly without cracking, &c. in these close chambers, when exposed to much greater heat than they would bear on the open flue first described, or the open air, from the circumstance of the atmosphere, although very hot, being so highly charged with vapour. In practice these steam chambers have proved many principles, but they are not likely to become universal, for they are very expensive in erection on account of the quantity of steam pipes, and involve constant expense in fuel, and require attention in the management of the steam boiler; but their greatest defect is the want of a current of hot air through the chamber to carry off the excess of vapour faster than is now done. The attaining a high degree of temperature in these chambers is useless, unless there is a current to carry off the vapour. Why should this piping be used, or steam at all, when we have a large mass of heat being constantly wasted, night and day, during the time the kilns are burning? and after the process of burning the kilns is completed, we have pure hot air flowing, from forty-eight to sixty hours, from the mass of cooling bricks in the kilns, free from

* A second paper by Mr. Humphrey Chamberlain, read at the Society of Arts.

carbon or any impurities: this could be directed th[illegible] constant flow of hot dry air, and escaping in warm vapour. The waste heat during the process of burning can be taken up flues under the chamber, and thereby all the heat of our burning kilns may be economised, and a great outlay saved in steam pipes, boilers, and attention. It must not be forgotten, also, that so large an atmospheric condenser as the steam-chamber is not heated without a considerable expenditure in fuel. This drying by steam is a great stride in advance of the old flued shed, but practical men must see the immense loss incurred constantly from this source of the spent heat of the burning kilns, and that by economizing it, an immense saving will be effected in the manufacture. The kilns are constructed as near the lower end of these chambers as convenient.

A kiln for attaining the object of the one I built in 1846 is now at work at Epsom, at Mr. Hand's brick-works, but with this difference, that the smoke is consumed. The drying-shed is kept quite close, that the hot flues may raise the temperature so high as to dry the ware. In this kiln the heated gases escape from the top, after passing up through the ware, into a flue, and are carried to the ground, and thence into the drying-shed, which is a very large construction in proportion to the size of the kiln, and holds nearly sufficient ware to fill four kilns. In the shed the heat passes up a hollow wall, about 6 feet high, and after running through the length of the shed on one side, returns down a similar flue on the opposite side of the shed, and is again carried to the kiln, through the bottom of which it passes in two close flues between the three kiln-furnaces, with the exception of small apertures through which the heat enters to consume (as I am informed) the smoke, but I have not been able to see it at work, and therefore cannot speak on this point. I fear there must be a loss of heat to consume this smoke, which has travelled some 300 feet or 400 feet: this should be done in the furnace before it enters the ware, and so be economised. From these return flues the spent gases rise up a shaft at the end of the kiln. One result of carrying this return flue through the kiln, is the attaining a great draft or suction in the flues to carry off vapour. If Mr. Hands were to erect three more kilns, and so work four into his present drying-house, he could always have it highly heated, as one kiln would be burning and another cooling continually, while the other two were being respectively filled and emptied. By this means he would realise a much larger return from his spent heat. He has now to raise the temperature of the whole construction each time he burns, from that of the atmosphere to a drying heat of about 90 degrees.

The burning of bricks is exposing the clay to such a degree of heat as to change its character from a merely absorbent lump of dry earth to a hardened, indestructible, partially vitrified mass, or artificial stone, which will withstand the action of the atmosphere. The effect of fire on clays, or brick-earth, varies with the proportion and number of earths and salts of which they are composed, and the different per centage they bear one to another. Clay, or pure alumina, is infusible, but on exposure to great heat, contracts greatly in bulk. It is this property which regulates the action of Wedgwood's pyrometer. Alumina combined with silica, or alumina combined with lime, will withstand the most intense heat which can be obtained in a furnace; but if we mix these three earths, alumina, silica, and lime together, they then melt at a very low heat; the lime acting as a flux on the silica; and, according to Dr. Ure, in his "Dictionary of Arts," the more readily the nearer the mixture approaches the following proportions, viz.,—Alumina, ½; lime, ⅛; and silica, ⅜: by adding two parts more of sand, it becomes infusible. The Devonshire and Dorsetshire plastic clays are composed of silica, ⅝, and alumina, ⅜: they burn very white, and form the basis of earthenware.

The clays and loams generally made into bricks contain protoxide of iron. If a clay has a large per centage of iron, and a small per centage of lime, the silica and alumina, the body of the ware, will withstand a much higher temperature than is required to flux the iron. By attaining a sufficient heat the iron melts and completely cements all the pores, giving the brick a metallic coating; so that on being immersed in water these bricks are very slightly absorbent. The bricks made from London clay, about Uxbridge, and burnt in what are called close fire-clamps, take from 10 to 15 degrees Wedgwood to burn them sufficiently hard: the fire-bricks of Stourbridge take 85 degrees; the vitrified blue bricks of Staffordshire 95 degrees; and the vitrified bricks of North Wales require 120 degrees Wedgwood, or the same heat as an iron smelting furnace. It will be seen, from what I have stated, with how varying a material we have to deal. In one case we have to attain the heat of the smelting furnace, and in another we are not much to exceed a low red heat, or the whole of the kiln or clamp would become one lump of useless slag. Clays contract in the burning as well as in drying: in order to correct this, therefore, it is desirable to work up sufficient silicates, as loam, sand, &c. with strong clays or very plastic earths. A good tile clay, that will dry and burn soundly in a thin body, or a perforated brick, will fly in the fire in so large a mass as a solid brick.

In the case of refractory clays, if, as soon as the kiln is burnt, a little common salt is thrown into the fires, from the intense heat of the interior it is immediately volatilized: the kiln then being closed up, and the fumes retained, an effect is produced on some clays of glazing the bricks, and on others of changing their colour, particularly if the clay is charged with iron, to a much darker hue, the soda acting as a flux on the iron and silica: for the effect of the chlorine we must appeal to the chemists. Stone ware, or Dorsetshire clay, takes a salt glaze. Salt must be very cautiously used, until its action on the clay is proved, for brick-earth becomes much more fusible when exposed to the vapours or gases from salt, and will be in danger of being melted. The use of sulphurous coal for brick-burning is esteemed by many makers, from the bricks having a harder appearance and better colour. The colour to which bricks are burnt, varies throughout the country. In London the white bricks are esteemed, although from the smoky atmosphere they soon obtain a different hue. Suffolk, Devonshire, Dorsetshire, Cambridgeshire, and Essex, produce white bricks of the best quality. The general colour of bricks throughout the country is red, but in Staffordshire, Shropshire, Worcestershire, and other coal districts, they are what are termed blue bricks, and are of the colour of cast-iron.

The chemical action of salts thrown into the fires of brick-kilns for the purpose of fluxing, or burning the ware at a lower temperature, or giving a better colour or appearance to the bricks, has not been sufficiently experimented on. This should be undertaken by the chemist, as the brickmaker, without his assistance, may try many useless experiments.

To explain fully the various processes of firing adopted for the different classes of earths, or more generally the different districts of the country, would occupy more time than the limits of this paper will allow. Each county adopts a distinct mode; and in some counties there are used two or three different constructions of kilns, or principles of firing the ware. I will, therefore, briefly allude to the general systems adopted, and more particularly explain those improvements which have taken place, and stood practical proof of their utility. A subject which has formed the basis of 230 patents cannot be fully explained in so brief a space. Besides this there are many improvements not protected by patents.*

* To be continued.

FALL OF PART OF A CHURCH AT DERBY.—On Sunday in last week the gable end of the chancel of St. Michael's Church, Derby, gave way, and the casing fell into the churchyard, shaking the fabric of the church, and spreading consternation through those assembled within its walls. The service was prematurely concluded, and the congregation, in terror and alarm, hurried out of the edifice. Fortunately no accident occurred.

PROPOSED GOVERNMENT COMPETITION.

PUBLIC OFFICES.

In pursuance of the intention of the Government to invite designs from architects of all countries for an Office for the Secretary of State for Foreign Affairs, an Office for the Secretary of State for War, and for laying out the ground between the Thames and St. James's-park, adjoining Great George-street, mentioned in our last, the Chief Commissioner of Works, Sir Benjamin Hall, invited a number of architects to meet him on Monday last at the Office of Works, that he might hear their opinion as to the particulars and instructions to competitors he proposed to issue. Mr. Hunt was with Sir Benjamin, and there were present, Sir Charles Barry, Mr. Tite, M.P.; Mr. Hardwick, Mr. Burn, Mr. John Shaw, Mr. T. H. Wyatt, Mr. M. D. Wyatt, Professor Hosking, Mr. Ferrey, Mr. Godwin, Mr. Scott, Mr. Mair, Mr. Bellamy, Mr. Pownall, Mr. Clutton, Mr. P'Anson, Mr. Poynter, Mr. Jas. Knowles, Mr. Railton, Mr. Pennethorne, and others. Mr. Sydney Smirke was prevented by indisposition from being present.

Some were there ready to protest against throwing open the competition to foreign architects, and others against any competition at all; but the Chief Commissioner informed them that these points had been settled in Parliament, and would not be opened. The proposed instructions were then read and discussed, and now stand as follow:—

"It is proposed to invite architects to offer designs for two new public offices, one for the use of the Secretary of State for Foreign Affairs, the other for the use of the Secretary of State for War. These buildings are intended to be erected on a site between Charles-street and Downing-street. The drawings are to be made to a scale of 16 feet to an inch, the plans and sections being tinted with light brown Indian ink, and the elevations in line only. Enlarged details to a scale of 4 feet to an inch, and perspective (not bird's-eye) views, tinted with light brown Indian ink, may accompany the respective designs. General specifications of the materials proposed to be used in the intended buildings must accompany each design. Lithographed plans of the site, together with particulars of the accommodation required, and the dimensions of the principal apartments, will be furnished to such architects as may apply for them.

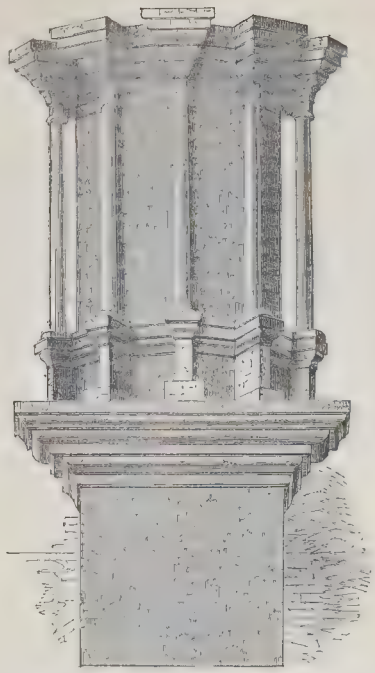
Architects are farther invited to send in a general block plan, to be drawn to a scale of 44 feet to an inch, showing how the site lying between Whitehall on the north, Great George-street and New Palace-yard on the south, St. James's-park on the west, the river Thames on the east,—provided always that any line of embankment shall not exceed the line laid down upon the ground-plan to be furnished), may be so appropriated that the two buildings now proposed to be erected may form part of a large and comprehensive scheme for concentrating the principal public offices, and for the improvement of the leading thoroughfares, including Westminster bridge, whether as regards its present or any other site.

Premiums will be awarded to eighteen of the most successful competitors, in three classes, according to the following scale, provided the commissioners should consider the respective designs worthy of the intended rewards:—

For the best design for the War Office, a premium of	£800
Second	500
Third	400
Fourth	300
Fifth	300
Sixth	100
Seventh	100
For the best design for the Foreign Office, a premium of	£700
Second	400
Third	300
Fourth	200
Fifth	100
For the best design for a block plan, a premium of	£500
Second	200
Third	100

All designs for which premiums shall be given are to become the absolute property of the commissioners.

The designs are to be delivered to the Office of Works, London, on or before the 1st day of February, 1857. They are to be distinguished by mottoes, and to be accompanied by a sealed letter containing the



MOULDED BRICK CHIMNEY-SHAFT.

author's name and address, with a corresponding motto on the outside.

If the architect whose design for either the War Department or the Foreign Office is considered the best should be appointed to carry out the work, he will be paid five per cent. on the outlay, but in that case he will not be entitled to receive the premium."

The only change agreed to was the substitution of a scale of 16 feet to an inch for one of 10 feet to an inch and a quarter, with the view of lessening the labour of competitors. Amongst the points discussed was the nature of the tribunal and desirability of giving some information on the subject. Sir Benjamin objected to its being fixed in the first instance, but inclined to a mixed jury of professionals and amateurs, and said it was proposed to exhibit publicly all the designs in Westminster Hall *before* coming to a decision,—a very desirable arrangement. Although no pledge would be given, it was understood that the successful competitors, if competent, would be employed to carry out their designs, and would receive the usual commission of 5 per cent.

The premiums amount in the whole, it will be seen, to 5,000*l.* The amount of expenditure is left to the competitors: no estimate of cost is required. No disposition is manifested in favour of any particular style.

The course adopted, prompted by desire for expedition, can scarcely be considered the best calculated to obtain a grand whole. A design should first have been obtained for laying out the whole of the land at the disposal of the Government with reference to the various offices and buildings likely to be required; and *then* designs should have been sought for the two structures named, to occupy such positions as might be most consistent with the best distribution of the whole.

We would farther urge that more time should be allowed the competitors for the preparation of designs.

British Archæological Association.—We reserve our report of the Archæological Congress till next week.

MOULDED BRICKWORK—CHIMNEYS.

As moulded brickwork has been much talked of lately, I send you a sketch of a chimney of an old house in Blandford, which is, I think, a good specimen of moulded brickwork. The bricks are thin and well made, and the columns appear to be burnt, of the same material. The form of chimney is a decagon (on a square base), having a column at each angle. The house is one of the few which escaped when the town was nearly destroyed by fire on the 4th of June, 1731. It is the property and residence of Mr. W. C. Fincham. The sketch may possibly interest some of those who are advocates of moulded brickwork. Jas. B. Green.

STEEL AND MALLEABLE IRON MADE WITHOUT FUEL.

The iron interest has been somewhat startled and excited by the paper, read at the Cheltenham meeting of the British Association for the Advancement of Science, by Mr. H. Bessemer, "On the Manufacture of Malleable Iron and Steel without Fuel;" a discovery already tested, according to Mr. Bessemer, by experiment on a great scale. In one sense the process is not effected without fuel, because it is crude iron already melted by means of fuel that is converted into steel and soft iron; but in place of the iron being reheated, and subjected to the puddling process by means of a second application of fuel (chiefly mineral in this country), and afterwards worked up in small pellets into a malleable state, the whole furnace of melted iron is at once transferred to a second furnace, where there is no fuel for keeping it in a melted state, but where a blast of condensed air acting on the carbon in the iron itself, not only consumes that carbon, but produces such an intense heat that the metal boils with violent agitation, and the malleable iron, which is thus ultimately and rapidly made, itself arrives at a white heat, and continues in a melted state as if it were still perfectly fluid crude iron, so that even scraps of tough iron and steel are also melted in it by means of the surplus heat produced by the mere action of the oxygen of the air-blast on the carbon of the iron. Thus, in place of the immense labour and tedious delay of the puddling, hammering, and rolling processes, and the comparatively small scale on which, only, good malleable iron or steel can as yet be in this way formed, superior kinds of cast steel and malleable iron, it is said, are yielded as it were by wholesale, or on a great scale, in course of less than half an hour! with a loss of only 18 per cent. in place of 28 on the quantity of crude iron used, a large portion of this loss, moreover, being easily recoverable.

If there be no exaggeration here, the productibility of cast steel and malleable iron will now, and only now, become commensurate with the great scale on which pig-iron has heretofore been produced, and the cost of both cast steel and soft iron accordingly, as well as from saving of fuel and time, be immensely reduced.

The quality of the iron is said to be equal to that of charcoal iron, and that of the steel to be capable of being made, by a mere extension of the ingot, of a far superior quality to that which such an extension produces in blister-steel.

During the short time in which the melted metal is undergoing its fiery purification, it passes through the various states of hard and soft steel, semi-steel, and malleable and soft iron, according to the quantity of carbon consumed, so that by tapping the reservoir at different times, the different kinds of metal are at once obtained. When the metal has lost all its carbon, and is become a soft malleable iron, it is still perfectly fluid, and not a mere pasty mass, so that even then it is readily tapped and run off at once into bars, beams, or any other form, and of any dimension short of the whole quantity produced.

Since the above was written, Mr. Bessemer's magnificent discovery has been formally tested, in presence of many competent judges, and the result, in the formation of ingots of cast-steel 6 cwt. in weight, from a mass of crude iron 6 cwt. 3 qrs. 18 lbs. in weight, after less than *ten minutes boiling* and washing in its own oxide, was unanimously declared to be perfectly satisfactory. A few minutes more would have converted the steel into pure soft malleable iron. Mr. David Mushet, who appears to have seen at a glance the immense importance of Mr. Bessemer's discovery, without waiting any test of its value, declares, in the *Mining Journal*, his full "conviction that Mr. Bessemer has brought into the world one of the grandest operations ever devised in metallurgy,—a truly magnificent process," which, as he ingenuously remarks, "might easily have been predicted by any of us had our nodding and winking faculties been inspired with the wit to think to the purpose." Mr. Bessemer has been two years in maturing his great discovery; but, as scarcely ever fails in such circumstances, he is not, it appears, to be left in exclusive possession of the fruits of his genius, a Yankee patentee having already employed a patent agent to lay claim to it, on the ground that, on 15th September, 1855, he appropriated this very process to himself by patent taken out in this country. How it was that so splendid a discovery, secured so long ago by patent, was not generally heard of, or did not make itself widely known, long ere Mr. Bessemer explained his new process the other day, is not stated.

It now appears that while the Woolwich department of our own Government fatuously pooh-poohed the discovery, or "sought to throw cold water on it," as the *Times* remarks, "by alleging that Mr. Nasmyth had already made substantially the same discovery, which that gentleman has since been the first to disclaim," the French emperor to whom also Mr. Bessemer explained his process, had the penetration to appreciate its vast importance, and the disinterestedness and generosity to afford him great facilities for conducting his experiments (then in an imperfect state) to a successful result.

No discovery in the iron manufacture since Cort's, at the close of last century, has ever given such promise as this of Mr. Bessemer's. To begin with, it at once not only renders this country independent of Russia and Sweden for the finest qualities of iron,

but while these qualities are sold here at from 20*l.* to 30*l.* a ton,—by the new process iron of equal quality can be made at a cost actually 2*l.* per ton less than the present cost of common English iron! What, too, may not be anticipated from the power, thus put into our hands, of casting malleable iron beams limited, in immensity of dimensions, only, perhaps, by the limits of our mechanical or other power in transporting them from the place of their production to that of their ultimate destination!

"Cast malleable iron," says Mr. Mushet, "in the very limited scale on which it has hitherto been produced, has been characterized by excessive red-short; but on the scale of Mr. Bessemer's production this may be entirely altered, or successfully removed. The economic basis he has fixed is so broad that there is room to rear any amount of superstructure. The success of the new process will re-act upon the management of the blast-furnace, and render unnecessary the present wasteful system of manufacturing forge-iron for the puddling furnace. This and the refining will be superseded with a vast economy in all branches of the manufacture. After seventy years' use, one of the inventions which has made Britain great is threatened with antiquation, but the grooved roller is likely to remain a little longer. Mr. Bessemer has, I think, invented something *equally calculated to stimulate the passions and the devices of the base, the mercenary, and the ungrateful.* This discovery throws distinctive light upon many details of the blast-furnace, well known, but never rightly understood; but space will not now permit a reference to them. I know nothing," he adds, "of Mr. Bessemer except his name, his centrifugal pump, and now this gigantic cupel, but I am always eager to express my sense of great merit. Besides the enormous capacity of his process for the manufacture of iron and steel, he has realized a method for effecting a working temperature infinitely exceeding what has ever yet been attained in the arts, except by intense electro-chemical currents; and it is impossible to foresee what may be the range of ultimate and general consequences from this invention."

PROVINCIAL NEWS.

Great Grimsby.—The Corn Exchange is nearly completed. The body of the building is of red and white brick. The tower is of stonework. The cost, with site, will be about 9,000*l.* to be paid off in thirty years by instalments.

Alford.—The erection of the Corn Exchange here has commenced on the site of premises which have been pulled down in the market-place.

Lynn.—The Norfolk estuary works, which have been stopped for some time, in consequence of the want of clay for the training banks, have been recommenced, a supply of material having been found in the old channel.——The materials of the old workhouse, with the land on which it stands, containing about three roods, were put up to auction on Tuesday in last week. The reserve was fixed at 1,400*l.* but the highest bidding was only 1,130*l.* and no sale was effected. A strong competition, according to the *Norfolk Chronicle*, was expected for this site, which is situated in the best part of the town.

Newbury.—It is in contemplation to make a new road from the bridge into the market-place. A correspondent of the *Reading Mercury*, who approves of the proposal, states, however, that while the plan, from destroying six houses, would cost 6,500*l.* another which he suggests would only cost 4,000*l.* including the re-erection on an eligible site of the mansion-house, with wings in Crystal-palace form for a corn-exchange: by this plan, he says, only two houses, the *Newbury Herald* and *Reading Mercury* offices and another (both in the centre of the Market-place) would require to be removed.

Horley.—The first stone of Burstow Hall, the mansion of Mr. Francis Kearsey, between the Horley and Three Bridges stations, on the London and Brighton Railway, was laid on Tuesday before last by his son. The mansion will be built in the Italian style of architecture after a design of Mr. H. Flower, of London, architect.

Frome.—The inconvenience so long felt in this place, for want of suitable accommodation, is likely soon to be remedied, by the erection of a market-house. A convenient site has been purchased, and the building is to be commenced forthwith, chiefly, it is said, at the expense of the Earl of Cork.

Devonport.—The War Department has given Mr. G. Roach the contract for erecting the north wing of the new barracks at Devonport, the cost of which is estimated at 56,000*l.* The buildings in the Ligonier and Frederick squares, and the Picquet stables, will be taken down, and the whole of the materials sold by auction. It is also intended by the Government to appropriate a portion of George's-square for the erection of barracks for married men, the contract for building which will soon be made public. The old barracks will be taken down, and a considerable portion of the site will be thrown into the Mount Wise parade. When the barracks are fully completed, including the Royal Marine Corps, Artillery, &c. the garrison, it is said, will accommodate about 7,000 troops.

Alvechurch.—On the 7th inst. the corner-stone of new national schools for the parish of Alvechurch, designed by Mr. Butterfield, who is also the architect of the new rectory just completed, was laid. The site is in the neighbourhood of the church and the new rectory. On the completion of the new schools it is hoped that sufficient funds will be raised for the restoration of the parish church, which has suffered much from neglect and mutilation.

Manchester.—The extensive range of buildings erected for the new Manchester workhouse at Crumpstall will probably be ready for occupation in March next, according to the *Courier*. The building will accommodate 1,700 persons, and measures about 700 feet long by 400 feet broad. The works are under the supervision of Messrs. Mills and Murgatroyd, the architects. A stone entrance marks the front of the building. No steps have yet been taken relative to the supply of water; and it is not decided whether to bore for it, in which case it is believed an abundant supply would be obtained, or use the equally abundant corporation water, which would have to be brought upon the ground. Pipes are being laid for both water and gas: the fittings of the latter are done by Messrs. Owen and Robinson, Manchester. No disturbance has resulted from the bricksetters' labourers since the outbreak which consigned several of them to the assizes. The cost of the entire building will be about 50,000*l.* A considerable portion of the land will be devoted to "test" labour. The test for women will be in the washhouse and laundry, which are very extensive. The able-bodied will thus earn their living. There will be schools and playgrounds for boys and girls, and workshops for teaching trades to the boys, as well as for teaching the girls the occupations suited to their age and sex. There are also imbecile wards, an infirmary, &c.——The corporation workmen, under the direction of the improvement committee, Mr. Shorland, the city surveyor, and Mr. Langtry, the surveyor of Chorlton, have commenced widening Oxford-street, an improvement long contemplated and much needed. In the narrowest part it is only 12½ yards wide: when the improvement is effected, there will be a general width of at least 20 yards.

Stockport.—The internal arrangements of the grammar-school have undergone extensive revision and improvement, under the suggestions of the architect, Mr. Hardwick, of London, the stonework having been executed by Mr. S. Bann, and the brickwork by Mr. Barlow, both of Stockport.

Oldham.—The new building for the Oldham Lyceum, at the corner of Clegg-street and Union-street, is to be publicly opened on the 22nd of next month. The building has two entrances, the principal one being in Union-street, which opens into a large entrance-hall, the most prominent object on entering which will be a window of stained glass opposite the entrance and above the first landing on the staircase. The window bears representations of science, art, history, and fame, and is the work of the St. Helen's Plate-glass Company. The basement floor contains two class-rooms, 14 yards by 9. The news-room on the ground-floor is 14 yards by 9, lighted by five windows, and two eight-light chandeliers. The reading-room, on the same floor, is 9 yards square, and is lighted with three windows fronting Union-street. Behind this room is the library, 5 yards by 9. From the hall, two broad flights of steps, boarded with African oak, lead to the second story, the principal room on which is the theatre or lecture-room, which will accommodate about 300 persons. It is lighted by eight windows, and the roof is ornamented and panelled. In the evening the room will be lighted with a sunburner. The board-room is situated on the centre of the landing, and to the left there are coffee and class rooms. There is a third story at the back of the building, in which there are two rooms: the first, 10 yards by 5, is to be appropriated to discussion and music classes; and the other, which is 9 yards by 6, and is lighted from the roof, for a drawing-class. There is an apartment with a glass roof, adapted for a photographic class, and a fire-proof room for a laboratory. From the photographic class-room a stair leads to the roof of the building, where a considerable space is flagged and walled round, and is intended to be used as an observatory, for which Mr. James Platt, the president of the institution, has presented a telescope. A railing of a design furnished by the Thorncliffe Ironworks Company, near Sheffield, will be placed round the outside of the building. The windows are of plate-glass, from the St. Helen's Plate-glass Company. Connected with the institution is a dwelling-house for the superintendent, and there are separate play-grounds for boys' and girls' classes. Mr. Pennington, of Manchester, is the architect for the building; and the whole of the works are contracted for by Mr. George Whittaker, of Oldham, builder.

Edinburgh.—Among other improvements in progress at Holyrood Palace, the throne-room on the south side of the quadrangle has had a new ceiling of the style of sixteenth century. The throne-room measures about 70 feet by 30, and the surface of ceiling is intersected by moulded ribs, forming panels alternately square and circular, which contain heraldic devices modelled in relief. Besides the heraldic devices, there are numerous other decorations consisting of the fleur-de-lis, rosettes, pendants, &c. the whole being supported by a cornice, enriched with a wreath of rose, thistle, and shamrock intertwined. The old windows are being replaced by new ones of plate-glass, in a style to correspond with those in the other State apartments. The new drive from Abbey-hill to the Queen's Park, passing in front of Holyrood Palace, is now almost completed. An improvement is being made on the drive at the east end of the Duke's Walk, where the line is being diverted to the northward so as to avoid the acute angle at the corner of Parsons-green.

Glasgow.—The foundation-stone of the new Free College and Church was laid on Monday in last week. The buildings are in progress.

St. Andrew's.—Upwards of 1,700*l.* have been subscribed for the erection of a new Town-hall in St. Andrew's.

Londonderry.—The foundation-stone of the Magee College was laid on Monday in last week. Mr. M'Clelland is the contractor, and has engaged about 100 men on the work, whom he has just entertained in a pavilion erected on the grounds.

Drogheda.—A meeting of the inhabitants of Drogheda was held on Monday before last, in the Tholsel, convened by the Mayor, at the request of nearly 200 ratepayers, to adopt measures for erecting two draw-bridges over the Boyne, and to remove all obstructions to the free navigation of the river. Resolutions favourable to the object of the meeting were passed.

SMOKY BRICKS.

My house was built about twenty years ago with bricks from half a dozen houses 150 or 200 years old. The dirt from the old bricks eats through the plastering in my two best rooms, spoiling the paper in about four months, in patches as if the walls were damp, which can hardly be, as the house is cemented outside. Will you please to say, in your next *Builder*, if you can recommend any method for preventing this? I have thought of knocking off the present plaster, then nailing slate laths, upright, against the wall, and lathing and plastering upon them, but should rather, if possible, save that expense and trouble. If you can help me out of my difficulty, I shall feel particularly obliged and grateful. G.

*** Thin sheet-lead, or tin-foil, may be applied advantageously.

NEW HOUSES IN "THE ROWS," AT CHESTER.—Mr. T. Mainwaring Penson, Architect.

NEW HOUSES IN "THE ROWS," AT CHESTER.

No one forgets Chester who has once seen it, with its peculiarly arranged streets, with a public way beneath the first floor of the houses, its ancient walls and red sandstone churches. In respect of its streets, the "Rows" as they are termed, Chester is unique in England, and all who love picturesque effects, and would retain ancient characteristics, will desire that these should not be interfered with. The substitution of ugly brick fronts and sash windows for the old gables wherever repair or alteration has become necessary, has done much injury to the appearance of the streets, and should not be encouraged. We are glad, therefore, to see that in two fronts recently put up under the direction of Mr. T. Mainwaring Penson, the old style has been adhered to, and with good effect. We have engraved a view of them to mark approval of the course pursued. Provision is needed for the eye and mind as well as for the body.

THE ROYAL MONUMENTS IN WESTMINSTER ABBEY.

It will be recollected by most of our readers that owing to a memorial addressed to her Majesty by the Institute of British Architects, Mr. Scott, as architect to the Abbey, was requested by Sir W. Molesworth to report upon the condition of the royal monuments which it contains. His report represented, in strong terms, the mouldering condition of the stone, both Purbeck marble and firestone; and urged that some course should immediately be taken for their preservation, and suggesting a certain degree of partial restoration. The different Antiquarian Societies strongly objecting to restoration, Mr. Scott turned his thoughts to the question of whether some process could not be found by which they could, as it were, be *stereotyped* in their present state, and secured from farther decay. After several means being considered, and some experiments being tried, the following mode of operation was hit upon: a very weak resinous solution in spirits of wine is injected upon the decayed surface by means of a gardener's syringe, the end of which is perforated with numerous fine holes. The small streams from these minute orifices have not strength sufficient to remove the loose scales which hung upon the surface, and which were so tender that the slightest touch of the finger or a brush would cause them to drop. The solution is made in the first instance exceedingly weak, so as to soak, even into the Purbeck marble, as far as the decay has penetrated. The operation is repeated at intervals of a day or two, till the pores are perfectly saturated; and the solution is made somewhat stronger as the work proceeds. The number of coats or applications varies from four to six. And an injection of pure spirits is used at the close to take off any gloss which may appear upon the surface; and, finally, such parts as have scaled off to such an extent that the solution will not secure them, are firmly re-attached by strong shell-lac cement, applied with a pencil. The process has been applied to all the monuments of Purbeck marble or firestone which surround the chapel of the Confessor, including also his shrine, and with every appearance of perfect success. The surface, instead of being loose

and powdery, so that the slightest touch of the finger or the dress brought it off in dust, or larger fragments, is now hard and firm, while the venerable tone of colour—the peculiar charm of these monuments—is scarcely perceptibly altered. We heartily rejoice in this result, which will be hailed, we trust, with satisfaction, both by those who favour and those who discountenance restoration. The only restorations effected to the royal tombs, all of which are mainly due to Mr. Scott, and some of which we have before noticed, are the refixing of the iron screens to the monuments of King Edward V. and Queen Eleanor; the restoration to their places of some portions of the tabernacle work to that of Queen Philippa (portions of which had been for many years in a private collection); the restoration to its place of one of the spiral columns to that of King Henry III. which had been broken and removed; and the restoration of a similar column to the shrine of the Confessor: the fragments were found in the triforium, and have been carefully put together, and will shortly be fixed in their place. The recent works have been executed by Mr. Poole, of Westminster.

CHURCH-BUILDING NEWS.

Lincoln.—A stained-glass window in memory of Sir Richard Armstrong, has been added to the three lately placed in the aisle on the south of the nave of Lincoln Cathedral. The artist was Mr. Edgland, of London. The subject, portrayed in four separate groups, is from the life of David, illustrating 1 Sam. xvii. 54, 1 Sam. xx. 41, and 2 Sam. xxiv. 25, surmounted by King David on his throne playing a harp.

Bury.—Excavations are being made for the foundations of the proposed new church, in St. Mary's parish, to be called St. Peter's. The site is in Union-terrace. The style to be adopted in the building is of an early date, and the designs are by Mr. Hakewell. The funds have been placed in the hands of the incumbent of St. Mary's anonymously, and the site has been secured from the Marquis of Bristol.

Rougham.—The *Bury Post* states that the works which have been in progress for some time at Rougham Church are now brought to a close. The roofs have been repaired and made secure, and the interior has undergone a complete renovation — the stonework of the arches, pillars, windows, &c. having been divested of coatings of whitewash, cleaned and restored, and the walls restuccoed. The nave and aisles are now fitted up with oak benches, having carved poppy-heads and tracery panelled ends, varied in detail, corresponding with the old benches, which have been repaired and cleaned. All are in style of the Perpendicular period. The tower (the arch of which has been thrown open to the nave), is fitted up with oak benches, the gift of Miss Colvile, for the school children. Various other minor improvements have been effected. The works have been carried out under the direction of Mr. Johnson, of Bury, architect, by Mr. Rednall, jun. of Woolpit, the contractor. The total expense is about 800*l.*

West-Ham.—The works at the cemetery for West Ham parish, will shortly commence, the contracts for the erection of the chapels and other buildings having been entered into by the West Ham Burial Board, pursuant to the Burial Board Acts. The land is situate in Forest-gate-lane, contiguous to the Whitechapel Industrial Schools, and about equidistant from Church-street, Stratford, and Plaistow wards.

Basingstoke. — At a meeting of the local Burial Board, held on Monday in last week, it was resolved, says the *Reading Mercury*, that Messrs. Poulton and Woodman, of Reading, who obtained the first premium for the designs for the cemetery, should be appointed the architects for the requisite buildings, and that advertisements for contracts should be inserted in the *Builder*, and the various local papers. At same meeting it was also resolved that a loan of 3,500*l.* be negotiated on the rates and borough fund. Mr. Grainger, inspector of burial grounds, has seen and approved of the site for the burial ground.

Oxford.—The tower of St. Mary's Church, which some time ago was considered to be in an insecure state, by the giving way of the lower part, has been strengthened, under the direction of Mr. Scott, the architect, by the insertion of a number of iron bolts, about twenty-four of which pass through the building, and are fastened by ornamental nuts on the opposite side. The buttresses are also secured by bolts, which are fastened in the interior of the church, and the general stability of the spire is increased by the building up with solid work two staircases on each side. The number of bolts altogether is about sixty.

Whitchurch.—The parish church of Whitchurch, Oxon, is now found to be unequal in accommodation to the wants of the parishioners, and it is proposed to build a new aisle, and arrange the seats in the body of the church for the better accommodation of the congregation. Between 1,400*l.* and 1,500*l.* will be required.

Luton.—The foundation-stone of a new church has been laid at Luton by Mrs. Crawley. The site of the new edifice, which is to be named Christ Church, is on the right of the Dunstable-road, about midway between the Town-hall and the point where the Luton, Dunstable, and Welwyn Railway will cross the main road. The church, which will stand east and west, is to be built in the style of the transition from the Early English to the Geometrical period; and will consist of a nave, north aisle, north and south transepts, and chancel, with small vestry attached. The church will be built of red bricks with bands and crosses of black vitrified bricks, and Bath stone dressings from the Corsham Down quarries: the quoins will be in white bricks from the Arlsey grounds: the roof will be covered with Bangor countess slates, laid in alternate rows of blue and green. At the south-west angle of the nave there will be a small turret springing out of the buttresses, with trefoil-headed arches and small shafts, supporting a shingle spire. A cross will surmount the west end of the nave. There will be three entrances to the church, the principal at the west end, and two on the south side. At the west end there will be a large five-light trefoil-headed window: on the south side the windows will be two-light, with polygonal perforations above. The transepts and chancel will have single-light trefoil-headed windows, with rose windows in the gables; and the aisles and sides of the transepts, polygonal cusp windows. The chancel window will be in stained glass. The chancel will be divided from the nave by an acutely pointed arch, springing from ornamented carved corbels; and under the wall-plate of the chancel roof there will be a course of Minton's encaustic tiles. The nave will be divided into four bays, with pointed arches, springing from octagonal shafts. The interior roof will be composed of rafters, with cross braces, springing from and covered with boarding, laid diagonally, and stained and varnished. The chancel roof will be composed of rafters and moulded purlins, with lath and plaster between the rafters, coloured a deep blue. The font and pulpit will be executed in Caen stone. There will be stalls of an ornamental character in the chancel; and the seats, which are to be open, will be of deal, stained and varnished, with ornamental bench-ends of quatrefoil panels. The church will seat 700 persons, inclusive of 100 children; and the estimated cost of its construction is 1,750*l.* It will be heated with hot water by the apparatus of Mr. Scott, of Greenwich. The architect is Mr. H. Elliott, of Dunstable; and the builder, Mr. Robert Greig, of Pimlico.

Portswood and Highfield.—The *Hampshire Independent* states that the addition which has been made to Christ Church, Portswood, by Mr. Chinnock, builder, under the superintendence of Mr. Elliott, architect, was opened on Monday before last for divine worship. This enlargement will afford 300 additional sittings, more than half of which are appropriated for the poor of this rapidly-increasing district.

Winchester.—The tower of St. Thomas's Church here is nearly up to the point at which the spire commences. The new windows of the tower give a different character to the building.

Sherborne.—A vestry was held at the town-hall, on Thursday in last week, to consider the propriety of reopening the west door of the abbey church of St. Mary. When this church was partly under restoration, some five years since, it was thought advisable by the architect, Mr. Carpenter, to close these doors, which was accordingly done, leaving a blank wall as the result. Mr. Slater, the present architect, said, in reply to an inquiry, he thought it would be most desirable that the west door should be opened as a western entrance. Some alterations required would probably cost about 25*l.* exclusive of the masonry work, which would cost about the same amount. It was resolved that the west door of the church be reopened, at a cost not exceeding 60*l.*

Knaresborough.—The consecration of Trinity Church, Knaresborough, took place on Monday in last week. The first stone of the new edifice was laid on the 8th of August, 1854. The church is built on the south-west side of Windsor-lane, on a plot of land given by Sir Charles Slingsby. It is calculated to accommodate 800 persons.

Bristol.—A painted window, in the Early English style, has just been placed in St. Peter's Church, by Mr. Pearce, of Stoke's-croft. St. Peter's has been lighted by gas by Messrs. Hale and Co. of this city.

Oswestry.—The celebration of the completion of the new church tower, Llanyblodwel, took place on Thursday in week before last, when the Gothic tower and spire were completed. This structure is the gift of the Rev. J. Parker, the vicar. The design was from the same gentleman. The church needs repewing.

Llanedwen (Anglesey).—The old church in the chapelry of Llanedwen having become so dilapidated that it was unfit for the celebration of Divine service, and not worth restoring, a new edifice has been erected on the same site, from designs by Mr. H. Kennedy, of Bangor, architect; Mr. Ebenezer Thomas, Menai-bridge, being the contractor. It is built in the Perpendicular style, and consists simply of a nave and chancel, with roof of open frame timber work, the old oak principals being restored. The seats are all free, and calculated to accommodate from 200 to 300 persons. The materials used consist of blue rubble stone, Stourton-hill stone being used for the dressings of the doors, windows, and buttresses, and also of the spire. The church is situated on a gently rising ground, at a short distance from the shore, facing Port Dinorwic. There are two memorial windows of stained glass, to members of the Plas Coch family, one being in the chancel, and consisting of three lights; the other on the north side of the pulpit, which, with the reading-desk, is of oak, and foliated. The cost has been principally borne by the landed proprietors of the parish.

Llandudno.—Divine service was celebrated on Sunday evening at the ancient church of St. Tudno, on the Great Orme's Head, lately restored for Mr. Reece.

Nottingham.—A new Congregational church for the parish of Sneinton, at Nottingham, was opened on Thursday before last. It is built after a plan by Mr. Thomas Oliver, jun. of Sunderland, architect.

Doncaster.—At the beginning of the year, says the local *Gazette*, we stated that it was the intention of Mrs. Saunders, of Hall-gate, to place a memorial window in the west end of the south aisle of the parish church, to the memory of the Elston and Saunders families; and that the design had been entrusted to Mons. Capronnier, Rue de Brabant, Brussels. Since then we find that this benevolent lady has expressed a wish to have the window facing the north aisle also filled with stained glass, and in perfect keeping with the one already mentioned. The principal figures will represent Charity in all her attributes. Mr. Wailes, of Newcastle, has been entrusted with the design for the windows intended for Forman's chapel. The drawings will be specially provided for him, under the direction of an artist, and approved of by Mr. Forman and Mr. Scott.

Huddersfield.—On Thursday in last week St. Paul's Church, Huddersfield, was reopened. About 300 guineas have been expended in renewing the floor, which was very much decayed, and in rearranging the pews.

South Stockton.—A subscription has been commenced for the purpose of building a church

in South Stockton. A site has been offered gratuitously, and it is hoped means will soon be found to raise the building.

Scarborough.—Several alterations and improvements have lately been made in the parish church of Scalby, part of the church having been taken down and rebuilt, and the interior repaired. At the eastern end of the chancel is a window of stained glass, containing three lights, representing respectively figures of "The Baptism," "The Last Supper," and "The Crucifixion of Christ." This window is the gift of Mrs. Betsey Hardcastle, of Scalby Villa, in memory of her deceased husband. These improvements have been carried out under the direction of Mr. Petch, of Scarborough, architect. Other alterations of a more extensive character are contemplated.

Glasgow. — Claremont church, erected at the West End by members of the United Presbyterian body in this city, was recently opened for public worship. The church consists of nave and aisles with clerestory measuring 100 feet from north to south, and 70 feet from east to west, with its west front to Claremont-street, and the north or entrance front to the New Park. The windows of the aisles are gabled into the roof, and divided by mullions into three lights or bays branching into flowing tracery in the pointed tops. On the east and west sides are doorways with segment-headed arches, moulded and enriched with detached flowers in the mouldings leading to the staircases and main porch. The south gable fronting the mews lane is filled in with two-light windows and traceried heads, and the five-light window of the nave, with symbolic tracery. The north, or grand entrance, fronting the park, has a doorway flanked with triple buttresses running into octagonal pinnacles. Over the door is a four-light window inferior to that at the south end, and there are two-light windows at the end of the aisles filled in with tracery and traceried panels at the foot of all these windows. The door is yet to be covered with floriated iron work. The pewing is all of simple design, cushioned with crimson-covered hair-cushions. Something like 20 per cent. more space is allowed for each sitter than generally allowed in Scotland. The gallery is carried round the two aisles and across the north end of the nave, supported on bronzed pillars, disengaged from the pillars of the arcade. The panels of the front are filled in with traceried work. The church is seated for 1,180; but, had the pews been the usual width, it would have accommodated 1,400. Underneath the church is a hall, to accommodate 400 Sunday scholars, or prayer meetings, lectures, &c.; besides a session-house, with the church-officer's apartments, heating-chambers, vaults, closets, lavatories, &c. The building is enclosed with a railing of ecclesiastical design. The entire cost of the building, exclusive of the land, and including the stained windows, cushions, gas-fittings, &c. is considerably under 7,000*l.* The mason work has been executed by Mr. Allan Craig; the wright work by Mr. James Russell; the plumber work by Messrs. Leadbetter and Son; the plaster work by Mr. John Craig; the slater work by Mr. Anderson, Greenock; the painter work by Mr. Graham, of Stirling; the glazier work by Mr. Watson, of Dunfermline; the painted windows by Mr. Ballantyne, of Edinburgh, and Mr. Cairney, of Glasgow; the stone-carving by Mr. James Crawford; the upholstery by Mr. Goldie. The architects are Messrs. Hay, of Liverpool.

FOREIGN INTELLIGENCE.

Kaulbach and the German Museum. — The ancient mural paintings lately discovered in the Town-hall of Nuremberg, have been now cleaned and copied in their natural size, by M. Eberlim, who has already completed those of the inside of the hall and the outer wall of the pediment. This has been done at the expense of the German Museum, and the fine group of musicians has been lithographed for being painted, and privately distributed, with an explanatory text, amongst friends and patrons. Although Nuremberg has possessed many great painters, it is not rich in mural paintings. The more pleasing is it to hear that Kaulbach has offered to adorn one of the walls of the *Kaethause* with a mural painting, and there is, no doubt, that such an example will be followed by many other artists of distinction.

Potable Water. — M. Darcy, of Dijon, has published a work, entitled "Les Fontaines Publiques" (the public fountains of the city of Dijon), which discusses the important question of *drink* water in large towns. It is so far back as the earlier days of Arago and Brougham that the great sanitary importance of potable water for large cities was recognised. M. Darcy has repeated these assertions, and has, moreover, furnished a monography of all the *public fountains* and the various borings and aqueducts of Dijon, which shows what strenuous exertions are made even by small communities for the welfare of their citizens.

The amount of gold exported from Australia, since its first finding in 1851, has been 46,000,000*l.* sterling, of which seven millions have been from New South Wales, and thirty-nine millions from Victoria. It appears, farther, that the amount of gold found in Victoria has been nearly the same during the last four years, but has considerably decreased of late in New South Wales.

The Salubrification of Paris on a new System, &c. (*Paris*, 1856, 8*vo.*)—Notwithstanding the great efforts made for the salubrity of Paris, still no one can pass even the best quarters in the evening hours, during the warm season, without finding himself unpleasantly affected by the smell emanating from the *égouts* of the paving. In Paris, it seems, all the waste water of the households has to take its course in the streets, &c. Thence M. Allain proposes that it should be carried off at once to the greatest depth possible. Now already two large sewers, built on both banks of the Seine, receive those impurities which formerly polluted the waters of the river. The owners of the new streets of Rivoli and Strasburg are bound to have both an ample supply of water and a subterraneous drainage.

Benevento: the Triumphal Arch of Trajan.—The Papal Government have purchased the houses which have been plastered up at both sides of Trajan's Arch, in order to demolish them. The fine basso-relievos, which seem well preserved, will, therefore, come to light, after centuries of concealment. As there will be a place opened around the arch, it will assume the appearance it had in the Roman period. It is time now that this splendid monument should be properly designed, as there exists no good engraving of it. There is at Benevento also the church of Sta. Sophia, a diminutive specimen of its great prototype. It was executed by a Greek architect under Gisulph III. a Longobard king of Benevento. It will next claim the restorative care of the Papal authorities.

THE TUMULI AT KERTCH, IN THE CRIMEA.

Dr. Duncan Macpherson in his paper read at Cheltenham, illustrative of his researches in the Crimea, said,—The present town of Kertch is built close to the site where 500 years before Christ the Milesians, who were of the family of Ionians, formed a colony and founded the city of Panticapæum. The colony of Cherson, near Inkermann, was founded about the same period by the Dorians, a people at rivalry with those of the colony of Miletus. History records that the race denominated the Cimmerians originally inhabited this locality, and that the Tauri, a savage and cruel people, who made offerings and feasts of human victims, and whose dwellings cut out of the solid rock are still seen around Kertch, succeeded them. The Scythians who appear to have descended from the mountains of Thibet in Tartary, and were probably the ancestors of the present race of Tartars, conquered the Tauri, and became the Tauro-Scythians. Crossing from Pontus, where they held sway, the Milesians expelled the Scythians and founded a kingdom, which, from the salubrity of its climate, the fertility of its soil, and the industrious habits of the colonists, speedily arose in its prosperity and became, in its palmiest days, the granary of Athens. They dedicated their new city to the sylvan god Pan: because of the abundance of the wine found, the worship of Bacchus became very general among them, and they called the chief city of this colony Panticapæum. The characteristic features around Kertch are the immense tumuli, or artificial mounds, that abound in this locality, more especially in the second valium. These sepulchres of the ancient world are found in many places. They are in the form of barrows in England, and cairns in Scotland. Calculated as they are for almost endless duration, they present the simplest and sublimest monuments that could have been raised over the dead. The size and grandeur of the tumuli found in the neighbourhood of Kertch excite astonishing ideas of the wealth and power of the people by whom they were erected, for the labour must have been prodigious and the expenditure enormous. Specimens of the highest Hellenic art have been discovered in these tumuli, such as sculptures, metal, alabaster, Etruscan vases, glass vessels remarkable for their lightness, carved ivory, coins peculiarly pleasing on account of their sharpness and finish, and trinkets executed with a skill that would vie with that of our best workmen. All originals were forwarded to the Hermitage at St. Petersburgh, duplicates being preserved in the Museum at Kertch, and these might have been easily secured to England on the investment of the place by the Allies, but, with the exception of some bas-reliefs which, in connection with two other officers, Dr. Macpherson transmitted to the British Museum, the whole of these rare treasures were barbarously made away with. The local tradition is, that these tumuli were raised over the remains and were intended to perpetuate the memory of the kings or rulers who held sway over the colonists, and that the earth was heaped upon them annually on the anniversary of the prince's birth, and for a period of years corresponding to those in which its tenant had held rank or reigned; and to this day the successive layers of earth which were laid on each succeeding year can be traced, a thin coating of sea-shell or charcoal having been first put down. Dr. Macpherson counted as many as thirty layers in a scarp made in one of these mounds about two-thirds from its base. They are to be seen of all sizes, varying from 10 to 300 feet in circumference, and in height from 5 feet to 150, and are usually composed of surface soil and rubble masonry. Herodotus's reference to these sepulchres is the earliest account which history has recorded of this mode of burial, and the attention of the meeting was particularly drawn to his description of the mode adopted to perpetuate the memory of their deceased princes, as it would be seen that one of the excavations to be referred to corresponded exactly with the description given by him. "The tombs of the Scythian kings," he states, "are seen in the land of Sberri, at the extreme point to which the Borysthenes is navigable. Here, in the event of a king's decease, after embalming the body they convey it to some neighbouring Scythian nation. The people receive the royal corpse and convey it to another province of his dominions, and when they have conveyed it through all the provinces, they dig a deep square foss, and place the body in the grave on a bed of grass. In the vacant space around the body in the fosse they now lay one of the king's concubines, whom they strangle for the purpose, his cupbearer, his cook, his groom, his page, his messenger, fifty of his slaves, some horses, and samples of all his things. Having so done, all fall to work throwing up an immense mound, striving and vieing with one another who shall do the most." The Greeks, who always respected the religion of the countries they had conquered, and who, in process of time, imbibed to a certain extent their customs and observances, appear to have adopted this Scythian mode of burial. Instead, however, of placing their magistrates or rulers in "a deep, square fosse," dug in the earth, they built tombs, and over these raised the conical hill. All, or nearly all, of these tumuli have been examined. The Genoese explored the largest and most valuable, and the Russian Government have also carried on explorations with much success. Selecting those which promised best, assisted by Major Crease, Royal Engineers, Dr. Macpherson carefully explored these tumuli. In some the tomb was found above the natural surface, and in some beneath it. Some were arched in the Egyptian, others in the modern style. Square flags, resting on each other in the centre, and supported by a niche in the side wall, supported a few: others had flat roofs, while occasionally no masonry was discovered. Fragments of bracelets, which were exhibited in the room, were found in one of the tumuli. Having descended many feet under the natural surface, he came upon the bed of ashes. The bones of a horse, a human skeleton, and other remains were also met with; and on removing the masonry, fibulæ and bronze coins were picked up in niches between the stones. Having worked at this tumuli for two months without success, he turned his attention to Mons Mithridates. The whole of this hill, from its base to its summit, and the spur extending from it to a distance of three miles, is composed of broken pottery and *débris* of every description to a depth of from 10 feet to 100 feet over the natural clay hill. The height and size of this Milesian work are so enormous, that it is scarcely possible to believe it to be the result of

human labour; and it must have been the work of ages to have conveyed the surface soil from the plains below, to raise it and the neighbouring heights to the present elevation. On the top of this hill is a rude chair, cut out of the rock, and a hollow resembling a sacrificial altar.

INTERDICTION OF PORTICOES IN LONDON.

THE BOARD OF WORKS.

As the architect of works now in progress at No. 30, Grosvenor-street, I consider it my duty to ask you to direct the attention of the profession to the proceedings of the Metropolitan Board of Works, on their last meeting at Guildhall, as reported in the *Daily News* on the 16th inst. and the *Observer* on the 17th inst.

A portico was wished for by the owner of the residence referred to, and after a delay of upwards of three months (arising from a portion of the property being held in trust), the *written consent* of the adjoining owners was obtained, in accordance with the printed instructions of the Metropolitan Board of Works. The design received the approval and recommendation of their superintending architect, and the district surveyor sanctioned its being erected; but the Board of Works decided, by a small majority, against its being erected, not from any objection to the design or mode of construction, but partly on "sanitary grounds," arguing that porticoes are an obstruction to light and air, and partly because the District Board of St. George's, Hanover-square, had objected to them. I find that so far from the Metropolitan Building Act interdicting the erection of porticoes, the 26th section shows that the continuance of such erections for the future was contemplated and expected by the framers of the Act. If, without consulting the public or the profession, this decision of the Metropolitan Board of Works, that for sanitary (!) improvement, porticoes hereafter must not be built in London, is to become the law, I, of course, must submit to this decision. If it were simply a question as to site, I might respectfully urge that few situations in London are more appropriate.

Independently of architectural effect, a portico in a climate like ours becomes a most useful addition to a dwelling, and also it frequently affords shelter to the public. It appears to me that the question whether we are to have porticoes or not in London should be at once definitely settled: it is one of great importance to the architects of London, and I think it is incumbent upon them to take some steps towards remedying what appears likely to become a great evil; for, in the exercise of their profession, they may be induced to comply with the instructions issued by the Metropolitan Board to prepare, as I have done, a block plan of the neighbourhood, showing the various projections in the immediate locality; to make drawings, and obtain the consent of the adjoining owners; pay professional fees for reporting thereon; and probably, as in my case, solicitors' charges also; and after taking every possible pains to comply with the conditions required under the 26th section of the Building Act, and sec. 143 of the Metropolis Local Management Act, be afterwards informed, "We do not object to your design, but to porticoes."

I enclose a tracing from my drawing for the proposed portico, in order that you may judge how far it would have interfered with light and air. The materials were to have been Portland stone, with polished Aberdeen granite shafts, and it would have been much smaller and lighter than any other in the street. JOHN DWYER.

MANUFACTURE OF BRICKS.

Blue Bricks.—In the article on the manufacture of bricks in your last number, the blue or dark-coloured bricks of the Birmingham district are mentioned as being made by exposure to a greater heat than that requisite for burning red bricks, and it is added, that "the iron, melting at a lower temperature than is sufficient to destroy the bricks, gives the outer surface of them a complete metallic coating." I have been told by workmen employed in the manufacture, that when a well-shaped brick is required for outside work, it is usual to produce this metallic coating by throwing salt on the fire the last time fuel is put on before closing the fire-holes. The reason given is, that as the temperature at which the iron melts is but little below that sufficient to destroy the brick, if the blue colour is obtained by simple heat the greater part of the bricks are sure to be more or less misshapen. In Shropshire, I am told the same effect is produced by sprinkling powdered ironstone over the brick before burning. I would trouble you to inquire if the above statements are correct, as I have found it very difficult to obtain information on this subject, my experience in brick-making having been limited to making the common red brick on a farm near here. In one case, the man who undertook the burning offered to produce blue brick if I would supply the salt, but I did not like to run the risk of spoiling a kilnful, without knowing more about the subject; and I have found the blue brick-makers very uncommunicative. S. P.

Iron, Bricks, Pipes, and Tiles.—As you are now noticing Mr. Chamberlain's paper on the manufacture of bricks, allow me to refer your readers to my correspondence last year on this subject, showing the capability of not only making one fire produce from clay, direct from the pit, in less than two hours, a perfect and finished article (except the annealing or gradually cooling) of any form or shape, avoiding all the difficulties of drying and burning out of form, to which all other processes are liable; and as the waste heat of the furnace is not required, it may be applied for generating steam, drying, and burning common bricks, lime, cement, &c.; and as I perceive by the supplement to the *Mining Journal* of last week that Mr. Bessemer's improvements in the iron manufacture are calculated to dispense with the puddling of iron, I would suggest the employment of the puddlers and their furnaces in the manufacture of iron and clay slags, and thereby retain the use of the waste heat for generating steam for rolling the iron, tempering, moulding, drying, and burning common bricks, pipes, tiles, &c. As slag direct from the furnace is moulded into any form or shape, similar to glass, in less than two minutes, and the iron moulds ready for use again immediately, the article is taken out and placed in the oven to anneal. By this simple process all the difficulties of tempering, moulding, drying, and burning, as appear by the paper above referred to, are overcome, either upon a large or small scale, as the melting process is applicable to both in every locality, and more particularly to situations remote from an established brickyard, where a quantity of bricks are wanted at a short notice for a special purpose only, such as the building of a bridge or tunnel, and where the carriage would exceed the cost of the articles manufactured on the spot, from earth required to be removed for foundations, as, with the assistance of moveable machinery to temper and mould common bricks, the clamping system might be adopted for burning where it would not answer to build permanent kilns.

W. G. ELLIOTT.

TOWER-HILL AND ITS NEIGHBOURHOOD.

I WISH you could spare time to visit Tower-street, and also Postern-row, Tower-hill, for the purpose of looking at the tinkering going on in both places. At the corner of Mark-lane a ricketty old house is not to be pulled down because the public service requires that some 50 or 60 square feet should be added to the inconveniently narrow footway. But this is nothing to the Woods and Forest Commissioners' proceedings at Postern-row, where some real improvement is so much needed that several Acts of Parliament have been passed to effect it, and it was the first on the list of thoroughfares which the Commissioners for Metropolitan Improvements gave as imperatively required. Ten years ago that might have been done for a few hundred pounds, which will now cost as many thousands, owing to mismanagement or supineness. So absolutely necessary was something required to be done, that the City authorities have stepped beyond their jurisdiction to make the roadway at least passable. Whom the footway round the Tower belongs to, I do not know, but it is in a state too disgraceful for even the field-marshal, who rules in the neighbouring fortress, to be supposed capable of approving. X. Y.

RAILWAY MATTERS.

Sleepers.—Some experiments have recently been made by the Permanent Way Company at Westminster, showing the operation of Dr. Boucherie's patent process for preserving timber sleepers from decay. The object of the process is first to expel the sap, and then fill the pores of the timber with a preservative solution. The apparatus is very simple, and the cost of the whole, it is said, need not exceed 50*l*. It consists of a slate tank, containing a solution of sulphate of copper, placed at an elevation of about 32 feet from the ground. Flexible tubes convey the solution to the timber intended to be preserved. A cap is fitted to one end of the piece of timber, and the flexible tube conveys the solution to it. The pressure from above forces the sap gradually out of the other end of the timber, and as that is accomplished the solution follows the sap, takes its place, and the operation is comp'eted. It appears from official statements that this process has been applied with success on the Northern of France Railway, where upwards of 80,000 beech and birch sleepers so prepared and laid in 1846, were found, in 1856, to be as sound as when first laid down. It also appears that about 230,000 telegraphic posts in France have been successfully treated by the same process. The great object appears to be, to apply the process to cheap wood, such as Scotch fir, beech, elm, and other timber, immediately after the tree has been cut down, with a view to make it available in place of more expensive timber.

New Station at Chippenham.—A new station is to be built at Chippenham for the Great Western Railway Company. It will be a covered structure 140 feet long, having a covered platform of 400 feet, with spacious offices and commodious waiting-room suitable for the increasing traffic there. The present goods station will also be taken down and a larger one erected a short distance up the line. The contract for the new works has been taken by Mr. Brotherhood, who has already commenced clearing the ground.

New Route to India.—The paper on a Syro-Arabian Railway, contributed to the geographical section of the British Association by Mr. Locke, suggested a line of railway from Acre to Busrah, passing the Jordan between the 32nd and 33rd degrees of latitude, to be continued from Busrah along the southern shore of the Persian Gulf, and crossing the northern spur of the Arabian peninsula by Bireimah to Sohar, to proceed coastwise to Maskat, and thence to Bombay. The gain *in space* of this line over the proposed Euphratean routes was stated to be 400 miles; and *in time* (making due allowance for greater velocity of locomotive than steamer), two days and a half, and, over the present overland route, 1,000 miles, or six days, which might be increased one day and a half by accelerating the speed in the long level reaches of the desert, where the traveller can observe, at the distance of several miles, any object of a size calculated to impede or endanger a train.

AUSTRALIAN NEWS.

THE Melbourne Market Committee had approved of the plans of the proposed new Eastern Market on 1st April. The plans are from the design of Mr. M. P. Smith, the city surveyor. The dimensions of the market are, as compared with any public edifice that has yet been erected in Melbourne, gigantic. The extent of the front exceeds, by nearly 100 feet, that of the Western Market—the latter having only 232 feet frontage, while the proposed Eastern Market will have 330 feet. The sides are to extend 313 feet, the whole forming a quadrangle. The frontages will abut on Bourke-street, Stephen-street, Little Collins-street, and a new street to be formed at the western extremity, from Bourke-street to Little Collins-street. The style of the chief buildings will be Italian. The estimate of cost will be nearly 40,000*l*. The income anticipated from rents is 9,500*l*. a year.

The several classes of mechanics and workmen at Melbourne have been holding meetings to obtain a general combination for restricting the time of labour to eight hours per day, which they contend is quite as much as ten hours in the mother country, considering the difference of climate. All the meetings of the different trades had been unanimous on this question up to the last despatches.

The executive at Melbourne had accepted a tender from Messrs. Holmes and Co. for the construction of 3¼ miles of plank road, at a short distance from town. The amount of the contract is 16,900*l*. being at the rate of nearly 5,000*l*. per mile. The Government have also accepted tenders for the erection of mile-posts upon the roads in the vicinity of Melbourne.

The following appointments in connection with the Victorial railway department had been made by the Acting-Governor:—To be Engineer-in-Chief and Surveyor, Mr. George Christian Derbyshire, C.E.: to be Engineers and Surveyors, Mr. Charles R. Sayer, C.E.; Mr. Robert Watson, C.E.; Mr. William B. Hull, C.E.; Mr. William A. Zeal, C.E.; Mr. William H. Greene, C.E.; Mr. William F. Hardie, C.E.; Mr. Frederick C. Christy, C.E.; to be Draughtsmen, Mr. Robert Adams, C.E. and Messrs. William E. Bryson, Adam A. Jackson, and Samuel W. Kemp.

The *Australian Builder*, speaking of colonial resources, says:—Some time since, Captain Pasley, the Commissioner of Public Works, published a general invitation soliciting samples of all kinds of building materials indigenous to the colony. This very commendable act has not been disregarded, many intelligent persons having been induced to turn their attention to the discovery of new and the improvement of existing materials. We have inspected several samples of fine granite from the Plenty, Mount Gellibrand (Broadmeadows), and Western Port, and a very beautiful specimen of porphyry, which is said to abound on Gabo Island. We have also seen some samples of blue lias cement, now being tested by Mr. Knight, the resident architect at the Houses of Parliament, and so far as the trial has gone the material appears to be of a very superior quality. Mr. Knight has also manufactured a small quantity of plaster

from colonial gypsum, but the sample forwarded to him was insufficient to make a fair experiment. The manufacture of bricks has also been wonderfully improved. A new kind of prepared brick, made by steam power, has just been turned out from an establishment on the Salt-water River, superior to anything ever made or even imported into the colony. In addition to the uniform squareness and beauty of these bricks, they are found to be perfectly fireproof, and fully equal to the celebrated Stourbridge clay.

In the department of Public Works, at Adelaide, according to the *Adelaide Observer*, of May last, "the committee advised no specific retrenchment of expenditure, but counselled general reforms in the service: the Government have, however, greatly reduced this item: instead of 600*l.* for occasional overseers of works, they have put down 100*l.*; on forage 50*l.* are saved: the salary of the colonial architect is now entered at 393*l.* instead of 600*l.*; and the salary of the assistant colonial architect at 300*l.* instead of 400*l.*: a draughtsman at 208*l.* disappears, and sundry reductions are made in clerks' salaries."

The new Congregational Chapel recently erected at the junction of the Norwood and Kensington townships, according to the same paper, was opened in April. The chapel stands at the end of the Norwood-parade, its principal front facing westward, and forming a conspicuous object along the Parade. The windows are filled in with stained glass. The interior fittings consist of open pews in cedar, with Gothic panels. The architect was Mr. George Abbott, of Adelaide; the builder, Mr. Samuel Lewis, of Kensington. The chapel, including all expenses, cost 2,196*l.* 14s. 6d.

BATS IN CHURCHES.

I see by your paper of the 26th April, a churchwarden wishes to know how to rid his church roof of bats,—animals which abound in this country, and in some places are a great nuisance. The method adopted here, and which is most effectual, never failing to drive them from the house, is to tie portions of the prickly pear (a species of cactus growing wild here, and of which they make hedges), on a string across the room, or even on the bottom of the punkah (it is my misfortune to be in a country where such things are required). The bats, in their blindness, fly against the spines, half an inch long, and suffer so severely, that they soon desert the house where this expedient is tried. The prickly pear could, I feel sure, be obtained in many places in England.

Rajahmundry District, Madras Presidency. INDICUS.

Notices of Books.

Aphorisms on Drawing. By the Rev. S. C. Malan, M.A. Vicar of Broad-Windsor. London: Longman and Co. 1856.

This nice-looking little volume, inscribed with propriety to Mr. J. D. Harding, contains some useful remarks, in short sentences. There would seem to be, however, in the rev. author's mind, some confusion as to the meaning and the aim of drawing. He says, "Drawing is human art, in *imitation* of nature." We need scarcely give any reason for saying that it is nothing of the kind. It may represent, but never seeks to imitate. The author considers drawing in a two-fold aspect, "as *positive*, or *real*, and as only *relative*;" and proceeds to define real drawing as "an image of God's works," and relative drawing as "an imitation of man's work." Drawing is the art of justly representing the appearances of objects by a certain process, and a view of the summer-house we have set up in our garden may be as fully real drawing as the representation of the everlasting hills which form the back-ground. Harm is done, as it seems to us, by seeking to invest a necessary and easily acquired power, which all ought to possess, with higher attributes than belong to it; and we do not think it necessary, therefore, to believe with the author that the idea of *devotion* "of right belongs to drawing" (any more than to every act of our lives), "since drawing is an image of God's fairest works." We deny altogether that no one can ever learn drawing unless naturally qualified for it by a combination of gifts, and protest against the doctrine, that "it is of no great use to teach children to draw before the age of fifteen or sixteen." All can learn to draw, and the earlier they begin, the greater will be the power they will acquire over the pencil.

VARIORUM.

The twelfth edition of "Black's Picturesque Tourist of Scotland" (C. and A. Black, Edinburgh) has been issued. A twelfth edition speaks for itself, and all we need say is that it abounds with illustrations, and forms an excellent guide to tourists in Scotland.——The fourth and concluding treatise of Messrs. Walton and Maberly's scientific series, by Dr. Lardner, titled the "Handbook of Natural Philosophy," is now published. It treats of electricity, magnetism, and acoustics, and completes a new edition of a very valuable and standard work. Many hundreds of engravings have been added to those of the previous edition, already numerous.——"An Introductory Lecture on Education, being the first of a series of plain and simple Lectures on the Education of Man," by Thomas Hopley, F.S.S. author of "A Lecture on Respiration," favourably noticed by us some time since, has been published by Churchill, of New Burlington-street. This is one (and the first) of a series written with a view to delivery in London for behoof of the funds of various charitable institutions. The training of the faculties and organs in general during childhood is treated of in this introductory lecture, and the views appear to be in general harmony with those of a sterling treatise by Dr. Andrew Combe on a similar subject.——Relfe, Brothers, of Aldersgate-street, have published "A Complete Guide to Government Appointments, and to the Civil Service Examinations," by J. C. Hurst, of Her Majesty's Civil Service. Besides lists of the branches of education requisite in candidates for the various Government offices, it contains some curious specimens of the results of past examinations, in defective spelling, and various other information, including an analysis of the Civil Service Commissioners' report, and a general preface.——"The Metropolitan Reformatories and Refuges," published by the committee of the Reformatory Union, 118, Pall-mall, gives an interesting and authentic account of some thirty institutions.——An important lecture on epidemical forms of disease, and the necessity and advantage of pure air and light to healthfulness in towns, on malaria and other poisons (such as lead), and on other sanitary subjects, has been published by Bell and Daldy, under the title of "The Progress of Preventive Medicine and Sanitary Measures." It comprises the Thrustton speech on the Wendy Commemoration, at Caius College, Cambridge, delivered in May last, by A. W. Barclay, M.D. officer of health for St. Luke's, Chelsea.

Miscellanea.

The Hull Glass Company.—This company, which was established and failed at Hull, is about to be completely wound up, after being in Chancery since April, 1850, the date of the order to wind up.

"The Georama."—A company is in course of formation to carry out a patented improvement in pictorial representations, by which, it is asserted, countries, cities, towns, and villages, with their surrounding or connecting scenery, may be impressed upon the imagination of the spectators, or nearly so, as if they were viewing the real objects themselves! "Persons who have visited dioramic exhibitions, similar to those at present in use, are aware that the scenery passes from right to left, or from left to right, in front of the spectator; but by this novel mode of exhibition, the scenery will pass sideways, or on each side of the spectator—so as to represent, at one and the same time, both sides of any street, road, river, canal, harbour, &c. In other words, the scenery will move from the centre, in front of the spectator, divergingly or obliquely, to either side; and as it thus passes, the spectator will fancy himself in the act of moving forwards, whilst the scenery will appear to be fixed and stationary."

Purify!—Will you allow me to make a brief sanative suggestion through the medium of your columns? In order to counteract the toxical gases abounding in the atmosphere of all large towns, and so productive of phthisis, I beg to propose that large superficies of matter be formed, of such composition as will cause the absorption of such gases. Carbonic acid gas and sulphuretted hydrogen, our two greatest enemies, might be counteracted by the familiar chloride of lime, exposed in sufficient quantity.—O. H. H.

*** We have often said that municipal and other authorities ought to be obliged by law to make large use of such agencies.

Death of Mr. James Bremner, C.E.—Mr. James Bremner, civil engineer and shipbuilder, at Pulteneytown, Wick, retired to bed in his ordinary state of health on Wednesday in week before last, but was suddenly taken ill, and died before twelve o'clock. Mr. Bremner's share in removing the steam-ship *Great Britain* off the strand in Dundrum Bay is well known: the fatigue he then underwent, says the *Scotsman*, tried his iron constitution very much, he having been almost constantly employed night and day for about three months.

Relics discovered at Taunton.—The workmen of Mr. Jeboult, builder, have found in the middle of the wall of a house in Fore-street, Taunton (probably about 250 years old), several specimens of the remains of Ham-hill stonework, supposed to have formed part of the porch of the Portman town residence, which formerly stood near the spot. The pieces appear to have been worked up in the original building, and consist of several carved bosses on the intersection of a groined rib, a carved gurgoyle, stone pattern complete, portions of the jambs of doors and tracery of stone windows. The workmen also discovered about the same time, whilst making alterations in a house in North-street, several sandstone chimney mantels, one of which is richly cut in sunk Gothic tracery, and was found in its original position, but covered with plaster and rubbish; also a moulded oak casement window, taken from the north wall.

Antiquarian Remains at Cardiff.—The workmen employed in constructing the town drainage at Cardiff discovered, last week, the vaulted entrance of a subterraneous passage in that portion of the road which passes along the pine end of the Cardiff Arms Hotel. On opening the aperture, so as to admit ingress, it was ascertained that the passage extended for about 50 feet beneath the pavement, and terminated in a Gothic arch, which had been blocked up with masonry of a later date. The passage appeared to have been ventilated from the roof in two places. These outlets were of a circular shape, lined with masonry, and had been closed at the summit with pieces of timber, still visible, supported by iron bars. The passage crosses the road diagonally from the small window of the Cardiff Arms Hotel towards the Castle Lodge, but it has not been opened more than 73 feet. The arch is roughly but solidly formed of Lockwith limestone, and the sides of river pebbles. The passage is supposed by some to have formed a communication between Cardiff Castle and an ancient mansion, which, in the days of the Commonwealth, stood on the site now occupied by the dead-house, with the view of affording the inmates of the castle an opportunity of escape in those troublesome times. It is also believed that this subterranean passage extends beneath the bed of the river Taff, to another ancient house, which formerly stood on the opposite side. On condition of a large reward being given him, a soldier is recorded to have showed the Protector's army a secret subterranean passage, which communicated with the castle beneath the bed of the river Taff, by means of which the garrison was surprised during the night. Cromwell having obtained the castle, the soldier was very properly hanged as a reward for his treachery.

The Great Bell for Westminster Clock.—This bell has now been raised from the pit, and was sounded for the first time with a clapper of 7 cwt. on Friday last. The casting is said to be clean, and the tone fine. The diameter is 9 feet 5½ inches; the height outside, 7 feet 10½ inches; inside 6 feet 8 inches; thickness of sound bow, 9 inches; of the waist, 3 inches. It has not yet been weighed, but, as it has shrunk less than was expected in casting, it is believed that the weight will be rather over 15 tons. The note is E natural. The bell has the following inscription running round it, just above the sound bow:—"Cast in the 20th year of the reign of her Majesty Queen Victoria, and in the year of our Lord 1856, from the design of Edmund Beckett Denison, Q.C.; Sir Benjamin Hall, baronet, M.P. Chief Commissioner of Works." On the waist or middle of the bell are the Royal arms, and the names of the founders and patentees of the mode of casting which has been adopted for it,—"John Warner and Sons, Crescent Foundry, Cripplegate, London." The certificate of Professor Wheatstone and the Rev. W. Taylor, F.R.S. or one of them, is required in addition to that of Mr. Denison. The quarter bells will now be proceeded with: the largest of them will be 6 feet in diameter, and will weigh about 4 tons, and is also to be cast at Norton, near Stockton-on-Tees.

A Large Gasometer.—A gasometer of enormous size, no less than 200 feet in diameter, is in course of construction for the Imperial Gas Company, near Stanley-bridge, in the King's-road, Chelsea. It comprises about 1,000 tons of iron, and, including the tank, will probably cost more than 20,000*l.* Messrs. Westwood and Wright, of Dudley, are the contractors. The works of the company here are now becoming of immense extent.

Boring and Excavating.—Mr. R. A. Brooman has patented an invention (a communication), which consists of certain arrangements of machinery, driven by steam or other like suitable power, whereby earth, stone, and rock are bored or excavated. The *débris*, or part dug out or excavated, is deposited in waggons, at the side or out of the track of the machine, and whereby the machine is made to propel itself forward; all these actions being simultaneous, and communicated from the same prime mover. Immediately behind the excavating tool a series of hollow funnel-shaped gatherers are fixed upon the shaft, and again behind them a hopper, which by means of slides is made to open to one or both sides, or to the centre of the machine.

Destruction of Ancient Relics in Scotland.—Another interesting antiquity has just been destroyed. The *John O'Groat's Journal* thus speaks of it:—The Dwarfie Stone of Hoy (one of the Orkney isles, if we mistake not) has, we understand, been irretrievably destroyed by the barbarian hands of some visitors to the island, who, to all appearance, maliciously lit a fire within the excavation in the stone, and by that means succeeded in splitting it into fragments. A reward has been offered to any one who may give such information as will lead to their conviction.

Opening of the Grand Belgian Economic Exhibition.—*L'Exposition d'Economie Domestique de Belgique* was opened at Brussels on the 25th inst. under the special patronage of King Leopold, and at the sole expense of the Government. It is held in Les Jardins Botaniques, and under the buildings attached to these grounds. The Minister of the Interior, accompanied by several of his *attachés*, inaugurated the opening. This is an exhibition emphatically for the working classes, and to attract the beholder by the simplicity and economy of the main articles necessary for the comfort and convenience of a family. It is held preliminary to the *Congrès International de Bienfaisance*, which is summoned for the 15th of next month, and which is to consider the most effectual means of improving the condition of the industrious classes throughout the world, and to adopt such measures as may be deemed necessary for the promotion of that view. The objects exhibited are divided into six classes, which are again subdivided into a great number of details. These classes are—1st, Lodgment and Construction; 2nd, Furniture and Household Objects; 3rd, Clothing; 4th Food; 5th, Tools and Implements of Manual Labour; 6th, Education and Instruction. The lowest price is marked upon each article. It is proposed that the exhibition shall remain open until the 1st of October; that the visitors shall be admitted gratuitously from ten to four o'clock each day, on Sundays, Mondays, and Thursdays; and that on the other days of the week they shall be admitted upon payment of half a franc each. A vast number of persons entered the building on the opening day.

A Dublin Athenæum.—A new literary institute, named the Dublin Athenæum, has been formed in Grafton-street, in the southern part of the city. Classes are in process of formation, reading-rooms and conversational galleries have been established, and a library is in course of collection. Lecturers are being engaged, and other arrangements made, for an active opening session.

Mortar in Ancient Buildings.—In corroboration of your statement in the last *Builder*, respecting the durability of mortar in ancient buildings, the following may be a farther illustration. It was only yesterday that I was examining, with an intelligent builder, the sole vestiges remaining of the ancient castle of *Oswestry*. These vestiges comprise two large masses of masonry, each containing several cubic yards, one of which, though completely turned out of its bed, still retains its integral tenacity: the other stands as the builder laid it. They are portions of the keep, and must date nearly as far back as the Conquest, if not anterior to that period. The masonry is of the very rudest kind, and is composed of large and small boulder stones, lumps of red sandstone, and fluts. They appear to me to have been laid dry at first in indiscriminate rubble, and grouted or flushed at intervals with mortar, composed of lime, sand, and pebbles; thus, from the shape of the stones, giving a proportion of nearly one-fourth of mortar to the entire structure. Nor does it appear to me that a hammer has been used even to the face of the wall, which is composed of the same sort of stone, but laid close, and as even as the surface would admit. Notwithstanding * the exposure of this mortar to the atmosphere for ages, in a bleak situation, it will still resist the blow of a hammer as well as stone, and it must have cost some powder and shot, in more senses than one, to bring it to a ruin, such as the wind might reduce some of our modern buildings to.

J. Blake.

* Read "Because of."—Ed.

The Restorations at Christ Church Cathedral, Oxford.—The restorations and alterations at Christ Church Cathedral, which are being effected by Messrs. I. and W. Fisher, of Oxford, builders, from the designs of Mr. John Billing, are progressing rapidly. The architectural features of the edifice, and more especially the groined roof, with its carved pendants, instead of being, as hitherto, in some measure concealed, will be prominently brought out to view. According to the *Oxford Journal*, the present dean, Dr. Liddell, aims at putting Christ Church Cathedral, as far as is practicable, on the same footing as other cathedrals, with regard to the public. The north transept, immediately opposite to the organ, is to be devoted to the public, and is to be fitted up with seats, which will accommodate at least 300 persons. The edifice, being not only a cathedral but a college chapel, it has been found necessary to modify the new arrangements, to suit both these characteristics. During the progress of the work, two sarcophaguses, or stone coffins, have been discovered. One of these was found on the south side of the choir, and the other in a corresponding position, between the second and third columns, on the north side of the choir, and almost on a level with the ground, forming, probably, at one time, a part of the paving, as the lid is richly sculptured with a long cross and other ornaments. On removing the lid, which appeared to be of the twelfth or thirteenth century, all that were found were remains perfectly decomposed, a portion of a shoe, remnants of the burial dress, and one bone—but no skull: in the coffin were also found a pewter chalice and paten. The coffins have been allowed to remain in their original resting-places.

The Wellington Statue at Manchester.—According to the *Manchester Guardian*, upon a pedestal of granite stands the statue of the duke: at each angle of the pedestal is a small projecting foot or pedestal for the reception of a subordinate figure: the two figures at the front angles are (to the spectator's left) Mars or Valour, and (to the right) Minerva or Wisdom. Behind Mars is the reward of valour—Victory: behind Minerva is the reward of wisdom—Peace. In four panels or plinths in the square of the pedestal will be placed as many bas-reliefs, but not in time for the inauguration. That at the rear is to portray the battle of Assaye, Wellington's greatest victory in India; that in front, the battle of Waterloo, his crowning victory in Europe. Between the figures of Mars and Victory is to be a bas-relief of the Congress of Vienna; and between Minerva and Peace another representing the duke receiving the thanks of the House of Commons. The statue and the four subordinate figures are all of bronze. The figures were cast by Messrs. Robinson and Cottam at their Pimlico works, and the aggregate weight of metal in them is about ten tons. The statue of the duke alone weighs five tons, and stands 13 feet high: the granite pedestal is about 19 feet in height, and weighs about 100 tons.

Archæological Excursions.—The annual excursion of the North Oxon Archæological Society was fixed for Thursday and Friday in this week, the 28th and 29th inst. Starting on the first day from Brailes, they were to proceed to Compton Wynyatts, Tysoe, the Sun Rising (where they were to lunch), Warmington, Shotteswell, and back to Banbury, where, in the evening, there was to be a meeting in the Vicarage Hall, Mr. W. Dickins, of Cherrington, in the chair. On Friday the route was to be to Adderbury, Deddington, Somerton, Middleton Stoney, Wendlebury, Weston-on-the-Green, Alchester, and Bicester, at which place the company were to dine. The Worcester Diocesan Architectural Society made, some short time since, a proposal to the Oxfordshire Society to join in this excursion: the offer was accepted, and a larger concourse of strangers than usual was anticipated.

A Model City.—We can imagine a city with no ground floors; with every house upon an elevated foundation; the drainage, the gas and the water supply, carried on through ducts, easily constructed, accessible in every part, and under constant inspection. We can imagine the railway on the same level, noiselessly distributing its hundreds of thousands, regularly throughout the day; the omnibus—lumbering make-shift of a half-civilised community—disappeared; the horse, rude slave of a barbarous unscientific time, preserved only as the slave of the rider for pleasure; a builded esplanade above the railway; above the aqueduct, the drainage and gas ducts, on a level with the lowest floor of the houses; the whole of the underground of life accessible to the inspector and the workman, ventilated, and constructed to assist in maintaining the health of the whole metropolis, instead of being the source of poison. We can imagine trades and callings distributed into classes and districts; the penny railway ride being only a customary portion of the rent. The houses of all classes, palaces; the roofs, emancipated from smoke, garden-terraces; and the view from any elevated tower, a picture of health and beauty, of animated movement without crowding.—*Spectator*.

Statue of Vandyke.—At Brussels during the late *fêtes*, a statue of Vandyke, the work of M. Cuyper, a native architect, was inaugurated.

[Advertisement.]

MESSRS. CLARK and CO.

15, Gate-street, Lincoln's-inn-fields.

Gentlemen, — After eight years' trial of your Patent Revolving Shutters, erected here, I can safely pronounce them most effectual in their action, and they have given me the utmost satisfaction.

I am, Gentlemen, yours truly,

Geo. Downe.

155, Leadenhall-street, August 7th, 1856.

TENDERS

For building school and residence, St. John's, Upper Lewisham. Mr. Joseph Peacock, architect.—

Thompson	£1,416	0	0
Wells	1,380	0	0
Patman and Co.	1,339	0	0
Todd	1,278	0	0
Harmer	1,268	0	0
Peper and Son	1,256	0	0

For an Independent chapel and schools, at Banbury, Oxon:—

Orchard and Co.	£2,589	10	0
Cartidge	2,150	0	0
Chesterman	1,660	0	0
Davis (accepted)	1,397	0	0

For re-building premises in the rear of 134, Fleet-street. Mr. C. H. Howell, architect:—

W. Cubitt and Co.	£4,645	0	0
Brown and Co.	4,542	0	0
T'Anson	4,534	0	0
Lucas, Brothers	4,231	0	0

For the erection of new parsonage-house, at Little Brickhill, near Fenny Stratford, Bucks. Mr. Arthur Billing, architect. Quantities supplied:—

Williams (Luton)	£1,497	0	0
Andrews (Tring)	1,445	0	0
Cooper (Aylesbury)	1,325	0	0
Lawson and Joy (Bedford)	1,325	0	0
Quarterman (Oxford)	1,298	15	0
Chesterman (Banbury)	1,198	0	0

For hotel, to be built at Knightsbridge, for Mr. Martin Wallace. Mr. F. R. Beeston, architect:—

Myers	£7,700	0	0
Cubitt and Co.	7,380	0	0
Lucas and Co.	7,308	0	0
Holland	7,197	0	0
Wilkinson and Son (accepted)	7,189	0	0

For alterations to Mr. White's premises, 68, Cheapside. Messrs. Tress and Chambers, architects. Quantities supplied:—

Brand	£1,498	0	0
Brown (College Hill)	1,437	0	0
Brass and Sons	1,397	0	0
Downs	1,360	0	0
Lawrence and Son	1,342	0	0
Macey	1,289	0	0
Tolley	1,283	0	0
Harmer	1,044	0	0

For a Chapel of Ease, in Lombard-street, Mint-street, Southwark, for the Rev. William Cadman. Mr. Arthur S. Newman, architect. Quantities supplied by Mr. Arthur Billing:—

	Kentish rag and Bath stone dressings.	The same with terra-cotta dressings.	Picked stocks and Bath stone dressings.	The same with terra-cotta dressings.
William Winder	£1,461	£1,391	£1,397	£1,327
William Higgs	1,355	1,300	1,355	1,280
Peace and Tuckwood	1,282	1,221	1,225	1,153
Pollock & McLennan	1,277	1,200	1,259	1,182
Dove, Brothers	1,197	1,197	1,175	1,175
Patrick and Son	1,175	1,090	1,140	1,055
Joseph Peake	1,125	996	1,087	938
T. and J. Coleman	1,113	1,056	1,069	1,022
William Wills	1,012	991	994	971
Joseph Hayden	920	940	—	—
Benj. Wells (accept.)	880	878	865	853

The terra cotta was specified to be supplied from Mr. Blanchard's Works, Blackfriars-road.

TO CORRESPONDENTS.

"*Taking out Quantities*"—Sir,—As one of your oldest subscribers, I will feel obliged by any of your correspondents replying to the following:—It is usual with many architects to employ building surveyors to take out quantities: can the architect demand a copy of the detail calculations?—S Y.

"E. W. T." publicati on would not be desirable at this moment.—"B. B. B."—"W. P."—"J. G."—"W. G. E."—"Subscriber."—"C. R. S."—"D. G. A."—"C. E."—"W. R."—"Otho."—"F. J. F."—"J. C."—"G. W."—"H. A. H."—"C. Estate."—"G. T. R."—"E. A. S."—"R. B."—"A. B."—"J. C."—"Constant Subscriber."—"J. C. H."—"B. O. B." (under our limit).—"W. D. M."—"F. S."

Erratum. For Duke of Alnwick, p. 464, *ante*, read Duke of Northumberland.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the Editor, and not to the Publisher.

ADVERTISEMENTS.

A YOUTH WANTED in a BUILDER'S OFFICE, who understands time and book keeping. Must have some knowledge of the business. Apply, with full particulars of age, where last employed, and salary required.—Address, W. A. L. 80, Aldersgate-street.

SURVEYOR of GAS MAINS, and CHIEF INSPECTOR of LIGHTS.—A Metropolitan Gas Company is in want of a Gentleman to fill the above appointment. It is indispensable that he be a good draughtsman, of mechanical abilities, good address, and a thorough man of business. A DISTRICT INSPECTOR is likewise required, who must possess similar qualifications to the above.—Apply by letter only, stating particulars of previous engagements, age, salary expected, and copies of testimonials, to GAS, Wadham's Newspaper Office, 169, Strand.

TO BUILDERS' CLERKS.

WANTED, a BUILDER'S CLERK, of good, practical experience. He must be a good draughtsman, and full competent to take off quantities, make estimates, measure up works, and keep the books of a builder's office.—Reference will be required.—Address, stating age, terms, and where last employed, to DELTA, Post-office, Leicester.

TO FOREMEN JOINERS.

WANTED, a capable MAN to manage the joiners' department of a builder's establishment accustomed to set out the best work for, and superintend, a number of men working piece-work, in connection with machinery. Good references indispensable. Apply, in the first instance, to Mr. ELLIS, 44, Botolph-lane, City.

WANTED, an ASSISTANT in an Architect's Office, thoroughly acquainted with ecclesiastical architecture and land-surveying.—Apply by letter to OMEGA, at Messrs. Aldridge and Street's, Clement's-inn, stating age, terms, references, &c.

WANTED, a DRAUGHTSMAN, thoroughly acquainted with building details, who can work out a finished drawing from a sketch, and who can measure work. He is competent to land and town surveying would be preferred.—Address, stating experience, capabilities, and terms, to C. S. care of Abbott, Brown, and Co. Advertising Agents, 2, Upper Wellington-street, Strand.

WANTED, in a Land-Surveyor's Office in the country, an ASSISTANT, who is fully competent to take a part in surveys in the field, and to make copies of maps in the office. A good reference will be required.—Address, W. B. Post-office, Banbury, Oxfordshire.

TO KILN BURNERS.

WANTED, a MAN who perfectly understands GLAZING and BURNING SANITARY PIPES. Address, Z. Z. Mr. Arnold, 23, Poultry, London.

WANTED, a SHOP FOREMAN of JOINERS, in London.—Apply to Mr. TIBBATTS, 44, Bishopsgate-street Without.

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WANTED, by a respectable Man, a SITUATION as FOREMAN of a BRICKFIELD, who has had twenty years practical knowledge in Making common stocks, and stop brick, and white close kiln brick, tiles, and drain pipes of every description; and well understands making, preparing, and moulding such goods, and all matters connected therewith. Has no family to embrace. Most respectable references can be given.—Address, A. B. J. Bristow, 24, Hanbury-road, Stoke-Newington.

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MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING Also, Lathe Turning, Picture Carving, Frame, and other specimen Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford bridge.

MAHOGANY and WAINSCOT seasoned by Sutherland's New patent Process JOHN COUMBE solicits an inspection of his stock. The process for seasoning both to season his wood in a comparatively short space of time, fits it at prices generally charged for wet wood.—Address, PATENT WOOD SEASONING WORKS, Lady Lake's grove, Mile end gate

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Pine Plank, 3s. 6d.; Spruce Deals, 3s.; Mahogany, 6d. per ft. Yellow Battens, 12l 10s.; E. Walnut, 7d. Carriage free in town.—F. FORMAN, 1, Walnut-tree-walk, Lambeth-walk

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of its kind ever established, a large assortment of PREPARED FLOORING and MATCH BOARDING, seasoned and ready for use, from 1 inch to 1½ inch thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Sills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's road, Chelsea.

NOTICE of REMOVAL.—EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton road, Pimlico, to the KING'S-ROAD, CHELSEA, where their orders will be promptly executed as heretofore.—Please address, E. SIMMS, King's-road, Saw mills, Chelsea, opposite Manor street.

MOULDINGS BY MACHINERY. Cyprus, Sash bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to

E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S-ROAD, CHELSEA.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country an extensive assortment of specimens and patterns commencing at 4s per foot superficial, together with every particular of its cost and adaptation, can be obtained of Messrs. H. P. BURT and CO. 2, Charlotte-row, Mansion-House; or of Messrs. ARROWSMITH and CO. 86, New Bond street.

ACORN TIMBER WHARF and SAW MILLS, CANAL BRIDGE, OLD KENT-ROAD, LONDON. A Monthly Price Current forwarded on application. RICHARD MAY, Proprietor.

ILETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that they have completed their extensive arrangements, and will be happy to execute all orders entrusted to their care with despatch and punctuality. Wet and dry docks, and powerful steam-cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring match boarding, &c. &c. always in stock at reduced prices.

ROBINSON and BARTRAM, SAWING and PLANING MILLS, BELVIDERE-ROAD, LAMBETH, and SWAN-STREET, BERMONDSEY, having completed a useful MACHINERY for SAWING TIMBER, for building purposes, will be glad to receive ORDERS in this Department, and beg to assure their friends that all favours shall be executed in the best manner, and with the utmost punctuality and de-patch

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NOKES and CO invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:—

1-inch white, 13s. 6d. per square;	3-inch white, 15s. per square;
1-inch white, 18s. per square;	3-inch yellow, 15s. per square;
3-inch yellow, 18s. 6d.;	3-inch yellow, 20s.

Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.

STEPHENS' DYES or STAINS for WOOD. The following extract from a letter the Proprietor has obtained leave to make public:—"Northgate, Colchester, Feb. 5, 1855.—Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant,

"SAMUEL GRIMES, Builder.

"To Mr. Henry Stephens, 71, Stamford street, London."

Samples and prospectuses free to any part of the kingdom.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction in last year's prices of French polish, white and brown hard spirit varnishes, spirit lackers, and finishing spirit. The present prices are 6s. to 6d. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Leather lane; and 14 and 15, Dorrington-street, Holborn, London.

TO PAINTERS, BUILDERS, &c.—LIVETT, FRANK, and SON, No. 14, Borough, London-bridge opposite the Railway Station, Factors, &c. quote their present prices for cash—Linseed oil, 3s. 2d.; boiled, 3s. 4d.; turpentine, 2s. 8d.; oak varnish, 7s. 6d. per gallon; genuine white lead, 23l.; second, 21l.; best Essex ditto, 24l.; best Essex oil, 4s. per cwt.; colours, brushes, &c equally low Lists of prices on application.

PAINT, certified by the Government Engineers and Contractors to be the CHEAPEST and BEST ever discovered for wood and iron, price 35s. per cwt.—Apply to the London Anti-Oxyde Paint Company, D. WALKER, Secretary, 29, New Bridge street, Blackfriars

KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade, and of the manufacturers, G. B. KENT and CO. 11, Great Marlborough-street, London. Established 1777. M.B. Kent's Painting Brushes are all stamped G. B. KENT & CO. Price Lists forwarded by post.

GRAINING by MACHINERY.—The present system of graining is far surpassed by the use of BELLAMY'S PATENT GRAINING MACHINES, by which an ordinary workman can produce first-class work, and at an immense saving of time. The designs are perfect imitations of the choicest specimens of woods and patterns of the first artists. The Patent Graining Company are now prepared with a large and well assorted stock of instruments, which they offer to the trade, and parties wishing to purchase

Grained paper in imitation of all kinds of fancy woods of the choicest descriptions, in the piece, or in sets for panels, &c. wholesale and for exportation. Pattern-boards and cards for the trade in great variety

Painters, Grainers, Decorators, Merchants, and others are respectfully invited to inspect the patterns, and see the process at the Company's Offices, 36, Minories, Lond n.

TO BUILDERS, PAINTERS, &c.—OAK GRAINING in OIL 4d. per yard, in quantities not less than 60 yards. Church work done in the Elizabethan style No objection to the country, if terms are paid. Reference given.—Apply to CHARLES PETTET, 5, Princes-street, Edgware-road.

TO BUILDERS, PAINTERS, &c.

GRAINING of the best class WOODS and MARBLES; prices low. Specimens and references, if required. JOHN TAYLOR, 5, Compton-street, Brunswick-square, London

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gas, Noxious Vapours, Damps, and Salt Water; also intense heat without fire. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that oils of Wolston's Torbay Iron-Paint will effectually cover as much surface as 281lbs. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Private, Shipping purposes (Wood or Iron), stucco and Cement it possesses long and durability will be secured to Builders and Painters, for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and Co. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brick work, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDIAVAL LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works Mr THOMAS WEEKES.

Agents in London, Messrs. GEORGE POUTER and CO. Limemerchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 19, North-wharf-road Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lime, Lime Juice, Roman and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

11 George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any other lime.—All Communications to be addressed to the General Offices, 50, Old Broad-street, London; to Mr. MONUMENT, 4, Carolina-place, Clifton-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be tapered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road Office, 4, George-yard, Lombard-street.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs.
Warehouse, No. 1, Wharf, Paddington-basin

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce on demand the canal company's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 16, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead, whilst the consumption of material is less than for one coat. It dries very fast and hard.

HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three-fourths the price.

HUBBUCK'S PATENT WHITE ZINC PAINT is invaluable for Iron Ships and Iron exposed to salt water; neither blue water, nor noxious vapours from cargo, nor heat on funnels of Steam Vessels act upon it. Sold by the Wholesale Paint Dealers, in original packages, stamped, Hunnicx, London. PATENT; and when so marked the quality is guaranteed.

HUBBUCK'S COPPER COLOUR ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber coated with this Enamel is not attacked by the worm neither do barnacles attach to it.

Full particulars of THOMAS HUBBUCK and SON, Paint and Varnish Works, opposite the London Docks, London.

OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

CHARLES RICHARDSON,
3 & 6, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS,
PORTLAND ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 6 South Wharf, Paddington.

NOTICE.

CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now both the GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London

GREY STONE LIME WHARFS,
12, UPPER GROUND STREET, Blackfriars (Surrey side),
7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 8s. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote. Office, at Warwick.

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keen's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Washing Whiting, Sand for ashphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any stations on the London and Southend and Eastern Counties Railway, or any railway connected with them. Vessels of 200 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above named articles can also be procured, as well as all kinds of fire goods both Welsh and Newcastle. Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here Lime is packed in hogsheads, casks, jars, &c for exportation

General Office—No. 12, GEORGE-YARD, LOMBARD-STREET. Letters addressed to Grays Essex, will meet with immediate attention.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brick-fields, which are only a quarter of an hour's walk from the City. H. D earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.

Malm Place, half-washed Stock, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brick-fields, Grange-walk, near the Rosemary Branch, Hoxton

N.B. Light-coloured Pit Sand of a proved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BLUE BRICKS and TILES, of superior quality, and in great variety of mould, for ornamental work, paving, coping, and general purposes.—GEO. C. RYLAND, Haulstone Wharf, Crescent, Birmingham.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury New-park, would be willing to enter into arrangements with builders and others for supplying first class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Dell's Farm, St. Ike Newington Green.

11, George-yard, Lombard-street, City.

ON SALE, 3,000,000 PLACE BRICKS, of good quality, for cash or approved bills. Immediate delivery.—Apply to G. BOOTH, Agent, as above.

REMOVED FROM CRITCHILL-PLACE, NEW NORTH-ROAD, HOXTON.

BRICK MOULDS (improved), Steel-face Stocks, and Plates, with Screw Stock Pegs, used four seasons. Various sizes kept on hand. References, where in use Brick Mill Work and Implements. J. LEACH Millwright and Engineer, 9, St Peter's-square, Hackney road, London.

ROUPELL-PARK BRICKFIELDS,
LOWER NORWOOD, SURREY. Entrance, Norwood end, Palace-road.—BRICKS of the first class. Red Kiln Bricks Cutters, Dressings, Facings, and Paviors, Clamped ditto, Yellow and Pale, Seconds, Paviors and Pickings, Washed Stocks, Stocks, and Place.—Apply to THUMAN and CO. Norwood Lodge, Palace-road, Roupell park, Lower Norwood, Surrey.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for hirers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Warlingham (close to the field), leave at 6 and 9 30 a.m. and 3 p.m.; return at 9 55 a.m. and 7 35 p.m.

HENRY C. MOUNT, Sec.
37, King William-street, City.

BEADON'S EAVES GUTTER TILES.—MR. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the south-eastern suburbs of London, at 7½ per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile, and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5s. per 100. This charge to include tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

FOR SALE, 20,000 hexagon RED TILES, of first-rate quality, for flooring &c.—Apply by letter to Y. Z. Office of "The Builder," where a specimen may be seen and price obtained.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambraic Mosaics, manufactured of a highly decorative character, and extreme durability, Slabs and Tiles for Fireplaces and Hearths, Covings for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

MAW and CO.'S ENCAUSTIC TILE PAVEMENTS, form a highly decorative and durable substitute for ordinary floorings, and their perishable oil cloth now in use for entrance halls, corridors, conservatories, baths, passages, &c. &c. Price 1 pattern-book forwarded, post-free, and sketches of the designs adapted to any given dimensions, supplied without charge, accompanied by estimates, on application to MAW and CO. Benthall Works, Broseley, Salop

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 31, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURORS," page 581, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

PANTILES, PAVINGS, &c. — J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 32s. 6d. per 1,000; floor bricks and 6-inch pavings, at 37s. 6d. per 1,000; 8-inch pavings, at 57s. 6d. per 1,000; plain tiles, at 30s. per 1,000, delivered. Cash prices.—Delivered on trucks in London or Eastern Counties Railway.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 15, South Wharf, Paddington, Manufacturers of Improved Plain and Ornamental Roofing, Ridge, and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Sewerage Pipes, &c. adapted for Sanitary and Railway purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted impervious, and to resist all acids and exhalations.

*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Quoin Blocks, &c
Tividale, Staffordshire.

WINDOW-BLINDS.—J. FULLER, Manufacturer, 29, Charlotte-street, Blackfriars-road. Established, 1850.—Venetian Blinds, from 10s. each, or 8d. per foot; Wire ditto, 7s. each, or 1s. 9d. per foot; Holland ditto, from 5s. each, or 5½d. per foot. Every other description of Blinds equally low, warranted of the best manufacture. Discount to Builders and the Trade. Fixed complete.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 3s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and 4 accounts to Builders and the trade, forwarded on application, post free.

CHEAP AND DURABLE ROOFING.

By Her Majesty's Royal Letters Patent.

F. McNEILL and CO. of LAMB'S-BUILDINGS, BUNHILL-ROW, LONDON, Manufacturers and ONLY Patentees of

THE PATENT ASPHALTED FELT, FOR ROOFING HOUSES, VERANDAHS, SHEDS, &c.

Patronized by

HER MAJESTY'S WOODS AND FORESTS, HER MAJESTY'S COMMISSIONERS OF CUSTOMS, HONOURABLE EAST INDIA COMPANY, HONOURABLE BOARD OF ORDNANCE, HER MAJESTY'S ESTATE IN THE ISLE OF WIGHT, ROYAL BRITANNIA GARDENS, REGENT'S PARK,

And by the most eminent members of the Royal Agricultural Societies of England, Scotland, and Ireland, at whose great annual shows it has been exhibited, and HAS OBTAINED THE PRIZE for the best Sheathing Felt for covering farmers' stacks at the Royal Agricultural Society's Meeting, Battersea Park, London, and at Newcastle, Lincoln, and Yorkshire. It is impervious to rain, snow, and frost, and is made in rolls of 24 yards in length, by 32 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples sent free by post on the receipt of a stamped letter, with TESTIMONIALS, some of the first scientific men of the day, from Architects, Builders, Noblemen, and Gentlemen who have extensively used the felt for their own purposes. Hessian Felt for covering Boilers, &c., is also manufactured by which a saving of about 25 per cent in fuel is effected. The Trade are respectfully invited to send their orders DIRECT to the FACTORY, as the best means of being supplied with the genuine article, and in the best suited for their roofs. To prevent Leakage CAUTIONED AGAINST DISCRIPTIONS and IMITATIONS made in Great Britain who the above roofing is made are F. McNEILL and CO.'s Manufactories, LAMB'S BUILDINGS, BUNHILL-ROW, Roofs covered with the Felt to be seen at the Factory, also the new Vice-Chancellor's Courts the passages and others leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

GENUINE SEYSSEL ASPHALTE.

ORSI AND ARMANI.

THE EXCLUSIVE SUPPLY OF SEYSSEL ASPHALTE (FRANGY)

DIRECT FROM THE MINES.

REDUCTION IN THE PRICE FOR VARIOUS WORKS FIFTEEN PER CENT.

AND THE

WORK GUARANTEED FOR THREE YEARS.

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

PATENT METALLIC LAVA.

A printed List of the important Works for Flooring, Roofing, Covering of Arches, &c. &c. executed from 1848 to 1852, with this Material, may be obtained at the Office of

ORSI AND ARMANI.

THEIR PATENT METALLIC LAVA IS FIFTEEN PER CENT. CHEAPER THAN THE GENUINE SEYSSEL ASPHALTE OF MESSRS. O. AND A.

OR THIRTY PER CENT. LOWER THAN ANY OTHER MATERIAL CALLED BITUMEN OR ASPHALTE

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

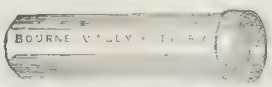
Begs to call the attention of Surveyors, Contractors, Builders, and Builders to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

THE LATE FIRE AT THE BOURNE VALLEY POTTERY,

NEAR POOLE, DORSET.



The Proprietors of the above Works respectfully inform Surveyors, Contractors, Builders, and others, that they have now in stock a large and well-assorted necessary for the full business, and are now ready to execute, at LOW PRICES, orders for SALT-GLAZED STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, CLOSET PANS, TRAPS, &c. &c. Also, Chimney Pots and Lines, &c. &c. made of the best materials, in any quantity, and at the shortest notice. Their Pipes are very carefully manufactured, and are guaranteed to be sound in the Kiln, and of the best quality, the produce of the estate can be rendered at very moderate prices.

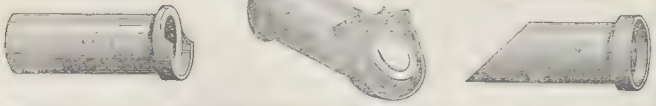
The goods, or any information respecting them, may be obtained on application to the Manager, Mr. J. T. BOUNSALL, Bournemouth, near Poole; or the Agent in London, Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth.

N.B. A liberal discount to the Trade. A Large Stock always on hand.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.  WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Socket Pipes, Bends, Junctions, Water Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire-Bricks made from the Clay of this estate have been tested, and are well known, to be equal to the best of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly seven years, and having regularly supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Castle Market, Wellington and Clarendon Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties who have used the Pipes have continued to do so, they undertake this as a fair test of the quality of the articles supplied by them: and as the Company have no Partners, Agents, or Travellers, offer their Goods to Contractors, Builders, and others, at prices which cannot be equalled by any Company NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,

which is recommended for the simplicity of its construction, and the ease with which it works.

In the introduction of the vibrating standard, the cumbrous carriage and expensive slides and gearing are unnecessary, rendering the pump considerably less than Pumps made on the old plan.

Deep and Shallow Pumps for raising fluids from a depth not exceeding 24 feet, also Garden Pumps, constructed on the same principle.

JOHN WARNER & SONS,

8, Crescent, Jewin-street, London, Manufacturers and Patentees.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for waterworks, mills, breweries, dairies, gardens, sinks, liquid manure, slops, farm and sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells. PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 3s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

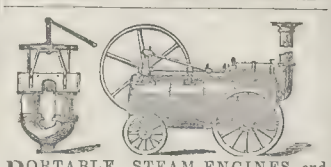
Upper Ground-street, Blackfriars Bridge, Surrey Side.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, [illegible], raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,

Engineers and Contractors, Johnson-place, Holland-street, Southwark, London.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars Bridge (Surrey Side).

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND HAND STEAM-ENGINES of various powers suitable for contractors' work generally. Apply to Messrs. MAUDSLAY and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

LAND DRAINAGE.—Mr. THOS. SCOTT, 5 CHARING CROSS, LONDON, is now prepared to undertake large or small DRAINAGE CONTRACTS, and to complete the same in as short a space of time as may be required.—Reports as to the most improved system to be adopted, or its new drawing; and also to officers of the Crown.

MACINTOSH INDIA-RUBBER WAGGONCOVERS, of peculiar [illegible] sizes of different shapes also cases, and can be inspected at their Warehouse, Messrs. SON and DAVIES, 11 and 12, Aldersgate-street, and at the Factory, India-Rubber Steam Works, Bow-common.

DURABILITY of GUTTA PERCHA PIPING.—Many inquiries having been made as to the durability of the Patent Gutta Percha Tubing, the Gutta Percha Company have much pleasure in publishing both the following Testimonials:—

SIR RAYMOND JARVIS, Bart., VENNER'S HOUSE, NEWPORT, Isle of Wight.

Newport, Isle of Wight, March 14th, 1850.

In reply to your letter, dated this morning, concerning the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many persons have recently examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it [illegible] in the houses the water is elevated by it.

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Pipes.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, [illegible] Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Springs for Carriages, Railways, &c. Vulcanized Rubber Sheeting, Paper, Canvas, and Prepared Vulcanized Rubber Solution for Paste.

Vulcanized Rubber in sheets from three to four feet wide and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES BYNE HANCOCK, Gosset-mews, Gosset-road, London.

ROYAL POLYTECHNIC.—Patron:—H. R. H. PRINCE ALBERT.

Last Two Weeks of the Present Arrangements, previous to the Pantomime Season. Recreations and Professorships of Geology, Garden Theatre. Popular Lectures on Chemistry, &c. by J. H. Pepper, Esq. and Dr. Bachhoffner. Every Evening at Eight, Mr. and Mrs. Wells' Inimitable Entertainment, entitled Scottish Music, at Lectures Hall every Tuesday, Thursday, and Saturday Evening, at Eight, Mr. Walter Rosamond Lecture on the Writings of Charles Dickens, Friday Evenings, at Eight. Next Monday Evening, Lecture at Eight, on the Decoration of Paper, by J. H. Pepper, Esq.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET. HALF-SOCKET.

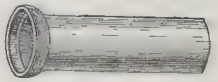
MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

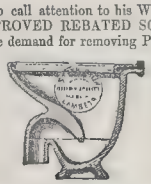
STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.



Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICES.

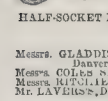
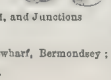
JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

Pan, 3s. 6d. Pan, 3s. 6d.

 Trap, 2s. Trap, 2s. 

HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz. :—

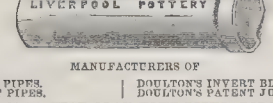
Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, Kings-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Camden-road, Hoxton.
Drawings, with Prices, will be forwarded free, on application.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.



MANUFACTURERS OF

DOULTON'S STONEWARE PIPES. DOULTON'S HALF-SOCKET PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.

GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE

The clay obtained from the pits on the island of Brankesea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Brankesea Island, Poole, Dorset.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

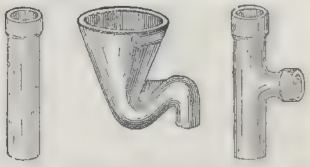
W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

STONE PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES.—E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yard-stone paving, sinks, slabs, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY LEIGH near SOUTHEND, London Establishment, Eden Wharf, St. Blackfriars.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

SUPERIOR GLAZED STONEWARE DRAIN-PIPES, &c. The attention of Boards of Works, Contractors, and others, is invited to the MANUFACTURES of the DORFIELD Yorkshire STONE POTTERIES, with which for evenness of finish and imperviousness they can compare. Tubes, bends, junctions, traps, and all the requisites of a complete system of drainage, also chimney-pots, garden-edging-tiles, sinks, and every description of fire-brick applicable to sanitary works, in any quantity, and immediately available, at the London Depôt: No. 4 Warehouse, Goods Station, Great Northern Railway. City Offices, 27, Bucklersbury, City, where Illustrated Price Lists can be obtained

E. B. BEAUMONT, Proprietor.
J. D. JONES, Agent

N.B. Chimney-pots, roofing tiles, ridging, quarries, pigs, floor-ing and paving tiles, fire-bricks, oven-bricks, bakers' lumps, cinder oven lumps and quarries.

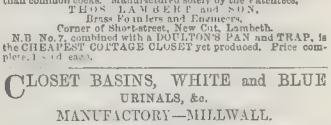
PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					3d. per foot
4	"	"	"		4d. "
6	"	"	"		5d. "
9	"	"	"		9d. "
12	"	"	"		1s. 5d. "
15	"	"	"		2s. 6d. "

These pipes are made for steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The porous seamless red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE No 7.



is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 1l. 5s. each.

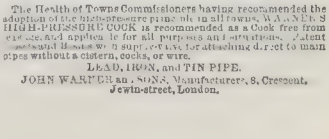
CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:
ARTHUR-STREET, NEW OXFORD-STREET.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS,



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from extraneous applica-tion for all purposes and situations. Patent Combined Hose-work supplies the means for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

SALES BY AUCTION.

TO BUILDERS, CONTRACTORS, SAW-MILL PROPRIETORS, ENGINEERS, AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, at the FACTORY, Ranelagh-road, Thames-bank, Pimlico, on MONDAY, SEPTEMBER 8, and following day, at ELEVEN, in lots, without reserve, the valuable MACHINERY, Plant, and Tools of a Builder's Factory, by the best makers, and with all the modern improvements, including a very powerful rack-bench with saws and gearing two iron circular saw benches, one iron vertical-saw frame, planing machine by Parsons, an universal tenoning machine, effective American sprung tenoning, mitreing, and moulding machines, a very superior double-cylinder steam-engine of 23 horse power, two tubular steam-boilers, 600 feet turned shafting with numerous other effects—To be viewed overhead travelling-crane, two self-acting screwing-machines (one by Whitworth) to cut from ¼-inch to 13-inch and from ¼-inch to 2 inches, a self-acting slide rest by Holtzapffel, upon bed 20 feet long, vertical drilling-machine, two cutting and punching presses, two smaller lathes, 200 feet pipes, set three-throw pumps with metal barrels, gas-fitting, forty joiners' benches, cramps, screw-jacks, stocks and dies and steel tools, 200 scaffold boards, fifty navvy-barrows, crabcranes, trolly, six smiths' forges, anvils, smiths' tools, an assortment of valuable patterns, and numerous other effects—To be viewed on Friday and Saturday previous to the sale, when catalogues (at 6d. each) may be had at the Works, and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO BUILDERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, at the PREMISES, Ranelagh-road, Thames-bank, Pimlico, on WEDNESDAY, SEPTEMBER 10, and following day, at ELEVEN, the STOCK of well-seasoned FITTINGS and MATERIALS, including 50,000 feet of deal boards, from 4 inch to 9 inches, 6,000 feet 1-inch match boards, 31,000 feet run oak and deal plank, 52,000 feet run spruce and pine plank, 80,000 feet matchboard and wainscot plank, 50 cubic feet Dantzic timber, 25 squares 14-oz. patent sheet iron, 20,000 feet moulding and beads, 1,250 moulded and other doors, 200 pairs sashes and frames, 500 oak sills, 100 prepared window linings, a stock of builders' ironmongery in axle pulleys, brass, bolts, locks, nails, screws, files, &c. 20 tons bar and rod iron, 5 cwt. gun metal, 1 ton sheet iron, brass cabinet work, and other effects.—To be viewed on Friday and Saturday previous to the sale, when catalogues at 6d. each may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Proprietor (who is retiring) to SELL by AUCTION, on the PREMISES, Herbert's-buildings, Waterloo-road on TUESDAY, SEPTEMBER 23, and following days, at ELEVEN, in lots, without reserve, the MACHINERY, Tools, and Stock in-Trade of a FILE and TOOL MAKER, the tools principally by Smith, Beacock, and Tannett, of Leeds, including fourteen self-acting lathes, one 15-inch and one 10-inch screwcutting, with beds 20 feet and 22 feet long, screw-cutting, from 24 inches to 84 inches centre; four surfacing lathes, to take in surfaces from 4 feet to 7 feet diameter; two boring-mills, thirty engine and hand-turning lathes, with slides; five self-acting planing-machines, the largest to take in 3 feet wide and 12 feet long; three self-acting shaping-machines, three self-acting drilling-machines, slotting-machine, self-acting screwing machine, nicking machine, oscillating steam engine of 14-horse power, Cornish steam boiler, 18 feet long; 300 feet turned bright shafting, overhead motions, 4 steps, and driving gear; fifty vices, fifty workbenches, boring-bars and heads, steel tools, stocks, and dies; forges, smiths' tools. Lloyd's fan, five tons of cast and shear steel, ten tons of bar and rod iron, and numerous other effects.—To be viewed on Saturday and Monday previous to the sale, when catalogues may be had on the Premises; or of Messrs. FULLER and HORSEY, Billiter-street, City.

IMPORTANT WATER-SIDE PROPERTY, ON THE THAMES, IN THE CITY OF LONDON.

MESSRS. FULLER and HORSEY are instructed by William Crawshay, Esq. to SELL by AUCTION, on WEDNESDAY, OCTOBER 15, at TWELVE, at the MART (unless an acceptable offer is previously made by private contract), the splendid MERCANTILE PROPERTY, held under the Corporation of London, known as George-yard, Upper Thames-street, in the city of London, having a frontage next the Thames of 133 feet, and occupying a superficial area of about 34,000 square feet, a site unrivalled in the metropolis, either as a depôt for landing and loading goods or for carrying on any wholesale business for which extensive water-side premises are desirable. George-yard is universally known as the London establishment of Mr. Crawshay, the eminent ironmaster, and has been in the occupation of his family and predecessors for more than a century. The trade carried on ranks among the first in the City, the returns are very large, and, to any firm wishing to occupy the premises for the same business, a large proportion of the connexion may be transferred. In the year 1842 the counter expended many thousands of pounds in the erection of a massive pile of fine stone, 66 feet in length by 66 feet in width, abutting on to the river; the structure is of the most substantial character, and, if needful for the purpose of warehousing goods, the foundations and walls are quite equal to support an elevation of seven or eight stories above those already erected. The building is one lofty groundfloor, with gallery supported on iron girders and columns, and constructed to carry a heavy weight. There is also a stack of warehouses, abutting on the river, 75 feet in length, of two floors, and a stack of warehouses, 60 feet in length, of three floors, abutting on Thames-street. A counting-house in the centre of the yard, the lower part occupied as offices for clerks and principals. A comfortable dwelling-house in Thames street, and spacious paved yards, with a separate entrance, affording every convenience for loading and landing goods. The whole held on lease from the Corporation of London, for a term which will expire in the year 1900, subject to a ground-rent of 1,200l. per annum. A stack of warehouses adjoining, of three floors, with frontage of 133 feet in Castle yard, may be added if desired, at a rent of 150l. per annum To be viewed; the printed particulars and plans will shortly be ready, and may be obtained at the Mart; of Messrs. CROWDER and MAYNARD, Solicitors, 57, Coleman-street; and of Messrs. FULLER and HORSEY, Billiter street, London.

VICTORIA-STREET, WESTMINSTER.—Important Sale of new Building Materials, Plant, Stock, and Utensils of a Builder.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on THURSDAY, SEPTEMBER 11, 1856, and following days, at ELEVEN o'clock precisely, in the PREMISES, Victoria-street, Westminster, in lots (without reserve), an important stock of well-assorted NEW BUILDING MATERIALS, partly prepared, adapted for first-class buildings; including 30,000 feet super. 1-inch and 2-inch plate-glass; 3,000 feet ditto, stained with sheet-glass; 400 feet 2-inch marginal sashes with ornamental glass; 1 feet ditto, not glazed; 6,400 feet 3-inch sashes and frames, 500 feet 2-inch ditto, 2,000 feet 3-inch Venetian sashes and frames, 800 feet 2-inch Venetian sash-frames; 20 cubic feet 4-inch mouldings in small lengths for square panels, 10 squares 1-inch, and 2 squares 1¼-inch deal flooring boards, 2,000 feet moulded architraves, 1,500 feet 6 by 3 door-frame, 800 feet cube Portland stone, 5,000 feet 9-inch touched York paving, 5,000 feet self-faced ditto, 2,000 feet York landings, 350 feet cube York stone, 1,700 feet cube granite, 600 feet iron girders, 90,000 stock and fire-bricks, 400 yards cast-iron rain water-pipe, 30 register and hall stoves, 20 black and bright fenders, 40 marble chimney-pieces, 15 slate cisterns, 12 copper baths, 10 gas stoves, 30 coils iron-pipe, 8 galvanized tanks, gas brackets and pendants, 10,000 feet iron tube, an assortment of T's, elbows, bends, sockets, &c., 1,000 sheets of lead, 1,000 feet moulded skirtings, 1,500 feet 6 by 3 and corners, 200 feet muslin pattern glass, 500 feet polished embossed and ground plate-glass, 200 feet ditto, in various sizes, 20 tons cast iron girders, 2 tons wrought ditto, 2 tons paper-hangings, 5 tons sheet and pipe lead, traps, service boxes, &c. 4 cwt. brass tube, 10 cwt. of brass castings, dusters, brushes, pencils, &c. The plant will include a Clark's portable steam-engine, an hydraulic lift, 7 hoisting machines and chains, mortar mill, sweeping machine, 5 stone trucks, 7 Asphalte pots, crab-cranes, blocks and falls, 2,000 scaffold boards, 1,000 scaffold poles, 10 to 40 feet; 1,000 feet run 3-inch plank, 500 dozen scaffold cords, 60 ladders, 30 benches, barrows, 6 brass-finishers' lathes, smiths' forges, vices, anvils, benches, air furnace, moulding trough, and tongs, 3 painters' machines, 24 pair steps, and trestles; an assortment of stocks and dies, steel tools, 50 dozen new files, 100 pair gas metal (wood) patterns, and numerous other effects. To be viewed four days previous to the sale, when catalogues, at 6d. each, may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street.

SALES BY AUCTION.

Highly-finished Condensing Steam Engine, by Nasmyth.

MESSRS. FULLER and HORSEY are instructed by the First Commissioner of her Majesty's Board of Works, to SELL by AUCTION, at HERBERT'S-BUILDINGS, Waterloo-road, on WEDNESDAY, SEPTEMBER 24, at ELEVEN, a highly-finished, direct acting, CONDENSING STEAM-ENGINE, by Nasmyth, with 14-inch cylinder, 5-feet stroke, 5-slide-valve, throttle-valve and governors, air-pump and two feed pumps, with solid cast-metal eccentric, bright wrought-iron crank shaft, fly-wheel, condenser, and apparatus, made for the House of Parliament.—To be viewed on Tuesday previous to the sale, when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City

BOROUGH-ROAD.—Well executed Groups, Figures, Vases, Fountains, &c. in Artificial Stone.

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION, on the PREMISES, 74, Borough-road, Southwark, on TUESDAY, SEPTEMBER 9, 1856, at TWELVE for ONE, the remaining portion of the extensive STOCK; comprising fountains, vases, groups pedestals, centre flowers, &c. To be sold without reserve—May be viewed one week previous, and catalogues had on the Premises and of the Auctioneers, 40, Parliament-street, Westminster.

TO TIMBER MERCHANTS, BUILDERS, SHIP-BUILDERS, CABINET-MAKERS, PIANOFORTE-MAKERS, &c. AND OTHERS.—On the Premises, Snow's-fields, King-street, Borough, and Robinson's Saw-mills, Swan-street, Grange-road, Bermondsey.

MR. PEAKE is favoured with instructions from the Executors of the late Thos. Elliston, esq. to SELL by AUCTION, on the PREMISES, on TUESDAY, SEPTEMBER 9, 1856, and two following days, at TWELVE o'clock each day, his well known, superior, and well-seasoned STOCK in TRADE; comprising 25,000 feet Spanish and Honduras mahogany, in planks and boards, 15,000 planks, deals and battens, flooring boards, mixed, lining, 1-inch feet wainscot, Spanish, Honduras, and walnut veneers; 800 feet Spanish cart logs, a large quantity of perfectly dry pine, Honduras boards, oak, ash, and all woods, in all twenty loads of Baltic Timber, &c. —May be viewed Monday previous and mornings of sale. Catalogues obtained on the Premises; at Rennie's Saw-mills; and at Mr. PEAKE'S Offices, 344, Tooley-street, Southwark. Approved bills at three months will be taken from purchasers to the amount of 20l. and upwards. Luncheon provided.

WOOLWICH, KENT.—To BUILDERS and others.

MR. G. HUDSON has received instructions from the Lords of the Admiralty, to SELL by AUCTION, upon the PREMISES, near the Royal Marine Barracks, on WEDNESDAY, SEPTEMBER 17, 1856, at ONE for TWO o'clock, in lots, the valuable BUILDING MATERIALS, and HOUSE FIXTURES of Bennet Cottage and Office, late the residence of Captain Yarde, R.M. together with the greenhouse adjoining, 21 feet 6 inches by 10 feet.—Catalogues may be had at Her Majesty's Dockyard, Woolwich; and of the Auctioneer, Brewerstreet, Woolwich.

GRAVESEND, KENT.—Three Freehold Private Residences in Parrock-street.

MR. CHARLES JOHNSON has received instructions to SELL by AUCTION, from the executors of Mr. J. Little, at the NEW INN, Gravesend, on WEDNESDAY, the 3rd of SEPTEMBER, 1856, at THREE o'clock, exact time, in lots, THREE FREEHOLD PRIVATE RESIDENCES, known as Nos. 13, 14, and 15, Parrock-street, in the occupation of respectable tenants, and producing a rental of 73l. per annum. This eligible estate is situate in the centre of the town, and offers an unusually eligible opportunity for Investment. Particulars and conditions of sale may be obtained of Messrs. GIBSON and WATES Solicitors, Gravesend and Dartford; at the Place of Sale; and of Mr. CHARLES JOHNSON, Auctioneer, Valuer, and Estate Agent, 39, Harmer-street, Gravesend.

GRAVESEND, KENT.—Valuable Freehold Estate, producing 45l. per annum.

MR. CHARLES JOHNSON has received instructions to SELL by AUCTION, at the NEW INN, Gravesend, on WEDNESDAY, SEPTEMBER 3rd, 1856, at THREE o'clock precisely, in one lot, that FREEHOLD PLOT of BUILDING LAND, situate on the north side of the MILTON PARK ESTATE, comprising plots of Building Land, in the Grove and Wellington-street; Fifteen Freehold Private Dwelling-houses, producing 270l. per annum; also Freehold Peacock street, producing 27l. per annum; a well-secured Freehold Ground-rent, of 7l. per annum; also Three Freehold Houses, Nos. 9, 10, and 11, Peacock-street, producing 45l. per annum—Particulars and conditions of Sale, with plans of the Estate, may be had (ten days before the sale, of G. M. ARNOLD, Esq. Solicitor, Berkeley-crescent, Gravesend; of G. H. KNIGHT, Esq. Solicitor, 5, Essex-court, London; of Mr. H. NEWMAN, and Messrs. GUARD and HOWSEGOE, House Agents, Harmer street; Mr. J. GOULD, Jun. Surveyor, Gravesend; at the Place of Sale; and of Mr. CHARLES JOHNSON, Auctioneer, Estate Agent, and Valuer, 39, Harmer-street, Gravesend.

GRAVESEND, KENT.—Eligible Freehold Estate in Peacock-street.

MR. CHARLES JOHNSON has received instructions to SELL by AUCTION, at the NEW INN, Gravesend, on WEDNESDAY, SEPTEMBER 17, 1856, at THREE o'clock precisely, in lots, FOUR FREEHOLD PRIVATE RESIDENCES, being Nos. 31, 32, 33, and 34, Peacock-street, in the occupation of respectable tenants, and producing a rental of 72l. per annum—Particulars and conditions of sale may be obtained of G. M. ARNOLD, Esq. Solicitor, Berkley-crescent, Gravesend; of G. H. KNIGHT, Esq. Solicitor, 5, Essex-court, Temple, London; of Mr. H. NEWMAN, Bond-street, Dover; Messrs. GUARD and HOWSEGOE, Harmer-street, Gravesend; Mr J. GOULD, Jun. Surveyor, Gravesend; at the Place of sale; and of Mr. CHARLES JOHNSON, Auctioneer, Valuer, and Estate Agent, 39, Harmer-street, Gravesend.

TO MAHOGANY MERCHANTS, CABINET MAKERS, SHIP and RAILWAY-CAR BUILDERS, and others.—To BE SOLD by AUCTION, on WEDNESDAY NEXT, the 3rd SEPTEMBER, 1856, at ELEVEN o'clock precisely, in the WOOD SALES SHED, Brunswick Dock, Liverpool,—

- 600 Logs Honduras Cedar,
- 900 Logs and Carls Colo Mahogany,
- 672 Logs and Carls St. Domingo Mahogany,

Being the cargoes just landed per steamer "May Flower," "Marie Leocadie," and "Adelgunde," direct from Cuba and St. Domingo, respectively. On account of the Importers.

The above wood is well worthy the attention of shell-grown Honduras Mahogany, Hyas, Wainut, Bahia Rosewood, Bird eyed Maple, Pencil Cedar, Riga Wainscot, Billets, &c. &c. particulars of which may be seen in catalogues lying at the Office of this newspaper, and the same may be had by addressing the Broker.

Mahogany is now a cheaper wood than teak or Greenheart, these last-named being 1l. 5s. per load per measurement on the contract, every piece of mahogany, however small, and frequently presented as rare, so that while paying for 2 feet, he actually receives 3 feet per measurement, Queen's calliper. The importer of the Honduras Cedar and Cuba Mahogany, "May Flower," has actually paid freight on 189,034 feet of the former, and 1,033 feet of the latter, which is 190,067 cubic feet, against 17,903 cubic feet; thus paying freight in excess of 114,970 superficial feet, or 59½ per cent. on the actual amount of the freight. The Mahogany and Cedar per this vessel are not of large diameter, but are extremely long, thereby valuable for ship-building and railway carriages and waggons, and the price probably will not be more than equivalent to 10l. per load, Queen's caliper measure, while Teaks and such woods range up to 15l. per load. Railway carriages and waggons are now built of self-coloured woods: varnished mahogany and cedar, if so dealt with, would be more handsome, cheaper, and more durable than most woods, and could be more easily worked and altered, besides which they shrink and expand less than any other woods, most important considerations in railway-carriage work: exported to warmer countries.

EDWARD CHALONER, Broker,
No. 6, East Side, Queen's Dock, Liverpool.

SALES BY AUCTION.

IN BANKRUPTCY.

MR. ALFRED DAY has received instructions from the assignees of Messrs Rowland and Evans, bankrupts, to SELL by AUCTION, on the PREMISES, in the field known as the Cricket-field, near the late Cattle-market, Lower-road, Islington, on TUESDAY, the 9th of SEPTEMBER, 1856, at TWELVE o'clock without reserve, the second portion of the extensive STOCK and UTENSILS of a Builder, comprising an 8-horse power steam-engine, 3-horse do. 10-horse egg-end boiler, circular-saw table, up and down frame do. planing table, grooving machine mortise do. moulding do. tenoning do. Sylvester's drying apparatus, Spanish mahogany, Honduras, and cedar planks in various thicknesses, 70 pine planks, 10 well wheels, 2 tilt waggons, 2 trucks, and pipe lead, 2½ firkins Patent-lead. Ironmongery—Several bags of nails, brads, pullies, locks, sash-weights, sash fastenings, bolts, taps, oils, turps colours, glass paper, paperhangings, rain-water pipes, window glass, sixty carpenters' benches, cramps, copper glue-pots 10 sets deal boards, 1,500 pulleys, 400 dozen of cords 36 long ladders, wheeling planks, paving horse, spring cart, 2,000 scaffold poles, three powerful crabs, 20 sticks of timber, 3,000 feet run of seasoning, erection of forges, tewel irons, troughs, blocks, stakes, bellows, vices, drilling-machine, benches, scales, weights, smiths' tools, quantity of wrought bar iron, cast iron frames, stoves, blocks, falls, &c.; slate landings, Caen, Bath, Portland, York, and Kentish rag, in blocks and landings; pan tiles, office fittings, comprising desks, iron safe, quantity best of pacem holes, gas brackets, and effects. May be viewed on the Saturday and Monday preceding the sale. Catalogues to be had of Messrs. HADLEY and FILDER, Solicitors, 16, Gresham-street, City; of J. NICHOLSON, Esq. Official Assignee, 24, Basinghall-street; and of the Auctioneer, City-terrace, City-road, near the Eagle Tavern.

ISLINGTON IMPROVEMENTS. TO CARPENTERS, BUILDERS, FARMERS, AND OTHERS.

MR. L. ENGLAND is instructed to offer for SALE by AUCTION, in lots, on TUESDAY, the 2nd day of SEPTEMBER, 1856, at ONE for HALF o'clock precisely, on the PREMISES, the whole of the valuable MATERIALS of FIVE well-built HOUSES, being Nos. 1 to 5, Queen's Head-row, Lower-street, Islington, adjoining the Old Queen's Head, for the purpose of making a new road leading to the City-road, to be pulled down and cleared by the respective buyers, consisting of about 300,000 good bricks, about 10,000 good sound plain tiles, a quantity of slates and stone coping, the whole of the capital rafters, joists, partitions, floor boards, doors, sashes and frames, cupboard fronts, flights of stairs, marble and other chimney-pieces, iron railing, stone curb and steps, capital register and other stoves, ranges, &c. about three tons of lead in gutters, pipes, &c several stacks of firewood, and various other useful articles. May be viewed two days prior and morning of sale. Catalogues had on the Premises; of Mr. HEBB, 54, St. Paul-street, New North-road, Islington; at the Bars and Bowl, Queen's Head, Islington; and of the Auctioneer, 3, Shepperton-street, New North-road, Islington.

SYDENHAM.—To CONTRACTORS, BUILDERS, and others.

MR. MARSH has received instructions from the Executors of the late Thos. Hunt, esq. to SELL by AUCTION, on the PREMISES, Well-street, Sydenham, on THURSDAY, SEPTEMBER 11, 1856, at THREE for FOUR o'clock, in convenient lots, 600,000 of superior STOCK, PLACE, and other BRICKS The premises are close to three railway stations, and in the vicinity of excellent roads.—May be viewed the day prior and morning of sale, and catalogues obtained of the Premises; the principal Inns in the neighbourhood; and at Mr. MARSH'S Offices, 2, Charlotte-row, Mansion-house.

17, PUDDING LANE, CITY.—Lease of Premises, Stock of a Builder, and Effects, by

MR. RICHARDS, on the PREMISES, on TUESDAY, SEPTEMBER 2nd, at TWELVE o'clock, by direction of Mrs. Hinton, on retiring from business. The STOCK comprises sixty round and other timber, long scaffold poles, boards, purlins, cords, screens, plasterers' steps, and a variety of tools. You pass from Lombard-street into the bankers, pantiles, iron door, &c. Also the lease of the commodious premises held from the City at the low rent of 50l. per annum.—On view the morning of sale. Catalogues obtained on the Premises, and of the Auctioneer, Tottenham.

TO MASONS and OTHERS.—The STOCK, IMPLEMENTS, and GOODWILL of a small but very long-established BUSINESS in Marble, in mourning and general work, in a market town in Devon, TO BE DISPOSED OF. This is an unusual opportunity of purchasing business with a small capital.—For address and particulars, apply, prepaid, to C. 29, Vauxhall-bridge-road, Westminster

BUILDING BUSINESS TO BE SOLD.—That is an eligible JOBBING BUSINESS, and is sold upon account of the premises of Mr. Thomas Hall, Bridge-road, Cottingham, and will include everything. Rent of premises, 35l.—For full particulars, apply to Mr. C. BROWN, House and Estate Agent Hammersmith.

TO PAINTERS, PLUMBERS, and GLAZIERS.—TO BE DISPOSED OF (in consequence of the death of the proprietor), a small OLD-ESTABLISHED BUSINESS in the above Trades, with a respectable connection, and capable of great extension. The premises and tools are ready with every convenience. The terms are moderate.—Apply to Messrs WM ROBERTS and CO. Falcon Wharf, Hollandstreet, Blackfriars, London.

BUILDER'S BUSINESS FOR DISPOSAL. TO BE DISPOSED OF, by order of the Executors, an old-established BUSINESS, with a first-rate connection, situate in a small country town about thirty miles from London. The works executed by the late proprietor have gained for the concern a high reputation; they have included the erection and restoration of several churches and others, both of a substantial and ornamental character. The trade are very complete in their arrangements: the rent nominal, and the stock well selected. The amount required will be from 1,200l. to 1,500l. There are several substantial cottages and land which will be included in the purchase. The business has been conducted by the late proprietor and his ancestors for more than half a century, and to any practical man of business a more eligible opportunity can rarely be met with. For further part culars, apply to Messrs. FULLER and HORSEY, Billiter street, City

TO ENGINEERS, BOILER-MAKERS, and OTHERS. TO BE DISPOSED OF, the STOCK and PLANT of an ENGINEER and IRONFOUNDER, situate in a large manufacturing town in the north of England. The premises are spacious and well arranged with steel facings for tool and water-carriage. The plant now at work is capable of employing fifty hands, and the trade is of a first-class character, and as the business is well established, this is a favourable opportunity for an enterprising person with a moderate capital.—Letters to be addressed to D. TAYLOR, Esq. Kennington-park, Surrey.

PLUMBING, PAINTING, or GLAZING.—The Advertiser, having some SURPLUS LABOUR, would request to TENDER for any quantity of WORK in the above line with or without materials. Any party requiring work done would find this worthy their notice.—Address, THOS. STANWAY, 10, Dorset-street, Portman-square, London.

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The Builder.

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BUILDERS' BENEVOLENT INSTITUTION.—The NINTH ANNIVERSARY DINNER will be held at the LONDON TAVERN, on WEDNESDAY, 29th OCTOBER next, Mr. Alderman WILLIAM LAWRENCE, President, in the Chair.

Gentlemen desirous of promoting the interests of the Institution by becoming Stewards, will be pleased to forward their names to the Treasurer, Mr. GEORGE BIRD, 34, Sloane-square; or to the Secretary, at the Offices, 19, Southampton-street, Bloomsbury.

A. G. HARRIS, Secretary.

BUILDERS' BENEVOLENT INSTITUTION.—An ELECTION of PENSIONERS will take place 27th NOVEMBER next. Candidates may obtain forms of application to be returned on or before 29th SEPTEMBER) at the Offices of the Institution 19, Southampton-street, Bloomsbury.

Pensions: £24 per annum for males, and £16 for females.

August 28, 1856. A. G. HARRIS, Secretary.

ARCHITECTURAL EXHIBITION and COLLECTION of MATERIALS, PATENTS, and MANUFACTURES connected with Architecture.—All Drawings, Models, Photographs &c. must be delivered at the Galleries Suffolk-street Pall-mall East, on the 1st and 2nd of DECEMBER next. The printed rules may be had on application to the Hon. Secretaries.

The Committee announce with much satisfaction that the Rev. Mr. Boutell, Mr R. W. Billings, Mr. Owen Jones, Mr. George Scharf (unless circumstances in the mean time should interfere), and other gentlemen, have kindly promised Lectures for the Tuesday Evenings, as on the last occasion. Full particulars will be published as soon as arrangements are complete. Season tickets, admitting at all times to the Exhibition and to all the Lectures, will be half-a-crown, as before.

DEPARTMENT for MATERIALS.—Persons desirous to make their inventions known, will find this the best and indeed only way of bringing them under the notice of the whole body of Architects in London and the country; and the Committee request that applications for space (directed to Mr. JAMES EDMESTON, Jun. Hon. Sec.) may be made at once, as full two-thirds of the two rooms devoted to this purpose has been already applied for, and many who delay will certainly be disappointed

Intending subscribers should send their names to the Secretaries; and it is requested that unpaid subscriptions for last year may be forwarded at once, as the issue of the balance-sheet is delayed until these are received.

JAMES FERGUSSON, F.R.A.S., 20, Langham-place, } Honorary
JAMES EDMESTON, jun. } Secretaries.
5 Crown-court, Old Broad-st.

COMPETITIONS.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The Trustees for Sale of a Freehold Estate of 50a acres, including the Scotch Sow and near the Crystal Palace, require PLANS for LAYING OUT the SAME for building purposes, showing the necessary roads, sewers &c. the whole to be clearly defined and apportioned in suitable lots, and laid down to a scale of two chains to an inch, from actual admeasurement. The following premiums are offered:—For the plan adjudged the best by the trustees, 15 guineas; for the second, 100 guineas; for the third, 50 guineas. The plans to which the above premiums shall be awarded, will be retained by and be the property of the trustees.—Further particulars may be obtained of Mr. PEACOCK Builder, near the Jolly Sailor Station, Norwood, close to the property. The trustees will meet on the 20th day of OCTOBER next, to examine the plans, which are to be previously forwarded enclosed and sealed, to the Secretary's Office, Auction Mart, London, addressed to the Trustees of the White Horse, Norwood, Estate.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover district hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall Mall, London, on or before WEDNESDAY, the 10th day of SEPTEMBER, 1856, from persons desirous of CONTRACTING for TAKING DOWN and REBUILDING portions of the SCARP WALLS of the CITADEL, Dover. A specification of the works to be executed, may be seen by persons duly competent to undertake the work (none others need apply), and forms of tender obtained at the Royal Engineer Office, Dover between the hours of TEN and FOUR o'clock, from MONDAY the 1st of SEPTEMBER, to TUESDAY, the 9th of SEPTEMBER, 1856 (Sunday excepted). The party whose Tender may be accepted for the work, will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of £600, for the due performance of the Contract. Tenders for the above work to be addressed to the Director-General of Contracts, Pall-Mall, London, and endorsed "Tender for Repairing Scarp Walls, Citadel, Dover."

N.B. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, August 28, 1856.

TO BUILDERS.—Notice is hereby given that TENDERS will be received at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on or before the 15th SEPTEMBER, 1856 from such persons as may be desirous of contracting with the War Department for CONSTRUCTING and ERECTING FOUR POWDER MAGAZINES (to contain 55,000 barrels), and EIGHT SHOEING-SHEDS, together with boundary walls, rolling stage, and earth traverse, at Marchwood, in the county of Hants. Plans and specifications, with forms of Tender, may be seen, and all other information obtained, on application at this Office, any day (Sundays excepted) between the hours of TEN and FOUR, from the 25th AUGUST, 1856, to 14th SEPTEMBER, 1856. The time of the work to be completed within eight calendar months from the date of notification of acceptance of Tender. No notice will be taken of any Tender unless it be on the prescribed form. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Portsmouth, 19th August, 1856.

TO BUILDERS.—Notice is hereby given, that TENDERS will be received by the War Department, at their Office, Pall-Mall, London, on MONDAY, the 8th day of SEPTEMBER, 1856, from such persons as may be willing to undertake the ERECTION of a BOMB-PROOF MAGAZINE to contain 10,368 Barrels of Gunpowder, at Tipner, near Portsmouth, in the county of Hants. The plans, specification, and conditions of Contract, may be seen, and every information obtained on application at this Office on or after the 24th day of AUGUST, 1856, between the hours of TEN and FOUR each day (Sundays excepted). Tenders to be endorsed, "Tender for the Erection of a Bomb-Proof Magazine, at Tipner, near Portsmouth, in the county of Hants."

N.B. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Portsmouth, August 7, 1856.

NOTICE to CONTRACTORS and BUILDERS.—TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, on or before the 6th OCTOBER next, from such persons as may be willing to enter into a CONTRACT for the CONSTRUCTION of a FORT, near the village of Elson, in the county of Hants. Plans and specifications may be seen, and every information obtained on application at the Royal Engineer Office, Gosport, between the hours of TEN and FOUR daily, from the 15th SEPTEMBER to 4th OCTOBER, 1856. No notice will be taken of any Tender unless upon the printed form. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders

Royal Engineer Office, Portsmouth, August 25, 1856

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The principal Officers of her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following CONTRACT, viz.:—For the several Works proposed to be executed for the ERECTION of QUARTERS for NON-COMMISSIONED OFFICERS and MARRIED SOLDIERS, Laundry, Drill-shed, and Privy, together with Rebuilding a Portion of the Boundary Wall, &c. at Beggars-bush Barracks, Dublin. Persons desirous of Tendering for the same, will receive every information on application at the District Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and may obtain a specification, with the terms of Contract. The Building-wall to be completed sixty days after the acceptance of the Tender and the whole of the buildings roofed by the 10th March, 18 7, and the remainder of the Works to be completed on or before the 31st July, 1857.—The letters of Tender, with specifications, to be sealed, and transmitted, under cover, to "The Director-General of Contracts, War Department, Pall-mall, London," so as to be received on or before the 15th day of SEPTEMBER, 1856 and to be marked on the outside, "Tender for Work at Beggar-bush Barracks, Dublin."

Commanding Royal Engineer's Office, Dublin, 29th August, 1856

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The Principal Officers of her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following CONTRACT, viz.:—For the several Works proposed to the ERECTION of CAVALRY QUARTERS and STABLING, together with OUT-BUILDINGS, at the BARRACKS at ISLAND BRIDGE Dublin. Persons desirous of Tendering for the same will receive every information on application at the District Commanding Royal Engineer's Office, Lower Castle-yard, Dublin; and at the Royal Engineer's Office, Island Bridge Barracks; and may obtain specifications, with the terms of contract. The soldiers' ablution-room to be completed, and all the buildings roofed in, by the 1st of MARCH, 1857, and the remainder of the works completed on or before the 31st of AUGUST, 1857. The letters of Tender, with specifications, to be sealed, and transmitted, under cover, to "The Director-General of Contracts, War Department, Pall-mall, London," so as to be received on or before the 15th day of SEPTEMBER, 1856 and to be marked on the outside, "Tender for Work at Island Bridge Barracks, Dublin."

Commanding Royal Engineer's Office, Dublin, August 29, 1856.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—The Commanding Royal Engineer at Guernsey hereby gives Notice, that sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall London until TUESDAY, the 23rd of SEPTEMBER, 1856, for CONSTRUCTING a small BATTERY, ERECTING BARRACK BUILDINGS, with enclosure walls, &c and FORMING DITCHES, GLACIS, and ROAD, at HOMMET POINT, in the Island of Guernsey. Detailed drawings of the works may be seen, and every requisite information obtained, on applicat on at the Royal Engineer Office, Guernsey, every day (Sundays excepted), between the hours of NINE and FOUR. The terms of contract, specification for the works, and forms of Tender, may be procured at the Office of the Inspector General of Fortifications, War Department, Pall-Mall, London; as well as at the Royal Engineer Office, Guernsey. Each Tender to be in one lump sum, in British sterling, for the whole work, to be attached to a copy of the terms of contract and specification, addressed to "The Director-General of Contracts, War Department, Pall-Mall, London," and endorsed, "Tender of Works at Hommet, Guernsey." The War Department reserve the right of rejecting any or all of the Tenders.

Royal Engineer Office, Guernsey, August 27, 1856.

TO BUILDERS.—Sealed TENDERS for BUILDING the ESCARP of the right flank of the Flat Bastion, and part of the adjoining Curtain in the Lines of Devonport, will be received by the Director-General of Contracts, at the War Department, Pall-mall, London, on or before FRIDAY, 12th SEPTEMBER, at NOON. Specifications may be seen at the Royal Engineer's Office Devonport, on week days, between the hours of NINE and FOUR o'clock, from THURSDAY, 4th SEPTEMBER, to THURSDAY, 11th SEPTEMBER, both days inclusive.

Royal Engineer's Office, Devonport, 28th August, 1856.

TO BUILDERS.—Sealed TENDERS for BUILDING NEW BARRACKS for non-commissioned officers and married soldiers, at Devonport, including all requisite Pavements; also, separate Tenders for the Asphalte Work required for same, will be received at the War Department, Pall-Mall London, on or before TUESDAY, the 30th SEPTEMBER next, at NOON, addressed "To the Director-General of Contracts," and endorsed "Tender for Married Soldiers' Barracks, Devonport," "Asphalte Work for Married Soldiers' Barracks, Devonport" as the case may be), on the left-hand corner of the envelope. The barrack comprises—three blocks of two story buildings, laundry, cook-houses, outbuildings, ash-pits, enclosure walls, gates, footpaths, roads, and parade.

Plans and specifications, with terms and conditions, may be seen, and forms for Tenders and every information obtained at the Royal Engineer's Office at Devonport, between the hours of NINE and FOUR o'clock on week-days, from MONDAY, the 15th, to SATURDAY, the 27th SEPTEMBER next, both days inclusive

Royal Engineer's Office, Devonport, Sept. 3, 1856.

TO BUILDERS and CONTRACTORS.—Persons desirous of TENDERING for the ERECTION of the proposed NEW FORT and BATTERY at Grange, near Gosport, may obtain all necessary information, bills of quantities, and forms of Tender, from Mr. P. F. CASLIN, C.E. and Architect duly of the Royal Engineer Department, 16, Bond-street, Shefhe d, and Mr J. JAMES, 3, John street, Adelphi, London, who are retained by parties about to Tender.

134 Hi h street, Gosport, Aug. 28, 1856.

TO BUILDERS and CONTRACTORS.—NEWARK CHRIST-CHURCH SCHOOLS.—Persons desirous of CONTRACTING with the Committee for the ERECTION of NEW INFANTS' and GIRLS' SCHOOLS, in CORTLAND-STREET, in the Parish of NEWARK-UPON-TRENT, may see the drawings and specification, and obtain all further information, on application at my Offices, in Kirkgate, on and after WEDNESDAY, SEPTEMBER 3rd, until WEDNESDAY, SEPTEMBER 17th, on which day I shall receive sealed Tenders, endorsed, "Tender for Newark Christ-Church Schools," and to be delivered at my Office before SIX o'clock.—The Committee do not bind themselves to accept the lowest or any of the Tenders sent in.

CHARLES BAILY, Architect.

Newark, August 27, 1856.

SOUTHAMPTON LOCAL BOARD of HEALTH.—TO STONE-MERCHANTS, CONTRACTORS, and OTHERS.—Notice is hereby given, that the Southampton Local Board of Health are prepared to receive TENDERS from any person or persons willing to supply from 1,000 to about 1,600 TONS of BROKEN GUERNSEY GRANITE STONE, for repairing the Macadamized roads within their district. Specifications may be seen and information obtained on application to Mr. POOLE, Surveyor to the Local Board of Health, Southampton. Sealed Tenders (according to the forms mentioned in the specification), must be delivered at my Office on or before the 19th day of SEPTEMBER next. No pledge is given to accept the lowest or any other Tender.—By order of the Local Board of Health,

CHARLES E. DEACON, Clerk.

Public Health Office, Southampton, August 27, 1856.

FARM BUILDINGS and DWELLING-HOUSE.—Persons desirous of CONTRACTING for the ERECTION of either or all of the following WORKS, for the Earl of Essex, may see the plans and specification at the Office of Mr. HUMBERT, Land Agent and Surveyor, Watford, Herts.

1. FARM BUILDINGS, at Rayne Hall, in the parish of Rayne, near Braintree, Essex.
2. FARM BUILDINGS, at Porter's Hall, in the parish of Stebbing, near Dunmow, Essex.
3. A DWELLING-HOUSE, at Walkern Park, in the parish of Walkern, near Stevenage, Herts.

All Tenders must be delivered to Mr. HUMBERT on or before the 23rd day of SEPTEMBER, on which day, at noon, they will be opened at his Office.—The Advertiser does not bind himself to accept the lowest or either of the Tenders.

[*For remainder of Contracts see next page.*

CONTRACTS.

TO BUILDERS.—TENDERS will be received from competent parties for Works to be done in ALTERING and REPAIRING the HOUSE and PREMISES, No. 33, Euston-square. The specification and drawings may be seen at the Office of Mr. ROBT. W. ARMSTRONG, Architect, 16, Essex-street, Strand. The Proprietor does not bind himself to accept the lowest Tender.

TO BUILDERS and OTHERS.—Persons desirous of contracting for the ERECTION of a POLICE STATION and FOUR HOUSES at Luton, Bedfordshire may see the plans and specifications at the Office of Messrs. WILLIAMSON and AUSTIN, Solicitors, Luton, on and after the 1st day of SEPTEMBER next. The Tenders to be sent in sealed and marked "Tender for Police Station and Court-house, Luton," on or before TWELVE o'clock on the forenoon of SEPTEMBER next—the lowest or any Tender will not necessarily be accepted.

TO BUILDERS.—TENDERS are requested for the ERECTION of AGRICULTURAL CHAPEL, at Buckingham; the plans and specifications for which, may be seen on and after the 1st of SEPTEMBER next, at the Office of Mr. WILLIAM WALKER, Esq. Buckingham; or at the Offices of Messrs. POSTER and WOOD, Architects, 4, Park-street, Bristol. The Tenders are to be sent to WILLIAM WALKER, Esq. sealed and endorsed, "Tender for Chapel" on or before the 20th instant. The lowest or any Tender will not necessarily be accepted.

ST. MARY, ISLINGTON, MIDDLESEX. METROPOLIS LOCAL MANAGEMENT ACT.—The Vestry of this Parish hereby give Notice, that a Committee will meet at the Offices, 21, MILNER-SQUARE, Islington, on WEDNESDAY, the 10th day of SEPTEMBER, 1856, at TEN o'clock in the MORNING precisely, to receive TENDERS for the CONSTRUCTION of about 800 FEET of SEWER, 3 feet 6 inches high and 2 feet 6 inches wide, and other WORKS connected therewith in and along John street, Liverpool-road, in the said parish. The form of Tender (which alone will be received) may be obtained, and specification and plans seen, at the Vestry Office (Surveyor's department), during the hours of TEN and FOUR o'clock. Parties desirous of attending are invited at the time and place above stated, with sealed Tenders, endorsed "Tender for Works in John-street, Liverp'ol road." The Vestry do not bind themselves to accept the lowest or any Tender.

JOHN LEYTON, Vestry Clerk.

21, Milner-square, Islington. 1856.

RUGBY.—To BUILDERS.—Persons desirous of TENDERING for the ERECTION of a TERRACE-WALL of Bath stone and Brickwork, at Calthorpe Lodge, may see the drawings and specification at the Office of Mr. A. B. FREND, Architect, 44, Bedford-row, London.

BOROUGH of LEEDS.—HOLBECK BURIAL-GROUND.—CONTRACT B.—To IRONFOUNDERS and SMITHS. TENDERS wanted for providing and fixing an IRON FENCE and ENTRANCE GATES to the proposed Burial-ground at Holbeck. Plan and specification may be seen on and after WEDNESDAY, the 27th instant, at the Office of Mr. EDWARD TILLOTT, Borough Engineer and Surveyor, No. 16, Greek-street, Leeds. Tenders to be sent to the Town-clerk's Office, not later than TWELVE o'clock at noon, on WEDNESDAY, the 10th SEPTEMBER next, addressed to "The Chairman of the Burial-grounds Committee; Tender for Ironwork."—By order, JOHN A. IKIN, Town-clerk.

Leeds, August 22, 1856.

TO BUILDERS and OTHERS.—LOUGHBOROUGH CEMETERY.—The Burial Board for the parish of Loughborough, in the county of Leicester, are prepared to receive TENDERS for SURFACE DRAINING, MAKING TERRACE ROADS and PATHS (CESS-POOLS, and GRATEN, LAYING OUT and ERECTING the NEW PUBLIC CEMETERY GROUND, at Loughborough, aforesaid.—The plans and specifications may be seen at the Office of Messrs. H. and W. H. TOONE, Solicitors, Loughborough, on and after the 8th day of SEPTEMBER next, where sealed Tenders are to be delivered, addressed to the Chairman of the Board, not later than the 15th day of SEPTEMBER next, endorsed "Tender for Cemetery Works."—Bills of particulars may be had on application to the Architects, Messrs. BIDLAKE and HARDY, 90, Bradda'e, Lincoln, on payment of their charge of £1.1s. The Board do not bind themselves to accept the lowest Tender.—By order,

W. H. TOONE, Clerk to the Burial Board.

Loughborough, 28th August, 1856.

TO BUILDERS.—LLANHILLETH RECTORY, MONMOUTHSHIRE.—Builders are invited to submit TENDERS for the ERECTION of a RECTORY-HOUSE for the Parish of Llanhilleth, near Newport, Monmouthshire, the plans and specification of which may be seen on application at the Office of Mr. JAMES BUCHER, at Cromhall, in the Western Valleys Railway, and after MONDAY next. The Tenders to be forwarded to Mr. NORTON, Architect, 24, Old Bond-street, London, on or before the 20th inst.

BOARD of WORKS for the LIMEHOUSE DISTRICT, comprises the Parish of Limehouse, the Hamlet of Ratcliff, the Precincts of Shadwell and Wapping.—CONTRACT for SEVEN-YEARS' WORK and REMOVAL of DUST.—Notice is hereby given that the Public Committee of the Board of Works for the Limehouse District will be ready on MONDAY, the 15th day of SEPTEMBER, 1856, to receive sealed TENDERS from parties who may be willing to contract for SEVEN-YEARS' WORK and for the REMOVAL of DUST. Further particulars may be known and printed conditions and forms of tender on offers will be received, Boarded, upon application at the Office of the Board, White Horse-street, Commercial-road, East, between the hours of TEN and FOUR. Tenders as above to be delivered at the said Office before THREE o'clock p.m. on the said 19th day of SEPTEMBER, and no Tender will be received after that hour. The Board do not bind themselves to accept the lowest or any Tender, and any whose Tender shall be accepted will be required to provide two sureties for the due performance of their acts. The attendance of parties tending will be required at the Board Room, on MONDAY, WEDNESDAY, the following DAY, at the Board room, Rate Work house, Yorkstreet, West, Commercial-road, East, at THREE o'clock p.m. THOS. WATKINS, Clerk of the Board

White Horse-street, Commercial-road East, Sept. 3, 1856.

ST. PANCRAS, MIDDLESEX.—The Burial Board of the Parish of St. Pancras in the County of Middlesex, are prepared to receive TENDERS for various ALTERATIONS and ADDITIONS to the CHAPELS of that Cemetery, at FINCHLEY. The plans and specification may be seen, and particulars obtained at the Office of Mr. W. C. BIRCH, Architect, 16, Essex-street, Strand, and sealed Tenders endorsed, "Tender for Alterations," to be left at my Office, Vestry-hall, King's-road, St. Pancras, on or before TWO p.m. on MONDAY, the 22nd inst. on which day and hour the Board will proceed to consider the same.—The Board do not bind themselves to accept the lowest or any Tender. By order,

CHARLES GREENE, Clerk to the Board.

TO RAILWAY CONTRACTORS.—Parliamentary Estimates required for Constructing a Railway of sixty miles in length, now surveying.—Address, L. R. C. care of Messrs. Hooper and Gill, 13 Lombard street, City.

NAILS and IRONMONGERY

From BIRMINGHAM direct

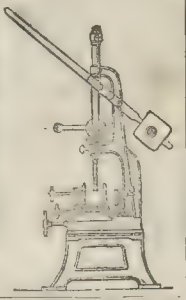
Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the

LOWEST PRICES IN BIRMINGHAM PRICES.

A complete LIST of which will be forwarded upon application to BLYTH and BRANCH,

Nail Manufacturers and General Factors, BIRMINGHAM; or at 11, Gresham street, LONDON.

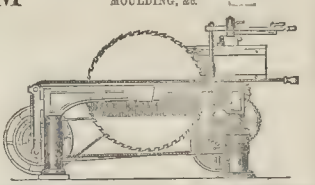
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinet-makers, and others, doing similar work, are invited to call at the Patentees', DOWIE, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 36, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self feeding, it does not require any skill or care in using it—the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery attended to.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Roller and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines, for Sawing, Planing, Grooving and Moulding Wood. They have constantly on hand machinery, either wholly or partly made so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, shipbuilders, or the trade in the world with their machines, for home and foreign use. One of their Saw Benches, and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace. A descriptive Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. King's-road, Chelsea, London.

WOOD-CUTTING MACHINERY, JOHN M'DOWALL and SONS, WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow. MANUFACTURERS of VERTICAL SAW-FRAMES (driven by straps).

For cutting balks of timber, from 6 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached, circular cross-cut radial sawing machines; power mortising ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a ½ of an inch thick to 6-inch deck plank; revolving planers, for squaring and planing heavy timbers, as used by ship-builders &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders, power morticing and tenoning machines; moulding machines, for sole and double; veneer mills of all sizes, with all appendages; sole-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames, and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr M'D. and Co. have been the engineering and millwright business for upwards of 30 years, during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evident by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises and first-class plant, made for every department of the works at the lowest rates of cost, the largest contracts can be executed with a regularity, accuracy, and despatch which cannot be excelled by any other firm in Europe. Applications as above for further particulars, will be promptly attended to.

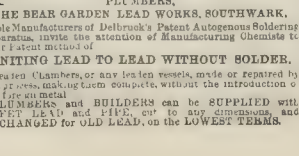
HART and SON, MALLEABLE IRON FOUNDERS, 4, Vine-street, York-road, Lambeth. Orders for Malleable Iron Castings executed within a week.

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND,

London



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First-class Prize Medal, Paris Exhibition, 1855.

Specimens at the Hardware Court, Crystal Palace, Sydenham. Illustrated Lists of prices sent free on application.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK,

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any fire or metal

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the store and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post. DEANE, DRAY, and CO. opening to the Monument, London-bridge. Established A.D. 1700.

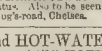
GURNEY'S WARMING APPARATUS, for CHURCHES PUBLIC BUILDINGS, and PRIVATE HOUSES.—This Apparatus is a modification of that invented by Mr GURNEY the surveyor, and now used by him for warming the House of Commons and House of Peers. It is constructed so as to be available for private houses, churches, and other buildings. It is simple, inexpensive, and powerful the fuel may be coal, coke, or any combining the laws of conduction and convection of heat, to temper and warm air for respiration, without drying or reducing its natural hygrometric state. For further particulars apply to Mr. WOODCOCK, 85, Bessborough-gardens, Pimlico, who will supply the Apparatus, and is empowered to grant licenses for agencies under the patent.

WARMING and VENTILATING.—ALFRED MAY begs to call the attention of Architects, Builders, and others to his system of WARMING by HOT WATER, Lunatic Asylums, Workhouses, Churches and other Public and Horticultural Buildings, Mansions, and Offices.

A. M having had great experience in the above line, is enabled to guarantee the efficiency of such works as may be intrusted to him for execution; he has just completed, to the entire satisfaction of the architects, the warming and ventilation of the Baron's and Sir Anthony Rothschild's new mansions and conservatories

Manufactory, Eagle-street, Red-lion-square, Holborn; and at 50, Devonshire-street, Queen's-square, Bloomsbury.

Artificial heat applies for drying linen on a very economical and effective system.

HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and Co. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fixing given.—J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

DR. ARNOTT'S SMOKE-CONSUMING GRATE.

Will this Grate become universally used?

Its advantages over every other consist in—

1. A saving of 50 per cent. in fuel.
2. Its being a cure for a Smoky Chimney.
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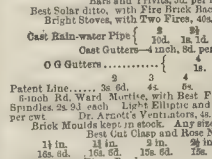

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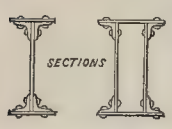

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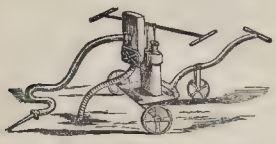

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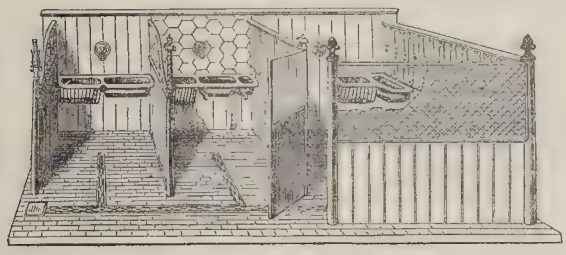

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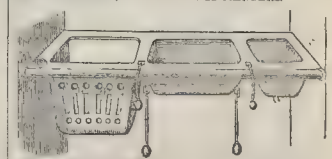

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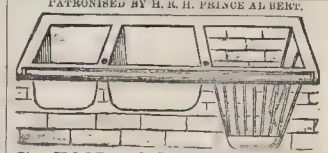

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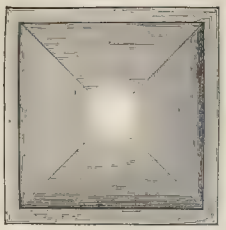

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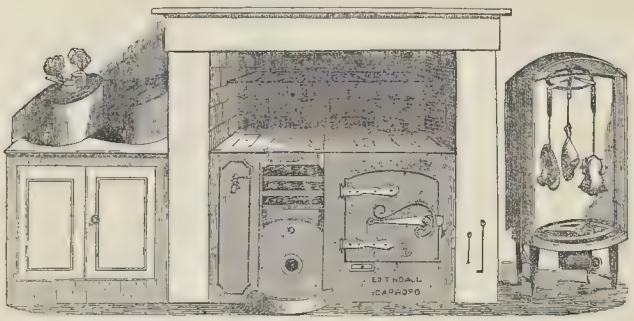

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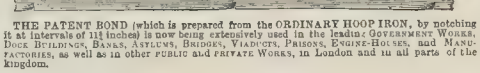

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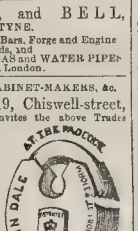

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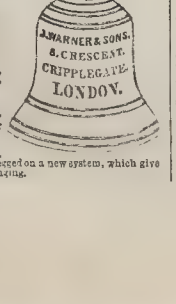

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Crystal Palace, August 23, 1856.

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The Builder.

VOL. XIV.—No. 709.

SOMERSETSHIRE is so rich in churches and Mediæval and Elizabethan mansions, that the members of the *British Archæological Association*, during their recent congress, held first in Bridgwater, and afterwards in Bath, have found the excursions full of interest. Somerset is the county of noble towers. Apart from the great churches of Bristol and Bath, St. Mary's at Taunton, St. Mary's North Petherton, the church of Huish Episcopi, Wrington church, Yatton church, Chewton-Mendip church, St. Cuthbert's at Wells, and others, possess towers of unrivalled magnificence and beauty. Representations of many of these will be found in Mr. Wickes's admirable "Towers and Spires," and will well repay study.

A ride through the county is made particularly interesting by this prevalence of towers: the earthworks, too, are not few: the hedgerows are full; and the hills are covered with foliage. All these make a journey in this neighbourhood more than usually pleasing, and the pleasure is increased by the connection between the locality and events in the early history of the country, more particularly with Alfred the Great and his defeat of the Danes. It was on the Isle of Athelney, within a few miles of Bridgwater, that Alfred, leading a troubled life, as Asserius writes, in the forests and marshes of Summurtune county, took up his abode in the cottage of one of his cow-herds, and let the cakes burn. Here, some time after, he made a stronghold, and, with the men of Somersetshire and Wiltshire, ultimately defeated the Pagans, and forced them to leave the country; their king, Godrum, or Gurtharum, agreeing to become a Christian and receive baptism. This ceremony was performed a few weeks after the battle; Alfred acting as his godfather, at the church of Aller, close by. The decisive battle was fought at a place then called Ethandune, or Edendune, and has been claimed for Edington, in Wiltshire. During the meeting of the Association in Bridgwater, Mr. Gabriel Poole, a local antiquary, in an interesting paper, made out a very strong case for a place called Eddington, in Somersetshire, about six miles east of Bridgwater, and which certainly seems to accord better with the account left by Asserius than the Edington in Wiltshire. Mr. Poole said, justly, that as the great events referred to had been mainly brought about by the valour of the men of Somerset, he felt that, as their descendants, they ought, on such an occasion as this, to bring to mind the great deeds of their forefathers; and that, if these events took place in the neighbourhood of Bridgwater, they ought not to allow themselves to be deprived of the honour of calling them their own, unless some other county could show a better right to them.

Bridgwater, where the meeting we are speaking of took place, is situated on the river Parret, about six miles from its mouth. It is an ancient town, though most of the evidences have been removed, and is peculiar as the only place in the kingdom where the well-known bricks for scouring purposes, known as Bath bricks, are made. Why they have this name is not known. It would seem that a mixture of sand from the sea with the alluvial deposit of the river, is here formed naturally, to the extent of about half a mile above the town bridge, and half a mile below it. The works are situated on the banks of the river, so that the sediment is taken at once to them, and being dried and formed into shape, is then burnt in kilns hard by. The manufacture employs from 4,000 to 5,000 hands.

There was a large castle in Bridgwater anciently: its site is now occupied by King-square. A drawing belonging to Mr. Heard, which was exhibited, with a number of other views of the old town, at the Assize Hall, showed that there were considerable vestiges of the castle within fifty years ago. At present all that remains is a postern gate in some premises on the quay. The parish church, St. Mary's, an interesting edifice, with a lofty spire and tower at the west end, has been restored with the exception of the tower, in consequence of which omission there is an ugly mass of masonry inside, that spoils the appearance of the church viewed from the east end. The east window is blocked up internally to afford a position for a large picture of the Descent from the Cross. The works of restoration appear to have been exceedingly well performed. The north doorway, a beautiful specimen of the Geometrical period, and untouched, is peculiar in its arrangement. A flat, pointed, arch is introduced for the doors to shut against, and the space between that and the point of the equilateral main arch above is filled with open geometrical tracery (a circle with quatrefoils, trefoils, &c.), to light the porch. The end of the north transept, too, where, next the ground, there are recesses with monumental effigies, and a door between, is very picturesque. The body of the church is mostly Perpendicular.

At the opening meeting, Mr. Pettigrew read a comprehensive and pleasant paper on the

Antiquities of Somersetshire;

in the course of which he said:—The primeval antiquities of Somersetshire are either few in number or have been scantily reported. Collinson, the historian of the county, writes, under the head of Celtic antiquities, simply the mention of Hantrille's Coit, a large stone, evidently belonging to an ancient cromlech, and estimated to have weighed not less than thirty tons. Mr. Collinson describes it as standing in an inclosure north-east from the church, and forming part of the remains of four assemblages of large ponderous stones, forming two circles, an oblong, and an ellipsis. The first, or large circle, part of which is crossed by an old hedge-row, is westward from the other parts, and is 300 feet in diameter, composed of fourteen large stones, some of which are fallen, and lie flat upon the ground: the second circle eastward is 84 feet in diameter, and consists of eight stones: the oblong, consisting of five stones, stands between the two circles, but rather inclining to the south; and at the southward extremity of all is the ellipsis, which is 40 feet in length, and has seven stones, one of them placed, as it were, centrically, and out of the line of arrangement. The stones which form the second or inner circle are the largest; one of those on the west side being 9 feet high and 22 feet in circumference, and would, upon a calculation, weigh upwards of fifteen tons. Dr. Stukely has regarded the work as the remains of a Druidical temple. The usual opinions connected with this subject have indeed been entertained and supported. The place has derived its name from the erection, as it is called Stanton, from *Stean* a stone, and *ton* a town; and from its ancient roads, Stanton Drew, whence, from its situation, the proverbial rhyme,—

"Stanton Drew,
A mile from Pensford, and another from Chew."

Sir Richard Colt Hoare, Bart., in 1817 transmitted to the Society of Antiquaries an account of a barrow in the parish of Wellow, at Stoney Littleton, denominated by him as the stone barrow, agreeably to its internal mode of construction. It measured 107 feet in length, and 54 feet extreme width, and was 13 feet in height.

In Roman antiquities, Somersetshire is exceedingly rich, every part of the county appearing to be capable of yielding examples illustrative of its occupation by the Romans. Villas have been discovered, and pavements excavated. There are examples at Wellow, Coker, Pitney, Hurcot, and Wadford; but most of these have suffered serious mutilations. Archæological societies were not at the time of their discovery in active operation as at the present period, when, we trust, more decided measures would have been adopted for their preservation.

The churches of Somersetshire may, in general terms, be said to offer to us splendid examples of the fully developed crucial form, with a central tower. The churches specially deserving attention, and of which several particulars have already been recorded in the Proceedings of the Somersetshire Society, are Uphill Old Church; St. John the Baptist, Wellington; St. Mary, Taunton; Lullington Church; St. Cuthbert, Wells; St. Mary, Kingston; Stoke-sub-Hambdon, and Somerton. The Somersetshire churches, in general, are remarkable by the absence of aisles (except in very large buildings, as St. Cuthbert's); by the frequent presence of transepts; by the octagonal form of their towers, and by the abundance of cruciform specimens. The churches which, in the course of our congress at Bridgwater, we shall be able to inspect, are those of Bridgwater; St. Cuthbert's, Wells; Martock; Stoke-sub-Hambdon; Montacute; Brympton; Yeovil; Clevedon; Walton; Weston-in-Gordano, and Tickenham. St. Mary, Bridgwater, is large and handsome: it has nave, chancel, two side aisles, and a tower at the western end, upon which is a lofty spire, so that the tower and spire measure 174 feet in height. St. Cuthbert's, at Wells, is a church of the Third Pointed Period, but some portions of it are earlier. Its tower is generally esteemed to be the finest in Somersetshire. Frescoes were discovered in it in 1851, the most finished of which was a life-size figure of the Saviour, clad in a russet-coloured garment, with a red cloak on his shoulders. In his left hand was an orb, surmounted with a cross: his right was used in benediction: his feet were bare: Ꝺ℘e m'cy was ten times repeated on the ground of the fresco, at the foot of which was written *Salvator Mundi*. Martock Church is distinguished by its magnificent nave, which is very long, with six bays. As a whole, it is entitled to the highest commendation, and the effect is strikingly agreeable: the relief one part affords another, and the various effective combinations, proclaim the evidence of design, and entitle the architect to praise.

At the same meeting Mr. Black gave the corporation (as well as the meeting) much gratification by an examination and report on

The Municipal Records.

Taking the parchments in the order in which he found them, he produced an ancient charter of one of the early kings—Edward I.—and others, reciting the inspection of the former charter, and confirming its stipulations. The charter was granted to one William Brewer, of the town of "Burgewater," and it provided that the town should be a free borough, with a free market, and a free fair to last eight days, the burgesses to be free of "lastage and stallage throughout our whole land except the City of London." Next he found a charter of Edward II. confirming this grant; and another further confirming the charter by Henry III. "King of France," &c. dated in the "45th year of our reign, and of our reign of France the 32nd" (1372). In the charter granted by Edward IV. it was stated that complaint had been made to the king that "from ancient time the town has been accustomed both by foreigners and natives of this country, and used for all manner of merchandize; and whereas the town had fallen into great ruin and decay, by want of reparation, so that the merchants had withdrawn themselves and failed to come with their ships to the port;" and this grant was for the purpose of restoring the town to its former degree of prosperity. To accomplish this, the boundaries of the borough were extended in a remarkable manner, the confines of the town being duly set forth in

the charter. He laid before the meeting some other interesting documents, such, he observed, as it seldom fell to the lot of an antiquarian to unfold on such an occasion. These consisted of rolls found among the muniments in the corporation chest, containing the principal accounts of the churchwardens—which were not usually met with among corporate deeds. The town was described as the "town or borough and parish of Bridgwater;" and from these documents it would seem that the corporation had considerable right and power which they exercised over the ecclesiastical affairs of the town. On one of the rolls he had seen that morning the cost of erecting Bridgwater tower—the material and the cost of labour; and what was more important still, had ascertained the time it was built, a circumstance now made a matter of certainty, instead of mere conjecture and speculation. At a meeting in the evening, he pointed out particularly an Exchequer taxation roll, which he said contained the name of every place in each hundred of the county, and the amount of taxation contributed by them. The whole sum for the county was 1,357*l.* 19s. 2½d. of which Bath was assessed at 13*l.* and Bridgwater—showing it to be a place of great importance at that period—at double the amount.

At the same meeting, Mr. G. Parker read a paper on the

Local History of Bridgwater.

The first notice, Mr. Parker said, we have of Bridgwater, is from Doomsday-book. At the time of Edward the Confessor, A.D. 1041, Bridgwater was a private estate of Meile Swain, a Saxon Thayne. He lost it at the conquest, when William the Conqueror gave it to one of his followers, Walter de Dowai, from whom the place derives its name.* His descendants conveyed the lordship of Bridgwater to William Briwere, and King John confirmed to him the manor with the Knights' fees, advowsons of the church, and granted him an ample charter, making it a free borough, with a free market and a fair, and gave him licence to build a castle.

The Briwere family built and endowed the hospital of St. John (the charter of which was dated 1214), for a prior, master, and brethren of the order of St. Augustine, who were to superintend and maintain thirteen poor and infirm persons, besides religious men and pilgrims. William de Briwere made the haven of Bridgwater, and commenced the stone bridge afterwards finished by Sir T. Trivet. The castle and third part of the manor of Bridgwater became vested in the crown about the time of Edward IV. In 1626, Charles I. granted to Sir Wm. Whitmore the manor and castle of Bridgwater. The Whitmores sold it to Henry Harvey, of Bridgwater, who leased it in 1643, two years before the siege of the town by Fairfax, to Edmund Windham. Mr. Parker then gave an interesting account of the siege of the town by the Parliamentary forces, principally taken from Oldmixon's history of England. Oldmixon was a native of the town, and relates that he himself saw Monmouth leave the town for the fatal battle of Sedgmoor. Reviewing the history of the town, Mr. Parker described the old buildings, drawings of which were exhibited in the museum. Within the last century nearly every shop was without glazed windows. Mr. Parker described the sites of the old crosses and gates, and stated that some of them existed during his remembrance. He pointed attention to the house now in his possession, where Admiral Blake was born.

The next day, when the members went to

Glastonbury,

a paper, by Dr. Beattie, on the Abbey there, was read by Mr. George Wright. "Amongst the noblest structures ever raised by man for the worship of his Maker," said Dr. Beattie, "the church of Glastonbury was for ages without a rival. It was invested with a holy tradition that claimed for it the immediate protection of Heaven. Guardian angels, it was affirmed, stood sentinels at its gate, and, like the Seraphim of old, hovered with expanded wings over its altars. It was regarded as the first hallowed spot—the very Zion of the Christian Church in England. The soil on which it stood, the skies through which its spires pointed the way to Heaven, were pronounced richer and lighter than those of any other land—those of Nazareth only excepted. Pilgrims, as they approached the hallowed precincts of Glastonbury—so tradition affirms—were met and welcomed by angels, whose never-ceasing 'hallelujahs' were heard and felt in the heart of every believer,—

'——— Kindling his faith and lifting up
His new-born hopes to heaven.'

The legend, historical as well as popular, which commemorates the founding of Glastonbury, attributes it to no less a personage than Joseph of Arimathea. * * * After the spirit of Christianity had been successfully propagated among the surrounding natives, the modest cell which Joseph had erected with *his own* hands, was replaced by a solid structure, which Ina, King of the West Saxons, presented to the brotherhood. This edifice, on which the king had bestowed all possible care, by selecting workmen qualified for the task, is described as a very fair and stately church, dedicated to Christ, St. Peter, and St. Paul. Thus substantially housed and patronized, the brotherhood of Glaston rapidly increased in numbers and influence. * * * In the reign of King Lucius, two delegates from Pope Clutherius were sent to make a survey of the rising church of 'Ynswyton,' as Glastonbury was then called, and, among other restorations and additions to the original cell, on oratory was erected on Mount Thor. This temple they dedicated to the archangel Michael, that, being so 'honoured by men on earth, he might, by God's command, bring men to honour Him in Heaven.' In the year 430, the church was visited by St. Patrick, who took up his residence there, rebuilt the chapels of St. Michael and the Blessed Virgin, and, after conferring many benefits on the place, spiritual and temporal, was succeeded by St. Benignus, who softened the name of Ynswyton into that of Avalon. In 530 the sacred edifice was again enlarged and embellished by the Bishop of St. Davids, uncle of King Arthur; and when the renowned prince was mortally wounded at Canslan, he was carried hither with great solemnity to receive the last consolations of religion, and a grave in hallowed ground. His remains were long afterwards disinterred by Abbot de Levansey, and reburied in the presbytery.

"In 665, St. Augustine incorporated the brotherhood of Glastonbury into a regular monastic institution, with an Abbot at their head, and governed by stringent laws and regulations. In 708, King Ina, who had declared himself, as already noticed, the great patron of Glastonbury, supported his title by many gifts, also of princely munificence, to the monastery. Among numerous other donations of precious utensils, he gave for the use of the chapel and altar no less than 264 pounds weight of gold, 2,640 of silver; and to these he added an extensive territory, still known as the jurisdiction of Glastonbury, and consisting of seven parishes. His nobles, following the example of their prince, vied with one another in their benefactions and posthumous bequests. Thus patronized, the Abbey became proverbial for its riches. Not a pilgrim entered its holy precincts, but returned home with exaggerated reports of its splendour. These accounts, stimulating the cupidity of barbarous enemies, brought frequent ruin upon the monastery. Danish and other marauders were seen at its gate: fire and sword demolished the buildings, dispersed the monks, and stripped the treasury of all its sacred wealth. But no sooner was the calamity passed, than the brotherhood re-assembled, the church was re-edified, and in a few years Glastonbury not only revived, but exceeded its former splendour."

The Association, after visiting the ruins of Glastonbury Abbey, examined the beautiful architecture of

Wells Cathedral.

The visit was rendered still more agreeable by the courtesy of the Bishop of Bath and Wells. Lord Auckland not only threw open the episcopal palace and grounds to the members of the Association, but kindly accompanied them in their visit to the Cathedral, the Chapter-house, and the Refectory.

In the Chapter-house Mr. Pettigrew read a paper on the Cathedral, embodying a communication on the building from Mr. Britton.

On the subject of the gorgeous display of ecclesiastical sculpture on the west front, Mr. Pettigrew quoted the opinion of Mr. Britton, who considered that the intention of the architect of this venerable pile was to surpass all preceding works of the kind—producing in fact, a sort of "miracle in art," and thus exciting in the mind of the beholder wonderment and devotion. Flaxman, whose pure taste in art will ever entitle him to a high place in the grateful remembrance of all lovers of classic sculpture, characterized the sculptures as presenting the noblest and most useful subjects that could possibly be chosen. Comparing the difficult circumstances under which the work was executed, in comparison with our own times, it was remarked that, in those days, there were neither prints nor printed books to guide the judgment and discretion of the artist; there were no glimmerings of anatomy, of optics, or perspective, which were reserved for the researches of so sublime a genius as Roger Bacon, many years afterwards. Professor Cockerell's deductions on the subjects portrayed in the figures which adorn this part of the building, were considered at some length, and his opinion stated. According to that gentleman, these sculptures were designed to illustrate, in a striking manner, the great and fundamental doctrines of the Christian faith, its happy advent to this country, and its subsequent protection under several dynasties until their execution, A.D. 1214. Mr. Cockerell, who in his investigations had the co-operation and assistance of the late Dean (Dr. Goodenough), ascertained that the stone used was from the Doulting quarries, near Shepton Mallet, and that they were executed by English workmen.

Some of Mr. Cockerell's suppositions were warmly disputed.

In the Bishop's Palace are the remains of the vast "Guesten Hall," the chapel, and other old parts of the edifice, together with the fortified walls, bastion-towers, machicolated gate-house, and other characteristics of a castellated mansion. The deanery contains some curious architectural remains, particularly a fine chimney-piece in the hall, a bay window, and other objects of curiosity. These various buildings, as well as the vicar's close, are illustrated in the Picturesque Antiquities of English Cities, and the latter especially is amply described and displayed by Mr. T. L. Walker.

We shall not pretend to give a complete account of the week's work, but must confine ourselves to a few salient points likely to interest our readers. As a sample, however, of the excursions, we may note something of what was seen on the third day, Wednesday, when a numerous party started early in the morning, and made a descent on

Martock Church.

This is for the most part of the Perpendicular period, and is noticeable for a very handsome open roof, reminding the visitor, by the extent of its decoration, of some in Norfolk: it has also a range of handsome niches on each side of the nave, above the spandrills of the arches separating it from the aisles. Some coarse paintings of figures *adorn* them. A handsome Early English window of five lancets, at the east end of the chancel, is shut off by a huge pseudo-classical composition, in plaster, of columns and entablatures, altogether incongruous, and serving by its ill-proportioned scale to lessen the apparent size of the church. A hope was expressed that it would be removed, and the window opened.

There are three interesting mediæval effigies, the size of life, placed over modern graves outside: these should be placed under cover.

The remains of the Manor-house at Martock include the hall, with a good roof of open timber, and the kitchen at a short distance

* Qy. Burg. Walter.

from it, connected at one corner with the solar and offices. The windows of the hall, of two lights, with trefoiled heads and a transom, have a cinquefoiled inner arch. A carved stone bracket projects from each side wall, the purpose of which is doubtful. These may even have been built in afterwards. The kitchen retains its ancient fire-place and hatch.

Stoke,

The next place stopped at, is remarkable for the number of good stone cottages of the sixteenth and seventeenth centuries which it exhibits, and very considerable remains of monastic buildings. The church is a Norman structure, with various insertions, and a south chapel of the Early Decorated period, with a range of four lights on each side. A low side window (sometimes called a lychnoscope, and sometimes a vulne window), on each side of the chancel; a squint, or hagioscope, on each side of the chancel arch; and what may be the remains of a stone altar, at the end of the chancel, are amongst the noticeable points. On the south side of the latter there is a large piscina, with shelf above, placed anglewise. The most interesting feature in the edifice, however, is the north door of the church, against which, in more recent times, a porch has been built that obscures the upper part of the ornamented semicircular arch. On the semicircular tympanum, above the straight head of the door, are various rude sculptures, consisting of a tree in the centre, with three large birds amongst the foliage: on the left, or east side of this, is a representation of the archer of the Zodiac, marked at the side, in Byzantine fashion, Sagittarius, and on the other side an animal inscribed Leo, and a representation of the Agnus Dei. The capitals of the columns are leafed, and the shafts are ornamented: the arch displays the zigzag and fret. This doorway would seem to belong to the end of the eleventh or the beginning of the twelfth century. King Stephen, who reigned from 1135 to 1154, bore Sagittarius as a device.

The cill of a window on the south side of the nave projects to throw off the wet, an arrangement not usual in Mediæval work.

Montacute

is a very picturesque village, and offers attractions in the shape of the gatehouse of the old priory, and the residence of the Phelipses, Montacute House. Both the gateway and the residence have been illustrated in our pages, so that we need do nothing more than refer to them.* The hall contains a stone screen, of which we have given an engraving elsewhere; and at the opposite end, on the wall, a large bas-relief, of rather coarse execution, of Stang-riding, or Riding the Skimmington, a mode of punishing certain delinquencies, or of ridiculing a man who allows his wife to beat him, still followed in some parts of the country. It consists in making him ride a wooden horse in procession, with the accompaniment of much noise. One end of the bas-relief shows an interior where the husband, who has visited the beer barrel, having accidentally pulled out the spigot, has been forced to put his finger in its place to prevent the waste of the beer, and being so discovered by the wife, is receiving a castigation: the other half displays the mock procession. The garden at Montacute,

"Walled al with stou,"

with its balustrades, steps, fountain, terraces, and stone summer-houses, is charming in the extreme: a delicious "pleyng place," to step into from my lady's "bowre."

The inscription over one of the entrance-doors,—

And yours, my friend,

would be very satisfactory if it were true.

* See vol. iii. p. 387; vol. vi. p. 42 (view of the stone screen in hall); vol. vii. p. 330, &c.

According to the guide-books, including Murray's excellent new one, Montacute has its name from the sharp-pointed hills near, *Mons acutus:* others, however, would rather find the derivation in the fact, that William Earl of *Mortaigne,* in Normandy, founded here, in the latter part of the eleventh century, a priory of black Cluniac monks. The gateway of the priory, built at a later date, we have already mentioned.

From this pleasant spot, the party proceeded to

Brympton,

where the church, the residence, and a mediæval domestic building, supposed to have been the residence of a chantry priest, form a most interesting group. In the churchyard there are some large stone effigies, of the fourteenth and fifteenth centuries, on which Mr. Planché, who did good service during the week, made some observations. One, a female, has the half-moon head-dress: both should be removed under cover, in order to preserve them. The bell-cot, overhanging the base on all sides, is more peculiar than pleasing. The principal front of the mansion, which presents Italian architraves, window-caps, cornices, &c. with the mullions and transom of the Tudor period, has been ascribed by Walpole and others to Inigo Jones, and probably with truth. In our fourth volume (p. 31), will be found some details of the stable here, said to be also the work of Inigo. A portion of the manor-house belongs to the reign of Henry VII.

From Brympton

Yeovil

is but a short ride, and there, after viewing the church, the tower of which stands grandly, the archæologists had an opportunity of seeing a collection of ancient and modern works of art which had been exhibited for some time past in the Literary Institution there, and is now closed. It contained a number of good pictures, and some very curious works of art of other sorts; for example, a cabinet of medallions, ascribed to the fourteenth century, representing the sculptures on the triumphal arches in Rome, and which ought to go to the forthcoming Manchester Exhibition. There was a small part of a shrine from Glastonbury, which deserves illustration, and we may mention a portion of a metal 2 feet rule, or guage, found in the walls of the tower of Yeovil Church, and sent by Mr. Shout, the architect.

Let us say, as to the church, that the interior, which is of noble proportions and of the Perpendicular period, is sadly disfigured with white and yellow wash. A brass lectern here has a quaint and contracted Latin inscription.

A luncheon at Yeovil, a dinner at Bridgwater in the evening, and then two papers in the Town-hall, one by Mr. Vere Irving, on "Earth-works," and the other by Mr. French, of Bolton, on "Rayed Banners and the earliest Armorial Charges," ingenious if not correct, completed the business of a long day. And here, with a hint to the very liberal and enlightened corporation of Bridgwater, that the aspect of their Assize Court, looking up at the ill-arranged heap of timber which forms its roof, is scarcely worthy of them, we must close our present notice.

ON THE DRYING AND BURNING OF BRICKS.*

FOR burning bricks, we have to employ the utmost care and attention in exposing them to as high a heat as they can stand without endangering their melting. If they are not sufficiently burnt, they will be very absorbent, and will retain sufficient moisture for a frost to destroy them.

The burning is carried out on two principles. First, in the neighbourhood of London and Manchester, by what are termed close fire clamps; that is, with as little draft as possible, or by a smouldering fire which occupies a month or six weeks in burning, having the fuel spread in layers between the bricks. The other system is by a draft of hot air or flame from furnaces or fire-holes in square or circular buildings, called kilns.

* See p. 467, *ante.*

Of these there is an endless number of constructions; some nearly approach the close fire clamps, having a very low draft, and take a week or nine days to burn them. Others have an increased draft, and take four or five days; and the more recent constructions effect the desired object in from forty-eight to seventy-two hours.

The close fire clamp is the favourite system around London and Manchester for burning bricks, which arises from these large populous cities supplying the brickmaker with a very cheap fuel in the shape of the refuse ashes from the houses and the manufactories, and also from the clays in these districts taking little fire to burn them. The London makers not only burn by layers of the ashes between the bricks in the clamp, but, as I before mentioned, add in the making about 30 per cent. to the clay before it is moulded. Around Manchester, ashes are not used in making the bricks, but only in burning them. I think it quite superfluous to describe the setting or constructing these clamps: it would occupy much time, and the fewer we have of them, the better bricks will be supplied. But the principle is to stack the bricks close together, and to check the draft as much as possible, the fuel being intermixed with the ware. The wind is often very troublesome with clamps, and drives the fires to one side, by which that is over-burnt and the other side almost useless from not being burnt enough. I have not had any experience in these clamps myself, but I am informed by those practically acquainted with them, that the inferior (that is, the over and under burnt) bricks are often in a proportion of from 30 to 50 per cent.; and these have to be sold at a reduced price. This irregular firing produces the numerous qualities of bricks which I described in my previous paper. All are made equally well, but are destroyed by the unequal heats to which they are exposed. The heat at which the bricks are burnt varies in the London close fire clamps from 5 to 20 degrees. That the close fire clamp is the worst system of burning bricks few can doubt; and it would not be so tenaciously adhered to around London and Manchester, but from the supply of ashes being so great and so cheap. As a proof that the system is not good, the brickmakers in the collieries all use kilns, even where they have in their works refuse coal free of cost. But they cannot sell their bricks unless they are of good quality: they therefore use the kiln with a quick draft.

On visiting the brickworks at Epsom a few weeks since, to inspect the kiln which I have described to you, I was quite convinced that my opinion was right with respect to close fire clamps. The bulk of the bricks made in these works are burnt in the clamps, and a portion in the kiln. The most casual observer could not but be struck with the difference of the ware. Before I leave the subject of close fire clamps, I might mention that the London ashes could still be used by their being ground up fine amongst the clay; and then a very small quantity of fuel in the furnace of an improved kiln would burn the bricks of one uniform quality, and enable the waste heat to be economised for drying the green ware. The ashes, as they are now used, have their particles too large; and these, on being consumed, leave the bricks full of cells, and less compact and solid than other bricks.

The burning kilns are generally rectangular brick constructions, either open at the top or arched over, but some are circular buildings, or cupolas, called "ovens." It would take a whole evening to describe every one, and the different systems adopted in each: I will, therefore, only briefly explain the burning of an improved square kiln, and of a round one. The construction of the kilns cannot be correctly explained without drawings. The square kilns for large works, as erected by Mr. Beart, are built in pairs, to save one wall: they have the furnaces along one side, and the centre wall supports

two arches of the kilns. When they are thus built together, one is burning while the other is being discharged and filled, the cool kiln acting as a buttress to the burning one. The late Dr. Cother, of Gloucester, built a pair of these kilns under one arch. The bottom of the kiln is constructed with furnaces every 5 feet from centre to centre, and built with fire bricks. Above the fires, and about 5 feet from the bars of the furnace, is the floor of the kiln, supported on walls running through the length of the kiln, about 4 inches apart, and in these walls are arches at each furnace. The walls are tied together by the lattice-work of the floor of the kiln, and the ends of the bricks, forming the open floor, are kept about 3 inches from each other. Through these small holes the flame from the furnace enters the goods to be burnt. The height from the open floor to the top of the arch is about 15 feet, and the vertical walls are from 12 to 14 feet apart. Thus a large space is allowed, as they can be built of any desired length. These kilns are constructed to hold from 50,000 to 200,000 bricks each, and are capable of being burnt from eighteen to twenty times in a year. The arches of the kilns have a row of small chimneys, about 3 feet high and 5 feet apart, built down the centre, and a similar number on each side, through which the waste heat and gases escape.

The first process is to fill the kiln, which is called "setting." The bottom rows of bricks are kept wide apart over the floor, to allow the flame to enter more freely. On these are placed one or two rows of bricks, crossing the course on the floor, and about ¾ of an inch apart. Every one or two courses are then crossed, so that the fire has to pass through a series of network, formed in the setting of ¾-inch squares. When the kiln is filled, the entrance, called the "wicket," is built up close with burnt bricks, and plastered over with loamy clay. The fires are then lighted in the several furnaces, and for twenty-four hours are allowed to burn very gently, but gradually increased, air being admitted, that the draft or warm current may drive off the steam as fast as it is formed, for bricks cannot be *thoroughly* dried previously to their being stacked in the kilns. When the steam ceases to flow from the top chimneys, the fire is gradually increased, and the heated gases flow with greater velocity through the ware. At this time the judgment of the burner is called into requisition, for if his furnace should become too hot, he may vitrify the bottom bricks, while those at the top of the kiln, 20 feet from the fire, would be quite unburnt. This he prevents by opening his furnace lids, and allowing a current of air to enter sufficient to cool his furnace. He then again closes the lid, in order to attain what heat he can safely use. These operations of heating and cooling are continued until, on looking at the top chimneys of his kiln, he sees that he has attained a sufficient heat. After this he gives the kiln a few hours more fire, but gradually admitting more air, which begins to lower the temperature of the bottom part, and, from the increased draft, carries the heat to the arch, and thoroughly burns the top bricks. I have often seen these top bricks, 20 feet from the fires, harder burnt than those on the floor of the kiln, within 5 feet of the fire. After the burning is completed, the fire doors are shut to prevent the kiln cooling too rapidly, and for two or three days it is pouring off to *waste* an immense amount of heat, free from all impurities. When the kiln is cool, the wicket is taken down, and the ware drawn out for use. With a good burner the bricks will all be of equal quality, and, if well made, will all command the highest price, not a moiety only, as in clamp-burnt bricks.

The common brick-kiln is a rectangular building, generally open, but sometimes arched over. In the side walls and opposite to each other are built fireplaces, or holes for the insertion of the fuel. The furnaces are formed in the setting of the kiln with unburnt bricks, and above these the kiln is filled as above described. In these kilns, from the raw ware forming the furnace, the flash of the flame from the fires in the walls too often vitrifies and destroys the nearest bricks. In the open kiln, as the fire or heat reaches to the top, the fireman soils or earths it down, which throws the draft to another part more backward; and, as it continues to rise, he proceeds with this operation until all the top is earthed in: he then continues the firing until the whole has sunk, by the contraction of the clay in the fire, to the desired depth. The fire-holes are then stopped up with mud, and the kiln is left to cool gradually. If the air were admitted too rapidly while the kiln was at this intense heat, it would cause bricks made with strong clays to fly to pieces like glass: it is, in fact, the process of annealing. Cooling too quickly also affects, in many clays, the colour of the bricks.

Temporary kilns are constructed in the country with unburnt bricks, and called clamps. In Staffordshire, the bricks are burnt in small round kilns, called ovens, which hold from 7,000 to 8,000 bricks each: these are burnt from fire in the walls round the ovens, and the raw ware is set in, so as to form a flue from each fire, to direct the flame to the centre. These ovens burn very quickly, and a most intense heat can be obtained in them.

I will now more fully describe a principle of burning which I have had in practice for the last six years, and which I can therefore recommend with great confidence. The great object in brick burning is to attain a sufficient heat to thoroughly burn the ware with as small a consumption of coal as possible; and with nearly an equal distribution of the heat over all parts, so that the whole of the ware, being subjected to the same temperature, may contract equally in bulk, and be of one uniform colour throughout. The advantage is also gained of burning in much less time than in the old kilns, which, on an average, took a week; and the management is so simplified that any man, even though not at all conversant with the manufacture, after he has seen one kiln burnt, will be able to manage; and the last, though not least, advantage is, that of delivering up to us the waste heat at the ground level, or under the floor of the kiln, to be used in drying the green ware, or in partially burning the next kiln.

Hitherto the heat has been applied by a series of fire-places, or flues and openings round the kiln, each exposed to the influence of the atmosphere; and in boisterous weather it is very difficult to keep the heat at all regular, the consequence of which is, the unequal burning we often see. The improvements sought by experimentalists have been the burning the goods equally, and, at the same time, more economically. These are obtained by the patent kilns, as improved by Mr. Robert Scrivener, of Skelton, in the Staffordshire Potteries. The plan is both simple and effective, and is as follows:—A furnace is constructed in the centre of the kiln, much below the floor level, and so built that the heat can be directed to any part of the kiln at the pleasure of the fireman. First, the heat is directed up a tube in the centre to the top of the oven or kiln, and, as there is no escape allowed to take place there, it is drawn down through the goods by the aid of flues in connection with a chimney. Thus, all the caloric generated in the furnace is made use of, and, being central, is equally diffused throughout the mass; but, towards the bottom, or over the exit-flues, the ware would not be sufficiently burnt without reversing the order of firing. In order to meet this requirement there is a series of flues under the bottom, upon which the goods are placed, with small regulators at the end of each: these regulators, when drawn back, allow the fire to pass under the bottom, and to rise up among the goods which are not sufficiently fired, and thus the burning is completed. By means of these regulators the heat may be obtained exactly the same throughout: there is, therefore, a greater degree of certainty in firing, and a considerable saving of fuel, with the entire consumption of the smoke. From the fire or draft being under command, so as to be allowed either to ascend or descend through the ware during the time of burning or cooling, the waste caloric can be economised and directed through the adjoining kiln in order to partially burn it, or be used in drying off the raw wares on flues or in chambers. I have found the saving of fuel in these kilns over the common kiln, 50 per cent.; and to give an idea of the facility with which they can be worked, it is common for my men to fill the kiln, burn, cool, and discharge it in six days. But the time I usually allow is, to have each kiln set, burnt, and drawn in seven days.

To sum up the manufacture of bricks on the most improved system, the whole works should be under one roof, and only occupy a fraction of the space devoted to this manufacture in the field. The brick manufactory may be a square construction, a fourth of which, across the top, would be occupied by the steam-power mills and machines, with an allowance for working room: one-half would be used for drying the ware, and the remaining quarter for kiln-room. The clay should be brought into the works from the pit by trucks, on a light railway, of which some excellent ones for the purpose are manufactured by Mr. Crosskill, of Beverley, the celebrated agricultural implement maker. It should then be manufactured into bricks by machinery, and delivered to a drying-chamber, or laid on open flues (the latter being the cheapest in construction), in order to be dried, the flues or chambers being heated by the waste heat of the burning kilns. As soon as the bricks are dry, they should be stacked in the kiln, burnt, and delivered out, at the opposite end of the manufactory to that at which the raw clay entered, ready for use. This can be done in from eight to nine days from the time when the clay first entered the works; being a very little more time than is occupied in burning alone in many districts.*

To attempt to give the cost of manufacturing would only mislead. The largest item is labour, the cost of which varies so much between manufacturing and agricultural districts. The next is coal or fuel for burning, which ranges from 3s. to 20s. per ton, according to the district of country. Again, one clay requires a large expenditure of fuel to be used, in order to attain the most intense heat; while another will burn sufficiently hard at about 10 degrees Wedgwood. The consumption of coal for burning bricks varies with the clays, from 3 to 20 cwt. per 1,000.

BRIDGE FOUNDATIONS.

ROCHESTER.

In connection with the particulars already given of the mode adopted in constructing the foundations and piers of the new Westminster-bridge, some account of other systems of founding may be interesting. Let us first allude to the principle adopted from screw mooring, in Mitchell's screw piles, which have been used with success for a pier at Courtown, county Wexford; also for the staging for the breakwater at Portland; for the foundations of many railway bridges and viaducts; and for the Fleetwood, Maplin, and other lighthouses raised aloft on slender supports from the sand.

Pneumatic cylinder piles have been applied according to two different methods. The first invention was due to Dr. Potts, and was adopted in a bridge on the Chester and Holyhead Railway. The cylinders were exhausted by a double air-pump, the pile sinking as the exhaustion was continued. A cast-iron plate was fixed on the heads of the piles, on which the pier was built. The cylinders, as first used, were 12 inches in diameter; but subsequently a diameter of 5 feet, or even 7, feet was found advisable. This increase required increase of power to overcome the friction of the sides,—and that was effected by interposing another vessel, between the tube and the air-pump, which was first exhausted; when a communication being opened between the tube and the exhausted vessel, a double effect was produced,—namely, the excavating or exhausting process as in the former instance, with the addition of a sudden blow on the head of the piles.† The failure, however, in this process at Rochester, led to the adoption of the modification of the diving-bell principle, by Mr. John Hughes, which we referred to in our notice of the Rochester bridges,‡ where we alluded to an analogous in-

* The quality of bricks depends on the fineness of division of the particles, the proper admixture of the earths and their thorough amalgamation, the closeness or compactness into which they are worked, and, finally, the having been exposed to a sufficient heat to render them indestructible from exposure to any change of atmosphere

† Minutes of the Institution of Civil Engineers, April 29, 1851, "On Foundations, Natural and Artificial," by Mr. S. Clegg, jun. M. I. C. E.

‡ See *ante*, p. 418.

vention by Mr. Bush, for which he obtained letters-patent in 1841, and to one by Lord Dundonald, patented in 1830. An application of a similar principle appears to have been made in France, in the sinking of a pipe as a mine shaft: it is described in the "Comptes Rendus" of the Academy of Sciences, and in Dr. Ure's Dictionary of Arts, Manufactures, and Mines. The conditions to be answered by Mr. Hughes, were, that the cylinder pile should be kept free from water, until sunk 30 feet at least through the bottom of the river, in order that the men inside might excavate with ease; that the stone and earth should be promptly removeable; and that the pile should descend truly placed. When sunk, the cylinders were to be filled up with concrete and brickwork.

The cylinder lengths were in 9 feet, 7 feet in diameter, cast with flanges, at which they were screwed together and made air-tight. The top length had a wrought-iron cover bolted to it, through which two cast-iron chambers ⊍ shaped in plan side by side, in reversed positions, called "air locks," were fixed in the cover, partly above and partly below it. These formed the means of passing in and out of the cylinder, and were provided with valves or doors, and air-cocks to regulate the escape or the action of the compressed air of the pile. One valve or flap, at the top of the "air lock," leading to the external atmosphere, was closed when the other communication with the cylinder was open and the "lock" filled with compressed air; and the valve or door, lower down, opening into the cylinder, when the upper valve was closed, allowed the workmen to pass the materials out of the cylinder, or *vice versâ*. Each "air-lock" had two sets of cocks, one for forming a communication between the cylinders and the chamber, the other between the chamber and the atmosphere. One set of cocks was designed for the use of men passing in and out of the cylinder, and accessible from the inside: the other set was used in passing buckets or materials through the "air-locks." One cock between the chamber and the atmosphere was placed in charge of a man inside the cylinder, who, having closed the door, could let off the air and pass a bucket from inside to outside. Another cock, from the interior of the cylinder to the chamber, was worked by a man outside, who, on closing the flap, could fill the chamber with air, and pass a bucket from outside to inside. The principle is similar to that of canal locks.

The compressed air was supplied to the cylinder piles from a double-barrelled pump, worked by a steam-engine. The pile was weighted down to cause its descent, and was pitched with studied accuracy horizontally and vertically. The length of cylinder fitted with the air-locks had to be removed when a fresh length was added,—the water of course filling the pile each time,—from which, however, it could be again ejected by a few strokes of the pump.

At first, when the system was set in operation, the water was forced out at the foot of the pile; but this plan being found objectionable, a syphon pipe was added, descending inside to the bottom of the cylinder. Other minor contrivances were applied, which we need not describe. Some of the cylinders, as we stated, were carried down 40 feet.

Since the foregoing account was written, we have observed that Mr. Edward Cresy, in his recently published Supplement to his "Encyclopædia of Architecture," has given an account of the foundations of Rochester-bridge, with illustrations. This Supplement, we may say, appears to be a valuable work of reference as to many improvements dating subsequent to the publication of the first edition of the Encyclopædia. To it, however, we must give attention at a future opportunity.

In 1853, Mr. Hughes patented a modification of the method used at Rochester, which appears to deserve some attention at this juncture. The invention, which is for "improvements in building or forming structures under water or below the surface of the ground," contemplated the use of a hollow vessel, or "shoe," upon which the cylinder was to be raised, the structure being built around and externally to it,—the "shoe" descending and forming part of the foundation. Where required, the "shoe" can be floated on the water by aid of a deck, or floor, and the cylinder raised as before. Exhaustion, or compression of air to the cylinder, are applied as necessary; and many modifications and combinations of the invention will readily occur.

In the course of the inquiry, which we have endeavoured to open, into recent inventions for founding and building piers, we think it will have appeared that there is no reason to assume that coffer-dams—involving great expense, loss of time, serious obstruction to the water-way, and injury to river-banks—are inevitably required in the Thames bridges. We have noticed several old and new inventions, each possessing some merits, and each certainly not free from defects. Would it not be possible to make fresh combinations from such appliances, and to remedy the defects of one invention, by enlisting, further than has been done, the special advantages of another? If, for the timber-bearing piles of the new Westminster-bridge system, cylinder piles deeply founded and cased in concrete were substituted, the pier could hardly be inferior to the supposed strength of London-bridge, and might be free from some objections which we apprehend there are at Rochester.

THE LATE MR. THOMAS HOPPER, ARCHITECT.

MR. HOPPER was, we believe, in the seventy-ninth year of his age. Few men have passed a more active or energetic life than his, or have been more extensively engaged in important architectural works; and this will be considered more remarkable by some when it is mentioned that Mr. Hopper did not receive what is commonly called an architectural education. His father was a measuring surveyor, clever and prominent in his business, but of intemperate habits: his son's first years of active life were spent in assisting, or rather carrying on, his father's business; and these responsibilities dated from the early age of eighteen.

It chanced that, while engaged in this pursuit, he went to Craven Cottage, Wandsworth, then in course of erection by Walsh Porter, the "*arbiter elegantiarum*" of that day, and the guide of the Prince Regent in all matters of art and taste. Mr. Porter was struck with the ability of the young man, perceived his talents, and became his patron.

Hopper's first work was the enlargement and decoration of Craven Cottage, a good specimen of the *cottage ornée* style, which has since become fashionable; and from this period his career as an architect may be dated. He was introduced to the Prince Regent, and erected for him the conservatory and other works at Carlton House. His next noticeable work was Slane Castle, in Ireland, for the Marquis of Conyngham; and from that time his engagements in the erection or alteration of private mansions in all parts of the country became very numerous and incessant.

We have not a list of these commissions, but among them may be more especially named Peurhyn Castle, at Bangor, in North Wales, a work whereon vast sums were expended, and upon which his claims to the possession of high qualifications for his art would best rest; Margam, in South Wales, a noble mansion in the enriched Tudor style; Dunkeld, in Scotland, for the late Duke of Atholl, prematurely stopped, but laid out on a very comprehensive plan, and intended to be completed in a style of princely magnificence; Leigh Court, near Bristol, a classic house for the late Mr. Miles; Llanover Court, in Monmouthshire, for Sir Benjamin Hall; and Gosford Castle, in Armagh.

For alterations on an extensive scale we may mention Stansted Park, near Havant, Hants; Alton Towers; Stoneham Park, near Southampton; Rood Ashton, near Trowbridge; Easton, near Dunmow; Kimmel Park, near St. Asaph, for Lord Dinorbin; Amesbury Park, near Salisbury; and many others of less pretension. He erected several gaols on the system formerly adopted both in Essex and elsewhere, and more recently the extensive works required for the conversion of the Essex County Gaol at Springfield to the cellular system, involving an outlay of above 40,000*l*. He was also the architect of Arthur's Club House, in St. James's-street; the Atlas Fire Office, in Cheapside; and the Legal and General Life Office, in Fleet-street. For about forty years he held the office of County Surveyor of Essex, and that of Surveyor to the Atlas Fire Office.

He has died in a good old age; and though he cannot be pointed to as an example of what is now required in an architect, yet we may profitably emulate his great activity and constant perseverance. In his best days his flow of spirits was exuberant; his powers of conversation remarkable; his memory most tenacious. He never drank anything stronger than water, and could bear a marvellous amount of fatigue. Towards the close of his professional career, he designed St. Mary's Hospital, Paddington, and unwisely consented to superintend its erection gratuitously: such services are never very highly valued, and the engagement throughout occasioned Mr. H. considerable vexation. Of his most recent pupils, Mr. F. J. Francis (to whom we are indebted for information), and Mr. Burn, who has latterly had charge of Mr. Hopper's business, have made themselves best known.

He was a competitor for the General Post Office at St. Martin's-le-Grand, and he subsequently published his design, which he always maintained had been adopted in the existing structure There were on that occasion nearly 100 designs submitted by 89 persons, but on examination it was found that not one was adapted for the business of the office; and Sir R. Smirke, who had not been a competitor, was ultimately commissioned to erect the building.

Mr. Hopper also, at great expense, published in folio his plans for New Houses of Parliament.

On the whole, we cannot but feel that, by his death, a man of mark and power has been taken from amongst us.

HOUSE ADORNMENT.

To Girtin and Turner we are mainly indebted for the improvement in water-colour painting which has become now such an important agent in the decoration of English dwellings. The drawings by Girtin, most of those by Clennell, and the early water-colour pictures by Turner, are remarkable for a broad simplicity of grey colour, and have the appearance of having been washed in, to a considerable extent, with Indian ink, and the lights tinted on with warm colours upon the lights and shadows already modelled with the Indian ink. These early drawings form a striking contrast with the glow, strength, and purity of colour to be found in the later works of Turner, and the water-colour painters of the present day.

With proper management of the hanging and papering, nothing can be more elegant in a modern house than a well-selected collection of water-colour drawings. It does not answer, however, to mix them with prints, or with oil pictures, for one style of art, to a very great extent, destroys the effect of the other.

There is at present not so much of the decorative work of our dwellings left as in the olden time for the ladies to exert their ingenuity upon, but even that little might be somewhat better done. The patterns of the wrought covers of chairs and footstools are often of anything but good design. Instead of adopting some of the forms now so much in use, how much better it would be to adapt some of the scroll-work on our Gothic tombs and structures to this purpose. What, for instance, can be more elegant than some of the ivy, hawthorn, and other leaves on the tombs of the kings and queens in Westminster-Abbey. These forms, and many of the Gothic diapers, would, if properly used, and wrought in appropriate, rich colours, make a very great improvement in the needle-work decoration of the furniture of the present time.

The large old-fashioned screens which in former days were not only very ornamental, but also very useful and comfortable, often possessed much artistic merit. Some were of carved ivory, inlaid with light blue silk, silver, scarlet, black, &c.; some of embossed leather, others of tapestry work. The smaller kind of fire-screens might be made to afford an opportunity for artistic display.

In the great Exhibition of 1851, the collection of English and other carpets suggested several ideas for the improvement of this important manufacture at home. Those who carefully examined this portion of the Exhibition, while they were gratified at the skill shown by the English, were at the same time astonished at the richness and harmony produced in the carpets of Turkey and Persia. In the furnishing of a house, the choosing of the carpets is of more consequence than is generally supposed. In a room in which gorgeous pictures, by Titian, Rubens, and such artists are hung, and the fittings are of corresponding taste, the carpet will admit of a good deal of colour; but the carpet ought always to be a secondary consideration, and in no instance intrude upon the eye. It is, perhaps, a good sign of the proper balance of the interior decoration of a house, if in passing through it you are not led to observe what the carpets are.

GEOMETRICAL PRINCIPLES OF CONIC SECTIONS.

HYPERBOLA.*

THE hyperbola has lately acquired an importance in the eyes of students of Greek architecture by the publication of Mr. Penrose's work on the "Principles of Athenian Architecture," wherein he demonstrates that this is the curve which the Greeks adopted for the outline of their columns, and also of several of their mouldings. We therefore proceed to show how the knowledge of its properties will enable the architect to employ the hyperbola to form the entasis of his columns, instead of giving them the barrel-shape which we see in such columns as the Duke of York's monument.

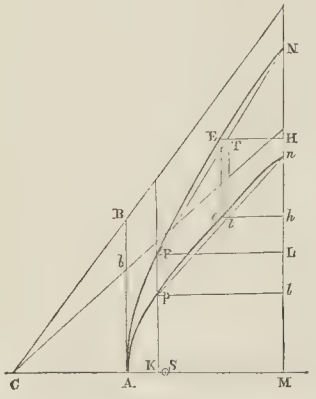


FIG. 1.

Let A P N, A p n (fig. 1), be two hyperbolas having a common centre C, and a common vertex A, but having asymptotes, C B, C b, inclined at different angles to the axis C A. Draw the vertical line A b B; then, if we draw any ordinate M n N, it is a property of the curves that M n : M N = A b : A B; so also K p : K P = A b : A B; therefore the horizontal lines P L, p l, are equal.

Mr. Penrose has made use of this property to show how a templet may be made at full size for the entasis of a column of the Parthenon, which method we now proceed to explain.

Let the semi-axis C A represent one foot, and take C S : C A in the ratio of, say 4 : 3, and make C b = C S, S being the focus of the given smaller hyperbola, by means of which the larger hyperbola is to be drawn. Take C B as the asymptote of the larger hyperbola, a part of which is to form the required entasis. We suppose that the column is to start from the pavement at P, and that P L represents the semi-diminution of the column; P and N will be found from p and n by means of the beforementioned property. Draw the chords p n, P N. Then, if we form a templet of the proper length of the column, and draw on it the line P N, and divide P N and p n into an equal number of parts, we can readily obtain as many points of the required curve as we please. For, let T on P N correspond to t on pn; draw the horizontals H T E, hte; then by the above property E T must equal et; and e being a point on smaller curve, E will be a point on larger curve; and so for any number of points.

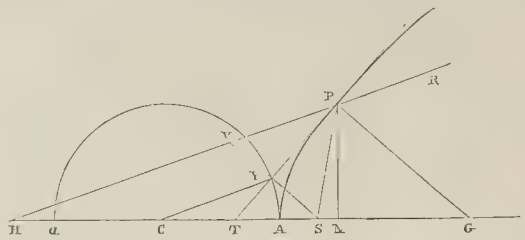


FIG. 2.

To draw a tangent at any point P (fig. 2) of an hyperbola, we proceed thus:—From the foci H and S draw H P and S P, on H P take P V = P S, join S V and bisect S V in Y, then P Y is tangent at P. If we draw a circle on the axis A a, for its diameter, and C its centre, the point Y will be found to be on this circle. For, join C Y, since S Y = V Y, and H C = S C, therefore C Y equals half H V (Euclid, book 6), equals half the axis A a, or C Y = C A (Since H V = A a, see last art.). Also, since V P = P S, and V Y = S Y; therefore, S Y is perpendicular to the tangent P Y. Therefore we have this property, *the perpendicular from the focus upon the tangent meets it in the circle drawn upon the major axis.*

It also follows that the tangent bisects the external angle H P S; therefore if we produce H P to R, and draw the normal P G or perpendicular on the tangent at P, then P G bisects the internal angle S P R, or, angle S P G = angle R P G. Hence it follows from the property of light that if a ray from S falls on a hyperbolic reflector, it will be reflected as if it had come from the further focus H. Compare this with a similar property in the Ellipse (page 141, *ante*).

To find where the tangent from any point T (fig. 2) on the axis meets the curve, *find C N a third proportional to C T and C A*, as in the case of the Ellipse (page 106, *ante*), draw the vertical N P to meet the curve at P, then T P is the required tangent. E. W. TARN, M.A.

* See p. 345, *ante*.

DESIGN AND SYMBOLISM.

THE view lately taken respecting non-progression in taste, cannot be considered satisfactory. It is supposed that we are at present in a torpid state, principally encumbered with symbolical decoration, which cannot be shaken off without difficulty. There are hints concerning this period, as if the present were the shade and the future were to be the sunny side of the beautiful, and that an equatorial line were to divide it into two hemispheres; but before the conclusion of every such essay, the reader becomes convinced that the rise and fall of styles are nothing more than transitional architecture.

In point of design, for many years great exertions have been made to get up a new style,—one that may be considered perfectly original, and still rank amongst the classic elegancies. Lately, nothing is heard thereof; and the consequence of its failure is, that draughtsmen are still confined to their books of proportions, and must reduce existing forms, with certain modifications, to the subjects on which they are engaged. They must consult libraries, and find, amongst the engravings of masterpieces, matter which, when collected and arranged, may be suitable for modern purposes. Thus, the spirit having departed from the stones of temples and amphitheatres, the designs may be ingeniously applied to palatial warehouses and other civil edifices, without causing any degree of suspicion; and it follows that books written on design and architecture, when they embrace what has been built, existing wholly or in ruins, remain works of reference, and are likely to continue so, until the expected change has arrived at some practical degree of operation.

The present state of art is nothing more than a reflex of the past, no matter how styles have changed, or when they were introduced. The rarest modern novelty will be found, on research, to have its origin in some great idea written, sculptured, or built, some centuries ago. Its revivification in another shape, or for another purpose, does not render the design less pleasing, no more than using the same materials in erecting different buildings. When art requires aid to carry out something unprecedented, she naturally looks back to what was or would have been done, under similar circumstances, by the early architects. In their works she points out to the designer the various phases of building, from mere reality to embellishment in pseudo-material, and from ordinary decoration to symbolism; and it depends on his own resources to adopt what will fully realize the purport of his imagination.

When we speak of a creative talent in conjunction with architecture, something more is meant than bricks, stone, iron, and glass; something superior to mere reality. This is to the architect what genius is to the poet: intuitively there is no distinction. The one uses ponderous materials, the other mental; and both kinds are taken up in a rough state from the world. They see mankind using this matter and this thought, in the ordinary way of living, whereas they give them a different meaning, shape, and order, so rendering them beautiful. The architect, in particular, may depart from beaten paths to cause admiration; still his works must be subservient to the usages of society. As improvement progressed, art required decoration, and genius gave her that adornment from one of the sublime works of creation,—foliage; but if nothing more than natural necessity animated mankind, we should still behold shapeless masses, or plain geometric piles, without reference to purport.

Decoration may be called by some an obstacle in the progress of legitimate architecture. Perhaps it has been when introduced with profusion; but it necessarily becomes the business of an artist to relieve his work with embellishment, tributary to the genius of his edifice; and if this be done with taste, he fulfils what talent requires on his part. At the present day an artist cannot enter into the general improvement without being figurative; and, in order to be original, he must combine natural and artificial existence.

Reality, indeed, must be the basis of design; but that reality would be dead walls or loopholes, unaided by symbolism. What now would be the state of the original Pointed style, were it not improved, extended, and exalted by those who saw nature with science? The different excrescences which shoot out from church and monastery, the construction of a mediæval building, the spire pointing upwards, are all simply architectural now, but not the less symbolical of certain great truths; that is to say, there was some centre for this style of architecture. Such sublime unity of expression could not have been produced, unless the architects inwardly felt what they outwardly showed in their works.

To the eye of an artist, there is not a more beautiful object than a figurative female bust; but the simplest subjects may be made the sport of poetical fancy. It is difficult to con-

vince men in general that such can be done, or that poetry may enter into the most rough and arduous occupation. In architecture, poetical licence becomes symbolism; and by it, can an artist, at any time, beautify a type or render it monstrous, in accordance with the bearing of his design. He cannot be at a loss for varieties or truthful position, when his conception of the ideal is in harmony with the purport of the building; and even then he may symbolize himself, or do as Hackett, the assistant architect of Batalha, who is seated on a lofty projection, looking down on the lofty works he superintended.

When the outward forms of buildings became typical, it is not surprising that everything internal followed in due course. The desks, tables, altars, fonts, and all other ecclesiastical and civil appendages were moulded and fashioned similarly. The Pointed style of church architecture could not long have remained in its rude state, when so many illustrious personages contributed to render it perfect. Almost all individuals, in those times, appeared zealous to make church edifices eminent; some, perhaps, induced by private motives, but the many with exquisite feelings of spirituality. It is but a natural conclusion, that symbolism should be the result of this sincere devotion—the service of religion unalloyed with worldliness, as much as it could be practicable. And we are well aware, that where matter-of-fact sculpture and figures would offend the eye, and turn divine worship into ridicule, the same may be raised for contemplation before the mind, beautifully in figurative outlines.

Temple and church building was the sphere in which architecture first arose, long, naked, and detached stones, and ultimately arrived at perfection; and from it proceeded all other varieties of construction. In the transition, no doubt, it was accompanied with those symbolical ornaments, long before fixed as classical, and considered inseparable from the composition. The mediæval structures communicated their influence to military and civil affairs, and castles, mansions, and farmhouses were built and decorated in accordance with the spirit of the age. If, independent of their originality, time rendered these buildings venerable, and even coerced the mind to admiration, that is no reason why they should be copied servilely, at the present day, when the same field is open to the studious and persevering, and decoration may be greatly diversified, in harmony with the purpose for which an edifice is intended. But, to carry this argument to an extreme, let those who desire to cast off the figurative, imagine such a building as Salisbury Cathedral stripped of all its ornamentation, tracery, spire, and everything but what is absolutely necessary, after the plainest manner, for public worship: let them imagine this, and even the cruciform plan changed to quadrangular; and their feelings will soon convince them that there is something more than decoration and show in the mediæval church. They may not deny that religion, in those days, suitably arranged herself in external forms. They may probably acknowledge that design and imagery are identical, and that symbolism is the soul of architecture.

FRANCIS SULLIVAN.

THE CAMBRIAN ARCHÆOLOGICAL ASSOCIATION.

THE annual meeting of this association took place on 18th ult. at Welchpool. The days of meeting were Monday, Tuesday, Wednesday, Thursday, and Friday, in the week beginning with the 17th ult.

On Monday the business of the association commenced by the members holding their preliminary meeting in the evening. The public meeting was held at half-past eight. The attendance included the Earl of Powis, Archdeacons Clive and Williams, and various other clergymen and other gentlemen, with several ladies. Lord Powis presided. Lord Dynvor, the late president, was absent owing to illness in his family. After an address was delivered by Lord Powis to the meeting, the annual report was read, and unanimously approved of. The Rev. H. L. Jones then gave a sketch of the notabilia of Montgomeryshire, including Offa's Dyke, for the preservation of a portion of which archæologists were indebted to their president, Lord Powis.

On Tuesday the members of the association had arranged to make an excursion to Breidden, Buttington Church, Crew-green, and Llandrinio Church, returning through Guilsfield. The weather, however, was unfavourable, and the members therefore disposed of themselves as best they could until the evening meeting, when the attendance was much more numerous than on the preceding evening. The Rev. E. L. Barnwell then read an able and interesting paper on "The Ancient Stones of Brittany," especially those of Loc-Maria-Ker, near Carnac, which had been somewhat overshadowed by their more celebrated companions at Carnac. After some discussion on the subject of this paper, Archdeacon Williams read a learned paper on "Ancient Celtic Coins." The Museum proved to be a chief point of attraction to the archæologists on Tuesday. The objects were arranged in the Grand Jury Room, at the Town-hall, and embraced not only a great number of local interest, but others, the associations of which were not confined to the Principality.

On Wednesday, the members of the Association visited the antiquities of the town of Welchpool, including the church, with its chancel of fourteenth century, &c. They were afterwards received at Powis Castle by the president. Here they inspected the bibliographical treasures of the earl's library, the numerous historical portraits of the gallery, the architectural details of the castle, the terraces and hanging gardens, &c. A cold collation was served in the long ball-room. At the evening meeting, which was fully attended, Mr. J. H. Parker, F.S.A. Oxford, gave an account of the chief architectural features of Powis Castle, and explained the absence of any visible remains older than the period of Henry VIII. by observing that the edifice had always been inhabited, and modified in every century to suit the wants of its noble occupants. The Earl of Powis added some remarks in explanation of Mr. J. H. Parker's description. Mr. T. O. Morgan then read a paper on the Marches of Wales, and on the division of Wales into counties, *temp.* Henry VIII. This gave rise to an animated discussion, in course of which the president spoke at much length about the Salopian Marches, giving the members some valuable information. The Rev. D. Davies followed with a paper on the Roman remains of the station of Caer Sws, between Newtown and Llanidloes, tending to show that this was the actual site of Mediolanum, which had been much disputed.

On Thursday, an excursion was made to the Roman camp of Clawdd Coch, in the meadows, near the junction of the Vyrnwy and Tanat, and thence to Llanyblodwell, where the party were entertained by the vicar, the Rev. John Parker, and inspected his collection of antiquarian drawings, &c. They then visited the church of Llansantffraid and that of Meifod. At the evening meeting, which was attended only by subscribing members, the annual votes of money, the appointments of officers, and the recommendations of the general committee were considered and passed. A considerable number of new members were admitted, and the treasurer's accounts showed a balance in favour of the Association of more than 25 per cent. on the annual income, after all expenses had been paid. Archdeacon Williams then continued the reading of his paper on ancient Celtic coins, and a discussion followed.

On Friday, an excursion was made to Offa's Dyke and Montgomery. The members were conducted by the Earl of Powis over the castle (*temp.* Henry III.), few walls of which remain, though the lines of works are all distinct. The president then took them to the summit of the Fridd Faldwin, a large British camp on the hill westward of the castle. After hearing a lecture in the church, on its architecture, by Mr. R. K. Penson, the members followed the Earl of Powis to his ancient house in Lymore-park, close to the town, a large black and white woodwork edifice of the Elizabethan era. Here his lordship again entertained them with a sumptuous cold collation; and then took them to see Offa's Dyke, in the park, as being the place where it would be found most perfect. On arriving at the spot, as the *Times* report remarks, his lordship's astonishment and chagrin may be conceived at finding a gang of labourers busily engaged in destroying it, by the order of his own farm-bailiff! The association then proceeded to an Early British castle near the town, and so to the Gaer, a large Roman camp near the Severn, on their return to Welchpool. At the evening meeting, which was the concluding one, and where every seat was occupied, the Rev. Rowland Williams read a paper on the position assumed by the early Welsh Church towards the Saxons. The Rev. H. H. Knight then gave an account of the owners of Powis Castle from the earliest period to recent times; and Mr. Longueville Jones followed with a paper on the towns built in Wales by Edward I. compared with those erected in Aquitaine and Guienne by the same monarch—a subject already treated by him in the *Annales Archéologiques*. The usual votes of thanks were then given and acknowledged, and the meeting finally broke up.

Although the weather was unpropitious during the greater portion of the week, the proceedings of the association did not seem to flag, and the value of the papers has tended to make the Welchpool meeting one of considerable archæological interest.

LONDON ANTIQUITIES IN BRITISH MUSEUM.

THOSE who look in to that comparatively desert space in the British Museum, called the British and Mediæval department, will find that one of the empty cases has been filled with a part of the valuable collection of antiquities which have been chiefly gathered from the Thames and London, after years of patient care, by Mr. C. Roach Smith.

The matters at present exposed to public view are but a tithe of the ancient remains of Old London, which have, by the efforts of the press, and the exertions of a number of individuals, become national property: it is, however, pleasant to look over them.

There are flint arrow-heads, spear-heads, knives and weapons of stone, found in the bed of Father Thames, at Whitefriars, Parliament-street, the Port of London, &c.

Bronze weapons of Roman date, from Thames Ditton, Whitehall, and other familiar places. Some of the swords are in good preservation; and even after the lapse of so many centuries, the scabbards are in part left.

There are Roman fibulæ, some beautifully inlaid rings, &c.; some of these from Botolph-lane, dug up in 1846. There are also lockets, amulets, beads, and other articles of female decoration; Roman keys, from the corner of Moorgate; lamps, little hand-bells, spoons, &c. from the London Docks.

The specimens of glass of various colours are well worthy of notice: the deep rich tints, of blue and purple, are particularly rich. The castings of heads, of fine design, in delicately coloured glass, have quite a gem-like appearance: some of these beautiful objects are from Clement's-lane, and other parts of the City. There are some fragments of old armour from East Smithfield; bronze Celts, and other similar matters, found off the Temple in 1831; Roman and Saxon swords, found off the Temple; small altars; combs, of different width of teeth; Saxon crosses, and other objects of the greatest use, in illustrating the history and manners of ancient London.

Passing from the cabinet which contains the fragments slightly referred to above, and glancing at a few of the most interesting objects contained in this scantily filled department, it is to be regretted that so many objects, some of them of great value, are left without any written description: the consequence is, that persons of even good general information are puzzled to make out what they are, and fail to derive that amount of benefit from the sight of these objects which would otherwise result. To the great masses who visit the Museum, this want of lettered description has still a worse effect, for they pass by things of rare interest without giving them a glance. There are here some articles of art manufacture of very chaste design, and of fine workmanship; amongst them

a blood-stone cup mounted in gold, a flask of lapis lazuli of the sixteenth century, and some cups of rock crystal, richly carved, from the Soane collection: there is an engraved crystal with the following inscription:—"Engraved Crystal, representing the history of Susanna and the Elders: it was made by order of Lothian, king of France, A.D. 954—986, and formerly belonged to the Abbey of Vasor, on the Meuse." In this instance the relic is well described, and it would be a great benefit if the busts of Roman emperors, and the thousand other objects of value and interest contained in the British Museum, were described in a popular manner, and at some length: the place would then be like an instructive and useful book to all who chose to walk through it.

LODGINGS IN LONDON.

WE have had submitted to us a case of such frequent occurrence, and which presses so hardly on a large part of a most valuable and industrious class of the community, that although it may appear somewhat like a repetition of former arguments used on the subject of dwellings for the working classes of the metropolis and other large towns, we give the particulars as they have come to hand.

"You know how inadequate and inconvenient the arrangement of the houses is in London, which are available for the use of persons who are provided with, say half-a-dozen children, and a limited income: there are several thousands in this great place who are either so circumstanced that they cannot get possession, or who would not wish to incur the risk of taking a house saddled with rates and taxes, which are constantly becoming due. Many an honest, hard-working man has brought himself to ruin and beggary by speculating in the taking of a house larger than he requires for his own use, in the hope of letting off the extraneous part to cover the extra expense. The spare places have perhaps been for a long time without occupation, and the trouble with bad-paying tenants leads often to the incurrence of debts, which are a drag during life, and have often been the means of causing executions, which have left families without either furniture or a permanent cover for their heads.

There are also others who are equally sufferers by the present arrangement of the great mass of the dwellings provided for the poorer classes: I mean those who, in order to manage their income and expenditure without risk, engage part of a house, and put up with the troubles of that rather than get into arrears: in this, however, there is but little safety in too many instances. In my own case at present, I have had part of a house for some time, and regularly each week paid my rent: another person has, I believe, done the same. The party, however, who rents the house from the landlord, has not paid rent, as I learn, for half a year, and the arrears of taxes were left to amount to 5*l*. I got information of this, and by paying some charges over and above my rent, I was glad to move away almost like a thief in the dusk, in order to save the articles which are so necessary to my family. On discovering that I was acquainted with the circumstance, the person who rented the house soon moved off, and left the landlord not only minus his rent, but also to pay the amount of taxes above mentioned, and probably, in addition, to make some arrangement in order to get possession of the place.

It is only those who have experienced the difficulty, that can form an idea of the trouble there is of getting quarters when the number of children is large, and the sum of money which can be spared for rent is not more than six shillings or so per week; and yet it is the children of those with limited means who require, more than others, comfort and arrangement in their dwellings. I submit to you, sir, that the houses which are at the service of the great bulk of the married workmen in London are a trouble both to landlords and tenants. Instead of the houses being arranged in the manner they now are, is it not possible to provide sets of rooms which might be let at from 5s. or 6s. to 7s. a week, in which the bedding and other household matters of the tenement would be safe, and where the occupier would have the comfortable feeling that when his rent was paid he would not need to fear the visits of the bailiff from the landlord, or a messenger from her Majesty for overdue taxes.

I could tell you various instances where decent people with families of children have had all their possessions taken away under the circumstances I have above attempted to describe, although they have had the weekly receipt for rent in their hands; and I am sure that he who will show that houses fit for the means of the working man can be made at a fair profit to the speculator, would confer a benefit on the community which it is difficult sufficiently to estimate."

CHURCH-BUILDING NEWS.

Warlingham.—The small and interesting church of Warlingham is about to be restored and enlarged, by the addition of a north aisle and vestry, together with new benches, roof, &c. under the direction of Mr. Withers, of London.

Greenhithe.—On Thursday in last week the Bishop of Rochester consecrated the new church of St. Mary the Virgin, Greenhithe. All the seats in the church, which will accommodate about 500 persons, are open, and there are no galleries. The floor of the nave and chancel is paved with tiles which are coloured black, red, and buff, and laid in patterns. The cost of the edifice is about 3,000*l*.; of which 500*l*. have yet to be raised.

Salisbury.—The Chapter-house of Salisbury Cathedral has been recently restored, but to complete it eight stained glass windows are requisite. Some ladies have agreed to raise the necessary fund—215*l*.—for putting in one of the windows, and Mr. G. W. Digby has agreed to defray the cost of another. Her Majesty has transmitted a donation of 100*l*. towards the restoration of the Chapter-house.

Llandudno.—On 15th ult. the foundation-stone of an Independent chapel was laid in this rapidly-increasing town. The building is to be erected in the Decorated style of architecture, on a site in Tudno-street. The plan consists of a parallelogram 70 feet long by 33 feet 6 inches broad. A large doorway is provided in the front, which enters into a vestibule divided by an ornamental screen from the chapel. Entrance is obtained into two aisles, each 3 feet wide. These aisles run the whole length of the chapel, with ranges of pewing on each side. The total accommodation is for 500 persons. At the end of the chapel is the pulpit, placed in the centre, with a table in front for the celebration of the communion. Behind this is an arch, transmitting light from a triangular tracery window at the back of the recess, which is 6 feet wide and 21 feet long; and a second ornamental screen, with doors leading to a staircase, and conducting to a basement floor, in which is a school, with six windows on each side, and adapted for lectures and public meetings. Public and private vestries are also attached. The length of the chapel is divided into six by buttresses, between which are one-light windows to light the chapel, and two-light windows for the schools under. The whole is covered with a high-pitched roof. The gable of the principal front is filled up by two single-light windows, filled with tracery, with a circular window above the whole. The building is to be erected with stone from the neighbourhood, with Stourton Hill stone dressings. The architect is Mr. Joseph James, of London, and the contractor is Mr. Yates, of Liverpool.

Wolverhampton.—St. John's Church, Wolverhampton, which was rapidly falling into decay, has been under reparation and alteration, and being nearly completed, the edifice was to be re-opened on Sunday last. The architects to whom the direction of the works has been entrusted are Messrs. Bidlake and Lovatt; and the contractors are Messrs. Higham and Mr. Tottey. The windows have been taken out and new leaded: new steps have been placed at the north, south, and west end doorways; the spire pointed; the churchyard-wall repaired, and a lightning-conductor fixed. In the interior, the ceilings have been coloured and the walls painted, the oak-work varnished, the capitals of the pillars, the chancel, the altar-piece, and the windows decorated, and the mouldings in the chancel gilded.

Sutton Coldfield.—The foundation-stone of the church of St. Michael the Archangel, at Boldmere, near Oscott, will be laid on 10th inst. by the Countess of Dartmouth. The church will be erected by Mr. Highway, of Walsall, from the designs of Mr. J. F. Wadmore, of London. The Decorated is the period chosen for the style; and ultimately the edifice will consist of nave, chancel, aisles, tower, and spire; but at present only the nave, chancel, and tower are to be erected, the aisles and spire being omitted, the former until the accommodation is required, and the latter from want of funds. The material to be employed is Rushall stone, and for the roof and other interior fittings stained fir. The seats will all be open, and the major portion free. The architect gives a stone pulpit and an oak lectern. It is intended to erect a parsonage-house near the church, and both edifices are expected to be finished by the 29th of September next, in order to allow the church to be consecrated on St. Michael's-day. Schools for boys and infants are already provided and maintained by the corporation of Sutton Coldfield. The site for the church is given by the Rev. W. K. R. Bedford, rector of Sutton, who also furnishes an endowment amounting to about 160*l*. per annum. The funds for the erection of the building are deficient by about 800*l*.

Heanor.—Messrs. C. and A. Gibbs, of London, have executed a stained-glass window, containing subjects from the life of our Lord, for Heanor Church, near Belper, Derby. The window is a monument to the late Mr. Joseph Barrow and his family. It has been erected by the Rev. Joseph Wolley and family, relatives of the deceased.

Boston.—The opening of a new Unitarian chapel at Bolton took place on Thursday in last week. The building is Gothic, of the Early English period, and of stone. The plan is cruciform, and consists of a nave and two transepts, the nave being continued 11 feet beyond the sides of the transepts. The length of the nave externally is 71 feet 9 inches, and the width 11 feet. The transepts are each 21½ by 15½ feet—the width across the nave being 72 feet. The principal entrance is at the east end of the building. The total height from floor to ceiling is 39¾ feet. A gallery is carried round the chapel, supported by light iron pillars, and open framing. The west end is appropriated to the choir and organ, under which are vestry, committee-rooms, library, &c. A large school is under the chapel. The whole building is to be heated by hot-water pipes.

Doncaster.—The great east window of the parish church at Doncaster, the only one which was wanting to complete the four great windows, is finished. All the windows of the church are now completed. The east is the largest of the four. It has undergone considerable alteration in design, according to the local *Gazette*, since the drawings were first exhibited in 1853. The present pattern is that given in the second edition of Mr. Denison's lectures. The roof of the nave is boarded over and covered with felt. The aisle roofs are in progress, and it is expected that all except the tower space will be roofed over before the end of the year. It must then be determined whether the tower is to stop there, and be covered with a temporary roof until money can be raised to build it up, or is to be carried on at once under the provisions of the present contract. In the former case the tower will probably cost 2,000*l*. more to build, whenever the work is to be resumed, than if it is carried on under the present contract.

Leeds.—The foundation-stones of the two chapels in the Municipal Cemetery for Holbeck were laid on Thursday in last week. The cemetery comprises nine acres of land at Beeston-hill. The soil is a dry shale. The land purchased (in all 11 acres) cost 2,100*l*. The cemetery has been laid out by Mr. Filliter, the borough surveyor. On two sides it is to be enclosed by a stone wall, and on the other sides by a wall and iron palisading. The cemetery itself will be divided into two portions—one-half to be consecrated, and the other half unconsecrated. Upon either portion a chapel will

be erected, and there are also to be two lodges —one for each portion of the cemetery. The chapels (which are to be erected after designs by the borough surveyor) will be in the Early English style of architecture: each will be 25 feet long and 18 feet wide, with an octagonal apse. The total cost of the cemetery, including purchase of land, building of walls, and erection of chapels and lodges, will be about 7,000*l.* to be raised by rates levied upon the township of Hunslet under the authority of the Leeds Improvement Act. The contractor for the erection of the chapels is Mr. Whiteley, of Woodhouse, builder. Their erection is to be completed on or before the 1st of December next.

Redcar.—The window erected in the church of this sea-bathing place to the memory of a late incumbent is thus described by a correspondent of the *Leeds Intelligencer*:—The window consists of four lights, cinquefoiled, with foliated eyelets filling up the head. The centre eyelet contains the pelican feeding its young with its own blood. The window may be said to be formed of two fenestellæ, each one consisting of two lights, and bearing in the head a quatrefoil. Each of these quatrefoils contains the sacred monogram I. H. S. Commencing on the north side, or the left hand, the first-light has in the head the I. H. S. beneath the Evangelistic symbol of St. Matthew—namely, an angel bearing a scroll; and beneath this an effigy of that Evangelist under a highly enriched canopy. The Evangelist is clad in a rich green robe lined with amber, and under that a dress of blue. He carries in his hand a book, in which he is represented as writing. The second light contains the symbol of St. Mark—namely, the ox; and beneath it, under a canopy of the same outline as the former, though of varied colours, the effigy of that Evangelist. He is represented in an outer garment of pale maroon, lined with green, and an under coat of red. He holds a book, in which he is reading. The third contains in the upper part the symbol of St. Luke, a lion, and beneath it, within a niche similar in all respects to the former one, a representation of that Evangelist. He appears in a vestment of red lined with blue, covering one of a rather pinky hue. He holds in one hand a book, and in the other a pen, as does also St. John. On the extreme right there is the same I. H. S. with a symbol of St. John, namely, the eagle. The niche is similar to the one on the extreme left, and bears the figure of St. John, robed with a garment of amber lined with green, and, underneath, one of blue. Beneath these are four medallions, which, taken in the order already observed, bear representations of St. John the Baptist, our Lord, St. Peter, and St. Paul, each with some characteristic mark,—namely, St. John with his dress of camel's-hair and the vefillem; our Lord in the act of saying, "Come unto me all ye that are heavy laden, and I will give you rest;" St. Peter with the keys; and St. Paul with a sword. Our Lord is distinguished by the ray of glory in the form of the cross. At the foot of the window runs the inscription in old text. The flood of light which pours into the church from the south to a very considerable extent damages the effect. Mr. F. Barnett, of Edinburgh, was the artist who produced the window.

Knaresborough. — Trinity Church, Knaresborough, consecrated on 18th ult. is of Early Pointed character, and stands at the south-eastern extremity of the town. It has been erected at the cost of about 3,000*l.* obtained by subscriptions, together with grants from societies. It consists of nave, with clerestory, chancel, north and south aisles, north porch, organ chapel, and vestry. The tower is engaged at the western extremity of the north aisle, with two arches opening into the church. The seats in the nave, accommodating 400 adults, are entirely free. The church in all, as before noted, accommodates 800 persons. The architect was Mr. Jos. Fawcett, of the firm of Mitchell and Fawcett, Sheffield.

Ugthorpe.—A new church has been opened at Ugthorpe, near Whitby. The building is of the fourteenth century, cruciform, with a bell-turret and spire at the west-end. The font is the gift of Archdeacon Churton, and is of Caen stone, the basin octagonal. The site was given by Mr. James Hindson, of Ugthorpe. The church is built entirely of stone, from Stonegate, presented by Mr. Wm. Hill.

Jarrow.—Arrangements are being made for the erection of a new United Presbyterian Church at Jarrow. It will be built of brick, and capable of containing nearly 400 persons. There will also be a school-house attached.

Wigan.—The new cemetery for the town of Wigan is now nearly complete, and was lately consecrated. It is situated about a mile and a quarter from the market-place, in the township of Ince-in-Mackerfield, and consists of eighteen acres of land, enclosed with a stone wall, 6 feet high, except a small portion at the eastern end, which forms the entrance, where there is a semi-circular dwarf wall and iron railing, together 6 feet high. A road 12 yards high has been formed from the highway to the entrance of the cemetery, the railway cutting being crossed by an iron girder bridge, of three spans or arches. On either side of the entrance-gates a lodge has been erected, in the Early Domestic style. From the entrance-gates to the west end of the cemetery, a carriage-way has been constructed, and eight acres of ground on the south side are appropriated for the use of the Church of England. On this ground the episcopal chapel is erected. On the north side of the road lie ten acres, appropriated, six acres to the Roman Catholics, and four acres to the Dissenters—the only separation between the two being a winding road. The episcopal chapel consists of a nave, 33 feet by 22 feet; chancel, 16 feet square; and a vestry at the south-east angle, 9 feet by 8 feet 9 inches. The porch is of ornamental timber, and adjoining it rises an octagonal turret, surmounted by a stone spire, the total height of which is 59 feet. The windows on the north and south side of the nave are trefoliated lancets, with mullions and drop arches internally. The chancel window on the east is of three lights, filled with light geometric tracery. The chapels on the Roman Catholic and Dissenters' portions of the ground are precisely similar in plan and general arrangement. The cemetery was opened on the 1st of September.

Forgue.—The *Banffshire Journal* states that the foundation-stone of St. Margaret's Episcopal church, Forgue, was laid on the 21st ult. by Mrs. Morison, of Bognie. The church is already in course of erection on a site given by Mr. Morison, with space for a burying-ground around it, besides a site for a parsonage with a garden attached. Mr. and Mrs. Morison also contributed largely towards the building fund. The church has been designed by Mr. William Ramage, of Aberdeen, architect, and lithographed by Keith and Gibb, of Aberdeen. The style is Early English, sharply pointed. The church consists of nave and chancel distinct; the former 56 feet by 24 feet, the latter 28 feet by 18 feet, entered from the nave by an arch of Auchindoir freestone, of which material the whole of the dressed work is to be constructed. There are buttresses of it all round, double at the corners, and one between each window. The windows are single and double lancets alternately on the north and south walls, with two single lancets and a trefoil in the west gable, and a window of three lights at the east end. On the south side is a porch, and the sacristy, under which is the heating chamber. On the north side, at the junction of nave and chancel, is the tower, of three stories, square, surmounted by a solid hexagonal spire with vane, measuring in all, in perpendicular height, 100 feet. On the base of the tower is the organ-chamber, which opens into the choir by a stone arch. The chancel is to be paved with encaustic tiles, and fitted up with stalls for the choir. The roof is equilateral. The mason is Mr. John Thompson, of Forgue. The carpenter work is to be executed by Messrs. W. and J. Cooper, of Huntly. There are no funds at present to finish the spire or to fill the windows with stained glass.

FRENCH MODEL LODGING-HOUSES.—There is some idea of undertaking a vast enterprise, which is said, according to the *Siècle*, to have received the approbation of the Government. It is, to erect, just within part of the fortifications, 2,500 houses, in groups of fifty, which would thus give fifty villages, each forming a sort of square. Each house is to accommodate six workmen's families, at a rent to each of not more than 150 francs.

PROVINCIAL NEWS.

Peterborough.—The Great Northern Railway Company, it appears, are about to build another row of fifty houses at "New England," for the accommodation of their servants, which, when complete, will make 150 houses. At the last half-yearly meeting, the shareholders agreed to a vote of 700*l.* for building a school for the instruction of the children of the occupants.

Yarmouth.—There is, it is said, every prospect of the projected new pier, at the end of the Regent-road, being carried out. The proposed structure will be of timber, and will commence at low water mark, whence it will run out into the sea some 500 feet, or nearly double the extent of the Wellington Pier. It will be 25 feet wide, being 5 feet narrower than that pier, and will terminate in a round end instead of a T end. It is also proposed to erect refreshment and waiting rooms, with every convenience, at the land end. A concrete road will lead across the beach from it to the Regent-road. The total estimated cost is about 4,000*l.* of which more than half is already privately subscribed or taken up. The new Britannia-terrace will be completed for the entire range; and a little to the north it is intended to erect a first-class hotel, with *tables-d'hôte* upon the continental principle, and bath-house, &c.

Cambridge. — At a recent meeting of the Visitors of the Cambridge Pauper Lunatic Asylum, a long discussion took place upon the report of the architect that glazed bricks for lining the corridors, day-rooms, and other internal portions of the building could not be obtained, unless at an enormous expense, and recommending the substitution of plain bricks for some portions of the work, and Parian cement for other portions. Mr. Hill's "characteristics" of his plan, according to the local *Chronicle*, were referred to, one of which was to the effect that all corridors and day-rooms, store-rooms, workshops, chapel, kitchen, laundry, brewhouse, &c. &c. being lined with glazed bricks, would save both painting and lime-washing, and subsequently avoid a large yearly expenditure for repairs. These glazed bricks were provided for in the contract, and the Visitors considered that such a very important item ought to be forthcoming, and expressed their sentiments very strongly upon the subject, both to architect and builder. Mr. Jones (the architect) and Mr. Webster (the builder) explained that glazed bricks could only be obtained at a cost of 12*l.* per thousand, delivered at Cambridge; and Mr. Jones stated that in making his calculation he took it for granted that any brick clay would readily take glaze, and that the expense would not be increased by more than 2s. 6d. or 3s. per thousand. At length it was determined to adopt so much of the report of Mr. Jones as recommended the omission of glazed bricks, and the substitution of plain bricks, a corresponding amount being deducted from the contract sum, and the architect and builder undertaking to finish the chapel in stucco if required, without its being considered an extra. Arrangements are about to be made for laying the foundation-stone.

Worcester.—The Streets' Committee of the Worcester City Council have resolved to accept the tenders of Mr. Richard Barrow, of Chesterfield, for contract No. 1 (iron pipes for the waterworks); of Mr. John Aird, of Southwark, for contract No. 2 (pipe-laying for the waterworks); of the Haigh Foundry Company, near Wigan, for contract No. 3 (engines, pumps, and machinery for the waterworks), for the sum of 2,500*l.*; and of Messrs. Wilkinson and Beard, of Newcastle-under-Lyne, for contract No. 4 (the sewage works), for the sum of 14,684*l.* 10s. 8d. Mr. Hawksley had stated that the result of the competition indicated that the cost of the works would be within the amount of his preliminary estimate. It was resolved to recommend the Council to advertise for a sum of 10,000*l.* to be advanced immediately, and another sum of 10,000*l.* to be advanced in January next, on mortgage of the special district rates, the principal and interest to be paid off by thirty equal instalments. The purchase of the site of the engine-house, filtering-beds, &c. being in a forward state, the Council was recommended to

advertise at once for tenders to execute the works.

Gloucester.—Public baths are about to be provided for Gloucester. Plans have been prepared, and it is intended to construct the building on the most approved principles. There will be first and second-class baths for ladies and gentlemen, and a swimming-bath, about 70 feet long and 30 feet wide, with a fountain in the centre. The front of the building has been designed by Messrs. Jacques, of Gloucester.

Swansea.—The Ferry-side National Schools were opened on Tuesday in last week, and are now nearly completed. The buildings are erected on a site given by the Earl of Cawdor, near the railway station. They are in the Mediæval Domestic style of architecture, built of limestone, with Bath stone dressings, and consist of a girls' and infants' school-room, boys' school and class-rooms, with separate entrances and lobbies, a residence for the schoolmaster and schoolmistress, and lodgings for the curate of the parish. The girls' and infants' school is in the clear 30 feet long by 18 feet wide, and the boys' school 33 feet by 20 feet, and they are so arranged as to be capable of forming one large room by means of folding-doors. The roofs of both school-rooms are open to the ridge, and are constructed with principals of an arched shape. The ceiling is formed between the common rafters or spars, and the whole of the timbers being thus exposed to view are wrought, stained, and varnished. The buildings are covered with stone tiles and ornamented ridges. At the junction of the roofs over the schools there is a bell-turret of stained timber, with pointed roof, rising to a height of 18 feet from the ridge of the roofs. The buildings have been erected by Mr. Jenkins, of Ferry-side, from the designs and under the superintendance of Mr. R. K. Penson, of Swansea, architect. The building-stones, roof-tiles, and a portion of the haulage were given by the parishioners.

Birmingham.—The town council of Birmingham have unanimously resolved to purchase Aston Park and Hall, the seat of the late Mr. J. Wall, as a place of public recreation, if the price demanded be reasonable. Lord Calthorpe has also, in imitation of a similar act of generosity by Mr. Adderley, M.P. placed the land he proposes to set aside as a public park at the disposal of the council, without restriction of any kind, relying on the good sense of the people of Birmingham for its proper use and conservation. Birmingham will thus be shortly supplied with public grounds and promenades, where its industrious artisans may breathe the fresh air within the shortest possible distance from their workshops and manufactories. The Adderley Park has already been opened.

Salford.—The newly-formed company for the erection of public baths and laundries, in Manchester and Salford, opened the first of their intended establishments on Wednesday in last week, in Collier-street, Greengate, Salford. The building is of brick, with stone dressings, in the Italian style. It contains a large number of first and second class private baths for men and for women, besides two large tepid swimming-baths (first and second-class); and in the laundry department there are thirty-eight washing places. Each class of baths has its own waiting-room, suitably furnished, and a separate entrance and staircase.

Bradford.—The town council of Bradford, after resolving to unite the offices of borough surveyor and manager of the waterworks, have appointed Mr. Charles Gott their temporary surveyor to both offices, at a salary of 200*l.* a year. They also, at same meeting, resolved to advertise for an assistant surveyor or clerk, at 120*l.* a year.

Dundee.—At a recent meeting of the Committee of Corn Exchange and Public Hall subscribers, the tenders for erection of the Corn Exchange and Public Hall, on the site in Bank-street, were finally accepted, and the buildings will be immediately proceeded with by the contractors. The hall will be capable of accommodating from 1,800 to 2,000 persons sitting, or about 5,000 persons standing; and will be so arranged by the proprietors, as to be available for concerts, assemblies, public meetings, and other similar purposes.

THE MINISTERIAL *NON*-RECIPROCITY SYSTEM.

I have no more interest in the architectural profession than with the profits of any other class of her Majesty's subjects; but *until her Majesty's Ministers are selected by competition from the best qualified of all other nations*, I must protest against foreign competition in designs or erection of national buildings; and I trust the British architects will act upon their rights as British subjects. I need scarcely add that the existing non-reciprocity system connected with our commercial economy should be promptly corrected, or John Bull will not have an ounce of gold or silver left in his money-chest.

Observer.

The accidental discrepancy between the number of premiums stated (eighteen) in the conditions we printed last week, and the actual list of premiums recited (fifteen) was not a mistake of ours. We printed the terms exactly as they were stated to the meeting. The list (of fifteen) is correct.

COFFEE AS A DEODORISER.

Now that the "sporting season" has again come in, we beg to remind sportsmen and others that fresh-ground coffee is a perfect and safe deodoriser: a sprinkling will keep game fresh and sweet for several days. Clean your game,—that is, wipe off the blood,—cover the wounded parts with absorbent paper, wrap up the heads, and then sprinkle ground-coffee over and amongst the feathers or fur, as the case may be: pack up carefully, and the game will be preserved fresh and sweet in the most unfavourable weather. Game sent open and loose cannot, of course, be treated in this manner; but all game packed in boxes or hampers may be deodorised as described. A tea-spoonful of coffee is enough for a brace of birds, and in this proportion for more or for larger game.

Fresh-ground coffee may be used with advantage in a sick room; a few spoonfuls spread and exposed on a plate: burned by a red-hot iron it is a safe and pleasant fumigator.

Should any of our sporting friends care to send us any game from the moors, we hope they will not forget the coffee.

"SEWERAGE AND STORM WATERS."

The question of sewerage still continues the theme of the day, and, undoubtedly, much practical science was to be developed to perfect a system of town and local drainage. The most economical course for the general sewerage and drainage of a district is of paramount importance, more particularly in extended flat districts, where artificial means must be resorted to, and expense in perpetuity incurred, for raising and disposing of the sewerage. Having given much attention to the separation of surface drainage and storm waters, from the general sewerage of a district, I am led to the conclusion that such would be attended with good results, and a large outlay of capital may be saved in projecting new works. Practice confirms the area of sewers to be determined in accordance to the maximum quantity of sewage to pass through them, to which must be added a greatly increased area to provide for storm waters. But why incur such an expense in the discharge of storm waters, when nature allows of so many sources of exit?

I would suggest the surface drainage and storm waters to be so collected by a series of terro-metallic pipes, having established communication with the sewers, that they may be flushed as circumstances require, and natural outlets made use of for the discharge of these waters; thus saving, particularly in low-land districts, excess of area in the required sewers, an unnecessary area in storage reservoirs at the termini, and, above all, much of the unavoidable expenses in pumping-apparatus. In the first outlay the saving in the sizes of the sewers would much more than cover the required outlay for a trunk and intercepting line of pipes; and for the purpose of discharging the first hour's flush of street *débris*, in heavy rains and casual storms, I propose, as a substitute for the ordinary street gullies, to introduce a circular well, say, 2 feet 6 inches in diameter, and 3 feet 6 inches deep; the bottom being a cast-iron basin, having a 6-inch aperture into a culvert communicating with the sewer, the aperture to be closed by means of an ordinary wooden plug, coated with gutta percha. Through this well the storm waters line of pipes would pass, an aperture being provided for the water to flow from the well into the pipe, on plugging the iron basin after disposing of the street refuse-matter. The well would always be charged with water to the level of the aperture into the pipe, and thus most effectually suppress the return of nauseous vapours from the sewers. A series of stop-cocks for flushing the sewers at will, and making use of every natural outlet for the discharge of the water, carries out my idea.

George Augustus Dixon.

GALLERY, HÔTEL DE VILLE, PARIS.

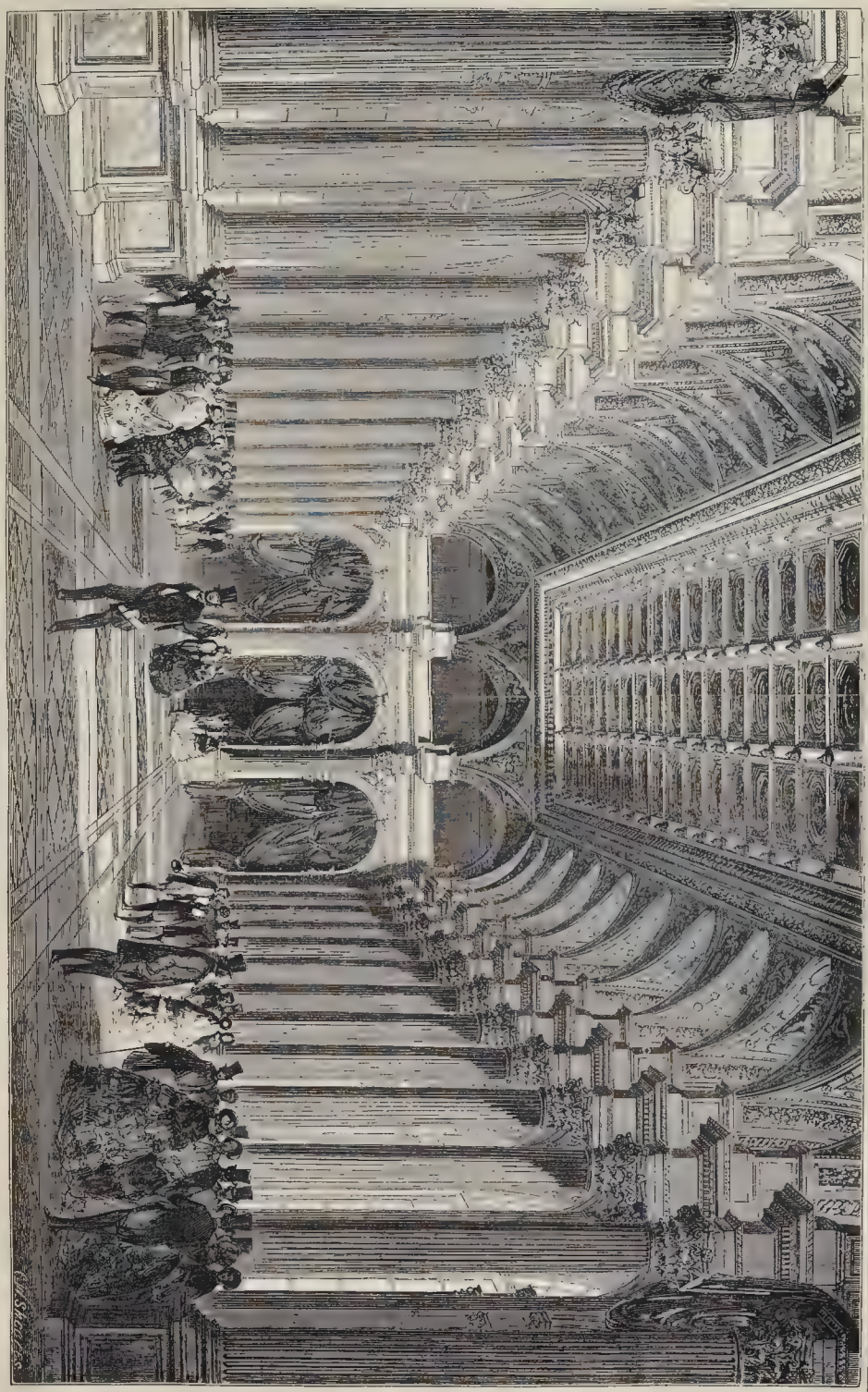
The first stone of the Hôtel de Ville, at Paris, was laid on the 15th of July, 1533, by the *prévôt* of the merchants of Paris. The original design, in the Gothic style, however, was not advanced in execution beyond the second story; a new project having been presented to Henry II. in 1549, by Domenico Baccadoro, called "of Cortona." The work then proceeded slowly, and was not completed till 1609, under Henry IV.—and then, even, did not include more than a fourth of the existing building. The main building—flanked by two pavilions with high roofs—was in two stories, surmounted by a balustrade, and had an elegant bell-turret, decorated at the base with allegorical sculpture. Two ranges of superimposed composite columns enriched the façade,—each intercolumn of the one-pair story having a niche, now filled with sculpture. Above the gate of entrance was placed an equestrian statue of Henri Quatre, in gilt bronze, by Biard. This statue was said to have been destroyed during the Revolution, but was replaced in the reign of Louis XVIII. Sculpture, also, was inserted in the tympana of arches to other entrances; and altogether an elegant and picturesque combination was realized by the general design, with the high-pitched roofs having lucarnes richly ornamented. The *façade* remained till 1830, as Domenico da Cortona had left it.

Under the reign of Louis Philippe, the accommodation of the Hôtel being found deficient, the architects Godde and Lesuer were charged with the direction of great works for the completion and enlargement of the building. In these, they observed as much as possible the style and decoration of the work of Domenico da Cortona. To the building which has been described, they added upon the principal *façade* two new blocks of building, connected with the original pavilions. The eastern façade is copied from that of the west, omitting the bell-turret, and the high-pitched roof.

The halls of reception are situated in the one-pair story, next the quay and the square, and consist of the "Salle du Trône," the "Salle des Arcades," the "Salle de l'Empereur," and the Yellow and Blue *Salons*, the two "Salons des Arts," the "Salle des Cariatides," the "Salle de la Paix," the two "Salons des Prévôts," and the grand "Galerie des Fêtes," of which we now give a view. This gallery is about 160 English feet in length, 43 feet 3 inches in width, and 40 feet in height. It is lighted from the street by thirteen windows, in arcades. The decorative character of the gallery is given by an order of Corinthian columns, serving as the support to the cove which carries the *plafond* or ceiling of the hall,—the tribunes, or window recesses, being arched over from column to column, the arches breaking with the cove. The tympana or spandril spaces in the cove, between the archivolts, are designed to receive painted figures. The general decorative enrichment is in white and gold.

The gallery communicates with the "Salle des Cariatides," and opens upon the grand staircase,—thus, during a *fête*, a grand effect is realized by the spectator.

New Mansion at Curraghmore.—The Marquis of Waterford is going to erect a costly mansion at Curraghmore, near Waterford.



GALLERY, HOTEL DE VILLE, PARIS.

METROPOLITAN BOARD OF WORKS AND THE DISTRICT SURVEYORS.

At the last meeting of the Board a recommendation from the superintending architect, to the effect, that the district surveyors should be ordered to report *quarterly* to the Board, and also to the Vestries and District Boards, in terms of the statute, 103rd section, Local Management Act, all cases in which underground rooms or cellars are let or occupied as separate dwellings, contrary to the provisions of the statute, was received, and will be brought up for confirmation at the next meeting. Surely, the district surveyors should have had some opportunity afforded them, to make a statement on this subject to the Board before such a determination was come to. It is true the Local Management Act directs, that the district surveyors shall, without fee or reward, report as to such dwellings at such times as the Metropolitan Board "may" order, but it was always felt that the duty being altogether different from that which properly belongs under the Building Act to the district surveyors, appertaining rather to the police or inspectors of nuisances than to structural surveyors, the Board would be led to place the matter on some other footing. To perform the duty strictly, in some districts, would positively absorb the whole time of the district surveyor; because, inasmuch as the Act sets forth, that "every room or cellar in which any person passes the night, shall be deemed to be occupied as a dwelling within the meaning of this Act," the supervision would require to be constant.

It is to be hoped that the Board will reconsider the matter before coming to a determination.

FOREIGN AND COLONIAL NEWS.

Assyria. — The well-known M. Kiepert, of Berlin, has delivered a public lecture on the survey of Assyria, made by English engineers (scale $\frac{1}{1\,000\,000}$). It comprises that portion of the country where the well-known antiquities have been discovered, and which extends over an area of 30 square miles. The map shows about sixty ruin mounds, scattered on the banks of the Tigris; and there are added large plans of the ruins of the large cities of Nineveh, Nimrud, &c. As the size of Nineveh has been accounted far too large by the ancients, Ktesias and Strabo, as it is only half the size of Berlin, and about that of Cairo — the plan of Rome by Blondel may lead to interesting comparisons.

Swiss Industrial Exhibition.—There will be an exhibition at Berne for 1857. The Central Government of the Republic has granted 30,000 francs, the municipality of Berne 2,000 francs, and the subscriptions hitherto amount to 40,000 francs. The necessary steam power will be provided for the motion of machines, &c.

Bavaria.—Roman Ruins.—By the sinking of a well near Ingolstadt, adjoining the Devil's Wall (*vallum Romanum*) and the old Roman road, part of a mosaic pavement, several canals, and a *compluvium* (reservoir of rain-water), were discovered. The excavations, made most carefully, have exhibited a pavement of great beauty, the hitherto exhumed area of which exceeds 800 square feet. The designs represent marine deities, tritons, nymphs, riding and aquatic animals, &c.

Trinidad.—The great Asphalte Lake.—This curious lake lies near the village De la Brave, the houses of which are built of asphalte. Not far off are also springs of natural naphtha. Combined with sand and rubble, the asphalte forms a good paving for the city of Puerto de Espagna. It is intended now, however, to utilize it on a large scale, and by mixing the asphalte with chips of wood, to obtain every year 5,000 tons of a superior fuel, by which the West-India steamers could save much of the coal they are obliged now to carry with them from England.

Bavaria.—Practical Education of the People.—The King of Bavaria has ordered, by the Secretary of State for Home Affairs, that the places where Roman roads have been discovered, as well as the localities where Roman mosaics or other antiquities have been found,—in fine, all ancient camps, amphitheatres, &c. shall receive substantial tablets, for properly fixing the attention of travellers as well as inhabitants. These tablets have also to contain the date and other short particulars about the historical remnants thus marked for public attention. [This example ought to be followed.]

Sydney University.—The Legislative Council of New South Wales have made ample provision for this head educational establishment of the five confederated provinces of Australia. The architectural plans, now in this country for professional inspection, are said to exhibit thought and art. The Sydney Legislature have granted an area of some twenty acres of land to the university, so much indeed, that extensive plantations, like the old *Academy* of Athens, will surround it, and make it worthy of its high destiny. Upwards of 100,000*l.* have been already voted for the building, library, &c. Dr. Charles Nicholson has been elected the first president of Sydney University.

Important Invention in Stereotypy.—One of the persons employed in the State's printing-office of Vienna has made the discovery that plates of plaster of Paris will *uniformly* contract by a repeated washing with water, and still more if with spirits of wine. On this is based a process to produce both print (*Drucksachen*) and wood-cuts in various gradations of type and size, by a calculated diminution of the plaster of Paris plate. Already print and drawings have been made of a twelfth-part size, reduced from 3 inches to 1 inch in diameter, and yet even the reduction to the smallest size does not encroach on the perfect correctness of the impression.

SCENERY AT THE PRINCESS'S THEATRE.

MR. CHARLES KEAN, in the production of Sheridan's "Pizarro, or the Spaniards in Peru," has achieved another legitimate and very great success. If we are to judge from the manifestations on the first night, we may augur for it a run equal to that of the play which preceded it. In the production of this piece, the manager has not failed to avail himself of all available information, and to set forth the actual state of the people. As Mr. Kean writes in his fly-leaf, "Pizarro and his followers had found the kingdom of the Incas inhabited by an industrious, disciplined, population, united under the sway of a paternal government, possessing numerous works of art, and many national memorials. While Nature appeared to revel in her grandest and most picturesque aspect, the land abounded with precious gems and metals, to such an extent, that amidst the gardens of temples and palaces, trees and plants of gold and silver, most exquisitely manufactured, stood intermingled with natural productions. Birds of the same costly materials were seen upon the artificial branches, and the interior of the great Temple of the Sun, the most magnificent structure in the New World, was probably unsurpassed in the richness of its decorations by any building in the Old."

"By the recent excavations in Assyria, entombed races were raised before the eyes of the living; while, through the adventurous and unscrupulous spirit of the Spanish conquerors of America, in the sixteenth century, vast nations, buried in obscurity, unknowing and unknown, were revealed in active existence, occupied with the pursuits of cultivated life. We read, with surprise mingled with awe, of an extensive empire, whose mysterious origin is lost in the labyrinth of ages, confined within its own limits, seeking no external intercourse,—of a people dwelling in towns and hamlets, clustered amidst orchards and gardens, constructing canals and subterraneous aqueducts, carrying roads over plains and across mountains, forming beautiful terraces on the sides of the Cordilleras, which bloomed with every variety of vegetation,—rich in flocks, that supplied garments of the finest wool, victims for the altar, and viands for the banquet,—erecting palaces for their Incas, and temples for their God, with a profusion of wealth within the walls that almost rivals the marvels of Arabian fable,—and, what is most remarkable, enjoying the intellectual and refined amusement of a poetical drama."

The play involves less architectural scenery than preceding revivals, but due attention has been paid to correctness where it has been introduced. There is a marked difference between the remains of buildings existing in Peru and the extraordinary monuments of Central America; and this has not been lost sight of. Mr. Fergusson, in his excellent "Handbook of Architecture," has a discriminating chapter on this subject, wherein he points out, among other things, the remarkable similarity in style that exists between some of the Peruvian buildings and the Pelasgic remains of Italy; but it would take us from our present purpose to pursue it.

The sun being the great object of adoration amongst the Peruvians, the luminary has been looked to for the main scenic effects in the piece; and the new lights which science has given to the drama have been brought in powerfully to aid them, as in the second scene of the second act, "The Interior of the Temple of the Sun;" and again in the fourth scene of the third act, "The great Square of the City of Cuzco," where the rising luminary, first touching the distant cordilleras, and then the gnonoms set up in front of the temple to receive its early rays, ultimately renders the whole scene a blaze of light and splendour. The gardens of the royal palace, with its raised terraces forming a pyramid in stages, and some of the mountainous landscapes, are especially beautiful. Mr. Grieve has executed much of the scenery with his own hand, and has been ably seconded by Mr. Gordon and Mr. F. Lloyds. Mr. Kean's *Rolla*, and Mrs. Kean's *Elvira*, are admirable pieces of acting: the former threw an amount of energy and power into the part, which those who best know the labour, care, and anxiety that must fall to the manager in such a production of a play, will most wonder at.

The grouping throughout is beautiful, and presents a series of artistical pictures; for example, at the death of Orozembo (very effectively played by Mr. John Cooper), when the Peruvians are waiting with outstretched arms for the appearance of the sun, and the return of the warriors to the women in their rocky retreat.

SINGULAR INSTANCES OF SPONTANEOUS (?) COMBUSTION AT BEDFORD.

WITHIN the last week or two great excitement has prevailed at Bedford, in consequence of a series of separate and distinct fires, about forty in number, having successively broken out in a house in Horn-lane there.

The house is inhabited by a person named Morton, a commercial traveller, and his family. In the absence of her husband from home, Mrs. Morton had fumigated the house with burning sulphur, with a view to get rid of a notorious domestic pest—better known, perhaps, in London, than even in Bedford. By some accident a vessel containing the melted roll sulphur leaked, and the sulphurous fluid escaped into a basinette, burnt through the bottom, fired the floor, and ate its way through the planks. Timely observation and alarm availed to arrest the progress of this fire, and all was deemed safe.

"An hour and a half," says the *Bedford Times*, in narrating the circumstances, "served to dispel this delusion: the mattress, feather-bed, and the contents of a chest of drawers, successively took fire, and caused great anxiety in the minds of the household, who remained up the whole of the night. No more outbreaks occurred that night; but on the following morning, about eight o'clock, some dirty linen in a room up stairs was discovered to be on fire. The flames were subdued, and the damaged articles thrown into the yard. The premises were strictly watched, but no more fires took place on that day, and it was then thought that no further danger was to be apprehended. In the meantime Mr. F. Howard communicated with Mr. Morton, who returned on Saturday. No outbreak had occurred since the previous Wednesday morning, but Mr. Morton, before retiring to rest on Saturday evening, threw his stockings and other wearing apparel, which were damp, on the carpet in the parlour, and on the following morning, to his astonishment, they were found burning. The marvels of the previous Tuesday evening were then resumed. About eight o'clock a fire was discovered in the boy's room, as well as in the bed on which the master and mistress of the house had been sleeping. Soon after a succession of fires took place, not only in every room and closet in the house, but from drawers, boxes, and cupboards smoke and flame were seen to issue in the most extraordinary manner. Several gentlemen and friends of the family were called in to witness the wonderful phenomena, and many of the outbreaks occurred in their presence; but all attempts to unravel the cause of the fiery visitations proved unavailing. Indeed, the fires took place so rapidly and in so sin-

gular a way, not only with respect to articles belonging to the occupier, but the handkerchiefs of some of the visitors were scorched by contact with the inflammatory spirit which seemed to pervade every part of the house, until at length the parties began to fear for their own personal safety, and to ask themselves whether they were not about to become the victims of spontaneous combustion. Dr. Barker, whose advice was sought on the Sunday, visited the premises again on Monday with Mr. Blower. As the cause of the fires seemed to be wrapped in the greatest mystery, the two medical gentlemen waited upon the magistrates who were then sitting in Petty Sessions at the Shire Hall. Mr. Blower briefly related the circumstances of the mysterious fires, and suggested to the Bench the propriety of holding an investigation by Mr. Eagles, the borough coroner."

An inquest was accordingly held, and after a good deal of evidence had been heard, the jury, having consulted about half an hour, returned the following verdict:—"That the fire on Mr. Alfred Morton's premises was accidentally caused by incautiously placing and setting fire to a quantity of brimstone in a pot, the same being placed in a bassinet situate on the first floor of the said premises; but as to the cause of the continuation of fires on the said premises, we have not sufficient evidence to show."

In course of the inquiry, a chemist and druggist deposed to his belief that the fires were produced by spontaneous combustion. Dr. Barker gave his opinion that "there was a something pervading that house which produced spontaneous combustion." Mr. W. Blower, surgeon, said, "there was something in the atmosphere which caused the spontaneous combustion which has been spoken of."

The prevalence of thunder, and the consequent production of an abundance of ozone or active oxygen in the atmosphere this year, may have rendered this a summer predisposing to spontaneous combustion; but since the fumes of burning sulphur produce a smell precisely like that of ozone, may not the burning of sulphur in a confined atmosphere, in such a summer as this, have doubly charged that atmosphere with ozone itself, and so predisposed combustible materials in the house for a time to take fire spontaneously? There may have been some trickery at work, however, in the production of such unusual phenomena.

COMPETITIONS.

Windsor Cemetery.—Twenty designs were received by the Burial Board, and from these the committee have selected one, with separated chapels, by Messrs. Poulton and Woodman, estimated to cost 1,350*l.* The chapels are in the Decorated style of Gothic architecture, and are intended to be constructed of rag stone with Bath stone dressings. At each end of the buildings are large traceried windows. The roofs are to be open, and, as well as the internal fittings, to be stained and varnished. The episcopal chapel has, over the entrance, at the north-west tower, a bell tower, terminating in a light spire of considerable altitude. One of the leading features in the Dissenters' chapel is an ornamental timber porch. A robing-room is provided for each of the chapels. The stone panelling under the windows, is arranged so as to receive tablets for monumental inscriptions.

COMPETITIONS IN IRELAND.

Naas Gaol.—The premium of 50*l.* for the best plans for enlarging and improving Naas Gaol, has been awarded to Mr. John M'Curdy, of Dublin. The plan adopted proposes the erection of a new wing, giving the requisite increased accommodation on the separate system. The old wings are to be connected by corridors to the central building, which is to be converted into an inspection hall; the whole to be open from ground-floor to roof, with iron galleries to each story. The cost will be about 9,000*l.*

Londonderry.—A new bridge is to be built at Londonderry, for which premiums of 200 and 100 guineas are offered respectively for the first and second best designs. Sir William Cubitt is to decide.

CAST-IRON PILING.

The first application of cast-iron piling is due to the late Mr. Robert Sibley, who employed it for the first time at the Island Lead Works, Limehouse, the brick-faced wharf having given way, and it was entirely successful. Mr. Sibley was then employed by Mr. Chadwick at Fenning's Wharf, London-bridge, which he supervised, and notwithstanding the considerable depth of water, and tide, made a successful work of it. Shortly afterwards, Mr. James Walker, slightly modifying only the form of pile, and using sheet-piling, executed the Blackwall Wharf.

Mr. Sibley designed several bridges, which he proposed to execute in this way, as also to repair existing ones, without having recourse to coffer-dams. He had a favourite idea that the embankment of the Thames might be successfully carried out in this way.

In cutting into this work (iron piling), it has been found that an intimate chemical union has taken place between the lime in the concrete backing and the iron piles and plates,—so much so that the lines of separation could not be traced, the whole forming one solid mass.

No appreciable effect after the first oxydization has been observed on the face of the iron. The ends of the piles were not pointed, but square, for driving.

Palmam qui meruit ferat.

SIR C. BARRY AND THE GOVERNMENT.

ARCHITECTS' REMUNERATION.

All members of our profession must agree with your remark that we all suffer by the very illiberal and government-like treatment to which Sir Charles Barry has been subjected; and as Sir Charles in his letter says that he accepts because "it is evident that no *individual* could with the least chance contend against the Government," I beg to propose, through your columns, that a subscription be immediately set on foot to support Sir Charles in any legal opposition to such piratical treatment. I am only a poor member of the body, but there are, I believe, now rather more than 8,000 of us in the kingdom, and, as a nucleus, I enclose you my name for 5*l.*

A Country Architect.

*** The question has been closed by Sir Charles, but we print the foregoing to show the feeling of the profession.

I hope you will print the *reply* of the honorary secretaries of the Royal Institute of British Architects (July 24, 1856) to Mr. Wilson's special pleading letter of July 15 to them, already published by you, just to show that the council have not been hoodwinked by his Jesuitical arguments in the Westminster Palace matter. Architect.

The reply in question, after acknowledging receipt of papers mentioned in Mr. Wilson's letter, says,—

"Both these documents will be submitted to the council of the Royal Institute of British Architects at their next meeting: the correspondence embodied in the latter has, however, already been before them, and it was only after a careful examination of the whole of the Parliamentary Papers connected with the subject that the council arrived at their own conclusions thereon, and framed and unanimously adopted the resolution in question."

In the Parliamentary paper wherein this reply is printed, it is headed, "From the Royal *Society* of British Architects, to James Wilson, Esq. M.P." This want of correctness, of which there were other instances in the letter we have already printed, does not convey a very elevated impression as to the mode of conducting business at her Majesty's Treasury.

RECENT PATENTS.

The following are selected from the lists of recent patents published in the *Mechanics' Magazine*:—

Swinburne, R. W. Improvements in furnaces used in the manufacture of glass. Dated Nov. 17, 1855. (No. 2595.) The inventor makes outlets or openings in the sides or ends of a furnace, or in both the sides and the ends, near to or a little above the level of the siege or floor of the furnace upon which the cuvetts or pots are placed, for the purpose of causing the heat or heated air proceeding from the fires to be drawn across the siege in such a manner as to act upon the body, or upon the lower part of the cuvetts or pots, in a greater degree than in furnaces of the usual construction.

Barbier, C. J. An improved kiln for burning or firing pottery, bricks, tiles, and other earthenware. Dated Nov. 28, 1855. (No. 2683.) This invention is grounded on the use of a moveable furnace, conveying successively the heat through all the parts of the materials to be burnt, and on the continuous action of the gases, which successively circulate through a number of laboratories, their temperatures decreasing as they get farther from the fire, thus completing the burning of such articles as are nearest, and at the same time progressively preparing the others.

Marguerite, L. J. F. Certain improvements in the manufacture of vitreous products. Dated Nov. 12, 1855. (No. 2537.) The improved vitreous compound contains some silica and alumen, but neither potash nor soda: this want constitutes the chief character of this invention. For instance, by calcining a mixture of silica 65·47, lime 25·80, alumen 8·73, a perfectly transparent glass is obtained.

Coignet, F. Certain improvements in the use and preparation of plastic materials or compositions to be used as artificial stone, or as concrete or cement for building and other purposes. Dated Nov. 26, 1855. (No. 2659.) These improvements relate to various combinations of sands, gravel, broken flint, broken stone, burnt or unburnt soil, cinders, and coal refuse, scoria, wood-ash, dross, with unctuous or hydraulic chalk, &c. and very fine sand, and in the employment of such matters when compounded in the formation of houses and other buildings. The matters to be mixed are pounded together, and when used, the desired forms are given by moulding and compression on the wall, or other formation, repeating the operation till the structure desired is obtained.

Clerville, J. J. C. de [not proceeded with]. Improvements in preparing oil with other matters for painting. (A communication.) Dated Nov. 26, 1855. (No. 2663.) Linseed oil is first boiled with peroxide of lead and sulphate of zinc; then a quantity of rosin and bee's-wax is dissolved therein; next a quantity of caustic alkaline solution is added—say about twice as much as there is oil—and the whole compound or mixture is boiled for a time, after which some essence of thyme is stirred in, and the whole is allowed to stand, and is afterwards filtered.

Cottsell, G. An improved gutter and kerb for roads and streets. Dated Nov. 7, 1855. (No. 2496.) Claim—Constructing a gutter and kerb of a hollow box or pipe, with a lateral grating, or series of apertures for the admission of the water and surface drainage, and for preventing the entrance of large solid substances.

Wilkes, J. G. Improvement or improvements in the manufacture of tubes of copper and alloys of copper. Dated Nov. 26, 1855. (No. 2657.) This invention consists in forming the said tubes by passing hollow cylinders between rolls furnished with grooves of a nearly semi-circular section, the grooves being somewhat less deep than they would be if their section were truly semi-circular.

Eassie, W. Improvements in hammers. Dated Nov. 16, 1855. (No. 2585.) This invention relates to a "friction hammer." The principle carried out is, the obtaining by means of nipping action the elevation and release of a vertical rod or bar of iron, the lower extremity, which is shaped as a hammer head, performing the functions of a hammer.

Jeffreys, E. An improvement in the construction of furnaces. Dated, Nov. 6, 1855 (No. 2495). Instead of setting all the fire-bars in the same horizontal plane, the patentee arranges them at different levels, rising from the central group to the sides, or from the sides to the central group. These fire-bars he mounts in a rocking frame, capable of being rocked by the stoker on the trunnions which support it, and thus of changing the level of the fuel.

Jessop, J. Improvements in the construction of furnaces and boilers. Dated Nov. 6, 1855 (No. 2488). This invention consists—1. In the employment of a number of discs or wheels, fixed at suitable distances from each other on a shaft, capable of rotating, and applied to the back part of furnaces betwixt the grate-bars and the bridge for receiving the clinkers, &c. when pushed from the grate-bars, and carrying the same forward at intervals to the ash-pit underneath. Also in the use of a diaphragm to separate the discs and ash-pit from the ordinary grate-bars and ash-pit, with doors, dampers, or valves, to regulate the admission of air thereto. 2. In constructing boilers with a water space projecting over the back part of the grate-bars, forming an inverted bridge to the furnace in front of the ordinary bridge, and immediately above the before-mentioned discs, the purpose of which is to deflect the smoke down into close contact with the fuel and clinkers at the back part of the furnace and on the discs.

Davis, W. Improvements in the construction and arrangement of furnaces and furnace-bars for the better combustion of smoke and prevention of loss of heat by radiation. Dated Nov. 7. 1855. (No. 2503.) This invention consists — 1. In constructing some of the bars of a furnace with deep flanges or projections in the direction of their length, on the upper part of the bar, carried as high as the top of the fuel, and so that when two such bars are placed together, an air channel or space is formed between them, for the passage of air to the upper part, or above the fuel in the furnace. The patentee also constructs furnace bars, with an upturned part at the back end, the whole forming a bridge at the throat of the furnace. 2. In placing a cellular construction on the interior of the furnace-door, and admitting continuously to such cells a sufficient quantity of air through the door, to maintain the interior of such cells as are next the door at a low temperature. The introduction of air at the fire-door is to prevent radiation of heat.

Pitman, J. T. Improvements in the construction of iron beams and girders, and in machinery for making the same. (A communication.) Dated Nov. 15, 1855. (No. 2574.)—The improved beam or girder is formed of a single bar of sheet or wrought iron brought to the required form by a series of consecutive swaging operations performed by certain im-

proved machinery. The side elevation of the beam is a parallelogram, and its cross section shows a pair of flanges at bottom from which rise the closed sides of the beam, surmounted by a tubular arch. The flanges rest at the ends of the beam upon the walls of the building, and form, throughout their length, abutments for the support of an arched fire-proof flooring and ceiling. The machine for making this beam or girder, consists of a series of pairs of rolls, or revolving swages and dies, arranged to act consecutively and automatically upon the iron. [Patent not proceeded with].

METROPOLITAN BUILDING ACT.

IN this badly and loosely drawn up Act, let me call the attention of the profession to some strange omissions,—very proper provisions existing in the former Act, 1844.

1. No person was allowed to break an opening in any external wall overlooking his neighbour's premises: if he did, a month's notice, and it was set right. At present there is actually no provision on this head.

2. Party-walls were most properly deemed to be walls dividing premises in different occupations, standing half on one ground, half on the other. At present a party-wall is only deemed to be so when it divides *buildings* in distinct occupations. Why, in the name of common sense, is not a wall, dividing a building and ground in distinct occupations, a party-wall? It is so, to all intents and purposes. A party-wall included a party-fence wall, *i.e.* a party-fence wall and a party-wall were one. This will be a fertile source of mischief. Party-fence walls are now ignored altogether.

3. Pray, why were all the scheduled forms of notices omitted? If a joke, it is a bad one. No part of the present, but what in some other part it contradicts itself. AN ARCHITECT IN A FIX.

BRIDGE BUILDING.

Permit me to say, in some corner of your journal, that the articles you have given on bridge foundations have led me to think whether it might not be possible even yet to construct foundations, where desired, literally imperishable.

Now I fancy that, within a coffer-dam, a pile of *unburnt* bricks might be raised, in proper order, with breeze, treated as a clamp, of the size and form for the required foundation, to a little above the high-water mark, and *then* burnt to a heat beyond that required for bricks, so that all might *unite together*, as we sometimes see a few accidentally joined in the firing. Then the air-channels might be grouted with fine concrete, to make the bed more solid, and prevent the sub-earth rising into them.

Or perhaps our giant engineers would as readily build and burn it on a floating iron platform, and then sink it gradually; in which case the town might be saved the nuisance of the firing, by its being done elsewhere, and floated afterwards to its place.

Now, if this be practicable, instead of placing dependence on rotting timber, or on decaying stone or rusting iron, it might be reposed in a fire-made rock that would defy both current and cannon as long as the existence of the people it serves.

Although apart from this point, may I name another thought? I do not suppose it new: that of forming a platform in the centre of the pier, suggested by the frequent perforating arch, for steamers' landing-place, connected by stairs with the road level of the bridge, so as to serve for either side of the water. OLIVER P.

Notices of Books.

Inventorium Sepulchrale: An Account of some Antiquities dug up at Gilton, Kingston, &c. in Kent, from 1757 *to* 1773, *by the Rev. Bryan Faussett.* Edited from the original manuscript in the possession of JOSEPH MAYER, Esq.; with Notes and Introduction. By CHARLES ROACH SMITH. Printed for subscribers only. London. 1856.

LAST year, as many of our readers know, the manuscripts and antiquities of which this is the history, passed into the hands of Mr. Joseph Mayer, of Liverpool, by purchase from Dr. Faussett's executors. Mr. Mayer lost no time in arranging and throwing open to the public his important acquisitions, and at once resolved on printing and illustrating the manuscripts for the public behoof. The conduct of the trustees of the British Museum in neglecting to secure the Faussett collection of Anglo-Saxon and Roman antiquities,—so suitable, nay, so indispensable as such British antiquities must be to a British museum,—was quite inexcusable, and has been the means of depriving the nation of other collections, such as that of Mr. Wylie; but it is fortunate for the country at large, that the Faussett collection did not share the fate of other antiquities rejected by the same trustees, and become lost to us either by transportation to a foreign country, or by dispersion in our own at public auctions: it is still more fortunate that this collection has passed into such hands as those of Mr. Mayer. Had the Government, moreover, been induced to accept the offer made by Dr. Faussett's executors, the manuscripts would probably have remained a sealed book to the public; whereas we have the whole here already, comprised in a handsome quarto volume, illustrated with numerous engravings, many of them in colours, and preceded by an Introduction, from the able and accomplished pen of Mr. Smith, who took so much interest in the unavailing endeavour to open the eyes of the Museum trustees to their manifest duty as the collectors and preservers—beyond all else—of our *national* antiquities.

On the Physical Conditions involved in the Construction of Artillery, with an Investigation of the Values of Materials and Causes of Destruction of Cannon in Service. By ROBERT MALLET, M.I.C.E. F.R.S. &c. London: Longman and Co. 1856.

Illustrated Handbook of Military Engineering and of the Implements of War, for Non-professional Readers. By R. FORREST, Woolwich. London: Day and Son, Lithographers to the Queen.

THE former and more important of these works on the strength, form, and general construction of ordnance, and its improvement, is based on investigations first made public at the Royal Irish Academy in course of last year. Circumstances had led the author to the conviction that the manipulative skill of the gun-founder and the practical resources of the mechanical engineer were insufficient to supply any certain basis for advancement in the construction, power, and endurance of cannon, or to explain its mishaps and accidents; and that a *science* of gun-founding yet required to be formed and systematized,—a science which must be founded and established on a more searching and exact discussion of the properties of the constructive materials for ordnance than as yet appeared to have been given by any one. The work therefore necessarily contains much matter of interest to the civil engineer as well as to the military, on the strength and qualities, chemical and mechanical, of iron and brass, and on moulding, casting, and founding in general,—whether of cannon or of other heavy works in metal. The book is illustrated by various engravings, as of the peculiarities and changes of structure in iron, taken from photographs, as well as of other subjects more strictly professional. The smaller work under notice is expressly designed to render intelligible to non-professional readers the various necessarily technical expressions found in all historical or popular descriptions of modern warfare; and, although scarcely so timely in appearance as was probably anticipated when the plates and descriptions were first thought of, it is to be hoped the public will *not* lose their interest in such subjects, since it is hard to say how soon they may have a recurrence of occasion to desire a little special information as to the technical language of military engineering, war-implements, and warfare.

Miscellanea.

ELECTRO-TELEGRAPHIC.—We regret to learn that another submarine cable has been lost in the Mediterranean, between Sardinia and the African coast, during a storm. It was insured at Lloyd's for nearly 30,000*l*. Surely some better method of laying down submarine cables than appears to have as yet been adopted might be devised. In the event of a storm occurring could not the cable be cut and buoyed in some conspicuous way, so as to enable the vessel containing the remainder to recover the cut end and restore the connection at a future time? The cable just lost was between 120 and 130 miles in length, the distance between Spartivento and Tunis being 109 miles, and the Mediterranean irregular in depth.

GIBSON'S STATUE OF THE QUEEN.—The statue of her Majesty, which has been sculptured in marble by Mr. Gibson at Rome, has arrived in this country, and is now being placed on the pedestal allotted to it in the Prince's Chamber, in the New Palace of Westminster. This apartment is at the back of the throne. The pedestal on which the statue is being placed is of solid marble. The three emblematical figures on the base, representing Astronomy, Commerce, and Architecture, are also from the chisel of Mr. Gibson. Mr. Gibson has made up his mind to *colour* the group. It is much too large for its position.

INAUGURATION OF THE WELLINGTON STATUE AT MANCHESTER.—The Wellington statue (described in our last number) was inaugurated on Saturday last, in the presence of 20,000 spectators. The statue is a companion to the Peel statue, which has been raised higher on its pedestal, and both are placed in front of the Manchester Infirmary, which is erected on the finest site in Manchester. The mayor and corporation of Manchester, the Bishop of Manchester, Lieutenant-General Sir Harry Smith, the executive committee, the 7th regiment of Dragoons, and the 25th regiment, or Queen's Own Borderers, assisted at the ceremony. Mr. Noble had superintended the erection of the figures during the last fortnight, great care being required in fixing the bronze figures at the angles of the pedestal. These are of great weight: they were cast by Messrs. Robinson and Cottam, founders, Pimlico, and brought to Manchester without accident by the London and North-Western Railway. The statue of Mars at the left front angle of the pedestal is itself 10 feet high, while the main statue is only 13 feet high, and must, one would think, from its position on a pedestal 19 feet high, lose even some of the small predominance over its subordinate which it in reality possesses.

THE PEEL STATUE AT MANCHESTER.—The Peel Monument at Manchester has been elevated 3 feet 9 inches. Mr. William Buxton, builder, performed, by contract, the task of removing the statue, and re-erecting it, happily without accident. The work occupied about a week. An additional layer of granite has been placed underneath, of the height mentioned, and 13 feet 7 inches long, by 7 feet 2 inches wide. The granite was brought from Aberdeen, carefully tied up in matting like a bale of goods. To produce uniformity, the old granite, which had become somewhat weather-stained, will be "rubbed" or cleaned; but the black, smoke-covered figures will remain as they are in the mean time, although it is intended to clean them, so as to be in accordance with the Wellington statue, we presume. The statue of Sir Robert Peel weighs three tons; and the top stone of the pedestal upon which his figure rests weighs seven tons.

COMPULSORY HOUSE DRAINAGE: HAMMERSMITH.—The authorities of Kensington vestry summoned Mr. W. Hedges to Hammersmith Police-court on 28th ult. for suffering a house, No. 7, Brown's-buildings, Kensington, to be untenable. From the statements of Mr. F. Godrich, the medical officer of health, and Mr. Biradbridge, the surveyor, it appeared that a quantity of liquid house-manure flowed from a dung-heap in the yard into the basement of the house and under the flooring of the kitchen, and had rotted the boards. What the officers required was that a drain should be made under the kitchen to carry off the water, the yard to be properly drained, and that there should be a water-supply to the offices. Mr. Godrich added that the woman of the house had been, and was now looking, very ill, and he considered the house untenantable from the want of proper drainage. The defendant said he had let the house to a man named Lever, who had promised to make all things comfortable. The magistrate, Mr. Dayman, made an order as required by the complainant.

THAMES TUNNEL.—In the week ending 30th August, 16,436 passengers passed through, and paid 68*l*. 9s. 8d.

THE MARYLEBONE FREE LIBRARY.—It is a subject of regret, and, indeed, of dishonour and shame to the metropolis, that it has but one free library, and that even this is in so languishing a condition, that it must be closed at the end of the present year, unless the annual subscriptions be increased by about 200*l*. Since its opening (not under very wise auspices or arrangements, certainly), in January, 1854, no less than 73,312 readers have attended it, and 79,477 books have been issued, down to 31st July last. It also contains a lending library of 1,000 volumes, established and conducted by working men, and in full operation, 5,732 volumes having been issued and returned without loss or damage. A special committee of gentlemen, unconnected with the library, but interested in its welfare, has been formed for the purpose of preventing, if possible, its threatened extinction, and it is to be hoped the metropolis will not incur the additional disgrace of not being able (or willing rather), to sustain the only solitary institution of this kind which it possesses.

Gas.—The Liverpool United Gas Company have just been dividing their usual handsome dividend of 10 per cent. per annum for the last half-year. The gas rental for 1856, notwithstanding the reduction of price from 4s. 6d. to 4s. in 1855, has already reached the amount of same rental in the year previous to the reduction, namely, 1854, and even exceeded it. The chairman declared that he was perfectly satisfied with the result, and that "in this as in every class of business in which men engage, those who supply good and cheap articles need never be afraid of an increase of production." We have not the least doubt of the rental being farther increased in the ensuing year.——The directors of the gas company at a place called Errol, in Scotland, not being yet converts like the Liverpool chairman to the right principle in gas statistics, lately attempted to increase their dividend of 6½ per cent. arising from the sale of gas at 10s. a thousand cubic feet, by *raising* the price to a still higher pitch, namely, 10s. 10d. The immediate result has been, that more than the one-half of the gas-consumers of the village have signed a document, binding themselves to give up the use of gas altogether till the company agree to reduce the price and to pay for replacing the meters.——The ratepayers of Salford have, in a public meeting, formally complained that the price of their gas has been raised 10, 20, and 30 per cent. without any increase of its illuminative power, and they seem to think they may as well have it cheap and bad as dear and bad. Mr. Rudd stated that the price per thousand feet in London was only 3s. 6d. although coals were so dear; that in Burnley the price was the same, and in Todmorden 3s. 8d. He complained that the Salford gas was impure, and that it was delivered at too high a pressure. They were paying 10 or 15 per cent. for gas which they did not consume. Mr. Storey said that the profits from the gas at the present time, if properly managed, would be from 120 to 150 per cent.——At a recent meeting of the directors of the Spilsby Gas Company, it was resolved to reduce the price of gas from 8s. 4d. to 7s. 6d. The company is now paying a dividend of 5 per cent. which will doubtless, as usual, increase as they diminish the price of their gas.——The York United Gas-light Company have resolved to divide 6 per cent.

Employment of Convicts. — In an article of your paper of last week, there was a hint on the subject of the Thames sewage, which pointed to employment of thieves in said dirty work. This was hitting the right nail on the head. I have given this same nail a blow or two myself, but it will take many more to drive it home, but when done, it will be a *clencher*. Some time since I addressed the *Times* on the subject in general, proposing that street thieves should be put to all the irksome and dirty work of the town. My letter was not inserted, but the hint was thought to be worthy of an honourable position in a leader. Dear sir, do contrive to give another blow on this nail. It may be rather out of your line, but it can be done. Thieves do not bargain for continuous hard work: put them in earnest to this, and the reformatory system will find much of their work done by this simple process.—H. B.

Stained-Glass Windows for Glasgow Cathedral.—At the request of the Lord Provost of Glasgow, Mr. James Ballantine, of Edinburgh, the artist, who was selected, in 1845, to fill the windows of the House of Lords, has submitted a complete plan of illustrations for the windows in Glasgow Cathedral, comprising the leading events recorded in the Old and New Testament. He has prepared the designs for the four principal windows: these are as follow:—*Large West Window.* — Christ's Entry into Jerusalem—Last Supper—Crucifixion and Ascension, or the Life of Christ, illustrated in a series of medallions. *Large South Transept Window.* — The Transfiguration, and Christ cleansing the Temple: the four lateral upright lights to be filled with Architectural Ornamentation, similar in character to the treatment of the large north transept window. *Large North Transept Window.*—St. John preaching in the Wilderness—Christ preaching on the Mount—The Day of Pentecost—The Angels opening the Prison Doors to the Apostles. *Large East Window.* — Effigies of the Twelve Apostles and Heads of Twelve Prophets, in Medallions, with geometric and foliated adjuncts. Mr. Ballantine urges that unity of purpose and harmony of connection can only be attained by placing the whole series for execution in the hands of one artist.

Colossal Bust of the Queen for Manchester Town-hall.—The bust commissioned by Alderman Barnes, from Mr. Noble, and for which her Majesty granted sittings, is now completed, and will be shortly placed in Manchester Town-hall.

A New Metallic Alloy.—Equal parts of iron, cobalt, and nickel, fused together, made a very hard alloy of dazzling whiteness, resembling silver. It is suitable for making knife-blades, fine files, and other such articles.

North Oxfordshire Archæological Society. —The members of this society had their annual excursion on Thursday and Friday in week before last, in conjunction with the members of the Worcester Diocesan Architectural Society. The North Oxon members halted for a short time at Swalcliffe, and after inspecting the church, proceeded to Brailes, where they were joined by the members of the Worcester Society. After a visit to the church, the whole party started for Compton Wyniates, the residence of the Marquis of Northampton. They were here cordially received by Lord A. Compton, who conducted them over the mansion, and showed them the various objects of interest with which it abounds, adding various explanations. The church was next visited, and the party then went on to Tysoo Church, and from thence to the Sun Rising, at Edge Hill, where they were met by Colonel North. Here the party dined. Warmington was the next halting-place: the church here was visited, and one of the Worcester gentlemen gave a short account of a curious portion of the edifice, supposed to have been used by a recluse. After visiting Shottswell, the party returned to Banbury. A meeting was held in the Vicarage-hall in the evening. The Rev. T. Chamberlain, vicar of St. Thomas's, Oxford, read a paper "On the Restoration of Chancels and Churches." This was followed by one from the Hon. F. Lygon, "On Mediæval Monuments—especially brasses," rubbings of which were hung round the hall. Mr. Faulkner, of Deddington, made a few remarks on the necessity of preserving the brasses in churches. Friday's excursion included Adderbury, Deddington, Somerton, Weston-on-the-Green, Middleton Stoney, Wendlebury, Alchester, and Bicester.

Woolwich: Government Contract.—Messrs. Lucas, brothers, of Lowestoft, builders, have concluded a contract with Government for the erection of a brick wall, 15½ feet in height, and 2 miles in extent, which is to inclose and connect the newly-acquired premises in Woolwich Marsh with the Arsenal. Great additions and improvements have been made throughout the entire circuit, so that the general aspect of the Arsenal is now that of a thoroughly new establishment, on a liberal and extensive scale. The works are being pushed forward with great diligence, many of the contractors' men working over-hours.

The Late Sir Richard Westmacott, R.A.—Sir Richard died at his town residence, in South Audley-street, on the 1st inst. in his 82nd year, after an illness of about three weeks' duration. Richard Westmacott was born in London, in 1775, and, showing early signs of his future vocation, adopted the profession of a sculptor when he was quite a child. In 1805 the Royal Academy of London elected him an associate of their body, and he became in 1816 a Royal Academician. The works of art by which he was best known are his statues of Addison, Pitt, and Erskine, his statues of the late Duke of Bedford and of Charles James Fox, in Bedford and Russell squares, and his monuments to Sir Ralph Abercromby, Lord Collingwood, and others, in Westminster Abbey and St. Paul's Cathedral, together with the figure of Psyche, much admired by every lover of art. Besides these he designed the colossal statue of Achilles, in Hyde-park. "The Distressed Mother," which he executed in 1822, for the Marquis of Lansdowne; "The Houseless Traveller," a copy of which is in Westminster Abbey; his "Euphrosyne," for the late Duke of Newcastle, in 1837. His latest work, we believe, was the sculptured pediment at the British Museum.

The Stereoscope.—A discovery of a curious character is announced by a M. Luegol, namely, an animated likeness, which takes us a step farther in photography, and surpasses even a "speaking likeness." M. Luegol takes two portraits for the stereoscope, each one at a different angle to the other, so that when they are placed in the instrument and it is moved from the right to the left, the eyes are in apparent motion.

Messrs. Broadwood's Fire — Workmen's Tools.—The *Builder*, in noticing this calamitous event, observes,—"Several hundred workmen will be thrown out of employment, and a great number have lost their tools, some of which were insured, and many not. It is much to be regretted that workmen will not adopt this easy mode of securing the value of their property. There is no difficulty whatever in doing so. It is a practice we have often urged, and we hope that experience, such as the present, will at length induce the general observance of tool insurance as a rule with but few exceptions." Why do not masters make it an invariable rule to include in their insurance the tools of their workmen, and if they think it necessary to make a deduction from the wages on that account, a penny or twopence a week, according to the value of the chest and the risk of the occupation, would defray the whole cost?—*Bury Post.*

Paper from Stone.—We are likely shortly, it seems, to be writing "with a pen of iron on the rock," in a sense very different from what Job or his comforters dreamt of, or the Assyrians, with their microscopic writings on tablets of pottery, practised. A Glasgow marble-cutter, grudging doubtless the immense waste of his material in useless chippings, is said to have invented and patented a process whereby stone is convertible into paper of a superior kind, both in texture and quality, to that now in use, and at a much cheaper rate. As stone, however, is only said to be "the principal material," we must infer that the *stone* needs *mortar* to hold it together: nevertheless, the saturation of some glutinous medium with stone dust *may* form a very fair succedaneum or substitute for paper. Mr. Edward Grecnless is the patentee.

Fatal Accident by Fall of Old Building.—On Tuesday night, about twelve o'clock, a house, No. 9, Little Swan-alley, Moorgate-street, fell, occasioning the loss of four lives, and severe injury to others. The whole of the occupants, sixteen in number, were buried in the ruins, so that it is wonderful more were not sacrificed. Some difficulty in shutting and opening doors had previously, it is reported, given warning of what might have been hence looked for, but the landlord, it seems, denies that any information of the circumstance had been given to him. The house was a very old one, of three stories, let out in rooms. Fortunately three rooms only were occupied. Decay of the beams and rafters is regarded as the cause of the accident. The alley contains a number of other houses of a like dangerous order, and is surrounded, indeed, by the same kind of buildings, all densely occupied.

The Sledge Principle in Railway Transit.—A correspondent, who subscribes himself "A Thoughtful Mechanic," suggests the substitution of the sledge principle in railway carriages in place of wheels, leaving the latter on the locomotive only, and describes the advantages of such a system, as in safety, facility of stoppage, &c.; but we fear it is but too manifest that the disadvantages arising from that friction to which some of these counter-advantages are due are too many to leave much chance of the substitution which our correspondent desires, however much the safety or smoothness and comfort of railway travelling would thereby be increased.

The Metropolitan Traffic Question: Scheme for Railway Intersections.—The absurdity involved in the idea that the metropolis of a country which set the example of railway transit to other nations, is still so utterly devoid of internal means of intercommunication at all equivalent to the immensity of railway traffic poured into its streets, that these may be said to be now in a perpetual state of blockade, and continually getting worse and worse,—is so very obvious, that the subject is ever and anon forcing itself into reiterated notice, as indeed it ought to do, and must do, till the intolerable and still increasing grievance shall be fairly met and obviated: and the sooner the better, considering not only the really alarming increase of the general traffic in the streets of the metropolis, but the rapid extension of these streets themselves, presenting thus an ever increasing obstacle to the carrying out of any feasible scheme of railway interconnection, except at a wide sweep around its suburban districts, which would still further postpone the requisite internal interweavement of routes. A Tract, by Mr. William Footman, titled "A Practical Means of providing an efficient Accommodation for the Traffic of the Metropolis," has just been published by Herbert, 88, Cheapside, in which a railway scheme is proposed to be carried out by a company, at a cost of 3,600,000*l.* including the purchase of Southwark-bridge, for the purpose of the projected railway, which is to run as an extension, from the South-Western and South-Eastern, to that bridge, so as to form a junction with a Blackwall extension, and to pass over Thames-street and Cannon-street, and by a tunnel under Cheapside and St. Martin's-le-Grand, &c. to Smithfield, and then, by open railway again, to the Great Northern, at King's-cross; passing thence on by the outskirts of the Regent's-park, and forming a junction with the North-Western by the way, to the Great Western at Paddington. The total length of the proposed company's line would be about 6½ miles, and it is noted that short lines in populous districts are the best paying lines; and certainly no such populous districts as these are to be found so concentrated throughout the whole world. Without *some* system of central interlinkment (if we may be allowed the expression), our railway system is like a body without a head,—like some of those acephalic fœtal monsters which occasionally astonish the world. The organization of the railway system of England cannot be regarded as a vital self-sufficient organism till a *centrum commune* or central head be formed in the metropolis; and we hope to see this done ere many years go over our own head.

THE BANK OF LONDON, LATE HALL OF COMMERCE.—Mr. McLean has lately published a good view of the beautiful chamber, in Threadneedle-street, formerly known as the Hall of Commerce, and now occupied by the Bank of London. It was judiciously fitted up for this purpose by Mr. Edmund Woodthorpe.

LORD SOUTHESK AND AGRICULTURAL DWELLINGS.—We learn with much satisfaction that the Earl of Southesk has given instructions to the tenants on his estates to make returns of all the houses and cottages occupied by servants and others employed in agricultural labour, specifying the dimensions of the different departments, and other particulars, with the view of introducing a thorough reform in the dwellings of the humbler classes in this quarter (Brechin). We also learn that his lordship is about to erect a comfortable dwelling-house and place of meeting for Mr. Wodsworth, home missionary, whose labours among the out field population of this town have been attended with marked success during the few months that have elapsed since he became a denizen of the ancient city.

PRESERVING WOOD, METALS, &c.—MONS. C. F. L. Oudry, of Paris, has patented the application of copper or other metals on iron, zinc, and other metals and their alloys, and also upon wood, paper, cardboard, and stone, having first covered them with an isolated coating of a composition susceptible also of preserving, waterproofing, and metallizing them, and which coating is a conductor of electricity. The copper is applied to any desired thickness by ordinary electro-chemical means, and serves to preserve the metal or other substances thus covered from oxidation by the action of the air, water, or the humidity of the earth. The composition may be made of metal or metallic salts, combined with essential oils or greases, and resins, gums, bitumen, or asphalte, according to the nature of the articles to be covered over, and a conducting property is given by adding copper, graphite, or other metallic powder.

THE SEWAGE OF GREAT TOWNS.—Mr. R. G. Whitfield writes to the *Times*:—"About eight years ago the city of Antwerp paid annually for sweeping their streets 20,000*f*. The scavenger not being satisfied, and having made an increased demand, the members of the corporation came to the determination to put the cleansing of the streets up to competition. The first year they obtained 15,000*f*. which, as the sewers, formerly all communicating with the Scheldt, have been removed and cesspools made, has gradually increased up to the present time, when the corporation receives 120,000*f*. the contractor paying that sum for the privilege of obtaining the sweepings of the streets and the contents of the cesspools! The streets of Antwerp are now swept every morning throughout the year before ten o'clock. The dust and refuse from the houses are not allowed to be thrown into them (as is done in Paris) until the scavengers' bell rings, and the cesspools containing the excrement are periodically emptied, by order of the municipality, the soil being first deodorised, and the whole, with the dust and sweepings, are carted away some miles into the country, and converted into guano, a very thin layer of earth on the deodorised soil being sufficient to keep down any noxious exhalations. The fertilising qualities of the street-sweepings and the night-soil, when converted into guano, are truly surprising, both at Antwerp and Paris, and are, commercially, a very lucrative speculation. In Paris, last year, I watched the growth of grass-seed sown upon earth prepared with the 'town guano,' for a lawn at the Duchess D'Aiba's: on the eighth day it was mown! At Milan, where the system has been extensively adopted, and the town-produce for years has been converted to its legitimate use, the land yields eight crops of grass a year!"

TENDERS

For alterations and improvements at St. James's church, Piccadilly. Mr. Charles Lee, architect:—

Burt	£1,835 0 0
Lawrence	1,825 0 0
Abbott and Son	1,760 0 0
Patrick	1,748 0 0

For the restoration and enlargement of the parish church of St. Mary, Brecon. Messrs. W. G. and E. Habershon, Architects. The quantities were furnished:—

	Church.	For Screen.
D. Thomas (Cardiff)	£3,490	
H. Ramm (Abergavenny)	2,736	£40
Walter Jones (Brecon)	2,450	46
T. Griffiths and Son (Brecon)	2,420	43
Wm. Williams, jun. (Brecon)	2,400	47
W. Jones and J. Games (Brecon)	2,097	25
Henry Jones (Brecon)	2,085	30
Rees Price (Brecon) (accepted)	1,707	21

N.B.—The last named builder made a mistake in his tender, in not having included the whole of the works, viz. the plumber's, stainer's, and glazier's work, which he estimated at 205*l*. which amount the committee allowed to be added to his estimate, making it 1,912*l*. (accepted).

For new church at Richmond, Surrey. Mr. G. G. Scott, architect. Quantities supplied by Messrs. Balam and Lee:—

Hills	£9,291 0 0
Nicholson	9,227 0 0
Sweet	8,948 0 0
Carter	8,939 0 0
Brewer	8,840 0 0
Carless	8,767 0 0
Piper	8,445 0 0
Long	7,599 0 0

For the erection of a villa at Ewell, for Mr. W. R. Shaw, Messrs. Tillott and Chamberlain, architects. The quantities not supplied:—

Wm. Wills	£1,747 0 0
Heath and Son	1,745 0 0
J. Gray	1,695 0 0
R. Wells	1,598 0 0
S. and J. Chuter (accepted)	1,550 0 0

For rebuilding the new Philological School, New-road, under Messrs. W. G. and E. Habershon:—

Messrs. King and Stanger	£4,620 0 0
M. A. Taylor	4,390 0 0
G. Day and Co.	4,295 0 0
J. H. Tarrant	4,194 0 0
W. T. Purkiss	4,175 0 0
Patman and Fotmington	4,156 0 0
Longmire and Burge	3,883 0 0
J. R. Botterby	3,898 0 0
H. Knapp	3,810 0 0
P. J. Harmer	3,800 0 0
W. H Rowe	3,685 0 0
Thompson and Crosswell	3,693 0 0
A. Simmons	2,660 0 0

For Northampton Lunatic Asylum. Messrs. Milne and Son, architects:—

Estimates for new wing.		Drainage, liquid manure tanks, &c.
Cosford	£6,500	498
Watkin	6,500	
Whitney	6,240	
Wills and Fisher	6,160	
Ireson, sen (accepted)	6,155	£495 (accepted)
Ireson, jun.	6,040	
Gardener	6,025	

For West Kent Militia barracks. Messrs. Whichcord and Son, architects:—

	Bricklayer, Mason, and Carpenter.	Plumber, Glazier, and Painter.	Smith and Founder.
	£. s. d	£ s. d	£. s. d.
Kirk Parry & Co.	4,749 0 0	649 10 0	598 10 0
Drury & Biggleston			570 0 0
William Cobb	4,896 0 0		
Thompson & God win	4,700 0 0		
George Chambers	4,970 17 7	498 0 0	
James Hries		573 0 0	
William Colling			751 9 6
Robert Foord		594 14 6	
Thomas Court		476 18 0	
Weeks & Pelman			631 9 6
Sutton & Walter	5,187 0 0	501 3 0	
L Ashdown		539 0 0	
Garrett & Cross			648 0 0

The tenders of Messrs. Drury and Biggleston; Thompson and Godwin; and Thomas Court, were accepted. Total, 5,748*l*. 18*s*.

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"A. L."—"S. H. P."—"W. G."—"W. D. M."—"Jonce."—"W. P." (under our figure).—"F. D." (ditto).—"I. S."—"E. J."—"G. T. R."—"J. G."—"Mr. W."—"Z. Z. Z" (we decline recommending).—"R. S. T." (we do not recommend inventions of which we know nothing).—"P. S."—"A Reader."—"H. A. B."—"T. R."—"W. R."—"R. R."—"S. L."—"J. L."—"T. T. C."—"G. H. C."—"Intended Competitor."—"J. E."—"J. F."—"R. S. T."

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ROOFING SLATES, SLATE CISTERNS, And every description of Slate Slabwork. T. B. HANNAFORD begs to inform Builders and the Public generally that they not only can rely on the best of materials and workmanship, but being part owner of an extensive quarry, he is enabled to offer his slates at prices considerably lower than the usual quotations.—Treviske Wharf, Ratcliff-cross.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; and at Messrs. Peake's, Belsize-road, where terms may be obtained

PARIS EXHIBITION.—ENAMELLED SLATE—TWO FIRST-CLASS MEDALS.—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1845. This beautiful material handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles—too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of lee-tables, chiffoniers, consoles, &c.; baths baptistries, altar-tablets, pilasters, columns, vases pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price list can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôt, at Bangor, or to transmit by railway. Also Slabs of all sizes.—Apply to the Secretary, addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor.

AMERICAN OILSTONES, superior to all other Oilstones for sharpening Edge Tools. Can be cut to any shape or size. AMERICAN OILSTONE DUST, 2s. 6d. per lb. Patentee of the Engineers' Ratchet Drilling Brace, from 21s. each. JOSEPH FENN, Tool Manufacturer, 105, Newgate-street, London.

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ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
PRICE 2s. 6d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN LIVINGTON, Patentee and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

O. MCARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, White friars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

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W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel For terms, &c. apply at the Wharf.
Contractors supplied to any extent.

BUILDING LAND, WOODFORD, within five minutes' walk of the Church and George-lane Railway Station, and eight miles from the City. TO BE LET on Building Leases, desirable BUILDING LAND, admirably adapted for Villas or other Residences, being part of the Grove Estate, Woodford.—Apply to Mr. WASHINGTON SINGLE, the Grove, Woodford; or to Mr. G. R. NOBLE, Surveyor, &c. Woodford, Essex. Money advanced if required.

FREEHOLD BUILDING LAND between Aldershott permanent Barracks and Farnham, adjoining the Government Land, half a mile from the Queen's Pavilion, and having two frontages with most extensive views. Sand, gravel, and building stone upon the estate. Eleven acres, together or in portions.—Apply to Mr. W. C. BIRCH, Architect and Surveyor, Farnham, and 16, Essex-street, Strand

BUILDING LAND TO BE LET, at HALLSVILLE ..... Term 1,000 years, for small cottages.
CANNING TOWN .. " 1,000 " for small cottages.
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POPLAR..... " 98 " for fourth-rate houses.
Advances 7s. to 20l. at 5 per cent. on each cottage.
Apply to Mr. Wm ELLISON, Architect, Stainsby-road, Limehouse

DUNSTABLE, BEDS.—TO BE LET, ELIGIBLE BUSINESS PREMISES, with ample Domestic Apartments attached, situate in the High-street, Dunstable, having a frontage of 40 feet, by a depth of 124 feet. The warehouses and others which have been erected within the last few years are commodious, and comprise every requisite for the Straw Business, for which they are specially adapted.—Apply to Mr. WILLIAM C. REED, Architect and Surveyor, 64, Old Broad-street London.

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PERPETUAL INVESTMENT, LAND, and BUILDING SOCIETY Shares issued, 13/2: Invested on real Securities, 192 000l. Monies daily received on Deposit or Shares, interest paid half yearly. Money ready for advances on houses or lands. No legal charges to Borrowers.—Apply for particulars to the Secretary, Mr. J. E. TRESIDDER, at the Head Offices, 37, New Bridge-street, London.

BUILDING LAND.—TO BE LET on Lease, for a long term, a desirable PLOT of LAND, in an elevated situation, admirably adapted for the erection of Villa Residences.—For further particulars apply by letter to W. G Messrs. Webber's, 6, Piccadilly.

FREEHOLD and LAND-TAX REDEEMED TO BE SOLD, about FIVE ACRES and a HALF of extremely valuable BUILDING LAND, situate within a few minutes' walk of the Egham station of the Ascot Railway, with extensive frontages to the High Western and Windsor roads, commanding uninterrupted views of the Surrey Hills, Epsom Downs, St. Ann's Hill, &c. and within an easy walk of Virginia Water, the Great Park, the River Thames, and a pleasant drive of Ascot Heath, Windsor Castle, Hampton Court, and other attractive localities. Villa residences are in great demand in this favourite locality being surrounded by the seats of the nobility and gentry, and from the contiguity to the royal domain, must always maintain its rank as a first-class neighbourhood. The soil is gravel and sand, and a good supply of water can be obtained.—For particulars and to see plans, apply to Messrs. WEBNERT and ASHDOWN, Architects, 42, Charing-cross

A CAPITAL MANSION, in one of the new parks in the vicinity of Sydenham, Norwood, and Streatham, TO BE LET, on lease, or TO BE SOLD, at a ground-rent. The house stands on a gravelly soil, and contains on the upper floor seven airy sleeping rooms; on the first floor, four excellent bed-chambers, a dressing-room, and a bath-room. Water laid on to the top of the house. On the principal story a spacious and lofty drawing-room, a well-proportioned dining-room and study. On the basement a good kitchen, housekeeper's room, butler's pantry, groog room, and every convenience. Gas laid on throughout the house. Double coach-house and three-stalled stable, with rooms and loft over. Fore court, carriage drive, and large back garden.—Plans with full particulars, may be seen, and offers to view, at Messrs ROBINSON and ROBSON'S, 28, Margaret-street, Cavendish-square.

TO BUILDERS, ARTISTS, and OTHERS.—TO BE LET, or the FREEHOLD TO BE SOLD, a FAMILY RESIDENCE, situate in Park-place, about ten minutes' walk of the Hackney Railway-station, containing four good bed-rooms, dressing-rooms, dining-room, spacious drawing-room, breakfast-room, kitchen, and other accommodation, for a respectable family, large garden in the rear, extending to College-street.—For particulars and orders to view, apply to Messrs. PRICKETT and SONS, Surveyors and Valuers, 34, Southampton-buildings, Chancery-lane; and Highgate, Middlesex

BILLINGSGATE.—TO BE SOLD, or LET on Lease, THREE FREEHOLD HOUSES,—Two in Love-lane, One on St. Mary at Hill, Lower Thames-street. The Three adjoin each other, with a large cellarage, vaulted, and are suitable for wine purposes requiring room.—Inquire on the Premises of Mr. FALKNER. Architect, 61, Gracechurch-street; or of Mr. ELLIS, 41, Botolph-lane.

FINSBURY-SQUARE.—The LEASE of a most desirable and commodious FAMILY RESIDENCE, in the best part of Finsbury-square, TO BE DISPOSED OF. The house is replete with every convenience, and has been decorated in a superior manner. Communicating from the lower part of the garden, and having a separate entrance from an adjoining thoroughfare, there is a Suite of Offices, consisting of Eight Rooms and Cellar, with paved yard, watercloset, &c.—Applications for carriage view and for particulars to be made to Mr. WILLIAM SOUTTER, Surveyor, 25, Broad-street Buildings.

TO BE LET, in LIMEHOUSE, extensive WATERSIDE PREMISES, with Landing Crane, &c. in good repair.—Apply to E. ROBINSON, 9, Church-row, Limehouse

TO BE LET, the commodious BUSINESS PREMISES being No. 17, Green street, Leicester square.—Apply to W. C. REED, Architect, 64, Old Broad-street, City.

TO BE SOLD, a Bargain, SIX CARCASES, for finishing, held on a long lease at a ground-rent.—Apply to Mr ROBERT GRAY, Estate Agent and Surveyor 14, Southampton-street, Strand.

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WINDOW-BLINDS.—J. FULLER, Manufacturer, 29, Charlotte-street, Blackfriars-road, Established, 1830.—Venetian Blinds, from 10s. each, or 8d. per foot; Wire ditto, 7s. each, or 1s. 9d. per foot; Holland ditto, from 5s. each, or 6d. per foot. Every other description of Blinds equally low, warranted of the best manufacture. Discount to Builders and the Trade. Fixed complete.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 8d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 1s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application post free.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs ROBINS and Co. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr THOMAS WEEKES.
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PORTLAND and BATH CEMENTS.
TATHAM and CO.
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PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON and CO. will be happy to send prices and samples in reply to application to post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Pan's White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano

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ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccos dry quickly, and can be painted upon within a few days. Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street Westminster

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster: and Seel-street, Liverpool.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS or the strength of this and other Cements tried at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of Roman Cements for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME lump and ground, which will carry more sand than any in the market. Communications to be addressed to the General Offices, 80, Old Broad-street, London, or to Mr. MONTAGUE, at the same place, City-road; to Mr. TIMEWELL, the Depôt, 8, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
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14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or casts, of an hour's walk from the Town, and is ready for use in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Thames street, London, and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT, PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs.
Warehouse, No. 1, Wharf, Paddington-basin.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal scaurer's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 18, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

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STENT'S COMPOSITION FOR PREPARING NEWLY-PLASTERED OR DAMP WALLS FOR PAPERING,
Is the result of practical experiments and long experience; it is unfailing in its application. Entire houses have been papered a few days after plastering. In repairs of old plastering it is invaluable. A moderate room can be papered for 2s. 6d.
Prepared only by W. J. STENT, Warminster.
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HUBBUCK'S WHITE BODY PAINT of superior body to the Best White Lead, whilst it is as smooth and permanent as Zinc Paint. One coat laid on as directed is equal to two coats of White Lead; whilst the consumption of material is less than for one coat. It dries very fast and hard.
HUBBUCK'S STONE COLOUR BODY PAINT the same as the former, at three fourths the price.
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HUBBUCK'S COPPER COLOURED ENAMEL PAINT prepared expressly for the bottoms of Iron and Wood Steam Ships, a protection from rust and incrustation. Timber coated with this Enamel is not attacked by the worm, neither do barnacles attach to it.
Full particulars of THOMAS HUBBUCK and SON, Patentees and Varnish Works, opposite the London Docks, London.
OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT.

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COWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES,
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 6 South Wharf, Paddington.

NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now SELLING GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's bridge and Paddington, from whence it can be delivered a month any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.
All applications for prices and terms will meet with prompt attention.
N.B. Please observe the lime is ground at the works, not in London.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME at any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 9d. per ton.
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Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

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WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

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PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keen's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building, Gantry sand, Coarse loam, Whiting, White Sand for asphaltic, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MELSON and CO.'s wharf at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines.—Railway Consignees (with them only) to be so named in the goods' delivery orders at Grays. At MELSON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods (in Welsh and Newcastle). Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Pariors, and Pickings, of good and sound quality, constantly on sale at K. DODD'S Brickfields, which are only a quarter of an hour's walk from the Curtain. H. D earnestly requests purchasers to favour him with a visit, in order to inspect his stock and to judge for themselves.
Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Lighters can load Sand of a coarse quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM CUTTERS, SECONDS, PALINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury New-park, would be willing to enter into arrangements with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Dell's Farm, Stoke Newington Green.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Warlingham (close to the field), leave at 6 and 9.30 a.m. and 3 p.m.; return at 9.55 a.m. and 5.5 and 7.35 p.m.
HENRY C. JOUNG, Sec.
37, King William-street, City.

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY. Entrance, Norwood, Palace-road.—BRICKS of the first class. Red Kiln Bricks Cutters, Dressings, Facings, and Paviors, Clamped ditto, Yellow and Pale, Seconds, Pariors, and Pickings, Wasted Stocks, Stocks, and Place. Apply to TRUMAN and CO. Norwood Lodge, Palace-road, Roupell park, Lower Norwood, Surrey.

11, George-yard, Lombard-street, City.
ON SALE, 3,000,000 PLACE BRICKS, of good quality, for cash or approved bills. Immediate delivery. Apply to G. BOOTH, Agent, as above

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER TILES.
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest and most durable spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 8d. Any mason can put them up, or if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles delivered in Agents yard, cement, and labour. May be had in London, Gloster, Bridgewater, and Rugby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPÔT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "Terro-Metallic," is the exclusive right of the Proprietor, and, thirdly, that the "Reports of the Jurors," page 581 of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

PANTILES, PAVINGS, &c.—J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 30s. per 1,000; floor bricks and 6-inch pavings, at 37s. 6d. per 1,000; 8-inch pavings, at 37s. 6d. per 1,000; plain tiles, at 28s. per 1,000, delivered. Cash prices. Delivered on trucks in London on Eastern Counties Railway.

H. and R. HAYWOOD, Brownhills Blue Metallic Tileries, near Burslem, Staffordshire; London Depôt, 78, Southwark-street, Tooley-street. Manufacturers of Improved plain and ornament. Roofing, Ridge and Flooring Tiles, for Churches, &c.; also Metallic Plain and Socket Newsewage Pipes, &c. adapted for sanitary purposes. They are extensively used on the London and North Western, Great Western, Trent Valley, North Staffordshire, and other Lines of Rail, and highly approved. Warranted superior, and to resist all acids and exhalations.
*** A FIRST-CLASS MEDAL was awarded to H. and R. HAYWOOD, by the Jury of the GREAT EXHIBITION.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Queen Blocks, &c.
Tividale, Staffordshire.

MACINTOSH INDIA-RUBBER WAGGON COVERS, at reduced prices. Stocks of different sizes are always ready, and can be inspected at our Warehouse, MESSRS. SON, and DAVIS, 2 and 15, Aldgate High-street, and at the Factory, India-Rubber Steam Works, Bow-common.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter.—FROM SIR RAYMOND ARVIS, Bart., YENTNOR, ISLE of WIGHT.—Second Testimonial.—"March 10th, 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."
N.B. From this Testimonial it will be seen that the CORROSIVE WATERS of the ISLE of WIGHT has no effect on Gutta Percha Tubing.
THE GUTTA PERCHA COMPANY, PATENTEES,
18, WHARF-ROAD, CITY-ROAD, LONDON.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber strip cut to any pattern for macatelle tables
Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.
Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.
N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

FACING FOR BUILDINGS COMPANY—TAYLOR'S PATENT.

BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,
REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.

STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond-stones, and the Stone Ashlar never injuriously weighted by the settlement of the Mortar joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences. It can be had ready for fixing from the quarries at a small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

Mr. JOHN TAYLOR, ARCHITECT, OFFICES OF THE COMPANY, 40, KING-STREET, CORNER OF CHEAPSIDE.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that **FOUR-FIFTHS** of the **ROUGH PLATE**, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

THE SEVRES GLASS COMPANY.

LEGENDRE, TURPIN, AND CLARK'S

Establishment for the supply of Crystal White Sheet Glass, First, Second, and Third Quality; Window Glass, Shades, Potiche, Lamp Glasses, Bottles, and other Articles in White Glass, at

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PATENT REVOLVING WOOD AND IRON SHUTTERS,

WITHOUT MACHINERY,

96, REGENT-STREET, AND AT HIS STEAM WORKS, 135, OLD-STREET.

Testimonials from Architects, Bankers, &c. of their security and durability, forwarded.

MANUFACTURER OF METALLIC DRAWN SASH-BARS, STALL-BOARD PLATES, &c.

BUNNETT AND CO.'S NEW PATENT

INTERLOCKING CURVILINEAR REVOLVING IRON SHUTTERS

ARE GREATLY SUPERIOR TO ALL OTHERS,

Also cheaper, and suited in various modifications and price, for Public Buildings, Offices, Shops, Warehouses, Private Residences, and for Exportation.

BUNNETT and CO. are the ORIGINAL INVENTORS and PATENTEES of REVOLVING IRON SHUTTERS, and the only Patentees of any real improvements therein.

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In order to supply the deficiency which has hitherto existed in Furniture suitable for the many Mansions that have been erected or restored in the MEDIÆVAL STYLES, Messrs. CRACE have directed their particular attention to this subject, in addition to their other works, and have prepared appropriate specimens in the various branches of Furnishing.

STUFFS for HANGINGS, in simple Worsted Damask, in Silk; also in Tapestry of Banderkin.
CARPETS, plain or in rich Velvet pile, with appropriate Borders.
PAPER-HANGINGS of various kinds.
OAK CABINETS, Buffets, Octagon Library and Occasional Tables, Benches, Chairs, and other useful and appropriate Furniture
The whole of the above-mentioned Furniture, &c. is designed by the late Mr. A. W. PUGIN, Architect.
To render this Furniture generally available, a considerable portion has been arranged in the simplest manner, consistent with its ancient character.

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CROGGON'S PATENT ASPHALTE ROOFING FELT,

has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 42 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non-conductor.

INODOROUS FELT, for damp walls and for damp floors, under carpets and floor cloths. Price ONE PENNY per Square Foot.

CROGGON and CO.'s PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and
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By Royal Letters Patent.

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COMPANY, 226, Oxford-street.
HELY and WARING, Managers.

CCC CROWN, 18 Tables, per crate, 32s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 2d. ENAMELLED, 4d. per foot. Tiles and Slates from 6d. each. Sashes primed and glazed, 3d. per oot. HELY'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

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First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot: also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 38s.; 4ths, 36s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½d. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3½d. per foot. Crown and Sheet British and Patent Plate. HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

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and for Exportation.—LAROCHE, PUGNI, and CO. Manufacturers and Importers of Belgian, Plate, Sheet, Crystal, Coloured, and every other description of foreign Glass, respectfully inform merchants, dealers, &c. that they have now on sale a large supply of every kind of window glass suitable for the English market. Engraved, Embossed, and Ornamental Glass; Antique, Rough, Cathedral, and other Glasses for Stainers. Estimates given and contracts supplied to any amount.—Warehouse, 3, Old Trinity House, Water-lane, Lower Thames-street.

E. and W. H. JACKSON beg to call the

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and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 32s.; 4ths, 30s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 22 by 14, 2d.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

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BARS, for shop-fronts and other windows, skylights, conservatories, verandahs, exhibition and counter cases, fern cases, aquariums, &c.—Manufactured by LLOYD and SUMMERFIELD, Park Glass works, Birmingham.

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Manufacturers of MEDIÆVAL CHURCH and DOMESTIC FURNITURE, MONUMENTAL BRASSES, and STAINED GLASS.

Decorations of all kinds executed.
Metal Works—160, GREAT CHARLES-STREET.
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HOUSE.—JOSEPH POULSON, 154, Edgware-road.—Crown Glass, in crates, 25s.; 15 oz. sheet, 3d. per foot. Sheet Lead, Pipe, Solder, Oils, Colours, and Varnishes. Also Plumbers' Brass Work, cheaper than any house in London.

IMPROVED REVOLVING SHUTTERS.

FRANCIS RICKABY and DUNN are now enabled to offer the above at the following reduced prices:—IRON SHUTTERS, double riveted, with machine-cut worm gear, complete, at 4s. 6d. per foot. WOOD SHUTTERS, with worm gear complete, at 3s. 6d. per foot. Machine-drawn Brass Sash Bars and Stall-board Plates made to any design.—84, Gray's inn-lane, Holborn.

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In case of Injury by

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CARTS, VANS, WAGGONS, LADDERS,

BARROWS, &c.—Price Lists for the undermentioned may be had on application:—

No. 1. Carts, Vans, Waggons, Drays, and Trucks.
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VIBRATING STANDARD PUMPS. PATENT CAST IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 20 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 3	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron	3 5 0
3½ „	ditto 3 6	flanged pipe,	2 12 0
4 „	ditto 3 6	as required.	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 18 0

The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage. May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London. - Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

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Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

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Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

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TO BUILDERS and OTHERS.—To be

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A 16-horse ENGINE, complete; BOILER, 25 feet long, 4 feet diameter; Shafting, 80 feet long, 2½ feet diameter. Seventeen Drums, and fourteen Plumer Blocks.—Apply to JACOBS and HYMAN, Thornhill-bridge Wharf, Caledonian-road.

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ENGINE.—One of these useful engines FOR SALE, four-horse power, second-hand. Also, Stone Sawing Frame, by a first-rate maker; a Timber Frame, to cut 9 feet 6 inches square; and a powerful Hydraulic Press.—Apply at 20, North Wharf-road, Paddington, where they may be seen.

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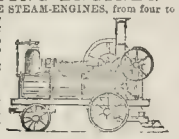
PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.



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PORTABLE STEAM-ENGINES and

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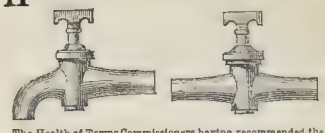
TO BE LET, on HIRE, or for SALE, several NEW and SECOND HAND STEAM ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



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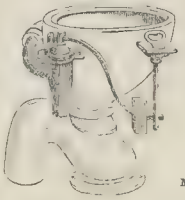
W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



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DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

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LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing,

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

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STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

SALT-GLAZED STONEWARE, FIRE-CLAY, AND TERRA-COTTA

WORKS,

NEAR BARNSLEY, YORKSHIRE.

The Proprietor, E. B. BEAUMONT, manufactures every description of STONEWARE for drainage and sanitary purposes, from clays which have been subjected to the most searching analyses, and proved to be of the most tenacious and indissoluble qualities. The pipes are wrought by Spencer's Patent Machine, by which tube and socket are one, without a manipulated joint, and rendered the more compact by high pressure; and as every improved apparatus has been made available to secure the highest excellence with great economy of labour, the goods are put upon the market at a considerable reduction from the prices charged for others at all approximating in quality, whilst the stock on hand is always sufficiently large to provide for works of the greatest magnitude.

THE TRADE LIBERALLY TREATED WITH.

Price lists and Diagrams sent free on application.—

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In MANCHESTER.....To Mr. BLONDER-TINI, Hunt's-bank.
In LONDON.....To Mr. J. D. JONES, 27, Bucklersbury; and Goods Depot, No. 4 Warehouse, King's-cross (Great Northern Railway).

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.

THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of JAMES PILBROW, Esq. Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

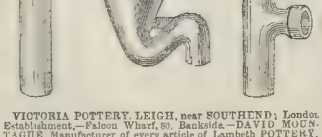
N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

GREAT REDUCTION in the PRICE of

STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 80, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

THE NEW SKETCHING TENT, 6 feet

6 inches high, 6 feet wide, by deep at the base. Weight under 8 lbs. Easily pitched and struck; very portable and compact when folded up.

London: WINSOR and NEWTON, 38, Rathbone-place.

FOR HIRE, a SPACIOUS TENT, adapted

for the Laying of Foundation Stones for Public Buildings, &c.

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.

Apply to H. PIGGOTT, 115, Fore-street, City.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.

H. MORRELL, BLACK LEAD PENCIL

MANUFACTURER, No. 149, Fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

H H H H for drawing on wood.	F F light and shading.
H H H for architectural use.	F for general use.
H H for engineering.	B black for shading.
H for sketching.	BB ditto ditto.
H B hard and black for drawing.	BBB ditto ditto.
	BBBB ditto ditto
M medium.	

Sold by all the principal Stationers in town or country

THE FARNLEY IRON COMPANY, WORTLEY, NEAR LEEDS,

MANUFACTURERS OF

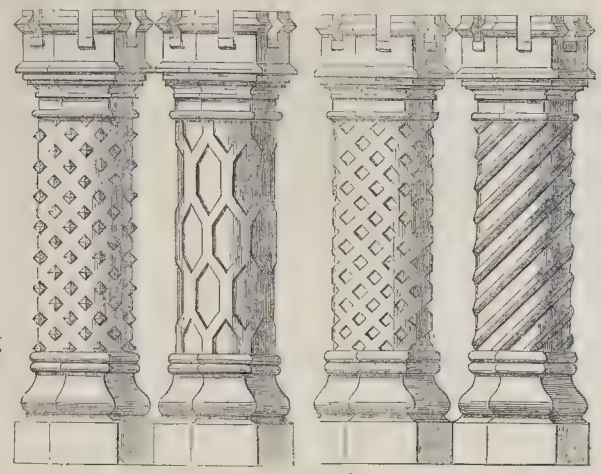
FIRE-BRICKS, PATENT GLAZED STONEWARE DRAIN PIPES, CLOSET-PANS, ORNAMENTAL TRUSSES, BRACKETS, MODILLIONS, PEDESTALS, VASES, &c.;

ALSO OF

TERRA COTTA CHIMNEY-TOPS,

In upwards of One Hundred Patterns, of various dimensions and of first-rate design, a few of which are given below,—scale half an inch to a foot.

No. 67.—Wind-guard. 3 ft. 6 in.



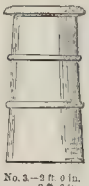
Nos. 46, 47, 4 , and 49.—4 ft. 4 in. high.
" " 6 ft. 0 in. "
" " 9 ft. 6 in. "

No. 65.—3 ft. 6 in.

No. 33.—3 ft. 6 in.
4 ft. 9 in.

No. 18.—Oblong or Square.
2 ft. 2 in.
2 ft. 6 in.
2 ft. 9 in.

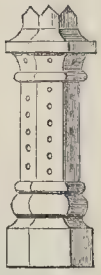
No. 24. Wind-guard.
3 ft. 6 in.



No. 3.—2 ft. 0 in.
2 ft. 6 in.

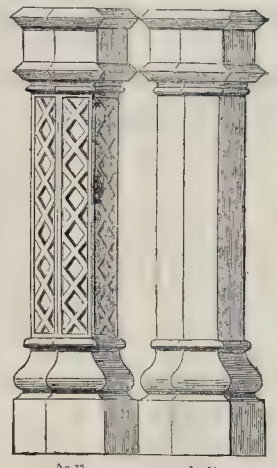
No. 14.—2 ft. 6 in.
2 ft. 10 in.
3 ft. 8 in.

No. 13.—3 ft. 1 in.



No. 66. Plain or Wind guard.
3 ft. 10 in.
4 ft. 2 in.
4 ft. 8 in.

No. 76 (round).—1 ft. 10 in. high.



No. 75 (square).—1 ft. 10 in.

No. 50.—4 ft. 3 in.
6 ft. 0 in.

No. 34.
2 ft. 9 in.

No. 12.
2 ft. 9 in.

No. 73.
6 ft.

No. 74.
4 ft.

No. 21.
Oblong or Square.
2 ft. 6 in.
3 ft. 0 in.
3 ft. 6 in.

No. 4.
2 ft. 8 in.

No. 70.
6 ft. 3 in.

ARCHITECTS' DESIGNS CAREFULLY EXECUTED, AND WITH QUICK DESPATCH.

Prices quoted are delivered free in Leeds, on Boat or Rail, for any part of the Kingdom.

OFFICES AND STORES.

LONDON..... No. 14, York Chambers, York Buildings, Adelphi; No. 16, Bath-place, New-road; St. Ann's Wharf, Limehouse.
BIRMINGHAM .. No. 7, Bury-row; also 24, Cambridge-street, and Lawley street.
BRISTOL..... No. 14, Nelson-street.
LIVERPOOL..... No. 9, Russell-street; 83, Renshaw-street; and Shipping Wharf, Leeds-street.
NEWCASTLE.... W. B. Wilkinson and Co. Prudhoe-street.
GRIMSBY..... P. G. Skipworth.
MANCHESTER.. No. 42, Travis-street, and 23, 24, and 28, Birmingham-street, London-road.
HULL..... No. 60, Queen-street, and Wellington-street.
BRADFORD..... Horton-road.
LEEDS ..... Wellington-street, adjoining the Midland Station, and Shipping Wharf, Victoria Works, Hunslet.
SUNDERLAND.. W. B. Wilkinson and Co. Queen-street.
WARE ..... G. E. King, Stone Merchant.

WHERE DRAWINGS, WITH PRICES, &c, MAY BE OBTAINED.

THE FARNLEY IRON COMPANY, WORTLEY, near LEEDS.

Manufacturers of FIRE BRICKS, TILES, QUARRIES, &c., White Building Bricks, Fire-clay CHIMNEY-TOPS, in Norman, Egyptian, Saxon, Tudor, Grecian, Gothic, and Elizabethan styles.

TERRA COTTA

Fountains, Vases, Pedestals, Capitals, Trusses, Brackets, &c., in great variety, which for beauty and elegance of design are unequalled

The designs of Architects modelled with the greatest exactness.

Also of PATENT GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, &c., well adapted for pressure, being made extra pressed under "Spencer's Patent." Superior White Glazed CLOSET PANS, TRAPS, &c.

The Works of the Company are situated in the immediate vicinity of the well-known bed of WORTLEY FIRE-CLAY, and their manufacture of BRICKS, for the use of Forges, Gas Companies, Foundries, Potteries, and Glassworks, is confidently recommended for all purposes where extreme heat is required. Their GROUND CLAY is also particularly adapted for the manufacture of CRUCIBLES, MELTING POTS, &c.

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BIRMINGHAM..No. 7, Easy-row; also 23, Cambridge-street, and Lawley-street.
BRISTOL .....No. 14, Nelson-street.
LIVERPOOL....No. 9, Russell-street, 83, Renshaw-street, and Shipping wharf Leeds-street.
NEWCASTLE...W. B. Wilkinson and Co. Prudhoe-street.
GRIMSBY.....P. G. Skipworth.
MANCHESTER..No. 46, Travis-street, and 23, 24, and 25, Birmingham street, London-road.
HULL.....No. 60, Queen-street, and Wellington-street.
BRADFORD ....Horton-road.
LEEDS .....Wellington-street, adjoining the Midland Station, and Shipping-wharf, Victoria-works, Hunslet;
SUNDERLAND..W. B. Wilkinson and Co. Queen-street.
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Where Drawings, with Prices, &c. may be obtained.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz: The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioner of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

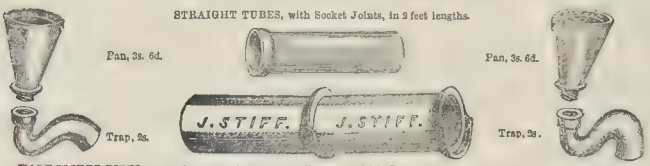
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thorulull Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

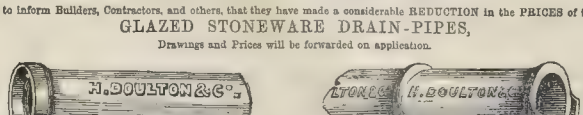
GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

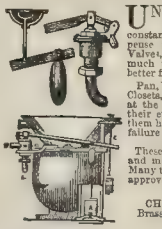
GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.



UNDERHAY'S PATENT REGULATOR CLOSETS for

constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in fixing, and a better flush of water obtained in use.

Pan, Valve, Self-acting, and Servants' Closets, on this principle, may be seen at the Works. They are very cheap, their efficiency is guaranteed. 5,000 of them have been sold, and no instance of failure has occurred.

These Stool-valves are cheaper, stronger, and more ornamental, than any other Many thousands are in use, and greatly approved of.

Manufactured by CHARLES BOTTEN and SON, Brass Founders, Crawford-passage, Clerkenwell, London.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S

LONDON.

STONE PIPES.—GLAZED STONEWARE

PIPES of the most superior quality, at REDUCED PRICES.—E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c., in stock. Yorkshire paving, sinks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.

GROUND FLINT AND CORNISH STONE,

UNADULTERATED,

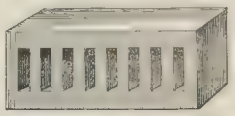
WILCOX & CO.

FLINT MILLS, MILLWALL, POPLAR.

LAND DRAINAGE.—Mr. THOS. SCOTT,

5, CHARING-CROSS, LONDON, is now prepared to undertake large or small DRAINAGE CONTRACTS, and to complete the same in as short a space of time as may be required.—References to gentlemen whose properties he has drained, or is now draining; and also to officers of the Crown.

IMPROVED AIR-BRICKS.



WILLIAM GILBERT, Manufacturer of all

kinds and colours of Tiles, Quarries, Drain pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Quoin Blocks, &c.

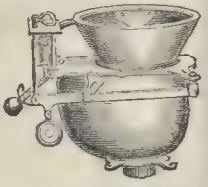
Tyndale, Staffordshire

LAMBERT'S PATENT WATER WASTE

PREVENTER, and SELF-REGULATING VALVE-COCK, especially adapted for Water-closets.

FIG. 1. (a)

FIG. 2.



This Valve is so arranged, that whether it be held down propped up, only a given quantity of water can be used at each action.

The pressure of the column of water, at its vertical height being known, a quart, gallon, or any other quantity desired will be (and no more can be) discharged, and before a second quantity can be obtained, a second action must take place.

This Valve is capable of several modifications; one of its applications to the Pan Closet, as shown in Fig. 2 is important, as it renders unnecessary any other appliance to regulate the discharge of water; it can be made to keep open as long or short a time as may be desired, after the handle which operated upon it is left free.

It is yet more valuable when applied to self-acting Closets, as it dispenses entirely with reservoirs or supply cisterns; once regulated, say for one gallon, that quantity will always be discharged at each action of the seat by its pressing upon the stud a, or by any other movement.

The Patentees have tested them under every pressure up to 300 feet with complete success.

THOS. LAMBERT and SON,
Founders and Manufacturers of High-pressure Water-Vals,
Plumbers' Brass Work, Pumps, &c.
SHORT-STREET, NEW-CUT, LONDON.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

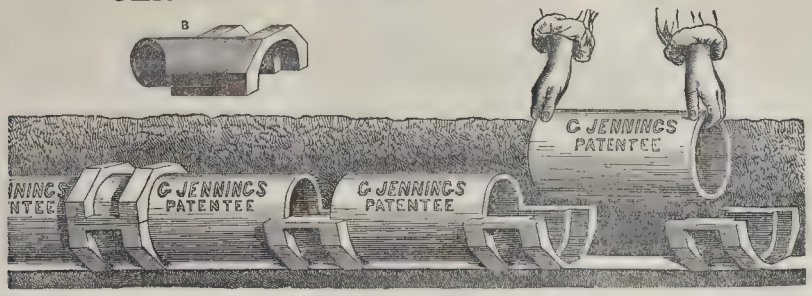
manufactured by ARTHUR O. FRANCIS and CO. Ogre, Essex, sold by them, and by FRANCIS, BROTHERS, Mr. Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at				2½d. per foot.
4	"	"	"	3½d. "
6	"	"	"	5½ "
9	"	"	"	9d. "
12	"	"	"	1s. 3d. "
15	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The production of stoneware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

JENNINGS'S PATENT DRAIN-PIPES.



THE PATENT CHAIRS AND SADDLES above shown are to a line of pipes the SAME SUPPORT AS SLEEPERS TO A LINE OF RAILWAY, the base of each Chair being BROAD and STRONG. The pipes are simple cylinders, of uniform thickness, made without the usual socket; the drying and burning, in consequence, is much more perfect. Pipes thus made and connected will be found to BEAR ANY PRESSURE, and are in no way liable to derangement. The laying of these pipes, and the making of the joints, IS DONE AT ONCE, EACH PIPE BEING BEDDED AS IT IS LAID, and the space between allows the workman to strike up the joint, and the superintendent TO SEE that every pipe is ACCURATELY LAID and PROPERLY JOINTED.

B shows one of the PATENT JUNCTION COVERS, by which connections are made to finished lines of pipes, it being only necessary AT ANY TIME to remove a PLAIN Cover or Saddle, and substitute a Junction Cover, the Junction being THE SIZE of the Branch Pipe.

The favour with which these pipes have been received will no doubt give rise to many imitations, AS IT IS MUCH EASIER TO COPY THAN TO INVENT; but GEORGE JENNINGS hopes his sanitary patrons will give HIM CREDIT for being THE FIRST TO SHOW HOW JUNCTIONS MAY BE INTRODUCED, OR EXAMINATIONS MADE, TO FINISHED LINES OF PIPES. These important improvements, as above shown, are PATENTED; and GEORGE JENNINGS would caution those who desire TO PROFIT BY HIS IDEAS, NOT TO INFRINGE HIS PATENT RIGHTS, as they will not be allowed to do so with impunity, although he feels confident the ORIGINAL, for its SIMPLICITY and EFFICIENCY, will be preferred to the attempted Copy, the provisional specification of which was not proceeded with, although STILL CALLED PATENT.

Prices of JENNINGS'S Drain Pipes, per foot run, including the Patent Chair and Saddle, are as follows:—4-inch, 6d.; 6-inch, 8d.; 9-inch, 1s. 1½d.; 12-inch, 1s. 10d.; 15-inch, 3s.; 18-inch, 4s.; with the usual discount to the Trade.

JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.

Architects describing this Closet in their specifications will have a PERMANENTLY GOOD VALVE CLOSET, NOISELESS, and FREE FROM COMPLICATION. The Patentee has such confidence in its DURABILITY and EFFICIENCY, that he will guarantee every Closet for SEVEN YEARS.

JENNINGS'S IMPERISHABLE EARTHENWARE CLOSET AND TRAP.

This Closet has a large water surface, has no back to soil, is imperishable in its material, and the Trap and Closet are combined in one piece, suited alike for the PALACE or the COTTAGE.

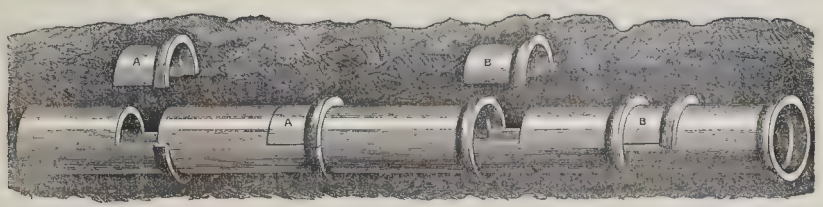
JENNINGS'S IMPROVEMENTS IN LIFT AND OTHER PUMPS.

These Pumps would well repay a visit to Jennings's factory, where may be seen Jennings's Lavatories, Urinals, Sluice Valves, Fire and Steam Cocks, of every size; Shop-Shutter Shoes; Gully, Area, and Sink Traps, and other sanitary goods.

Or Illustrations and Prices can be had free by post, if two stamps are enclosed to

GEORGE JENNINGS, SANITARY ENGINEER, HOLLAND-STREET, BLACKFRIARS-ROAD, LONDON.

AYLESFORD POTTERY COMPANY'S PATENT DRAIN-PIPES.



THE above Company respectfully invites the attention of Engineers, Architects, Surveyors, Builders, &c. to an improved DRAIN-PIPE, whereby all stoppages may be cleared without disturbing the invert of the drain, by simply removing the cover (marked A or B) whichever may be preferred.

The cover (marked B) may be used in conjunction with whole or half-socket Pipes.

Pipes thus constructed may be laid at intervals in a drain of ordinary Socket-Pipes.

With the great advantage these Pipes offer, they are cheaper than any yet submitted to the public.

London Depôt—AYLESFORD WHARF, Belvedere-road, Lambeth.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

WANTED, a FEW DOBBING-CARTS, in good working condition. Number and price to be sent by letter, to LEE and LAVERS, Sutton-street, Belvedere-road.

H. DOULTON & CO'S.

TERRA-COTTA CHIMNEY-TOPS

Will withstand the action of the Weather and Sea Breezes, and are

QUITE IMPERISHABLE.

Prices not much higher than Cement.

DOULTON & CO.'S

TERRA-COTTA POTS, &c.

Erected in London upwards of 2 years since, are now as sharp and perfect as when first manufactured.

Drawings on application to

H. DOULTON & CO. High-street, Lambeth.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

SALES BY AUCTION.

TO BUILDERS, CONTRACTORS, SAW-MILL PROPRIETORS, ENGINEERS, AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, at the FACTORY, Ranelagh-road, Thames-bank, Pimlico, on MONDAY, SEPTEMBER 8, and following day, at ELEVEN, in lots, without reserve, the valuable MACHINERY Plant, and Tools of a Builder's Factory by the best makers and with all the modern improvements including a very powerful rack-bench with saws and gearing, two iron circular saw benches, one iron vertical-saw frame, planing-machine by Parsons, an 8-inch mortising machine, American morticing, tenoning, mitreing, and moulding machines, a very superior double-cylinder steam-engine of 25 horse power, two tubular steam-boilers, 300 feet turned shafting with riggers and straps a powerful overhead travelling-crane, two self-acting screwing-machines (one by 9 hitworth) to cut from ¼ inch to 11 inch and from 4-inch to 2 inches, a self-acting lathe with chuck and 20 feet long, vertical drilling-machine two cutting and punching presses, two smaller lathes, fan and pipes, set three throw pumps with metal barrels gas-fittings, forty joiners' benches, cramps, screw jacks, stocks and dies and steel tools, 200 scaffold-boards, fifty navvy-barrows, crab-cranes trolly, six smiths' forges, anvils, smiths' tools, an assortment of valuable patterns, and numerous other effects.—To be viewed on Friday and Saturday previous to the sale, when catalogues (at 6d. each) may be had at the Works, and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO BUILDERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, at the FACTORY, Ranelagh-road, Thames-bank, Pimlico, on WEDNESDAY, SEPTEMBER 10th, and following day, at ELEVEN, the STOCK of well-seasoned JOINERY and MATERIALS, including 400 feet of deals, boards, from ¼ inch to 2 inches, 6,000 feet 3-inch match boards, 11,000 feet run oak and deal plank, 2,200 feet run spruce and pine plank, 800 feet mahogany and walnut plank, 500 cubic feet Dantzic timber, 150 squares ¼ inch prepared flooring, 30,000 feet moulding and beading 150 moulded and other doors, 200 pairs sashes in frames, oak sills, 100 prepared window linings, 75 blocks Belgian marble, 3 blocks Caen stone, 30 marble chimney-pieces, 50 register stoves, 50 pan-oil seats, a stock of builders' ironmongery in axle pulleys hinges, bolts, locks, nails, screws, files, &c. 10 tons bar and rod iron, 5 cwt. gun metal, 1 ton sheet iron, brass cabinet work and other effects.—To be viewed on Friday and Saturday previous to the Sale, when catalogues (at 6d. each) may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Proprietor, who is retiring to SELL by AUCTION on the PREMISES, Phœnix Iron-Works, Waterloo-road, on TUESDAY, SEPTEMBER 23, and following days, at ELEVEN, in lots, without reserve the MACHINERY, Tools, and Stock in-Trade of a PLATER and TOOL MAKER the tools principally by Smith Beacock, and Tannett, of Leeds—fourteen self-acting lathes, one 15-inch and one 10-inch screw-cutting, with beds 26 feet and 22 feet long, seven screw-cutting, from 9½ inches to ¾ inches centre; four surfacing lathes, to take in surfaces from 4 feet to 7 feet diameter; two horizontal-mills thirty engine and band-turning lathes, with slides; five self-acting planing-machines, the largest to take in 3 feet wide and 12 feet long; three self-acting shaping-machines, three self-acting drilling-machines slotting machine, screwing machine, wheel cutting machine, oscillating steam-engine of three-horse power, Cornish steam boiler. 18 feet long; 300 feet turned bright shafting, overhead motions, riggers straps, and driving gear; fifty vices, workbenches, boring-bars and heads, steel tools, stocks, and dies, forges, smiths' tools, Lloyd's fan, five tons of cast and shear steel, ten tons of bar and rod iron, and numerous other effects.—To be viewed on Saturday and Monday previous to the sale, when catalogues may be had on the Premises; or of Messrs. FULLER and HORSEY, Billiter-street, City.

IMPORTANT WATER-SIDE PROPERTY, ON THE PREMISES, IN THE CITY OF LONDON.

MESSRS. FULLER and HORSEY are instructed by William Crawshay, Esq. to SELL by AUCTION, on WEDNESDAY, OCTOBER 15, at TWELVE, at the MART (unless an acceptable offer is previously made by private contract), a splendid MERCANTILE PROPERTY held under the Corporation of London, known as George-yard, Upper Thames-street, in the city of London, having a frontage next the Thames of 225 feet, and occupying a superficial area of about 34,000 square feet, a site unrivalled in the metropolis, either as a depôt for landing and housing goods or for carrying on any wholesale business for which extensive waterside premises are desirable. George-yard is universally known as the London establishment of Mr. Crawshay, the eminent ironmaster, and has been in the occupation of himself and predecessors for more than a century. The trade carried on ranks among the first in the City, the returns are very large, and, to any firm wishing to occupy the premises for the same business, a large premium for the connexion may doubtless be secured. In the year had the occupier expended many thousands of pounds in the erection of a massive pile of buildings 160 feet in length by 65 feet in width abutting on to the river; the structure is of the most substantial character, and, if needed for the purpose of warehousing goods, the foundation and walls are quite equal to support an elevation of several stories above those already erected. The building is one lofty groundfloor, with gallery supported on iron girders and columns, and constructed to carry any weight. There is also a stack of warehouses, abutting on the river, 75 feet in length, of two floors, and a stack of warehouses, 60 feet in length, of three floors, abutting on Thames-street. A commodious dwelling-house in the yard, the lower part occupied as offices for clerks and principals. A comfortable dwelling-house in Thames street, and spacious paved yards, with two separate entrances, affording every convenience for loading and drawing goods. The whole held on lease from the Corporation of London, for a term which will expire in the year 1900, subject to each rent of 190l per annum. A stack of ware houses adjoining, of three floors, with frontage of 34 feet to Castle yard, may be added if desired, at a rent of 150l per annum To be viewed till the sale. Printed particulars and plans will shortly be ready and may be obtained of the Solicitors of Messrs. CROWDER and MAYNARD, Solicitors, 57, Coleman-street; and of Messrs. FULLER and HORSEY, Billiter-street, London

VICTORIA-STREET, WESTMINSTER.—Important Sale of new Building Materials, Pipe, Stock, and Out Builder

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on THURSDAY SEPTEMBER 11, 1856, and following days, at ELEVEN o'clock each day, on the PREMISES, Victoria-street, Westminster, in lots (without reserve), an important stock of well-seasoned NEW BUILDING MATERIALS, partly prepared, adapted for first-class buildings; including 2,000 feet 2-inch sashes, glazed with plate-glass; 3,000 feet ditto, glazed with sheet-glass; 400 feet 2 inch margin sashes with ornamental glass; 500 feet ditto, not glazed; 6,400 feet 2-inch sash-tubes 4,000 feet 2-inch casings and frames, 1,000 feet 2-inch French casements and frames, 500 feet 2-inch Venetian sash frames, 2,000 feet 1¼ and 2 inch doors moulded and square panels, 300 squares 1-inch, 1¼, and 2-inch yellow and white deal flooring boarded, 5,000 feet moulded architraves, 1,650 feet 6 by 4½ door-frame, 50 feet cube Portland stone 500 feet cube Bath stone 10 yards, 5,000 feet self-faced ditto, 2,000 feet York landings, 350 feet run York 20 cwt. 70 feet cube granite two Moira iron girders, 90,000 stock and fire-bricks 40 tons cast iron rain-water-pipe, 20 register and hall stoves, 20 black and bright finishers, 40 marble chimney-pieces, 15 gas fronts, 10 open ranges, 12 gas stoves, 30 coils iron-pipe 8 galvanized tanks, gas brackets and pendants, 10,000 feet iron tube, an assortment of Ts, elbows, bends, sockets, &c. 30 cwt. slooping, 5,000 feet inch boards, 200 feet quarters and corners, 200 feet muslin pattern glass, 500 feet polished embossed, and ground plate-glass, 300 feet stained glass, 50 gallons varnish, 20 cwt. white lead, 10 cwt. white zinc, and 1,000 pieces paper-hangings, 5 tons sheet and pipe lead, traps, service boxes, &c. 4 cwt. brass tube, 10 cwt. of brass castings dusters, brushes, pencils, &c. The plant and tools include a 6-horse portable steam-engine, an hydraulic lift, 7 hoisting machines and chains, mortar mill, sweeping machine, 5 stone trucks, 7 Asphalte pots, crabcranes, blocks and falls, 2 000 scaffold boards, 1,000 scaffold poles, 10 to 40 feet; 1,000 feet run 3 inch plank, 500 dozen scaffold cords, 60 ladders, 20 benches, barrows, 6 brass-finishers' lathes, smiths' forge, vice, anvils, benches, air furnace, moulding trough, and tongs, 2 painters' machines, 24 pair stips and trestles; an assortboxes; stocks and dies, steel tools, 50 dozen new files, 100 pair garment of wood-patterns, and numerous other effects.—To be viewed four day previous to the sale, when catalogues, at 6d. each may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street.

SALES BY AUCTION.

BOROUGH-ROAD. Well-executed Groups, Figures, Vases, Fountains, &c. in Artificial Stone

MESSRS. EVERSFIELD and HORNE are instructed by the Proprietor to SELL by AUCTION on the PREMISES, 74, Borough-road S uthwark on TUESDAY, SEPTEMBER 9, 1856, at TWELVE for ONE, the remaining portion of the extensive STOCK; comprising fountains, vases, groups, pedestals, centre flowers, &c. To be sold without reserve —May be viewed one week previous, and catalogues had on the Premises and of the Auct neers, 40, Parliament-street. Westminster.

TO MARBLE MASONS, BUILDERS, SCULPTORS, AND OTHERS

MESSRS. EVERSFIELD and HORNE beg to announce that they are instructed by the consignees to SELL by AUCTION, at the MARBLE WHARF, No. 17, Millbank-street Westminster, on TUESDAY, SEPTEMBER 16, 1856, at ELEVEN o'clock, a valuable PARCEL of MARBLE, comprising Statuary, Vein, Sicilian, Black and Gold, Black, and Buddlin, in 11 ck and scantling of large dimensions—Imperial bills of six months will be taken in payment. May be viewed, and catalogues had at the place of Sale, and of the Auctioneers, 40, Parliament-street. Westminster, and 23, Exchange.

IN BANKRUPTCY

MR. ALFRED DAY has received instructions from the assignees of Messrs Rowland and Evans, bankrupts, to SELL by AUCTION, on the PREMISES, in the field known as the Cricket-field, near the late Cattle-market, Lower-road, Islington, on TUESDAY, the 9th of SEPTEMBER 1856, at TWELVE o'clock a choice reserve, the second portion of the extensive STOCK and UTENSILS of a Builder, comprising an 8-horse power steam engine, 3-horse 10-inch nine cap-end boiler circular-saw tables, iron and dovetailed frame planing table greoving machine mortise do. moulding do. tenoning do, Sylvester's drying apparatus Spanish mahogany, Honduras, and cedar planks in various sizes, 2,000 feet of pine planks, 50 yellow deals, 200 Christiana do.; sheet and pipe lead, 3½ firkins of white-lead. Ironmongery—Several bags of nails, brads, pullies, locks, jsash weights, sash fastenings, bolts, hasps, oils, turps, colours, glass-paper, paperhangings, rain-water pipes, window glass, sixty carpenters' benches, cramps, copper glue-pots 100 scaffold boards, 1,000 pulleys, 400 feet of cord, 20 long ladders, wheeling planks, a rag horse, spring cart, 2,000 scaffold poles, three powerful crabs, 30 sticks of timber, 3,000 feet run of scantling, erection of forge, tewel irons, troughs, blocks, stakes bellows, vices, dovelling-machine, benches, scales, weights, smiths' tools, quantity of wrought bar iron, grating, iron frames, stoves, blocks, fills, &c.; slate landings, Caen, Bath, Portland, York and Kentish rag, in blocks and landings; pan tiles office fittings, comprising desks, iron safe, stools, nest of pigeon-holes, gas-fittings and effects.—May be viewed on the Saturday and Monday preceding the sale. Catalogues to be had of Messrs. HADLEY and FILDES Solicitors, 16, Gresham-street, City; of J. NICHOLSON, Esq Official Assignee, 24, Basinghall-street; and of the Auctioneer, City-terrace, City-road, near the Eagle Tavern.

TO CAPITALISTS BUILDERS, SPECULATORS, and Others KINGSLAND.—Important Sale of Improved Ground Rents, amounting to 93l per annum, secure upon newly 150 Houses, with valuable Reversionary Interest in the rack-rents, amounting to 2,500l per annum.

PULLEN and SON are directed by the Trustees and Executors of Mrs Mary Robinson, deceased, to SELL by AUCTION, at the MART, on THURSDAY, SEPTEMBER 18, at TWELVE in one lot, a highly-important LEASEHOLD ESTATE, consisting nearly of five acres of land now covered with houses, including thirty-three residences, with gardens, forming the whole of Robinson's-row, in the front of the high-road, Kingsland, closer to the railway station; also the Cock and Castle and Eagle Public houses, the Birkbeck Schools, the whole of Wellington-street, Castle-street and Henry-street, numerous houses in Orchard-street, Bridge-place, &c. extending in the rear to the Mildmay Estate, at Newington. The entire property is held for a term expiring at Christmas, 1893, at a ground-rent of 96l. 6s. and is underlet at ground-rents amounting to 630l per annum. The under leases are nearly all granted for shorter terms than that of the original lease, and several of the under-leases expire at Christmas next. The purchaser will commence into possession of the rack-rents of a large portion of the property (and the other portion as the various under leases fall in) for the remainder of the unexpired term of the original lease, estimated at 236l per annum.—May be viewed by leave of the tenants; and particulars had of Messrs. TYRRELL, PAINE, and LAYTON, Solicitors, Gresham Hall-yard, at the Mart; and of PULLEN and SON, 80, Fore-street, Cripplegate

The valuable Materials and Fittings-up of Clothworkers' Hall and several H uses adjoining, in Mincing-lane

PULLEN and SON are favoured with instructions from the Wardens of the Company of Clothworkers to prepare for SALE by AUCTION on the PREMISES, on TUESDAY, SEPTEMBER 16th, and following day, at TWELVE, in lots, the entire BUILDING MATERIALS, FIXTURES, remaining FURNITURE, and FITTINGS-UP of Clothworkers' Hall and several houses adjoining, in Mincing-lane. Detailed particulars will appear in a few days, when catalogues may be had of Messrs Beckwith, Towse, Esq. Clothworkers' Hall; of SAMUEL ANGELL, Esq. Architect, 16, Russell-square; and of PULLEN and SON, 80, Fore-street Cripplegate

SYDENHAM To CONTRACTORS, BUILDERS, and OTHERS

MR. MARSH has received instructions from the Executors of the late Thos. Hunt, esq. to SELL by AUCTION, on the PREMISES, Kirkdale-road, Sydenham, on THURSDAY, SEPTEMBER 11, 1856, at THREE for FOUR o'clock, in convenient lots 600,000 of superior STOCK, PLACE, and other BRICKS. The premises are 1 mile from railway stations, and in the vicinity of excellent roads.—May be viewed the day prior and morning of sale, and catalogues obtained on the Premises; the principal Inns of the neighbourhood; and at Mr. MARSH'S Offices, 2, Charlotte-row Mansion-house

BELMONT WHARF, MAIDEN LANE KING'S-CROSS.—Immediate Clearance Sale of the remaining portion of a Timber Merchants' Stock in

MESSRS. WHITE and SONS, of Dorking, under instructions received from the arbitrator, in closing a partnership account, will SELL by AUCTION, on FRIDAY, SEPTEMBER 19th 1856 at ELEVEN o'clock (including a quantity of good oak, ash, beech, elm, and hornbeam plank, elm boarding oak 3in. scantling, ash rails, gates, grave boards, pales; larch rails and posts, stocks, felloes, and other useful wheelwrights' material). Catalogues may now be obtained of Wm. Flowers, on the Wharf; also at the City of York Tavern, near thereto; of Mr. WEAKLIN, Stationer, 91, Farringdon-street, London; and of the Auctioneers, Dorking, who will forward them on application by post.

LIVERPOOL Valuable Property, in the immediate vicinity of the Lime-street Station of the London and North-Western Railway

MR. BRANCH, on FRIDAY, the 19th of SEPTEMBER instant, at TWO o'clock in the afternoon, at the CLARENCE ROOMS, South John-street, Liverpool, subject to conditions of sale to be then produced, in three lots, three Freehold Dwelling-Houses, situate in the Second Wellington Building Society, the CEMENT WORKS, WAREHOUSE, and PREMISES, situate on the south side of Lord Nelson-street and at the east side of Hotham-street, in Liverpool, late in the occupation of Mr. G. H. Newton. The site of the premises comprises in front to Lord Nelson-street, 61 feet, when it turns off and runs in a southwardly direction, 13 feet 7 inches, when it again turns off and runs along Hotham-street, 55 feet, on the east side to a common passage of 3 feet wide, 51 feet, and on the south side for 4 inches, and in the whole 319 yards, or thereabouts. The buildings have been recently erected in a very substantial manner, and are fitted up with a steam engine, and every other requisite for carrying on an extensive trade; but they are capable of being converted (such conversion having been contemplated in their original construction), at a moderate expense, into an hotel, for which the locality cannot be surpassed. Immediate possession may be had. The tenure is freehold of inheritance. For further particulars, apply to Messrs. C. and J. ELLISON, 38, Renshaw-street; or to Mr. WILLIAM FOSTER, Solicitor, 40, North John-street, Liverpool.

SALES BY AUCTION.

The Stock of a Timber Dealer and Builder

MR. LEREW will SELL by AUCTION, on the PREMISES, No. 43 Union-street Somers-town, on MONDAY, SEPTEMBER 15, at TWELVE, about 2,000 PLANKS, DEALS, and BATTENS; 180 squares of flooring, 10,000 feet scantling, fifty doors, dry cut stuff, pulpit, fourteen benches, ironmongery, scaffold-poles, boards and cords, ladders, work-benches, tools, and utensils in trade.—Auction Offices, Cardington-street, Hampst ad road.

TO STONEMASONS, BUILDERS, CONTRACTORS, and OTHERS.—400 Tons of Portland, Bramley Fall, and Caen Stone, in blocks to be SOLD by AUCTION, by

MR. SITGRAVE, on TUESDAY, SEPTEMBER 16th, at ONE o'clock precisely, on the PREMISES, Devon Wharf (near new Globe-bridge). Mile-end, by direction of the proprietors, 300 blocks, containing 6,400 feet of PORTLAND, BRAMLEY FALL, and CAEN STONE, of the finest quality, and chiefly of large dimensions and lengths, up to 13 feet, suitable for balconies, landings, steps, and other building purposes. Also, 10,000 feet of sawn Hare-hill and Potter Newton Slat, now lying on the bank of the Regent's Canal, with every facility for water or land carriage.—May be viewed three days prior to the sale, and catalogues had on the Premises; and of the Auctioneer, at his Offices, 28, Leadenhall-street; or will be forwarded per post on application.

TO TIMBER MERCHANTS, BUILDERS, PACKING-CASE MAKERS, SHIP-BUILDERS, COACH-MAKERS, CABINET-MAKERS, ORGAN-BUILDERS, PIANOFORTE-MAKERS, AND OTHERS.—On the Premises, Snow's-fields, King-street, Borough, within five minutes' walk of the London-bridge Terminus; and Robinson and Bartram's Saw-mills, Swan-street, Grange-road, Bermondsey.

MR. PEAKE is favoured with instructions from the Executors of the late Thomas Elliston, esq. Timber Merchants to SELL by AUCTION, upon the PREMISES, Snow's-field, Bermondsey, on TUESDAY, SEPTEMBER 9th, 1856, and Three following days, at TWELVE o'clock each day, at ROBINSON and BARTRAM'S Saw-mills, Swan-street, Grange-road, Bermondsey, on TUESDAY, SEPTEMBER 16th, at TWELVE for ONE, his well-known, superior, and thoroughly SEASONED STOCK in TRADE, comprising 25,000 feet Spanish and Honduras mahogany, in plank and boards; about 18,000 planks, deals, and battens; flooring-boards, match lining, 1,000 feet wainscot, Spanish, Honduras, rosewood, and walnut veneers; 500 feet Spanish curl logs, a large quantity of perfectly dry wide pine, Honduras boards, carriers' tables, oak seasoning and wedges, about twenty loads of bulk timber, &c. &c.—May be viewed Saturday and Monday previous and mornings of sale. Catalogues obtained on the Premises; at Robinson's Saw-mills; and at Mr. PEAKE'S Offices, 44, Tooley-street, South wark. Approved bills at three months will be taken from purchasers to the amount of 20l. and upwards. Luncheon provided.

TO BUILDERS and OTHERS.—TO BE DISPOSED OF, the BUSINESS of the late Mr. HOWE, Bricklayer Plasterer, and General Repairer, No. 2, Portland-road, Marylebone. For terms, apply as above

CARPENTER, BUILDER, and HOUSE DECORATOR'S, close to Eaton and Belgrave Squares.—W. H. JOHNSON is instructed to LET the above, changed hands only once in thirty-two years. The trade will be satisfactorily proved. A commodious House and Premises as a moderate rent, in lease Terms low, and every satisfactory reason given for retiring.—Apply at the Auctioneer's City Office before THREE, at 37, Cornhill-street. Bishopsgate; and before SEVEN, at 73, Connaught-terrace, Edgeware road Letters must enclose 2 stamps.

TO PLUMBERS, GLAZIERS, PAINTERS, &c.—The Proprietor of an excellent BUSINESS, which he has since successfully carried on for twenty-six years (being about to retire), seeks a SUCCESSOR. This is an opening having unusual advantages, and I write the attention of any one desiring to embark in business.—Satisfactory information on application (if by letter, enclosing stamp), to R. A. 13, Artillery-place, Finsbury-square, London.

TO PLUMBERS, PAINTERS, and BUILDERS.—TO BE DISPOSED OF, an old-established BUSINESS, at the west-end of London, in the above line. This presents a very eligible opportunity to any young man desirous of commencing business.—Particulars may be obtained confidentially by principals only, on application to Mr. CHARLES BRADLEY, Surveyor, 24, Nottingham-street, St. Marylebone.

TO ZINC WORKERS, PLUMBERS, BUILDERS, &c.—TO BE SOLD, a BUSINESS in the above line; situation the most favoured in the metropolis: permanent success certain, and no risk; very moderate means required for stock, tools, &c. and for conducting the present established trade and future extension of connexion; the most valuable to a manufacturer, being principally for family and private use. Principals only treated with, and letters paid. Rent very low.—For particulars apply at the Lead Works, 51, Marylebone-lane, Oxford street.

BUILDER'S BUSINESS FOR DISPOSAL. TO BE DISPOSED OF, by order of the Executors, an old-established BUSINESS, with a first-rate connection, situate in a small country town about thirty miles from London. The works executed by the late proprietor have gained for the concern a high reputation; they have included the erection and restoration of several churches and others, both of a substantial and ornamental character. The premises are very complete in their arrangements: the rent nominal, and the stock well selected. The amount required will be from 1,200l to 1,500l. There are several advantageous contracts in hand, which will be included in the purchase. The business has been conducted by the late proprietor and his ancestors for more than half a century, and to any practical man of business a favourable opportunity can rarely be met with.—For further particulars, apply to Messrs. FULLER and HORSEY, Billiter-street, City.

TO ENGINEERS, BOILER-MAKERS, and OTHERS.—TO BE DISPOSED OF, the STOCK and PLANT of an ENGINEER and IRONFOUNDER, situate in a large seaport town in the south of England. The premises are spacious and well-arranged, with great facilities for land and water-carriage. The plant now at work is capable of employing a full staff of hands. As the tools are all in good order, and the business is well established, this is a favourable opportunity for an enterprising person with a moderate capital.—Letters to be addressed to D. TAYLOR, Esq. Kennington-park, Surrey.

TO BUILDERS.—TO BE LET, on building or repairing lease, a PROPERTY in Westminster, belonging to Corpus Christi College, Cambridge, consisting of an entire street containing TWENTY-SIX HOUSES, and a Stable-yard, Coach-houses, and Stables. The property is compact, and is situate opposite to her Majesty's Stationery Office, and in the immediate neighbourhood of the proposed Government improvements and of St. James's-park, and is respectably tenanted.—For particulars apply to E. M. FOXHALL, Esq. District surveyor of St. George's, Hanover-square, at his Office, 148, South-street, South Audley-street, between the hours of TEN and FOUR o'clock.

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ARCHITECTURAL EXHIBITION.—All

drawings, models, photographs, &c must be delivered at the Galleries, Suffolk-street, Pall-mall East, on the 1st or 2nd of DECEMBER. Printed rules will be forwarded on application to the Honorary Secretaries.

DEPARTMENT for MATERIALS. Patents, &c connected with Building. Applicants should apply immediately to Mr. JAS. EDMESTON, Honorary Secretary, as most of the space is already engaged. This will be found the best, and indeed the only certain, means of bringing articles exhibited under the notice of the whole body of architects of London and the country, and of all persons connected with building.

The Committee are glad to add the following names of gentlemen who will act as Local Honorary Secretaries to the list already published, and they trust that others will follow their example in the many important localities not yet so provided:—

BIRMINGHAM	JAMES GOODMAN, Esq.
DUBLIN	WILLIAM WIGGINTON, Esq.
DUBLIN	JOHN S. SLOANE, Esq.
GUILDFORD	THOMAS GOODCHILD, Esq.
OSWESTRY	JAMES BLAKE, Esq.
SWINDON	E. W. MANTELL, Esq.
WINCHESTER	JOHN COLSON, Esq.

The Committee have much gratification in adding the names of Mr. THOMAS ALLOM and Professor DONALDSON to the list of Lecturers already published.

JAMES FERGUSSON, 20, Langham-place, } Honorary
JAMES EDMESTON, jun. 5, Crown-court, Old Broad-st } Secretaries.

COMPETITIONS.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The Trustees for Sale of a Freehold Estate of 560 acres, including the Beulah Spa, and near the Crystal Palace, require PLANS for LAYING OUT the SAME for building purposes, showing the necessary roads, sewers, &c. the whole to be clearly defined and appropriated in suitable lots, and laid down to a scale of two chains to an inch, from actual admeasurement. The following premiums are offered:—For the plan adjudged the best by the trustees, 150 guineas; for the second, 100 guineas; for the third, 50 guineas. The plans to which the above premiums shall be awarded, will be retained by and be the property of the trustees.—Further particulars may be obtained of Mr. PEACOCK, Builder, near the Jolly Sailor Station, Norwood, close to the property. The trustees will meet on the 20th day of OCTOBER next, to examine the plans, which are to be previously forwarded, enclosed and sealed, to the Secretary's Office, Auction Mart, London, addressed to the Trustees of the White Horse, Norwood, Estate.

PLAN and ESTIMATE for CEMETERY.—The Burial Board for the Parish of Saffron Walden, in the County of Essex, are desirous of receiving PLANS and ESTIMATES for LAYING OUT and PLANTING their NEW CEMETERY. The ground contains about 6 acres, a plan of which may be seen, and further information obtained at my Office. The party whose plan is approved will be paid the sum of five guineas, and such plan to be the property of the Board. The plans and estimates must be delivered at the Office of the Clerk to the Board, on or before MONDAY, the 22nd of SEPTEMBER instant. SIMEON JOHN KING, Clerk to the Board.

Saffron Walden, Sept. 4, 1856.

WELLINGTON MONUMENT.—The Commissioners of her Majesty's Works and Public Buildings give Notice, that it is the intention of her Majesty's Government to ERECT a MONUMENT in St. Paul's Cathedral, London, to the memory of the late Duke of Wellington, and that the Commissioners are prepared to receive DESIGNS for the same from artists of all countries. A drawing, showing the ground plan of the cathedral and the site of the proposed monument, together with a statement of the premiums, and other particulars, will be forwarded to artists on application, by letter, addressed to me at this Office.

ALEXR. J. AUSTIN, Secretary.

Office of her Majesty's Works and Public Buildings, Whitehall, London, September 6th, 1856.

CONTRACTS.

TO BUILDERS.—Persons desirous of CONTRACTING for certain WORKS required to be performed on the Premises of the Surrey Consumers' Gas Company at Rotherhithe, may see the plans and specification by applying at the Company's Offices in Robert-street, any day between the hours of TEN and FOUR o'clock. Tenders addressed to the Directors, sealed and endorsed "Tender for Works," are to be personally delivered at the Offices as above, on TUESDAY, the 23rd SEPTEMBER instant, at HALF-PAST TWO o'clock in the afternoon, precisely. The Directors will not be bound to accept the lowest or any Tender.—By order.

W. P. BODDY, Secretary.

Rotherhithe, Sept. 5, 1856.

NOTICE to CONTRACTORS and BUILDERS.—TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, on or before the 8th OCTOBER next, from such persons as may be willing to enter into a CONTRACT for the CONSTRUCTION of a FORT, near the village of Eastney, in the county of Hants. Plans and specifications may be seen, and every information obtained on application at the Royal Engineer Office, Gosport, between the hours of TEN and FOUR daily, from the 15th SEPTEMBER to the 8th OCTOBER, 1856. No notice will be taken of any Tender unless upon the printed form. The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Portsmouth, August 23, 1856.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The Principal Officers of her Majesty's War Department hereby give Notice, that they will receive proposals for a CONTRACT, to be entered into forthwith, for the several Works proposed in the ERECTION of QUARTERS for NON-COMMISSIONED OFFICERS and MARRIED SOLDIERS, Laundry, Dead-house, and Privy, together with Refortifying a Portion of the Boundary wall, &c at Beggar's-bush Barracks, Dublin. Persons desirous of Tendering for the same, will receive every information on application at the District Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and may obtain specifications, with the terms of contract. The boundary wall to be completed and the buildings roofed in by the 1st March, 1857, and the remainder of the Works to be completed on or before the 31st July, 1857.—The letters of Tender, with specifications, to be sealed, and transmitted, under cover, to "The Director-General of Contracts, War Department, Pall-mall, London," so as to be received not before the 18th day of SEPTEMBER, 1856, and to be marked on the outside, "Tender for Work at Beggar's-bush Barracks, Dublin."

Commanding Royal Engineer's Office, Dublin, 26th August, 1856.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The Principal Officers of her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following CONTRACT, viz.—For the several WORKS proposed in the ERECTION of CAVALRY QUARTERS and STABLING, together with OUT-BUILDINGS, &c. in the BARRACKS at ISLAND BRIDGE, Dublin. Persons desirous of Tendering for the same will receive every information on application at the District Commanding Royal Engineer's Office, Lower Castle-yard, Dublin; and at the Royal Engineer's Office, Island Bridge Barracks; and may obtain specifications, with the terms of contract. The soldiers' ablution-room to be completed, and all the buildings roofed in, by the 1st of MARCH, 1857, and the remainder of the works completed, on or before the 31st of AUGUST, 1857. The letters of Tender, with specifications, to be sealed, and transmitted, under cover, to "The Director-General of Contracts, War Department, Pall-mall, London," so as to be received on or before the 16th day of SEPTEMBER, 1856, and to be marked on the outside, "Tender for Work at Island Bridge Barracks, Dublin."

Commanding Royal Engineer's Office, Dublin, August 29, 1856.

NOTICE to BUILDERS and CONTRACTORS.—The Commanding Royal Engineer at Guernsey, hereby gives Notice, that sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, until TUESDAY, the 23rd of SEPTEMBER, 1856, for CONSTRUCTING a small BATTERY, ERECTING BARRACK BUILDINGS, with enclosure walls, &c and FORMING DITCHES, GLACIS, and PAD, at HOMMET POINT, in the Island of Guernsey. Detailed drawings of the works may be seen, and every requisite information obtained, on application at the Royal Engineer Office, Guernsey, every day (Sundays excepted), between the hours of NINE and FOUR. The terms of contract, specification for the works, and forms of Tender, may be procured at the Office of the Inspector General of Fortifications War Department, Pall-Mall, London, as well as at the Royal Engineer Office, Guernsey. Each Tender to be in one lump sum, in British sterling, for the whole work, to be attached to a copy of the terms of contract and specification, addressed to "The Director-General of Contracts, War Department, Pall-Mall, London," and endorsed, "Tender of Works at Hommet, Guernsey." The War Department reserve the right of rejecting any or all of the Tenders.

Royal Engineer Office, Guernsey, August 27, 1856.

NOTICE to BUILDERS and CONTRACTORS.—WAR DEPARTMENT WORKS.—The Commanding Royal Engineer at Guernsey gives notice that TENDERS for the ERECTION of a FORT and BARRACK BUILDINGS, on Richmond hill, Guernsey, will be received by the Director-General of Contracts, War Department, Pall-mall, London, until SATURDAY, [illegible] at [illegible] Detailed drawings, specifications, and every requisite information obtained, at the Royal Engineer Office, Guernsey, on and after the 9th instant. Tenders for the above works to be forwarded from the Royal Engineer Office, Guernsey, and to be addressed to "The Director-General of Contracts, War Department, Pall-mall, London," and endorsed "Tender for Erecting a Fort and Barrack at Richmond-hill, Guernsey."

N.B.—The War Department reserve the right of rejecting any [illegible] Tenders.

Royal Engineer Office, Guernsey, 30th August, 1856.

CONTRACTS.

TO BUILDERS.—Sealed TENDERS for BUILDING NEW BARRACKS for non-commissioned officers and married soldiers, at Devonport, including all requisite Fittings; also, separate Tenders for the Asphalte Work required for same, will be received at the War Department, Pall-Mall London, on or before TUESDAY, the 16th SEPTEMBER next, at NOON, addressed "To the Director-General of Contracts," and endorsed "Tender for Married Soldiers' Barracks, Devonport," "Asphalte Work for Married Soldiers' Barracks Devonport" (as the case may be), on the left-hand corner of the envelope. The barrack comprises—three blocks of two-storey buildings, laundry, cook houses, outbuildings, ash-pits, enclosure walls, gates, footpaths, roads, and parade.

Plans and specifications, with terms and conditions, may be seen, and forms for Tenders and every information obtained at the Royal Engineers Office at Devonport, between the hours of NINE and FOUR o'clock on week-days from MONDAY, the 15th, to SATURDAY, the 27th SEPTEMBER next, both days inclusive.

Royal Engineer's Office, Devonport, Sept. 3, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover district hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall Mall, London, on or before SATURDAY, the 11th day of OCTOBER, 1856, from persons desirous of CONTRACTING for LINEN-EYE ADDITIONS and ALTERATIONS to the Fortifications at Dover Castle. Drawings and a specification of the works to be executed, may be seen (persons with competent skill to take the same from one others need apply), and forms of Tender obtained at the Royal Engineer Office, Dover, between the hours of TEN and FOUR o'clock, from THURSDAY, the 4th SEPTEMBER to FRIDAY, the 10th of OCTOBER, 1856 (Sundays excepted). The party whose Tender may be accepted for the work, will be required to enter into a bond, with two eligible securities in the sum of £1,000 each separately, to be bound under a penalty of 2,000l. for the due performance of the Contract. Tenders for the above work to be addressed to the Director-General of Contracts, Pall Mall, London, and endorsed "Tender for Work at Dover Castle."

N.B. The War Department reserve to themselves the right of rejecting the tender of any of the tenderers.

Royal Engineer Office, Dover, 1st September, 1856.

LANCASTER and CARLISLE RAILWAY.—To BUILDERS.—The Directors of the Lancaster and Carlisle Railway will meet at Carlisle, on the 24th day of SEPTEMBER, to receive TENDERS for the BUILDING of a SMITHY and other WORKSHOPS at Carlisle. The drawing and specifications may be seen at the office of the Engineer, at Lancaster, on the 18th day of SEPTEMBER, and at Carlisle Station from the 19th to the 18th of SEPTEMBER, both days inclusive. Tenders to be delivered at the Office of the Secretary, at Lancaster, before TEN o'clock on the 20th day of SEPTEMBER, having endorsed on the back, "Tenders for Workshops." The Directors will receive Tenders for the works as a whole or in separate trades, and they do not bind themselves to accept the lowest Tender. The Company will also be willing to let timber at Carlisle a pass on the Lancaster and Carlisle Railway, to and from Carlisle once a week. All materials for the work, except stone, bricks, sand, and lime, will be carried free along the Lancaster and Carlisle line.

TO BUILDERS.—TENDERS are requested for the ERECTION of a CONGREGATIONAL CHAPEL at Buckingham, the plans and specifications for which may be seen and had of Mr. WM. WALKER, Buckingham, or at the Offices of Messrs. POSTERS and WOOD, Architects, 4, Parkstreet, Bristol. The Tenders are to be sent to Mr. WALKER, sealed and endorsed "Tender for Chapel," on or before the 20th inst. The lowest or any Tender will not necessarily be accepted.

SUSSEX COUNTY LUNATIC ASYLUM.—To BUILDERS.—Persons willing to CONTRACT for sundry WORKS proposed to be done in ERECTING a SUPERLUNATIC ASYLUM for the County of Sussex, on a plot of ground selected for the purpose, and situate on Hurst House Farm, in the parish of Wivelsfield, about a mile and a half from the railway-station at Haywards Heath, are required to send in Tenders, sealed up and endorsed "Tender for County Lunatic Asylum," to my office, at Lewes, on or before TUESDAY, the 7th of OCTOBER next, after which time no Tender will be received. The works to be done under the direction of the Committee of Visitors and their Architects, or other persons appointed by them, agreeably to plans, specification, and conditions, which may be inspected at the Office of the Architect, Mr. H. E. KENDALL, Jun. 33, Brunswick-square, London, on any day after the 20th day of SEPTEMBER instant, between the hours of TEN am and SIX pm. The Committee will not be pledged to accept the lowest or any Tender, and the Contract will be required to enter into a Contract, and to give a bond, with sufficient security, to be approved by the Committee, in the sum of £5,000, for the due performance of the Contract. The plans can be obtained from Mr. THOMAS PERCY, of No. 1, Alfred-place, Bedford-square, London, Surveyor; and the usual charges of such surveyor are to be paid by the Contractor whose Tender may be accepted.

By order of the Committee of Visitors,
WM. POLHILL KELL, Clerk.

Lewes, September 6, 1856.

TO CONTRACTORS, BUILDERS, AND OTHERS.

TENDERS are required for the ERECTION of WEAVING SHEDS, &c at Kidderminster. The plans and specifications may be seen on and after MONDAY next, at the Offices of the Architects, Messrs. BIDLAKE and LOVATT, Market-place, Wolverhampton, between the hours of TEN and FOUR o'clock; and TUESDAY, the 23rd of which day is APPOINTED, all estimates are to be delivered to the Architects, sealed and endorsed "Tender for Weaving Sheds at Kidderminster." The Architects do not bind themselves to accept the lowest or any Tender.

[*For remainder of Contracts see next page.*

CONTRACTS.

TO BUILDERS. — PARISH of SAINT PANCRAS, in the County of Middlesex - DEPARTMENT of WORKS. - Notice is hereby given that the Highways Sewers, and Public Works Committee of the Vestry of the Parish of St. Pancras, will meet at the Office of the Department of Works on MONDAY, the 22nd day of SEPTEMBER instant, at FOUR o'clock in the afternoon, to receive TENDERS for BUILDING LAUNDRIES, KITCHENS, SEPARATION WARDS, and other premises, according to plans and specifications, to be seen on or after SATURDAY, the 13th SEPTEMBER at the Office of the Chief Surveyor, Edward street, Hampstead road, where bills of quantities and further particulars may be obtained. Security will be required for the due performance of the contract. The Vestry do not bind themselves to accept the lowest or any Tender. Tenders to be delivered at the office of the Department of Works, by or before TWELVE o'clock at noon, on MONDAY, 22nd day of SEPTEMBER instant. By order of

WM. BOOTH SCOTT, Clerk of the Vestry.
Department of Works, Edward street, Hampstead road.

TO BUILDERS.—LLANHILLETH.

REDBORY, MONMOUTHSHIRE.—Builders are invited to submit TENDERS for the ERECTION of a RECTORY-HOUSE, for the Parish of Llanhilleth, near Newport, Monmouthshire. The plans and specification of which may be seen, and copies obtained, on application to the Rev. JAMES HUGHES, at Crumlin, on the Western Valleys Railway, near Pontypool, on MONDAY next. Tenders to be forwarded to Mr. NORTON, Architect, 24, Old Bond-street, London, on or before the 20th inst.

NORTH-LONDON FREEHOLD LAND SOCIETY.—The DIRECTORS of the above Society are ready to receive TENDERS for MAKING ROADS, and PUTTING IN GAS-PIPES and SEWERS, upon their Estate at Enfield.—A specification and particulars may be obtained of Mr. CHARLES WILSON, Surveyor, 21, Belle Vue Villas, Islington. Tenders to be sent to Mr. JAMES BARNARD, Secretary, 6, York place, City-road, on or before TUESDAY next.

TO ENGINEERS, MECHANICS, PRINTERS, AMATEURS, AND OTHERS. — The Proprietor of PARAGON WORKS, Edinburgh, having removed from Edinburgh, purposes to have a SALE of NEW ENGINES, TOOLS, and MACHINES, to take place in the month of OCTOBER next, and which will comprise, amongst others, the following:—Steam Engines, viz.: 10-horse Slide Lathe, Planing Machine, Vertical Boring Machine, and Drills, Nut and Screw-cutting Machine, Screw-cutting Lathe, Slotting Form Planing Machine, Circular and Metal Saws, Punching Presses, Portable Steam Engines, Lathes, Drilling Machines, Excentric and Coal Cutting and Coal Breaking Apparatus, and a number of other Tools and Machines; and as nothing but first-class work, containing all the most recent improvements, is turned out of Paragon Works, the above are well worthy the attention of all parties requiring the like.—Detailed and descriptive catalogues will be sent to parties applying to the Manager of Paragon Works, near Queensferry, Midlothian, Edinburgh, by post when requested by enclosing 6d. in stamps.

N.B. Improved Steam Hammers of all sizes made at Paragon Works.

TO PLANT BROKERS and OTHERS.—

WANTED, a good second hand cast-iron WATER-TANK, in plates, to hold from 1,000 to 2,000 gallons of water.—Address by letter, to 12, Gt. Ann-st., near Gt. Hill, and JONES, Export Biscuit Bakers, Jewry-street, Aldgate.

HOT-WATER APPARATUS of the best construction, adapted for warming and ventilating hot-houses, conservatories, public buildings, &c.; cast-iron boilers, self-acting regulators, pipes, &c.; hot-air, drying, and hydraulic apparatus; portable engines; shafting and other machinery upon advantageous terms.—TAYLOR BROTHERS.

TO BUILDERS and CONTRACTORS.—

TO BE SOLD CHEAP, a quantity of proved CAST-IRON GIRDERS, from 5 feet to 20 feet long, also some malleable and cast-iron pipes, galvanized or in the bright. For further particulars, apply to H. POUNTNEY, British Iron Foundry, Blackfriars-road.

PATENT MACHINES for WORKING in WOOD. These celebrated Machines have now been in use for four months in the establishment of the Inventor, and have been visited by the Indian, American, and all the principal Governments in Europe; also by eminent Contractors, Builders, Shipwrights, Mast-makers, and others in wood, and are pronounced by all who are in every respect perfect, either in hard or soft wood, for planing, squaring up, moulding, tenoning, morticing grooving, rebating, sawing, and boring, whilst they perform it in a very rapid and superior manner, at a greatly reduced cost.—Sold only by WILLIAM PURNELL, Patentee, 20, Lant-street, Borough, from all of full particulars may be obtained, and the machines can be seen at work.

CANNON IRON FOUNDRY, 80, Goswell-street, St Lukes, J. NESBIT and BLYTON, have now in great activity, as for the last 30 years, the business in the Trade that they can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Wrought Guards, Verandahs, Trellis Panelling, Vaults, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Grates, Eye and Pin Wheels, Weights, &c.

BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

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GLOVER, BROS.,

Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION either structural or ornamental.

Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes Valves, Pistons, Lathes, and Steam Engines, Rotary or Hot plate Metal. An improved Boot Door, and other Ornamental work.

A large stock of Rain-water Pipes, Plain and O G Gutters, Air bricks, Sash Weights, Air tight Sewer Grates, Stable Fittings Hurdles, &c.

Plain and Ornamental Vases 20 per cent. cheaper than Terra-cotta.

Estimates given for Iron Buildings, Wrought-iron Roofing, Greenhouses, Staircases, Wrought-iron Girders, Fireproof Book safes and Strong Rooms, Tanks and Boilers, and every description of Ironwork as specified, and Drawings executed with every attention to quality and despatch.

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RAILS, CONTRACTORS' FLAT-BOTTOM, FOR SALE, about 100 tons, 44 lbs. to the yard, in good condition. Apply to MALTHUS and SON, 44, Cornhill, and City, Contractors for Railway Plant and Stores. A quantity of Wrought Iron Tanks, and Iron Work, suitable for Wool Warehouses. Also, an Iron Crane, 3 ton power, capable of carrying thirty feet.

LIGHTNING CONDUCTORS.—

R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, supply Lightning Conductors, with the Patent and absolute safety of the copper rope, at the least possible cost. R. S. NEWALL and CO.'s Patent Copper Rope Conductor is being applied by architects, engineers, and scientific men in all parts of the kingdom.

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First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham.
Illustrated Price detailed lists post free on application

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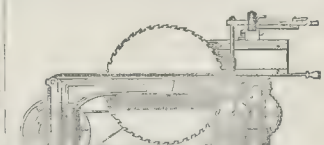
Orders for Malleable Iron Castings executed within a week.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, Sawyers, Turners of Saw Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Rotary and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machinery for Sawing, Planing, Dressing, and Working Wood. They have constructed 50 Planing machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished engineering and shipbuilding firms interests in the world with their machines, for home and foreign use. One of their Saw Benches and also a smaller one with further Apparatus may be seen at the Machinery Department, Crystal Palace. A complete Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. Kings road, Chelsea, London.

WOOD-CUTTING MACHINERY, JOHN M'DOWALL and SONS, WAGHORNSHAW (late) FOUNDRY, J. HINSTON, near Glasgow, MANUFACTURERS OF VERTICAL SAW-FRAMES (driven by steam),

For cutting balks of timber, from 5 feet on the side down to the smallest scantling.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached, circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a ¼ of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c; patent curvilinear sawing machines, for circles, ovals, and irregular figures, also ample for ship-building purposes; patent 4 cutter moulding machine, moulding 4 sides at once; and double; veneer mills of all sizes, with all appendages; sole-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first class workmanship. Mr M'Dowall has been in the engineering and millwright business for upwards of 30 years, but during the last 21 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the number of patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.

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A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Locks, Ironmongery, Brass Foundry, Nails, Screws, and cut, Copper and Zinc, Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. 6s. 6d. each.

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PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's Improved Ventilators. HULETT and CO., High Holborn.

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SOLE LICENSEES and MANUFACTURERS.
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WORKS, GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
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Iron of every description galvanized.

BUILDINGS HEATED BY HOT WATER.
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DRYING CLOSETS for HOSPITALS, UNIONS, ASYLUMS, &c.
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HOT-PLATES, STEAM and GAS-COOKING APPARATUS, for HOTELS, MANSIONS, &c.
G. B. C. has recently fitted up the Crystal Palace Kitchens with Gas-cooking arrangements upon an extensive and most complete scale. Ornamental and Constructive Ironwork.

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Manufacturers of
PATENT GALVANIZED IRON,
Sheets, corrugated and plain; Pensung and Telegraph Wire, Bars, Rods, Rivets, Nails, Screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.
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PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

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11 gauge weighs about	18	oz. per foot super.	
12	"	20	"
13	"	23	"
14	"	26	"

Full particulars and the reduced price sent by post on application to
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A. MOREWOOD and CO. (late Morewood and Rogers),
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PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,
PLAIN or CORRUGATED, and Carved to all Gauges
Manufactured articles always kept in stock, viz.: Cisterns, pails, scoops, bowls, riddles, skips, &c. of all sizes.
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A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Register Stoves, with Solid Bars, per inch, 5d.
Improved New Pattern Circular Check Register, with strong Bars and Trivets, 7d. per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 40s. to 100s. each.

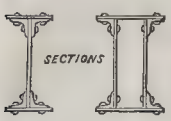
Cast Rain-water Pipe	2 in.	3 inch.
	1d.	1s. 1d. per yard.
Cast Gutters—4 inch, 8d. per yard.		
	6 in.	9 in.
O G Gutters	1s.	1s. 2d. per yard.

	2	3	4	5	6	
Patent Line	3s. 6d.	4s.	5s.	7s.	9s.	per gross.

6-inch Rd. Ward Mortise, with Best Furniture and Patent Spindles, 2s. 3d. each. Light Elliptic and Register Metal, 1s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.
Brick Moulds kept in stock. Any sizes made to order.

Best Cut Clasp and Rose Nails.				
1½ in.	1 in.	¾ in.	½ in.	⅜ in.
10s. 6d.	10s. 6d.	12s. 6d.	16s.	14s. per cwt.
Best Sheet Cut Floor Brads				14s. per cwt.
Best Cut Lath Nails				10s. "

COLLINGE'S PATENT HINGES.—
Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental Hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and regained in an instant. Rising and self-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axle-trees, sugar-mills, &c.



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For BRIDGES and BUILDINGS,
MANUFACTURED AND GUARANTEED AS TO STRENGTH.
CAST-IRON GIRDERS for BRIDGES and BUILDINGS.
Castings of every description.

ROLLED WROUGHT-IRON FLITCHES
For TRUSSING BETWEEN TIMBER.
SPIKES, RIVETS, CUT NAILS, WROUGHT DITTO, SCREWS, BOLTS AND NUTS, BOND HOOPS, CHAINS, &c.
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And IRON WORK for WOOD WAGGONS, &c.

MATTHEW T. SHAW, 64, CANNON-STREET (late with C. J. Mare & Co.)
Such arrangements are made for Despatch and Punctuality that Orders can be executed in a few days.

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CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.
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ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.
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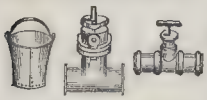

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FIT UP HEATING-APPARATUS OF ALL KINDS,
For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,
And for every purpose where artificial heat is required.
They also erect DRYING-ROOMS for ASYLUMS, UNIONS, DOMESTIC and MANUFACTURING PURPOSES, on the most improved principles, and upon the largest or smallest scale.
STEAM COOKING and BATH APPARATUS FIXED;
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To be worked by hand, horse, or steam power;
AND ALL KINDS OF
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IN WROUGHT IRON
TO ANY DEPTH,
FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.
Sizes, from 3-inch to 15-inch barrels.

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FOR BUILDING PURPOSES.
ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft
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15	3½	8s. 6d.
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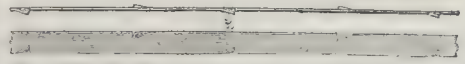

THE PATENT BOND which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1½ inches) is now being extensively used in the best class of Country Mansions, Public Buildings, Banks, Asylums, Bridges, Viaducts, Prisons, Engine Houses, and Manufactories, as well as in other public and private Works in London and in all parts of the Kingdom.

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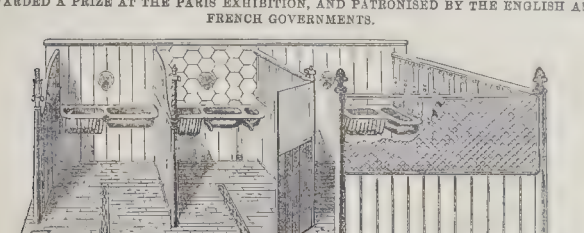

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Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT IRON RACK, united to an iron top-plate, and forming one complete and useful fixture having Cottam's Patent Nosebag Hutch Gate and Chaff-Rein attached, the ball of which is taken to the back of the manger, and works with ease and freedom up or down the curb bar. Cottam's new Patent Seed-Box, of galvanized sheet iron, an important addition to the above fittings, being unique in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

Improved Harness Holders, for preserving the shape of the harness, and preventing its creasing. Patent Loose-Box Fittings, Cheap and Durable Corn-Bins.

Improved Surface-Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.

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TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,
THE BEAR GARDEN LEAD WORKS, SOUTHWARK,
Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of
UNITING LEAD TO LEAD WITHOUT SOLDER.
Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.
PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

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Will this Grate become universally used?
It confers advantages over every other extant in—
1. A saving of 50 per cent in fuel
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3. Its not requiring one half the attention of an ordinary fire.
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for CHURCHES PUBLIC BUILDINGS, and PRIVATE HOUSES.—This Apparatus is a modification of that invented by Mr Goldsworthy Gurney, and now used by him for warming the House of Commons and House of Peers. It is especially adapted as the most available for private houses, churches, and other buildings. It is simple, inexpensive, and powerful. Any fuel may be used, coke, or gas combining the laws of conduction and convection of heat, to temper and warm air for respiration, without drying or reducing the natural hygrometric state. Further particulars apply to Mr. WOODCOCK, 5, Bush-lane, Cannon-street, Pimlico, who will supply the Apparatus, and is empowered to grant licences for agencies under the patent.

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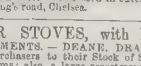
A. M. having had great experience in the above line, is enabled to guarantee the efficiency of such works as may be intrusted to him for execution; he has just completed, to the entire satisfaction of the architects, the warming and ventilation of the Baron's and Sir Anthony Rothschild's new mansions in Piccadilly.

Manufactory, Eagle-court, Dean-street, Holborn, and at 59, Devonshire-street, Queen's-square, Bloomsbury.

Artificial heat applies for drying linen on a very economical and effective system.

HEATING BY  HOT WATER.

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This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.
The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.
The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete, so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring boards, or of cement, asphalte, tiles, slate, or other material.
Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.
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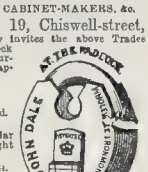

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Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings, complete
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Best Fine Cut Clasp and Rose.

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16s. 6d.	16s. 6d.	15s. 6d.	15s. 6d.	15s.	14s. per cwt.

And every material required in the building, bell-hanging, upholstery, and brass-founding trades on the most reasonable terms.
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GREAT REDUCTION IN PRICES.
RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	3 in.	4 in.	4½ in.	5 in.
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Ditto, with plain clips cast on		1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.
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Sash Weights, 7s. 6d. per cwt. Air Bricks, 3s. 3d. per dozen.
Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
15s. 6d.	15s.	14s. 6d.	14s. per cwt.	

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails ..... 15s. 6d. "
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Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.
TUNED BY MACHINERY
Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange
MUSICAL HAND-BELLS
tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system, which give superior tone and facility for ringing.

NAILS and IRONMONGERY From BIRMINGHAM direct.
Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the LOWEST BIRMINGHAM PRICES.
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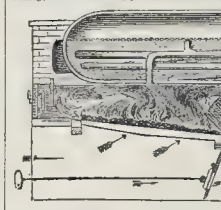

They are applicable to all Furnaces, Locomotives, Marine Engines, Ovens, Pottery and other Kilns, Common Fire, Kitchen Ranges, Hall and Hot-air Stoves. Application to be made to the PATENTEE, 21, Norfolk-street, Middlesex Hospital; to Messrs BURBIDGE and HEALY, 118 Dorset-street, Fleet-street; or to Z. D. BERRY, Albion Works, Wilton-road, Pimlico.
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Vein, in blocks of ordinary dimensions, 8s. 6d per foot cube.
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An inspection of their well-assorted stock is solicited, at "The Depôt," Bridge-wharf, Millbank, adjoining Vauxhall-bridge.—Apply only to Mr. BAXTER, Wharf Foreman.
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TO CONTRACTORS AND OTHERS.
YORKSHIRE PAVINGS, LANDINGS, STEPS, COPINGS, CURBS, SILLS, SINKS, and CHANNELS; Horse-hill, Robin Hood, Park Spring, and Garbo, in Blocks, Headstones, or Slabs; Purbeck Paving, Sinks, Curbs, Rickstones, Pitchers, and Squares; Caithness Flags, Firestone, Newcastle and Bilston Grindstones; Portland Stone in Blocks, Landings, Slabs, &c.; Denby Dale, Cam Stone, Bramley Fall, Bath, Huddlestone, Park-wood, and other Block Stones. Valentia Slate Slabs, Bangor Slates, Cornish, Aberdeen, Guernsey, and other Granites; Marble, in Block and Slabs, supplied from the Wharfs, Millbank-street, City Basin, and Deptford; also direct from the quarries by vessel or rail.—Address, FREEMAN'S WHARF, 87, Millbank street, Westminster.

RAWDON-HILL STONE.—Messrs. TRICKETT and PERKIN are prepared to execute orders to any extent for their much-admired Building Stone. Depôts, where large stocks are kept, No 3, Stone-wharf, Great Northern Railway Station, King's-cross; Victoria Stone-wharf, Millwall, Poplar. Blocks quarried to suit customers for columns, cornice, landings, steps, ledgers, head-tones, cills, &c. Delivered to any part by vessel or railway trucks.
"This stone when better known, must come into extensive use I should think it exceedingly suitable for the London market."
C. L. DIESSER, F.G.S.
Address, JOHN TRICKETT, Hendingley, Leeds, Yorkshire; or, SAMUEL TRICKETT, Victoria-wharf, Isle of Dogs, London.
N.B. A large quantity of Foundation Landings for sale.

GREEN MOOR STONE WHARF.—BROWN and BOOTH, 42, Bankside, Southwark, beg to invite Builders, Architects, Masons, and the Trade, to the stock of STONE of all kinds; viz. Portland, Jaselyn, Harehill, York Paving, Landings, &c. &c.; the Green Moor stone in blocks, landings, quarry-worked steps, sinks, copings, cills, &c. &c. Sawn slab and headstones in Green Moor, Harehill, Robin Hood. The best attention given to all orders, and prices sent on application—at such prices to meet the wishes of all. The nearest wharf to the City and Surrey side of the water.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 346, High-street, Southwark, near the Townhall.

GATES and GEORGE, CAEN, AUBIGNY, and GENERAL STONE MERCHANTS.
CAEN WHARF, ROTHERHITHE, LONDON.

WELSH GRANITE.—The Welsh Granite Company, Carnarvon, supplies Pitching or Paving Sets of this Material to order. The Sets, which have for several years been extensively used in Manchester, Bristol, Leeds, and other large towns, combine in a higher degree than any others, the qualities of roughness in wear and durability. The stone is also well adapted for foundation courses, plinths, &c. for public buildings and for mill-stones.

GRANITE.—King William and Nelson Monuments. Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—TREGELLES and TAYLOR, 54, Old Broad-street. Manager—JAS. J. TRATHAN, Liskeard
This Granite is selected for the New Westminster-bridge.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SCOLES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

STONE! STONE! STONE!—To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Self-face Slab, Granite Pitching and Curb, Guernsey broken Road Materials, and every other description of stone, at JOHN KNIGHT and SONS, Devon Wharf, Mile-end. York tooled paving, 38s. 6d. per 100 feet; slab for hearths, 4d. per foot sup.; slab for chimney-pieces, 3½d. per foot sup.; 8 by 3 window-sills, 6d. per foot run; 13 by 3 coping, 8d. per foot run; box chimneys (any opening), 8s. 6d. each. Terms cash on delivery.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab, Marble mortars, &c.

BATH STONE OF BEST QUALITY.
RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

SLATE.—An assortment of the best BANGOR ROOFING SLATE ON SALE, at Bridge-wharf, Millbank—Apply to Mr. GEORGE BAXTER, Foreman.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; and at Messrs Brahw's, Belvidere-road, where terms may be obtained.

PARIS EXHIBITION.—ENAMELLED SLATE—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1848. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can in all respects compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of loo-tables, chiffoniers, consoles, &c.; baths, baptistries, altar-tablets, pilasters, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate would not exhibit a single article to the most extensive contracts, for home and abroad.

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôt, at Bangor, or to transmit by railway. Also Slabs of all sizes. Orders to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner, or supplied in any quantity. Information for using forwarded gratis by material. Post-office orders or reference in London promptly attended to.—Estimates given for every kind of the above work.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations,
FROM 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Poloneeau and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

CROGGON and COMPANY, Manufacturers of
PATENT ASPHALTE ROOFING,
BOILER, RAILWAY, SHEATHING and INODOROUS FELT.
For Damp Walls, and Lining Iron Houses,
2, DOWGATE-HILL LONDON.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.
W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrow-road, to 2, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf.
Contractors supplied to any extent.

FACING FOR BUILDINGS COMPANY—TAYLOR'S PATENT.

BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,
REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.
STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond-stones, and the Stone Ashlar never injuriously weighted by the settlement of the Mortar-joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c of Private Residences It can be had ready for fixing from the quarries at a small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

Mr. JOHN TAYLOR, ARCHITECT, OFFICES OF THE COMPANY, 40, KING-STREET, CORNER OF CHEAPSIDE.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854, was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

THE SEVRES GLASS COMPANY.

LEGENDRE AND TURPIN'S

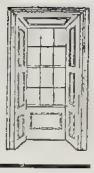
WHOLESALE ESTABLISHMENT for the supply of CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality;

WINDOW-GLASS, Shades, Moderator Globes, Lamp Glasses, Bottles, and other Articles in White Glass, at 131, UPPER THAMES-STREET, LONDON-BRIDGE.—WORKS: SEVRES, NEAR PARIS.

SANDS AND EMERY,

CURSITOR-STREET, CHANCERY-LANE.

MANUFACTURED JOINERS' WORK AND MOULDINGS OF EVERY DESCRIPTION ON THE SHORTEST NOTICE, AND AT THE LOWEST PRICES, PACKED AND FORWARDED TO ALL PARTS OF THE COUNTRY.



Lists of Prices and Estimates forwarded on application.

BELGIAN WINDOW-GLASS, Wholesale and for Exportation.—LAROCHE, PUGNI, and CO. Manufacturers and Importers of Belgian, Plate, Sheet, Crystal, Coloured, and every other description of foreign Glass, respectfully inform merchants, dealers, &c. that they have now on sale a large supply of every kind of window glass suitable for the English market. Engraved, Embossed, and Ornamental Glass; Antique, Rough, Cathedral, and other Glasses for Stainers. Estimates given and contracts supplied to any amount.—Warehouse, 3, Old Trinity House, Water lane, Lower Thames-street.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 215, OXFORD-STREET.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s; 4ths, 30s; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 22 by 14, 2d.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

G. FARMILOE and SON, 118, St. John-street, West Smithfield

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 296, Oxford-street.

COCOA CROWN, in Tables, per crate, 30s.; H 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 24s per case; CROWN of SHEET SQUARES, 100 feet boxes, 2d. per foot. HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 6d. and 8d. per foot; FLASHED RUBY, 2s. GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Tiles and Slates from 6d. each. Sashes primed and glazed, 3d. per cut. HELY'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

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CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d per foot: also in Cases of 100 and 200 feet, assorted sizes. Belgian Sheet Glass, in Cases 200 feet each, 3rds, 38s; 4ths, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½ per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3½d. per foot. Crown and Sheet British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes street, Leicester-square.

THE PATENT CRYSTAL WINDOW BARS, for shop-fronts and other windows, skylights, conservatories, verandahs, exhibition and counter cases, fern cases, aquariums, &c.—Manufactured by LLOYD and SUMMERFIELD, Park Glass works, Birmingham.

LONDON LEAD and GLASS WAREHOUSE.—JOSEPH POULSON, 164, Edgware-road.—Crown Glass, in crates, 25s.; 15 oz. sheet, 2d. per foot. Sheet Lead, Pipe, Solder, Oils, Colours, and Varnishes. Also Plumbers' Brass Work, cheaper than any house in London.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 26, Soho-square.

TO ARCHITECTS, BUILDERS, and OTHERS.—R. I. MOORE, Plain and Ornamental Lead Glazier, for Church and other purposes, is prepared to execute all descriptions of Glazing, on the most reasonable terms and despatch. Old window lights repaired and restored. Manufacturer of all kinds of window lead to the trade.—No. 37, Castle-street East, Oxford-street London.

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OAK GRAINING, in Oil, at 4½d. per yard, not less than sixty yards. Church writing done in the Elizabethan style. Reference given. Specimens done if required. Address to C. PEPPER, 3, Princes-street, Maida-hill.

GRAINING by MACHINERY.—The present system of graining is far surpassed by the use of BELLAMY'S PATENT GRAINING MACHINES, by which an ordinary workman can produce first-class work, and at an immense saving of time. The designs are perfect imitations of the choicest specimens of fancy woods and patterns of the first artists. The Patent Graining Company are now prepared with a large and well assorted stock of instruments, which they offer to grainers, painters, builders, and others without royalty.

Grained paper in imitation of all kinds of fancy woods of the choicest descriptions, in the piece, or in sets for panels, &c. wholesale and for exportation. Pattern-boards and cards for the trade in great variety.

Painters, Grainers, Decorators, Merchants, and others are respectfully invited to inspect the patterns, and see the process at the Company's offices, 30, Minories, London.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.

STEPHENS' DYES or STAINS for WOOD. The following extract from a letter the Proprietor has obtained leave to make public:—"Northgate, Colchester, Feb. 5, 1855.—Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant,

"SAMUEL GRIMES, Builder.

"To Mr. Henry Stephens, 54, Stamford-street, London."

Samples and prospectuses free to any part of the kingdom.

TO PAINTERS, BUILDERS, &c.—LIVETT, FRANK, and SON, No. 14, Borough, London-bridge, opposite the Brighton and South-Eastern Railway Stations, quote their present prices for cash—Linseed oil, 3s. 5d.; boiled, 3s. 8d.; pale pale, 4s. 3d.; oak varnish, 7s. 6d. per gallon; genuine white lead, 38s.; seconds, ditto, 31s.; best town glass, 28s. per cwt.; colours, brushes, &c. equally low. Lists of prices on application.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, spirit lackers, and finishing spirit. The present price is 6s. to 6s. 6d. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 97, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

TO BUILDERS, HOUSE-PAINTERS, and CONSUMERS of PAINT.—The GRAFTON MINERAL PAINT. This is the most durable paint hitherto known. It has been used during the last four years in the United States with great success. It is there affirmed to be unrivalled. After it has been applied to wood, and exposed to the weather a few months, it becomes as durable as stone. Wherever it is applied, neither rain nor sea-water can penetrate. The colour of the Grafton Paint is a reddish brown, but a variety of durable colours may be made by mixing it with other paints. In proportion to the quantity of any other paint mixed with it, will be the loss of its own peculiar properties. It may, however, be mixed advantageously with an equal quantity. The colour produced by this mixture will be far more durable than that of other paint. It is used on buildings of wood or brick, on iron bridges, iron railings, gasometers, and iron-work in general. Also, on fences, gates, waggons, railway-trucks, &c. For priming under any paint it is unequalled. 25 lbs. of this paint will cover 100 square yards of brickwork, or 170 of wood or iron. The Grafton Paint being finely ground does not require to be ground again. It is easily spread out, and does not emit any unhealthy effluvium.

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"I have analyzed the Grafton Mineral Paint, and find it to consist of silica, alumina, and peroxide of iron. These indestructible ingredients are in such a state of chemical combination that they are unaffected by heat, cold, rain, or sea-water.

"WM BASTICK, Analytical Chemist.

"2, Brook street, Grosvenor-square, London."

Sold by LIVETT, FRANK, and SON, Oil-Merchants, 14, Borough, London-bridge; of whom may be had testimonials in its favour, and also directions for use.

Price 20s. per cwt.

Sole Consignee for the United Kingdom,
JOHN EIVES, 61, King William-street, City.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that 62lbs of Wolston's Torbay Iron-Paint will effectually cover as much surface as 112lbs. of either White or Red Lead and Best Boiled Oil, under the same atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; Paignton Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade, and of the manufacturers, G. B. KENT and CO 11, Great Marlborough-street, London. Established 1777.

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Price Lists forwarded by post.

BUILDER'S BUSINESS for DISPOSAL. TO BE DISPOSED OF, by order of the Executors, an old-established BUSINESS, with a first-rate connection, situate in a small country town about thirty miles from London. The works executed by the late proprietor have gained for the concern a high reputation; they have included the erection and restoration of several churches and others, both of a substantial and ornamental character. The premises are very complete in their arrangements: the rent nominal, and the stock well selected. The amount required will be from 1,200l. to 1,500l. There are several advantageous contracts in hand, which will be included in the purchase. The business has been conducted by the late proprietor and his ancestors for more than half a century, and a practical man of business a more favourable opportunity can rarely be met with.—For further particulars, apply to Messrs. FULLER and HORSEY, Bulhter-street, City.

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WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application post free.

FOR HIRE, a SPACIOUS TENT, adapted for the Laying of Foundation Stones for Public Buildings, &c.

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.

Apply to H. PIGGOTT, 113, Fore-street, City.

NEW WINDSOR ESTATE. — Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences, with Stabling, which are much needed in this improving locality. The situation is the finest in or near Windsor, abutting on the Park and Long Walk, and commanding a splendid view of the Castle. Within ten minutes of the Great Western and fifteen minutes' walk of the South-Western Railway Stations. Any person can be had by responsible parties. For particulars apply to Mr WILLIAMSIM, Architect and Surveyor, 2, Danes-Inn, Strand.

BUILDING LAND, Wanstead-park, Essex. TO BE LET, on Building Leases, for long terms, several PLOTS of highly desirable LAND for villas and other residences in the above park. The land is situate in the immediate neighbourhood of Wanstead and Leytonstone Railway stations, now in full operation. Plans of the property may be seen, and all particulars and terms may be learned, on and after the 10th inst. on the Premises, Archie Lodge, No 5, Gresham House, Broad-street.

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DUNSTABLE, BEDS.—TO BE LET, ELIGIBLE BUSINESS PREMISES with ample Domestic Apartments attached, situate in the High-street, Dunstable, having a frontage of 30 feet, by a depth of 134 feet. The warehouses and Shops which have been erected within the last few years are commodious, and will improve every person's trade. The Premises are now in the occupation of Mr WILLIAM C. REED, Architect and Surveyor, 64, Old Broad-street, London.

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The Builder.

VOL. XIV.—No. 710.

LITTLE SWAN-ALLEY, where fell the house that proved a grave for four poor creatures last week, is a few paces out of the fine thoroughfare Moorgate-street, and a very short distance from the region of gold, Lothbury. The alley is about *seven feet* wide, with houses on both sides, all in a miserable condition, dangerous alike in a structural and a sanitary point of view. The house that fell was at the back of the houses on the north side of the alley. It was a mere heap of rubbish. The tenants were advised at different times to leave it, but, as one of them said at the inquest, in words we have often recorded before, she would gladly have done so if she could; but she had a large family, and it was very difficult to get reasonable lodgings in the neighbourhood, and so she would take the chance. Mr. Woodthorpe, the district surveyor, said, in the course of his examination at the inquest,—

"The house that has fallen was upwards of 200 years old. The woodwork was perfectly rotten in every part. I have examined the house since the occurrence, and from my judgment, having seen a great deal of dilapidated property, I think that the house fell bodily from a decay of the joists and ends of the rafters. That remark would apply to the whole of the woodwork, without exception, as it was all worm-eaten. My own opinion is, that the cause of the fall was the weight of the people in the house at the time, which had then got up to a breaking-point. The floor was unable to bear the weight. The appearance of the house externally would not indicate its rotten appearance within. I have no knowledge of any formal complaint being given at my office in respect to this property. This property had been presented by the ward inquest as unsafe ten or twelve years ago. That was before my appointment; but although the presentment was made to the Court of Aldermen by the inquest, I can trace it no further. It does not appear to have been communicated to the surveyor. I have heard that the premises were afterwards repaired. He had examined three other houses, and found the same cause of decay, and he believed they would be condemned that very day. There was no foundation whatever for the chimney-shaft:—the chimney-shafts were completely suspended. Excavations frequently were made for the purpose of deepening cellars, and the footings of the walls were often destroyed. These alterations took place surreptitiously, and without notice being given to the district surveyor. Three weeks ago, when I looked at these houses, I saw nothing special to call for interference in respect to them. I do not consider it my duty to go over the district like a policeman every day. I have condemned twenty houses within the last six months in the neighbourhood of Golden-lane on my own authority. I was set in motion on notice being given to me, and on making farther inquiries I ordered the houses to be pulled down."

The coroner, after summing up the evidence that had been given, pointed out that it was the duty of the jury to inquire if there had been that culpable neglect on the part of any persons which would make them criminally responsible; whether there had been omission amounting to culpable neglect on the part of those who had charge of surveying the district, or of any other person. If they were of that opinion, they must say who were to blame, and it would be their duty to return a verdict of manslaughter against him or them; or, if they did not feel justified in coming to that conclusion, then they must say it was an accidental occurrence.

The jury, after deliberating for some time, returned the following verdict:—"Accidental death from suffocation by the falling of the house, No. 9, Little Swan-alley," accompanied by the following recommendation:—"The jury earnestly recommend to the Commissioners of Sewers that they would authorize a special survey forthwith to be made of all the buildings, in the city of London, that from age or other cause may be supposed to be out of substantial repair."

It is to be hoped that this recommendation will be attended to immediately, as there are houses around the site of the recent accident, without going farther, in an imminently dangerous state. There are houses in Blue-Hart-court and Bell-alley (we would especially instance No. 4, in the latter place, that looks as if it might come down at any moment), which should have immediate attention. In New-court, although more decent in aspect externally, the fronts overhang very considerably. In a sanitary point of view, air and light are sadly needed in this nest of alleys. We can remember when it was much worse, it is true,—when the tenants had no water, and every house was a reeking fever-still. It is bad enough, however, even now. In one of the houses that we entered, the smell was perfectly overpowering, and in many, the cadaverous aspect of the occupants shows the degradation of the vital powers. Let us hope that out of evil may come good.

Considerable misapprehension was evinced at the inquest, as to the duties of district surveyors in respect of ruinous buildings, and has since been shown out of doors, leading to very injurious reflections on the conduct of a body of public officers, wholly unfounded. The Metropolitan Building Act sets forth, in section 69, that whenever it is made known to the Commissioners of Sewers of the City of London, if situated in the City, or to the Commissioners of Police, if situated elsewhere, that any structure or projection is in a dangerous state, the commissioners "shall require a survey of such structure, to be made by the district surveyor, or by *some other competent surveyor;* and it shall also be the duty of the district surveyor to make known to the said commissioners any information *he may receive* with respect to any structure being in such state as aforesaid." Upon receipt of the surveyor's certificate, the commissioners are to act. The City Commissioners of Sewers have, wisely and honourably, as it seems to us, continued to employ the district surveyors in such matters; but the Police Commissioners have thought it right to take them wholly out of the hands of the district surveyors, and employ a surveyor of their own, so that the body of district surveyors have in truth nothing whatever to do with ruinous buildings beyond forwarding to the commissioners any information they may receive in respect of such, and this they do constantly without fee or advantage. They are, not simply, not called upon to move farther in such matters, but they have no power to do so, and would lay themselves open to animadversions if they attempted it. It is surprising, therefore, and to be regretted that a respectable journalist should reproach the district surveyors, for treating with *sang froid* what he terms their most important duties, in the discharge of which, he continues, they ought to be wakeful and active, when no such duties devolve upon them.

Again, a correspondent of the *Morning Advertiser*, who signs himself "A Practical Builder," but who scarcely can be so, says,—"It is not to be expected that the surveyor will visit and inspect the interior of every house that may appear to him to be in a dilapidated condition, unless the outward appearances shall warrant him, in his cursory view, that something is radically dangerous."

It certainly is not to be expected that he should do so: in the first place, he would have no right to do it, as we have already shown, and would simply render himself liable to a reproof for his pains. The writer goes on to say,—"And even then" (that is, if led to visit the interior of the house), "his education and avocation *does* not lead him to investigate and examine into the minute details which are requisite; and the remedy I beg to suggest is very simple, and attended with little expense, viz." (What do our readers think?), "that every surveyor shall have attached to him a practical builder of experience, who can take notice of all these defects, report to the surveyor, who can then make his report to the proper office, and thus prevent a recurrence of this dreadful catastrophe."

If the writer were really a practical builder, he would know that if any one of the surveyors be unable of himself to detect, on survey, if a building be dangerous or not, he is unfit for his office. Again, however, let us seek to make it understood, that the district surveyors, with the exception of the four in the City, are not permitted to have anything whatever to do with ruinous buildings: the Commissioners of Police have taken them altogether out of their hands.

The same correspondent, in a subsequent letter, in which he gives a list of buildings in a dangerous state, completes the evidence of either his ignorance of the matter as regards the surveyor, or wilful departure from the truth, to injure a public officer, by asking why the Corporation permit such flagrant abuses to exist, "and quietly allow the surveyor to receive his salary without efficiently performing the duties of his office?" The surveyors receive no salary, but they would be paid a small fee for each survey if they were directed to make it.

The City Commissioners of Sewers, at a meeting held on the 9th, came to the resolution, on the motion of Mr. T. Abraham, "That it be referred to the General Purposes Committee to inquire into the cause of the falling of the house in Little Swan-alley, and into the working of the present system of house inspection, with especial reference to dangerous structures, and also whether it is necessary to make any and what alteration of system, and to report thereon to this commission."

One of the speakers, Deputy Lott, in supporting the motion, said he most heartily wished that more uniformity of action would be adopted for the future than had recently prevailed among the district surveyors of the City, and he trusted that the committee would take into consideration the provisions of the last Building Act, which were of a very peremptory description. As an instance of the want of unity among the district surveyors, he might mention that some of them were very diligent—he might almost say precocious—in condemning houses, and others of a totally different turn. A case occurred in his own ward, in which the district surveyor condemned the front wall of a house, and, upon the opinion of another surveyor being obtained that the wall was not at all in danger, the matter was compromised by removing a portion of it.

If the surveyor, when appointed to survey, be too fast, he may bring ruin on an individual by unnecessary condemnation; if too slow, an accident may occur and lives be lost.

The *Times*, in a leading article induced by the accident in question (wherein it is right to say the error of attributing blame to the district surveyors is not fallen into), says:—"But while the Commissioners of Sewers must bear their own share of blame in this matter, others also are in fault, and there is not a more pointed satire on London architecture than the fact that the house in question has fallen after only 200 years." And then we find at the close of the article that these "others" are our architects:

"until our architects," says the writer, "rejoice in their materials and know how to use them, we can have little expectation of their building houses that are to last." Now, as to the house having fallen after only 200 years,—where will be the majority of the houses recently built and now building in the metropolis and suburbs at the expiration of that time? Where will they be in fifty years? No where. Hundreds of houses are being erected at this moment with rotten bricks, bad mortar, and bad workmanship, which in twenty years will be ruinous structures.

But what control have "architects" over these? None. These houses are erected to *sell*; and the problem sought to be solved by the builders of them is, how to comply with the Building Act and to make them stand with the least possible outlay. Even when an architect has to overlook them on the part of the landowner, all that he can do usually is to see that the *minimum* is not passed. The fault does not rest with "our architects."

On the day following the very sad occurrence we have referred to, an accident happened at the new Wellington Barracks in James-street, Buckingham-gate, now in progress by Messrs. Dales, builders, under Captain Grant, and Mr. Roberts as head clerk of the works. The daily papers have made the particulars known, although not quite correctly. The stone core for the top cornice had been put on ready to receive the brickwork of the blocking or parapet above, and was about to be secured by iron cramps to the brickwork below, when several of the men being around a pot-boy to get their beer, one of them stood upon the projecting core and brought a part of it over. About 20 feet of the core, some of the brickwork, and six men with it fell on to the scaffold, and then to the ground with great violence, when one man was unfortunately killed and the others were much injured. The top stones lay 1 foot 7 inches on the wall, and projected 1 foot 7 inches: the under stones were 1 foot 7 inches on the wall, and projected 1 foot 3 inches. The foreman was away seeing after the missing cramps. After evidence had been heard, the verdict was, "That the death of Thomas Conner was occasioned by a portion of the cornice falling on him, but had the iron cramps directed to be used by the specification been applied as the building progressed, the accident would have been prevented."

Some importance was attached to the fact that the scaffolding was not formed with putlogs of the usual character, but of sawn quartering, about 4 inches square, and was much wider than usual, namely, about 7 feet, and it was urged by one witness who came forward, that if this had not been the case, the weight that fell, about ten tons, would not have broken through the putlogs. This, however, is doubtful. The scaffold was certainly weaker than an ordinary scaffold: the increased width had been enforced by the necessity of fixing it at the bottom clear of the gas and water pipes which supply the Palace; but it is doubtful if a narrower scaffold would have withstood the concussion. The mass reached the ground with such force that it drove in an 18-inch area wall built in cement six months ago.

This is unfortunately not the first fatal accident that has occurred at these barracks in a similar manner, and should induce care, not merely there, but in all building operations.

District of Newington and Lambeth. — A vacancy in the office of surveyor to the district of Newington, and the central division of Lambeth, under the Metropolitan Building Act, has been caused by the death of Mr. George Porter, which unfortunately took place a few days ago.

Roman Remains in Shropshire.—An interesting discovery, it is said, has just been made of the remains of a Roman villa, on the property of the Rev. T. F. More, of Linley-hall, Shropshire.

THE BRITISH ARCHÆOLOGICAL ASSOCIATION IN SOMERSET.

Our notice last week brought up the proceedings to the end of the third day: we must pass more rapidly over the events which followed. On Thursday, 28th August, the members proceeded to visit in succession Clevedon Church, Walton Castle and Church, Walton-in-Gordano Church, Canenor Court, Clapton-in-Gordano Church, Cadbury Camp, Tickenham Church, and Clevedon Court.

Walton Church is a solitary ruin. Walton Castle is situated on a lofty hill, commanding a beautiful view. The ruins consist of an octagonal wall, with a tower at each angle, and, in the area thus formed, of an octagonal keep with a tower at one angle. Cadbury Camp, a Roman fortification, is formed by two ramparts made of loose stones. It occupies a commanding point, overlooking the Vale of Nailsea on one side, and of Portbury on the other. Clevedon Court, the seat of Sir A. H. Elton, dates from the reign of Edward III. but was restored in the time of Elizabeth, and has since received many alterations and additions. An evening meeting was held in Bridgwater, and then the next day the members took their departure for Bath, where they were kindly welcomed. The business here was opened by Dr. Markland, who read a very elaborate and elegant address on

Bath and its History.

We must take a few paragraphs. Bath, said the reader—"When compared with some other English towns, possesses but few attractions to the antiquary: still, if he has an eye for whatever is picturesque, the stranger must be struck with a city of great beauty, placed in a country of almost unrivalled loveliness. Speaking of the city itself, Macaulay says, 'It charms even eyes familiar with the masterpieces of Bramante and Palladio.'

The reign of Queen Elizabeth was a marked era in Bath as elsewhere. She visited Sir John Harington, a favourite godson (the translator of the 'Orlando Furioso'), at his mansion at Kelweston (Kelston now pronounced), in 1590. Sir John had employed an Italian artist, Barozzi, to design for him this mansion, which he had fitted up in a style of magnificence suited to the taste of the age. The mansion which preceded this, built by Sir John's father, the grantee of Kelston (he having married a natural daughter of Henry VIII.), is said to have been the largest at that time in the county ('Nugæ Antiquæ,' p. 8). It seems somewhat strange that it should have existed only during one generation. Probably the poet's Italian villa was an adaptation of the older residence to a taste growing into fashion. The queen, we are told, dined 'right royally under the fountain which played in the court.' It is to be regretted that every vestige of this mansion, even of the fountain and the court (part of an old wall excepted), has been swept away: some outbuildings remain, and the foundations of the mansion-house may be traced. A letter addressed by Sir John Harington (probably to Lord Burleigh), presents a view of the city worth repeating on the present occasion.

'The citie of Bathe, my Lord, being both poore enough and proude enough, hath, since her Highnesse being there, wonderfully beautified itselfe in fine houses for victualling and lodging, but decays as fast as their ancient and honeste trades of merchandise and clothing. The faire church her Highness gave orders should be re-edified, stands at a stay; and their common sewer, which before stood in an ill place, stands now in no place, for they have not any at all, which for a towne so plentifullye served of water, in a country so well provided of stone, in a place resorted unto so greatly (being at two times of the yeare, as it were, the pilgrimage of health to all), methinke seemeth an unworthie and dishonourable thing. Wherefore if your Lordship would authorise me, or some one wiser than me, to take a stricte account of the money, by her Majestie's gracious graunt gathered, and to be gathered, which in the opinion of manie, cannot be lesse than ten thousand pounds (though not to wrong them, I thinke they have bestowed upon the pointe of ten thousand pounds, abating but one cipher) I would not doubt of a ruinate church to make a reverent church, and of an unsavourie town to make a most sweet town.'

Sir John, being 'by the unanimous consent of his own age, a man of extraordinary wit,' gave one specimen of it regarding the Abbey Church; for we are told that, conversing with Bishop Montague near the Abbey, it happened to rain, which afforded an opportunity of asking the bishop to shelter himself within the church: care was taken to convey the prelate into that aisle which had been despoiled of the lead, and was nearly roofless. As this situation was far from securing his lordship against the weather, he remarked that it did not shelter him. 'Doth it not, my lord! then let me sue your bounty towards covering our poor church; for if it keep us not safe from the water above, how shall it save others from the fire beneath?' The bishop, we know, became a liberal benefactor.

The style of domestic architecture existing in Bath, at the beginning of the last century, and the species of accommodation afforded to visitors in lodging-houses, may be best gathered from the curious plan which you will find suspended in the lobby. Our intelligent librarian, Mr. Charles Palmer Russell, who is more conversant with the ancient maps or plans of Bath than any other person, and possesses probably the most perfect collection of them, tells me that the plan in question appeared at *three* distinct periods.

To these houses and to this plan you will remember Mr. Macaulay refers. The writer quoted by him is the architect Wood, who published an account of Bath about 1740. He tells us that in his younger days, 'about the year 1727, the visitors to the springs were exposed to the greatest discomforts — the floors uncarpeted and coloured brown, with a wash made from soot and small beer, in order to hide the dirt' (ii. 348). This quotation has exposed the historian to an attack from his bitter reviewer in the *Quarterly*, who censures him for transplanting into the life of Charles II. what belongs more properly to the reign of George II. Evelyn's and Pepy's Diaries, which are also referred to by Macaulay, do not exactly confirm his statements: the former describes the city with streets 'narrow, uneven, and unpleasant.'

Pepys paid a visit to Bath in 1668; so that the first time he saw the city he had attained his thirty-sixth year — an additional proof how little locomotion prevailed in his days. He tells us that he 'resolved to see the Bath and, it may be, Bristol.' He commended the country as, indeed, it deserves. He pronounces 'the town clean, and the streets narrow.' The bathing 'by wholesale, so many bodies together in the same water, struck him as not clean.' The walls of the city he describes as 'good, and the battlements all whole.' Of these but one insulated fragment remains, viz. in the street still called the Borough-walls, near the General Hospital; and, as it has been mentioned in print, I may add, that had I not interposed at a critical moment, this interesting relic would have disappeared. A brighter day approached; but the new buildings, before 1720, were chiefly devoted to public purposes. Between 1727 and 1748 many handsome houses were erected on land belonging to Mr. Gay, the Duke of Chandos, and others.

The talents of Wood have not been fairly appreciated: Warburton strongly censured him, as, unhappily, he did men in general. Many of Wood's works will not stand close criticism, but on the other hand, there are several which prefer strong claims to praise: the north side of Queen-square and Prior-park are the productions of no ordinary architect. I would also call your attention to some specimens of domestic architecture, which existed in the days of Allen and Nash, from drawings by Mr. Lansdown, now laid upon the table: others might be placed before you of the same period, where something of a palatial character was given to the residences of such men as Viscount Weymouth and Mr. Allen. When London was little frequented by country families, these winter residences in provincial cities furnished to their inhabitants many of the gaieties which are sought by the present generation in the metropolis. This change is,

of course, the main reason why many of our provincial towns have fallen into decay."

The Rev. Mr. Scarth followed with a paper on the Roman antiquities of Bath, of which he gave a very full account. Mr. C. E. Davis, architect, read a descriptive paper on the churches of Bath, and then, under the same gentleman's guidance, the members visited the cathedral and other structures in the city. There was a public dinner, with some interesting speeches; and in the evening Mr. Pettigrew read a paper

"*On the Prevalence of Yew-trees in the Churchyards in Somersetshire, and on other Funeral Emblems derived from the Vegetable Kingdom of Nature.*"

"Prior to the invention of gunpowder, the demand for bows must necessarily have been very great, as warlike proceedings were chiefly carried on by archers. This may perhaps account for the great plantation of yews, and the churchyard would not only offer a place of security for their growth, but also probably give a suitable soil, these trees requiring a damp ground, or one of clay and loam. At what time yew-trees were first planted in churchyards does not appear to be known, either to botanists or to antiquarians. There is a statute 35 Edward I. (1307),—*Ne rector arbores prosternet in cemeterio*,—which Dallaway thinks may probably refer to them, and to their being planted for the supply of bows to the parishioners. An Act of the time of Edward IV. ordains that every Englishman in Ireland, and every Irishman in England be furnished with a bow of his own height, and made of yew, witch-hazel, or ash. Witch-hazel was used by persons under seventeen years of age, to prevent the great consumption of yew.

The wood of the yew was well adapted to form bows, being very firm and compact in its growth, presenting very small annual rings; so much so that no less than 280 have been counted in a piece of wood only 20 inches in diameter. The tree is of very slow growth, and attains a great age. Sir John Sinclair mentions one in the churchyard of Fontingall, in Perthshire, measuring 52 feet round, which is, I believe, the largest known: at Kerne churchyard, Devon, there is a yew-tree measuring 27 feet in girth; and at Mamhead, in the same county, one of 29½ feet: at Staverton churchyard there is one, according to Mr. Polwhele, of many hundred years' standing, it being supposed coeval with the church. The trunk of this tree is now so excavated by age that several people may walk into it together, and there stand erect. At Hardham churchyard, Sussex, are the remains of an English yew of gigantic dimensions: its trunk is capable of holding twenty-seven people, its girth 23 feet, and, supposing it were solid, it would contain not less than 500 cubic feet of wood. Thirty-three years since the top of this tree was blown down. It is of a great age. The period of endurance of yew-trees has not been ascertained; but it is very confidently stated that there is evidence of their having existed for more than 1,000 years. They never grow to any great height, 58 feet being, I think, the tallest known: this is to be seen in the churchyard at Harlington, near Hounslow. Fountains Abbey, in Yorkshire, is remarkable for its yew-trees, which are said to have attained their growth at the time of the erection of the abbey, as far back as A.D. 1132. It is singular that there should exist no very theological legend connected with the yew. Mary Queen of Scots had a yew-tree on her coinage to perpetuate the Cruxton Yew, beneath which she gave her consent to marry Darnley. The tree is indigenous to this country, and when its longevity, its durability, and the perpetual verdure it presents, are taken into consideration, it is not surprising that it should have been recognised as an emblem of the immortality of the soul, and employed about our churchyards to deck the graves of the deceased."

Flowers say Mr. Leigh Hunt, "besides being beautiful themselves, are suggestive of every other kind of beauty—of gentleness, of youthfulness, of hope. They are evidences of Nature's good nature; proofs manifest that she means us well, and more than well; that she loves to give us the beautiful in addition to the useful. They naturalize bad with good; beautify good itself; make life livelier; human bloom more blooming; and anticipate the spring of heaven over the winter of the grave. Their very frailty and the shortness of their lives please us, because of this their indestructible association with beauty; for while they make us regret our own transitory existence, they soothe us with a consciousness, however dim, of our power to perceive beauty; therefore of our link with something divine and deathless, and of our right to hope that immortal thoughts will have immortal realization. And it is for all these reasons that flowers on graves are beautiful, and that we hope to see them prosper accordingly."

On Saturday the excursion included Widcombe Old Church, Prior-park, Combe-down, Hampton-down, Bathampton Church, Batheaston Church, Little Sodbury, Swainswick Church, Langridge Church, Lansdown; Waller's Entrenchments, Roman and British encampments, rendezvous at the grand stand on the race-course, Chapel of St. Lawrence, and Charlcombe Church. It will be admitted by all who are conversant with the above route, that it can scarcely be surpassed in scenic beauty or interesting associations in any part of England; for whether the visitor revels amidst the delightful scenery of Prior-park, so intimately associated with Ralph Allen, Bishop Warburton, and Pope, or explores the well-defined remains of the Roman and Belgic encampments on Hampton-down, Solsbury-hill, and Lansdown, or contemplates the venerable memorials of the dead in the sacred edifices of Swainswick, Bathampton, and Langridge, he will find abundant sources of mental gratification and interest.

Papers descriptive of the various churches visited, were read by Mr. Jeffrey, and on the earth-works by Mr. Scarth, and are reported, we may say, in the *Bath Chronicle*. Of

Wellow Tumulus,

Mr. Scarth said, that, together with the camps and places of worship, or judicial meeting, of the Belgæ, or other ancient British races, must also be noticed their burial-places, of which the most perfect in this kingdom, and he believed nearly the last, still exists at Wellow, four miles from Bath, and within the boundary of Wansdyke. This is a chambered tumulus, which has been carefully described by Sir R. C. Hoare, in the 19th vol. of the "Archæologia," where an accurate drawing of it, and measurements made by the late Mr. Skinner, of Camerton, are given. A similar chambered tumulus exists at Uleybury, in Gloucestershire, and has been described by Dr. Thurnam, in the Journal of the Archæological Institute, which contains also a drawing of it. Another formerly existed in the parish of Butcombe, which is described in one of the old numbers of the "Gentleman's Magazine," and a drawing given of it there. This, he regretted to say, is now totally destroyed. Mr. Phelps, however, has recorded it in his History of Somerset. The tumulus at Wellow would by this time have probably shared the same fate, had it not been discovered to have become ruined by the frost of the winter before last, by two of the members of the Bath Naturalists' Club, who had walked over to examine it. This being represented to the Somersetshire Society by one of the members, he was empowered to have it put into its original state, so that no further damage might ensue, which has accordingly, by the permission of the owner of the property, and the occupier of the farm, been done effectually, and it is hoped that this ancient record of the primitive places of sepulture of our British forefathers, may be preserved still for many years. He need hardly remind this learned body that the most striking monument of this kind which still exists is to be found at New Grange, in Ireland, and has been described in the "Archæologia," by Gov. Pownall, who has written so much and so well on the Roman antiquities of Bath.

The writer in the *Gentleman's Magazine*, who describes the chambered tumulus, near Butcombe Church, supposes it to have been the burying place of the Druids, the priests of Stanton Drew, from whence it is distant four miles, lying in a still and secluded hollow. It was more probably the mausoleum of some chieftain's family of the same period when the temple of Stanton Drew was invested with all the sanctity of early superstition.

In Langridge Church, which is only 50 feet long by 18 feet wide, a fine Anglo-Norman entrance challenged admiration. Among the monuments are the effigy of a lady, in the dress of the reign of Henry III. and a Virgin and Child of still more remote antiquity. The members all agreed in the value and interest of the latter relic, and will probably take steps, either by a plaster cast or by an illustration in their published proceedings, to obtain the opinion of antiquaries upon the probable date of a work of art which may prove to be one of the earliest essays of English sculpture.

At the concluding meeting a paper was read by Mr. W. Tite, M.P. "On the Condition of the Working Classes, and of their Dwellings during the Middle Ages," and then some complimentary resolutions closed a very successful congress.

Mr. Pettigrew, in acknowledging a vote of thanks for his aid, reviewed the labours of the association during the week, pointing out the services it had been enabled to render to science, and acknowledging the assistance which it had received from the local authorities. Mr. Pettigrew also expressed the obligations which archæology owed to Mr. John Britton, and the gratification it gave him to see the veteran antiquary present upon the occasion. This allusion was loudly cheered by the company.

We may add that in the examination of churches the members were assisted by Mr. Burnell, architect, in addition to the gentlemen already named.

MUNICH.

The Old Mural Paintings.—The old paintings found at the house of M. Lebeling, in the Promenade Strasse, some time ago, have now been completely restored and elucidated. They have been purchased for the Bavarian National Museum, by King Max, who took such interest in them, that the process of restoration by the artist, M. F. Reichard, was reported by telegraph to Berchtesgaden, probably the only time that *art* has been thus honoured and noticed by any kingly personage. The first difficulty was to remove them from the wall, and place them on wood, which process was also witnessed by the art-loving king. As far as technicism is concerned, the mural paintings are no frescoes, as first thought, but oil paintings. The colours being strongly pictured on a well-polished ground of plaster of Paris, could be detached in large flakes, but they had originally covered the whole surface, and being made in a bold and free hand, bespeak a very skilful artist. Where, however, the colours have not scaled off, which is not often the case, they have remained in their original freshness, and only the violet and the carnation tones have somewhat suffered. The place where these paintings were found, formed an oblong square, 28 feet long, and of proportionate breadth, and probably all the four walls had had similar ornamentation.

On the north side appear in a frieze, 4 feet high, nine representations of the life of Christ, viz. the Miracle of the Loaves and Fishes, the Samaritan at the Fount, &c. On the walls below the frieze, other subjects are represented, amongst them a picture of the Trinity, 7 feet high and 6 feet broad. The painting completely exhibits the character of the Bavarian school at the end of the fifteenth century, as on the very interesting picture which Hans Olmdorf painted in 1491, for the altar of Blumsberg, similar ideas and figures are to be met with. Six painted medallions, lackered with gold and silver, on red, which appeared on the upper northern wall, under the frieze, show clearly the place where the chandeliers have been placed, which proves that the locality was used once as a chapel. The great number, variety, and execution of these mural paintings, constitute them some of the most interesting of the present time. Hence, therefore, they were first considered older than they really may be. According to the details of the costume, which in some cases is gorgeous, they were painted about 1480 or 1500. The last question to be determined was,

who can have been the private individual who, at such a remote period, and when Munich was a small town, could have had this private chapel thus richly ornamented. There exists a *Sual und Grundbuch* of that city of 1630, and a still older relievo model of Munich, made by Jacob Sandtner, about 1571. In the latter appears a stately, old-fashioned house, at the corner of the then Pranner-strasse. It has been, therefore, thought that these fine chapel-buildings have been made for a rich brewer, Nicod. Hering, whose house appears in 1465, as one of the rateable property.

The Schelling Monument.—This memorial, erected by King Maximilian to his teacher, is one of the finest of modern times. It presents a monumental *façade* of three compartments; the architectural proportions, the splendid arrangement, and the artful ornamentation of which speak highly for its talented projector. The upper portion of the monument consists of a pediment, which is open below, and surmounted by rich acroteria, above which a cross is placed. A square, widely scooped out, and opening, conceals the colossal *bust* of Schelling, on an ornamented pediment, made by Halbig. The second compartment of the monument has the same main breadth, but the cornice projects on both sides about 1½ foot, and is supported by two caryatides, above the heads of which capitals with rich acroteria are placed. Another square recess shows an *alto-relievo*, where the philosopher is represented as teaching a host of young men, in a hall supported by pillars. These two compartments of the monument are of the marble of Schlanders. The third (lowest) compartment of the monument, built in a pyramidal form, consists of a socle, divided into two parts, and is of Salzburg and Swiss marble, of a red tint, contrasting with the colours of the upper part. The height of the monument is about 18 feet, and the arch 10 feet broad. The caryatides hold stiles and tablets in their hands. The sculptures of the Schelling monument were executed by M. Kuntner. The plan has been made by the Oberbaurath and Professor of the Academy of Munich, M. Ziebland.

THE DISPOSAL OF THE DEAD.

We still hear of interments in positions where they should not be permitted, and find individuals even now obstinately denying the evil of piling up dead bodies in the midst of the living. During the inquiries into the Rugeley poisoning cases, two bodies, which had been for a space of time interred, were dug up, by legal authority, from what was supposed to be their last resting-place. One had been put into a wooden coffin, the other into the more aristocratic casing of lead. According to the newspapers, the two coffins were removed from the graves to an inn. The corpse in the wooden coffin was dry—the gases had evaporated; but in the other instance (the lead coffin), on boring a hole, and afterwards making a larger opening, the poison that escaped was such that several of the jury fainted, and all were affected. Does not this make the evil clear?

Many of the London grave-yards have been closed, and the rest must follow: it will never do to continue burying 130 bodies on a single Sunday in one grave-yard, as we are told is the case at present at Bethnal-green.

Instead of the thickly-packed metropolitan grounds, burying places have been provided in various parts of the suburbs. This has led to considerable changes in the cost and manner of funerals, which press rather hardly on the poor, particularly when old-fashioned plans are persisted in.

The strong arm of the law has obliged the parish authorities to remove the graveyards to a distance: this causes an expense of from 15s. to 1*l.* for conveyance alone from St. Pancras to Finchley, and so in proportion. This sum in addition to the cost of the ground and other fees, is a serious one to many; and the bodies of the dead are, in consequence of the difficulty of raising it, often kept at home until they have become dangerous.

When an individual in the midst of two or three millions of people dies, the body ought to be removed without loss of time; but then, survivors say, how can we part suddenly with what remains of those we have so much loved. The parishes, in several instances, have provided places for the reception of bodies until the friends of the deceased can arrange for the funeral. The value of this accommodation is very great, particularly when the receiving-houses for the dead are well placed, and yet it is not much used by the great numbers of the London poor who so much require it. In some instances, too, the London undertakers have made provision on their own premises for the reception of the dead until the time fixed for the funeral. This is not always good, for many of these places are in close neighbourhoods, where numbers of persons are living all around—indeed, in some cases, in the same house. Prejudices have to be overcome, and all may aid in doing this. There are often difficulties in the way of an early burial, and in such cases the body should be removed to a proper reception-house, where it could remain till the arrangements were complete.

Accounts and engravings of funeral pageants—in the olden time—show that the pomp and display and cost were extraordinary. The expenses on these occasions often crippled even noble families for years. With each succeeding generation, as information has spread, the heralds' emblazonry, the banners, the feasting and inebriety of such ceremonials have been gradually dispensed with. The other day the venerable poet Rogers was, at his own request, quietly buried in the pleasant churchyard at Hornsey. He might have been carried with all the pomp and feathers to Westminster Abbey: the poet's choice showed the poet's sense. Sir Robert Peel wished to be and was unostentatiously buried. Other eminent men have set the same good pattern. All this, together with the absolute need, will work its effect. It requires many efforts, however, to conquer old prejudices, and to overcome ignorance.

We grieved to see that in the case of the premier's brother, Sir William Temple, evil was persisted in, with a full acknowledgment that it was evil. The body was interred in Romsey Abbey Church, under the west window. It is stated that "Every precaution which modern sanitary science has made known was followed. The coffin, surrounded by powdered charcoal, was to be bricked in, and a small tubular shaft projected from the vault, through the wall, to the outside." Lord Palmerston ought to have carried his own views and enactments into practice.

The graveyard question, not yet quite settled, must not be overlooked, if we would have the Registrar-General continue to show clean bills of health.

"STEEL AND MALLEABLE IRON MADE WITHOUT FUEL."

Although, as we have already noted, the great discovery of Mr. Bessemer (taking for granted in the meantime that it will really prove itself ultimately not unworthy to be so called), is not, strictly speaking, a formation of steel and malleable iron without fuel,—we still retain the title by which the process has become known. Since our last article appeared, an immense amount of correspondence has been printed and published on the subject, *pro* and *con.*,—much of it evidently by interested parties, especially those who feel alarm rather than pleasure at the idea of the introduction of such a process as that contemplated.

The main *facts* to be recorded since our last are, the repetition of an experiment by Mr. Bessemer, to show to experienced persons the nature and results of his process, and trials by others, showing the alleged result of testing (so far) the iron yielded in Mr. Bessemer's experiments.

A correspondent of the *Staffordshire Advertiser*, last week, in announcing the result of the second trial referred to, says,—

"The opinion that Mr. Bessemer's invention will prove the precursor of a complete revolution in the iron trade continues to gain ground. A second trial was made on Monday last, and amongst those present were General Lord Rokeby, Mr. J. H. Blackwell, Mr. Richard Smith, Mr. James Nasmyth, Mr. Thomas Barker, Mr. E. B. Dimmack, Mr. H. Firmstone, Messrs. Walker, of Gospel Oak; Messrs. Davis and Bloomer, Mr. Henry Martin, Mr. Thomas Rose, Mr. E. J. Wright, Mr. Haden, Mr. Smith, of Windmill End; Mr. James A. Shipton, Mr. Jobson, and many others. Seven hundred weight of gray Blaenavon pig—which is *a very first-class quality of pig iron*—was melted in a cupola, whence it was run into a converting furnace, and after undergoing Mr. Bessemer's process for twenty-six minutes, was tapped out. Numerous small specimens have been brought into the district, and have been rolled and beaten out into thin sheets and small bars. The iron produced is malleable and fibrous, and no doubt of the excellence of the invention remained on the minds of those who witnessed it. Many are *desirous of seeing it tried on ordinary kinds of pig iron*, in order to see if it would be equally efficacious with them. Although in several cases small portions of the iron so produced have been rolled out—in one case spread over the surface of a hoop in a very thin layer—and the general appearance indicates its toughness and excellent quality, so far as we have heard no careful test of its power of resistance has been made, although a gentleman is about to make one with a small bar. Several applications from some of the first iron-masters are said to have been made to Mr. Bessemer for licenses to use his invention, but it is further stated that the inventor demands 10s. per ton on all iron produced by the process as his charge for permission to employ it. If the process were applied to all the iron made in the kingdom at this rate, Mr. Bessemer would receive a million and a half sterling per annum. It is generally thought that if the invention has such a price put upon it the temptation would be so great as to lead to numerous attempts to evade the patent, which would lead to lawsuits, and perhaps to its loss; and that Mr. Bessemer would consult his own interest by fixing a much lower rate of interest for the use of his invention. It is said that a license for the use of the new process has been taken by the proprietors of the Dowlais Works, in South Wales, formerly belonging to the late Sir John Guest, but the terms have not transpired."

This alleged license involves another of the reported facts to which we alluded. The *Merthyr Guardian* states that Mr. Bessemer's process was tried at the Dowlais Works in course of week before last, and that although—

"The blast-pipes by some means became clogged, so that the full amount of cold air could not be brought in contact with the liquid metal, nevertheless, the experiment was considered eminently successful. Iron of a tolerable quality was produced, capable of being worked by smiths into the various articles that may be required."

In reference to the material produced at the first trial, a correspondent of the *Wolverhampton Chronicle*, who describes himself as one of the witnesses of that trial, says,—

"Undoubtedly, malleable iron was produced, just as described by Mr. Bessemer himself; and a piece of the spongy scrap spilt upon the ground, or knocked off the corner of the ingot then made, was this morning, by the help of a blacksmith's fire in this town, shaped into a very satisfactory little piece of wrought-iron bar, exhibiting fibre in its fracture, and otherwise indicating good quality. None doubted that completely malleable iron had been produced; and the general impression seemed to be favourable as regarded the ultimate success of the invention; but it was an equally general impression that practical difficulties would prevent the present puddling process being immediately superseded. *The experiment would have been much more satisfactory had an average good quality of pig iron been employed instead of the 'Blaenavon,' which is a first-rate iron.*"

While the iron was thus being tested and declared to be malleable iron, many writers were proving that it would not and could not be malleable iron. It certainly casts a doubt upon the importance of the alleged results, however, that common pig iron was not used *in either trial.*

The Wolverhampton correspondent of the *Mining Journal* says, in reference to the iron of the first trial, "I have seen some specimens of the iron then made, which has been rolled and hammered, and which exhibits great toughness, and is acknowledged by all who have seen it to be of excellent quality." And another correspondent of the same paper states that at a blast furnace of his in South Wales, by a singular accident, which occurred while Mr. Bessemer was in the act of reading his paper to the British Association, "the very malleable iron which he was then describing" was produced by means of a blast of hot air playing on some of the

crude metal which had got separated by the giving way of a part of the lining of the furnace, and which the workmen had to cut out afterwards with the cold chisel, occasionally bestowing anything but blessings on the "infernally tough stuff," which, however, was thrown away, but afterwards sought out and tested when Mr. Bessemer's paper was published, and found to be "to all intents and purposes a malleable iron."

The specification of patent under which the American, Mr. Martien, claims priority of discovery, or at least of patent right, to Mr. Bessemer, plainly shows that he never contemplated the production of steel or malleable iron on the great scale, if at all, nor the melting of steel and malleable iron by intense heat, produced in a manner without fuel, as Mr. Bessemer did; the air, in his process, being applied to the cast-iron in the mere "channel or gutter" through which it was to "flow from" the blast furnace, or the refinery furnace, into the mould. An attempt is now being made to convert this "channel or gutter" into "a vessel," or gigantic cupel, such as Mr. Bessemer's; but there is little chance, we should think, of such an attempt being successful. The mere refining of iron by means of air, in whatever way accomplished (and many ways have been resorted to), is not the only, or the chief, point at issue.

In conclusion, and on the whole question, we can only, in the meantime, repeat what we have already said,—that, *if there be no exaggeration here*, the productibility of cast steel and malleable iron will now, and only now, become commensurate with the great scale on which pig-iron has heretofore been produced, and the cost of both cast-steel and soft-iron accordingly, as well as from saving of fuel and time, be immensely reduced.

CHURCH-BUILDING NEWS.

Lincoln.—The church of St. Michael on the Mount is to be opened for Divine service on the 16th inst. The building consists of nave, transept, north aisle, and chancel, and is capable of accommodating 350 persons, in addition to the boys of Christ's Hospital. The church is in the Early Decorated style, with a five-light window at the west end, and a four-light window in the transept, and two-light north and south windows. Three two-light windows in the chancel (which has an apsidal termination) have been filled in with stained glass, to the memory of R. Smith, M.D. the founder of Christ's Hospital, and to that of the late Bishop of Lincoln. The porch has been left in an unfinished state, until funds can be obtained to build a tower over it. It was the original design of the architect to build a bell turret over the chancel arch, for which the east wall of the aisle and transept form the buttresses; and the transept also materially tends to support the south side of the church, which is built on the side of a hill, and the foundations have been taken down to a great depth. The roof timbers of the building are stained. The seats are made of yellow pine, stained and varnished. The paving is of Yorkshire stone, with Minton's red and black tiles in various patterns. The carvings have been executed by Mr. Mowbray; and the gas fittings have been furnished by Messrs. Skidmore, of Coventry. Mr. Teulon is the architect, Mr. Ward the builder, and Mr. Geo. Bacon the foreman.

Worcester.—St. Martin's church, which has been closed during the last four months, for the purpose of making some extensive alterations and improvements therein, was re-opened for divine service on Tuesday in last week. Among the alterations is the new window at the east end, for the better display of which the arch over the communion has been raised. It is after the Byzantine style, designed by Mr. W. H. Hopkins, who has superintended all the alterations, and the stonework has been executed by Mr. Norman. The glass is not completed, and the effect cannot be even guessed at from the small quantity at present fixed. There were formerly two aisles up the sides of the church, but the whole of the pews have been re-arranged, and now give eighty additional sittings, or about 560 in all; a portion of them free. The flooring, which was in a very bad state, owing to the frequent opening of the vaults which run under the whole of the edifice, and at times emitted offensive and unwholesome smells, has been entirely renewed: the vaults have all been arched and covered with concrete, while ventilators are introduced all round the building so as to keep up a current of air under the flooring. The brick and woodwork have been executed by Messrs. Priddey and Son, Lowesmoor, and the ceiling and walls have been coloured by Messrs. Collins and Langford. The entire renovation has been undertaken by the rector, the Rev. T. L. Wheeler, on his own responsibility, but he has received considerable assistance.

Stroud.—The portion of the new cemetery on Stroud-hill, intended for the burial of members of the Established Church, was consecrated by the bishop of the diocese on Monday before last. The new cemetery is a sloping piece of ground, five or six acres in extent, situate about a quarter of a mile out of the town, on the road to Bisley. It has been laid out with shrubs and walks by Mr. W. Foster, nurseryman.

Middlewich.—A mortuary window has been erected in the chancel of the parish church of Middlewich, to the memory of Miss Elizabeth Nugent, by her sister, Miss Lucy Nugent. The restoration of the window was carried out by Mr. Joseph Clarke, architect; and the glass was furnished by Mr. D. Evans, of Shrewsbury. The central compartment of the main window is taken from the Vision contained in Rev. xii. 4-6, as a symbolical representation of the struggle between Christianity and the Pagan Idolatry of the Old Roman Empire. Michael the Archangel, being "one like unto God," and being spoken of in connection with the angels as "Michael and his Angels," is regarded as identical with the Son of God himself in the principal subject, and the rest of the window is filled up with angels. The figure on the north side of the main window represents the angel which appeared to the women at the Sepulchre of Jesus. The south side represents the two angels which appeared to the Apostles after the Ascension of Jesus. On a line dividing the subject from the memorial is inscribed the "ter Sanctus."

Cardiff.—The whole of the niches in the chancel of Saint Mary's church, Cardiff, are to be filled up with painted glass. Mr. George Crittenden, architect, has been engaged in making preparations for the improvements.

Liverpool.—Some time ago it was arranged to erect, at Everton, a Roman Catholic cathedral. Mr. E. Welby Pugin furnished the design, which is that of a full cathedral edifice, to be dedicated in honour of St. Edward, and also to serve as a parish church. It is to be in the form of a cross, with a large central tower. The choir will be fully 100 feet long, with side aisles, and an interior elevation of nearly 100 feet. This space will be chiefly lighted by clerestory windows, enriched with tracery. The choir will be divided off from the northern portion of the edifice by a transept, 28 feet wide between the pillars, at the eastern end of which is to be placed the great window; the shorter limb of the cross projecting beyond the transept of the north. A portion of this structure was a considerable time since commenced, and is now rapidly drawing towards completion. This portion, as described by the local *Journal*, consists of that part of the edifice which is cut off from the choir by the rood screen, and which, in the completed cathedral, will be used as the private chapel of the dean and canons; and, in this instance, is to the south of the screen. It is 40 feet long, and has side aisles. This, in the present instance, will be used as the chapel of the college, with which it is to be connected by a range of cloisters. In addition to the private chapel, there is also included a transverse space, 20 feet wide by about 80 feet long, intended for the accommodation of general worshippers. The whole of this is in an advanced state, and the contractors, Messrs. William Baynes and Son, of Liverpool, will have it ready for consecration within a month from this time. The portion of the edifice now in progress, which may be taken as indicative of the general style of its architecture, is of the Pointed style. It is of rustic mason work, the walling being of Upholland stone; and the facings and dressing labels, as well as the window mullions, being from Stourton quarry.

Blackpool.—The new Roman Catholic Church here, which was commenced in May last, is now up to the eaves course, and will probably be covered in by the end of next month. It consists of a chancel, 24 feet long and 17 wide; nave and aisles capable of containing accommodation for 600 people; two transepts, with chapels, two sacristies, and a south porch, with a tower at the west end. The entire building measures 126 feet long by 60 broad. The stone used in the dressings is from the Minerva Quarries, near Wrexham: the rubble is from Yorkshire. This work is being erected at the sole expense of Miss Tempest, of Broughton Hall. Mr. E. Welby Pugin is the architect. The contract amounts to something over 5,000*l.* and is taken by Mr. Yates, of Liverpool.

Bolton.—A new Unitarian chapel, costing 3,900*l.* has been opened at Bolton. It is in the Gothic style, of the Early English period.

Glasgow.—In laying the foundation-stone of the new Free Church College and Church lately, in this city, Dr. Clark, hitherto of no mark or prominence in the denomination, gave the princely donation of 20,000*l.*

Brechin.—The new Free East Church, in Panmure-street of this town, has been formally opened. The roof is unceiled, and the couples and purlins are stained of dark oak. The large north window is fitted with stained glass. The gaslights are fixed in two groups of jets in the roof, the light being thrown down by reflectors. Except the roof, no part of the edifice is yet painted.

PROVINCIAL NEWS.

Ditton.—The roof and side of a house at Little Ditton, belonging to a bricklayer, had been in a tottering condition for some years, and fell in on Sunday in last week, but fortunately none of the inmates were hurt. Three cottages adjoining are all in much the same state, though still containing inhabitants.

Teignmouth (Devon).—The following is the list of tenders for building infant-schools, and alterations to old school buildings, at Teignmouth; Mr. Thomas Bradbear, surveyor. For the new buildings:—

Fletcher	£228	19	0
Soper	225	0	0
Willcocks	213	0	0
Prideaux	209	10	0

Including the alterations to present old buildings, the tenders were:—

Soper	£323	0	0
Fletcher	315	0	0
Willcocks	304	0	0
Prideaux	272	0	0

Liverpool.—The sculptural group on the tympanum of the portico at St. George's Hall having been much begrimed with soot and other impurities, says the *Journal*, has been thoroughly cleaned, and the figures now stand out in much stronger relief. Since they have been cleaned, the figures have received a coating of boiled oil and turpentine, with a view to their preservation. The first of the colossal lions, intended as ornamental adjuncts to the eastern balustrade, was placed on its pedestal, at the southern angle of the balustrade, on Wednesday in last week. At a meeting of the St. George's Hall Committee of the town council, last week, Mr. Bennett complained of the continued expense going on at the boundary-wall of St. George's Hall. "Absurdity after absurdity," he remarked, "is added to it, until it will be found one large mask or screen to the hall, and a very heavy expenditure indeed. I have seen this morning one of the lions upon the pedestal, and a more absurd decoration I can scarcely imagine. The lions themselves are more like the chairman of St. George's Hall Committee than like lions. There are other things to do,—such as Lime-street to lower; why cannot that be proceeded with and done, before the enormous expenditure of ornamental gates, towering up about 15 feet, and overlooking an area you might jump over; and before the enormous globes, or whatever else is intended to be put on those granite pillars, with Mercuries flying on the top, to crown the absurdity of the whole." He trusted

the committee would stop before they incurred farther expense, otherwise he would move a resolution of council as to it.

Rotherham.—At the periodical meeting of the Local Board of Health, last week, the Board proceeded to the election of a surveyor, vice Mr. Baylis, dismissed. It was stated that there were forty-one candidates, and that the committee had selected four, viz. Mr. Charles Dobb, of Rotherham, who asked 100*l.* a-year; Mr. Charles Rawson, of Rotherham, who undertook to do the work for 100*l.* but required 200*l.* for his whole time; Mr. W. H. Stead, who required 75*l.* a-year; and Mr. John Hartley, who asked 130*l.* On the first vote the larger numbers were for Mr. Hartley and Mr. Rawson, and ultimately Mr. Rawson was elected by the casting vote of the chairman, at 100*l.* a-year, on the understanding that he was required to resign on receiving three months' notice from the Board to do so; otherwise Mr. Hartley to have the situation.

Darlington.—A committee of the Darlington Board of Health has reported in favour of erecting a fountain on the site of the ancient cross in that town.

Dundee.—The town council of Dundee have resolved, by a majority of 14 to 6, that the salary of their surveyor, Mr. Fulton, shall be raised from 250*l.* to 350*l.* a-year, for five years, with special reference to the increase of his duties in carrying out the drainage of the town, on which it is expected that for that period a sum of 10,000*l.* will have to be expended.

PROPOSED MONUMENT TO THE DUKE OF WELLINGTON.

Sir B. Hall, bart. M.P. as Chief Commissioner of Works, has given notice, that it is the intention of her Majesty's Government to erect a monument in St. Paul's Cathedral to the memory of the late Duke of Wellington, and has invited designs from artists of all countries. The cost, with all expenses, must not exceed 20,000*l.* The models by artists residing in the United Kingdom, must be sent in by the 1st of June, 1857; those by artists residing abroad, on or before the 25th of the same month. There will be a public exhibition of them in July, 1857. The following premiums will be given for the nine most approved designs:—

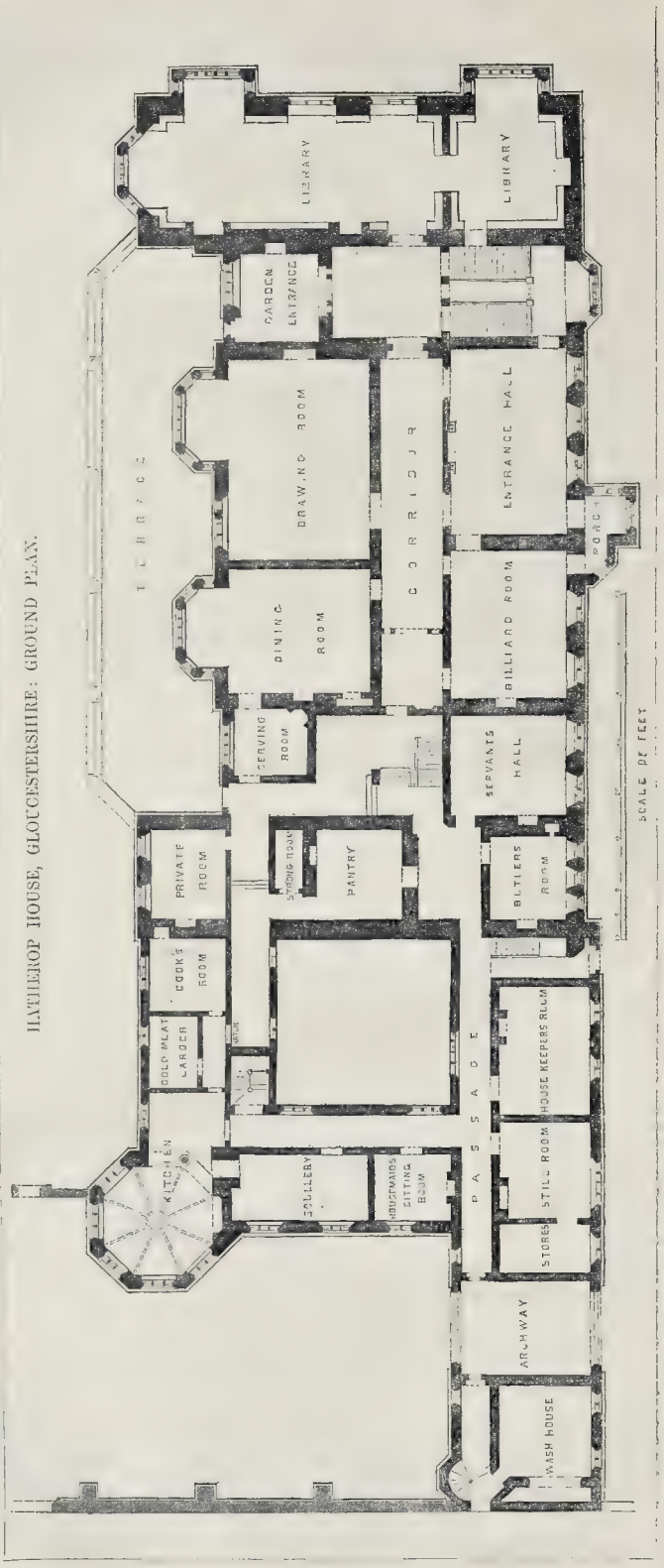
For the First	.....	£700
,, Second	.....	500
,, Third	.....	300
,, Fourth	.....	200
,, Fifth	.....	100
,, Sixth	.....	
,, Seventh	.....	
,, Eighth	.....	
,, Ninth	.....	

If, however, the artist to whom the highest premium may be awarded, shall be employed to execute his design, he will not be entitled to receive any premium. The models in respect of which premiums may be awarded, are to remain the property of Government.

Accompanying the instructions, the chief commissioner has issued a plan and sketches showing the position the monument is to occupy in the cathedral, a very necessary arrangement for distant competitors.

HATHEROP HOUSE, GLOUCESTERSHIRE.

The residence of which we give a view and plan in our present number, is situated three miles from Fairford, in Gloucestershire. The building is erected with the stone of the county, the inside of the walls being lined with brick, the outside faced with limestone, with a dressed face. This latter came principally from Bibury, as also the stone for the dressings. Internally, the fittings are very elaborate, particularly the ceilings, which are highly ornamented in plaster decorations. The woodwork is of oak. The dining-room and drawing-room (internally) are the only parts of the building not yet completed. The joiners' work was executed by Mr. Ruddle, of Peterborough. The cost of the building, exclusive of stabling, will be about 20,000*l.* The architect is Mr. Henry Clutton, of St. James's.



HATHEROP HOUSE, GLOUCESTERSHIRE: GROUND PLAN.

HATHEROP HOUSE, GLOUCESTERSHIRE.—MR. HENRY CLUTTON, ARCHITECT.

ARCHITECTURAL MEMORANDA IN ANGLESEA.

THE north-eastern corner of the island of Anglesea contains many interesting examples of architecture for the study of the tourist archæologically inclined, as well as for the architect whose leisure or business may lead him that way. Within the compass of a few miles are remains dating from the early British period to the latest time that can be denominated "ancient," to say nothing of the world-renowned works of modern times which span the Menai Straits and seem to divert notice from those of an earlier age.

Beaumaris may be considered the centre of the group of remains of which I wish to give your readers a slight sketch, and to begin with the origin of the town itself. Beaumaris seems to have been of little importance previous to the time of Edward I. There are traces of an old Roman road running past the town towards Priestholme, which, no doubt, was in connection, by a track through the island, and across the strait, with the two Roman stations at Segontium (Caernarvon), and Conovium (Conway). In the year 1096 the earls of Chester and Shrewsbury invaded the island and the opposite country, and planted the first Norman strongholds on the soil. These earls built castles or forts at Bangor, and at Lleinog, about two miles from Beaumaris, towards the east. Of the castle at Bangor faint traces exist, overgrown with a young plantation, and standing on the cliff that overhangs the entrance of the town. The existence of this castle is so little known that even the inhabitants of the town cannot tell anything of it, nor are they aware that one ever existed. The site is, however, marked in the Ordnance Map. The castle of Lleinog, though almost as little known, is still nearly perfect as regards the outer walls. It stands on a rising bank, on the east side of a small stream, about a furlong from the seashore. A large and very lofty artificial mound is encompassed by a broad ditch, and there appear to be some outer earthworks at the approach from the brook, but quite obscured by thick underwood. On the summit of the mound stands the castle, a simple square inclosure, the walls about 9 feet high, built of undressed limestone, and at each angle a circular bastion of about 9 feet circumference and 15 feet high, three of which are almost entire. The parapet has been guarded by battlements, and projects about 6 inches, at 6 feet from the ground, and the bastions are loopholed. From the castle to the shore ran a covered way, and on a small promontory at its termination is a mound, on which a round tower formerly stood, though only a few scattered stones remain. It has evidently stood to protect the landing-place in the little bay below Lleinog. The Norman invasion, under the confederate earls, was eventually repelled, but apparently by a new claimant to the soil. Harold, son of Magnus, a Northman, made a descent on this coast; and as the forces of Hugh Lupus and the Earl of Shrewsbury stood on the shore to resist his landing, he chose two skilful archers, and placing them at the prow of his vessel, ordered them to aim at the Earl of Shrewsbury, who stood in full mail on the shore. An arrow struck the earl in the eye, and he fell dead, pierced through the brain, the open vizor of his helmet having shown the only vulnerable point to the archers. The Norman forces were afterwards expelled from Anglesea.

On the invasion of Wales by Edward I. Lleinog was occupied by him; and a tradition exists, that when the castle and walls of Beaumaris were erected, stones from Penmon quarry were passed from hand to hand along a distance of five miles, by a line of men extending from Penmon limestone quarries to Beaumaris. An old record is said to exist in a farm-house near this place, being an account of the number of men employed, and the wages paid to them. Between the castle of Lleinog and the mound on the shore which is called Little Lleinog, stands a house also bearing the same name. Some years back it bore traces of work of about the date of Edward I. with later work of the sixteenth and seventeenth centuries; but this house has been modernized, and most of these traces destroyed. The last historical notice of Lleinog Castle is that it was occupied by the Royalists during the great rebellion, but it appears to have had intermediate occupants, as on each face of the walls sloping buttresses have been built; but they are simply erected against, and not worked into, the older masonry: they have the look of late Gothic, but no very clear distinguishing feature. On the north wall also there is a small projection, similar to those in most mediæval castles, down which waste and rubbish were passed into the moat. I have dwelt more fully on this interesting little ruin, because it seems to be little known or noticed; but apart from this, nothing can be more picturesque than its situation. The high mound and moat are thickly covered with trees, and underwood and briers and ivy cover the walls, and choke up the small court-yard, so that it is difficult to distinguish the castle from the surrounding trees. Looking from the bastion, below me lay the quiet fields, sloping sunnily to the south, with the sweet new hay, just mown, and the hedges fragrant with dog-roses, honeysuckle, and a thousand nameless flowers, the broad expanse of blue water running to seaward, and narrowing to the right into the Menai Strait, the rich woods of Llanfaes, Baron-hill, and Penrhyn, and opposite the huge rocky wall of "Penmaen Mawr," crowned by the lines of a large British earthwork, and backed by a dark sea of mountains, ridge upon ridge, and at the extreme left the bold promontory of Ormshead, with the gentle undulating country of the Anglesea shore behind, altogether made up a picture which one might contemplate with pleasure for a long summer day.

I must reserve my remarks on Beaumaris for another paper, as well as those on the interesting priories of Llanfaes, Penmon, and Priestholme, and on the quarries of marble at Penmon.

E. W. C.

EARTH-WORKS.

IN a communication to the Secretary of the Royal Society, published in its "Proceedings" for March and April last (obtainable from Taylor and Francis, Red Lion-court, Fleet-street), Mr. W. J. Macquorn Rankine, C.E. and F.R.S. professor of civil engineering in the University of Glasgow, states that he has a paper in preparation on the subject of Earth-Works, as re-investigated by him in reference to his collegiate lectures, which he proposes to offer to the Royal Society when ready. Meanwhile he communicates to the society (who have published them in the number of their Transactions just specified) the two fundamental principles on which his researches are based, and which are as follow:—

I. *Principle of the Stability of Earth.*—At each point in a mass of earth the directions of greatest and least compressive stress are at right angles to each other; and the condition of stability is, that at each point the ratio of the difference of those stresses to their sum shall not exceed the sine of the angle of natural slope of the earth.

II. *Principle of the Transformation of Structures.*—Let a structure of a given uniform transverse section be stable under a system of forces represented by given lines in the plane of section:—Then will any other structure whose transverse section is a *projection by parallel lines* of that of the first structure upon any other plane, be stable under the system of forces represented by the projections, upon the new plane, of the lines representing the first system of forces.

An Earth-Work Table, we may also here note, has been published by Hodges and Smith, of Dublin, Mr. Joseph Louis Gallott, the author, for the calculation of quantities for all lengths, bases, and slopes, with explanatory instructions on the sheet itself as to its use.

THE WORCESTER EXHIBITION OF MODERN PAINTINGS.—This exhibition was opened on Saturday week, at the rooms of the local Society of Arts. The attendance, it seems, was by no means large, although the number of pictures this year is greater than has ever been got together before at Worcester, and even the quality improving.

DECAY AND PRESERVATION OF STONEWORK.

IN a notice recently of what is called Daines's patent for the preservation of stone, we said that the process appeared to be similar to, if not the same as, that patented by Barratt. This has brought a number of letters, including as well Mr. Barratt as the solicitor engaged in the prosecution of Daines's patent. While the latter gentleman terms it a misstatement, but says nothing to remove the impression founded on evidence before us,—Barratt thinks it has a tendency to give a value to a process to which he gives a very harsh name, and further asserts, that whatever is good in the process was obtained from him. He goes on to say, moreover;—"Let him amalgamate the sulphur and oil by the process of heat ever so well, the instant he applies that solution, the oil alone will penetrate the stone, the sulphur remaining on the surface in the form of a powder, which may be brushed off at will. Farther, so well will the sulphur combine with the oil, that suffer the solution to remain quiescent for a few hours, and you will get back the sulphur in the form of a precipitate, in its native purity."

Into the personal dispute we are not disposed to enter, but we may say of our own knowledge that not very long ago the only patent for preserving stonework in which Mr. Daines took any interest was Barratt's.

If either patentee have a process by which, at reasonable cost, stonework *in situ* may be stayed from decay and not injured in appearance, it is one of great value, and should have its truth confirmed.

Sir Charles Barry objects very strongly to the use which has been made of a certificate given by him as to the effect of the solution on parts of the stonework at the Houses of Parliament, applied about two years ago. This period of time he cannot undertake to say is a sufficient test of its complete success. Still he shows that it has stopped decay, and that no signs whatever of decomposition appear in any portion of the surface of the stone subjected to the process. This is a good groundwork on which to base the results of further experiments.

THE SMOKE QUESTION.

THE Prize Essay by Mr. Charles Wye Williams, C.E. to which the special gold medal of the Society of Arts was awarded, has been published by Weale, of High Holborn.* In this treatise on the Smoke Question, the subjects discussed, in accordance with the scheme of the Society of Arts, comprise a review of the various plans put forth as remedies, with an account of their success or failure, and their results as respects expense or economy; the legislative measures necessary, and the causes of failure in local Acts; and the best means of preventing the nuisance of smoke itself.

The author, in his introduction, remarks that he offers no new theory,—no new view of the nature of combustion, and that he draws no inference that is not in strict accordance with the highest chemical authorities, and with the results of successful experience. He very properly endeavours to reduce the question strictly to the nature of a chemical problem to be solved, and that solution he finds simply in the sufficient access of air—cold air—to the fuel during combustion.

"We see," he remarks, finally, "that the cause of the formation of smoke is, the absence of the proper supply of air to the combustion of the gas (the only combustible that it contains), *at the time when from its high temperature of incandescence* it was best fitted to receive it. So long then as due consideration to the providing for the admission of this supply of air to the furnace, at *the proper time* and in the proper quantity, be but little attended to; and that our practical engineers regard the question as of secondary importance, or almost with neglect; we cannot expect any reformation of the system of furnace details and arrangements."

In enumerating the patents in which the principle of introducing the air direct to the gases in the furnace by jets, films, or otherwise divided streams, forms the basis of these respective so-called inventions, the author remarks that it is "sufficient to know that the principle is daily gaining ground, and will shortly supersede the necessity for legislative interference. Thus this class of patentees, imitators

* Prize Essay, "On the Prevention of the Smoke Nuisance." By C.W. Williams, Associate Inst. C.E. Weale, 59, High Holborn. 1856.

though they be, are, nevertheless, working unquestionable benefit to the public, by adopting the right mode of introducing the air, and thus effecting combustion without the production of smoke. For the present, however, and until the subject is more generally understood and the principle adopted, *not by patentees, but by the makers and designers of boilers*, the improved practice must be effected at the expense of those who are compelled to have recourse to such agency, to avoid the penalties harshly and even unjustly imposed under the provisions of the existing law."

Although the author appears to handle his subject in general both ably and correctly, his anxiety to place it entirely and strictly on scientific, or chemical grounds, to the neglect of popular meaning and ideas, may be occasionally considered to lead him *unnecessarily* into an appearance of mistake, himself, which may betray some of his readers into actual error, both as to his real objects and as to the subject on which he treats. Thus, in pointing out that "blacks," or in fact soot, is a product or result of imperfect combustion, and that the gases and vapours which arise at first in adding coal to an ordinary fire, already burning, contain no such result, but consist of *combustibles not yet burnt* even into "blacks," he speaks always of these "blacks," while yet undeposited, as *being*, exclusively, "smoke," the combustible gases and vapours contradistinguished from it not being smoke at all, and this because, "according to the views of scientific men, the term smoke is applied to the volatile *produce* of the furnace *after* the process of flame or combustion has taken place, in contradistinction to *that* which issues direct from the coal, and which is called gas, or gaseous vapours." Now, whatever scientific men may mean by "smoke," what the public desire to get rid of as a nuisance in the atmosphere is not merely the "blacks," which Mr. Williams and the scientific men call "smoke," but of those very gases and vapours also which these gentlemen tell them are *not* "smoke," but which the public insist upon calling smoke, or at least upon comprehending under the term "smoke nuisance," as part and portion of that very contamination of the atmosphere which they desire and require to get rid of, and which, in fact, Mr. Williams, in accordance with that desire, shows how best, in his opinion, to get rid of. The combustible carburetted hydrogens, sulphur, and other substances which rise from fires immediately when fresh coals are put on, are far more noxious to human beings than even the "blacks," soot, or "smoke," with which every townsman's lungs are well known to be blackened for life; and if a whole people will insist upon calling that "smoke," scientific men and Mr. Williams ought just to submit to the infliction, correct their own definitions, and make the most of them. As it is, the best mode of burning completely these noxious gases and vapours, so as at same time to prevent the *production* of blacks, is in effect what this very able and valuable treatise precisely treats of.

"GROUND TO LET."

IN an account of a bankrupt's final examination, recently published, it appears the petitioning creditor, who was the mortgagee of nearly all the bankrupt's property, had agreed to lease some land to the bankrupt, had induced him to expend 4,000*l.* of his own money on it, to get largely into debt in covering the land, and had proposed to the bankrupt to assign the whole of his property to him, and then to go through the Bankruptcy Court, promising him, after he should have obtained his certificate, to give him "1,000*l.* to begin again" with.

Without going into the truth of this matter, it would be a great benefit to the building trade if you would warn them against such machinations, as it is well known there are many who press upon poor and industrious builders, and serve them in the same way. The plan adopted by these worthies is to take a large plot of land, and then underlet it, not by advertising, but by getting an agent for building materials to "look up" customers at a premium of from 1*l.* to 3*l.* per plot. He meets with an industrious man who has been a few years in business, and has hitherto paid his way and is in tolerably good credit; and as a great secret to the victim, tells him a friend of his has some very eligible land to let, and that he (the agent) will introduce him; that he can get him a couple of houses to build at a fair price if he will take ground for six; and that his (the agent's) friend will advance from 75*l.* to 80*l.* per cent. on the buildings, which will be sufficient to finish them, as he (the agent) is in a position of getting his (the builder's) materials for him at a cheap market—will be happy to serve him in that or any other way, and will make no charge for his services; but if he (the builder) can come to terms with his friend, and can afford a few pounds out of so good a thing, he will "of course" take it. This is often paid on the signing of the agreement, the usual fee being 5*l.* from the poor builder, and 1*l.* per house from the landlord. The builder begins his operations, and if able to finish the first pair, and let them, the landlord advances on the leases, and so keeps on until all his (the builder's) money and credit are exhausted, and then advises him, through the agent or by himself, to go to the Bankruptcy Court, with a promise to make it all right when he has passed through the ordeal.

If all the builders who have passed through the court for the last ten or fifteen years dared to make it known, three-fourths of them would acknowledge the truth of these statements.

ONE OF THE VICTIMIZED.

MODE OF EFFECTING PARIS IMPROVEMENTS.

IT will be recollected that, some time since, a committee of the Society of Arts was appointed to take up this subject, with a view specially to obtaining information as to the manner in which the improvements in the streets of Paris were effected. Information relative to the mode in which the legal proceedings connected with the compulsory taking possession of private property for such purposes, has been obtained, and is published in the Journal of the Society, for September 5,—No. 198.

The law of France is based on the following general considerations.

Undertakings for the public good involve private interests in a certain amount of sacrifice, though they share in the general profit and advantage arising from them, and regulations to meet this view are accordingly adopted. Some of these regulations relate to the mode in which such parties should share in the expenses and profits: others refer to compulsory taking of land; and again, some others refer to injuries affecting the property and rights of individuals, and to the compensation they may be entitled to. In certain cases, public works may be undertaken for the benefit of private property. They may likewise be useful and beneficial to a limited number of proprietors. The duty of the public administration* is, in both cases, to superintend the execution of such works, and to procure, or, at any rate, to enforce regularity in the working by all parties interested therein. The outlay is equitably divided among those who are to profit by such works, and in proportion to the benefit accruing to them therefrom.

MEDIÆVAL MONUMENTS AND BRASSES.

AT a meeting of the Worcester Architectural Society and of the North Oxfordshire Society, held at Banbury, a few days ago, the Hon. F. Lygon, as mentioned last week, read a paper on "Mediæval Monuments, and particularly Brasses," in the course of which he said the earliest records of those departed in Christ were to be found in the Catacombs of Rome, and there, few were met with earlier than the eleventh century. In that and the two following centuries, stone coffins began to be used in memory of the noble and rich, which were fixed in the pavement of churches where the departed were resting. These slabs were sometimes incised with designs more or less elaborate, and to these incised slabs they might refer the origin of brasses. The slabs were gradually raised from the ground, at first perhaps a coped stone coffin with a cross sculptured thereon; and this variety of monument, with the addition first of panelled sides; then of niched sides with figures; next a light canopy, which, developed more and more, swelled into the full and perfect majesty of a mortuary chapel inclosing within it an altar tomb. It was to the first-mentioned variety of monument that he particularly called their attention. He claimed for our national taste the almost sole encouragement of monumental brasses,—a grateful and enduring method of preserving to posterity the features and appearance of our ancestors. Glasgow cathedral boasted of owning the only brass in Scotland: in Wales, there are few known to exist,—one from St. Thomas's chapel, St. David's, now the Chapter-house; one to Sir Hugh Johnys, at Swansea; one to Gwenllian Walsh, at Llandoughi; at Llanrwst, in Denbighshire; and some to the Gwydr family, now represented by Lord Willoughby D'Eresby; one at Dolwyddelan, in Carnarvonshire; one at Usk, in Monmouthshire; a wretched little thing at Haverfordwest; and one somewhere on the borders of Herefordshire. These are all that now exist in Wales, but at St. David's are the matrices of four others, one of which, on the altar tomb of Edmund, Earl of Richmond, must have been on a grand scale. In St. Patrick's, Dublin, there are three. There were some at Bruges, one at Amiens, a few at Aix-la-Chapelle, some in Meissen cathedral, one at Seville, one at Constance, which is believed to have been sent from this country; there are a few at Funchal, Madeira, some in Denmark, and a very fine rubbing from a magnificent brass at Lubeck exists in the collection of the Oxfordshire Society. The earliest kind of brass was known by the name of "Limoges Enamel," and which was used half a century before 1200,—the earliest date recorded of any brass properly so called. The art of enamelling metals was introduced into Europe through Byzantium and Venice, and its principal manufacture settled at Limoges, whence the above name. In this country it was first used to adorn the tomb of Walter de Merton, founder of Merton College, and Bishop of Rochester. These Limoges enamels led the way to the use of incised slabs of brass let into stone, and these, ecclesiologists have agreed to call "brasses." The earliest brass of which the design was known, was that of Philip and John, sons of Louis VIII. of France, who reigned from 1223 to 1226. The earliest brass we read of in England was that of Simon de Beauchamp, Earl of Bedford, who died 1208, and was buried in St. Paul's, Bedford. There were also records of brasses to Jocelyn, Bishop of Wells, who died 1242; Bingham, Bishop of Sarum, 1247; Richard de Berkyns, Abbot of Westminster, 1246; but the earliest brass extant in England was that of Sir John d'Abernon, 1277, in Stoke d'Abernon church, in Surrey,—the only whole-length military example, of the reign of Edward I. which was not in cross-legged attitude, and the only effigy that remains of a knight armed with the knightly lance.

* "*Administration Publique*" applies to public authorities of all kinds, whether municipal or governmental.

BATHS AND LIBRARY FOR THE CITY OF LONDON.

WE have so long heard of public baths and libraries for the City, that the idea of their ever being really erected, seems most improbable, although we are told by the newspapers, and upon every possible opportunity of lauding our generosity, that every want is cared for in this country. (?) The ninth of November will soon be here again, when a lord mayor might possibly be elected who will forsake the beaten tracks of his predecessors, and call a meeting to erect baths and wash-houses, and a library, the expenses to be defrayed partly by subscription, and a rate to be levied upon the whole of the City, the baths, &c. being erected in as central a position as can be obtained, so as to be within walking distance from any point, standing, as the city does, only on a square mile of land. The expense would then fall lightly upon all, as there are so many rich owners and occupiers, either living or trading within its boundaries, who would doubtless subscribe liberally, leaving but a comparatively small sum to be collected, which could easily be raised by a union of all the parishes within the City; 20,000*l.* or 25,000*l.* being a mere bagatelle to collect for so useful an object from the merchant princes of England. There is plenty of work for the builder to do in every part of the City, which requires a better method of improvement than the present dilatory system, the welfare of the present generation being of as much consideration as any other. There is an alderman, once in the trade, who, should he live to fill the office of mayor, will, I trust, prove a "brick" in making improvements.

A. Z.

GLASGOW CATHEDRAL.

A MEETING was held in Glasgow, on Thursday in last week, as to finishing the renovation of this structure, the only one in Scotland which escaped destruction at the Reformation. Till about fifteen years ago, it remained almost entirely neglected; but the Commissioners of Woods and Forests (to whom the cathedral belongs), urged by the citizens, and assisted by the corporation of Glasgow, have since then restored the fabric, at a cost of about 17,000*l.* of which the city have contributed nearly 3,000*l.* The restoration was coming to a close, and it was deemed incomplete unless the windows were filled with stained glass in the highest style of art. A subscription was accordingly organised on the plan that each contributor should fill in one window, and has been very successful. The four principal windows, which will cost from 800*l.* to 1,000*l.* each, are to be filled in respectively by the Government, the Trades House of Glasgow, the Duke of Hamilton, and the Messrs. Baird of Gartsherrie, the wealthy ironmasters. There are upwards of forty smaller windows, the filling in of which will cost about 120*l.* each, and these have been taken up by the Duke of Montrose, the Duke of Buccleuch, the Earl of Eglintoun, the Earl of Glasgow, Lord Douglas, Lord Belhaven, the great majority falling to the share of private citizens of Glasgow. The meeting of Thursday was the first meeting of the subscribers. The Lord Provost was in the chair. The Duke of Hamilton moved the first resolution,—"That it is desirable to complete the restoration of the cathedral of Glasgow by filling the

whole of the windows with painted glass. The Duke of Montrose moved the second—"That it is desirable that the subscribers to this interesting and important undertaking should unite in promoting the adoption of a harmonious plan of decoration, suitable to the character of the building, and worthy of the purity and dignity of its architecture." Mr. Stirling, of Keir, M.P. moved the third resolution, to appoint a committee to procure information as to the best means of carrying the foregoing resolutions into effect, and to communicate the result of their inquiries to the Government, and to the subscribers. The resolutions were all unanimously adopted. The Lord Provost afterwards complained, that in the newspapers of late, his name had been freely used in connection with this matter, totally without his sanction. He had been applied to by great numbers of glass-stainers both in this country and on the continent, and the universal answer he returned was, that nothing could be done till a committee was appointed to investigate and report on the whole subject.

THE ARCHITECTURAL ASSOCIATION.

It would be very desirable if our committee of the Architectural Association would shortly inform us through your columns of their views respecting the proposed amalgamation with the Institute of British Architects, as we should be given time to reflect over it much better than by a sudden discussion on its merits at a general meeting, when we could have had no time to study it. Considering the very great service which it will prove to all the junior members, and, indeed, to architectural art in general in the metropolis, I certainly think that sufficient time ought to be given to the members to consider the means proposed to obtain it. We shall no longer have our energies cramped by the idea that the Association has any pecuniary difficulties to trouble it, while the fine library to which the junior members will obtain access, will not only prove of incalculable benefit to them, but induce vast numbers to join our body, who, by reason of the want of this, have held aloof. As a junior member of the Architectural Association, I do earnestly trust that our committee will not, from any desire of office, throw difficulties in the way of what they must see to be so eminently for the general benefit. At the same time there can be no doubt that the junction would be very much facilitated if the Royal Institute of British Architects would give some idea of the terms they would accept, instead of leaving the Association to propose what possibly might be immediately rejected. We must not, however, shut our eyes to the fact, that if the Institute really wish to make the Association part of itself, and at the same time retain and improve its practical use, it must lay down towards it a liberal policy in dealing with it, so as to retain its vigour unimpaired. If this plan is adopted, nothing but blundering on the part of the leading body of the Architectural Association can prevent this most desirable result, and doing otherwise would, in a comparatively short time, produce the ruin of the society.—J. T. Irvine.

RECENT AMERICAN PATENTS.

We glean the following from the lists of recent United States patents in the *Journal of the Franklin Institute*, of Pennsylvania:—

For an Improvement in Cast-iron Pavements: Asa P. Robinson, City of New York.—Claim: "The cylindrical form with the tangential flat surfaces raised upon its circumference, for contact between the blocks. Also, the peculiar manner of keying the blocks together, and of keeping the blocks to the rails, to prevent vertical motion, and to admit of any one block or rail, or any number of blocks or rails, being moved without disturbing others not required to be moved, by means of the triangular formed spaces, the rebates and the keys, or by means of the projecting surfaces of the blocks, and the flanches or lugs on the rails and the key."

For an Improvement in Bridges: George W. O. Huggens, assignor to self and Charles Bender and D. F. Tiedman, St. Louis, Missouri.—Claim: "The combination of and between those mechanical agencies and technical parts which constitute the mode to prevent vibration in a bridge by using the compensated effect of compression only. Also, the combination of and between the mode in which the arches are arranged, and across each other, and the mode in which they are connected with the flow; and, finally, the mode in which they receive their leverage, the mechanical effect of which said combination is to originate the tendencies in the upper and lower arches to curve apart or asunder. Also, the combination of and between the mode in which the arches cross each other, and the mode in which they are connected with the floor; and the mode finally, in which they are constructed, in regard to amount of material, the mechanical effect of which said combination is to originate the equal intensity of the said tendencies. Also, the employment in the bridge construction of the arches, as a practical substitute for upper cords, and generally, for all such parts in bridges which serve to uphold the floor. Also, the special mode in which the arches are connected with the floor."

For an Improvement in Repairing Railroad Bars: James M'Lellan, Detroit, Michigan.—Claim: "Placing the rail or bar to be heated within a cooler, which is fitted within the furnace, and supplied with water from a reservoir at the outer side of the furnace—the cooler being so formed or arranged, as to encompass or be in contact with the parts of the rail bar not designed to be heated."

For an Improved Machine for Bending Wood: Edward J. Updegraff, York, Pennsylvania.—Claim: "The peculiar method of operating the form upon which the wood is bent, by bringing it hard down upon the platform by means of the screws, and giving it motion by means of the platform beneath it (whether endless chain or otherwise), separately and in connection with the arrangement of the wheels, the screw, the spring, the frame, and the slide."

For an Improved Mortising Machine: Edward Joslin, Keene, New Hampshire.—Claim: "Combining or arranging with the tri-armed sectional lever, and the post or frame of the tool carriage, two wooden springs and a connecting rod, so that one spring may be separated by draft, and the other by pressure, when said lever is placed downward."

For an Improvement in adjusting the Angles in Machines for Sawing Marble Obelisks: Lebbius Brookes, Great Falls, New Hampshire.—Claim: "The peculiar combination of mechanism, by which each of the saw frames is moved relatively to the other, and so as to dispose its saws either in or out of parallelism with those of the other, as circumstances may require—the same consisting of the upright rod, the bell crank rod, their slides, staple guides—the same being applied to the main frame and the saw frame. Also, combining with each of the bell-crank shafts and the rod, and each of the saw frames, and its suspension-rod, the movable frame, whereby said suspension-rods are adjusted or moved, at their lower ends and in the same directions."

For an Improvement in Machines for Sawing Marble in Obelisk Form: J. E. Haviland, Galveston, Texas. — Claim: "Adjusting the saw-frame, F, more or less angularly or obliquely with the saw-frame D, by means of the adjustable or sliding plates, which are fitted over curved surfaces on the cross pieces of the frame."

For an Improvement in Machines for Sawing Marble in Obelisk Form: James Miller, Buffalo, New York.—Claim: The combination of the crank shaft, mounted above the saw frame; the loosely-jointed pitman, and the rocking bars, vibrating on fulcra upon the adjustable frames which guide the saws."

For an Improved Planing Machine: Cyrus B. Morse, Rhinebeck, New York.—Claim: "1. The combination of the following mechanical elements: planing cylinders, line plate, beds or rests, and weighted levers, when arranged and combined for reducing a board to an equal thickness, without bending the same.—2. Making the edge of the bed a cutting instrument, and giving said bed or rest a longitudinal movement, simultaneous with the swinging back or forward of the cylinder, so that the edges of the cutters on the cylinder will preserve the same relative position, with respect to the cutting edge of the bed, in all positions which the said cylinder may occupy.—3. Giving the line-plate a tilting motion about its own axis, to present its flat surface to the board under all circumstances.—4. Maintaining the pressure on the middle of the board, irrespective of the portion of the cutters to which the board is submitted, by means of the weighted levers."

For an Improved File-Cutting Machine: James L. Norton, Alum Bank, Penna.—Claim: "1. Hanging the worm-wheel shaft in moveable bearings, so the worm may be disengaged from the feeding rack, without stopping its motion to do so, for the purpose of allowing the carriage to run back and be set for the next series of nicks. Also, in combination with the moveable shaft, the adjustable projection and levers, for first holding and then disengaging the shaft, to admit of its swinging. Also, in combination with the sliding carriages, the projection and adjustable former, for keeping the blank at a uniform distance from the nicking tool, for the purpose of equalizing the force of the blow, notwithstanding the taper of the blank. Also, the use of the spaces for regulating the force of the spring upon the nicking tool."

For an Improvement in Machines for Sawing Marble Kerfs of Varying Angles: Samuel Nickelson, Pulaski, Tennessee.—Claim: "The adjustable or sliding bars, when said bars are curved or bent, so as to form saw-frame guides, in combination with the pivoted pitmans and eccentrics on the shafts, whereby the saw frames and the devices for drawing them ar all attached to and move with the bars; thereby allowing the saws to be adjusted more or less angularly with each, and at required distances apart, with the greatest facility."

For an Improvement in Scaffolding: John M. Dearborn, Boston, Mass.—Claim: "This improvement in the construction of moveable scaffolds, which consists, first, in constructing the upright standards of two planks or boards, leaving a space between them, in which space the ledgers can be moved up and down, and secured in any desired positions. Also, constructing the upright standards with tenons on the top, which fit into the bottom space, strengthened by an iron sleeve between the planks of the upright standards of the next upper section, whereby I am enabled to extend the stageing vertically."

For an Improved Mode of Constructing Portable Houses: Daniel Fitzgerald, City of New York.—Claim: "1. The constructing houses of staves, held together by hoops.—2. Combining the staves in segments or parts of the periphery, some of which shall combine the doors and windows, to facilitate the putting up and taking down.—3. Constructing the floors in segments.—4. Sustaining the thrust of the roof by a hoop, which also confines the staves."

For an Improvement in Preparing Artificial Stone: Robert Neisch, City of New York.—Claim: "The preparation of artificial stone, by treating plaster of Paris, previously calcined, together with sulphuric acid, with solutions of alum and carbonate of ammonia."

BUILDERS' BENEVOLENT INSTITUTION.

A meeting of the Committee and Directors of this useful charity was held at the office of the institution, Southampton-street, Bloomsbury-square, for the purpose of taking into consideration the propriety of having a fresh election of pensioners, and upon other business. Mr. T. Cozens presided.

The chairman having stated the object for which they had been called together, said that their new President, Mr. Alderman Lawrance, would preside at the ninth anniversary of the foundation of this institution, which was fixed to take place at the London Tavern, on the 29th of October. He hoped that the trade in particular would well support Mr. Lawrance, and respond liberally to the appeal on the part of the charity, so as to enable the committee to have it in their power, as on the last occasion, to elect a larger number of candidates.

Mr. Thomas Scantelbury proposed, and Mr. J. Williams seconded, a resolution to the effect that an election of pensioners take place on Wednesday, the 27th of November.

Mr. G. Bird trusted that the builders generally would support their new president at the following anniversary festival, and by that means raise a sufficient fund to take in the whole of the candidates. He hoped that all who could would become stewards; for if they did that, and each one used his best exertions, he felt confident that they could raise money enough to relieve some of the poignant distress that was now existing.

Mr. G. Grayson always heard with pleasure of another election of candidates, and trusted that gentlemen would not relax in their exertions, but would endeavour to make this institution one of the first in the kingdom.

Mr. Joseph Bird said it behoved all those who were prosperous to make provision for the comfort and happiness of their less fortunate brethren. On the last occasion, the result of the dinner was so satisfactory, that they were enabled to elect six candidates instead of two, and he hoped that the same gratifying result would attend the advocacy of their new President at the forthcoming anniversary festival.

The Chairman then put the motion, which was carried *nem. con.*; and after the transaction of some other business, the meeting separated.

Notices of Books.

Monumental Memorials. Part I. By J. W. Hallam, Architect. London: Masters. 1856.

Here we have thirteen designs for headstones and four for mural monuments, drawn with a free hand and some affectation. A few of the headstones show an admixture of iron and stone, an uncertain union, unless very cleverly performed. The author, Mr. Hallam, in his brief introduction, makes a suggestion. He says,—

"In the case of a new church, where it is desired to place a memorial, the architect will be the proper person to design a monument in accordance with the style of the building, and if possible, to arrange for it to form part of the design, so as not to mar but add

to the effect. Suppose, for instance, that the walls of the church are of brick, uniform in colour, not plastered: a good effect might be obtained at a trifling cost by arranging in the bond of the brick-work for bricks of a different colour, to form an ornamental cross, inserting a block of stone at the foot, on which to carve the inscription, the letters of which should be painted and gilded. Such an arrangement must of course be considered before the wall is built, so as not to interfere with any objects which may surround it."

VARIORUM.

Murray's "Handbook for Wilts, Dorset, and Somerset," alluded to last week, is a branch of so large a family with a good reputation, that it needs no praise from us. It will be found of the greatest value by tourists, and, moreover, tells of such an interesting part of the country, that it is a readable book for those who stay at home. In a work of this sort errors will creep in; and we may note for the next edition, that the north door of Bridgwater Church is of the Geometrical period, not Norman; that Yeovil Church is Perpendicular, not Decorated; and that the paintings above the altar at St. Mary Redcliffe, Bristol, have been removed some time.——Some may thank us for saying that *The Ecclesiologist* for August contains a letter from M. Lassus, the eminent French architect, in defence of the motto adopted by him in the Lille competition,—"Eclecticism is the Affliction of Art."——Carlyle would make our architecture very lively. In Mr. Waldo Emerson's "English Traits," just now published by Routledge, a very agreeable set of sketches, showing much but not quite enough knowledge of us, the philosophic American describes a visit to Stonehenge with the writer we have named. Recording some of Carlyle's observations, Emerson says, "In these days, he thought, it would become an architect to consult only the grim necessity, and say, 'I can build you a coffin for such dead persons as you are, and for such dead purposes as you have, but you shall have no ornament!'"—on what reasonable grounds it would seem hard to say.

Miscellanea.

PURE WATER AND HEALTH.—At the late meeting of the British Association, Dr. Lankester exhibited some water taken from a well at Cirencester. The water from this well had been the cause of illness in a family which had partaken of it. Although at first clear, after standing a little time it exhibited the mycelium of a fungus. This water had been sent to him for examination, and he had been struck with the resemblance of the fungus to that of one which he had found in the well-water of Broad-street, Golden-square, the drinking of which had been undoubtedly connected with the outbreak of cholera in that district in 1854. This well had subsequently been found to have received into it the contents of house-drainage. He had now discovered that the well at Cirencester had also received into it a certain amount of house-drainings. He related other cases in which fungi appeared in contaminated water. None of the waters mentioned exhibited any injurious constituents that could be discovered by chemical analysis. Before chemistry could detect them they had lost their injurious properties, and the microscope alone could realize their presence.

GAS.—The Cardiff Gas Company have declared their usual dividend of eight per cent. The company are rapidly extending their works on all sides.——The directors of the Montrose Gas Company have resolved to reduce the price of their gas from May last to 5s. 6d. per 1,000 feet, being the lowest price at which this article is supplied within any of the neighbouring counties of Forfar, Aberdeen, or Perth, excepting the town of Dundee, where the price is somewhat lower.——A company has been recently started, under the law of limited liability, called the British Portable Gas-Apparatus Company. The capital is 40,000*l.* divided into 4,000 shares of 10*l.* each. The objects of the company, says the *Morning Herald*, are to bring into general use a new and improved portable gas-apparatus, patented by Mr. Abram Longbottom, a civil engineer, and with whom a satisfactory arrangement has been made for the transfer of the rights taken under his patent. It is stated that the apparatus for producing the gas is one of a most simple construction, and we find that a silver medal has been awarded for the invention by the American Institute. By this plan gas, it is said, can be produced in private mansions, manufactories, hospitals, and other isolated buildings, at a trifling cost.

AMALGAMATED SOCIETY OF ENGINEERS.—The members of the Manchester first branch of the above society celebrated their anniversary dinner on the 30th of August, at the house of Mr. Campbell, Land o'Cakes, Great Ancoats, when upwards of seventy sat down to dinner. The district secretary stated that the society paid last year nearly 20,000*l.* to its members for want of employment, sickness, superannuation, funerals, and accidents, thereby showing benefits which, he said, no insurance company in the known world could offer, at the same amount of subscription.

AUSTRALIAN COPPER.—The mercantile report of Messrs. Macdermott, Dutton, and Co. of Adelaide, states that at the Burra Burra mine, in the six months ending 31st March, 1856, 6,450 tons, estimated to contain an average of twenty-seven per cent. of copper, were raised. The cost of produce is estimated at about 8*l.* per ton. This mine commenced working in April, 1845, with an original capital of 12,010*l.* in 5*l.* shares. Since that period there have been raised 109,005 tons of copper ore, which produced 2,000,000*l.*; and twenty-six dividends, amounting to 418,880*l.* or 170*l.* for every original 5*l.* share has been already paid to the shareholders, and in addition to the latter, there is an undivided profit of 208,854*l.*; making the gross profit in ten and a half years 627,734*l.* A vastly increased quantity of copper might be raised, were it not for labour being withdrawn to the Victoria gold-fields. The entire staff of the Burra Company comprises only 688 persons. The copper and copper ore exported from the colony during the last season were valued at 500,000*l.*

PROJECTING CORNICES IN STREETS.—I beg to be allowed to call attention to what appears to me to be not only a piece of useless expense, but offensive to good taste—in city building. I allude to the enormous cornices which it appears to be the present fashion to adorn warehouses &c. with. In wide streets, where the parapet can be seen above the cornice, it may be all very well; but what necessity can there be so to crown a warehouse in a narrow street? If one of the elements of beauty consists in utility, then it is surely wrong, and as it must tend to darken the narrow street, and has been attended with considerable danger, in more than one instance, it cannot be right. You will, no doubt, remember the sad accident in Wood-street, Cheapside, that occurred during the erection of a warehouse, when some 20 or 30 feet of the cornice fell, smashing the scaffolding, and killing either a man or a horse. In such a thoroughfare it was fortunate more lives were not lost.—R. S. T.

THE MANCHESTER EXHIBITION BUILDING.—The length of the building is now clearly shown, the terminal walls, front and back, being some 25 feet above ground. There is an immense quantity of building material spread upon the site, at the points where it will be wanted, consisting of iron, wood, and bricks. Nearly 1,000,000 of bricks have already been placed. The timber and bricks are supplied by Messrs. Bennet, of Ardwick. As giving some idea of the quantity of wood required, the following items may be mentioned: 8,400 joists, 12 feet long; 2,000 ditto, 8 feet long; 140,800 boards, 12 feet long, 1¼ inches thick; 265,600 ditto, 12 feet long, ⅞ of an inch thick; 25,000 scantlings, 12 feet long, 4 inches by 3 inches; and 10,000 ditto, 3 inches by 3 inches. This gives a total of 451,200 pieces; yet the only woodwork visible will be the floors.

HISTORY OF THE STEAM-ENGINE.—I am led to send the following extract from the fortieth chapter of Gibbons's "Decline and Fall," &c. for insertion in the *Builder*, by reading a history which passes from the days of Hero to the twelfth century of our era, and which affirms that in the interval "history is a blank" as to any notices of the "developement of the power of steam."—E. C. S.

"In a trifling dispute relative to the walls or windows of their contiguous houses, he" (Anthemius, architect of the Emperor Justinian) "had been vanquished by the eloquence of his neighbour Zeno; but the orator was defeated in his turn by the master of mechanics, whose malicious though harmless stratagems are darkly represented by the ignorance of Agathias. In a lower room Anthemius arranged several vessels or cauldrons of water, each of them covered by the wide bottom of a leathern tube, which rose to a narrow top, and was artificially conveyed among the joists and rafters of the adjacent building. A fire was kindled beneath the cauldron: the steam of the boiling water ascended through the tubes: the house was shaken by the efforts of imprisoned air, and its trembling inhabitants might wonder that the city was unconscious of the earthquake which they had felt..... The orator declared in tragic style to the senate that a mere mortal must yield to the power of an antagonist who shook the earth with the trident of Neptune," &c.

⁂ The anecdote is well known, but may interest some of our younger readers.

INTELLIGENCE FROM JERUSALEM.—The building which the Austrian Government erects in this ancient city for the reception of 100 pilgrims and voyagers, has been of late commenced, under the superintendence of M. Endlicher, the Vienna architect. When excavating the foundation the workmen arrived at some large stone-slabs, most probably belonging to the ante-Roman (Hebrew) period. Farther on a subterraneous church (*crypt*) was discovered, which served, probably, the first Christians for a religious hiding-place. It is entirely built of stone. M. Endlicher and some other persons then entered a series of caves, through which they passed for some considerable time, but have had no leisure to examine them yet. Still, all these discoveries will successively clear up the topography of ancient Jerusalem; the more so, as the present Pacha is a man willing to give encouragement to every such enterprise. School-houses, hospitals, and even places of public resort, casinos, &c. are constantly springing up in this town. A railroad is also spoken of; at any rate, a good Macadamized road would much increase the number of European visitors.

COLCHESTER BURIAL-BOARD.—The Board, in a report from the Building Committee just now published, accuse the architect whose design was selected, of reducing the design for execution, so as to bring it within the desired cost. They say:—"The contract entered into between the Board and Messrs. Colls and Co. provided for an outlay of 1,865*l.* for chapels, lodge, receptacle-house, and entrance-gates. To this was to be added the cost of erecting the eastern boundary wall, which would raise the expense of the work to be performed by the contractor to about 2,200*l.* Soon after the commencement of the works, it was discovered that Messrs. —— and ——, the architects, had so reduced and altered the working drawings that they very inadequately represented the drawings to which the premium had been awarded. This defalcation on the part of the architects rendered it necessary to make many important additions to their mutilated plans, involving, of course, a heavy outlay in the shape of extras."

THE DUPLICATE RETORT STEAM-BOILER.—Recent explosions have led Messrs. Dunn and Co. to bring into notice their Patent Duplicate Retort Steam-boiler. The main advantages that have been sought by the patentees are to render an explosion more difficult, or if it does take place, to diminish the mischievous effects, by giving it only a partial character. These results are proposed to be attained by the substitution for the present steam-boiler, of a number of cylinders or retorts about 10 feet long, and 19 inches diameter, composed of ½-inch best wrought-iron Staffordshire plates, with strong cast-iron ends, forming the pipe junctions. These cylinders or retorts are placed in parallel lines, and the water supply-pipe is connected with one end of each by a short pipe or neck, through which the water is pumped into all the cylinders, which are generally kept about half full. The water is converted into steam in the cylinders, and the steam passes from the cylinders (on the opposite side from whence the water supply is obtained) through a tube into the steam-chest, and from thence the steam becomes a motive power, and its action is intelligently directed. The fire plays underneath and over the cylinders in a sinuous manner. One great economical advantage is claimed; that in the event of explosion only one cylinder may be affected, and not, as in ordinary cases, the entire boiler.

RAILWAY TRAFFIC.—The traffic returns of railways in the United Kingdom, for the week ending August 30, amounted to 478,999*l.*; and for the corresponding week of 1855, to 461,732*l.*; showing an increase of 17,267*l.* The gross receipt of the eight railways having their termini in the metropolis amounted, for the week ending as above, to 209,737*l.*; and for the corresponding week of last year to 202,100*l.*; showing an increase of 7,637*l.* The increase on the Eastern Counties Railway amounted to 397*l.*; on the Great Northern to 368*l.*; on the Great Western to 2,246*l.*; on the London and North-Western to 2,958*l.*; on the London and Blackwall to 94*l.*; on the London, Brighton, and South Coast, to 142*l.*; on the London and South-Western to 1,651*l.*: total, 7,856*l.* But from this must be deducted 219*l.*—the decrease on the South-Eastern—leaving the increase, as above, 7,637*l.*

FALL OF A CHIMNEY.—The colossal chimney attached to the vitriol works of Mr. Jones, at Victoria-quay, facing the Royal Barracks, Dublin, suddenly fell on Thursday week, levelling with their foundations several high walls in its vicinity, and breaking down the greater portion of a long slated shed, fortunately, however, without doing the slightest personal injury. This chimney, which had long been known as the largest as well as the loftiest in Dublin, was built twenty-four years since: its dimensions were—height, 150 feet; circumference, from 60 to 70 feet; and internal diameter, 24 feet.

THE WESTMINSTER CLOCK BELL.—At the time of our former notice of this bell it had not been weighed. The weight is now stated to be 15 tons 18 cwt. 1 qr. 22 lbs. or 16 tons within a small fraction. The thickness is found to be rather more than was stated in our former notice—viz. 9⅜ inches at the soundbow, where the hammer strikes, and 3⅜ in the upper part, being very nearly 1-12th and 1-36th respectively of the diameter at the mouth, 9 feet 5½ inches. The great bell had to be sent down from Norton to West Hartlepool by railway on Sunday, being too wide for any train meeting it to pass. The composition is 7 of tin to 22 of copper, melted twice over, as in speculum metal, to secure a perfect alloy. The metal is nearly as hard as spring steel, and much harder than is usual in modern bells, in which the proportion of tin is less than in the best old ones. When the bell arrives at Westminster, it is to be hung for trial at the foot of the clock tower, with a clapper of half-a-ton, to be pulled by five or six men. It is finally to be hung in the open part of the spire of the tower, which was made for the purpose, in order that the sound may issue without obstruction.

NORFOLK AND NORWICH ARCHÆOLOGICAL SOCIETY.—A meeting of the members of this society was held on Wednesday in last week, at Yarmouth, and excursions were made into the neighbouring parishes to inspect the churches, and to Caister Castle. The Mayor of Yarmouth (Mr. Palmer, a good antiquary), received the members at the Town Hall, and delivered an address on the robes and regalia of the corporation. The party then visited Caister Castle, and the churches at Mautby, Filby, Burgh, Rollesby, Martham, and Ormesby. At Caister Mr. Harrod read a paper descriptive of the place, with pictorial representations and plans. On the return of the party to Yarmouth, about fifty went to the Assembly-room at the Town-hall, where a cold collation was provided, the Mayor in the chair.

THE NEW PARK OPENED AT BIRMINGHAM.—The Adderley-park, just opened, is in the Adderley-road, about two miles from the centre of the town, and within an easy distance of the Saltley station, on the Midland Railway. It covers an area of ten acres, lying between St. Saviour's church and the extensive works of Brown, Marshall, and Company. The grounds are arranged, a gravel walk traversing the circuit of the park, with a row of lime-trees planted along the sides. The entrance to the park will be through a lodge, to which is attached a large building, designed by Mr. Street, of Oxford, in which apartments will be appropriated to the purposes of news and refreshment rooms, a library, and a general museum. The building had been erected by Mr. Adderley, but the expense, amounting to more than 1,000*l.* will now be defrayed out of the proceeds of the recent bazaar in the Town-hall. The building is nearly completed.

LONDON SLAVES.—Mr. Lilwall, of the Early Closing Association, has addressed a letter to us on the frightful drudgery to which assistant chemists are condemned, and makes out a strong case for reform. "Eight o'clock ought, by all means, to be the hour of closing, as the time thus rescued from the shop would be available for some really useful purpose: it would, for instance, afford opportunity to members of the business to attend scientific lectures, and to prosecute such other studies as are essential to the completion of their general, and more particularly their professional, education. If, however, eight o'clock be considered too great a leap to make at once, nine may be fixed upon by way of commencement, but, whether eight or nine be the hour, it will be a mere farce if it amounts to no more than merely putting up the shutters and leaving the door half open—the present too-general custom. Let families and individuals make it a point of conscience, in every possible case, to abstain from evening shopping. Let them, also, do their utmost to discountenance the keeping the druggists' shops unshuttered on Sundays, which is now done under the cloak of an alleged but *unreal* necessity."

ELECTRO-TELEGRAPHIC PROGRESS.—A United States vessel, the *Arctic*, lately reached Cork after fathoming the bottom of the Atlantic ocean all the way across from Newfoundland, along "the telegraphic plateau," as it has been called. The result is reported to be perfectly satisfactory. Soundings were taken to a depth of 27,000 fathoms, but for some fifty or sixty miles from St. John's, Newfoundland, and again on this side, there is a bank varying from 25 to 120 fathoms, and between these a plateau, nearly level, with soft bottom composed of microscopic shells. The soundings were taken by the aid of steam power. The captain of the *Arctic* undertakes to lay down the projected cable at the rate of ten miles an hour right across. The American company who are to provide the cable have already about 1,700 miles at work, connecting Newfoundland with the United States lines, and it is expected that in a short time the 1,640 miles of the Atlantic cable will be a realized fact.

SANITARY RETROGRESSION.—The Dudley Board of Health have dismissed their officer of health, Mr. Houghton; reduced the salary of their inspector of nuisances from 120*l.* to 60*l.*; and that of their surveyor, Mr. Bateman, from 150*l.* to 100*l.*

MASONS' STRIKE AT NEWCASTLE-UPON-TYNE.—This unfortunate dispute between masters and workmen has now continued for some time, and seems as far off adjustment as ever. The men lately employed in St. Nicholas'-square have issued an address, in which they charge Mr. Robson, the contractor, with having violated terms he had previously consented to abide by. The terms are said to have been 4s. 4d. for five days in the week, and 2s. 4d. for the Saturday, on which day they were to have a half-holiday. The progress of the work meantime has not been wholly stopped.

PRESERVATION OF WOOD.—A method of charging the sap-tubes of timber with preserving fluids has been adopted at Paris by Dr. Boucherie, and the prepared timber applied as telegraph-posts, railway-sleepers, &c. A cross cut is made on the prostrate timber to nearly 9-10ths of its diameter: a wedge is then inserted, and a cord is wound round on the cut surface, leaving a shallow chamber in the centre, which is then closed by withdrawing the wedge. A tube is then inserted through an augur-hole into this chamber, and to this tube is attached an elastic connecting-tube from a reservoir placed some 20 or 30 feet above the level in which the wood lies, and a stream of the saturating fluid with this pressure passes into the chamber, presses on the sap in the sap tubes, expels it at each end of the tree, and itself supplies its place. The fluid used is a solution of sulphate of copper in water, in the proportion of 10 per cent. and a chemical test that ascertains the presence of the copper solution is applied at each end of the tree from which the sap exudes, by which the operator ascertains when the process is perfected. Several French commissions have investigated both the process and its effects, and have, it is said, reported favourably of its results, showing that the soft Scotch fir, green from the wood, may in a few days be cheaply rendered capable of resisting damp and weather more effectually than heart of oak in its unprepared state.

SMOKED BRICKS.—It is a singular fact, that smoke stains will show through almost any thickness of plaster. I once had a stack of chimneys blown down by a hurricane, in rebuilding which a portion of the old material was used, and a few bricks, japanned with the smoke of half a century, accidentally reversed. This was rough cast and whitewashed, in country-cottage fashion (I speak particularly of Ireland), but greatly to my annoyance, and somewhat to my surprise, the discolouration worked its way through all, as also through several successive layers of rough cast, and coats of whitewash. Lime-mortar had no other effect than that of increasing the size of the chimney-stack, which in a little time had outgrown all resemblance to its fellow stack, and its former self. Having endured this smoke nuisance for a season, and employed a stonemason, who, being a sort of handy man of the neighbourhood, had engrafted on his own solid stock, the kindred crafts of bricklayer and plasterer, to pull down and rebuild, instead of this he merely cleared away the rough cast, and rubbed the discoloured bricks over two or three times, allowing them to dry each time with some fresh cow-shed dung, diluted to the consistence of strong whitewash, which had the desired effect. When dry, it is perfectly free from smell, but whether it is retentive enough to hold paper I cannot say.—A READER.

IMPROVEMENTS AT EDINBURGH.—The population of the Scottish metropolis in 1841 was 166,450: it is now 210,000. This increase of population has given an impulse to the building trade, so long stagnate after the over speculation of 1825. Within the last five years there have been built Clarendon-crescent, Eaton-terrace, and Cambridge-terrace, at the Dean-bridge, and in the same vicinity Randolph-crescent, Randolph-place, and Great Stuart-street have been completed. The large district to the south, comprising the Grange, Whitehouse Estate, Greenhill, Morningside, and Merchiston, extending over a space of one square mile, has been intersected by numerous streets, and almost covered with houses, which, in five years more, will have become a southern city of villas. Numbers of houses in the same style have been built, and are building, on the north side of the city at Trinity and Granton. At present there are thirteen churches building, or about to be built—namely, the Baptist Church, in Dublin-street; English Episcopal Chapel, St. Vincent-street; St. Andrew's Episcopal Chapel, south back of Canongate; Free Tollbooth Church, St. Andrew's-square; Free Bucclench Church, Cross-causeway; Free St. Mary's, Broughton-street; Independent Chapel, George IV.'s bridge; United Presbyterian Church, South Clerk-street; St. Peter's Episcopal Chapel, South Clerk-street; New Free Church Assembly Hall, Lawnmarket; Grayfriars Church, rebuilding; new chapel in the Castle; and Trinity College Church, Calton-hill. Many mansions and villas are now building in the Royal-terrace, Calton-hill; at Bruntsfield-terrace, Greenhill; and in Greenhill-gardens. A new street, to be called Leuchars-street, is in progress behind Clarendon-crescent. The building trades are also busy with many other improvements in buildings, streets, and roads, and various statues are about to be added to those which already adorn the city.

DISCOVERY OF ANCIENT REMAINS AT ROYSTON.—An excavation of remote origin has been recently discovered on Royston Heath, on the summit of a lofty hill near to the old British and Roman Ickneld way and to a number of British tumuli. The spot in question, before it was opened, presented the form of a hollow oval, surrounded by a very low bank, and flanked on the north-east by a truncated mound, which had the appearance of having been disturbed. A small hillock within the circular bank, but most probably accidental, gave to the place a somewhat Druidical character. The hollow oval lies in a direction north-west and south-east. Its length is about 31 feet by a breadth of about 22 feet. Within the bank are two circular excavations, meeting together in the middle, and nearly forming the figure 8. Both excavations descend by concentric and contracting rings to the walls which form the sides of the chambers; the depth from the surface of the southern excavation being nearly 7 feet, from that of the northern, about 5 feet. The southern chamber has an upright wall to the height of nearly 4 feet: the wall of the northern chamber gradually recedes almost from the floor. A division wall about 2 feet 6 inches high in the southern chamber, and about 1 foot in the northern chamber, with an opening about 3 feet wide between the shoulders, separates the two chambers. The southern may be compared to an ampulla, with the foot turned inwards; the northern to an egg, or an ace of spades. The northern chamber is about 7 feet from north to south, by about 6 feet from east to west at the broadest part. A bench runs round it on the west side, about 1 foot high above the floor, by about 1 foot broad, and a similar bench occupies a small portion of the east side also. Various ancient and mediæval relics were found; but these do not seem to shed any light on the original purpose of the excavation.

[ADVERTISEMENT.]

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MESSRS. CLARK and Co. of 15, Gate-street, Lincoln's-inn-fields, having erected at our premises two very large revolving shutters, one weighing upwards of two tons, we feel much pleasure in recommending them, having acted exceedingly well during the whole of the three years they have been in use; also for the lowness of their charges and rigid punctuality, entitling them to the support of all those with whom durability is economy and time saved money made.

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"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

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Price of length tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambro Mosaics, manufactures of a highly decorative character, and extreme durability; Slabs and Tiles for Fireplaces and Hearths, Cornice for Grates, Door Furniture, White Glazed and Ornamental Tiles for Halls, Dairies, and Kitchen Rooms, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPÔT for this WARE is REMOVED to No. 21, WHARF, Wakefield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor, and, thirdly, that the "REPORTS OF THE JURIES," page 581, of the Great Exhibition, rank the Manufactories KNOWN so long as "The Tileries." Tunstall, Staffordshire, as the first of the kind in the world.

PANTILES, PAVINGS, &c.—J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 52s. 6d. per 1,000; floor bricks and 6-inch pavings, at 37s. 6d. per 1,000; 8-inch pavings, at 57s. 6d. per 1,000; plain tiles, at 25s. per 1,000, delivered, on cash prices.—Delivered on trucks in London on Eastern Counties Railway.

ROYAL POLYTECHNIC.—Entire Series of Novelties.—Lecture, with Experiments and Dissolving Diagrams, of Bessemer's new Process of Manufacturing Iron and Steel, by J. H. Pepper, esq., every day at Three, and every evening, except Monday and Saturday, at Eight. New Entertainment by Leicester Buckingham, esq. entitled, "Life in the West; or, every-day Life in the Log Hut and the City;" illustrated by a series of highly-finished Dissolving Views, painted by G. Harvey, esq. from sketches taken on the spot.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

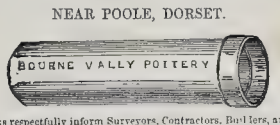
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

THE LATE FIRE AT THE BOURNE VALLEY POTTERY,

NEAR POOLE, DORSET.



The Proprietors of the above Works respectfully inform Surveyors, Contractors, Builders, and Others that the buildings rendered necessary by the late disastrous fire are now nearly complete, and they are enabled to supply SALT GLAZED STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c. in any quantities. These Pipes, &c. being made under immense pressure by new and patented machinery, and burnt, by intense heat, to as near equal degree of hardness, are very far superior to any hitherto made in Hants or Dorset, and will bear comparison with any in the kingdom; and being made of clay of the finest quality, the produce of the estate can be rendered at very moderate prices.

The goods, or any information respecting them, may be obtained on application to the Manager, Mr. J. T. BOUNSALL, Bournemouth, near Poole; or the Agent, in London, Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth.

N.B. A liberal discount to the Trade. A large Stock always on hand.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c. to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.

GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

GENUINE SEYSSEL ASPHALTE.

ORSI AND ARMANI.

THE EXCLUSIVE SUPPLY OF SEYSSEL ASPHALTE (FRANGY)

DIRECT FROM THE MINES.

REDUCTION IN THE PRICE FOR VARIOUS WORKS FIFTEEN PER CENT.

AND THE

WORK GUARANTEED FOR THREE YEARS.

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

PATENT METALLIC LAVA.

A printed List of the important Works for Flooring, Roofing, Covering of Arches, &c. &c. executed from 1846 to 1852, with this Material, may be obtained at the Office of

ORSI AND ARMANI.

THEIR PATENT METALLIC LAVA IS FIFTEEN PER CENT. CHEAPER THAN THE GENUINE SEYSSEL ASPHALTE OF MESSRS. O. AND A.

OR THIRTY PER CENT. LOWER THAN ANY OTHER MATERIAL CALLED BITUMEN OR ASPHALTE

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

CHEAP AND DURABLE ROOFING.

By Her Majesty's Royal Letters Patent.

F. McNEILL and CO. of LAMB'S-BUILDINGS, BUNHILL-ROW, LONDON,

Manufacturers and ONLY Patentees of

THE PATENT ASPHALTED FELT, FOR ROOFING HOUSES, VERANDAHS, SHEDS, &c.

Patronized by

HER MAJESTY'S WOODS AND FORESTS,
HER MAJESTY'S COMMISSION OF CUSTOMS,
HONOURABLE EAST-INDIA COMPANY,
HONOURABLE BOARD OF ORDNANCE,
HER MAJESTY'S ESTATE, ISLE OF WIGHT,
ROYAL BOTANICAL GARDENS, REGENT'S PARK,

And by the most eminent members of the Royal Agricultural Societies of England, Scotland, and Ireland; at whose great national shows it has been exhibited, and OBTAINED THE PRIZE, for being the best and cheapest article for roofing; also used for under slates at the Royal Agricultural Society's House, in Hanover-square. Its advantages are lightness, warmth, durability, and economy. It is impervious to rain, snow, and frost, and a non-conductor of heat and sound. The Felt can be cut to any length, by 32 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples, with full directions as to its uses and the manner of applying it, with TESTIMONIALS, some of them of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 25 per cent. in fuel is effected. The TRADE are respectfully enjoined to send their orders DIRECT to the FACTORY, as the surest means of being supplied with the genuine article, and in lengths best suited to their roofs. They are likewise CAUTIONED AGAINST MISREPRESENTATION of THE ONLY WORKS in Great Britain, where the above roofing is made are F. McNEILL and Co's Manufactories, LAMB'S-BUILDINGS, BUNHILL-ROW. It is covered with the Felt to be seen at the Factory, also the new Vice-Chancellor's Courts, the passages and offices leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

TO SPECULATIVE BUILDERS and OTHERS.—FOR SALE, about FIFTY-FOUR LOADS of sound ROOF TIMBER, in good condition, and of various lengths and sizes.—The timber may be viewed on application to Mr. WADE, of 38, Lower Shadwell, to whom offers for the whole or a portion may be made; and it will be taken down and loaded into the carts of the purchaser free of expence.

TO BUILDERS AND OTHERS.

AT the LOWEST PRICES.—TIMBER, DEALS, MAHOGANY, and WAINSCOT. A large assortment of seasoned prepared FLOORINGS and MATCH BOARDING of all descriptions. Also an extensive stock of Dry White Yellow, and Pine Cut Stuff, Slating, Battens, Pantile Laths, Oak Plank, Sash Cills, &c. Timber of all kinds, Planks, Deals, and Battens, fetched from the docks, sawn by patent machinery in the best manner, and delivered at the shortest notice.—THOMAS JACKSON, Sawing and Planing Mills, Commercial-road, Pimlico, London.

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process.—JOHN COUMBE solicits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he sells at prices generally charged for wet wood.—Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile-end-gate.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY has much pleasure in informing his numerous friends that he has made a further reduction in the price of Pine Planks, &c. and respectfully solicits an inspection of his large and well-selected stock of Deals &c.

Pine Planks, 12 feet by 3 in. by 11 in. from	£21	0 per 120.
Yellow Battens, from	11	10 "
Yellow Deals, from	20	0 "
Spruce Deals, from	16	0 "

Prepared Flooring, &c. equally low. A list of prices forwarded on receipt of a postage stamp.—N.B. All sawn goods delivered within two miles free of carts, &c.—Borough-road, Southwark, and Elm-street, Gray's-inn-lane.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of FLOORING and MATCHED BOARDING, from ¼ inch to 1½ inches thick, seasoned, and ready for use; also, Mahogany, Moulding, Wainscot, and all kinds of Timber required for Building purposes.—Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

MACHINE CARVING WORKS (Patent). Ecclesiastical and every other description of CARVING. A magnificent Gothic Screen, Carved Glass Frame, and other specimens. Tables, Chairs, Lecterns, &c. Designs and estimates at the Works, Belvedere-road, Lambeth, foot of Hungerford-bridge.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Pine Plank, 3s. 6d.; Spruce Deals, 3s.; Mahogany, 6d.; 2½ Yellow Battens, 12.10s.; F. Walnut, 7d. Carriage free in town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth-walk.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from ¼-inch to ¼-inch thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Sills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

NOTICE of REMOVAL.—EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton-road, Pimlico, to the KING'S-ROAD, CHELSEA, where their orders will be promptly executed as heretofore.—Please address, E. SIMMS, King's-road, Saw-mills, Chelsea, opposite Manor-street.

MOULDINGS BY MACHINERY. Capping, Sash-bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to

E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S ROAD, CHELSEA.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country; an extensive assortment of specimens and patterns commencing at 1s. per foot super together with every particular of its cost and adaptation, can be obtained of Messrs. H. P. BURT and CO. 2, Charlotte-row, Mansion-House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the trade that they have completed their extensive arrangements, and will be happy to execute all orders entrusted to their care with despatch and punctuality. Wet and dry docks and powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring match boarding, &c. &c. always in stock at reduced prices.

ROBINSON and BARTRAM, SAWING and PLANING MILLS, BELVIDERE-ROAD, LAMBETH, and SWAN-STREET, BERMONDSEY, having completed powerful MACHINERY for SAWING TIMBER, for building purposes, will be glad to receive ORDERS in this Department, and beg to assure their friends that all favours shall be executed in the best manner, and with the utmost punctuality and despatch.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NOKES and CO. invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:—

¾-inch white, 15s. 6d. per square; ¾-inch white, 15s. per square; 1-inch white, 18s. per square; ¼-inch yellow, 15s. per square; ¾-inch yellow, 13s. 6d.; 1-inch yellow, 20s.

Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

DRAINAGE.—To BUILDERS, CONTRACTORS, LAND SURVEYORS, &c.—TO BE SOLD, a quantity of large-size DRAINING TILES, very suitable for land or field drainage, sewers &c. and well adapted for covering open ditches, as they form a very economical and strong lasting drain. Largest size, 15 inches by 12 inches diameter, about 2 inches thick, 10d. per foot run complete. Smaller size, 12 inches by 10 inches diameter, about 1½ inches thick, 8d. per foot run complete.

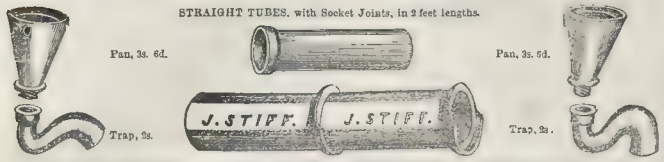
N.B.—A discount on taking a quantity.
Apply at Brunswick Wharf, Vauxhall, London.

GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz. :—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Duckhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLE, SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ratcliffe-bourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,
IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, on which Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.
DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.
The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

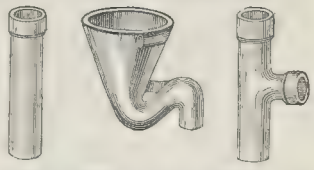
REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES				
3 inch bore, in 2 ft. 6 in. lengths, at				2½d. per foot.
4	"	"	"	3½d. "
6	"	"	"	5d. "
9	"	"	"	9d. "
12	"	"	"	1s. 3d. "
15	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, Se Bankside. DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES &c &c on the most advantageous terms. The new lists of prices will be forwarded on application as above. Feb 11, 1856.

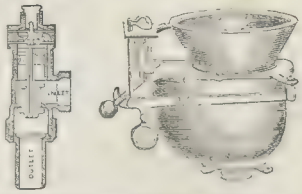
WATER-CLOSET, with APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,
Enamelled White Inside,
BRASS VALVE, &c.
MANUFACTURED AND SOLD BY
W. PATTEN, PATENTEE,
OLD FISH-STREET, near SAINT PAUL'S
LONDON.

LAMBERT'S PATENT WATER WASTE PREVENTER, and SELF-REGULATING VALVE-COCK, especially adapted for Water-closets.

FIG. 1. FIG. 2.



This Valve is so arranged, that whether it be held down or propped up, only a given quantity of water can be used at each action.

The pressure of the column of water—viz. its vertical height—being known, a quart, gallon, or any other quantity desired will be, and no more can be, discharged; and before the full quantity can be obtained, a second action must take place.

This Valve is capable of several modifications; one of its applications to the Pan Closet, as shown in Fig. 2, is the most important, as it renders useless nearly all other apparatus, and enables the discharge of water; it can be made to keep open as long or short a time as may be desired, after the handle which operated upon it is set free.

It is yet more valuable when applied to self-acting Closets, as it dispenses entirely with reservoirs or supply cisterns; once regulated, say for one gallon, that quantity will always be discharged at each action of the seat by its pressing upon the stud, or by any other movement.

The Patentees have tested them under every pressure up to 300 feet with complete success.

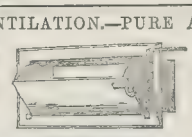
THOS. LAMBERT and SON,
Founders and Manufacturers of High pressure Water-Valves, Plumbers' Brass-work, Pumps, &c.
SHORT-STREET, NEW CUT, LONDON.

CLOSET BASINS, WHITE and BLUE URINALS, &c.

MANUFACTORY—MILLWALL.
DEPOT:
ARTHUR-STREET, NEW OXFORD-STREET.

CONTRACTORS' STEAM-ENGINES. — TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally. Apply to Messrs. SEDGWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

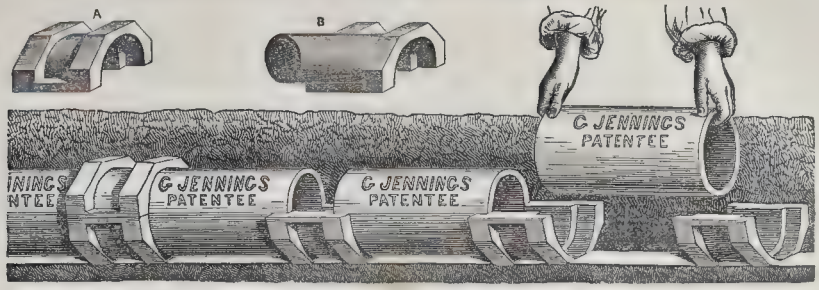
VENTILATION.—PURE AIR.



With single pulley, from 6s. each; with leading pulley, from 8s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, gole Manufacturers, &c., Blackfriars-road, and 117, Union-street, Borough, and of all respectable ironmongers, builders, &c.

JENNINGS'S PATENT DRAIN-PIPES.



THE PATENT CHAIRS AND SADDLES above shown are to a line of pipes the SAME SUPPORT AS SLEEPERS TO A LINE OF RAILWAY, the base of each Chair being BROAD and STRONG. The pipes are simple cylinders, of uniform thickness, made without the usual socket; the drying and burning, in consequence, is much more perfect. Pipes thus made and connected will be found to BEAR ANY PRESSURE, and are in no way liable to derangement. The laying of these pipes, and the making of the joints, IS DONE AT ONCE, EACH PIPE BEING BEDDED AS IT IS LAID, and the space between allows the workman to strike up the joint, and the superintendent TO SEE that every pipe is ACCURATELY LAID and PROPERLY JOINTED.

A shows one of JENNINGS'S PATENT SADDLES or COVERS, by means of which examinations are effected; B shows one of the PATENT JUNCTION COVERS, by which connections are made to finished lines of pipes, it being only necessary AT ANY TIME to remove a PLAIN Cover or Saddle, A, and substitute a Junction Cover, B, the Junction being THE SIZE of the Branch Pipe.

The favour with which these pipes have been received will no doubt give rise to many imitations, AS IT IS MUCH EASIER TO COPY THAN TO INVENT; but GEORGE JENNINGS hopes his sanitary patrons will give HIM CREDIT for being THE FIRST TO SHOW HOW JUNCTIONS MAY BE INTRODUCED, OR EXAMINATIONS MADE, TO FINISHED LINES OF PIPES. These important improvements, as above shown, are PATENTED; and GEORGE JENNINGS would caution those who desire TO PROFIT BY HIS IDEAS, NOT TO INFRINGE HIS PATENT RIGHTS, as they will not be allowed to do so with impunity, although he feels confident the ORIGINAL, for its SIMPLICITY and EFFICIENCY, will be preferred to the attempted Copy, the provisional specification of which was not proceeded with, although STILL CALLED PATENT.

Prices of JENNINGS'S Drain Pipes, per foot run, including the Patent Chair and Saddle, are as follows:—4-inch, 6d.; 6-inch, 8d.; 9-inch, 1s. 1½d.; 12-inch, 1s. 10d.; 15-inch, 3s.; 18-inch, 4s.; with the usual discount to the Trade.

JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.

Architects describing this Closet in their specifications will have a PERMANENTLY GOOD VALVE CLOSET, NOISELESS, and FREE FROM COMPLICATION. The Patentee has such confidence in its DURABILITY and EFFICIENCY, that he will guarantee every Closet for SEVEN YEARS.

JENNINGS'S IMPERISHABLE EARTHENWARE CLOSET AND TRAP.

This Closet has a large water surface, has no back to soil, is imperishable in its material, and the Trap and Closet are combined in one piece, suited alike for the PALACE or the COTTAGE.

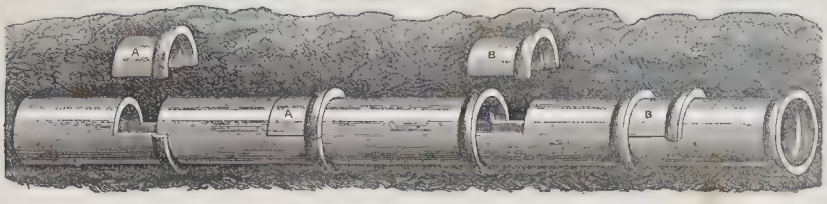
JENNINGS'S IMPROVEMENTS IN LIFT AND OTHER PUMPS.

These Pumps would well repay a visit to Jennings's factory, where may be seen Jennings's Lavatories, Urinals, Sluice Valves, Fire and Steam Cocks, of every size; Shop-Shutter Shoes; Gully, Area, and Sink Traps, and other sanitary goods.

Or Illustrations and Prices can be had free by post, if two stamps are enclosed to

GEORGE JENNINGS, SANITARY ENGINEER, HOLLAND-STREET, BLACKFRIARS-ROAD, LONDON.

AYLESFORD POTTERY COMPANY'S PATENT DRAIN-PIPES.



THE above Company respectfully invites the attention of Engineers, Architects, Surveyors, Builders, &c. to an improved DRAIN-PIPE, whereby all stoppages may be cleared without disturbing the invert of the drain, by simply removing the cover (marked A or B) whichever may be preferred.

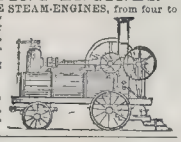
The cover (marked B) may be used in conjunction with whole or half-socket Pipes.
Pipes thus constructed may be laid at intervals in a drain of ordinary Socket-Pipes.
With the great advantage these Pipes offer, they are cheaper than any yet submitted to the public.

London Depôt—AYLESFORD WHARF, Belvedere-road, Lambeth.

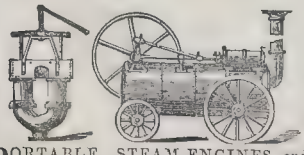
MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.



JAMES BURTON & SONS,
Engineers and Contractors,
John's-place, Holland-street,
Southwark, London.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 36s. per doz. painted.
Ditto .... 42s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

STONE PIPES.—GLAZED STONEWARE PIPES of the most superior quality, at REDUCED PRICES.—E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, stuks, sills, steps, and coping, &c.—E. and W. STURGE, Bridge-wharf, City-road.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is GROSS'S WHOLESALE WAREHOUSE, 22, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

SALES BY AUCTION.

LIVERPOOL.—Valuable Property, in the immediate vicinity of the Lime-street Station of the London and North-Western Railway. By

MR. BRANCH, on FRIDAY, the 19th SEPTEMBER instant, at TWO o'clock in the afternoon, at the CLARENDON-ROOMS, South John-street, Liverpool, subject to conditions of sale to be then produced, by order of the trustees of the Second Wellington Building Society, the CEMENT WORKS, WAREHOUSE, and PREMISES, situate on the south side of Lord Nelson-street and east side of Hotham-street, in Liverpool, late in the occupation of Mr. G. H. Newton. The site of the premises contains in front to Lord Nelson-street 96 feet, when it turns off and runs to a southwardly direction, 13 feet 7 inches, when it again turns off and runs along Hotham-street, 35 feet, on the east side to a common passage of 3 feet wide, 51 feet, and on the south side 51 feet 3 inches, and contains 1,046 square yards, or thereabouts. The buildings have been recently erected in a very substantial manner, and are fitted up with a steam engine, and every requisite for carrying on an extensive trade; but they are equally of being converted into a dwelling, having been contemplated in their original construction), at a moderate expense and in a short time from the period that may be required. Immediate possession may be had. Title to be furnished of inheritance.—For further particulars, apply to Messrs. C. and J. ELLISON, 36, Renshaw-street; or to Mr. WILLIAM FOSTER, Solicitor, 40, North John-street, Liverpool.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Proprietor (who is retiring) to SELL by AUCTION, on the PREMISES, Herbert's-buildings, Waterloo-road, on TUESDAY, SEPTEMBER 23, and following days, at ELEVEN, in lots, without reserve, the MACHINERY, Tools, and Stock-in-Trade of a LATHE and TOOL MAKER (the tools principally by Smith, Beacock, and Tannett, of Leeds), including fourteen self-acting lathes, 15-inch and 10-inch screw-cutting, with 6 ft. 2 feet and 22 feet bed, seven screw-cutting, from 6½ inches to 8½ inches centre; four surfacing lathes, to take in surfaces from 4 feet to 7 feet diameter; two universal drilling engine and hand-turning lathes, with slides; five self-acting planing-machines, the largest to take in 3 feet wide and 13 feet long; three self-acting shaping-machines, three self-acting drilling-machines, slotting machine, screwing machine, wheel-cutting machine, oscillating steam-engine of 14-horse power, Cornish steam boiler, 18 feet long; 300 feet turned bright shafting, on 9 head motions, 3 iggers, straps, and driving gear; fifty vices, workbenches, horse planes and chisels, steel tools, stocks and dies, forges, smiths' tools, lloyd's iron, five tons of steel and sheet steel, ten tons of bar and rod iron, and numerous other effects.—To be viewed on Saturday and Monday previous to the sale, when catalogues may be had on the Premises; or of Messrs. FULLER and HORSEY, Billiter-street, City.

TO STONE MERCHANTS, CONTRACTORS, IRON-FOUNDERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the assignees of Mr. C. J. Mare, to SELL by AUCTION, at the KING'S ARMS HOTEL, Bridge-street, Westminster, on MONDAY, SEPTEMBER 29, 1856, at TWELVE o'clock, in lots, without reserve, 235 BLOCKS, Slabs, and Landings of Chesewring Granite, Bramley Fall and Bradford Stone, forty-three cast-iron girders, and 150 large Portland Cement, supplied for the construction of the new bridge, at Westminster, and now not required by the commissioners.—To view, and for permission, at the Bridge Works, Stangate, on Friday and Saturday previous to the sale. Catalogues may be had at the King's Arms, Bridge-street, Westminster; of Messrs. PULLEN and SON, 80, Fore-street; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Highly-finished Condensing Steam Engine, 30-inch Cylinder, 9-feet stroke, by Naylor, Vickers, and Co., Sheffield.

MESSRS. FULLER and HORSEY are instructed by the First Commissioner of her Majesty's Board of Works, to SELL by AUCTION, at HERBERT'S-BUILDINGS, Waterloo-road, on WEDNESDAY, SEPTEMBER 24, at ELEVEN, a highly-finished direct acting, CONDENSING STEAM ENGINE, by Naylor, Vickers, and Co., 30-inch cylinder, 9-feet stroke, D slide-valve, throttle-valve and governors, air-pump and two feed pumps, with solid gun-metal eccentric, bright wrought-iron connecting-rod, and complete set of apparatus, made for the Houses of Parliament.—To be viewed on Tuesday previous to the sale, when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO BUILDERS, IRONMONGERS, STOVE-GRATE MAKERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, OCTOBER 7th, 1856 and following days, at ELEVEN o'clock each day, at the WAREHOUSES, Bell-Savage-yard, Ludgate-hill, in lots, without reserve, the extensive STOCK of the Sheffield Company's Stove Grate and General Ironmongery Warehouse, all of the newest patterns and designs, including 1,000 polished steel register stoves, with ormolu mounts, 350 black register and Romford stoves, 20 wind-up ranges, 20 cottagers' cooking stoves, 30 hall and shop stoves, 50 steel fenders, with ormolu mounts, 2,000 brass and black fenders, 200 sets fire-irons, bronzed umbrella-stands, hat-stands, garden chairs and tables, an assortment of elegant Berlin bronzes, in groups of horses, in stag, in medelli us, &c.; 2-barrel cotton rollers, 20 round and oval fly-fishing-reels, 5 yards ram-water pipe and guttering, 2 tons stove and range metal, air-bricks, dampers, and frames, an assortment of builders' ironmongery, in locks, nails, hinges, screws, bolts, pulleys, &c.; furnishing ironmongery, japanned goods, black roller ware, 50 dozen frying-pans, electro-plated goods, iron and papier maché trays, coal vases and scoops, toilet sets, 30 gas chandeliers, 300 ship cabin and entrance lamps, 2 dozen pairs 2-feet globes, 50 improved reflecting telescopes, 2 gross patent pen guards, fittings and tools of smith's shop, standard scales and weights, counting-house fittings, and other effects.—To be viewed on Saturday and Monday previous to the sale, when catalogues may be had on the Premises, and of Messrs. FULLER and HORSEY, Billiter-street, City.

IMPORTANT WATER-SIDE PROPERTY, ON THE THAMES, IN THE CITY OF LONDON.

MESSRS. FULLER and HORSEY are instructed by William Crawshay, Esq. to SELL by AUCTION, on WEDNESDAY, OCTOBER 1st, at TWELVE, at the MART (unless previously disposed of by private contract), the splendid MERCANTILE PROPERTY, held under the Corporation of London, known as George-yard, Upper Thames-street, City of London, having a frontage next the Thames of 133 feet, and occupying a superficial area of about 34,000 square feet, a site unrivalled in the metropolis, either as a depôt for landing and housing goods or for carrying on any wholesale business for which extensive water-side premises are desirable. George-yard is universally known as the London establishment of Mr. Crawshay, the ironmaster, and has been in the occupation of himself and predecessors for more than a century. The trade carried on ranks among the first in the City, the premises having very lately been fitted up to carry on the premises for the same business, a large proportion of the connexion may be obtained. In the year 1852 the owner expended many thousands of pounds in the erection of a massive pile of buildings, 160 feet in length by 65 feet in width, abutting on to the river; the structure is of the most substantial character, and, if needed for the purpose of warehousing goods, the foundation and walls are quite equal to support an elevation of several stories above those already erected. The building is one lofty ground-floor, with arches and piers to carry the iron columns, and constructed to carry any weight. There is also a stack of warehouses, abutting on the river, 75 feet in length, of two floors, and a stack of warehouses, 60 feet in length, of three floors, abutting on Thames-street. A commodious dwelling-house in the yard, the lower part occupied as offices for clerks and principals. A comfortable dwelling-house fronting Thames-street. Extensive paved yards, with two separate entrances, affording every convenience for loading and drawing goods. The whole held on lease from the Corporation of London, for a term which will expire in the year 1900, subject to the rent of 1,200l. per annum. A stack of warehouses adjoining, of three floors, with frontage of 132 feet in Castle yard, may be added if desired, at a rent of 150l. per annum. To be viewed till the sale. Printed particulars and plans will shortly be ready, and may be obtained at the Mart; of Messrs. CROWDER and MAYNARD, Solicitors, 37, Coleman-street; and of Messrs. FULLER and HORSEY, Billiter street, London.

SALES BY AUCTION.

PRELIMINARY ANNOUNCEMENT.

MESSRS. FULLER and HORSEY in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees of Mr. C. J. Mare, to SELL by AUCTION in the ENSUING MONTH, the whole of the LOOSE STORES and TOOLS of the extensive ship-building yards and iron-works at Blackwall and West Ham, including upwards of 1,000 tons of wrought iron, in bars, rods, plates, scrap, blooms, and puddled bars; 100 tons rivets, 100 tons screwed bolts and nuts, 50 tons cast and wrought steel, 70 tons cast iron; 20 tons engineers' steel stocks, an expensive self-acting boring bar, rat-het braces, stocks, taps and dies, &c.; 100 wrought-iron anvils, 30 tons smiths' tools, 20 tons metal hearths of large planks and deals, moukers, &c; 200 tons iron flasks, crane shank and band ladles, flask weights, several washing machines, brass fitters' and finishers' tools, blacksmiths' tools, 150 tons shaping-upwards and blocks, patent twisting machine, contractors a portable steam-engine and boiler, three Cornish a cam-boilers, crab cranes blocks and falls, many tons of chain slings, mooring-chains, cream-cables, &c.; 50 brass barrel lift pumps, ships' water-closets, ships' pumps, five tons brass fittings, a large assortment of general ironmongery, 1,000 dozen files, 100 joiners' benches, joiner's cramp and tools, 10 tons iron, plumbers' tools, five tons bolt and sheathing copper, 50 oak trees, several hundred fathoms slab, expensive prepared cabin fittings, several thousands of stage planks and deals, shipwrights' tools, 20 barges and skiffs, three wrought-iron barges, counting-house fittings and a large assortment of miscellaneous effects. More detailed advertisements will shortly appear. Catalogues are being prepared, and may shortly be obtained, at one shilling each of Messrs. PULLEN and SON, 80, Fore-street; or of Messrs. FULLER and HORSEY, Billiter-street, City.

VICTORIA-STREET, WESTMINSTER. SECOND PORTION.—Sale of new Building Materials, Plant, Stock, and Utensils of a Builder.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on TUESDAY, the 30th of SEPTEMBER, and following days, at ELEVEN o'clock each day, on the PREMISES, Victoria-road, Westminster, in lots (without reserve), the SECOND PORTION of the STOCK of well-seasoned NEW BUILDING MATERIALS, partly prepared, yellow and white deal flooring boards, 500 feet cube Portland stone, 5,000 feet 3-inch tooled York paving, 5,000 feet red and other paving, 2,000 feet York landings, 350 feet cube York stone, 1,700 feet cube granite, two tons iron girders, 50,000 stock and fire-bricks, 400 yards coal iron rain-water pipe, 10 slate cisterns, 20 baths, Peggs stoves, 30 coils iron pipe, 8 galvanized tanks, 10,000 feet iron tube, an assortment of T's, elbows, bends, sockets, &c. plus basins, 50 gallons varnishes, 30 cwt. red and white lead, and colours; 200 pieces paper-hangings, &c. The plant and tools include 7 hoisting machines and chains, mortar mill, sweeping machine, 5 stone trucks, 7 asphalte pots, crab cranes, blocks and falls, 2,000 scaffold boards, 1,000 scaffold poles, 10 to 40 feet; 1,000 feet run 3-inch plank, 500 dozen scaffold cords, 60 ladders, 20 benches, barrows, 6 brass finishers' lathes, smiths' forges, vices, anvils, benches, air furnace, moulding trough, and tongs, 2 painters' machines, 24 pair steps and trestles; an assortment of boxes, stocks and dies, steel tools, and numerous other effects.—To be viewed two days previous to the sale when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street.

PRELIMINARY ANNOUNCEMENT.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees of Mr. C. J. MARE, to SELL by AUCTION, in the ensuing month, at the WORKS, Blackwall, a Pair of highly-finished, oscillating Marine ENGINES, equal to 350 horses' power; eight new tubular marine boilers; the castings for a second pair of oscillating marine engines; two new tubular marine boilers, with brass tubes; two new wrought-iron boats, and other similar property, more detailed advertisements of which will shortly appear.—To be viewed, and Messrs. PULLEN and SON, 80, Fore-street; or to Messrs. FULLER and HORSEY, Billiter-street, City.

TO MARBLE MASONS, BUILDERS, SCULPTORS, AND OTHERS.

MESSRS. EVERSFIELD and HORNE beg to announce that they are instructed by the consignees to SELL by AUCTION, at the MARBLE WHARF, No. 17, Millbank-street, Westminster, on WEDNESDAY, SEPTEMBER 17, 1856, at ELEVEN o'clock, a valuable PARCEL of MARBLE, comprising Statuary, Vein, Sicilian, Black and Gold, Black, and Bardilla, in blocks and scantling of large dimension.—Approved bills of six months will be taken in payment.—May be viewed, and catalogues had at the place of Sale, and of the Auctioneers, 40, Parliament-street, Westminster; or Coal Exchange.

TO STONEMASONS, BUILDERS, CONTRACTORS, and OTHERS.—400 Tons Bramley Fall, and Caen Stone, in blocks, to be SOLD by AUCTION, by

MR. SITGRAVE, on TUESDAY, SEPTEMBER 16th, at ONE o'clock precisely, on the PREMISES, Devon Wharf (near new Globe-bridge), Mile-end, by direction of the proprietors, 200 blocks, containing 1,000 feet of PORTLAND, BRAMLEY FALL, and CAEN STONE, of the finest quality, and chiefly of large dimensions and lengths, up to 12 feet, suitable for building steps, and other building purposes. Also, 10,000 feet of sawn Hare-hill and Potter Newton Slab, now lying on the bank of the Regent's Canal, with every facility for water and land carriage.—May be viewed the day prior to the sale, and catalogues had on the Premises; and of the Auctioneer, at his Offices, 23, Leadenhall-street; or will be forwarded per post on application.

Surplus Property of the South-Eastern Railway Company, at Hastings, Sussex.

MR. MARSH has received instructions from the Directors of the South-Eastern Railway Company to SELL by AUCTION, at the SWAN HOTEL, Hastings, on TUESDAY next, SEPTEMBER 16th, at TWO for THREE o'clock, SIXTY-TWO PLOTS of valuable BUILDING GROUND, situate adjoining the town of Hastings and the Railway Station; presenting very admirable sites for the erection of shops or private residences, and offering votes for the county of Sussex.—May be viewed, and particulars, with conditions of sale, obtained at the several Railway Stations; of Mr EDWARD RYDE, Surveyor to the Company, Cannon-bridge Terminus; and at Mr. MARSH's Offices, 2, Charlotte-row, Mansion-house, London; or will be forwarded on application.

TO TIMBER MERCHANTS, BUILDERS, PACKING-CASE MAKERS, and OTHERS.—Messrs. Robinson and Bartram's Sawmills, Swan-street, Grange-road, Bermondsey.

MR. PEAKE is directed by the Executors of Thomas Elliston, Esq. Timber Merchant, deceased, to SELL by AUCTION, at the SAW-MILLS, as above, on TUESDAY, SEPTEMBER 16th, 1856, at TWELVE for ONE, in lots, the last portion of his STOCK, comprising a large quantity of dry planks, deals, and battens.—May be viewed the day previous and morning of sale. Catalogues obtained on the Premises; and at Mr. PEAKE'S Offices, 44, Tooley-street.

TO BUILDERS, AGRICULTURISTS, WHEELWRIGHTS, COOPERS, and OTHERS Saffron Walden, Essex.—TO BE SOLD by AUCTION, by

MESSRS. NOCKOLDS and KING, upon the PREMISES (late in the occupation of Mr. William Ward, deceased), on TUESDAY and WEDNESDAY, the 23rd and 24th days of SEPTEMBER, 1856, and following days, the BUILDER'S STOCK-IN-TRADE, comprising a large quantity of well-seasoned oak, ash, elm, beech, lime, willow, chestnut, walnut, and maple plank; oak, elm, and deal boards; and flooring; deals, pines, yellow battens, tiling and rough cast lath, wheelwrights' and coopers' stuff, six capital five barred oak gates, shop-fittings, building materials, and numerous timber trees of excellent quality and large dimensions, sixty ash, beech, larch, and other trees, a large quantity of building stones and road sand, stonemasons' stock, comprising three handsome Portland tombs (complete), tomb stone, &c.; plain tiles, building bricks, the materials of a shed covered with pantiles, 54 feet long by 12 feet wide; large quantity of old sounding and firewood; also a neat gig on patent axles, in good condition.—May be viewed on the Monday previous to the sale, and catalogues had at the George, Bishop Stortford; Red Lion, Cambridge; upon the Premises; and of the Auctioneers, Saffron Walden, Essex.

SALES BY AUCTION.

HARROW, MIDDLESEX.—Valuable Freehold Building Land, situate midway between the church and the station.

MESSRS. FAREBROTHER, CLARK, and LAYE are instructed to SELL, at GARRAWAY'S, on WEDNESDAY, OCTOBER 8, a valuable FREEHOLD PROPERTY, close to Harrow-on-the-Hill, and about midway between the church and the station, and only a few yards' remove from the high-road, beautifully situate, commanding extensive views over the surrounding picturesque country, divided into three lots, as under, viz.:—Lot 1. A desirable plot of ground, as staked out, and abutting on the Roxburgh-road, and having a frontage thereto of 300 feet, and extending in the rear to a depth of about 500 feet, part having a frontage of 307 feet to the Byron road. Lot 2. A corner plot, situate at the junction of the Roxburgh and Byron roads, with by frontages, of 115 feet to the former, and 183 feet to the latter. Lot 3. Another valuable plot, having a frontage of 253 feet to the Byron-road. The above property forms a portion of a larger estate, recently disposed of for building purposes. The roads are laid out, tasteful villas have been erected on the adjoining plots, and some others are in progress. The proximity of the railway station, combined with the benefits extended by the North-Western Railway Company to occupants of houses in the vicinity, coupled with the advantages of Harrow School, render this a most desirable property for the erection of villa residences. May be viewed; and particulars, with plans, may be had at the King's Head Inn, Harrow; the Railway Hotel, at the station; of THOMAS WOOSTER, Esq. Solicitor, 18, Skinner-street, Snow-hill; at Garraway's; and at the Offices of Messrs. FAREBROTHER, CLARK and LYE, Lancaster-place, Strand.

SALE of MAHOGANY, &c. at LIVERPOOL.

The next Liverpool Periodical Auction Sales, comprising Two Cargoes City St. Domingo, One Cargo St. Domingo, and 400 Logs Cuba Mahogany, with Red wood, Walnut Maple, and other Furniture Woods, &c. will take place on WEDNESDAY MORNING, the 24th SEPTEMBER, 1856, at ELEVEN o'clock precisely, in the WOOD SALES SHEDS, Brunswick and Toxteth Docks.—Catalogues containing full descriptive particulars may be seen at the Office of this Paper, or may be had on application to EDWARD CHALONER, Wood Broker and Measurer, No. 6, East Side, Queen's Dock, Liverpool.

VALUABLE RESIDENTIAL INVESTMENTS

MESSRS. BEADEL and SONS have received instructions to SELL, by AUCTION, at the MART, Bucklersbury, London, on TUESDAY, the 7th day of OCTOBER, 1856, at TWELVE o'clock, in Eight Lots, the following RESIDENCES and SHOPS:—Lot 1 will comprise a Freehold Residence, No. 3, Swallow-street, Gray's-inn-road, in the occupation of Mr. Thomas Malby.—Lots 2 and 6 will include Sixteen Leasehold Residences, in Upper Stamford-street, Blackfriars-road, held on long unexpired terms, at moderate ground-rents, and let to respectable tenants.—Lot 7. A Leasehold House, with Wheel Factory, No. 29, Bridge House place, Newington-causeway, sub-let to Mr. William Tinker.—Lot 8. Two Leasehold Houses and Shops, Nos. 2 and 3, Portland place, in the occupation of Messrs. Mantle and Thomas, the whole producing a rental of about 1,000l. per annum.—Particulars and conditions of sale may be obtained of Messrs. R. Sutton and Son, Solicitors, 33, Holborn; at the Auction Mart; and of Messrs. BEADEL and SONS, 25, Gresham-street, London.

COLCHESTER.—Freehold Building Land.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the CUPS HOTEL, Colchester, on THURSDAY, the 16th day of OCTOBER, 1856, at TWO for THREE o'clock, in six lots, several valuable PLOTS of FREEHOLD BUILDING LAND, situate close to the railway station at Colchester, possessing considerable frontages to North-street, and the roads leading from Colchester to Sudbury and Ipswich, which will be sold with no restrictions as to building, also a few lots close to St. James's Church, on the East-hill fronting Castle-road and Garden-terrace. The above property is freehold, land-tax redeemed, chiefly tithe free, most eligibly situate, and well adapted for the erection of villas, or other residences, and offers votes for the county of Essex.—Particulars, with lithographic plans, may be obtained of Robert Rossiter, Esq. Solicitor, 29, Coleman-street, London; at the Cups Hotel, Colchester; and of Messrs. BEADEL and SONS, 25, Gresham-street, London.

IN BANKRUPTCY.

MR. ALFRED DAY has received instructions from the assignees of Messrs. Rowland and Evans, bankrupts, to SELL by AUCTION, on the PREMISES, Arlington-street, New North-road, Islington, on TUESDAY, the 23rd of SEPTEMBER, 1856, at TWELVE o'clock without reserve, the third portion of the extensive STOCK and UTENSILS of a Builder, comprising 300 scaffold boards, 1,000 putlocks, 20 long ladders, wheeling planks, 1,000 scaffold poles, three powerful crabs, sticks of timber, erection of forge, troughs, blocks, stables, bellows, vices, filing-machine, benches, scales, weights, smiths' tools, quantity of wrought and bar iron, rod ditto, gratings, iron frames, stoves, &c.; slate landings, Caen, Bath, Portland, York, and Kentish rag, in blocks and landings; fire bricks, pantiles, sheds, and other effects. May be viewed on the Saturday and Monday preceding the sale. Catalogues to be had of Messrs. Hands and Pullen, 16, Gresham-street, City; J. Nicholson, Esq. Official Assignee, 24, Basinghall-street, City; and of the Auctioneer, City-road, near the Eagle Tavern.

TO ENGINEERS, INDIA-RUBBER MANUFACTURERS, and Others.—Barne's Cray, Crayford.—Machinery, Plant, Stock, &c. at the Leading Corn Flour Factory, near Crayford, Kent.

MR. T. DANN will SELL by AUCTION, on the PREMISES, on FRIDAY, the 19th of SEPTEMBER, at TWELVE, TWO capital STEAM ENGINES, with shafts and gear complete (one of 16 and the other of 8 horse-power), two thread and three tape machines (nearly new), two cleansing machines, two mast-rafters, cutting machine, steam-pans, cylinders, spreading-mach ne, naphtha-still, clothes-frames, turning-lathes, a set of Silk Colour Cards, Dartford; of Mr. G. BEADLE, House Agent, Erith; at the principal Inns in the neighbourhood; and of the Auctioneer, Bexley, Kent.

N.B. The Proprietor of the Vendors is in the Premises to be Sold by Private Contract. Particulars of the Auctioneer, &c.

RED HILL, near REIGATE.—TO BUILDERS, BUILDING SOCIETIES, and OTHERS.

MR. ORPWOOD will SELL by AUCTION, at the MART, on WEDNESDAY, SEPTEMBER 17, at TWELVE, TWO unfinished six-roomed HOUSES, with shops and garden ground, near the Royal Oak Tavern, in High-street, facing towards the Station.—Printed particulars at the Royal Oak; Messrs. KING and SHEPPARD'S Offices, North-buildings, Finsbury; Mr. ORPWOOD'S, Artillery-place, Finsbury; and Mart.

BUILDER'S STOCK.—WALTHAM ABBEY.

MR. C. PRYOR is instructed by the Executrix of the late Mr. H. Phillips, Builder and Undertaker, to SELL by PUBLIC AUCTION, on the PREMISES, on TUESDAY, SEPTEMBER 16, at TEN for ELEVEN, 50 feet PLANK, of oak, chestnut, acacia, pine, and maple; deals and battens; 1,000 feet deal board; elm board; posts, pales, tops and slabs, nails and spikes, iron and brass work. The utensils include two and weight-lever vans carts, wheels, ladders, and harness; also oak, ash, and elm timber trees and other effects.—May be viewed, and catalogues had on the Premises, and at C. PRYOR'S Offices, 18, Smithfield bars, and at Waltham Abbey.

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The Builder,

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TO ARCHITECTS, ENGINEERS, SURVEYORS, AND BUILDERS.

PROFESSOR DONALDSON'S COURSES of LECTURES on ARCHITECTURE and CONSTRUCTION, at University College, for the Session 1856-57, will commence on Tuesday, the 21st October. The circular and terms can be had at the College Office.

TO the MEMBERS of the METROPOLITAN BOARD of WORKS.

GENTLEMEN,—The District of St. Mary, Newington, &c. &c. being vacant by the death of Mr. George Porter, I beg leave to make application for that office.

You are aware that, by a recent decision of the Lords of the Treasury, I am entitled to an annuity of 105l. 13s. 4d. payable out of the funds raised from the rates at your disposal. You are also aware that this is not my first application for the office of District Surveyor.

Should you do me the honour to propose to appoint me to the vacant district, on the condition that payment of my compensation should stop during the time I hold the office, I, on my part, should fulfilnough not barred by the statute) be prepared to accept the office on such condition.

My certificate of qualification was laid before you on a previous occasion, and still lies in your office.

Some very urgent and important business will, I fear, prevent my calling upon you to make personal application for your votes.

I am, Gentlemen, your obedient Servant,
EDWARD WARD LOVER
(Late Surveyor to the Office of Metropolitan Buildings).
Clapham, Sept. 11, 1856.

SURVEYOR WANTED. — WEST HAM LOCAL BOARD of HEALTH.—Notice is hereby given, that the Local Board of Health for the District of West Ham, in the county of Essex, require a fit and competent Person to execute the duties of a SURVEYOR under the Public Health Act, within the said district. He must possess a thorough and practical acquaintance with works of drainage, sewerage, roadmaking, and paving. He must be competent to take levels, to prepare plans, sections, drawings, and estimates, and to superintend the execution of all works of the description referred to, or which may fall within the duties of the Office of Surveyor under the Public Health Act, or the Bye-Laws of the Local Board. He will be required to superintend the public lighting of the district when under the Management of the Local Board, and see to the execution of their Contracts in reference thereto. The officer will be required to reside in the district, and devote the whole of his time to the service of the Local Board. He will therefore be restricted from taking private business. His salary will be 300l. per annum, with the free use of offices. Any further information respecting the duties of the office, may be obtained on application to the Clerk of the Local Board. Candidates must send written applications for the office, with recent testimonials of qualifications and competency, and with particulars of age and previous occupation; and all applications must be sent to me, endorsed "Application for the office of Surveyor," on or before MONDAY, the 29th instant. Such of the candidates as may be deemed by the Local Board eligible for the Office (but no others), will be required to attend on the day of Election, of which, and of the hour and place, they will be duly informed.—By order of the Local Board,
W. J. BARSHAM, Clerk.
Rokeby House, Stratford, Essex, Sept. 15, 1856.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The Trustees for Sale of a Freehold Estate of 500 acres, including the Beulah Spa, and near the Crystal Palace, require PLANS for LAYING OUT the same for building purposes, showing the necessary roads, sewers, &c. the whole to be clearly defined and apportioned in suitable lots, and laid down to a scale of two chains to one inch, from actual admeasurement. The following premiums are offered:—For the plan adjudged the best by the trustees, 150 guineas; for the second, 100 guineas; for the third 50 guineas. The plans to which the above premiums shall be awarded will be retained by, and be the property of, the trustees.—Further particulars may be obtained of Mr. PEACOCK, Builder, near the Jolly Sailor Station, Norwood, close to the property. The Trustees will meet on the 5th day of DECEMBER next, to examine the plans, which are to be previously forwarded, enclosed and sealed, to the Secretary's Office, Auction Mart, London, addressed to the Trustees of the White Horse, Norwood Estate.

TO SURVEYORS. — NOTICE. — NORWOOD, BEULAH SPA ESTATE, near the Crystal Palace. It having been intimated to the Trustees that the time mentioned for the Delivery of the Plans is insufficient, they have determined to EXTEND the same to MONDAY, DECEMBER 8, at the same place.

WELLINGTON MONUMENT.—The Commissioners of her Majesty's Works and Public Buildings give Notice, that it is the intention of her Majesty's Government to ERECT a MONUMENT in St. Paul's Cathedral, London, to the memory of the late Duke of Wellington, and that the Commissioners are prepared to receive DESIGNS for the same from artists of all countries. A drawing, showing the ground plan of the cathedral and the site of the proposed monument, together with a statement of the premiums, and other particulars, will be forwarded to artists on application by letter, addressed to me at this Office.
ALFRED AUSTIN, Secretary.
Office of her Majesty's Works and Public Buildings, Whitehall, London, September 6th, 1856.

CONTRACTS.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that the receipt of Tenders for Works at Tourville, Alderney, which was advertised to be received by the Director-general of Contracts, War Department, Pall-mall, London, on the 30th instant, is POSTPONED until the 31st of OCTOBER, 1856.
War Department, Pall-mall, London,
Sept. 16, 1856.

NOTICE to CONTRACTORS and BUILDERS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that the WORKS proposed to be performed to the FORTIFICATIONS at DOVER CASTLE, and for the execution of which Tenders were called for, are POSTPONED.
Royal Engineer's Office, Dover, September 17, 1856.

NOTICE to BUILDERS and CONTRACTORS.—The Commanding Royal Engineer at Guernsey, hereby gives Notice, that sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, until TUESDAY, the 23rd of SEPTEMBER, 1856, for CONSTRUCTING a small BATTERY, ERECTING BARRACK BUILDINGS, with enclosure walls, &c. and FORMING DITCHES, GLACIS, and ROAD, at HOMMET POINT, in the Island of Guernsey. Detailed drawings of the work may be seen, and every requisite information obtained, on application at the Royal Engineer Office, Guernsey, every day (Sundays excepted), between the hours of NINE and FOUR. The terms of contract, specification for the works, and forms of Tender, may be procured at the Director-General of Fortifications' Office, War Department, Pall-Mall, London, as well as at the Royal Engineer Office, Guernsey. Each Tender to be in one lump sum, in British sterling, for the whole work, to be attached to a copy of the terms of contract and specification, addressed to "The Director-General of Contracts, War Department, Pall-Mall, London," and endorsed, "Tender for Works at Hommet, Guernsey." The War Department reserve the right of rejecting any or all of the Tenders.
Royal Engineer Office, Guernsey, August 27, 1856.

NOTICE to BUILDERS and CONTRACTORS.—The Commanding Royal Engineer at Guernsey hereby gives Notice, that sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, until WEDNESDAY, the 8th of OCTOBER, 1856, for CONSTRUCTING a BATTERY and BARRACK BUILDINGS at Le Crocy, in the Island of Guernsey. The plans, specifications, conditions of contract, and form of Tender may be seen, and all other information obtained, on application at this Office, every day, Sundays excepted, between the hours of TEN and FOUR, from the 19th to the 30th inst. the whole of the work to be completed within eight calendar months from the date of notification of acceptance of Tender. The Tender to be in one lump sum in British sterling, for the whole work, to be attached to a copy of the terms of contract and specification, addressed to "The Director-General of Contracts, War Department, Pall-Mall, London," and endorsed "Tender for Works at Le Crocy, Guernsey." The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Guernsey, 8th September, 1856.

NOTICE to BUILDERS and CONTRACTORS—WAR DEPARTMENT WORKS.—The Commanding Royal Engineer at Guernsey gives notice that TENDERS for the ERECTION of a FORT and BARRACK BUILDINGS, on Richmond hill, Guernsey, will be received by the Director-General of Contracts, War Department, Pall-mall, London, on or before SATURDAY, the 27th day of SEPTEMBER instant, after which date no Tender will be received. Detailed drawings may be seen, and every requisite information obtained, at the Royal Engineer Office, Guernsey, on and after the 16th instant. Tenders for the above work to be on forms furnished from the Royal Engineer Office, Guernsey, and to be addressed to "The Director-General of Contracts, War Department, Pall-mall, London," and endorsed "Tender for Erecting a Fort and Barrack at Richmond-hill, Guernsey."
N.B.—The War Department reserve the right of rejecting any or the whole of the Tenders.
Royal Engineer Office, Guernsey, August 30, 1856.

TO BUILDERS.—Sealed TENDERS for BUILDING NEW BARRACKS for non-commissioned officers and married soldiers, at Devonport, including all requisite Fitments; also, separate Tenders for the Asphalte Work required for same, will be received at the War Department, Pall-Mall, London, on or before TUESDAY, the 30th of SEPTEMBER next, at NOON, addressed "To the Director-General of Contracts," and endorsed "Tender for Married Soldiers' Barracks, Devonport," or "Asphalte Work for Married Soldiers' Barracks, Devonport," (as the case may be), on the left-hand corner of the envelope. The barrack comprises—three blocks of two-story buildings, laundry, cook-houses, outbuildings, sail-pits, enclosure walls, gates, footpaths, roads, and parade.

Plans and specifications, with terms and conditions, may be seen, and forms for Tenders and every information obtained at the Royal Engineer's Office at Devonport, between the hours of NINE and FOUR o'clock on week-days, from MONDAY, the 15th, to SATURDAY, the 27th SEPTEMBER next, both days inclusive.
Royal Engineer's Office, Devonport, Sept. 3, 1856.

CONTRACTS.

NOTICE to STONE-MERCHANTS, CONTRACTORS, and OTHERS—ROYAL ENGINEER CONTRACT.—The War Department being about to enter into a CONTRACT for REPAIRS to ROADS, &c. of the Royal Artillery Barracks at Woolwich, such persons as may be desirous of tendering for the same, may inspect the specification, and receive all necessary information relative thereto, by applying to Mr. BARTWRIGHT, Clerk of Works, at the Royal Engineer Office, Grand Depôt, Woolwich, between the hours of TEN a.m. and FOUR p.m. up to the 2nd of OCTOBER, 1856. Tenders to be delivered at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on the 4th of OCTOBER, 1856. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.
Grand Depôt, Woolwich, 13th Sept. 1856.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, on or before SATURDAY, the 4th day of OCTOBER, 1856, from persons desirous of CONTRACTING with the War Department for ERECTING certain BLOCKS of BUILDINGS for the accommodation of married non-commissioned officers and soldiers of the Royal Sappers and Miners, near Brompton Barracks, Chatham. Plans may be seen, and specifications and forms of Tender obtained, on application at the Royal Engineer Office Chatham, between the hours of TEN and FOUR, till the 3rd of OCTOBER next. Sundays excepted. The person whose Tender may be accepted will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 1,500l. for the due performance of the Contract. Tenders to be addressed to "The Director-General of Contracts, War Department, Pall-mall, London," and to be delivered free, endorsed, "Tender for Works at Brompton Barracks, Chatham." No Tender can be admitted after the said 4th day of OCTOBER, 1856.
N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Chatham, 16th September, 1856.

TO DEALERS in BUILDING MATERIALS and OTHERS.—TENDERS are required by the Principal and Auditors of the Honourable Society of Saint Clement's Inn, for the PURCHASE and REMOVAL of the old MATERIALS comprised in the buildings belonging to them, being No. 8, St. Clement's-Inn, Strand. Particulars and conditions, &c. may be obtained on application at the Office of Mr. THOMAS GREGORY, the Steward, No. 13; and of Mr. BLACKBURNE, the Architect to the Society, No. 16, on and after SATURDAY, the 20th day of SEPTEMBER next. The Principal and Auditors reserve to themselves the right of rejecting, at their option, the whole or any of the Tenders.

CONTRACT.—ST. GEORGE the MARTYR, SOUTHWARK.—The Vestry of the above parish are desirous of receiving TENDERS from persons who are willing to Contract for REMOVING the DUST, ASHES, DIRT, RUBBISH, DECAYED VEGETABLES, ICE, SNOW, FILTH, and all REFUSE MATTER from the houses throughout this parish; and also for CARTING away the SLOP and STREET SWEEPINGS, when collected and swept up by the labourers of the Vestry, and the employment of proper slop and other carts, horses, and drivers for such purposes, from the 30th day of SEPTEMBER instant, for six or twelve months, at the option of the said Vestry. Such Tenders, with the names of two responsible parties, to be sent in to the Clerk's Office, on or before TWELVE o'clock at noon of MONDAY next, the 22nd day of SEPTEMBER, endorsed what the Tender is for.

The Vestry will not bind itself to accept the lowest or any Tender. No Tender will be accepted unless accompanied by a deposit of 5l. to be returned in the event of the Tender being accepted. All persons Tendering are desired personally to be present at the meeting of the Vestry, on MONDAY, the 22nd SEPTEMBER inst. at half past SEVEN o'clock in the evening, exact time in the Board-room at the Workhouse, in Union-road, Southwark, when forms and full particulars may be had at the Clerk's Office as below, and where a copy of the Contracts may be seen. The stamps on the Contractors' bonds to be provided by the Contractors.—By order of the Vestry,
FREDERICK TRITTON, Vestry Clerk.
49, Bridge House-place, Newington-causeway,
September 16, 1856.

FARRINGDON DRAINAGE.—TENDERS are requested for the CONSTRUCTION of about 1,000 yards of DRAINS in BRICKWORK, in the Tything of Westbrook, in the Parish of Faringdon, Berks, the sections and specifications for which may be seen at the Offices of Mr. JOHN DYKE, Faringdon, between the hours of TWO and SIX, until FRIDAY, the 26th inst. on which day all estimates are to be delivered to Mr. JOHN DYKE, endorsed, "Tender for Westbrook Drainage." The lowest or any Tender will not necessarily be accepted.

METROPOLIS LOCAL MANAGEMENT ACT.—Notice is hereby given, that the Vestry of Paddington are ready to receive TENDERS from parties willing to CONTRACT for the CONSTRUCTION of 1,300 feet of SEWER, more or less, in Third-street, Upper Porchester-street, and Connaught-terrace, together with other Works incident thereto. The Tenders to be sent, sealed, and directed "To the Vestry," and left at the Vestry-hall, Harrow-road, on or before MONDAY, the 6th of OCTOBER next; and persons sending Tenders are requested to be in attendance on the following morning, TUESDAY, at TEN o'clock precisely. Specification, plans, and sections may be seen, and all particulars obtained, from the Surveyor, at the Vestry-hall afore said, between the hours of TEN and TWELVE a.m. The party whose Tender may be accepted, will be required to provide two sureties, in the sum of 250l. for the due performance of the work. The expenses of the contract to be paid by the contractor. The Vestry do not bind themselves to accept the lowest or any Tender.—By order,
FREDR. AVELING, Vestry Clerk.
Paddington, Sept. 17, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

TO SEWER CONTRACTORS and BUILDERS.—The Vestry of the Parish of Clerkenwell will, at their Meeting on THURSDAY [illegible] at HALF PAST SIX o'clock in the evening, at the Vestry-hall, [illegible] Rosoman-street, CONTRACT for the BUILDING of a SEWER in Clerkenwell [illegible], in length about [illegible] feet, of which [illegible] specification may be seen by applying to Mr. BEVAN, the Surveyor, from TEN till TWELVE o'clock daily.—Tenders to be in a sealed cover addressed to the Clerk, and their nature expressed outside. None to be received after SIX o'clock on the day above mentioned.—By order,

THOMAS CROMWELL, Clerk of the Vestry.

Sept. [illegible], 1856.

TO PIPE-MAKERS and LAYERS, ROAD-MAKERS, and GENERAL CONTRACTORS.—The Burial Board for the Parish of West Ham, in the county of Essex are prepared to receive TENDERS from parties willing to contract for the general DRAINAGE of their new BURIAL-GROUND, situate near Forest-gate, in the said parish and county of Essex, and for the forming of [illegible] paths and roads, with gully holes, iron gratings, &c. and for the ploughing, sowing, and general adjustment [illegible] construction of from 1,700 to 1,800 feet lineal of 12-inch culvert and other works [illegible] may be seen at [illegible] of Mr. [illegible] F. KNIGHT [illegible], Architect, 25, Cannon-street, City. The general drainage [illegible] must be in one Tender; the culvert must also be tendered for separately [illegible] parts. Tenders [illegible], and marked "Tender for Making Roads, Drainage, &c." [illegible] to be addressed to Mr. JOHN SUTTON, Clerk to the Burial Board, Rokeby House, Stratford, Essex, and to be received by [illegible] on MONDAY, the [illegible] of OCTOBER, now next, after which hour no Tender will be received.

Dated September 13th, 1856.

SHOREDITCH.—BUILDING GROUND.—TENDERS will be received until MONDAY, the 6th of OCTOBER [illegible] for [illegible] LEASE [illegible] BUILDING LAND [illegible] upwards of [illegible] with an entrance from the High-street and partly abutting thereon.—Particulars may be obtained of Messrs. R. J. and H. CLUTTON, 9, Whitehall-place, where a plan may be seen.

THE Board of Works for the Limehouse District, comprising the parish of Limehouse, the hamlet of Ratcliff and the parishes of Shadwell and Wapping.—CONTRACT for FLINTS and GRAVEL BALLAST.—Notice is hereby given that the [illegible] at the Office of the Board, White Horse-street, Commercial-road East, on MONDAY, [illegible] SEPTEMBER [illegible] TENDERS [illegible] 400 CUBIC YARDS of the best picked Kent FLINTS, and also for the SUPPLY of 200 CUBIC YARDS of sifted GRAVEL BALLAST [illegible] contract [illegible] district. Further particulars [illegible] of Tender [illegible] the hours of TEN and FOUR. Tenders [illegible] respectively, "Tender for Flints," and "Tender for Gravel Ballast," must be delivered at the said Office, not later than THREE o'clock in the [illegible] do not bind themselves to accept the lowest or any Tender. No Tender will be received [illegible] the printed form [illegible].

[illegible]

White Horse-street, Commercial-road, September 18th, 1856.

TO BRICKMAKERS, DUST COLLECTORS, and OTHERS.—The Vestry of the Parish of St. Mary Abbotts, Kensington [illegible] WEDNESDAY [illegible] instant, at SEVEN o'clock [illegible] and to CONTRACT for the SALE and REMOVAL of the COAL-DUST, CINDERS, ASHES [illegible] and [illegible] in the said parish [illegible] TENTH [illegible] SEPTEMBER [illegible] The contractor will have to enter into a bond, and to provide two good and sufficient sureties [illegible] contract. [illegible] value of [illegible] Vestry have [illegible] two districts, which may be tendered for jointly or separately. Forms of Tenders and particulars may be obtained on application at the Vestry Office, Vestry Hall. No Tender will [illegible] unless [illegible] endorsed "Tenders for Dust," [illegible] Office on or before FOUR [illegible] instant. The Vestry [illegible] or any Tender. The expense of the contract [illegible] to be paid by the contractor.—By order,

REUBEN GREEN, Clerk of the Vestry.

Vestry Hall, Kensington, September [illegible].

TO SCAVENGERS, CARTERS, and OTHERS.—The Vestry of the Parish of St. Mary Abbotts, Kensington, in the county of Middlesex, will meet at the Vestry-hall, Kensington, on WEDNESDAY, the [illegible] at SEVEN o'clock in the Evening, to receive TENDERS and to CONTRACT for CARTING and CARRYING AWAY daily from all streets and places within the said parish of Kensington, the DUST, Dirt, Filth, Rain-water, Soil [illegible], Mud, Snow, and Ice that may be [illegible] collected together by the servants of the said Vestry, and as may be directed by Mr. JAMES BROADBRIDGE, the Surveyor [illegible] SEPTEMBER, 1856, to the 29th day of SEPTEMBER 1857, inclusive; and also to receive Tenders [illegible] supply of Horses and Carts, with proper carters, at per day and per load. The Vestry have divided the parish into two districts, which may be tendered for jointly or separately. Forms of Tender and further particulars may be obtained on application at the Vestry Offices, Vestry-hall. No Tender will be received unless [illegible] one of the said printed forms. Tenders [illegible] endorsed "Tenders for Scavenging," or "Tenders for Cartering," as the case may be, and to be delivered at the Clerk's Office on or before FOUR o'clock on the Afternoon of the 24th instant. The Vestry do not bind themselves to accept the lowest or any Tender. The expense of the contract to be paid by the contractor.—By order,

REUBEN GREEN, Clerk to the Vestry.

Vestry-hall, Kensington, Sept. 12, 1856.

WELCHPOOL LOCAL BOARD of HEALTH. Persons desirous to CONTRACT with the Local Board of Health for the District of Welchpool, in the County of Montgomery, for the LAYING and JOINTING of STONEWARE and CAST IRON SEWER PIPES, the CONSTRUCTION of BRICK SEWERS, the DEEPENING and improvement of [illegible] in [illegible] drawings, specifications [illegible] the [illegible] ROBERT DYMOND and SONS, Surveyors, Exeter [illegible] the lowest or any other Tender [illegible] Tenders must be sealed and endorsed, "Tender for Sewerage Works," and delivered on or before the [illegible] SEPTEMBER, 1856, [illegible] ALFRED [illegible],

Clerk to the Local Board of Health, Welchpool.

Welchpool, September [illegible].

WELCHPOOL WATERWORKS.—Persons desirous to CONTRACT with the Local Board of Health [illegible] Welchpool [illegible] Montgomery, for the CONSTRUCTION of a RESERVOIR, capable of containing about 4,0,0 0 cubic feet of Water, and other works in connection [illegible] ROBERT DYMOND and SONS, Surveyors, Exeter. The Board [illegible] endorsed "Tender for Reservoir," and delivered on or before the 29th day of SEPTEMBER, 1856, at the Office of [illegible]

[illegible] Clerk to the Local Board [illegible] Welchpool.

Welchpool, September [illegible], 1856.

CONTRACTS.

TO CONTRACTORS, BUILDERS, AND OTHERS.

TENDERS are required for the ERECTION of WEAVING SHEDS, &c. at Kidderminster. The plans and specifications may be seen and all other information obtained at the offices of the Architects, Messrs. BIDLAKE and LOVATT, Market-place, Wolverhampton, between the hours of TEN and FOUR until TUESDAY [illegible] instant, on which day, at NOON, all estimates are to be delivered to the Architects, sealed and endorsed, "Tender for Weaving Sheds at Kidderminster." The Architects do not bind themselves to accept the lowest or any Tender.

SUSSEX COUNTY LUNATIC ASYLUM.—To BUILDERS.—Persons willing to CONTRACT for sundry WORKS proposed to be done in ERECTING a PAUPER LUNATIC ASYLUM for the County of Sussex, on a plot of ground selected for the purpose, and situate on Hurst House Farm, in the parish of Wivelsfield, about a mile and a half from the railway station at Hayward's-heath, are required to send in Tenders, sealed up and endorsed "Tender for County Lunatic Asylum," to my Office, at Lewes, on or before TUESDAY, the 7th of OCTOBER next, after which time no Tender will be received. The works to be done under the direction of the Committee of Visitors and their Architect, or other person appointed by them, agreeably to plans, specification and conditions, which may be inspected at the Office of the Architect, Mr. H. E. KENDALL, Jun., [illegible]-square, London, on and after the 2[illegible] SEPTEMBER instant, between the hours of TEN and SIX. The Committee will not be bound to accept the lowest or any Tender, and the Contractor will be required to enter into a Contract, and to give a bond, with sufficient security to be approved by the Committee, in the sum of 5,000*l.* for the due performance of the Contract. The quantities can be obtained from Mr. THOMAS PERCY, of No. 1, Alfred-place, Bedford-square, London, Surveyor; and the usual charges of such surveyor are to be paid by the Contractor whose Tender may be accepted.

By order of the Committee of Visitors,

WM. POLHILL KELL, Clerk.

Lewes, September 6, 1856.

CONTRACT for ALTERATIONS of the GALLERY of the SOCIETY of BRITISH ARTISTS.—The drawings and specification may be seen at the Office of Mr. FRANCIS [illegible], Architect, [illegible], Fleet-street, until the afternoon of THURSDAY, the [illegible] SEPTEMBER. The Committee will not be bound to accept the lowest Tender.

SEVERN COMMISSION.—To CONTRACTORS.—The Commissioners for improving the Navigation of the River Severn are desirous of receiving TENDERS [illegible] CUBIC YARDS of EARTH [illegible] UPPER LODE [illegible] Mr. E. LEADER WILLIAMS [illegible] "Tenders [illegible] Severn Navigation," and marked outside "Tender for Earthwork," must be [illegible] The Commissioners do not bind themselves to accept the lowest or any Tender.

THOMAS WATERS,

Clerk to the Severn Commissioners.

Worcester, Sept. 13, 1856.

LYMINGTON RAILWAY.—CONTRACTS.—[illegible] TENDERS for the EXECUTION of the FENCING, EARTHWORK, BRICKWORK, LAYING and BALLASTING the PERMANENT WAY, and other WORKS necessary for completing about four miles of single line of railway, either together [illegible] Office of the Engineer, J. C. BIRKINSHAW, Esq. 23, Abingdon-street, Westminster; or on application to the Secretary, E. H. [illegible] sent, not later than WEDNESDAY, the 8th of OCTOBER next. The Directors [illegible] themselves to accept the lowest [illegible], Sept. [illegible], 1856.

HART and SON, MALLEABLE IRON FOUNDERS, 4, Vine-street, York-road, Lambeth. Orders for Malleable Iron Castings executed within a week.

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IRONMONGERS AND MANUFACTURERS,

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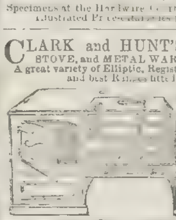
HINGES, GAS-STANDARDS, LOCKS, &c.

First-class Prize Medal, Paris Exhibition, 1855.

Specimens at the Hardware Court, Crystal Palace, Sydenham. Illustrated Price-catalogues sent free on application.

CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 159, Shoreditch. A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.



Improved Self-acting Cottage Ranges, with Large Oven and Boiler [illegible]

Best Self-acting Ranges with Oven and Back Boiler, Bright Wrought Bars—

34 36 38 42-inch

[illegible]

Strong Elliptic Stoves with Extra Back and Solid Bars, per in. 2½d.

Register Stoves, with [illegible]

Improved New Pattern Circular Cheek Ranges, with strong Bars and Trivits, 5d. per inch.

Best Sober ditto, with Fire Brick Backs, per inch, 1sd.

Bright Stoves with Two Fires, 4s. to [illegible] each.

Cast Rain-water Pipe { 2 2½ 3 inch. / 1 d 1s. 1d 1s 3 per yard.

Cast Gutters—4 inch, 8d. per yard.

O G Gutters.............. { 4 4½ inch. / 1s. 1s. 2d. per yard.

	9	3	4	5	6	
Patent Line......	3s. 6d.	4s.	5s.	7s.	9s.	per gross.

[illegible] per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.

[illegible] order.

[illegible] Nails.

1¼ in. 1½ in. 2 in. 2½ in. 3 in.

[illegible] per cwt.

Best [illegible] per cwt.

Best Cut Lath Nails.................................. [illegible]

ECONOMIC COOKING-STOVE.—DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co.'s establishment; where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and CO. (opening to the Monument), London-bridge. Established A.D. 1700.

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DR. ARNOTT'S SMOKE-CONSUMING GRATE.

Will this Grate become universally used?

Its advantages over every other construction:—

1. A saving of [illegible] per cent. in fuel.
2. Its being a cure for a Smoky Chimney.
3. Its not requiring one half the attention of an ordinary fire.
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A Prospectus, with a Second Series of Testimonials, just issued, from all parts of the country, will be sent on application.

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WARMING and VENTILATING.—ALFRED MAY begs to call the attention of Architects, Builders, and others to his system of WARMING by HOT WATER [illegible] Lunatic Asylums, Workhouses, Churches, and other Public and Horticultural Buildings, Mansions, [illegible]. A. M. having had great experience in the above [illegible] enabled to guarantee the efficiency of such works as may be entrusted to him for execution; he has just completed, to the entire satisfaction of [illegible] the warming and ventilation [illegible] and [illegible] Manufactory, [illegible], and at 59, Devonshire-street, Queen's-square, Bloomsbury.

Artificial heat applies for drying linen on a very economical and effective system.

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JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive [illegible] JOHN WEEKS and CO. [illegible] Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. [illegible] seen in extensive operation at their Premises, King's-road, Chelsea.

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THE LARGEST STOCK AT

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SAVING IN GAS.—D. HULETT, INVENTOR and PATENTEE.—The Mercurial Gas Regulator is the only efficient instrument [illegible] the height of the flame.—D. HULETT and CO., High Holborn, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

IRON CHURCHES, STORES, &c.—For SALE. Substantial Corrugated Iron Stores, Churches, Dwelling-houses, and every description of Building, adapted to all climates. Iron Roofs constructed for all parts of the world. An Iron Church with fittings for 7[illegible] people, for [illegible] sale. To view and for further particulars apply to SAMUEL HEMMING, Clift House Works, Bow, London.

IRON FOUNDRY, Harrow-street, Lant-street, Southwark.—W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Railing, and Newel Bars, Iron Coping, Panels, Tomb Enclosures, Area Gratings, Sash Weights, &c. [illegible] Fly and other Wheels, Riggers, Pinions, [illegible] and Lathe Castings; Forge Backs, Furnace Bars, Kilns, Pans, Pipes, Tank Plates, and other Castings, to patterns or drawings.

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D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on hand; every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern-book and price-list, 10s. [illegible] and 56, High Holborn.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, supply Lightning Conductors, with the point and all staples complete for fixing, at [illegible] the foot.

R. S. NEWALL and CO.'S Patent Copper Rope Conductor is being applied by architects, engineers, and [illegible] in all parts of the world.

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From BIRMINGHAM direct.

Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the

LOWEST BIRMINGHAM PRICES.

A complete LIST of which will be forwarded upon application to

BLYTH and BIANCHI,

Nail Manufacturers and General Factors, BIRMINGHAM; or at 1[illegible], Gresham-street, LONDON.

WILSON, LAW, and COMPANY,

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PATENT GAS AND WATER-PIPES.

TO BOILER-MAKERS and ENGINEERS.—WANTED a SECOND-HAND CORNISH, or TUBULAR BOILER, from [illegible] to [illegible] horse-power. Must be in [illegible] condition.—Address, stating price and full particulars, to J. T. BURKE and CO. India-rubber Manufacturers, 3, Gresham-street, City.

BOILER WANTED.—A good strong 10 horse EGG-END BOILER, with valve and steam-gauge, complete [illegible]—Apply [illegible] Messrs. [illegible] and JONES, [illegible], 4 and 5, Jewry-street, Aldgate.

VENTILATING STOVES! SUSPENSION STOVES!—Approved by thousands of purchasers, and recommended as the two best, cheapest, most healthy, and economical [illegible] DEANE, DRAY, and [illegible] Ironmongery and Furnishing Warehouse, London-bridge.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

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CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

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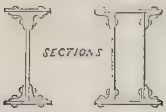

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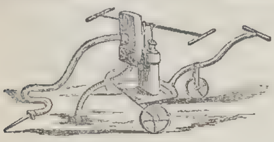

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SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.

The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve ways three times usual size, [illegible] liquors of all kinds, [illegible] is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

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SINGLE AND DOUBLE PUMPS IN WROUGHT IRON

TO ANY DEPTH,

FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.

Sizes, from 3-inch to 15-inch barrels.

N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

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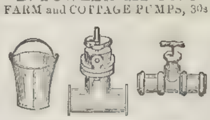
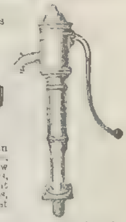
FARM and COTTAGE PUMPS, 30s.





All sizes and descriptions of Pumps in various [illegible] for [illegible] for deep [illegible] wells. Brass Lift Pumps, Fire Engines, Horse [illegible], Wrought Pails, and [illegible] Baskets, Sewer [illegible], Steam and Hot Water [illegible] at lowest prices.

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AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.

COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT IRON RACK, united to an iron top [illegible] and forming one complete and [illegible] fixture having [illegible] Patent [illegible] Halter Guide and Collar-Rein attached, the [illegible] back of the manger, and works with [illegible] freedom up or down the [illegible]. Cottam's new Patent Seed Box, of galvanized sheet iron, is an important addition to the [illegible] construction, light and durable, [illegible] and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

Improved Harness [illegible], for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings. Cheap and Durable [illegible].

Improved [illegible], with safety covers, Sanitary Traps, and every article for the harness room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.

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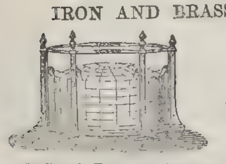

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Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds; these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c.

Gas Cooking Stoves and Ranges on the most improved principles.

GAS-FITTING IN ALL ITS BRANCHES.

GAS CHANDELIERS OF ALL SIZES, IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS. DEVICES FOR GAS ILLUMINATION.

IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.

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Signals for communication between Guard and Engine Driver. Railway Stoves and Lamps of every description.

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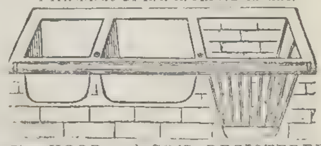

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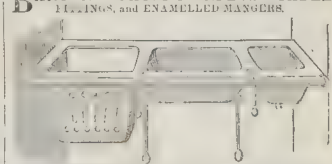

THESE FITTINGS will be found to possess all the latest and most important improvements and are of the best manufacture. All kinds of Stable furniture in stock. Iron Hurdles, Gates, Fencing, Tombrailing, &c. New illustrated Catalogues forwarded on receipt of two postage stamps. JAMES BARTON, Ironfounder, & 370, Oxford-street, London.

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TESTIMONIALS.

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"GENTLEMEN,—We have been using almost exclusively, for the last three years, your Packing to our stuffing boxes and steam and water joints, previous to which time we tried all the sorts which came under our notice, but [illegible] we consider decidedly the best and most economical. We are, yours respectfully,

"[illegible] and Sons."

"King and Queen Iron Works, Rotherhithe,

"London, Nov. 11, 1854.

"GENTLEMEN,—We have tried your Patent Packing for some time [illegible] steam-engines, and also in [illegible], and find it efficient and economical, and to be much superior to the ordinary hemp packing. It is especially suited [illegible] slide valve. Yours truly, "HOWARD RAVENHILL and CO."

"Works, [illegible], Jan. [illegible], 1856.

"I have pleasure in stating that the Packing of Messrs. S. W. Silver and Co. has been in use in the various parts of the engines on board the steam-ships of the company, and gives very satisfaction. "J. BEARDMORE, Engineer.

"General Steam Navigation Company."

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TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c.—The [illegible] best [illegible] Gas Pendants, [illegible] in Brass and Iron; Tin, Composition, Iron and Brass [illegible], Rings and Lacquered Case Tube for Picture Rods, [illegible].

Superior [illegible] Brass for Engravers, Castings in Fine and Common [illegible], &c. at RICHARD [illegible]'S Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

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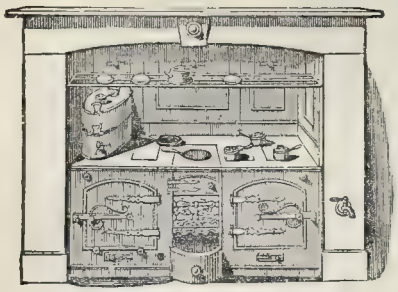

The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

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TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1¼	7s. 0d.
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15	2	8s. 6d.
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THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches) is now being extensively used in the lead to GAS-WORKS, DOCK BUILDINGS, BANKS, ASYLUMS, BRIDGES, VIADUCTS, PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in London and in all parts of the Kingdom.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.
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JOHN TANN'S NEW PATENT RELIANCE LOCK and CHEMICAL-FILLED WROUGHT-IRON FIRE-PROOF SAFES, DOORS, &c. &c. Manufacturers of cash, deed, and paper boxes, embossing and copying presses, letter balances, and every description of lever locks and street door latches. To be had at the General Lock and Safe Warehouse, 30, Walbrook, City. List of prices on application.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Sliding Spindles; Dr. Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, so much admired, &c. &c. &c. each.

J. H. BOOBBYER (late STRUCH and BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.
14, Stanhope street, Clare market, London.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, 2½d. per inch, and upwards.
Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
3 ft., 2l. 16s.; 3 ft. 6 in., 2l.; 4 ft., 2l. 15s.
3-feet Cottage Ranges, with ovens and back boilers, 33s. each.
3 feet self-acting ditto, ditto, 34s. each.
Air Bricks, 4s. per doz.
Best Town Glue, 5½d. Ditto, Scotch, 6½d. per cwt.
Best Fine Cut Clasp and Rose.

1½	1¾	2	2½	3-in. & larger.
16s. 6d.	16s. 6d.	15s. 6d.	15s. 6d.	15s. 14s. per cwt.

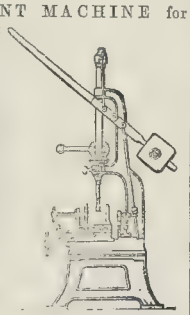
And every material required in the building, bell-hanging, upholstery, and brass-foundry trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter prepaid.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axle trees, sugar-mills, &c.

WOOD-CUTTING MACHINERY,
JOHN M'DOWALL and SONS,
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,
MANUFACTURERS of VERTICAL SAW-FRAMES
(driven by straps),
For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached; circular cross-cut radial sawing machines; patent reversible ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a ¼ of an inch thick to 6-inch deck planks; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power mortising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 30 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.

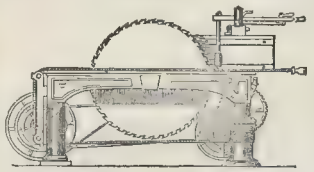
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 58, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines, for Sawing, Planing, Grooving, and Moulding Wood. They have now in hand machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches, and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace.—A descriptive Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. King's-road, Chelsea, London

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GREAT REDUCTION IN PRICES.
RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	10d.	1s. 1d.	1s. 3d.	1s 7d.	1s. 10d.	2s. 4d.	2s. 8d.
Half-round Gutters	7d.		8d.	9d.	1s.	1s. 2d.	
O G Gutters				1s 0d	1s 1d.	1s. 3d.	1s 4d.
Ditto, with plain clips cast on				1s 1d.	1s 2d	1s. 4d.	1s 6d.
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Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.
Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

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A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.
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BATHS, RANGES, GAS-STOVES,
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GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.				
12	"	20	"	
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Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.
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BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,

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No necessity for Iron Cramps and Bond-stones and the Stone Ashlar never injuriously weighted by the settlement of the Mortar-joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences. It can be had ready for fixing from the quarries at a small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

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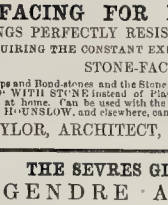

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Veins, in blocks of ordinary dimensions, 8s. 6d. per foot cube.
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A Capital Travelling Crane for Sale.

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The Builder.

VOL. XIV.—No. 711.

HOSPITALS, more than any other buildings, demand the most careful arrangements—not merely for the ample supply of air, but to ensure that the air so supplied be *pure*. So little has this been attended to in days gone by that there are many hospitals in this country where, as soon as the wards get full, fevers and other disorders appear, and it is difficult to effect a cure in many cases which, under other circumstances, would be overcome without difficulty. A leading Edinburgh professor, in some recently published "Memoirs," says,—"I have often stated and taught that, if our present medical, surgical, and obstetric hospitals were changed, from being crowded palaces with a layer of sick in each flat, into villages or cottages with one, or at most two, patients in each room, a great saving of human life would be effected. And if the village were constructed of iron (as is now sometimes done for other purposes), instead of brick or stone, it could be taken down and rebuilt every few years; a matter, apparently, of much moment in hospital hygiene. Besides, the value of the material would not greatly deteriorate from use: the principal outlay would be in the first cost of it. It could be erected in any vacant space or spaces of ground, within or around a city, that chanced to be unoccupied; and, in cases of epidemics, the accommodation could always be at once and readily increased."

There is value in the hint, but it is only in exceptional cases that it could be resorted to. Hospitals must still be erected, and we must take care that every available means be used to render them healthful and fit for their purpose. Some of our military hospitals are disgraceful to the scientific character of the country, and it never fell to our lot to visit any in which there were not obvious errors that might have been avoided. With respect to the vital importance of fresh air for the maintenance of life, it would really seem as if the world were not to be convinced on this head: you may remind them of the black-hole-of-Calcutta story; of the canary-bird that dies in a night hung up under your bed-curtains; or of the 250 Coolies who, in a few hours, were killed a year or so ago in an American vessel, by having been forced under hatches. It is all of no use: the facts are assented to: the necessity of plenty of air is fully admitted; and then, on the very first occasion, the assenters proceed to act as if they had never heard of such a necessity, or did not believe in it if they had.

We have long fought for fresh air,—fresh air everywhere. What we would now more especially speak of is the arrangement of hospitals for the sick and wounded,—a subject the more urgent because of the large sums about to be spent in the provision of additional structures of that kind.

Mr. John Robertson, surgeon, of Manchester, in a paper read recently at the Statistical Society of that town, says,—

"I have long thought that in constructing hospitals we have been in the habit of confounding together two things widely different, namely, *sick wards and dormitories*; wards, where the sick and wounded lie continuously throughout the day and night, with dormitories occupied by the healthy for only eight or nine hours in the twenty-four; — of confounding wards — where cubic air space, though highly important, is a secondary consideration to the getting rid of fœtid and pestiferous exhalations by a continual renewal of the atmosphere—with dormitories, in which ample cubic air space is all that is required. It has been owing to ignorance or inattention to this essential difference between wards for the sick and dormitories for the healthy, that we have few hospitals in England that are not insalubrious whenever they chance to be crowded; and which, when crowded with such cases as burns, compound fractures, and extensive ulcers, are often the abodes of death, occurring in forms most humbling and mortifying to the pride of surgical science; since the surgeon, in such circumstances, is aware that the poor sufferers have been carried to a public institution to their destruction; and that had they been treated by him in their own homes, howsoever humble these might be, the chances of recovery would have been greater."

Mr. Robertson refers more than once to this prime defect in the great majority of our hospitals, that of their being constructed after the plan of a hotel, well suited to have lodged persons in a state of health, but incapable of the proper degree of ventilation when crowded with sick, especially those of a surgical class. There is, moreover, another evil attaching to this plan of building, distinct from the other—the creation of what is justly denominated *an hospital atmosphere*, which arises from the wards communicating with one another by passages and stairs. It is owing to this kind of intercommunication that, if a foul state of the air happen in only a single ward, such foul air spreads and speedily pollutes the entire building. "In a few of our hospitals," says he, "the plan of construction is good; in the majority, bad; but in not one of them that I have seen, is the plan such as to render impossible the formation of an *hospital atmosphere*; yet this all-important object has been attained on the continent in several instances, where we have a plan of construction at once ingenious and perfectly successful,—a plan that, when first seen and understood, never fails to excite feelings of pleasure and admiration. I allude, more particularly, to the Bordeaux Hospital, the most attractive, altogether, that I have examined; although it must be admitted that the Saint John's Hospital, Brussels, the new Lariboisaire and the Beaujon Hospitals, Paris, are built after the same plan, and are, perhaps, not very much inferior."

Annexed we give the ground-plan of the Bordeaux hospital, with some references to explain the appropriation of the several parts. Passing into the hospital by the centre gateway, the visitor beholds a beautiful court, for the most part planted with evergreens and flowering shrubs; and, on the two sides thereof, facing each other, a succession of pavilions or tiers of building, standing parallel, and having the ends towards the square. The tiers of building are separated from each other by a flower garden, and in these tiers are the sick-wards, each ward isolated from the rest. You enter the sick-ward from the open air, under the cover of an arcade, which runs along the ends of the different tiers; and, when you return, it is by the same door through which you entered: there is no intercommunication by doors or passages between any of the wards. When in a ward you behold a spacious, lofty, cheerful apartment, 140 feet in length, fitted to contain forty beds, and having tall windows on opposite sides facing each other. The wards in the upper stories are entered, in the same manner as those beneath, out of an open arcade; and in every ward when you look out of a window it is into a garden, there being, as before mentioned, a garden between each pair of tiers of building. In one word—for this is the important point,—every ward is in itself a separate hospital, and the foul air from one ward cannot enter into another, because, by the windows, it passes and is dispersed into the external atmosphere.

We may mention, as an advantage connected with this kind of arrangement, that there is no limit to the size of the hospital or the number of beds: only enlarge sufficiently the court, and multiply the separate tiers of building, and you may lodge thousands of patients without the risk of engendering an hospital atmosphere.

The principles carried out in the arrangement at Bordeaux were laid down seventy years ago, after long investigation, by a number of skilful medical men in France so as best to unite health and convenience in such an edifice. "One of the conditions," says Mr. Gwilt, "prescribed by their programme, was the complete insulation of each apartment, as well as an easy communication by covered galleries round the building, and these were required to be of such extended dimensions, that the air around should be unobstructed and circulating in every part with freedom, thus affording a wholesome promenade for the patients."* Durand, in his *Parallèle d'Edifices*, gives the plans of many of the finest hospitals in Europe, and amongst them the plan of the Hospital de la Roquette, the designs for which were made by Poyet, about 1788, on the instructions referred to. "In this design each room, as well those on one side of the establishment for the males, as those on the other side for the females, is appropriated to one particular disease. Each of these rooms is about 32 feet wide, and 30 feet 6 inches high. Behind the beds (which are in two rows in each room), runs a passage, about 3 feet 4 inches wide, which removes them so much from the walls, and allows therefore of the necessary waiting on the invalids, and hides the wardrobe attached to each bed in the window recesses. Above these passages, which are about 6 feet 6 inches high, is arranged on each side a row of windows, by which ventilation as well as light is obtained."

It would be better if the open gardens between the wards at Bordeaux were wider, so as to ensure a visit from the rays of the sun.

In the new hospital at Malines, built from the designs of M. Chas. Drossaert, the same principle of arrangement is followed, but the open lawns between the projecting wards are wider: they are made in all cases twice as wide as the height of the buildings, which enclose them on three sides; and further, a small apartment or anteroom is interposed in every case between the wards and the "latrines,"—a much more important matter than some in England seem to think. The first stone of this hospital was laid by the King of the Belgians on the 3rd of July, 1854, and it was roofed in at the end of last year. Complete illustrations of it will be found in the *Journal Belge de l'Architecture*, seventh year.

The Hospital *du Clos St. Lazare*, in Paris, built under the direction of M. Gauthier, architect, exhibits the same arrangement as that of Bordeaux,—indeed, the latter seems to have influenced all that have been built since in France. M. Gauthier's hospital contains 600 beds, and, including the land, cost rather more than 560*l.* per bed!

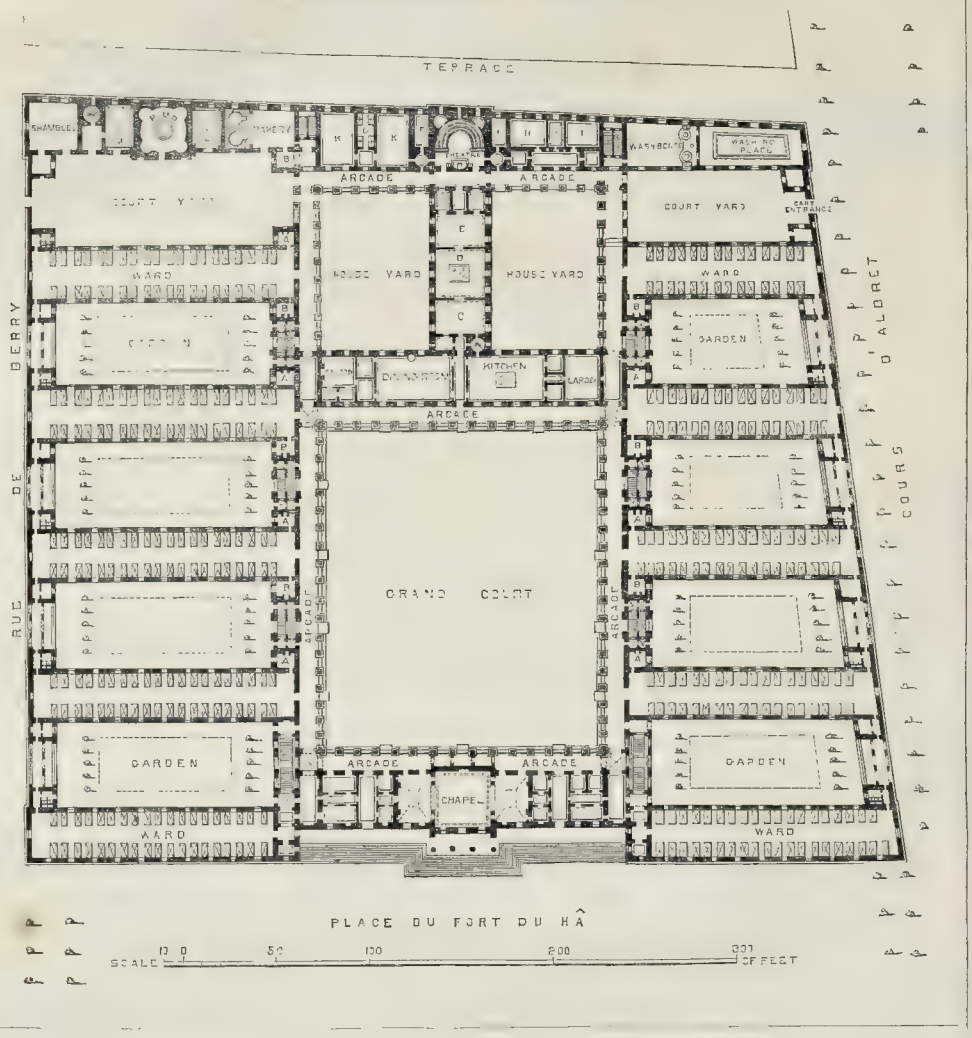
Returning to Mr. Robertson's clear and intelligent paper, we may educe the following recommendations:—

1. That the site of an hospital be an elevation to the windward of a city; that it be of ample space, on a soil naturally dry or of easy drainage; and, that no inconvenience may arise from distance, there should be "accident rooms" in the larger thoroughfares, as there are in Paris, where sufferers can be carried at once and obtain assistance.

2. That every sick ward of an hospital occupy

* Cyclopædia of Architecture.

THE BORDEAUX HOSPITAL: GROUND PLAN.



the breadth of the floor, and have *windows facing each other on the opposite side-walls*, through which, when they are thrown open, the air may circulate and purify the apartment. When a ward has windows on one side and a dead wall on the other, it cannot be healthful.

3. Modes of ventilation called "scientific," which may answer for mere dormitories, fail in an hospital; where effluvia from the bodies of the sick, and fætor from ulcers, wounds, burns, and vitiated excretions pollute the atmosphere, so as no ventilation can dissipate other than nature's, namely, the ceaseless flow of the external air through the ward.

4. As, however, in stormy weather, an unrestrained circulation of the atmosphere, by open windows, even though moderated by curtains and blinds, is not always desirable, the air-currents, by means of finely perforated zinc-plates, can be made to percolate into the wards, as in the Middlesex Hospital, in so subtle a manner as to be entirely robbed of sensible draughts, and thus the blessing of pure air be obtained, as it were, by stealth.

5. The cubic air space for each patient in a ward ought not to be less than 2,000 feet, or nearly double the average space found in most provincial hospitals.

6. The windows in a ward, not only for ventilation, but for another most important object—the admission of light—ought to be tall. In nearly all country hospitals the windows are short, not reaching to within a number of feet of the ceiling, on which account the upper stratum of foul air, supposing the windows thrown open, does not escape.

7. The heating of wards by other means than open fire-places or stoves is injurious, because heat both promotes the rapid decomposition of foul excretions, and also increases the discomfort of the feverish sick, by surrounding them with an unnaturally dry, hot atmosphere. And

8. The bedsteads to be of iron, having light curtains without tester, and so arranged along the walls as in no case to stand opposite a window. In many hospitals, if you open the windows the air rushes upon the patient, and that, too, when they are unprotected by curtains. The convalescents to have a separate eating-room. Every fouled article to be passed from the ward by a discharging shaft in the wall; and nurses and other attendants, as well as the patients, to observe the strictest habits of cleanliness.

Last month we gave the ground-plan and a view of the Victoria Military Hospital, now in course of erection near Southampton. Considerable pains were taken, there is reason to believe, in the preparation of the designs for this building, and in many respects we have no doubt it will be found satisfactory. The committee to whom the arrangements of the building were referred, show, in their report, how widely they inquired for information. Nevertheless, as it seems to us, some very serious mistakes have been made: we would especially refer to the placing of the baths and the "latrines" together, and the position of the latter between sick-wards! It may not be too late to remedy this. Should the proposed arrangement be carried out, whenever this hospital shall be full of patients, more disease will be

generated there than cured. This is a strong assertion, but we speak with the results of actual experience before us, and we trust Mr. Mennie will take it into consideration, and make an alteration in his plan. On another point, although not one affecting life and death, we feel very strongly, and that is as to the employment of "cement dressings." Surely, in a national building, intended to last for ages—at least it should be so—this miserable sort of patchwork ought not to be used. Away with it altogether, and let us have good honest brickwork in its stead.

References to Plan of Bordeaux Hospital.

AA. Nurses.	G. Dead-house.
BB. Office.	H. Men's Baths.
C. Dispensary.	I. Women's Baths.
D. Laboratory.	K.K. Dissecting-room.
E. Drug Depôt.	L. Coach-house.
FF. Closet.	M. Stables.

ENGLISH AND FRENCH CITIES AND TOWNS.

CESSPOOLS *versus* SEWERS.

COMPARISONS have recently been made betwixt London and Paris,—English towns and French towns; the conclusions drawn being generally in favour of France; the English climate, coal fires and smoke, having numerous evils laid to their account. That Paris is a cleaner-looking city than London, we will not deny: that a French atmosphere is brighter and clearer than a British atmosphere, we will not dispute; but we are not prepared to acknowledge any large balance, either of natural or of artificial advantages against Old England. Home comfort is to be preferred before external grandeur; and health, with foul weather, is better than disease with bright days.

The great test (as far as man is concerned) of any climate, country, or city, is the Registrar-General's return. Not that such a return proves one climate to be better than another, but merely that it proves the existence of facts of more importance to the human race than a comparative amount of sunshine.

Paris contains many grand buildings, well placed; fine streets, open boulevards, noble monuments, a clear atmosphere, a clean surface, and an uncontaminated river. London also contains many grand buildings, but they are ill placed. There are some fine streets, but no boulevards: there are, however, unrivalled parks. The atmosphere of London is not very clear, neither is the Thames very clean. But would Englishmen, as the price for these "blessings," give up coal-fires, the tides of the Thames, and the commerce? Men must be contented with possibilities. The river Thames will never be freed from tidal mud, however well the Metropolitan Board may "intercept" and "sewer:" the atmosphere will never have a continental brilliancy, even should coal-fires be abolished, or all the smoke be consumed.

Notwithstanding all that has been written on sanitary science, very little of that subject is really understood and acted upon. Paris and the Seine are named as superior to anything English. The city, its public buildings, its streets, its fountains, its sewers, its river and quay walls are set before us as examples to be imitated. It is true, fine buildings are only grand objects when well placed; and if we could induce thought as to site, we should not again expend millions in raising a pile of carved stones where the whole basement, and even the ground-floor, are below the surface level of river tides. Improvement in British architecture is possible, and even with our free institutions, is practicable; but we must confess to the necessity for a little wholesome despotism now and then to direct, if not to overrule, local freedom. Can the metropolis of Great Britain be well governed by numerous local Boards? We shall see! Up to this time several of the district Boards have paid in salaries about 100 per cent. for the actual work done: that is, the rates are about equally divided betwixt salaries and works. We may be told the Boards are in their infancy, and that there has not been time to devise and commence works. There may be truth in this. How long would it have taken the Emperor of the French and his council to have settled preliminaries?

As it is not our intention to open up the question of Despotism *versus* Freedom, holding to freedom, even with its defects, we propose contrasting English and French practice in sanitary works. Paris, to the eye, is a very clean city: London, judged by sight alone, is very dirty. We must, however, again refer to the returns of the Registrar-General for practical results; and then we find that, although the metropolis of Great Britain numbers more than double the population of Paris,—though we have a damp, dull-looking, smoke-laden atmosphere, and a foul river,—we nevertheless have a lower rate of mortality. There must be reasons for such a result, if we can find them. Let us examine one set of works, and analyze the regulations under which they are used, striving to see if anything useful can be learned. The River Seine is not contaminated by sewage as the River Thames is, although there would be no tidal return and oscillation. The buildings of Paris do not drain into sewers, but the whole of the house-soil and slop refuse is passed into *pseudo*-hermetically-closed cesspools. These cesspools are constructed under regulations, and the superintendence of the municipal body or their officers. They are also emptied by the same authorities, and a very large return is obtained by sale of the manure after it has been deodorized. The system is considered perfect by its supporters: it has been lauded by public writers; and those who only judge from surface appearances conscientiously think the Paris plan of cesspool sewerage should be imitated. But these gentlemen have probably never lived long in Paris; or if they have resided there, it has not occurred to them that the sharp and subtle stench now and then met with can have anything to do with the cesspools; neither are they conscious that such a stream of gas may be more deadly than a wound by a naked sword. The French pay a terrible penalty for their cesspool system. Their clear atmosphere and clean river do not save them from the subtle, unseen, but most deadly gases of decomposition. This cesspool taint must have something electric in it, as it pervades all available space. On a bright warm day the doors and windows of a house may stand open from morn to night without bringing relief: it is not to be blown out. The boasted hermetical sealing is only a delusion and a snare. Fermentation takes place, and the gases of decomposition force a passage through every chink and cranny, as also back along the pipes and ducts which convey the refuse. There is no such thing as a "stench-trap" in existence, nor ever will be. As previously stated, the Paris cesspools are emptied by servants of the municipal body, and no doubt many persons consider that to empty a cesspool is, for a time, to remove the cause of contamination. This, however, is not so. The sides of a cesspool are foul from infiltration, the bottom is never entirely cleared from sediment, and there is soon a covering of liquid, so that there is a larger area of decomposition, and more cubical space for the deadly gases generated. A cesspool must be a foul abomination, if near a human dwelling, under any management.

London is not without cesspools: there are thousands beneath dwelling-houses, and connected with them; but, fortunately, they never became municipal property. The small area covered by the City, and the defective powers of parish boards beyond City limits, have probably saved the English people from constructions so fatal to health and life. Better all the soil refuse of a city in the gutters, on the surface, or in the river, where the sun may dry it, the air ventilate it, the rain wash it, and the river dilute and remove it, than stored in cesspools, to undergo continuous fermentation and decomposition; but better still the instant removal of all soil and slop refuse (before decomposition commences), by means of drains and sewers, to some common outlet, where it can be applied at once to land for agricultural purposes. To obtain such results will be worth almost any pecuniary cost, supposing the whole outlay to be a loss; but, like all true improvements, such plan is the most economical.

Sewers were constructed in the remotest antiquity: they are found in ancient Rome, on the sites of cities of Etruria, and Layard has bared them amidst Assyrian ruins. Some of the City and metropolitan sewers are centuries old, but the greatest number and length have been devised and completed within the memory of men now living. The oldest sewers of London were not constructed to remove soil refuse, but to lead below the surface the contents of street gutters. What these consisted of is forcibly told by Swift in "The City Shower."

The first sanitary commission, however, proved the evils of cesspools, and advantages of sewers. The first General Board of Health aided in spreading information and in forming local boards, so that there have probably been more sewers formed during the last seven years than at any previous period in the world's history—taking the metropolis and the provinces. There has been opposition—violent and most unscrupulous class prejudices have been offended—monopoly has been assailed, and, as usual, there has been reaction. The oldest and most earnest workers in sanitary science, are repudiated—turned adrift, and the heads of the opposing faction are triumphant. It is one thing to gain a victory: it is another thing to profit by it. Time will bring results, and men free from partialities and prejudices will give judgment. As to the social value of cesspools and sewers, the mortality returns must be the test. There are other regulations and conditions necessary to health: no city having a cesspool system can be healthy, however grand or clean. Sewers and drains can alone remove the greatest cause of disease, however perfect. There must be ventilation and cubic air space within habitable rooms. Architecturally Paris may be grander than London—the Seine is no doubt cleaner than the Thames; but in sewerage and drainage, although there is much still to do in the British metropolis, yet Englishmen must not learn what to do in Paris, but what to avoid doing. Cesspools must be abolished: sewers and drains of transmission are alone admissible.

ENDEAVOURS AT EDMONTON.

ANOTHER great offshoot of London will, before long, have been established in the green fields of Hornsey and Tottenham. Towards Edmonton, along the "Seven Sisters Road," from Holloway to Tottenham, many villas have been already completed, and on almost every plot of land is a notice that it may be had on a building lease; so that not many years will pass ere the great coach road through Edmonton will have reacquired its former consequence. The neighbourhood at present, however, presents a curious appearance of change. Many of the dwellings in the old-fashioned houses in the pleasant little parks have moved farther from the range of bricks and mortar. From Edmonton, where a local Board of Health has been established, we have received a few particulars respecting the dwellings of the poorer part of the inhabitants. There, as is the case with other similar neighbourhoods, rows of small cottages closely abut upon the open streams, which, as a matter of course, soon become putrid ditches. We are told, however, that at Edmonton the whole of the cesspools have been got rid of, and that the Mosell ditch, or river, as some call it, now flows clearly and cheerfully along below the numerous wooden bridges which lead to the cottages. This stream was formerly the means of carrying off all the refuse of the closets. It is now clear of pollution, and the place is drained by a sufficient fall to where the matters are solidified, and, in the shape of English guano, spread upon the surrounding fields. "Some thousands of tons of this valuable material will be available," say our informants, "and we think that the important consideration of drainage has been now taken up in an enlightened manner."

It is creditable to those concerned to look so far ahead. The bulk of the inhabitants, however, complain of the expense; and it is, unfortunately the case that some of them cannot be made to appreciate the advantages of good, or the danger of bad, conditions of drainage.

There is sufficient reason for complaint of the water supply of this neighbourhood at present. To a considerable extent the people had depended for this necessary upon the wells which were sunk in almost every garden. The greater portion of them were shallow, and would, in a great measure, be impure, in consequence of the filtration from the surface. All the surface wells, like the cesspools, have been closed; and it unfortunately happens that a deep well, lately sunk, on which the authorities had depended for a supply, is partly a failure. This, it is hoped, will soon be remedied; but in the meantime the people are sadly off. Some of the wells of water from the chalk are allowed to be used; and one of them was the only water supply available for use for a long row of cottages. Too great exertions cannot be made to remedy this evil, for a short water supply is liable to make people look with impatience at the means in progress, however wise.

SOCIAL HISTORY OF PAST TIMES.*

THE past is the great teacher of the present, whether by warning or by example, and even where no useful inference can well be drawn from the experience of our ancestors, it is always interesting to become acquainted with their general habits and practices, their laws and customs. The provincial literary talent of the country could not well be exercised to better purpose, or in a way more interesting and instructive to the public of the present day, than in researches amongst the documentary and other records of every county in the kingdom, and in the consequent preparation, from such materials, of popular treatises on their social and general history. A good deal, indeed, already has been done towards this desirable end in some of our counties, but an immense field remains untouched. As a basis for the general history of the country, such materials—so arranged—would be invaluable; but the history that is to be extensively based on such foundations yet remains to be written, and, indeed, its materials yet to be collected.

Two valuable contributions towards this important end have just been published, and we propose to take a hasty dip here and there into these, leaving it to the accidental upshot to determine whether what we may have fished out shall be useful, either for warning or for example, or for neither; but in the latter case, at all events, we cannot fail to find some little matter of curiosity and interest to our readers worthy of perusal. "Mankind," as Mr. Roberts, in his "Social History of the Southern Counties of England," truly remarks, "will ever, while civilization is retained, delight in learning what their ancestors did (especially) in periods remarkable for striking incidents. They may not always desire to know of precedents for imitation, but may seek for facts that will furnish a good subject for comment, perhaps for censure, often for glorification of the present day; while the admirers of everything bygone will continue to the end of the chapter to see in the past superiority over the passing age."

In the south-west of England, where the red marl abounded, mud houses, or mud mixed with chopped straw, called cob, were of old constructed upon a stone foundation. In other parts, a stone foundation, carried up of the same material, was succeeded by a wooden framework, with mud between, and the whole whitewashed.

"In towns," says Mr. Roberts, "few houses were built of stone. The expense was so much greater than was incurred for those of wood or timber framework [illegible] found in Bristol and most of our country towns. The stories projected, so that the upper rooms were the longest; and in narrow streets persons could almost shake hands out of the topmost windows. The plasterers filled up the space between the framework. The souterrain or cellar had no groined roof, as in the more costly buildings of cities: it was entered from the street by steep steps, which encroached upon the roadway. Low doors and a trap secured the entrance. The shop was on the ground-floor, with stalls or bulkheads (a word often contracted into *bulks*) open to the street, in which were no glass windows—another reason why our ancestors hailed the return of summer. The framework of the Vicarage of Lyme, destroyed in the siege of 1664, was rebuilt at a cost of 12*l*.

When houses were constructed of wooden framework, we can understand why aldermen were provided with a proper hook and cord. In case of fire these were used to pull down the wooden framework buildings in flames. * * * *

In ordinary residences there was no ceiling. The under side of the planking of the floors was whitewashed, and this was the ceiling, so to speak, of the lower room. A ceiling to rooms raised the character of the house.

The plaster was spread upon reeds as well as upon laths, and was mainly composed, in the towns near the greensand formation, of *Fox mould* sand or earth. Near Lyme people dug pits close to the king's highway, which were very dangerous, and the material thrown about made the way almost impassable."

Chimneys were rare in the country towns in the reign of Queen Elizabeth. Leland had expressed some wonder at a chimney in Bolton Castle. Fireplaces and chimneys were built very often of plaster only.

The burning of limestone in a kiln was not practised. Neither coal nor culm was used for the purpose. A skilful lime-burner used wood and frith upon the hills to calcine a mass of stone, very ingeniously disposed so that all should feel an equal degree of heat. Lime-burning was a trade—an art. Very little lime was used.

The Somersetshire churches have been famed. They were constructed of an inferior oolite from Hamden-hill, commonly called Ham-hill, near Crewkerne. Beer-stone for interiors, a free-stone where the chalk and greensand pass insensibly the one into the other, was much used.

"Portland, Purbeck, and Petworth quarries were early known; but the expense of conveying the material to a distance, except for churches and great houses, kept the use of it within very narrow limits. Caen stone was imported, as its excellence justified. The use of stucco as a protection to buildings constructed of perishable stone is very recent.

Healing or healm stones, indurated flags used by helliers for covering roofs, were from well-known localities, such as Horsham, where the quarries are said to be worked out. Slates may occasionally be meant; they were, however, generally called slatt-stones."

The fashion of building towers about the middle and close of the fifteenth century extended into the country.

"A merchant named Borough built a goodly one in the butter-market of Lyme. The merchants in the towns had their merchandize stored in their own residences, the country not being so secure as to warrant storehouses being away from the owner's own eye. The tower was at the entrance, and had to do with the security of the building, as we may suppose. A portcullis let down at night shut out the public from the inner court.

There was a great fondness for these towers, which honest Stow viewed and felt offended at. He judged some afflictions into which the possessors had fallen to have been judgments sent for their desire to overlook their neighbours. Thus in almost every instance we find a novel introduction, however useful and harmless, to have been designated by one class or the other as positively sinful."

At a time when there were only two or three chimneys in a town, and when these certainly useful adjuncts of a house were at length becoming general, Courts of Hustings books ever treated abundantly about "mantels,"—"dangerous mantels," &c. A mantel, sometimes entered as *caminus sive mantella, mantella caminata*, so often presented by court-leet and other juries, was a projecting fireplace (hence mantel-piece), which had sometimes a great deal of wood in it, while the rest was mud or plaster. When this became ruinous from neglect, there was great danger of fire; and the houses themselves, except the basement, were of wood and plaster. Neighbours trembled, and acted upon their fears in a way here deemed worthy of being set forth:—

'3 Elizabeth, 1561, at Lyme. 'It was commanded to John Somer to amend his mantalle, payne of v shillings.'"

Around the spacious cupola, over the French and Italian fireplaces, is a ledge to which are affixed pegs, on which the postillions straightway proceeded to hang their wet cloaks to dry. We call the stone or wooden shelf over our fireplaces *mantel-pieces*, or *mantel-shelves*; but we no longer hang our mantles upon them to dry. In some of the old places of Rome, the *mantel-pieces* are applied to the similar original purpose.

The hole to allow the escape of the smoke at the back of the projecting fireplace was often so placed that there was great danger. Another source of no less danger, both to house and town, is thus instanced by Mr. Roberts:—

"Widow Gaye, in the heart of Wimborne, carried on a very thriving trade as a tipler, and brewed her own beer and ale. The situation probably required a draft, and a somewhat elevated exit for the smoke; so Widow Gaye had erected a FLUE, or CHIMNEY of TIMBER, as others in so many instances had mantels of wood. This, or some part of the said house, by the nature of its construction and materials, had taken fire, and very likely to have adventured the whole town. Widow Gaye was to be prevented from henceforth selling beer or ale, or from tipling or brewing in the said house; and the constables of the town of Wimborne were to bring her before some justice of the peace, to give bond not to tiple any more, nor to brew for her own use in the said flue, [illegible] by the constables to be sufficient for her own use."

The wages of artificers and servants were fixed by the magistrates, under the famous statute of labourers, A.D. 1352. In the south of England wages were fixed annually at the Dorset easter sessions; and it was not only the operative journeyman and skilled workman who had their wages so fixed, but the master mechanic, and the tradesman as well. The rates did not much vary from year to year. Mr. Roberts gives us those for the year 1633. The following are a few extracts:—

"XI. A master mason, a master carpenter, a master joiner, a master plumber, a master thatcher, every one of them to take, with meat and drink, 6d. and without meat and drink, 12d. and not above. [Mason, 4d.; master carpenter, 5½d.; master tiler, 3d. to 4½d.]

XII. A master ship-carpenter, from Candlemas to Michaelmas, shall not take above 12d. the day, with meat and drink, and 20d. the day without meat and drink."

* * * *

"XIV. None shall be accompted a master workman in any of the occupations aforesaid but such as have good skill of the work, and shall have working under them one or two journeymen, and one apprentice at the least.

XV. Every other carpenter, mason, rough-layer, bricklayer, tiler, slater, plumber, glover, tailor, painter, joiner, plasterer, lime-burner, brick-burner, tile-burner, cooper, tinker (!), every of them (!) shall not take by the day above 5d. with meat and drink, and without meat and drink 10d. and not above. Every apprentice to take by the day, with meat and drink, 3d. and without meat and drink 6d. A pair of sawyers to take by the day, with meat and drink, 8d. and without meat and drink, 16d. or else to take for every hundred sawing of boards and planks, 20d. and of housing timber, 2s. and not above.

XVI. No artificers under the age of sixteen years shall receive any wages, but meat and drink.

XVII. Every artificer and workman aforesaid to find himself tools for the work and art of his science."

Thus far we are indebted to Mr. Roberts's very interesting volume on the "South of England." No less interesting and varied are the researches of Mr. Noake, in Worcestershire.

In alluding to the recess in the chancel wall of St. Michael's Church, at Worcester (as in the chancel walls of most old churches), Mr. Noake thus describes the known purpose of such recesses:—

"Among the ceremonials of the unreformed Church the most conspicuous was that at Easter, when the Resurrection was represented. For this purpose a tomb or sepulchre was arranged in the chancel (a recess still to be seen in the chancel wall of most old churches), in which the effigy of the Saviour was laid, and watched day and night by persons appointed for the purpose, as well as by religious devotees, till it was raised out of the tomb on the morning of Easter Sunday, when the previous darkness in the church suddenly ceased, and a flood of light, together with the richest music, incense, and every sign of rejoicing, celebrated the event."

* The Social History of the People of the Southern Counties of England in Past Centuries: illustrated by a series of extracts from municipal by-laws, civil progress, &c.; from the researches of [illegible] London: Longman and Co. 1856

Notes and Queries in the Province of Worcester. By J. Noake, author of "The Rambler," &c. London: Longman and Co. 1856.

How curiously such practices of the Romish Church remind one of certain Pagan and other mystic rites, such as the death and revival of the god Adonis, and the hierophantine ceremonial of the Egyptian temples, where, after certain rites had been performed in the vestibule, the great gates of the temple were *suddenly* thrown open, and a flood of radiance issued forth from the penetralia, mingled with incense and music, and the virgin devotees as suddenly took flight into the sanctuary, preceded by the sacred Ibis!

The older records of St. Clement's Church, Worcester, had an odd fate: they are believed to have been washed away, or to have perished through the effect of floods, to which the old parish church, formerly situated on the upper quay, was exposed. The existing books appear to have been completely soaked. Early even in the present century, the incumbent yet in office, as he informed the author, during a great flood,—"passed up the aisle of the church in a boat, and for some weeks was obliged to borrow another church to accommodate his parishioners. An old tale is told in this parish that on one occasion a clergyman found a salmon left by the subsidence of the flood in St. Clement's Church, and hence the presentation to the living was supposed to include the valuable privilege of catching all the fish that can be secured in this way."

Another of the Worcester churches, that of St. Swithin, should have been the edifice reared upon this ancient site of St. Clement's. The older records of St. Swithin's seem to have been lost, as well as those of St. Clement's, but the only waters of which there is any record at St. Swithin's, appear to have been certain "strong waters," the use or purpose of which is not very clear, as for example,—

"For a gall. of strong waters to send Jones, of St. John's, away, to save him from arrest, 3s. 4d."

And this was not the only instance in which the "strong waters" were given to some poor devil to float him off in "heavy wet," or in other words, "to send him abroad that he may not be too chargeable" to the parish. These are "Notes," that in truth require some "Queries." Were the "strong waters" a bribe to induce Jones and his unfortunate confreres to "move on" to another parish?

The following particulars as to the Dineley manuscripts are worthy of note in the *Builder*, and will interest some of our readers:—

"The Dineley Manuscripts (now in the possession of Sir T. E. Winnington, Bart. M.P.) consist of three volumes, written between 1670 and 1680 by Thomas Dineley, esq. a member of one of the oldest Worcestershire families. One of the volumes contains accounts of his visits to many churches in this county, as also to adjacent towns and about a dozen cathedrals; pen and ink sketches of monuments, coats of arms, dresses, &c. many of them exquisitely done; copies of inscriptions, both quaint and curious; tracings of pedigrees, &c.; showing the compiler to have been a gentleman well versed in ecclesiastical antiquities, a classical scholar, acquainted with heraldry, and an accurate draughtsman. The second volume is entitled 'Observations in a Voyage in the Kingdom of France, being a collection of several monuments, inscriptions, draughts of towns, &c.'—date 1675; and the latter part of this volume is devoted to a similar description of Ireland, with a curious dissertation on the manners and customs of the Irish. The filthy habits of that people in the seventeenth century are treated of in rather broad language, not adopted for the present day. The third volume has the following title,—'The Jovrnall of my Travells through the Low Countreys, Anno D'ni 1674.' It appears that in December, 1671, Mr. Dineley went in the suite of 'Sir G. Downing, Knt. and Bart. Ambssador from his most sacred Ma'tie to ye States Generull of the United Provinces.' His journal is written in a minute but beautiful caligraphy, and denotes habits of judicious observation."

We had noted many other passages, both in Mr. Noake's volume, industriously compiled and pleasant, and in that of Mr. Roberts, but we must conclude with the following from Mr. Noake's "Notes and Queries:"—

"A cast-iron slab may be seen on a grave in Himbleton Church, having an inscription to Philip Fincher and his wife, who died, the former in 1660 and the latter in 1690. Is any earlier instance known of the use of cast iron for such a purpose?

Answer.—In Mr. Lowe's paper in the Sussex collections is a description of a cast-iron grave slab of the fourteenth century, existing in Burwash Church. It has an ornamental cross, and inscription in relief, and is considered as unique for the style and period, being probably the oldest existing article of the kind produced by our foundries."

PERSPECTIVE WITH ONE VANISHING POINT.

IT frequently occurs in drawing buildings in perspective, that one vanishing point is at a great distance, and thereby causes inconvenience to the draughtsman. The following plan enables the draughtsman to dispense altogether with the distant vanishing point, using only the nearer one.

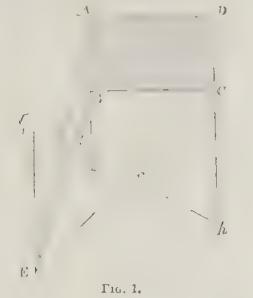


FIG. 1.

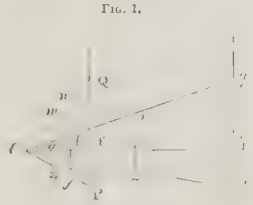


FIG. 2.

Let ABC in fig. 1 represent the plan of a right solid; fig. 2 the same in perspective. In fig. 1 let V, H*h*, be the picture plane; E the situation of the eye: produce AB and DC to meet the picture plane in H and *h*; then H and *h* will be two lines of heights in fig. 2. To find the ground line of the building, take HP and *hp* on these two lines of heights, each representing the height of the horizontal line above the ground. Draw P*yx*V, and *pz*V; join *yz*, then *xyz* is the ground line of the building. In the same way the sky-line may be found, taking HQ and *hq* equal to the height of the building above the horizontal line, and drawing Q*nm*V, and *qo*V, then *mno* is the sky-line of the building. In the same way may be found any other lines that may be required.

ON THE INTRODUCTION OF MOULDED AND COLOURED BRICK INTO STREET ARCHITECTURE.

AT the annual meeting of the Leicestershire Architectural and Archæological Society, held on the 9th of September, Mr. W. Millican read a paper on this subject.

My present purpose, he said, in the course of it, is to give a rapid sketch of the necessity for, and desirability of, introducing (with a view to improvement) moulded and coloured brickwork into our present flat and lifeless street architecture, particularly the cottage buildings, which, from their plainness, are so undesirably abundant in Leicester and other manufacturing towns. You are doubtless aware that this our town stands on, and is surrounded by, extensive beds of clay of the most excellent description, and of several varieties; but all equally adapted by Nature for the purposes to which it is my present endeavour to promote their application, requiring only the assistance of man's hand, and the evidence of his mind impressed upon them—the life of the living clay infused into the shapeless mass of dead clay,—to render that clay fit ornament for the cottages or palaces of men, or the adornment of temples even set apart for the worship of our Creator. Leicester, therefore, being undoubtedly possessed of the material (hitherto neglected) for supplying the lack of animation so deplorably prevalent throughout the brick buildings which line the streets, from the humble home of the toilsome artizan through whom her wealth is acquired, to the more aspiring and pretentious residence of the manufacturer, who seeks retirement from the hurry and turmoil of business, in the goodly squares and terraces which are rising in her suburbs; it becomes the part of man—of the artist, the architect, and the producer—to render it fit to be employed as ornament. It must, in fact, receive from man a portion of the life he has the power to impart to it. Is it, therefore, owing to the want of men who can impart this life, that the clay of Leicester has so long remained cold and inanimate? That this is not the case is most convincingly manifested by the beautiful carvings and other art-works which have been and are daily produced by natives of this town; though it is a source of regret that many of them have left the place of their birth, and the town which they would most gladly have decorated with the riches of their own imaginations, for other places, where the carver's art is—I will not say more fully appreciated—but more extensively encouraged; for artists of all kinds, though undoubtedly not the most mercenary of the human race, cannot live on the admiration alone of their genius and their works.

But further, the clay may be wrought in so simple a manner, as, the designed pattern having been once moulded, it may be multipled to an unlimited extent by workmen of ordinary abilities, without requiring the aid of an artist, except in the invention of the original design; indeed, for this purpose, those workmen who are daily employed in casting in plaster and cement, the perishable ornaments with which so many of our public and private buildings are meretriciously decorated, might be induced to turn their attention to the production of ornament in burnt clay, that would be as lasting as the buildings in whose walls it might be imbedded. Having both the material and the artists necessary for its manipulation so plenteously provided to our hand, what (will be asked) is the reason we do not see so valuable a material properly applied, and its capabilities developed to their fullest extent? It is not that it is impracticable, for of the fallacy of this idea we have incontestable evidence in the great number of Italian buildings wholly indebted for their decoration to this neglected material, of which the Great Hospital at Milan is a surprising and magnificent example, its principal façade being covered with most elaborate and beautiful ornaments—foliage, heads, &c. &c.—rivalling the best sculpture in stone, or princely marble. Hundreds of other existing specimens, too, will be found in Street's "Brick and Marble Architecture of Italy," from the plain square dentil (the humblest form of all) to the most beautifully enriched frieze or string course, alive with a spirited foliation, peeping at intervals from out of the shadow of the overhanging moulding, by which it is protected from accident or the tempest's unsparing influence. The reason is, I am reluctant to confess, the all-powerful utilitarian spirit of our age, which condemns tacitly (though, too frequently, not the less effectually) most things which will not afford either convenience or a profitable return on the outlay involved in their production; and as these are looked on as two indispensable requisites in the homes of the humber classes (and other houses built for mere speculation), which are usually run up at the least possible outlay, to produce the greatest possible return; I fear to that engrossing spirit must we principally attribute the utter absence of redeeming features in the ugly blank walls, with square windows in them, which have grown to be considered the *ne plus ultra* of our street architecture. I need not, I am sure, occupy your time with a long argument endeavouring to prove that ornament is necessary, for that would be fruitless; but that if not necessary, it is at least desirable, you will, I am sure, on a little reflection, readily admit; for who, in the interior of his house—however sumptuous or however humble—would

be satisfied without some attempt at decoration, either in furniture, pictures, or the innumerable trifles which form so unnecessary, yet so pleasing a part of our house attractions? Do not all, according to their means, aim at making the interiors of their homes more attractive than as the builders leave them? Is it not almost instinctive? for do not even insects and animals regard these matters in *their* architecture? If you will admit the desirability of ornament on the outside as well as the inside of our buildings (and I cannot think many will deliberately dispute it) I will endeavour to show in what manner and by what means it may be accomplished, not forgetting too the principal point—the expense. In those buildings wherein, from being of a temporary nature, or from their purpose, ornament is needless, or thought to be so, the plain surfaces may be relieved—at literally no extra cost—by merely selecting bricks of different shades of colour, and placing them to form lines or patterns in the walls. It is true this would require a little thought, but considering what thought is wasted continually on schemes of folly, or dishonourable pursuits, surely that element will not be deemed too valuable to be made use of. In the next class of buildings, I would suggest that string courses and cornices may be introduced of different coloured or different shaped bricks and quarries, imbedded in the work, of which the additional cost would be so trifling as to be comparatively unappreciable. Beyond this stage we must venture into patterns of moulded and ornamented brickwork, either simple bricks with moulded ends, flat ornament produced by sinking the ground round the well-designed outline, or imitations of the productions of Nature herself, each and all of which (the design and model being once made) would be most easily multiplied, and at no more expense than in cement; only requiring that for general use the mouldings and patterns should be of such sizes and character as would admit of their introduction into large as well as small buildings; also of several parts, in order that variety may be obtained in their disposition, and then would be opened a field for enduring and truthful decoration, the limits of which are not to be foreseen or prescribed.

The most ordinary workman, having them habitually under his notice, would acquire a facility and variety in their application, which even accomplished architects scarcely attain with the complex ornaments to which they have until lately been limited. The workmen, too, from having other than their physical abilities exerted, would be advanced to a more intellectual position than is now too generally their lot; acting as machines, building tasteless walls by mere mechanism (as it were) from morning till night, and from the morning to the evening of their existence.

Our streets, instead of being but gloomily-fenced highways, to be trodden only for the convenience of business, or when paced in the pursuit of pleasurable companionship, to be hurried through without a glance of interest, would, with the improvement of public taste and spirit, become panoramas of the imagery of men's minds, and storehouses of thoughts and ideas as varied and valuable as they now are of objects unvarying and valueless. We should then linger as we passed along to mark where a more skilful hand had left its impress, or to recall, possibly, the memory of some of those who, having in their lifetime animated the lifeless earth, had sunk back into its cold solitude, leaving behind them these faithful witnesses of their superiority over the brutes that perish.

DALBY-HALL.

MANY of the members of the Leicestershire Architectural and Archæological Society visited on Wednesday last, amongst other places of interest, Dalby-hall, the seat of Mr. E. B. Hartopp. The visitors, as reported in the local *Journal*, bestowed their admiration upon the additions now being made to the mansion by Mr. Broadbent: the new dining-hall was an especial object of attention. Now, any one not acquainted with the circumstances, would suppose that Mr. Broadbent is the architect for the works referred to, whereas he happens to be the builder only. The architect is Mr. Alfred Bell, of London, who was a pupil of Mr. Scott. The dining-hall of the mansion referred to is an elaborate work, especially as regards the wall-decorations, which were painted by Mr. Castell, of London, from cartoons designed and prepared by Mr. Bell. There are fifteen figure subjects, painted in oil colours, on the walls, by the architect himself, from his own designs, illustrating the German stories of "St. George and the Dragon," the "Wild Huntsman," and "William Tell." The furniture is also being executed from the architect's designs; in short, Dalby-hall affords a rare modern example of everything being executed from the actual designs of the architect, whether it relates to the fabric, sculpture, decoration, or furniture. Few young architects have had the opportunity of commencing in their profession under such liberal patronage as that of the owner of Dalby-hall.

VERITAS.

THE YOUNG WORKMEN OF LONDON.

IT is a noticeable circumstance that so many eminent in the various walks of science, men famous in literature, presidents of societies, editors of newspapers, managers of large establishments, and even aldermen of London, are from the provinces.

Considering the immense population of London, and its constant increase, it becomes necessary to consider the causes which tend towards this state of things.

The deteriorated condition of the atmosphere, the great cost of rent and living, and the want of good and sufficiently cheap education for the industrious classes in this wonderful community, to a certain extent make it difficult for a large portion of the youth of London to gain the amount of physical energy and proper knowledge so necessary in first commencing the business of life. Those acquainted with the condition of the London artizans even of the better class, know the trouble there is in getting their sons put to a good and useful trade: in many instances either premiums are required, or else a considerable portion of the time is given for small sums: often two or three years without wages at all. The expense of this to persons of limited income is great, and the only chance of rearing the family frequently is to get one or two of the eldest apprenticed, and the rest sent to situations as errand-boys, and to other positions from which they seldom rise to much usefulness. There are many other circumstances which in London prevent thousands from being provided with that valuable fortune,—the means of earning a livelihood by the possession of skill in an honest trade,—which we must pass over, in order to direct attention to one chief cause of the advantage which the youths of the provinces have over those of the metropolis: this is, the means of association amongst those following similar pursuits of the ages between fourteen and twenty-one.

In London, such is the state of society that it is often the case that people are not known to their next-door neighbour; and the writer of this paper has often met with young men learning ornamental trades, such as glass-painting, carving, &c. who showed good ability, but were completely at a loss to know how to employ the spare hours of the evening in improvement. In the country towns, bands of young men, similarly circumstanced, find each other out: they meet at each other's houses, get attached to the Mechanics' Institute, and, by a friendly rivalry, effect a power of good.

We know that some thousands of persons now in influential positions in London will be able to trace their success to the proper cultivation of the seven years after leaving school; and we could mention numerous instances of the valuable effects of association amongst young men during the years above mentioned.

The want of the opportunity of meeting, the want of convenient libraries and such like institutions, is no doubt a chief cause of the condition of affairs to which we are so anxious to direct attention; and it becomes, therefore, a matter of importance to consider by what means the evil can be remedied.

Much might be done by the young men of London themselves, particularly in establishments where half a dozen or more are employed. In many instances the proprietors of manufactories could, without much trouble, allow a room as a place of meeting for the apprentices, three or four evenings a-week. Masters ought to direct the attention of their lads to the importance of the improvement of their leisure hours. We know of some masters who have taken a little trouble, and have not only reaped benefit themselves in consequence, but have also had the satisfaction of being carefully remembered by those who have thus received a large amount of good. We have met with young carvers at the Architectural Museum, whose masters had paid for their admission, and spared them so much time to attend at this place; and we believe they will not be out of pocket by the act. But what is chiefly required is some organized plan by which this unwieldly metropolis can be managed, so that by division each might in a measure be capable of some superintendence, and thus receive those aids which they would be likely to meet with in most provincial towns. The subdivision of the large metropolitan parishes into districts affords an excellent opportunity for a movement in this direction. In many of these, infant and national schools have been erected, and with very little trouble excellent libraries might be established in connection with these district schools, and evening schools and places of meeting for those youths who, living in the district, might feel disposed to avail themselves of the means of improvement.

We should be glad to hear that the clergymen and other leading persons in each of the new divisions had given careful consideration to the extent of the amount of education required amongst the young workmen of their neighbourhood; and in what way they could assist self-supporting places. They could then learn the general feeling by visits throughout the districts, and by calling public meetings of the working classes in school-rooms and in other convenient places.

THE CRYSTAL PALACE, SYDENHAM.

THE directors of the Crystal Palace are not standing still, but are striving still further to increase the attractions of this noble rendezvous of beautiful things. The Indian Court, in the gallery, contains a very large number of curious and interesting objects illustrative of the people of that country, and, to some extent, of its buildings. Near this, a collection of models of architectural and engineering works is being formed, which will be valuable. A library of reference, too, under Mr. Shenton, is fast approaching to a respectable size, and will tend to make the Crystal Palace, what it really should be,—a place for study. The picture-gallery has been greatly improved, and is of itself worth a journey.

The flower-show held last week, late as it was in the season, had many points of interest wholly its own, in the shape of dahlias, ferns, German asters, and the composite shows of cottagers and individuals working with one gardener only. The day was pleasant, and the company numerous.

To render our illustrations of the fountains and grounds more complete, we add to the engravings we have already given (including plan showing all the fountains, a view of the Water Bower, and a general "prospect" of the grounds*), a view of one of the lofty water-towers, and a portion of the main building. A technical description of the water-towers, by means of which the lower jets may be made to play to the extraordinary height of 250 feet, will be found on a preceding page (337). The extreme height of these towers is 282 feet from the ground: each of them swallowed up about 1,000 tons of iron, and from them branch off 13 miles of large iron pipes.

ANCIENT REMAINS DISCOVERED AT LEICESTER.—A subterranean vaulted passage was discovered a few days ago near the lower end of Trinity Hospital, Leicester. It is 11 feet wide and 10 feet high, and extends some distance underground. It is 8 or 10 feet below the surface. The upper part is arched, and the whole is built of stone.

* See pp. 337, 338, 343, 355, &c.

WATER-TOWER, CRYSTAL PALACE, SYDENHAM.

CHURCH-BUILDING AND PROVINCIAL NEWS.

Barholme.—The church of St. Martin, Barholme (situate about five or six miles from Stamford) was re-opened, after its complete restoration, on Tuesday in week before last. The restorations (under the superintendence of Mr. Edward Browning, of Stamford, architect) have been carried out at a cost of nearly 1,000*l.*—a considerable portion of it contributed by the incumbent, the Rev. Wm. Turner, M.A. aided by subscriptions from the parishioners and others. Previous to the restoration, unsightly roofs covered both church and chancel, having horizontal plastered ceilings; and the walls, the ancient chevron work of the nave arches, the pillars, and the freestone work of the chancel arch, and windows, were covered up with successive coats of whitewash. The ground floor, including church and chancel, was filled with deal enclosed pews, of various heights and sizes. The new chancel roof is of equilateral pitch, open timbered, arranged with hammer beams and wall pieces springing from carved stone corbels. The windows and sedilia have been entirely restored. The floor is of encaustic tiles, by Messrs. Minton. On each side of the chancel are carved stalls of English oak, with poppy-head terminations. A low screen of oak, with crocketted tracery panels, separates the nave and chancel. The nave and north aisle have been restored. The nave roof is of equilateral pitch, arranged in waggon-head form, and divided into panels with carved bosses at each intersection: the roof springs from a continuous cornice, battlemented. The seats of the nave are all open, and of English oak, with moulded elbows and sunk tracery panels with double featherings. The tower arch has been opened, and the space underneath appropriated to the Sunday-school children. The tower has been raised another stage. The accumulation of earth round the walls of the church has been removed, and the churchyard drained. The ancient Norman remains of the south wall have been preserved, and the Norman doorway of the south entrance, with its sculptured tympanum, restored. The works have been executed by Mr. Hy. Bradshaw, of Stamford.

Long Sutton (Lincolnshire).—The first stone of the new Corn-exchange, market-house, public rooms, &c. for this place was laid on Monday before last.

Newbury.— The corner-stone of the Sunday School-room, in connection with the Congregational Chapel, was laid by the Mayor last week. The site is near the chapel. Mr. J. B. Clacy, of Reading, is the architect. The building will be of a plain and simple character, in the form of a parallelogram, 70 feet long by 33 feet wide, with deep gallery class-rooms at one end, divided by moveable shutters, to admit of the entire space being thrown into the large room. The building will be chiefly lighted by glazed panels in the ceiling. The contractors are Messrs. Hopson, Adey, Toomer, and Gore.

Dorchester.—The foundation-stone of the new Congregational Church here was laid on Wednesday before last, by Mr. R. B. Sheridan, M.P. The site is in South-street, and was purchased by Mr. M. Devenish, who presented 1,000*l.* towards the object in view. A large sum has also been subscribed by other private individuals, and the amount is still accumulating. Messrs. Poulton and Woodman, of Reading, are the architects. Mr. Wellspring, of Dorchester, is the contractor for the works, and Mr. G. Slade clerk of the works. The church is to be in the Decorated style of Gothic architecture. The front towards South-street will be ornamental. In the centre the leading feature will be a large traceried window, with a gable and finial over it. On either side of the middle compartments will be an entrance porch, that on the south side forming the base of a spire, the height of which will be 85 feet. The church will be in the extreme clear length 76 feet, and the width 37 feet. It is to be a parallelogram in form, the back being apse-like in plan, with a centre recess for the organ. On either side of the recess will be the vestries and other apartments, and in the rear of these the school-room, 26 feet by 40 feet. There will be a side passage, from South-street, to the school and vestries, as well as an access from the street at the back of the premises. The church will have a gallery across the front. The floor of the church will be laid to a fall towards the pulpit. The woodwork of the roof will appear open, and is to be stained and varnished, but will comprise an inner ceiling (apparently the outer roof itself). The inner roof will be arched in form, and a series of glazed ornamental openings will be introduced in it along the sides and end. The accommodation of the whole church will be for 600 adults, and the total cost will be about 2,000*l.*

Dursley.—The following tenders were received for the re-building of Coaley chancel, near Dursley, Gloucestershire; Messrs. Jacques and Son, architects:—

Spire and Hook (Eastington)	369	12	0
Jackson (Uley)	320	10	0
Coleman (Chaxhill)	297	19	7
Hayes (Gloucester)	289	10	0
Watkins (Coaley) (accepted)	288	0	0
Niblett (Gloucester)	287	10	0

Nottingham.—The new Congregational Church, opened, as already noted, on 14th ult. at Nottingham, for the parish of Sneinton, is in the Italian style, with recessed Doric portico and Roman Ionic façade; and, when completed, will finish with a campanile. Accommodation is provided for 800 persons; and the contract sum, which did not include the boundary walls, palisading, warming-apparatus, and gas-fittings, was a little under 2,500*l.*

East Retford.—A stone reredos has just been placed in the parish church of St. Swithin, East Retford, from the designs and under the superintendence of Mr. William Kerby, of East Retford, architect. The design is in the Decorative style, and comprises five compartments, each having a traceried head supported by slender shafts, with foliated capitals (which have been picked out with gold, &c.), and the whole surmounted with carved crockets and finials. The centre surmounted has an O G canopy, beneath which there is a carved figure of an angel holding a band with the text, "He that hath the Son hath life," lettered on it. The groundwork at the back of the figure is diapered, and is to be pricked out with gold and colours. On either side of this are smaller compartments containing the Lord's Prayer and Apostles' Creed, and the end compartments on either side contain the Ten Commandments. The whole of the lettering has been cut into the stone, and illuminated with gold, red, and blue. There are four small canopies yet to be executed, which will contain figures of the four Evangelists. The work has been executed by Mr. Wm. Lee. The colouring is being executed by Mr. George Foster.

Coventry.—A new stained window to the memory of Colonel the Hon. Governor Hood (Grenadier Guards), who fell in the trenches before Sebastopol, is being placed in St. Michael's Church, by Messrs. Heaton and Butler, of Gloucester-place, New-road.

Hulme.—The Manchester and Salford Baths and Laundries Company are about to extend the usefulness of their undertaking by erecting new baths and wash-houses in Stretford New-road, opposite Holy Trinity Church, Hulme, on the site on which the old Chorlton union workhouse recently stood, and which has just been purchased for the purpose. When completed, this will make the fourth establishment of this kind in Manchester and the immediate neighbourhood.

Blackburn.—The corporation of this town have resolved to erect public baths adjoining the park. The baths will be extensive and commodious, with baths of different classes, including a set to suit the pockets of the poorest. There will be three plunge-baths, first and second class for men, and one for women. The cost is expected to be about 5,000*l.* which will be for the building only, the land costing nothing.

Glasgow.—The site of the extensive works for the tidal basin and graving dock at Meadowside, at the junction of the Kelvin with the Clyde, now presents a busy appearance, there being some hundreds of navvies engaged in the excavations. The land for the works is nearly thirteen acres in extent. Numerous lines of rails have been laid down, and there are half a dozen steam-engines, besides a locomotive, on different parts of the ground, and employed in the various processes of pumping, sawing, grinding mortar, driving the piles, and drawing up the trains of earth waggons. Large travelling cranes have also been put up for the stonework, and an extensive brickfield has been formed at the north end of the ground, for the conversion of the clay, which forms a large part of the excavations. The works will comprise an entrance tidal basin, graving dock, and a wharf running up the west bank of the Kelvin. The graving dock, which will be one of the largest in the country, will be entered from the north side of the basin, and will take in the largest screw steamships afloat. It will be 500 feet in length inside the gates, and 80 feet broad. The masonry will be of a massive description, the floor and walls being formed of large blocks of best Nitshill stone, and the copes and quoins of granite. The depth of water on the sill at high water will be 17 feet, and width of the gates 55 feet. The gates will be made of wrought iron. A steam-engine of 150 horse-power, and driving two pumps, each 50 inches diameter, is in course of construction at the works of the proprietors, Messrs. Tod and Macgregor, and will be employed for discharging the water from the dock when ships are to be taken in. The Kelvin will be deepened so as to allow of an easy entrance to the tidal basin, and to admit of large vessels lying at the wharfs. The wharfs round the tidal basin and along the Kelvin, upwards of 1,000 feet in length, will be used for vessels lying alongside and getting their upper works repaired, while the graving dock will be reserved for the examination and repair of the bottoms of vessels. Five or six steamships of the largest class may thus be under repair at the same time. These works are being executed by Messrs. York and Cowper, the contractors, from the designs and under the superintendence of Messrs. Bell and Miller, civil engineers.

Lincluden.—The *Dumfries Courier* directs attention to the neglected state of the interesting ecclesiastical ruins of Lincluden, on the banks of the Nith. The iron gate which was wont to protect the western door, the wall it divides having probably formed the stone screen of the church, has been removed, and cattle have in consequence free access, as also have idle and mischievous persons; and gipsies probably use it as a place of shelter during the night: at least, says our authority, the smoke-blackened walls show that fires have been lighted in the beautiful tomb of the Countess of Galloway and the fine stone stalls on the opposite side; while fresh chips of sandstone show that a good deal of carving has been recently mutilated.

TIMBER BENDING.

AN important invention has just been introduced, which is likely to produce a beneficial effect upon many branches of manufacturing industry in this country. It is a process by which timber of almost any size can be bent to any curve, with marvellous facility and expedition, and by which the chief qualities of the wood, it is considered, instead of being impaired, as has hitherto been the case by bending, are greatly improved: that is to say, the wood is rendered more durable and rigid, and the operation, instead of expanding and disintegrating the fibres, compresses the whole mass, and expels a great portion of the deleterious fluids contained therein, thereby preventing early decay. The inventor is Mr. Thomas Blanchard, of New York, and the process has been already adopted in the United States with great success, it is said, for ship-building purposes, and for the manufacture of furniture and wheels.

Experiments have been made with a view of testing the comparative strength of large timbers which have been bent and timbers of a naturally crooked form, the result of which shows greatly to the advantage of the former; and the opinion of Sir William Hooker, who examined microscopically some bent specimens, is also conclusive as to the improved condition of the wood after being operated upon.

On a recent visit we saw a piece of timber, 12½ inches by 7 inches, and 12 feet long, quietly and steadily bent into a semicircle. The timber

is steamed for a few hours before it is submitted to the action of the machine, and is kept attached to the mould for a similar period of time afterwards.

The difficulty which at present exists in procuring timbers for ship-building of a natural growth suited to the forms required for knees, futtocks, &c. will be overcome by means of this invention; and for purposes of furniture, &c. the saving of material (often of a very costly nature) must, we should think, insure its adoption by the trade, as the present method of cutting and shaping the wood will be thus superseded. Its applicability to architectural purposes is also very important, particularly for Gothic edifices, as it will of course reduce the cost of all curved work, and will, in many cases, give the artist greater freedom in his design, by allowing the introduction of lines which are now frequently avoided on account of the cost of execution.

FOREIGN INTELLIGENCE.

Aluminium an Object of Trade.—This metal has become already cheaper than silver, and is sold in Paris for 300 francs the kilogramme; but being very light, it will reach five or six times the extent of silver. Very nicely made tea and coffee pots, spoons, &c. are already to be seen in the shops of the jewellers of the French capital.

Rome. — The monument of Gregory XVI. which stands in the lateral nave, on the right hand side of St. Peter's, has been lately opened to public view. The symbolic figures of Prudence and Moderation are the only ones which have been put up, with the statue of the late Pope, as the want of means has prevented the execution of the complete group as intended. In the Vatican a large and splendid staircase is building, leading to the apartments of the Pope.

Scientific Congress at La Rochelle. — M. Baruffi, professor of Turin, said,—"The piercing of the Isthmus of Suez, connecting the two seas by an artificial Bosphorus, is an idea of *our* times. If realised, it will be one of its titles of honour and desert. No *combination* will succeed to elude such an enterprise." The congress, by a formal vote, acknowledged the great value of the undertaking.

THE PUBLIC OFFICES' COMPETITION.

Inquiries having reached us, it may be well to state, that the particulars of the Public Offices' competition are not yet ready. The Department have found it no easy matter, we understand, to prepare the details of the accommodation required for the War-office and Foreign-office. The papers will probably be ready for delivery next week. We believe we may anticipate, too, that the time for preparing the designs will be enlarged. A period of six clear months is the very least that should be given for the purpose: it should be remembered that architects must *live* as well as compete, and may not neglect all other business for the chance of obtaining even a noble prize.

THE VACANT DISTRICT OF NEWINGTON.

Allow me to suggest for the consideration of the Metropolitan Board of Works in the conduct of the election to vacant districts under the Metropolitan Building Act.

In any case of a vacancy there will always be a host of applicants, in proportion to the emoluments of the office, the number and variety of whose supposed claims must necessarily embarrass the choice. It would be well, therefore, if, in future, a limited period were to be fixed, beyond which no application should be entertained, regard being had to the facility of candidates procuring the necessary testimonials, which, of course, are not always to be obtained immediately. It would be wise also if some limit were assigned as to the age of a candidate,—probably the range should be between the ages of twenty-five to fifty; and no person with any physical infirmity should be allowed to be a candidate for an office requiring strength and activity. The examiners of the Institute of Architects will, no doubt, be careful not to send forth men not fully qualified in a professional point of view, whilst the Metropolitan Board should pay especial regard to the moral tone of the applicants as testified in their credentials, since it is of essential importance that a district surveyor whose duties may lead him into collision with all sorts of characters should possess tact, and exhibit a gentlemanly bearing to all.

In the present case there are opinions afloat that the district should be divided into two, if not into *three;* but it is undesirable, on many accounts, to split it up, since the smallness of the income would tend to lower the standing and authority of the surveyor with many whom he may have to deal with in the district, besides paring down that reasonable pecuniary return for his education which every professional man has a right to expect in accepting a public post.

From the high and impartial tone evinced by the Metropolitan Board of Works, there can be no doubt that, when the case has been duly sifted, the election will be conducted without personal predilections, and simply on the grounds of professional and moral merit.

COMPETITIONS.

Weston-super-Mare Town-Hall.—At a meeting of the Town Commissioners on the 10th, the clerk read the resolutions passed at a public meeting of the ratepayers and at the commissioners' meeting, that a town-hall was necessary, and that one be erected over the market-house, at a cost not exceeding 2,000*l.* Mr. Smith stated that he had advertised for plans and specifications as instructed, offering a premium of fifteen guineas for the best. Out of more than 100 applications for plans of the ground which he had received from almost every part of England, twenty architects had competed, and it would be for the Board to open and examine the several plans, &c. which had been sent in. According to the *Taunton Courier*, "The beautiful style in which many, indeed most of the plans were got up, struck the examiners with astonishment, especially when the very trifling premium offered was considered. The average size allotted for the principal room is about 65 by 45 feet, in addition to various ante-rooms and offices."

Lewisham Cemetery.—In answer to the advertisement, inviting designs for this cemetery, there were fifteen competitors. The Burial-board having met, set aside six for further consideration, and have finally decided upon those sent in by Messrs. Tinkler and Morphew, subject to the approval of the bishop, and to their plans being carried out for the stipulated sum. The designs are of the Early Decorated period.

NEWS FROM IRELAND.

Fermoy barracks are to be enlarged to contain 8,000 or more men. There are 120 acres of exercise-ground adjoining the barracks: water is abundant; and the situation is reckoned the healthiest for troops in Ireland.

The consecration of the new parish church of Kinneigh, by the Bishop of Cork, Cloyne, and Ross, took place on Wednesday in week before last. The church is situated close to one of the celebrated round towers of Ireland, which serves for a belfry, and in which a bell has been lately hung.

A pedestal for a statue of the late Daniel O'Connell has been erected at the Crescent, George-street, Limerick. The statue is to be cast in bronze from the model, and put up in a few weeks. Mr. Hogan is the artist, and has just completed the model. The statue is colossal,—nearly of the size of the one in the Royal Exchange, Dublin,—but the attitude is different as well as the costume, which in this case consists of the usual dress and cloak. The model was to be shipped to France; Mr. Hogan accompanying it, and returning thence with the bronze cast to Limerick.

The foundation-stone of a new church was laid on Thursday in week before last, according to the *Belfast Newsletter*, at Glencraig, a secluded spot, about three miles below Holywood. The site has been granted by Miss Symes, of Glencraig. It is surrounded by trees and commands a glimpse of the Lough, and the undulating outline of the county Antrim. The endowment, 1,600*l.* has been supplied by the Rev. Frederick Trench, Cloughjordan, and this sum has been supplemented by 500*l.* raised by private subscription. Mr. Francis Farrell, of Dublin, is the architect; and Mr. Nimick, of Holywood, the builder. It would appear from the drawings that the building will be in the Anglo-Gothic style, the roof being raised up in the Gothic fashion, and the windows arched in accordance with the characteristic of the Saxon period. The length will be 67½ feet, including the chancel; and the breadth 29 feet. The elevation of the side-wall above the plinth will rise 16 feet. There will be a tower 60 feet in height.

The foundation-stone of a Wesleyan Chapel about to be erected in the town of Newport, was laid on Friday before last, by Sir Richard A. O'Donnell, bart.

OPENING OF THE EXHIBITION OF ART AND INDUSTRY, AT MANCHESTER MECHANICS' INSTITUTION.

The opening of the Exhibition of Works of Art and Industry, in the new building of the Manchester Mechanics' Institution, took place on Tuesday in last week, under promising circumstances. The collection is regarded as a more extensive one than has ever appeared in the provinces. The assemblage at the opening was numerous. The hall on the ground floor is filled with the art-works contributed by the French Emperor. The lecture-hall on the first-floor contains sculpture and paintings, and other rooms on the same floor are filled with works in bronze and silver. On the second-floor are two picture galleries, containing a great many pictures. There are also rooms filled with photographic pictures, under the superintendance of the Manchester Photographic Society, and a Mediæval Court, a Crimean Court, &c. Mr. H. Walker presided at the organ, in the lecture-hall. An address was delivered by Mr. Oliver Heywood, the president of the Institution, and the company then distributed themselves throughout the various departments of the exhibition.

THE PRESERVATION OF STONEWORK.

Following out the opinion we have again and again expressed as to the importance of obtaining some efficacious mode of saving stonework from decay, we may mention that at the second meeting of the forthcoming session of the Royal Institute of British Architects, on or about the 17th of November, Mr. C. H. Smith has engaged to read a paper "On the various Methods now before the Public of Indurating and Preserving Architectural Stonework." We do so in order that the various patentees and others interested, being informed, may forward full particulars of their various plans. They will doubtless be invited to the meeting to hear what is said on the subject, and to afford such further information as may seem desirable. From the comparison and discussion advantage will doubtless result.

RESTORATION OF THE DOMES OF BAMBERG, ULM, AND REGENSBURG.

THE NEW VILLA OF THE KING OF BAVARIA, REGENSBURG.

The German cathedrals are the brightest jewels in the diadem of the people; and their restoration, at the present time, proceeds not from any puny interest or consideration, but from respect towards religion and art. If the huge buildings of Speyer, Worms, and Mayence, represent the simple German-Romanic style, the cathedral of Bamberg is one of the finest specimens of the transition from the round-arch style to the Gothic. Although its decoration belongs to the style of the former period, its plan and *ensemble* are Gothic, as the interior and the windows present already the pointed arch form. Its renovation, by King Ludwig's orders, has been in the main satisfactory. As all the successive renovations of plaster have been removed from the walls, the mere dull surfaces of the hewn stones, not modified by the reflected hue of stained windows, nor the diversion of mural paintings, either in the choir or naves, produce a dreary, bare appearance.—The restoration of the minster of Ulm presents, in the main, the same satisfactory features as that of Bamberg, the more so as no transeptal structure interrupts the imposing perspective, more than enough for the exigencies of religious worship. The dome of Ulm, however, presents the greater disadvantage, that it is threatening destruction. The lateral walls of the middle nave have no flying buttresses, the construction of which became, probably, interrupted, together with the completion of the whole structure. These lateral walls have, therefore, yielded to the pressure of the superimposed vaults, and deflect considerably from the perpendicular. If these walls were ever to yield, half of the cathedral would become a ruin.—Regensburg has been once the seat of a great school of sculpture, as some of the sculptures there found, from the thirteenth and fourteenth centuries, are amongst the finest specimens of German Mediæval art. Traces of this art-activity, although much dissimilar in style, are to be met with at all great cathedral building places (*Bauhütten*) in Cologne, Strassburg, Freyburg, Regensburg, Ulm, &c.; but they do not appear in the great Romanic workshops of the Middle Rhine, while they again appear in their finest

developement in the small Romanic churches of Upper and Lower Saxony.—At Regensburg, a villa for King Max. Joseph is now building at the east side of the city, close to the Danube, by the architect Professor Foltz. The plan consists of a right angle, the sides of which are directed towards the town and the Danube, and a fine view is afforded of the villa on passing the Lower Danube bridge. Projecting turrets at the corners, windows of varied shapes, with arched tops, an ornamented pediment over the chief cornice, and proportions of great lightness, impart to the whole an elegant and picturesque character. The view extends on the many-steepled old town, which appears on a clear summer sunset like an old painting on gold ground. M. Foltz has first tried here to make ornamental relievos of cement, and to paint in various colours of cement, a procedure which affords an ornamentation quite inaccessible to the vicissitudes and the influence of climate and weather.

Notices of Books.

Analysis of Ornament. The Characteristics of Styles: an Introduction to the Study of the History of Ornamental Art; being an Outline of Sixteen Lectures on that Subject, originally prepared for the Government School of Design in the Years 1848, 1849, *and* 1850. By Ralph N. Wornum. London: Chapman and Hall. 1856.

From week to week we have delayed noticing Mr. Wornum's book, from the feeling which leads one to postpone an unpleasant task. Remembering his instructive and well-illustrated course of lectures, many of which we reported almost *verbatim* at the time, we looked forward to the appearance of a more valuable book than we find, and are consequently disappointed. It professes to be but an abstract of the lectures: still, if this had been correctly illustrated, it would have been a very useful book. Its main object is to impress the characteristics that distinguish the styles, which could only be obtained "by dint of great labour in the comparison of many costly publications," and Mr. Wornum *says* the student will find the most essential and characteristic elements of the styles, perhaps adequately illustrated by the engraved cuts contained in the work. He can scarcely think this, however, for in truth the illustrations for the most part miss the characteristics altogether, and are quite worthless. Take, for example, the echinus ornament (egg and dart), its form is given quite wrongly: in the cut from the Erectheium, p. 45, it is a simple caricature. Look, too, at the Greek Terra Cotta, p. 25, and the Ionic Capital, p. 48. When we come to illustrations of Gothic art matters are even worse. The Early English spandril from Stone Church, Kent, the Tooth ornament, and the Early English Capital, p. 81, do not give the slightest idea of the characteristics of the style, and the pedestal from Henry VII.'s Chapel reminds us of the apochryphal Gothic illustrations of topographical works at the end of the last century. It is no reply to say these illustrations were chiefly executed by the female students of the wood-engraving class at Marlborough House. If so, it merely shows that the students have sadly retrograded, or that the best of them have not been employed. But here is a book on "Ornament," with V. R. on the cover, and though not published by the Government "Department for Art," still obviously connected with it, and which will go with this appearance to the Libraries and Art Schools of foreign countries; and it ought unquestionably to be—if not in advance of the ordinary illustrated works of our period—at any rate fully equal to anything that has been done before. The inference from the book as it now stands would be, that the art of engraving, as applied to architecture, had altogether fallen in England.

Notwithstanding the objection we are forced to take, there is much valuable matter in the work which may be studied with advantage. The author's remark on the anthemion, commonly called "honey-suckle," will serve as an example of his style:—

"In the anthemions we have a compound element, a succession or alternation of an harmonic group of curves, in a conventional adaptation of floral forms, as the name anthemion itself implies. In Greek examples we have a smaller and larger cluster alternated, sometimes reversed, sometimes enclosed in a curve, and generally connected by a band, by mere contact, or by some simple scroll. Every example of an ornament must have an individuality of detail necessarily, but it is a great mistake to adopt this detail as an essential part of the ornament: for example, no two Greek anthemions are alike, but there are some few which contain a member a good deal resembling the honeysuckle: the ornament is simple and beautiful, but modern imitators overlooking its principle have comprehended only the detail, assumed it to be an imitation, and have called it the honeysuckle ornament. Instead, therefore, of grasping the source of a thousand ornaments equally beautiful, they have acquired but one, and half the classical buildings of modern times are covered with honeysuckles, bringing the whole art of Greece into disgrace for its monotony and formality, while there is scarcely a weed in England that might not with equal skill have been substituted for the honeysuckle, with perhaps equal effect."

Let us add his observations on *style*:—

"Style is only another name for character. Every style, as such, depends, of course, upon what is *peculiar* to it, never on what it has in common with other styles. These peculiarities are what we term *characteristics*—the features by which it is distinguished.

Sometimes a style is merely a modification of, or peculiar elaboration of, the features of another style. It is, then, only a variety or a derived style; and such varieties are common, especially in later times, the natural result of the accumulation of materials. These varieties the student will discover without aid, and, indeed, may invent at pleasure, when he is once master of the essential characteristics of the great historic styles.

As a matter of course, the earliest styles are the most simple, and, perhaps, necessarily also the most original, as each successive style has been gradually developed out of its predecessor, —as the Roman from the Greek, the Romanesque from the Roman, and so on, with more or less affinity of character.

It does not follow, however, that an ornamental work is in a certain style because it belongs to the *period* of that style, for a style is defined not by its time or period, but by the prevailing peculiarities or characteristics of that period: and it is not at all the case that every work of a period possesses these peculiarities. It must be borne in mind, therefore, that while a genuine example of a style will always imply a certain time, a specimen of a certain time will only, as a general rule, illustrate the corresponding style. This is because no style is predetermined, but is, in its details, in all cases, incidental, notwithstanding a prevailing sentiment."

VARIORUM.

A volume on "The Duration of Human Life," by Mr. J. Pinney, author of a treatise on the influence of occupation on health and life, has been published by Messrs. Longman and Co. Its main feature is the advocacy of temperance, especially in drinking, although the author is not an advocate of the pledge. Any work devoted to the promotion of temperance in drink, and the removal of that stigma which so disgraces us as a nation in continental eyes as well as in our own, deserves a favourable notice, even were it not very cultivated in style; but the present treatise is pleasantly written, and contains a good deal of curious and interesting matter unconnected with the particular subject to which we have just alluded. It treats, in fact, of the three eras of human life,—the era before the flood, when men attained to more than 900 years of age; that immediately following the flood, when they still attained to 450 years of age; and that which has ever since prevailed in the "three-score-and-ten" life. The author is of opinion that life is again lengthening a little, and that the "three-score-years-and-ten" life, though a fact, is not a law nor a limit. He treats of the objections started as to the literal signification of the *years* during which the antediluvians lived, and shows that they must have been actual years such as our own; and indeed, had he reversed the line of succession in showing how gradually life was shortened, the probability of this would have still more distinctly appeared. Thus, in King David's time, men usually lived to the age of seventy; but in gradually retreating to previous eras we find it recorded that Jacob lived 147 years; Abraham, 175; Terah, 205; Peleg, 239; Salah, 433; Shem, 600; Lamech, 777, and so on; so that it would puzzle objectors to point out any precise epoch where the nature or description of the years lived can be said to differ from those preceding. On the contrary, we have here a species of unexpected evidence in favour of the idea that human life *has* gradually dwindled to its present limits from a time when it partook much more of that immortal vigour which must have actuated man before the curse of mortality befell him.——In the third part of a new periodical publication (Whittaker and Co. London, and Dunhill and Palmer, Manchester), titled "Manchester Papers," there is an able article by Mr. Hammersley, F.S.A. master of the Manchester School of Art, on the Exhibition of Art Treasures of the United Kingdom," to be held in that city next year. Mr. Hammersley expresses a hope in accordance with our own, that the exhibition will contain an architectural department, including not only drawings and sections, but models of a suitable description, and he indicates the sort of details, decorative and instructive, of which casts should be collected. Architectural and Archæological Societies would willingly contribute to such an object. Mr. Hammersley also urges the classification of the whole exhibition and its catalogue, and the introduction of well-considered lectures in illustration of the various objects of interest.—— "Practical Mechanics, including Mechanical Drawing, Strength of Materials, and Sources of Mechanical Power," by James Imray, C.E.; and "The Chemistry of Food and Diet, with a Chapter on Food Adulterations," by John Scoffern, M.B. London (two eighteenpenny Treatises from Orr's Circle of the Sciences), are now separately published by Houlston and Stoneman, of Paternoster-row.——Two very good little shilling school volumes have been issued by Gilbert, of Paternoster-row. They are titled "Ince and Gilbert's Outlines," and the one is on English History, by James Gilbert; and the other on Descriptive Geography, by Professor Wallace. Children, in our schoolboy days, had no aids of so sterling a description, that we can remember.——"The British Workman" is a wonderful pennyworth: indeed, it is almost given away, inasmuch as it is still 30,000 below the self-supporting point; but with its philanthropic supporters profit is not the main consideration, although it is exceedingly desirable that such a periodical should at least pay its own expenses. On its own merits, as a cheap illustrated monthly journal, it is well worthy of notice. Partridge and Co. of Paternoster-row; Cash, 5, Bishopsgate Without; and Tweedie, 337, Strand, are the publishers; and it can be had, post free, in packets of four copies, for 4d. or 4s. a year; or in larger packets at proportional rates. Employers would do well to advertise among their workmen a periodical which inculcates the principles of temperance, morality, and kindly feeling in a simple and effective way, by anecdotes, brief stories, and illustrations, as the "British Workman" appears to do: even taste is cultivated by a selection of engravings far above the average of such periodicals.

Accident to the Westminster Clock-bell.—In shipping the great bell, at West Hartlepool, for the Houses of Parliament, the crane by which it was suspended over the vessel, into which it was about to be lowered, gave way, and it fell into the hold, breaking the foremast into splinters and seriously damaging the hull of the schooner, but it was hoped, or believed, without injury to the bell. The master of the vessel was in the hold at the time, and had a narrow escape. The vessel, with its freight, being in a sinking state, was run aground in the inner basin of the dock where she lay.

Miscellanea.

THE ATLANTIC TELEGRAPH.—This great undertaking may be said to be already begun, since eighty-five miles of telegraphic line have been thrown across the Gulf of St. Lawrence to the Island of Newfoundland, which lies in the way of the projected line. At first it was contemplated that the line should go by Labrador, Greenland, Iceland, and the Ferroe Isles, and so to Europe by successive stages; but to such a round-about journey there were insurmountable objections. Ice has especially to be guarded against, and ground where anchors may catch in the line must be avoided; consequently, very deep water is a desideratum, and this presents itself at once at Newfoundland. 1,900 miles of ocean must then be crossed, and facilities for the undertaking exist, it is said, such as no equal extent of the globe can parallel. The cable, to allow for the inequalities of the ground and other exigencies, will be 3,000 miles long. The wires will be isolated in gutta-percha coatings; and all the improvements which modern science can afford will be applied to give durability, strength, and efficacy to the cable. Two ships will proceed to the mid-ocean, each carrying one-half of the line. Uniting the ends of the cable, the ships will then separate and continue to lay it out until they reach their respective destinations. The wires will enable them, during the entire process, to telegraph each other at will. The Government of the United States placed a war-ship at the disposal of the company for their survey, and we hope to see our own Government uniting with that of the States in each contributing a first-class steam-ship for the laying of the cable. It is to sailing-vessels towed only by steamers, it seems, that the loss of so many submarine telegraphic cables is attributable. The *Cork Reporter* states that "Dr. Whitehouse, one of the highest authorities on this branch of science, has demonstrated by more than 4,000 experiments that so far from the great length of line requiring a proportionally great circumference or diameter of wire, the very contrary is the case,"—a conclusion entirely at variance with that of Dr. Faraday. Dr. Whitehouse is also said to have invented an apparatus by means of which, should the line be damaged, the exact point of interruption can be accurately ascertained.

RAILWAY MATTERS.—M. Jobard, of Brussels, is of opinion that no insurmountable difficulties would be encountered in raising the ordinary speed of railway trains to 300 *miles per hour*, or five times the present velocity! He advises an extremely firm built carriage, three tubular boilers in front, supplying three of Potel's rotary engines, placed upon the axes of three large driving wheels, way 6 metres (20 feet) wide, wheels of 20 feet diameter, Dr. Boucheries' preserved sleepers, car of 30 or 40 metres length, central safety rail for sharp curves, Decoster's lubricator, Guerin's brake, and Verdié's steel-surfaced rails and wheels. He anticipates diminution of material and increase of speed, and that one carriage only would be necessary between Paris and Brussels.—The new railway train, or travelling palace, built by the Orleans Company for the French Emperor, is composed of five carriages. No. 1 forms a dining-room and saloon for the aides-de-camp, with kitchen and dressing-room. No. 2 forms a kind of terrace, and is all made of wrought iron, polished, and of elaborate workmanship. No. 3, which is the state carriage, or reception saloon, is surmounted by the Imperial crown: it is composed of an ante-chamber, with folding sideboards for refreshment. No. 4 is the sleeping apartment: it comprises a bed-room for the ladies of honour; bed-room for the Emperor and Empress, with a cradle for the Prince Imperial, dressing-rooms, &c. No. 5 is a waiting-room for the servants, place for luggage, and also has a cupboard containing every kind of tool that could be required in case of accident. All these carriages are decorated and furnished with the greatest elegance.—On Friday before last, a reservoir at Bogside, Glasgow, which received the waste water from the St. Rollox Chemical Works, burst its embankments on the side contiguous to the Caledonian Railway, and rushed out, entirely blocking up the line between that and Buchanan-street Station.

ACCIDENT ON THE WORKS OF THE IDMISTON BRIDGE OF THE ANDOVER AND SALISBURY RAILWAY.—When Mr. Strapp, chief engineer of the South-Western line, was inspecting the line, on Friday, the 12th inst. with his assistant engineer, Mr. O. Donaldson, under whose immediate superintendence the works are being executed, the latter, who is the son of Professor Donaldson, stepped upon a plank, or lagging of the centering, which was insecurely fastened, and was precipitated to a depth of 20 feet, on a mass of bricks and rails. He was at first supposed to have been killed, but providentially he had only two ribs broken, besides receiving severe contusions on other parts of his body, and is now progressing satisfactorily.

CLEARING OUT THE PIGGERIES AT THE POTTERIES, KENSINGTON.—The Hammersmith police magistrate was engaged on 12th inst. the greater part of the day in hearing summonses against pig-owners in the notorious Potteries, at Kensington, the piggeries of which were proved, by medical and other evidence, to be injurious to health as well as a public nuisance. Mr. F. Godrich gave evidence to the effect that while the average rate of mortality in the parish of Kensington as a whole for the last five years was 19 to 20 per 1,000, that of the Potteries was never lower than 25 per 1,000, and occasionally rose to 35 per 1,000. During the last eight months, 19 deaths per 1,000 had taken place in the Potteries, and only 13 per 1,000 in the whole parish. There are between sixty and seventy pig-owners, and, of these, eight had been summoned as a commencement to them all being brought up. The magistrate, in the first case, ordered the pigs to be removed and pig-keeping to be discontinued on the premises. Notice of appeal having been given on the part of the defendant, the other summonses were adjourned for a fortnight to enable the vestry to decide whether they would take the whole of the cases gone into, or have them stand over until the appeal case had been heard.——Before the parties retired, Dr. Aldis and Mr. Burge, the medical officer of health for Hammersmith, complained of the disgraceful and unhealthy state of the court. They made this statement publicly, as they heard that Mr. Reeves, the police surveyor, was in the court. Mr. Bodkin said it was a state of things that should not exist; but he heard that a new court was to be erected. Mr. Reeves, in reply, stated that the site for the new court had been decided upon, and the plans were now at the Home Office to be approved. He thought that they would commence building in about ten days. It was stated by one gentleman that he heard the very same statement made two years ago, about the plans, and still there was no court.

DISGRACEFUL CONDITION OF SOUTHWARK POLICE-COURT.—For some time past, says the *Morning Herald*, the smells in and about this court have been abominable. The court is not only badly constructed and ventilated, but the surrounding neighbourhood has several offensive trades. The drainage is also extremely bad, the flooring of the kitchen being much lower than high-water mark; so that the refuse from closets, &c. is hardly ever carried away: an escape of gas, too, has been about the court for some time. Some attorneys complained of all this last week as disgraceful in a public court; and Mr. Combe said he should at once write to Mr. Reeves, the surveyor to the police, on the subject.

KILKENNY ARCHÆOLOGICAL SOCIETY.—The September meeting of this society was held in the Tholsel, at Kilkenny, on Wednesday before last, Mr. P. O'Callaghan, in the chair, when ten new members were elected, and various presentations made; and the secretary, the Rev. Mr. Graves, announced the receipt of a transcript of a valuable family MS. from the Marquis of Kildare, for publication, and made various other communications to the society, on oghams, leather ordnance, ordnance survey records, &c. He also read a portion of the manuscript of Mr. Dineley's tour in Ireland in the reign of Charles II. as to which we happen to have given a quotation from Noake's "Notes and Queries for Worcester," in our present number; and the publication of which, Mr. Graves announced, has been undertaken by the Kilkenny Archæological Society, Mr. E. P. Shirley, M.P. having given the transcript, and a donation of 5*l.* towards the cost of printing it. The portions read are reported to have served to throw much curious light on the social condition of Ireland in the latter end of seventeenth century. Several other papers were received, and the meeting then adjourned.

EXHIBITION OF THE BIRMINGHAM SOCIETY OF ARTISTS.—This exhibition was opened on Wednesday in last week, to a numerous assemblage. It contains upwards of 450 pictures, but the local *Journal* states that there seem to be fewer great names represented this year than usual. There is as usual a great predominance of landscape: the portraits are less numerous; the general run of metropolitan artists more sparingly represented; the local contributions on the whole better; the downright rubbish rather more plentiful than last year.

GLASGOW CORPORATION WATERWORKS. — The contract for the cast-iron pipes for these works has been let out to Messrs. Edington and Sons, of the Phœnix Foundry, Glasgow. The contract is for about 24,000 tons. There were numerous tenders lodged. "It has been very currently reported," says the *Gazette*, "that upon a certain one-sided report from the corporation engineers, and through the partiality of certain active commissioners, the party entitled to the contract was elbowed out of it to make way for the firm of an active chairman of the election committee of a member of the Water Committee sitting in judgment on the tenders."

LECTURES AT THE ARCHITECTURAL MUSEUM.—The committee of the Architectural Museum, Canon-row, Westminster, have issued cards for a course of lectures on the Contents of the Museum, on the evenings of Monday, October 13th and 27th, and November 10 and 24th. A subscriber's recommendation is sufficient to secure admission to these lectures, which will be delivered by the Rev. Charles Boutell.

NARROW ESCAPE FROM FIRE AT THE LIVERPOOL AMPHITHEATRE.—A reckless and strange occurrence took place on Friday evening in last week, at the Royal Amphitheatre, Liverpool, during the performance, when the foot-lights suddenly went out, accompanied with a strong smell of gas; and immediately thereafter, a drunken scamp of a carpenter, who had just before been refused employment, was caught in the act of removing a jointed piece of gas-pipe below the stage, which he had just been coolly sawing off, putting out the foot-lights 18 inches above, and causing an escape of a body of gas capable of producing a flame 6 feet high, and certain in a few minutes to have not only been fired and set the stage in flames, but also to have produced an explosion in the midst of a crowded audience! The scoundrel has, of course, been committed for trial. Had fire and explosion occurred before the fortunate discovery was made, here would have been another mysterious case of theatre burning, about which there might have been many speculations, far astray from the true cause.

RAZING WALLS AT KNIGHTSBRIDGE.—At Hammersmith police-court, on 12th instant, Mr. Reeves, police surveyor, attended in support of a summons against the owner of the building called the Life Guardsman public-house, Knightsbridge, to show cause why certain walls should not be pulled down, as they were considered dangerous. This house, which has now been closed for some time, has been repeatedly under the notice of the public from its connection with the Duke of Wellington's stables. The building is shored up, the pathway has been obstructed for months by the piles, and the outside is completely covered with billstickers' broadsides. There appears to be some dispute as to the ownership, and the title cannot be made out to the satisfaction of his Grace to complete his purchases. The owner did not appear, and Mr. Dayman made an order for the walls to be pulled down, which is tantamount to the demolition of the whole building.

DISCOVERY OF A ROMAN VILLA IN SHROPSHIRE.—The remains of a Roman villa have just been found near Linley-hall, in Shropshire, the seat of the ancient border family of More. The site, near upon the boundary line of Wales, is not far distant from the mining district of the parish of Shelve, where numerous traces of the Roman lead mining operations are still visible, and pigs of lead, with the name of the Emperor Hadrian stamped upon them, have been found at no great distance from Linley.

EXHIBITION OF THE BRIGHTON AND SUSSEX SOCIETY OF ARTS.—This second Exhibition is said to be an improvement on that of last year: 116 artists have sent works, amounting in all to 262. Brighton contributes upwards of sixty paintings, the production of twenty-one resident artists. Chichester, Arundel, Hastings, and other Sussex towns have also forwarded contributions.

THE GOLDEN-SQUARE DISTRICT, LONDON.—Will you allow me, through the medium of the *Builder*, to call the attention of the vestry to the "pest-house" in Marshall-street, at the present time, as I hear application is made for a license to carry on the business? One blood-hole, two bullock-pounds, one dung-hole, three slaughter-houses, two cow-houses, one grain-hole, several stables, a tripe-boiling establishment, with large coppers, &c. form one huge "factory" to emit nauseous smells, poisonous vapours, and foul air to the inhabitants of a closely-packed and as closely confined neighbourhood. Notwithstanding the vigilance that has been taken by the sanitary officers, under Dr. Lankaster, these smells, &c. still continue. During the hot weather the door of the tripe-house is left open, to let out the effluvia, which, joined with what proceeds from the grain-hole, and slaughter-houses, &c. makes a delightful relish for the neighbours when they open their windows in the early morning. So confined is this "hot-bed of malaria," that some beasts were this summer in a state of putrefaction before the flesh could get cold, which I am told on authority I can believe, would not have been the case had a proper amount of air, unpolluted, surrounded them. All that is asked of the vestry is, to do justice to the poor who surround this "precious place" by refusing the license, and rooting out the main-spring of dissatisfaction that is so loudly proclaimed by a hardworking and justly complaining people. I had forgotten to state two new gullies were made just above the outlet of the drain in Marshall-street, some twelve months since, to cleanse the main sewer perfectly.—HOPE.

Metropolitan Board of Works.—At the last meeting, on the 12th, the chairman, Mr. Thwaites, said, he had been informed by the engineer that he hoped to bring up his report on the main drainage of the metropolis on the 26th inst.; and as there would be an interval of a fortnight between the present and the next meeting of the Board, he had to ask them, if the report was in a sufficient state of forwardness, that it might be printed, so that it might be placed in the hands of members before the day of meeting. Mr. A. Ware moved, and Major Lyon seconded, a motion "That when the engineer's report was ready, that it be printed," which was put and agreed to. The Chairman then stated that, in consequence of the state of public business, in the first week in October it would be necessary to have three meetings, and for these reasons. They had under their consideration, as most of them were aware, the formation of two new streets, and for one or both of them they might require the authority of Acts of Parliament, and as a great number of preliminaries must be gone through in the service of notices upon the owners of the property, he thought they ought to have as early a meeting as possible to consider this question. Then they might have to meet on the Wednesday to consider the report of their engineer on the main drainage, and there would be the ordinary meeting on Friday. If the consideration of these streets were thrown over for another week, it might possibly prevent them from proceeding for a Bill in Parliament in the next session.

Sewage Deodorisation.—Mr. Manning, from Edinburgh, has been consulted by the Southampton Special Works Committee, on the sewage of the town. Mr. Manning, says the *Hampshire Advertiser*, has two patents for his process of deodorising town sewage, and he asserts his ability to render sewage matters fertilising and remunerative. He has just been to Liverpool for the object which brought him here. His precipitant matter, by which sewage liquid is clarified, is a combination of alum and iron. A large glass jar, filled with liquid sewage from the impounding well on the Marsh, was rendered quite transparent in a few minutes, precipitation commencing in about two minutes from the mixing of the deodorising matter. There are several modes of precipitating and deodorising sewage matter. The question to decide is, which is the best and cheapest?

The Brussels International Congress of Improvement has been sitting during the past week. We shall revert to its proceedings.

Stained Glass for Cambridge.—Two new windows of stained glass are being now exhibited in Munich, which are destined for St. Peter's College, Cambridge. They are 7¾ Parisian feet in breadth, and 13 feet in height, the figures in the windows the size of life; the one relating to the life of St. Peter, the other to that of St. Paul. St. Peter is represented coming out of the Temple accompanied by St. John, whilst on the steps of the holy edifice lies the cripple begging for alms: close to this group is a rich man distributing charity, and a woman with a boy carrying doves as offerings are ascending the steps: the interior of the Temple is illuminated by burning tapers. In the other window, the better work of art of the two, St. Paul delivers his eloquent speech before Felix, the Governor of Cæsarea, and King Agrippa. Paul stands in chains upright, and inspired by the consciousness of right: he is guarded by soldiers: his accusers bow before Festus, who is represented seated on his throne, deeply moved by the stirring words of the bold convert, whilst Agrippa appears to be weighing in his inmost soul these new ideas so unexpectedly set before him. According to the *Literary Gazette*, the composition of both pictures is excellent: they are full of fire and expression, and are clearly and elegantly designed. They will form a very valuable addition to the artistic treasures of Cambridge.

Contracts for Sewerage.—A short time ago the Local Board decided upon adopting the system of contract in the construction of the sewerage of the town. On Thursday last, at a meeting of the Committee of General Purposes, the first portion of the work for which tenders were invited was let. It was for Pole-street and Park-road. Mr. Wrigg estimated the expense for Pole-street at 378*l.* 13s. and for Park-road, 377*l.* 7s. 6d. The following tenders were received:—

	Pole-street.	Park-road.
Jas. Richards, Adelphi-street	£135 5 0	£207 3 0
Cooper and Tullis, Orchard	261 0 0	264 0 0
D. Stevenson, Ely-street	248 0 0	285 0 0
W. Laxton, Hopwood-street	297 2 6½	291 9 2½
T. Saville, Chorley	291 0 0	332 0 0
J. Armstead, Hudson-street	510 0 0	555 0 0

On the tenders being opened, Mr. Richards was informed that he was the lowest, but it appeared that he had not included the providing of the pipes and flush-boxes. His tender was therefore incomplete. Messrs. Cooper and Tullis were then declared the contractors.—*Preston Chronicle.*

Improvements at Kingston-upon-Thames.—The "Corporation Slip" has been converted into a river walk, by the accumulation of refuse, mould, &c. on the river bank, by "the poplars," for the last few years, and other means, suggested and promoted by Mr. Gould, the late mayor, by whose exertions subscriptions were obtained, contracts entered into, and at length the new road formally opened by her Majesty at the end of last month, as the "Queen's-parade," at a cost of 670*l.* leaving a balance in hand. A design for a fountain also has been prepared by Mr. W. P. Griffith, to be erected on the aqueduct, at the cost of the subscribers, by permission of Sir Benjamin Hall. The corporation of Kingston, instead of a money contribution, have resolved to construct a wharf 150 feet long at the Rampier, and subsequently from the Anglers'-corner, towards Harris's Slate-works, instead.

A Suggestion for the Builder.—Mr. Bessemer has invented a process by which iron will be greatly increased and cheapened. His plan is to make the crude metal the solvent of its own impurities, and thus incalculably diminish the cost and labour of its manufacture. One of Mr Bessemer's atmospheric furnaces, it is asserted, will melt in half an hour as much metal as fifty puddling furnaces in two hours; so that, by its adoption, "the cooling and watching of forty-nine furnaces, the labour of nearly 100 hours, is dispensed with." To what uses is all the additional iron that may now be produced to be applied? To gun making, say those of a warlike tendency. To the railway and the steam-ship, says the pacific *Evening Star*. And not only to these two great engines of peace and goodwill, but to house-building and articles of domestic use and household furniture:—"Why should not tables and chairs be manufactured of a material at once so enduring, so cleanly, and so capable of ornamentation? These qualities especially point it out for use in a capacity hitherto unaccountably overlooked. We have often considered why builders, &c. should not fit up their houses with the principal articles of furniture—beds, tables, chairs, &c. leaving the tenant to dress and cushion them at his pleasure. How great would be the convenience is known only to those who have had occasion to move household stuffs up and down the country."—*Fife Herald.*

Recovery of Submerged Property.—A scheme, said to be based upon scientific principles, is about to be resorted to, with the view of regaining sunken ships, with other extensive property submerged, as along our own coasts. The apparatus is the patented invention of Captain Stephen Randoll Smith, who has entered into an arrangement with the Sunken Vessels Recovery Company, lately formed under the Limited Liability Act, for the carrying out of his plans. The apparatus requires a steam-tug and two large flat-bottomed ships, peculiarly constructed with regard to buoyancy and calibre. They are to contain machinery capable of giving a lifting power of 1,360 tons of submerged matter.

Iron Staircase.—A very large iron staircase has just been cast by Messrs. Cottam and Hallen, the extensive ironfounders in London, for the "go-downs," or warehouses, of Messrs. George and Frederick Hogg, merchants, of Shanghae, China. It is 30 feet high, and every step has the device of the Shamrock, Thistle, and Rose, gradually widening to the base, some 4 yards wide. It weighs about twelve tons, and cost nearly 650*l.*

London.—Heine, the German poet, speaking of our metropolis, says,—I have seen the greatest wonder which the world can show to the astonished spirit: I have seen it and am still astonished—and still there remains fixed in my memory the stone forest of houses, and amid them the rushing stream of faces of living men with all their motley passions, all their terrible impulses of love, of hunger, and of hatred: I mean London. Send a philosopher to London, but, for your life, no poet! Send a philosopher there, and stand him at the corner of Cheapside, where he will learn more than from all the books of the last Leipsic fair; and as the billows of human life roar around him, so will a sea of new thoughts rise before him, and the Eternal Spirit which moves upon the face of the waters will breathe upon him; the most hidden secrets of social harmony will be suddenly revealed to him; he will hear the pulse of the world beat audibly, and see it visibly—for, if London is the right hand of the world—its active mighty right hand—then we may regard the route which leads from the exchange to Downing-street as the world's pyloric artery. But never send a poet to London! This downright earnestness of all things, this colossal uniformity, this machine-like movement, this troubled spirit in pleasure itself, this exaggerated London, smothers the imagination and rends the heart. And should you ever send a German poet thither—a dreamer, who stares at everything, even a ragged beggar-woman, or the shining wares of a gold-smith's shop—why, then, at least, he will find things going right badly with him.

A New York Hotel.—The proprietors of the St. Nicholas Hotel have published a description of their immense establishment, from which we quote a few statistics:—The St. Nicholas has a front of 275 feet on Broadway, and a depth of 200 feet, thus covering an area of one acre and three-quarters in the most valuable part of the city. The building cost 1,200,000 dollars, and the entire cost of building, furniture, &c. was 1,900,000. The area of the front wall, which is of marble, is 18,000 feet. The building will accommodate 900 guests, and has frequently contained over a thousand. It was completely finished on the 1st March, 1844. The number of rooms in the house is six hundred, all well lighted, and provided with hot and cold water. These include one hundred complete suites of rooms, with baths, water-closets, &c. attached. The three largest dining-rooms in the house aggregate 9,000 superficial feet, and can accommodate six hundred guests. The cost of the mirrors distributed about the house was 40 000 dollars, and of the silver ware and plate, 50,000 dollars. The proprietors are Messrs. J. P. Treadwell, J. P. Acker, Peter Acker, and Virgil Whitcomb. The number of servants averages during the year about three hundred and twenty. The hours for meals range through nearly the whole twenty-four, excepting from midnight to five a'clock, a.m. There is a regularly organized fire department in the building, with steam-power for forcing water to any portion of it. Eighteen plugs, with 200 feet of hose to each, enable the engineers to flood the building in six minutes from the time the alarm is sounded. The house consumes 18,000 to 30,000 feet of gas nightly, from 2,500 burners. The gas is made on the premises. The laundry employs seventy-five laundresses, and can wash and iron 6,000 pieces per day. Steam is the great agent in this process, and is extensively used in the St. Nicholas for boiling, washing, mangling, drying, turning spits, heating water, &c. We are happy to learn that the talent and enterprise, as well as capital invested in this magnificent hotel, are being liberally rewarded. The proprietors are making both money and reputation.—*New York Mirror.*

Caution to Engineers and Machinists.—There is a clique of foreigners now in England going round the metropolis and some of our larger manufacturing provincial towns obtaining measurements and patterns of our machinery and other manufactured articles, for the purpose of transplanting the inventions and getting them patented in their own countries. They come chiefly from France, many from Belgium and Germany, but a larger portion from Russia.—Spy.

Liverpool Academy.—The annual exhibition of this Academy is now open. The number of pictures is 865, a proportion of which are by Liverpool and Manchester artists.

The Iron Duke's Monument. — Seeing that Sir Benjamin Hall intends this monument to be open to competition to the sculptors of England, why might not the material of the testimonial be formed of iron manufactured by the new process of Mr. Bessemer. Surely the advent of this great chemical discovery in the manipulation of iron of the present time, the dawn of the latter half of the nineteenth century, is worthy of perpetuating the glorious events of the first half of the nineteenth century. Then the above would commemorate the glorious advance of science, while delineating the victorious career of the deceased warrior; and not only might the present generation remember and venerate the household name of the Iron Duke, but the men of the future will also venerate the hero of war who was likewise a hero of peace, and shall say of us when we have passed away, that we still speak to them in the true spirit of symbolism; that our fathers were men of an iron age—men who scattered to the winds the tales of the middle ages, about the Satanic agency and power of the Prince of Darkness in the manufacture of the iron hinges of the doors of Notre Dame, at Paris; and that there were men in their own land, and of their nation, who could invent, design, adapt, and manufacture a work of art from the materials of their own island, in the spirit of the age in which they lived.

An Art-Workman.

TENDERS

For the chapels and lodge of the Basingstoke Cemetery. Messrs. Poulton and Woodman, architects.

Gover	£2,300 0 0
Chamock	2,260 0 0
Biggs	2,220 0 0
North	2,078 18 0
Budden	1,990 0 0
Reynolds	1,983 0 0
Strong	1,780 0 0
Wells	1,760 0 0
Nichols	1,757 16 6
Wigmore and Wheeler	1,725 0 0
Young	1,600 0 0

For building a police station and magistrates' court-house at Luton, Bedfordshire.—

Kirkby	£2,775 0 0
Hopkins	2,597 18 10
Conquest	2,520 0 0
Haynes & Freshwater (accepted)	2,388 7 0

The gas-fittings are included in the amounts.

TO CORRESPONDENTS.

"S. Big Wills."—Various dates on this article have at different times appeared.—for example, at pp. 334 and 357 of our last volume.

"J. A."—"A Thoughtful Mechanic."—"A Subscriber" attended with thanks.—"W. K."—"C. G. R."—"C. H. S."—"H. H."—"Mr. P."—"F. S. W."—"J. B."—"H. H."—"R. S. T."—"T. M. S."—"Mr. D."—"T. D."—"J. D."—"Miss B."—"J. G."—"R. K."—"W. P."—"B. W. A." (under our limit).—"W. H."—"T. W."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

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N.B. Machinery of the kind now established. Messrs. Buck and Co. may be seen in operation at the Royal Arsenal, Woolwich.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Pine Plank, 3s. 6d.; Spruce Deals, 3s.; Mahogany, 6d.; 2¾ Yellow Battens, 12 10s.; F. Walnut, 7d. Carriage free in town.—T. FORMAN, 1, Walnut-tree-walk, Lambeth-walk.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from 1-inch to 1¼-inch thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Sills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

NOTICE of REMOVAL.—EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton-road, Pimlico, to the KING'S-ROAD, CHELSEA, where their orders will be promptly executed as heretofore.—Please address, E. SIMMS, King's-road, Saw mills, Chelsea, opposite Manor-street.

MOULDINGS BY MACHINERY. Capping, Sash-bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to
E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S-ROAD, CHELSEA.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced in this country. An extensive assortment of specimens and patterns commencing at 1s. per foot super together with every particular of its cost and adaptation, can be obtained of Messrs. H. P. BURT and CO. 2, Charlotte-row Mansion-House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that they have completed their extensive arrangements, and will be happy to execute all orders entrusted to their care with despatch and punctuality. Wet and dry docks, and powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring match boarding, &c. &c. always in stock at reduced prices.

ROBINSON and BARTRAM, SAWING and PLANING MILLS, BELVIDERE-ROAD, LAMBETH, and SWAN-STREET, BERMONDSEY, having completed powerful MACHINERY for SAWING TIMBER, for building purposes, will be glad to receive ORDERS in this Department, and beg to assure their friends that all favours shall be executed in the best manner, and with the utmost punctuality and despatch.

ACORN TIMBER WHARF and SAW MILLS,
CANAL, BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NOKES and CO invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:—
½-inch white, 13s. 6d. per square; ¾-inch white, 18s. per square; 1-inch white, 18s. per square; ¼-inch yellow, 15s. per square; ¾-inch yellow, 18s. 6d.; 1-inch yellow, 20s.
Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

STAINING DEAL TO IMITATE ALL KINDS of WOODS. It requires NO SIZING, and will stand the exposure to the weather. Price 6s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 44, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

GRAINING by MACHINERY.—The present system of graining is far surpassed by the use of BELLAMY'S PATENT GRAINING MACHINES, by which an ordinary workman can produce first-class work, and at an immense saving of time. The designs are perfect imitations of the choicest specimens of fancy woods and patterns of the first artists.
The Patent Graining Company are now prepared with a large and well-assorted stock of instruments, which they offer to grainers, painters, builders, and others without royalty.
Grained paper in imitation of all kinds of fancy woods of the choicest descriptions, in the piece, or in sets for panels, &c. wholesale and for exportation. Pattern-boards and cards for the trade in great variety
Painters, Grainers, Decorators, Merchants, and others are respectfully invited to inspect the patterns, and see the process at the Company's Offices, 30, Minories, London.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, paint lackers, and finishing spirit. The present price is 6s. to 8s. 6d. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellac, and sold at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

TO BUILDERS, HOUSE-PAINTERS, and CONSUMERS of PAINT.—The GRAFTON MINERAL PAINT.—This is the most durable paint hitherto known. It has been used during the last four years in the United States with great success. It is there admired to be unrivalled. After it has been applied to wood, and exposed to the weather a few months, it becomes as durable as stone. Wherever it is applied, neither rain nor tea-water can penetrate. The colour of the Grafton Paint is a reddish brown, but a variety of durable colours may be made by mixing it with other paints. In proportion to the quantity of any other paint mixed with it, will be the loss of its own peculiar properties. It may, however, be mixed advantageously with an equal quantity. The colour produced by this mixture will be far more durable than that of other paint. It is used on buildings of wood or brick, on iron bridges, iron railings, gasometers, and iron-work in general. Also, on fences, gates, waggons, railway-trucks, &c. For priming under any paint it is unequalled, 25 lbs. of this paint will cover 100 square yards of brickwork, or 170 of wood or iron. The Grafton Paint being finely ground does not require to be ground again. It is easily spread out, and does not emit any unhealthy effluvium
TESTIMONIAL.
"I have analyzed the Grafton Mineral Paint, and find it to consist of silica, alumina, and peroxide of iron. These inde-tructible ingredients are in such a state of chemical combination that they are unaffected by heat, cold, rain, or sea-water.
"WM. BASTICK, Analytical Chemist,
"2, Brook street, Grosvenor-square, London."
Sold by LIVETT, FRANK, and SON, Oil-Merchants, 14, Borough, London-bridge; of whom may be had testimonials in its favour, and also directions for use.
Price 20s. per cwt.
Sole Consignee for the United Kingdom,
JOHN EIVLS, 61, King William-street, City.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that 6lbs. of Wolston's Torbay Iron-Paint will effectually cover as much surface as 112lbs. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement fronts, economy and durability will be secured. To Builders and Painters, for all painting purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade, and of the manufacturers, G. B. KENT and CO 11, Great Marlborough-street, London. Established 1777.
N.B. Kent's Painting Brushes are all stamped G. B. KENT & CO.
Price Lists forwarded by post.

WINDOW BLINDS.—FULLER BROTHERS, Manufacturers of every kind of Inside and Outside WINDOW BLINDS, warranted of the best materials and workmanship, at the lowest possible prices. Builders and the Trade supplied. A List forwarded on application. 29, Charlotte-street, Blackfriars-road; and at Sydney, New South Wales.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application post free.

A FIXED ALLOWANCE OF at PER WEEK
in case of Injury by
ACCIDENT of any DESCRIPTION,
or the Sum of
1,000l. IN CASE OF DEATH,
may be secured by an annual payment of 3l. for a policy in the RAILWAY PASSENGERS' ASSURANCE COMPANY.
A weekly allowance of fifteen shillings for injury, or 100l. in case of death secured by payment of ten shillings.
NO CHARGE FOR STAMP DUTY.
Forms of proposal, prospectuses, &c. may be had of the agents, of the clerks at all the principal railway stations, and at the head office, London, where also
RAILWAY ACCIDENTS ALONE
may be insured against by the journey or by the year as heretofore.
Railway Passengers' Insurance Company, empowered by Special Act of Parliament.
WILLIAM J. VIAN, Secretary
Offices, 3, Old Broad-street, London.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS Millbank-street, Westminster; and Seel-street, Liverpool.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Accounts of COMPARATIVE EXPERIMENTS on the strength of this and other Cements (read at the Institute of Civil Engineers), to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 80, Old Broad-street, London; to Mr. MONUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 8, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works Mr. THOMAS WEEKES.
Agents in London, Messrs. GEORGE POTTER and CO, Lime-merchants, Purfleet wharf, Earl-street, Blackfriars, and No. 19, North-wharf-road, Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Laths, Stucco, &c. Marble Merchants and Importers of Pozzolano.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Offices, 4, George-yard, Lombard-street.

PORTLAND CEMENT.—JAMES WESTON having enlarged that portion of his CEMENT WORKS on Millwall, Poplar, for Manufacturing the above CEMENT, begs to inform the Trade in general that they can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Earl-street, Blackfriars, or Middle Wharf, Scotland-yard, Westminster. Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. B. BLYTH, at Millwall, Isle of Dogs, Warehouse, No. 1, Wharf, Paddington-basin.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal gauger's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 19, South Wharf, Paddington, J. B. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

HUBBUCK'S PATENT WHITE ZINC PAINT,
The Permanent White of the Ancient Artist.
HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor tropical climes act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The fearful White Zinc may be had for grinding in Oil, and where it is used with Size, Varnish, &c. To prevent the prejudice against Zinc paint, which the adulterated article must otherwise produce, it is now sold by the Wholesale Paint-dealers in Original Packages, each cask stamped, HUBBUCK—LONDON PATENT. And when so marked, the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works opposite the London Docks, London.
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

GREY STONE LIME WHARFS,
12, UPPER GROUND-STREET, Blackfriars (Surrey side),
7, NORTH WHARF ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 6d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

CHARLES RICHARDSON,
3 & 6, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS.
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 6 South Wharf, Paddington.
NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now burning GREAVES'S BLUE LIAS LIME per the Great western Railway from Harbury to Bull's bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.
All applications for prices and terms will meet with prompt attention.
N.B. Please observe the lime is ground at the works, not in London.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement. Works at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

GREAT REDUCTION in BLUE LIAS LIME.—To BUILDERS.—CARR'S FOUNDATION LIME can now be had at 3s. 10d. per quarter, delivered at the Paddington Station.—Address, Mr. ISAAC CARR, Twerton, near Bath.

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keen's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods, &c.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP RED RUBBING BRICK.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Writing, Whiting Sand for sahphate, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. Sent by carts from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods both Welsh and Newcastle, Fire-clay, Fire-bricks, Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.
General Office—No. 12, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at R. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.
Malm Place, half washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and Co. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Lighterage or Pitching Hand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Hinbury New-park, would be willing to enter into engagements with builders and others for supplying first class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Delf's Farm, 58, Kingsland-road, Kingston Green.

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY, near the Crystal Palace.
Entrance, Norwood end, Palace-road.—BRICKS of the first class Red Kiln, Malm, Cutters, Pressings, Facings, and Paviors. Clamped ditto, Yellow and Pale, Seconds, Paviors and Pickings, Washed Stocks, Stocks, and Place.—Apply to TRUMAN and Co. Norwood Lodge, Palace-road, Roupell park, Lower Norwood, Surrey.

GRAVEL.—WANTED, to PURCHASE, about 200 loads of good Lime GRAVEL, for roads.—Apply to Mr. WELCHMAN, No. 23, Rutland-gate, Hyde-park.

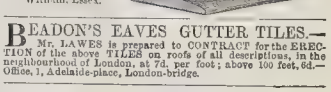
IMPROVED AIR-BRICKS.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Quoin Blocks, &c.
Tivdale, Staffordshire.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Warlingham (close to the field), leave at 6 and 9.30 a.m. and 3 p.m.; return at 9.55 a.m. and 2.5 and 7.35 p.m.
HENRY C. MOUNT, Sec.
37, King William-street, City.

HOGG'S GARDEN EDGE TILES: a cheap, elegant, and durable substitute for Box Edging.
13s. per Hundred, or
4d. per yard.
Exhibited at Court of Inventions, Crystal Palace; and at the Office of "The Builder."
Full particulars from Mr. R. BLACKETT, Witham, Essex.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the ERECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.



BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 881, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world

PANTILES, PAVINGS, &c.—J. H. ANDREWS, Wisbench, Cambridgeshire, begs to offer pantiles at 60s. per 1,000; floor bricks and 6-inch pavings, at 37s 6d. per 1,000; 8-inch pavings, at 57s. 6d. per 1,000; plain tiles, at 35s. per 1,000 delivered. Cash prices.—Delivered on trucks in London or Eastern Counties Railway.

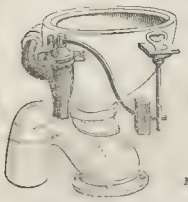
IMMEDIATE CASH ADVANCES.—Money Lent on Personal Security, Leases, &c. Sums from 10l. to 300l. advanced two or three days after application, for two years, one year, or six months, repayable by weekly, monthly, or quarterly instalments; and good bills discounted. Charges moderate, and strict confidence observed. London and Provincial Loan Company, private office, 69, Goswell-road, London. Open daily from Nine till Six, thus avoiding inconvenience or publicity.—Form of application and prospectus, gratis, on receipt of stamped envelope.

MONEY WANTED.—The Council of Hastings, acting as the Local Board of Health, for the District of Hastings, in the said borough, are desirous of borrowing, under the powers of the Public Health Act, 1848, the sum of 4,000l. or to that amount, in sums not less than 50l. The said several sums may be repaid by annual instalments of principal and interest, within the period of thirty years; or they may be repaid within such period, subject to special arrangement, by means of sinking fund. Any parties desirous of lending the full sum, or any part thereof, are requested to communicate their terms for interest, &c. address d to the Town Clerk, Hastings.
Hastings, July 9, 1856.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find at immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSSE'S MANUFACTORY, 29, Bowling Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSSE'S WHOLESALE WAREHOUSE, 29, GREAT PORTLAND-ST. REG., oxford-st., where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly seven years, and having greatly increased the DRAIN PIPES, &c to some of the largest Works in and around London, viz.:—The New Castle Manor, Westminster, Buckingham Palace, Grosvenor Square, Hyde Park Barracks, Her Majesty's Commissioners of Works, &c. and in all localities parties who have not yet seen them, now feel themselves established as Potters, beg to take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor. 2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required. 4th. It can be easily applied by any unpractised person. 5th. Dry or wet fixings, wet lime, or hair, are not required. 6th. It is a perfect protection against damp. 7th. It is fire-proof. 8th. It is light, not weighing more than about 42 lbs to the square of 100 feet, the cost of carriage is small.—9th. Under slate, metal, or tiles, it is a most effective non-conductor.

INODOROUS FELT, for damp walls and for damp floors, under carpets and floor-cloths. Price ONE PENNY per Square Foot.

CROGGON and CO.'S PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing Radiation of Heat, saving 25 per cent. of Fuel, and rendering Steam.

Samples, testimonials, and full instructions, or application to CROGGON and CO.'S, DOWGATE-HILL, LONDON.

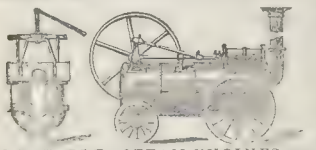
TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closet and Basin with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.



PORTABLE STEAM-ENGINES and BOILERS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey side).

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,

Engineers and Contractors, Johnson-street, Hull, and 6-street, South-wark, London.

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM ENGINES of various sizes, suitable for contractors' work, generally. Apply to Messrs. MILLS and HALL, Engineers, Stamp Iron Works, Bleathmore-road, where they may be seen.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 6s. 6d. [illegible] as may be required without the slightest draught being felt by the occupants, and as without the slightest [illegible] SHERINGHAM and CO., 67, Union-street, Borough; and of all respectable ironmongers, builders, &c.

TO CAPITALISTS, BUILDERS, and BRICKMAKERS.—TO BE SOLD, by private contract, a FIVE-HORSE POWER STEAM-ENGINE together with other machinery used for the purpose of brickmaking. Also, TO BE LET, a valuable BRICKFIELD at a rent and royalty, situate at Heath-st. Kent, near to estates on which buildings are being extensively erected. For further particulars apply to Messrs. WIRE and CHILD, Solicitors, 31, Swithin's-lane, City.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, tools, steamboats, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by Hand, Horse, or Steam power.

Iron Tanks 3s per ton painted.
Ditto .... 4ss per ton galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

WARNER'S PATENT VIBRATING STANDARD PUMPS—PATENT CAST IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2¼ in.	short 1 ft 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 3	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron	2 8 0
3½ „	ditto 3 6	flanged pipe,	2 12 0
4 „	ditto 6	as required.	3 3 0

½ in. short, with 15 feet of lead pipe attached, ready for fixing 2 14 0
2½ in. long ditto ditto 3 18 0

The short-barrel Pump is very convenient for fixing in situations where there is but little space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot, cold, and plant houses, they may be fixed with ease, under the stage, without the assistance of any Ironmonger or Plumber in town or country, at the expense of a few shillings each.

Manufacturers, JOHN WARNER and SONS, 8, Crescent, Jewin-street, London, and 6, Crescent, Jewin-street, City. Depôt for Garden Water, Showers of Water, Rose-jet Watering Pots, &c. Also, Fire and Garden Engines, &c. &c. Drawings sent on application.

MACINTOSH INDIA-RUBBER WAGGON COVERS, at reduced prices. Stocks of different sizes are always ready, and can be inspected at the Warehouse, MOSES, SONS, and DAVIS, 14 and 15, Aldgate High-street, and at the Factory India-Rubber Mills and Works, Essex-bridge.

DURABILITY of GUTTA PERCHA TUBING. Many inquiries have been made as to the durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM MESSRS. RAYMOND and JARVIS, Bath, VENNER'S HOUSE, ISLE OF WIGHT. Second Post-mark, 7th March, 1854.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers correctly. Many Builders, and other persons, who merely examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

HANCOCK'S PATENT VULCANIZED INDIA RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Strips for Joints.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Breast Collars, and Articles of this Kind made to any pattern however.

N.B. All communications and orders punctually attended to, address 10 the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most effectual yet invented, is made by T. SMITH, 24, Queen street, Oxford-street, near Argyll-street, where a working model can be seen, or a sketch will be sent on application.

N.B.—Espagniolette Bolts of a superior quality, at reduced prices.

H. DOULTON & CO'S.

TERRA-COTTA CHIMNEY-TOPS

Will withstand the action of the Weather and Sea Breezes, and are

QUITE IMPERISHABLE.

Prices not much higher than Cement.

DOULTON & CO.'S

TERRA-COTTA POTS, &c

Erected in London upwards of 20 years since, are now as sharp and perfect as when first manufactured.

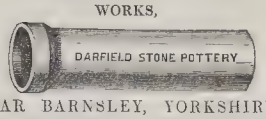
Drawings on application

H. DOULTON & CO. High-street, Lambeth.

PATENT TERRA-COTTA.

Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, [illegible] Chimney shafts and tops, Keyed moulded Cornices, Chimney shafts and tops, and numerous other Architectural Terra-Cotta, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Mill wall, Isle of Dogs; and sold at No. 1, Wharf, Fitzroy-street, Pentonville-road.

SALT-GLAZED STONEWARE, FIRE-CLAY, AND TERRA-COTTA WORKS,



NEAR BARNSLEY, YORKSHIRE.

The Proprietor, E. B. BEAUMONT, manufactures every description of STONEWARE for drainage, building, sanitary purposes, and fancy ware, from clays which have been subjected to the most searching analyses, and proved to be of the most tenacious and indissoluble qualities. The pipes are wrought by Spencer's Patent Machine, by which tube and socket are cast, without a manipulated joint, and rendered the most compact by hydraulic pressure; and as every improved apparatus has been made available to secure the highest excellence with great economy of labour, the goods are put upon the market at a considerable reduction from the prices charged for others at all assimilating in quality, whilst the stock on hand is always sufficiently large to provide for works of the greatest magnitude. THE TRADE LIBERALLY TREATED WITH.

Price lists and diagrams sent free on account on—
At the WORKS .....To Mr. WM. FORD, Darfield Fire-clay Pottery, near Barnsley.
In LIVERPOOL .....To Mr. JOHN SIDDALL, 32, Shaw-street.
In MANCHESTER ..To Mr. B. CONSTERDINE, Hunt's bank.
In GLOUCESTER....To D. S. WILKINS, Westgate Wharf, Gloucester.
In LONDON.....To Mr. J. D. JONES, 27, Buckle-sbury; and Goods Depot, No. 4 Warehouse, King's-cross (Great Northern Railway).

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONEWARE PIPES,
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free on also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c

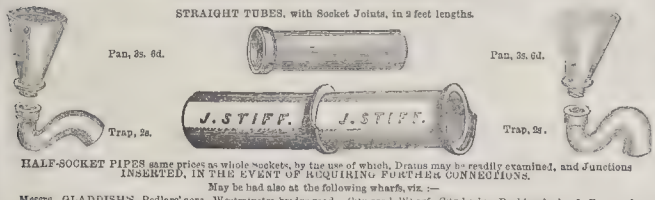
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz. :—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge road, City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLLS and ARDILL, and COLE, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Riverside-terrace Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal road, Hoxton.
Drawings, with Prices, will be forwarded free, on application.

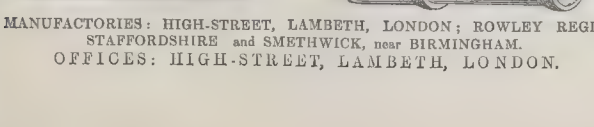
GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

DRAINAGE.—To BUILDERS, CONTRACTORS, LAND SURVEYORS, &c.—TO BE SOLD, a quantity of large size DRAINING TILES, very suitable for land or field draining, sewers, &c. and well adapted for covering-in open ditches, as they form a very economical and strong barrel drain. Largest size, 15 inches by 12 inches diameter, about 2 inches thick, 10s. per foot run complete. Smaller size, 12 inches by 10 inches diameter, about 1½ inches thick, 9d. per foot run complete.

N.B.—A discount on taking a quantity.

Apply at Brunswick Wharf, Varnish-ll, London

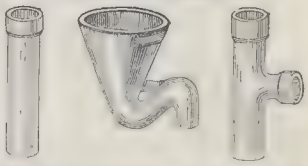
REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Wharves.

	PRICES.
3 inch bore, in 2 ft. 6 in. lengths, at	2½d. per foot
4 " " " "	3½d. "
6 " " " "	5d. "
9 " " " "	9d. "
12 " " " "	1s. 3d. "
15 " " " "	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes of the per, but any cracks are overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Essex Wharf, No. 1, Basinghall-street. DAVID MOONEY, Manufacturer of every article of Drain or POTTERY, having now further reduced the prices, begs to draw the attention of Builders and others to STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. 28, 11 1856

WATER-CLOSET, WITH APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,
Enamelled White Inside,
BRASS VALVE, &c.

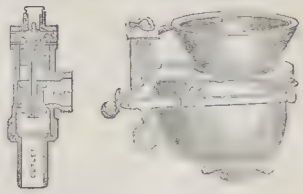
MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S, LONDON.

LAMBERT'S PATENT WATER WASTE PREVENTER, and SELF-REGULATING VALVE-COCK, especially adapted for Water-Closets.

(a) FIG. 1. FIG. 2



This Valve is so arranged, that whether it be held down or propped up, only a given quantity of water can be used at each action.

The pressure of the column of water—viz. its vertical height—being known, a quart gallon, or any other quantity desired will be full to more or less discharged; and before a second quantity can be obtained, a second action must take place.

This Valve is capable of several modifications; one of its applications to the Pan Closet, as shown in Fig. 2, is important, as it renders unnecessary any other appliance to regulate the discharge of water; it can be made to keep open as long or short a time as may be desired, after the handle which operates upon it is set free.

It is yet more valuable when applied to self-acting Closets, as it dispenses entirely with cesspools or supply cisterns; once regulated, say for one gallon, that quantity will always be discharged at each action of the seat by its pressing upon the stem of, or by any other movement.

The Patentees have tested them under every pressure up to 300 feet with complete success.

THOS. LAMBERT and SON,
Founders and Manufacturers of High pressure Water-Valves,
Plumbers' Brass Work, Pumps &c.
SHORT-STREET, NEW-CUT, LONDON.

STONE PIPES.—GLAZED STONEWARE PIPES of the most superior qualities, at REDUCED PRICES. E. and W. STAUGE invite particular attention to their stock of these goods, which contains every description of socket both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, sinks, stills, steps, and coping, &c.—E. and W. STAUGE, Or be what they may.

GROUND FLINT AND CORNISH STONE, UNADULTERATED.
WILCOX & CO.
FLINT MILLS, MILLWALL, POPLAR.

FOR HIRE, a SPACIOUS TENT, adapted for the Laying of Foundation Stones for Public Buildings &c.

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.

Apply to R. PIGGOTT, 116, Fore-street, City.

SALES BY AUCTION.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY are instructed by the Proprietor (who is retiring) to SELL by AUCTION, on the PREMISES, Herbert's-buildings, Waterloo-road, on TUESDAY, the 23rd SEPTEMBER 56, and following days, at ELEVEN, in lots, without reserve, the MACHINERY, Tools, and Stock in-Trade of a LATHE and TOOL MAKER (the tools principally by Smith, Beacock, and Tannett, of Leeds), including fourteen self-acting lathes, one 15-inch and one 10 inch screw-cutting, with beds 26 feet and 22 feet long, seven screw-cutting, from 8½ inches to 24 inches centre; four surfacing lathes, to take in surfaces from 4 feet to 7 feet diameter; two boring-mills thirty engine and hand-turning lathes, with slides; five self-acting planing-machines, the largest to take in 3 feet wide and 12 feet long; three self-acting shaping-machines, three self-acting drilling-pin lines slitting machine, screwing machine, wheel-cutting machine, oscillating steam-engine of 14-horse power, Cornish steam boiler, 16 feet long; 300 feet turned bright shafting, overhead gearing, riggers, straps, and driving gear; fifty vices, workbenches, turning lathes, and bench and tool tools of all descriptions, smiths' tools, Lloyd's fan, five tons of cast and shear steel, ten tons of bar and rod iron, and numerous other effects.—To be viewed on Saturday, and Monday previous to the sale, when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

TO STONE MERCHANTS, CONTRACTORS, IRON-FOUNDERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Executors of Mr. C. J. Mare, to SELL by AUCTION, at the KING'S ARMS HOTEL, Bridge street Westminster on MONDAY, SEPTEMBER 29, 1856, at TWELVE o'clock, in lots, without reserve, 823 BLOCKS, Slabs, and Landings of Cheesewring Granite, Bramley Fall and Bradford Stone, forty-three cast-iron piles, and 150 bags Portland Cement, supplied for the construction of the new bridge, all unmanufactured and now not required by the commissioners.—To be viewed (by permission) at the Bridge Works, adjoining, on Friday and Saturday previous to the sale. Catalogues may be had at the King's Arms, Bridge-street, Westminster; of Messrs. FULLER and SON, 80, Fore-street; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Highly-finished Condensing Steam-Engine, by Nasmyth.

MESSRS. FULLER and HORSEY are instructed by the First Commissioner of her Majesty's Board of Works, to SELL by AUCTION, at HERBERT'S BUILDINGS, Waterloo-road, on WEDNESDAY, SEPTEMBER 24, at ELEVEN, a highly-finished direct acting, CONDENSING STEAM-ENGINE, by Nasmyth, with 11-inch cylinder, 2 feet stroke, with throttle-valve and governor, air-pump and two feed pumps, with solid gun-metal eccentric bright wrought-iron crank-shaft, fly-wheel, condenser, and apparatus, made for the Houses of Parliament. To be viewed on Tuesday previous to the sale, when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City

TO BUILDERS, IRONMONGERS, STOVE-GRATE MAKERS, AND OTHERS

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on THURSDAY, OCTOBER 16th, 1856, and following day, at ELEVEN o'clock each day, at the WAREHOUSES, Belle Sauvage-yard, Ludgate-hill, in lots, without reserve, the extensive STOCK of the Sheffield Company's Stove Grate and General Ironmongery Warehouses, all of the newest patterns and designs, including 100 polished steel register stoves, with ormolu mounts, 350 black register and Romford stoves, 20 wind-up ranges, 30 cottagers' cooking ranges, 20 hall and slate stoves, steel fenders, with ormolu mounts, 50 fire land black fenders, 250 sets fire-irons, bronzed umbrella-stands, hatstands, cards and tickets, an assortment of elegant Berlin bronzes, in groups of figures, inkstands, medallions, &c. 20 garden rollers, 30 round and oblong pig-troughs, 500 yards rain-water pipe and guttering, 30 tons stove and range material, fire-bricks, dampers, and frames, an assortment of builders' ironmongery, in locks, nails, hinges, screws, bolts, pulleys, &c.; furnishing ironmongery, japanned tea trays, kettles, and tea urns, bronze, electro-plated goods, brass and paper mach trays, cutlery, and scoops, toilet sets, 30 gas chandeliers, 300 ship cabin and entrance lamps and lanterns, 200 gas and other improved reflecting telescope, 12 gross patent peck guides, hinges and tools of smith's shop, standard scales and weights, counting-house fittings, and others.—To be viewed on Saturday and Monday previous to the sale, when catalogues may be had on the Premises, and of Messrs. FULLER and HORSEY, Billiter street, City.

IMPORTANT WATER-SIDE PROPERTY, ON THE THAMES, IN THE CITY OF LONDON

MESSRS. FULLER and HORSEY are instructed by William Crawshay, Esq. to SELL by AUCTION, on WEDNESDAY, OCTOBER 15, at TWELVE, at the MART (unless an acceptable offer is previously made by private contract), the splendid MERCANTILE PROPERTY, held under the Corporation of London, known as George-yard, Upper Thames-street, in the city of London, having a frontage to the Thames of 138 feet, and occupying a superficial area of about 34,000 square feet, a site unrivalled in the metropolis, either as a depôt for landing and housing goods or for carrying on any wholesale business for which extensive water-side premises are required. George-yard is universally known as the London establishment of Mr. Crawshay, the eminent ironmaster, and has been in the occupation of himself and predecessors for more than a century. The trade carried on ranks among the first in the City, the returns are very large, and, to any firm wishing to occupy the premises for the same business, a large proportion of the connexion may doubtless be secured. In the year 1851, the entire premises many thousands of pounds in the erection of a massive pile of buildings, in fact, the whole, with the exception of a small stove those already erected. The building is one lofty ground-floor, with cellars supported on iron pillars and arches and constructed to carry any weight. There is also a stack of warehouses, abutting on the river, 75 feet in length, of two floors, and a stack of warehouses, 60 feet in length, of three floors, abutting on Thames-street, a commodious dwelling-house in the yard, the lower part occupied as offices for clerks and principals. A commercial should purchase in Thames-street, and seasons paved yards, with two separate entrances, affording every convenience for the landing and loading goods. The whole is held in fee of the Corporation of London, for a term which will expire in the year 1916, subject to the rent of £800 per annum. A stock of warehouses adjoining, of three floors, with frontage of 133 feet in Castle-yard, may be added if desired, at a rent of 150l. per annum. To be viewed till the day of sale. Printed particulars and plan will shortly be ready, and may be obtained at the Mart; of Messrs. CROWDER and MAYNARD, Solicitors, 57, Coleman-street; and of Messrs. FULLER and HORSEY, Billiter street, E.C. tot.

VICTORIA-STREET, WESTMINSTER.—SECOND PORTION —Sale of new Building Materials, Plant, Stock, and Utensils of a Builder.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY, the 29th of OCTOBER, and following days, at ELEVEN o'clock each day, at the PREMISES, Victoria-street, Westminster, (in lots without reserve), the SECOND PORTION of the STOCK of well-seasoned NEW BUILDING MATERIALS, partly prepared, yellow and white deal flooring boards, fir and oak, Portland stone, 5,000 feet 12-inch tooled York paving, 3,000 feet self faced ditto, 2,000 feet York landings, 40 feet of York stone kerb for circle granite, two separate entrances, affording every convenience for landing and loading goods. The whole held in lease from the Corporation of London, for a term which will expire in the year 1916, subject to the rent of £800 per annum. A stock of warehouses adjoining, of three floors, with frontage of 133 feet in Castle-yard, may be added if desired, at a rent of 150l. per annum. To be viewed till the day of sale. Printed particulars and plan will shortly be ready, and may be obtained at the Mart; of Messrs. CROWDER and MAYNARD, Solicitors, 57, Coleman-street; and of Messrs. FULLER and HORSEY, Billiter street, E.C. tot.

SALES BY AUCTION.

PRELIMINARY ANNOUNCEMENT.

MESSRS. FULLER and HORSEY in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees of Mr. C. J. Mare, to SELL by AUCTION, in the ensuing months, the whole of the LOOSE STORES and TOOLS of the extensive ship-building yards and iron-works at Blackwall and West Ham, including upwards of 1,000 tons of wrought iron, in bars, rods, plates, scrap, blooms, and puddled bars; 100 tons rivets, 100 tons screwed bolts and nuts; 20 tons cast and shear steel, 500 tons castings, 20 tons engineers' steel stools, an expensive self-acting boring bar, 24 hot benches, stocks, taps and dies, &c.; 100 wrought-iron anvils, 30 tons smiths' tools, in top and bottom swages, hammers, mandrils, monkeys, &c.; 200 tons iron flasks, crane shank and hand ladles; flask weights, several weighing-machines, brassfounders' and finishers' tools, boiler-makers' tools, 100 tons shaping-plates and blocks, patent rivetting-machine, contractor's portable steam-engine and boiler, three Cornish steam-boilers, crab cranes, blocks and falls, many tons of chain slings, mooring-chains, chain-cables, &c.; 50 brass barrel lift-pumps, many water-closets, ships' pumps, five tons brass fittings, a large assortment of general ironmongery, 1,000 dozen files, 100 joiners' benches, joiner's cramp and tools, 1st valves, plumbers' tools, five tons pitch and chemicals, upwards of oak trees, several hundred fathoms of expensive prepared cabin fittings, several thousands of stage planks and deals, shipwrights' tools, 2 boats and sheers, three wrought-iron barges, counting house fittings, and a large assortment of miscellaneous effects. More detailed advertisements will shortly appear. Catalogues are being prepared, and may shortly be obtained at one shilling each, of Messrs. PULLEN and SON, 80, Fore-street; or of Messrs. FULLER and HORSEY, Billiter-street, City.

PRELIMINARY ANNOUNCEMENT.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees of Mr. C. J. Mare, to SELL by AUCTION, in the ensuing months, the whole of the PLANT of highly matched, non-blating MARINE ENGINES, equal to 450 horses' power; eight new tubular marine boilers; the castings for a second pair of oscillating marine engines; two second-hand marine boilers, with brass tubes; two new wrought-iron boats, and other similar property, more detailed advertisements of which will shortly appear.—Apply to Messrs. PULLEN and SON, 80, Fore-street; or to Messrs. FULLER and HORSEY, Billiter-street, City.

HARROW, MIDDLESEX Valuable Freehold Building Land, and good midway Residence, with the church and the station

MESSRS. FAREBROTHER, CLARK, and LYE are instructed to SELL, at GARRAWAY'S, on WEDNESDAY, OCTOBER 8, a valuable FREEHOLD PROPERTY, close to Harrow on-the-Hill, and about midway between the church and the station, and only a few yards' removed from the high-road, beautifully situate, commanding extensive views over the surrounding picturesque country, divided into three lots, as under, viz.—Lot 1. A desirable plot of ground, as staked out, and abutting on the Roxburgh-road, and having a frontage thereto of 300 feet, and extending in the rear to a depth of about 500 feet, part having a frontage of 207 feet to the Byron-road. Lot 2. A corner plot, situate at the junct on of the Roxburgh and Byron roads, with two frontages, of 118 feet to the former, and 181 feet to the latter. Lot 3. Another valuable plot, having a frontage of 202 feet to the Byron-road. The above property forms a portion of a larger estate, recently disposed of for building purposes. The roads are laid out, handsome villas have been erected on the adjoining plots, and some others are in progress. The proximity of the railway station, combined with the benefits extended by the North-Western Railway Company to occupants of houses in the vicinity, couple with the advantages of Harrow School render this a most desirable property for the erection of villa residences. May be viewed; and particulars, with plans, had of the King's Head Inn, Harrow; the Railway Hotel, at the station; of THOMAS WONTNER, Esq. Solici or, 13, Skinner-street, Snowhill; at Garraway's; and at the Offices of Messrs. FAREBROTHER, CLARK, and LYE, Lancaster-place, Strand.

COLCHESTER.—Freehold Building Land.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the CUPS HOTEL, Colchester, on THURSDAY, the 16th day of OCTOBER, 1856, at TWO for THREE o'clock, in sixty lots, several valuable PLOTS of FREEHOLD BUILDING LAND, situate close to the railway station at Colchester, having long lines of frontages to North-street, and the roads leading from Colchester to Sudbury and Ipswich, which will be sold without restrictions as to building; also a few lots close to St. Johnstreet, on the Earl's-hill fronting Castle-road and Garden-terrace. The above property is freehold, land-tax redeemed, chiefly of the free, most eligible situate, and importance for the erection of villa or other residences, and offers votes for the county of Essex.—Particulars, with lithographic plan, may be had and Fillmore, Esq. Solicitor, 59, Coleman-street, London; at the Cups Hotel, Colchester, and of Messrs. BEADEL and SONS, 21, Gresham-street, London.

IN BANKRUPTCY.

MR. ALFRED DAY has received instructions from the assignees of Messrs. Rowland and Evans, bankrupts, to SELL by AUCTION, at the FARMERS, Islington-green, New North-road, Islington, on TUESDAY, the 23rd of SEPTEMBER next, at TWELVE o'clock without reserve, the third portion of the extensive STOCK and UTENSILS of a Builder, comprising 200 scaffold boards, 1,000 putlocks, 30 long ladders, wheeling planks, 1,000 scaffold poles, three powerful crabs, sticks of timber, erection gear, troughs, planks, gates, hollow vices, drilling-machine, benches, masks, weights, smiths' tools, quantity of wrought and bar iron, rod ditto, gratings, iron frames, &c.; also, the Household Furniture, Bedding, Linen, and Kentish rag, in blocks and landings; fire bricks, pantiles, sheds, and other effects. May be viewed on the Saturday and Monday preceding the sale, and catalogues had on the Premises; of HARDEY and FILDER, Solicitors, 16, Gresham-street, City; J. NICHOLSON, Esq. Official Assignee, 24, Basinghall-street, City; and of the Auctioneer, City-road, near the Eagle Tavern.

TO BUILDERS. Superior Chimney-pieces of Statuary Marble, some richly sculptured, one of the Louis Quatorze style, four Italian Chimney pieces, and the Tomb of Dove and Veiled Marbles.

MESSRS. ROBINS will SELL by AUCTION, at their ROOMS, in Covent-garden, on TUESDAY SEPTEMBER 23, at TWELVE, STATUARY MARBLE CHIMNEY-PIECES, some richly sculptured, suitable for first-class drawing-rooms, one of Louis Quatorze style, four Italian sculptured chimney-pieces, others of a less expensive character, with trusses of black and sicilian marbles, for dining-rooms and libraries, several in Dove and Siena marbles, and a great variety of vein marble of smaller size. — Now on view at the Auction premises, in Covent-garden.

TO BRICKLAYERS, CONTRACTORS, AND OTHERS.

MESSRS. H. BROWN and T. A. ROBERTS will SELL by AUCTION, at the BULL INN, Dartford, on SATURDAY, SEPTEMBER 27, at SIX o'clock precisely, in lots, without reserve, to clear the ground, with about 750,000 BRICKS principally place at the property fronting the Crayford-road, about two miles from Dartford, Kent, where there is both water and land carriage.—To view, apply to E. SHEARWOOD, opposite Wilmington-hall, price catalogues, which will be ready for delivery of Sale; and of Messrs. H. Brown and T. A. ROBERTS, 32, Throgmorton-street, City.

MITCHAM, SURREY.—Valuable Freehold Land, giving Vote for the County

MESSRS. NORTON, HOGGART, and TEIST have received instructions to offer for SALE, at the MART, on FRIDAY, SEPTEMBER 26, at TWELVE, in one lot, a PIECE of valuable FREEHOLD LAND, situate at Mitcham, a short distance from the church, having a frontage to a road of 172 feet, and containing 2a. 1r. 24p.; also a Piece of Freehold Land adjoining, land-tax redeemed, having a frontage of 130 feet, and containing 1a. 2r. 1p. May be viewed, and particulars had at the King's Head, Mitcham; of Mr. R. J. WATTS, Solicitor, 9, Gray's-inn-square; Mr. W. LAMBERT, Surveyor, 4, New Basinghall-street; at the Mart; and of Messrs. NORTON, HOGGART, and TEIST, 3, Old Broad-street, E.C. [illegible]

SALES BY AUCTION.

PENSHURST, KENT. Important Sale of Building Materials, waggons, horses, cows, about 14 tons of prime meadow hay hunt hold furniture, and numerous other effects, the whole being particularly deserving of attention.

MR. JAMES M. RICHARDSON respectfully intimates that he has been favoured with directions, to SELL by AUCTION, on the PREMISES, in the occupation of the Messrs. Hope and Benjamin Constable, at Penshurst, Kent, on WEDNESDAY, THURSDAY, and FRIDAY, SEPTEMBER 24th, 25th, and 26th, 1856, commencing at TWELVE for ONE o'clock each day, their extensive and valuable STOCK of TIMBER and general BUILDING MATERIALS, including rails, curbs, horses, cows, a stack of prime meadow hay, household furniture, and numerous other effects, which will be further particularized in catalogues, to be obtained on the Premises; at the Offices of Messrs. CARNELL, GORHAM, and WARNER, Solicitors, Tunbridge; or of the Auctioneer, 1, Wilton-place, Tunbridge-wells.

PANKHURST IRON WORKS, 28, BAKER-STREET, AND KING-STREET, PORTMAN SQUARE.—Extensive Sale of Lease. To Families Furnishing, Hotel Keepers, Builders, Furnishing Ironmongers, &c.—Unreserved Sale of the extensive Stock of Messrs. Massey and Co. Stove Grate Manufacturers, and General Furnishing Ironmongers; removed to the spacious Auction Rooms, 31, Old Bond-street, a sale being prohibited on the premises

MESSRS. GREEN (28, Old Bond-street) have received instructions to SELL by AUCTION, at the large ROOMS, 31, Old Bond street, on THURSDAY, SEPTEMBER 25, and six following days, at TWELVE, per minority and without reserve, in lots suited to private purchasers, the whole of the extensive and well known high-class STOCK in TRADE of Messrs. Massey and Co. General Furnishing Ironmongers, comprising upwards of 200 register stoves of Grate, Bedfordshire, and various designs in Berlin iron and polished steel, many highly finished and polished ornaments, several hot-air and other hall and church stoves with ascending and descending flues, numerous kitchen-ranges, hot closets, &c. of the most approved description; a vast assortment of fenders, embracing costly polished steel for drawing-rooms, bronze, steel, Berlin black, and others for dining-rooms and parlours, and cast-iron and brass top for bed-rooms and nurseries; upwards of 200 sets of fire implements in every variety, capital japanned flat lamb shower, hip, sponge, and foot baths, toilet ewers and pails, plain and highly ornamental, japanned, and copper coal-scuttles, vases and pedestals, a great variety of costly, and less expensive, papier maché and iron tea-trays, waiters, and baskets; numerous tortoiseshell bronze tea and coffee urns fitly handsome modern silver lamps, in bronze, porcelain, opaque glass, and or-moulu; hall lanterns, Parisian time pieces, bronze ornaments, lustres, lamps, candlesticks, &c. sets of block tin fish-kettles with plated handles, block tin water-dishes and plates, copper tea-kettles, copper stew and sauce pans and fish-kettles, table cutlery, a large assortment of iron, tin, and wood ware, meat screens, plate-warmers, bottle jacks, chests of tools, brushes, door rugs, wire flower-stands and trainers, iron rollers, garden-engines and tools, and many useful articles; also the mahogany and glazed show cases, warehouse and office fittings, counters, gas-fittings and chandeliers, carpeting, illumination devices and lamps, weighing machines, and other items suitable for the trade; horse, two carts, and nun-rous miscellaneous effects.—On view three days preceding and mornings of sale, and catalogues obtained at the Pankhurst Works; at the Auction Rooms; and of the Auctioneers, 28, Old Bond-street.

TO CAPITALISTS, BUILDERS, SPECULATORS, and Others KINGSLAND.—Important Sale of Improved Ground Rents, amounting to [illegible] per annum secure for a period of 15 Houses, with valuable Reversionary Interest in the rack-rents, amounting to 230l. per annum.

PULLEN and SON are directed by the Trustees and Executors of Mrs. Mary Robinson, deceased, to SELL by AUCTION, at the MART, on THURSDAY, SEPTEMBER 25, at TWELVE, in one lot, a highly important LEASEHOLD ESTATE, consisting nearly of five acres of land, now covered with houses, including thirty-three residences, with gardens, forming the whole of Robinson's-row, in the front of the high-road, Kingsland, close to the railway station; also the Cock and Castle and Elephant Public-houses, the Birkbeck Hotel, the whole of William-street, Castle-street, and Henry street, numerous houses in Orchard-street, Bayne's-place, &c. extending in the rear to the Midmay Estate, at Newington. The entire property is held for a term expiring at Christmas, 1893, at a ground rent of £76 per annum, and the rack-rents amounting to and per annum. The under leases are nearly all granted for shorter terms than that of the original lease, at some of the under leases expire next, when the ground rents will come into possession of the rack-rents of a large portion of the property (and the other portion as the various under leases fall in) for the remainder of the original term, and the rack rents estimated at 2,300l. per annum.—May be viewed by leave of the tenants, and particulars [illegible] of Messrs. TAYLOR, PUNT, and LAYTON, Solicitors, Gaithall-yard; at the Mart, and of PULLEN and SON, 80, Fore-street, Cripplegate

The valuable Materials and Fittings up of Clothworkers' Hall, and several Houses in Mincing-lane

PULLEN and SON are favoured with instructions from the Worshipful Company of Clothworkers to SELL by AUCTION, on the PREMISES, on TUESDAY, SEPTEMBER 30th, and following day, at TWELVE, in lots, the entire BUILDING MATERIALS, FIXTURES, remaining UNTOUCHED and STANDING UP of Clothworkers' Hall and several houses adjoining, in Mincing-lane; comprising about 500,000 excellent stock bricks, 50,000 plain tiles, thirty squares of marble slate, selected Yorkshire paving, eight tons of lead, stout oak and fir timber in roofs and floors; modern sashes with plate glass in them, elegant stained and other enrichments, [illegible] and ceiling, and also the richly-carved oak screen in hall, with pilasters and capitals, 15,000 feet of oak and other panelling, the stone porch, with columns and carved capitals, 1,000 feet run of stone coping, window sills, iron columns, wrought-iron gates and railing, stoves, ranges, large copper boilers and fittings up of the kitchens, lead tanks and slate cisterns, iron doors and partitions, stone rooms, &c.; also the remaining furniture of the hall and court rooms, including twelve handsome solid brass chandeliers (from twelve to twenty-four lights each), large Turkey and Brussels carpets, chimney and pier glasses, elegant richly cut glass lustres, eight sets rich crimson cloth curtains, with handsome cornices, mahogany, dining, and other tables, and other effects, and brass and iron gas-fittings, and miscellaneous effects.—May be viewed on Saturday and Monday previous.—Catalogues had of ROBT. BECKWITH TOWSE, Esq. as the Officer of the Clothworkers' Company, Barbers' Hall; of SAML. ANGELL, Esq. Architect, 16, Russell-square; and of PULLEN and SON, 80, Fore-street, Cripplegate.

CHESTERFIELD, DERBYSHIRE. — To IRONFOUNDERS, MILLWRIGHTS, and OTHERS. — TO BE SOLD by PRIVATE CONTRACT, and the purchaser to be put in possession soon, the PREMISES, known as the Corn Factory, situate close to the town of Chesterfield, and comprising two large moulding shops, with fitting, modelling, and smith's shops; store loft, brass-foundry, &c. Also, a comfortable residence for a foreman, spacious yard, counting-house, and other conveniences; the whole containing an area of about an acre. There is water power upon the premises adequate for the above works during a great part of the year, and they are in the immediate neighbourhood of good [illegible] For further particulars apply to Mr. W. MACHEN, Manager, Gas Works, Chesterfield; or to Messrs. SHIRLEY and WALLIS ELLIS, Solicitors, of the same place. Chesterfield, Sept. 9, 1856.

LONDON: Printed by CHARLES WYMAN, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Brothers & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at No. 46 of the Builder, 4, York-street in the Parish of St. Paul, Covent Garden. All in the County of Middlesex.—Saturday, Sept 20th, 1856.

The Builder.

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Architect, Engineer, Operative & Artist.

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ARCHITECTURAL ASSOCIATION,

Lyon's-inn-hall, St. Mary-le-Strand. Session 1856–57.

The chair will be taken at EIGHT o'clock precisely, on the following Friday Evenings.

October 3rd. Public Conversazione, Opening Address. Arthur Ashlen, esq. A.I.B.A. President. The Committee will meet at Seven p.m. precisely.

October 10th.—Sketch. Interior of a Church, without aisles, 50 feet wide.

October 17th.—Medieval Architecture in Palestine, G. J. Wigley, esq. A.I.B.A. Vice-President.

October 24th. Sketch. Porch Lodge

October 31st. On Vale Crucis Abbey, Llangollen, North Wales, illustrated by Sketches. Randall Druce, esq.

Nov 7th.—Sketch. Clock Tower.

Nov 14th. Special Business, to consider the Report from the Committee, as to the answer to be sent to the letter from the Royal Institute of British Architects. The Committee meet at Seven p.m.

Nov. 21.—Sketch. Village School for One Hundred Children, with One Residence.

Nov. 28th.—Remote Resemblances in Assyrian and Babylonian Architecture. W. Boutcher, esq. The Committee meet at Seven p.m.

Dec 5th. Sketch. Font, with Cover.

Dec 12th.—A Paper will be read by H. T. Braithwaite, esq. late Honorary Secretary.

Dec. 16th.—Sketch. Covered Market for a Country Town.

Dec. 26th.—Notes on Architecture in Normandy. G. W. Lloyd esq.

1857. Jan. 2.—Sketch. Entrance Doorway (domestic.)

Jan 9th.—The Architects of the last Century. T. W. Goodman, esq. Honorary Secretary.

Jan. 16th.—Sketch. Country Inn.

Jan. 23rd.—Cubic Content alone.

Jan 30th.—Sketch. Pulpit.

Feb. 6th. On the Treatment of Arches, with special reference to the Connection between the Contour and Section. T. M. Bockman, esq. The Committee meet at Seven p.m.

Feb. 13th.—Sketch. Entrance hall to a Villa.

Feb. 20th.—Life and Works of Sir Christopher Wren. T. Roger Smith.

Feb. 27th.—Sketch. East Window and Reredos to a Cathedral.

March 6th.—The Construction and Decoration of a Dwelling-house. R. A. C. Herring, esq. The Committee meet at Seven p.m precisely.

March 13th.—Lighthouse.

March 20th.—Application of Coloured Materials in Building. C. Gray, esq.

March 27th.—Sketch. Bishop's Tomb, with surrounding Iron-work.

April 3rd.—The Science of Form. A. Allom, esq. A.I.B.A. President. The Committee meet at Seven p.m. precisely.

April 17th.—Public Conversazione.

April 24th.—Sketch. Elevation of Side of Private Library, showing Fireplace.

May 1st.—Special Business Meeting. The Committee meet at Seven p.m. precisely.

May 8th.—Sketch. Staircase to a Villa.

May 15th.—Dwellings of the Labouring Poor in Large Towns J. A. Bunker, esq. Honorary Secretary

May 22nd.—Sketch. London Warehouse Elevation.

May 29th.—The Elevation and Professional Lives of the Early Italian Architects, Artists, and Sculptors, contrasted with the Education and Practice of Modern Times. R. Druce, esq. The Committee meet at Seven p.m.

June 5th.—Sketch. Street (Gothic) Shops, and Mezzanine over Floors. Tudor Fireplace Pilaster.

June 12th.—Nomination of Officers and General Business. The Committee meet at Seven p.m. precisely.

June 19th.—Sketch. A Square, Hexagon, Octagon, or Circular Piazza or Place (Gothic).

June 26th.—Election of Officers. The Committee meet at Seven p.m.

Members of the Profession, and the Public generally, will be admitted to all the Ordinary Meetings at which Papers are read, and they are respectfully invited to attend, and take part in the discussions which follow.

T. W. GOODMAN,
J. A. BUNKER, } Hon. Secretaries.

TO ARCHITECTS, ENGINEERS, SURVEYORS, AND BUILDERS.

PROFESSOR DONALDSON'S COURSES of LECTURES on ARCHITECTURE and CONSTRUCTION, at University College, for the Session 1856-57, will commence on Tuesday, the 21st October. The circular and terms can be had at the College Office.

BUILDERS' BENEVOLENT INSTITUTION.—The NINTH ANNIVERSARY DINNER in aid of the funds of the Society will be held at the LONDON TAVERN, on WEDNESDAY next, October 1st, Mr. Alderman WILLIAM LAWRENCE, President, in the Chair.

STEWARDS.

Mr. Allot, James
— Annis, J. W.
— Astley, A. O.
— Bird, Stephen
— Bird, Edward
— Bird, John
— Bird, George (Treasurer)
— Bird, Joseph
— Blashfield, John
— Brass, William
— Burton, W. S.
— Cheesewright, J.
— Child, Joseph
Messrs. Cubitt, Shaddbolt, and Co.
Messrs. Collins and Stanbury, Birmingham
Mr. Cozens, Thomas
— Dodd, Henry
— Doulton, Henry
— Dunnage, Wm.
— Ellis, William
— Forest, Robert
— Formby, Charles
— Fox, Samuel
— Freeman, J. R.
— Gardiner, W. J.
— Goulter, James
— Grayson, George
— Greaves, Richard
— Grissell, T. F.S.A.
— Gritten, W. R.
— Harvey, John
Mr. Head, George
— Head, G. jun.
— Head, Richard
— Hickman, R. J.
— Higgs, Joshua
— Hilton, C. J.
— Honeywill, S.
— Howard, Thos.
— Hutchens, Wm.
— Jackson, Thos.
— Jackson, Wm.
— Jackson, W. H.
— James, Jabez
— Jay, John
— Jennings, G.
— Lawrence, Jas. C.
— Lee, Wm. M. P.
— Lucas, Chas. T.
— Mansfield, G.
— Mashman, Wm.
— Meakins, W. E.
Messrs. Morris and Phillips
Mr. Myers, George
— Newson, J. sen.
— Newson, J. jun.
— Nicholson, Benj.
Messrs. Orsi and Armani
Mr. Pearson, Thos.
— Peters, William
— Peters, Joseph
Sir Samuel Morton Peto, Bart.
Mr. Piper, Thos. jun.
— Plunkett, W.
— Richmond, C.
— Richardson, R.
— Rider, Thomas
— Rose, Alderman
— Sapwell, John
— Scantlebury, W.
— Simkin, W. S.
— Simpson, T. B.
— Skeat, William
— Sloper, Joseph
— Smith, Thomas
— Smith, G.
— Smith, Alfred
— Smith, Edmund
— Soward, T. jun.
— Stanham, R.
— Strehens, S. J.
Stiff, James
— Stirling, Thos.
— Stirling, Wm.
— Taylor, James
— Thorn, John
— Todd, Wm. Jun.
— Tode, E. H.
— Waggett, James
— Wales, George
— Watts, R.
— Webb, William
— Wetton, James
— Williams, J.
— Wilson, James

Gentlemen desirous of promoting the interests of the Institution, by becoming stewards, will be pleased to forward their names to the Treasurer, Mr. GEORGE HEAD, 33, Edgware-road; or to the Secretary, at the Offices, 8, Southampton-street, Bloomsbury, where Tickets may be obtained, 21s. each, of the Stewards, and at the London Tavern.

A. G. HARKIS, Secretary.

September 25, 1856.

SURVEYOR WANTED. — WEST HAM LOCAL BOARD of HEALTH.—Notice is hereby given, that the Local Board of Health for the District of West Ham, in the county of Essex, require a fit and competent Person to undertake the duties of a SURVEYOR under the Public Health Act, within the said district. He must possess a thorough and practical acquaintance with works of drainage, sewerage, road-making, and paving. He must be competent to take levels, to prepare plans, sections, drawings, working estimates, and to superintend the execution of all works of the description referred to, or which may fall within the duties of the Office of Surveyor under the Public Health Act, or the Bye-Laws of the Local Board. He will be required to superintend the public lighting of the district when under the Management of the Local Board, and see to the execution of their Contracts in reference thereto. The officer will be required to reside in the district, and devote the whole of his time to the service of the Local Board, and will therefore be restricted from taking private business. His salary will be 200l per annum, with the free use of offices. Any further information respecting the duties of the office, may be obtained on application to the Clerk of the Local Board. Candidates must send written applications for the office, with recent testimonials of qualifications and competency, and all particulars of age and previous occupation; and all applications must be sent to me, endorsed "Application for the Office of Surveyor," on or before MONDAY, the 29th instant. Such of the candidates as may be deemed by the Local Board eligible for the Office (but no others) will be required to attend on the day of Election of Officers, and on the hour and place, they will be duly informed. By order of the Local Board,

W. J. BARSHAM, Clerk.

Bloxsby House, Stratford, Essex, Sept. 16, 1856.

COMPETITIONS.

NEW GOVERNMENT OFFICES.—The Commissioners of her Majesty's Works and Public Buildings give Notice, that they are prepared to receive DESIGNS in Architecture of all Countries for COTTAGES for the ACCOMMODATION of the principal GOVERNMENT OFFICES, on a Site facing St. James's Park, the New Palace at Westminster, and the Public Offices in Downing-street and Whitehall. Plans for the Cottages, of Stairs, Entrance Doors, and the Fences and Boundary of each Garden, are to be delivered at the Office of Works, 16, Whitehall-place, on or before the 1st day of DECEMBER next, and the Designs must be accompanied by Plans of the ground, together with a statement of the premiums for which they will be executed, and delivered at the Office of Works, as aforesaid, addressed to me at the same place.

ALFRED AUSTIN, Secretary.

Office of Works, 16, Whitehall, Sept. 25, 1856.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The Trustees for Sale of a Freehold Estate of 500 acres, including the Bowl and Field, Crystal Palace, require PLANS for LAYING OUT the same for building purposes, showing the several Roads, Sewers, &c., the whole to be clearly defined and apportioned in suitable lots, and laid down to a scale of two chains to one inch, from actual admeasurement. The following premiums are offered:—For the plan adjudged the best by the trustees, 150 guineas; for the second, 100 guineas; for the third 50 guineas. The plans to which the above premiums shall be awarded will be retained by and be the property of, the trustees. Further particulars may be obtained of Mr. PEACOCK, Bailiff, near the Jolly Sailor station, Norwood, close to the property. The Trustees will meet on the 8th day of DECEMBER next, to examine the plans, which are to be previously forwarded, packed and sealed, to the Secretary's Office, Aviation Mart, London, addressed to the Trustees of the White Horse, Norwood Estate.

COMPETITIONS.

WELLINGTON TESTIMONIAL.—The Committee appointed at a Meeting of Subscribers, held at the Mansion House, on the 29th July last, to carry into effect the resolutions then passed, are desirous of receiving DESIGNS for a COLUMN and STATUE to be erected in honour of the late Duke of Wellington, at Liverpool.

The amount at present at the disposal of the Committee is £3,000, and in the event of the designs sent in not being considered worthy of being carried out for that sum, they are desirous that it should be, but any Artist will be at liberty to send in a separate design, either for the Column or for a Column and Statue.

The Committee do not bind themselves to accept any of the designs sent in, but will select that which they consider most worthy of being carried out, and in the event of material which they propose to employ.

A premium of 50l. will be given for the design which, in the opinion of the Committee, shall be the next in merit to that selected.

Each design must have a motto or device, and the name of the author of such design is to be sent in a separate sealed letter, bearing on the outside a corresponding motto or device.

The design for which a premium may be awarded to become the property of the Committee.

All communications to be addressed to the Chairman of the Committee, at the Town-hall, Liverpool; and the designs must be delivered there free of expense, on or before the 1st day of NOVEMBER next.

T. Winkall, Liverpool, September 20, 1856.

TO ARCHITECTS and OTHERS. — The Burial Board for the Parish of Saint Paul, Deptford, in the Counties of Kent and Surrey, are desirous of procuring DESIGNS for LAYING OUT the GROUND, and the ERECTION of TWO CHAPELS, LODGE, and ENTRANCE GATES, accompanied with detailed working drawings, specifications, and estimates. The outlay for the Chapels, Lodge, and Gates, must not exceed 1,600l. The Board will award to the author of the best design, in their judgment, subject to the approval of such design by the bishop of the diocese, the sum of 50l. The design for which the premium is awarded will become the property of the Burial Board, who will not bind themselves to employ the author to superintend the execution of the works. The Board may reject a premium unless a sufficient Tender be made for the erection of the Chapels, Lodge, and Gates, at or within the stipulated sum of 1,600l. If the Board employ the author of the design to superintend the execution of the buildings, the premium will operate in the commission, which is not to exceed 5 per cent. on the lowest Tender accepted, including travelling and other expenses. A plan of the ground, showing the situation of the buildings, may be obtained, at the Office of the Clerk to the Board, in High-street, Deptford, where designs must be deposited, free of all expenses, before FOUR o'clock in the afternoon of FRIDAY, the 31st day of OCTOBER next, marked on each design or drawing, and on a sealed letter addressed to the Board, having the same motto or device on the cover, and inside the name and address of the author. The designs not approved will be returned to the author on application. By order of the Board,

THOS. MARCHANT, Clerk.

High-street, Deptford, 22nd September, 1856.

WELLINGTON MONUMENT.—The Commissioners of her Majesty's Works and Public Buildings give Notice, that it is the intention of her Majesty's Government to ERECT a MONUMENT in St. Paul's Cathedral, London, to the memory of the late Duke of Wellington, and that the Commissioners are prepared to receive DESIGNS for the same from artists of all countries. A drawing, showing the ground plan of the cathedral and the site of the proposed monument, together with a statement of the premiums, and other particulars, will be forwarded to artists on application by letter addressed to me at this Office.

ALFRED AUSTIN, Secretary.

Office of Her Majesty's Works and Public Buildings, Whitehall, London, September 6th, 1856.

CONTRACTS.

TO BUILDERS and CONTRACTORS.—Notice is hereby given, that the receipt of Tenders for Works at Tourville, Alderney, which was advertised to be received by the Inspector-general of Contracts, War Department, Pall-mall, London, on the 29th instant, is POSTPONED until the 20th of OCTOBER, 1856.

War Department, Pall-mall, London, Sept. 20, 1856.

NOTICE to BUILDERS and CONTRACTORS.—The Commanding Royal Engineer at Guernsey gives Notice, that sealed TENDERS will be received by the Inspector-general of Contracts, War Department, Pall-mall, London, until WEDNESDAY, the 8th of OCTOBER, 1856, for CONSTRUCTING a BATTERY and a MAGAZINE BUILDINGS at Le Crocy, in the Island of Guernsey. The plans, specifications, conditions of contract, and form of Tender may be seen, and all other information obtained, on application to the Commanding Royal Engineer at the Royal Engineer Office, Guernsey, on and after the 29th instant. The Tenders must be completed in accordance with the terms stated in the printed forms, and must be delivered at the Office of the Inspector-general of Contracts, War Department, Pall-mall, London, on or before the hour named for opening the Tenders. The public work, to be contracted for, is marked on the plan deposited in the office of the Inspector-general of Contracts, War Department, Pall-mall, London," and endorsed "Tender for Works at Le Crocy, Guernsey." The War Department reserves to themselves the right of rejecting the whole or any of the Tenders.

By Authority of the Inspector-general of Contracts, War Department, Pall-mall, London.

Royal Engineer Office, Guernsey, 6th September, 1856.

NOTICE to STONE-MERCHANTS, CONTRACTORS, and OTHERS.—ROYAL ENGINEER OFFICE.—The War Department being about to CONTRACT FOR REPAIRS to ROADS, &c. of the Royal Artillery Barracks at Woolwich, next year, are desirous of receiving Tenders for the same, may inspect the specification, and receive all necessary information, relative thereto, by applying to Mr. CHEVRIGHT, Clerk of Works, at the Royal Engineer Office, Grand Depot, Woolwich, between the hours of TEN a.m. and FOUR p.m. up to the 2nd of OCTOBER, 1856. Tenders to be delivered at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on the 4th of OCTOBER, 1856. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Grand Depot, Woolwich, 13th Sept. 1856.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—The War Department is anxious that the Tenders which have been received for the erection of an Officers' Barrack at Dover Castle, by the Commanding Royal Engineer of the Dover District, hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, from whom alone the THIRTEEN Sheets of DRAWINGS, 1856, from competent persons desirous of CONTRACTING for BUILDING a RANGE of OFFICERS' BARRACKS, with Stable and Lodge, Lodges, in the Medieval style of Architecture, at Dover Castle. The plans and specifications of the works may be seen by persons fully competent to undertake the works (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Dover, between the hours of TEN and FOUR o'clock, from WEDNESDAY, the 24th of SEPTEMBER, to WEDNESDAY, the 8th of OCTOBER, 1856 (Sundays excepted). The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible sureties, jointly and separately, to be bounden under a penalty of 3 per cent for the due performance of the contract. The letter for the above works to be addressed to the Inspector-General of Fortifications, Pall-mall, and endorsed "Tender for Building an Officers' Barrack at Dover Castle."

N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer office, Dover, Sept 20, 1856.

TO BUILDERS.

BUILDERS desirous of TENDERING for the various WORKS required to be done in ERECTING ST JOHN'S CHURCH, Barnsley, may see the plans, specification, and quantities at Mr J. Jackson's, Solicitor, Barnsley, on and after 1st of OCTOBER next. Sealed Tenders to be addressed to the Rev. W. J. BINDER, and delivered at the School-room on Friday, the 31st day of OCTOBER next. The Incumbent does not bind himself to accept the lowest or any Tender.

PHILIP BOYCE, Architect.

TO BUILDERS.

PERSONS desirous of TENDERING for the ERECTION of a NEW BANK, at Kidderminster, may see the plans and specification, and obtain further particulars, at the Offices of the Architect Mr THOS. SMITH, 91, High-street, Stourbridge. Tenders to be forwarded to the "Stourbridge and Kidderminster Bank, Stourbridge," on or before MONDAY, the 6th of OCTOBER next.

The Directors do not bind themselves to accept the lowest or any Tender.

TO BUILDERS and OTHERS.—The Paving Committee of the Vestry of St Mary, Newington, Surrey, will meet at the Vestry-room of the Parish Church, on MONDAY next, the 29th inst., at SEVEN o'clock in the Evening, to receive TENDERS from persons willing to contract with the said Vestry for the ERECTION of an OPEN SHED, at the Stone-yard of the Vestry in Penn's buildings, Lock's fields. A specification and drawing may be seen at the Office of the Clerks to the Vestry, Church-row,

H. and F. CHESTER, Clerks to the Vestry.

Newington Butts, 23rd September, 1856.

THE Board of Works for the Limehouse District, comprising the parish of Limehouse, the hamlet of Ratcliff, and the hamlet of Shadwell and Wapping, CONTRACT for FLINTS and GRAVEL BALLAST. Notice is hereby given, that the Committee for Paving, Lighting, &c will meet at the Office of the Board, White Horse-street, Commercial-road East, on MONDAY, the 29th SEPTEMBER, 1856, to receive TENDERS from persons willing to contract for the SUPPLY of 600 CUBIC YARDS of the best picked FLINTS, and also of the SUPPLY of 200 CUBIC YARDS of sifted GRAVEL BALLAST, to be delivered according to the conditions of the specification, free of expense on the roads within the said district. Further particulars may be known, and printed forms of Tender obtained, upon application at the said Office between the hours of TEN and FOUR o'clock, when sealed and indorsed respectively, "Tender for Flints," and "Tender for Gravel Ballast," must be delivered at the said Office, not later than THREE o'clock on the said 29th day of SEPTEMBER, 1856. The Board do not bind themselves to accept the lowest or any Tender. No Tender will be received after the time specified, nor unless upon the printed form.

THOS. W. RATCLIFF, Clerk of the Board

White Horse-street, Commercial-road, September 18th, 1856.

SUSSEX COUNTY LUNATIC ASYLUM. To BUILDERS.—Persons willing to CONTRACT for sundry WORKS proposed to be done in ERECTING a PAUPER LUNATIC ASYLUM for the County of Sussex, on a plot of ground leased for the purpose, and situate on Hurst House Farm, in the parish of Wivelsfield, about a mile and a half from the railway station at Haywards-heath, are required to send in Tenders, sealed up and endorsed "Tender for County Lunatic Asylum," to my Office, at Lewes, on or before TUESDAY, the 7th of OCTOBER next, after which time no Tender will be received. The works to be done under the direction of the Committee of Visitors and their Architect, or other persons appointed by them, agreeably to plans, specification, and conditions, which may be inspected at the Office of the Architect, Mr. H. E. KENDALL, Jun. 33, Brunswick-square, London on any day after the 24th day of SEPTEMBER instant, between the hours of TEN a.m. and SIX p.m. The Committee will not be pledged to accept the lowest or any Tender, and the Contractor will be required to enter into a Contract, and to give a bond, with sufficient security, to be approved by the Committee, in the sum of 5,000*l* for the due performance of the Contract. The quantities can be obtained from Mr. THOMAS PERCY, of No. 1, Alfred-place, Bedford-square, London, Surveyor; and the usual charges of such surveyor are to be paid by the Contractor whose Tender may be accepted.

By order of the Committee of Visitors,

WM. POLHILL KELL, Clerk.

Lewes, 8 September 6 1856.

SEVERN COMMISSION.—To CONTRACTORS.—The Commissioners for improving the Navigation of the River Severn are desirous of receiving TENDERS for the execution of about 100,000 CUBE YARDS of EARTHWORK at the Diglis Basin, NEAR WORCESTER. Plans, sections, and particulars may be seen at the Hill Gate Engineer to the Commission, Mr. F. LEADER WILLIAMS, Diglis House, Worcester. Sealed Tenders, addressed "To the Severn Commission," and marked outside "Tender for Earthwork," must be delivered at the office of the Commission, Edgbaston-street, Worcester, on or before THURSDAY, the 2nd day of OCTOBER next. The Commissioners do not bind themselves to accept the lowest or any Tender.

THOMAS WATERS,

Clerk to the Severn Commissioners.

Worcester, Sept 19, 1856.

LYMINGTON RAILWAY.—CONTRACTS for WORKS.—The Directors are desirous of receiving TENDERS for the CONSTRUCTION of the LINE, the WORK, RAILS, WORK, LAYING, BALLASTING, the PERMANENT WAY, and other WORKS necessary for completing about seven miles of single line of railway, either together or separately. The plans, specifications, bills of quantities, and forms of Tender, may be seen at the Office of the Engineer, Mr. J. C. BIRKINSHAW, Esq. 29, Abingdon-street, Westminster; or on application to the Secretary, E. H. MORE, Esq at Lymington, Hants, to whom Tenders are to be sent, not later than WEDNESDAY, the 8th day of OCTOBER next. The Directors do not bind themselves to accept the Lowest Tender.—Lymington, Sept. 15, 1856.

TO BUILDERS and CONTRACTORS.—BAPTIST CHAPEL, PRESTON.—Persons desirous of CONTRACTING for the ERECTION of the NEW BAPTIST CHAPEL, may see the drawings and specifications, and obtain bills of quantities, and all further information, on application at the Architects' Offices, No. 5, Cannon-street, on and after WEDNESDAY, OCTOBER 1st, and not before, and on WEDNESDAY, OCTOBER 15th, on which day Tenders will be received, sealed and endorsed "Tender for Chapel," and addressed to Messrs. HIBBERT and RAINFORD, Architects. The lowest Tender will not necessarily be accepted.—Preston, September 23, 1856.

CONTRACTS.

SAINT MARY, ISLINGTON, in the County of Middlesex.—METROPOLIS LOCAL MANAGEMENT ACT.—The IRONFOUNDERS and OTHERS in the Parish above given, that a Committee will meet at the Vestry Office, 20, Milner-square, on WEDNESDAY, the 8th OCTOBER next, at SEVEN o'clock, in the evening precisely, to receive TENDERS, and to CONTRACT for executing CAST IRON LAMP-POSTS and COLUMNS, according to pattern. The pattern may be seen on application to the Inspector of the Chapel-house, Chapel of Ease, Holloway-road. The entrance must be of ornamental and column pattern, be 4 cwt. 2 qrs. The whole to be delivered weighed, and stowed away at the Storehouse, Chapel of Ease, by the contractor, within a month and the contract price to be paid within the same period after the contract shall be completed. Sealed Tenders, stating the price per ton, to be delivered at the Vestry-offices previously to the above meeting. Parties desirous of contracting should attend the committee. The Vestry do not bind themselves to accept the lowest or any Tender.

JOHN LAYTON, Vestry Clerk.

21, Milner-square, Islington, September 24 1856.

GLOUCESTER PROPOSED CEMETERY. The piece of ground selected as a site for a burial-ground having been approved by the Secretary of State, the Gloucester Burial Board are now ready to receive PLANS for LAYING OUT and PREPARING the same. All persons desirous of furnishing such Plans may obtain further particulars on applying to Mr. JOHN HARVEY, Gibb Surveyor, Gloucester. Plans to be delivered to the Clerk on or before OCTOBER 30.—By order of the Burial Board,

A. H. JENKINS, Clerk.

Gloucester, 20th September, 1856.

TO BUILDERS.—WARNEFORD HOSPITAL, LEAMINGTON.—TENDERS are desired for the ERECTION of a WING to the above Hospital. Plans and specifications may be seen on and after WEDNESDAY, the 24th inst. at the Offices of GEO. T. ROBINSON, Esq. Architect, 23, Upper Parade, Leamington, where further particulars may be obtained. Tenders to be delivered at or before NOON on WEDNESDAY, the 8th of OCTOBER, at the Warneford Hospital, and endorsed "Tender for Additional Wing."

23 Upper Parade, Leamington, September 20, 1856.

METROPOLITAN BOARD of WORKS. To BUILDERS, CONTRACTORS, and OTHERS.—The Metropolitan Board of Works hereby give Notice, that they will be ready on THURSDAY, the 2nd of OCTOBER next, to receive sealed TENDERS from parties who may be willing to contract for the CONSTRUCTION of a BRICK SEWER, 3150 feet in length, or thereabouts, with other works in connection therewith, in Norfolk-street, Rhodeswell-road, and other places near Bow-common, in the county of Middlesex, and for the maintenance of such works in complete repair, for the term of twelve calendar months. Plans, sections, and a specification of the works, together with the form of Tender, may be inspected, and other particulars obtained, at the Office of the Board, No. 1, Greek-street, Soho-square, between the hours of NINE a.m. and FOUR p.m. until the 2nd OCTOBER next. Tenders addressed to the Metropolitan Board of Works must be delivered at the Office of the Board, before FOUR o'clock p.m. on the 2nd of OCTOBER, and no Tender will be received after that hour. The Board do not bind themselves to accept the lowest or any Tender, and the party whose Tender shall be accepted will be required to provide two approved sureties for the due performance of the works.

E. H. WOOLRYCH, Clerk of the Board.

No. 1, Greek street, Soho-square.

24th day of September, 1856.

THE CONSERVATIVE LAND SOCIETY.

TRUSTEES.

Viscount Ranelagh.
Right Hon. R. A. C. N. Hamilton, M.P.
Hon. Col Lowther, M.P.
J. C. Cobbold, esq. M.P.

TO BUILDERS.—The Executive Committee are prepared to receive TENDERS for the ERECTION of a pair of SEMI-DETACHED VILLAS, on the Weybridge Estate, Surrey. The drawings and specifications may be seen at the Offices of Mr GEORGE MORGAN, 3, Danes' Inn, Strand, London, on and after WEDNESDAY, OCTOBER 1st, 1856, between the hours of TEN and FOUR. Tenders are to be delivered on or before TWELVE o'clock on MONDAY, OCTOBER 13th, to the Surveyor, at his Offices, and endorsed, "Tenders for a pair of Villas, Weybridge." The Executive Committee do not bind themselves to accept the lowest or any Tender.

CHARLES LEWIS GRUNEISEN.

33, Norfolk-street, Strand, London.

THE CONSERVATIVE LAND SOCIETY.

TRUSTEES.

Viscount Ranelagh.
Right Hon. R. A. C. N. Hamilton, M.P.
Hon. Col Lowther, M.P.
J. C. Cobbold, esq. M.P.

TO BUILDERS.—The Executive Committee are prepared to receive TENDERS for the erection of a pair of SEMI-DETACHED VILLAS, on the Enfield estate, Middlesex. The drawings and specifications may be seen at the Offices of Mr GEORGE MORGAN, 3, Danes' Inn, Strand, London, on and after WEDNESDAY, OCTOBER 1st, 1856, between the hours of TEN and FOUR. Tenders are to be delivered on or before TWELVE o'clock on MONDAY, OCTOBER 13th, to the Surveyor, at his offices, and endorsed, "Tenders for a Pair of Villas, Enfield." The Executive Committee do not bind themselves to accept the lowest or any Tender.

CHARLES LEWIS GRUNEISEN,

33, Norfolk-street, Strand, London.

TO BUILDERS.—TENDERS are required for the ERECTION of a WAREHOUSE, in Cutler-street, Houndsditch. The proprietors do not bind themselves to accept the lowest or any other Tender. Apply to Messrs. RICHARD TRESS and CHAMBERS, Architects, 27, Queen-street, City.

TO SURVEYORS. — NOTICE. — NORWOOD, BEULAH SPA ESTATE, near the Crystal Palace. It having been intimated to the Trustees that the time mentioned in the Indenture of the Estate, without power to extend it to EXTEND the same to MONDAY, DECEMBER 8, it therefore is

TO BUILDERS, HOUSE-PAINTERS, and CONSUMERS of PAINT.—The GRAFTON MINERAL PAINT is the most durable paint hitherto known. It has been used during the last 12 years in the United States with great success. It is there admitted to be unrivalled. After it has been applied to wood, and exposed to the weather a few months, it becomes as durable as stone. When put to applied leather can not sea-water can penetrate. The colour of the Grafton Paint is a reddish brown, but a variety of durable colours may be made by mixing it with the other paints. In proportion to the quantity they may be mixed with it, will be the loss of its own peculiar properties. It may, however, be mixed advantageously with an equal quantity of Linseed Oil reduced by the mixture will be far more durable than that of other paint. It is used on buildings of wood or brick, on iron bridges, iron railings, gasometers, and in fact in all general. Also on fences, gates, waggons, railway trucks, &c. For painting under any paint it is unequalled. 25 lbs of this paint will cover 10 square yards of brickwork, or 150 of wood or iron. The Grafton Paint being fire-proof does not require to be frequently renewed. It is easily spread out, and does not run; is unusually effluvium.

TESTIMONIAL.

"I have analyzed the Grafton Mineral Paint, and find it to consist of silica, alumina, and peroxide of iron. These indestructible ingredients are in such a state of chemical combination that they are unaffected by heat, cold, rain, or sea-water.

"WM BASTICK, Analytical Chemist,

"2, Brook street, Grosvenor-square, London."

Sold by LIVETT, FRANK, and SON, Oil-Merchants, 14, Borough, London-bridge; of whom may be had testimonials in its favour, and also directions for use.

Price 20*s.* per cwt.

Sole Consignee for the United Kingdom,
JOHN EIVES, 61, King William-street, City.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat with unrivalled success. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon which testify that 63lbs. of Wolston's Torbay Iron-Paint will effectually cover as much surface as 112lbs. of either White or Red Lead and that it resists atmospheric action better than Lead Paints. For all Priming purposes, and other Iron Roofing, Fencing, Shipping purposes, (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured To Builders and Painters, for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention

KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade, and of the manufacturers, J. B. KENT and CO. 11, Great Marlborough-street, London. Established 1777. N.B. Kent's Painting Brushes are all stamped G. B. KENT & CO.

Price Lists forwarded by post.

ROYAL POLYTECHNIC.—Entire Series of Novelties—Lecture, with Experiments and Dissolving Diagrams of Bessemer's new Process of Manufacturing Iron and Steel, by J. H. Pepper, esq. every day at Three, and every evening, except Monday and Saturday, at Eight. New Entertainment by Leicester Buckingham, esq. entitled, "Life in the West;" illustrated by Dissolving Views, paint by G. Harvey, esq. Montanari's May Flower—Illustrating the Floriculture of Mexico. Last Week of the Scottish Musical Entertainments on Tuesday, Thursday, and Saturday evenings, by Angus Fairbairn, esq. assisted by the Misses Bennett. Monday evening, the 29th, at Eight, Lecture by Dr. Noad, F.R.S. on Rühmkoff's Coil, with numerous beautiful Experiments.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9*d.*; best holland blinds, on rollers, 6*d.*; best ditto, on spring rollers, 9*d.*; gauze wire blinds, in mahogany frames, 3*s.*; perforated zinc blinds, in ditto, 1*s.* 10*d.*; outside blinds of striped cloth, 2*s.* Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application post free.

FENDERS, STOVES, and FIRE-IRONS.—Buyers of the above are requested, before finally deciding, to visit WILLIAM S. BURTON'S SHOW-ROOMS. They are the largest in the world, and contain such an assortment of Fenders, Stoves, Ranges, Fire-irons, and General Ironmongery as cannot be approached elsewhere, either for variety, novelty, beauty of design, or completeness of workmanship. Bright stoves, with bronze ornaments and two sets of bars, 2*l.* 1*s.* to 5*l.* 5*s.*; ditto, with ormolu ornaments and two sets of bars, 5*l.* 10*s.* to 12*l.* 12*s.* Bronzed Fenders complete, with standards, from 7*s.* to 3*l.*; Steel Fenders, from 2*l.* 15*s.* to 6*l.*; ditto, with rich ormolu ornaments, from 2*l.* 10*s.* to 7*l.* 7*s.*; Fire-irons, from 1*s.* 9*d.* the set to 2*l.* 2*s.* Sylvester and all other Patent Stoves, with radiating hearth-plates. All which he is enabled to sell at these very reduced charges.

First—From the frequency and extent of his purchases; and Secondly—From those purchases being made exclusively for cash.

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SAVING IN GAS.—D. HULETT, INVENTOR and PATENTEE.—The Mercurial Gas Regulator is the only efficient instrument for ensuring wholesome and uniform lighting, equalizing the pressure, and preventing any irregularity in the height of the flame.—D. HULETT and CO. 85, High Holborn, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

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ANDREW CLARK and COMPANY, PLUMBERS,

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Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

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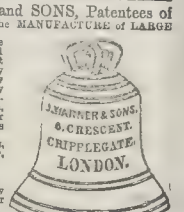

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Castings of every description.

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For TRUSSING BETWEEN TIMBER.
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Such arrangements are made for Despatch and Punctuality that Orders can be executed in a few days.

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IS AS
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Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to
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ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.
THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.
Many roofs covered with zinc thirty-five years ago have never required repairs.

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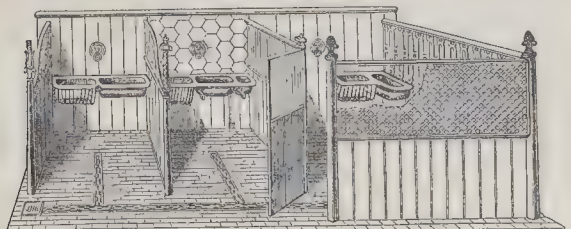
AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER TROUGH, and WROUGHT IRON RACK, united to an iron top plate, and forming one complete and useful fixture having Cottam's Patent Noiseless Heater Guide and Coupler attached, the bolt of which is taken to the back of the manger, and works with ease and freedom up or down the corde-bar. Cottam's new Patent seed-box, of galvanized iron, is an important addition to the above fittings, being simple in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned upon or out of the way when not in use.

Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings, Cheap and Durable Corn-Bins.

Improved Surface-Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.

The new Illustrated Catalogue for 1856, and estimates gratis, upon application to

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FOR BUILDING PURPOSES.
ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1¼	7s. 0d.
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THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11½ inches) is now being extensively used in the leading GOVERNMENT WORKS, Dock BUILDINGS, BANKS, ASYLUMS, BRIDGES, VIADUCTS, PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in London and in all parts of the kingdom

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.
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HOT-WATER APPARATUS of the best construction, adapted for warming and ventilating hot-houses, conservatories, public and private buildings, improved boilers, self-acting regulators pipe, &c; hot-air, drying, and hydraulic apparatus; portable engines; shafting and other machinery supplied or erected by R. S. TAYLER Battersea.

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DRYING-CLOSETS for HOSPITALS, UNIONS, ASYLUMS, &c.
BATHS, RANGES, GAS-STOVES,
HOT-PLATES, STEAM and GAS-COOKING APPARATUS,
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G. B. C. has recently fitted up the Crystal Palace Kitchens with Gas-cooking arrangements upon an extensive and most complete scale. Ornamental and Constructive Ironwork.

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Will this Grate become universally used?
Its advantages over every other consist in—
1. A saving of 50 per cent in fuel.
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A Prospectus, with a Second Series of Testimonials, just issued, from all parts of the country, will be sent on application.
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WARMING and VENTILATING.—ALFRED MAY begs to call the attention of Architects, Builders, and others to his system of WARMING by HOT WATER, Lunatic Asylums, Workhouses, Churches and other Public and Horticultural Buildings, Mansions, and Offices.

A. M. having had great experience in the above line, is enabled to guarantee the efficiency of such works as may be intrusted to him for execution; he has just completed, to the entire satisfaction of the architects, the warming and ventilation of the Baron's and Sir Anthony Rothschild's new mansions as conservatories.

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Artificial heat applies for drying linen on a very economical and effective system.

WILSON, LAW, and COMPANY,
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PATENT GAS AND WATER-PIPES.

VENTILATING STOVES! SUSPENSION STOVES!—Approved by thousands of purchasers, and recommended as the two best, the neat, most healthy, and economical for churches, chapels, halls, schools, warehouses, shops, greenhouses, bedrooms, libraries, &c. Prospectuses, with prices, sent post-free.—DEANE, DRAY, and CO. Stove Range, Ironmongery and Furnishing Warehouse, London-bridge.

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85, DRURY-LANE, and CHARLES-STREET, DRURY-LANE.
GLOVER, BROS.,
Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION either structural or ornamental.

Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathes, and Steam-engines; Range and Hot-plate Metal. An improved Soot Door, adapted for interior work.

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Plain and Ornamental Vases 20 per cent cheaper than Terra-cotta.

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BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock

IRON FOUNDRY, Harrow-street, Lant-street, Southwark.—W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Railing, and Newel Bars, Iron Coping, Palings, Tomb Enclosures, Area Gratings, Sash Weights, &c. Also Fly and other Wheels, Riggers, Pinions, Engine and Lathe Castings; Forge Backs, Furnace Bars, Kilns, Pans, Pipes, Tank Plates, and other Castings, to patterns or drawings.

FIRE-PROOF CONSTRUCTION.—FOX and BARRETT'S PATENT.
This improved system of fireproof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron, with concrete so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

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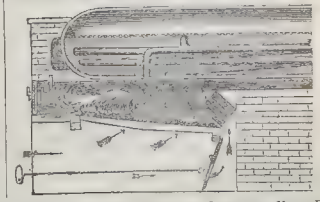

They are applicable to all Furnaces, Locomotives, Marine Engines, Ovens, Pottery and other Kilns, Common Fire, Kitchen Ranges, Hot and Hot-air Stoves. Application to be made to the PATENTEE, 34, Dorset-street, Fleet-street, or at the Hospital, to Messrs. BURBIDGE and HEALY, 113, Dorset-street, Fleet-street; or to Z. D. BERRY, Albion Works, Wilton-road, Pimlico.

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NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and
STEWART'S PATENT CAST-IRON GAS and WATER PIPES
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ESTABLISHED 1817.
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GREAT REDUCTION IN PRICES.
RAIN WATER CASTINGS, per yard.
Sizes—2 in. 2½ in. 3 in. 3½ in. 4 in. 4½ in. 5 in.
Pipes ..... 1s. 1d. 1s. 1d. 1s. 3d 1s 7d. 1s. 10d 2s. 2d. 2s. 9d.
Half-round Gutters ..... 7d. 8d. 9d. 1s. 1s. 3d.
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Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.
Best Cut Clasp Nails.
1¼ in. 1½ in. 2 in. 2½ in. 3 to 6 inch.
16s. 6d. 16s. 15s. 14s. 6d. 14s. per cwt.
Best Cut Floor Brads ..... 13s. 6d. to 15s. 6d. per cwt.
Best Cut Lath Nails ..... 15s. 6d. "
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A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.
Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

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PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr Arnott's Improved Ventilators.
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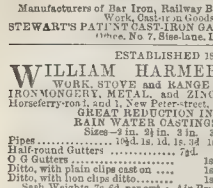
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.



Improved Self-acting Cottage Ranges, with Large Oven and Boiler
30 32 34 36-inch.
28s. 30s. 32s. 34s.
Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—
34 36 38 42-inch
54s. 56s. 58s. 60s.
Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 2½d.
Register Stoves, with Solid Bars, per inch, 3d.
Improved New Pattern Circular Check Register, with strong Bars and Trivets, 5d. per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Fires, 4os. to 10os. each.
Cast Rain-water Pipe { 2 2½ 3 inch. 10d. 1s. 1d. 1s. 3d. per yard.
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Patent Line..... 3s. 6d. 4s. 5s. 7s. 9s. per gross.
6-inch Rd. Ward Mortise, with Best Furniture and Patent Spindles 2s. 9d. each. Iron Hinges and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.
Brick Moulds kept in stock. Any size made to order.
Best Cut Clasp and Rose Nails.
1¼ in. 1½ in. 2 in. 2½ in. 3 in.
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Best Sheet Cut Floor Brads ..... 13s. per cwt.
Best Cut Lath Nails ..... 16s. "

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.
JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

Elliptic Stoves, double backs, 2½d. per inch, and upwards.
Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch,
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3-feet Cottage Ranges, with ovens and back boilers, 32s. each.
2 feet self-acting ditto, ditto, 34s. each.
Air Bricks, 4s. per doz.
Best Town Glue, 50s. Ditto, Scotch, 64s. per cwt.
Best Fine Cut Clasp and Rose.
1½ 1¼ 2 2½ 2½ 3-in. & larger.
16s. 6d. 16s. 6d. 15s. 6d. 15s. 14s. per cwt.
And every material required in the building, bell-hanging, upholstery, and brass-foundry trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter prepaid.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, rail, gate, cacchouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and every description of fastenings, as per illustrated prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar mills, &c.

WOOD-CUTTING MACHINERY,
JOHN M'DOWALL and SONS,
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow.
MANUFACTURERS of VERTICAL SAW-FRAMES
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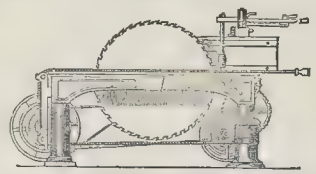

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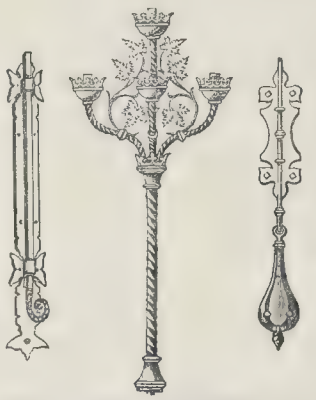

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Carnarvon	Finsbury	Swansea
Cheltenham	Spitalfields	Taunton
Chester	Westminster	Taunton
Clonmel	Saint Thomas' Charterhouse	Truro
Cork	Finsbury	Warrington
Coventry	Rotherhithe	Wakefield
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TO WATER and GAS COMPANIES.—TO BE SOLD, by TENDER, the undermentioned PIPES, &c. of the make of Messrs. Cochrane and Co. of Woodside Iron Works, near Dudley, Fourteen 12-inch pipes, weight about seven tons; five 12-inch, about two tons; one hundred and thirty 9-inch, about 29 tons; fifty 4-inch, about five tons. Sundry easy and quarter bends, branches, end and middle plugs, reducing pipes, and bolts and nuts together about nine tons. Also about seventy second-hand 7-inch pipes, about ten tons. Also one 5-inch, two 4-inch, two 3-inch, four 2-inch, and fifteen 3-inch three-way COCKS. Also an excellent twenty-horse-nigh pressure PUMPING ENGINE, with boiler complete, together with 100 yards of wood pump trees, with fixed flanges bolts, and nuts, and stays for a 6-feet 6-inch pit, wheels and counter-balance to pump, bucket and clack, 4-inch pump rods, 12 to 27 feet lengths, with double gaps and boxes complete. The above is surplus stock of the Wolverhampton Waterworks Company, who have no further use for it, in consequence of the new company taking possession at Christmas next.—Separate Tenders, at per ton, for pipes, bends, &c. and old pipes, and for the engine, the lot, also for the casing, to be sent, directed to the Office, on or before THURSDAY, the 2nd of OCTOBER next.
HENRY ROPER, Secretary.
Wolverhampton Waterworks,
Wednesday, Sept. 17, 1856.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

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NEW WINDSOR ESTATE.—Valuable BUILDING LAND to BE LET, in Plots for first and second class Villa Residences, with Stabling, which are much needed in this beautiful locality. The situation is the finest in or near Windsor, abutting on the Park and Long Walk, and commanding a splendid view of the Castle. Within ten minutes of the Great Western and fifteen minutes' walk of the South-Western Railway Stations. Advances can be had by responsible parties. For particulars apply to Mr. WILLIAM SIM, Architect and Surveyor, 3, Danes-Inn, Strand.

CITY.—Building Site, close to Cornhill and Gracechurch-street. TO BE LET, on Building Lease, a valuable PLOT of GROUND, occupying a commanding position in one of the best thoroughfares, and affording a first-rate site for a bank or public company, offices, dining-rooms, or shops. Uninterrupted light back and front.—Mr. DEBENHAM, 80, Cheapside. (2,970.)

ALDERSHOTT CAMP.—TEN ACRES of FREEHOLD BUILDING LAND, close to the camp and adjoining the high road to it. TO BE SOLD cheap, in one lot. A great bargain is, and adapted for public houses or residences of officers, as urgently required for.—Apply to Mr. HEWETT, Surveyor, Winchester.

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FREEHOLD LAND TO BE LET, on the River Thames, between the river and the Victoria Docks, being very near the dock entrance on BUILDING LEASES for manufacturing purposes. The land has a frontage of river frontage, but it is bounded on the land side by a branch of the Eastern Counties Railway, into which sidings may be made.—Plans may be seen, and particulars had of Mr. JOHN OAKLEY, Land Agent and Surveyor, 60, Doughty-street; and of Messrs. KINGSFORD and DORMAN, Solicitors, No. 25, Essex-street, Strand.

BUILDING LAND TO BE LET, in Wilson-street (continuation of Bow-street), Long-acre, and Granby-street, Hampstead-road, for dwellings, warehouses, or workshops. Apply to Mr. HARLOW, 11, Portman-street, Portman-square.

BELSIZE-PARK, HAMPSTEAD.—A portion of the Park WILL BE LET, on BUILDING LEASES for Villa Residences. Roads are Macadamized, and gas and sewers are completed. Money, if required, can be advanced on mortgage.—Apply to Mr. WILLIAM THOMPSON, Architect, 9, Conduit-street West, Westbourne-terrace

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CREOSOTING PLANT, complete, for SALE. Cylinder, 50 feet by 6 feet. Engine, boiler, and pumps, by Burton. Would be divided if needful.—Apply to JOHN CLARKSON, Timber Merchant, Birmingham.

The Builder.

VOL. XIV.—No. 712.

COMPETITIONS are just now abounding. The designs sent in by the sixteen selected competitors for the proposed library and museum in Liverpool will probably be exhibited publicly *before* the committee announce their decision. Several of the designs possess considerable merit. The committee acting on a suggestion made by a committee of the local Architectural Society, invited the competitors to examine and report on the best three designs, in addition to their own, and paid the railway fares of those residing at a distance. These reports were sent in under seal, and by this time have been laid before the committee. We shall look anxiously for the result of this step. But for the weakness of human nature, it would be an admirable course. None should so well be able to detect the weaknesses and appreciate rightly the skill with which difficulties have been overcome in a design (apart perhaps from the question of art), as those who, having worked out the problem for themselves, are fully aware of the requirements. Serving, however, as this course does, to array the judgment and duty of competitors against their immediate personal interest, the result could not always be looked for with perfect confidence. The character of the reports on the present occasion will probably influence the adoption of the step elsewhere.

When a certain number of architects attended Sir Benjamin Hall, at his request, on the subject of the proposed Public Offices Competition, Mr. John Shaw urged the application of the same principle, but his remarks did not elicit any strong expressions in its favour. Turn the question of competition which way you will, there are always difficulties visible. As to the Public Offices Competition itself, the conditions and instructions will be ready for delivery after the 30th inst. These occupy eighteen pages of foolscap paper, and will be accompanied by large and comprehensive plans of the neighbourhood, with especial reference to the design (1) which is sought for the best mode of concentrating the principal Government offices. "The design is also to represent the improvements which may be suggested in the principal approaches to the New Palace at Westminster, as well as in the communications with the Surrey side of the River Thames, especially with reference to the New Westminster-bridge, the ultimate position of which must be considered in connection with this design."

The instructions state that "architects are not necessarily to regard the existing Government buildings, should they interfere with the designs: but it is desirable that as many of such buildings as possible should be preserved and adapted as may be consistent with the integrity of the entire scheme.

Architects desiring to send in models with their designs [for the general arrangement alone] will be permitted to do so, provided the models are made to the same scales; but drawings in frames (other than straining frames) and glasses will not be received."

The time for sending in the designs is extended to the 20th of March, 1857, by which day they are to be delivered at Westminster Hall, where, it is intended, they shall be exhibited.

The following is a list of the principal Government offices, with the approximate area required for each:—

	Approximate Superficial Area in Feet.
The Treasury, including official residences for the First Lord and for the Chancellor of the Exchequer	50,000
The Foreign Office, including an official residence	46,000
The War Department	51,000
The Colonial Office	15,000
The Home Office	15,000
The Paymaster General's Office	15,000
The Exchequer Offices	3,000
The Board of Trade	20,000
The Privy Council Office	15,000
The Departments of the Admiralty (now at Somerset House)	45,000
The Board of Control	12,000
The Poor Law Board	8,000
The General Board of Health	3,000
The State Paper Office	5,000
The Office of Works	8,000
The Office of Woods	8,000
Civil Service Commission, &c.	5,000
The Charity Commission, &c.	6,000
The Ecclesiastical Commission	6,000
The Emigration Office	5,000
Copyhold, Inclosure, and Tithe Commission	10,000

In addition to the offices above enumerated, architects are to provide for farther buildings, to be afterwards appropriated for other departments of the Government, to such an extent as may be consistent with proper open spaces and thoroughfares.

The design (2) for the Department of the Secretary of State for Foreign Affairs is now to include an official residence for the Secretary of State, and this has led to an alteration in the apportionment of the premiums offered. The list, we believe, will now stand as follows:—

"Design No. 1.—(Block Plan.)	
First premium	£500
Second "	200
Third "	100
Design No. 2.—(Foreign Department.)	
First premium	£800
Second "	500
Third "	300
Fourth "	200
Fifth "	100 each.
Sixth "	
Seventh "	
Design No. 3.—(War Department)	
First premium	£800
Second "	500
Third "	300
Fourth "	200
Fifth "	100 each.
Sixth "	
Seventh "	

The designs in respect of which premiums may be awarded are to become the property of the Government.

If, however, the architect to whom the highest premium may be awarded in respect of the design for either the Foreign-office or the War-office, shall be employed to superintend the execution of the work, he will not be entitled to receive such premium, but he will be paid a commission, at the rate of 5 per cent. upon the outlay. Such commission to include all expenses for measuring, superintendence, &c. except the salaries to clerks of works."

Concerning the other competition proposed by her Majesty's Office of Works, that for the intended Wellington monument in St. Paul's, an architect complains to us that, having addressed the Office, pointing out that the old monuments were "architectural," the figure forming, in fact, a part of an architectural design, as might be seen in Westminster Abbey and in other buildings, and inquiring if designs upon paper might be sent, he was informed that they would not be received. We are not disposed to quarrel with this determination. It seems to us right that all the competitors should submit their ideas in the same material, in order to their being fairly compared. Moreover, it is doubtless expected that the competitors will, in this case, show their power over form as well as in design. The premiums offered, it must be remembered, too, are large; much larger in proportion than those offered for the designs for Public Offices. That the monument may very properly be semi-architectural there can be no doubt, and, indeed, we shall be sincerely glad if it be so: the monumental shrines of the mediæval period, and some remarkable examples of the Renaissance period in the church of St. Denis and at Rouen, to go no farther, rise to recollection to strengthen the wish. It is to be hoped at any rate, that the monumen'ts already in St. Paul's will be carefully studied, in order to learn what to avoid. More than 200 applications for the particulars and conditions have been received by the Office of Works; and 150 copies have been sent abroad through the Foreign Office.*

Looking to another Governmental body, we hear with satisfaction from several quarters that the observations we were led to make in July last on the two branches of the Royal Engineer Department (p. 405, *ante*), promise to be of service. The article of course gave offence in some quarters, and was referred, we are told, to the authorities in London as a libel on the corps. The answer it elicited, however, showed that it was viewed there in a very different light, and that an intention to reorganize the department would probably be hastened. The necessity for alteration is obvious. Two such enormous establishments, one civil the other military, cannot be required; nor is it clear why there should be two classes of civilians, clerks of works and foremen of works, farther than it appears that the clerk of works is *de facto* the civil engineer and architect of the department, whilst the foreman of works is the real clerk of works. Then, if this be so, why not give to each his proper title, and get rid of the interference at least of the junior military officers, whose labours appear more to obstruct than to facilitate the public duties of the department.

Attempts have been made repeatedly during the last twenty years to render the artificers of the Royal Sappers and Miners useful in building-work, as carpenters, masons, &c. and also to bring them into the Royal Engineer Department as foremen of works. Have these endeavours succeeded? We believe not. Although the corps officers persist in their assertions that they are a fine body of artificers, they are in fact but indifferent hands. It is scarcely likely that a good mechanic would enlist as a soldier when he could earn three times as much as a civilian, and enjoy his personal liberty. The sappers, when employed on building-work, are placed under the superintendence of the foreman of works of the Royal Engineer Department, who generally allows them, report says, to amuse themselves as they think proper, giving them out a few tools and materials to work on with, and leaving the public to find out what this "cheap" labour costs.

Another point in the arrangements which seems to require alteration, is the employment of *Assistant Royal Engineers*. At many of the stations in the colonies, the heads of the corps call for more engineer officers from time to time, with the view of increasing their own corps; and failing to obtain an augmentation of their corps, they get authority to employ Assistant Royal Engineers, and for these *Engineering* appointments, they select *Regimental Line Officers!* What would be thought of any civil engineer or architect, if, needing assistance, he made a selection from that quarter? Yet, to carry on the engineering works of this great country, this is the course pursued. Can any

* A design is being sought by competition for a column and statue in honour of the Duke of Wellington, to be erected in Liverpool, too, at the cost of [illegible]

other result be expected, but that these infantry engineer officers will obstruct the works carried on by those so absurdly placed under their orders, or can it be imagined that such appointments are made for the good of the public?

What the clerks of the works say is, as we are now compelled to be the civil engineers and architects of the department, give us the title and pay of such; or let us be clerks of works only, and let the military engineer take his hands out of his pockets, and do the work; or, if he is not able to do it, or the clerk of the works to take the position, let efficient civilian engineers and architects be employed and paid for what they do.

Some alteration, at any rate, is needed, and should be made forthwith.

THE PROGRESS OF ARCHITECTURE IN OUR OWN CENTURY.

THE general condition of art in Europe, the bent of thought and action through various channels operating directly or indirectly on taste, and the magnitude of the effects finally supervening in intellectual progress at the cessation of the war, have required us to give attention to the period at or about the year 1815, at some length. We have not even yet referred to all the influences which were conducing to the later and the present state of art in England and Germany. The fact of having worked out the models in one style, the co-existence of many different fields of study or selection, the love of mere *revivalism* in new works, and a desire to perpetuate the old, and the actual apprehension of only a *portion* of the attributes of architectural art, were so many conditions which were prejudicial to success in new works. Yet the desire to achieve something great was not wanting. In Bavaria, it did not even wait for the termination of the war: in England, the requirement for new churches was pressing. How was the *art* in such works to be expressed, under views of art, mistaken, conflicting, or unmatured? The difficulty was one which had never been presented to architects before, in the same variety of details and collective magnitude. The problem is still only being worked out, and is peculiarly complicated in church architecture.

The architect, however, is called upon *to act*. Supposing that the architects of George IV. or Louis of Bavaria, perceived that nice metaphysical points were involved in the work they were called to do, how were they to settle things which are thought out only in the lapse of years and by the contribution of many observant minds? The public oscillates in taste, heedless of consistency, even in error. It is not for a few architects to penetrate the clouded question, and place the art in a permanently progressing course. Like the old general, we are "beaten by time." Never, however, at any juncture in the history of taste, was the discriminating faculty more needed to ensure the erection of buildings, possessing the attributes of *art*, and having features of permanent interest and intellectual elevation for the public.

In the philosophic mind of Germany, we apprehend that perception that there was a fresh requirement was not wanting. This it was that gave birth to the new science of æsthetics, which long occupied the German sages, before the recent development of the same study in England. Time, however, was required in both countries, for the effect to be perceived on new art.

In the last article on this subject,* we essayed to set forth in words, what were all the attributes of the special art of architecture; and certainly we hardly think—though much has been said of some of these attributes—that the same thing had before been done. For, it appears to us, that whilst the *presence* of all the attributes is necessary to constitute the art, the invariable error made in this century, and maintained to this day by the writers in the newspapers, is in exalting colour, or form, or material, or style, or structural propriety or other element—one of them—and in leaving each of the others totally out of view. Half the truth is often as pernicious in its effects as whole error.

It cannot be too widely known, that even assuming correct views to prevail with practical architects, it is not these which make any actual condition in the art of architecture. Such views even are warped and modified by the prevalent opinions of the public: or, in the necessity of *acting* upon conclusions, directions are taken up which are not easily unlearned. We are driven, therefore, to regard as one of the chief active influences for the production of good art, the state of knowledge and taste existing with the public and private patron. It is a deficiency in this particular which yet retards the prevalence of good architecture.

We repudiate the word *patronage*, in the sense in which, alas! it has been often used by artists. We have no confidence in the value of what pertains to alms-giving: and art only is worth recognition, and valuable in its intellectual results, when it proceeds from a demand expressing the love of it, and the appreciation of its moral influences. Architecture, however, as we had hardly need to state, requires a demand, or it is not created: and though *public* patronage may be of chief moment, it is remarkable how much is in the power of individuals.

Now, the modern fame of Germany in the special art of architecture, has been greatly due—independently of the architects—to one or two "patrons;"—it has, indeed, owed much to a single monarch. It requires something more than the possession of funds, or the feeling of a wish, to exercise the calling of a Mecænas. Voltaire,* as quoted by Mr. Elmes, in our last volume, says in one place, "Colbert, le Mécène de tous les arts, forma un académie d'architecture en 1671. C'est peu d'avoir des Vitruves, il faut que les Augustes les employent." And, in another place, "Il n'est pas aussi facile à un génie né avec le grand goût de l'architecture de faire valoir ces talens, qu'à tout autre artiste. Il ne peut élever de grands monumens que quand des princes les ordonnent. Plus qu'un bon architecte a eu des talens inutiles."

But from king to commoner, we have been singularly unfortunate in the Mecænas family in England. Moreover, we are a people worshipping many things besides intellectual attainments, or even high character and virtue. How much, a sounding name and rank, or reputed wealth, or a certain presence, will carry with it, let every day's story tell. If only,—

"* * * * Virro painted, built, and planted,"

though

"Only to show how many tastes he *wanted*;"

or if "some demon" had—

"* * * * whisper'd, 'Visto! have a taste,'"

straightway, reason or no reason, the one has been installed, or the other has installed himself, judge and potentate in such matters as those which affect national credit,—as art does; art, which—what is of even more immediate moment—affects national prosperity, intellectual culture, and material and social happiness. Every bow-window of the clubs, still holds its "Sir Oracle," who, when he *opes* his *mouth*, thinks to "let no dog bark;" and it has been most unfortunate that some of those even, who may have attained considerable learning in particular branches of study, have neglected both æsthetics and the *general* study of styles,—the combined pursuit which we have held to be at this juncture in the history of architecture, more than ever necessary to the just decision upon what steps are to be taken towards the production of anything great. We are *cursed* with "the influence of authority in matters of opinion,"—that is to say, the authority which sycophancy gives to the man with a purse in his pocket, or "a handle to his name,"—leading to the astonishment that pervades the countenance, when *you* "just hesitate dislike,"—you, Mr. perhaps "Blank"—but for your lifetime a student, by lengthened day, and midnight oil, — and the clinching rejoinder, that that very pattern only one hour agone, was chosen by the Duke of Ducats, as well as the Lady Piastre, whom *all the world knows* to be at the head of fashion, and of faultless taste. Such a potentate, only on a wider field, was the great George IV.—of whom as to his capital, it might be said, as of Augustus, "lateritiam accepit;" but of whom, like Augustus, it could not be said that he left it of marble,—either in fact or by figure of speech. That, however, was the comparison drawn in words, by writers who should have known better; for, though by reference to what had existed during some previous years, the change was a remarkable one, and perhaps a fortunate one, the works produced do not form grounds for any very extraordinary congratulation; they are quite unworthy to be set forth as examples of the skill of English architects, and are strikingly inferior in all those elements of architecture which emphatically are the attributes of *art*, to the works which were being undertaken on the continent. Of the English works, however, the terms both of our approval and disapproval have been expressed.

To some, the reputation of a Mecænas appears to convey the idea of the absence of talent, such as it is deemed can be possessed only by those who are—shall we say?—"patronized." To us, it seems, that there is no calling which presents not only scope for so laudable an ambition, but which requires so extensive a combination of qualities. But between an English king and Louis of Bavaria, how great was the difference! The latter erred perhaps in making his capital somewhat of a museum of *imitations*, thereby losing something of the full expression of *art* from what he built; but, in spite of such errors, he "has done more for the permanent benefit of taste during the last quarter of a century, in the small city of Munich alone, than was ever before accomplished, by whole generations of kings, either in ancient or modern times. All the munificence of Pericles, and of Lorenzo the Magnificent combined, would not reach one tithe of the patronage of Ludwig the First, of Bavaria. His works in every department of art are truly surprising, and all accomplished in half the time spent by Louis XIV. over the gorgeous accumulations of his one palace at Versailles."* One great public monument a year was raised by this Mecænas during the twenty-five years; and, independent of architects, about 200 artists were kept constantly employed in decoration,—in sculpture, in painting in fresco and encaustic, in stucco, scagliola, mosaic, and marquetry; besides that during the same time other arts were in full activity, as casting and working in metal, and glass-painting. Indeed, in the last-named, some works of great importance were executed, as the windows which were contributed to Cologne Cathedral. Here, however, again we find ourselves overrunning the years of our present position in the series of this history.

The contrast between the architecture of England and Germany, after the time of the war, is great; and to Englishmen, we fear it must be admitted, is humiliating. Still some advantage may be derived from the comparison. Here are two sovereigns, each commencing about the same time to embellish a capital,—we shall shortly see in what way, and with what results.

In an article in our last volume, wherein we noticed the course of revivalism in Germany, we spoke of German artists, as Overbeck, Cornelius, Schadow, and others, who were resident at Rome, where most of those of the Lutheran Church became Roman Catholics in the year 1814. About this time occurred an event which was probably of great importance in our history. This was the visit to Rome of the Crown Prince, afterwards King Louis of Bavaria. This prince possessed knowledge and taste, and had already manifested a disposition towards the cultivation of the arts. The artists therefore hailed him as a patron, who would secure to them maintenance and fame. They were not disappointed. The prince, having conceived the design of embellishing the capital of his future kingdom, at once attached himself personally to several of the young men, and gave commissions liberally amongst them. The artists, in return, combined to give him a grand festival. A villa was engaged; and the prince was received at the porch by a representation of St. Luke, with an

* See p. 441, *ante*.

* "Essais sur l'Histoire Générale," tom. vi.

* Mr. Wornum's Lecture on "Ornamental Art." *Vide the Builder*, vol. viii. pp. 340, 341.

inscription bidding him enter and contemplate what *the arts* had done in his honour. Allegorical compliments, both to the visitor and to artists, were exhibited, through the medium of transparencies, busts, wreaths, and devices. Veit had set forth the figures of Giotto, Michelangelo, Raffaelle, Albrecht Durer, and others. Overbeck indicated the part the prince was to play by portraits of Pericles, Augustus, Julius II. and Leo X.; while Schadow, Vogel, and others essayed to portray their own high calling by representations of the downfall of the walls of Jericho, the extermination of the Philistines by Samson, and the cleansing of the Augean stables by Hercules.* "There is no doubt," says the writer in the *Quarterly Review*, "that this visit to Rome laid the foundation of all the royal undertakings that have since distinguished Munich." Indeed, amongst the several projects in Germany, to which, in the course of our notice of Cologne Cathedral,† we alluded as put forth at the time the war was thought to be concluded in 1814, was one for the Walhalla, completed several years later, and for which the King of Bavaria issued a programme for architects to send in designs, in that year. In 1814, also, one of the future great architects of Munich, Friedrich Von Gärtner, was in Italy. There he remained four years. Gärtner, it may be remarked, in 1819, visited England; but from 1820, when he was appointed professor of architecture in the Munich Academy, he was employed at Munich. In 1815, Klenze was royal architect, and in 1816 was commissioned to make designs for a Walhalla. A commencement of this building was made in 1821, as far as regards the preparation of materials, but the structure was not in fact commenced till the year 1830. Meanwhile, great attention had been given in Munich to the study of general art. In another article we shall examine further what were the architectural results. A right apprehension of these is of some moment in England.

* See the *Quarterly Review*, No. CLIV. "Modern German Painters."

† See *ante*, vol. xiii p. 517.

"IN OLD THINGS THERE ARE NEW."

IT is surprising that the lessons to be gathered from the pages of antiquity, particularly as applied to social and domestic policy, should have been treated with so little consideration as they have been; and it is curious that in our own country many matters are only now beginning to be appreciated by us, although the example had been set hundreds of years ago by the famous old Romans, who, conquering as warriors, did so much as engineers and architects to advance the condition of this country.

For centuries the highways of England were but quagmires, and almost impassable, yet the Roman roads of far older date may be seen at the present time,—faced by boulder stones, or with such materials as could be readily found in the various localities,—in a tolerably perfect state; and some of them are used at small cost of materials at the present day. During the Caffre war, which caused so much distress to our troops a few years back, when a band of men, called by us savages, set at defiance the British forces, the late Duke of Wellington was applied to for advice. This famous soldier gave it in a few syllables,—"Make roads into the bush." This was the Roman method, which we were obliged in our new way to carry into effect in the Crimea.

In connection with the London of bygone times, the Romans buried their dead outside the city: we have but just acknowledged the wisdom of this practice. It seems, from a consultation of the best authorities, that the streets of London, like the capital city of this great people, were set out, as far as practicable, at right angles. We have since then contrived twisted and tortuous roadways,—and such slums and alleys have, in consequence, been originated, that but for the actual damage they cause, they would be curious and ridiculous.

After the Great Fire Sir Christopher Wren proposed to build the new city somewhat after the Roman fashion: where the Bank of England and the Royal Exchange now stand, he inscribed a circle for the Royal Exchange and other important public buildings, and designed that the new streets should branch in long straight lines, and the interval be arranged in a similar manner: one of these main thoroughfares was Cheapside,—a Roman causeway,—raised above the waters and marshes towards the north. If this wise plan had been carried out, it is difficult to estimate the advantages which would have occurred. In a sanitary point of view the ventilation would have been quickened and drainage simplified. As a matter of policy its advantages can be appreciated by those who have to *ferret* into the crooked lanes and streets of Whitechapel and elsewhere. It is scarcely necessary to mention how advantageous Wren's or the Roman plan would have been for the convenience of the increased traffic. The Roman method has been carried out in the American cities; and all the improvements of the old parts of London at the present day are being carried out, at an enormous expense and inconvenience, on the plans which have formerly been propounded.

In the domestic edifices of the Romans—the remains of which have been found in London and elsewhere—the bath was made a necessary part of the dwelling. We have only as it were the other day acknowledged its utility amongst the poorer classes of the community; and, unfortunately, this important accessory to health has been at present but seldom provided in houses for the families of the middle and even the higher classes. It is however certain, that the sooner we imitate the Romans in this respect the better.

Look at the water supply of modern London; its partial impurity in some districts and certain unwholesomeness in others; the people *fighting* for water in courts and alleys, and left, as is unfortunately still too surely the case, without this cheap yet important necessary of life—begging for water, or travelling to a distance to polluted wells.

The old Romans laid a glorious supply of water, bringing it over hills and valleys from a distance, far from the chance of poison from the refuse of towns, by stately viaducts, beautiful in their architectural simplicity, and so substantial in their construction that to the present day they remain to us as samples of human skill, devoted to a wise purpose, well worthy of imitation.

MOSCOW AND THE ST. PETERSBURG AND MOSCOW RAILWAY.*

THE distance between these two cities is only 150 leagues, yet it is only at *Moscow* that we can understand that fusion of the Asiatic and Slavian civilisation, so strongly portrayed in its buildings, ornamentation, &c. The aspect of Moscow from the railway station is without any striking characteristic, no regular tracing (*alignement*) of streets, like in the city of the Neva. Gardens, which reach up to the frontage of the road, and in which stand mostly low houses, give the whole a very Oriental appearance, to which is to be added the *bizarre* architecture of the churches, the *area* of which is equal to *one-half* of the whole city. Every style of architecture, from the massive temples of Ellora to the *bizarreries* of the Moresque style and the Renaissance, is here represented, if not most artistically, still in an original way. These inflated cupolas, chequered with such glaring colours; these *bizarre* porticos, where the Moresque trefoil and the plain Roman cornice are combined; those steeples, which become suddenly expanded for receiving, like a postament, the gigantic crowns of the Czars; those so much flattened vaults, where (like in *Vassily Blajennoy*) one is almost obliged to stoop,—present all a character of originality, unmatched in any other part of Europe.

The *four hundred* churches which we see at Moscow, exhibit all, more or less, that style *sui generis*, which we may, unhesitatingly, call the *Russian* style of architecture. But it is in the *Kremel* where all this is most strikingly combined. At the feet of the beholder, and beyond the circumference of the wall, flanked by massive towers, which form the entering places to the Holy City, flows the Moscowa silver-waved, and overlaid by huge stone bridges. Farther on extends the city; the roofs of the houses, painted pale green, intermix their colour with a gloomy vegetation, relieved, however, by the innumerable steeples of the Greek churches and monasteries, with which are mingled Mahomedan minarets and Chinese pagodas, as here, in the seat of the grossest absolutism, a perfect freedom of religious credence is tolerated. On the other side of the scene you perceive the cathedrals of the Archangel and the Assumption, in front the steeple of *Ivan Veliki*, where the bells of the Kremlin are suspended. Beside that edifice that fabulous bell, so long *half-buried* in the ground, rests now on a granite socle. In following the course of the river you behold the new palace of the Czars, the front of which exhibits all the rich fancies of the Renaissance style. The other palace is that of the ancient Czars of Muscovy, rich in most curious specimens of the Byzantine and Russian art style. Turning towards the gateway of St. Nicholas are the modern structures, which have replaced those consumed in the conflagration of 1812,—the old and new arsenal, which, however, possess no other merit than their huge dimensions. Strange to say, that in the porticos and arches of the Kremel, notwithstanding all renovation, the vestiges of the great fire of 1812 are still visible in a few places.

The St. Petersburg and Moscow Railway has been opened for the last five years, during which and the next following five years the revenue is divided between the Russian Government and an American company; but hereafter the former will be the exclusive owners. Its construction has been most careful, and no possible comfort has been neglected,—so much so, that its title, "*un chemin de fer de luxe*," is no exaggeration. With the exception, however, of some bridges and viaducts, the work has been one of comparative ease, as the line of the railway, passing through the *gouvernements* of St. Petersburg, Novgorod, Tver, and Moscow, almost in a straight line, is built on even ground. The angles of excavations and fillings up are more obtuse here, which renders earth-slips less frequent, and the rails, placed in double pillions on perfectly well-squared beams, are of a good make. Most of the stations, however, are real architectural monuments, leaving far behind the wood and plaster barns of other countries.

The carriages are constructed after the American model, and are a sort of *chars à bancs*, containing seats for from forty to forty-five passengers. They are divided by a passage (*couloir*), which extends from one end to the other, and through which the guards can pass, the passengers go to the commodity, &c. The 500 wersts between St. Petersburg and Moscow are usually traversed in twenty-two hours, giving an average speed of six leagues (*lieues*) the hour. But Russian railway travellers are in the habit of taking breakfast, lunch, dinner, supper, and tea, for each of which half an hour is allowed. The trains start only once in twenty-four hours from and to either of the two cities, except on special occasions. The aspect of the country near St. Petersburg, as far as Tver, is most desolate and barren, the houses of the few peasants seeming to crumble to pieces; and it is only on nearing Moscow that traces of a nascent civilization are to be met with.

* "Moscou en 1856." Moscou, publié par Ordre du Gouvernement 8vo.

COMPOSITION OF MORTAR.

A CORRESPONDENT says,—"In many places sharp river sand for mortar is costly, and the sand from pits, which is often used about London, is objectionable in ways and for causes which I need not point out to you. Clay is prevalent in most districts, and is often carted away at great cost. The mortar of which I send a sample has been used about two months. The clay is mixed with chalk, and burned in heaps: it is then passed through a crushing-mill, worked by steam, and water is added when the compound is required for use. No other lime is used than the chalk burned with the clay. The piece sent is a fair sample cut out of a wall in the course of fixing a stone staircase."

The specimen sent is extremely hard, considering its early age.

MECHANICAL DEVELOPMENT.

INSTITUTION OF MECHANICAL ENGINEERS AT GLASGOW.

At a meeting of this Institution, on the 17th inst. Mr. Whitworth, on taking the chair, delivered an opening address on topics more or less connected with mechanical engineering. After describing a small measuring-machine, by which a difference in length of the 1,000,000th part of an inch may be detected, the chairman said,—"This question of correct measurement is in immediate connection with another, which will repay all the attention that can be given to it; and I think there is no subject that can be more profitably discussed among us;—I mean that of proper gradations of size in all the various branches of the mechanical arts. I think no estimate can be formed of our national loss from the over-multiplication of sizes. Take, for instance, the various sizes of steam-engines—stationary, marine, and locomotive. In the case of marine engines, the number of sizes up to 100-horse power will probably not be short of thirty, where ten perhaps would be ample. If so, look at the sums expended in patterns, designs, and in the number of tools for their manufacture. Nor is this all; for if there were only ten sizes instead of thirty, there would be three times the number made of each pattern, and, as you know, the very soul of manufacture is repetition. By attention to this, the shipowner would be benefited by getting a better engine at a less price. In the case of locomotives and carriages I would urge the subject on the attention of our members, the engineers of the great lines of railway,—the London and North-Western, the Midland, the Great Northern, for instance. I hope they will permit me to suggest that they should consider and determine, not only the fewest possible number of sizes of engines and carriages that will suffice, but also how every single piece may have strictly defined dimensions. This question is also well worthy the attention of our architects and builders. Suppose, for instance, that the principal windows and doors of our houses were made only of three or four different sizes; then we should have a manufactory start up for making doors, without reference to any particular house or builder. They would be kept in stock, and made with the best machinery and contrivances for that particular branch; consequently we should have better doors and windows at the least possible cost. Our friends across the Atlantic manage matters in connection with their buildings much better than at present we do. I hope the members of this institution will join me in doing what we can with reference to those two important subjects—correct measurement and its corollary, proper gradations of size. The want of more correct measurement seems to pervade everything. Take, for instance, the case of the common brick, which ought to be 3 inches thick. Who is there that has made an addition to a building that has not felt inconvenience from the irregularity of size?—the new brick being perhaps too thick, and so not allowing sufficient mortar to be used; or too thin, and requiring too much mortar. Perhaps one of the most effectual means that could be adopted, in the first instance, to remedy this unsatisfactory state of things, would be for the Government to supply corporate bodies with proper standards of length—such as the inch, the foot, and the yard. The corporate bodies themselves might then have their own standards of size founded on these, and made to suit the particular wants of the different trades in the locality. The only standard of length at present supplied by the Government, and kept by the corporate bodies, is the standard yard; but there is so little attention paid to accuracy that to the engineer and machinist it is not of the slightest use, and is only employed to adjust yard sticks for measuring woven goods. There is also another subject which bears upon this question, and which has lately been brought before the legislature,—that of decimalizing weights and measures. There can be no doubt of the beneficial results that would follow the passing of such a measure. There may be a difference of opinion as to what the unit or integer of lineal measure should be; but I am of opinion that it should be the inch; for, from the accuracy with which we can now measure that length, there would be no difficulty in determining and fixing the length of its multiples. The most important divisions of length in mechanism are those of parts of an inch, and if the length of the inch were altered it would cause much confusion. Small accurate standards of length, of the decimal parts of an inch would be of much service to some trades. There is now no standard of appeal; and the different wire and other gauges differ so considerably that the manufacturer, in the case of small wire and sheets of metal, has to send a sample of what he wants, there being no means of correctly expressing its size. Although I have said so much to you with reference to the desirableness of farther improvement and greater perfection in the mechanical arts, I congratulate you on the success which in our time they have attained, and the high consideration in which they are held. Inventors are not now persecuted as formerly by those who fancied that their inventions and discoveries were prejudicial to the general interest, and calculated to deprive labour of its fair reward. Some of us are old enough to remember the hostility manifested to the working of the power-loom, the self-acting mule, the machinery for shearing woollen cloth, the thrashing-machine, and many others. Now, the introduction of the reaping and mowing machine and other improved agricultural machinery is not opposed. Indeed, it must be obvious to reflecting minds that the increased luxuries and comforts which all more or less enjoy are derived from the numerous recent mechanical appliances, and the production of our manufactories. That of our cotton has increased during the last few years in a wonderful degree. Comparatively few persons, perhaps, are aware of the increase of the production during our lifetime. Thirty years ago, the cost of labour for trueing a surface of cast iron, by chipping and filing with the hand, was 12s. per square foot: the same work is now done by the planing-machine at a cost of labour of less than 1d. per square foot; and this, as you know, is one of the most important operations in mechanics. It is therefore well adapted to illustrate what our progress has been. At the same time that this increased production is taking place the fixed capital of the country is, as a necessary consequence, augmented; for in the case I have mentioned of chipping and filing by the hand, when the cost of labour was 12s. per foot, the capital required for tools for one workman was only a few shillings; but now, the labour being lowered to 1d. per foot, a capital in planing machines for the workmen is required which often amounts to 500*l.* and in some cases more. This large outlay of capital, invested in machinery to increase production, makes it impossible to curtail the hours of working machinery as much as could be desired. In some cases two sets of workpeople have been employed in relays, each working eight hours a day; and this system, perhaps, may in time be extended, although it is attended with certain inconveniences. If, however, the relay system could be so improved and organized as to allow more time for the better education of young operatives none would more cordially rejoice than myself. I believe that mechanics, though a mere material power in itself, may, if rightly used, become a moral lever, by which, like Archimedes of old, we may seek to raise the world. There is at the present time a very gratifying circumstance in connection with the extension of machinery—viz. the large remuneration which the operatives receive compared with those who perform hand labour without the help of machinery. I would here mention, with reference to the amount of wages paid to the operative, that it does not solely depend on the master manufacturers of this country, but is governed in some measure by what is paid by the manufacturers of other countries who are in competition with our own. When in America, in 1853, I found that the American operatives received somewhat more wages than are paid in this country; but they worked much longer hours, although the climate during some part of the year is so unfavourable. These longer hours enable the American manufacturer to turn over his capital more frequently. This question of increased production, with which we as mechanical engineers are so identified, is so entirely dependent on the power of the people to consume, that I hope I shall be excused in adverting to it. Our yearly exports now amount to about 100,000,000*l.* sterling, having doubled in a short time, while our home productions have been greatly increased from the same cause—the increased ability of our people to consume. As a general principle, it would seem to be far better to levy a small impost on the entire wealth of individuals rather than to fasten a tax on particular objects, which if produced would constitute wealth, but which are not made because of the threatened impost. The proprietors of land may rest assured that in the future development of mechanical improvements none will be more benefited than themselves. I do not hesitate to say that all harvest operations on land properly laid down will very shortly be performed in one-fourth the time required with the hand labour now expended, by the farther application of machines worked by horse power. This is my conviction, based upon the experience I have had in the successful working of the machine I constructed for sweeping the streets, at the same time filling the cart, by horse power. By the combined aid of mechanical improvements and the science of chymistry, together with the greater skill of our modern agriculturists, the culture of the land throughout Great Britain must more and more approximate to that of a garden. We have seen the effect of the repeal of the duties on glass and bricks in the improved appearance and reduced cost of residences, and a still further benefit may be expected to result from the removal of the remaining duty on timber."

MR. BESSEMER'S PATENT PROCESS FOR MAKING MALLEABLE IRON.

Time, as yet, in place of entirely settling the merits of this new process, only accumulates an increasing mass of contradictory assertions and opinions regarding it. While one class of objectors declare that the process evolves no extra heat at all, and that the metal still remains crude iron, another class allege that the heat is so intense that a new cupel must be erected, at great and impracticable cost, on every occasion, as the fire-bricks are melted and the vessel destroyed at every making of the metal. As to the qualities of the metal actually produced, too, there are the like contradictions; one announcing that it turned out to be mere rotten iron, and another that it produced articles of excellent quality. May it not be that, although purified from carbon and sulphur, phosphorus, or other crudity by the new process, the metal requires to be either cooled very slowly, to enable it to assume the fibrous or tenacious state, *or re-heated*, though not puddled; and that in those cases where it has been said to have turned out well, and produced articles of good quality, the re-heating requisite even to shape the articles so produced constituted an essential element in the favourable product; while in other cases, where a want of tenacity or consistency was met with, there was no such adequate or sufficient re-heating, or re-cooling rather. Of course, if re-heating and slow re cooling be essentially requisite, the value of the process is, to a certain extent, diminished; but still, if actual puddling be not necessary to the production of malleable iron or steel in this way, an immense advantage would be gained, and perhaps even the extra heat attendant on the process itself might be ultimately expended in protracting the cooling process so as to anneal the metal as it were, and obviate the necessity of even re-heating.

We do not mean to add to the speculations and opinions, however, already entertained on this interesting subject, but shall confine ourselves to a mere record of such alleged facts as appear to be of importance in their bearing on the final determination of the points at issue.

The *Engineer* states that—

"A piece of one of the bars made at Woolwich, from iron refined by Bessemer's process, was heated and rolled out to a thin sheet, at one of the Wolverhampton mills. With a view to its being rolled yet thinner, the sheet was then doubled, again heated, and again rolled, when it came out duplicate pieces of No. 23 gauze, 12 inches long by about 4 inches wide. These were then

annealed in the manner customary in the finishing of sheets so thin, and when cold were submitted to the following very severe test. They were taken to a tobacco-box maker in the same town, and, still cold, were punched out to the required shape for such an article. Operated upon first lengthwise and then across, the resistance was the same—perfect. It seemed as ductile as a piece of good block tin. In the words of the workman conducting the operation, 'it was as tough as leather.' The box was completed and the burnishing tool applied, when a polish was produced, that, if the process had been continued a little while longer, would have 'equalled,' the operator said, 'the polish of steel.' 'A better bit of iron,' this man said, 'I never worked.' The only perceptible flaw that the excessive punching which the shaping of the box required, was one of very minute proportions; and this the burnishing tool removed easily. The dimensions of the piece of bar from which these Lilliputian sheets were rolled, were, length about 4 inches, width about $2\frac{1}{2}$ inches, and thickness about, we think, $1\frac{1}{10}$ inch. *Before being broken it had been nicked and had broken very short*—the bar being to all appearance devoid of all the usual appearances of fibrous iron; *and yet, after being submitted to the heating and rolling processes* which we have described, it became malleable to the very great extent required to stand successfully so severe an ordeal."

These results seem to support the ideas we have broached: they would also explain why others have found the metal yielded by the very same experiment to be apparently so bad. Even the purest of glass forms but indifferent, or, at least, brittle, and hence comparatively worthless articles, unless annealed. May it not be so with the purest of iron, even admitting Mr. Bessemer's to be so, till also annealed, or unless protractedly cooled?

The experiments at Woolwich alluded to by the *Engineer*, and reported in the *Society of Arts Journal*, have apparently militated much more against than in favour of the immediate product of Mr. Bessemer's process, so far as regards tenacity, but they may be subject to the considerations already suggested. The metal was found to be crystalline, yet approaching to fibrous iron in tenacity: it is to be remembered also that the product of the experiment witnessed by various iron-masters was said to be semi-steel only, or at least not malleable iron, the metal having been poured out before it attained to the malleable state. At Woolwich, however, the cooled metal *was* re-heated, in whatever way it may have been re-cooled.

Till it be fully proved, if it can be, that Mr. Bessemer's process is really valueless, it is but fair to put the most favourable construction on its merits, since no actually great and important discovery was ever all at once matured, or ever so manifested itself from the outset as to defy criticism and to be without failure.

A strange letter from Mr. David Mushet appears in last week's *Mining Journal*, in which he charges a patent-agent with very questionable conduct in regard to the preparation of the specifications of the American patentee, Mr. Martien, after he had also prepared, unknown to that gentleman, the specifications of Mr. Bessemer's patent. The most remarkable circumstance in respect to this new view of Mr. Mushet's is that while he now expatiates by inference as largely on Mr. Martien's prospects, as he formerly did in relation to those of Mr. Bessemer, which he now affects to depreciate and pity, he asserts that Mr. Martien publicly performed, in November last, "precisely the same operation from which Mr. Bessemer has been deriving such *éclat*." This, he says, was "witnessed by a host of incredulous and astonished spectators;" and yet we find Mr. Mushet, who had been expressly invited to examine Mr. Martien's plans, and witness his astonishing experiments, expressing, in the *Mining Journal*, only a few weeks back, his own unbounded astonishment and admiration at *Mr. Bessemer's process*, which had just been published at the Cheltenham meeting of the British Association!

We pointed out, a week or two ago, what appeared to us to be an essential point in which Mr. Bessemer's patent overrode Mr. Martien's, namely, inasmuch as Mr. Bessemer contemplated the purification of the metal at once into steel and malleable iron, on the great scale, in a special vessel or receptacle; while Mr. Martien only specified the infusion of air into the pig metal, as it flowed from the crude furnace, through the gutters or channels, to the pig moulds. Now, however, we are told by Mr. Mushet that, although Mr. Martien explained his process to the agent, while preparing his specification, in such a way as ought to have secured for him this very "receptacle," or vessel,—

"Mr. Martien was very much surprised to find that, according to the English patent law, his brief and comprehensive *provisional* specification would not cover any claim for refining liquid iron, except while the iron was flowing in a channel or gutter from the blast-furnace, and that he was debarred from refining the iron in a 'receptacle,' and that it was necessary to *strike out* of his draft the word 'receptacle' wherever *he had inserted it*. It is true the provisional did not contain the words channel or gutter: it contains no limitation whatever: it claims the searching and complete penetration with air of the liquid metal 'as it comes, or after it has flowed, from a blast or smelting-furnace, and prior to its congelation in the shape of pigs or otherwise.' It was also true that this claim, which Mr. Martien sought the best reputed advice in order to secure in the amplest manner, had been actually and publicly proved, *not* in a channel or gutter, but in a 'receptacle.' Puzzled and perplexed by such apparent contradictions, Mr. Martien could do nothing but bow with great unwillingness to English patent law, as expounded by a celebrated agent: he never dreamed, nor could have dared to dream, that there was a secret patent, filed under the proper secrecy of six months' protection, being carried forward in the same office, attempting to give another man the title to use Mr. Martien's sole invention in a receptacle or 'colander!'"

One would have thought that in such a case, it is Mr. Martien who ought to be pitied as a Tantalus; but no: it is Mr. Bessemer from whose lips the "full cup" is about to be "dashed!" It may be so; but certainly Mr. Mushet's explanation seems to be anything but clear, unequivocal, or satisfactory.

MODEL LODGING-HOUSES IN FRANCE.

The following observations have been addressed by Mr. Henry Roberts, architect, to the Society for Improving the Condition of the Labouring Classes:—

Having very recently had an opportunity of examining the two earliest establishments formed in France, on the general plan of our model houses, I think that a short account of them may be interesting to you, as well as to other members of our committee, and perhaps be suggestive of some useful practical lessons.

The Model Lodging-house at Marseilles is a large and imposing pile, built for 150 unmarried men. It is outside the town, in a healthy situation, but evidently too far from the daily occupation of the class for whose benefit it was constructed; and the many advantages it offers, being not sufficiently appreciated, do not practically counterbalance this objection. The consequence is, that a considerable number of the chambers are generally unoccupied, although the rent has been reduced to six and seven francs per month, according to the floors.

Whilst, in the main features of arrangement, our George-street house has been taken as a model, nearly double the space is given to the separate compartments provided for each lodger: the expense of construction has in proportion been consequently greatly increased.

A *restaurant* forms part of the establishment, and involves a heavy loss, owing to the small number of persons who use it. The superintendent expressed a strong opinion as to the improbability of such an appendage to a model lodging-house being likely to prove self-supporting, as, in all probability, but comparatively few of the inmates would be customers with sufficient regularity to admit of an adequate supply of provisions being dressed without the risk of constant waste.

Baths are also supplied in the house, but these cannot pay the cost and expenses.

A very respectable merchant, who takes great interest in the establishment, and the lead in its management, told me that, in a pecuniary point of view, it is altogether a failure, as, notwithstanding the subvention of one-third of its cost being paid by the Government, the 150 proprietors receive no dividend. In regard to its moral effects, he doubted whether they are more encouraging. The only obvious benefit appears to be that of the health of the inmates, no death from cholera having occurred in the house.

The Government has been anxious that houses for families should be built at Marseilles, where they are much wanted; but so great is the discouragement caused by the want of success in this first effort, that the large subvention which they have offered in aid remains untouched.

At Mulhouse, a manufacturing town on the line of railway between Basle and Strasbourg, the population of which has doubled within the last ten years, a *cité ouvrière* has been built by an association of manufacturers, on a scale more extensive than that of any other similar establishment in France. Although without the town, being in the vicinity of several large factories, the workmen therein employed are its principal occupants, and all the houses appear to be tenanted.

A spacious road, planted on either side, runs between the main groups of cottages, and parallel roads run behind them. They consist chiefly of groups of four dwellings, forming a detached block of building, placed in the centre of a square plot of garden ground, which is divided equally between the tenants. Two of these dwellings front the main central road, and two the minor or back road—an economical arrangement in regard to cost of construction, and one which admits of good internal ventilation.

The dwellings, though not precisely uniform in their disposition, have mostly a wide entrance, fitted up with a cooking-stove and sink. Beyond is a staircase leading to three bed-rooms and a closet. The remainder of the ground-floor is devoted to the living-room, with a large recess behind the staircase, of sufficient dimensions to contain a full-sized bed. This compartment has a side window, and, in some cases, being partitioned off from the living-room, forms a small separate room.

There are, besides these, several rows of double houses, built back to back, each having a narrow strip of garden ground. They are let at much lower rents than the others; but their arrangement cannot be commended as consistent with good ventilation; and the general appearance of the tenants indicated a decidedly inferior class of occupants, with considerable want of cleanliness and propriety.

The progress made in the construction of these houses has been:—In 1853, there were 100 built; in 1854, there were added 86; and in 1856, 40 more, together with a spacious and well-arranged building for baths and washhouse, with another for a bakehouse and public kitchen, conducted by a *société alimentaire*. In this establishment food is prepared and sold at cost prices: it may be either consumed on the spot, or taken home: in the former case, a payment of 75 centimes is required for three months' right of admittance to the refreshment-rooms. A breakfast, consisting of bread, coffee, and milk with sugar, costs 15 centimes, or $1\frac{1}{2}$d.; a dinner of soup, bread, meat, and vegetables, from 20 to 30 centimes, or 2d. to 3d.; and supper in the same proportion.

The intelligent manager of this establishment, which has been fully organized only about two months, told me, that in order to its being self-supporting, from 500 to 600 persons must be daily supplied with food. The progressive increase of customers warrants the expectation that the object of the founders will in this respect be realized.

To revert again to the dwellings: out of the 186 completed up to the close of the past year, seventy-five have been sold to tenants at cost prices, exclusive of the outlay on the roads, drainage, fencing, and planting, which were paid for out of the government subvention of 300,000f. or 12,000*l.* being one-third the amount of outlay of 900,000f. The cost of the houses has averaged from 72*l.* to 120*l.* each.

The managing director, M. Bernard, to whose zeal and activity may, doubtless, in the main, be attributed the measure of success which has been obtained, spoke much of the difficulties he encountered, resulting from the administration

of the law in France with reference to tenants, and the expulsion of such as proved unworthy. He remarked that it was invariably the best who became purchasers; and that the payments, whilst attended with much trouble, owing to the smallness of the sums received, and frequent irregularity of payment, produced the important and gratifying effect of inducing industrious and frugal habits, as well as in producing that feeling of self-respect and honest independence which appears to be much better understood amongst the working-classes in England than in France.

In a sanitary point of view, the experience here has been the same as in all other like cases. And whilst alluding to this important consideration, I may add, in proof of the enormous expense which a defective sanitary state sometimes involves, that the chief magistrate of Genoa lately told me cholera had put the authorities of that city to an expense of 12,500,000f. chiefly in providing relief for those who, from the defective state and confined atmosphere of their dwellings, were the greatest sufferers.

VENTILATION OF HOSPITALS.

The importance of this subject, commented on in your leader of last week, induces me to offer a few remarks on those parts which bear particularly on ventilation.

In the summary which you educe from Mr. Roberton's excellent paper, you remark, "that modes of ventilation called *scientific*, which may answer for mere dormitories, fail in an hospital."

It is impossible for me to urge, more strongly than you have done, the great importance of ventilation in hospitals. The influence upon the sick, of an atmosphere charged with the emanations of disease, and the fatal effects, arising from a want of change in the poisonous air of the wards, engendering erysipelas, and other endemic diseases, are patent to all of any experience in these buildings; and the works of military surgeons prove that the per centage of recoveries, which is greater in their temporary hospitals than in our permanent buildings, arises principally from their temporary construction allowing the winds of heaven to blow freely through them. These may be said to be *naturally* ventilated. But, however desirable this system may be, it cannot always be carried out in the hospitals of our great cities.

In these the area is necessarily limited, and the height of the wards diminished, and it is under these circumstances that the necessity for ventilation is greater, and the means of obtaining it *naturally* becomes more difficult.

"Windows facing each other on the opposite side walls," which you so properly advocate, cannot always be obtained, and without this arrangement the movement of the atmosphere, instead of passing through, and thoroughly changing the air of the wards, displaces it from one part of the hospital to another. But even when opposite windows can be obtained, they cannot in all weathers be opened, and ventilation should be *constant, day and night*, and in amount such, that no difference can be perceived by the sense of smell between the freshness of the air of the wards and the external air.

These conditions cannot *constantly* be obtained except by artificial ventilation.

In trying experiments on the air of the wards of the Middlesex Hospital, previous to their being ventilated, I could not detect any difference in the smell of the air at the level of the floor, or even up to 4 feet from it; but from this height to the ceiling, the air became gradually more fœtid, until at the latter level, it was quite overpowering; but after the upper parts of these wards were connected with a powerful extracting shaft, little or no difference could be detected in the quality of the air at the different levels. This proves strongly the benefit derived from *artificial ventilation with an upward current*.

While speaking of this hospital, I may mention a circumstance indirectly bearing on this question. In one of its wards erysipelas constantly attacked patients who were placed in certain beds. For some time the cause could not be discovered, but on closing and ventilating a dust-bin placed outside of the building, near this part of the ward, no erysipelas afterwards occurred. The position and ventilation of the water-closets are, as you say, most important, and demand especial attention, more particularly as it is necessary for the convenience of patients, that they should be situated as near the wards as possible, and the emanations from them being sure to contaminate the atmosphere of the wards if allowed to enter.

The most certain method of preventing this, is to *ensure* a current of air always setting in *from* the *wards* to the water-closets, and this has been provided by Mr. Mennie for the Royal Victoria Hospital, by connecting the water-closets, with a powerful extracting shaft, which means have been proved at the London and other hospitals, to have perfectly effected the required ventilation. Wm. Jeakes.

*** With further reference to the Royal Victoria Hospital, we are requested by the architect to say that "cement dressings" are not to be used, but that it is to be built of red bricks and Portland stone, with a granite plinth. We had our information obligingly from the architect himself, and made a note of it at the instant. It was doubtless a slip of the tongue, and we most gladly rectify the statement. As to the position of the "latrines," notwithstanding the provision made for their ventilation according to Mr. Jeakes, we must reiterate the hope that the position of them will be altered. Several correspondents have written to confirm our statements touching the condition of many of our hospitals. Dr. Roberton says,—"I have inspected a considerable number of our provincial hospitals, as well as a majority of those in London, and so unhealthy are many of them, that I confess I see no remedy for such a calamitous state of things without some exposure such as would result from the labours of a Commission of Inquiry issued by Government."

FOREIGN INTELLIGENCE.

Berlin: New Museum.—At the beginning of winter a fresh portion of the Berlin Museum will be opened to the public, comprising the ethnographical collection, placed in three saloons on the first floor of the southerly part of the edifice. The bulk of the collection consists of the stock of the former *Kunst Kammer*, and the collections made by Prince Waldemar in India. The Mexican antiquities, hieroglyphics, &c. are exhibited in cases of old Mexican fashion. Asia alone occupies nearly two saloons. A model of a reed house from Borneo, and Indian and China lackered ware, models of alabaster and ivory, water-colour drawings on glass, &c. are amongst the most interesting specimens of the Berlin ethnographic collection.

The Cathedral of Cologne.—The northern tower of this building is progressing towards completion, the material used being the *basalt-lava* of the Perlenkopf, one of the volcanic summits which form the mountains between the Laacher Sea and the Aarthal. The *basalt-lava* of the Perlenberg is even harder than that of Niedermending: in fact, it may be considered the hardest building-stone hitherto known. The pillars, which have to serve as buttresses to the walls and vaults of the lateral nave of the north and south portals of the dome, have also been begun.

Vienna.—The models for the *Kaiserhalle* of Speyer exhibited here, have been much approved of. They will be placed in the niches of the chief portal, and represent Maria with the infant, Stephen the Martyr, &c. The basso-relievos for the interior of the hall are to be made by Pilz, of Rome; the statues of the Emperors by Dietrich. Some of the pictures of the Gallery Manfrin have arrived here: a fine St. George, by Andreas Montagna, a superior and well-preserved picture. A plan of Vienna, of the time of the Babenberg dukes of Austria (1300), has been found, which the Vienna Academy of Sciences will shortly publish.

The Antiquarian Associations of the South of Germany.—The associations of Cassel, Darmstadt, Mayence, Wiesbaden, and Frankfort, have combined for the editing and publishing of their joint transactions. The last number of the *Periodische Blätter* of these historical and antiquarian societies contains "A Roman Colony in the Niederlahngau;" "Unedited Antiquities of Mayence and Environs;" "The Merovingian Churchyard at La Chapelle St. Eloi," &c.

Switzerland. — An Art-loving Parish.—The parish of Ragaz, the place where Schelling died, and where King Max has erected him a monument, has, through their communal and federal superiors, expressed to the king their acknowledgment for honouring their township with the memorial of such a man. They say that they are sure that the Supreme Powers of the Swiss Republic will, for all time to come, respect and protect this monument of the piety of a monarch towards his teacher.

Photographical cards.—They are making visiting cards in Germany, whereon, besides the name, the portrait of the party is engraved. Some odd anecdotes have resulted from this novel industry.

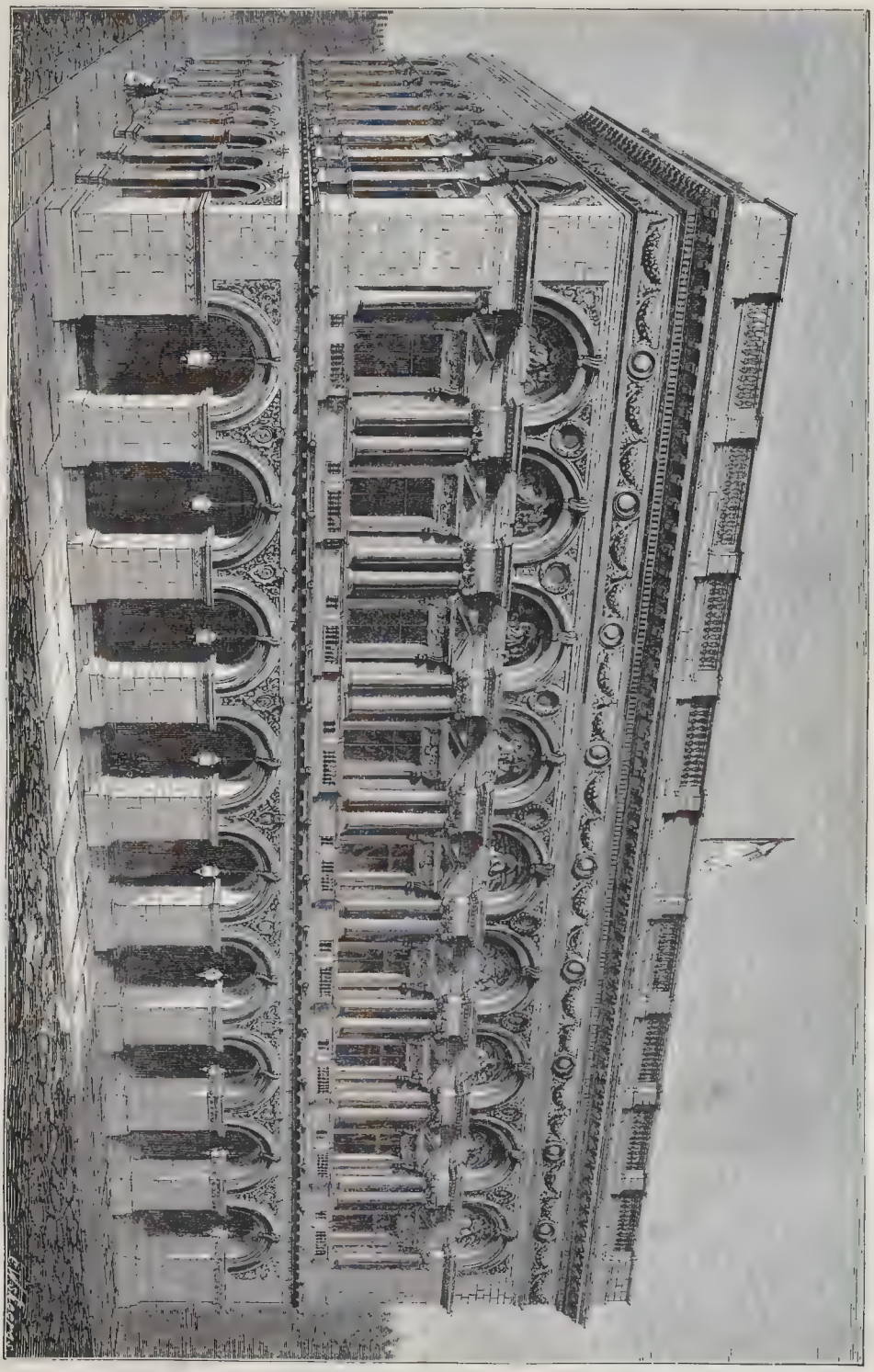
THE NEW FREE-TRADE HALL, MANCHESTER.

The new Free-Trade Hall in Manchester, built on the site of the hall bearing that name, in which the Anti-Corn-Law meetings were held, is to be opened in October next.

Our engraving represents the exterior of this very handsome building, for which Manchester is indebted to the skill and taste of Mr. Edward Walters. It has been raised by subscription, by not very many gentlemen of Manchester, and has cost 25,000*l.* without fittings, such as for the gas, or ultimate decorations. Mr. George Hurrap was the builder; Mr. J. Hollins, the mason. The building, externally, is of Yorkshire stone. The principal front, it will be seen, consists of two main stories, the ground-floor forming an arcade of nine arches, with broad piers and plain archivolts, imposts, and block cornice, but having the spandril spaces filled with the arms of different towns in foliage; and the upper story, of greater height, having a range of three-quarter Ionic coupled columns, with pedestals and blocks of entablature, bearing archivolts with consoles, above which is the main entablature of the building, with its frieze enriched with medallions and festoons, the whole building being terminated by a balustrade. The spandril spaces of the range of arches last named are enriched with wreaths and circles of red granite, and the semicircular panels in the arches are filled with alto-relievos by Mr. Thomas. Immediately below these, a narrow panel, ranging with the cornice of the order, contains a fret. The windows have architraves, trusses, pediments, and balconies. The building derives considerable effect from the width of its angle piers, which are without quoins, and are undecorated except by the lines of the several horizontal impost and other mouldings.

In the grand hall the walls above the gallery have coupled attached columns with entablatures, forming piers, with arches cutting into the great sweep of the cove of the ceiling: the room is lighted by five circular openings, and seventeen openings in the cove round the hall. The proportions of the room are somewhat different to those of ordinary large rooms, being 78 feet wide, and only 52 feet in height; and yet it has not the appearance of a *low room*. The object of the architect has been to produce a good room for speaking in. The length of the hall is 135 feet. There are seventeen panels with centre flowers in the ceiling, and in these flowers are sun lights, containing some eighty burners in each. These lights, as yet, are only partially understood. When properly formed, with flues of the necessary size, the heat rushes towards a centre, and the flowers themselves should never be *soiled* by the gas. The hall is not yet painted, the work not being dry, and the money not forthcoming. This would require at least 4,000*l.* more.

In addition to the hall, the building includes an assembly-room, 76 feet by 37 feet 6 inches, and 28 feet high, with a separate staircase; a drawing-room, 40 feet 6 inches by 24 feet, and 24 feet high; a supper-room over the assembly-room, and various other apartments. The extent of the principal front is 153 feet, the total height of it 75 feet. The building covers an area of 2,300 square yards.



THE FREE-TRADE HALL, MANCHESTER.—MR. EDWARD WALTERS, ARCHITECT.

PROVINCIAL NEWS.

Taunton.—A fatal accident occurred at the new Shire-hall here on Wednesday before last. From the evidence before the coroner, reported in the *Bridgwater Times*, it appears that two workmen were on a brick wall about the middle of the building, taking off the braces from the couples. As one of the men was taking down one of the rafters, having one end of a rafter in his hand, and the other end of the rafter being on the back of the couple, he went to pull it off, when the end of the rafter slipped off the couple, struck against the wall, and knocked him off the wall. He fell down 23 feet on a joist below, and from thence to the ground, a farther distance of 14 feet, and was killed. The rafter was 4½ inches by 2¼ inches, and 18 feet in length. His fellow-workman had a rope in his hand, which the deceased ought to have tied to the rafter before he attempted to wrench it from the couple. The former, in his evidence, stated that he told the deceased that he would tie the rafter to the couple, but as he was going to do it the accident happened.

Portsmouth.—The Government, it is said, have resolved to open a communication between Portsmouth and Langston harbour, by a canal, 200 feet wide, and 13 feet 9 inches deep. The plans and specifications are said to be ready, the contracts to be shortly taken, and the work commenced. Farther schemes are also said to be under consideration, which, if carried out, will not only render Portsmouth impregnable, but will make it one of the largest government establishments in the world.

Hastings.—The ceremony of laying the first stone of the general drainage of Hastings was performed on Saturday last by the Mayor, in the presence of most of the members of the corporation. The stone was laid near the Rock-a-Nore Groyne, where Mr. Munday has commenced his contract for the carrying out the drainage of division A. Several coins were deposited in the stone; also a scroll, with an inscription upon it. Mr. John Laing, C.E. is the surveyor.

Sheerness.—Messrs. Kirk and Parry, of Sleaford, are said to have received an Admiralty order to build a new military hospital within the fortifications of Sheerness.

Bedford.—Application is to be made at the next meeting of the local commissioners for permission to lay down main pipes for the supply of the town with pure water. In the event of the application being successful, a company, according to the *Bedford Times*, will be formed for the purpose, the supply to be raised from the river near Clapham, and made available to supply every house at a small cost, even to their attics. The reservoir is intended to contain sufficient for the flushing of the sewers when an improved system of drainage is accomplished. The estimate is said to be 10,000*l.* and the capital intended to be raised in shares of 5*l.* each, securing 6 per cent. at a moderate calculation for the investment.

Wellingborough.—The works for the sewerage of this town are being executed by the contractor, Mr. Richard Anderson, under the superintendence of Mr. Dixon, the engineer and surveyor to the Local Board of Health. The main line of sewer through the town approaches completion; those through Market-street and Oxford-street are commenced; and the one through Church-lane is finished.

Halifax.—In consequence of a report having been circulated to the effect that the newly-constructed reservoir at Ogden, five miles west of Halifax, and from which the town is now supplied with water, was likely to burst, the place was visited on Sunday in last week by at least 10,000 persons from the surrounding districts. The reservoir stretches itself over an area of forty acres of land, and was in depth last week more than twenty yards, at which time water was observed to commence springing from the rocks a little distance below the embankment. It was at first thought to be an old spring which had become diverted in its course by reason of the workings; but new springs burst one after another, until they became six in number, which again united at a short distance, and, on being measured, it was found that the quantity discharged amounted to 3⅔ cubic feet per second, equal to the amount required to supply the mills in the vale below for manufacturing purposes. On Friday in last week the reservoir was visited by members of the town council, who, on inspecting the works, determined to ease the pressure of the water by opening the clow a little, so that the escape was then, taking into account the escape at the rocks below the embankment, about 10 cubic feet per second, which in twenty-four hours' time lowered the water in the reservoir 19½ inches. "As to the probability of the embankment giving way," says a local paper, "it is out of the question altogether, but what means will be adopted to stay the discharge of water alluded to we have not yet heard suggested by any one; nor have we heard on whom the expense will fall." We are afraid there are more than one reservoir in the country needing inspection and care.

Doncaster.—The tender of Mr. Robert Wood, for the enlargement of the infirmary at the union workhouse, and other improvements connected with the washhouses, has, it appears, been accepted by the local Board of Guardians. For the joiners' and bricklayers' works, &c. the amount is 365*l.* This, however, does not include the plumbing, which has been given to Mr. John Walker, at 43*l.*; making a total of 408*l.* From the highest to the lowest tender there was a difference of 137*l.* The contract is to be completed by the end of the present year, under the superintendence of Mr. Godfrey.

Stirling.—For some time past, a spacious goods shed has been in course of erection at the station of the Scottish Central Railway here, the former having been quite inadequate for the increasing traffic. The building is now approaching completion: it is 200 feet in length, by 80 feet in breadth: the walls are 19 feet high, and to the top of the ridge of the trussel roof the height is about 36 feet: the great span of the roof is unprovided with central supports. The architects are Messrs. A. and A. Heiton, of Perth, who have been the architects of many similar works, including that of the goods shed at Edinburgh, and the engine sheds at Perth. They were also the architects of Mr. Russell's residence at Falkirk, and other gentlemen's mansions in this and adjoining counties. The builder was Mr. Stevenson, from Aberuthven The woodwork was done by Messrs. Currie and Taylor, of Stirling; the slate-work of the roof by Mr. Morrison, from Glasgow; and the glazier was Mr. Alexander M'Donald, of Stirling. The wood principals, iron tie-rods, and iron suspension-rods were supplied by Messrs. Tod and Sons, of Edinburgh. Counting-houses, &c. are attached to the building.

CHURCH-BUILDING NEWS.

Barton.—The consecration of the Barrow-on-Humber burial-ground took place on Monday before last, commencing in the church, which is being restored. The new ground is situated on an elevated part of Thornton-road, about half a mile from Barrow. The chapels are in the Early English style, from designs of Mr. D. W. Aston, of Hull, architect. They are of equal dimensions, and adjoin each other. The ground is two acres in extent, and enclosed with a wood fence and quickset-hedge around the sides, and in the front is a brick wall and iron palli-sading.

Stanwick.—The Church of St. Lawrence, Stanwick, has been restored, and was re-opened on Tuesday in last week. The church was formerly blocked up with high pews of various sizes, a large stove mounted on a high brick base in the centre aisle, a west gallery for the organ and singers "done in Doric woodwork," and the arch between the tower and nave blocked up with rough boarding. The roof of the nave was of rough timber, and of so low a pitch as to cut across the arch alluded to, so that a portion of it was visible outside above the lead of the roof. Now the seats are open and uniform, and correspond, says our authority, the *Northampton Herald*, with some ancient ones found in the church. The pulpit, prayer-desk, and lectern are of oak, panelled and carved. A new roof has been placed on the aisle, and an entirely new roof has also been placed on the nave, of the original pitch, and covered with Collyweston slates. This has brought the whole of the tower arch inside, and, all other obstructions having been cleared away, the tower is thrown open to the church. The simple lancet window at the west end, and octo-foil over, have both been filled with stained glass. The glass is the gift of Lord Sidmouth, and is the work of Messrs. Clayton and Ward. All the stonework inside has had the whitewash removed, and has been restored, and the walls re-plastered. The porch has a room over, the entrance to which was formerly blocked up, but is now opened, and a new oak door provided. The other doorways have also oak doors, with ornamental ironwork for the hinges and locks. The old font has been cleaned and preserved. A new window has been put in the chancel, and the seats there are placed stallwise. The stone-work outside has been repaired, and new stone crosses placed on the gables. The works have been executed by Mr. Eaton, of Titchmarsh, under the superintendence of Mr. William Slater, architect.

Hungerford.—A new chapel was opened at Hungerford, on the western border of the New Forest, on Tuesday in last week. The chapel was erected under the superintendence of Mr. Jurd, of Southampton. It is calculated to hold, including a gallery at one end, about 300 persons. There are pointed windows on either side, and a triple-arched window at the gallery end.

Wells.—On Wednesday in last week, the first stone was set of the new portion of the screen in the cathedral of this city. The new part will project 5 feet from the old, and will be 17 feet in length. The new organ, built by Mr. Willis, of London, will be put up as soon as the masonry is sufficiently advanced.

North Petherton.—The consecration of the new cemetery here took place on Friday before last. The architect, under whose superintendence the works were done, was Mr. J. C. Knowles. The ground extends over about two acres; a portion of it being devoted to the Dissenters, the division being effected by suspended iron chains. The style of the chapel is Gothic, of thirteenth century. The entire outlay involved in the completion of the cemetery (including purchase of land, enclosing the same with stone walls, iron railings, gates, erection of chapels, and other incidental expenses), according to the *Bridgwater Times*, will be about 1,800*l.*

Flaxley.—A new church erected close to the old, at Flaxley, in the Forest of Dean district, was consecrated on Thursday week. The new edifice was designed by Mr. Scott, and built by Mr. James Coleman, of Westbury. It is in the Decorated style of architecture, and is built of red-grit stone from the forest, with grey-stone facings. The internal fittings are of oak. There is an east window by Jarente, an alabaster altar screen by Philips, and the font and pulpit are constructed of Painswick stone, with marble columns. An organ of fourteen stops with couplers, built by Grey and Davison, has been put up in the building.

Market Drayton.—The consecration of the new church at Hales took place on 11th inst. This church was lately erected and endowed at the sole expense of the Rev. Alexander H. Buchanan, of Hales Hall. It was built under the direction of Mr. Scott, and is of red sandstone, lined with white ashler, and in the style of the latter part of thirteenth century. The carving was executed by Mr. Philip, of London; and the stained windows, seven in number, were the production of Mr. Ward. The church is calculated to contain 180 persons.

Bingham.—The interior of Bingham Church is undergoing decoration, from designs by the lady of the rector. The eastern windows, of tinted glass, on which are representations of the Evangelists, were the work of this lady.

Aston.—The presbytery connected with St. Michael's Church, Aston, is just completed. It stands on the site formerly occupied by the ancient hall, and the more recently built monastery, which was removed in consequence of its foundations having given way. The Rev. Canon Huddlestone, the new rector, for whom the work is being executed, is about to take possession. Besides the house, a large sum has been expended in building a new aisle and otherwise repairing the church, which had fallen into

a very bad state of decay. The work has been carried out under the direction of Mr. Pugin, and the contract was taken by Mr. Hutton, of Wolverhampton.

Southport.—The foundation-stone of the new church in Birkdale Park, near Southport, was laid on Saturday week. The architect is Mr. Alfred Rimmer, and the builder, Mr. Richard Wright.

Saltaire.—The original plan of Saltaire included the erection of a Congregational church. Designs of the intended edifice have been prepared by Messrs. Lockwood and Mawson, of Bradford, and the ceremony of laying the foundation-stone is to take place on 27th inst. The church will be a large edifice in the Roman Corinthian style of architecture. The principal front will consist of a circular colonnade detached from the building, above which will rise a pedestal, supporting a cupola and dome, 130 feet in height to the top of the vane. The sides and end will be also decorated with Corinthian pilasters, and a frieze and entablature. In the interior the walls will be relieved by three-quarter columns in verd antique marble, with Parian caps and bases, supporting a circular ground ceiling of rich design. The length of the body of the church inside will be 90 feet by 45 feet, exclusive of entrance and apse. The extreme length, from east to west, will be 140 feet.

Penistone.—The chief stone of the new church of Saint Ann, at Carlecotes, in the parish of Penistone, Yorkshire, has been laid. This church is being erected at the expense of Mr. John Chapman, of Mottram (and late high-sheriff of Cheshire), at a cost of about 5,000*l.* exclusive of the ground on which it stands, which is also presented by the founder. The site is in close proximity to the old manor-house of Carlecotes, and the church will hold about 200 persons. A school-house and parsonage will also be included in Mr. Chapman's gifts to the inhabitants. The church will be of stone, from a design supplied by Mr. Shaw, of Saddleworth, who is the architect of the building. It will be in the Gothic style, with a belfry over the roof at the western end.

Barnsley.—The new Congregational church, Barnsley, is now nearly completed, and was to be opened for public worship on Thursday. The chapel, which is situated on the right hand side of Regent-street, includes nave 82 feet 10 inches, by 37 feet, in the clear of seven bays, the four last bays being thrown into a double transept on each side, two bays being devoted to each transept, and divided on each side by a lofty column, from which springs a double arch. At the front is a tower and spire, the base of which forms the principal entrance to the interior of the edifice, a second doorway being placed on the opposite side of the building. At the upper end of the chapel is placed the pulpit, on a raised dais of two steps, with an ornamental screen at the back of it, dividing the organ-gallery from the chapel. Behind the chapel, and with entirely separate and distinct entrances, are a public vestry, 21 feet 10 inches by 16 feet 6 inches; a minister's vestry, 13 feet 6 inches by 9 feet; a girls' school, 30 feet by 16 feet 6 inches; a boys' school, 37 feet 10 inches by 16 feet 6 inches, with three class-rooms on the first floor. The style of architecture is Early Decorated. The front of the chapel consists of a four-light window, with a three-light on each side of it, the whole under one label moulding, and giving the appearance of a window with ten lights. Above these, and divided from them by an enriched string, is a circular window contained in a spherical triangle, with column, &c. the gable finishing with an ornamental finial. The spired tower attached to this main gable of the nave is 19 feet 8 inches square at the base, and is divided into four stages, the lowest having a doorway surmounted by a crocheted pediment, terminating in an enriched finial. The topmost stage is pierced with two windows, of two lights each, in either face, and the tower itself finished with canopied pinnacles rising up from the angle buttresses at each corner. The spire springs from this, and, with the exception of two tiers of spire-lights, is kept quite plain. The height of the tower is 73 feet; the whole height to the top of the vane on the spire being 167 feet. In addition to the large window, the nave is lighted by two-light windows, filled in with tracery in each bay. Each transept has a coupled three-light window under a hoodmould, with a small window in each gable. The chapel will seat about 600 adults on the ground-floor, and there is an end gallery which will accommodate about 150. The works have been designed by Mr. Joseph James, of London, architect, and have been carried on under his superintendence, assisted by Mr. Whitworth, of Barnsley. The contract exceeds 4,000*l.*

Castle Douglas.—The foundation-stone of an Episcopal chapel was laid at Castle Douglas on 10th instant. The site, as described by the *Dumfries Courier*, is a little to the end of the town, at the head of the Carlingwark Lake, and directly in front of the Grove House. Some progress has been already made in the erection of the works. The church has been founded by Colonel Johnston, of Carnsalloch, assisted by Mr. R. J. Congreve, and a few other subscribers. The plan of the building, which is to be erected in the Early English style, is cruciform, consisting of a nave and chancel, to which a northern vestry and a southern organ-chamber form the transepts: over the vestry will rise a tower and spire. The interior will be seated, in the first instance, for 120 persons, but with capabilities of enlargement, should necessity require it. The seats will be open. The stone used for the quoins, mullions, windows, and all external ornamental works, is Dalbeattie granite: the walling, which is the gift of Mr. Gordon, of Greenlaw, is of Silurian, and the interior decorative stone is sandstone from the neighbourhood of Carlisle. The roof will be of oak timber, framed with arched ribs, and covered with slates of the country. The design was furnished by Mr. E. B. Lamb, of London.

STAINED GLASS.

Goole.—Messrs. C. and A. Gibbs have just fixed two stained-glass memorial windows in Luddington Church, Goole, one in memory of Mrs. Lister, provided for by her widower, Mr. James Lister: the other has been given by Mr. John Richardson, of Northland House, Winterton Brigg, Lincolnshire, to the memory of his father and mother. The west window has been also filled in with stained glass by the same artists.

Ely.—Mr. Wilmhurst has just fixed a stained-glass window in Ely Cathedral. It is a Norman window, in the baptistery, called St. Catherine's Chapel, 9 feet 6 inches by 4 feet 5 inches. The subject is the Baptism of our Lord by John the Baptist. It is the gift of the Rev. William Gale Townley, of Beaupre, near Wisbeach.

Kettering.—Stained-glass traceries are being put in the windows of the north aisle of Kettering Church, to correspond with the south, which is already decorated. The traceries represent the twelve apostles, and the work was executed by Messrs. Webb and Nixon.

Bildeston.—A large window on the south side of the chancel of Bildeston Church has just been restored and reglazed, as a memorial to the late Rev. Charles Johnson, fifty-three years rector of this parish, and Catharine his wife, and to Ann Gedge, daughter of the late James Johnson, mother of the Rev. J. Gedge, the present rector. The tracery in the head contains the symbol of the Trinity; the Vine (John xv.); a stem and ears of wheat (John vi. 48, Mark iv. 28); and the Rose and Lily of the Valley (Cantic. ii. 1.) The three principal compartments are filled with diapered glass, bordered, and scrolls bearing the texts,—"I am the Way and the Truth;" "No man cometh to the Father but by me;" "I am the Resurrection and the Life;" beneath which are the three obituary inscriptions. The work was executed by Messrs. Chance, of Birmingham.

Birmingham.—A memorial window has recently been placed in the east end of the chancel of Ward End Church, by the family of the late Mr. Isaac Marshall. It consists of three large lancets, in the style of the latter part of thirteenth century, and the glass is designed in the style of that period, the finest examples of which are in the celebrated "five sisters' window," in the north transept of York Minster. In the centre light, enclosed in the symbolical *vesica piscis*, is a figure of Our Lord ascending. The light on the north side contains the Virgin and Child. The Virgin holds in one hand a lily. In the light on the south side is a figure of St. Margaret, to whom, in conjunction with the Virgin and the Holy Trinity, the church is dedicated. St. Margaret bears in one hand a sword, the instrument of her martyrdom, and in the other a palm branch. These figures are placed under canopies. Above them, in the midst of the grisaille ornament, which constitutes the general groundwork of the window, are the emblem of the Holy Trinity, the Lilly, and the Martyr's Crown, with palm branches. Medallion groups below the figures illustrate David showing and explaining to Solomon the plan, building, and dedication of the Temple. These particular groups were selected in especial reference to the pecuniary and personal assistance afforded by the Marshall family in the erection of the church. Mr. Wailes was the artist. It is intended to fill some of the other windows of this church with stained glass. The Rev. J. F. Green, the incumbent, wishes, it is said, to have memorial windows offered for this purpose.

Coventry.—The subscription in this city for a memorial window to the late Colonel Hood has so far advanced, as to admit of the work being proceeded with. The subject, in accordance with the wishes of the family, will be the Ascension of Our Lord, and also figures of eight prophets from the Old Testament. The window, which is to be completed by the 1st of December next, has been entrusted to Messrs. Heaton and Butler, of London.

Devizes.—A memorial window, by Messrs. Gibbs, has just been placed in Shrewton church, Devizes, Wilts, to the memory of Mrs. Nicholls. The window has been given by the widower, Mr. John Nicholls, of Shrewton House, Devizes. This is the second memorial window executed by the same artists for the family of the Nicholls, and placed in the same church.

THE LATE DR. EMILE BRAUN.

MANY of our antiquarian readers will hear with regret of the premature death of Dr. Emile Braun, of Rome, the well-known antiquary and the secretary of the Archæological Society of that city. He was attacked by *la perniciosa*, and died, during the absence of Madame Braun, who was in England, at his residence on Monte Caprino. Dr. Braun's acquirements were very extensive; and he had directed his attention to many branches of art and industry. His annual course of lectures on the Antiquities of Rome, his Handbook to these Antiquities, published not long ago, and a new material for casts invented by him, and described in this journal at the time, will be best known to our readers. The very fine model of the Coliseum, in the Crystal Palace at Sydenham was made under his direction. His death must be regarded as a general loss.

THE METROPOLITAN BOARD OF WORKS.

I CANNOT in any way admire your patience and forbearance towards the Metropolitan Board of Works.

Two separate sets of Commissioners of Sewers were dismissed for not carrying out an effectual method of sewerage of London, and a representative Board was then tried. About this time Prince Albert told us that representative government was then on its trial.

This representative Board had the advantage of all the information obtained by the former commissions and their surveyors and assistants just as they had got ready for action. Notwithstanding these advantages, they have showed themselves incapable of action,—more so than can be charged against any other body. Who is it that would venture to value a fellow creature's life, and what can the man or the men be who would presume to do this with thousands of such lives? The members of the Metropolitan Board of Works are the most thoughtless, or else the most sinful and wicked body that ever met together. They have been denounced so by all I have heard speak of them, and those are neither few nor unimportant, but such as may be relied on for sound judgment. They are complete obstructives to the proper sewerage of London, as well as all other healthful improvements. Many of your readers have expressed their astonishment that you have not ere this commented on their shameful neglect of their duties. S. P. X.

THE SHIPWRIGHTS' STRIKE.

At the Central Criminal Court, on 18th instant, ten shipwrights pleaded guilty to the charge of conspiracy to prevent workmen from entering the service of the prosecutors, Messrs. Young, Son, and Magnay; but, on the recommendation of the prosecutors, the judges, Baron Bramwell and Mr. Justice Williams, they were merely ordered meantime to enter into their own recognizances to appear and receive the judgment of the court if they should be called upon to do so.

Baron Bramwell, in delivering this interim order, said he would ask them to listen to a bit of advice which might be useful to them and others in a similar position of life. The law had been very rightly laid down that they had a right to refrain and refuse to work for any person except upon terms that were satisfactory to themselves. This was only reasonable, but they must remember at the same time that they had no right whatever to coerce and intimidate others from accepting employment; and it was clear that such a proceeding amounted to the most insufferable tyranny. In these times, when everything was done to remove all impediments to commerce, when ancient corporate rights were abolished for that object, and when working men were allowed facilities by the abolition of apprenticeship and other similar rights, it was intolerable that any set of men, for their own selfish purposes, should set up a tyranny of such a description. For his own part, he would much rather live under one intelligent despot, whose knowledge of the world and whose education would induce him to exercise his tyranny, at all events, in a sensible way, than be subject to the tyranny of a set of men who did not possess any of these qualifications. He should be glad to know what the defendants themselves would say if the agricultural labourers of the country—a class which they, no doubt, considered infinitely beneath them so far as intellect and education were concerned—were to assemble together and pass resolutions that they would only work six hours a day, and endeavour to coerce, and bribe, and intimidate those who would not join them? He was sure they would say these were a set of stupid, ignorant fellows.

The Shipwrights' Union have, it appears, thrown away no less than 4,000*l.* on this lunch question, and have utterly failed, after all, in their purpose, their late employers having taken into their employment more reasonable workmen, who have resolved not to allow their fellows to tyrannize over them and their employers.

AUSTRALIAN NEWS.

At Adelaide, the city corporation, by the last accounts, were about to introduce into the Legislative Council a Bill for a Building Act, which appears, from an abstract given by the *Adelaide Observer*, to follow much in the train of the London Building Act. The Government had just laid upon the council-table a Water Supply Bill for the city of Adelaide, providing for a constant supply of water from the Torrens, to be realized by funds, raised in bonds bearing 6 per cent. interest, to the extent of 280,000*l.* the sum of 28,000*l.* to be annually appropriated as a redemption fund. The ultimate investment of the works in the municipal corporation is provided for, and municipal authorities may in the meantime be appointed as commissioners by the Governor. The paper just alluded to complains of the apparent apathy of the inhabitants as to this measure, and endeavours to excite an interest in the question of drainage as well as of water. The Port Adelaide waterworks had just been provided with an engine imported from Dundee. By its means, a power of twelve horses is employed in drawing and forcing up a column of water to a height of 35 feet into eleven galvanized iron tanks, seven capable of holding 1,000 gallons each, and four 3,000 gallons each. From these reservoirs the inhabitants of the Port are supplied with water.

A public library and reading-room had just been opened at Angaston, according to the *Adelaide Observer*.

The free Presbyterian Church at Gawler has also been opened. This church, which has been built by Messrs. English and Brown, at a cost of about 1,350*l.* is regarded as decidedly an ornament to the town: it is the only building with a spire as yet in the colony. About 300 persons can be accommodated in it. A debt of about 500*l.* still remained on the church.

In Victoria colony, the daily papers are devoting great attention to railway subjects. The proceedings at Adelaide, or in South Australia, and those in New South Wales, had evidently spurred them on. A surveyor from the Government department at Sydney, had lately taken an overland journey from the Murray to Melbourne, to report on the facilities that exist for a "through" line to connect Sydney and Melbourne, and to invite the Victoria government to join with Sir William Denison in promoting the early formation of such a line. The tenders for the Mount Alexander line from Melbourne had been opened, but the result was not known.

The Government of New South Wales and Victoria, relying upon the co-operation of South Australia, had resolved to lay down a line of electric telegraph between Sydney, Melbourne, and Adelaide. The cost of construction was estimated at about 64*l.* per mile. The direction of the line will probably be from Sydney, *viâ* Liverpool, Goulbourn, Yass, Gundagai, Albury, and Beechworth, to Melbourne; thence *viâ* Ballarat, Belfast, Portland, and Penola to Adelaide.

WINCHESTER CATHEDRAL.

Workmen are now engaged, under the direction of Mr. John Colson, architect, in throwing open to the public the south-west side of the cathedral; and in doing so a fine arcade of five Norman arches has been exposed to view. These arches formed the north end of the Chapter-house. The foundations of the Chapter-house have been exposed, as well as those of other Norman buildings which formerly stood near. It is interesting to watch the removal of the accumulated rubbish and earth, as every day's work brings to light something for the study of the archæologist. The work, when completed, will be a great improvement to the Close and cathedral.

COMMERCIAL-STREET CHAPEL, WHITECHAPEL.

In opening main roads and noble streets, or forming railways in the metropolis, it is necessary to reinstate interests disturbed. If it is worth while to form a long perspective of lofty mansions, or to ride royally over the heads of lowly buildings and abodes, it is equally worth while to pay pleasantly for the damage done to the houses, and to reinstate handsomely the institutions that are upset. By so doing, not only is the immediate object in view secured, and justice done to those dispersed, but they are led to seek the advantage of sites in the new thoroughfares, on which to erect buildings of more value than those they have left. And so those whom it is necessary to turn out, to make way through a densely-populated district, become the occupants and improvers of the vacant ground in the streets opened out for the purposes of metropolitan improvements.

An instance in which this principle has been carried out is afforded by a chapel recently erected in Commercial-street, Whitechapel.

In the progress of time steam, by two new lines of railway, invaded the retreat of thought and prayer of a people who had erected it after emerging from another sort of persecution in years gone by. Under the then circumstances, they took advice as to how they should escape from discord and distraction. A claim, not only for damages but for entire reinstatement, was put in, and was simply left in the hands of Mr. Tite, the railway company's architect, by whose award, with between 3,000*l.* and 4,000*l.* in addition to it, they have erected the new chapel in Commercial-street, Whitechapel, from the designs of Mr. Joel F. Earle, architect, to seat about 800 persons, at the following cost, including everything except legal expenses:—

Freehold site, 88 feet by 85 feet.....	£2,900	0	0
The chapel, external dimensions, 78 feet by 52 feet 9 inches, and 60 feet high from the basement floor to the ridge of roof; the lecture-room and school-room, external dimensions, 41 feet 6 inches by 27 feet; and vestries, class-rooms, &c. occupying a space of 85 feet by 12 feet	6,760	0	0
Total	£9,660	0	0

The entrance to the ground-floor of the chapel is by a Roman Corinthian portico of two columns *in antis*, through a central lobby 16 feet by 8 feet, and so by two smaller lobbies into the body of the building. The entrance to the gallery from the portico is by two stone staircases, each enclosed by lobbies. The portico stands on a granite plinth 5 feet high, the gift of Mr. J. Freeman. Two independent columns, with pilasters grouped on each side, form the portico; the staircases to the galleries are in the spaces thus enclosed by pilasters of the portico.

The chapel and school are fitted with deal seats, stained and varnished; the pulpit is placed on a raised platform; the baptistery is under the platform; when used, part of the floor is wheeled forward, and thus the baptistery is opened, and the vestries connected with it become accessible from it.

The basement of the chapel is prepared for use, when required, either for a school or other purposes. A vacant portion of the site is reserved for a minister's house.

MELTON MOWBRAY CHURCH.

At the recent meeting of the Leicestershire Architectural Society, to which we referred last week, the Hon. and Rev. J. Sandiland read a paper, forwarded by a member of the society, on Melton Church, a part of which we print.

Melton Church is the finest church in the county. The ground arrangement, the outline of the superstructure, and the details, possess a superiority, it is presumed, over every other.

It is a cruciform church, and is peculiar in its symmetrical proportions. The transept is of due length, a circumstance to which attention should be called, as in parochial churches this advantage is seldom found. Nor do we often meet with the two side aisles and clerestory carried out in this part upon the same plan as in the nave. But here we have them in perfection. These are matters essential to true grandeur, and have almost been confined to cathedrals.

In details there is variety, and each of the three Gothic styles is admirably exemplified. The clerestory and the upper part of the tower are of Perpendicular work, of the time of Henry VII. and are a specimen of the excellent masonry for which that period was remarkable. The Decorated side aisles, seen in this view, are rather poor; but this is fully atoned for by the beautiful porch, which, with its doorway and eight gorgeous niches, presents a show of elaborate sculpture of the time of Edward II. It is in very good preservation, with the exception of the pinnacles, which have perished, and have been superseded by a modern coping. Their restoration will ere long be accomplished, we trust, to the perfecting of this ecclesiastical gem. The lower part of the tower is Early English, and to this we particularly invite attention: it is, perhaps, the most perfect example to be met with.

The centre of the building is the place from which to see the clerestory, which must not be forgotten. It is peculiarly light and elegant, containing no less than forty-eight windows, each of three lights. The pendants and mouldings are almost innumerable.

It may occur to some to ask,—How came Melton to be honoured with the best architects and the best workmen in the thirteenth, fourteenth, and at the end of the fifteenth century?—for the fact that it was so is proved by these architectural remains. No doubt it was then a place of more importance than now. Medelton, as it was anciently called (or *Middle-Town*), is one of the oldest market towns in England. It had an endowed school at least as long ago as 1347. But we suspect its church is chiefly indebted to the great Priory at Lewes, which in the thirteenth century had the patronage, and to which priory the cell of twelve Cluniac monks at Melton was subject. And we must not forget its connection with the illustrious family of the Mowbrays.

Objects of interest, and some of great interest, are not wanting to the ecclesiologist.

Two important brasses only remain. Of the many that once did honour to the dead, the matrices or vestiges show where the *robbers of churches* have laid their sacrilegious hands. Incised slabs and ancient tombs exist, but they are partly concealed by modern work. There are three high-tombs, dating about 1300, 1400, and 1500, respectively commemorative of a Crusader, a Lady, and a Knight. The first has a recess in the south wall of the nave, as though a founder or benefactor of the church; the second, an alabaster enshrinement; the third, a Purbeck marble structure, formerly inlaid with a splendid brass, the outline of which enables the instructed student to recover the design. How delightful must have been the contrast of the two last, and how striking their appearance, when the "virgin white," and the shining sable, illuminated with glowing brass, did their best to honour these worthies, who were probably chief contributors to the magnificent temple wherein they have their resting-place!

The bells are eight in number: the six largest are old, and some have inscriptions. There are two fonts: one, of a modern character, has the well-known Greek inscription, that may be read either backward or forward: the other is a gift of the family of the late Richard Norman, Esq. and is a striking piece of church furniture from an elaborate design by Scott.

We come lastly to a portion possessing more than ordinary attraction—the Galilee Porch. The sculptured and ornamental parts, judging from the work, seem to have had the same artists as were employed at the south-west of the church at Gaddesby, in this county, and, if possible, surpass both in design and execution. It is much to be regretted that the porch is mutilated by the disappearance of the presumed pinnacles. Its piscina, locker, and other relics will be explored with much pleasure; and a question for interesting discussion will arise upon a singular window, and more especially four openings in the

walls. These latter resemble the mysterious Lychnoscope, a name still retained, though the theory it denotes is exploded by more conclusive evidence that it was "an outward confessional window for all comers." The apertures, to which we solicit attention, like the lychnoscope, had never been glazed, but have had a grating and shutter: they are not high from the ground, and had long been firmly blocked up by masonry. Much to the annoyance of the antiquarian, they have been recently opened and glazed. They furnish good examples to help farther investigation of the question; and if we be satisfied to regard them as outward confessionals, the number will not be staggering, provided we bear in mind that Melton was on the highway to the great leper hospital at Burton Lazars, which at certain times of the year would bring swarms of these "all comers." Besides the hospital, a spring at that place in great repute for the cure of leprosy attracted them. Moreover, the farm-house adjoining the churchyard, afterwards and to this day called the Rectory, was inhabited by fourteen chantry priests. We may conclude, therefore, that there would be no lack of applicants or of priests to confess them.

RECENT PATENTS.

THE following are selected from the *Mechanics' Magazine*, and other sources:—

Rowcliffe, E. Improvements in the manufacture of blocks or slabs for paving or building purposes. Dated Dec. 22, 1855. (No. 2906.)—The inventor takes natural asphalte and reduces it into small particles, and then places it in metallic or other moulds, without reducing it into a fluid state, and by hydraulic or other pressure makes it into the form required.

Grey, R. Improvements in machinery or apparatus for moulding bricks, tiles, and other similar articles. Dated Jan. 4, 1856. (No. 33.)—This invention relates to a peculiar construction of machinery for making bricks, pipes, tiles, chimney-pots, &c. by expelling the plastic material horizontally by continuous pressure through dies, placed at or near the bottom of the sides of a pug-mill. It consists in the employment of a vertical pug-mill fitted with an Archimedian screw, and furnished at the sides, at or near the bottom, with lateral orifices, each fitted with a suitable mould die. In front of each of these orifices is a travelling platform, running on wheels, and fitted with the ordinary rollers to ease the motion of the clay, which is introduced into the top of the pug-mill, and is pressed down by the rotation of the Archimedian screw.

Chaffer, T. and J. Ellis. Improvements in machinery for sawing and cutting slate, stone, coal, salt rock, or other minerals. Dated Dec. 6, 1855. (No. 2751.)—This invention is applicable to sawing or cutting blocks from the quarry, and consists—1. In sawing seams into minerals, by means of a circular saw, which travels along a bed plate fixed to the mineral to be operated upon. 2. In causing a cutting tool to move to and fro along a bed plate, and in so moving it as to cut a seam into the mineral, the said cutting tool being made to increase the cut by means of a setting-up screw or other mechanism.

Glover, F. R. A. Improvements in the construction of breakwaters, sea-walls, and other structures or foundations of structures which lie partially or entirely under water. Dated Dec. 18, 1855. (No. 2868.)—In order to construct the foundations of breakwaters, &c. where the natural bed of the sea or stream is composed of a shifting or moveable sand, the patentee fixes a number of pieces of framework by means of anchors, or by weighting them with ballast, and in order to insure a firm and sound structure, he bolts or connects the separate pieces together. The framework thus set up, serves gradually to collect the sands, &c. moved about by the waves, and to enclose and retain them, the deposit continually increasing until the framework is filled, and a compact mass has been produced on which any required superstructure may be erected. Secondly, he constructs the framework in the manner described, and gradually adds to the sand or materials collected a quantity of lime, cement, or concrete material during the process of collection, so as to expedite the solidification of the mass.

Cook, J. E. An improved composition for preserving exposed surfaces or surfaces liable to deterioration and decay. Dated Dec. 27, 1855. (No. 2931.)—In making up this composition, from two to six pounds of gum shellac are dissolved in every gallon of methylated spirit; or, instead of methylated spirit, wood spirit may be used.

Jennings, J. G. An improvement in the arrangement of the overflow-pipes of baths, wash-hand basins, and other vessels. Dated Dec. 10, 1855. (No. 2787.)—This invention consists in applying a syphon-pipe to the overflow openings or passages of a bath, a wash-hand basin, and any other vessel subject to like consequences of leaving the tap open.

Jennings, J. G. Improvements in connecting earthenware rain-pipes and soil-pipes of water closets, and in valve water-closets. Dated Dec. 10, 1855. (No. 2788.)—For connecting earthenware pipes, cast-iron junctions are used. Each junction is cast with an internal rib or projection of the thickness of the pipes, and on the outside there are lugs to fix the junction to part of a building. The junction is fixed in the following manner:—There is a grooving around or near the end of the pipe, so that when the end is introduced into the junction, and melted asphalte or cement is run into the socket between it and the pipe, there will be a good joint formed. In fixing the end of another pipe into the junction, a washer of vulcanized India-rubber is placed on the projection in the junction, and the whole of the surfaces are coated with red lead or suitable cement, and then the end of the other earthenware pipe is introduced, and a sound joint is made.

Davis, R. W. and D. Davis. An improved vice. Dated Dec. 12, 1855. (No. 2805.)—This invention comprises—1. The application to a vice of a beam having a ratchet which is engaged by a pawl, and having a spiral-faced head or the equivalent thereof, fitted with a loose cap having a corresponding face, &c. 2. An arrangement of crossed levers between the jaws, and their attachment so as to secure to the jaws an uniform leverage.

Gardner, J., J. C. and H. Improvements in glasses as applied for the transmission of light. Dated Dec. 7, 1855. (No. 2762.)—This invention consists in the use in the ordinary way over the light (gas or otherwise, as the case may be), for increasing its illuminating power, of a solid piece of glass having a cylindrical, elliptical, or other bore or opening through or near the centre for the light, such glass being externally more or less globular in form. Also in the use of hollow glasses filled with water or other transparent fluid.

Back, H. Improvements in the application of glass to decorative purposes. Dated Jan. 4, 1856. (No. 30.)—This invention consists—1. In adapting or applying hollow glass pillars or facings, gilded or coloured at the back (as described in a patent granted to the patentee, March 15, 1855); and 2. In adapting and applying fluted, corrugated, diapered, or otherwise suitably decorated sheet glass, gilded or coloured at the back as above, to various uses, either alone or in combination with the hollow glass pillars or facings above referred to.

Miscellanea.

SCHOOL KITCHENS.—Miss Banister, to whom the public are indebted for various suggestions, proposes a plan for a kitchen, to be superintended as a reward for good conduct by respectable women cottagers, in succession. Six children, from eight to ten years of age, are to attend to be taught;—one day how to make broth, soup, and gruel; on other days how to make meat puddings and boil potatoes, broil chops, bake loaves, pies, cakes, &c. The room, &c. to be kept in order by the children. The pay of the cottager to be one-fourth of the food cooked, the other three parts to be sent by the children to sick and aged people. From eight to ten years of age poor children would thus learn the duties of life, while gaining all the knowledge their simple career requires, in the school-room. Miss Banister "calls upon all who have the power to aid in getting undone that unfitting course of education for the labourer's children which has so unthinkingly been done, and is still doing." Although the foregoing plan is principally intended for our agricultural population, it is suggested that it might be easily adapted to towns by dividing them into sections of 150 to 200 children in each. "Miss Burdett Coutts having courageously come forward," says Miss Banister, "I am induced to offer my scheme to stay prevailing errors."

THE PARIS IMPROVEMENTS.—The *Revue Municipale* says:—Twenty dark and narrow streets, containing 249 damp and unhealthy houses, were demolished for the enlargement of the Central Halles. The prolongation of the Rue de Rivoli, which is now 3,146 mètres in length, and the clearing away the approaches to the Hôtel de Ville, caused the removal of thirty-two narrow streets and 587 houses. When the question is to rebuild, it will be readily understood that the difference between the number of old and new houses must be very great. It was found necessary to abandon a large space of ground to the public thoroughfares, 22 mètres of width for the Rue de Rivoli, and 30 mètres for the Boulevard de Strasburg. The houses to be rebuilt cannot be at all like those which were demolished, most of the latter belonging to old Paris, and being most unhealthy. During the last six years nearly 2,000 houses have been demolished in Paris, while the number of new ones is not more than 650. The destruction of these 2,000 houses has led to the removal of more than 80,000 persons.

WATERLOO-WITH-SEAFORTH BOARD OF HEALTH.—Mr. W. A. Richardson, an assistant in the Borough Engineer's Office, Liverpool, was unanimously elected on the 8th instant by the Local Board of Health for the district of Waterloo-with-Seaforth (near Liverpool), as surveyor and inspector to the Board. There were forty applications for the situation.

RECOVERY OF POSSESSION OF HOUSES BY THE COUNTY COURTS.—In the new County Courts Act about to come into force, there are several clauses of considerable importance to landlords, extending the recovery of premises, where the rent does not exceed 50*l*. a year, in a summary manner, and preventing actions of ejectments in the superior courts. Where the term has expired in property where neither the value of the premises nor the rent is more than 50*l*. by the year, a plaint may be entered, and in default of the tenant giving up the same, the bailiff may enter and give the landlord possession. In plaints for the recovery of possession, the plaintiff may recover his rent where the same does not exceed 50*l*. Farther, the Act provides that where there is a half-year's rent due, and the landlord has a right to re-enter, possession may be given by the County Courts.

NEW FIELD FOR FEMALE LABOUR.—A few months since, a series of letters appeared in the *Times* and other London journals, showing that the most available means of rescuing the female toilers of this country from their present abject position, was the introduction of the art of watchmaking among them, and for which pursuit it was shown by the well-known watchmaker of Cheapside, Mr. John Bennett, by whom the idea was first started, the female hand was highly suitable. The subject is now receiving attention on the part of many provincial manufacturers, and ere long the public, we are glad to learn, may look forward to the realization of this excellent suggestion, at least to some extent. It is by female employment that Switzerland has become so celebrated for watchmaking, and it is hard to see why England, the chief improver of this branch of art, should not be able to cope with Switzerland in this respect.

THE COVENTRY SCHOOL OF ART.—The works executed by the students of this school have been on view during the week, in St. Mary's Hall, Coventry, and large numbers have attended, particularly in the evening, and been much gratified by the character of the drawings, paintings, &c. exhibited. The examination was conducted by Mr. H. A. Bowler, the Government Inspector, who was assisted by Mr. Henry Rafter, the Head Master of the school; and proof of the proficiency of the pupils, and the skill of their instructor, appeared in the number of medals awarded,—eighteen; the greatest number given in any former year having been eleven. Besides these, seven works were distinguished by "honourable mention." Sir Joseph Paxton having offered a prize of ten guineas for the best ribbon designs, for which the ladies' class were to compete, ten were sent in, and they attracted considerable attention and comment. This prize has not yet been awarded.

PROPOSED TESTIMONIAL TO MR. MECHI.—Friends of Mr. Mechi, who have long been desirous of presenting that gentleman with a testimonial of their appreciation of his efforts to assist in agricultural progress, as well as a slight acknowledgment of his undeviating hospitality at his annual gatherings, are now taking steps to carry out their object.

ANOTHER ACCIDENT AT THE WELLINGTON BARRACKS.—On Monday an accident occurred at the Wellington Barracks in St. James's-park, by the falling of a mass of earth, the effect of which was that one of the unfortunate men engaged in the excavation, of the name of Henry Redman, lost his life. Several men, who were in the employment of the contractor for the erection of the barracks, were engaged in digging the foundations for the officers' barracks, and a spacious tank to contain a large quantity of water. They had got to the depth of about 12 feet, where a layer of sand was met with. The men were about to leave their work, but just as they were doing so the gravel gave way, when immediately the mass of earth on that side fell, and covered four men who were at the bottom of the shaft. Three of them were promptly extricated, and were found to have received no serious injuries. In about two hours afterwards the fourth man, Henry Redman, was got out, but life was extinct.

INVENTION FOR SAWING PAVEMENT.—We understand the Earl of Caithness, among his other mechanical inventions, has constructed a machine for sawing stone, which is likely soon to be put in practical use in this county. The invention consists of an endless saw or knife affixed to a metallic belt which is run over two drums, and may be driven by any power—steam, water, or hand. We trust the invention may be completely successful, as it is now high time the method of stone-sawing at present adopted in Caithness were superseded by some more easy and less labourious system.—*John O'Groat's Journal.*

BLAST OF 12,000 TONS.—The great limestone quarries at Penderryn, in the Vale of Neath, have been the scene of a blast which has detached the enormous mass of 12,000 tons of solid rock. An old chamber was cleared out to an extent of 10 yards, and half a ton of powder was placed therein. The match having been lighted, in eleven minutes the explosion took place, which drove out a mass of rock 20 yards square, and immediately the whole face of the rock, 120 feet in height, rolled down and filled the quarry below. The calculations range as high as 15,000 tons, stones of 250 tons being detached separately. These quarries are the property of Mr. Wm. Crawshay, and supply great quantities of limestone to the adjacent ironworks.

MASONS' STRIKE. — We are glad to hear that the masons who had struck in Mr. Kelk's employ have returned to their work, and that the strife has been happily brought to a termination. The questions in dispute were, as stated in the letter of the masons to Mr. Kelk, of the 6th August, as follows:—First—That they should have the full privilege of four o'clock time on Saturday. Second—That they should not be asked to work piecework. The special arrangement of Mr. Kelk's establishment, as to the four o'clock time on Saturday, Mr. Kelk had conceded, in the first instance and at once; so that the actual and only cause of difference was that of piecework; and this the workmen, after conference with the members of the Builders' Society, on the 11th instant, have wisely withdrawn unconditionally.

CHANCERY-LANE IMPROVEMENTS.—The first stone of the new building for the Law Union Fire and Life Insurance Company, within one door of Fleet-street, has been laid. The front is to be of stone, and Elizabethan in character. The works are being carried out by Mr. Myers, from the designs of Mr. J. Wornham Penfold.

PROPOSED EXHIBITION OF LOCAL ART AT MANCHESTER.—It is intended to have an exhibition of the works of local and native artists in the new picture gallery which is being erected in Peel Park, adjoining the present museum. Mr. David Chadwick, borough treasurer of Salford, according to the local *Courier*, was the originator of the scheme. A meeting of artists was held in the mayor's parlour, Town-hall, Salford, on Thursday in last week, to consider the suggestion, and to appoint a committee, &c. Resolutions promotive of the object in view were unanimously passed, and Mr. Hammersley, the head-master of the Manchester School of Art (who was among those present), was elected chairman of the new committee. It was deemed desirable that the exhibition should be open before the Art Treasures Exhibition at Old Trafford, and remain open for some time; and it was accordingly resolved to open the exhibition on the first Monday in March; artists to be at the expense of forwarding the pictures they intend to exhibit to the museum building, free of cost, the executive committee undertaking to insure the pictures and return them carriage free: with respect to the works of deceased artists, the committee to bear the whole expense of collecting and returning them.

"ROADSIDE RESTING-PLACES."—The writer of a pamphlet bearing this title, known in the literary world as the authoress of "Home Truths for Home Peace," has carried her philanthropic project into execution near the town of Shepton Mallet, by erecting large iron seats by the roadside, on the turnpike-roads, for the accommodation of travellers. The chairs are large enough to seat five or six persons, and are covered with short texts of Scripture.

IMMORTALITY BY PRIVATE CONTRACT. — Affixed to a post at the corner of one of the numerous streets which intersect each other at the back of the Jardin d'Hiver, at Lyons, is seen the following announcement:—"To be sold by private contract, the right of giving the purchaser's name to this street."

DIRT AND VICE.—The *Glasgow Mail* declares that "Glasgow has been filthier in 1856 than in any year in the last decade;" and "the stenches, so intolerable in the summer and autumn, have at certain periods been worse, if possible, than ever they were before." Glasgow is also said to be the most drunken city in the empire. "So true it is (comments the *Gateshead Observer*), the more dirty the more vicious (or the more vicious the more dirty, whichever way you like to put it)."

INCREASED VALUE OF LAND AND PROPERTY IN SCOTLAND.—By tables of returns which have been obtained by the Board of Trade it appears that the acreage of Scotland is now set down at 20,049,462 acres. In 1674 this acreage and the house property on it were valued for land and houses at 319,281*l.*; but in 1855-56 they were valued at 8,155,972*l.* The valuation for the county of Aberdeen in the former year was 19,418*l.*: last year it was 526,640*l.*: the county of AYR was 15,967*l.* and 640,926*l.*; but the county of Lanark showed the greatest increase, the valuation in 1674 being only 13,511*l.* while in the latter it was 870,562*l.*

CONCERTS FOR THE PEOPLE.—An inaugural entertainment was given on Monday last, at St. Martin's-hall, and was largely attended by an audience not quite so quiet as was deserved. Mr. Leigh Hunt presided. It was the committee's intention to give between the parts of the musical portions a literary interlude, consisting of readings from the old poets, and the introduction was written by the chairman of the evening, and read by Mr. Stocqueler. Whether, as the audience said, they could not hear, or they did not wish to hear such readings, we will not say, but they certainly would not listen even when a more powerful voice was called into requisition. The musical selection was a very good one, and gave great pleasure to those assembled. Miss Birch, Mr. Donald King, and others took part in it.

AN IMPROVING LANDLORD.—Mr. James C. Harter, of Broughton Hall, Lancashire, purchased, in 1852, an estate of some 1,500 acres, lying for about three miles along the verge of the Shannon, and contiguous to the bridge of Banagher. The estate of Esker was, at this time, in a deplorable condition. Mr. Harter paid for it 8,000*l.* and he has since expended in improvements about 4,000*l.* The farms were all remodelled, and substantial aid given to every tenant to improve his residence and offices. As a preliminary improvement, draining was extensively set on foot, and new roads made, opening up the estate, and giving value to the land which it was impossible formerly to reach. Every cottage and farmhouse is neatly whitewashed and kept clear of manure heaps and cesspools. Persons who saw this property a few years ago, would scarcely recognize it now. The swamps and morasses have been converted into excellent land, and the callows are worth treble their former value.

PROPOSED NEW MARKET AT MANCHESTER.—The markets committee of the Manchester corporation have advertised for plans for a new butchers' market, to be erected in the place of the old shambles at Shudehill. Two prizes have been offered by the committee, and eleven different plans have been sent in for competition. The decision of the committee, according to the local *Courier*, will be made known early next month.

THE VULCANIZATION OF INDIA-RUBBER.—This has become a very important and extensive process, better known hitherto in America for the multiplicity of its uses than with us. Vulcanized rubber is worked in the plastic state, especially by the aid of steam and boiling water, just as if it were plastic clay, and is in this state moulded at once into all sorts of forms, such as those of workmen's tool handles, or compounded with other ingredients, so as to assume the aspect of bronze, ivory, buckhorn, cameos, &c. For chisel-handles, and such like, subject to concussion, the vulcanite possesses the rare quality of permitting the hardest blows being dealt with the hammer or mallet indifferently without splitting or other injury. Gum elastic, or India-rubber, as remarked in an interesting article on the subject in the *Mechanics' Magazine*, can be readily mixed or combined with almost every other substance. It may be mixed with other gums, oils, coal-tar, carbon, and with the earths and oxides, or pulverized metals and ores. It can likewise be combined with all fibrous products. It is compounded in the manufacture with many of the above substances, for the purpose of obtaining particular advantages for special uses. Ground cork and other light materials are sometimes mixed with the gum to increase the bulk and make the articles light. The oxides of metals, their filings and pulverized silicas, will give imitations of marble. The fibre of cotton or the dust of different woods will afford simulations of wood of greater or less gravity, as may be required. The combining of plumbago gives the crayon, oxide of zinc produces lithographic stone, and so on, *and on*.

A NEW CITY ON THE UPPER MISSISSIPPI. — A correspondent of the *Morning Herald*, in St. Cloud, Minnesota, writes of that new and flourishing town. One year ago it contained only two shanties in the way of houses. It has now between 300 and 400 inhabitants, and upwards of ten frame buildings, among which are six stores, mechanics' shops of various kinds, and one steam saw-mill that cuts 10,000 feet per day, which cannot half supply the demand. There are many more buildings in progress, and under contract to be finished this year, among which are the county buildings, a steam flouring-mill, two churches, a hotel 50 feet by 60, three stories high. There are several fine quarries of granite within a short distance of the town, also good lime rocks, clay for making brick, &c. for building purposes, which are soon to be put in use. There is a fine spring of water, capable of furnishing a town of 15,000 inhabitants. The "city" stands at the head of the steamer navigation of the Mississippi. There is a great demand for labourers. Mechanics command from two dollars fifty cents to three dollars per day; common day labourers from one dollar fifty cents to two dollars fifty cents per day. Carpenters are in great demand.

DISGRACEFUL STATE OF THE NELSON MONUMENT AT YARMOUTH. — The *Bury Post* gives a lamentable account of one of the very few monuments ever erected to the honour and the memory of an admiral who so immensely contributed to the naval renown of Britain, as did the glorious Nelson. In these days of sickening re-duplications of unnecessary monuments to Wellington, it is really an infamous disgrace to the country that the memory of its other noble sons, and its gratitude to the dead, so quickly fade. The Yarmouth monument to Nelson is fast going to utter ruin. The terrace at the base is greatly dilapidated: the walls are forced several inches outwards, from being choked with sand and rubbish: the terrace platform is much sunk, disjointed and damaged: the caryatides supporting the roof are all injured: the figure of Britannia has ominously lost the trident: the unsightly poles which surround the monument are all rotten: in short, the whole is a sad picture of decay and desolation. More than all ought what follows to bring the blush of shame to the cheek of every one interested in the honour and glory of his country: we quote from the paper already alluded to:—"About thirty years ago the terrace was relaid, at an expense of about 50*l.* by the brave old veteran James Sharman, who 'shows' the monument, and who was one of those who carried the dying Nelson down into the cockpit, after he received his fatal wound, at the battle of Trafalgar. Since that time he (Sharman) has spent about 20*l.* about it. These sums he paid out of the money which he received during the first ten years of his 'keeping' the monument; but since then, unfortunately, the annual amount which he has obtained for doing so has been so small, that it has not sufficed to maintain him and his family. Were not this the case, he would, he says, do all that is required to be done to preserve the monument without asking the country for a single farthing towards the expense!"

ANTIQUARIAN DISCOVERY IN RUSSIA.—A discovery has just been made in the village of Alexandropol, in the government of Ecatherinslow, which has caused a sensation among archæologists. M. Luzancho, the director of the Museum at Kertch, has found in a small mound the catacombs of the Scythian kings. Numerous articles in gold, silver, bronze, iron, earthenware, &c. have been discovered there. The existence of the Gherros, or Necropolis of the Scythian monarchs, spoken of by Herodotus, is thus proved.

TENDERS

For the Convent of the Christian Retreat, Peckham; Messrs. Wigley and Nicholl, architects:—

W. Jackson	£2,870	0	0
White	2,684	0	0
Thompson	2,680	0	0

For rebuilding the White Hart public-house, Hoopersquare, Whitechapel, for Messrs. Truman and Hanbury; Mr. James Harrison, architect. Quantities supplied by Mr. W. J. Gardiner:—

Withers	£1,128	0	0
Morter	1,085	0	0
Tolley	1,077	0	0
Brake	1,055	0	0

For building Trinity Presbyterian Church, De Beauvoir-town; Mr. T. E. Knightley, architect:—

Hocken	£5,995	0	0
Pollock and McLennan	5,172	0	0
Batterbury	5,098	0	0
M. A. Wood and Sons	4,893	0	0
J. and J. Coleman	4,655	0	0
Dove, Bros.	4,345	0	0
E. Clarke	4,240	0	0

Delivered to the St. Pancras Vestry for new kitchens, scullery, and laundry buildings; Mr. Booth Scott, architect. Quantities supplied by Mr. C. J. Shoppee:—

Phillips	£2,434	0	0
H. W. Rowe	2,300	0	0
R. Thomas	2,260	0	0
Furnival	2,160	0	0
Williams	2,142	0	0
Palmer	1,970	0	0
W. T. Purkiss (accepted)	1,835	0	0

For new Male and Female Dormitories, Bath Rooms, &c. for St. Pancras:—

Phillips	£1,737	0	0
H. W. Rowe	1,500	0	0
Thomas	1,475	0	0
Williams	1,434	0	0
Furnival	1,379	0	0
W. T. Purkiss	1,275	0	0
Palmer	1,223	0	0

TO CORRESPONDENTS.

"H. R." (we shall be glad to receive some details) :—"T. E. B. B. S."—"E. W. O."—"P."—"J. L."—"J. R."—"Messrs. G."—"G. W."—"C. R. W."—"F. O. W."—"S. G."—"R. O. M."—"W. A. R."—"Mr. H."—"J. H. R. and C. H." (partially atmospheric)—"P. P."—"D. M."—"W. W."—"A. P." (works on acoustics generally) :—"W. C. B."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

THE ARCHITECTURAL MUSEUM, Canon-row, Westminster. Patron: — H.R.H. PRINCE ALBERT.—A COURSE OF ELEMENTARY CLASS-LECTURES on the CONTENTS of the MUSEUM, will be delivered in the Rooms of the Museum, on the Evenings of MONDAY, OCTOBER 13th and 27th, and NOVEMBER 10th and 24th, by the Rev. CHARLES BOUTELL, M.A. Hour of admission, SEVEN o'clock. Lecture at EIGHT o'clock. Cards may be had at the Museum, by a Member's recommendation, on and after WEDNESDAY, OCTOBER 1st, when the Museum will be re-opened; also at the Office of "The Builder." The competitions for the prizes for Wrought-Iron Work and Stone Carving, will close on the 31st of DECEMBER next.

GEORGE GILBERT SCOTT, Treasurer.
HENRY CLUTTON, Hon. Sec.

September 20, 1856.

ARCHITECTURAL ASSISTANT.—Messrs. ANDREWS and DELAUNAY, Architects, Bradford, Yorkshire, require the services of an ASSISTANT competent to prepare Working Drawings, measure up Works, and take out Quantities.—Address as above, stating the Salary required

TO PARENTS AND GUARDIANS

A VACANCY is open for an ARTICLED PUPIL as an ARCHITECT and LAND SURVEYOR, in an office conducting a most advantageous practice, and having the management of several valuable building and other estates, and where the pupil, from the extensive nature of both branches of the business, would have an opportunity of acquiring a thorough practical knowledge of his profession. A premium will be required.—For particulars apply to Messrs. LOCK and PEDLEY, Architects, 5, High-street, Southampton.

TO BUILDERS, PAINTERS, CONTRACTORS, HOUSE-AGENTS, &c.

CLERK and STOREKEEPER, &c.—WANTED, by an experienced, active Man, aged 34, a SITUATION as above. Can measure and estimate every description of builder's work, and having a good knowledge of materials and general repairs, would be found very useful in a jobbing business, or on an estate.—Direct, J. THOMAS, 24, Philip-street, Walworth-road

N.B. A short engagement not objected to

MASONS for Working Granite, or for Hard Stone. WANTED at Sheerness, Isle of Sheppey, Kent.

WANTED, in a Builder's Office, a respectable YOUNG MAN, who writes a good hand and is capable of measuring and booking materials. He would be required to take charge of the store, and serve out ironmongery and other materials.—Address, stating references and salary required, A. B. Post-office, Wolverhampton.

WANTED, a REGISTRAR and MANAGER for the BRADFORD CEMETERY. He will be required to give up the whole of his time to the duties of his office; to superintend the works and grounds and the workmen employed; the sale of graves; and to keep the books. He must be a good writer and accountant, well versed in all that appertains to the office, and possessed of good taste in monumental designs. Salary, 300*l.* a year, with excellent house, free from taxes and rates.—Application, stating age, previous situation, and number of family, with test monials, to be made to JOHN ATKINSON, Esq. Secretary; or Messrs. RAWSON, GEORGE, and WADE, Solicitors, Bradford, Yorkshire.

WANTED, an intelligent Young Man of respectability, about 18 years of age, capable of TAKING CHARGE of the TIME BOOKS and keeping the Prime-cost Accounts in a manufacturing business in town. He must write a neat hand, and be able to give unexceptionable reference.—Apply by letter only, stating age, where last employed, and salary required, to W. A. 33, Act n-street, Gray's-inn-road.

TO FOREMEN OF HOUSE-PAINTERS.

WANTED, a steady, persevering, practical Tradesman, of good address, married, and not under thirty, as FOREMAN, and capable of wholly conducting a business in the City when required. He must be thoroughly qualified in every respect, and bear an irreproachable character, which will be very strictly investigated, the situation being one of the utmost trust and confidence. Apply, by letter, with proper name and address, to B C D, Office of "The Builder."

JUNIOR CLERK AND ASSISTANT SECRETARY.

WANTED, at a Manufactory, a gentlemanly YOUNG MAN, from 17 to 21 years of age, liberal education and active habits, accurate in account keeping, and who writes fairly well. He must be able to produce good testimonials and satisfactory references; some knowledge of, and a taste for, drawing, would be advantageous, and must render any gentleman who accepts the situation worthy of greater value. A willingness to be generally useful would be appreciated, but the work more particularly needed relates to a department of church-windows, and other decorative glazing.—Apply by letter, prepaid to Messrs. JAMES POWELL and SONS, Whitefriars Glass Works, London.

WANTED, in a Builder's Office, an experienced MEASURING CLERK.—Address, with full particulars, to B. R care of Mr. Farnell, 40, Watling-street.

WANTED, in the Office of a Builder and Surveyor, a competent MANAGING CLERK; he must be a good penman and accountant, and capable of taking out quantities, measuring work, and plotting land. Address, Mr G. HUDSON, Surveyor, Woolwich.

WANTED, a Person accustomed to the routine of a Lead Warehouse, to act as CUTTER and SALESMAN; one who has a knowledge of house agency preferred. References as to capability, honesty, and sobriety indispensable.—Apply to THOS. STANWAY, Plumber, 10, Dorset-street, Portman-square, London.

WANTED, in a Timber Merchant's Office, a thoroughly good ACCOUNTANT, who understands the trade, to take charge of the books.—Apply, by letter, pre-paid, to X. Y. Z. at Garraway's Coffee-house.

TO JOURNEYMEN PLUMBERS AND GAS-FITTERS.

WANTED, experienced, steady Men, who have no objection to the country. Reference as to character and acquirements necessary.—Apply, 26, Warwick-street, Regent-street, London; or 76, Southgate-street, Gloucester.

TO ARCHITECTURAL DRAUGHTSMEN

WANTED, in a Builder's Office, an experienced CORRESPONDING CLERK, BOOKKEEPER, and QUANTITY MAN.—Apply to JOHN WEEKS and Co. Horticultural Builders, Kingsroad, Chelsea

WANTED, a respectable Young Man, as CLERK, in a Decorator's and Upholsterer's establishment, at the West end of the town.—Address, stating age, particulars where last engaged, and salary required, to X. Z. Office of "The Builder."

WANTED, by a well-experienced CLERK of WORKS, a RE-ENGAGEMENT. He is a good draughtsman, and can get up working drawings; is well conversant in all the branches of building, and has first-rate testimonials from previous engagements.—Address, T. B. 3, Bloomsbury-terrace, Vauxhall-bridge road, Pimlico.

TO SHIP AND HOUSE JOINERS.

WANTED, THREE or FOUR Steady MEN who can answer to the above. Apply at Mr. H. P. BOLT'S, Builder, &c. Newport, Monmouthshire.

TO WINDOW-GLASS AND LEAD MERCHANTS, &c.

WANTED, by a Person, aged 30, a SITUATION as FOREMAN, SHOPMAN, or as entire MANAGER of a BUSINESS; is thoroughly acquainted with every branch in the above trades, having had great practice for sixteen years, and is a thorough window-glass cutter.—Apply to F. W. 13, Wellington-terrace, New-road, Hammersmith.

TO DECORATORS, &c.

WANTED, by an OIL GRAINER, ORNAMENTAL and HERALDIC PAINTER, a SITUATION in either or the whole of the above branches. No objection to filling up time with plain painting. Wages 27*s.* per week. Good reference given as to character and ability given if required. No objection to the country.—Address, T. C. No. 3, Upper Bryanston-street, Edgware-road, London

WANTED, to PLACE a Youth for four years as IN-DOOR APPRENTICE to a CARPENTER and BUILDER where he would be part of his time in the office, and gain a thorough knowledge of the business. The country preferred.—Stating terms, address, R. W. No. 31, Clarges-street, Piccadilly.

TO PLUMBERS AND BUILDERS.

WANTED, a SITUATION as FOREMAN, by an experienced hand, capable of taking the charge of three branches, and a good sheet-lead caster. No objection to town or country.—Address, G. M. 34, Stanhope-street, Clare-market, London.

TO BUILDERS, &c.

WANTED, by a Young Man, who has served his time in a carpenter and joiner's shop, a PERMANENT SITUATION, where he would have an opportunity for improvement. Address to ALPHA, at Tanner's, 18, Boston-place, Harewood square

N.B No objection to a country town.

TO PAINTERS AND BUILDERS

WANTED, a CONSTANCY, by a GRAINER and PAINTER, in town or country. Wages moderate. Address, H. BIRD, 35, Margaret-street, Clerkenwell

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Samples and prospectuses free to any part of the kingdom.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c. — A considerable reduction in the prices of French polish, white and brown hard spirit varnishes, spirit lackers, and flatting spirit. The present price is 8s. 6d. to 7s. per gallon; white French polish, 10s. per gallon; white shellac, is. 8d. per lb.; gums, shellacs, and all other articles at lowest prices. A trial list forwarded on application to JAMES SLIPPER, 87, Leather-lane; and 1 and 15, Dorrington-street, Holborn, London.

MONEY WANTED.—The Council of Hastings, acting as the Local Board of Health, for the District of Hastings, in the said borough, are desirous of borrowing, under the powers of the Public Health Act, 1848, the sum of £[illegible] for the purpose of [illegible] and sewerage of the said borough, and are willing to grant mortgages of the rates and assessments of the said borough, and of any other property which may be legally assigned for the purpose, for the repayment of the principal and interest, within the period of thirty years; or they may be willing to grant debentures for the said loan, bearing interest at the rate of [illegible] per cent. per annum, payable half-yearly, and repayable at the end of the said period of thirty years. Any persons desirous of lending the said sum, or any part thereof, are requested to communicate their terms of interest, addressed to the Town Clerk, Hastings.
Hastings, June [illegible], 1856.

LOANS, from 10l. 10s. to 100l. ADVANCED, within twenty miles of London, repayable weekly or otherwise, at 5s. per cent. for twenty-five weeks, and 8 per cent. for fifty weeks. Forms, price 2½d.; by post, three 9-stage stamps to be sent to the METROPOLITAN LOAN COMPANY, 1, Crane-street, Strand. Established 1849. Office hours, from Ten to Four o'clock. ROBERT NORTON, Secretary.

NOTICE.—TO BUILDERS, RAILWAY AND DOCK DIRECTORS, WATERWORKS AND GAS COMPANIES, CONTRACTORS, &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland CEMENTS, made on the same principle and from the same materials as used by the late firm of Swindells, Brother. J. C. is prepared to enter in to contracts with any of the above branches that may favour him with their orders. The advantage to be derived from the above cements, manufactured by J. C. over all others, are their extraordinary hydraulic properties. Samples and references may be had on application either at the Works, Ashton New Road, or the Warehouse, 5, Broom street, Shudehill, Manchester.

BATH, PORTLAND, and ROMAN CEMENTS. The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all ordinary flue purposes, decorations &c as having all the qualities requisite for an inferior cement, and being quit unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, brown and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 69, Old Broad-street; London; to Mr MANTEVENT, Clerk, pro tem, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunstall, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colors. Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and Co. to whom THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester.
Agent at the YORK—Mr. THOMAS WEEKES.
Agents in London, Messrs. GEORGE POTTER and CO. Limemerchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 19, North-wharf-road, Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON and CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mine Ochre, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Tiles, Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Portzeloa.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

PORTLAND CEMENT.—JAMES WESTON has enlarged that portion of his CEMENT WORKS on the Medway, for the manufacturing the above CEMENT, begs to inform the Trade in general that it can be supplied with any quantity they may require, either at his Works, St. Andrew's Wharf, Rochester, or Middle Wharf, Scotland-yard, Westminster, Manufacturer of Roman, Lias, and Mastic Cements, English and French Plaster, &c.

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs, Warehouse, No. 1, Wharf, Paddington-basin

11 George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand made and machine made, for shipment or otherwise.—Apply to G. H. OTT, Agent, as above.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known Lime Stucco, dry ready for use, in tin packets, with a few days. Manufactured by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick setting Cement, that requires no coat-sanding. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements tread at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

HUBBUCK'S PATENT WHITE ZINC PAINT,
The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither has it the disagreeable effect upon it. It is entirely free from any poisonous or pernicious property. The generality of the painters' colic, will be altogether averted. The Powdered White Zinc can be had in three grades, Nos. 1, 2, and 3, and where it is used with Soap, Varnish, &c. To prevent the proper genuine Zinc paint, which the adulterated article is most objectionable, being sold in Oriental Packages, each cask stamped, HUBBUCK'S LONDON PATENT. And when so marked, the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works opposite the London Docks, London.
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce on demand the canal company's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 6, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

DAVIES and NORMAN, CROWN WHARF, GREAT SCOTLAND YARD.
R. MAN and PORTLAND CEMENTS,
LIME BRICKS, TILES, SLATES, FIRE GOODS, &c.
STONEWARE PIPES, PANS, TRAPS, &c.
A Liberal Allowance to the Trade.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford line of the Great Western Railway, at Harbury, are now prepared to supply LIME and GROUND LIME, either ex-kiln, direct from the Works, or by Railway on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath and Lias Cement. Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

GREY STONE LIME WHARFS, 12, UPPER GROUND STREET, Blackfriars (Surrey side), NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME, in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works on the Medway, near Rochester.

CHARLES RICHARDSON, 3 & 6, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

2 & 6, South Wharf, Paddington.

NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's Bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.
All applications for prices and terms will meet with prompt attention.
N.B. Please observe the lime is ground at the works, not in London.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whyting, Whitin Sand for asphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 200 to 600 tons can load along-side the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods, both Welsh and Newcastle, Fire clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation
General Office—No. 13, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury New-park, would be willing to contract to arrangements with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Delly Farm, Stoke Newington Green.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY.
(Within a short distance of the fire bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and FACINGS, in any quantity.
Also, STOCKS of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY, near the Crystal Palace.
Extensive Manufacturers of — BRICKS of the first class, Roman Bricks, Cutting, Rubbings, Facings, and Pavers, Clamped ditto, Yellow and Pale Seconds, Paviors and Pickers, Wash of Stocks, Stocks, Grinders, &c. TRUMAN and Co. Norwood Lodge, Palace-rd, Roupell-park, Lower Norwood, Surrey.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Warlingham (close to the field), leave at 6 and 9·30 a.m. and 3 p.m.; return at 9·55 a.m. and 5·5 and 7·55 p.m.
HENRY C. SOUNE, Sec.
37, King William-street, City.

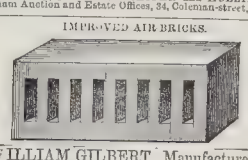
BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and judge for themselves.
Malm Place, half unsited Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Horton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKFIELD TO BE LET at TOTTENHAM, containing 6½ acres of excellent malm earth, situated by the side of the high road, 4 miles from London. The bricks made in the field have always found a ready sale.—For terms and other particulars, apply to Mr. A. RICHARDS, Auctioneer, Tottenham.

BRICKFIELD TO LET, in full work.—In consequence of decease of a principal, situate about twelve miles west of London; the Great Western Line passing at the end of the property, and the Grand Junction Canal at the other, with a commodious Dock and Loading Stage. About Thirty-three acres of LAND, twenty-five thereof containing excellent Brick earth, together with roomy DWELLING-HOUSE, and all stone and three-quarters acres of ground attached thereto. A great portion of the land not yet required for brick-making, is profitably underlet. About one, three years of lease unexpired.—Apply, by letter, to H. Y. Messrs. Hemington, Stationers, 142 Fenchurch-street, London.

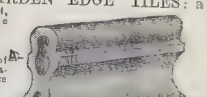
TO BRICKMAKERS and OTHERS.—TO BE LET or SOLD, a BRICKFIELD, containing 15 acres of ground, 12 acres of which are brick-earth, commanding both railway and water carriage; low royalty. The field is in full working order, with machinery, &c. complete.—For further particulars, apply to Messrs. SLOPER and HOLLIDAY, 12 Gresham Auction and Estate Offices, 34, Coleman-street, City.

IMPROVED AIR BRICKS.

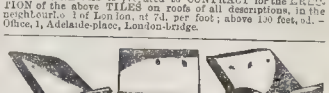


WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain pipes, Moulded Bricks, Brackets, Vases, Chimney pots, Stoneware Glazed Sewage Pipes, Ornamental Quoin Blocks, &c.
Tiverdale, Staffordshire.

HOGG'S GARDEN EDGE TILES; a cheap, elegant, and durable substitute for Box Edging.
13s. per Hundred, or 1½ per yard.
Exhibited at Court of Honour, Crystal Palace; and at the Office of "The Builder."
Full particulars from Mr. R. BLACKETT Witham, Essex



BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the EXECUTION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—No. 1, Adelaide-place, London-bridge.



BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambra Mosaics, manufactures of a highly decorative character and extreme durability, Slabs and Tiles for Fireplaces and Hearths, Cistine Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPÔT for the WARE is at HOWELL'S WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "Terro-Metallic," is the exclusive right of the Proprietor; and, thirdly, that the "Reports of the Jurors," page 681, of the Great Exhibition, rank the Manufactories known so long as "The Tile-ries," Tunstall, Staffordshire, as the best of the kind in the world.

PANTILES, PAVINGS, &c.—J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 50s. per 1,000; floor bricks and 6-inch pavings, at 37s. 6d. per 1,000; 9-inch pavings, at 57s. 6d. per 1,000; plain tiles, at 25s. per 1,000, delivered. Cash prices.—Delivered on trucks in London on Eastern Counties Railway.

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

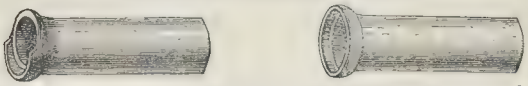
MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during this period supplied DRAIN PIPES, &c to some of the largest Works in and around London, viz.:—The New Cattle Market, Wellington and Chatham Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their goods to Contractors, the Trade, &c. of a first-rate quality and manufacture, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

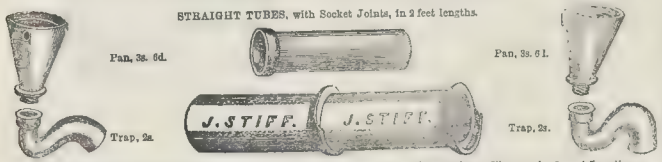
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, SHABOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. HITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Horton.

Drawings, with Prices, will be forwarded free, on application.

REDUCTION IN THE PRICE OF CLOSET-PANS

DOULTON AND WATTS,

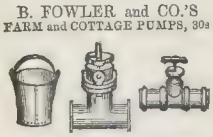
LAMBETH POTTERY, HIGH-STREET, LAMBETH,

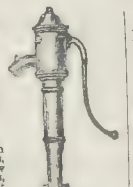
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pans.

B. FOWLER and CO.'S FARM and COTTAGE PUMPS, 30s





All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps, Engine Frames, Horse Gear, Crabs, Pulley Blocks, Wrought Pails, and Rubbish Baskets, Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJAMIN FOWLER and CO.

FIT UP HEATING-APPARATUS OF ALL KINDS,

For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,

And for every purpose where artificial heat is required.

They also erect DRYING-ROOMS for ASYLUMS, UNIONS, DOMESTIC and MANUFACTURING PURPOSES, upon the most improved principles, and upon the largest or smallest scale.

STEAM-COOKING and BATH APPARATUS FIXED;

Also PUMPS, for DEEP or SHALLOW WELLS,

To be worked by hand, horse, or steam power;

AND ALL KINDS OF

ENGINEERS', MILLWRIGHTS', or SMITHS' WORK, for Public or Private Establishments.

The most ample references from a long experience in the above branches can be given.

BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s. per foot super together with every particular of its cost and adaptation, can be obtained of Messrs. H. P. BURT and CO. 2, Charlotte-row, Mansion-House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is GROSS'S WHOLESALE WAREHOUSE, 29 GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

TO ARCHITECTS, BUILDERS, and OTHERS.—Messrs. LIALE and ALBRECHT, 4, Litchfield-street, Soho, London, for many years engaged at Messrs. Kepp's, Chandos-street, beg to inform the trade generally, they are open to furnish estimates for Copper Roofing, Covering Domes, Guttering, &c.; also, Ornamental Vanes made to any design, on the lowest terms. Coppersmiths in general.

N.B. Estimates forwarded in application.

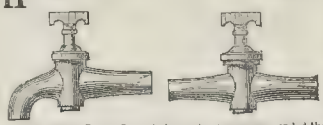
FOR HIRE, a SPACIOUS TENT, adapted for the Laying of Foundation Stones for Public Buildings, &c.

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.

Apply to H. PIGGOTT, 110, Fore-street, City.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



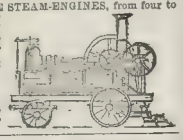
The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.



Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, Southwark, London.

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or eng ne power.

Iron Pails 38s per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground street, Blackfriars Bridge, Surrey Side.

MACINTOSH INDIA-RUBBER WAGGON COVERS, at reduced prices. Stocks of different sizes are always ready, and can be inspected at our Warehouse, MOSES, SON, and DAVIS, 14 and 15, Aldgate High-street, and at the Factory, India-Rubber Steam Works, Bow-common.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT.—Second Testimonial.—"March 18th, 185 . In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders and other persons, have lately examined it, and there is not the least apparent inferiority since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Straps cut to any pattern for bagatelle tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

THE LATE FIRE AT THE BOURNE VALLEY POTTERY,

NEAR POOLE, DORSET.

The Proprietors of the above Works respectfully inform Surveyors, Contractors, Builders, and Others that the buildings rendered necessary by the late disastrous fire are now nearly complete, and they are enabled to supply SALT-GLAZED STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, CLOSET-PANS, TRAPS, &c. in any quantities. These Pipes, &c. being made under immense pressure by new and patented machinery, and burnt, by intense heat, to an unusual degree of hardness, are very far superior to any hitherto made in Hants or Dorset, and will bear comparison with any in the kingdom; and being made of clay of the finest quality, the produce of the estate can be rendered at very moderate prices.

The goods, or any information respecting them, may be obtained on application to the Manager, Mr. J. T. BOUNSALL, Bournemouth, near Poole; or the Agent, in London, Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth.

N.B. A liberal discount to the Trade. A large Stock always on hand.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.

GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.

HALF-SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

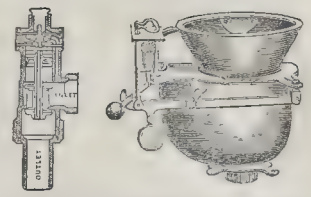
DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

LAMBERT'S PATENT WATER WASTE

PREVENTER, and SELF-REGULATING VALVE-COCK, especially adapted for Water-closets.

(a) FIG. 1. FIG. 2.



This Valve is so arranged, that whether it be held down or propped up, only a given quantity of water can be used at each action.

The pressure of the column of water—viz. its vertical height—being known, a quart, gallon, or any other quantity desired will be (and no more can be) discharged; and before a second quantity can be obtained, a second action must take place.

This Valve is capable of several modifications; one of its applications to the FIG. Closet, as shown in FIG. 2, is important, as it renders unnecessary any other appliance to regulate the discharge of water; it can be made to keep open as long or short a time as may be desired, after the handle which operated upon it is set free.

It is yet more valuable when applied to self-acting Closets, as it dispenses entirely with reservoirs or supply cisterns; once regulated, say for one gallon, that quantity will always be discharged at each action of the seat by its pressing upon the stud a, or by any other movement.

The Patentees have tested them under every pressure up to 300 feet with complete success.

THOS. LAMBERT and SON,
Founders and Manufacturers of High pressure Water-Valves, Plumbers' Brass Work, Pumps, &c.
SHORT-STREET, NEW-CUT, LONDON.

PATENT TERRA-COTTA.

Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

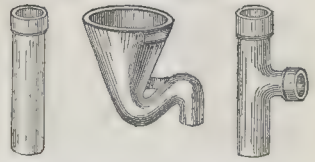
PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at			2½d. per foot.
4	"	"	3½d. "
6	"	"	5d. "
9	"	"	9d. "
12	"	"	1s. 6d. "
15	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The production against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

GREAT REDUCTION in the PRICE of

STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, 4, Falcon Wharf, 80, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1853.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

STONE PIPES.—GLAZED STONEWARE

PIPES of the most superior quality, at REDUCED PRICES. E. and W. STURGE invite particular attention to their stock of these goods, which continue to give great satisfaction both as to manufacture and price, a list of which will be sent upon application. An increased discount will be allowed to large contractors. Every description of junctions, bends, &c. in stock. Yorkshire paving, stairs, sills, steps, and coping, &c. E. and W. STURGE, Bridge-wharf, City-road.

CLOSET BASINS, WHITE and BLUE

URINALS, &c.

MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

TO ARCHITECTS, &c.—The IMPROVED

SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most effectual yet invented, is made by T. SMITH, of 14, Queen-street, Oxford-street, near Argyll-street, where a working model can be seen, or a sketch will be sent on application.

N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

SALES BY AUCTION.

TO BUILDERS, IRONMONGERS, STOVE-GRATE MAKERS, and OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on THURSDAY, [illegible] at ELEVEN [illegible] each day, at the WAREHOUSES, [illegible] in lots, without reserve, the extensive STOCK of the Sheffield Company's Stove Grate [illegible] the newest patterns and designs, [illegible] register stoves, with ormolu mounts, 350 black register and Romford stoves, [illegible] wind-up ranges [illegible] cooking stoves [illegible] hall and shop stoves, [illegible] steel fenders with ormolu mounts, [illegible] and black fenders, 250 sets fire-irons, bronzed umbrella-stands, hat-stands, garden chairs and [illegible] an assortment of elegant Berlin bronzes, [illegible] groups of figures, inkstands, [illegible] rollers, 50 round and oblong pig troughs, 500 yards rain-water pipe and gutter [illegible] tons stove and range [illegible] dampers, and frames, an assortment of builders' ironmongery, in locks, nails, hinges, screws, bolts, pulleys, &c.; furnishing ironmongery, [illegible] carriage lamps [illegible] reflecting telescope, 50 gross patent pen guides, fittings and tools of smith's shop, standard scales and weights, [illegible] fittings, and other effects. To be viewed on Monday and Tuesday previous to the sale, when catalogues may be had on the Premises, and of Messrs. Fuller and Horsey, Billiter-street, City.

VICTORIA-STREET, WESTMINSTER. SECOND PORTION.—Sale of new Building Materials, Plant, Stock, and Utensils of a Builder.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on MONDAY the [illegible] th of OCTOBER, and following days, at ELEVEN o'clock each day, on the PREMISES, Victoria-street, Westminster, in lots without reserve, the SECOND PORTION of the STOCK of [illegible] NEW BUILDING MATERIALS, partly prepared, yellow and white deal flooring boards, [illegible] feet cube [illegible] stone, 5,000 feet 2½ inch tooled York paving, 5,000 feet self faced ditto, [illegible] feet York landings, [illegible] feet cube York stone, 1,000 feet cube granite [illegible] stock and fire bricks [illegible] yards cast iron [illegible] pipe, 15 slate cisterns, [illegible] open baths, [illegible] gas stoves, 30 coils iron pipe, 8 galvanized tanks, 10,000 feet iron tube, an assortment of T's, elbows, bends, sockets, &c. plug basins, 50 gallons [illegible] red and white lead, and colours; [illegible] pieces paper-hangings, &c. The plant and tools include 7 hoisting machines and chains, mortar mill, sweeping machine, 5 stone trucks, 7 asphalte pots, crab cranes, blocks and falls, 2,000 scaffold boards, 1,000 scaffold poles, 10 to 40 feet; 1,000 feet run 3-inch plank, [illegible] dozen scaffold cords, 6 ladders, [illegible] barrows, 6 brass-finishers' lathes, smiths' forges, vices, anvils, benches, air furnace, moulding trough, and tongs, 2 painters' machines, 24 pair steps, and trestles; an assortment of boxes, stocks and dies, steel tools, and numerous other effects.—To be viewed two days previous to the sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street.

PRELIMINARY ANNOUNCEMENT.

MESSRS. FULLER and HORSEY in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees of Mr. C. J. Mare, to SELL by AUCTION, in the ENSUING MONTH, the whole of the LOOSE STORES and TOOLS of the extensive ship-building yards and iron-works at Blackwall and West Ham, including upwards of 1,000 tons of wrought iron, in bars, rods, plates, scrap, blooms, and [illegible] tons rivets, [illegible] tons screw bolts and nuts, [illegible] tons cast and shear steel, [illegible] tons castings, [illegible] tons engineers' steel stools, an expensive self acting boring bar, ratchet braces, stocks, taps and dies, &c.; 100 wrought iron anvils, 30 tons smiths' tools, in top and bottom swages, hammers, mandrils, monkeys, &c.; 200 tons iron flasks, crane shank and hand ladles; flask weights, several weighing machines, brassfounders' and finishers' tools, boiler-makers' tools, 190 tons shaping-plates and blocks, patent rivetting-machine, contractors' portable steam engine [illegible] blocks and falls, many tons of chain-slings, mooring-chains, chain-cables, &c.; 50 brass barrel lift-pumps, ships' water-closets, ships' pumps, five tons brass fittings, a large assortment of general ironmongery, [illegible] joiners' benches, [illegible] plumbers' tools, five tons bolt and sheathing copper, 50 oak trees, several hundred [illegible] prepared cabin fittings, several thousands of stage planks and deals, shipwrights' tools, [illegible] barges and skiffs, three wrought-iron barges, counting-house fittings, and a large assortment of miscellaneous effects. More detailed advertisements will shortly appear. Catalogues are being prepared, and may shortly be had, price one shilling each, of Messrs. Pullen and Son, 80, Fore-street; or of Messrs. Fuller and Horsey, Billiter-street, City.

PRELIMINARY ANNOUNCEMENT.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees of Mr. C. J. Mare, to SELL by AUCTION, in the ensuing month, at the WORKS, Blackwall, a Pair of highly-finished, oscillating Marine ENGINES, equal to 350 horses' power; eight new tubular marine boilers; the castings for a second pair of oscillating marine engines; two second-hand marine boilers, with brass tubes; two new wrought-iron [illegible] and other [illegible] property, more detailed advertisements of which will shortly appear. Apply to Messrs. Pullen and Son, 80, Fore-street; or to Messrs. Fuller and Horsey, Billiter-street, City.

CLOTHWORKERS' HALL.

Remaining Furniture of the Court Rooms and Hall, Massive Brass Chandeliers, Girandoles, Elegant Curtains, Carpets, &c., and all the valuable Fixtures.

PULLEN and SON will SELL by AUCTION on the PREMISES in Mincing Lane, on TUESDAY, SEPTEMBER 30, and following day, at TWELVE, by order of the Worshipful Company of Clothworkers, twelve handsome, nearly new, SOLID BRASS CHANDELIERS (from twelve to twenty-four lights each), adapted for a Hall or Chapel, large Turkey and Brussels carpets, large pier glasses, eleven elegant richly gilt girandoles, eight sets of rich crimson cloth curtains with [illegible] dining and other tables and sideboards, [illegible] seats and forms, handsome stoves, large copper boilers, cooking apparatus, and expensive fittings of the kitchens, lead tanks and slate cisterns, iron doors and fittings up of strong room, gas fittings, lamps, and miscellaneous effects. May be viewed. Catalogues had of Pullen and Son, 80, Fore-street, Cripplegate.

The valuable Materials and Fittings-up of Clothworkers' Hall, and several Houses in Mincing lane.

PULLEN and SON are favoured with instructions from the Worshipful Company of Clothworkers to SELL by AUCTION, on the PREMISES, on TUESDAY, SEPTEMBER [illegible] th, and following days, at TWELVE, in lots, the [illegible] BUILDING MATERIALS, FIXTURES, and FITTINGS-UP of Clothworkers' Hall and several houses adjoining, in Mincing lane; comprising about 500,000 excellent stock bricks, 50,000 plain tiles, thirty squares of nearly new slates, 2,500 feet of sheet copper, eight tons of lead, stout oak and fir timber, in roofs and floors; modern sashes (some with plate glass), doors, elegant statuary and other chimney-pieces, 300 square of flooring and slating [illegible] carved [illegible] in hall, with pilasters and capitals, [illegible] feet of oak and other panelling, the [illegible] portico, with columns and carved capitals, 7,000 feet run of stone coping [illegible] &c. May be viewed on Saturday and Monday previous. Catalogues had of [illegible] Company, [illegible] Architect, 16, Russell-square; and of Pullen and Son, 80, Fore-street, Cripplegate.

BUILDING MATERIALS.—Clearance Sale. Rochester-mews, Kentish-town, near the Castle Inn.—Absolute and Unreserved Sale.

MR. PETER BROAD will SELL by AUCTION, on the VACANT GROUND, Rochester-mews, on MONDAY, SEPTEMBER 29, at ONE, the whole of the valuable MATERIALS, comprising timber of every description, quartering, doors, sashes, frames, boards, planks, tiles, slates, wrought and cast iron, and the usual effects. On view. Catalogues on the Premises; or of the Auctioneer, 28, Poultry.

SALES BY AUCTION.

COLCHESTER.—Freehold Building Land.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the CUPS HOTEL, Colchester, on THURSDAY, the [illegible] day of OCTOBER, 1856, at TWO for THREE o'clock, in sixty lots, several valuable PLOTS of FREEHOLD BUILDING LAND, situate close to the [illegible] possessing considerable frontages to [illegible] from Colchester to Sudbury and Ipswich, [illegible] will be sold without restrictions as to building; also a few lots close to St. James's Church, on the East-hill fronting Castle-road and Garden-terrace. The above property is freehold, land-tax redeemed, chiefly tithe free, most eligibly situate, and singularly adapted for the erection of villa or other residences, and offers votes for the county of Essex.—Particulars, with lithographic plans, may be obtained of Robert Russell, Esq. Solicitor, 59, Coleman-street, London; at the Cups Hotel, Colchester; and of Messrs. Beadel and Sons, 25, Gresham street, London.

TO LIGHTERMEN, WHARFINGERS, COAL MERCHANTS, and OTHERS.—Seven capital Decked and Open Barges, two Skiffs, Tarpaulins, &c. TO BE SOLD by AUCTION, by

MR. SITGRAVE, on TUESDAY, SEPTEMBER [illegible], at ONE for TWO o'clock, at Mr. CARNE'S WAYS, 85, Bankside, Southwark, opposite the Phœnix Gas Works, by order of the Proprietor, two capital DECKED BARGES, sixty tons each; one OPEN BARGE, fifty-six tons; and two others, forty five tons each; one thirty and one twenty-five ton open barges; two skiffs, twenty tarpaulins, pumps, anchors, chains, and other useful barge gear. May be viewed two days prior to the sale, and catalogues had at Jack's Coffee house, Mark-lane; Coal exchange Coffee house, St. Mary-at-hill; Place of Sale; and of the Auctioneer, at his Offices, 28, Leadenhall-street, London.

Near OUNDLE, NORTHAMPTONSHIRE, within two miles of a Railway Station and Water Carriage.—400 superior Oak Timber Trees, some of very large dimensions, lying on good roads outside of Oundle and Park Woods, on the Estate of J. Watts Russell, Esq. TO BE SOLD by AUCTION, by

MESSRS. DEACON and SON, on TUESDAY, the [illegible] day of SEPTEMBER, 1856, in convenient lots. Six months' credit will be given to all purchasers at or [illegible] on payment of [illegible] per cent. deposit, and giving approved joint security at the close of the sale. The company are requested to meet the auctioneers at the [illegible] (within a mile and a half of the Oundle Station, on the London and North Western Railway), at ELEVEN o'clock, and proceed to sale. To view the timber apply to Mr. John Meadows, Benefield, near Oundle; and for further particulars, to Messrs. Cobb, Surveyors and Land Agents, 18, Lincoln's-inn-fields; or to the Auctioneers, Oundle and Benefield.

TO CABINETMAKERS, TIMBER MERCHANTS, CHAIRMAKERS, BUILDERS, and Others. For SALE by AUCTION, on the PREMISES, New Inn, Broadway, Curtain-road, Shoreditch, by order of the proprietor (who is relinquishing the premises, and removing entirely to 131, Curtain-road), the third portion of the STOCK-IN-TRADE of Mr. J. F. Mitchell, Mahogany and Timber Merchant, which will be sold without reserve, on TUESDAY, 7th OCTOBER, 1856, at TEN for ELEVEN o'clock precisely. The stock consists of large quantities of excellent and well-seasoned Spanish, Cuba, and Honduras mahogany and cedar, [illegible] planks and boards, birch, rosewood, and walnut in planks and boards, fir, pine deal and plank, whole and cut, &c.—To be viewed two days previous to, and on the morning of sale. Catalogues may be had on the Premises, and of T[illegible] and Son, Mahogany Brokers and Auctioneers, [illegible] Old Broad street, City.

N.B. The Premises TO BE LET [illegible] trade.

FREEHOLD PLOTS of GROUND at WALTHAMSTOW.—To be SOLD by AUCTION, in Eleven Lots, at the NAG'S HEAD INN, Walthamstow, by

MR. PLATER, on THURSDAY, OCTOBER 2nd, 1856, at TWELVE for ONE o'clock. The above Estate is most [illegible] the high road [illegible] Parsonage [illegible] Green leaf lane, Walthamstow, Essex, one portion having a frontage of 90 feet by 100 feet in depth, [illegible] the other portion having a frontage of about 435 feet, by about 85 feet in depth, in a road intended to be called [illegible]. The [illegible] commands [illegible] and varied prospects. [illegible] plans and particulars, apply to [illegible] Angell, Esq. Solicitor, 41, Watling-street, City; Mr. Underwood, Nag's Head, Walthamstow, near the Church; Mr. [illegible] Lion and Key, Layton; and of the Auctioneer, 28, Bow-road, Bow Church.

LYTCHETT POTTERY.—To BUILDERS, LANDOWNERS, and OTHERS. TO BE SOLD by AUCTION, by

MESSRS. WATERMAN and HABGOOD, on THURSDAY, OCTOBER the 2nd, 1856, the LEASE, PLANT, and STOCK of the POTTERY WORKS at Lytchett, now in the occupation of Mr. H. Fisher, about one and a half miles from the Poole Junction, on the turnpike road from Poole to Blandford. The stock consists of stoneware glazed pipes, from [illegible] to 12 inches, junctions, bends, and [illegible] all sorts and sizes; fire and white brick, roofing and flooring tiles, together with a variety of other pottery goods, which will be SOLD on the PREMISES, and may be viewed [illegible] the Foreman. Sale to commence at ELEVEN o'clock in the forenoon. The Lease, Plant, [illegible] will be sold in the same day at the London Hotel, Poole [illegible] sale to commence at SIX o'clock in the afternoon.—Further particulars may be obtained, and samples of the stock may be seen, at the Auctioneers', Poole and Wareham, where catalogues may be had.

HARROW, MIDDLESEX.—Valuable Freehold Building Land, about midway between the church and the station.

MESSRS. FAREBROTHER, CLARK, and LYE are instructed to SELL, at GARRAWAY'S, on WEDNESDAY, OCTOBER 8, a valuable FREEHOLD PROPERTY, close to Harrow [illegible] high-road, beautifully situate, commanding extensive views over the surrounding picturesque country, divided into three lots, as under, viz.:—Lot 1. A desirable plot of ground, as staked out, and abutting on the Roxburgh-road, and having a frontage thereto of 300 feet, and extending in the rear to a depth of about 500 feet, part having a frontage of 207 feet to the Byron-road. Lot 2. A corner plot, situate at the junction of the Roxburgh and Byron roads, with two frontages, of 118 feet to the former, and 183 feet to the latter. Lot 3. Another valuable plot, having a frontage of 282 feet to the Byron-road. The above property forms a portion of a large estate [illegible] The roads are laid out, tasteful villas have been erected on the adjoining [illegible] North-Western Railway Company to occupants of houses in the [illegible] this a most desirable property for the erection of villa residences. May be viewed; and particulars, with plans, may be had at the King's Head Inn, Harrow; the Railway Hotel, at the station; [illegible] hill; at Garraway's; and at the Offices of Messrs. Farebrother, Clark, and Lye, Lancaster-place, Strand.

TO BUILDERS, STONE-MASONS, AND OTHERS.

MR. A. BOOTH will SELL by AUCTION, on WEDNESDAY, the [illegible] of OCTOBER, [illegible] at TWELVE for ONE [illegible] on the PREMISES, No. [illegible] place, Harrow-road, the STOCK-IN-TRADE of Barrett's patent preserving STONE-WORKS; two hundred chimney-pieces, in imitation, black, Sienna, and porphyry, marble [illegible] hundred and fifty plaster ballustrades, trusses, &c.; Bath and [illegible] traveller, and cart and trucks, steel tools, twenty saws and frames, sheet iron, truck [illegible] office fittings, &c.—May be viewed on day prior and morning of Sale. Catalogues forwarded by post, or may be obtained on the Premises, and of Mr. Abraham Booth, Auctioneer and Estate Agent, No. 1, Carlton-Hill-villas, Camden-road (opposite the Brecknock arms).

SALES BY AUCTION.

SYDENHAM.—TO CONTRACTORS, BUILDERS, AND OTHERS.

MR. MARSH has received instructions from the Executors of the late Thomas Hunt, Esq. to SELL by AUCTION, without the slightest reserve, on the PREMISES, Wells Road, Sydenham, on TUESDAY, OCTOBER 14th, at THREE for FOUR o'clock, in Stocks Lots of 1,000 each, 600,000 of capital STOCK, SECOND DITTO, PLACE, and other BRICKS. The Premises are close to three Railway Stations, and [illegible] May be viewed the day prior and morning of Sale and Catalogues obtained on the Premises and at Mr. Marsh's Offices, 2, Charlotte-row, Mansion-house.

TO COAL AND CORN MERCHANTS, BARGE BUILDERS, LIGHTERMEN, AND OTHERS.

MESSRS. EVERSFIELD and HORNE will SELL by AUCTION, at CARNE'S WAYS, 85, Bankside, and [illegible] Wharf, on TUESDAY, SEPTEMBER [illegible] at TWELVE for ONE precisely, TWENTY OPEN and PARTLY [illegible] BARGES, several of which are suitable for the Corn Trade, with gratings, tarpaulings, &c.; one nearly new. Also two decked Sailing Barges, of 70 tons; a nearly new Sailing Barge, of [illegible] tons, [illegible] waggons, carts, weighing machines and [illegible] in the coal trade relinquishing their cartage; a large town waggon, Stourbridge, and [illegible] May be viewed one day previous, and catalogues [illegible] on the Premises, and of the Auctioneers, 40, Parliament-street, and Coal Exchange.

TO BUILDERS.—Superior Chimney-pieces of Statuary Marble, some richly sculptured, one of the [illegible] style, four Italian Chimney-pieces, and a variety of Dove and Vein Marbles.

MESSRS. ROBINS will SELL by AUCTION, at their ROOMS, in Covent-garden, on TUESDAY, SEPTEMBER 3[illegible], at TWELVE, STATUARY MARBLE CHIMNEY-PIECES, some richly sculptured, suitable for first-class drawing-rooms, one of the Louis Quatorze style, four Italian sculptured chimney-pieces, others of a less expensive character, with [illegible] black and sicilian marbles, for [illegible] libraries, [illegible] Sienna marble, and a great variety of vein marble of smaller size.—Now on view at the Auction rooms, in Covent-garden.

TO CARPENTERS and BUILDERS.—A BUSINESS, as above, TO BE DISPOSED OF a few miles from the City, East end. For stock, implements, &c. together with some leasehold property, price 400 guineas; part of which [illegible] principals only will be treated with, and [illegible] it is requested that [illegible] in full, to G. A. Office of "The Builder."

TO WORKING PLUMBERS, PAINTERS, and GLAZIERS.—TO BE SOLD, a small BUSINESS, established about twenty years, in the vicinity of [illegible] with all the requisite tools, &c. for 120*l.* Business done from June, [illegible] to June, 185[illegible], about 3[illegible] Rent and taxes [illegible] per annum, of which 15*l.* 12*s.* is let off. Apply to G. WITT, 7, Earl's-court, Cranbourn-street, Leicester-square.

TO ENGINEERS, BOILER-MAKERS, and OTHERS.—TO BE DISPOSED OF, the STOCK and PLANT of an ENGINEER and IRONFOUNDER, situate in a large seaport town in the south of England. The premises are spacious and well arranged, with great facilities for land and water carriage. The plant now at work is capable of employing upwards of fifty hands. As the tools are all in good order, and the business is well established, this is a favourable opportunity for an enterprising person with a moderate capital.—Letters to be addressed to D. TAYLOR, Esq. Kennington-park, Surrey.

A FIXED ALLOWANCE OF 6*l.* PER WEEK
In case of Injury by
ACCIDENT of any DESCRIPTION,
or the Sum of
1,000*l.* IN CASE OF DEATH,
may be secured by an annual payment of 3*l.* for a policy in the
RAILWAY PASSENGERS' ASSURANCE COMPANY.
A weekly allowance of fifteen shillings for injury, or 100*l.* in case of death secured by payment of ten shillings.
NO CHARGE FOR STAMP DUTY.
Forms of proposal, prospectuses, &c. may be had of the agents, of the clerks at all the principal railway stations, and at the head office, London, where also
RAILWAY ACCIDENTS ALONE
may be insured against by the journey or by the year as heretofore.
Railway Passengers' Insurance Company, empowered by Special Act of Parliament.
WILLIAM J. VIAN, Secretary.
Offices, 3, Old Broad street, London.

NORWICH UNION FIRE INSURANCE SOCIETY.—The business of the Company exceeds [illegible] and, owing to the [illegible] with which its engagements have been performed, is [illegible] increasing. The Duty paid to Government for the year 1853 was 74,766*l.*; and the Amount [illegible]
Returns of Three fifths of the Profits are periodically made to Parties insuring, who have thus from time to time received sums [illegible]
The Rates of Premium are [illegible] by [illegible] other [illegible] Insurers.
For prospectuses, apply at the Society's Offices, Surrey-street, Norwich; and 6, Crescent, New Bridge-street, Blackfriars, London.

PHŒNIX FIRE ASSURANCE COMPANY, LOMBARD-STREET & CHARING-CROSS, LONDON, established in 1782.

[illegible]

Decimus Burton, esq.	K[illegible] Hodgson, esq.
Octavius Edward Coope, esq.	J[illegible]
William Cotton, esq.	William J[illegible], esq.
John Davis, esq.	John Dorrien Magens, esq.
[illegible] Foster, esq.	J. Masterman, esq. M.P.
George Arthur Fuller, esq.	J[illegible]
[illegible] Hart, esq.	[illegible] esq.
James Alexander Gordon, esq.	B[illegible]
Henry Grace, esq.	M[illegible] W[illegible], esq.
Thomas Hodgson, esq.	[illegible] W[illegible]

AUDITORS.
John Hodgson, esq. [illegible]
Henry Hem[illegible]
[illegible]
Wilmer Harris, esq. [illegible] George William L[illegible]
ARCHITECT AND [illegible]
Solicitors.—Messrs. Dawes and Sons, Angel-court.
Insurances against loss by fire are effected by the PHŒNIX COMPANY upon every description of property, in every part of the World, [illegible]
Persons insuring with the Phœnix Company are not liable to make good the losses of others, as is the case in some offices.
Insurances with this Company expiring at Michaelmas must be renewed within fifteen days thereafter, or they will become void.
Receipts are now ready at the principal Offices, Lombard-street, and Charing-cross, and with the respective Agents throughout the United Kingdom.

London: Printed by Charles Wyman, of 13, Hunter-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said Charles Wyman, at the Office of "The Builder," 1, York-street, in the Parish of St. Paul, Covent Garden, all in the County of Middlesex.—Saturday, September 27, 1856.

The Builder.

Architect, Engineer, Operative & Artist.

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BUILDERS' BENEVOLENT INSTITUTION.—The NINTH ANNIVERSARY DINNER in aid of the funds of the above named charity, will be held at the LONDON TAVERN, on WEDNESDAY, 29th OCTOBER next, Mr Alderman WILLIAM LAWRENCE, President, in the Chair.

STEWARDS.

Mr. Abbott, James	Mr. Head, George	Mr. Piper, Thos. jun.
— Annis, J. W.	— Head, G jun.	— Plucknett, G
— Ardley, A. O.	— Head, Richard	— Richardson, C.
— Bird, Stephen	— Hickmann, R. J.	— Richardson, R.
— Bird, Edward	— Higgs, Joshua	— Rider, Thomas
— Bird, John	— Hilton, C. J.	— Rose, Alderman and Sheriff
— Bird, George (Treasurer)	— Honeywill, S.	— Sapwell, John
— Bird Josepeh	— Howard, Thos.	— Scantlebury, W.
— Blashfield, John	— Hutchons, Wm.	— Simkin, W. S.
— Brass William	— Jackson, Thos.	— Simpson, T. B
— Burton, W. S.	— Jackson, Wm.	— Skeat, Wyllys
— Cheesewright, J.	— Jackson, W. H.	— Sloper, Joseph
— Child, Joseph	— James, Jabez	— Smith, Thomas
Messrs. Coles, Shadbolt, and Co.	— Jay, John	— Smith, George
Messrs. Collins and Blanbury, Birmingham	— Jennings, G.	— Smith, Alfred
Mr. Cozens, Thomas	— Lawrence, Jas. C.	— Smith, Edmund
— Dodd, Henry	— Lee, Wm. M. P.	— Soward, J. jun.
— Doulton, Henry	— Lucas, Chas. T.	— Stanham, R.
— Dunnage, Wm.	— Mansfield, G.	— Stephens, S. J.
— Ellis, William	— Mashman, Wm.	— Stiff, James
— Forest, Robert	— Meakin, W. F.	— Stirling, Thos.
— Formby, Charles	Messrs. Morris and Phillips	— Stirling, Wm.
— Fox, Samuel	Mr. Myers, George	— Taylor, James
— Freeman, J. R.	— Newson, J. sen.	— Thorn, John
— Gardiner, W. J.	— Newson, J. jun.	— Todd, Wm. jun.
— Goulter, James	— Nicholson, Benj	— Todd, E. H.
— Grayson, George	Messrs Orsi and Armani	— Waggett, James
— Greaves Richard	Mr Pearson, Thos.	— Wales, George
— Grissell, T. F.S.A.	— Penke, Joseph	— Watts, R. jun.
— Gritten, W. R.	— Peters, William	— Webb, William
— Harvey, John	— Peters, Joseph	— Weston, James
	Sir Samuel Morton Peto, Bart.	— Williams, J.
		— Wilson, James

Gentlemen desirous of promoting the interests of the Institution, by becoming stewards, will be pleased to forward their names to the Treasurer, Mr. GEORGE BIRD, 38, Edgware-road; or to the Secretary, at the Offices, 19, Southampton-street, Bloomsbury, where Tickets may be obtained, 21s. each, of the Stewards, and at the London Tavern.

A. G. HARRIS, Secretary.

September 25, 1856.

TO ARCHITECTS, ENGINEERS, SURVEYORS, AND BUILDERS.

PROFESSOR DONALDSON'S COURSES of LECTURES on ARCHITECTURE and CONSTRUCTION, at University College, for the Session 1856-57, will commence on Tuesday, the 21st October. The circular and terms can be had at the College Office.

COMPETITIONS.

NEW GOVERNMENT OFFICES.—The Commissioners of her Majesty's Works and Public Buildings give Notice, that they are prepared to receive DESIGNS from Architects of all Countries for a SCHEME for the CONSTRUCTION of the principal GOVERNMENT OFFICES, on a Site lying between Whitehall and the New Palace at Westminster; and also Designs for Two Buildings which her Majesty's Government have determined to erect forthwith, as parts of such general scheme, one for the Department of the Secretary of State for Foreign Affairs, the other for the Secretary of State for War. Plans of the ground, together with a statement of the premises and other particulars, will be forwarded to architects on application by letter addressed to me at this Office.

ALFRED AUSTIN, Secretary.

Office of Works, Whitehall, Sept. 20, 1856.

TO ARCHITECTS and SURVEYORS.—WHITE-HORSE ESTATE, NORWOOD.—Competitors for the Premium of 150*l.* for setting out this estate for building purposes, can be furnished with a plan from a recent survey on moderate terms.—Apply to Mr. SMITH, Surveyor, Edenbridge, Kent.

COMPETITIONS.

FOLESHILL, WARWICKSHIRE.—NEW WORKHOUSE for the FOLESHILL UNION.—INSTRUCTIONS to ARCHITECTS and CONDITIONS. The proposed New Workhouse and Buildings are to be erected on a site near Foleshill Hall. Accommodation is required for 150 Paupers, with Wards, Yards, and other Conveniences, suitable for their complete classification in proportion as follows, namely:—

Men infirm from age or other cause	36
Able-bodied Men and Youths above 15	14
Women infirm from age or other cause	30
Able-bodied Women and Girls above 15	20
Boys under 15 years old	15
Girls under 15 years old	15
Lying-in Women	6
Sick Males	6
Sick Females	8
	150

Detached Wards for Vagrants of both sexes, 6 of each.
Receiving Wards.
Refractory Cells in three Compartments.
A Dead-house.
A Board-room, suitable for 25 Guardians.
Clerk and Registrar's Office, with Closets for Books and Papers. The Safe in the present Register Office to be removed to a site adjoining the Registrar Office.

Accommodation for a Master, Matron, Schoolmaster, and Schoolmistress, situated with respect to their duties.

A Dining hall, suitable for the whole of the Inmates to dine at one time.

A Workroom for able-bodied Men.
A Schoolroom.
The plans to be so framed that the Children may be kept totally apart from the Adult Inmates.

The Sleeping Accommodation to be equal to 300 cubic feet of space for each inmate in health, and 500 cubic feet for each sick person.

A Well in the able-bodied Men's yard, with a Pump to be fixed thereon, to be worked by manual labour, of sufficient power to supply the establishment with water.

Washhouse and Laundry.
Bath-house, with Hot and Cold Water Taps.
Cisterns for Cold Water, with requisite Fittings.
Requisite Fittings in the Lavatories and Water-closets, with sunk Pool for filth from Water-closets.
Tanks under ground, to store the rain-water from the roofs, with Flushings to the Drains.
Pumps in the Washhouse.
The house to be provided with open Fireplaces, and a complete system of Ventilation.
Stabling for 12 Horses, and an Open Shed, 30 feet by 20 feet.
Good Kiln Bricks to be used in the buildings. The floor-line to be two feet above the surface of the land.

Further extension of the Dormitories must be provided for, with due regard to uniformity; and the day-rooms must be sufficiently extensive to accommodate an additional number of inmates, not exceeding 20.

The Architect must state the cost of completing the works according to his plans. The maximum sum proposed to be expended on the building is 3,500*l.*

Architects are required to furnish the following plans, with general specifications and estimates. The plans, except the block-plan, to be drawn to a scale of eight feet to an inch.

1. A block-plan, showing the situation of the building on the land, and the proposed drainage.
2. A plan of each floor.
3. One transverse and one longitudinal section of the principal buildings.
4. Elevations.
5. A plan of the roof.

Each set of plans and specifications must be sent in with a motto affixed, and a sealed letter, containing the name and address of the Architect, bearing the same motto. The letters will not be opened until the Board of Guardians shall have finally decided upon the plans and specifications accepted. The plans to be sent addressed to the Guardians of the Foleshill Union, Foleshill; and the letters addressed to the Clerk.

The Guardians will not be responsible for any injury which the plans may sustain, and the plans will be returned to the unsuccessful candidates, with the letters, unopened.

All plans are to be delivered on or before the 24th day of NOVEMBER next, and no plans will be received after that day under any pretence.

The Architect producing a plan accepted by the Guardians, and approved by the Poor Law Board, will be employed at a sum not exceeding 5*l.* per cent. on the outlay, and his plans and specifications will become the absolute property of the Guardians.

No Architect shall be entitled to make a charge, or to receive any remuneration for his plans or specifications which shall not be accepted.

The Guardians do not bind themselves to accept any of the plans which may be submitted.

By order of the Board of Guardians,
THOMAS DEWES, Clerk.

Coventry, 19th September, 1856.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The Trustees for Sale of a Freehold Estate of 500 acres, including the Beulah Spa, and near the Crystal Palace, require PLANS for LAYING OUT the same for building purposes, showing the necessary roads, sewerage, &c. the whole to be clearly defined and apportioned in suitable lots, and laid down to a scale of two chains to one inch, from actual admeasurement. The following premiums are offered:—For the plan adjudged the best by the trustees, 150 guineas; for the second, 100 guineas; for the third 50 guineas. The plans to which the above premiums shall be awarded, will be retained by, and be the property of, the trustees.—Further particulars may be obtained of Mr. PEACOCK, Builder, near the Jolly Sailor Station, Norwood, close to the property. The Trustees will meet on the 8th day of DECEMBER next, to examine the plans, which are to be previously forwarded, enclosed and sealed, to the Secretary's office, Auction Mart, London, addressed to the Trustees of the White Horse, Norwood Estate.

TO SURVEYORS. — NOTICE. — NORWOOD, BEULAH SPA ESTATE, near the Crystal Palace. It having been intimated to the Trustees that the time mentioned for the Delivery of the Plans is insufficient, they have determined to EXTEND the same to MONDAY, DECEMBER 8, at the same place.

COMPETITIONS.

WELLINGTON TESTIMONIAL.—To SCULPTORS and ARCHITECTS.—The Committee are desirous of receiving DESIGNS for a COLUMN and STATUE to be erected in honour of the late Duke of Wellington, at Liverpool.

The amount at present at the disposal of the Committee is about 6,000*l.* and if their intentions can be properly carried out for that sum, they are desirous that it should be, but any Artist will be at liberty to send in a separate design, either for the Column alone, or for a Column and Statue.

The competitors must accompany their designs by estimates of the cost, either for the Column and Statue combined, or separately, and stating the description of material which they propose to employ.

A premium of 50*l.* will be given for the design which, in the opinion of the Committee, is the best for the purpose intended.

Each design to be marked with a motto or device, and the name of the Author is not to appear, but to be put in a separate sealed letter, bearing on the outside a corresponding motto or device.

The design for which the premium may be awarded to become the property of the Committee.

All communications to be addressed to the Chairman of the Committee, at the Town-hall, Liverpool; and the designs must be delivered there, free of expense, on or before the 15th day of NOVEMBER next.

Town-hall, Liverpool, September 20, 1856.

ARCHITECTURAL EXHIBITION.—All drawings, models, photographs, &c. must be delivered at the Galleries, Suffolk-street, Pall-mall East, on the 1st or 2nd of DECEMBER next. Printed rules will be forwarded on application to the Honorary Secretaries.

DEPARTMENT for MATERIALS.—Patents, &c. connected with Building, &c.—Exhibitors should apply immediately to Mr. JAS. EDMESTON, (Honorary Secretary), as most of the space is already engaged.

Exhibitors will be allowed to set up and fix their contributions at any time between the 1st of NOVEMBER and 1st of DECEMBER.

The following gentlemen are added to the number of local honorary secretaries since the list last published:—

BATH	J. ELKINGTON GILL, Esq.
POCTHAMPTON	A. BEDBORO'UGH, Esq.
WORCESTER	J. HOPKINS, Esq.

There are still some important places for which the committee would be glad to appoint local secretaries.

Lectures will be delivered on the Tuesday Evenings, by Thomas Allom, Esq.; Professor Donaldson; the Rev Mr. Boutell; R. W. Billings, Esq.; Owen Jones, Esq.; George Scharf, Jun. Esq. unless circumstances in the meantime should interfere; and other gentlemen.

Subscribers have the privilege of introducing a friend to, or of transferring their tickets for, the lectures.

JAMES FERGUSSON, Esq. F.R.A.S. } Honorary
90, Lowndes-place, Regent-street, } Secretaries.
JAMES EDMESTON, Jun. }
3, Crown-court, Old Broad-street.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—The War Department having rejected the Tenders which have been received for the erection of an Officers' Barrack at Dover Castle, the Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before THURSDAY, the 9th of OCTOBER, 1856, from competent persons desirous of CONTRACTING for BUILDING a RANGE of OFFICERS' BARRACKS, with Stables and Coach-houses, in the Mediæval style of architecture, at Dover Castle. The plans and specifications of the works may be seen by persons fully competent to undertake the works (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Dover, between the hours of TEN and FOUR o'clock, from WEDNESDAY, the 24th of SEPTEMBER, to WEDNESDAY, the 8th of OCTOBER, 1856 (Sundays excepted). The party whose Tender may be accepted for the works will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 3,000*l.* for the due performance of the contract. Tenders for the above works to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed "Tender for Building an Officers' Barrack at Dover Castle."

N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, Sept. 20, 1856.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The Principal Officers of Her Majesty's War Department hereby give Notice, that they will receive Proposals for the following CONTRACT, viz.:—For the several WORKS proposed in the erection of QUARTERS for Married Soldiers, Laundry, drill-sheds, privy, ash-pit, &c.; also for drains, gas and water piping, &c.; and converting soldiers' rooms into staff sergeants' quarters, at Richmond Barracks, Dublin. Persons desirous of Tendering for the same will receive every information on application at the District Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and may obtain specifications with the terms of Contract. The drill-sheds to be completed, and the joisting of the upper floor of the quarters for married soldiers laid by the 15th MARCH, 1857, and the remainder of the whole completed on or before the 31st OCTOBER, 1857. The letters of Tender, with specifications, to be sealed, and transmitted under cover to "The Director-General of Contracts, War Department, Pall-mall, London," so as to be received on or before the 18th day of OCTOBER, 1856, and to be marked on the outside, "Tender for Work at Richmond Barracks, Dublin."

Commanding Royal Engineer's Office, Dublin,
24th September, 1856.

TO ROAD-MAKERS and CONTRACTORS. The Committee of the City of London Freehold Land and Building Society are desirous of receiving TENDERS for MAKING a ROAD through their Estates at Tube-hill, Lower Norwood. The specification may be seen at the offices of the Society, 79, Farringdon-street, where Tenders must be delivered before THREE o'clock on TUESDAY, the 14th inst.

JAMES HIGHAM, Secretary.

CONTRACTS.

BUILDERS desirous of TENDERING for the ERECTION of a PAIR of VILLAS and a PAIR of COTTAGES on the Stratford Estate of the Temperance Permanent Land and Building Society may inspect the drawings and specifications on and after the 12th instant, at the Office of the Architect, Mr. WILLIAM ELLISON, 19, Stainsby-road, Lomehouse; also at the Offices of the Society, 34, Moorgate-street, City, where Tenders are to be delivered by SEVEN o'clock in the evening of MONDAY, the 20th instant. The lowest Tender is not necessarily accepted.—MONEY is ready to be ADVANCED by this Society to any amount on houses and lands; for terms apply, between TEN and FOUR, to HENRY J. PHILLIPS, Secretary.

BRADFORD CORPORATION WORKS.—To EXCAVATORS, MASONS, and GENERAL CONTRACTORS.—The Waterworks Committee of the Bradford Corporation will meet at their Office in Bradford on WEDNESDAY, the 22nd day of OCTOBER, at ELEVEN o'clock in the FORENOON, for the purpose of receiving TENDERS or PROPOSALS for the following WORKS:—

CONTRACT C.—The excavating, forming, and completing of a STORE RESERVOIR, of about sixty acres in extent, near to Chelker House, in the township of Draughton and parish of Skipton, with the Culverts, Waste Pit, and other Works connected therewith, including the diversion of the Skipton and Otley turnpike-road for about half-a-mile in length.

CONTRACT D.—The excavating, forming, and completing of a STORE RESERVOIR, of about sixty acres in extent, on the Barden Beck, in Barden Bush Park, in the township of Barden and parish of Skipton, with the Pye Channels, Residuum Lodges, Culverts, Valve Well, Waste Weirs, Waste Water Channel, and other Works connected therewith; also, the building and completing of a Branch Conduit of about 720 yards in length, from such Store Reservoir to the Main Conduit hereinafter mentioned.

CONTRACT E.—The excavating, forming, and completing of a MILLOWNERS' COMPENSATION RESERVOIR, of about 100 acres in extent, on the river Dibb, near to Grimwith, in the township of Appletreewick and Hardingston, in the parish of Burnsall, with three Culverts, Valve Well, Waste Weir, Waste Water Channel, Gauge Basin, Residuum Lodges, and other Works connected therewith.

CONTRACT F.—The forming and completing of about 17½ miles in length of the main Aqueduct or Conduit for bringing an improved supply of water to the town and borough of Bradford, whereof about 4 miles will have to be executed by means of tunnelling, and about 4½ miles will consist of a cast-iron main pipe and which Contract may be subdivided as follows:—

Division No. 1.—Main Conduit, from the end of Barden Beck Branch, in the township of Barden, to Addingham low moor being a length of about 7,320 yards, including the Barden Tunnel of about 1,730 yards in length, the Draughton Tunnel of about 210 yards in length, and the Chelker Tunnel of about 1,320 yards in length, with the lading and laying down of about 920 yards in length of Cast-iron Pipe of 28 inches in diameter for crossing the Ings Beck Valley, near Draughton, and a Branch Conduit of about 20 yards in length for bringing the water from the above-named Chelker Reservoir to such Main Conduit.

Division No. 2.—Main Conduit from the end of Division No. 1, at Addingham low moor, to a public highway passing through Holden Wood in the township of Silsden, and parish of Kildwick, being a length of about 7,278 yards, including the Silsden Tunnel of about 850 yards in length, the Swarma Tunnel of about 230 yards in length, the Flockton and Bowling Tunnel of about 560 yards in length of Cast-iron Pipe of 30 inches in diameter for crossing the Holden Beck Valley, near Holden Wood, and the Holden Park Reservoir Tunnel of about 80 yards in length, of which about 150 yards will be tunnelling.

Division No. 3.—Main Conduit, from the end of Division No. 2, at Holden Wood, to East Morton, in the town ship of Morton East and West, and parish of Bingley, being a length of 5,800 yards.

Division No. 4.—Main Conduit, from the end of Division No. 3, at East Morton, to a public highway at Heaton, near to the Service Reservoir now in progress there, being a total length of about 4,200 yards, including the Greenhill Tunnel of about 920 yards in length, the Goose Eye Tunnel, of about 545 yards in length and the lading and laying down of about 1,260 yards in length of Cast-iron Pipe of 30 inches in diameter, for crossing the valley of the Morton Beck, at East Morton; and a further length, of about 4,980 yards in length of Cast-iron Pipe, of like diameter, for crossing the valley of the river Aire, including the passing of the river Aire and the Leeds and Liverpool Canal, below Hurst Mill, near Shipley.

The Committee do not bind themselves to accept the lowest or any other Tender for any of the above Contracts. Plans may be seen, and further information may be had, from and after MONDAY, the 6th day of OCTOBER, on application to Mr. J. W. LEATHER, Civil Engineer, Leeds.—By order,

W. H. HUDSON, Town Clerk.

Bradford, September 23rd, 1856.

TO CONTRACTORS and BUILDERS.—TENDERS are required for the ERECTION of a DWELLING-HOUSE at Berwick-upon-Tweed. The plans and specifications may be seen at my office, Howard-street, Near Shields, between the hours of TEN and FIVE, from the 14th to the 21st day of OCTOBER, and at the Shop of Mr FLEMING, Berwick-upon-Tweed, until the 28th.

F. R. N. HASWELL, Architect.

North Shields, September 24th, 1856.

LLANDUDNO IMPROVEMENT ACT, 1854.—To SEWER CONTRACTORS, &c.—Parties desirous to CONTRACT for the CONSTRUCTION of the MAIN SEWER in the Town of Llandudno, may see the plans, sections, and specifications, prepared by T. MACDUGALL SMITH, Esq., C.E. at the Office of the Commissioners, between the hours of TEN o'clock a.m. and FOUR o'clock p.m. daily. Tenders, under seal, to be sent into the Office before MONDAY, the 27th of OCTOBER next. The Commissioners do not bind themselves to accept the lowest Tender; but in the event of one being accepted, the party or parties will be required to give security for the due performance of his or their contract. The Commissioners have on hand a quantity of sewerage bricks, pipes, invert and junction blocks, which the contractors will have to take at cost price.

WANTED, a steady experienced Overseer, Person, to act as CLERK of the WORKS, to superintend and to take charge of the above Works being properly carried out.—Applications, stating terms, accompanied by satisfactory testimonials or references, to be made to the Commissioners' Office, before the above date.—By order,

JOHN WILLIAMS, Clerk to the Commissioners.

Improvement Commissioners' Office, Sept. 22 1856

TO CONTRACTORS.—WORMLEY INCLOSURE, HERTS.—The Valuer acting in the matter of the Inclosure of the Westend Commons in the parish of Wormley, in the county of Hertford, is desirous of receiving TENDERS for the FORMATION of a PUBLIC WHARF, the construction of a culvert, the formation of certain new roads, and improvement of existing road &c. &c. The roads to be formed and improved are in length about 1,100 yards. Plans and specifications of the above works may be seen at the offices of Messrs. GRAWTER and BEATH, at Turner's-hill, Cheshunt, where Tenders for the whole are to be delivered on or before TUESDAY, the 13th instant, addressed to me. The lowest or any Tender will not necessarily be accepted, and security for the efficient performance of the works will be required.

Cheshunt, Herts, Oct. 1, 1856. JAMES DEATH, Valuer

TO SANITARY ENGINEERS, SURVEYORS of BOARDS of HEALTH, &c.—SEWAGE DEODORIZATION.—The Hitchin Local Board of Health is desirous of receiving PLANS for PURIFYING and DEODORIZING the SEWAGE flowing from the town, at or near the outlet before it is discharged into the river. Plans, accompanied by an explanatory descriptive statement, and an estimate of the cost, are to be sent to JOHN GOODWIN, Clerk of the Local Board, not later than SATURDAY, the 1st day of NOVEMBER. No plan can be adopted and carried out by the Board, until it has received the sanction of the Central Board of Health. Any information required can be obtained by applying, personally, to Mr GOODWIN. It will save time if a letter be first sent to him, stating the nature of the information to be applied for, as, when he may expect to be called up for it. By order of the Board,

SAMUEL GOODWIN, Clerk to the Board.

Hitchin, Herts, September 29 1856.

CONTRACTS.

THE YORK UNITED GAS-LIGHT COMPANY.—To GASHOLDER MAKERS, IRONFOUNDERS, &c.—Parties desirous of TENDERING for the CONSTRUCTION of a TELESCOPIC GASHOLDER, mean diameter 101 feet 8 inches, and 30 feet deep, in cup lifts, with columns, cast &c., orders, &c. complete, may see the plans and specifications at the Company's Office, Monk-bridge, York, daily from TEN to FOUR o'clock, from MONDAY, the 29th, to WEDNESDAY, the 8th days of OCTOBER inclusive. Security will be required for the due performance of the Contract. Tenders will be received at the Company's office up to TEN o'clock on THURSDAY, the 30th instant, but no pledge is given that the lowest or any Tender will be accepted JOSEPH BRADDOCK, Engineer.

York, October 1st, 1856

GRAMMAR-SCHOOL, SUDBURY, SUFFOLK.—To BUILDERS.—The Trustees of the above School are prepared to receive TENDERS for the execution of the several WORKS required to be done in the erection and entire completion of the new GRAMMAR SCHOOL and MASTER'S HOUSE, on the plot of ground known as the School Playground, Sudbury Suffolk. The plans specifications, and conditions of contract may be inspected at my Office on and after the 9th day of OCTOBER next ensuing, between the hours of TEN and FIVE o'clock, where the Tenders are to be delivered not later than THURSDAY, the 16th instant, addressed to me, and endorsed "Tender for Sudbury new Grammar School." Any further particulars required relating to the work may be obtained of the Architect, Mr. ROBT. P. POPE, 3, Provost-road, Haverstock-hill, Hampstead-road, London, where copies of the plans may also be seen. The Trustees will not pledge themselves to accept the lowest or any Tender.

(Signed) GEO. WM ANDREWS, Clerk to the Trustees.

Sudbury, September, 1856.

TO WELL-SINKERS, &c.—The Board of Works for the Wand-worth District are desirous of receiving TENDERS for SINKING FOURTEEN WELLS, in the parishes of Battersea, Clapham, Putney, and Wandsworth.—Specification and particulars may be seen at the Offices of the Surveyor to the Board, Mr. D. W. YOUNG, Bellingbroke-grove, Wandsworth-common. Sealed Tenders, addressed to "The Board of Works for the Wand-worth District," and endorsed, "Tenders for Sinking Wells," are to be delivered at the Offices of the Board, on or before WEDNESDAY, the 8th day of OCTOBER next, at THREE o'clock in the afternoon. The Board do not bind themselves to accept the lowest or any Tender.—By order of the Board of Works for the Wand-worth District.

ARTHUR ALEXR. CORSELLI, Clerk to the Board.

Bellingbroke-grove, Wandsworth-common, Sept. 23, 1856.

TO CONTRACTORS. — Wavertree Local Board of Health.—The Wavertree Local Board of Health are prepared to receive TENDERS for the CONSTRUCTIONS of SEWERS within the district of the Local Board of Health (Wavertree), according to the plans and specifications prepared for that purpose. The Tenders to be sent in addressed to "The Chairman of the Wavertree Local Board of Health, Public offices, Wavertree near Liverpool," according to the forms, with a schedule of prices attached to each, before FOUR o'clock on MONDAY, the 13th proximo. The plans and specifications may be inspected at the Office of Mr. ISAAC ATHERTON, Prince's buildings, North John street, Liverpool, from MONDAY next to MONDAY the 13th proximo, where forms of Tender may be obtained on application, and at the Board-room where plans may be obtained in the immediate neighbourhood. The Board do not pledge themselves to accept the lowest or any Tender.

Prince's buildings, North John-street.

Liverpool, Sept. 30, 1856

THE CONSERVATIVE LAND SOCIETY.

TRUSTEES.

Viscount Ranelagh.
Right Hon. R. A. C. N. Hamilton, M.P.
Hon. Col. Lowther, M.P.
J. C. Cobbold, esq. M.P.

TO BUILDERS.—The Executive Committee are prepared to receive TENDERS for the ERECTION of a pair of SEMI-DETACHED VILLAS, on the Weybridge Estate, Surrey. The drawings and specifications may be seen at the Offices of Mr. GEORGE MORGAN, 3, Pancras Inn, Strand, London, on and after WEDNESDAY, OCTOBER 1st, 1856, between the hours of TEN and FOUR. Tenders are to be delivered on or before TWELVE o'clock on SATURDAY, OCTOBER 18th, to the Surveyor, at his Offices, and endorsed "Tenders for a pair of Villas, Weybridge." The Executive Committee do not bind themselves to accept the lowest or any Tender

CHARLES LEWIS GRUNEISEN.

31, Norfolk street, Strand, London

THE CONSERVATIVE LAND SOCIETY.

TRUSTEES.

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Hon. Col. Lowther, M.P.
J. C. Cobbold, esq. M.P.

TO BUILDERS.—The Executive Committee are prepared to receive TENDERS for the erection of a pair of SEMI-DETACHED VILLAS, on the Enfield estate, Middlesex. The drawings and specifications may be seen at the Offices of Mr. GEORGE MORGAN, 3, Pancras Inn, Strand, London, on and after WEDNESDAY, OCTOBER 1st, 1856, between the hours of TEN and FOUR. Tenders are to be delivered on or before TWELVE o'clock on SATURDAY, OCTOBER 18th, to the Surveyor, at his Offices, and endorsed "Tenders for a Pair of Villas, Enfield." The Executive Committee do not bind themselves to accept the lowest or any Tender

CHARLES LEWIS GRUNEISEN,

33, Norfolk street, Strand, London.

STEAM BOILER for SALE, Fourteen-horse power, of the best description for getting steam requiring no brick-work. Also several sets of Stamping Machinery for reducing Ores, Lead, &c. to Powder; Horse-whim gear, pumps, and every kind of machine for mining purposes, at J. WALKER'S, 17, Cowper street, City-road

TO CAPITALISTS, BUILDERS, and BRICKMAKERS.—To BE SOLD by private contract, a FIVE HORSE POWER STEAM-ENGINE, together with other machinery used for the purpose of brickmaking. Also, To BE LET, a valuable BRICK FIELD, and the rent and royalty, situate at Dartford, Kent, near to estates on which buildings are being rapidly erected.—For further particulars apply to Messrs. WIRE and CHILD, Solicitors, 3, St. Swithin's lane City.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK,

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by his process, making them complete, without the introduction of any foreign metal.

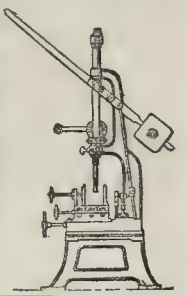
PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD on the LOWEST TERMS.

AUSTIN'S IMPERIAL.

PATENT SASH and BLIND LINE can be obtained of all IRONMAKERS, IRONMONGERS, MERCHANTS, FACTORS, and WHOLESALE HOUSES, in TOWN or COUNTRY. Established 1774.

TO BE SOLD, a MACHINE for WOOD MOULDINGS. Has been worked, and may be seen at No. 3, Clephane-road, Canonbury

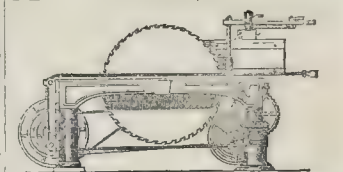
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Bedplate, Moller and Pfaan Planing Machines, Endless Saw Frames, and all other kinds of Machines, for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand a large stock, either wholly or partly made so that they can at all times on short notice supply them. S. W. and Co. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their large and also a smaller one with Bonn's Apparatus, may be seen at the Machinery Department, Crystal Palace.—A descriptive Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. Kings-road, Chelsea, London.

By Her Majesty's Royal Letters Patent.

IRON SAW-BENCHES, PLANING MACHINES, and PATENTED MACHINERY, for Cutting out Sweeps, and Moulding all kinds of Wards in Circular Grounds. May be seen at work, and prices obtained, on application to THOMAS ROBINSON and SON, Railway Saw-mills, Rochdale.

WOOD-CUTTING MACHINERY, JOHN M'DOWALL and SONS, WALKINSHAW FOUNDRY, J. JOHNSTONE, near Glasgow, MANUFACTURERS of VERTICAL SAW-FRAMES (driven by steam),

For cutting balks of timber, from 5 feet on the side down to the smallest deal frame

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached; circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working from 4 to 24 inches thick; to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c; patent curvilinear sawing machines, for circles, sweeps, and irregular cutting, well adapted for ship-builders; power mortising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent silent feed machine for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 16 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood cutting machinery, as evinced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private individuals in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work, without resort to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe. All parties as above for further particulars, will be promptly attended to.

AMERICAN MACHINERY.—L. D. OWEN and Co. Importers, have on hand at 187, Tottenham court-road, London, Wood Working Machinery, manufactured by Messrs. Buck and Co consisting in part of Planing, Tenoning, Moulding, Morticing, and Sawing Machines, of the best structure, which they offer at prices which cannot fail to suit.

N.B. Machinery from the works of Messrs Buck and Co. may be seen in operation at the Royal Arsenal, Woolwich.

TO GAS and WATER COMPANIES.—TO BE SOLD, by TENDER, the following CAST-IRON PIPES, purchased for the Mains of the Stockton Gas Consumers' Company, Limited and not required, in consequence of the purchase by that Company of the plant of an existing Company:

450	yards of	7-inch	pipes,	weighing	140 lbs. per yard.
500	"	6-inch	"	"	96 " "
700	"	5-inch	"	"	68 " "
1,000	"	4-inch	"	"	52 " "
750	"	3-inch	"	"	35 " "
2,000	"	2-inch	"	"	26 " "

Tenders, marked "Tender for Pipes," to be sent on or before TUESDAY, the 14th OCTOBER, to T. W. HORNSBY, Secretary to the Stockton Gas Consumers' Company, Limited, 131, High-street, Stockton-on-Tees.

Stockton-on-Tees, 25th September, 1856.

SAVING IN GAS.—D. BULE, T. INVENTOR and PATENTEE.—The Mercurial Gas Regulator is the only efficient instrument for ensuring wholesome and uniform lighting, equalizing the pressure, and preventing any irregularity in the height of the flame.—H. BULLET and CO. 33, High Holborn, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

PARKIN AND MARSHALL,

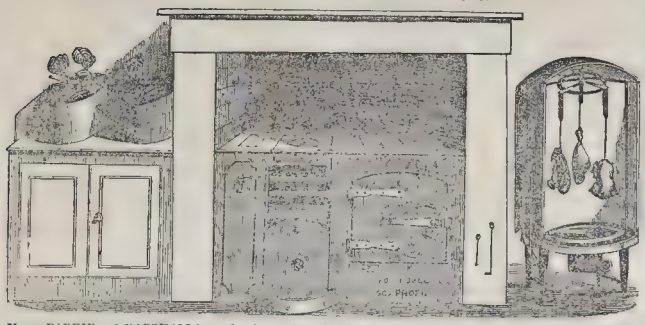
GENERAL MERCHANTS, AND MANUFACTURERS OF

TABLE CUTLERY, PEN and POCKET KNIVES, SCISSORS, RAZORS, ELECTRO-PLATED WARES, FILES, SAWS, EDGE and JOINERS' TOOLS, AUGURS, STEEL, &c. &c.

TELEGRAPH WORKS, SHEFFIELD.

OFFICES—{NEW YORK—71, JOHN-STREET. BOSTON—25, KILBY-STREET. U.S. MELB URNE 24, COLLINS-STREET EAST.

CORPORATE MARK —XLALL. — Granted by the Cutlers' Company, 1789



Messrs. PARKIN and MARSHALL have also pleasure in stating that they are appointed Sole Wholesale Agents for the Sale of the undernamed Articles, manufactured by

MR. ENOCH OLDFIELD TINDALL, IRON WORKS, SCARBOROUGH, viz.:—

TINDALL'S Patent Portable Mangles, Washing and Wringing Machines, Napkin Presses, Cooking Ranges, Laundry Stoves, Sanatory Trap and Grate, Chaff Cutters, Oat, Barley, Malt and Linseed Mills, Bean Mills, Oilcake Breakers, Portable Saw Mills, Turnip Cutters, Cultivators, Ploughs, Harrows, &c. &c.

THE PATENT COOKING RANGES AND ROASTERS are now amongst the most complete and inexpensive before the Public, and especially adapted for the Families of Gentlemen, Cafes and Taverns.

THE IMPROVED LAUNDRY STOVE will heat Fifteen Irons at once, occupies only 12 inches in space, is removable from one room to another and will be found invaluable in Public Hospitals, Infirmaries, Laundries, and Private Families.

E. O. T.'S SANATORY GRATE AND TRAP is now acknowledged to be the best and most secure from effluvia (as well as not choking Pans) for Sinks, and Pens are using them, and bear testimony to their efficiency and superiority over all others.

Prize awarded for Mangles by the Yorkshire Agricultural Society, at Rotherham, August, 1856

THE OAT BRUISERS AND WRINGING MACHINES have been introduced into the Royal Household most of the Public Institutes, and also into many thousand Private Families, and bear testimony to their efficiency and superiority over all others.

Prize awarded for Mangles by the Yorkshire Agricultural Society, at Rotherham, August, 1856

THE OAT BRUISERS AND CHAFF CUTTERS, like the above, combine cheapness with the greatest simplicity of construction, and only need to be tried to be appreciated. They effect great saving and should be in every stable.

N.B.—E. O. TINDALL is the Sole Licensed Manufacturer for the North of England of BUSHE'S celebrated ROOT PULPER and SLICING TURNIP-CUTTER.

Illustrated Catalogues per post, on receipt of twelve stamps.

STEVENS AND SON,

ENGINEERS,

IRON AND BRASS FOUNDERS AND MANUFACTURERS;

CONTRACTORS

FOR THE

ERECTION OR ALTERATION OF GAS-WORKS FROM TWENTY LIGHTS UPWARDS,

With Buildings, Mains, Meters, Service-pipes, Lamp-Posts, Lamps, and Gasfittings

WATERWORKS FOR THE SUPPLY OF TOWNS,

WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.

Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds; these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c

Gas Cooking Stoves and Ranges on the most improved principles.

GAS-FITTING IN ALL ITS BRANCHES.

GAS CHANDELIERS OF ALL SIZES IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS.

DEVICES FOR GAS ILLUMINATION.

IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.

These Turnstiles have been selected for the Entrances of the great Exhibition, New York

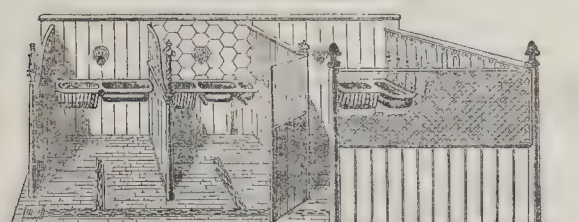
PATENTEES OF THE SEMAPHORE RAILWAY SIGNAL.

Signals for communication between Guard and Engine Driver Railway Stores and Lamps of every description

DARLINGTON WORKS, 16 to 19, SOUTHWARK-BRIDGE ROAD, LONDON.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT-IRON RACK, united to an iron toe-plate, and forming one complete and useful fixture, having Cottam's Patent Noiseless Halter-Guide and Collar-Rein attached, the ball of which is taken to the back of the manger, and works with ease and free tom up or down the guide-bar. Cottam's new Patent Seed-Box, of galvanized sheet-iron, is also a most useful addition to the above fittings, being simple in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use

Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings, Hasp and Durable Corn-Bins.

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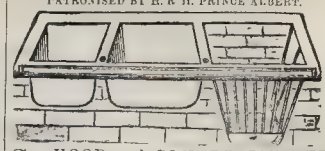

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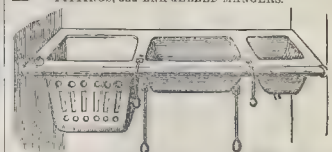

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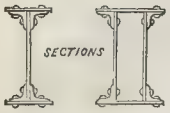

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Castings of every description.

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BUCKLED PLATES may be united to each other, or to the frame of the structure they cover, by either lap or butt joints, and either by screw bolts, rivets, or wood screws (of timber), and the joints are made absolutely watertight when required, by riveting and bolting up, or by interposed strips of felt saturated in oil cement, or in tar and pitch, or by strips of vulcanised India-rubber, or by a thin layer of oil putty.

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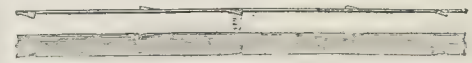

THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11½ inches) is now being extensively used in the leading GOVERNMENT WORKS, DOCK BUILDINGS, BARKS, ASYLUMS, BRIDGES, VIADUCTS, PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in London and in all parts of the kingdom.

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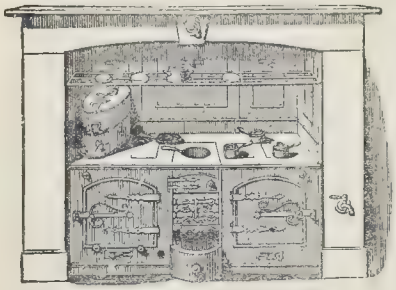

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The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

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"JOSHUA SCHOFIELD and SONS."

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"London Nov. 11, 1854.

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Ditto, with plain clips cast on		1s. 1d.	1s. 2d.	1s. 4d.	1s 6d.		
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1¼ in.	1½ in.	2 in.	2½ in.	3 to 6 inch.
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Improved Self-acting Cottage Ranges, with Large Oven and Boiler

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Best Sheet Cut Floor Brads ..... 13s. per cwt.
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Elliptic Stoves, double backs, 24d. per inch, and upwards.

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3-feet Cottage Ranges, with ovens and back boilers, 32s. each.

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Air Bricks, 4s. per doz.

Best Fine Cut Clasp and Rose.

1½	1¾	2	2½	3-in. & larger.
16s. 6d	16s. 6d.	15s. 6d.	15s. 6d.	14s. per cwt.

And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.

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GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.				
12	"	"	20	"
13	"	"	23	"
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Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
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Iron of every description galvanized.

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WORKS—GLASS-HOUSE-YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
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Manufacturers of
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J. H. BOOBYER (late STRICH and BOOBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.
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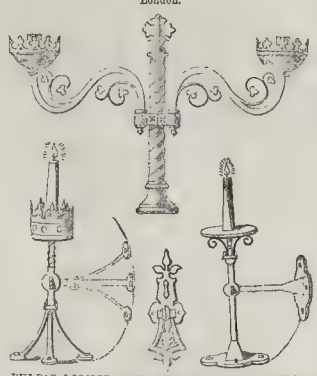

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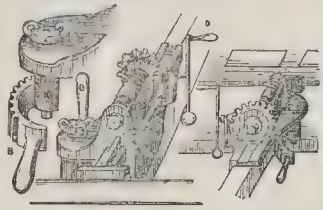

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" VI.	"	Rome	4 "
" VII.	"	Byzantium	3 "
" VIII.	"	the Arabs	3 "
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			48

Chapter			Plates
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Vol. XIV.—No. 713.

BRUSSELS is a city of conferences and exhibitions. The International Philanthropic Congress and the Exhibition of Domestic Economy, which have recently been held there, will not be the least useful of its endeavours in this way. The principal place in the Exhibition was occupied by specimens relating to the construction and furnishing of dwellings. It is curious to note the various steps taken in Belgium for the improvement of the dwellings of the labouring classes. The Hygienic Congress of 1852 had given much of its time to the sanitary amelioration of populous districts, and it laid down a series of resolutions on the subject. In these, rules for the building of habitations for the working-classes and poor were published. This subject was taken up by the "Conseil Supérieur d'Hygiène Publique" in two reports, where the means to put into execution the resolutions of the Congress were explained. Ultimately, the "Commission Permanente des Sociétés de Secours Mutuel" examined the question, and issued a report.

In France, a credit of six millions of francs was obtained, in 1852, towards the erection of dwellings for the workmen in the large manufacturing towns. Thus, *cités ouvrières* have been erected in Paris, Marseilles, Lille, and other places. Still, it was the exhibition of the models of the private society of Mulhouse (Département du Bas Rhin) which attracted most notice in Brussels. The whole capital of this company was only 350,000 francs (14,000*l.*), but it had a man like Muller, the architect, who supplied the deficiency by integrity and talent. The houses of the Mulhouse society have each a garden. The French workmen can pay the rent according to a very varied scale, and become even *proprietors*. In the year 1855 the society possessed 186 houses, of which sixty-five had been *sold* to working men: since then, others have been sold. M. Müller had sent to the Exhibition a work on the construction of houses for the labouring classes in town and country, accompanied by an atlas: this work is the best for any one wishing to appreciate what has been done in France. M. Bleck exhibited a model in relief of the "Cité Ouvrière de Mulhouse," made of pasteboard, to the scale of one centimètre to one mètre. Holland, Denmark, Switzerland, even Italy, had also contributed their share to the Exhibition of Domestic Economy, and M. Canevari, a Roman engineer, had sent a plan of houses adapted to the inhabitants of Rome and Central Italy.

Messrs. Ducpatiaux and Dumont have exhibited a series of plans of houses for working men, both in town and country, as well as a specimen of a house furnished in every respect, which has given satisfaction. To economize space without too much restriction, systematize the means of *aëration* (*not ventilation*), to economize fuel without stint, are here the leading principles. In fact, sufficient studies and plans *exist*, but it remains to make them applicable, not to hundreds and thousands, but to millions of working people. The baths, washhouses, and lavatories, after the plans of Messrs. Wynaud, Janssens, and Reinaud, exhibited, are the best existing in Belgium. Amongst the materials for construction were the cements of Medina; the varnished tiles of the manufactory of Messrs. Jonas and Delanzie, of Antwerp; the materials employed by M. Müller in the Cité Ouvrière of Mulhouse; the specimens of Florentine marble from the quarries of Felny (Hainaut); and amongst them a chimney-piece ready for being fixed, at the price of ten francs. The Société de la Vieille Montagne had also contributed towards the Exhibition of Domestic Economy specimens of zinc, worked in all forms and for all wants, showing the great extent to which this metal can be used for building and domestic purposes. Messrs. Staadt and Deldine-Haut exhibited locks and other specimens of this sort, the prices of which are exceedingly low. The painted papers of Messrs. Vandelaer, Lorsont, and Leghers, at 25 cents. (2½d.) the *roll*, were much praised for their good make and pattern. The double-action pumps of Messrs. Mathilm, Brothers, which can raise 1,000 *litres* per hour, cost, with a *balancier*, only thirty francs. The fine spaces of the Botanical Gardens, where the Brussels Exhibition took place, added much to its attraction; and the number of visitors went on increasing, as the public became aware of the wide bearing of the exhibition. The prices being affixed to all specimens, excited at times the surprise of intending purchasers, but made this exhibition as well a sort of fair on a large scale, as every person might purchase, mostly at a short distance, the articles he was in need of. It may be added that M. Müller, of Mulhouse, has been awarded a first prize by the committee, for his plans of the Cité Ouvrière.

At the opening meeting of the Congress on the 15th of September, under the presidency of M. Charles Rogier, after M. Ducpatiaux had read a general report of the objects the Congress had in view, and the transaction of some routine business, Mr. F. O. Ward, as a representative from England, addressed the meeting at considerable length, on the course that had been pursued by sanitary reformers in this country.

There were two ways, he said, of understanding the word philanthropy. We may view it as relieving existing distress, or give it to the endeavour to prevent the production of distress; and it was in this second sense that the English sanitary school dealt with it: they had arrived at the conviction, that it is easier, better, and cheaper to prevent distress, of which a great part results from the want of proper arrangements in towns, and is easily preventible, than to cure it. Starting from this principle, to prevent instead of curing, they had sought for the best means to carry it out, and the results of these inquiries were formulated into another principle, Circulation instead of Stagnation. In following that idea they had gradually been led to elaborate the tubular system, so called, as by a series of pipes it gathers pure water, leads it into the town, carries it away enriched with fertilizing residuums, and applies it to agriculture. He was happy to say that more than 100 towns were already organized, or in train of organization, more or less completely, on this principle, and with a success which the adversaries of the system could not contest. After alluding to various special instances, Mr. Ward deduced, as the results of sanitary improvement:—1. The diminution of illness, mortality, and distress; the moral and intellectual elevation of the people: 2. The increase of the articles of subsistance: and 3. Pecuniary advantages constantly attending improvements in health and in agriculture. And these were the results of philanthropy as understood and practised by the sanitary school of England.

M. Wolowski, for France, referred especially to the increase of the articles of subsistence, and then spoke of the necessity of providing suitable dwellings for the working classes. Paris, he said, was being transformed into a new city: whole quarters were disappearing, the quarters of narrow and crooked streets, where the sun could not penetrate or the free air circulate. A great improvement, in a healthful point of view, had doubtless been effected, and the population of Paris would gain in the end; but in the meanwhile, as a large number of low-priced dwellings were swept away, entire populations (and there was no exaggeration in employing that word, it lent its greatness to the greatness of the evil he was opposing) found themselves driven from the shelter they had enjoyed, and were unable to obtain what suited them elsewhere.

M. Scrive described some admirable arrangements made at Lille for the advantage and recreation of the work people.

Dr. Pinot then related what had been done at Mulhouse, and spoke of the workmen's towns already referred to, which had been built there. The erection of large buildings where were lodged twenty or thirty families had been discontinued. The accumulation of a number of persons, strangers to each other, had given rise to continual discussions, misconduct, and immorality. They had found it more advisable, therefore, to build separate dwellings, wherein only one family was permitted to reside: this had given rise to the *cité ouvrière*. Each city consisted usually of 300 houses, of different size, and different cost. To induce the workman to become the purchaser of his house, the payment was distributed over a certain period of time. On making the purchase, he had to pay down from 12*l.* to 20*l.* according to the size of the house, the price ranging from 75*l.* to 120*l.* If he had not the money, the manufacturer, his employer, sometimes advanced it to him. Afterwards he had to pay from 1*l.* to 1*l.* 5s. a month, till the whole amount was discharged. These little towns are thus much sought for by workmen, some to buy the houses, and others to rent them. In a sanitary point of view, amongst others, the result had been most satisfactory. When the town was affected with cholera, there had been but few cases in the *cité ouvrière;* while, on the other hand, the greater proportion of cases in the town were in the quarters occupied by the workpeople. A public washhouse, baths, bakery, and kitchen, are attached to the *cité ouvrière*.

However, we must pass on. At the closing sitting of the Congress, Sept. 20, M. Müller, of Mulhouse, brought up, in conjunction with Mr. H. Roberts, to whom M. Muller addressed a warm eulogium, a comprehensive report on the conditions necessary for the erection of healthful habitations, and urged further their application in rural districts as well as in towns.

Mr. Roberts, after showing some of the results of sanitary improvement, proposed a resolution, which was adopted, declaring on the part of the Congress the necessity of enlightening the working classes by every means on all matters concerning the amelioration and proper maintenance of their dwellings, the advantages of good ventilation, and the evils produced by dampness.

M. David, of Denmark, mentioned that they had in that country two workmen's cities, containing—one 80, and the other 350 families. An inquiry had been made as to the comparative healthfulness of the *cité*, and although he could not give the exact results, he was able to say that the amount of sickness and mortality there, as compared with the sickness and mortality in the other quarters of the town, was only as 1 to 5! We need not look for a better fact with which to conclude this notice of the meeting in Brussels.

The demolition of the dwellings of the industrious and poorer classes of Paris, for the improvement of that capital, without due provision elsewhere for their occupants, referred

to by one of the speakers, has caused, not only the greatest distress to individuals, but some apprehension to the Government; and it has been determined that little batches of houses suitable to the class who have been driven away shall be erected in the suburbs of Paris without delay. Many remarks have been made on this proceeding by Londoners, apparently unconscious that *in their own capital* the dwellings of the poor have recently been demolished to an enormous extent; and this, too, without thought being given to the ejected tenants. And as it is certain that for some time to come, multitudes of dilapidated houses will annually be condemned to give way to substantial dwellings of a better class, we would again press the matter on attention. Our readers have been from time to time furnished with particulars respecting the dwellings of this great metropolis, and pretty well know their condition. We have often, too, directed attention to the utter unsuitableness of the ordinary dwelling-houses let out to various tenants, without privacy, or the necessary accommodation for families; an evil, the extent of which can only be appreciated by those who have inquired carefully into the subject; but nothing of a better kind seems to have come into the market, at all adequate to the demand. Blame for this, to a great extent, attaches to a large body of the more prosperous mechanics of the metropolis. There is an immense number of the wretched and ignorant poor, who are obliged to take advantage under present circumstances of any kind of shelter (and pay a high price for it, too); but there are numbers who can choose, and yet have a prejudice against anything except the old plan, although they know the inconvenience, and often danger, which beset it both by night and day.

The railways with metropolitan terminuses employ a very considerable number of men, who are lodged with their families in single rooms, in the neighbourhood of the stations, and we are informed that the difficulty of obtaining decent accommodation is very great indeed, particularly for those who have several children. These men pay about 3s. 6d. a week for a room, and some have asked, when viewing the huge hotels which adjoin these stations, if it would not pay companies to plant little colonies on some of their spare land, not too far from town, where something like the necessary room could be found for their workmen at a moderate price, giving the workman a free pass to the place of his employment, and to the wife a pass to town on one day of the week for marketing. Schools and other institutions would soon spring up in such villages. It is, however, to be feared that many of the workmen would rather put up with all the faults of their present lodgings, than avail themselves of a change much for the benefit of both themselves and families. Many builders to whom we have mentioned this subject have said, "What encouragement have we in putting up new-fashioned dwellings, when we look at the profits and state of occupation of the buildings put up by the metropolitan associations—say that in the Old St. Pancras-road?" And it is a circumstance well worthy of notice that for some time past that building, so excellent in its arrangements and which provides the sort of accommodation so much wanted, has not been fully occupied. It is most important to learn the cause of this, in order to show what has produced the present appearance of failure. In doing this, it ought to be borne in mind that this building was the first experiment of the kind made on a large scale,—that the expenses of forming the Association were considerable, including the cost of the charter. The rates are also heavy. However, for five or six years after its completion, this building was so well occupied by a respectable body of tenants that it was difficult to find a vacant set of rooms. The rents had been, during the time above mentioned, raised more than once to new tenants; thus holding out an inducement to those who had possession to remain. About fifteen months ago the rents of the sets of rooms were again raised without the above consideration, and that, too, at a time when the working men were struggling against the advanced price of every kind of provision. Since then more than twenty sets of rooms out of 110 have been unlet at one time, and several are in the same condition at present. Now, as it is a fact that numbers of capitalists well intentioned are watching with anxiety the results of such-like experiments, we cannot help feeling regret that at the time the price of provisions was very high, the rent of this place, provided for the families of persons of limited income, should have been raised, believing that if this building had been put up under ordinary circumstances, without the cost of charters, and management,* or the expense of alterations and repairs (which might have been to a great extent avoided), the rent previously charged would have been ample to have allowed a handsome profit upon the outlay. Even when this model building was first opened at a small rent, it was a difficult matter to let the rooms, so prejudiced against it were the kind of persons for whom it was intended, and eventually a class came into occupation for whom it was not originally intended, and this had the effect of inducing others to follow a good example. At present, we believe, and we say this advisedly, that the families of nine out of a dozen of the mechanics of the metropolis assembled in council respecting the choice of a dwelling, would say of this place, "It looks like a workhouse. I can work, and do not want to seem to live on charity. I like to go in and out as I think fit."† "Merciful goodness!" says the wife, "five stories high—how will I get up and down? the children will break their necks;" forgetting that to some extent the necessity of travelling up and down stairs is much avoided by the dust-shafts, water-supply, sculleries, closets, oven, and boiler, attached to every set of rooms. In Queen Elizabeth's days, sea coal was by many looked upon as abominable: vaccination, the circulation of the blood, railways, and other great discoveries, were for long regarded with doubtful misgivings, which are now laughed at and wondered at. The prejudice against new-fashioned dwellings will, in course of time, in the same manner vanish; but in the meantime, in order to produce present and beneficial results, it is necessary to endeavour to conform as much as possible to the feelings of those for whose benefit the houses are required, trusting that in course of time we may all get wiser.

What is really wanted for the use of several thousands of families, who would be glad, and are able to pay a fair rent in London, are small houses, and houses with the accommodation of two or three suites of apartments of the model buildings, which would present as much as possible the outward appearance of the ordinary dwellings which are now let out to lodgers, and be provided with separate plots of ground; for there is an objection to a large play-ground, in which some hundreds of children of different ages and circumstances are thrown together. We must find some other time to go more fully into this part of the subject, and in the meantime would express a hope that the intelligent working men of the metropolis will turn their serious attention to this matter, not only for the sake of themselves, but also out of consideration for those who, less fortunate than themselves, would much benefit by their sanction and appreciation of those improved arrangements of dwellings which are so much required in the immensely extended and constantly increasing districts which are tied together under the name of London.

* It must be borne in mind that this was a new experiment The walls were stoutly built, and will remain good for centuries ut all the interior fittings, doors, windows, locks, &c. were of th most indifferent description. The rooms were barely whitewashed ver the bricks.

† On the first establishment of these buildings, the gates were ocked at a certain time. Those who have noted the independen pirit of the working classes, know that this will never do; and though this restriction has been nearly abandoned, this is not generally known.

ART-WORKS IN IVORY.

Is it not a singular circumstance, that one of the most delicate and refined species of art-works, those in ivory and its congeners, is one of the most ancient of which we have any record; and that, moreover, it is one which is still practised in the East at the present day, as it was thousands of years since? Even in antique times, statues composed of ivory were known and spoken of as statues "in the ancient style:" and statues were not the only large works done in ivory, for we find in the Bible, that even houses were in some way composed of or at least covered with ivory, so as to merit the name of houses of ivory. That there are several allusions in the Bible to such works in ivory as those we are speaking of, is of course well known to art-writers, but as we do not recollect seeing these allusions specially quoted, it may be interesting to do so with reference to the few notes on ancient art-works in ivory with which we propose to fill a column or two of the present number.

In 1st Kings, x. 18, in the midst of the details of the glory and riches with which Solomon surrounded himself, we are told, that "The king made a great throne of ivory, and overlaid it with the best gold. The throne had six steps, and the top of the throne was round behind. And there were stays on either side on the place of the seat, and two lions stood beside the stays; and twelve lions stood there, on the one side and on the other, upon the six steps: there was not the like made in any kingdom." These lions, though doubtless composite, or made up of pieces of ivory, and other materials, must have been, to some extent at least, carvings in ivory. In the same chapter, verse 22, it is narrated, that "the king had at sea a navy of Tharshish, with the navy of Hiram," and that "once in three years came the navy of Tharshish, bringing gold and silver, ivory, and apes and peacocks," reminding us curiously of certain ancient Egyptian sculptures, in which elephants' tusks, and apes, with other valuables, are being inventoried by the king's officers. The ivory which Solomon thus received from his Mediterranean navy, doubtless, formed the spoils of African elephants, whether got through Egypt or elsewhere. To such an extent, indeed, were the elephants of North Africa robbed of their valuables, and made away with in the process, that they ultimately became extinct as a source of supply. That Solomon also obtained ivory from the East, we presume there can be little doubt.

In the same Book of Kings (xxii. 39), amongst "the acts of Ahab" are enumerated "the ivory house which he made and all the cities that he built." In Psalms xlv. 8, it is said of the anointed, "All thy garments smell of myrrh and aloes, and cassia, out of the ivory palaces, whereby they have made thee glad." These ivory palaces, however, may have been but similitudes of palaces, made for the purpose of holding perfumes. In Solomon's Song, among the bridegroom's poetical beauties, it is said (ii. 14), "His belly is as bright ivory overlaid with sapphires, and his legs as pillars of marble set upon sockets of fine gold." The "ivory overlaid with sapphires" probably denoted some species of art-work which had actually existed. Again (vii. 4), the bride's "neck is as a tower of ivory," such a tower having also probably been an actual formation, especially since we know that such a tower exists in the present day, or lately existed, in China. Ezekiel (xxvii. 6) says of Tyrus, "Of the oaks of Bashan have they made thine oars: the company of the Ashurites have made thy benches of ivory brought out of the isles of Chittim." The merchants of Ashur are spoken of in the same chapter as merchants of Tyre. In Genesis, however, we read of Ashur going forth and building Nineveh and various other cities; and in the passage just quoted, the Ashurites were clearly something more than mere merchants, since they *made* the ivory benches. They were thus, in fact, clearly art-workmen, or at least connected with the building trades of antiquity: from what is said of a company of them, and of Ashur *going forth* and building Nineveh and other cities, may not these "children of Shem" have constituted some of those wandering building tribes who are known to have existed not only in the Middle Ages of the Christian era, but in times of extreme antiquity? In the same chapter of Ezekiel, verse 15, it is said that the men of Dedan brought Tyrus, "for a present, *horns* of ivory, and ebony." These "horns" were doubtless tusks, their resemblance to horns rendering such a mistake probable, or at least possible: nevertheless, the horn of a certain creature, namely, the narwhal, one of

the cetacea, and supposed to have been what is recorded in ancient inventories as "the unicorn's horn," was used, at all events in the Middle Ages, as a species of ivory, which it resembles. This splendid horn, however, which is occasionally 6, and even 7 feet long, is not the only sort of "unicorn's horn;" for it has of late been found that a one-horned animal, the true unicorn, exists in the east, in the Thibetan mountains. The prophet Amos (iii. 15), speaking in the name of the Lord, says, "I will smite the winter house with the summer house; and the houses of ivory shall perish, and the great houses shall have an end, saith the Lord." The same prophet (vi. 4) speaks of those "that lie upon beds of ivory." In Revelations (xviii. 12) are enumerated "Merchandize of gold and silver, and precious stones, and of pearls, and fine linen, and purple and silk, and scarlet, and all thyine wood, and all manner of vessels of ivory, and all manner of vessels of most precious wood, and of brass and iron, and marble."

There are thus not a few allusions, in the most ancient of all books, to the existence of various art-works in ivory in very ancient times; and the recent discoveries of carved ivories at Nineveh by Mr. Layard corroborate the verisimilitude of some of these allusions, as, indeed, do the carved ivories of ancient Egypt, which in some respects resemble the Assyrian. In truth, the facility with which ivory is carved, the polish it easily receives, and the mellow tone of its colour, recommended this material for sculpture from the earliest time of human civilization. Already in Pharaonic Egypt, in ancient Assyria, in the earliest epochs of Etruscan, Greek, and Roman history, it was employed for ornamental purposes. The difficulties besetting, in ancient times, the communication with India and inner Africa, whence ivory was brought, enhanced its value in the west far beyond its present price; though the ancients knew of one more source of supply, now, as said, fully exhausted, viz. that of Northern Africa. Central Africa proved a more plentiful source, which, from times immemorial down to the sixteenth century, supplied Europe, by way of Egypt, with elephant's tusks.

Antique Egyptian carvings in ivory are rare. The dryness of the climate—to which we are indebted for the preservation of such perishable materials as wood, and the colours of the reliefs,—proves destructive to ivory; for as soon as the animal glue which gives it cousistency evaporates, it cracks, and crumbles to pieces. Assyria and Persia were supplied with ivory from India and Bactria. The bearers of elephant tusks are never wanting in the triumphal processions of the Eastern conquerors. The sculptors of Greece derived their ivory both from India and Africa; though it seems that the African, with its yellow tint and more agreeable sheen, was more frequently employed than the white Indian ivory, of chalky appearance. In Greece, not only was ivory used for ornamental purposes, as in Egypt and Assyria, but statues of large dimensions were built up from this precious material, which likewise served for the insignia of royalty and priesthood,* and, together with the purple, remained the symbol of princely power and sacerdotal honour through all the eras of antiquity. By joining smaller bits of ivory, in a manner not yet sufficiently explained, even after the learned researches of Quatremère de Quincy, the Greeks carved colossal statues of this material, adorning them with enamelled gold—the only metal believed to be worthy of being joined to ivory. Some of the Chryselephantine statues became celebrated as wonders of their world, both for their precious material and the eminence of workmanship. The Olympian Jupiter of Phidias, at Elis—his Minerva, at Athens—and the Juno of Polycletus, at Argos—remain unsurpassed for beauty and magnificence. The great French archæologist and patron of art, the Duc de Luynes, had lately made a copy of the Minerva of Phidias, according to the description of the ancient authors, and its representations on medals, vases, and gems. His Chryselephantine statue was one of the most interesting objects of the great French exhibition of fine arts, and gave some idea of the magnificence and costliness of this kind of sculpture.*

The ivory remains of classical antiquity are of extreme rarity. "One only sceptre," says Mr. F. Pulszky† "has been preserved to our days: stiles for writing are more numerous; so are ornamented hair-pins, toys, dice, scent-boxes. Admission-tickets to the theatres and amphitheatres have likewise survived the great catastrophes of history; and with them a few reliefs, among which the most important are the Diptycha. We designate by this name large double ivory tablets, ornamented with reliefs on the outside; whilst the inside was covered with wax, on which the ancients used to write with metallic or ivory stiles. Diptychon means, originally, anything doubly folded; and therefore St. Augustine calls the oysters diptycha; but the term was principally applied to ivory book-covers, or tablets for writing.

The most interesting of these tablets were the Consular Diptycha, because we are able to assign a certain date to them; and as they were manufactured for the highest functionaries of the state, and presented to the senators, we may presume that they are the best specimens of the art of the time, and therefore highly valuable documents for the history of art. They serve likewise to elucidate some dark points of Byzantine history; and afford most valuable information on the manners and customs of a period about which but scanty information can be gathered from contemporaneous authors, whose attention was principally directed to the development of the Christian dogmas, and who neglected political history, so far as it remained unconnected with the Church. Accordingly these ivories, which were always highly prized from the time of their manufacture up to our days, and remained the ornaments of the treasuries of churches and monasteries, attracted the attention of scholars immediately after the revival of letters."

Those interested in this elegant branch of art, ancient and modern, have recently had the opportunity of possessing themselves of a valuable treatise on the subject by Mr. Digby Wyatt, and which has the rare and novel merit of being illustrated by a series of excellent photographs by Mr. J. A. Spencer. The volume has been published by the Arundel Society, under the general title of "Notices of Sculpture in Ivory," and consists of a lecture by Mr. Wyatt, on the history, methods, and chief productions of the art, delivered at the first annual general meeting of the Arundel Society, on 29th June, 1855; and of a catalogue, by Mr. E. Oldfield, of the British Museum, of specimens of ancient ivory-carvings, in various collections (including the Fejérváry, of Mr. Pulszky, just alluded to, and the Maskell collection, recently purchased by the British Museum trustees), casts of some of which are sold by the Arundel Society in classes exemplifying the principal schools and periods.‡

In this interesting volume, Mr. Wyatt enters at some length into the ancient history of the art of ivory-carving, and the various remains which still exist, and of nine of which the beautiful photographs included in the volume are vivid representations. He remarks, that though the ivory used in Classical times, and in great part of Europe during the Middle Ages, was obtained from the tusks and teeth of the Asiatic and African elephants, in the north a different substance generally took its place.

"This was derived from the fine-grained tusk of the *rosmar*, or *rostungr*, found in the Northern seas, and known as the walrus, morse, or sea-horse. That distinguished antiquary, Mr. Albert Way, tells us that such tusks were sculptured in the Scandinavian countries, and highly esteemed, from an early period. This material, which has been ably commented on by Mr. Way, the 'huel-bone' of Chaucer, the 'whale's bone' of ancient English song, well suited to form a substitute for ivory in times when difficulty of communication with the East must have rendered the tusk of the elephant a costly rarity, was largely used by the skilful sculptors of the North for various purposes of ornament or convenience. In Germany, moreover, where in the ninth and tenth centuries ivory was employed, the carvings of the eleventh and twelfth centuries were usually executed in the tusk of the walrus; fine examples of which are to be seen in the Reliquarium at Hanover, in the collection of Prince Soltykoff, and in that of Colonel Meyrick, at Goodrich Court. Amongst objects carved in this material, as we learn from the treatise of the Archbishop of Upsala on the Antiquities of the Northern Nations, as also from Olaus Magnus, chessmen, very elaborately carved, were so esteemed as to be included with royal gifts. Of these, probably the most remarkable collection existing is that discovered in the Isle of Lewis, and now preserved in the British Museum."

In generalizing the details of the ancient art-works in ivory noticed in his lecture, Mr. Wyatt says:—

"When we turn from the details of ivory-carving, and attempt to generalise with respect to national peculiarities, we are met by many difficulties, foremost amongst which is the facility with which the objects might be transported from place to place, rendering the criterion of present locality comparatively worthless. Happily, however, nationality is generally so marked by style, that the judicious connoisseur will distinguish it almost by sympathy. To define precisely why one specimen is believed to be French, another German, and a third English, would be often no easy task, and yet the greatest authorities arrive almost invariably at a unanimity of judgment. It may suffice in this place to point out that France was by far the largest manufacturer, and that the subjects selected by her artists were, even when of a sacred nature, *toujours gais*. A peculiar *nez retroussé*, a dimpled, pouting, and yet smiling mouth, a general *gentillasse* of treatment, and a brilliant yet rapid mode of technical execution, stamp the French work with an almost unmistakeable character. We have already adverted to the two leading varieties of Italian expression, the one spiritual and sublimated, and the other partaking more of Greek immoveability, a little "raide" and uncouth, like the mosaics, but always dignified and grand. German work is invariably admirable in finish and minute elaboration, more especially of drapery, but rarely rising to an elevated type, either of physical or intellectual beauty. The English style, of which Prince Soltykoff's collection contains one of the noblest specimens extant, in the shape of a triptych of the fourteenth century, representing Christ crowned, with the Virgin Mary by his side, the Crucifixion, and four Saints, may be assigned a position midway between the French and the second Italian manner. It certainly does not exhibit the gaiety and tenderness of the former, nor has it quite the grandeur of the latter, but it is marked by a sober earnestness of expression in serious action, which neither of those styles possesses. This vigorous action is now and then carried almost to caricature in English work. With respect to manipulation, it may be noticed in most of the English carvings, that the mark of the cutting tool is very seldom subdued by finishing with abrasive implements—the surface being rarely scraped, but each stroke of the chisel, and a curiously hard expression is given to most of the heads by this practice. Occasionally, however, confusion has arisen between English and French ivories, owing to many objects, the nationality of which is supposed to be attested by the introduction of English heraldic bearings, having been executed by French artists for English knights and nobles during their various partial occupancies of the country of their final loss. Among the multitude of mediæval works which time has spared to us, we are unable to identify the author of any single specimen."

We may appropriately conclude our incidental notices of art-works in ivory with a quotation from Mr. Hendrie's translation of the monk Theophilus's instructive work, "Schedula diversarum Artium." This rare artificer opens to us the *arcana* of his various crafts, and among other instructions he thus relates how ivory and bone are to be carved:—

"In sculpturing ivory, first form a tablet of the magnitude you may wish, and, after smoothing it, portray with a lead the figures according to your pleasure, and with a pointed instrument mark the lines, that they may appear; then carve the grounds as deeply as you wish with different instruments, and sculp the figures, or other things you please, according to your invention and skill. But should you wish to ornament your work with a leaf of gold, lay on the glue of the bladder of the fish which is called 'huso,' or sturgeon, and the leaf being cut into small

* The senators of Rome had likewise ivory sceptres, and the curule seats were of the same material, in order to indicate that the magistrates of Rome were the equals of foreign princes.

* The statue cost the duke 300,000 francs.

† "Catalogue of the Fejérváry Ivories in the Museum of Joseph Mayer, esq. with Essay on Antique Ivories." By Francis Pulszky, F.H.A. Liverpool: printed by D. Marples, 50a, Lord-street.

‡ These casts may be seen in the Crystal Palace, in a court close to the private office of the Fine Art department. There also, we may here remark, are various other interesting art-works, forming a collection belonging to the Arundel Society; and a "Descriptive Notice of the Drawings, Tracings, Models, and Miscellaneous Publications of the Arundel Society," thus exhibited at Sydenham, has been published at the office of the Arundel Society, 24, Old Bond-street.

pieces, overlay it as you please. Fashion also round or ribbed handles from ivory, and make an opening through the middle lengthwise; then, with various files, proper for this work, enlarge the opening that it may be inside as outside, and let it be smooth everywhere, and moderately thin; and portray flowerets around it very finely, or animals, birds, or dragons, twisted together by the necks and tails, and transpierce the grounds with very fine instruments: then scale, as gracefully and artistically as you may be able. Which being done, fill the opening inside with oak wood, which you cover with thin gilt copper, so that through all the grounds the gold can be seen; and so two pieces being joined in from a particle of the same ivory, close the hole before and behind, you will fasten these on with ivory pegs, so cunningly, that no one may be able to see how the gold is laid in. After this, make an opening into the small piece in front, in which the blade is placed, the handle of which, being heated, can be easily inserted, because the wood is within, and it will stand fast; make also a plain handle, and, according to its size, make the opening in which the blade should be placed, and join the wood carefully into it, and according as the wood is fashioned, so cause the handle of the knife to be made. Then grind some clear *thus* (resin) into the finest powder, and fill the opening of the handle with it, and envelop the blade near the handle with a wet cloth, in a threefold manner, and placing it before the furnace, warm this handle until it slightly glows, and immediately fix it carefully in the handle, that it may be well joined in, and it will stand firmly."

Here we have the very practice, with regard to the inserted gilt copper, of the knife-handles of India, and, with respect to the mode of retention of the tongue of the blade in the handle, of Birmingham and Sheffield in the present day.

ARCHITECTURAL EDUCATION.

The approaching commencement of the courses of instruction in architecture and construction at King's College, London, under Professor Hosking, and at University College, under Professor Donaldson, suggests to us to say, that due importance is scarcely attached by our young men to the advantages to be derived, on the commencement of their professional studies, from attention to a systematic course of information and instruction. The student should start with the conviction that, entering upon such a vast subject, which is based, first, upon scientific principles; secondly, upon the profoundest elements of taste; and, thirdly, varied historical knowledge,—it cannot be hoped that he will rise above mediocrity unless he masters these, and becomes acquainted with the numerous buildings already in existence. These cannot be known, or, if known, not sufficiently appreciated, without a careful methodical analysis of their varied peculiarities; the knowledge of all styles of all countries under their various aspects of taste, construction, and historic origin, and also adaptation to special purposes. Dr. Booth at the conclusion of his lecture, elsewhere mentioned in our present number, says:—"Incompetence, imbecility, idleness, and ignorance shall no longer usurp the place of skill, of genius, of vigour, of industry, and knowledge." But how is this to be accomplished, unless our young men render themselves competent by hard previous study and proper instruction?

We cannot better advance our views than by quoting a portion of Professor Donaldson's Sessional Circular:—

"I may be permitted to point out that, as competitive examinations have been adopted by the Government, as the best tests of proficiency for civil and military appointments, and as even such an ordeal before the Royal Institute of British Architects is necessary for the appointment to district surveyorships, the actual circumstances of the day imperatively demand that the professional education of the architect, engineer, surveyor, and builder should be benefited by attendance on such a course.

In addition to the details contained in the papers of questions, I feel myself called upon to instil into the minds of the youth before me an active principle of energy, to exalt his aims, to ennoble his labours, and to excite to new spheres of imagination, reflection and duty; to call to his remembrance that he succeeds to men who have produced the Rhamnesium of Thebes, the Parthenon, the Pantheon, the Coliseum, the Vicentine Basilica, the Louvre, St. Paul's, the Spire of Fribourg, Henry the Seventh's Chapel, magnificent Canterbury and solemn Stonehenge; that he may be possessed of powers of invention and execution identical with theirs, distinct and distant only as are their periods from his in the world's history, and modified alone by the times, the country, the usages and experience of the epoch in which his lot is cast.

In order that a youth may be properly trained to think and act, it is necessary to impress upon his mind that he must be an earnest and devoted labourer; cultivating his intellect by meditation and practice; that he should be urged on as he labours by the consciousness of progress; and mindful that casual, intermittent, feeble efforts can never issue otherwise than in failure, discouragement, and defeat, hoping against hope if necessary, and determining to conquer by a mighty struggle for a noble object."

The standard of the qualifications of the profession is necessarily raised now-a-days, in consequence of the examinations necessary to qualify men to hold public employment. And the spirit of competition (*now opening to the whole world*) must prove that no continued success is possible without previous instructional discipline of the mind. To this end, the courses given at the two Metropolitan Colleges are of material assistance, and those who hope to render themselves eminent, and to succeed to the highest position in the professional career, should not neglect the means presented to them, and which, up to fifteen years since, were not in existence to aid the architect, the surveyor, the engineer, or builder.

We may mention that there is a broad distinction between the Professor's duty at University College, and at King's College. At the former the Professor does not look to the College at all; his class is composed almost wholly, we believe, of young men already in office, and attending specially whom the college might call occasional students. Whereas Mr. Hosking's class is composed of students within the college, his course on the Arts of Construction being part of the *curriculum* of the college for its matriculated students in their third year: occasional students are with him the exception, and do not seem to be sought for, as the teaching is adapted to the college students proper, and they, who are generally under twenty years of age, cannot digest anything but spoon-meat, whilst at University College the Professor finds himself in a position to administer more solid food.

STREET PAVING BY STEAM POWER.

Good street pavement requires a good foundation, good stone, and good ramming; the latter being of the utmost importance. It is painful to see men sweating at a 50 lb. rammer, going three or more times over the surface, and, after all, leaving the work ill done. Again we appeal to the Messrs. Burton, or to any other of our portable steam-engine makers, to turn their attention to a steam-rammer for street pavements. The work would be accomplished more quickly, the stones would be driven to a firmer bed, and much human misery would be saved. Sound paving-stones will bear, without fracture, the force of a blow many times greater than a man can give. If it were not for the multiplicity of gas-pipes and water-pipes, and sewers and sewer-pipes, streets, once formed, paved with the best granite, and steam rammed, would last for years: a second or third ramming, at intervals, as inequalities began to show, would bring the surface even, as at first: ridges would be beaten down, and slack places would be raised. Hand-ramming, as at present practised, cannot possibly accomplish this. Jack Falstaff's "three-man beetle," if used, might do better. But three-man beetles are not used. Why not?

Let us consider how a paved street is formed, and how it wears. Look at the Haymarket, now under repairs. A gravel and concrete foundation is formed and finished, as near as may be, to one uniform surface, having the required cross sectional contour: upon this the paving-stones are laid, in courses, as they are to be set: they are not all exactly of the same depth, neither is the concrete surface, or bed, a true plane: fine gravel or sand is used to set the paving-stones to an even surface, and there is more sand or gravel under one stone than under others. A man, using the heaviest beetle he can lift, cannot ram heavy pavement to an equal bearing: at all events, it is never done, so as to prevent wheels soon knocking it into holes. What takes place then? Wet rests on slack places, sinks to the foundation, and softens it (there is no sub-soil or sub-area drainage): each wheel drops like a rammer on this, the weakest place, jumps at the ridge, produces a second slack, and so on until a pavement, originally smooth, becomes a continuous series of hills and hollows, over which spring-vans, omnibuses, carriages, cabs, &c. bounce along: all the weak places continue to be struck with increased force as the road becomes more uneven, to the discomfort of passengers, tradesmen, and residents, and to the rapid wear and destruction of vehicles. The old and homely proverb of "A stitch in time" is most applicable to road and street repairing. The first show of inequality in pavements should be removed, and this a steam rammer would quickly do. As the process is not to be patented, will any one try it?

The dirt found on granite pavements is not the wear of the stone, but consists of material worked up from below by the incessant ramming of carriage-wheels, and of dirt brought or dropped on. Keep the surface even, and little will work up from below. Surface sweeping or washing must remove surface refuse.

If iron or granite trams are to be laid down, even then a steam rammer will be useful to consolidate the intervening pavement. Macadam stone should be forbidden in streets of much traffic: such streets are merely stone mills, in which some 9 inches or 12 inches vertical in depth of broken stone is annually crushed and ground into mud or dust. Many thousands of tons are so ground yearly in the streets of the metropolis, to great loss of traction, wear of horse-flesh, ruin of vehicles, destruction of clothes and goods, and the misery of all.

When the water companies and the gas companies now trading in the metropolis have been consolidated, and the Metropolitan Board of Works will work, there may be sub-ways for sewers, gas-pipes, water-pipes, electric-telegraph wires, &c. as in the new streets in Paris. One main-pipe will then do the work of ten, the sub-soil will be less tainted, the street surfaces will be less disturbed, such sub-ways will be fully ventilated, and there may be comfort and health above ground as below. Must all this remain a dream, or will some future Peel realize it? Order is the offspring of a clear conception, positive directions, and firmness of purpose.

LIVERPOOL FREE LIBRARY AND MUSEUM COMPETITION.

The Committee, on Friday, the 26th ult. resolved to recommend to the Council to confer the first premium of 150 guineas on the author of the design marked "Con Amore," and the second premium of 100 guineas on the one marked "Alma." These are respectively the first and second in the lists sent in by the competitors, "Con Amore" having eight votes, and "Alma" seven. It is noticeable that all the competitors having voted, as we are informed, there should be no design which commanded an absolute majority of their suffrages; the most successful having only eight votes out of sixteen. The Committee were unanimous in regard to the first, but not so with regard to the second. Some thought that "Alma" was out of court, from its great expense; but it was urged, on the other hand, that, strictly speaking, no single plan had complied with all the conditions, and as the competitors had considered the subject themselves, at the request of the Committee, it was only fair to attach weight to their recommendation. Acting on these views, a considerable majority voted for "Alma" as second. Votes were also given for "Bis dat qui dat Cito" and "Roma."

On opening the letters accompanying the drawings, the author of the design marked "Con Amore" was found to be Mr. Allom, of London; the author of "Alma," Mr. Thomas Holmes, of Bury, in Lancashire.

The Town Council, at its meeting on the 1st inst. adopted the following resolution:—

"That previously to the Council awarding the first or second prize, the Library and Museum Committee,

with the assistance of the Corporation Surveyor, do report to this Council the amount at which the buildings described in the plans forwarded under the mottoes 'Con Amore' and 'Alma' can be erected and completed in a proper manner."

The matter, therefore, will rest here until the cost is ascertained.

Local architects have already objected that out of the sixteen sets sent in, theirs alone complied with the conditions, and that therefore the Committee have done wrong.

THE FAMILY OF SIR CHRISTOPHER WREN.

Among the many distinguished names which gave prominence and lustre to the county of Wilts during the seventeenth century, not the least was that of the first English architect of his day, Sir Christopher Wren, born in 1631 at East Knoyle, at the parsonage-house of his father, Dr. Christopher Wren, the Dean of Windsor. As the following incidents, occurring during the childhood of Sir Christopher, will not be found in the "Parentalia," published by his descendant, Dr. Stephen Wren, their appearance in the *Wiltshire Magazine* may, it is hoped, provoke farther elucidation and illustration from other local contributors.

When the civil wars broke out between Charles I. and his Parliament, Knoyle was the centre of a group of Royalist families, such as Stourton, Bennett, Cottington, Digby, Green of Mere, Willoughby, and Hyde. The doctor's advanced age, moreover, made him averse to any movement of a revolutionary kind. His adherence to the king's party was therefore from the first pronounced in a decided manner. This, in fact, was all that could be alleged against him, to prove what was termed "delinquency," for he had served his cure with credit for nearly thirty years. Still, delinquency, though in the form only of adherence to the king, was a crime to be punished, and even on this point the evidence was very contradictory. There was also another charge, relating to pictures which he erected in the chancel, but it was not shown that they were "superstitious." Without farther comment, we proceed to the facts alleged.

Soon after the commencement of hostilities Dr. Wren retired to Windsor. Sir Edward Hungerford, the Parliamentary general, sweeping through the south of Wilts, compelled Christopher Williams and Henry Marshman to surrender 25*l.* due to the doctor as rent of part of the parsonage of East Knoyle. In a few months after, Ludlow was shut up in Wardour Castle, and Colonel Barnes, who lay before it, had the command of the country adjacent. Down comes the dean from Windsor, armed with a warrant from Sir Ralph Hopton, empowering Colonel Barnes to send a troop of horse to his aid, by which means he speedily collects all rents due to him, and compels Williams and Marshman to pay their 25*l.* over again. This was in the autumn of 1644, and from this time he seems to have considered Knoyle a safer place than Windsor.

The spring of the next year was signalised by Cromwell's capture of Sir James Long's troop near Devizes; and about Lady-day, Cromwell and Waller were lying near Shaftesbury, laying their plans for the relief of Taunton. Keeping these two facts in mind, we seem to trace, in the following fragment of the evidence in Dr. Wren's case, the movements of the scattered remnants of Long's troop, who, being chased (as is known) through Steeple Ashton, and seeking safety by flying southward and distributing themselves among their associates in South Wilts, must have heard with great consternation that the enemy was so close upon their traces.

"On the morrow after Lady-day, 1645," deposed George Styles, of Knoyle, "at about ten o'clock at night, there came to his house a large company of Royalist soldiers, accompanied by Dr. Wren, who saluted this informant with the name of 'landlord.' Mistress Styles provided for the doctor and one of the commanders a bed, in which they lodged together; and in the morning, as they lay in bed, the doctor spake these words to his friend,—'Sir, all is well, there is no danger, for I left word with my wife that if there were, she should send word over the grounds." [Across the fields.]

The next thing we hear of Dr. Wren is his advocacy of the Club-rising in the autumn of the same year, 1645. [This was a union of the gentry and agriculturists of South Wilts and Dorset, to protect their property from both the conflicting parties.] Andrew Marshman swore that Dr. Wren not only encouraged his parishioners to assist, but when Mr. Thomas Bennett, of Pythouse, came to Knoyle to invite their co-operation, Dr. Wren seconded Mr. Bennett's remarks, and even went forth himself with Mr. Bennett, carrying a caliver upon his shoulder. [The doctor was probably shooting pheasants.]

Against this and other testimony to the same import, Randall Dominick declared that Dr. Wren had expressed so decided an opposition to the "Club-business," that the parish of Knoyle did not list themselves.

We next come to the story of the pictures in the church. These were loosely reported at first as "superstitious;" but the only evidence worth reciting in this place will be that of the workman who executed them under the doctor's supervision; and the whole affair shows that the love of pictorial embellishment as an accessory to architecture, which his distinguished son afterwards gratified in the dome of St. Paul's, was a taste derived from the father. Little Christopher was perhaps too young to have watched the progress of the frescoes at Knoyle, being then only eight years of age, but he was fifteen or sixteen before he left Wiltshire.

Robert Brockway, of Quinten, in Dorset, plasterer, being sworn, saith,—"That about July, eight years ago, or thereabouts, Dr. Wren sent for him, and agreed with him to make and set up in the chancel at Knoyle, in fret-work, the picture of the four Evangelists and such other things as the doctor should invent. And, accordingly, he did invent and make a model or draught thereof in paper, which he gave to this examinant and caused him to make it, viz. the picture of the 'Ascension,' with the twelve Apostles, and Christ ascending in the clouds, his feet and lower part of his garment being seen below the clouds. This stood at the lower end of the chancel next towards the church. He also gave this examinant a draught of 'The Trinity,' formed by three rounds linked in each other, an emblem in the midst, with glory around it; and above that, clouds on the roof. This was over the communion-table. Farther, on each side of the east window there was set up the picture of 'Jacob's Dream and his Sacrifice;' clouds above; Jacob sleeping below, and a ladder let down to the earth. On the one side of the window, angels holding crowns of laurel in their hands, ascended; and on the other side of the window they descended; and underneath were these words written, 'Let prayers ascend that grace may descend.'" He farther saith that, "Dr. Wren did himself pay for the work, and used to come every day to overlook it, and give directions thereto." Testified before the committee sitting at Longford Castle, 8th May, 1647. [Abbreviated.]

Fret-work, Mr. Wilton tells me, is the same as pargetting, a sort of Arabesque ornament found in the ceilings of mansions of that date, and also in some country churches. In the latter case, when the church and roof happen to be contemporaneous, this pargetting is found worked into Gothic forms. This pargetting at Knoyle is commended by Sir Richard Colt Hoare.

That Dr. Wren had not designed to raise any scandal by his fret-work is proved by the fact that, while resident at Windsor, he wrote to Randall Dominick (probably his churchwarden), giving him full authority to remove the whole series of paintings, if any offence seemed likely to be taken against them. The Parliament also seems to have taken a view of his case creditable to him in every respect, as shown in the following "Letter from the Committee of Lords and Commons for Sequestrations, to the Wilts Committee, touching Dr. Wren;" without date, but apparently written about February, 1647:—

"Gentlemen,—There are come to our sight several orders of Parliament, and other public certificates, some of them attested by our committee, whereby it appears that Dr. Christopher Wren hath been much employed by the Parliament, and hath suffered many violences and plunderings in the performance of these employments; and likewise that he hath contributed very large sums to the service of the state, and been a painful labourer in the work of the ministry almost these thirty years; all which do fully induce us to believe that he is a parson far from meriting the doom of sequestration (the punishment of most malignant ministers). Wherefore we desire you to take his cause into your serious consideration, and narrowly to weigh the number and quality of the witnesses and informers, looking upon him with such favourable inclinations as the due consideration of these premises do warrant. And what tenderness you please to afford him shall be esteemed as an obligation upon your very assured friends, John Danvers, William Stevens, James Herbert, John Evelyn, William Lister."

Such are the main facts connected with Dr. Wren's share in the Civil War, which might have been much extended by reciting in full all the evidence tendered. At the time when the last-quoted document is supposed to have been written, his son Christopher was executing his treatise of "Spherical Trigonometry," having left Wiltshire for Wadham College, Oxford, in the previous year, 1646.—(*Wiltshire during the Civil Wars.**)

PERSEVERANCE AND PROGRESS.

On the 24th of September Dr. Booth, F.R.S. delivered the opening lecture of the session at the Lewes Mechanics' Institution, on the subject of "Education." Seeking to show that ample means and plenty of leisure time are not indispensable for the acquirement of knowledge, the lecturer said,—The minds of men, brought up with many aids and appliances, are too often without spring: they are deficient in elasticity of intellect, and they often want that one moral quality of mind which breathes life and vigour into all the intellectual faculties, the absence of which no others can compensate, even by their presence in excess—I mean that unflinching determination not to be borne down by difficulties—that enduring perseverance not to be over-mastered by defeat. He among you who can put forth into action such energy of will does not much require external aid. He need not care whether the schoolmaster be abroad or not, for he has got him at home. This is no mere theoretical reasoning. The views I place before you are amply confirmed by experience. Read the biographies of those men whose names shed lustre on humanity, whose lives are our best instructors, teaching us by their example, and encouraging us by their success. I have little doubt that in the minds of other men, perhaps of great sagacity and far reach of thought, before Columbus's day, the existence of a great western continent may have been a dim conception, a mere geographical possibility. That the earth may be circumnavigated, or at all events travelled round, is a truth which follows at once from the admission of its globular form, but the germ of this truth fell on ungenial soil; it never fructified in their minds. Columbus was not the last by many who showed how the impossible may be reduced to the practical. It was the indomitable resolution of Columbus, his unyielding energy, that enabled him to verify his conceptions and to realise his theory. Look at the perseverance of Kepler, who for years and years groped his way through dry, perplexed, and endless arithmetical calculations till he saw that first faint ray of light, which burst out as the sun in the mind of Newton, and revealed those laws concealed since the creation, by which the Almighty constituted the mechanism of the universe. Turn where you will you find indomitable perseverance the indispensable condition of success. Who is there so cold as to read without emotion the heroic struggles of that brave old Huguenot, Bernard Palissy, the potter, who, despite of failure after failure, the ridicule of enemies, the sneers of friends, the remonstrances of his family, still held on till a success unhoped for at last crowned

* Contributed by Mr. J. Waylen to the "Wiltshire Archæological Magazine," published under the direction of the Society for collecting county and other antiquities at Devizes. Pamphlets and books relating to Shakspeare, Shakspeare Topography, and the Drama; a specimen of the old Market-house at Marlborough, by Mr. Cottingham; "Who Destroyed the Images at the West end of Salisbury Cathedral?" &c. &c.

his efforts. Or, if we wish to take a more fortunate example in our own country, we may name Sir Richard Arkwright, the great inventor of the cotton-spinning machine, who, till he was thirty years of age, continued to practise as a barber in his native town. The characteristic quality of his mind was not deep thinking, but unyielding tenacity of purpose. If any one who hears me is disheartened by his daily toil, or discouraged by the want of books, let him read the autobiography of the late William Gifford, for many years the learned and talented editor of the *Quarterly Review*. Of his early life he thus writes:—"I possessed at this time but one book in the world: it was a treatise on algebra, given to me by a young woman who found it in a lodging-house. I considered it as a treasure. I sat up for the greatest part of several nights successively: this carried me some way into the science. I had not a farthing on earth, nor a friend to give me one. Pen, ink, and paper were, therefore, for the most part, as completely out of my reach as a crown and sceptre. There was, indeed, a resource. I beat out pieces of leather as smooth as possible, and wrought my problems on them with an old blunted awl." Now, here was a man, almost without books, and entirely without instruction or apparatus of any kind, who contrived to master the elements of a sound education, which eventually led him to power, eminence, and wealth. Not less true than trite is the proverb, that necessity is the mother of invention. Difficulties overcome habituate the mind to overcome difficulties. Do not for a moment imagine that if you pore in solitude for hours, say over a mathematical problem, or any other difficulty, and fail even at last to obtain the result you are in quest of, that, therefore, your labour is but lost, and your time thrown away. Do not suppose anything of the sort. Your mind has been at work the whole time. Other things which were before clouded have become clear: principles have been sinking deeper into the mind, and cutting a groove in which your ideas will run with greater ease another time.

It is a very remarkable and curious fact that there is no acquirement of real value, whether it be a science you want to know, or an art you require to practise, or a language you wish to learn, that does not demand a large expenditure of labour for its acquisition. So true is this, that the amount of labour and pains bestowed is the measure of the intrinsic value of the acquirement. One never opens a diamond mine while turning up the soil for knowledge. Chance has very little to do with the extension of knowledge. Thousands had seen apples fall to the ground before the time of Newton. But it was to his mind only that the simple fact was suggestive. It fell upon a mind prepared for its reception. Everybody knew that oxygen was a supporter of combustion—that it is largely present in the atmosphere; but it is only the other day that the simple obvious facts have been applied to compel the air we breathe to supply fuel to our iron furnaces—a process which bids fair to revolutionize the whole iron manufacture. Great discoveries are everywhere cropping out beneath our feet, if we would only look before us. See what vast discoveries in chemistry and natural science were due to Sir Humphrey Davy, and I mention him the more willingly as he is another and a signal example of a man who, born in a humble station, by the brilliancy of his talents, his unrelaxing perseverance and intensity of will, raised himself to high social position, and took his place as the very first of European philosophers. When a surgeon's errand-boy in Penzance, he attempted to make experiments on the properties of air; and what, you will be curious to know, was his laboratory? Why the phials and bottles of his master's shop. His biographer, with great justice observes, had Sir Humphrey Davy been furnished, in the commencement of his career, with all those appliances he enjoyed at a more recent period, it is very probable that he might never have acquired that wonderful tact of manipulation, that ability of suggesting experiments, and of contriving apparatus so as to meet and surmount the difficulties which must constantly arise during the progress of the philosopher through the unbeaten tracks and unexplored regions of science.

Referring to the examinations instituted by the Society of Arts, and the certificates granted by them, the lecturer informed his audience, that at the first examination the best mathematician was a young man from Leeds, a bookseller's shopboy. He passed so good an examination, that the managers of the Kew Observatory, much to their credit, have appointed him assistant observer, a situation which, to one of his predecessors, opened the way to rank and fortune. Within the last few weeks the council of the Society of Arts have come to the determination to establish a public registry of their certificated candidates, which propose to throw open, free of charge, to all those persons who may desire to make merit and intelligence the qualifications of those whom they may employ. The Society of Arts, through its Board of Examiners, pledges its credit and character, that the certificates which it issues, whatever the grade, shall state with the most precise accuracy attainable, and without the least tincture of exaggeration, the clear, uncoloured truth; and he asked the friends of education and progress to co-operate with them, by taking into their counting-houses, warehouses, shops, manufactories, mills, and factories of every kind, those young men who, by obtaining certificates, shall have proved themselves to be intelligent, laborious, studious, and diligent. In benefiting yourselves, he continued, you promote the welfare of your country. England has, indeed, attained to a high standing among the nations: if only true to herself, a brilliant destiny awaits her. But a dark spot mars the brightness of her aspect, and that the Society of Arts, so far as its power and influence prevail, will strive to remove. We will endeavour, in our humble way, that incompetence, stupidity, imbecility, idleness, and ignorance shall no longer usurp the places of skill, of genius, of vigour, of industry, and knowledge.

WELLS.

Being called for a time to reside in this antiquated city, so recently visited by the British Archæological Association, and in which

> "The finer arts (save where the Muse has sung,
> In daring flight above all modern wing)
> Neglected droop their head,"

I thought a few words on what is doing here would not be uninteresting to some of the readers of your valuable journal. The various beautiful studies that here present themselves with thrilling interest to the lovers of architectural and antiquarian history are too well known to need any comment from me. This quaint old city, whose population has neither increased nor decreased for the last three centuries, seems at last to have made a move in the onward direction.

One would suppose that the music of the sweet play of its fairy fountain sparkling in the sun, or the poetry beaming with such intense brilliancy from its glorious cathedral, would almost inspire its people with its own richly-pervading spirit, whose

> "—— grandeur overwhelms us not.
> And why? It is not lessened: but the mind,
> Expanded by the genius of the spot,
> Has grown colossal; and can only find
> A fit abode wherein appear enshrined
> Our hopes of immortality."

The beautiful parish church of St. Cuthbert is undergoing partial restoration under the direction of the architect, Mr. H. Crisp, of Bristol: the old galleries that have so long disturbed the devotional eye have been removed, and their removal has brought to light the ancient colouring and flowing foliage on the clustered pillars. Indeed, it is certain that the whole of the interior of this church was decorated with colour and historical paintings of sacred subjects. After I had examined the portions brought to view by the removal of the galleries, I was informed that a beautiful life-size painting of our Saviour was discovered a few years since in the Trinity Chapel; also another large painting, representing the miraculous draught of fishes, and, by order of the then praiseworthy churchwardens, an artist was employed to restore these paintings; but alas! for the idiosyncracies of human affairs and the jejuneness of feeling for anything appertaining to the beautiful, the succeeding churchwardens had one painting chopped away, and the other plastered up again, because, forsooth, it annoyed their pseudo-religious eyesight. I feel grieved, as indeed must every lover of the fine arts, to see the artistic workings of our forefathers thus lost to us through the ignorance of petty authority.

The old unsightly-looking pews are being replaced by open benches with carved and foliated seat ends.

In East Wells, the piety and munificence of the widow of the late Dean Jenkyns is rearing a church in the Decorated style of the continent. The architect, Mr. Teulon, has elicited considerable polychromatic effect by the use of alternate layers of a red conglomerate, and the blue limestone of the neighbourhood, with the oolitic stone of Doulting for dressings. This church will certainly have a very novel and artistic appearance.

Workmen are also engaged in restoring a portion of the west front of the cathedral, some parts of which, through the inadvertency of the Dean and chapter in cutting away the angle columns of the buttresses, has become very dangerous, and a few weeks since some two or three tons of stonework fell down in the cloisters, through this want of proper advice.

At Wookey Hole, one of the largest papermills in the kingdom is being erected for Mr. W. H. Hodgkinson, under the direction of Mr. Edwin Hippisley, architect. The chimney will be a bold feature in the building, being 100 feet high, with a battlement top. The spirited proprietor also contemplates building a number of cottages for the workpeople, so that this celebrated and beautiful little valley will soon merge its wonted quiet into the noise and din of commercial life.

In East Wells there is also in course of erection a mansion for the bishop's secretary, on one of the most commanding and beautiful sites of the neighbourhood. The style is Decorated Tudor. The architect is Mr. Edwin Hippisley. The walls are of blue limestone and freestone dressings.

I should have mentioned that the workmen in blasting the rocks at Wookey Hole, exposed a portion of the skeleton of a fossil mammoth of the carnivorous tribe, together with a good deal of osseous Breccia, relics of mighty forms which have disappeared, but which, in the dim primeval time, wandered through groves of palms and ferns, and forests of coniferous trees, where now the oak, the elm, and the ash spring up, and the architect seeks in the petrefactions of the older world for the materials wherewith to construct his edifices. Thus may all things—

> "—— So inform
> The mind that is within us—so impress
> With quietness and beauty—and so feed
> With lofty thoughts."

F. E. D.

THE SEINE AND THE THAMES.

I read with much pleasure some time since in the *Builder*, the article in which you ventured to stem the current of popular and indiscriminate laudation of the French capital, at the expense of our own, and with equal pleasure that of last week, entitled, "English and French Cities," in which the sanitary conditions of the two metropolitan towns were contrasted most truthfully.

Correct as the writer is when describing the cesspool system of Paris, and the universal stench resulting from it, he falls into an error (as many have done) in supposing that the river Seine is not contaminated by sewage. I have before me, as I write, a plan of the main sewers of Paris, and find that between the Pont de Jena and the Pont de Bercy upwards of seventy large outlets discharge into that river, and many, if not all of them, discharge a fluid almost as filthy as that which enters the Thames from the Fleet sewer, as any one may ascertain for himself by strolling along the quays in the summer months, and looking at the portion of the bed of the river exposed at that season of the year.

The fact is, that although a municipal regulation may exist interdicting generally fæcal matters entering the sewers, yet many exceptions have been made in favour of hospitals, barracks, markets, &c. and the liquid dejections

and refuse of the inhabitants have to a considerable extent for many years been carried off by the sewers into the Seine, and the pollution and injury of that river, I believe to be yearly increasing, and that it will continue to do so; for as the use of water-closets extends and the consumption of water increases, so the landlords will by all means in their power seek to prevent their cesspools (which are already, owing to the increased consumption of water, a heavy expense to them) from filling; and any filthy liquids they can get into the common sewers they will, and have for many years done. The whole of the surface washings also, in times of rain, which are nowhere more filthy than they are from some portions of Paris, discharge into the river, and the Seine therefore, like the Thames, is in a large degree the common sewer of the capital.

W. H.

ART IN MODERN NEEDLEWORK.

I have just now before me a needle-wrought sampler, in a quaint old-fashioned frame, at the bottom of which is "Jane * * * *, her work, 1805." This elaborate specimen of skill probably occupied the fair artist two hours of each afternoon, during five days in the week, for three months. It is painful to reflect upon the large amount of time and pains bestowed upon a thing composed of shreds and patches jumbled together without any principle of arrangement or view towards general effect. There are trees and flowers such as are only to be met with in this department of art. The following verse, neatly lettered in variously-coloured characters:—

> "What is friendship but a name,
> A charm that lulls to sleep;
> A shade that follows wealth and fame,
> But leaves the wretch to weep;"—

is surrounded by a border of some beauty. In fact, here and there, amongst the patterns thrown together at random, there may be traced a lingering indication of mediæval design: the greater part, however, is *modern and original*.

A representation of a milkmaid climbing over a style, of curious construction, is a characteristic example of this style of art. The hat of the maid is green, the dress blue and yellow, the apples on the tree are bright carmine, and the cloud above her head blue, pink, and yellow. On the right hand of the figure is a neat brick cottage; the windows, knocker on the door, &c. cunningly wrought. On the top of the chimney-pots are long iron funnels, which show that our grandmothers were not without the trouble of smoky chimneys. On the other side of the cottage is a balloon rising into a cloud similar to that already described.

There are, in the distant parts, arranged in defiance of all the rules of perspective, various delineations of natural history. These are singular enough, but are natural in comparison with a sort of cherub in top boots, with coal-black whiskers and hair, who on each side of the sampler hovers above the apple-trees amongst the birds.

I have also looked at another sampler, marked 1834, which, although much more effective, and bolder in execution, is equally without any true principle of art; and it is a sad fact, that in many instances, the patterns of needlework produced at the present day, although showy and taking, will not, in most cases, bear the inspection of the eye of true taste. This is the more to be lamented in consequence of our fair countrywomen having for so many centuries been famous both for the beauty and excellence of their working, both with their needle and at the frame.

Without entering into particulars, it may be worth while to mention that in the Saxon times of England, the patterns of the tapestry so much used in the decoration of the dwellings of that period were remarkable (considering the artistic means of the age), for a combination of both historical interest and ornamental design.

During the Middle Ages the fair ladies of England, in both palace and hall, directed the hands of numerous assistants in the production of hangings, embroidered and otherwise, for ecclesiastical and domestic edifices.

Ladies, in needlework pictures of large size, represented the heroic deeds of their husbands, sons, and brothers. They also devised scenes from Scripture history, and designed subjects connected with hunting, hawking, and other sports.

It is true that as the demand for this style of decoration increased, manufactories were established in various parts for their production. Without, however, taking account of these works, and confining ourselves to a comparison of the home-made productions of our ancestors, the historical designs which have already been mentioned, the diapers of many forms and colours, the embroidery of gloves, dresses, &c. &c. we cannot but feel humiliated by the contrast of the past with the present.

In looking over an immense number of designs for slippers, waistcoats, and various other things, the want of principle of design in the application of nature to ornamental purposes, was strikingly evident; so much so, indeed, that I wish you would call attention to this subject, and would direct our fair friends in London to no greater distance off than the tombs of the kings and queens in Westminster Abbey, and the numerous beautiful examples of diapers, &c. collected in the Architectural Museum, Canon-row, Westminster.

Back-Stitch.

CHURCH-BUILDING NEWS.

Stamford.—St. John's Church has been reopened. The work of restoration, under the direction of Mr. Edward Browning, of Stamford, architect, was commenced in May last, by the removal of the old and unsightly pews: all the old wood and stone floors were taken up, the nave arches scraped and restored, the clerestory windows divested of whitewash, the old belfry floor removed, the tower arches thrown open, and flues for heating the church introduced on a new principle. The work next commenced was the laying down of concrete, 6 inches thick, and upon this floors of deal were laid. Stalls, of solid English oak, were then erected, having bench-ends with carved finials, elbows, and sunk carved panels. The free sittings have moulded bench-ends with elbows. The whole of the seats have tracery backs of various patterns, with moulded capping. In addition to the stalls alluded to, there are eight loose framed seats, with tracery backs and carved bench-ends. The floors of the chancel and nave are laid with Minton's encaustic tiles. In the chancel, eight seats, set apart for the rector and the mayor and corporation, have four bench-ends with carved figures, representing the four Evangelists, executed by two self-taught workmen, named Rippin and Hull, in the employ of Messrs. Richardson. The organ, which stood in the south chapel, has been removed to the north chapel, and is enclosed on the south side by the screen which formerly separated the chancel from the nave. New stone altar-steps have been laid down. The reading-desk, on the right of the chancel, is new and of English oak, with open tracery front. The pulpit is of Roach Abbey stone, having four niches with canopy heads, under which stand four carved figures of the Evangelists, the whole surmounted with a carved and moulded capping. The whole of the works have been executed by Messrs. Richardson, and Mr. Tinkler, of Stamford. Two stained-glass windows, by Mr. Oliphant, of London, have been put up. The principal subject in the east window is "The Adoration of the Wise Men." The Virgin, with the Infant Saviour, occupies the centre, while the Magi kneel on either side with their offerings; and the side openings show a group of shepherds on the one hand, and of attendants on the other. Above are the angels, proclaiming "Glory to God in the highest;" and the star which has guided the travellers. In the lower part of the window, set in ornamental panels, and forming a base for the large picture, are five small groups representing our Lord blessing little children, questioning the doctors in the temple, His transfiguration, His triumphal entry into Jerusalem, and His appearance at Emmaus. The west window represents the conclusion, as the east window does the commencement, of our Lord's course on earth. The principal subject here, occupying the three centre openings, is "The Resurrection,"—the figure of the Redeemer rising from the tomb, a group of Roman soldiers dispersed, and an angel, seated on the removed stone. Parallel with this, and underneath it, is the entombment. One of the side openings contains a group of "The Crucifixion," the other has "The Baptism by St. John." The tracery of the window is filled with a choir of worshipping angels, and with figures of the four Evangelists. The east window, remarks the *Lincolnshire Chronicle* in describing it, thus commemorates the dawn and sunrise of Redemption, the west its victorious and complete accomplishment. This window is the gift of Mr. R. N. Newcomb, and is erected to the memory of his late uncle, Mr. Richard Newcomb. The east window was undertaken on the responsibility of the Rev. D. E. Jones, who, through the kindness of several friends, has succeeded in raising rather more than one-half of the required amount.

Shearsby-in-Knaptoft (*Leicester*).—The church of this place has been restored and re-opened. The architect, Mr. Ordish, of Queniborough, has, it seems, as far as possible, endeavoured to preserve the original architectural details, though, from the mutilated state of the fabric, and the alterations which have, without either taste or judgment, from time to time, been made, this must have been a difficult task. With the limited means at the disposal of the executive, however, economy was a point of essential consideration. The old oak chancel screen, of fourteenth century, has been restored. New chancel stalls have been fitted up in substitution of the old decayed pews; and in the body of the church have been erected mediæval benches, with square ends, of very plain construction. The old leaden-covered roof, which was before nearly flat, graduating only a few inches from the eaves to the apex, is now highly pitched, with open framework. There are several portions which have not been restored from want of funds, and amongst them the piscina and sedilia. The exterior of the building presents a curious aspect with the irregular stonework and the apex of the roof rising nearly to the top of the tower, which was built during the last century, but has no distinct form of architecture. The originator and prime mover in the work of restoration was the late wife of Mr. Thomas Wilson, of Knaptoft Hall. As a tribute of respect to her memory, a small lancet stained glass window has been placed in the north wall of the church by the architect, and another of more ample dimensions is about to be placed near it by the relatives and admirers of the deceased. It is now being prepared by Mr. Hardman, of Birmingham. The contractor for the restoration was Mr. Horton, of Mousley, and the expense incurred is about 700*l*.

Cottenham.—The opening of the new Baptist Chapel, at Cottenham, took place on Tuesday before last. The chapel, which has recently been erected after plans by Mr. Thomas Haird, at a cost of upwards of 1,427*l*. stands upon the site of the old building. It is built of white brick, and the interior is calculated to hold sittings for 750 persons. Towards the cost of its erection 1,147*l*. 10s. 6d. have been subscribed in the village.

Oxford.—At Christ Church Cathedral, a few days ago, says last week's local *Journal*, a subterranean chamber, supposed to have been used for the secretion of plate or other treasures, was discovered on the site of the organ gallery. Its size is 7 feet by 5, the walls 6 feet high, with an arched roof. There were cavities on the north and south side, measuring 14 inches by 16, and 1 foot 8 inches deep. On the top a beam appeared to have run across, and on one side was a kind of niche from the top to the bottom. This chamber, the purpose of which has puzzled the architect, the builder, and many antiquaries, has been again covered over, and will doubtless excite similar curiosity in some coming period.

Aylesbury.—On Monday before last a vestry meeting was held, for the purpose of sanctioning the purchase of ground, by the Burial Board, for the new cemetery. Ultimately sanction was given for the purchase of four acres of the ground selected, at a cost of 820*l*. The land selected for the new cemetery is near to the New Road Turnpike, and is the property of Mr. T. Bell.

Little Braxted. — The parish church here

having been restored and re-seated, under the superintendence of Mr. Ewan Christian, was re-opened on 11th ult. for divine service.

Wombridge.—On Tuesday before last, the parish church of Wombridge was reopened, after having been repaired. Mr. St. J. C. Charlton, of Apley Castle, has paid the cost of painting the church, which has been executed by Mr. C. Tudor, of Oakengates.

Tunbridge.—The cemetery buildings will comprise an entrance lodge and two chapels, each 30 feet by 40 feet, connected together by a centre archway, over which is a spire containing the bell. The buildings are designed in the Gothic style of the Decorative period, and will be faced externally with Kentish ragstone in random courses, and lined internally with hollow bricks, to prevent damp penetrating. The whole of the works have been designed by Mr. J. Messenger, of Folkestone, architect, who has already executed two or three cemetery buildings in the county, and will be carried out, under his immediate superintendence, by Mr. George Punnett, for the sum of 2,296*l.*

Croydon.—An appeal to the inhabitants, for the restoration of the parish church, has been circulated by Mr. Hodgson, the vicar.

Newport (Isle of Wight).—The reopening of St. Thomas's Church, according to the *Hampshire Advertiser*, will take place on the 25th inst. The building-fund has now reached the sum of 9,368*l.* odds, or to within 400*l.* of the amount required for the completion of the whole fabric. The inner arch of the principal entrance is all that remains of the ancient fabric. The alabaster effigy of Sir Edward Horsey is re-erected on the south side of the altar, and a large space is left on the eastern side for the monument to be erected, by special order of her Majesty, to the memory of the Princess Elizabeth, and which is now in course of completion by Marochetti. The designs in ornamental carving are being developed daily about the church by Mr. Baker. Most of the pews in the body of the church are completed, and an order is just being given for laying the gas-fittings, glazing, painting, &c.

The Berrow (near Ledbury).—The church of St. Faith, in this parish, was reopened on Thursday before last, after undergoing considerable restoration. The edifice was in a miserable state of dilapidation and decay,—the walls saturated with wet, owing to want of proper drainage, and the roofs rotten,—the old oak benches much defaced, or removed to make way for high pews, and neither wind or wet could be kept out by the decayed and broken doors and windows. The incumbent, the Rev. Mr Law, induced his parishioners to make a parochial grant, and to subscribe liberally to a fund for effecting the works which have now been completed under the direction of Mr. J. W. Hugall, of Cheltenham. The nave and aisle have been entirely reseated with open oak benches: the prayer-desk, lectern, and pulpit, are also of oak: the floors are paved with Minton's tiles, and open roofs have been put upon the building: the walls have been newly plastered, and the windows glazed with cathedral glass. The chancel is still in an unseemly condition, with broken brick floor, rotten plaster, and dirt: the *owner*, it is said, will neither restore it nor allow any one else to do so for him.

Llanerchymedd.—The church here was re-opened for divine service on the 16th ult. The edifice has been almost entirely rebuilt on the old foundation, except the tower, which has had new windows, and a roof put upon it. The style in which it has been designed is a rather Early Pointed. The plan consists of a chancel, 37 feet by 18 feet 6 inches, a nave, 48 feet by 19 feet 5 inches, and a north porch, with tower at the west end, the lower story of which is occupied by a vestry, and above is a ringing-chamber, the third, or uppermost story being intended for bells. There is a small bell-cot on the east side of the tower. The church, as re-arranged, is calculated to contain 260 persons. In the interior is an open timber roof, stained and varnished, as are also the seats, which are all open. The reading-desk and pulpit are placed on the north and south pier of the chancel arch. Within the altar-rails are two carved oak chairs, the gift and design of Lady Sarah Hay Williams. The total cost has been upwards of 1,000*l.* The architect was Mr. H. Kennedy, of Bangor. The additional burying-ground was given by the incumbent, the Rev. Hugh Owen, and has been fenced round by a wall.

Shrewsbury.—Belle Vue having been fixed upon for a cemetery, it was laid out and walled in. The ground has a southernly aspect, and is about two acres in extent. A considerable number of burials have already taken place in it. On Wednesday week the chief stone of the chapel which it is intended to erect upon the ground was laid. The chapel will be in the Early English style, of Redhill stone, with Grinshill stone dressings. On each side will be four buttresses, with neatly moulded water-tables, and three lancet-headed windows. The north end will be the principal face, in the centre of which will be a moulded entrance doorway. On each side of the doorway will be a lancet-headed window: over the gable part will be a moulded wheel window. The gable itself will be surmounted by a bell-turret, of Grinshill stone. The roof will be covered with part ornamented, and part plain, blue tiles, with ornamented blue cross. The roof of the interior will be open, showing the timbers, which will be all dressed: the principals will be ornamented. The reading-desk and seats will be open work, stained. The floor will be laid with blue and red quarries, diamond-wise. Mr. Pickard, of Shrewsbury, is the architect. The building is intrusted to Mr. John Cross, of this city.

King's Norton. — The church here has been re-opened. The east window, a plain five-light lancet, has in stained glass in the centre the Crucifixion, and in the two side lights the four Evangelists, with figures of angels holding scrolls and texts of Scripture. A round-headed window on the south side of the chancel and a priest's door have been removed, and a Decorated window and a new door inserted. This window and the two on the opposite side of the chancel are filled with ornamental stained glass, and the emblems of the Passion in the centres. The pews have been removed and converted into open seats, the old materials being worked up. The chancel has been laid with encaustic tiles, presented by Mrs. Prosser; and the altar rails are in brass, presented by Mr. Stock. The nave and lower entrance, with the cross-aisle, have red and blue quarries chequered. The skylights in the roof of the nave and a window over the chancel arch are now blocked up, and the pillars and arches of the nave have been scraped. The iron bars in the windows of the south aisle will be replaced by stone mullions, and a stone pulpit is to be erected. The Perpendicular windows of the porch, which have been blocked up for many years, are now restored. The organ (built by Harmshaw, of Birmingham) is placed at the west end of the south aisle.

Birmingham. — A new Synagogue, with schools and houses for the ministers, have been erected on a piece of land at Singer's-hill, near the old Synagogue in Severn-street. The building was commenced in June, 1855. Henceforth the whole of the Hebrew institutions of the town will be consolidated in the new building, and the two old Synagogues and the Hebrew school in Hurst-street will be sold. The new Synagogue was to be consecrated on Wednesday. The building was designed by Mr. Henry R. Yeoville, architect, and has been erected, under that gentleman's superintendence, by Mr. Samuel Briggs (both of Birmingham). The main features of the design are Early Italian, but in the details the Byzantine style has been freely used. The materials employed externally are red and white bricks, with dressings of Kingswood stone. The principal front consists of three sides of a quadrangle, of which the ministers' houses form the wings, the centre being occupied by a stone portico of three arches, surmounted by a cornice with an enriched parapet. The front of the quadrangle is enclosed by an iron railing, with gates. Above the portico rises the gable of the main building, in which is inserted a rose window, of twelve lights, filled with stained glass. The side elevations of the building are much plainer than the front. They are pierced by two tiers of windows, the lower modelled on Byzantine examples, and the upper semicircular-headed, with moulded architraves of white brick. The whole is surmounted by a cornice of white brick and stone. Entering by the principal front, and ascending a low flight of steps, access is afforded from a portico to the galleries. A lavatory is attached to the left-hand side wall of the portico. Entrance to the Synagogue is obtained through a vestibule, lighted from the roof. On each side are rooms for the ministers and choristers. The Synagogue consists of a nave, north and south aisles, and an apsidal chancel, or sanctuary, raised four steps above the floor of the nave. The total length is about 90 feet, the breadth 60 feet, and the height 42 feet. A gallery runs round the sides and west end of the interior, and this necessity of the construction has compelled the architect to adopt two tiers of columns, forming seven bays. These arcades divide the aisles from the nave. The columns, which are of Bath stone, support the semi-circular ceiling of the nave, which is divided into panels by enriched bands. It is intended, according to *Aris's Gazette*, eventually to decorate the ceiling with colour. The sanctuary opens to the nave by a lofty arch, with carved soffit and archivolt. The arch is supported by eight scagliola columns, arranged in double tiers, the lower ones being square. Two similar columns, placed at the back of the sanctuary, support the hemispherical, domed roof, which is groined and panelled. The sanctuary is lighted by three deeply-recessed semi-circular headed windows, decorated with pilasters with foliated capitals, and with enriched archivolts. The windows are filled with stained glass, of geometrical designs, chiefly a diaper. In the centre window are placed the tables of the Decalogue, inscribed in Hebrew characters. The centre compartment of the sanctuary, used as the ark, or depositary for the sacred writings, is decorated with a canopy of crimson velvet, and curtains of colours varying with the seasons of the Jewish Church. The seats throughout the building are arranged stall-wise, without doors. The gas-fittings and candelabra were manufactured by Messrs. J. and E. Ratcliff, the stained windows by Messrs. Chance, and the painting and staining of the woodwork by Mr. Whitworth, all of Birmingham..

Edgbaston (Birmingham).—An addition to the church of St. George, Edgbaston, has just been completed by Messrs. Branson and Gwyther, from the designs of Mr. Charles Edge, of Birmingham, in the erection of a chancel, with a vestry and a turret on its north side. By this extension, many additional seats have been gained in the body of the church, and about 200 children can now be accommodated in the galleries. The stained glass which formerly filled the east window has been removed into the chancel. The interior is fitted up with stalls on either side, and the roof is open timbered. The details are in the style of the building—Early English.

Ilam (Dovedale.)—The church of Ilam has been recently restored and reconsecrated. The most material addition has been a new aisle on the north side, capable of accommodating fifty persons. The rest of the church has, however, been so much altered, that no part of it, says the *Derbyshire Advertiser*, would probably be recognised, save the old porch. All the roofs have been raised: they are open inside, and outside are covered with variegated tiles. The tower has been very much raised, and now terminates in a saddleback roof, the gable ends of which are pierced with windows. A peal of five bells, cast by Messrs. Taylor, of Loughborough, has been hung in the tower. The whole area of the church has been seated with open benches of solid oak. A chancel screen crosses the chancel arch: it is of metal, and is the work of Messrs. Skidmore, of Coventry. The chancel seats are placed stallwise, and are carved. The pulpit is of Hopton-wood stone, polished, with carved medallions and shafts of Derbyshire marble. The east window is a triple lancet, with columns of dente marble on the sides, and filled with glass by Ward, designed by Mr. Clayton. Below this window is a reredos, the gift of the vicar, of alabaster, carved, the compartments filled in with tiles from Messrs. Minton's manufactory. An archway, adorned with much carving, leads through a lobby, which has been enriched with a groined ceiling, to the cemetery chapel, containing Chantrey's monument: from

this lobby a door opens into the sacristry. The nave is enriched with three stained glass windows: a large one, the gift of Miss Young, which is not quite finished, represents the Visit of the Wise Men to the Infant Saviour. A small lancet, of early date, has been filled with stained glass by the contributions of the parishioners: it represents the Baptism of our Lord. Another small round window has been inserted by Mr. Watts Russell, to whom the entire restoration is due, with the exception of some gifts from friends and neighbours. The restoration has occupied more than a year, and has been performed by Mr. Evans's workmen. Mr. Harrison was the clerk of the works. The stone carving of the capitals of pillars, &c. was done by a carver named Herley. The church is warmed by a hot-air apparatus, supplied by Mr. Handyside, of Derby. In the excavations for this, and in the demolition of old walls, several curiously-carved monumental crosses of great antiquity were discovered. The church has been restored from designs furnished by Mr. Scott.

Lancashire.—A monument has been recently erected in the churchyard of Great Eccleston Fylde, Lancashire, in memory of Mr. Robert Parkinson, designed by Mr. J. G. Hall, architect, London, and executed by Messrs. Yates and Robinson, of Preston, contractors. It consists of a Gothic cross—the inscription on the stem.

Preston.—The proposed new Baptist chapel in Fishergate will be erected on a site at the corner of Charnley-street. In addition to local competition, says the local *Guardian*, plans were sent in from architects in Leeds, Manchester, and Sunderland. The successful competitors were Messrs. Hibbert and Rainford, of this town, a brief epitome of whose designs we subjoin:—The structure will be erected at the south corner of Charnley-street, and will be entered from Fishergate by a flight of stone steps, with palisading in front. The ground-floor of the chapel will seat 450 persons, and the galleries 170 persons; but are capable of extension, so as to accommodate twice that number. In the rear of the chapel will be the vestry, dressing-rooms, and staircase to the organ-gallery. The seats will be open, and the roof will have open framing, consisting of rafters, with curved ribs, and spandrils filled in with ornamental iron castings. Beneath the chapel are to be boys' and girls' schools, divided by a movable screen, with separate entrances from Charnley-street. These schools will be 12 feet high, and have all requisite conveniences attached. The exterior will be altogether of stone. The style of architecture is Byzantine, of the Venetian manner, selected as giving the edifice a character distinct from the other ecclesiastical buildings in the town. At the corner of Charnley-street will be a square tower, upwards of 60 feet in height.

Manchester.—The fall of the tower and spire of an Independent Chapel, in course of erection at Higher Broughton, is thus noticed in the *Manchester Guardian* last week. "One part of the building was a square tower, rising as high as the roof of the main building, and surmounted by an hexagonal lantern, terminating in a conical spire. For a day or two some cracks and other indications of failure had been remarked, and on the morning of the accident, about five o'clock, the tower and spire, which had reached the height of 170 feet, fell with a tremendous crash, demolishing the west end, or street front, of the chapel, including a large Gothic window, the arched entrance at the base of the tower, a considerable portion of the roof, and the whole of a gallery intended for Sunday-scholars. From the manner in which the materials appear to have fallen, it would seem that the building did not topple over to one side, but the whole fell almost perpendicularly, as if the lower part of the tower had been crushed under the superincumbent weight of the lantern and spire. We understand that the damage sustained by this unfortunate event is estimated at about 1,000*l.* The damage would have been heavier if the tracery of the window had been filled in, and the turrets, pinnacles, and other ornaments of the front raised. The tower is 16 feet square, and the foundation walls, which are carried to a depth of a dozen feet or more, are 5 feet thick. The foundation had to be built deeper than was at first designed, in consequence of it being found that the ground was intersected by drains and watercourses, which may have had some effect in causing the fall of the building. From the hour at which this untoward accident occurred, nobody was at work on the building, and, so far as is known, no personal injury was sustained. It is frightful to think what might have been the consequences if the fall had taken place when the chapel was completed and occupied by a crowded congregation."

Scropton.—The church here, which was consecrated on the 25th ult. is designed in the Decorated style, and consists of a lofty tower, nave, chancel, and porch and vestry. It is built of the local stone, interspersed with courses of deep red sandstone, and radiated arches of alternate light and dark stone around the windows and arches. The tower is lofty, and its belfry lights are not louvered, but kept completely open, provision being made for carrying off the water. The tower is terminated by a pyramidal stone covering. The interior of the church is lined with stone, and the chancel arch ornamented by inlaid red stone and alabaster devices. The pulpit is also of alabaster, with red stone shafts and enrichments. The roofs are of deal, stained, as well as the seats. The church holds 270 people, and has been well executed by Messrs. Elliott and Lilley, the builders, from the designs of Mr. Ferrey, the architect.

York.—The new Wesleyan chapel, erected on the left side of the recently formed thoroughfare between Micklegate and Bishophill, called Priory-street, has been opened for divine service. It is of red brick, with ornamental stone facings, possessing five upper windows in front, three doors, and a staircase window on either side. On each side of the chapel are two rows of seven windows, and in the rear are two vestries. Galleries extend round the chapel in an oval form, the pews in them being five deep at the sides. The pews, which have mahogany tops, are painted white. The lighting of the building is accomplished primarily by a large central "sun-light," consisting of 164 jets of gas, arranged in four circles, in the form of an inverted cone, and suspended about 4 feet from the ceiling. This mass of light is sufficient for the galleries and the body of the chapel, and it is even expected that pulpit lights will be dispensed with. The pews under the galleries are lighted with lamps placed round the walls. The chapel is provided with hot-water apparatus for heating, and ventilated by the open funnel in the ceiling over the "sun-light." The architect of the chapel was Mr. James Simpson, of Leeds, from whose designs the Centenary chapel was also built. The masonry and brickwork have been executed by Mr. Shaftoe, builder, of this city, the joiner's work by Messrs. Atkinson and Thorpe, of Leeds; the plumber's work, by Mr. T. Shouksmith; the plasterer's, by Mr. Geo. Jennings; the slater's, by Mr. W. Ellis; and the painter's, by Mr. G. Wood, all of this city. Mr. G. J. Calvert has supplied the warming apparatus and the communion rails, and the gas company the lighting appointments.

Cadeby (near Doncaster).—The consecration of the Church of St. John the Evangelist, at Cadeby, took place on Thursday in last week. The church has been very recently completed, from the designs of Mr. Scott, and at the cost of Sir Joseph Copley, Bart. on whose estate it is erected, and who has also endowed it. It lies to the right of the road leading from Cadeby to Melton, and overlooks the vale of the Don. The style employed is the Early Decorated, and the stone used is the white limestone on the estate of the founder. The roof is overlaid with Westmoreland slate, and surmounted by a bell turret—and the porch has a deeply-recessed arch. The capitals of the doorway of the porch and the sides are carved. The chancel is lighted by a window of three lights, with circular head cusped with trefoils, filled with tracery—a copy of the old Norbury window—by Mr. Powell, of London. The west end is lighted by two windows, of two lights each, surmounted by a circular window, filled with Powell's patent glass. The pulpit and reading-desk are of oak, from designs of the architect, carried out by Mr. Webster, of Boston. The chancel fittings and the altar rails are also of oak, and the work of Mr. Rattee, of Cambridge. The floor of the chancel is laid with Minton's encaustic tiles; and the nave is covered with the patent tiles, from the works of the same firm. The interior roof is composed entirely of oak rafters, with stencilling between the timbers. The dimensions of the interior of the church, which stands on an acre and a half of ground, are—the length of the nave, 34 feet 7 inches; width, 16 feet: length of the chancel, 23 feet; width of the aisles, 8 feet; height of caps of piers, 12 feet; pitch of the roof, 31 feet. The approach is by a gentle ascent from the highway of a terrace of five steps. The cost of the church has considerably exceeded 5,900*l.*

COMPOSITION OF MORTAR.

With reference to the paragraph last week on this subject, inquiries have been made as to the proper proportions of clay and lime to be used. In reply to these, our communicant, Mr. Stephen Garrard, obligingly writes as follows:—The mixture of the heaps has usually been five of clay to one of chalk. Of course, if the result gives too much or too little strength for use, it is easily remedied by the addition of ground ballast (the burnt clay), or lime, as may be required. The ballast may be treated as sand, and mixed with lime in the ordinary way. Care must be taken that the clay is well burned and well ground.

THE DISTRICT OF NEWINGTON, &c.

It has been suggested that the vacant district should be divided into two. We are glad to find the committee of the Board of Works, to whom the question was referred, appreciating the importance of obtaining men of integrity and good standing as district surveyors, have agreed to recommend that it is not desirable to make the division. Mr. Hesketh, who assisted materially in improving the present Building Act in its passage through Parliament, is a candidate for the appointment. The Board could not have a more efficient officer.

RAILWAY MATTERS.

Traffic Returns.—The traffic returns of railways in the United Kingdom for the week ending Sept. 20 amounted to 492,091*l.*, and for the corresponding period of last year to 450,248*l.* showing an increase of 41,843*l.* The gross receipts of the eight railways having their termini in the metropolis amounted to 213,490*l.* and in last year to 199,837*l.* showing an increase of 13,653*l.*—The increase on the Eastern Counties amounted to 1,503*l.*; on the Great Northern to 867*l.*; on the Great Western to 2,270*l.*; on the London and North-Western to 6,913*l.*; on the London and Blackwall to 62*l.*; on the London, Brighton, and South Coast to 1,107*l.*; on the London and South-Western to 1,762*l.*; on the South-Eastern to 164*l.*: Total, 13,653*l.*—The receipts on the other lines in the United Kingdom amounted to 278,601*l.* and for the corresponding period of 1855 to 250,411*l.* showing an increase of 28,190*l.* in the receipts of these lines.

Railways in Russia.—The principal network of railways to be constructed in Russia has been conceded to a company composed of capitalists of various countries, among whom the chief are the heads of the Paris Credit Mobilier, and MM. Hottinguer, Baring, Hope, and Stieglitz. The concession is granted for 85 years, and a minimum interest of 5 per cent. is guaranteed to the shareholders by the Russian Government. The lines must be completed in ten years. In consequence of this decision, MM. Isaac Pereira and Thurneissen, on the part of the Credit Mobilier, have left for Russia.

Railways in America.—From a statement made up to the end of 1855, of the extent and cost of the railways in the United States, compared with those of Great Britain, we learn that the number of miles of railway opened in America is 23,242, and the cost of construction has averaged 7,100*l.* per mile. For this country the total is put at 8,334 miles (reckoning 3,076 miles of double track as 6,152), and the cost 36,000*l.* per mile. The people of the United States, therefore, are congratulated on having obtained nearly three times the extent of railway possessed by Great Britain, at little more than one-half of our aggregate outlay. The difference in the durability and general character of the roads, and also of the rolling-stock, must, however, be taken into account.

PROPOSED COMPETITION FOR THE PALACE OF INDUSTRY,

TO BE ERECTED IN AMSTERDAM.

It is proposed to erect a building in Amsterdam for industrial exhibitions, with bazaars for collections of objects of art and science, and rooms for meetings and other purposes; and an appeal is made to the architects of all countries for designs. For the convenience of some of our readers, we give insertion to the instructions and conditions which have been issued.

"The ground, of a rectangular form, has an area of 40,000 square mètres, ten acres of which the buildings, without the yards, may cover: 10,000 square mètres = 2½ acres.

The following subdivisions are required, viz.:—

A. A monumental front, containing a colossal vestibule, in which apartments for the royal family, rooms for meetings of the members of the society with their ladies, for the directors and administrators, and for audience chambers; finally, with rooms for the principal home officials and accessory apartments.

B. A series of saloons of different dimensions, varying from 150 to 250 square mètres, which are designed for cabinets, libraries, and collections of objects of art. The number of these saloons must be about twenty, and they may be arranged in two stories, of which the upper is merely destined for placing the collections of objects of art, and which will be provided with light from above.

C. A central exhibition-room, having an area of about 7,000 square mètres, in which should be a gallery, not exceeding 8 mètres in breadth, and containing two refreshment-rooms, with their kitchens, cellars, and the needful dwellings for servants.

The parts B and C must be arranged so that they may be enlarged *ad libitum*, without diminishing the perfection of the original plan; a particular which must be shown clearly in the plans.

The galleries, staircases, communications, and a sufficient number of retiring places, must be easy, spacious, well lighted, and have good ventilation.

The buildings, A, B, and C, must be so arranged that each part can be made respectively accessible to the public. The construction must be solid, and at the same time elegant; also, as far as possible, fire-proof. The principal arrangements and the kind of materials to be used must be clearly described and pointed out, also the manner of lighting, warming, and ventilating.

The space around the buildings must be laid out as gardens and walking-places for the visitors, with large plains before the front, and with covered ways for equipages, whilst the mode of inclosing and adorning the gardens with fountains, benches, groups of statues, is left to the taste of the architects.

To the plan must be added the needful drawings and illustrations, and also an approximate valuation of expense, the cost of piling not included. The ground plan to be made on a scale of 0·003 to 1,000 = 3 : 1,000.

The elevation of the front, the sections of length and breadth, on which the principal construction must be clearly shown, to be on a scale of 0·005 to 1,000 = 5 : 1,000. It is left, however, to the architect to make the drawings of the details on a larger scale.

To the best-judged plan will be awarded a premium of 1,000 f. Dutch currency; and to the two plans approaching the nearest to the best approved, 300 f. Dutch currency.

The three above-mentioned plans remain the property of the society: those which are not crowned can be reclaimed by the authors.

As competitors, the architects of every civilised nation are invited.

The plans must be sent in, free of postage and expenses, before the 31st of December next, to the Secretary of the International Society of Industry, 118, Bloemmarkt, at Amsterdam: they must be distinguished by a motto or mark, and provided with a sealed letter, containing the name, quality, and the domicilium of the authors. The same motto of the plan must be placed on the outside of the letter, with a clear sign for subsequent claim.

The decision on the plans is left to a jury of qualified persons, to be elected by the Council of Superintendence of the Palace, and the report of their judgment will be made known by the journals and periodical publications.

The Direction to the International Society of Industry.

(Signed) D. S. Sarphati, Chairman.

Amsterdam, Sept. 1, 1856."

With the result of the Lille Competition before their eyes, it is to be hoped that English architects, before they compete, will obtain some assurances as to the intentions of the committee, with respect to carrying out the selected design.

ENTRANCE TO ST. JAMES'S HALL, 28, PICCADILLY.

PROPOSED ST. JAMES'S HALL, LO[illegible]

ST. JAMES'S HALL, LONDON.

Advertisements have made known to our readers the formation of a company to provide the west end of London with a suitable music hall. Arrangements are in a forward state, we are told, for commencing the works.

The proposed building, designed by Mr. Owen Jones, architect, will be erected on a plot of ground in Vine-street, extending from the Quadrant to Piccadilly, and will have a frontage in Vine-street and in George-court, with entrances in Piccadilly and the Quadrant. We engrave a view of the intended entrance in Piccadilly.

The building will consist, on the ground-floor, of two minor halls, the one 60 feet by 60 feet, and 24 feet high, entered from the Quadrant; and [illegible] entered from Piccadilly. On the first-floor will be the great hall, 60 feet by 136 feet, and 60 feet high; entered both from the Quadrant and from Piccadilly. There will be besides exits from all the halls, in Vine-street and George-court. The staircases are at the angles

and external to the main building. A private entrance for the Queen is obtained in Vine-street, and the staircases and accommodation for a large orchestra are obtained in George-court. Next the Regent-street entrance will be a spacious *restaurant*, with two rooms, 60 feet by 40 feet, and every other accommodation. The large hall, of which we have engraved a view, is on plan a parallelogram, five squares wide and eight squares long, with recesses at one end for the orchestra and at the other for the galleries. The vault is a semicircle, 30 feet diameter, springing at 30 feet from the floor of the hall. Between each square are small columns, from which spring ribs, stretching right across the hall, and dividing the surface of the vault into eighty spaces, equal on plan, but varying in elevation. At each of the intersections of the ribs will be suspended a gas chandelier in the form of a star, to diffuse one equal light over the whole surface of the hall. To show the decoration more clearly, we shall give one compartment more at large on another occasion.

PROVINCIAL NEWS.

Chelmsford.—A meeting of the inhabitants of Chelmsford was held in vestry last week to consider a proposal to apply part of the Attwood Fund in aid of a project for clearing the entrance to the New London-road of a house recently sold, so as to effect a considerable improvement in the general appearance of the town. The proposal in shape of a resolution was voted for by a majority of twenty-five to twelve, but a poll was called for and agreed to.

Maidenhead.—The Town-hall of Maidenhead has been repaired. The flooring and other parts were in a bad condition. The ventilation was also much complained of. Conveniences, which did not exist before, have been added. The expenses will be defrayed by subscription, collected by the Mayor.

Kingskerswell (South Devon). — The new schools in this parish, built by the Rev. C. A. Fowler, the vicar, were lately opened. They are from a design by Mr. Hugall, the architect of the re-building of St. Mary's Church of this place.

Cardiff.—The new bridge over the Taff River, near Eirw village, in the Rhondda Valley, which has been in course of building for some time, was, on Monday before last, carried away by a flood caused by heavy rain. This will cause great delay and a heavy loss to the contractor, Mr. Richard Mathias. Had the fine weather, it is said, continued a week longer, the bridge would have been placed beyond danger.

Wednesfield.—The new schools here were to be opened on Monday. They are situated near the parish church. Mr. Edward Banks was the architect, and Mr. G. Spilsbury, the builder, both of this town. There is a play-ground in front of the building, and a master's-house (now erecting) adjoining. The site of the school building and a large portion of the play-ground, valued at about 200*l.* have been given by the Rev. W. Stephens, the vicar of Wednesfield, out of private property, by which the school fund will be benefitted another 200*l.* from the committee of council.

Cheadle.—New schools have been erected at the village of Tean, and were opened on Tuesday in last week. They have been erected at the sole expense of Messrs. John and Nathaniel Philips and Co. tape manufacturers, of Tean, Cheadle, Eagley, Manchester, and other places. The new buildings stand on an eminence at the upper end of the village, overlooking the church and fronting to the west. They consist of three rooms for boys', girls', and infants' schools. The boys' school is in the centre, the others transversely at either end, forming the wings of the building. The centre room is 60 feet by 35: the others are 60 feet by 25 each. They are built in the Tudor style, of native bricks, with Hollington stone dressings; open timber roofs, planed and stained. There are also class-rooms, play-grounds, a terrace, and other conveniences. The site upon which the schools are erected was presented to the firm by Mr. John Capel Philips, of the Heath House. They have been erected from the designs of Mr. M. Thompson, of Kendal, architect, by Messrs. Keats, Bostock, and Gosling—the former contracting for the brick and stone work, the second for the joiners' and carpenters' work, and the latter for the plumbing, glazing, and painting. The cost of the buildings has exceeded 3,000*l.*

Burslem.—The Burslem new Town-hall is rapidly approaching completion. Mr. Hales, the surveyor, in his report to the local Board of Health, states that the contractor had completed his original contract, and that there only remained the colouring and decorations to be done preparatory to the opening.

Leeds.—The foundation-stone of the St. Peter's new National Schools was laid on Sunday before last, by the bishop of the diocese, immediately after the morning service. It is estimated, according to the *Leeds Intelligencer*, that about 5,000*l.* will be required for the work. The new schools will be situated on a plot of ground on the north-east side of the parish church, which has been purchased for the purpose, and it will be necessary to pull down several houses. The buildings will cover a considerable area, and will comprise three teachers' residences, with boys', girls,' and infants' schools, having separate entrances to each. The schools will be capable of accommodating 937 children; and there will be a library, class, and lecture rooms, and open and covered play-grounds. The design is in the Perpendicular style of architecture, in harmony with the church, being brick with stone dressings, with tower at the north-east corner, containing a staircase and ventilating shaft. Messrs. Dobson and Chorley, of Leeds, are the architects.

Montrose.—The local *Review* speaks of designs for new Assembly Rooms and Corn Exchange. The styles are Classic and Gothic. The first-floor of the large hall will accommodate 650 persons. There will also be large galleries at each end, capable of seating 200 each; thus giving accommodation for an audience of 1,050. Under the galleries is a large hall to hold about 300, for smaller meetings and *soirées;* together with several ante-rooms for committees, and dressing apartments; whilst a semi-sunk floor will contain kitchen, scullery, and other useful appendages, for *soirées*, dinners, &c. Under the west gallery will be the stalls for the corn-factors. The entrance to the hall will be by a wide covered entrance through Mr. Mitchell's proposed new building in High-street, and passage leading to the intended new markets. The erection of the Assembly Rooms was to be proceeded with without delay, whenever the company was formed, which was to be in a few days.

Jersey.—The new infant school-room, built at the bottom of Clear View-street, at the back of Upper Val-Plaisant, was opened on Wednesday before last. The school-house, says the *Jersey Times*, is built for the instruction of infants belonging to St. Mark's district, by which means the St. Mark's schools will be relieved of a large number of young children, to be prepared for the more advanced schools. The new building is 46 feet long by 20 feet broad. The roof is open to the ridge, with a skylight in the centre, and moulded oak-stained rafters. Messrs. Balsam were the builders.

VENTILATION AND THE VICTORIA HOSPITAL.

The arrangement, construction, and the ventilation of hospitals are of the utmost importance. It is a fact as old as the human race, that fresh air is necessary to health and life. It is also a fact, that this fact is seldom fully realised and acted upon. Look at modern society, at our theatres, at our ball-rooms, at our private houses, during an evening party, and hear what such observers as Mr. Roberton say of our hospitals. I have seen something of the way of modern life, civil and military, low and high, and feel compelled to report that ventilation is not attended to. The poor will crowd living-rooms and sleeping-rooms, until there is not more than 30 or 40 cubic feet of air space to each inmate. Our nobility and the rich will crowd a levee, a state-ball, or an evening drawing-room party, until there is not more than 20 or 30 cubic feet of air space for wax-lights and human lungs, combined. The doors on such occasions must be opened, or the lights would grow dim, and the ladies might faint. At the dinner-table we have our plates changed. We do not pig from a common dish, or eat with our fingers; but at an evening party we breathe lung-tainted air, which is much worse. The necessity for ventilation may be acknowledged: the principle is not practised.

The country is much indebted to you for noticing the Victoria Military Hospital, as also for giving Mr. Roberton's and your own remarks. The arrangement of the wards in the Victoria Hospital is bad, beyond the power of artificial ventilation to mend. Hospital wards ought to be independent of each other, and independent of artificial means of ventilation. There should not be the least chance of the air of one ward tainting the air of any other ward: the foul air of latrines should pass away without "an artificial current of air from the wards." Look at the plan (p. 458, *ante*), and see if rooms, or wards—T T—X X—V—U—&c. story over story, with latrines, S S, betwixt on each floor, and under the same roof, can be prevented even by artificial means from tainting each other. But why adopt this connected form of construction? Did the architect wish to produce a grand elevation, or has it been to economise space? It cannot be this latter, as there is abundance of space inclosed that is useless to the wards and to the sick to be confined in them. C. E.

We have received numerous adhesions to our belief, that the French plan we published is the correct plan,—detached wards,—each room for the sick inclosed by four separate walls,—windows on two sides opening from the ceilings, and double sashes glazed; further, the latrines should be divided from the wards by a passage, or corridor, and be under a separate roof.

The corridors to be continuous and close, to the height of a man, but open above with piers or columns: the spaces not glazed. There should be galleries and seats on the garden sides for convalescents. This is sadly too much neglected. There is no escape from a sick ward, when sunlight, trees, plants, grass, and the external air, would do more for the patients than all the medicine and doctors in the world. Thousands of lives might be saved annually if sick men could be turned out so as to look upon Nature, feel the sunshine, and breathe pure air. We are satisfied that sheds, open on one side, if the patient had food and clothes, proper and sufficient, would be healthier than any close room. This plan was adopted in the Crimea, and Mr. Rawlinson had the huts cut and carved as much as possible, so as to admit abundance of fresh air. At the hospitals on the Bosphorus, windows were broken wholesale. We all know the results.

BEDFORD AND EDUCATION.

Of the 11,693 residents of Bedford in 1851, only 4,681 were born in Bedford, leaving 7,012 born elsewhere, and the disproportion must now be much greater. Bedford as a town must thus be greatly on the increase. The main cause of this state of things is rather a curious one. In the reign of Elizabeth a native of Bedford, sprung from a very humble root, and who became a tailor in London, and eventually one of its lord mayors and a knight of the kingdom, —Sir William Harpur, to wit,—built a free school in his native town, and endowed it with a piece of ground forming a meadow of 13 acres 1 rood, in the rural parish of Holborn, near London, and worth 12*l.* per annum. The *crops* that latterly grew up on the Holborn meadow (in the shape of brick and mortar) have gradually increased the value of the little Harpur property, and now every pound sterling of the primitive twelve has multiplied to 1,000*l.*, with an odd 1,000*l.* over and above, so that no less than 13,000*l.* per annum are now devoted to the purposes of the Harpur Charity at Bedford. This may very well account for the remarkable increase of that town from the influx of strangers. The proceeds of the "meadow" were at one time shamefully squandered by the Bedford Corporation, but now the whole is being restored to its original purposes, and the Free Schools of Bedford at present contain 1,400 children of both sexes receiving free education on a comprehensive scale. The property has just escaped from Chancery, and is probably now destined to a still greater expansion than ever of the benefits which it has heretofore conferred upon the residents of Bedford. It is not education alone either that is pro-

vided from its funds, although its schools are free to everybody,—that is to say, if you (*pater-familias*) were to go to Bedford to-morrow morning, and take a 10*l.* house in that highly-favoured town, you could not only get all your children educated for nothing, and let them compete for 200*l.* prize premiums to teach them professions, but draw lots for ordinary apprentice premiums, marriage portions of 20*l.* each for your daughters, and, when you grow old, be provided probably with an endowed almshouse for yourself, with a weekly allowance, clothes, and medical attendance! These facts are not well known to the public, or Bedford would be resorted to still more than it has been by people of limited incomes. A complete history of this interesting charity has just been compiled by Mr. James Wyatt, of Bedford, in a small volume, published by Timæus, of Bedford, and Longman and Co. of London, to which we may refer those who desire to know more of the matter.

LINCOLN DIOCESAN ARCHITECTURAL SOCIETY.

MEETING AT MANSFIELD.

The autumnal meeting of this association was held this season at Mansfield on Tuesday and Wednesday, the 23rd and 24th ult., under the auspices of the Dukes of Newcastle and Portland, the former of whom occupied the chair. A numerous party of ladies attended amongst the audience. The Town Hall was hung around with the rubbings of brasses belonging to the association from their collection at Louth, and with drawings, plans, sketches, and illustrations of the various objects of interest in the neighbourhood or likely to be referred to in the papers read; and the table set out with objects of curiosity and vertu.

The Duke of Newcastle, in his opening address, explained the objects of the society. His Grace then proceeded to remark that it was not architecture in general which they wished to promote as their main and principal object, so much as ecclesiastical architecture. He would admit that England was in this respect an example to the world, and one which proved that the science of architecture itself had its origin in feelings of piety and devotion. In some earlier stages of the world, it had no doubt been misdirected to the worship of false gods, but nevertheless in a spirit of piety and devotion. In the gigantic temples of Egypt, the sculptured caverns of India, the dateless shrines of Peru, the more sculptured edifices of Greece and Rome, architecture had found its greatest object in works of piety and devotion. He might add to these the enormous pyramids and mausoleums to be found in many of the countries to which he had alluded. He might have gone back in these few observations, not only to the pyramids of Egypt, but the earlier Indian pyramids, as associated with what might to-day be called the cultivation of our own natural style of architecture, though called the "Gothic" architecture,—or by some, the "Pointed style"—but in common parlance the Gothic; although that term was given it as a term of opprobrium, and as such was it recognised for a long time, and with it, as such, he would not quarrel, but would claim for it the title of "native," for it had grown with the growth of our religion, and become engrafted on the soil by the taste of the inhabitants. At the same time, he could not underrate the architecture of St. Paul's, and of many structures of minor degree in this country; although the buildings which attracted the attention, and of themselves aroused the feelings, were all of this other native style of architecture. Greatly as he admired, when he visited it, the great church of St. Peter's, at Rome, never were his feelings raised to such a pitch in any church as when he had visited the magnificent and spacious Gothic cathedral church of Seville, in Spain. Some considered the Gothic or Pointed architecture to have been destroyed at the Reformation; and, perhaps, to a great extent, that feeling had prevailed against its resuscitation in this country. But it was entirely an error. In the conclusion of his address, the chairman remarked, that it was not a less important object of such societies to promote the science of and taste for architecture generally; not merely the architecture of public buildings, but extending their attention to the domestic architecture of the cottage as distinctly as to that of churches. This was not merely of great importance to the cottager by affording superior accommodation, contributing to decency and a proper mode of life; but tasteful designs—not too expensive, for their example would not be followed—promoted habits of cleanliness and comfort amongst the labouring population. They ought not to believe that because they had received a higher education, and lived in greater luxury and comfort, the poor were behind them in appreciation of the beautiful.

The report was then read by the honorary secretary, the Rev. G. H. Smyttan, of Hawksworth. It entered minutely and at some length into the state of various ecclesiastical and other works projected, in progress, and completed throughout the diocese. The report was adopted and office-bearers elected.

The first paper read was one on Old Churches and Old Records, by the Rev. Mr. Dimock, of Southwell, and related to the village churches in the neighbourhood.

A paper was then read by Mr. G. G. Place, architect, on the Ecclesiology of the Neighbourhood of Mansfield, a pretty full report of which, as well as of the other proceedings, appears in the *Nottinghamshire Guardian* of last week.

In the evening of the day of meeting, a large party of members and friends dined at the White Swan Hotel, the Duke of Newcastle in the chair; and afterwards an evening meeting was held, when many strangers were present, including a large body of the working-classes, whom the Duke of Newcastle addressed from the chair.

A paper, on the Suggestiveness of Gothic Architecture, was then read by the Rev. Mr. Smyttan; and Sir Charles Anderson afterwards delivered an extemporaneous address, in explanation of the objects exhibited. Sir Charles also made some remarks on the desirableness of obtaining practical opinions on the durableness of stone.

On the Wednesday an excursion party went to Skegby, and other places, including Bolsover, and returned to Mansfield in the evening, in time for the Nottingham train.

WHAT TWOPENCES CAN DO.

Two lectures delivered to the inhabitants of the village of Lancing, Sussex, by Mr. William White, jun., on the Limited Liability Act, and on Friendly Societies, and other cognate subjects, have been printed on folio sheets for circulation. In these addresses Mr. White points out various useful purposes to which even the poorest class of people might turn the Limited Liability Act, as in the formation of a trading company for the purchase and sale of coals and various other articles. And in respect to Friendly Societies the lecturer gives the details of a scheme showing how much mutual benefit might be derived from very small means, and which there appears to be some design of carrying out at Lancing. He takes the population at 1,514 and calculates on getting 1,000 of these either to join as members or to be put on the list by employers or friends, and thus proceeds:—

	Per Annum.
"Twopence per head per week from 1,000 persons would be	£433
Out of 1,000 persons 25 will die in the course of the year: reckoning the cost of interment, children and adults together, at £4 each, the cost of funerals for the year will be	100
That will leave	£333
Now I propose a young medical man to attend all the births and sicknesses of these 1,000 persons, and to give his whole time and attention to them: he will have on an average from 20 to 30 visits to make every day, and for that service he might perhaps be obtained for	100
That will leave	£233
Medicine and surgical instruments, say	33
That will leave	£200"

This balance it is proposed to dispense in weekly allowances to sick members, except £70 for expenses of management. Rules and regulations are then laid down for the management of such a scheme, and *with trustworthy management* there are certainly many ways, in these days of Joint-stock Limited Liability, and Friendly Societies, in which twopences might be turned to important uses.

METROPOLITAN BOARD OF WORKS.

Public Buildings under Building Act.—At a meeting held on the 26th September, the first business upon the agenda paper was "To hear and consider statements of Mr. J. G. Wigley, architect, and Mr. W. C. Stow, district surveyor, as to whether a building to be erected for the purposes of a private female community is to be considered a public building or not." If a public building, fireproof stairs and accesses would be necessary. The district surveyor said the Act of Parliament upon the question stated that "every building used as a college," or "for public instruction," was a public building. It appeared to him that this was a building used as a college. The only difference between the present and the old Act which related to the subject in question was, that the words "in large numbers" were introduced in the old Act. The clause had been copied, he believed verbatim, all but the words "in large numbers." There was also in the building in question an apartment for worship, and he apprehended that if any person applied to attend the chapel, he would not be denied; but he could not say whether that would or would not be the case. There was also another apartment for the instruction of children, and he apprehended that there would not be any very great objection to the number of scholars being increased, and he thought, therefore, it was for "public instruction; but he believed that Mr. Wigley would state, if it was necessary, that that apartment would not be used for that purpose. For the reasons he had given, he thought the building in question was 'a public building.'"

Mr. Wigley contended that there was a great difference between "public" and "private" instruction. The establishment in question was to be a "private" institution for ladies. There would be sixty persons living in the house, of whom thirty would be scholars. The apartment which had been made for the chapel had been made so as to hold just the number of persons whom they had in the building, and would not be large enough for anybody else.

The Clerk to the Board was then called upon to give his opinion upon the matter. He said he thought the building in question could not be considered a public building. The definition of a "public building" was given in the second section of the Metropolitan Building Act, which was as follows:—"Public Building shall mean every building used as a church, chapel, or other place of public worship; also every building used for purposes of public instruction; also every building used as a college, public hall, hospital, theatre, public concert-room, public ball-room, public lecture-room, public exhibition-room, or for any other public purposes." In looking to the old Act he found the Act referred to a number of places which were to be public buildings, and went on "for the assemblage of persons in large numbers, for business, instruction, or resort." The question was whether the building in question was specified within that rule, and he thought it was not. It could not be said that large assemblages of persons were to meet to resort to that institution for public instruction.

The question was then put, "To agree that it is a private building," which was carried, there being but one or two hands held up against it.

The Engineer to the Commission, Mr. Bazalgette, afterwards read a report on the Drainage of the Metropolis, of which the following is the more important portion:—

"I am still of opinion that, in the absence of deodorizing works, the sewage may be discharged into the Thames, without nuisance, at Halfway Reach, beyond the limits of the metropolis, in the manner already proposed for the south side of the Thames.

Various propositions have, however, been made with regard to the position of the outfall and mode of discharge into the river, and with respect to the application of the sewage to agriculture. I shall now, therefore, endeavour to lay before the Board some facts and estimates, to enable it the more fully to

consider and compare the merits of the different propositions, and to draw its own conclusions respecting them.

There appear to be four different modes by which the metropolitan sewage may be disposed of.

1st. By retaining the points of outfall originally proposed at Barking Creek and Woolwich Marshes (marked A on the plan), but dispensing with the reservoirs at those places, and substituting for them deodorizing works, and discharging the purified waters into the Thames at all times of the tide, after having abstracted from them the deodorised manure, which would be available for agricultural purposes.

2nd. By discharging the sewage into the river at Halfway Reach (marked B on plan), beyond the limits of the metropolis, at and near high water, so that it should not reflow up the river, within the limits of the metropolis, excepting on occasions of heavy storms, which occur on from twenty to thirty days per annum, and last for short periods only on those exceptional days, on which occasions the sewage would be highly diluted.

3rd. By discharging the sewage into the river at Long Reach (marked C on plan) during the first half of the ebb tide, reducing the capacity of the reservoirs, and preventing the reflow of the sewage into the river, within the limits of the metropolis.

4th. By conveying the sewage on the south side of the Thames underneath that river to the north side, and discharging it at Sea Reach (marked D on the plan) at all times of tide, so that it would not return within the limits of the metropolis, and dispensing with reservoirs, or by occasionally distributing such sewage, or any portion thereof, as liquid manure over the lands or marshes through which it would be conveyed on its route to this outfall.

In comparing the foregoing propositions, the expenditure forms an important feature; and I submit estimates of the first cost and probable annual working expenses of each system, having capitalised the latter, at 5 per cent. in order to obtain a more correct view.

I am indebted to Mr. Thomas Wicksteed for the estimates for the deodorising works, which are founded upon his experience at the sewage works at Leicester.

COMPARATIVE ESTIMATES.

	Estimate of Cost of Construction.	Probable Working Expenses.	Working Expenses capitalised at 5 per cent.	Total Expenditure supposed as Capital.
	£.	£.	£.	£.
Main drainage as originally designed to Barking Creek and Plumstead Marshes. (A on Plan.)	2,407,276	27,390	547,800	2,955,076
Ditto, without Sewage Works, extended to Halfway Reach. (B on Plan.)	2,733,606	28,330	566,600	3,300,206
Ditto, extended to Long Reach. (C on Plan.).....	3,082,136	39,550	791,000	3,873,136
Ditto, extended to Sea Reach. (D on Plan.)	3,844,300	43,705	874,100	4,718,400
Deodorising Works added at the Barking and Woolwich Outfalls, at A. on Plan	2,528,556	45,000	1,700,000	4,228,556

Thus it appears that the extension to Halfway Reach involves an increased expenditure of 345,130*l.*; to Long Reach, 918,060*l.*; to Sea Reach, 1,763,324*l.*; and the addition of deodorising works to the original scheme, 1,273,480*l.* The substitution of deodorising works for reservoirs at Barking Creek and Plumstead Marshes involves the smallest expenditure of capital, but the largest annual outlay. The capital would not, therefore, be irrevocably sunk. And this plan presents the following advantages, viz. that if the sewage manure should be found to be of commercial value, it would be available for sale; or should any mode hereafter be discovered by which it could be rendered more profitable, or deodorised more economically, advantage could hereafter be taken of any such improvements. On the other hand, should it appear that the solid manure was altogether valueless, a considerable saving might be effected in the manufacture by merely precipitating, deodorising, and barging it away, and thus dispensing with the drying process and preparation for sale.

This process would, I conceive, entirely remove the sewage from the river in a practical point of view; and by presenting the sewage in a dry, inoffensive, and portable condition, it would test the very prevalent opinion that the metropolitan sewage can be thus profitably applied to agriculture. A further saving of probably nearly half a million might, however, be effected by terminating the sewers and establishing deodorising works nearer to London, say in the Greenwich Marshes, on the south side of the river, and the West Ham Marshes, on the north side, which would, in my judgment, accomplish the object desired without creating a nuisance. I am still, after mature consideration, of opinion that the second proposition, or the extension of the outfalls to Halfway Reach would fully satisfy the requirements of the Legislature, and be effective in a sanatory point of view, as already explained in my former reports upon this subject. This plan would not greatly increase the engineering difficulties in executing the works; and, as regards expenditure, it presents considerable advantages over any of the other plans.

The extension to Long Reach appears also to meet the required object in a sanatory point of view, although the outfall would not be so remote from habitations as that at Halfway Reach; and, if the former is objected to, it becomes questionable whether this will be considered sufficiently advantageous to justify an increased expenditure of upwards of three-quarters of a million.

The discharge of the sewage into the river at Sea Reach, at all times of tide, may also be regarded as the entire purification of the river, and this point and mode of discharge would probably be considered satisfactory. There are also extensive tracts of marsh and agricultural land along the route of the sewer, over which the liquid manure, or a portion thereof, might hereafter occasionally be made to flow, should it be found, as has been suggested, to be of sufficient value to warrant the formation of the necessary distributory works.

In order to effect this extension, it would become necessary to construct the low-level sewer from Putney to the Greenwich Marshes, at an average depth of 10 feet lower than formerly recommended, and to have a branch sewer from Woolwich, to fall into the above main sewer in those marshes, so as to enable the whole of the southern drainage to be carried under the river at Bugsby's Reach, without a syphon."

Buildings in advance of the regular Line of Fronts.—The following letter was approved of, and it was ordered that a copy be sent to each of the metropolitan district surveyors:—

"Sir,—I am directed by the Metropolitan Board of Works to acquaint you, with reference to the verification of plans to accompany applications to this Board for consent, under the 143rd section of the Metropolis Local Management Act, to erect buildings in advance of the regular line of fronts in streets, and applications to this Board under the 26th section of the Metropolitan Building Act, that the Board have passed an order, directing that the duty of verifying such plans should be attended to by a surveyor attached to the department of the Superintending Architect, and that you will not, for the future, be required to perform such services.

The Board consider it of importance that the District Surveyors of the metropolis should be apprised of the interpretation which they put upon the expressions, 'The general line of fronts in any street,' under the Building Act, and the 'regular line of buildings,' under the Local Management Act: the Board regard these terms as implying the line of houses in the street as originally designed and built, without reference to subsequent additions, or so far as built when these Acts came into operation. The consent of this Board is necessary whenever any builder or owner proposes to bring forward any building from the main wall or front of a house, although many such buildings may have been carried out in the length of the street, or any division of it; and the Board are extremely desirous of maintaining and improving all streets and thoroughfares, and preventing encroachments on present widths.

To give effect to their endeavours to preserve the main lines of buildings, they rely upon the active co-operation of the various district surveyors of the metropolis, and they deem it essential, that in all cases which come under their observation, they should inform the builders and others wishing to build on forecourts and vacant spaces, that they must obtain the consent of this Board before they can be permitted to proceed with the works, and by calling the attention of the Board to any cases in which their warning in this respect may have been disregarded.

It may be convenient to add, that in certain districts of the metropolis there are local Acts still in force, which will be found serviceable in preserving lines of frontage, and preventing unauthorised projections."

At a meeting of the Board held on the 1st inst. Mr. Leslie moved, in an elaborate speech, that the report of the engineer, given above, be rejected; but the motion, not being seconded, fell to the ground. Mr. Leslie re-urged the adoption of a single line of main intercepting sewers on the *southern* side of the river, and the necessity for a service and storm-water drainage separate from the sewage drainage. The further consideration of the report was postponed.

THE PROCEEDINGS OF THE METROPOLITAN BOARD OF WORKS.

Your last publication contains a letter signed S. P. X., which, I think, calls for a line or two of remark. The words "wicked and sinful body" are not such as can be justified, however we may desire to see the work of improvement moving with greater speed; neither is it much to be wondered at that the vast scheme of metropolitan drainage, which, as your correspondent observes, has failed under the attempts of two or three Commissions, should be found not quite so easy a matter as a man, quietly writing by his own fireside, is apt to imagine. It is no light affair,—the responsibility of expending two, three, or four millions of money from the pockets of the metropolitan ratepayers, on what some persons think a doubtful speculation, after all. However, an Act of Parliament has now made the attempt imperative, and it behoves those intrusted with the carrying of it out to well weigh every step as the work proceeds. We are probably destined to witness yet further delay, for I observe a notice of motion has been given by a member of the Board, at its next meeting, to negative the entire design, and begin *de novo*. I may, perhaps, be pardoned if I express an opinion that a part of the labours of the Board might reasonably fall elsewhere; for when it is publicly stated that a recent meeting of seven hours' duration was chiefly occupied in the petty details arising out of questions of shop-fronts, porticoes, bow-windows, &c. &c., one is apt to wonder what all the vestries and district-boards, with their architects and surveyors, are for, from Hackney to Turnham Green. One thing is clear,—the members of the Metropolitan Board of Works have no sinecure office, if such things as these fall legitimately within their province instead of the authorities in the several localities.

A Ratepayer.

SANITARY STATE OF SHOREDITCH.

The population of Shoreditch is one twentieth of that of all London, or 125,000 out of 2,500,000. The mortality from all causes in Shoreditch during the quarter ending 28th June last was 629,—from epidemics 158,—a proportion considerably exceeding that of all London. Such is the return given in the first quarterly report on the health and sanitary condition of Shoreditch by the medical officer of health for that district, Dr. Barnes (recently printed by the Vestry). In this report, which treats of various points, urged again and again in our columns, the state of the water supply and the air supply of the district is particularly dwelt on. The water supplied both by the New River and by the East London Companies is regarded as essentially and equally impure: both are impregnated with organic matter, and both are hard. As respects the air supply it is rightly observed, that it is not only necessary to dilute the aerial poisons as they arise by free ventilation, but imperative also by all possible means to get rid of the materials from which they are generated. This is to be effected mainly by improvements in sewerage and drainage. It is even more important, as the reporter remarks, to have a constant supply of air, than a constant supply of water, low fevers being a sure result of stagnant air. Many dwellings in the district are perversely constructed in defiance of both common sense and decency, as in Parsons-square and Bowl-court. They are built back to back in confined situations, with untrapped closets under the staircases, small close rooms, and a sad want of water. Bowl-court is accordingly one of the most prolific nurseries of fever in the whole parish, but the district abounds in courts, rows, and nests of houses little better in a sanitary point of view.

RAGGED SCHOOL, ISLINGTON.

I have noticed with much regret the struggles and difficulties with which the Ragged School in Bryan-street, Islington, has had to contend, in consequence of the want of funds necessary to carry it forward. You have before noticed this school for about 150 little boys and girls, and a number of helpless youths, who have there found shelter, and are acquiring the means of earning an honest livelihood, and who, but for this, would have been houseless vagabonds in the street, or else the inmates of a prison. I am told that a large amount of debt, amounting to about 300*l.* was once a heavy drag to this useful institution, and that this has, by great exertion and good management, been reduced to 25*l.*; and, once out of debt, the establishment promises to extend in usefulness. A little while since the children's-school was closed for a time, and it was a painful sight to see the little things come morning after morning and to watch their disappointed looks at finding the doors shut. They reminded me of a nest of bees whose hive had been destroyed, hovering about the spot. You, sir, who know the sort of places and scenes which these little children were so anxious to leave for a time and try to learn good, will join with me in the hope that this, the only institution of the kind in the generally wealthy parish of Islington, should not be closed for want of funds. When a schoolmistress could not readily be had, it was most praiseworthy on the part of Mr. Healey, the manager of the institution, to take the infant scholars in hand himself to teach; and, although in no way connected with the place myself, I have looked in from time to time, and hope

that, by your publishing this in the *Builder*, it may induce others to do the same, and, after assuring themselves of the merits of this useful and unassuming institution, give it in their various ways a helping hand.

A Dweller in "Merrie Islington."

DEPARTMENT OF SCIENCE AND ART.

PRIZE MANIA.

A paragraph in your journal of the 27th ult. alluding to the Coventry school of art, reports that the "proof of the proficiency of the pupils and the skill of their instructors, *appeared in the number of medals awarded*." The same remark will doubtless apply with equal force and justice to all other schools under the tutelage of the same department; and, such being the case, the following, as showing their prospects, will not, I trust, be read with indifference.

In the Metropolitan spring exhibition of 1855 there were exhibited 186 *drawings*, works forwarded from twenty-seven schools, to which were awarded 195 *medals*.

In the "Report of the Examination of Drawings sent up from Training Colleges at Christmas, 1855," I find that to the pupils of *twenty-six schools* there were awarded 659 *prizes*,—that in one institution 57 per cent. of the students obtained awards, in another 60, in another 66, in another 70, and—prolific talent—at Chester, 88 *per cent. of the competitors rejoiced in the unparalleled triumphs of their genius!*

In the autumn Metropolitan exhibition of the same year, there were exhibited 1,501 works, the product of fifty-eight schools, to which (incredible to relate) 358 *medals only* were distributed. Only 358! But lest this unusual paucity should create surprise, and be accounted by factious minds a presage of departing glory, we are forewarned that "in considering the number of medals given this session, it must be recollected that each year the tendency is rather to raise the standard of merit requisite to obtain them; and that, unless there is a proportionate progress towards excellence in each year, a decreased number of awards must be the result." Again, "In making these awards, it was felt to be desirable to raise slightly the standard of excellence which should be required for obtaining medals, thus occasioning a reduction in the number awarded, which by no means indicates any depreciation of the quality of the works sent up as compared with previous years." In the autumn exhibition of 1854, there were awarded 423 *medals*.

I shall not apologise for the irreverent levity with which I have cited these Blue-book facts: I am but mortal, and I can hardly write with gravity upon a subject which has long been the standing jest of every school-boy in every drawing-school throughout the kingdom.

C. H. W.

FOREIGN INTELLIGENCE.

Aggregate Meeting of German Archæologists, &c. at Hildesheim.—A report was read on the *queries* put forth last year by the association—*Limes imperii Romani*, and the history of the hundreds of Germany. The work of the restoration of the Godehard Church—a fine specimen of the Byzantine style—was inspected. Dr. Haberl exhibited a model of the Roman post-dyke (*Pfahlgraben*) in the Rhine and Taunus country, as well as one of the Porta Decumana or *Saalburg*, near Homburg, according to documentary evidence and the excavations lately made there. Subjects of great antiquarian interest have been lately found in Mecklenburg, belonging to the ante-Christian epoch, but it is doubtful whether they be of German or Celtic origin.

The Medal struck by the Municipality of Vienna,—in honour of the general meeting of German naturalists and medical men, is of a very original design and conception, made by the Medallist Professor Rednitzky. On the obverse side is Vindobona, festively attired, in honour of the guests. Around are allegorical representations of the different eras of this old city; that of Marcus Aurelius, Duke Jasomirgot, the first builder of St. Stephen's, &c. On the reverse is the inscription,—"To the thirty-second meeting of German naturalists and medical men." Underneath is the figure of Nature, with her all-nourishing breasts, and on the raised rim are represented the four reigns of nature by a prism, a palm and oak, bee, &c. Above all appears a star-crowned human head, superintending, as it were, all creation.

A Statue of Baron Larrey, the chief surgeon of the *Grande Armée*, has been placed in the salle of the Ecole de Médecine of Paris. It is a work of the general run of such statuary.

Lipinski, the Polish Archaeologist.—This gentleman, who died lately at Warsaw, has been a contributor to the large archæological work on Poland, as well as author of several essays on Polish antiquities. He had travelled over the whole of the former commonwealth, for studying its ancient churches, castles, &c. He had also co-operated with Count Raczynski in the work on Polish numismatics.

Notices of Books.

Supplement to an Encyclopædia of Civil Engineering. By Edward Cresy, Architect and Civil Engineer. London: Longman, Brown, and Co. 1856.

In this supplement Mr. Cresy has added to his comprehensive and voluminous Encyclopædia some chapters on Water Supply, Drainage, Railways, Cubical Proportion, Brick and Iron Construction, Bridge Building, including an account of the new Rochester Bridge, the Conway Tubular Bridge, and the Niagara Suspension Bridge. The latter is a surprising combination of the uses of the Telford and Stephenson bridges in one. The American engineer seems to have derived his idea from a study made when both objects were before him, and the question naturally arose, why one bridge or transit could not be made for both services. Its span is 821 feet 4 inches from centre to centre of the towers: it forms a slightly curved hollow beam or box of the depth of 18 feet, 24 feet wide at the bottom, and 25 feet at the top, the lower floor of which is used for common traffic, whilst the upper is kept for the railway.

In the portion devoted to brick and iron construction Mr. Cresy suggests the erection of labourers' cottages without any wood, but for the doors: the side walls vaulting the whole in a catenarian curve; five iron railway bars from front to back to be introduced as girders to carry arches which, when level on the top, might receive an asphalte flooring. The aspect of a village so formed would be curious, though not pleasing.

The author has dwelt at some length on the result of his investigations of the proportions adopted by the ancient architects in their buildings. The system he adopts is founded on the fifth book of Vitruvius, and he maintains that the multiplying of the cube constitutes the design alike of the Greek temple and the Gothic cathedral. He accounts for the difference of dimensions between the English and French cathedrals from the tenth to the fifteenth century, as arising out of two standards of measurement:—

"Guided by the fact that those erected in the above period of time were the works of the fraternities of Freemasons, it seemed conclusive that they should have some standard of measurement, either of their own or peculiar to each country; and on testing the measurements with that view, it resulted that those of England were set out with the English perch of 16 feet 6 inches, and no doubt by an English lodge; while in those of France the French perch royal, of 22 *pieds du roi*, equal to 23·452 English feet, was employed: the few exceptions at Bayeux, Caen, St. George Bocherville, and some others with round arches, and the elegant church of St. Ouen at Rouen, in the Flamboyant style, are set out with the English perch of 16 feet 6 inches, and are universally attributed to English constructors: they certainly most curiously agree in proportion and dimension with the English cathedrals, which have two cubes given to the nave, producing on the plan a Latin cross, instead of the Greek, so usually found in France."

Mr. Cresy's Supplement is a very interesting and valuable addition to his Encyclopædia. He has long been a valuable labourer.

Miscellanea.

Drainage of the Metropolis.—A correspondent, Mr. George Clack, C.E., states that about four years since he submitted to several public boards a plan for the drainage of London, comprising the formation of two sewers under the Thames, one close to each bank, to commence at Richmond and continue as far as might be considered necessary down the river, and to discharge the sewage into a tank at each side, to be emptied into the river should it be found to be valueless. The sewers to be so low as to secure a good fall, and ventilated by shafts. Coffer dams of iron in form of caissons to be used in constructing them, and tunnelling to be resorted to where obstacles occurred to the use of coffer dams.

Metropolitan Tolls.—A movement is in progress for getting rid of some of these nuisances. Memorials were lately got up to Lord Lonsdale, the Chairman of the Metropolis Roads Commissioners, and to the Commissioners of the Roads north of the Thames, on the subject, and a deputation went to the Board last week for the purpose of opposing an application from the parochial authorities of St. Pancras for the extension of toll-gates in that district, but the gentlemen forming the deputation were refused access to the commissioners, and the memorials were not presented. The commissioners had met specially for the purpose of considering whether all, or any, and which of the several toll-gates now placed on the ninth amongst other districts on the north of the Thames should be removed and placed elsewhere, or discontinued. The intimation conveyed in the public notice convening the meeting (on 26th ult.) and which was prominently displayed at all the metropolitan toll-bars, induced the ratepayers to believe that the court would be open, or at all events that the commissioners would be ready to receive representations in reference to the heavy grievances which these toll-bars inflict; and this opinion appears to be confirmed by the fact, that at the meeting on 1st August, of which this latter meeting was an adjournment, the parochial authorities of St. Pancras were admitted as a deputation to the commissioners, praying that they would sanction the erection of additional toll-bars in that parish.

Machine for Dressing Stones.—Among a list of inventions lately published, says last week's *John O'Groat's Journal*, we observe mention made of one by the Earl of Caithness, for rough dressing the surface of stone by machinery, as an improvement upon the present laborious plan of hammer-dressing. This is an entirely distinct invention from that for the sawing of stone, which we noticed last week as having been tested at Castlehill by the noble Earl. It consists simply of a series of chisels or hoppers, under which the stone intended for preparation is made to pass; and so rapid is its execution that a stone of considerable superficies may be dressed in the course of a few minutes.

Opening of the Oldham Lyceum.—The new building for the Oldham Lyceum was opened on Monday in last week, and the various proceedings connected with the event caused a good deal of stir in the town. The building (which is constructed in the Renaissance style, of a Palladian character) stands at the junction of Union-street and Clegg-street, immediately opposite the public baths. The corner-stone was laid on 25th June, 1855, by Mr. James Platt, the president. The building has been erected by Mr. G. Whittaker, of Oldham, from designs by Mr. N. G. Pennington, of Manchester. The total cost of the work will be between 5,000*l.* and 6,000*l.*

The Late Strike of Masons.—Seeing a short paragraph in your impression of the 27th respecting the late strike of the masons in Mr. Kelk's firm, permit me to point out what I consider to be an error in the last sentence of the paragraph in question. You say, in our letter to Mr. Kelk, on the 6th of August, our demands were—The full privilege of the 4 o'clock on Saturdays; and that the masons should not be asked to work piece-work: quite correct. But at the conference held at the Freemasons' Tavern with the Builders' Association, we did not withdraw the question of piece-work *unconditionally*, but altered the original words, "They shall not be asked to work piece-work," and substituted the following, "If they are asked to work piece-work and refuse, they would not be discharged in consequence." With this alteration the Association accepted it at once, and pledged their words, as gentlemen, that they would adhere to the terms here indicated. And in conclusion, allow me to state that the masters showed every disposition to treat the subject in all fairness and impartiality; and doubtless much good would accrue to all parties if they were to meet together oftener and discuss in a friendly manner those various questions that occasionally arise between employers and employed.—On behalf of the masons of London,

George Garrett, Sec.

Manchester Free-Trade Hall.—We are asked to say, and do so willingly, that the whole of the carving at this building, with the exception of the semi-circular bas-reliefs over the windows, which are in artificial stone (by Mr. Thomas, as we stated last week), was executed by Mr. Thomas Richard Williams of Manchester.

The York School of Art.—Mr. J. C. Swallow, head-master of this school, delivered on Wednesday evening in last week an interesting lecture to upwards of 200 persons, on the arts of drawing and painting. The working classes were especially the subjects of invitation. Mr. Swallow introduced himself as one of themselves, considering the calling of a working man to be noble, as he had great faith in the dignity of labour. He gave a concise sketch of the arts of drawing and painting, and demonstrated as plainly as possible the utility and advantages which must inevitably accrue to students of every description. At the close of his lecture, Mr. Swallow announced to the working men present, in particular, and to those absent in general, that he had established a class gratuitously, for their benefit, and invited them to enter their names; and in conclusion he said,—If by the means I have placed at your disposal, I shall be successful in disseminating a love for art, I am sure you will keep alive what has been so creditably obtained, and will continue your improvements, by further and still greater exertions, which must ultimately lead to a general and discriminating knowledge, without which, though no one values them more than I do, such institutions as this, exhibitions, galleries, or patrons, will be of little or no avail.

Bronze Castings Abroad.—The *Athenæum* says, seven castings in bronze are in progress at the royal foundry at Munich:—1. An equestrian statue of Washington, destined to form the centre of an immense monument to be erected in the State of Virginia, and which is to be surrounded by forty colossal statues of men who distinguished themselves in the war of independence; 2. An equestrian statue of the King Maximilian the First of Bavaria, for Munich; 3. A statue of Wieland, for Weimar; 4. A group of Schiller and Goethe, for the same place; 5. An equestrian statue of Ferdinand the First, of the Two Sicilies, for Messina, destined to replace one which was destroyed by the revolutionists, and which also was cast at Munich; 6. An allegorical monument to the memory of the Fugger family, the chief of which are considered as the creators of manufacturing enterprise in Germany, for Augsburg; 7. A statue of King Louis the First of Bavaria, for Munich.

Razing Ruinous Buildings.—Mr. Joseph Quick, of the Vauxhall Waterworks Company, Sumner-street, Southwark-bridge-road, the owner of several houses in Middlesex-passage, Bartholomew-close, was summoned by the commissioners of sewers for the city to show cause, on the 24th ult., why Nos. 1, 2, and 3, should not be pulled down, they being in so dilapidated a state as to be dangerous to the public. After some preliminary remarks, Alderman Lawrence said this was the first case that had come before him, and he was not sure that he should be acting right in establishing the precedent of granting orders without the personal attendance of the district surveyor. This case was not disputed, and there was no doubt about it, but a case might arise in which the surveyor's judgment might be questioned, and therefore he ought to be present that he might be examined by the defendant. —Mr. Tyrrell said the act provided that the surveyor's certificate should be sufficient evidence to lay before the magistrate, and he adopted that course because it saved expense, and there was scarcely any defendant he had to summon but grumbled at the expenses.—Mr. Martin, the chief clerk, said, in case of a dispute, the summons might be adjourned for the attendance of the surveyor. After some further discussion, Alderman Lawrence granted the order for taking down the houses within seven days from this date. Similar orders were obtained for houses Nos. 1, 6, and 7, Willis's-court, which were in the occupation of Julia Collins, Joseph Tarbrick, and Mary Jennings, none of whom had paid any rent for the last two years, the property being in chancery.

The late Sir Richard Westmacott, R.A.—I read with much satisfaction and pleasure, and it must have proved so to his family, your notice of the late Sir Richard Westmacott. Considering the many and talented works which emanated from his studio, and considering the many years he was professionally engaged, and the time he devoted to the sculptures of the British Museum, it appears that it would be but a just compliment by the Government to erect a statue of him in the hall of the British Museum, his last great work having been the adorning of the tympanum of the pediment there. This compliment has been paid to Wilkie in the National Gallery.

* * *

*** The statue to Wilkie was erected by subscription.

Sussex Archæological Society.—A reunion of this Association took place at Newhaven on Thursday in last week. The members visited first the Church of Denton, and afterwards that of Newhaven. This latter edifice, as the *Brighton Herald* remarks, has the peculiarity of a tower at the *east* end, which once led an Irish sailor to remark that "it sailed *starn foremost*." After an inspection of both churches, the archæologists adjourned to the Bridge Hotel for the despatch of business, when Mr. R. W. Blencowe was called to the chair. The chairman read a letter from the Duke of Norfolk, accepting the presidency of the Society, vacant by the death of his father. Some members were then elected, and, afterwards, the Rev. G. M. Cooper, of Wilmington, read a paper on Bayham Abbey. Mr. M. A. Lower read an historical and descriptive notice of the Churches of Newhaven and Denton. In the course of his paper Mr. Lower mentioned that, during a late tour in France, he had met with a church at Yainville, on the Seine, which so strikingly resembled that of Newhaven, that it must have been of contemporary date, if not the production of the self-same architect. The scientific business of the meeting being closed, those present sat down to a cold collation, after which some discussion took place as to the locality of the annual meeting for next year, and Arundel and Bignor were provisionally determined on. Among other projects for the forthcoming year, one seemed to meet with general acceptance, namely, an excursion to Normandy by a body of the members, for the purpose of investigating the antiquities of that province, and comparing them with those of this side of the channel.

St. Thomas's Church, Westminster-road.—A site has been obtained by the razing of Gilbert's-buildings, nearly facing the Female Orphan Asylum; and about 4,000*l.* out of the required 5,000*l.*, according to the *Morning Herald*, has been collected. The design selected was that of Mr. S. S. Teulon, architect. It is in the Gothic style, of plain construction, and will consist of a broad nave without aisles, north and south transepts, a sanctuary, with a small vestry on the north side. The nave will be surmounted with a fliche for one bell. The whole of the walls will be of grey stocks, diapered with red and black bricks. The seats to accommodate nearly 1,100, upwards of 800 free, will be open, with plain bench ends. The contractor is Mr. Joshua Higgs, builder. On the 24th ult. the foundation-stone was laid.

The Yorkshire Reservoirs.—Ever since the memorable flood of 6th February, 1852, from the Bilbery reservoir, the inhabitants of Holmfirth have, upon any unexpected rise of the river Holme, entertained fears lest a similar catastrophe should occur through the disruption of the large reservoir at Holme Styes. In consequence of a heavy fall of rain on Saturday week the river was considerably swollen, and so terrified were the inhabitants, that scores of families in a half-frantic state left their habitations for the night, and sought security in the houses of friends or relatives. About one o'clock on the following morning the rain abated, and the reservoir remained safe.——Mr. Bateman, of Manchester, the engineer employed in the construction of the Ogden Clough reservoir, near Halifax, has inspected the works of that reservoir, and states, as his opinion, that the beds of shale on that side of the valley where leakage existed have been disturbed by the formation of a culvert, and that the water escapes through the fissures of the earth; he therefore recommended that the corporation adopt measures for stopping the leakage. No damage, he asserts, is being done beyond the waste of water. He calculates the outlay for the repair at between 200*l.* and 300*l.* In accordance with this recommendation, the water is now gradually drained to such an extent as to allow the necessary repairs to be made. Many thousands of people from Halifax and other neighbouring places have visited the works.

Separation of Married Soldiers.—We are glad to learn that extensive alterations are in progress at Chatham for carrying out an order by the War Secretary, that the whole of the married non-commissioned officers and private soldiers belonging to regiments and depôts at the provisional battalion shall be supplied with separate rooms, apart from the unmarried soldiers.

"Spit in the Road."—As you go for improvements both great and small, do, good Mr. Editor, suggest to those who persist in indulging in the nasty and injurious habit of spitting, that others ought not to be annoyed by their ill-doings, and that they may lessen the annoyance very greatly by using the road instead of the pathway. We are very fond of abusing Brother Jonathan for this practice, but if any one will take the trouble to examine the pavement the next fine day he walks up Regent-street, for example, he will see that reform is needed at home as well as abroad. The practice to me is most disgusting, being, as I sign myself, your constant reader and—

A very nice Man.

Monumental Sculpture.—A tomb, with recumbent statue, has just been completed by Mr. Richardson, by order of the Marchioness of Ormonde, to the late Lord Ormonde. It will be placed in the middle of the south transept of the cathedral church at Kilkenny. At the head and feet of the figure are portrait-statues of the children, and in the panellings of the tomb are shields of arms, and the collar and order of St. Patrick, divided by foliated spandrels from natural leaves and flowers: at the four angles are angels holding scrolls. It will be conveyed to Ireland in the course of a few days.

The Kingdom of Art.—It is right that the kingdom of Art should remain under the joint government of the "Spiritual," the "Classical," and the "Naturalistic." These three distinct powers and authorities constitute "the three estates" in the administration of her empire. The Spiritual element, were it allowed undivided sway, would constitute an absolute theocracy, the tyranny of which, as advocated by M. Rio, we have been anxious to throw off. The Classical, the second of the three estates, is an aristocracy which, by ancestry and merit, we believe to be still entitled to weighty authority. Lastly, the Naturalistic element constitutes the democracy of art, the *vox populi*, which, as we have seen, is not necessarily, in art more than politics, the *vox Dei*. It is, then, in these three elements, in their mutual co-operation and counter-action, that the well-government of art is to be sought: in the Spiritual element we obtain a Divine sanction and authority; in the Classic the wisdom of the ancients; and in Naturalism actual truth, or what political theorists call honesty. The future Bentham in art-literature may doubtless show to the satisfaction of his disciples that such a constitution contains all the elements of the worst administration. We believe, however, that a government so constituted, although not a Utopia, might deliver the existing republic of art from threatened anarchy.—*Blackwood for September.*

Antiquities in Italy.—"About six miles from Rapello, and seven from Venosa and Melfi," writes a correspondent of the *Athenæum* from Naples, "excavations have been lately going on to construct the road of Rendina. In that part of the excavations which was conducted in the Via Appia, a sarcophagus has recently been discovered—which has thus been described to me:—It is of pure white marble, and measures ten palms in length, five in depth, and four in width. On the lid, which represents a kind of dormouse, is a young female sleeping, with her hair of that character so well known in statuary as undulating. Her head rests on a cushion, and her feet on a lion. On the front part of this sarcophagus are four niches,—in one of which is Proserpine—in another a statuette of Mars—in another of Venus with her glass—and in the last Meleager. On the other corresponding part are Ulysses, Vulcan, Mars, and a figure unknown. On one side is a fictitious door, and on the other various festoons. No inscription has been found upon it. This sarcophagus was discovered inclosed in a rectangular edifice, adorned with beautiful marbles, and the walls of which are constructed of brick. 'I have never seen anything like it,' said an antiquary to me; 'and, though many sarcophagi have been found in Magna Græcia, I think these are now more magnificent, for the abundance and the perfection of the sculpture. The style,' he continued, 'is of the finest Roman—the drapery is beautiful—the countenance delicate—and the drawing most correct. The niches, in which are the divinities, are separated from one another by many-spiral columns of the Corinthian order, and the figures are all in *mezzo-rilievo*.'"

Excavating Machines.—Mr. W. J. Curtis, Sebbon-street, Islington, has invented an improvement in combining machinery for excavating land for constructing tunnels. For this purpose, a rectangular or suitable form of frame, of a size depending on the intended tunnel, is constructed, and is arranged, when placed in an upright position, to be moved forward by hydraulic pumps or mechanical means pressing against the work which has been completed. There are three uprights: the two outer ones have reverse screw threads formed thereon, in such manner that a screw nut on each of them, when caused to rotate, shall ascend its upright, and then, when it arrives at the end, again descend. These nuts turn between two plates, which carry an endless chain, and chain wheels by which the chain is carried. The central upright is a shaft which gives motion to the chain wheels and chain. In order to cut or remove the land in front, the chain carries ploughs or cutters, which cut away the land in front as the chain is caused to move. The central upright or shaft is put in motion by a steam-engine, which moves on suitable rails up to the work. Rails are also laid as the work progresses, so that trucks may bring up bricks and materials to build up and form the tunnel, and the earth is raised into the empty trucks by suitable buckets or lifters, put into motion by the steam-engine.

JARROW DOCKS.—The foundation-stone of the north sixty-feet lock of these docks was laid on Tuesday in last week by the resident engineer, Mr. R. Hodgson. The stone was seven feet square, and came from Messrs. Stevenson & Co.'s Quarry, at Usworth. The depth of the foundation of the lock will be 29 feet 6 inches; and the depth of water on the lock sill will be 24 feet 6 inches, or 10 feet below low water at spring tides. The south sixty-feet lock is about ready for commencing with the mason work. The eighty-feet lock is commenced with. The works, as a whole, are making great progress. At present between 800 and 900 men are being employed on the works. The workmen were entertained in celebration of the occasion of laying the stone of the north sixty-feet lock.

LIGHTHOUSES IN THE UNITED STATES.—The illumination of the ocean, as it is called by Brother Jonathan, is now carried on there by means of 471 lighthouses, light fire-stations, and light-barges, of which many, however, are also placed on the banks of lakes and rivers. Of these, nine are placed alone in and near the Bay of New York; in the Bay of Newark there are four; along the Hudson there are twenty-three; along the Erie Lake thirty-four; on the Ontario sixteen. At each of these lights there are one or two guards, whose salaries vary from 180 to 1,000 dollars. The whole cost of maintaining these establishments amounted, in the financial year 1854-55, to 1,002,000 dollars, and 800,000 dollers were spent besides for the building of other similar works for lighting the shores of the United States.

THE ARCHITECTURAL ASSOCIATION.—The architectural association will hold an opening conversazione this (Friday) evening, the 3rd, at Lyon's Inn Hall. The list of papers advertised for the session promises well.

SEIZURE OF WOLVERHAMPTON CORPORATION PROPERTY.—The crisis long anticipated (says the *Staffordshire Advertiser*) has at length arrived, and the personal property of the corporate body of the borough of Wolverhampton is at the present moment in the possession of the sheriffs' officers, who have seized the police accoutrements and furniture, the fire-engines, and the furniture at the new Town Hall, in North-street. This unfortunate state of things has arisen from the claims of persons employed in connection with the late application to Parliament for a bill to construct waterworks, which the corporation failed to obtain, and which it was found they had no power to pay out of any funds in their possession. The chief of these claims was that of Mr. Hughes, civil engineer, for 1,224*l.*, which was considered exorbitant. On the corporation preparing to pay these expenses, they were threatened with legal proceedings, and ultimately a cheque for 3,000*l.*, granted for the purpose, was cancelled. Mr. Hughes sued the corporation, and judgment went by default. The amount for which the execution was put in was 1,485*l.* 16s. 7d., the increase being for legal expenses.

CHURCH STRUCK BY LIGHTNING.—The lofty spire of Castle Donington Church seems, from its elevated position on the brow of a hill, to be peculiarly liable to be struck by lightning. During the last three years it has been struck, it appears, as many times, and twice during the present summer—in each case, however, happily without doing any very material injury. In the previous discharge in the early part of this year (April 4th) the eccentricities of the electric forces were very great, and the peculiarity of that which took place on Friday before last consisted in the repetition, as far as it extended, of precisely the same eccentricities. The conductor ought to be examined by some one skilled in such apparatus: it may not be of sufficient calibre or properly insulated.

THE YOUNG WORKMEN OF LONDON.—I have read with great pleasure the remarks in your paper of last week respecting the young workmen of London. I, as a young man living in lodgings and bound to a trade in this city, have thought that young men of business situated like myself have no cause to be proud of the opportunities and inducements held out to them for improvement intellectually, morally, and physically. Why have we not a young man's club, where he could find comfort, intellectual information, good society, mutual instruction, and rational amusement; where he could read, mark, and learn, and form those habits the acquisition of which causes him to grow up a man, to all intents and purposes, and a useful member of society. I think the young men in London should be far more united for each other's benefit, that they might look to their club and institution with a manly pride. Young men in London are not sufficiently cared for, considering their importance. The enterprise of our enlightened men is much required to carry out and frame such an institution as shall attract us by its good, sound, and substantial foundation.

A BUILDER'S APPRENTICE.

THE IRON TRADE.—At the preliminary quarterly meeting of the South Staffordshire and East Worcester iron masters, held last week, it was resolved not to acknowledge any reduction below 9*l.* for bar-iron, although it is admitted by a Worcester ironmaster that "there are only a few—certainly not ten—houses that maintain that price." Expectations, indeed, had prevailed "that the trade would recognize the reduction in the price of iron, which, in reference to a large portion of the works, has taken place during the quarter."——The recent discoveries of iron ores in the uncultivated wilds of Exmoor Forest, Devonshire, are expected to produce a complete revolution in the iron trade. The district has been taken by three of the largest iron companies in England, and their machinery will, it is estimated, raise 200,000 to 300,000 tons of iron ore annually.——M. Conrad Meyer, of Paris, has invented some improved machinery for rolling metal, by so arranging and constructing rollers that round articles having shoulders, or other inequalities, may be rolled.——Mr. R. A. Brooman, patent-agent, Fleet-street (for a correspondent), has patented some alleged improvements in manufacturing cast-steel. The invention is said to be "for effecting the immediate conversion of bar or malleable iron into cast steel by the single operation of melting, which may be performed in a few hours." Almost any description of iron, it is said, however poor, may by this invention be converted into genuine steel, having great tenacity and malleability, as well as capability to be welded, and capability to stand high degrees of heat (without much, if any, deterioration), and repeated heatings. The basis of the invention consists in the use of certain chemicals in which the principle cyanogen shall be contained, and also some form of sal-ammoniac.

COMPETITION FOR THE GOVERNMENT OFFICES.—The *increased* time to March 20th, 1857, for submitting designs, will even now give but *two* months to architects in *South* America for making them, as it takes THREE months to send the particulars and to return designs from thence. I have written the First Commissioner twice on this point, as an applicant for the plans and particulars on behalf of an English architect of some eminence residing there, and if this is to be the utmost time allowed to those at such a distance, the competition cannot be regarded as *intended* for "all countries." Whether this is done to meet the views in part of those architects who advised the competition to be limited to Great Britain, or in order to hasten the erection of the *War* and other offices, the advertisement proposing it to "Architects of All Countries" is, to say the least, a *misnomer;* and to prevent such a misapprehension your insertion of this in the *Builder* will very much oblige—FAIR PLAY.

OLD ROCHESTER BRIDGE.—The old bridge is in course of demolition, the workmen in the employ of Messrs. Foord and Sons having commenced removing the superstructure preparatory to the whole being cleared away. The balustrading and some other portions of the bridge are to be used in the construction of the esplanade on the banks of the river, which is intended to be erected jointly by the bridge-wardens and the corporation of Rochester.

WINCHESTER CATHEDRAL.—Our correspondent of last week, who mentioned the works now going on at the cathedral, and who from his position ought to have known better, says, he inadvertently put the *south-west* side of the cathedral as being thrown open instead of the south-east, and assigned the five Norman arches discovered to the *north* end of the chapter-house instead of the west.

DENBIGH CASTLE.—The Chester Archæological Society has given instructions for farther exploring the curious shafted passages supposed to be peculiar to Denbigh Castle. The work has been commenced, and a doorway and passage, before concealed, have been partly opened, on the west side of the castle.

[ADVERTISEMENT.]

27 and 28, Bishopsgate-street, Aug. 1st, 1856.

GENTLEMEN,—After twelve years' experience of your Patent Iron Revolving Shutters, I have much pleasure in testifying to their great superiority over all others; and if I were to put in a new front to-morrow, I should most decidedly give them the preference.

I am, Gentlemen, yours, &c.

ROBERT ALEX. ROONEY.

Messrs. Clark and Co. 15, Gate-street, Lincoln's-inn-fields, Engineers.

TENDERS

For the erection of Christ Church Infant and Girls' School, with class-rooms, &c. at Newark-upon-Trent. Mr. Charles Baily, architect. Quantities not supplied:—

Duke and Son	£1,170 0 0
Slater and Thrall	1,091 2 6
Marshall and Henderson	1,091 0 0
Mackenzie and Fretwell	980 0 0

For the completion of seven houses for Mr. J. Sutton, Peckham. Mr. Richard Roberts, architect. Quantities furnished:—

Lawrence	£2,068 0 0
Browne and Co.	2 043 0 0
Gamin	1,955 0 0
Coleman	1,884 0 0
Galsworthy	1,847 0 0
Bowley	1,750 0 0
Rider	1,740 0 0
Wills	1,700 0 0
Friend	1,697 0 0
Harmer	1,468 0 0

For the erection of new premises in the city. Messrs. George Legg and Son, architects:—

Anley	£2,868 0 0
Rozers	2,769 0 0
George Man-field and Son	2,598 0 0
Pritchard and Co.	2,576 0 0
Taylor	2,540 0 0
Pollock and McLennon	2,485 0 0
Myers	2,425 0 0
Patman and Fotheringham	2,397 0 0
J and C. W Todd	2,383 0 0
Macey (accepted)	2,280 0 0

For East Kent Militia Barracks, Canterbury. Messrs. Whichcord and Son, architects. Quantities supplied by Mr. James Williams:—

	Builder.	Plumber, &c.	Smith, &c.
	£ s. d.	£ s. d	£ s. d.
Thos. F. Cozens	4,780 0 0	628 0 0	514 10 0
Drury and Co.	.....	.....	502 7 0
Weeks and Co.	.....	.....	571 11 6
Lancefield and Marshall	.....	791 0 0	.....
G. Lancefield and G Gaunber	4,852 0 0	.....	.....
P. Ayers	4,912 13 0	570 0 0	514 10 0
Burd t Holmes	.....	567 10 0	.....
Kirk and Parry	4,268 0 0	.....	.....
Sutton and Walter	5,591 0 0	.....	.....
Levi Ashdown	.....	559 0 0	.....

The following were accepted:—

Kirk and Parry	£4,268 0 0
Levi Ashdown	559 0 0
Drury and Co.	502 7 0
Total	£5,329 7 0

TO CORRESPONDENTS.

THE INITIAL LETTERS OF "THE BUILDER."—In reply to several inquirers, the initial letters we are now using were designed by Mr. Henry Godwin, architect.

"T. O."—"E. and Son."—"Mr. S." "L. D. O."—"Y. S. T." A company for bringing sea-water to London was started some time ago)—"L. L. O."—"C. B. M."—"W. H."—Messrs. H."—"R. R."—"T. G."—"G." (there is such a process)—"P. L. N. F."—"T. M."—"H. A. H."—"F. Y. R."—"J. J."—"T. O."—"W. S."—"A Practical Man."—"W. T."—"T. F. T."—"Mr. H."—"J. R."—"Hoathly" (thanks; all right)—"F. S. W."—"A. N. C. B."—"Mr. H. Mell" (take professional advice). "St. Columb" out of our province).

"Books and Addresses."—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

NO CHIMNEY WANTED for RICKETS'S PATENT CALORIFERE GAS STOVES in CHURCHES, HALLS, or SHOPS;

And for Conservatories, or any close Apartment. A Pipe can be attached to carry away the burnt air.

RICKETS'S CHEAP GAS STOVE, Price £1. 15s.

Made of Sheet Iron, suitable for Heating small Countinghouses, Bedrooms, Cellars, &c. &c.

MANUFACTORY, AGAR-STREET, STRAND, LONDON.

Liberal Discount to Builders.

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CANNING TOWN " 1,000 " for small cottages.
NORWOOD..... " 1,000 " for villa residences.
STRATFORD..... " 100 " for small cottages.
POPLAR..... " 88 " for fourth-rate houses.
Advances 70l. to 90l. at 5 per cent. on each cottage.
Apply to Mr. Wm. ELLISON, Architect, Stainsby-road, Limehouse.

SHOREDITCH.—BUILDING GROUND. TENDERS will be received until MONDAY, the 6th of OCTOBER, 1856, for the LEASE of a PLOT of BUILDING LAND, upwards of 180 feet in depth, adjoining Shoreditch churchyard, with an entrance from the High street and partly abutting thereon.—Particulars may be obtained of Messrs. R. J. and H. CLUTTON, 9, Whitehall-place, where a plan may be seen.

BUILDING LAND TO BE SOLD, thirty miles from London, and twenty from Brighton, and within a mile of a first-class station on the Brighton Railway, about TWENTY-FIVE ACRES of FREEHOLD LAND, most arable, with farm house, superior farm premises, and two cottages. Is well drained, lies high, and commands fine prospects with good building stone near the surface.—Apply to Mr. G. PLAYFORD, Grove Farm, Crawley, Sussex.

TO BUILDERS.—Some very eligible Lots of FREEHOLD LAND, suitable for the erection of houses of the value of from 9 0l. to 800l. each, situate at Tulse-hill; Lower Norwood; Walthamstow; near the Railway Station at Harrow; and Forest-hill, TO BE LET on Building Leases, at moderate ground-rents.—Apply to Mr. JAMES HIGHAM, 79, Farringdon-street.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety-nine years, with power of enfranchisement. Plots from one to four acres for large villa residences; small plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 6, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Gray's-inn-square.

BEULAH SPA HOTEL, TO BE LET, on lease, or the FREEHOLD TO BE SOLD.—The hotel comprises the old and new buildings and about four acres of land. The house is beautifully situated on Bagg's-hill, Norwood, with an extensive frontage to the high road, and is within a short distance of the Crystal Palace. The house is at present unoccupied, except the Tap.—For particulars, apply to E. N. CLIFTON, Gresham House, Broad-street, City.

TO BUILDERS and CAPITALISTS.—FOR SALE, by PRIVATE CONTRACT, about TWELVE ACRES of eligible BUILDING GROUND, situate in the township of Whitley, and adjoining the borough of Tynemouth. The ground commands one of the most beautiful and extensive views on the coast, overlooks the Whitley, or North Rocks, is about one mile distant from the Tynemouth Railway Station, and is approached by a good and level road.—Particulars may be obtained on application to Mr. WM. DUNN, Solicitor, Pilgrim-street, Newcastle-upon-Tyne; or to Messrs. RICHARDSON and ROSS, Architects, Darlington, with whom plans of the estate are deposited.

TO BUILDERS, CONTRACTORS, and OTHERS.—TO BE LET on Lease, for a long term, several Plots of FREEHOLD GROUND, well suited for manufactories, warehouses, or other building purposes. The property is within three miles from London, land-tax redeemed, and tithe-free.—Apply to Mr. W. H. DEAN, Surveyor, Stratford; or to Mr. GEORGE POWNALL, Surveyor, No. 87, Bloomsbury-square, London.

VALUABLE FREEHOLD BUILDING GROUND, comprising about two acres, situated in the parish of St. Mary, Islington.—TO BE SOLD, a valuable PLOT of FREEHOLD LAND, with frontages admirably adapted for the erection of about sixty houses, a chapel, public institution, or any other large edifice.—For particulars, apply to Mr. MILLS, 59, Spencer-street, Northampton square, between the hours of eleven and one o'clock.

BUILDING LAND TO BE LET for 900 years, near the new Railway Station, Norwood, and elsewhere. Money and bricks, if required.—Apply to Messrs BLAKE and SNOW, Solicitors, 23, College-hill, Cannon-street, City.

THE METROPOLITAN BOARD of WORKS are desirous of obtaining a suitable BUILDING for OFFICES of the BOARD, or premises capable of ready adaptation for that purpose, or a site conveniently situate upon which such a building might be erected. The site should not be less than 10,000 feet in area, and in such a locality as to be central, and easily accessible from all parts of the metropolis. Letters, containing full particulars (endorsed "Metropolitan Board of Works—Site for Offices") with plan and other requisite information, to be addressed to the Metropolitan Board of Works, 1, Greek street, Soho-square, before MONDAY, the 6th OCTOBER, at FOUR o'clock p.m. E. H. WOOLRYCH, Clerk of the Board.
Sept. 29th, 1856.

GUILDHALL, 29th September, 1856.—The Committee for Letting the City's Lands will meet at Guildhall, on WEDNESDAY, the 8th day of OCTOBER next, at ONE o'clock precisely, to receive PROPOSALS for a LEASE of a HOUSE, No. 27, Banner-street; and several Houses, Nos. 1 to 9, in York place, Banner street, Finsbury. Also to receive proposals for a yearly Tenancy of a House, No. 3, Giltspur-street.—Plans of the property may be seen, and forms of Tender obtained, upon application at the Architect's Office, Guildhall.
FERDINAND BRAND, Comptroller.

GUILDHALL, London, 2nd October, 1856. The Committee for Letting the Bridge-House Estates will meet at Guildhall, on FRIDAY, the 10th day of OCTOBER inst. at ONE o'clock precisely, to receive TENDERS, for a building lease for eighty years, of a PLOT of GROUND, on the west side of Old Change, in the City of London.—A plan of the ground and conditions for letting may be seen at the Architect's Office, Guildhall. FERDINAND BRAND, Comptroller.

NEW WINDSOR ESTATE.—Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences, with Stabling, which are much needed in this beautiful locality. The situation is the finest in or near Windsor, abutting on the Park and Long Walk, and commanding a splendid view of the Castle. Within ten minutes of the Great Western and fifteen minutes' walk of the South-Western Railway Stations. Advances can be had by responsible parties.—For particulars apply to Mr. WILLIAM SIM, Architect and Surveyor, 2, Danes-Inn, Strand.

LAMBETH BATHS and WASH-HOUSES COMPANY LIMITED, WESTMINSTER-ROAD, LAMBETH.—TO BE LET, for the next five months, either together or separate, the two handsome and light BATH-ROOMS, being about 150 feet long by 50 feet wide, and of the height of about feet, well adapted for parties requiring extensive premises during the winter season, both rooms being well fitted up and lit with gas. Also a ROOM, 47 feet long by 19 feet wide, with a room adjoining, 16 feet square, and a small note-room. These rooms are fitted up with fireplaces and stoves, and would be found suitable for a school or lecture-room. Possession may be had immediately. For terms and particulars, apply to Mr. J. B. DOWNING, the Secretary; or Mr. FULLER, Superintendent, at the Baths, Westminster-road, Lambeth.
N.B. The Private Warm Baths are now open, daily, from SEVEN a.m. till NINE p.m.; on SATURDAYS, till TEN p.m.; and on SUNDAY MORNING, from SEVEN till NINE o'clock. First Class Private Bath, 6d. Second Class, 3d.

BELSIZE PARK, Hampstead.—A PORTION of this PARK WILL BE LET on building leases to respectable builders. There are bricks on the ground, and the roads and sewers are completed. Money, if required, would be advanced on mortgage.—Apply to Mr. WILLIAM THOMPSON, Architect, 2, Conduit-street West, Westbourne-terrace.

WANTED, a Genteel COTTAGE RESIDENCE, within four or five miles of the Bank, with three best and two secondary Bed-rooms, good Garden, Stabling, &c. and if with Paddock preferred.—Address full particulars to Mr. MURRELL, 1, Walbrook, City.

TO SOLICITORS, ARCHITECTS, AND OTHERS.

OFFICE WANTED.—A Surveyor and Branchman requires an OFFICE, and would not object to share same with either of the above. Preference given where mutual assistance could occasionally be given.—Address to D. M. C. Miles's Library, Upper-street, Islington.

TO BUILDERS, CARMEN, &c.—TO BE LET, with immediate possession, LARGE PREMISES; comprising yard, stabling, and two residences, situate in a convenient locality.—For further particulars apply to Mr. MURRELL, Auctioneer, 1, Walbrook, City.

GREEN-STREET, LEICESTER-SQUARE. TO BE LET, the commodious BUSINESS PREMISES, No. 17, in the above street.—The premises may be viewed on application within, and particulars obtained of W. C. REED, Architect, 64, Old Broad-street, City.

WATERSIDE PREMISES.—TO BE LET, between Blackfriars and Southwark-bridge, Bank-side, ELIGIBLE PREMISES, with Warehouses and good entrance. For particulars apply to Mr. W. HOPWOOD, Aldine-chambers, Paternoster-row.

TO ENGINEERS, MANUFACTURERS, WHARFINGERS, and OTHERS.—TO BE LET, on Building Leases for 99 years, a large WATERSIDE FRONTAGE for building factories, wharfs, &c. with every accommodation by water and land carriage, within two miles from London-bridge.—For further particulars apply to WILLIAM RUSSELL, Ploughroad, Rotherhithe.

WHARF and PREMISES.—TO BE LET or the Lease to be Sold, a WHARF, on the Regent's-canal, near the Victoria-park, having a frontage of about 140 feet, with large shed (the upper part adapted for a granary), dwelling-house, and range of stabling.—Apply to Mr. ST. QUINTIN, Auctioneer, at Royal Exchange.

LIME WHARF, &c.—TO BE DISPOSED OF, the LEASE of an excellent WHARF, with Goodwill of a Lime, Cement, Slate, and Timber trade, situate in a suburban locality and rapidly-extending neighbourhood.—For particulars, apply to Mr. JONES, Estate Agent and Auctioneer, 27, Bucklersbury, City.

PELICAN LIFE INSURANCE COMPANY, established in 1797.
70, Lombard-street, City, and 57, Charing-cross, Westminster.

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NOTICE.—In order to remove any apprehension that might be entertained as to the perfect security of the Policies granted by the PELICAN LIFE OFFICE, the Directors have omitted every Clause that would render them void by reason of any error in the Statements made by the Assured before or at the time of effecting an Insurance. Moderate rates of Premium with participation in profits. Low rates without profits.
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For prospectuses and forms of proposal apply at the offices as above, or to any of the company's agents.
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THE LONDON and WESTMINSTER BANK issues CIRCULAR NOTES of 10l. each, payable at every important place in Europe. These notes are issued without charge, and they are cashed abroad free of commission. The Bank also issues, free of charge, Letters of Credit on all the principal cities and towns in Europe. The Letters of Credit are issued only at the Head Office in Lothbury. The Circular Notes may be obtained at the Head Office in Lothbury, or at any of the Branches, viz.—
Westminster Branch, 1, St. James's-square.
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The rate of interest allowed on deposits of 50l. and upwards, at the Bank or any of its Branches, is now 2 per cent.
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PHŒNIX FIRE ASSURANCE COMPANY, LOMBARD-STREET & CHARING-CROSS, LONDON, established 1782.

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Insurances against loss by fire are effected by the PHŒNIX COMPANY upon every description of property, in every part of the world on the most favourable terms.

Persons insuring with the Phœnix Company are not liable to make good the losses of others, as is the case in some offices.

Insurances with this Company expiring at Michaelmas must be renewed within fifteen days thereafter, or they will become void, and more minutes cannot be allowed.

Receipts are now ready at the principal Fire Offices, Lombard-street, and Charing-cross, and with the respective Agents throughout the United Kingdom.

GUARDIAN FIRE & LIFE ASSURANCE COMPANY, No 11, Lombard-street, London.

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LIFE DEPARTMENT.—Under the Provisions of an Act of Parliament, this Company now offers to future insurers Four-fifths of the Profits, with Quinquennial Division, or a low rate of premium with a participation of profits.

The next division of profits will be declared in June, 1860, when all Participating Policies which shall have subsisted at least one year at that time, 1856, will be all wed to share in the profits.

At the two divisions of profits made by this Company the annual revenue has been added to the policies have exceeded 9,000*l.*

At Christmas 1854, the assurances in force amounted to upwards of 4,240,000*l.* the income from the Life Branch in 1855 was more than 300,000*l.* and the Life Assurance Fund (independent of the Guarantee Capital) exceeded 1,760,000*l.*

FOREIGN RISKS.—The extra premiums required for the East and West Indies, the British Colonies, and the northern parts of the United States of America, have been materially reduced.

INVALID LIVES.—Persons who are not in such sound health as would enable them to insure their lives at the tabular premiums, may have the risks insured at extra premiums.

LOANS granted on Life Policies to a certain fixed amount, provided such Policies shall have been effected a sufficient time to have attained in each case a value not under 50*l.*

ASSIGNMENTS OF POLICIES.—Written Notices of, received and registered.

MEDICAL FEES paid by the Company, and no charge will be made for Forms or Stamps.

Notice is hereby given, That Fire Policies which expire at Michaelmas must be renewed within fifteen days at this Office, or with Mr SAMUEL BROWN, No. 1, St James's-street, corner of Pall-mall, or with the Company's agents throughout the kingdom, otherwise they become void.

Losses caused by Explosion of Gas are admitted by this Company.

TWELVE MARBLE (statuary, carved, truss, &c.) CHIMNEY PIECES TO BE SOLD, all new in the best taste, with shelves 4 feet wide by 2 inch thick. Also, eight slabs each 7 feet long, with a richly ornamented cast-iron table, to be in a revolving top; would suit a sculptor, or as a pedestal for a group or statue. Also an Aneroid, for Dissolving Views Apply to J. FARREL, 54, Norfolk-street, Middlesex Hospital

MARBLE CHIMNEY-PIECES, and every other description of marble work supplied to builders and the trade at about HALF THE USUAL PRICE, in many instances less. Manufactured by the LONDON and CONTINENTAL MARBLE COMPANY, at their own Quarries in France and Belgium.—Office and Depôt, 3, Crooked-lane, London-bridge.—Estimates given for works to any amount.

MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY-PIECES lately imported from the Continent. They comprise Statuary, Giallo di Siena, Vert Rouge, Dove, Black and Gold, Rouge de Roy, Burdilla, and other choice foreign marbles; and are designed with great taste, and executed by first-class artists.—On sale, in the show rooms of Messrs. EVANS, SON, and CO. King William-street, London-bridge.

MARBLE GALLERIES, 17, Newman-street, Oxford-street.—Mr. ALFRED G EDWARDES, (upwards of 20 years with the London Marble Company,) has opened the above premises, lately in the occupation of Bailey, the celebrated sculptor, under the firm of EDWARDES, EDWARDS, and COMPANY, with the largest stock of BRITISH and FOREIGN MARBLE CHIMNEYPIECES, &c &c in London. EDWARDES, EDWARDS, and CO. solicit the favour of an inspection of their stock by architects, builders, and others connected with the trade; and beg to assure them that for design, style of execution, and price, it will be found unrivalled. Estimates for every description of marble work.

BUILDERS, ARCHITECTS, AND MASONS.

MARBLE. — The ITALIAN MARBLE COMPANY beg to call the attention of Architects, Builders, and Others connected with the trades, to their large and well-assorted STOCK of VEIN SICILIAN, and other MARBLES. The liberal system of business adopted by this company, the superior quality of their marble, and their very moderate scale of prices are combined, to form an inducement to buyers. An inspection is solicited at the Depôt Bridge Wharf, Millbank, adjoining Vauxhall-bridge, where no other persons are authorised to sell except Mr. Baxter, Wharf Foreman, or the undersigned.

WILLIAM W. BONNIN, Secretary.

MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.

THOMAS JACKSON begs to draw the attention of the public to the most extensive stock of Marble Chimney-Pieces in the Metropolis, consisting of a selection of upwards of two hundred, and manufactured by steam power from the finest Italian and other marble, and with that care and attention to the details and finish as necessary in good marble work. The Stock consists of elegant Drawing-Room Chimney-Pieces in statuary Marble; bold, massive Chimney-Pieces, in Black, Black and Gold, Burdilla, Sienna, Verd Antique, Brocatella, Dove, St. Ann's, and Serpentine Marble, suitable for Dining-Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Emperor's Red and Amber Marble, for Boudoirs, Breakfast-Rooms, best and secondary Bed-Rooms, &c.; also, Monuments, Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the most classical designs, and in all the varieties of the finest Italian and British Marble, at the lowest remunerative prices.

BUILDERS and CONTRACTORS OBSERVE!—The chea est Depot in London for the Sale of Marble Chimney pieces is at the WESTMINSTER MARBLE COMPANY'S WORKS, Earl-street, Horse-ferry-road. A large stock on view to be sold from. Vein Marble Box Chimney pieces from 40*s.* upwards. The trade supplied on liberal terms.

N.B. The Westminster omnibuses pass the Works from the City.

LLOYD'S MARBLE WHARF, Thames-bank, Pimlico, adjoining Vauxhall-bridge.—Italian Statuary, Veined, Sicilian, Dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

PURBECK MARBLE can be had of Mr. JAS. WEBB, Corfe Castle, Dorset.

BRAMLEY FALL! BRAMLEY FALL! On account of great facilities than possessed by any one else, TRICKETT and PERKINS are prepared to supply in any quantity BRAMLEY FALL STONE, at greatly reduced prices, having opened the extensive quarries in the Hawksworth Cutting, on the North-Eastern Railway, near Horsforth. The stone is of be same quality as the well-known Old Bramley Fall and Horsforth Quarries, but has the advantage of being of a higher and more uniform colour. The North-Eastern Railway Company have put additional sidings on both sides of the railway. Powerful cranes are fixed so that the stone can be got to any site, and the stone being loaded in the quarries on the railway-trucks can be forwarded the same day to any part of the kingdom, or supplied in London rivers via Selby or Hull, in any quantity.—For particulars apply to JOHN TRICKETT, Stone Merchant, Headingley, near Leeds, or to SAMUEL TRICKETT, Victoria Stone Wharf, Isle of Dogs, London.

BANGOR WHARF, King's-road-bridge, Camden-town.—STRINGFIELD and COOPER late W. W. Rawlins beg to call the attention of Builders and others to their stock of Bangor slates, baths, plaster, Roman, Portland, and Keene's cement, blue lias, Dorking and chalk lime, plasterers' hair, Yorkshire plain, tan, and ridge tiles, garden sewer pipes, closet-pans, and traps, Welsh fire-bricks, gravel and shells for garden paths, ballast, sand, &c. Materials landed, wharfed, and carted

QUARRY WORKED STONE.—Architects, Masons, and Builders would effect a great SAVING in cost by ordering bases, plinths, templates, sills, corbels, imposts cornices, coping steps, staircases of all kinds moulded or plain, square or circular, from the quarries ready worked for fixing. Experienced foremen are kept, and the stone is clean worked, and carefully packed or stowed, and delivered direct to one bottom by vessel or railway truck. Prices and every information given on application, accompanied by plans or sketches, to SAMUEL TRICKETT, Stone-wharf, Isle of Dogs, or to JOHN TRICKETT, Headingley, Leeds, Yorkshire.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

YORKSHIRE STONE. — THOMAS TILNEY, Stone Merchant, Tanfield-place, Leeds begs to inform Builders, Surveyors, and Local Boards, that he can supply direct from his Quarries, by water or railway Paving, Landings, Steps, Kerb, or coal to sizes, on the most advantageous terms—Prices sent on application

TO CONTRACTORS AND OTHERS.

YORKSHIRE PAVINGS, LANDINGS, STEPS, COPINGS, CURBS, SILLS, SINKS, and CHANNELS; Hearthstones, Robin Hood, Park Spring, and Gayby, in Blocks, Heads, &c, or Slabs; Purbeck Paving Sinks, Curbs, Risbstones, Pitchers, and every description of Flags, Firestone, Newcastle and Bridge Stones, Pavement and Stone in Blocks, Landings, Slabs, &c; Darley Dale, Caen Stone, Bramley Fall, Ingleby, Huddersfield, Derbyshire and other Flock Stones, Valentia Slate Slabs, Bangor Slates, Cornish, Aberdeen, Guernsey, and other Granites; Marble in Blocks and Slabs, supplied from the Wharf, Millbank-street, City Basin and Westminster; also Fire from the quarries by vessel or rail.—Address, FREEMANS WHARF, 56, Millbank-street, Westminster.

TO STONE-MERCHANTS, MASONS, and BUILDERS.—The CHEAPEST WHARF in Yorkshire for ROBIN HOOD BLUE STONE is the Queen's Head Wharf, Saw-mills, New Dock, Leeds.—For Prices, &c. apply by letter to JOSEPH SLATOR, Stone-Merchant, Leeds.

GATES and GEORGE, CAEN, AUBIGNY, and GENERAL STONE MERCHANTS.
CAEN WHARF, ROTHERHITHE, LONDON.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman, Caroge shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Leeft Wharf, Waterloo-bridge. Office: 305, High-street, Southwark, near the Townhall.

TO CONTRACTORS, ROAD SURVEYORS, &c.—FOR SALE, about 800 YARDS BROKEN LOMBAY GRANITE, superior to Guernsey; 500 Broken Hobart Town; and 600 other Yorkshire Ditto. Also a large quantity of Peat Gravelles, Broken or otherwise, at very reasonable rates, by the ton or yard.—Apply to Mr. CHARLES ROSS, 3, Putney-causeway, Ratcliff; or at Polly-wharf, Isle of Dogs, Poplar.

WELSH GRANITE.—The Welsh Granite Company, Carnarvon, supplies Pitching or Paving Sets of this Material to order The Sets which have for several years been extensively used in Manchester, Bristol, Leeds, and other large towns, combine in a higher degree than any others, the qualities of non-abrasion in wear and durability. The stone is also well adapted for Roadside curbs, plinths, &c. for public buildings and for mill-stones.

GRANITE.—King William and Nelson Monuments, Plinth and steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—REGELLES and TAYLOR, 84, Old Broad-street. Manager—JAS. J. TRATHAN, Liskeard
This Granite is selected for the New Westminster-bridge.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SOULES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c cut on the shortest notice. Country orders promptly attended to.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab, Marble mortars, &c.

STONE! STONE! STONE! — To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Rag-face Slab, Granite Pitching and Curb, Guernsey Broken Road Materials, and every other description of stone, at JOHN KNIGHT and SONS', Devon Wharf, Mile-end. York boaled paving 38*s.* 6*d.* per 100 feet; slab for hire, 4*d.* per foot sup.; slab for chimney-pieces, 3*d.* per foot sup.; 8 by 3 window-sills, 6*d.* per foot run; 13 by 3 coping, 8*d.* per foot run; box chimneys (any opening), 8*s.* 6*d.* each. Terms cash on delivery.

BATH STONE OF BEST QUALITY.
RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.

List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

SLATE.—An assortment of the best BANGOR ROOFING SLATE ON SALE, at Bridge-wharf, Millbank.—Apply to Mr. GEORGE BAXTER, Foreman.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Berkhen Hospital, various Lunatic Asylums, the Portsmouth Works, Model Prisons, Parliament-street, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street, and at Messrs Drake's, Belvidere-road, where terms may be obtained.

PARIS EXHIBITION.—ENAMELLED SLATE TWO FIRST CLASS MEDALS!—Mr NAGNUS is the only exhibitor whose productions received the double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1845. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is unnecessarily below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of loo-tables, chiffoniers consoles &c.; baths baptistries, altar-tablets, pilasters, columns, vases pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dadoes.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.

N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

LLANGOLLEN SLABS and SLATES. HOUSE CISTERNS, Sink-stones, Filters, Larders, Mangers, Ridging, Skirting, and Roads, &c.

CISTERNS of LARGE DIMENSIONS for BREWERIES, DISTILLERIES, BLEACHING-HOUSES, and MANURE-TANKS.

Cattle-stalls, Pigstres, and Troughs.

Paving for Railway Stations, Malt-houses, Breweries, Balconies, Conservatories, Warehouses, &c.

CHIMNEY-PIECES, Baths, Tombstones, Pedestals, Washing-tables, Urinals, and every other Article of Slatework, PLAIN or PANELLED

Self-faced Flags for Barns, Outhouses, or Street Paving.

In Stock at Paddington, SEVERAL FINE SLABS of 70 SUPERFICIAL FEET each.

LLANGOLLEN FLAG AND SLATE COMPANY, PLANTAGENET WHARF, LLANGOLLEN, AND 4 WHARF, SOUTH WHARF-ROAD, PADDINGTON.

ROOFING SLATES or SLATING, SLATE CISTERNS, SINKS, &c.—T. I. HANN-FORD begs to inform Builders and the Trade generally, that they are not only manufacturing materials and workmanship of the best quality, but being the owner of a slate quarry, his prices will be found considerably lower than the usual quotations. 1*l* inch Slate Paving, 4*d.* per foot. Treviglo Wharf, Ratcliff-cross.

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the most liberal terms for cash, free of delivery, or to be transmit by railway. Also Slabs of all sizes. Orders to be addressed to R. EDWARDS, Manager, Royal Slate Quarries, Bangor.

AMERICAN OILSTONES, superior to all other Oilstones for sharpening Edge Tools. Can be cut to any shape or size. AMERICAN OILSTONE DUST, 2*s.* 6*d.* per lb. Patentee of the Engineers' Rather Drills, Brass, Iron Mi. nesh.—JOSEPH FENN, Tool Manufacturer, 105, Newgate-street, London.

TO CONTRACTORS and PROPRIETORS of SOLID ROCK.—Since the invention of HUNTER'S PATENT STONE PLANING MACHINE, nineteen of which are presently at work in Portsmouth, several on monumental slate-slabs have been made to order at a Machine for Ashlar Dressing, &c. Every one has failed. J and S HUNTER feel bound to direct attention to their PATENT now in practical operation both in England and Scotland. The machinery is constructed that it will receive a block how-ever rough, & cut it to two, facing both sides, it will also face one side without cutting on both sides. The machine is well adapted for large contracts, such as the construction of docks

O. M'CARTHY, CARTAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, free above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Block, Lime and old bricks, Dry rubble delivered per barge, in any quantity, alongside the Thames.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner, or supplied in any quantity. Information for using forwarded with material Post-office orders or reference in London promptly attended to.—Estimates given for every kind of the above work.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and very description of PAVING, especially in damp situations.

1*s.* 6*d.* per SQUARE YARD.

Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.

Apply to JOHN PILKINGTON, Poloncean and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London.

N B Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.

W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, late removed from No 21 Wharf, Harrow-road to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf.

Contractors supplied to any extent.

CREOSOTING PLANT, complete, for SALE Cylinder, 30 feet by 4 feet. Engine, boiler, and pumps, by Burton. Would be divided if needful.—Apply to JOHN CLARKSON, Timber Merchant, Birmingham.

COLES, SHADBOLT, and CO. CEMENT and PLASTER MANUFACTURERS, LIME BURNERS, BRICK, TILE, DRAIN-PIPE, HAIR, LATH, and FIRE GOODS Merchants, St. James's and Thornhill Wharfs, Caledonian-road, London.
ROMAN CEMENT, made at the above works, may be had fresh from the kilns daily—a great advantage to dealers and sewer contractors, especially in winter time.
PORTLAND CEMENT, of the best quality strength, and Colour, manufactured in Kent. This cement will carry more sand than any of the Lias Cements, so much of which is now brought into the market and sold as Portland.
PLASTER of PARIS, direct from the quarries, both coarse and fine, whole-sale and retail.
LIME, Grey Stone, Chalk, and Blue Lias Lime, fresh and well-burnt, a constant and regular supply of which may be had by the barge or yard.
A large assortment of Glazed Stoneware Drain-pipes, of the best Lambeth make; Yorkshire Plain, Pan, and Paving Tiles; Welch Fire-bricks, Lumps, and Tiles; Hair and Laths, always kept in stock.
These goods are of the best quality, and sold at the lowest possible prices.
N.B. Shipping orders promptly executed.

NOTICE.—TO BUILDERS, RAILWAY AND DOCK DIRECTORS, WATER-WORKS AND GAS COMPANIES, CONTRACTORS, &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic Roman, and Portland CEMENTS, made on the Maidstone and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel street, Liverpool.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company is to offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling purposes, decorations &c, as having all the qualities requisite for an interior cement and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 30, Old Broad-street, London; to Mr. MONUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON can be had in any quantity, wholesale and retail, at his wharf, 6 Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs ROBINS and Co. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Grey Portland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stucco, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agents at the Works—Mr. THOMAS WEEKES.
Agents in London, Messrs. GEORGE POTTER and CO. Lime-merchants, Portfleet-wharf, Earl street, Blackfriars, and No. 19, North-wharf-road Paddington.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture by improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, Ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, Gerrard-yard, Lombard-street.

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs, Warehouse, No. 1, Wharf, Paddington-basin
11 George-yard, Lombard-street, City

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements tried at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

DAMP WALLS.
STENT'S COMPOSITION FOR PREPARING NEWLY-PLASTERED OR DAMP WALLS FOR PAPERING,
Is the result of practical experiments and long experience; it is unfailing in its application. Entire houses have been papered a few days after plastering. In repairs of old plastering it is invaluable. A moderate room can be papered for 2s. 6d.
Prepared only by W. J. STENT, Warminster.
London Agents: Messrs. GEO. and THOS. WALLIS, 64, Long-acre. Agent for Ireland: Mr. S. BOYD, 46, Mary-street, Dublin.

HUBBUCK'S PATENT WHITE ZINC PAINT,
The Permanent White of the Ancient Artist.
HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor tropical climes act upon it. It is entirely free from any poisonous or pernicious property. The unctuous and mawkish paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil, and where it is used with Size, Varnish, &c. To prevent the prejudice against Zinc paint, which the adulterated article must otherwise produce, it is now sold by the Wholesale Paint dealers in Original Packages, each cask stamped, HUBBUCK—LONDON—PATENT. And when so marked, the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street Westminster

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS Millbank-street, Westminster; and Seel street, Liverpool.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal ranger's pass, by which the purchaser may know the quantity actually delivered.—Orders addressed to the London Depôt, 19, South Wharf, Paddington.
J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin's-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keene's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles, Fire Goods &c

DAVIES and NORMAN, CROWN WHARF, GREAT SOUTH-END YARD.
ROMAN and PORTLAND CEMENTS,
LIME BRICKS, TILE SLATTS, FIRE GOODS, &c.
STONEWARE PIPES, PANS TRAPS, &c
A Liberal Allowance to the Trade.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

BLUE LIAS LIME.—Messrs. GREAVES and KIRKSHAW having completed their Works on the Birmingham and Oxford line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars Surrey side, 7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 6d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

CHARLES RICHARDSON, 2 & 6, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES,
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.
3 & 6 South Wharf, Paddington.

NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or rail way stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.
All applications for prices and terms will meet with prompt attention
N.B. Please observe the lime is ground at the works, not in London.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting Whiting Sand for asphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station in the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 200 to 600 tons can load along side the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above named articles can also be procured, as well as all kinds of fire goods, both Welsh and Scotch, Fire-clay, Flare-burnt Lime and Marble and Temper Lime; and here lime is packed in bags heads, casks, jars, &c. for exportation
General Office—No. 12, GEORGE-YARD, LOMBARD-STREET
Letters addressed to Grays Essex, will meet with immediate attention.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY.
(Within a short distance of the fire bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY, near the Crystal Palace. Entrance, Norwood end, Palace-road.—BRICKS of the first class, Kiln Bricks, Cutters, Dressings, Facings, and Paviors, Clamped ditto, Yellow and Pale, Seconds, Place and Pickings, Washed Stocks, Stocks, and Place.—Apply to TRUMAN and CO. Norwood Lodge, Palace road, Roupell park, Lower Norwood, Surrey.

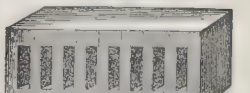
THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Warlingham or set to the field; leave at 6 and 9.30 a.m. and 3 p.m.; return at 9.25 a.m. and 5.5 and 7.55 p.m.
HENRY C. MOUNT, Sec.
37, King William-street, City.

BRICKS.—Mr. Rydon having made more Bricks than he requires for the Buildings on his estate, Highbury Crescent, would be willing to enter into arrangements with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms. For particulars, apply at the Estate office, Bell's Farm, St. Ke Newington Green.

BRICK, TILE, and POTTERY KILNS.—WANTED to RENT, CONVENIENT WORKS for carrying on the above Business. Address, THOMAS FOX Post office, Botwell, Middlesex.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings of good and sound quality, constantly on sale at D. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for them elves
Malm Place, half-washed Stocks, and Place Bricks, also on sale. The Bricks are good, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing
Apply at HENRY DODD and CO. at the Counting-house, Heston Brickfield, Grange-walk, near the Rosemary Branch, Hoxton
N.B Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its freedom from all existing saline matter, is also considered to be preferable to river sand.

IMPROVED AIR-BRICKS



WILLIAM GILBERT, Manufacturer of all kinds and sizes of Tiles, Quarries, Drain pipes, Moulded Bricks, Brackets, Vases, Chimney pots, Stoneware Glazed Sewerage Pipes, Ornamental Quoin Blocks, &c.
Tividale, Staffordshire.

HOGG'S GARDEN EDGE TILES: a cheap, elegant, and durable substitute for Box Edging.
13s. per Hundred, or
4d. per yard.
Exhibited in Court of Inventions, Crystal Palace; and at the Office of "The Builder."
Full pattern as from Mr. R. BLACKET Witham, Essex

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the EXECUTION of the above TILES on roofs of all descriptions in the neighbourhood of London, at 7½ per foot; above 100 feet, 6½.—Office, 1, Adelaide place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENCY.
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 3d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "HARDNESS OF THE FORMS," page 281, of the Great Exhibition, rank the Manufactures known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world

CONIAM'S PATENT IMPROVED ROOFING TILE.—These tiles are light from overlapping each other by a raised edge, which also prevents the drift of rain or snow, and, at the same time, effects considerable saving in timber. To be obtained of C. PHILLIPS, Potter, Weldon-super-Mare.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854 was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes whose named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

FACING FOR BUILDINGS COMPANY—TAYLOR'S PATENT.

BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,

REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.

STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No process of [illegible] Cramps and Bond [illegible] OTHER BUILDINGS FACED WITH STONE [illegible] cost for carriage. [illegible] Buildings at SPAIN GROVE, HOLLOWAY [illegible]

Mr. JOHN TAYLOR, ARCHITECT, OFFICES OF THE COMPANY, 40, KING-STREET, CORNER OF CHEAPSIDE.

THE [illegible] GLASS COMPANY.

LEGENDRE AND TURPIN'S

WHOLESALE ESTABLISHMENT for the supply of CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality,

WINDOW-GLASS, Shades, Moderator Globes, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET, LONDON-BRIDGE.—WORKS: SEVRES, NEAR PARIS.

SNOXELL'S

PATENT REVOLVING WOOD AND IRON SHUTTERS,

WITHOUT MACHINERY,

96, REGENT-STREET, AND AT HIS STEAM WORKS, 135, OLD-STREET.

Testimonials from Architects, Builders, &c. on the principle and durability, forwarded.

MANUFACTURER OF METALLIC DRAWN SASH-BARS, STALL-BOARD PLATES, &c.

ANCIENT HOUSE FURNITURE

In order to supply the deficiency which has hitherto existed in Furniture suitable for the many Mansions that have been erected or restored in the MEDIÆVAL STYLES, Messrs. GRACE have directed their particular attention to this subject, in addition to their other works, and have prepared appropriate specimens in the various branches of Furnishing.

STUFFS for HANGINGS, in simple Worsted Damask, in Silk; also in Tapestry of Bauderkin.
CARPETS, plain or in rich Velvet pile, with appropriate Borders.
PAPER HANGINGS, of various kinds.
OAK CABINETS, Buffets, Octagon Library and occasional Tables, Benches, Chairs, and other useful and appropriate Furniture
The whole of the above-mentioned Furniture, &c. is designed by the late Mr. A. W. PUGIN, Architect.
To render this Furniture generally available, a considerable portion has been arranged in the simplest manner, consistent with it ancient character.
14, Wigmore-street, January, 1853.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced the best, and most economical, for warm climates.

1st. It's a non-conductor.—2nd. It is portable, one man can carry 100 square yards on a hand-barrow.—3rd. It effects a saving of heat, the summer usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 42 lbs. to the square of 10 feet, the cost of carriage is small. 6th. Under slate, metal, or tiles, it acts as a most effective non-conductor of heat, as well as a perfect protection against damp.—7th. Price ONE PENNY per Square Foot.

RHODOROID FELT, for damp walls, and for lining floors, under carpets, &c.
CROGGON and CO.'s PATENT SHEATHING, for Covering Ships' Bottoms, &c., and
DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., a process for the saving of Heat, saving 25 per cent. of Fuel and deadening Sound.

Samples, testimonials, and full instructions, on application to CROGGON and Co. 2, DOWGATE-HILL, LONDON.

PANTILES, PAVINGS, &c. — J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 30s. per 1,000; floor bricks and 6-inch pavings, at 37s. 6d. per 1,000; square pavings at 37s. 6d. per 1,000; thick tiles, per 1,000, delivered. Cash prices.—Delivered in trucks in London, on Eastern Counties Railway.

TO BUILDERS, CARMEN, & OTHERS.—A Quantity of PIT SAND for Builders FOR SALE, at 1s. 6d. per yard, on the ground adjoining St. John's Church, Old Bethlem-green Road.

TO ROAD-MAKERS, BUILDERS, and OTHERS.—1,000 YARDS HARDCORE of DUST-YARD PICKINGS put on to and barges at Phœnix Wharf, Banks, Southwark, free of charge.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SHEET PLATE GLASS COMPANY, 26, Soho-square.

LONDON LEAD and GLASS WAREHOUSE.—JOSEPH POULSON, 164, Edgware-road.—Crown Glass, in crates, 24s.; 15 oz. sheet, 2½ per foot. Sheet Lead, Pipe, Solder, &c. Also Plumbers' Brass Work, cheaper than any house in London.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality. In Cases of 1 0, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 32s.; 4 hs, 30s. Squares, 18 inches by 12 feet each, 4 to 15 by 8, 2½ per foot. Lower sizes at 2d. 2½d, 3d, 3½d per foot. Ground Glass, 2½d per foot. Crown and Sheet Rough and Patent Plate, Enamelled Glass. Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 300 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 32s.; 4ths, 30s.; squares, in boxes, 100 feet each, 6 by 4 to 15 by 8, 2½; larger sizes, up to 22 by 14, 3d.; ground-glass, in cases, 2½d. per foot: Crown and Sheet British, Patent, and Hartley's Patent Rolled Rough Plate English and Foreign Fluted, Stained Glass, Glass Slates, &c., Sheet Lead, Pipe, White Lead, Oils, Colours, &c.
G. FARMILOE and SON, 118, St. John-street, West Smithfield.

E and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, rolled and for glazing, of unrivalled whiteness and finish. ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse 95, OXFORD STREET.

By Royal Letters Patent

THE COSMOPOLITAN GLASS COMPANY, 295, Oxford-street.
BELL and WARING, Managers.
CCC CROWN, 18s Tables, per crate, 30s.; B 15 oz SHEET, 9d per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 9d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 1d. 2d. and 3d per foot; ENAMELLED RUBY, GROUND SHEET, 2½d ENAMELLED, 3d per foot. Tiles and Squares from 6d each. Sashes prized and sized 6d per foot. BELL'S FAIRY FLY SCREEN, for INDICATING and VENTILATING NIGHT.
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THE PATENT CRYSTAL WINDOW BARS, for shop-fronts and other windows, skylights, conservatories, verandahs, exhibition and counter cases, fern cases, aquariums, &c. Manufactured by LLOYD and SUMMERFIELD, Par Glass works, Birmingham.

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DUNCAN and CO. JOINERS to the TRADE, 81, Lower Marsh, Lambeth, Shop Fronts and Fittings, Fittings complete to Offices, an experience only from 15 years' experience, on the most reasonable terms. A large quantity of [illegible] always on hand. Plans and estimates given free of charge. A detailed list will be forwarded.—Workshops, 33, James-street, Lambeth.

TO BE SOLD a bargain, TWO MAHOGANY-TOP COUNTERS, 2¾ and 10½ feet long, 2 feet wide, [illegible] and [illegible] Apply to Cuffort-terrace, West Brompton, London.

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IMPROVED REVOLVING SHUTTERS. FRANCIS RICKABY and DUNN are now enabled to offer the best and cheapest Shutter in the trade, viz. IRON SHUTTERS, double riveted, with machine-cut worm gear, complete, at 4s. 6d. per foot. WOOD SHUTTERS, with worm gear complete, at 3s. 6d. per foot. Machine-drawn Brass Sash Bars and Stall-board Plates made to any design. 84, Grays-Inn-lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Workmanship, materials, and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 116, Broadwall.

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WINDOW BLINDS.—FULLER, BROTHERS, Manufacturers of every kind of Inside and Outside WINDOW BLINDS, warranted of the best materials and workmanship, at the lowest possible prices. Builders' orders to Trade supplied. A List forwarded on application.—20, Charlotte-street, Blackfriars-road; and at Sydney, New South Wales

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER HANGINGS. GROSS'S WHOLESALE WAREHOUSE, 23, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders in the Trade, Contractors, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 23, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an

EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 8s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and also they are placed in the external wall, their action is not large enough when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 117, Union-street, Borough, and of all respectable ironmongers, builders, &c.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
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LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz. :—

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Manufacturers of FIRE BRICKS, TILES, QUARRIES, &c., White Building Bricks, Fire-clay CHIMNEY-TOPS, in Norman, Egyptian, Saxon, Tudor, Grecian, Gothic, and Elizabethan styles.

TERRA COTTA

Fountains, Vases, Pedestals, Capitals, Trusses, Brackets, &c., in great variety, which for beauty and elegance of design are unequalled

The designs of Architects modelled with the greatest exactness.

Also of PATENT GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, &c., well adapted for pressure, being made extra pressed under "Spencer's Patent." Superior White Glazed CLOSET PANS, TRAPS, &c.

The Works of the Company are situated in the immediate vicinity of the well-known bed of WORTLEY FIRE-CLAY, and their manufacture of BRICKS, for the use of Forges, Gas Companies, Foundries, Potteries, and Glassworks, is confidently recommended for all purposes where extreme heat is required. Their GROUND CLAY is also particularly adapted for the manufacture of CRUCIBLES. MELTING POTS, &c.

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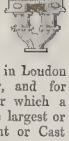
LIVERPOOL....No. 9, Russell-street, 83, Renshaw-street, and Sharpus wharf Leeds-street.
NEWCASTLE. ..W. B. Wilkinson and Co. Prudhoe-street.
GRIMSBY.....P. G. Skipworth.
MANCHESTER..No. 46, Travis-street, and 23, 24, and 25, Birmingham street, Londn-road.
HULL.....No. 60, Queen-street, and Wellington-street.
BRADFORD ....Horton-road
LEEDS .....Wellington-street, adjoining the Midland Station; and Shipping-wharf, Victoria-works, Hunslet;
SUNDERLAND..W. B. Wilkinson and Co. Queen-street.
WARE.....G. E. Kins, Stone Merchant.

Where Drawings, with Prices, &c. may be obtained.

ON SALE AND HIRE,
SINGLE AND DOUBLE PUMPS
IN WROUGHT IRON

TO ANY DEPTH,

FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.



Sizes, from 3-inch to 15-inch barrels.

N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

B. FOWLER and CO.'S
FARM and COTTAGE PUMPS, 30s

All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps, Engine Brasses, Horse-gear, Cranks, Pulley Blocks, Wrought Pails, and Rounds Baskets, Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.

H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 149, Fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

HHH for drawing on wood.	FF light and shading.
HH for architectural use.	F for general use.
H for engineering.	B black for shading.
H for sketching.	BB ditto ditto.
HB hard and black for drawing.	BBB ditto ditto.
M medium.	BBBB ditto ditto

Sold by all the principal Stationers in town or country

FOR HIRE, a SPACIOUS TENT, adapted for the Laying of Foundation Stones for Public Buildings, &c.

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices

Apply to H. PIGGOTT, 115, Fore street, City.

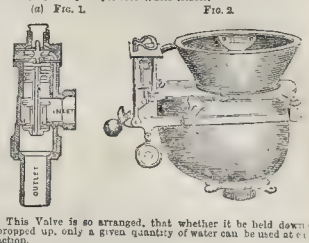
KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first houses in the trade, and of the manufacturers, G. B. KENT and CO. 11, Great Marlborough-street, London. Established 1777

N.B. Kent's Painting Brushes are all stamped G. B. KENT & CO.

Price Lists forwarded by post.

LAMBERT'S PATENT WATER WASTE PREVENTER, and SELF-REGULATING VALVE-COCK, especially adapted for Water-closets.

(a) FIG. 1. FIG. 2.



This Valve is so arranged, that whether it be held down or propped up, only a given quantity of water can be used at each action.

The pressure of the column of water—viz. its vertical height—being known, a quart gallon, or any other quantity desired will be (and no more can be) discharged; and before a second quantity can be obtained, a second action must take place.

This Valve is capable of several modifications; one of its applications to the Pan Closet, as shown in Fig. 2, is important, as it renders unnecessary any other appliance to regulate the discharge of water; it can be made to keep open as long or short a time as may be desired, after the handle which operated upon it is set free.

It is yet more valuable when applied to self-acting Closets, as it dispenses entirely with reservoirs or supply cisterns; once regulated, say for one gallon, that quantity will always be discharged at each action of the seat by its pressing upon the stud, or by any other movement.

The Patentees have tested them under every pressure up to 300 feet with complete success.

THOS. LAMBERT and SON,
Founders and Manufacturers of High-pressure Water-Valves,
Plumbers' Brass Work, Pumps, &c.
SHORT-STREET, NEW-CUT, LONDON.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street London.

MACINTOSH INDIA-RUBBER WAGGON COVERS, at reduced prices. Stocks of different sizes are always ready, and can be inspected at our Warehouse, MOSES, SON, and DAVIS, 14 and 15, Aldgate High-street, and at the Factory, India-Rubber Steam Works, Bow-common.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT.—Second Testimonial.—"March 10th, 1852—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the COMPOSITION WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES,
18, WHARF-ROAD, CITY-ROAD, LONDON

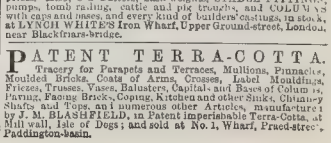
HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagnelle tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

IMPORTANT TO BUILDERS.



REGISTERED CAST-IRON CHIMNEY-HOPPER and CHIMNEY-BAR COMBINED, ensuring a perfect formation of the Flue, and rendering smoky chimneys impossible. One trial will cause their adoption in every building.

Price from 8s. 6d. each, according to size.

IRON GIRDERS and COLUMNS to MODEL or DRAWING. IRON PIPES and connections for gas, water, and liquid manure.

RAIN-WATER PIPE and EAVE GUTTERS, at wholesale prices. Also, O.G Gutters, Sash-weights, STABLE FITTINGS, pumps, tomb railing, cattle and pig troughs, and COLUMNS with caps and bases, and every kind of builders' castings, in stock, at LYNCH WHITE'S Iron Wharf, Upper Ground-street, London, near Blackfriars-bridge.

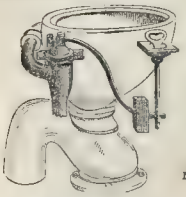
PATENT TERRA-COTTA.

Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals, and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Mill wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS,

LAMBETH POTTERY, LONDON.



DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

WILLIAM NORTHEN'S

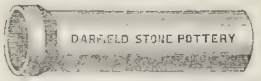
WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

SALT-GLAZED STONEWARE, FIRE-CLAY, AND TERRA-COTTA WORKS,



NEAR BARNSLEY, YORKSHIRE.

The Proprietor, E. B. BEAUMONT, manufactures every description of STONEWARE for drainage, building, sanitary purposes, and fancy ware, from clays which have been subjected to the most searching analyses, and proved to be of the most tenacious and indissoluble qualities. The pipes are wrought by Spencer's Patent Machine, by which tube and socket are made, without a manipulated joint, and rendered the more compact by hydraulic surge; and as every improved apparatus has been made available to secure the highest excellence with great economy of labour, the goods are put upon the market at a considerable reduction from the prices charged for others at all approximating in quality, whilst the stock on hand is always sufficient largely to provide for works of the greatest magnitude.

THE TRADE LIBERALLY TREATED WITH.

Price lists and Diagrams sent free on application, to

At the WORKS .....To Mr. WM. FORD Darfield Fire-clay Pottery, near Barnsley.
In LIVERPOOL .....To Mr. JOHN LIDDALL, 36, Shaw's-row.
In MANCHESTER ...To Mr. B. CONSTERDINE, Hunt's-bank.
In GLOUCESTER....To D. S. WILKINS, Westgate Wharf, Gloucester.
In LONDON.....To Mr. J. D. JONES, 37, Bucklersbury; and Goods Depot, No. 4 Warehouse, King's-cross (Great Northern Railway).

AYLESFORD POTTERY COMPANY,

BELVEDERE-ROAD, LAMBETH.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

The above Company having now been in existence for nearly six years, and having during that period supplied DRAIN PIPES, &c. to some of the largest Works in and around London viz.: The New Cattle Market, Wellington and Chelsea Barracks, Deptford Dockyard, Her Majesty's Commissioners of Works, &c. and in all instances parties using them expressing themselves satisfied therewith,—take this as a fair test of the quality of the articles supplied by them; and as they now feel themselves established as Potters, beg to offer their services to Contractors the Trade, & others requiring goods, and manufactured, and at the lowest possible prices, NOT BEING IN ANY WAY CONNECTED WITH THE LONDON POTTERS' ASSOCIATION.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.

HALF-SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Mincing-lane, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					2½d. per foot.
4	"	"	"		3½d. "
6	"	"	"		5½. "
9	"	"	"		9d. "
12	"	"	"	1s. 5d.	"
15	"	"	"	2s. 6d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by the manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh &c. &c.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

GROUND FLINT AND CORNISH STONE,

UNADULTERATED.

WILCOX & CO.

FLINT MILLS, MILLWALL, POPLAR.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, slate, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or other power.

Iron Pails 2s. per doz.; painted, Ditto .... 4s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, dairies, manufactories, and wells of a depth not exceeding 30 feet.

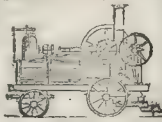
Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead, gutta percha or cast iron flanged pipe, as required.	1 10 0
2½	long 3 3		1 14 0
3	ditto 3 6		2 8 0
3½	ditto 3 6		2 12 0
4	ditto 3 6		3 3 0
2½	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½	long ditto ditto		3 18 0

The short barrel Pumps is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.



JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, Southwark, London.

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

TO CONTRACTORS.—FOR immediate SALE, a bargain, in consequence of the undertaking being abandoned, a strong and well-made powerful PORTABLE STEAM-ENGINE, adapted for contractors' work generally.—May be seen at work on application to Messrs. MEDWIN and HALL, Engineers, 92, Blackfriars-road.

JENNINGS'S PATENT DRAIN-PIPES.

The Drain-Pipes which weekly ornament the pages of the *Builder*, were originally introduced into Britain BY THE ROMANS. Common sense, however, objected to their use on a LARGE SCALE, as they neither admitted of examination nor repair.

The alterations made by GEORGE JENNINGS remove EVERY OBJECTION TO PIPE-DRAINAGE.

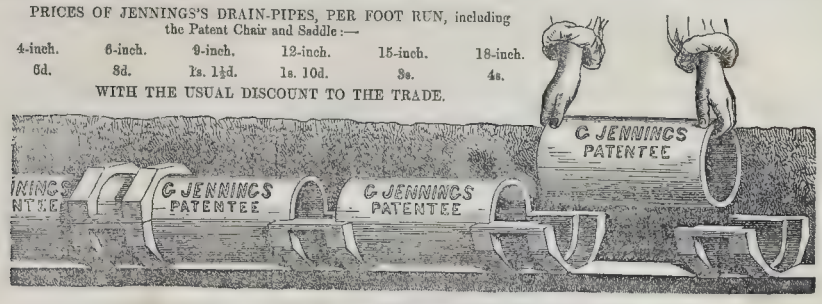
Examinations can now be made, junctions introduced, and repairs effected, without in any way disturbing the Invert or General Drain.

That these alterations were necessary is proved by the attempt of some manufacturers to effect the same object without infringing the Patent rights of GEORGE JENNINGS, who particularly invites Architects, Engineers, and Others interested in Sanitary Improvements, to COMPARE HIS THE ORIGINAL IMPROVEMENTS with the attempted copy.

PRICES OF JENNINGS'S DRAIN-PIPES, PER FOOT RUN, including the Patent Chair and Saddle:—

4-inch.	6-inch.	9-inch.	12-inch.	15-inch.	18-inch.
6d.	8d.	1s. 1½d.	1s. 10d.	3s.	4s.

WITH THE USUAL DISCOUNT TO THE TRADE.



JENNINGS'S PATENT DOUBLE-SEATED VALVE-CLOSET.

Architects describing this Closet in their specifications will have a PERMANENTLY GOOD VALVE CLOSET, NOISELESS, and FREE FROM COMPLICATION. The Patentee has such confidence in its DURABILITY and EFFICIENCY, that he will guarantee every Closet for SEVEN YEARS.

JENNINGS'S IMPERISHABLE EARTHENWARE CLOSET AND TRAP.

This Closet has a large water surface, has no back to soil, is imperishable in its material, and the Trap and Closet are combined in one piece, suited alike for the PALACE or the COTTAGE.

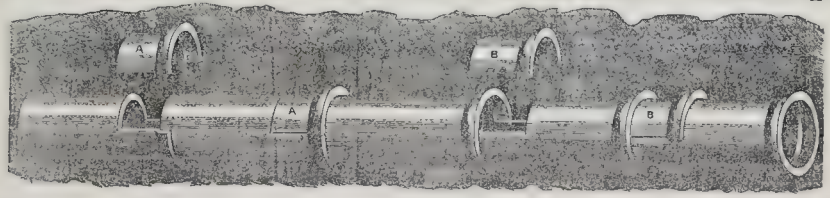
JENNINGS'S IMPROVEMENTS IN LIFT AND OTHER PUMPS.

These Pumps would well repay a visit to Jennings's Factory, where may be seen Jennings's Lavatories, Urinals, Sluice Valves, Fire and Steam Cocks, of every size; Shop-Shutter Shoes; Gully, Area, and Sink Traps, and other sanitary goods.

Or Illustrations and Prices can be had free by post, if two stamps are enclosed to

GEORGE JENNINGS, SANITARY ENGINEER, HOLLAND-STREET, BLACKFRIARS-ROAD, LONDON.

AYLESFORD POTTERY COMPANY'S PATENT DRAIN-PIPES.



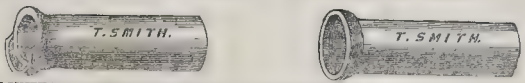
THE above Company respectfully invites the attention of Engineers, Architects, Surveyors, Builders, &c. to an improved DRAIN-PIPE, whereby all stoppages may be cleared without disturbing the invert of the drain, by simply removing the cover (marked A or B) whichever may be preferred.

The cover (marked B) may be used in conjunction with whole or half-socket Pipes.
Pipes thus constructed may be laid at intervals in a drain of ordinary Socket-Pipes.
With the great advantage these Pipes offer, they are cheaper than any yet submitted to the public.

London Depôt—AYLESFORD WHARF, Belvedere-road, Lambeth.

MANUFACTORY AT AYLESFORD, NEAR MAIDSTONE, KENT.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of JAMES PILBROW, Esq. Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.
TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

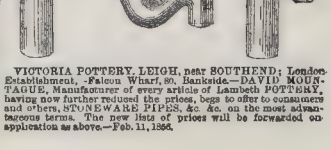
UNDERHAY'S PATENT REGULATOR CLOSETS for constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in fixing, and a better flush of water obtained in use.

Pan, Valve, Self-acting, and Servants' Closets, on this principle, may be seen at the Works. They are very cheap, their efficiency is guaranteed. 5,000 of them have been sold, and no instance of failure has occurred.

These Stool-valves are cheaper, stronger, and more ornamental, than any other. Many thousands are in use, and greatly approved of.

Manufactured by
CHARLES BOTTEN and SON,
Brass Founders, Crawford-passage,
Clerkenwell, London.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, 'Falcon Wharf, 80, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

SALES BY AUCTION.

TO BUILDERS, IRONMONGERS STOVE-GRATE MAKERS, and OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, at the WAREHOUSES, Belle Sauvage-yard, Ludgate-hill, on THURSDAY, OCTOBER 23rd, 1856, and following day, at ELEVEN each day, in lots, without reserve, the extensive STOCK of the Sheffield Company's Stove Grate and General Ironmongery Warehouse, all of the newest patterns and designs, including 100 polished steel register stoves, with ormolu mounts, 250 black register and Romford stoves, 20 wind-up ranges, 20 cottagers' cooking-stoves 20 hall and shop stoves, 50 steel fenders with ormolu mounts, 200 bronzed and black fenders, 250 sets fire-irons, bronzed number-lamp stands, bastian's garden chairs and tables, an assortment of elegant Berlin bronzes, in groups of figures, ink-stands, medallions &c.; 200 sash iron rollers, 50 round and oblong pig-troughs, 500 yards rain-water pipe and guttering, 30 tons stove and range metal air-bricks, dampers, and frames, an assortment of ladders, ironmongery, locks, nails, hinges, screws, bells, pulleys &c.; the fixtures in ironmongery, japanned goods, black boiler ware, 50 dozen frying-pans, electro-plated goods, iron and pewter meat dishes, cullenders and scoops, toilet sets, 30 gas chandeliers, 200 ship, cabin, and carriage lamps and lanterns, 2½ dozen gas brackets, an improved reflecting telescope, 50 grass patent pegging knives, fittings and tools of smith's shop, standard vices and files, 1 cwt. brass, gunmetal & fittings, and other effects.—To be viewed on Tuesday and Wednesday previous to the sale, when catalogues may be had on the Premises; and of Messrs FULLER and HORSEY, Billiter-street, City.

VICTORIA-STREET, WESTMINSTER.—SECOND PORTION —Sale of new Building Materials, Plant, Stock, and Utensils of a Builder.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on the PREMISES, Victoria-street, Westminster, on MONDAY, OCTOBER 20th, and following day, at ELEVEN each day, in lots, the SECOND PORTION of the STOCK of well-seasoned NEW BUILDING MATERIALS, partly prepared yellow and white deal flooring boards, 500 feet cube Portland stone, 5,000 feet 3inch tooled York paving, 5,000 feet self-faced ditto, 2,000 feet York landings, 350 feet cube York stone, 1,700 feet cube granite, two tons iron girders, 30,000 stock and fire-bricks, 200 tons chalk, 100 tons water-pipe, 15 slate cisterns, 30 coils iron pipe 10,000 feet iron tube, an assortment of Ts, elbows, bends, sockets, &c. pipe basins, 50 gallons varnish, 30 cwt. white lead, 100 cwt. sand, ordinary fittings 200 boards, 1,000 scaffold poles, 10 to 40 feet; 1,000 feet run 3 inch plank, 500 dozen scaffold cords, 60 ladders, 20 benches, barrows, 6 brass-finished locks, 100 mortice ditto, 12 cwt. anvils, vices, air furnace, moulding trough, and tongs, 2 painters' machines, 24 pair steps, and trestles; an assortment of boxes, stocks and dies, steel tools, and numerous other effects.—To be viewed on the day previous to the sale, when catalogues may be had, on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

500 TONS OF IRON.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed to SELL by AUCTION, on MONDAY, OCTOBER 27th, at ELEVEN, at the WORKS, Blackwall, by direction of the Assignees of Mr. C. J. Mare, in lots, 600 TONS WROUGHT-IRON, including 400 tons of Bowling, Lowmoor, and best scrap bars, plates, bolts, and angle iron, 200 tons scrap iron, 50 tons boiler plates, 30 tons pudlers, 40 tons rolled scrap plate, 50 tons hammered slab, 30 tons scrap blooms, &c.—To be viewed on Friday and Saturday previous to the sale, when catalogues may be had at the Works of CHAS. LEE, Esq. (Official Assignee), Aldermanbury, of Messrs. LAWRANCE, PLEWS, and HOPER, Soli'rs, Old Jewry Chambers; of Messrs. NEWSON, EVANS, and NEWSON, Solicitors, Wardrobe-place, Doctors' Commons; of Messrs. FULLER and SON, 80, Fore-street, Cripplegate; and of Messrs. FULLER and HORSEY, Billiter-street, City.

PRELIMINARY ANNOUNCEMENT

MESSRS. FULLER and HORSEY in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees of Mr. C. J. Mare, to SELL by AUCTION in the ENSUING MONTH, the whole of the HOUSE STORES and TOOLS of the extensive ship-building yards and iron-works at Blackwall and West Ham, including upwards of 100 tons steel, iron, and iron screwed bolts and nuts, 70 tons cast and shear steel, 500 tons cast-rings, 20 tons engineers' steel stools, an expensive self-acting boring bar, ratchet braces, stocks, taps and dies, &c., 100 tons anvils, 30 tons smiths' tools, in top and bottom swages, hammers, mandrils monkeys, &c.; 200 tons iron flask-, crane shank and hand ladles; flask weights, several weighing-machines, 3 cranes and tackle fitted to lighter, boiler-makers' tools, 10 tons sharp-plates and bolt dies, patent rivetting-machine, contractor's portable steam engine and boiler, three 6-ton jib cranes, crab cranes, blocks and falls, 20 tons tons of chain slings, mooring-chains, chain-cables, &c., 50 brass barrel lift-pumps, ships' water-closets ships' pumps, five tons brass fittings, a large assortment of general ironmongery, 1,000 dozen files, 10 joiners' benches, joiner's cramp and tools, 10 tons lead, plumbers' tools, five tons bolt and sheathing copper, 30 oak strings, several hundred fathoms slab, expensive prepared cabin fittings, several thousands of stage planks and deals, shipwrights' tools, 20 horses and skiffs, three wrought iron barges, counting house fittings, and a large assortment of miscellaneous effects. More detailed advertisements will shortly appear. Catalogues are being prepared, and may shortly be obtained, at one shilling each of Messrs. FULLER and SON, 80, Fore-street; or of Messrs. FULLER and HORSEY, Billiter-street, City.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on TUESDAY, 11th NOVEMBER, 1856 and following day, at ELEVEN o'clock each day, on the PREMISES, the Atlas Works, Fen-road-street, Southwark, unless previously disposed of by private contract, of which due notice will be given, the MACHINERY and TOOLS of the ATLAS WORKS, including a large and powerful self-acting boring machine, drilling-machine, ten very powerful lathes, for engine turning and screw-cutting vices and tee lies, steel to lathe smiths' forges, a large assortment of engineers' and smiths' tools, two steam engines and boiler, shafting, and gearing, screwing apparatus, a valuable collection of new patterns, in wood and iron, stores of every description, and numerous other effects. At the same time will be SOLD, the LEASE of the PREMISES, comprising a substantially-built factory, of two floors, the upper story used as a fitting shop, turnery, and store-room. The lower floor used as an erecting shop, foundry, engine house and smith's shop, a workman's dining room, stable-yard, a convenient residence, and offices, held on lease for a term of twenty-six years, at a rental of, per annum.—The Premises may be viewed till the sale, and the Machinery on Monday previous. Particulars and catalogues may be had on the Premises, and of Messrs. FULLER and HORSEY, 13, Billiter street, City.

TO ENGINEERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on MONDAY, OCTOBER 13, at TWELVE, on the PREMISES, No. 131, Southwark-bridge-road, in lots, without reserve, ENGINEERING TOOLS, including a self-acting planing-machine, to take in 6 feet by 2 feet 6 inches; 9 inch self-acting screw-cutting lathe; two foot-lathes; small horizontal steam engine and boiler; large assortment of tools, and other effects.—To be viewed the morning of sale, when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter street, City.

TO PLASTERERS, BUILDERS, AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on TUESDAY, the 21st of OCTOBER at ELEVEN o'clock, on the PREMISES, Victoria street, Westminster, in lots, PLASTERERS' TOOLS and MODELS, including many scarce and valuable originals, in wreaths, fruits, cups, heads, spatgles, friezes, trusses, cornices rock work, French and English centre flowers, and the plant and tools requisite.—To be viewed on Friday and Saturday previous to the Sale, when catalogues may be had, on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

SALES BY AUCTION.

TO IRON PLATE-WORKERS, IRONMONGERS, AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on THURSDAY, OCTOBER 16, at TWELVE, on the PREMISES, White Lion yard, White Lion street, Seven Dials, by order of the Trustees, the TOOLS and STOCK-IN-TRADE of an IRON PLATE WORKER, 100 dozen scoops and scuttles, ten kettles preserving-pans, saucepans, fire baskets, copper hole shovels, sifters, card boxes, and other articles, all of the best manufacture, set of bending-rolls, plate-workers' tools, bright stake heads, bench shears, vices and benches, smith's forge, bellows, anvil and 1 cwt. of round bar iron, tinning pit, lead cistern, fly-press, two iron safes, weighing-machine, and other effects.—To be viewed the morning of sale, when catalogues may be had on the Premises; and of Messrs. FULLER and HORSEY, Billiter-street, City.

COLCHESTER.—Freehold Building Land.

MESSRS. BEADEL and SONS have received instructions to SELL by AUCTION, at the CUPS HOTEL, Colchester, on THURSDAY, the 16th day of OCTOBER, 1856 at TWO for THREE o'clock, in 6 or 7 lots, several valuable PLOTS of FREEHOLD BUILDING LAND, situate close to the railway station at Colchester, possessing considerable frontages to North-street and the roads leading from Colchester to Sudbury and Ipswich, which will be found most desirable investments for building; also a few lots close to St. James's Church, on the East-hill fronting Castle-road and Garden-terrace. The above property is freehold, land-tax redeemed, chiefly tithe free, most eligibly situate, and singularly adapted for the erection of villa or other residences, and offers rotes for the county of Essex.—Particulars, with Lithograph plan (by permission of Colonel Russell, Esq.), of Messrs. Sole, Solicitor, 59 Coleman-street, London; at the Cups Hotel, Colchester; and of Messrs. BEADEL and SONS, 24, Gresham-street, London.

TO CABINETMAKERS, TIMBER MERCHANTS, CHAIRMAKERS, BUILDERS, and Others.

FOR SALE by AUCTION, on the PREMISES, New Inn, Broadway, Curtain-road, Shoreditch, by order of the proprietor who is relinquishing the premises, and removing entirely to 121 Curtain-road), the third portion of the STOCK IN-TRADE of Mr J. F. Mitchell, Mahogany and Timber Merchant, which will be sold without reserve, on TUESDAY, 7th OCTOBER, 1856, at TEN for ELEVEN o'clock precisely. The stock consists of large quantities of excellent and well seasoned Spanish, Cuba, and Honduras mahogany and cedar, in fine logs, flitches, planks, and boards, birch, rosewood, and walnut in planks and boards, dry pine deals and planks, whole and cut, &c. To be viewed two days prior to and on the morning of sale. Catalogues may be had on the Premises and of THOMAS EDWARDS and SON, Mahogany Brokers and Auctioneers 16, Pinner's Hall, old Broad-street, City.

N B The Premises TO BE LET for any other trade.

HARROW, MIDDLESEX.—Valuable Freehold Building Land, about midway between the church and the station

MESSRS. FAREBROTHER, CLARK, and LYE are instructed to SELL, at GARRAWAY'S, on WEDNESDAY, OCTOBER 8, a valuable FREEHOLD PROPERTY, close to Harrow on the-Hill, and about midway between the church and the station, and only a few yards removed from the high-road, beautifully situate, commanding extensive views over the surrounding picturesque country, divided into three lots, as under, viz.:—Lot 1. A desirable plot of ground, as staked out, and abutting on the Roxburgh-road, and having a frontage thereto of 300 feet, and extending in the rear to a depth of about 500 feet, part having a frontage of 187 feet to the Byron-road. Lot 2. A corner plot, situate at the junction of the Roxburgh and Byron roads, with two frontages, of 118 feet to the former, and 183 feet to the latter. Lot 3. Another valuable plot, having a frontage of 202 feet to the Byron-road. The above property forms a portion of a larger estate, recently disposed of for building purposes. The roads are laid out, tasteful villas have been erected on the adjoining plots, and some others are in progress. The proximity of the railway station, combined with the benefits extended by the North-Western Railway Company to occupants of houses in the vicinity, coupled with the advantages of Harrow School, render this a most desirable property for the erection of villa residences. May be viewed; and particulars, with plans, may be had at the King's Head Inn, Harrow; the Railway Hotel, at the station; of THOMAS WONNACOTT, Esq. Solicitor, 18, Skinner-street, Snow-hill; at Garraway's, and at the Offices of Messrs. FAREBROTHERS, CLARK, and LYE, Lancaster-place, Strand.

TO BUILDERS, STONE-MASONS, AND OTHERS.

MR. A. BOOTH will SELL by AUCTION, on WEDNESDAY, the 15th of OCTOBER, 1856, at TWELVE precisely, on the PREMISES, No. 40, Pitt-place, Harrow-road, the STOCK-IN-TRADE of a PATENT STONE-PRESERVING WORKS; 200 chimney-pieces, in imitation, blue Devonia, and statuary marble tops, flower-boxes, clock and shade stands, 500 feet ornamental pavement, one hundred and fifty plaster balustrades, trusses, &c.; Bath and Caen stone in blocks and slabs; Welsh and Yorkshire landings and curbs, steel tools, twenty saws and frames, sheet iron, brick erection of large preserving tanks, moulds, work-benches, gas and office fittings, &c.—May be viewed on day prior and morning of Sale. Catalogues forwarded by post, or may be obtained on the Premises, and of Mr. ABRAHAM BOOTH, Auctioneer and Estate Agent, No. 1, Carlton-Hill-villas, Camden-road (opposite the Brecknock-arms).

CHELMSFORD.—To FARMERS, BUILDERS, and OTHERS.

TO BE SOLD BY AUCTION, by

VALPY and STOKES, on THURSDAY, the 23rd of OCTOBER, 1856, on the PREMISES, Prittle-road, adjoining the Railway Viaduct, Moulsham, without reserve, by order of the Trustees of which is leaving the premises about 500,000 BRICKS and TILES, consisting of white and red kiln brick, yellow and grit stock bricks, pitty and paving bricks and drain-pipes; also, the kiln, as it stands; pipe-moulds, barrows, boards, brick-tables, moulds, &c. &c.; about ten tons of prime new hay, two horses, two fat heifers, thatched shed in brick-field, with standing stage, &c. Sale to commence at TEN for ELEVEN o'clock precisely.—Catalogues may be had at the Place of Sale; Office of the Auctioneers; and at the neighbouring Inns.

TO CABINET-MAKERS, BUILDERS, AND OTHERS.

MESSRS. KENNEDY and BONNY will SELL by AUCTION, at BAYHAM WHARF, near the Railway Station, Camden-town, on TUESDAY, OCTOBER 14th, 1856, at ELEVEN o'clock precisely, in lots, a large quantity of WAINSCOT PLANKS, containing about 15,000 feet, well-seasoned, and varying from 2 inches to 4½ inches in thickness. Also a quantity of WAINSCOT VENEERS.—May be viewed at any time and catalogues had of Messrs. SUTTON and OSMAN, Solicitors, No. 6, Basinghall-street, City; at the Wharf; and at the Auctioneers' Offices, Camden-town.

SALE of MAHOGANY, &c. at LIVERPOOL.

The next Periodical Auction sales, comprising Cargoes of Honduras, Mexican, City St. Domingo, St. Domingo, and Cuba Mahogany, and Havannah Cedar, Rosewood, Walnut, Sapele, and other Furniture Woods, &c. will take place on WEDNESDAY MORNING, the 15th instant, at ELEVEN o'clock precisely, in the WOOD-FLOOR, Upper Brunswick and Dutch Docks, Liverpool.—Catalogues, containing full descriptive particulars, may be had on application to EDWARD CRAWSHAY, Wood Broker and Measurer, No. 6, East-side, Queen's Dock, Liverpool.

TO TIMBER MERCHANTS, BUILDERS, CARPENTERS, AND OTHERS.

MR. LEREW will SELL by AUCTION, on the PREMISES, 42, Union-street, Somers-Town, on MONDAY, OCTOBER 13, at ELEVEN for TWELVE, 2,000 Yellow, White, Pine, and Spruce PLANKS, DEALS, and BATTENS, 5 squares of prepared flooring, 1,000 feet sentling, dry cut stuff, 30 doors, ranges, stoves, ironmongery, scaffold poles, ladders, steps, wheelbarrows, &c. May be viewed on Saturday prior to the sale, and catalogues had on the Premises; and of the Auctioneer, Carlington-street, Hampstead-road.

SALES BY AUCTION.

Surplus Lands and other valuable Freehold Property, on the Caterham Railway, the Rose and Crown Public-house, Cottages, &c. on the road from Croydon to Godstone, in the county of Surrey.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to offer for SALE, at the Mart, on FRIDAY, OCTOBER 17 (instead of the 24th, as previously advertised), at TWELVE, in Twenty-two lots, the SURPLUS LANDS and other FREEHOLD PROPERTY on the Caterham Railway, commencing at the Warlingham Station, and ending at the present terminus, comprising altogether about 170 acres. Lots 1 to 16 inclusive will consist of a brick-built dwelling-house, near to the entrance of Marden Park, with gardens and paddock; a smaller cottage and garden, numerous plots of building land, varying in quantity from one to 10 or 12 acres, possessing very extensive frontages to the high road leading from Croydon to Godstone, and immediately contiguous to the Caterham Station. Lot 17. A valuable Freehold Estate, on the opposite side of the railway, close to the station, bounded on one side by a road leading to the village, and on another by a road called Burnwood lane, containing nearly 80 acres, and capable, by the construction of a new road, of being made available for very extensive double frontages. Lot 18. A valuable Plot of Freehold Building Land, immediately adjoining the Warlingham Station, having a considerable frontage to the road, and containing about two acres. Lot 19. A valuable Freehold Estate, on the other side of the railway, and close also to the Warlingham Station, bounded by a new road and Salmon's-lane, principally adapted for building, and containing about 30 acres. Lot 20. A valuable Plot of Freehold Building Land, adjoining Lot 19, with considerable frontage to the new road, containing nearly seven acres. Lot 21. The Rose and Crown Public-house, close to the Warlingham Station, with offices, garden, and orchard. Lot 22. Three Cottages, garden, and orchard, near the Rose and Crown Public house. The Caterham Railway has opened to the metropolis a district full of beauty for building operations. The soil is excessingly dry, on a chalk subsoil, and, consequently, very healthy. Stone, bricks, lime, sand, and gravel can be obtained on the spot at a remarkably cheap rate, and it has the advantage of being in the neighbourhood of several packs of hounds and good shooting. At the terminus is a very comfortable hotel, with first-class stabling for hunters, erected for the accomodation of sportsmen, and the access to London will be frequent and easy, with the prospect in a short time of a terminus at the west end, and great facilities will be afforded to the public and to building operations by the issue of season tickets at extremely low prices, which tickets, under certain arrangements, will be in force for seven years. Particulars, with plans, may be obtained at the Caterham Railway Station; of Messrs. Farebrothers, London-bridge; at the Greyhound, Croydon; of Mr. ALEXANDER PAINE (who will show the lots), at the Caterham hotel, Caterham; at the stations on the Caterham railway; the White Hart, Godstone; the White Hart, Reigate; the Ward Arms, Westerham; the Dorset Arms, East Grinstead; of Messrs. DREW and GRAY, Solicitors; of Messrs. Dauncey and Son, Solicitors, Croydon; of Messrs. DAVIDSON and BRADBURN, Solicitors, 22 Basinghall-street, of JOHN DINGWALL, Esq., Solicitor, 7 Lenhouse-yard; of Messrs. BANKS and BURY, Architects, 37, Sackville-street; at the Mart; and of Messrs NORTON, HOGGART, and TRIST, 62, Broad-street, Royal Exchange.

Very important and valuable Freehold Building Ground at Paddington, lying between the Grand Junction Canal and the Harrow-road.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to OFFER FOR SALE, at the MART, on FRIDAY, OCTOBER 24, at TWELVE (unless previously disposed of by private contract), a very important and exceedingly valuable PLOT of FREEHOLD BUILDING GROUND, land-tax redeemed, having a very considerable frontage to the Harrow-road, communicating with the Queen's-road, Porchester-road, and Westbourne-terrace bridges, extending in depth about 410 feet, and lying immediately between the Grand Junction Canal and the Harrow-road. This valuable spot offers sites for about fifty houses. The buildings in the immediate neighbourhood consist chiefly of most respectable private houses, and it is almost the only uncovered space adapted for building.—May be viewed, and particulars, with plans, had of Messrs. CLAYTON, COOKSON, and WAINWRIGHT, Lincoln's-inn; at the Mart; and of Messrs. NORTON, HOGGART, and TRIST, 62, Old Broad-street, Royal Exchange.

SYDENHAM.—For absolute and unreserved Sale.

MR. MARSH has received instructions from the Executors of the late Thomas Hunt, Esq. to SELL by AUCTION, without the slightest reserve, on the PREMISES, Wells Road, Sydenham, on TUESDAY, OCTOBER 14th, at TWELVE for FOUR o'clock, in Sixteen Lots of 10,000 each, 600,000 of capital STOCK, SECOND DITTO, PLACE, and other BRICKS. The Premises are close to three Railway Stations, and in the vicinity of excellent roads.—May be viewed the day prior and morning of sale, and catalogues obtained on the Premises, and at Mr. MARSH's Offices, 2, Charlotte-row, Mansion-house.

TO CONTRACTORS, TIMBER MERCHANTS, BUILDERS, CARPENTERS, PACKING-CASE MAKERS, and OTHERS.

MR. MARSH has received instructions to SELL by AUCTION, on the PREMISES, (Messrs. Robinson and Bartrum's Saw Mills, Swan-street, Grange-road, Bermondsey, on WEDNESDAY, OCTOBER 15, at TWELVE o'clock, the entire and first-class STOCK, consisting of about 2,000 squares of dry prepared flooring, from two to four years old; consisting of 1¼ x 7, 1 x 8, 1 x 9, and ¼ x 7 (2 cut 3) inch) dry yellow, 1 x 9, and ¼ x 7 (3 cut 4) inch), 1 x 7, and 1 x 9 dry white deals and battens, and about 3,000 3 x 7 and 3 x 9 yellow, and 2½ x 7 and 3 x 7 dry yellow and white deals and battens, and 3 x 11 best bright yellow pine planks, and other useful timber. May be viewed the day prior and morning of sale, and catalogues obtained on the Premises; at the Swan Tavern, adjoining the property; and at Mr. MARSH's Offices, 2, Charlotte-row, Mansion House.

TO CARPENTERS, BUILDERS, AND OTHERS.

MR. L. ENGLAND will SELL by AUCTION, on the PREMISES, Stoney-street, Caledonian-road, Islington, on TUESDAY, OCTOBER 7th, at TWELVE for ONE o'clock precisely, valuable BUILDING MATERIALS, comprising a large quantity of floor-boards, joists, rafters, quartering, about 200 loads of old bricks, 30,000 pan and plain tiles, 20 tons of granite, pebble and other paving, a large quantity of scaffold boards and poles, Portland cord, a large cistern, a quantity of Christiana and other deals and pine planks, several ranges, registers and other stoves, a quantity of timber, doors, sashes, and frames four-wheel chaise, coach-house gates, twenty stacks of firewood will be found useful articles. May be viewed. Catalogues had on the Premises, and of the Auctioneer, 3, Shepperton-street, New North-road, Islington.

IMPORTANT AND UNRESERVED SALE.—Effects of the late George Gwilt, Esq. F.S.A. F.R.S.A. &c.

MESSRS. PUTTICK and SIMPSON beg to announce that they will SELL by AUCTION, on TUESDAY, the 14th of OCTOBER next, and following day, at the PREMISES, No. 8, Union street, Southwark, at ELEVEN for TWELVE punctually, the FURNITURE and a large quantity of the EFFECTS of the late George Gwilt, Esq. collected with great judgment and at a vast expense. The well-known taste of its late proprietor needs no comment. Besides the usual furniture will be found scientific instruments, philosophical apparatus, rare and choice music, musical instruments, between 300 and 400 valuable books, small quantity of wines, &c. &c.—On view days prior to sale, by catalogue, 6d. each, to be had of the Auctioneers, 191, Piccadilly; FRANCIS HOBLER, Esq. Solicitor, Bucklersbury; and on the Premises, 8, Union-street, Borough.

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The Builder,

A JOURNAL FOR THE

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BUILDERS' BENEVOLENT INSTITUTION.

—The NINTH ANNIVERSARY DINNER will be held at the LONDON TAVERN, on WEDNESDAY, 29th instant, Mr. Alderman WILLIAM LAWRENCE, President, in the Chair.

Gentlemen desirous of promoting the interests of the Institution, by becoming stewards will be pleased to forward their names to the Treasurer, Mr. GEORGE BIRD, 38, Edgware-road; or to the Secretary, at the Offices, 19, Southampton-street, Bloomsbury.

A. G. HARRIS, Secretary.

NOTICE is HEREBY GIVEN, that a

GENERAL QUARTERLY MEETING of MEMBERS of the INSTITUTION of BUILDERS' FOREMEN and WORKS, will take place on WEDNESDAY EVENING next, at the BAY-TREE TAVERN, St Swithin's-lane, for the purpose of Electing Officers, and other General Business.

W. ALLARD, Secretary.

ARCHITECTURAL EXHIBITION.—All

drawings, models, photographs, &c. must be delivered at the Galleries, Suffolk-street, Pall-mall East, on the 1st or 2nd of DECEMBER next. Printed rules will be forwarded on application to the Honorary Secretaries.

DEPARTMENT for MATERIALS. Patents, &c. connected with Building, &c.—Exhibitors should apply immediately to Mr. JAS. EDMESTON, Honorary Secretary), as most of the space is already engaged.

Exhibitors will be allowed to set up and fix their contributions at any time between the 1st of NOVEMBER and 1st of DECEMBER.

The following gentlemen are added to the number of local honorary secretaries since the list last published:—

BATH ..... J. ELKINGTON GILL, Esq.
PETERSHAM ..... A. BEDBOROUGH, Esq.
WORCESTER ..... W. J. HOPKINS, Esq.

There are still some important places for which the committee would be glad to appoint local secretaries.

Lectures will be delivered on the Tuesday Evenings, by Thomas Allom, Esq.; Professor Donaldson; the Rev. Mr. Boutell; R. W. Billings, Esq.; Owen Jones, Esq.; George Scharf, Jun. Esq. (unless circumstances in the meantime should interfere); and other gentlemen.

Subscribers have the privilege of introducing a friend to, or of transferring their tickets for, the lectures.

JAMES FERGUSSON, Esq. F.R.A.S
20, Lowndes-place, Regent-street, } Honorary
JAMES EDMESTON, Jun. } Secretaries.
5, Crown-court, Old Broad-street.

THE METROPOLITAN BUILDING

ACT, 1855 (sec. 39).—The Institute of British Architects hereby give Notice, that an EXAMINATION of PERSONS desirous of obtaining a CERTIFICATE of COMPETENCY to perform the duties of DISTRICT SURVEYOR will take place at the ROOMS of the INSTITUTE, No. 16, Grosvenor-street, Grosvenor-square, on TUESDAY, the 21st day of OCTOBER, at TWELVE o'clock, Noon. Persons desirous to be examined must, on or before FRIDAY, the 17th of OCTOBER, 1856, send an application, which must be accompanied by a statement according to a form, to be previously obtained at the Rooms of the Institute.

C. C. NELSON, } Hon. Secs.
M. D. WYATT, }

Oct. ber 7, 1856.

TO ARCHITECTS, ENGINEERS, SURVEYORS, AND BUILDERS.

PROFESSOR DONALDSON'S COURSES

of LECTURES on ARCHITECTURE and CONSTRUCTION, at University College, for the Session 1856-57, will commence on Tuesday, the 21st October. The circular and terms can be had at the College Office.

COMPETITIONS.

NEW GOVERNMENT OFFICES.—The Commissioners of her Majesty's Works and Public Buildings give Notice, that they are prepared to receive DESIGNS from Architects of all Countries for a SCHEME for the CONCENTRATION of the principal GOVERNMENT OFFICES, on a Site lying between Whitehall and the Queen's Palace at Westminster; and also De-igns for Two Buildings which her Majesty's Government have determined to erect forthwith, as parts of such general scheme, one for the Department of the Secretary of state for Foreign Affairs, the other for the Secretary of State for War. Plans of the ground, together with a statement of the premiums and other particulars, will be forwarded to architects on application by letter addressed to me at this Office.

ALFRED AUSTIN, Secretary.

Office of Works, Whitehall, Sept. 26, 1856.

COMPETITIONS.

FOLESHILL, WARWICKSHIRE.—NEW WORKHOUSE for the FOLESHILL UNION.—INSTRUCTIONS to ARCHITECTS and CONDITIONS. The proposed New Workhouse and Buildings are to be erected on a site near Foleshill Hall. Accommodation is required for 15 Paupers, with Wards, Yards, and other Conveniences, suitable for their complete classification, in proportions as follows, namely:—

Men infirm from age or other cause	36
Able-bodied Men and Youths above 15	14
Women infirm from age or other cause	30
Able-bodied Women and Girls above 15	20
Boys under 15 years old	15
Girls under 15 years old	15
Lying-in Women	6
Sick Males	6
Sick Females	8
	150

Detached Wards for Vagrants of both sexes, 6 of each.
Receiving Wards.
Refractory Cells in three Compartments.
A Dead-house.

A Board-room, suitable for 25 Guardians.
Clerk and Registrar's Office, with Closets for Books and Papers. The Safe in the present Register Office to be removed to a site adjoining the Register Office.

Accommodation for a Master, Matron, Schoolmaster, and Schoolmistress, situated with respect to their duties.

A Dining hall, suitable for the whole of the Inmates to dine at one time.
A Workroom for able bodied Men.
A Schoolroom.

The plans to be so framed that the Children may be kept totally apart from the Adult Inmates.

The Sleeping Accommodation to be equal to 300 cubic feet of space for each inmate in health, and 600 cubic feet for each sick person.

A Well in the able-bodied Men's yard, with a Pump to be fixed therein, to be worked by manual labour, of sufficient power to supply the establishment with water.

Washhouse and Laundry.
Supply of Hot and Cold Water Taps.
Cisterns for Cold Water, with requisite Fittings.
Requisite Fittings in the Lavatories and Water-closets, with sunk Pool for filth from Water-closets.
Tanks under ground, to store the rain-water from the roofs, with Flushings to the Drains.
Pumps in the Wash house.
The house to be provided with open Fireplaces, and a complete system of Ventilation.
Stalling for Horses, and an Open Shed, 30 feet by 20 feet.
Good Kiln Bricks to be used in the buildings. The floor-line to be two feet above the surface of the land.

Further extension of the Dormitories must be provided for, with due regard to uniformity; and the day-rooms must be sufficiently extensive to accommodate an additional number of inmates, not exceeding 50.

The Architect must state the cost of completing the works according to his plans. The maximum sum proposed to be expended on the building is 3,500*l.*

Architects are required to furnish the following plans, with general specifications and estimates. The plans, except the block-plan, to be drawn to a scale of eight feet to an inch.

1. A block-plan, showing the situation of the building on the land, and the proposed drainage.
2. A plan of each floor.
3. One transverse and one longitudinal section of the principal buildings.
4. Elevations.
5. A plan of the roof.

Each set of plans and specifications must be sent in with a motto affixed, and a sealed letter, containing the name and address of the Architect, having the same motto. The letters will not be opened until the Board of Guardians shall have finally decided upon the plans and specifications accepted. The plans to be sent addressed to the Guardians of the Foleshill Union Rates hill; and the letters addressed to the Clerk.

The Guardians will not be responsible for any injury which the plans may sustain, and the plans will be returned to the unsuccessful candidates, with the letters, on application.

All plans are to be delivered on or before the 24th day of NOVEMBER next, and no plans will be received after that day under any pretence.

The Architect producing a plan accepted by the Guardians, and approved by the Poor Law Board, will be employed at a sum not exceeding 5*l.* per cent on the outlay, and the plans and specifications will become the sole property of the Guardians.

No Architect shall be entitled to make a charge, or to receive any remuneration for his plans or specifications which shall not be accepted.

The Guardians do not bind themselves to accept any of the plans which may be submitted.

By order of the Board of Guardians,
THOMAS DEWES, Clerk.

Coventry, 19th September, 1856.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.

—The Trustees for Sale of a Freehold Estate of 500 acres, including the Beulah Spa, and near the Crystal Palace, require PLANS for LAYING OUT the same for building purposes, showing the necessary roads, sewers, &c. the whole to be clearly defined and apportioned in suitable lots, and laid down to a scale of two chains to one inch, from actual admeasurement. The following premiums are offered:—For the plan adjudged the best by the trustees, 150 guineas; for the second, 100 guineas; for the third 50 guineas. The plans to which the above premiums shall be awarded, will be retained by, and be the property of, the trustees. Further particulars may be obtained of Mr. PEACOCK, Builder, near the Jolly Sailor Station, Norwood, close to the property. The Trustees will meet on the 1st day of DECEMBER next, to examine the plans, which are to be previously forwarded, enclosed and sealed, to the Secretary's office, Auction Mart, London, addressed to the Trustees of the White Horse, Norwood Estate.]

TO SURVEYORS. — NOTICE. — NORWOOD, BEULAH SPA ESTATE, near the Crystal Palace.

It having been intimated to the Trustees that the time mentioned for the Delivery of the Plans is insufficient, they have determined to EXTEND the same to MONDAY, DECEMBER 8, at the same place.

COMPETITIONS.

WELLINGTON TESTIMONIAL.—To SCULPTORS and ARCHITECTS.—The Committee are desirous of receiving DESIGNS for a COLUMN and STATUE to be erected in honour of the late Duke of Wellington, at Liverpool.

The amount at present at the disposal of the Committee is about 6,000*l.* and if their intentions can be properly carried out for that sum, they are desirous that it should be, but any Artist will be at liberty to send in a separate design, either for the Column alone, or for a Column and Statue.

The competitors must accompany their designs by estimates of the cost, either for the Column and Statue combined, or separately, and stating the description of material which they propose to employ.

A premium of 50*l.* will be given for the design which, in the opinion of the Committee, is the best for the purpose intended.

Each design to be marked with a motto or device, and the name of the Author is not to appear, but to be put in a separate sealed letter, bearing on the outside corresponding motto or device.

The design for which the premium may be awarded to become the property of the Committee.

All communications to be addressed to the Chairman of the Committee, at the Town hall, Liverpool; and the designs must be delivered there, free of expense, on or before the 1st day of NOVEMBER next.

Town hall, Liverpool, September 20, 1856.

CONTRACTS.

NOTICE to BUILDERS.—ORDNANCE CONTRACT.—The Principal Officers of Her Majesty's War Department hereby give Notice, that they will receive Proposals for the following CONTRACT.—For the several WORKS proposed in the fifteenth QUARTERS for Barrack-stables, laundry drill-sheds, privy, ash-pit, &c.; also for drains, gas and water pipes, &c.; and converting soldiers' rooms into staff sergeants' quarters, at Richmond Barracks, Dublin. Persons desirous of Tendering for the same will receive every information on application at the District Commanding Royal Engineer's Office, Lower Castle-yard, Dublin, and may obtain such at any with the terms of Contract. The drill-sheds to be complete, and the joisting of the upper floor of the quarters for married soldiers laid by the 12th MARCH, 1857; and the remainder of the works completed on or before the 31st OCTOBER, 1857. The letters of Tender, with specifications, to be inclosed, transmitted under cover to "The Director General of Fortifications, War Department, Pall-mall, London," so as to be received on or before the 14th day of OCTOBER next, and to be marked on the outside, "Tender for Work at Richmond Barracks, Dublin."

Commanding Royal Engineer's Office, Dublin.
24th September, 1856.

ROYAL ENGINEER CONTRACT.—The War Department are about to enter into a CONTRACT for the CONSTRUCTION of a ROAD, BRIDGE, &c. at SHOEBURYNESS, such persons as may be desirous of TENDERING for the WORKS, may inspect the plans and specification there, and receive all necessary information relative thereto, by application to Mr. EDWARD WRIGHT, Clerk of Works, at the Royal Engineer Office, Grand Depôt, Woolwich, or to Mr. HOPKINS, Clerk of the Works, at Shoeburyness, between the hours of TEN a.m. and FOUR p.m. up to the 23rd instant. The Tenders to be delivered at the Office of the Director General of the War Department, Pall-mall, London, by noon, on the 24th of OCTOBER, 1856. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Grand Depôt, Woolwich, October 3, 1856.

NOTICE to BUILDERS and CONTRACTORS, ORDNANCE WORKS.

The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall-mall, London, on or before MONDAY, the 20th day of OCTOBER, 1856, from persons desirous of CONTRACTING for ADDITIONS and ALTERATIONS to the Western Heights Barracks at Dover. Drawings and specifications of the works to be executed may be seen by persons fully competent to undertake the same, at the Royal Engineer Office, which may be obtained at the Royal Engineer Office, Dover, between the hours of TEN and FOUR o'clock, from THURSDAY, the 2nd of OCTOBER, to SATURDAY, the 11th of OCTOBER, 1856 (Sundays excepted). A person belonging to the Royal Engineer Department will attend on the 1st at the Western Heights, on WEDNESDAY, the 8th, and THURSDAY, the 9th, to explain the drawings. The party whose Tender may be accepted for the work will be required to enter into a bond, with two sufficient sureties, duly attested, in the sum of 1,000*l.* for the due performance of the contract. Tenders for the above works to be addressed to the Director General of Contracts, Pall-mall, London, and endorsed "Tender for Work at Dover."

N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, October 1st, 1856.

TO PLASTERERS.—TENDERS &c

required for the whole of the labour in PLASTERING SIX PAIRS of SEMI-DETACHED VILLAS, in the Lansdowne-road, St. John's Wood, for Mr. THOMAS WILLIAMS, Architect, &c., 7, Coleman-street, City, by ten o'clock on MONDAY next, the 13th instant. Mr. Williams does not bind himself to accept the lowest or any Tender.

TO BUILDERS. — Builders desirous of

TENDERING for the ERECTION of a CHAPEL, at FOREST HILL, Sydenham, may see the plans and specification at the office of the Architects, Messrs. TINKLER and PREW, 4, Quality-court, Chancery-lane, on and after TUESDAY next. The Tenders to be delivered at TWELVE o'clock on WEDNESDAY, the 22nd instant. The Trustees reserve to themselves the right of rejecting the whole or any of the Tenders.

[For remainder of Contracts see next page.

CONTRACTS.

BRADFORD CORPORATION WORKS.—ST. LEONARD'S-ON-SEA.—MASONS and GENERAL CONTRACTORS.—The Waterworks Committee of the Bradford Corporation will meet at the Offices in Bradford on WEDNESDAY, the 22nd of OCTOBER, at ELEVEN o'clock in the FORENOON, for the purpose of receiving TENDERS or PROPOSALS for the following WORKS:—

CONTRACT A.—The excavating, forming, and completing of a STORE RESERVOIR, of about sixty acres in extent, near to Checker House, in the township of Draughton and parish of Skipton, with the Culverts, Waste Pit, and other Works connected therewith, including the Section in the Skipton and Otley turnpike road for about half-a-mile in length.

CONTRACT B.—The excavating, forming, and completing of a STORE RESERVOIR, of about 30 acres in extent, on the Barden Beck, in Barden Bottom and Park, in the township of Barden and parish of Skipton, with the Pipe Channels, Resinous Lake, Culverts, Valve Well, Waste Weirs, Waste Water Channel, and other Works connected therewith; also, the building and completing of a Branch Conduit of about 720 yards in length, from such Store Reservoir to the Main Conduit hereinafter mentioned.

CONTRACT C.—The excavating, forming and completing of a MILLOWNERS' COMPENSATION RESERVOIR, of about [illegible] acres in extent, on the river Dib, near to Grimwith, in the township of Appletreewick and Hartlington, in the parish of Burnsall, with the Culverts, Valve Well, Waste Weir, Waste Water Channel, large Basin, Resinous Lodges, and other Works connected therewith.

CONTRACT D.—The forming and completing of about 13¼ miles in length of the main Waterleader or Conduit for bringing an improved supply of water to the town and borough of Bradford, whereof about [illegible] miles will have to be executed by means of tunnelling and about 4¾ miles will consist of a cast-iron main pipe; and which Contract may be subdivided as follows:—

Division No. 1.—Main Conduit from the end of Barden Beck Branch, in the township of Burnsall, to Addingham Low moor, being a length of about 7,830 yards, including the Barden Tunnel of about 3,640 yards in length, the Drainage Tunnel of about 210 yards in length, and the Arched Tunnel of about 1,820 yards in length, with the ring and lining down of about 200 yards in length of Cast-iron Pipe of 20 inches in diameter, for crossing the Ings Beck Valley, near Low Laithe, and a Branch Conduit of about 1¼ mile in length for bringing the water from the above-named Beck Resort to such Main Conduit.

Division No. 2.—Main Conduit from the end of Division No. 1, at Addingham Low moor, to a public highway passing through Hollen Well, in the township of Sandbeds, and parish of Kildwick, being a length of about 7,275 yards, including the Silsden Tunnel of about 1,760 yards in length, the Swartha Tunnel of about 220 yards in length, the Dead Lane Tunnel of about 360 yards in length of tunnel, Pipe of 20 inches in diameter for crossing the Hollen Beck Valley near Holden Wood, and the Holden Beck Branch Conduit of about 310 yards in length, of which about 110 yards will be tunnelled.

Division No. 3.—Main Conduit, from the end of Division No. 2 at Hollen Well, to East Morton, in the township of Morton East and West, and parish of Bingley, being a length of 5,890 yards.

Division No. 4.—Main Conduit, from the end of Division No. 3 at East Morton, to a public highway at Heaton, near to the Service Reservoir in process of being formed, being a length of about 9,770 yards, including the Greenhill Tunnel, of about 220 yards in length, the Crossflatt Tunnel of about 345 yards in length, and the Heaton Lane Tunnel of about 1,250 yards in length of Cast-iron Pipe of 20 inches diameter, for crossing the valley of the Morton Beck, at East Morton; and a further length, of about 4,000 yards in length of Cast-iron Pipe, for crossing over or entering the valley of the river Aire, including the passing of the river Aire, and the Leeds and Liverpool canal, below Hirst Mill, near Shipley.

Tenders must be sent in at the lowest or any of the Offices of the Engineer, and Plans and specifications may be seen, and further information may be had, from and after MONDAY, the 20th day of OCTOBER, on application to Mr J. W. LEATHER, Civil Engineer, Leeds.—By order,

W. H. HUDSON, Town Clerk.

Bradford, September 23rd, 1856.

TO BUILDERS.—Persons desirous of TENDERING for the ERECTION of a WESLEYAN CHAPEL, on the Park-hill Estate, Highbury, may see the drawings and specification, and after TUESDAY the 14th day of OCTOBER next, may get the Architect, Mr C. LAWS, 12, Bouverie-street, Mecklenburgh-square, Seeled Tenders to be delivered at the Vestry of Liverpool Wesleyan Chapel, Islington, on MONDAY, the 20th of OCTOBER, at SEVEN o'clock in the evening. The Committee do not bind themselves to accept the lowest Tender; and the party accepted will be required to provide two sufficient sureties for the due performance of the Works.—October 9, 1856.

THE YORK UNITED GAS-LIGHT COMPANY.—To GASHOLDER MAKERS, IRONFOUNDERS, &c.—Parties desirous of TENDERING for the CONSTRUCTION of a TILES-ON-EDGE GASH HOLDER, main diameter 50 feet 8 inches, and 30 feet high, in two lifts, with columns, guides, girders, &c., complete, in accordance with specifications at the Company's Office, Monk bridge, York, daily from TEN to FOUR o'clock, from MONDAY, the 29th to WEDNESDAY, the 8th days of OCTOBER next, inclusive. Security will be required for the due performance of the Contract. Tenders will be received at the Company's Office up to TEN o'clock on THURSDAY, the 30th instant, but no pledge is given that the lowest or any Tender will be accepted.

JOSEPH BRADDOCK, Engineer.

York, October 1st, 1856.

BUILDERS desirous of TENDERING for the ERECTION of a PAIR of VILLAS and a PAIR of COTTAGES on the Stratford estate of the Temperance Permanent Land and Building Society may have the drawings and specifications on and after the 13th instant, at the Office of the Architect, Mr. WILLIAM ELLISON, 19, Stainsby-road, Lombard-street; also at the Offices of the Society, 34, Moorgate-street, City, where Tenders are to be delivered by SEVEN o'clock in the evening of MONDAY, the 20th instant. The Lowest or any Tender not necessarily accepted.—MONEY ready to be ADVANCED by this Society to any amount on loans and lands; for terms apply, between TEN and FOUR, to HENRY J. PHILLIPS, secretary.

SMETHWICK LOCAL BOARD of HEALTH.—To LAND SURVEYORS, &c.—Survey and Plans for the Smethwick Local Board of Health.—Hereby Notice, that they are prepared to receive TENDERS for a SURVEY and PLANS of the District of the Hamlet of SMETHWICK, in accordance with the Public Notice, to be seen, with Conditions and Particulars, at the Surveyor's Office, Crocker Hill, and specimen plans, and a plan showing the boundaries of the district and describing the proposed to be part of it, may be seen on application to Mr. NICHOLS, Surveyor to the Local Board of Health, at the Offices of the Board, Holt's Crescent, Smethwick. Sealed Tenders, addressed to the Chairman of the Local Board of Health, are to be sent to Mr. RALPH DOCKER, Solicitor, Clerk to the Local Board, Temple Bar-street, Smethwick, on or before the first day of NOVEMBER next. The Local Board do not pledge themselves to accept the lowest or any Tender.

RALPH DOCKER, Clerk to the Local Board.

Temple Bar-street, Smethwick, October 1st, 1856.

TO SANITARY ENGINEERS, SURVEYORS of BOARDS of HEALTH, &c.—SEWAGE IRRIGATION.—The Hitchin Board of Health is desirous of receiving PLANS for PURIFYING and DEODORIZING the SEWAGE flowing from the town, at present rendering the River Hiz offensive. Plans, accompanied by any explanatory observations deemed necessary, and an estimate of the cost, to be sent to Mr. GODWIN, Clerk of the Local Board, before TUESDAY the 21st day of NOVEMBER next. No plan will be received after the Board shall have received the report of their Engineer, pursuant to the foregoing notice, nothing to be paid for, or known by Mr GODWIN. It will save time if a letter be first sent to him, stating the nature of the Premises to be applied for, on which he may expect to be called up in Person.—By order of the Board,

SAMUEL GODWIN, Clerk to the Board.

Hitchin, Herts, September 29, 1856.

CONTRACTS.

TO CONTRACTORS and BUILDERS.—TENDERS are required for the ERECTION of a DWELLING-HOUSE at Bramley, near Leeds. The plans may be seen, and forms may be had, at the Office, Towergate, Northbridge, between the hours of TEN and FIVE, from the 1st to the 8th day of OCTOBER, and at the Shop of Mr. FLEMING, Berwick-upon-Tweed, until the 28th.

F. R. N. HASWELL, Architect.

North Shields, September 24th, 1856.

LLANDUDNO IMPROVEMENT ACT, 1854.—SEWER CONTRACTORS.—Parties desirous to CONTRACT for the CONSTRUCTION of the MAIN SEWER in the Town of Llandudno may see the plans, sections, and specifications, prepared by T. MACDUGALL SMITH, Esq. C.E. at the Office of the Commissioners, between the hours of TEN o'clock a.m. and FOUR o'clock p.m. daily. Tenders, under seal, to be sent to the Office before MONDAY, the 27th of OCTOBER next. The Commissioners do not bind themselves to accept the lowest Tender; but in the event of one being accepted, the party or parties will be required to give security for the due performance of his or their contract. The Commissioners have on hand a quantity of sewerage bricks, pipes, invert and junction blocks, which the Contractor will have Liberty to use.

WANTED, a well-experienced competent Person, to act as CLERK of the WORKS to superintend and take charge of the above Works being properly carried out.—Applications, stating terms, age, and testimonials, or references, to be made to the Commissioners' Office, before the 25th of October next.

JOHN WILLIAMS, Clerk to the Commissioners.

Improvement Commissioners' Office, Sept. 29 1856.

GLASGOW CORPORATION WATER-WORKS.—LOCH-KATRINE AQUEDUCT.—KELTY and DUNTREATH CONTRACTS.—To CONTRACTORS.—The Magistrates and Council of the City of Glasgow, as Commissioners under the Glasgow Corporation Water Works Act 1855, are now ready to receive, and hereby invite TENDERS for the EXECUTION of either or both of the LOCH KATRINE AQUEDUCT, which will be comprised in Two Contracts, viz. "No 4, or Kelty Contract," extending from the Valley of the Duntreath to the Valley of the Endrick, being a length of about 31 miles; and, "No 5 or Duntreath Contract," extending from the Valley of the Endrick, by Killearn, to Strathblane, being a length of about 7 miles. In No. 4 there will be Two Tunnels of the respective lengths of 1,175 and 1,418 yards, with various other ones, varying from 20 yards to 728 yards in length, and upon Two and Seven Aqueducts. In No. 5 there will be Two Tunnels 216 and 864 yards respectively in length, and various Masonry Aqueducts. Each Contract will include all relative work. Plans, sections, drawings, and specifications, all of which are now ready for inspection, and to which WEDNESDAY, the 15th inst. in the Town-hall, at the Cross of Glasgow, entry by No. 12, Trongate-street. Copies of specifications and quantities may be obtained, by intending Contractors on application to the Subscriber, at his office, 25 Millers-street, Glasgow; and any further information may be obtained at the Offices of J. F. BATEMAN, Esq. the Engineer, in Manchester; and from Mr. HILL, Assistant Engineer, Loch Ard; and Mr MOORE, Assistant Engineer, at Milngavie, who will point out the line of Works.

Tenders for the construction of the Works, addressed to the Commissioners, sealed, and marked "Tender for Kelty Contract" or "Tender for Duntreath Contract," as the case may be, must be delivered to Mr. BURN, at his office, 25, Millers-street, Glasgow, on or before WEDNESDAY, the 29th OCTOBER current, at TWELVE o'clock noon. By order of the Committee,

JOHN BURNETT, Secretary.

Waterworks Office, 23, Miller-street, Glasgow, Oct. 6, 1856.

TO ROAD-MAKERS and CONTRACTORS.—The Commissioners of the City of London Freehold Land and Building Society are desirous of receiving TENDERS for MAKING a ROAD through the Estate at Tufnell Lower Norwood. The specification may be seen at the offices of the Society, 41, Fore-street, City. Tenders must be delivered before THREE o'clock on TUESDAY, the 14th inst.

JAMES HIGHAM, Secretary.

THE following TENDERS were received by Messrs. TAYLOR and CHAMBERLAIN for MAKING ROADS and DRAINS and PROVIDING PLACES TO LAY OUT an ESTATE at Forest-hill, Surrey, belonging to R. Burras, Esq. The estate being on an elevated site, from which a commanding and uninterrupted view of the surrounding country is obtained, renders it eminently suitable for its intended purpose. Advantageous terms may be made on application at the Architects' offices, 7, Adelphi-street, Strand. The quantities not supplied:—

	Roads	Fences.
Mr Padbon	£.450 0	£15 0
Mr Goodman	1145 0	152 10
Mr Cubitt	1,150 0	
Mr Nelson accepted	971 15	
Mr Barrett		163 0
Mr. Trego accepted		89 10

MACINTOSH INDIA-RUBBER WAGON COVERS, at reduced prices. Stocks of different sizes are always ready, and can be inspected at our Warehouse, Messrs. S. N. CHAMBERS and Co., 11 and 12, Aldgate Head-street, and at the Factory, India-Rubber Mews, Bow-common.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in stating that the following extract from SIR RAYMOND JARVIS, Bart., TYNTN HOUSE, ISLE OF WIGHT, —Second Testimonial.—" March 10th, 1852.—In reply to your letter, received this morning, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons are lately examining what I have used of the Hose and Pipe of different sizes the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER PILLOW HOSE PIPES, WASHERS, ENGINE PACKING, Leather and Canvas Hose, Rings for Hawser pipes, Valves, Plugs, Rubber Door Springs, and Solid Round Rubber Cord of all strengths. Brilliant Cushion and Rubber Sheeting for Carriages, &c.

Driving Bosses of superior make, and improved Vulcanizer Rubber Soling Plates.

Vulcanized India-rubber in sheets, from three to four feet wide and of any thickness. Air Beds, Pillows, and Cushions, Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to addressed to the Manufactory, JAMES LANE HANCOCK, Goswell-mews, Goswell-road, London.

WINDOW BLINDS.—TYLOR & PAGE, Window Blind manufacturers, 104, New Bond-street, and 4, Queen-street, Cheapside, London, submit the following PRICES of Window Blinds, which are fitted complete with the most approved Venetian mechanism, and warranted to work perfectly free:—Mahogany frames, 1s. 6d.; ditto, with rollers, 2s.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 4s. 6d.; outside blinds of striped cloth, 2s. [illegible] Persons in the country can have the blinds forwarded to any part free.

THE LONDON and WESTMINSTER BANK issues CIRCULAR NOTES of 10l. each, payable at every important place in Europe. These notes are issued without charge, and they are cashed abroad free of commission. The Bank also issues, free of charge, Letters of Credit on all the principal cities and towns in Europe. The Letters of Credit are issued only at the Head Office in Lothbury. The Circular Notes may be obtained at the Head Office in Lothbury, or at any of the Branches, viz.:—

Westminster Branch, 1, St. James's-square.
Bloomsbury ditto, 214, High Holborn.
Southwark ditto, 3, Wellington-street, Borough.
Eastern ditto, 87, High-street, Whitechapel.
Marylebone ditto, 4, Stratford-place, Oxford-street.
Temple Bar ditto, 217, Strand.

The rate of interest allowed on deposits of 500l. and upwards, at the Bank or any of its Branches, is now 3 per cent.

J. W. GILBART, General Manager.

LOANS GRANTED and BILLS DISCOUNTED.—LONDON EXCHANGE ADVANCE FUND, 2, ADELPHI-TERRACE, FACING THE RIVER. City Office, 47, Old Broad-street.

Incorporated by Act of Parliament.—Capital, 100,000l. 20l. to 1000l. advanced on Bills of Sale, personal or other security. Bills of Exchange cashed. Five per cent. interest on deposits payable in January and July. Forms forwarded on receipt of twelve postage stamps.

LOANS, from 10l. 10s. to 100l. advanced within twenty miles of London, repayable weekly, or otherwise, at 5s per cent. for twenty-five weeks, and 5 per cent. for fifty weeks. Forms, price 2d. by post, three postage stamps to be enclosed. METROPOLITAN LOAN COMPANY, 1, Travers-street, Strand. Established 1839. Office hours from TEN to FOUR. ROBERT NORT N, Secretary.

NORWICH UNION FIRE INSURANCE SOCIETY.—The business of the Company exceeds 3,000,000l. and, owing to the liberality with which its engagements have been performed, is rapidly increasing. The Duty paid to Government for the year 1853 was 74,768l.; and the Amount Insured on Premises 9,978,6?4.

Returns of Three-fifths of the Profits are periodically made to Parties Insuring, who have thus from time to time received sums amounting in the aggregate to 400,000l.

The Rates of Premium are in no case higher than those charged by the other principal Offices making no returns to their Insurers.

For prospectuses, apply at the Society's Offices, Surrey-street, Norwich; and 6, Crescent, New Bridge-street, Blackfriars, London.

NO CHIMNEY WANTED for RICKETS'S PATENT CALORIFERE GAS STOVES in CHURCHES, HALLS, or SHOPS;

And for Conservatories, or any close Apartment. a Pipe can be attached to carry away the burnt air.

RICKETS'S CHEAP GAS STOVE, Price £1. 15s.

Made of Sheet Iron, suitable for Heating small Countinghouses, Bedrooms, Cellars, &c. &c.

MANUFACTORY, AGAR-STREET, STRAND, LONDON.

Liberal Discount to Builders.

KENT'S PAINTING-BRUSHES are of the very best quality, and may be obtained at all the first Shops in the principal towns. G. B. KENT and CO. 11, Great Marlborough-street, London. Established 1777.

N.B. Kent's Painting Brushes are all stamped G. B. KENT & CO.

Price Lists forwarded by post.

TO SAW-MILL PROPRIETORS, &c.—FOR SALE, TWO very superior vertical SAW FRAMES, made by Horn, of Whitechapel. To be sold a bargain.—Apply to W. DENNIS, Eagle Saw-mills, John-street, Churchlane, Whitechapel.

CHEST of TOOLS WANTED, second-hand, with drawers and fittings complete, suitable for an amateur carpenter and joiner. Moulding or bead planes not required.—Address, stating contents and lowest price, to A. B. care of Mr. Birch, Library, High-street, Kensington.

TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most efficient yet invented, made by T. SMITH, of 14, Queen street, Oxford-street, near Argyll-street, where a working model can be seen, or a sketch will be sent on application.

N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

BRIDGE for SALE.—An IRON BRIDGE, with its substantial abutments of MASONRY, TO BE DISPOSED OF. The Bridge requires taking down, weighs about 240 tons. The arch is segmental, 100 feet span, with a rise of 6 feet from the springing of the abutments to the soffit of the arch. The road is 30 feet wide outside the rails. The bridge is in perfect repair. The balustrade is of a novel design of an ornamental character, and the whole work has been fitted up in a most complete manner.—For further particulars apply to HUNTER and ENGLISH, Bow, Middlesex.

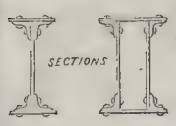
TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c.—The Trade supplied on the best terms with Bronze, Brass, and Iron Wire, Gas Pendants, Brackets, and Joints of all descriptions for Gasfitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Coronet Rods, and Lacquered Case Tube for Picture Rods. Bell Springs, &c.

Superior Rolled Brass for Engravers. Castings in Fine and Common Brass, to the trade, &c. &c.

MAPPIN and BRAITHWAITE, Brass and Bell Foundry and Metal Warehouse, Nos. 10, 11, and 12, Charles-street, Hatton-garden, London.

DREDGER for SALE.—To CONTRACTORS.—An excellent DREDGING BOAT FOR SALE, having [illegible] with engine, 22 horse power, in excellent condition.—Apply to MATTHEW THOMAS SHAW, 84, Cannon-street, City, Contractor for Dredging [illegible]

CAST-IRON SAW-BENCH WANTED, with [illegible] Apply to Mr. PETER WHITE, 29, St James's-street, [illegible]



WROUGHT-IRON GIRDERS
For BRIDGES and BUILDINGS,
MANUFACTURED AND GUARANTEED AS TO STRENGTH.
CAST-IRON GIRDERS for BRIDGES and BUILDINGS.
Castings of every description.

ROLLED WROUGHT-IRON FLITCHES
For TRUSSING BETWEEN TIMBER.
SPIKES, RIVETS, CUT NAILS, WROUGHT DITTO SCREWS, BOLTS AND NUTS, END HOOKS, CHAINS, &c.
CONTRACTORS' PLANT, RAILS, EARTH WAGGONS,
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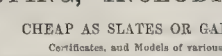
MATTHEW T. SHAW, 64, CANNON-STREET (late with C. J. Mare & Co.)
Such arrangements are made for Despatch and Punctuality that Orders can be executed in a few days.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,
IS AS
CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.
Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to
THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.
ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.
THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.
Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND,
FOR BUILDING PURPOSES.
ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES
beyond the current Price of Hoop-iron.

Gauge	In. wide.	Per 1,000 ft.
No. 16	1½	7s. 0d.
13	1¾	7s. 6d.
18	1¼	8s. 0d.
16	2	8s. 6d.
15	2½	8s. 6d.



THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches) is now being extensively used in the leading GOVERNMENT WORKS, DOCK BUILDINGS, BANKS, ASYLUMS, BRIDGES, VIADUCTS PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in LONDON and in all parts of the kingdom.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.
London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.
AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.

COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT IRON RACK, united to an iron top plate, and forming one complete and useful fixture having Cottam's Patent Noiseless Halter-Guide and Collar-Rein attached, the ball of which is taken to the back of the manger, and works with ease and freedom up or down the guide-bar. Cottam's new Patent Seed-Box, of galvanized sheet iron, is an improvement in the above fittings, being simple in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

Improved Harness Hooks, for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings, hemp and Durable Corn-Bins.

Improved Surface-Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.

The new Illustrated Catalogue for 1856, and estimates gratis, upon application to
COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

HOT-WATER APPARATUS of the best construction, adapted for warming and ventilating hothouses, conservatories, public and private buildings, improved boilers, self-acting regulators pipes, &c.; hot-air, drying, and hydraulic apparatus; portable engines; shafting and other machinery supplied or erected by S. S. TAYLER Bitterseas.

GURNEY'S WARMING APPARATUS, for CHURCHES PUBLIC BUILDINGS, and PRIVATE HOUSES.—This Apparatus is a modification of that invented by Sir Goldsworthy Gurney, now used by him for warming the House of Commons and House of Peers. It is constructed so as to be available for private houses, churches, and other buildings. It is simple, inexpensive, and powerful—the fuel may be coal, coke, or gas—combining the laws of conduction and convection of heat, to temper and warm air for respiration, without drying or reducing its natural hygrometric state. For further particulars apply to Mr. WOODCOCK, 5, Bessborough-gardens, Pimlico, who will supply the Apparatus, and is empowered to grant licenses for same as under Use patent.

REGISTER STOVES, with PATENTED IMPROVEMENTS. DEANE, DRAY, and CO. invite the attention of purchasers to their Stock of STOVES for drawing and dining rooms; also, a large assortment of PATTERNS, suitable for sitting-rooms offices, bed-rooms, &c. In Fenders and Fire Irons, DEANE, DRAY, and CO are constantly introducing every novelty at the lowest prices. DEANE, DRAY, and CO. Stove, Range, and General Ironmongery Warehouse, London-bridge. Established A.D. 1700.

DR. ARNOTT'S SMOKE-CONSUMING GRATE.
Will this Grate become universally used?
It only answers two of every other consideration—
1. A saving of 50 per cent in fuel.
2. Its being a cure for a Smoky Chimney.
3. Its not requiring one half the attention of an ordinary fire.
4. Its being perfectly safe.
A Prospectus, with a Second Series of Testimonials, just issued, from all parts of the country, will be sent on application to
F. EDWARDS, SON, and CO., 17, Ludgate-hill, Oxford-street.

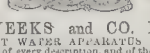
VENTILATING STOVES! SUSPENSION STOVES!—Approved by thousands of purchasers, and recommended as the two best, cheapest, and most economical fuel-saving stoves for halls, shops, counting-houses, bed-rooms, &c. Prospectuses, with opinions of upwards of 1,000 patrons, sent post-free — DEANE, DRAY, and CO. Stove Range, Ironmongery and Furnishing Warehouse, London-bridge.

WARMING and VENTILATING.—ALFRED MAY begs to call the attention of Architects Builders, and others to his system of WARMING by HOT WATER, Lunatic Asylums, Workhouses Churches and other Public and Horticultural Buildings, Mansions and Offices.

A. M. having had great experience in the above line, is enabled to guarantee the efficiency of such works as may be intrusted to him for execution; he has just completed, to the entire satisfaction of the architects, the warming and ventilation of the Barracks and Sir Anthony Rothschild's new mansions and conservatories

Manufactory, Eagle-court, Dean-street Holborn; and at 50, Pembroke-street, Queen's-square, Bloomsbury.

Artificial heat applies for drying linen on a very economical and effective system.

HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be efficiently warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c., where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

BATHS and HOT-WATER APPARATUS. J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c., to be had on application. Estimates and Plans for Fitting given. J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

MR. S. EGAN ROSSER, Warming and Ventilating Engineer, &c. successor to the late Mr. John Sylvester, C.E., has REMOVED from Great Russell-street, Bloomsbury, to No. 6, CANNON-ROW, PARLIAMENT-STREET, WESTMINSTER.

TO IRONMONGERS AND PLUMBERS, ESTABLISHED.
D. HULETT and CO. Manufacturers of GAS CHANDELIERS HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on view. Also of improved Bath Brass Patterns and Mounting of every description. Manufactory and Complete Pattern Book and Price List, 10s.—35 and 36, High-street Mews.

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GLOVER, BROS.,
solicit the attention of the trade to their extensive stock of PATTERNS for CASTINGS of EVERY DESCRIPTION, either Ornamental or Useful.

Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathes, Stoves, Grates, Range and Hot-plate Metal. An improved Soot Door, at a low price.

A large stock of Rain-water Pipes, Plain and O.G Gutters, Air-bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings, Hurdles, &c.

Plain and Ornamental Vases 20 per cent cheaper than Terra-cotta.

Estimates given for Iron Buildings, Wrought-iron Roofing Greenhouses, Staircases, Wrought-iron Girders, Fireproof Doors, Book-cases and Fenders, Cisterns and Boilers and every description of Ironwork to specification on the shortest notice.

Work executed with every attention to quality and despatch.

GLOVER BROS. IRONWORKS,
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CANNON IRON FOUNDRY, 80, Goswell-street, St. Luke's. JONES and BLAXTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Fronting, Lamps and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wheel Plates, &c.

BAKERS' OVEN WORK, Force Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

IRON FOUNDRY, Harrow-street, Lant-street, Southwark.—W. K. BARTLETT, manufacturer of Girders, Columns, Cast-beams, Railings, and Newel Bars, Iron Coping, Pavers, Tomb Enclosures, Area Gratings, Sash Weights, &c. Also Fly and other Wheels, Rigger, Pinions, Engine and Lathe Gearings; Force Backs, Furnace Bars, Rain Pans, Pipes, Sauk Plates, and other Castings, by patterns or drawings.

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This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete, so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron; the structure possessing great strength, and equally and forming a fire-proof foundation, adapted to receive a finished surface, either of the ordinary flooring boards, or of cement, asphalte, tiles, slate, or other material.

Many of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as regards the necessity for cast iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

Further information may be obtained of the Proprietor of the patent,—Mr BARRETT, 13, York-buildings, Adelphi.

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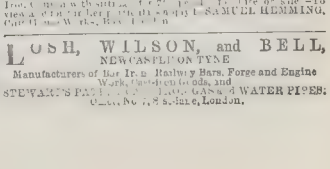

They are applicable to all Furnaces, Steam Engines, Marine Engines, Dyeing, Pottery, and other Works, Private Dwellings, Large Kitchen Ranges, Hot-water Apparatus, &c. &c. &c. Apply to the PATENTEE, 2, Norfolk-street, Middlesex Hospital; to Messrs. SHERIDAN and HILL, 10, Dorset-street, Fleet-street; or to ZEBEDEE GARDNER, Works, Wednesbury.
Testimonials, &c. may be seen upon application.

IRON CHURCHES, STORES, &c.—FOR SALE, Sheds and Offices, Iron Churches, Dwelling-houses, and every description of Buildings, suitable to all climates. Iron Roofing for Private Houses, Mills, Manufactories, Warehouses, &c. Detached Cottages for sale.—To view a Church kept on the premises, SAMUEL HEMMING, Church and Iron Builder, London.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE
Manufacturers of Best Iron Railway Bars, Forge and Engine Work, finished Goods, and
STEWART'S PATENT SCREW GAS and WATER PIPES:
Offices, No. 8, Spring-gardens, London.

PATENT MACHINES for WORKING in WOOD.—These celebrated Machines have been awarded a number of prize medals by many scientific institutions, and also by the Great Exhibition in London, and are now extensively used by the Indian, American, and all the principal governments in Europe; also by eminent Contractors, Builders, Shipwrights Machinemakers, and other workers in wood. Their operations are in every respect perfect, either in hard or soft wood, for planing, squaring up, moulding, tenoning, mortising, grooving, rebating, sawing, and boring, which they perform in a very rapid and superior manner, at a greatly reduced cost.—Sold only by WILLIAM FURNESS, Patentee, 26, Lawton street, Liverpool, from whom full particulars may be obtained, and all the machines can be seen at work.

MACHINERY for SAWING, PLANING, MOULDING, &c.

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JOHN M'DOWALL and SONS,
WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,
MANUFACTURERS of VERTICAL SAW-FRAMES
(driven by straps),
For cutting balks of timber, from 6 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached; circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a ¼ of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power mortising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 30 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.

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A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. ROOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, 4s; and the new registered Venetian Ventilator, so much admired, &c. &c. 6d. each.
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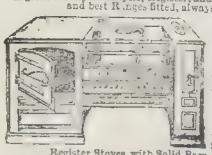
A great variety of Elliptic, Register, and other Stoves, Cottage and Best Ranges fitted, always in Stock.



Improved Self-acting Cottage Ranges, with Large Oven and Boiler
24 30 34 36 inch
25s. 30s. 32s 34s
Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—
34 36 38 42 inch
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Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 3d.
Register Stoves, with Solid Bars, per inch, 5d.
Improved New Pattern Circulating Register, with strong Bars and Radiants, 2l. per inch.
Best Solar ditto, with Fire Brick Back, per inch, 10d.
Bright Stoves, with Two Parts, 4s. to 10s. each.
Cast Rain-water Pipe { 2 3 inch. 10d. 1s. 1d. 1s. 3d. per yard.
Cast Gutters—4 inch, 8d. per yard.
O G Gutters { 4 4½ inch. 1s. 1s. 3d. per yard.

Patent Line	2	3	4	5	6
	3s. 6d.	4s.	5s.	7s.	9s. per gross.

6 inch Rd. Wrot. Mouse, with Best Patent and Patent Spindles 2s. 6d. each. Large Lath and Rooster Metal, 1s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.
Brick Moulds kept in stock. Any size made to order.
Best Cut Clasp and Rose Nails.

½ in.	¾ in.	2 in.	2½ in.	3 in.
16s. 6d.	16s. 6d.	15s. 6d.	14s. 6d.	14s. per cwt.

Best Sheet Cut Floor Brads..... 14s. per cwt.
Best Cut Lath Nails..... 10s. "

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WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSES, 19, Horseferry-road, and 1, New Peter-street, Westminster.
GREAT REDUCTION IN PRICES.
RAIN WATER CASTINGS, per yard.

Sizes	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	10d.	1s.	1s. 3d.	1s. 7d.	1s. 10d.	2s. 4d.	2s. 8d.
Half-round Gutters	7½d.		8d.	9d.	1s.	1s. 2d.	
O G Gutters			1s. 0d.	1s. 3d.	1s. 6d.	1s. 9d.	1s. 4d.
Ditto, with plain clips cast on			1s. 1d.	1s. 3d.	1s. 4d.	1s. 6d.	
Ditto, with lion clips ditto			1s. 3d.	1s. 5d.	1s. 6d.	1s. 7d.	

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.
Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
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Best Zinc Slating Nails ..... 45s. "
Best Glues ..... 47s. to 54s. "
A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.
Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

NAILS and IRONMONGERY From BIRMINGHAM direct.
Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the LOWEST BIRMINGHAM PRICES.
A complete LIST of which will be forwarded upon application to
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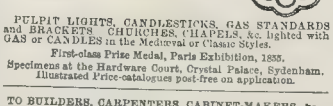

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Elliptic Stoves, double backs, 2½d. per inch, and upwards.
Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
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3-feet Cottage Ranges, with ovens and back boilers, 32s. each.
3-feet self-acting ditto, ditto, 34s. each.
Air Bricks, 4s. per doz.
Best Fine Cut Clasp and Rose.

½	¾	1	1½	2	2½	3-in. & larger.
16s. 6d	16s. 6d.	15s 6d.	12s. 6d.	12s.	14s.	per cwt.

And every material required in the building, bell-hanging, upholstery, and brass-founding trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter prepaid.

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ANDREW CLARK and COMPANY, PLUMBERS,
THE BEAR GARDEN LEAD WORKS, SOUTHWARK,
Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of
UNITING LEAD TO LEAD WITHOUT SOLDER.
Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.
PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

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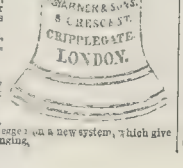
J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or mean, of any form, and at less cost than heretofore been possible.



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TUNED BY MACHINERY
Stocked and wholesale ready for hanging, old Bells re-cast or taken in exchange.
MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and ranged on a new system, which give superior tone and facility for ringing.

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Established 1774.

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GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than sheet Zinc.

No.		
11 gauge weighs about	18 oz.	per foot super.
12 " "	20	"
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PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
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Iron of every description galvanized.

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GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
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BATHS, RANGES, GAS-STOVES.
HOT-PLATES, STEAM and GAS COOKING APPARATUS, for HOTELS, MANSIONS, &c.
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BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,
REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.

STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond-stones, and the Stone Ashlar never injuriously weighted by the settlement of the Mortar joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences. It can be had ready for fixing from the quarries at a small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

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1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854 was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

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Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

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WHOLESALE ESTABLISHMENT for the supply of CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality; WINDOW-GLASS, Shades, Moderator Globes, Lamp Glasses, Bottles, and other Articles in White Glass, at 131, UPPER THAMES-STREET, LONDON-BRIDGE.—WORKS: SEVRES, NEAR PARIS.

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The Builder.

Vol. XIV.—No. 711.

WITH reference to very important works both in progress and in contemplation, wherein if error be committed the evil done would be of no common magnitude, we would say a few words on the *diffusion of gases and ventilation.*

Many of the laws of nature are simple when understood: man may in some cases subvert them; in other cases they are beyond his control. Much skill and labour are required to convert natural products and to change natural combinations to man's use: the chemist and the engineer have each their special work. The chemist can accomplish many things in his laboratory, which are commercially impracticable, on account of the expense involved: the work of the engineer is also limited very much to results which pay. The diffusion of gases follows a subtle but well-known law; all the consequences of such diffusion are not, however, fully comprehended. In the diffusion of gases electricity is excited, and we know something of the rapidity of this effect. The diffusion of gases can scarcely be controlled by mechanical means; in ventilating arrangements this should not be relied on if attempted. Many gases injurious to health are diffused with extreme rapidity: place and expose camphor in a room, then open doors and windows,—the diffusion will not be stopped, nor the scent be materially diminished; if even the air could be pumped out with a strong current, the taint would remain as long as any of the camphor existed. Decaying and fermenting animal and vegetable substances act much in the same way as camphor; gases are liberated and diffusion takes place.

The change of air in rooms and hospital wards ought not to be made at high velocities; some of the best regulated hospitals calculate upon a change equal to one foot vertical per minute; that is, in a room 15 feet high the whole air should not be changed at a greater rate than once in fifteen minutes. Gases are diffused much more rapidly than this: for a limited space one gas will pass into another gas (hydrogen into common air, for instance) as into a vacuum. No allowable artificial current man can create will prevent such diffusion, if the gases are brought into proximity; no ordinary artificial trapping will stop it. Many gases pass through fluids, and so called solids, very readily. Hydrogen gas will pass easily through the pores of stucco, so that plastered walls and ceilings are no barrier to the diffusion of cesspool emanations: hence the intolerable and incurable nuisance experienced where such receptacles are used. Latrines and cesspools generate hydrogen and its compounds; they cannot, therefore, be placed in contact with hospital wards or rooms without creating and maintaining a nuisance, and doing serious injury to the patients or inhabitants.

The law of the diffusion of gases may also be tested thus: throw any animal substance, such as bones, hair, feathers, &c. on to an open fire; the heat of the fire and the draught of the chimney will not prevent gases so liberated from being diffused through the air of the room, or indeed of all the rooms in a house.

There are gases heavier than common air,—carbonic acid and others; there are gases lighter than common air,—hydrogen and others: both these gases, and their compounds (which are generated by decaying and fermenting animal refuse), are exceedingly injurious if breathed; they are the gases found in the fever and cholera haunts of towns.

Taking these facts, as detailed, into consideration, it will become evident that rooms, and especially hospital wards, should be so constructed as to be entirely free from a chance of such contamination, as chemistry proves, the impossibility of the evil being prevented by mechanical means. To draw the air of a ward through a latrine will not prevent the foul gas of such latrine passing into the ward, even though the flue-draught is strong,—as strong as fire can make it. Cholera travels against the current of the monsoons as readily as with it; even the steam force of a tornado cannot retard its progress; the dread mysterious something which generates or developes cholera follows the law of gaseous diffusion, passing through atmospheric air as through a vacuum.

The ventilation of rooms and of hospital-wards to be safe and agreeable should be imperceptible to the sense of feeling: there must not be palpable draughts, and yet the whole body of air within the room or ward should have motion; this slow, quiet, unseen, and unperceived motion can only be obtained by means of diffuse areas of inlet and of escape, the whole circumference of the floor, the whole circumference of the ceiling Small and isolated openings, however quick the draught established, can only remove a portion of the air, and set up a current towards the point or points of inlet or outlet, as the case may be. Effective ventilation cannot be carried on through flues of small area.

Sewers and drains, even the best and most perfect, when in use, are gas-retorts; the solids and fluids constantly passing through or present in them are the producers of gas; and those lighter than common air—hydrogen, &c.—flow upwards. If, therefore, sewers and drains are connected with rooms and hospital wards, these foul gases will penetrate even through water and plaster. How, then, can a sewer or drain be "trapped?" Many persons think it is exceedingly easy to sewer and drain a house or building situate on a hill. This is a mistake. More care is required to prevent contamination than where sewers and drains have a moderate gradient, as those gases of decomposition which are lighter than common air ascend the quick gradients more rapidly; just as water flows down with increased velocity. The high parts of a town frequently suffer from epidemic diseases more than houses at a lower elevation: but this is where they are connected with sewers and drains having no proper and adequate means for ventilation. Sewers and drains ought never to pass beneath houses or hospitals: if possible they ought never to be directly connected with a house or hospital. They should stop at the outer wall; and there must be means for full and free external ventilation, so as to prevent even a possibility of contamination by the law of diffusion. If foul gases are admitted within a room or hospital, they will not be ventilated out through flues, however ingeniously contrived. The evil may be diminished, but it will not be destroyed.

LIVERPOOL FREE LIBRARY AND MUSEUM COMPETITION.

Our readers are aware that the sixteen designs drawn in completion of so many sketches chosen out of 115 in a previous competition, are now on view by the public, in a suite of rooms in St. George's Hall, Liverpool. As this competition has excited much attention in Liverpool, the number of visitors daily are very great.

As might have been anticipated, the designs for the most part affect Classic or Italian guise. We have one displaying Byzantine elements, but no representative of the Gothic. There are some that show a considerable amount of originality in general composition, while too many remind us of what we have seen before, either at home or abroad; and very few have made that free and independent use of the elements which constitute a design in the full sense of the word original. The suggestion of a dome-covered entrance-hall by the committee, in the instructions issued to architects, has been acted upon by several, and we have domes of every shape and proportion—square, octagonal, hemispherical, segmental, some of which crown colonnaded rotundas, that for size might vie with St Paul's itself; and where a dome of some kind is not adopted, there is generally a receding attic in its stead; so that most of the designs present a pyramidal pile externally; one or two of them something too much like St. George's-hall, either from the adoption of the attic just mentioned, or from the introduction of the dwarf intercolumnar walls, though the least reflection might have shown that the latter are far too peculiar to be repeated, especially on a site contiguous to that of the original.

One or two of the most beautiful designs considered abstractedly are altogether unsuited in expression to the intended purpose, being almost surrounded with colonnades, which, besides really diminishing the light, prevent the windows having that prominence essential to the true expression of the destined use of the edifice. The design selected by the committee for the first prize errs in this respect as much or more than any other as it almost entirely suppresses the window, and substitutes a row of niches, which might have a very good effect in a building purely monumental, but are absurd in one for a practical purpose, such as a library and museum. Windows are said to be so omitted for the sake of architectural effect, but the result is architectural absurdity: for windows, in this climate especially, are essential to true architectural effect, and you might as well put out a man's eyes with a view to increase his beauty, as for the sake of architectural effect to exclude the window.

While one competitor ignores the window, another is ashamed of his roof, and foolishly hides it by an enormous and false attic, which has no better effect than causing the wings to overpower the central pedimented portico.

The plans of the different floors show but in few instances anything like ingenuity, and in still fewer do we find very satisfactory arrangements for admission of light. The prize design, we think, has too compact a general outline for the security of a sufficiency of this indispensable element, without the substitution of an interior court for the central hall. Others have sacrificed the capability of lighting to the unskilled-for effect of external colonnades, as alluded to in speaking of the exteriors.

What excited in us considerable surprise on a first sight of the plans was, that notwithstanding the low sum named as the limit of the cost, most of the competitors had adopted a wasteful general arrangement: vast central "halls of columns," square and oblong, surrounded by corridors that would alone swallow up half the proposed 20,000*l.*; and circular saloons in emulation of the Pantheon vie with each other in magnificence,—which seems far more thought of than practical utility.

At least two-thirds of the competitors, we should think, violate the condition as to cost, and not a few would each require an outlay of from 70,000*l.* to 100,000*l.* to realise them in a durable material, with all their sculptural embellishments.

Some are expensive designs, even in respect of their mere shells. In one instance, the greater part of the boundary-walls are not in one vertical plane from top to bottom, but have the upper story receding within the plan of the lower, thereby greatly increasing the cost of erection.

But it is not in the matter of cost only that the conditions are violated; four of the designs, and among them the prize design, have mixed the library and museum,—*i. e.* these departments are in different stories of one building, and under the same roof, in contempt of an express condition that the library should form a distinct and separate block.

Even the plan of the site, which was issued along with the instructions, has been set at naught. One competitor, for the sake of magnificent interior arrangements, has overstepped the longitudinal boundary line by 50 feet; and another, in bringing walls perforated with windows up to the east and west limits of the site, has rendered increased extent of land necessary to the adoption of his design. The author of a very showy set of drawings before mentioned has shirked the difficulties of a very rapidly-inclined site, and placed his building on a dead level.

It is worthy of mention that the most imposing sets of drawings seldom proved, upon examination, to be the best designs. Some of the most gorgeous in colouring and pictorial accessories being little more than a stringing of the commonest elements together, without fancy or feeling; and were we to enter into the relative merits of the several designs, we fear we should go somewhat counter to what has been expressed by the votes of the competitors, and to the verdict of the committee, with whom good, or rather showy drawing and colouring, must have supplied the place and been mistaken for fair proportions and fine composition, originality, and other intrinsic qualities.

On the whole there is much to discourage the lover of art in this collection of designs,—a collection which cannot fail to induce the conviction of the vanity of expecting a satisfactory result under the present system and means of selection.

Public competition, in the abstract, no one, we think, could object to. We can conceive it so conducted as to become a most powerful means, not only of impulse to the study of architecture, but by bringing out nameless talent and sending in talentless names, of putting its professors in their right places. But what might thus be of incalculable value to our art, seems in practice to be all a farce.

We do not say this because the right man never gets the offered premium. If no other injury were perpetrated than that, it would be of comparatively little matter. We speak strongly, because in its present state it cannot have a good influence upon the study of architecture; for, as it becomes known that committee-men are incapable of judging of the relative merit of the works submitted to them, merit is of course not studied. Committee-men know nothing at all about the plans of the floors, therefore anything will do for a plan. Committee-men cannot recognise or appreciate originality, therefore originality is not sought. Committee-men award the premium to the author of the prettiest picture, and therefore the contest is not for the best plan and most beautiful and original exterior design, but for the showiest water-colour drawing. And to such an extent has this gone on, that even architects themselves would find it difficult to penetrate the dense atmosphere of claptrap, in the shape of colouring and getting up, which envelopes them, to the real merits and demerits of the designs. We have seen sets of drawings in which the very plans were glowing with vermillion and all the colours of the rainbow, in which the sections for drawing and colouring were absolute gems, while the perspectives were coloured by eminent water-colour artists, probably at great expense to the author, which, as architectural designs, were not worth the paper they covered.

That in a competition open to all, the majority of the designs sent in should be valueless it is natural to expect; because while the very humblest of the profession are as likely to respond to the invitation as the highest, we know very well that not one man in ten who writes himself architect is capable of designing a public building of any importance. But this renders more urgent the need of some better means than is at present resorted to of making the selection. What is the best we are not prepared to say, and will content ourselves with observing, as we have before said, that we have no faith in the plan which takes the verdict of the competitors, whose duty and interest it sets in the most striking opposition to each other; each being called upon in common honesty to declare for the design he considers the greatest rival to his own, and record a vote that might turn the scale against himself. But there are other objections to this mode: to say nothing of professional and local jealousy, and other influences. Are those who merely string the tritest elements together without the exercise of the least invention—window and pilaster, pilaster and window; or not content with that, copy an entire façade,—are they likely to respect the originality that rebukes their hum-drum productions? Nay, are they not likely to resent in others any breaking up of new ground, or deeper plunging into the wells of beauty? We believe that by no plan of selection could a truly fair decision be arrived at, unless the designs were all similarly drawn and tinted, say, in sepia or Indian ink; for such is the influence of superior drawing and colouring, that if a collection of designs, after being exhibited and judged of as they came from their respective authors, were re-drawn and coloured by the same hand,—the perspectives from the same point of view,—and with the same solar and atmospheric effects upon them, and in this new guise again submitted to an equally capable tribunal, or the same tribunal, supposing it could forget its former decision, the result would be totally different; and designs, which were perhaps all but unnoticed before, would become for their originality and beauty, the centre of attraction.

THE ARCHITECTURAL ASSOCIATION.

The public *conversazione* and opening meeting of the present session of this Association took place on Friday evening, the 3rd inst. at Lyon's-inn Hall, Newcastle-street, Strand;—the president, Mr. Arthur Allom, Associate of the Institute, in the chair.

Letters were read from the Right Hon. Sir Benjamin Hall and Mr. Decimus Burton, regretting their inability to be present on the occasion. A letter was also read from the Office of Works, accompanying copies of the plans and particulars for the New Government Offices, for the use of the Association.

The hon. secretary then read a report of the proceedings of the Association during the past year. It commenced by expressing the thanks of the committee to Mr. Tite, M.P. for the kind interest he had evinced in the welfare of the Association, both on the occasion of their last opening meeting, and on other occasions. Great difficulty had been experienced during the session for want of papers. Notwithstanding, several papers of considerable interest had been read. A crisis ensued, and on the 2nd of May last resolutions had been proposed having for their object the dissolution of the Association. They were, however, almost unanimously rejected, and from that time greater interest in the affairs of the Association had been manifested by the members generally. At the early part of the session, and after much consideration, a memorial had been presented to the Royal Institute of British Architects, praying them to institute such a course of examination as they might think necessary, in order to test the qualifications of candidates intending to practise as architects. This memorial was received and discussed by the members of the Institute; but the committee regretted that the objects of the memorialists had been totally misunderstood, both by the members of the Institute who had spoken, and by others who had written upon the subject. The committee received an answer to their memorial, in which they were told that the course proposed was as yet premature, and that the council could not proceed further in the matter until they had gained some experience in the working of the examinations of candidates for district surveyorships. The committee thought the subject was of so much importance, and so fraught with good for the future welfare of the young architect, that they felt bound to give it still further consideration; and they asked for the sincere and earnest support of the members of the Association in a matter of, as they considered, so much consequence. On the 17th of June last, the committee received a very important letter from the Royal Institute of British Architects, in which a suggestion was made for amalgamating the Architectural Association with the Institute. The matter had been taken into consideration by the committee, at four meetings held during the recess, and a resolution had been passed to the effect, that it would not be expedient for the Association to amalgamate with the Institute on the terms proposed. The subject, however, would be laid before the members generally, in November next, when a final decision on the subject would be come to. A list of the papers read during the past session was given, and thanks were returned for various donations.

In conclusion, the report called attention to the syllabus of papers and subjects for sketches for the present session, and urged upon the younger members of the profession the necessity of giving the Association increased support.

Mr. R. Kerr, in moving the adoption of the report, said,—Two circumstances mentioned in the report deserved a passing word. He was glad that the proposition for a dissolution of the Association had been rejected, whatever might have been the motives of those by whom it was made. Another singular circumstance seemed to have occurred very recently—namely, the proposition of the Royal Institute of British Architects that the Association should be amalgamated with the Institute, or, as he should call it, absorbed in the Institute. He was not aware, until the report was read, that such a proposition had been discussed and preliminarily disapproved of, but he was very glad that it was so. He considered that, although the proposition from the Institute was highly complimentary to the Association—just as much so as the other proposition to which he had alluded was the reverse—yet at the same time it was a proposition which deserved to be taken into consideration with a great deal of caution. That Association was founded for the purpose of affording to the young members of the profession the means of self-improvement by mutual instruction. The principle on which it was founded was one which had been carried out through this and other countries in various departments of science with very great success. The operations of that Association had been eminently successful; but they must expect that in that, as in other things, there must at times be some falling off. It did not, however, follow that the principle upon which it was founded had in the slightest degree proved inapplicable, or that the Association itself had been unsuccessful in its operations. He might be bold enough to say that that Association had done more practical good amongst the young men of the architectural profession within the last ten years than any Association of the kind ever established in this country. Ten years ago the profession was in a very different position from that in which it is now. Everything was then the "five orders." Nine out of ten of those present did not now know probably what the "five orders" were—in the sense, at least, in which it was then used. At that time every thing was the "five orders:" there were even five orders of Gothic architecture: at least it was attempted to be shown that there were; and "five orders" of a great many other things, which he would not then say anything more about. During the last ten years, however, the character of architectural design had been greatly changed; the picturesque had been studied more than the classic or the stately, and therefore the peculiar vigour exhibited by the youthful mind had been more called into requisition than the studied sense of those who were more advanced. That Association, he concluded, had been eminently conducive to the fostering of this peculiar energy of the youthful mind, and therefore he had no hesitation in saying that it had done more practical good amongst the class to which it appealed, than almost any other association with which they were acquainted. He had not the slightest doubt that the proposition of the Institute was prompted by the most disinterested and excellent motives. No one wished the Institute more success than he did; but there was one thing (and he did not speak offensively) in connection with the Institute which he did not like: he did not like its charter. In a country like this, and an age like this, Government patronage and Government authority, instead of being conducive to the benefit of any public movement, are invariably found to clog its progress. A most remarkable instance of the operation of the same principle had been displayed in the affairs of the late war. At the time that Government refused the offer of a private mercantile firm to provide the army in the Crimea with comfortable clothing and housing at a reasonable rate, our brave army were perishing on the ground from starvation and cold. There was a deplorable illustration of the difference between private enterprise and Government management and routine. In a country like ours, so long as private enterprise

was allowed to carry on its operations on its own basis, the energy and genius of a nation like this is sure to lead it to success; but the moment Government authority and patronage and routine come into play, the very reverse is the case. The Institute of British Architects was, he might say, a Government institution. He had no doubt that the practical management of that Institute was characterized by disinterestedness, gentlemanliness, and highmindedness; but at the same time he contended that if the Institute were not clogged with that unfortunate charter, but were based upon the enterprise of British public spirit, it would do a great deal of good, while many at present were disposed to say it did not do much good. Now, why should an institution like the Architectural Association become merged with the Institute of British Architects? Let them co-operate with them in every possible way, submit themselves to the authority of the men who compose it, allow themselves to be governed by their dicta, and perhaps they would be safe in so doing to a great extent. But a society of that kind once started in England never could be merged. If the Association were dissolved, before twelve months there would be another of a similar kind organized. In conclusion, he gave some practical advice for the carrying on of the business of the present session, which he hoped would be more successful than the last.

Mr. Gray seconded the adoption of the report, which was agreed to.

The Chairman then read an address of some length, commenting on the condition of the metropolis, which, he said, became more intolerable every day; the want of taste shown in public works, instancing the Nelson Monument in Trafalgar-square, the proposed Government competitions, the desired embankment of the Thames, the appropriation of the closed graveyards, the public monuments, and the want of proper Dining Houses in the metropolis. He suggested that the railway companies should aid in bringing building stone, in pieces of moderate size, at a cheap rate to London; and concluded with setting forth the prospects of the Association (now numbering 125 members), and expressing his opinion in favour of the union, not fusion, of the various architectural bodies of the metropolis, under a liberal policy. We are prevented from giving the address in full, by the more than ordinary demands on our space this week, but may recur to it next week, if not prevented.

Professor Donaldson said, he would not have risen to offer any remarks, but his friend, Mr. Kerr, whom he had known and respected for many years, happened to throw out some observations in reference to the Royal Institute of British Architects, which were not founded upon the actual circumstances of that Institute. Perhaps the meeting would pardon him for attempting to set the Institute right in their estimation. Mr. Kerr had started with the proposition, that when a company or society had got a charter of incorporation, it was necessary that it should be under Government influence and management. An idea so fallacious could not have been started by Mr. Kerr, if he had considered the subject beforehand; because the charter was merely meant to give to the Institute possessing it a legal standing in society: it did not give any influence to the Government, or empower any other body to interfere in any way with its management or control. The truth was, the Institute, after having been carried on for some years, had acquired considerable property in the public funds, as well as a valuable library and collection, and they felt that there was no safeguard for the property they possessed, if it remained vested in private individuals, and they thought it due to the profession, and the position which the Institute held, that they should give that property the security which the public had a right to expect. That was the whole and sole cause of their having a charter of incorporation, in order that they might stand — well or ill he did not pretend to say — but that they might stand as the representatives of the profession, and thus having a *locus standi*, that the property possessed by them might be under the protection of the law. The Institute had a generous regard for the whole members of the profession, and hearing that the Architectural Association found themselves in some difficulty, the council felt that they would not be wanting in the interest which they felt for every class of the profession, in coming forward and offering them the hand of friendship, to prevent them from disbanding themselves, and being consequently deprived of the opportunities for improvement. They said, "Let us go forward, and say we have a place here: if in any way we can combine you with ourselves, we shall be happy to do so, by offering you the use of our library, and place of meeting, and any other advantages we have at our disposal." That was the proposition that the Institute wished to make, and that was the whole and sole charge that could be brought against them. They felt that antagonism is bad for a profession, though rivalry is sometimes beneficial to it. The objects of the Institute had been to promote the interests of art generally, and not of the profession itself,—to uphold the character of the profession, to maintain it for the good of the art,—that was the sole object the Royal Institute of British Architects had in view. He had listened to the address which had been delivered by the president with interest, but he differed in opinion from some of the sentiments expressed in it. He recollected London some twenty-five years ago: there was then hardly a straight street in it. The streets were so narrow that two omnibuses could hardly go abreast. The streets were dirty, and the Thames was filthy, and there was hardly a garden around London. But since that time see the progress that had been made. The president had said that London becomes more and more intolerable: he (Professor Donaldson) said that it became more and more tolerable; it improved every day. Look at Cannon-street: was it not large and broad? were not those great mercantile magazines worthy of being palaces? He might allude to a large number of other buildings of modern structure around London, and ask, whether it really became "more and more intolerable as a place of residence." Regent-street did not exist thirty-five years ago: the Strand was not then as it is now. Let us have a century or two, as had been passed by foreigners in improving their cities, and London would be able to vie with any capital in the world. The chairman had alluded to the sewage of the Thames. If his memory served him well, three or four years ago competition was invited on this subject, and forty or fifty designs were sent in, not one of which suited the purpose for which they were required; and he did not know whether for the next ten years they would have a mode of sewage such as was desired. It had been said that Government interference was always bad, but there were numerous instances of entire failure where there was a total absence of all Government interference whatever: he need only give as one instance that of the Nelson column. Mr. Kerr had said that under certain circumstances they should go to the Institute, submit themselves to it, and adopt their rules; but the Institute did not require submission: they considered it would be unworthy of men and of architects to talk of submission. They must come, if they came at all, upon equal terms—make their own terms, in fact, with the Institute in an honourable way, worthy of men and of architects. The Institute might have been supposed to be placing themselves in an invidious position in coming forward to make the proposition they had made; but they disregarded any remarks that might be made on their conduct, being actuated solely by a desire to benefit the members of the Association; and if they could not succeed in their object, the fault did not rest with the Institute, but with the members of the Association themselves.

Mr. Jennings said the general feeling of the elder members of the profession was that there should be as complete union as possible in the profession. They considered at all times that there must be many things of which every individual was more or less ignorant, and that the elder branches of the profession might often, from experience, be enabled to impart information to them; hence the utility of association and unity. He felt quite satisfied that the present charter was attended with some inconvenience as far as amalgamation of the entire number of architects of London was concerned; but he did not conceive there was any insuperable difficulty in the way. If there was a desire on the part of both institutions to unite, he thought that it was not impossible to do so, and that some plan might be devised to carry it out with satisfaction to all parties.

Mr. Edwin Nash considered that the division of a profession into two bodies was injurious to its interests. If a union between the Association and the Institute could be devised in such a way that the junior members should be left free to exercise themselves in that industrious and energetic manner they had done there, it would be a good thing; but if they joined the Institute and merely attended the meetings which take place at the Institute, instead of benefiting, he thought they would be in a worse position than at present. The suggestion now made by the Institute for such a union he considered required remodelling before it could be accepted or acted upon.

Mr. Edward Hall, being called upon, observed that the present question of union in the profession had concerned with it the interests of art and architects for years to come. He had long felt that the mutual relations of established architects and other members of the profession, were not what they should be; and there was not the same intercommunion of ideas, and disposition to give credit on either side, which he noticed, for example, amongst the engineers. At the same time, whatever was decided upon for the Association, independent action had, to a certain extent, benefit, such as a noble author discovered, judging from the title of his work,—"Progression by Antagonism." He believed, with deference to Professor Donaldson, that the interests of *art* were to be served by advancing the interests of the *profession*, and somewhat more than the Institute had done; and also (without touching upon the reasons) he held that the architecture of London *had not* advanced in a ratio commensurate with the population (the real point), or in a manner parallel with the improvements in some other capitals. He did not consider that the Government, in calling for designs for particular offices, and a plan for general disposition of offices, at the same time, had inaugurated a happier state of affairs: if the general plan had any value, it would be as likely that the sleeve of a garment cut by one tailor would happen to fit the coat of a different workman, as that the general scheme and the details here should fall together; and at least one set of premiums must be wasted.

Mr. Papworth said, with regard to the union of the several bodies under one roof, it was only three years since he undertook to be the medium of communication for bringing about a combination of the Institute, the Museum, and the Association, on one piece of ground. At that time the Association decided that it would rather remain alone; and he supposed that decision would influence to a certain extent their answer to the proposition recently made to them by the Institute. That proposition was one which he had pressed upon the members of the Association for the last few years; seeing that as they had not a library, and as the Institute had a very good one; and that as it must be a perfect matter of indifference to the Association whether they met at that end of the town, or a little more west; and that as it would be very possible to make arrangements for using the library and the reading-rooms, and for other advantages of that sort, without the Institute at all interfering with their regulations,—he could not understand why the Association should not accept the proposition: he did not see why they could not have meetings of their own without even the presence of the Fellows. But latterly, his own ideas upon the subject had begun to change. He began to imagine that it would not be a good thing for the profession if the Association were to accept the offer. He would tell them why. During the time they had existed, they had been always spurred on by a want of something; but when they had got everything, what would they do? Again, when they had got a library at their command, were they sure that they would use it? He had some ground for that remark, for he could assure them that he had never seen five gentlemen at a time in the library of the Institute.

Mr. Kerr wished to correct what seemed to be a false impression arising from the remarks he had made respecting the Institute. He did not for a moment intend to convey the idea that the Institute was under Government control. He merely meant to lay down the principle that State patronage in any form was not found conducive to the success of any scientific movement of a public character. He was inclined to think that although the charter might be necessary for its library and property, the Institute would find it more advantageous to the profession at large if it had no charter and no property. He was convinced that if the Institute would open its doors to every one who liked to go into its meetings, as they did at the Association, and permit its library to be used by such of the profession who desired to use it, they would find those privileges very much appre-

ciated, and a very great deal of good feeling would be created by it. He must again express his very great respect for the Institute itself, and for the administration of its affairs by those who are at its head, and he should be sorry if any expression of his were considered as intended to convey a slur upon the Institute in any way whatever. But the Association could not be amalgamated with the Institute practically: it could not be done in the form proposed. At the same time he thought that if the Institute would accord to the members of that Association the practical benefits of the use of its library, and the permission to attend its meetings, the boon would be thankfully accepted, and prove highly beneficial.

Some further discussion took place, in which Mr. [illegible] and other gentlemen took part, and then

Mr. Gray moved a vote of thanks to the visitors, and particularly to those who had taken part in the discussion.

Professor Donaldson, as the elder member of the [illegible] would take upon himself to return thanks for the honour they had been received that evening. Their presence there was the best proof of the interest which they took in the Association. The Institute had come forward themselves with a proposition which they considered would be [illegible] to the interests of the Association, and [illegible] did not approve of that proposition it was perhaps for them now to appoint a committee to meet the Institute and see if a plan could not be agreed upon for the benefit of the Association.

A discussion then ensued as to the propriety of making the meeting to be held in November next, for the discussion of the question of amalgamation, a public one, when a motion was put and carried that such a course would be desirable.

THE DWELLINGS OF THE WORKING CLASSES ABROAD.

The following communications with reference to efforts for improving the dwellings of the working classes in various parts of the continent, were briefly alluded to in the report of Mr. H. Roberts, and the other commissioners who on this subject was referred at the International Philanthropic Congress lately held in Brussels, and reported on by us last week. The buildings erected, or in progress in France, are now so numerous, that with some exceptions, they were, like those in England, not named.

Prussia.—M. Huber, Professor in the University of Berlin, said,—I was to remark that after London Berlin is the first large town in which a society for dwellings for the [illegible] was established, and that this society is the first that I know of which adopted the principle of giving to the classes for whose benefit these houses were built the opportunity of becoming their proprietors. It is not a trifling undertaking which is here referred to, for the society has embarked 300,000 thalers, and has built a dozen groups of houses, containing about 200 dwellings, in which about 1,000 individuals are lodged. There is this feature in the society, that it is under the protection of H.R.H. the Prince of Prussia, whose patronage is very real. I have been for several years secretary to the society, and I can add in that the Prince really presided over the general meetings of the shareholders, and had a very accurate knowledge of everything relating to the undertaking.

Professor Schubert.—In the town of Konigsberg, where I reside, and which has a population of 30,000, a society has built two houses for families of the working classes. These houses comprise forty dwellings, each with two apartments, and a detached kitchen. The cost of the building was defrayed, one half by donations, the other half by shares, which for the first years bore no interest. The rent of these dwellings is excessively low: they are let by preference to the most honest workpeople: they are well constructed and very healthy. The cholera, which since 1846 has appeared five times in Konigsberg, attacked much less frequently the inhabitants of these houses than the workpeople residing in other places, and for the latter years not one case of cholera has been observed.

Holland.—M. Jonkes, Avocat Général de la Cour Provinciale.—The improvement of the dwellings of the labouring classes may be noticed in Holland, and mainly in several of our towns. At Amsterdam there exist already three societies, which have constructed healthy dwellings, provided with excellent water, and having good ventilation. These houses are let at low prices to the necessitous classes. But another measure appears to me indispensable; that is, the forbidding the occupation of unhealthy dwellings, for it is often the case, that although better dwellings may be obtained, the unhealthy are chosen because their rent is lower. The town of Rotterdam has, in this respect, set the example. A regulation of the commune forbids, in this town, the dwelling in unhealthy houses. Without this law, and I cannot sufficiently insist on this point, I believe that everything which may be attempted for the improvement of dwellings will be unsuccessful, for the lowest priced dwellings are always preferred.

Baron Van Breugel pointed out and dwelt on the advantages of a plan adopted at the Hague, where workpeople's dwellings have been so arranged as to combine the building in block, with the separation of each family, and to provide for free ventilation. The houses are in rows, with garden ground on each side. one tenement occupies the ground-floor, another the floor above. The entrances are placed on opposite sides or fronts of the building: in one is that to the ground-floor dwelling, and in the other that to the first floor dwelling: thus there are entrances in both fronts of the houses, whilst to each family is appropriated the plot of garden ground through which they enter their tenement.

M. Van Oye described the beneficial results arising from the construction, on sanitary principles, of one hundred workmen's dwellings, at Groningen, in Holland. Since they were built, the cholera has five times visited that town; and, although situated in the most unhealthy quarter, in these houses, which contain from 400 to 500 inhabitants, there has been but one case of cholera; and in that instance the doctor stated that the germ of the malady existed when the man took up his residence in the house fifteen days previously. The workpeople contend for the occupation of these houses: their admission is the reward of order and good conduct. The financial results are quite satisfactory: the shareholders receive 4 per cent. and a considerable portion of the capital is redeemed.

Sweden.—Dr. C. G. Gruehs, first municipal physician, at Stockholm, said that, in that city, an association of workmen has been formed amongst themselves, with the view to the improvement of their condition, and the mutual advancement of their well-being. In Stockholm and in Gottenburg, as well as in some other places, the public attention and interest have been directed to the hygienic question in relation to the working classes. The Capital, considering that a clear and wholesome dwelling is one of the first and most important means of securing the health and happiness of the working classes, set about obtaining funds for the building of workmen's dwellings. To the present time, thirteen piles of dwellings for families are built in different directions: they contain together 157 tenements, each consisting of a room and a kitchen, or of a single room, with chimney and stove, besides the necessary appendages, cupboard, cellar, dust-place, and privy. In some cases there is also a washhouse, drying-room, and bath. The rent, determined by the general town council, varies from 48 to 120 rixes per annum, according to the situation and the amount of accommodation. One of these dwellings has been erected by voluntary contributions, given with a benevolent object; and there has not been a better appropriation made of the sum subscribed by the inhabitants of Stockholm, as the expression of their joy and their thankfulness for the re-establishment of the king's health, after a serious illness, which drew forth this expression of the love of his people, in the winter of 1852-53. This dwelling referred to, was recently opened, and contains accommodation for twelve families. it is situated on a spacious and elevated plot of ground. the apartments are well disposed, and provided with separate dependences for each family. The other workpeople's dwellings have been built with funds lent by the Fire Insurance Company of Stockholm, bearing interest at 4 per cent. and repayable by annuities in a period of twenty-five years.

All the dwellings of the labouring classes are placed under the surveillance of the general town council.

Plans for baths and washhouses, at Stockholm, have been recently prepared by a very distinguished architect; and with these buildings are combined dwellings for work-people.

In the town of Gothembourg, for several years there have been workmen's dwellings, built in part by voluntary subscriptions, in part by loans on the guarantee of the town. These houses are capable of lodging more than 100 families; and lately a person has generously given 200,000 francs, with a view to found a *cité ouvrière*, directing that the rents of the houses shall be appropriated to the erection of new buildings, by which means this establishment will be always on the increase.

Dr. Faye, professor and physician to the King of Sweden, reported, that in Christiana, the capital of Norway, a commencement has been made, and two large establishments of dwellings for the working classes have been formed by a society of shareholders, who receive 4 per cent. interest. Several owners of factories have similar establishments for the work-people in their employ."

The Belgian Government has issued a small octavo pamphlet, of sixty pages, on the "Amélioration des Habitations d'Ouvriers," containing "Circulaires du Gouvernement; Résolutions et Propositions du Congrès Général d'Hygiène, 1852; Rapports du Conseil Supérieur d'Hygiène et de la Commission Permanente des Sociétés de Secours Mutuels."

This *brochure* is referred to in the report made to the *Congrès de Bienfaisance*, as given in the *Moniteur Belge*, Sept. 23: it contains details, at considerable length, with reference to what has been done in France, Germany, &c. as well as allusions to England.

The establishment of a society in Brussels, for the [illegible] of workmen's [illegible] in that city, was announced the last day of the Congress. The capital to be 250,000 francs, with power to increase to 1,000,000 francs.

One admirable example has been set by M. Pauwels, the large manufacturer of railway carriages, close to his works. He has built and fitted up, on the English plan, a lodging-house for forty single men employed in his works, and is [illegible] [illegible] houses for families.

THE UGLINESS OF OUR DWELLINGS.

OPENING MEETING OF THE LIVERPOOL ARCHITECTURAL SOCIETY.

The opening meeting of the Liverpool Architectural and Archæological Society was held on Wednesday, the 1st inst. the President, Mr. S. Huggins, in the chair. The student's prize for the best design of the side of a square, consisting of twelve houses of from 8 to 12 yards frontage, was presented to Mr. Pepper, the author of the design marked "Excelsior."

After some conversation on obtaining uniformity of size in materials used in building (by no means to be advocated without great qualification),

The President, according to custom, delivered an address. It was an able and suggestive composition, touching on many things, but we are compelled to restrict ourselves to the latter portion of it, which treated of ordinary street architecture and every-day building. This we give in full.—

Generally speaking, the ugliest thing about us is a common street dwelling-house, with its five or six holes in the wall, lintelled by a shapeless patch of stone. Cast your eye upon any other object around you, not at the works of God, but at the other works of man; look at a ship, a coach, a steam-engine, at most musical instruments, a harp, a guitar—look at these, and then look at what is very properly called a common dwelling-house, and say, is not anything, everything you see, more beautiful, or rather less ugly, than that? I believe at no other period of the world could this have been said, which appears the more strange when we consider that it is one in which the importance of the individual in society is so fully acknowledged; and I never hear of the happy homes of England but I feel a regret that the great bulk of them should be so void of those graces which might make them happier, and have a refining and ennobling influence upon the mind, besides strengthening that love of home which some degree of beauty in domestic architecture would not fail to foster.

What makes the matter worse is the ugliness complained of being from one mould. A variety of ugly things would often be a relief to the eye.

I was wondering the other day, while walking through one of our ordinary streets of brick-built houses, whether in any other age—whether at any time, even in China, could be found so many windows and doors exactly alike. "Heads and sills to the windows," said the first specification which we copied in our pupilage, "heads and sills" still echoes the one we drew up yesterday, and heads and sills are supplied by the mason from the same unvarying mould. Five or six windows thus adorned, along with a circular-headed opening, filled in with a bit of entablature, and a couple of wooden columns for a door, compose the front of tens of thousands of our street houses: and thus we go on. Builders of small houses, it is true, have at length got hold of a second idea for a window; but it is a false one. Bay windows are very

good things in their place. A bay window projecting from the front or side of a house may give you a prospect from a room which you could not otherwise have; but a long row of bay windows looking right into each other, obstructing one another's view, and destroying the privacy of the rooms they belong to, is an absurdity that one would hardly expect to see carried to such an extent as it has lately been in Liverpool.

Besides, bay windows and pigmy porticoes and porches, or any other projection from the fronts of small houses, marking too strongly the extent of each front, only produce littleness, and make small houses look smaller than they are, which, Heaven knows, is needless. We have, I think, a better resource than this from the monotony complained of in the shape of coloured and moulded bricks, to which I think we must look for infusing beauty and variety into our small houses. Where expense is not feared there is nothing like stone for window and door dressings; but where ideas of economy exclude stone, bricks will be found a useful and artistic means of relief and embellishment in the hands of an architect of taste. Neither durability nor beauty need be confined to palaces and large mansions. Small houses need not be either mean or fragile. Architectural beauty was not sought in palaces or great mansions only during the great periods of art. Ruskin says the most elaborate piece of architecture in Venice is a small house at the head of the Grand Canal, consisting of a ground-floor, with two stories above, three windows in the first and two in the second; and adds that many of the most exquisite buildings there and elsewhere are of no larger dimensions. But we may have a beauty that will charm the sight without the richness of decoration or elaborateness of design of the buildings of Venice. There is a beauty of form and proportion only that will operate upon the mind of the susceptible observer like ceaseless music.

But I have not quite done with my strictures on street architecture. Where, in a better class of houses than those I have referred to, something like architecture is exhibited, it is still all shallow front show, and this is, perhaps, the greatest eyesore of all: the pretension of houses to be more than they really are. It is as insanely ridiculous as it would be for a man to wear an embroidered waistcoat or front garment, while out at elbows or in hanging rags behind; for the back and sides are often as much seen as the front. But such absurdity is only exhibited in houses, and thousands who would scorn pretence in everything else, who dress well and thoroughly, and have real substantial dinners every day served up on solid mahogany, live in houses in which the architecture is all superficial—a mere wash of decoration in front, while all the rest is deformity itself.

What is the cause of all this? for it is a sufficiently important phenomenon to require an especial cause. There are a variety of causes, I take it, but on one or two only have I time to speak.

A prime cause of ill taste or of carelessness on the subject of domestic architecture is, I believe, a diminution of the ancient love of home. Men have now less reverence for the houses of their forefathers, and less wish to rear dwellings on which their descendants shall look with pleasure. Our houses are built to serve the present generation only, and of course we are proportionally indifferent as to their beauty. To whatever this be owing—whether to the spirit of enterprise among the masses, which creates such sudden and great changes in the circumstances of men, or to other causes, it is not natural to the human mind. It is in human nature to reverence antiquity, which gives great increase of dignity to a building. But there is another source of these evils, and among the rest I reckon the sordid money-grudging spirit of the age, and the faintness of our love for the beautiful and poetic, compared with that with which we cling to the worship of Mammon. If the work were written which was suggested by Mr. Pieton one evening last session, tracing the architecture of each country to the moral and mental condition of its people, much of what is seen in our works at present would have to be referred to this cause; to a sordidness and vulgarity of taste that is unworthy of being addressed in high poetry or art, except to satirise and pour contempt on it; and, which, indeed, is never penetrated except when some indignant outbreak of the poetic spirit, like Hood's "Song of the Shirt," awakens it to a momentary sense of its degradation.

As sure as finished thought and devotion to the beautiful are written on the temples of Greece—as sure as martial glory and luxury beam from the amphitheatres and triumphal arches of Rome—as sure as the mosques of Cairo and the Moorish palaces of Spain speak of the poetic and imaginative doctrines of the Koran—so sure, generally speaking, in other and very different characters, is money-grudging—contract and "no extras," inscribed on the architectural achievements of this generation. Everything is spoiled by a false economy, and nothing is so good and complete as it might be.

This is seldom to any extent the fault of the architects; nevertheless, I am convinced that architects are greatly to blame for it. Certainly the degraded feeling that leads to these evils may be traced in the operations of the artist himself. It is now, in a majority of instances, all money—not love—that prompts him to produce; for this alone he enters the profession, and art is followed solely for gain. The prayer of the sons of Eli, "Put me, I pray thee, into one of the priest's offices, that I may eat bread," expresses now too fully his motive for entering the profession. But art will not be so treated. She must be followed for her own sake. All that have obtained her richer gifts have so wooed her. Michaelangelo thus wrought in her temple. He refused payment for his services at St. Peter's, and worked for the love of art and glory of God; and this feeling, I take it, animates, in a greater or lesser degree, all true artists, who have an abstract love for art, and, if they can only live, are capable of entirely waiving all considerations of pecuniary remuneration, and find an entirely satisfactory enjoyment in it. I doubt not that Milton could have written his "Paradise Lost," with only the paltry 10*l.* or 15*l.* he got for it in view, and that the certainty of as many thousands would have been insufficient to support him through so many laborious days without the love of his art and the desire to produce what men would not willingly let die. Some, I know, would tell me that whatever the delight and advantages of art, money is the real substantial thing after all. Money is, I grant, a very essential thing in this world; but it is not the real and substantial thing, but is merely a scaffolding to the fabric of our true happiness, which consists of far different materials. We must undoubtedly have bread to eat and raiment to put on; but man does not live by bread alone. Bread, raiment, shelter, even of the most perfect and sumptuous kind, are not our being's end and aim. There are affections, and desires, and aspirations in the human breast that the wealth of the Rothschilds could not satisfy. The true, solid, substantial things are those enjoyments which are peculiar to our moral and intellectual nature; the exercise of the faculties with which God has endowed us in the contemplation and discovery of truth; the indulgence of the exalted emotions arising from the view of the physical and intellectual harmony of the universe; the privilege of revelling in the bright dreams of poetry and science, and basking in the rays of genius; communion with the noble living and the noble dead; the exercise of the pure and domestic affections and household virtues; in short, all those pleasures of which humanity alone is capable, and which distinguish man from the brute. These are the substantial, the real, the undying things.

We are still capable of all this. We have the same moral and poetic nature as our forefathers, but we have allowed it to be violated; gifted with powers to pierce the solemn mysteries of nature, and read the handwriting of the Infinite; a voice to question the past and anticipate the future; and a faculty to reconstruct what it sees, and create new worlds of its own, fairer and brighter than that it inhabits. With this as our celestial dower, we bestow our chief care upon what should be looked on as the mere means of physical existence, and sell our birthright for a mess of pottage.

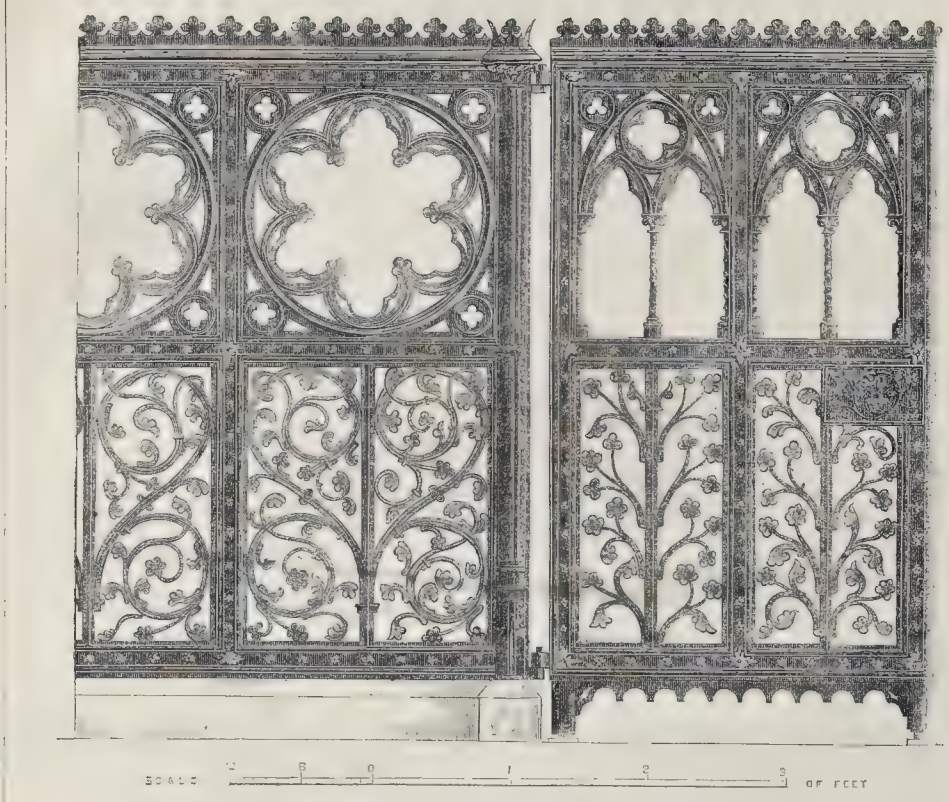
I am weaving, I fear, something of the sermon in the warp and woof of my address; but these reflections really belong to my subject. If they were not of consequence to ourselves, they would be to art, which must be based on high moral feelings and principles. Purity and nobleness of life I have ever held to be necessary as an inspiration to the intellect, in which view I am borne out by Milton, when he says that the poet who would hope to write well ought himself to be a true poem. "It is not enough," remarks Schiller, "that all intellectual improvement deserves our regard only so far as it flows back upon the character; it must, in a manner, proceed from the character, since the way to the head must be opened through the heart."

I have already alluded to the injurious influence of the contract system. This system—which produces bad workmanship, introduces unseasoned and inferior materials into buildings, and, worst of all, degrades the architect into a sort of policeman—must be done away with, and we must return to the old one of measure and value before our architecture, however beautifully it is designed, can be worthy the name: for good design is thrown away if not well executed. Measure and value is a system against which no honest man can object, and, day work being evidently unjust to the employer, it is the only one that can possibly be satisfactory to all parties: for, in at least three cases out of four, so many are the contingencies inseparable from building, it is utterly impossible to pre-estimate a building of any magnitude. I once heard a builder boast that he could estimate to a shilling the cost of a large house to be erected; but it bears absurdity on its face, and I unhesitatingly assert that in a majority of cases no architect, no surveyor, no man living can tell beforehand what a house will cost—that is to say, what sum the builder is fairly entitled to receive for it.

On the subject of town improvements I have hitherto confined myself to those qualities which are demanded by the eye and the sense of beauty; but we have other organs and senses which ought to be satisfied, and which happily delight in those qualities which are essential to the comfort and health of the body. It is really astonishing, now that the laws of the atmosphere have become known to us, that some of the very simple means which have been devised for at least the discharge of foul air from apartments, have not become universal in our houses and public buildings. I am no advocate for the monstrous and unnatural appliances under which some public buildings groan, and which might give the visitor to their lower regions the idea that to be warmed and ventilated was the sole object of their erection. But I think that some means for the exit of foul air should as invariably follow lighting by gas as a shadow its substance; and that the application of a simple mode of ventilation to buildings ought to be made compulsory on owners of houses. Though in almost every house gas is burnt for several hours every day for the greater part of the year, strange to say, not one in ten has any escape for the foul air. And I deem it no trifling proof of the indifference to such matters, that the Architectural, Philosophical, and Polytechnic Societies of Liverpool,—societies which have treated eloquently of town improvements, and expounded sanitary laws,—should have met for years in an apartment in which, though lighted by deleterious gas, no means whatever of ventilation have been provided.

The advantages of warming and ventilation would, I think, be best secured to the working classes by their dwellings being built in flats, which is the most economical, and I should think in other respects desirable, as three or four apartments on one level must be infinitely more convenient and pleasant than the same number placed one above another, and connected by stairs little better than ladders.

Means of health and comfort should take precedence of decoration. Baths and water-closets should be provided in houses before marble chimney-pieces or plaster cornices, or even panelled doors. While a house is without a proper supply of pure water, efficient sewerage, and the means of discharging the poisonous products of combustion and respiration, its



IRON SCREEN AND GATES: WESTMINSTER ABBEY.

architectural character is of little consequence. While inhaling the miasma of the neighbouring churchyard, the effluvia of open cesspools, slaughter-houses, and so forth, in their midst, the architectural beauty of public buildings and streets is an insult to the people, who would be more benefited by, and, I trust, more grateful for, the smallest purification of the atmosphere they breathe than by the creation of a Roman magnificence around them.

WESTMINSTER ABBEY.

THE TRANSEPT.—NEW WORKS.

Westminster Abbey has a new Dean, on whom much as to the architectural improvement and works of maintenance there will depend. We take the occasion to show what has lately been done in this noble fane, the interior of which need not fear comparison with that of any other in the world. It presents a glorious picture, ever varying, and the most constant student of its beauties finds new charms developing themselves before him, and ever feels increased admiration of the skill and taste that raised the wondrous pile.

Containing as it does, too, the ashes and memorials of so many of the great and noble of the land, it is natural that a large amount of public interest should be felt in its preservation; and many are anxious to restore the ancient tombs to their original appearance, to renew the canopies which from time to time have been destroyed, to paint and gild where needed, and to restore the mosaic work on the shrine and on the floor in the Confessor's Chapel. It is to be deplored that dilapidation should have been allowed to go on to such a great extent as is apparent; but it is felt that it would be wrong to destroy the idea of antiquity which is conveyed by the time-made colours, which constitute one of the charms of the place. Much, however, may be done to ensure the durability of the monuments for many centuries to come, without interfering with their value and truthfulness; and this we hope will not be neglected. We described a few weeks ago (p. 471) the process adopted to strengthen the face of some of the monuments and stonework by the injection of a solution of shellac. It seems to have done much good, and should be carried further. We have already noticed the judicious restoration of the ironwork of Queen Eleanor's tomb, the shrine of Henry the Fifth, and the entrance from the cloisters to the Chapter-house. This week we give an engraving of the changes which have been made in the transepts. Many of our readers will remember, that a few years ago a huge wooden screen blocked up the fine view across this portion of the church. This has been removed, and a screen of open ironwork substituted, by which means, too, seats for the accommodation of a large number of persons are made available in Poet's-Corner and in the north transept: further, a new pulpit has been set up, and the result is very satisfactory. Perhaps, however, if the screen had been made a couple of feet lower, so that the eye might have been allowed to pass over it without interruption, we should have liked it better.

Our view represents the transept looking north, and shows the new ironwork alluded to, which has been put up from the designs of Mr. Scott. We give half the gate, and a portion of the grille, on a larger scale. The work is for the most part of wrought iron; it is 30 feet in length on each side, and was executed by Mr. Potter, for the sum of 700*l.* but cost him, we are told, much more. The same worker has in hand a rail for the sacrarium.

Some ugly wooden panelling on the south side of the sacrarium, is to give place to carved work by Rattee, now in course of preparation.

Amongst the minor restorations, we may mention, that one of the detached twisted columns, of which there were anciently four at the angles of Edward the Confessor's shrine, has been gathered together from here and there, and made to take its original place again. It is of Purbeck marble, and was formerly ornamented with mosaics like the rest of the shrine.

It is proposed to fill the windows of the clerestory throughout the church with stained glass, in the shape of single figures, illustrating the "Te Deum." Thus "All Angels," "Cherubim and Seraphim," "The glorious Company of the Apostles," the "Noble Army of Martyrs," and "The Holy Church throughout all the World," would find their representatives. The cartoons for six of the windows for the south side of the part used as the choir, west of the transepts, are being made by Messrs. Bell and Clayton, and two of the windows adjoining the transept are completed. The figure in each is about 8 feet high, and an increase in the size in others is talked of. The height of the interior is very considerable; to the top of the window it is 100 feet from the pavement; nevertheless, the expediency of making the figures larger than life seems questionable, tending as it certainly does to make the building appear less. The windows executed, seem to us a little too heavy in colour, and need white glass: but all who know the difficulty of the question, will speak with diffidence upon it.

Attention has often been directed to the manner of *showing* the Abbey, and it would seem to be time that some less objectionable method than that now pursued should be resorted to. In Poets'-corner and the nave, the

WESTMINSTER ABBEY: THE TRANSEPT, LOOKING NORTH.

visitors are allowed to ramble about without guides, and contemplate them quietly. Amongst the tombs of our kings and queens this is not permitted. The mode in which a flock of visitors are hurried over the space which is reserved for exhibition is so offensive to good taste, that it cannot fail to destroy, in a great measure, the effect which would be otherwise produced.

It has been shown that the public may be trusted in galleries and choice gardens without any injury resulting. Why should they not be so trusted in Westminster Abbey? If, however, there is danger in this, there is a staff of officials, who now act as guides, who might be so placed as to guard every part by their presence. Then let the tombs be ticketed, and the guardians be directed to make themselves acquainted with the true history of the department which they oversee, so that they may be able to give an intelligent answer to a question, and the end would be answered.

EDUCATIONAL MOVEMENT IN THE METROPOLIS.

An important movement for the advancement of education has been made by Mr. Pepper, at the Polytechnic Institution. The Society of Arts, as our readers know, propose to examine candidates, and to give diplomas for competency in various branches of knowledge. To prepare for this, classes have been organized at the Polytechnic under able professors at a very small charge. The course of instruction will terminate a few weeks before the time appointed for the examination of students at the Society of Arts, thus allowing such as feel disposed to make the attempt to obtain a certificate from the Society, which may prove the foundation of fortune. A register has been opened at the Society of Arts of the names of those who obtained certificates at the last examination there, and it is to be hoped that large employers of labour will fill vacancies from this list. Already some good appointments have been made, and several influential men have promised others.

A crowded meeting inaugurated the classes at the Polytechnic on the 6th inst.—Dr. Booth in the chair—when the Rev. J. Butterworth Owen made an admirable and apposite address, and several other gentlemen addressed the meeting. The intention is excellent, and entitles Mr. Pepper to our best thanks. We trust that the proposed classes will be so well sustained as to serve as an encouragement for similar endeavours in other parts of the metropolis. The day is not far distant, it may be hoped, when every district will have its trade-school to which our young workmen may flock for instruction.

EDMONTON AND TOTTENHAM.

We have received a letter with reference to some recent observations in our journal on proceedings at Edmonton and Tottenham (p. 511), from Mr. William Warne, chairman of the Tottenham Local Board, pointing out that *Tottenham* should be read in the article for "Edmonton," as the locality where sanitary endeavours are being made. The two adjoin so closely that a casual inquirer might easily overlook the line of division. "In Edmonton," says Mr. Warne, "no attempts have been made to supply the inhabitants with water, or to abolish cesspools; whereas, here, in Tottenham, nearly 2,000 of these pestiferous receptacles have been abolished within the last few years, thirty miles of water mains and the like lengths of sewers and drains laid down, of which thirteen miles at least are public sewers. In addition, sewage works have been constructed for deodorising and solidifying the town refuse, which works are, I believe, with only one exception, the largest and most complete in England, and the sewers admittedly the most successful in their operations. It is inaccurate to state that there has been a failure in the magnificent artesian wells made here a few years since, which continue to supply water of the finest quality and in an abundance which would have amply sufficed for the supply originally contemplated; but that there should be a deficiency in the water supply *now* will not seem surprising to those who know how much the population of the district has increased, and the service extended to more than double the number of houses originally intended to provide for. The demand, indeed, for more water, and for its extension to the numberless new houses springing up in the parish, has necessitated the construction of much larger works and service, the contracts for which have been lately entered into, and will, without doubt, accomplish all that the advocates of a system so important in its effects can desire. In the parish there is abundance of good water, which only requires to be lifted from its bed, and more powerful means to accomplish this end. There are but few wells into the chalk in the parish beyond those referred to, and those only on the premises of the affluent, none of which have ceased to be used, nor is there any desire or power on the part of the Local Board to disallow their use. The water the Board supply is, as far as at present practicable, on the 'constant' service and high pressure, every cottage having a supply for domestic and sanitary uses, all refuse being carried away into the main sewers. The steam-engine works night and day, and is capable of raising upwards of 200,000 gallons in twenty-four hours, though at the present moment this quantity is not quite reached. When the new works are completed, an almost unlimited supply of water may be expected, and though there are many inhabitants who complain of the expense, they will before long learn to appreciate the advantages, which, in the opinion of those best acquainted with the practical working of the system, amply compensate for the bagatelle it now costs the parish in rates, and will reconcile them to the additional expense, estimated under 6d. in the pound, which the carrying out of the new works will necessarily entail. Justice to the Engineer of the Board, Mr. Pilbrow, whose well-devised plans have proved so far successful, renders this communication necessary."

PROVINCIAL NEWS.

Cambridge.—The chief stone of a new Lunatic Asylum for the county and borough of Cambridge and the Isle of Ely was laid by the Earl of Hardwicke on the 30th ult. The site is on a hill near the high road from Cambridge to Fulbourn, and about two and a half miles from Cambridge. The top of the hill has been levelled, to form an extensive platform, upon which the asylum with the airing-courts and pleasure-grounds will stand, enclosed by an ornamental boundary-wall. The structure upon which the foundations are built is the clunch rock. The architectural style of the building is Elizabethan. The length of the building is 610 feet, and its height from the level of the ground 60 feet: the centre with its tower rises considerably higher; and there will be numerous smaller towers placed at certain distances along the wings. The number of patients it is proposed to accommodate is 250, but space is provided for enlargement should it be required. The materials used for the structure of the walls are white perforated bricks from Messrs. Beart's kilns, bonded with red bricks and Derbyshire stone dressings for the principal entrance, cornices, windows, and external doors. The whole area enclosed within the airing-court walls is 27,367 square yards. All smoke chimneys will be of uniform height, and all fire-places on inside walls. The building will be fire-proof, except the roof and some of the floors. The floors of the chapel and day-rooms will be fire-proof, and constructed on Fox and Barrett's patent principle. The building will be surrounded by a dry arched area, and the footings covered with a layer of asphalte. The warming and ventilating will be by open fires, with air chambers behind them, supplied through channels. The window sashes are of cast iron, with ventilators to open and shut. To guard against fire to the furniture or bedding, large cisterns are to be placed over the stairs to feed the fire-plugs upon the several floors; and to guard against the effects of frost, all piping will range on the inner walls.

Byfleet.—The new schools and master's residence in course of erection in this parish are from designs by Mr. S. Smirke, and are capable of accommodating 150 children. The whole cost, together with purchase of land, &c. will be about 900*l.* which sum has been raised by the parishioners and friends, together with a grant from Government.

Dudley.—A school-room has recently been erected by the Primitive Methodists, near Constitution-hill. It is a brick structure, designed by Mr. Worrall, architect, and built by Mr George Plumb, both of Dudley. The school has been erected in about three or four months: its cost is 400*l.*; 160*l.* of which have been subscribed. The opening took place on Sunday in last week.

Neath.—On Friday before last a meeting of the Town Council of Neath was held for the purpose of letting the contract for the erection of a substantial stone and mortar wall, 2 feet thick and 3 feet 6 inches above the surface of the ground, to enclose the corporation land between the quay and the Neath canal. Tenders had been advertised for and six were forwarded. The council accepted that of Messrs. Morgan and John Williams, who agreed to erect the wall, as specified, for the sum of 5s. 6d. per perch.

Bebington.—The new schools in connection with the parish church at Bebington were opened on Wednesday in last week. They are in the Gothic style of architecture, and occupy about three-quarters of an acre of land behind the rectory, the site being the gift of Mr. George Orred. The schools, which are intended for boys, girls, and infants, will accommodate about 400, and were erected at a cost of 700*l.* Mr. Gee, of Liverpool, was the architect.

Leeds.—On the 23rd ult. the Bishop of Ripon (now Durham) laid the foundation-stone of the new training schools to be erected at a cost of 5,000*l.* In presenting an address from the clergy to the bishop, the vicar of Leeds (the Rev. Dr. Hook) alluded to 113 churches the bishop had been instrumental in building and founding.

Durham.—The visiting justices for the county of Durham are about to erect a new lunatic asylum. The cost will be about 30,000*l.*

Buckie.—The *Banffshire Journal* reports the laying of the first cope-stone of the western pier of the fishermen's new harbour at Buckie, on Thursday week,—a great day for this heretofore primitive town. The contractor for the works is Mr. Stewart. He commenced operations on the 18th of June, 1855, and has now the west pier fit for coping, while the parapet rises several feet above what will be the level of the quay. Within the piers, as projected, the area of the harbour at high water will be about three acres and a quarter. The west pier is upwards of 600 feet in length. The east pier is formed for a considerable distance, but fully a half of it is yet to be constructed. When completed, it will extend to 216 feet, the extreme end of it going farther out into the sea, and overleaping the head of the west pier, leaving an entrance of 70 feet. The tides at Buckie, as compared with the other towns on the coast of the Moray firth, are by no means heavy, and it is expected that this harbour, even in stormy weather, will be one of very easy access, and of complete safety.

CHURCH-BUILDING NEWS.

Peterborough.—St. Mark's church, in the Decorated style, and at a cost of 4,000*l.* was consecrated on Friday the 26th ult. With one exception, namely, the spire yet to be done, it has been erected by Messrs. Ellis and Son, builders, Peterborough, from the designs of Mr. Edward Ellis, of London. It consists of nave, north and south aisles and chancel, and is capable of accommodating 700 persons. The extreme length of the church is 110 feet, by 50 feet broad, and an interior elevation of 40 feet. The windows are filled with stained glass: the roof timbers are stained: the seats, which are all open and stall-wise, two-thirds of which are free, are made of yellow pine, stained and varnished.

Brigg.—The works connected with the cemetery here have been let to Mr. Jackson, of Lincoln.

Ipswich.—St. Helen's Church, Ipswich, was re-opened on Wednesday in last week. The alterations, which have been carried out by Mr. Barnes, architect, and Mr. Firman, builder, are somewhat extensive. Two new windows

have been added to the west end of the edifice, and the tower, which was before in a dangerous state, has been repaired: the interior of the building has been decorated, and new seats have been added for the aged poor and children.

Tenbury.—The church of St. Michael and All Angels, newly erected at Old Wood, near Tenbury, was consecrated on Monday in last week, by the Bishop of Hereford. The edifice is cruciform and in the Middle Pointed style. It has been erected at the expense of the Rev. Sir Frederick Arthur Gore Ouseley, bart. D.M. and professor of music at Oxford, who will be the incumbent, and who has not only endowed the church, but contiguous with it has founded and endowed a college to afford a liberal education to orphan sons of the poorer clergy and others, and also for the cultivation of choral music. The college is not yet completed: it contains dormitories for thirty boys. The outside of the church is plain and unpretending, but the interior is elaborately carved, painted, and decorated. The church and college will cost not less than 30,000*l.* The buildings are of sandstone, dug upon the site, and grained and chased with Bath stone. The roofs are covered with Delabole slating, and a blue stone from the Forest of Dean has been used for the several columns and shafts. The gables are surmounted by crosses, and the western is pierced for two bells. Mr. Woodyer is the architect, and Mr. Chick his clerk of works. Messrs. Wheeler, of Reading, are the contractors, and the undermentioned tradesmen have been employed, viz.; Messrs. Woochaffe and Lakes, carpentering and glazing; Mr. Fisher, decorating; Messrs. Minchall and White, carving; Messrs. Hardman, stained glass; Messrs. Filmes and Mason, ornamental iron work. The font cover was executed by the Wood Carving Company in Lambeth. The length of the church is 114 feet, the chancel being 43 feet 6 inches, and the height from the ground to the cross, 74 feet. The width, including the transepts, is 67 feet. The nave is 22 feet wide (with the aisles, 45). From the apex of the ceiling to the ground is 45 feet. The nave and aisles are intended to accommodate about 600 persons. The church consists of a choir of three bays, with a polygonal apse, north and south transepts, and nave, with three large and one smaller bay to the west. There are lean-to rests to the choir and nave, beneath a lofty clerestory, communicating by moulded and corbelled niches with the transepts. The sacrist or vestry is on the south side, adjoining the south aisle. A vaulted passage leads from it round the south transept into the south nave aisle. There is a lean-to north arch. Excepting the aisles, porch, and vestry, the church is groined and vaulted throughout in wood. The ceiling over the choirs is treated with colour slightly, but over the apse more elaborately. The pavements are entirely composed of Minton's tiles. The altar-table under an elaborate canopy, surmounted with a gilt metal cross, stands in the chord of the apse. The stalls and other choir fittings are of oak, the choir boys' desks being of wrought iron. A lofty iron screen, with folding gates, divides the choir from the nave, and there are screens of the like material in the double arches leading into the choir aisles. The former screen is surmounted by seven candlesticks. The screen is coloured ultra-marine, and decorated with gold. The south transept will be entirely filled by a magnificent organ of fifty-six stops, by Flight. The pipes are richly decorated in diaper pattern. When completed the pipes will be projecting, and spread out in front in the Spanish form (fan-like shape). The nave will be filled partly with open and moveable benches, and partly with church chairs. The choir and apse are lighted by nine twilight windows, filled with stained glass, containing figures of angels. The east window represents our Lord seated in majesty; St. Michael kneeling at his feet, with the usual symbols in allusion to the dedication. From the ceiling of the chancel a number of lamps are suspended, in which camphine will be used. Miss Rushout, of Burford House, contributed part of the stained glass.

Hutton Ambo (near Malton).—On Tuesday in the week before last, the new church and burial-ground at Hutton Ambo, near Malton, were consecrated. The funds for the erection (about 1,200*l.*) were partly raised by voluntary subscriptions, and partly by a rate on the inhabitants of the township. The site for the church was given by Mr. F. J. S. Foljambe; and the building, which is in the style of the thirteenth century, will accommodate about 200 persons. The architectural designs were originally made by Messrs. Andrews and Gould, of York, but, owing to the decease of Mr. Andrews, the church has been solely erected under the superintendence of Mr. Gould. The exterior of the structure has been built of Hildenley stone, from a quarry on the estate of Sir G. Strickland, Bart. M.P. and the interior fittings are of deal, stained. The timber in the roof, which is an open one, is also stained; and the west gable is surmounted by a bell gable for two bells. The church is not at all ornamented. The contractors for the work were—Mr. John Hall, of Hutton Ambo, the mason; Messrs. Shaw and Young, of York, the joiners; Messrs. Hodgson, of York, the plumbers; Mr. R. Clapham, of York, the plasterer; Mrs. Wood, of York, the slater; and Messrs. Haden, of Trowbridge, Wiltshire, supplied the heating apparatus

Newcastle-upon-Tyne.—On Friday in the week before last the ceremony of laying the foundation-stone of the two chapels to be erected in the cemetery intended for the joint use of the parish of St. John's, and the townships of Westgate and Elswick, was performed in presence of the members of the United Burial Boards of the parish and townships, the architect, and the contractors for the work. The cemetery is to be laid out on a design furnished by Mr. Johnstone, architect, and comprises twenty acres of ground purchased from Mr. Grainger, at the rate of 400*l.* per acre. The situation is elevated, being on what were formerly known as the Measure Hills. One of the chapels will have a spire of 102 feet in height.

Gateshead.—A new Roman Catholic church and schools are to be erected in Gateshead. The plans of Mr. A. M. Dunn for the church have been selected, and the design includes a dwelling-house, with accommodation for three priests. This will be followed by the erection of schools, &c. The committee are now taking measures to commence at once with the erection of the edifice, which will contain 1,200 sittings.

STAINED GLASS.

Hamble Church.—A stained-glass window has been put up in the east chancel of this church, as a memorial to the late Captain Matthew Barton Bradby, R.N. presented by his widow. The window is a three light, early decorated, with tracery, and contains the figure of St. Andrew (patron saint of the church), resting on his emblem, the X cross, in the centre opening under a canopy, the general design being Geometrical Mosaic. The tracery contains the dove in the centre, and the Alpha and Omega on each side. Messrs. Baillie and Co. of Wardour-street, were the artists.

Ely Cathedral.—Two memorial windows have lately been inserted, one in the south aisle of the choir, the gift of the Rev. J. H. Sparke, chancellor of the diocese, historical of John the Baptist, by Messrs. A. Lussau and Co. of Paris; the other in the north aisle of the nave, a memorial window to the late J. Maddy, D.D.; artist, Mr. Preedy. Amongst other improvements and restorations, the reredos, the gift of Mr. J. D. Gardner, is now near completion; and it is thought that when complete and the east end windows filled with stained glass, the choir will vie with any other in the kingdom.

St. Anne's Bede-house Chapel, Lincoln.—The Rev. R. Waldo Sibthorp has just had a new stained-glass window fixed up in his chapel, which is the work of an amateur, a native of Lincoln. This window is a triplet, on the south side of the chancel, and has been made at the cost of Miss Nelson. It is a memorial window. The style is that which prevailed chiefly in the fourteenth century. The subject is three saints, each under a canopy: the central figure is the prophetess Anne, mentioned Luke ii. 36, and to whom the chapel is dedicated. The saint is here represented as in the attitude of prayer. In the east light is inserted a figure of St. Paul, having in one hand "the sword of the Spirit," and in the other "the word of God." The westernmost light represents St. Matthew, with a pen in one hand and the gospel in the other. The "clear obscure" is produced by the use of unusually thick glass. The artist (the Rev. Mr. Usher) has consented, says the *Lincolnshire Chronicle*, to execute another window for Mr. Sibthorp's chapel.

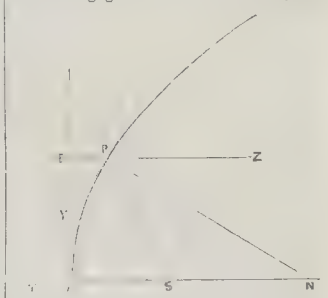
GEOMETRICAL PROPERTIES OF CONIC SECTIONS.

PARABOLA.

The parabola is a curve which may be said to lie intermediately between the ellipse and the hyperbola. It is produced by cutting one side of a cone by a plane parallel to the other side; whilst in the case of the ellipse, the cutting-plane passes through both sides, and in the hyperbola it is parallel to the axis. The parabola is, in fact, an extreme case of the ellipse; for if we lengthen the major, and shorten the minor axis of an ellipse, we approach nearer and nearer to a parabola; so that we may obtain a curve which shall approximate as nearly as we please to a parabola in the portion near the focus, by drawing an ellipse whose foci are very wide apart.

The parabola has but one focus, which is near its vertex, and is not an enclosed curve like the ellipse, since it only cuts the axis once, namely, at the vertex. It will be evident from what we have said in previous articles, that there may be an infinite number of different ellipses and hyperbolas: there is, however, but one parabola, that is to say, all parabolas are merely the same curve on a larger or smaller scale, just as all circles are the same curve larger or smaller as the case may be, but all bearing the same proportions in their several parts.

To draw a parabola by points, the focus and vertex being given: let A be the vertex, S the



focus, A S the axis. Draw A B perpendicular to A S, and from S draw any line, S Y, cutting A B in Y: draw T Y perpendicular to S Y, and produce it to P, so that Y P = T Y, then P is a point on the curve. So also by drawing other lines from S, we can find any number of points. The line T P is the tangent at P, for it is a property of the parabola, that *the perpendicular from the focus on the tangent meets the tangent in the line drawn from the vertex perpendicular to the axis.* From Euclid's geometry, we know that S P = S T; therefore, *to draw a tangent from any point P on the curve,* take S T = S P, and the line joining P and T will be the tangent at P.

Draw the normal P N (perpendicular to the tangent at P), meeting the axis at N; and draw B P Z parallel to the axis; then by Euclid—

Angle B P T = angle P T N,
= angle T P S;

Or, the tangent P T bisects the angle S P B; therefore, N P, which is perpendicular to P T, bisects the angle S P Z, so that S P and P Z make equal angles with the normal P N. Hence it follows that if a reflecting surface is formed by the revolution of a parabola about its axis, and a light is placed in the focus S, all its rays which fall on the surface will be reflected in a direction parallel to the axis. This species of reflector is therefore used in lighthouses and signal lamps, in which it is required to throw the light to a great distance without dispersion. It is this property which gave rise to the use of parabolic sounding-boards, which it was the

fashion some years since to mount behind church pulpits, but which have been discontinued from the annoyance they caused to the preacher. For, since sound follows the same laws of reflection as light, if a sound is produced at the focus of a paraboloid of revolution, it will be greatly strengthened by being reflected in one direction from the surface. But in applying this principle to aid a preacher, it was forgotten that if a sound proceeding from S to P was reflected in the direction of P to Z, or parallel to the axis, by the same rule all sounds produced opposite to the reflector or sounding-board would be concentrated at S. So that every noise which was made opposite the pulpit would fall with double force on the preacher's ear. Besides this, his own voice when reflected immediately behind him would produce a buzzing in his ears as it passed him. Above all, it is evidently impossible for a preacher always to keep his mouth at the same spot, and any deviation from the focus would destroy all the advantage of the sounding-board.

The parabola may be applied to Gothic architecture to form the Tudor arch, which is usually drawn with four centres; but the sudden change of curvature thereby produced destroys much of its elegance, which would not be the case were the parabola employed instead.

E. W. Tarn, M.A.

ART ABROAD.

Leutze's Milton.—M. Leutze, of Dusseldorf, who has already distinguished himself amongst the German painters, has finished a picture, which may be called the apotheosis of the English Commonwealth—"An Evening Party at Milton's." At that period, evening parties began soon, between five and seven; then the ladies retired, when the males continued in some serious converse, and then separated. Such a party is represented here. In the middle of the picture, somewhat to the right, sits Milton, the writer of "Paradise Lost," indicated by an engraving of Raffaelle's "Fall of Man," suspended above him. Milton is represented playing on the organ, while he looks over his shoulder at the company. To the right of the organ sits Milton's wife, with her son, a little boy. To the left of the organ stand two English females, of rare beauty, which pleasantly make up the right side and groupe of the picture. In the middle stands a large press, with books, globes, &c., pointing to the great erudition of the Latin Secretary of the Lord Protector; and a bust of Cato, the unflinching republican looking sternly and admonitively on the company. On the right side of the press leans a dreamy, pensive youth, John *Dryden*, at one time a friend to the Commonwealth. Near him, somewhat in advance, appear two men, hand in hand—one stern and thinking, the other vaguely gazing before him. The first is Algernon *Sidney*, a great promoter of the plans of the Protector, afterwards treacherously executed. The other figure, that of a very fine man, is that of John *Thurlow*, private secretary to the Lord Protector. To this group succeeds towards the left foregrounnd, a third group, *Cromwell* and his family, and friends. Cromwell, a compact figure, sits pensively resting on his *big* sword, and on the left of him his wife, familiarly but erroneously called *the drudge*. On his mother's left knee, rests her son Richard, the ephemeron. To the right of the father reclines *Bridget* Cromwell, finely and nobly formed. On the back of her chair reclines *Ireton*, a deep countenance, gazing down on his future wife. Behind him stands John *Seldon*, president of Oxford. The picture has been copied by the engraver, M. Dinger, who prepares a plate of this truly English representation. The size of the drawing is 21 inches by 15 inches.*

Monument to Froissart.—A monument has been erected to this ancient chronicler at Valenciennes, his native city. It consists of an architectural semicycle, in front of which rises the statue. Eleven arcades compose this mural structure, and between the archivolts two bronze medallions represent contemporaries of Froissart, mostly men of Valenciennes—Baldwin, Count of Flanders, Emperor of Constantinople; Philippa of Hainault, wife of Edward III. of England (whose secretary and *protégé* Froissart had been); Claudin-le-Jeune, music-master to Henry III. and Henry IV., called the Phœnix of Musicians, and inventor of the violonsolo. To the left and right of the semicycle, in the walls in front of these structures, and forming a frame to the statue, are two allegorical basso-relievos, in stone, representing the Escaut and La Rhônette, which flow through Valenciennes. The hemicycle (the stern architectural forms of which are much admired) was designed by M. Henri Lemaire, and built by M. Petiaux, architect, of the city of Valenciennes. The statue rests on a pedestal of granite, dressed with blocks of marble, which bear the inscription:—"Et si aucun quiert savoir qui je suis, je m'appelle Jehan Froissart, natif de la bonne et franke ville de Valenciennes." The statue, of white marble, is also by M. Lemaire, who has done full justice to the pensive and elegant gait of the old chronicler.

* Did Cromwell ever *visit* Milton? *Query* to the *German* painter.

SUGGESTED ARCHITECTURAL CONGRESS IN BELGIUM.

A writer in the *Journal Belge de l'Architecture*, M. Vincent, urging the desirability of requiring architects to obtain a diploma, and of protective enactments, suggests that an Architectural Congress should be held in Belgium, to discuss that and other questions affecting the progress of the art. "Although included amongst the fine arts," says he, "architecture requires from those who dare venture on so laborious a career, profound knowledge in the mathematical and physical sciences—knowledge on which often depends even success in the study of art properly so called. Architecture, then, is the veritable bond of union between art and science, since it emanates equally from these two branches of the intellectual mechanism. On this ground," he continues, "it has a right to all the care, encouragement, and protection that can be given to it."

The editor of the *Journal*, who is a constant and careful reader of our pages, admits that the discussion of the diploma question in this country has shaken his belief that the enforcement of a diploma will prove a remedy for the evils of which true architects complain, but lends himself warmly to realize the suggested idea of an Architectural Congress, and invites all who feel interested to communicate with him. "There are many other things to do besides establishing the necessity for a diploma," he writes: "thus, to name but one, we would identify ourselves with the complaint addressed to the government by the *Société Palladio*, that the State employs its engineers instead of architects when it concerns itself with buildings."

THE GREAT DRAINAGE QUESTION.

Before Lord Palmerston divested himself of parochial troubles and the sewage question, adroitly turning over these Augean labours to his noisy antagonists, I had sent his lordship my scheme, which reached his hands at Broadlands, but had not the courtesy of acknowledgment. Perhaps it went (*cum multis aliis*) to Greek-street, Soho.

The main features were the carrying the sewage along the beds of both sides of the river, by double lines of iron pipes, and bringing these lines together by means of the Thames Tunnel, and thence running on to Barking-marshes, the rain-fall to find its way by natural gravitation to the Thames; and when the sewage reached its destination, I proposed to lift the whole by water-wheels of 50 feet diameter, supplied by aqueducts from the confluence of several rivers within thirty miles of Barking. This scheme, as far as I know, was in its general details a novel one; but it now seems to have some influential advocates, who, strangely enough, assume the parentage. The scheme, though large, is not of Roman dimensions, since a hundred miles of acqueduct to them would not have presented insurmountable engineering difficulties. My water-wheels were to drive endless chains of buckets, and their action would be less interfered with than the vast pumping machinery which has been projected. The Thames Tunnel may be bought for a song, and has the capacity of a *cloaca maxima*. The only suggestion I should see fit to adopt of the "three proposals" of Mr. Bazalgette, is that of carrying the sewage farther from London than Barking, not alone in justice to that doomed locality, but also to obtain large lakes of salt-water, into which the sewage might run, and in this way become greatly deodorized, and eventually made use of by the farmer.

The wisdom of London is at fault on their "Grand Drainage Question." The ratepayers are becoming alarmed, and the Metropolitan Board of Works almost *in extremis!* Allow me to throw this live shell among them, if only to show that the world is not standing still as well as the latter. A. F.

METROPOLITAN BOARD OF WORKS.

At a special meeting on 6th inst. previous resolutions that the discharge of the main outfall sewer be made at a point *west*ward of Erith were revoked. A motion by Mr. Carpmael, to the effect that the engineers' report, so far as it relates to the outfall at B on the plan (mode No. 2, as given by us in the *Builder* of last week) be approved, was lost by a majority of two; and an amendment on this motion by Mr. Savage, to the effect that the outfall for the sewage should be at a point that would prevent it returning back within the metropolitan limits, or at least that the Board were not prepared to approve of any plan of a contrary description, was also lost; so that the question, as a whole, stands (at least till Wednesday next, as adjourned) precisely where it stood some time ago.

MIDDLESEX INDUSTRIAL SCHOOL COMPETITION.

The honourable magistrates of this county are sanctioning an extraordinary proceeding, which it is to be hoped they will put a stop to on reflection. Mr. Pownall, the son of a member of the committee of the above schools, was appointed one of the professional advisers of the committee to assist in the selection of the competition designs. He has now taken the unprofessional step of offering a design, for which he has had the opportunity of stealing the ideas of the forty competitors. Can any comment be necessary? I send you my name; but sign myself— Honesty.

STEREOSCOPIC EFFECTS WITHOUT ANY STEREOSCOPE.

It is not practically or generally known that the vivid reality of effect in stereoscopic pictures can be readily attained without any stereoscope at all, or any other substitute for it but the eyes themselves. Though theoretically aware of this, it was not without a little surprise that last week, on accidentally looking at some double photographs prepared for the stereoscope, and almost involuntarily adopting a practice of "crossing" the eyes slightly, by means of which I have long been in the habit of seeking, empirically as it were, for stereoscopic effect where it was not to be found, but so, to some extent, vivifying (as I thought) the perspective and the shade and light of pictures and engravings,—all of a sudden the two images on the card before me coalesced, and the life-like stereoscopic picture stood forth between its two *supporters*; and I found that if the attention be fully fixed on that picture, and hence withdrawn as much as possible from the two lateral components, the stereoscopic effect becomes as perfect and beautiful, and as steady and permanent before the sight, as in any stereoscope whatever. Some may find a little difficulty at first in acquiring the habit of throwing the eyes into the right focus; but, in such cases, there is a very simple mode of assisting the object in view,—a mode by means of which I have even taught a child how to see the third or stereoscopic picture between the two actually before the eyes. This mode is, simply to place the double picture at a little distance before the face, and lay a large card, or a fold of writing paper, or other flat thin substance, *on edge*, between the two, so as not to intercept the light in its progress to either picture; and then to bring the opposite edge of the card, &c. in contact with the face between the eyes, so that each eye can only see the picture on its own side. The two pictures will then, probably coalesce, so as to exhibit only one,—namely, the third, or stereoscopic; and, if this be steadily looked at, the card may be gently drawn away altogether, downwards, from before the face, and the stereoscopic picture will remain as vivid as ever, only flanked occasionally, it may be, by the subjective or lateral ones, with which, moreover, it may even be leisurely compared and contrasted; or the attention may be allowed to range over the details of the stereoscopic picture, at equal leisure, and for any length of time, without destroying the illusion. In this way the eyes are soon taught how to seek and where to find the stereoscopic, or solid and life-like, picture, without even a card or anything but the slight "crossing," as it is usually, though very incorrectly, called, of the eyes, while in search of the right focus,

and which will eventually require only a second or two to establish, when the double picture is rightly placed before the face. In purchasing stereoscopic photographs, the goodness of the stereoscopic effect of each may thus be judged of in little more than the time requisite to look at it in the ordinary way. As regards the stereoscope itself, I have resolved to discard it altogether as a somewhat useless incumbrance, the effect, as I think, being more pleasant, as well as convenient, without it. Even the stereoscope, however, it must be remembered, is not capable of displaying to *every one's* eyes the stereoscopic effect, and others may not be able to dispense with it as I do.

J. E. D.

SOCIETY OF ARTS' PREMIUMS.

The new list of subjects for communications on which the Society of Arts are willing to award premiums contain many which address themselves specially to our readers. It may be useful to mention some of them:—

For an account of the materials used as slates, slabs, and flags, in the principal towns in the United Kingdom, with information as to their durability, cost, chief use, and general statistics.

For the production of glass by the use of the constituents of which the French sands are composed, such glass to be of a quality equal to that produced from these sands.

For an economical and efficient method of producing designs on stained glass for windows and ornamental purposes, by which the cost of production shall be reduced, and the use of lead frames rendered unnecessary.

For an essay on the means at present in use for preserving iron from the injurious action of water or exposure to the atmosphere; how far they are efficient as a means of preserving that material when used in connection with the Arts, in the construction of ships, or for engineering purposes.

For an account of the machinery and processes employed in the manufacture of nails.

For an account of the machinery and processes employed in the manufacture of screws.

For a cheap portable machine for cutting, squaring, and dressing stone for building purposes.

For an account of the machinery and processes at present employed on the continent for earth-boring.

For an account of any recent improvement in sawing and shaping machines.

For the best specimens of cisterns suitable for household or other purposes, made of glass in one piece.

For a cheap quality of glass, applicable for drains, water-pipes, sinks, shelves for larders, dairies, &c. in which coarseness and want of transparency are not regarded.

For a new kind of thick glass suitable for fixing in floors to light lower rooms, vaults, &c. which by the arrangement of its two surfaces will give the greatest amount of light.

For an account of the various artificial stones and terra-cottas introduced and employed for purposes of construction, stating their properties, advantages, and imperfections, and their relative cost as manufactured, both inclusive and exclusive of loss by breakage in the kiln.

For an essay on the various concretes, cements, hydraulic mortars, and lutings for pipes, tanks, &c.

For an essay on architectural and decorative ornaments; the materials employed, their mode of manufacture, and the comparative cost of production.

For the best form of kiln for the manufacture of draining tiles, hollow bricks, roof tiles, paving tiles, or common bricks; which kiln shall be the cheapest and simplest to construct, with the least quantity of materials for transport, shall consume the smallest quantity, and effect the most perfect combustion, of fuel, with or without means of drying in the kiln itself or in a shed attached to it: to be verified by trial works and the cheapest production of perfect goods.

For the best method of economically deodorising sewage and other waters, and of precipitating or otherwise extracting the matters held by them in solution or suspension.

For an essay on the management and maintenance of public roads, with special reference to their altered position, since the introduction of railways.

PROCEEDINGS UNDER METROPOLITAN BUILDING ACT.

PULLING DOWN RUINOUS BUILDINGS.

At Guildhall recently, Mr. Chas. Harwood was summoned before Mr. Alderman Carter, to answer the complaint of the Commissioners of Sewers for the City of London that he had failed to pay the sum of 13*l.* 14s. 6d. being the amount of costs and expenses incurred by the said Commissioners incidental in pulling down a house and premises, No. 99, Cheapside, after the same had become lawfully due and had been demanded.

Mr. Tyrrell appeared for the Commissioners of Sewers, and Mr. James Bowker for Mr. Harwood.

This was the first case that has occurred under the New Building Act, which gives the Commissioners of Sewers the power of ordering all ruinous and dangerous houses to be pulled down; and in default of the owners doing so, after notice being given to them, the Commissioners have power to pull them down and recover all expenses for so doing. In this case the legal notices were served upon the owner, and upon his neglecting to comply with the order the Commissioners of Sewers razed the house No. 99, Cheapside, and now called upon the defendant to reimburse them the expenses they had been put to.

Mr. Bowker took several legal objections to the claim.

Formal evidence was then given as to the legal service of the various notices served upon the defendant, and the work being done, and also as to the reasonableness of the charges. The builder's charge was 6*l.* 12s. 6d.; the surveyor's, 2*l.*; and the solicitor's, 5*l.* 2s. Evidence was also given as to various demands for payment; but though one of them asked for over 28*l.* there was none that asked for the exact amount claimed.

Mr. Bowker contended that the magistrate had no jurisdiction in the matter. It was not a case in which he had power to act in a summary manner, as the defendant was not the owner in the sense of the Act of Parliament; that the order of March 5, upon which all the subsequent proceedings had been based, was illegal; and that the demand for 13*l.* 14s. 6d. had never been made. The first rule of the Act was, that the owner immediately entitled to the premises, or the occupiers thereof, should be liable, and have their remedy against the parties to whom they paid their rent; and by the 6th rule, the magistrate had jurisdiction only as to the owner, described in rule 1. The defendant was not the occupier, nor was he the owner immediately entitled to such possession as would bring him within the meaning of the Act of Parliament. He was not wholly entitled to the rent of these premises at any time, and the 6th rule of the 92nd section gave jurisdiction against the owner as described in rule 1, and against no other party. By a deed which was executed in 1854, Mr. and Mrs. Harwood parted with all their interest in it for a long term of years. The deed, which he produced, was an agreement for a lease, dated June 20, 1854, and by it there was in effect a subsisting lease to a Mr. Ernest for ninety years, at 600*l.* a year, and that gentleman was to rebuild it. He had paid Mr. Harwood the 600*l.* a year, and therefore he was the landlord immediately entitled to the possession of the premises. The defendant had never received any money from any tenants.

Mr. Tyrrell replied, that the deed proved the ownership to be vested in the defendant, and he had the power of compelling any other party interested to bear his portion of the expense. As regarded the solicitor's charges, they were fair and reasonable.

Alderman Cubitt was of opinion that the objections were insufficient, and ordered the money to be paid in a fortnight.

On the application of Mr. Tyrrell, he was allowed two guineas for the costs of this application.

Notices of Books.

VARIORUM.

A pamphlet on "Public Works in India," in the form of a Letter to the Right Hon. R. V. Smith, M.P. president of the Board of Control, by Mr. John Bourne, has been published by Messrs. Longman and Co. In this letter, which, though addressed to Mr. Smith, is dedicated to Colonel Sykes, the chairman of the East-India Company, Mr. Bourne illustrates the necessity of irrigation and internal navigation being largely promoted in India to develop the resources of that country and prevent the failure of the railways. In an accompanying map, the navigable rivers, the completed lines of railway, and the coal-fields of India, are shown. The author proposes to navigate the rivers by means of steam vessels of light draught of water, towing trains of shallow barges. As to railways, he recommends the introduction of the light and economical American system into India, a country which, in its circumstances, more resembles America than England. He hopes that the present chairman of the East-India Company who has long supported the river navigation here proposed, is destined to carry it out while in his present influcutial and favourable position.——"Marvels of the Globe" is the leading title of "Two Lectures on the Structure and Physical Aspects of the Earth," by Mr. W. S. Gibson, F.G.S. one of the registrars of the Court of Bankruptcy. The substance of these very instructive lectures was recently delivered to the Tynemouth Literary Institution, and the Mechanics' Institute of Wandsworth. Mr. Gibson, we may remark, is the author of several descriptive and historical treatises on the architecture of Northumberland, and other essays. ——In the "School Series," edited by the Rev. G. R. Gleig, M.A. Inspector-General of Military Schools, a very useful and clear little "Class Atlas of Physical Geography," by Mr. Walter McLeod, Head Master of the Model School, and Master of Method in the Royal Military Asylum, Chelsea, has been published: it contains much more information in a small compass for half-a-crown than some larger works of far higher price.

Miscellanea.

Walworth Working Men's Lecture and Reading Rooms.—This Institution held an Exhibition to open its autumnal proceedings on Tuesday and Wednesday last, comprising some excellent paintings by Webster and others, bronzes, statuettes, photographs, architectural and other models, natural productions and curiosities—lent by gentlemen of the locality, the Society of Arts, the Art-Union of London, and others. A large number of the working population availed themselves of the opportunity of inspecting the collection, and addresses were delivered by Mr. W. A. Wilkinson, M.P., Mr. T. A. Smith, Mr. Cooke, and Mr. Selway.

Sad Accident.—On the 25th ult. Mr. J. Ashby, of the New Palace, Westminster, in attempting to board a steamboat, which had just got under weigh from Old Shades Pier, London-bridge, on its passage to Westminster-bridge, unfortunately missed his footing, fell into the river, and was drowned. Mr. Ashby for several years discharged the duties of a clerk of the works at the new Houses of Parliament.

Workman's Class, School of Art, York.—With reference to the experimental class formed by Mr. Swallow, free for working men, mentioned last week, Mr. Swallow writes us, that his object is "to teach them the elementary principles of drawing, so that at the end of the course they may be enabled to enter the usual classes of the school, and pursue more advanced studies on payment of the ordinary fees. There is no promise that they should do so, but I hope that by making the lessons popular I shall create a taste, avoid the constant beginning, fill up my classes, and increase the efficiency of the school. At each lesson I endeavour to develop a principle contained in some well-known form, and show how any similar subject should be treated. The class is very popular. There are sixty-four working men of all sorts of trades, carpenters, joiners, coach-painters, coach-makers, tin-plate workers, black and white smiths, stonemasons, glasscutters, and tailors; in fact, almost as many trades as there are men."

Cost of Irish Lunatic Asylums.—Professor Donaldson is now at Dublin, investigating, as commissioner of inquiry, into the expense of erecting the lunatic asylums of Ireland, the estimates sent in by the governors of certain districts for the completion of the asylums, in the terms of the report made by Mr. Donaldson and Mr. Wilkes, as joint commissioners, and presented to Parliament during the last session.

Newcastle Society of Antiquaries. — The October meeting was held on Wednesday in last week, at the Castle of Newcastle, Mr. Matthew Wheatley in the chair; when Mr. Archibald Dunn, of Newcastle, architect, and Mr. W. B. Beaumont, M.P. Bywell, were elected members. Mr. White stated that he had lately noticed that the famous runic cross at Bewcastle had been painted,—the cross blue, the runic lines black. *Runes* had been supplied in black where none existed on the original. Mr. Charlton and Mr. H. Turner excused the circumstance as so far commendable, as it would preserve the stone. Mr. J. Latimer exhibited several Roman relics from Adderstone, and read a paper on the discoveries lately made, which is reported in the *Gateshead Observer*, together with a paper on the wall of Antoninus, by Dr. Bruce, and other proceedings at the meeting.

Leeds Town-hall.—At a special meeting of the Leeds Town Council, held on Monday in last week, it was resolved by a majority of 28 to 13, to adopt the Building Committee's report, and to grant a further sum of 5,500*l.* for the requirements therein contained. In the report approved of, the committee recommended the council to sanction the erection of a tower on an enlarged scale (as proposed by the architect, Mr. Brodrick), in connection with the scheme of ventilation and warming proposed by Messrs. Haden, of Trowbridge, and for which their tender (2,600*l.*) had been accepted. The committee also recommended a grant of 5,000*l.* for the erection of an organ. The tenders for the enlarged tower had exceeded the sum already granted by the council, but a saving would be effected by erecting it in connection with the mode intended to be adopted in ventilating and warming the building. The tower as submitted to the council, was 211 feet in height, the width of the columns 40 feet, and above the roof 50 feet, and the architect increased the height to 224 feet, and the width above the roof to 53 feet.

Curious Restoration.—In this restoring age (says the *Gateshead Observer*), a restoration, more evil than mediæval, is threatened in Newcastle. A tradesman announces his removal to new quarters, "until the damages recently done by" certain "alterations are completely restored!"

The Birkenhead Dock Works.—The great pool at Wallasey is to be deepened, and works are to be constructed there as part of the great scheme of dock extension at Birkenhead. Mr. George Thompson's tender for the work is 123,186*l.*

Sale of Goding's Brewery.—The extensive premises known as the "New Lion Brewery," situate in the Belvidere-road, Lambeth, has been sold. The auctioneer said that the premises occupied as the brewery ran on either side of the Belvedere-road, and occupied a large site of ground abutting on the river Thames. The brewery premises and stabling are let on lease for fifty years, from 1855, to Sir C. Ogle, bart. and H. Jenkins, esq. (determinable at the lessees' option at the end of the first fifteen years), at 1,750*l.* per annum. The ground on which the brewery stands was held from the Archbishop of Canterbury by J. Goding, esq. for seventy-eight years, at 77*l.*: the premises adjoining the brewery are held for a similar term, at 151*l.*; the stabling and buildings on the south side held for sixty-seven years, at 100*l.* being a net rental of 1,422*l.* per annum. He stated that he might call the 1,422*l.* a mere ground-rent. The hammer fell at 18,000*l.* at which figure the property was positively sold.

Gas.—The half-yearly meeting of the Surrey Consumers' Gas Company was held on Thursday in last week, when the usual rate of dividend, of 8 per cent. per annum upon the paid-up capital of the company, was declared.——The works of the Thornbury Gaslight Company are now almost completed, and, says the *Bristol Mirror*, the private dwelling-houses were for the first time lighted on Monday evening in last week.——The progress of the Clevedon Gasworks, according to the same paper, is likely to be rapid, as the foundations of the buildings are in, and the gasholder tank is nearly finished. The contracting engineers are Messrs. Stears and Son, of London. The company is formed under the Limited Liability Act, which appears to have caused the undertaking to be entered into with confidence by the inhabitants, and particularly by the intended consumers.

Laying on Time.—If we are well informed (says the *Salut Public* of Lyons), it is the intention of the municipality to have 150 electric clocks placed up in various parts of this city, giving always the same time in every quarter. Private persons, on payment of a small annual sum, can have a similar accommodation established within their houses.

Brighton Cemetery Competition.—The Burial Board for this parish, after considering the designs forwarded for their inspection, have adopted those sent in by Mr. R. Wheeler, of London. The plans have received the sanction of the bishop of the diocese and the Secretary of State, and estimates are to be procured forthwith.

Aluminium an Object of Trade.—A cargo of cryolite, we hear, has arrived at Copenhagen from Arksut, West Greenland, the ultimate destination of which is Paris, it being resolved to test the manufacture of aluminium on a large scale. Should the result be so successful as to reduce the metal to a moderate price, large supplies of cryolite can be obtained at Arksut, the deposits there being inexhaustible. A quantity of it was brought to England in 1850 by Commerce-raad-Lundt, but at that period the useful purposes to which aluminium could be applied were not generally known, although discovered in 1828 by Wöhler to be a metal.

The Building Trades and the Half-holiday Movement.—A meeting of the members of the building trades was held in Manchester on Tuesday, at which it was resolved — "That the Saturday half-holiday, as now before the public, is desirable, inasmuch as it would greatly conduce to the social, domestic, and moral advantage both of employers and employed;" and, "that this meeting being fully convinced of the importance of the foregoing resolution, pledges itself to give its co-operation to carry out the above object." A memorial to the employers was agreed to.

New Farringdon-street. — Allow me, through your pages, to complain of the shameful and dangerous state of the streets and roads in the neighbourhood of what I believe is to be called, if ever finished, New Farringdon-street. The course of that street is bad enough, but the roads intersecting it are much worse. As winter approaches, they will be absolutely unsafe, as well as disagreeable. They have now long continued in that state. In the neighbourhood of any country town they would be indicted, but as no one seems to know here in which branch of the "circumlocution office" the nuisance should be complained of, I take the freedom of asking your notice of the matter.—J. D.

Preserving and Disinfecting Timber.—Lieut. C. Scott Jackson, of Cannon-street, has patented an improvement in preserving and disinfecting timber, and other substances, by applying solutions of salts of zinc and iron in combination.

The Visitors to Peterborough Cathedral.—That natural ambition and anxiety to secure something like a shadow of immortality which induces the anything but immortal Buggins or Huggins to scrawl his glorious cognomen on the pyramids and obelisks of Egypt, to be handed down to future ages along with those of Cheops or of Rameses, at one time largely displayed itself on the walls of Peterborough cathedral, as on those of many others of our public edifices; but a less objectionable basis for Buggins's *cacoethes* than the walls and pillars of the edifice itself was at length discovered in the happy idea of a visitors' book, which, like an efficient lightning conductor, has had the excellent effect of drawing off the source of mischief to the edifice into a more harmless channel, at the same time securing to Buggins something like a substitute for that immortal recollection which he ever craves of his fellow mortals. The 40,000 names and remarks inserted in this useful book since February 6th, 1854, have been analysed by a local critic, and found to be composed, as might be expected, of an immense proportion of the "silly" order, and a very minute infusion of the "reflective;" some of the latter with a dash of the former even in *their* composition. Rude, silly, commonplace, critical, and reflective, are the appropriate terms used in the analysis. One "silly" condescendingly allows that the edifice is "highly commendable." Perhaps he was some celebrated judge at cattle shows. As to the various *habitats* of these originals, the analytic critic says,—"The greater number of visitors reside in the town and neighbourhood. London contributes the next greatest number. The colleges, including clergy, stand next. Visitors from Birmingham are numerous; from Manchester not so many as one might expect. Nottingham, Sheffield, Liverpool, contribute variously, and Scotland and Ireland are not unrepresented. Among the foreign and colonial addresses are Berlin, Barbadoes, Auckland, New Zealand, Adelaide, United States, East Indies, Demerara, &c. There appears to have been a fair proportion of ladies, who are, however, sparing of remarks." The visitors' book has not been altogether devoid of proper or of useful remarks and suggestions neither, and it merits imitation.

Toronto, Canada West.—The Hamilton correspondent of the *Canadian News* says,—Great improvements are going forward in our city this year, both in the way of building and improving the streets. A large number of very handsome buildings are in course of construction, among them, the new St. Andrew's or Scotch Church, one of the finest buildings of the kind in the province. The spire, which is of stone, and 200 feet in height, has just been completed. It is truly an ornament to the city. The Canada Life Assurance Company are now completing a new building of stone, with an iron front, which is to cost 10,000*l.* Another new church is in course of erection, also a large wholesale dry goods establishment, the most substantial building in the city, and a new hotel of very large dimensions. Numerous private residences are being erected in various parts of the city, and, on the whole, a greater number of buildings are going up this year than last. A system of sewerage has been partially carried out in the business part of the city.

Workmen's Tools.—Nearly 2,000*l.* have been raised for the workmen who lost their tools by the fire on the premises of Messrs. Broadwood.

Plaster Cast Work.—A short time ago an article appeared in your valuable work, respecting the very indifferent manner in which plaster ornament is executed in the present day. As a practical man of many years' experience, allow me to state that the principal cause is, that of late years the practice of "jelly moulding" has come into use, which has superseded the old plan of undercutting or casting, and fixing the different parts that require relief separate. The jelly mould is all in one piece, and, of course, a cast from the same is not to be compared with the former mode, either in sharpness or relief: if the parts are too much undercut to allow of its casting, they are stopped up, and so they remain. But that is not all. As in order to make the cast leave the mould before it heats (as in that case it would spoil the mould), the plaster is gauged with alum-water to make it stiffen quickly: in time the alum, if too strong, will work its way to the surface, and destroy the paint. As a proof of what I state, allow me to refer to the plaster ornament as executed at Arthur's Club, in St. James's-street, some years ago, under the late Mr. Hopper, by F. Bernasconi, which is a credit to both; and on the other hand, to the ornament lately executed at a club in progress hard by the latter, the whole of which, or nearly so, has been jelly moulded. You will there see blocks in the cornice more like bricks, as the caves are cast solid on the blocks instead of separate or undercut; and the rest of the ornament is mostly after the same fashion. The builder, to save expense, adopts the plan attended with the least labour.—A Practical Man.

The Drainage of London.—To get over som of the difficulty in this matter, I venture to suggest a scheme which would also economize the working expenditure by the employment of the sewage by direct application to the land as a fertilizer, of the immense value of which every day produces fresh evidence. Take all the mouths of the existing sewers by tunnels across the river Thames to the south side: continue them on at a low level to a line sufficiently removed to drain all the "south side" into them; and here build one intercepting sewer, and in a convenient position establish a pumping-station: from this pumping-station continue a line of sewer by tunnel and covered aqueduct right through the country, to deliver into the English Channel at a point in Sussex. A route may be chosen which will cut through the midst of hundreds of acres of waste land,—the very thing wanted for the sewage manure,—and at convenient points erect sewage manure tanks, and pumping-apparatus, which could be done far away from the habitations of man, and in many places on land not now worth 1s. per acre. Here the said sewage could be distributed and applied *direct*, without any cost for compression, drying, carriage, &c. and which would enhance the value of the land enormously for agricultural purposes. Properly and completely carried out, I question whether very much overplus would find its way into the sea. Still I would provide for all contingencies by a sewer of sufficient capacity throughout.—T. G.

Revolution in Mechanics.—From a mixture of India rubber and gas-tar, there has been combined a substance in the United States, said to be as valuable for its elasticity as for durability and elegance: it is of a jet black colour, and will take the finest polish. The choicest specimens of furniture, as well as objects of ornament or fancy, can be made of it, which may bring on a revolution in some portions of mechanical art.

Light on the Turkish Coasts.—A hundred new lighthouses are to be built on the Turkish coasts of the Black Sea and Mediterranean.

Paris and Mulhausen Railway.—The *Débats*, in reporting the progress made in the construction of the Paris and Mulhausen Railway, describes the viaduct which traverses the valley of the Marne at Nogent. This viaduct, it states, presents a development of more than 800 mètres, or a little less than the length of the Rue Richelieu. It is composed of thirty arches, each fifteen mètres in breadth, and of a bridge across the Marne, formed by four grand arches, each fifty mètres broad, or more than twice the breadth of the Rue de la Paix. At the lowest part of the valley the height of the arches is twenty-nine mètres (87 feet), or exactly the height of the triumphal arch at the Barrière de l'Etoile. What gives to this construction a peculiar merit is the grandeur of its proportions, and also the nature of the materials with which it is built. Hitherto enormous blocks of stone were employed in the construction of large arches; but the engineer at Nogent has made use of smaller materials, which are bound together by a species of mortar which has the virtue of obtaining a stony hardness: the arch is thus transformed, as it were, into a single block. By this means a great economy of money and time is obtained, and the construction of the Nogent viaduct was completed within eighteen months. The expenses of the construction of the viaduct and the bridge will not amount to 6,000,000f. The bridge is destined to support a weight of 10,500,000 kilogrammes. The weight of each arch exceeds 5,500,000 kilogrammes, and the keystone of each weighs 8,200 kilogrammes.

Master-masons of Antwerp.—A curious and, I believe, peculiar custom still exists at Antwerp among the guild of masons. Henri Conscience, the great Belgian writer, who was perambulating the town with me, informed me, as we passed their hall, that whenever a new master-mason was to be elected, it was necessary that, previously to being initiated into his somewhat important position, he should prove himself worthy of the dignity about to be conferred on him, by pulling down and rebuilding with his own hands the façade of one portion of the building, which has consequently been re-erected innumerable times, though the remainder of the edifice is sufficiently venerable. If the candidate shrunk from this trial, there was no alternative but to yield his claim.—*Flemish Interiors.*

Splitting Tree-stumps.—Experiments have been tried on the premises of Messrs. White, timber-merchants, Manchester, to test the efficacy of an invention to split the stumps of trees. A hole is bored half-way down a stump, and a cartridge is placed in the orifice. A piece of iron to effect percussion is then placed in the hole on the cartridge, and is secured in its place, when, by the fall of a heavy substance on the iron, an explosion of the cartridge is the result, and the stump is rent. The invention is due to Captain Norton, who was present at the trials.

TENDERS

For constructing 1,900 feet of 3 feet 9 inches by 2 feet 6 inches Brick Sewer, along Titchbourne-street, Connaught-terrace, and Upper Porchester-street, Paddington. Mr. William Merry, surveyor :—

Mutter	£1,260	0	0
Murray	1,150	0	0
Yeoman	1,083	0	0
Batterbury	1,133	0	0
Thompson and Co.	1,012	0	0
Gardner	996	0	0
Radley	925	0	0
Thirst	885	0	0
Rowe (accepted)	883	0	0

TO CORRESPONDENTS.

"J. H."—"Admiral B."—"T. C. T."—"A Ratepayer, but not a Cobbler."—"A. A."—"Mr. D."—"P. E. M."—"Constant Reader". Paving by Steam."—"A. J. B." (is not without impulses himself!)—"De Vere" (next week)—"R. W."—"R. B."—"A House Painter."—"W. R. S."—"G. J."—"W. O."—"H. P. S."—"Bursiem."—"Crusty."—"Competitor."—"W. M. L."—"One of the 16th"—"R. S. T."—"F. G. M."—"P. S."—"E. B. W." (shall hear).—"P. K."—"A Young Medical" (should appeal through the medical journals)—"H. P." (those we remember are of lead).

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

IMPORTANT AND UNRESERVED SALE.—Effects of the late George Gwilt, sq. F.S.A. F.R.S.A &c.

MESSRS. PUTTICK and SIMPSON beg to announce that they will SELL by AUCTION, on TUESDAY, the 14th of OCTOBER next, and following day, on the PREMISES, No. 8, Duke-street, Southwark, at ELEVEN for TWELVE punctually, the FURNITURE and a large quantity of the LIFE and WORKING MODELS collected with great judgment and at a vast expense. The well-known taste of the late proprietor needs no comment. Besides the usual furniture, will be found scientific instruments, philosophical apparatus, rare and choice musical instruments, between 40 and 50 valuable books, small plate, &c. &c. To be viewed on previous to sale, by catalogue (1 each) to end of the Engineers, 191, Piccadilly; FRANCIS HOBLER, Esq. Solicitor, Bucklersbury; and on the Premises 7 and 8, Union-street, Borough.

TO CABINET-MAKERS, BUILDERS, AND OTHERS.

MESSRS. KENNEDY and BONNY will SELL by AUCTION, at QUEEN'S BENCH WHARF, near Paddington, on TUESDAY, OCTOBER 14th, 1856, at ELEVEN for TWELVE o'clock precisely, 10 lots, 17,000 feet of WAINSCOT PLANK (English) well-seasoned and varying from 2 inches to 4 inches in thickness. Also about 80,000 in BANGOR SLATE, in various sizes. May be viewed at any time prior to the day of sale, and catalogues had on the premises, No. 6, Bastwick-street, City; at the Wharf, and at the Auctioneers' Offices, London.

CHELMSFORD. TO FARMERS, BUILDERS, and OTHERS. TO BE SOLD BY AUCTION, by

VALPY and STOKES, on THURSDAY, the 23rd of OCTOBER, 1856, on the PREMISES, Pertle-road, Upton, the Two Valuable Brick-making PLANTS, with all the requisite Sheds, Utensils, &c., belonging to the extensive and long-established BRICK-MAKING BUSINESS of Mr. JAMES WHITE, consisting of about one million of white and stock bricks, and a large quantity of red; also the Steam-engine, Boiler, Pumps, Shafting, Gearing, Iron Pipes, Tramroads, Horses, Carts, and other Effects. Also about 80 tons of iron drain-pipes; also, the kiln, as fixed. Williams's pipe-machine, barrows, boards, hovels, moulds, &c. &c.; about ten tons of prime mixed wood, for burning; Two Cottages, adjoining the brick-field, with drying stages for pipes, &c. &c. Sale to commence at TEN for TWELVE o'clock precisely. Coal may in the meantime be had at the Place of Sale; Office of the Auctioneers; and at the neighbouring Inns.

TO BUILDERS, STONE-MASONS, AND OTHERS.

MR. A. BOOTH will SELL by AUCTION, on WEDNESDAY, the 15th of OCTOBER, 1856, at TWELVE for ONE o'clock, on the PREMISES, No. 21, Bridge-place, Hammersmith, the STOCK-IN-TRADE of a PATENT STONE-PRESERVING WORKS; 200 chimney-pieces, in imitation, black, Sienna, and porphyry, marble tombs, flower-vases, clock-and-bracket-cases, correct ornamental pavement, one hundred and fifty paper balls-tracks, trusses, &c.; Bath and Caen stone in slabs and blocks, small stone trucks, lathe, cart and trucks, steel tools, twenty saws, an Eames' sheet-iron brick safe, counting-house fittings, portable weighing machine, desks, and office fittings, &c.—May be viewed on day prior and on morning of Sale. Catalogues forwarded by post, or may be obtained on the Premises, and of Mr. ANDREW BOOTH, Accountant and Estate Agent, No. 1, Catherine-hill, Camden-road (opposite the Beehive Tavern).

TO BUILDERS, CABINET and PIANO-FORTE MAKERS, AND OTHERS.

MESSRS. BOND will SELL by AUCTION, at No. 20, ROSS WHARF, Great College-street, Camden-town, on TUESDAY, OCTOBER 21, at TWO for THREE precisely, 15 YELLOW and WHITE PLANKS deals, inch battens, prepare, &c. and other lots, in inch and inch deals, a quantity of our stuff, sundry planks, &c. the remainder of a lot for absolute sale. Catalogues had of the Auctioneers, Messrs. Bond, Caledonian-road, Barnsbury; and of Mr. JAMES on the Wharf.

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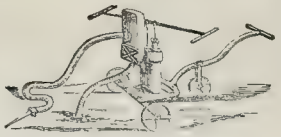
ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Spruce, 3s.; Pine Planks, 3s. 6d. Mahogany, 6d.; 2½ Yellow Battens, from 1.3. 10s. Carriage free to any part of town.—T. FORMAN, 1, Walnut tree walk, Lambeth-walk.

MAHOGANY and WAINSCOT seasoned by Solignac's Patent Process.—JOHN COLMER solicits an inspection of his stock. The above process enables him to season his wood in comparatively short space of time, for sale at prices generally charged for wet wood.—Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile-end-gate.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of its kind ever established, a large assortment of PREPARED FLOORINGS and MATCH BOARDING, seasoned and ready for use, from ¼-inch to 1½-inch thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses. Sliding Battens, Panelled Linings, Oak Sills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, Kingsroad, Chelsea.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of FLOORING and MATCHED BOARDING, from ¼ inch to 1½ inches thick, seasoned, and ready for use; also, Mahogany, Moulding, Wainscot, and all kinds of Timber required for Building purposes.—Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

NOTICE of REMOVAL.—EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Whitecross-st., Finsbury, to the KING'S-ROAD, CHELSEA, where their orders will be promptly executed as heretofore.—Please address, E. SIMMS, King's-road Saw mills, Chelsea, opposite Manor-street.



B. FOWLER, HOLMAN, and CO.

SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.

The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve ways three times usual size, made to suit liquors of all kinds, hot or cold, is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

MOULDINGS BY MACHINERY. Capping, Sash-bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to

E. SIMMS,

SAWING, PLANING, AND MOULDING MILLS, KING'S ROAD, CHELSEA.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that they have completed their new arrangements, and will be happy to execute all orders entrusted to their care with despatch and punctuality. Wet and dry docks, and powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring match boarding, &c. &c. always in stock at reduced prices.

ROBINSON and BARTRAM, SAWING and PLANING MILLS, BELVIDERE-ROAD, LAMBETH, and SWAN-STREET, BERMONDSEY, on the completed powerful MACHINERY for SAWING TIMBER, for building purposes, are ready to receive ORDERS in this respective and beg to assure the friends that all favours shall be executed in the best manner, and with the most punctuality and despatch.

ACORN TIMBER WHARF and SAW MILLS, CANAL BRIDGE, OLD KENT-ROAD, LONDON. A Monthly Price Current forwarded on application. RICHARD MAY, Proprietor.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road. GEORGE NOKES and CO. invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:—

1-inch white, 13s. 6d. per square; 1-inch white, 13s. per square; 1-inch white, 18s. per square; 1-inch yellow, 15s. per square; ¾-inch yellow, 16s. 6d.; 1-inch yellow, 20s.

Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

GRAINING by MACHINERY.—The present system of graining is far surpassed by the use of BELLAMY'S PATENT GRAINING MACHINES, by which an ordinary workman can produce better work, and at an immense saving of time. The designs are perfect imitations of the choicest specimens of fancy woods and patterns of the first artists.

The Patent Graining Company are now prepared with a large and well-assorted stock of instruments, which they offer to grainers, painters, builders, and others without royalty.

Grained paper in imitation of all kinds of fancy woods of the choicest description, in the piece, or in sets for panels, &c. wholesale and for exportation. Pattern-boards and cards for the trade on great variety.

Painters, Grainers, Decorators, Merchants, and others are respectfully invited to inspect the patterns, and see the process at the Company's Offices, 30, Minories, London.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, spirit stains, and Bronzing liquid. The present price is 6s. 6d. to 7s. per gallon; white French polish, 10s. per gallon; white shellac, 18s. 6d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Heather-lane; and 14 and 15, Dorrington-street, Holborn, London.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.

STEPHENS' DYES or STAINS for WOOD. The following extract from a letter the Proprietor has obtained leave to make public:—Newington, Colchester, Feb. 5, 1856. "Sir,—I have used your Stains for finishing some Oak Stairs, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant, "SAMUEL GRIMES, Builder.

"To Mr. Henry Stephens, 54 Stamford-street, London."

Samples and prospectuses free to any part of the kingdom.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and the Official Reports made thereon, which testify that 24lbs. of Wolston's Torbay Iron-Paint will effectually cover as much surface as 112lbs. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For the Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all painting purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon, London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 54, John-street, Bedford-row, will have immediate attention.

TO BUILDERS

THE Advertiser requires a WAREHOUSE erected on certain land half a mile from London-bridge, and is willing either to rent the same on lease, with option of purchase, or will erect the same for any other arrangement as may be mutually agreed upon.—Address, A. B. C. Leopard Coffee-house High-street, Borough.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 80, Old Broad-street, London; to Mr. M'KINLAY, 3, Carolina-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT. Glazed Stoneware Sewage Pipes. Brick, Lime, and Cement Merchants, TATHAM and CO. 14, South Wharf, Paddington.

PORTLAND and BATH CEMENTS. TATHAM and CO. 14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames street, London; and also at the manufactory, Fatersham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs ROBINS and Co. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851 are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first class quality for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works—Mr. THOMAS WEEKES. Agents in London, Messrs. GEORGE POTTER and Co. Limemerchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 19, North-wharf road, Paddington.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL. Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire bricks, Grindstones, Cement Chimney tops, dittc Vases, Rodding, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS Manufactured by J. M. BLASHILL and SONS, at Millwall, Isle of Dogs. Warehouse, No. 1, Wharf Paddington-basin.

11 George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand made and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its constituent properties; that it is not affected by frost, and does not deteriorate in damp localities. See one of COMPARATIVE EXPERIMENTS on the strength of this and other Cements used at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that readily takes colouring, sold exclusively by JOHN BAZLEY WHITE and BROTHERS Millbank-street, Westminster; and 1 Nott-street, Liverpool.

CHARLES RICHARDSON, 3 & 6, SOUTH WHARF, PADDINGTON BASIN. COWLEY AND KENT BRICKS, PORTLAND, ROMAN, AND OTHER CEMENTS, TAMWORTH GLAZED SEWAGE PIPES BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 6 South Wharf, Paddington.

NOTICE.

CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now burning GREAVES'S BLUE LIAS LIME for the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered at a less cost than any of the four Thames canals, or railway stations, and not being affected by either frost or damp ground, in any quantity, and as agreed upon between the parties.

All applications for price and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

BLUE LIAS LIME.—Messrs. GREAVES and KIRKHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the finest quality, direct from the kilns, and the stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Roman, and Parian Cements.—Works, at Harbury, Stockton, and Wilmcote.—Stations, Warwick.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor tropical climes act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil, and where it is used with Size, Varnish, &c. To prevent the paint here against Zinc paint, which, the sole agents of this article must otherwise produce, it is now sold by the Wholesale Paint-dealers in Original Packages, each cask stamped, HUBBUCK—LONDON—PATENT. And other, so marked, the quality is unwarranted. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Waterworks Companies, Coal-Mine Proprietors, Builders, Contractors &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, made on the same principles and from the same materials as used by the late firm of SWINDELLS and BROTHERS. J. C. is prepared to enter into contracts with any of the above branches that may favour him with their orders, and will advertise to be derived from the above Cements manufactured by J. C. over all others are the great saving in hydraulic properties.—Samples and references may be had on application either at the Works, Ashton New-road; or the Warehouse, 5, Bro-street, Shude hill, Manchester.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank street Westminster.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which is tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the same. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal ganger's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 21, South Wharf, Paddington, or J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southham, Warwickshire

PLASTER of PARIS manufactured by T. P. BLYTH, Baldwin-place, Gray's-inn-lane, Holborn. The trade and shippers supplied on advantageous terms. Roman and Keene's Cement, Tiles, Plasterers' Hair, Pan and Plain Tiles. Fire Goods &c

DAVIES and NORMAN, CROWN WHARF, GREAT SCOTLAND-YARD. ROMAN and PORTLAND CEMENT. LIME, BRICKS, TILES, SLATES, FIRE GOODS, &c. STONEWARE PIPES, PANS, TRAPS, &c. A Liberal Allowance to the Trade.

NOTICE. SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), and 7, NORTH WHARF ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large grey Stone, or Grey Chalk, free on board at Works, 1s. 3d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works on the Medway, near Rochester.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting sand for polishing, Land Drain Pipes, Patent Drain Pipes, Gas Sun, for brickmaking, &c. &c. sent by barge from Messrs MEESON and CO.'s Works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 300 to 500 tons can load alongside the wharves at Grays. Apply to MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named agents can also be procured, as well as all kinds of fire goods from Welsh and Newcastle. Fire clay, Fire brick and lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.

General office—No. 12, GEORGE-YARD, LOMBARD-STREET.

Letters addressed to Grays Essex, will meet with immediate attention.

THE BEST HERTFORDSHIRE MALM SEOUNDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY.
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at C. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests gentlemen to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm Place, Halfwood, Stocks and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and Co. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Lighters can be loaded at the Canal Wharf, Hoxton, on sale upon reasonable terms. Also, Sand, for mortar containing any saline matter, is acknowledged to be preferable to river sand.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Catchem, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Waddon (one mile) at 9.15, 11, 1, 2.30, and 3.30 a.m. and 3 p.m.; return at 9.55 a.m. and 3.5 and 7.55 p.m.

HENRY C. DODD, Sec.
37, King William-street, City.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury, Newington, will be willing to enter into arrangements with builders and others for supplying superior STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Bell Farm, Stoke Newington Green.

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY, near the Crystal Palace. Entrance, Norwood end, Palace road. — BRICKS of the first class Red Kiln Bricks, Cutters, Dressings, Facings, and Paviors, Clamped ditto, Yellow and Pale, Seconds, Paviors and Pickings, Wasted Stocks, Stocks, and Place.—Apply to TRUMAN and CO. Norwood Lodge, Palace road, Roupell park, Lower Norwood, Surrey.

TO FIRE-BRICKMAKERS. — TO BE LET, the MAKING of FIRE-BRICKS, at a large Establishment, in the County of Durham. None but experienced workmen of good character need apply.—Further particulars may be obtained on application to S. H. E. care of Messrs. HOWES and Co. 7, Thames-inn, Holborn.

IMPROVED AIR-BRICKS.

WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney pots, Stoneware Glazed Sewerage Pipes, Ornamental Quoin Blocks, &c
Tunstall, Staffordshire.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the EREC-TION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 7d. per foot; above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tiles), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide place, London-bridge.

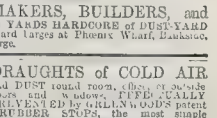
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 8d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that he LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "Terro-Metallic" is the sole property right of the Proprietor; and, thirdly, that the "REMAINS OF THE CRYSTAL" page 881, of the Great Exhibition, rank the Manufacture known as "Terro-Metallic Interlaces," Tunstall, Staffordshire, as the first of the kind in the world.

CONIAM'S PATENT IMPROVED ROOFING TILE. These tiles are light from overlapping each other by a raised edge, which also prevents the drift of rain or snow, and at the same time, offer a considerable saving in timber. To be obtained of C. PHILLIPS, Potter, Weston super-Mare.

HOGG'S GARDEN EDGE TILES: a cheap, elegant, and durable substitute for Box Edging.
12s. per Hundred, or 1d. per yard.
Exhibited at Court of Inventions, Crystal Palace, and at the Office of "The Builder."



Full particulars from Mr. R. BLACKLT Witham, Essex.

PANTILES, PAVINGS, &c. — J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 50s. per 1,000; floor bricks and 6-inch pavings, at 30s. 6d. per 1,000; 9-inch pavings, at 25s. 6d. per 1,000; plain tiles, at 35s. per 1,000, delivered. Cash prices. Delivered on trucks in London or Eastern Counties Railway.

TO ROAD-MAKERS, BUILDERS, and OTHERS.—1,000 YARDS HARDCORE of DUST-YARD PICKINGS to be put on rails and barges at Phoenix Wharf, Blackfriars, Southwark, free of charge.

DRAUGHTS of COLD AIR and DUST round room, chest, or outside doors and windows, EFFECTUALLY PREVENTED by GILL'S GOODS patent INDIA-RUBBER STOPS, the most simple and efficient method of making air-tight joints to doors of carriage work, cabinet work, &c. These Stops can be had any length or pattern. Self-acting spring stops, for the bottoms of doors.
The Trade supplied.
JOHN GREENWOOD, Patentee,
19, Arch-street West, London-bridge.

DRAUGHT and DUST EXCLUDER 1d. to 6d. per yard, easily fixed to doors and windows. Is the Patentee, R. HELBRONNER, 215, Regent-street. Wholesale and retail.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Finials, Terminal Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts, and Tiles, and numerous other Articles, manufactured by J. M. BLASHFIELD, on Patent improved terra-Cotta, at Mill wall, Isle of Dogs; and sold at No. 1, Wharf, Trafalgar-street, Paddington Basin.

ROYAL POLYTECHNIC. — Patron—H R H PRINCE ALBERT—Time Tables and Tickets, 5s. each class only, be obtained of the Money-taker, and admit to the Annual Evening Classes now opened in connexion therewith. The Examinations of the Society of Arts.—All applications for information must be accompanied with an envelope, stamped and addressed.

O. McCARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, White friars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened by the yard or per barge. Stocks, lime, and old bricks. Rubbish delivered per barge, in any quantity, alongside the Thames.

CROGGON and COMPANY,
Manufacturers of
PATENT ASPHALTE ROOFING,
BOILER, RAILWAY, SHEATHING and INODOROUS FELT,
For Damp Walls, and Lining Iron Houses,
2, DOWGATE-HILL, LONDON.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner or supplied in cask gratuitously. Information for using forwarded with material. Post-office orders or reference in London promptly attended to. Estimates given for every kind of the above work.

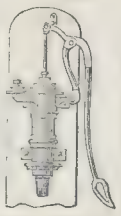
ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations,
FROM 8s. 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Ploneeum and Limmer Asphalte Office, Monumen-chambers, 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

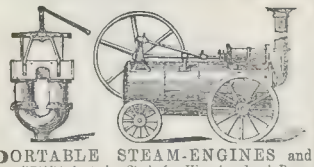
NOTICE TO ROAD CONTRACTORS, NURSERYMEN, AND OTHERS.
W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrow-road, to 8, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf.
Contractors supplied to any extent.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.
Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.
Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.
Iron Pails 3os. per doz. painted.
Ditto .... 4os. per doz. galvanized
Upper Ground-street, Blackfriars Bridge, Surrey Side.

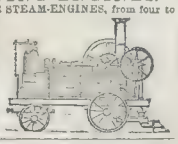
TO BUILDERS AND PLUMBERS.
The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,
which is recommended for the simplicity of its construction, and the ease with which it works.
By the introduction of the vibrating standard, the cumbrous carriage and expensive lines and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.
Beer and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.
JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.





PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready for use on hire, for the work of mines, for pumping, sawing, pile-driving, raising materials, &c. &c.
Contracts taken for pumping any quantity of water.

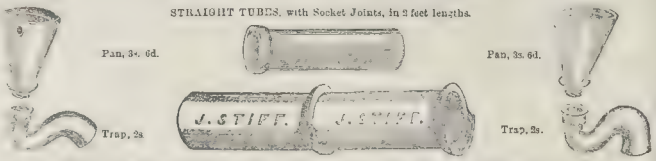


JAMES BURTON & SONS,
Engineers and Contractors,
John's-mews Holland-street,
Southwark, London.

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND HAND STEAM ENGINES of various powers, suitable for contractors' work generally. Apply to Messrs. SLOWEY and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where the machines can be seen.

STEAM POWER.—TO BE SOLD, a Second-hand HORSE ENGINE, in prime working condition, with cross head, governor, &c. &c. nearly complete for the Price and Address to the Proprietor, Mr R. Nash, Pomeroy-street, Shibdale.

GREAT REDUCTION IN PRICES.
JAMES STIFF,
MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE, AND OTHER PURPOSES,
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.
STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

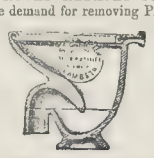


HALF-SOCKET PIPES same prices as whole Sockets, by the use of which Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNEXIONS.
May be had also at the following wharfs, viz.:—
Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road, City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Dunverne-wharf, Chelsea; Pratt-wharf, Kingsland, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate wharf, Canal-road, Hoxton.
Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.
STEPHEN GREEN,
IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.



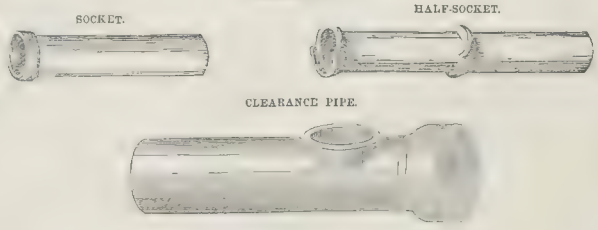
Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B Prospectuses, with Prices and Terms, forwarded post-free on the Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.
HENRY DOULTON AND CO.
Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their
GLAZED STONEWARE DRAIN-PIPES,
Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

THE NORTH DEVON POTTERY COMPANY,
MANUFACTURERS OF SUPERIOR SALT-GLAZED STONEWARE PIPES, &c.
LONDON DEPOT, BALTIC WHARF, KINGSLAND-ROAD.
AGENT Mr. E. COOK.

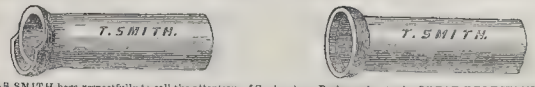


(ESSENTIAL IN CASE OF STOPPAGE.)
A LIBERAL DISCOUNT ALLOWED THE TRADE.
MANUFACTORY, NEAR BIDEFORD, NORTH DEVON.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and pleasing description of [illegible] is now introduced into this country; an extensive assortment of [illegible] Messrs. SLOWEY and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where the machines can be seen.

PAPER-HANGINGS.—The CHEAPEST HOUSE in LONDON for [illegible] of PAPER-HANGINGS is at [illegible] GROVE 29 PRINCES, [illegible] where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, at HALF the USUAL CHARGE. CHEAPER than any paper hanger in the trade. Builders, Decorators, and large consumers will do well to visit this establishment.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.



THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.:

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of JAMES PILBROW, Esq. Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH, and ALBION POTTERY, OLD FORD, BOW.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

THE LATE FIRE AT THE BOURNE VALLEY POTTERY,

NEAR POOLE, DORSET.

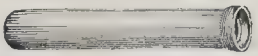
The Proprietors of the above Works respectfully inform Surveyors, Contractors, Builders, and Others that the buildings rendered necessary by the late disastrous fire are now nearly complete, and they are enabled to supply SALT-GLAZED STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, CLOSET PANS, TRAPS, &c. in any quantities. These Pipes, &c. being made under immense pressure by new and patented machinery, and burnt, by intense heat, to an unusual degree of hardness, are very far superior to any hitherto made in Hants or Dorset, and will bear comparison with any in the kingdom; and being made of clay of the finest quality, the produce of the estate can be rendered at very moderate prices.

The goods, or any information respecting them, may be obtained on application to the Manager, Mr. J. T. BOUNSALL, Bournemouth, near Poole; or the Agent in London, Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth.

N.B. A liberal discount to the Trade. A large Stock always on hand.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the Island of Brankseas is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

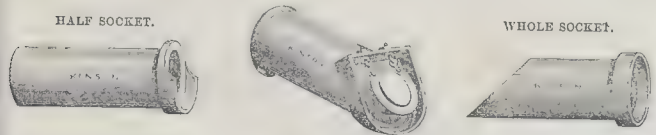
A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Brankseа Island, Poole, Dorset.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.



Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

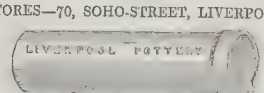
DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.



MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

LAMBERT'S SELF-CLOSING

LAVATORY AND CLOSET VALVE

No. 7.

is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured by the Patentees,

THOS. LAMBERT and SON,

Brass Founders and Engineers,

Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combining both a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 1s. 6d. each.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO., Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES

3 inch bore, in 2 ft. 6 in. lengths, at				2½d. per foot.
6	"	"	"	3½d. "
9	"	"	"	5d. "
9	"	"	"	9d. "
12	"	"	"	1s. "
15	"	"	"	1s. 6d. "
18	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The principle material used in their manufacture is the finest clay, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

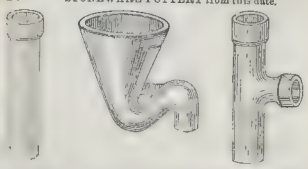
W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

GREAT REDUCTION in the PRICE of

STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 30 Bankside. DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. Feb. 11, 1854.

CLOSET BASINS, WHITE and BLUE

URINALS, &c.

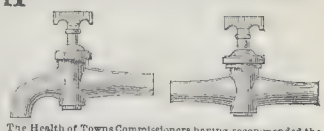
MANUFACTORY—MILLWALL.

DEPOT:

ARTHUR-STREET, NEW OXFORD-STREET.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.



The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply valve for attaching direct to main pipe without a cistern, cocks, or ware.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street London

FOR HIRE, a SPACIOUS TENT, adapted

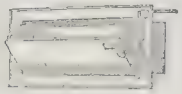
for the Laying of Foundation Stones for Public Buildings, &

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.

Apply to H. PIGGOTT, 118, Fore-street, City.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an



EXTERNAL WALL

With single pulley, from 6s. each; with leading pulley, from 6s. 6d.

These Ventilators are arranged that the admission of any required quantity of pure air may be regulated for the different seasons of the year without draught or inconvenience, and as they are placed in the external wall, their action is not impeded when the casement is closed. For cases in which an abundant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

SALES BY AUCTION.

TO BUILDERS, IRONMONGERS, STOVE-GRATE MAKERS, AND OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, at the WAREHOUSES, Bell-street, Sun-street, Bishopsgate, on THURSDAY, OCTOBER 23rd, 1856, and following day, at 11 precisely, in lots, without reserve, the extensive STOCK of the Sheffield Company, Messrs. Sanderson Brothers and Newbould, Warehouses, all of the newest patterns and designs, including 100 polished steel register stoves, with ormolu mounts, 350 black register and Romford stoves, suitable for cottages, 30 cottagers' ovens, 30 hall and shop stoves, 75 steel fenders with ormolu mounts, 30 bronze hand black fenders, 230 sets fire-irons, bronzed umbrella-stands, hatstands, garden chairs and tables, an assortment of elegant Berlin bronzes, in groups of figures, inkstands, medallions, &c; 30 garden rollers, 50 round and oblong pig-troughs, 500 yards rain-water pipe and guttering, 30 tons shave and runes metal sash-sticks, dampers, and frames, an assortment of builders' ironmongery, in chain, nails, hinges, screws, bolts, pulleys, &c; furnishing ironmongery, japanned goods, black hollow ware, 50 dozen frying-pans, electro-plated goods, iron and papier maché trays, coal vases and scoops, toilet sets, brass chandeliers and ship, cabin, and carriage lamps and lanterns, 20 dozen sash brackets, an improved reflecting telescope, 50 gross patent pen nibs, fittings and tools of smith's shop, standard scales and weights, counting-house fittings, and other articles. May be viewed on Tuesday and Wednesday previous to the sale when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Bilitter-street, City.

VICTORIA-STREET, WESTMINSTER—SECOND PORTION.—Sale of new Building Materials, Plant, Stock, and Utensils of a Builder.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on the PREMISES, Victoria-street, Westminster, on MONDAY, OCTOBER 27th, and following days, at ELEVEN each day, in lots without reserve, the SECOND PORTION of the STOCK of well-seasoned NEW BUILDING MATERIALS, partly prepared yellow and white deal flooring boards, 60 feet cut in Portland stone, 500 feet 9-inch tooled York paving, 5,000 feet self-faced ditto, 2,000 feet York landings, 350 feet cube York stone, 1,700 feet cube granite, two tons iron girders, 20,000 stock and fire-bricks, 400 yards cast-iron rain water-pipe, 15 slate cisterns, 30 coils iron pipe, 10,000 feet iron tube, an assortment of Ts, elbows, bends, sockets, &c, plug-taps, 50 gallons varnish, 50 cwt. red and white lead, and tin-ore, 2½ pieces paper-hangings, &c. The plant and tools include 7 hoisting machines and chains, mortar-mill, sweeping-machine, 5 stone trucks, 7 asphalte pots, crab-crance, blocks and falls, 3,000 scaffold boards, 1,000 scaffold poles, 10 to 40 feet; 1,000 feet run 3-inch plank, 500 dozen scaffold cords, 60 ladders, 20 benches, barrows, 6 brass-head turner's lathes, smiths' forge, anvils, benches, air furnace, moulding trough, and tongs, 2 painters' machines, 24 pair steps, and trestles; an assortment of boxes, stocks and dies, steel tools, and numerous other effects. To be viewed two days previous to the sale, when catalogues may be had, on the Premises; and of Messrs. Fuller and Horsey, Bilitter-street, City.

800 TONS OF IRON.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed to SELL by AUCTION, on MONDAY, OCTOBER 27th, at ELEVEN, at HAY WORTH, by order of the Trustees of the Assignees of Mr. C. J. Mare, in lots, 800 TONS WROUGHT-IRON, including 400 tons of flowing, L-mouse, and bed scrap bars, plates, boats, and angle iron, 200 tons scrap iron, 20 tons nails, 30 tons puddled bars 40 tons rolled scrap plate, 50 tons hammered slabs, 40 tons scrap blooms, &c.—To be viewed on Friday and Saturday previous the sale when catalogues may be had at the Works, of Chas Lee, Esq. Official Assignee, Abchurch-lane, of Messrs. Lawrence, Plews, and Boyer, Solicitors, Old Jewry Chambers, of Messrs. Evans, Newton, and Newton, Solicitors, Wardrobe-place, Doctors' Commons; of Messrs. Pullen and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Bilitter-street, City.

PRELIMINARY ANNOUNCEMENT.

MESSRS. FULLER and HORSEY in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees of Mr. C. J. Mare, to SELL by AUCTION in the PREMISES, SEVENTH, EIGHTH, and LOAST STORES and TOOLS of the extensive ship-building yards and iron-works at Blackwall and West Ham, including 100 tons rivets, 50 tons screwed bolts and nuts, 20 tons cast and shear steel, 500 tons castings, 20 tons engineers' steel studs, an expensive self-acting boring bar, ratchet braces, stocks, taps and dies, &c; 100 wrought-iron anvils, 30 tons smiths' tools in top and bottom swages, hammers, mandrils monkeys, &c; 300 tons iron flasks, crane shank and head links, chain wheels, several weighing machines, brassfounders' & d finishers' & fitters, boiler-makers' tools, 190 tons shaping plates and blocks, patent rivetting-machine, contractor's portable steam engine and boiler, three Cornish boilers, crab cranes, blocks and falls, many tons of chain-slings, mooring-chains, chain-cables, &c; 50 brass barrel lift-pumps, ships' water-closets, ships' pumps, five tons brass fittings, a large quantity of general ironmongery, 1,000 dozen files, 100 joiners' benches, joiner's cramp and tools, 10 tons lead, plumbers' tools, five tons bolt and sheathing copper, 60 oak trees, several hundred fathoms sash, expensive prepared cabin fittings, several thousands of stage planks and deals, shipwrights' tools, 20 barges and skiffs, three wrought-iron barges, counting-house fittings, and a large assortment of miscellaneous effects. More detailed advertisements will shortly appear. Catalogues are being prepared, and may shortly be had, at one shilling each, of Messrs. Fuller and Son, 80, Fore-street; or of Messrs. Fuller and Horsey, Billiter-street, City.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on TUESDAY, 11th NOVEMBER, 1856 and following day, at ELEVEN each day, on the PREMISES, the Atlas Works, Union-street, Southwark, (a few doors only disposed of by private contract, of which due notice will be given), the MACHINERY and TOOLS of the ATLAS WORKS, including a large and powerful self-acting boring machine, drilling-machine, ten very powerful lathes for engine turning and screw-cutting, vices all sizes, steel and iron smiths' forges, a large assortment of engineers' and smiths' tools, two steam engines, and boiler, shafting and gearing, screwing apparatus, a valuable collection of new patterns, in wood and iron, stores of every description, and numerous other effects. At the same time will be SOLD, the LEASE of the PREMISES, comprising a substantially-built factory, of two floors, the upper story used as a fitting shop, turnery, and store-room. The lower floor used as the engine house, and engine house used as the smiths' shop, a workmen's dining room, stable-yard, a convenient residence, and offices, held on lease for a term of twenty-six years, at a rent of £ per annum. The premises may be viewed, on the sale, and the Machinery on Monday previous. Particulars and catalogues may be had on the Premises, and of Messrs. Fuller and Horsey, 13, Billiter-street, City.

TO ENGINEERS

MESSRS. FULLER and HORSEY will SELL by AUCTION, on MONDAY, OCTOBER 27, at TWELVE, at the PREMISES, 149, City-road, in lots, without reserve, the ENGINEERS' TOOLS, including a self-acting planing-machine, to take in 6 feet by 2 feet 6 inches; 9 inch self-acting screw-cutting lathe; two foot-lathes; small horizontal steam engine and boiler, fore, drilling, and other machines, and effects.—To be viewed the morning of sale, when catalogues may be had on the Premises, and of Messrs. Fuller and Horsey, Billiter street, City.

TO PLASTERERS, BUILDERS, AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on TUESDAY, the 21st of OCTOBER, at ELEVEN o'clock, on the PREMISES, Victoria street, Westminster, in lots, PLASTERERS' TOOLS and MODELS, including many scarce and valuable originals, in wrestles, busts, casts, bas-reliefs, figures, &c; cornices, rock work, friezes and flowers, centre flowers, and plaster ornaments, tools requisite.—To be viewed on Friday and Saturday previous to the Sale, when catalogues may be had, on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

SALES BY AUCTION.

TO IRON PLATE-WORKERS, IRONMONGERS, AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on THURSDAY, OCTOBER 14, at TWELVE, on the PREMISES, Wells Lower-yard, White Lion-street, Seven Dials, in lots, by order of the Trustees, the TOOLS and STOCK-IN-TRADE of an IRON PLATE WORKER, 100 dozen scoops and scuttles, tea-kettles, preserving pans, saucepans, fire backets, copper hole shovels, offers, feed boxes, and other articles, all of the best manufacture, set of bending-rolls, plate-workers' tools, bright-take hand, bench-shears, vices and benches, smith's forge, bellows, anvil and tools, 10 cwt. rod and bar iron, tilting pit, lead cistern, fire-press, two iron safes, weighing-machine, and other effects. To be viewed the morning of sale, when catalogues may be had, on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City

Surplus Lands and other valuable Freehold Property, on the Caterham Railway, the Rose and Crown Public house, Cottages, &c, on the road from Croydon to Godstone, in the county of Surrey.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to offer for SALE, at the Mart, on FRIDAY, OCTOBER 17 (instead of the 24th, as previously advertised), at TWELVE, in Twenty-two lots, the SURPLUS LANDS and other FREEHOLD PROPERTY on the Caterham Railway, commencing at the Warlingham Station, and ending at the rear of Coomb-farm, comprising altogether about 170 acres. Lots 1 to 16 inclusive will consist of a brick-built dwelling-house, near to the entrances of Marden Park, with gardens and paddock; a smaller cottage, and numerous eligible plots of building land, varying in quantity from one to 10 or 12 acres, possessing very extensive frontages to the high road leading from Croydon to Godstone, and immediately contiguous to the Caterham Station. Lot 17. A valuable Freehold Estate, on the opposite side of the railway, close to the station, bounded on one side by a road leading to Warlingham, and on another by a road called Burnwood-lane, containing nearly 80 acres, and capable, by the construction of a new road, of being made available for very extensive double frontages. Lot 18. A valuable Plot of Freehold Building Land, immediately adjoining the Warlingham Station, having a considerable frontage to the road, and containing about 2 acres. Lot 19. A valuable Freehold Estate, on the other side of the railway, and close also to the Warlingham Station, bounded by a new road and Salmon's-lane, and containing nearly 20 acres, and immediately adjoining about 30 acres. Lot 20. A valuable Plot of Freehold Building Land, adjoining Lot 19, with considerable frontage to the new road, containing nearly two acres. Lot 21. The Rose and Crown Public-house, close to the Warlingham station, with offices, garden, and orchard. Lot 22. Three Cottages, garden, and orchard, near the Rose and Crown Public-house. The Caterham Railway has opened to the metropolis a district full of beauty for building operations. The soil is excessingly dry, on a chalk subsoil, and consequently very healthy. Stone, bricks, lime, sand, and gravel can be obtained on the spot at a remarkably cheap rate, and it has the advantage of being in the neighbourhood of several packs of hounds and good shooting. At the terminus is a very comfortable hotel, with first-class stabling for hunters, erected for the accommodation of sportsmen, and the access to London will be frequent and easy, with the prospect in a short time of a terminus at the west end, and great facilities will be afforded to the public and to building operations by the issue of season tickets at extremely low prices, which tickets, under certain arrangements, will be in force for seven years. Particulars, with plans, may be obtained at the Caterham Railway office, Hillersdon Chambers, London bridge; at the Grayhound, Croydon; of Mr. Adam Smith, Parish clerk who will show the lots), at the Caterham hotel, Caterham; at the stations on the Caterham railway; the White Hart, Godstone; the White Hart, Reigate; the Ward Arms, Westerham; the Horse Arms, East Grinstead; of Messrs. Drew and Gray, Solicitors; of Messrs. Drinkwater, Solicitors, Croydon; of Messrs. Davidson and Bradbury, Solicitors, 22, Bucklersbury; and of John Dingwall, Esq., Solicitor, Tokenhouse-yard; of Messrs. Banks and Bury, Architects, 27, Sackville-street; at the Mart; and of Messrs Norton, Hoggart, and Trist, 62, Old Broad-street, Royal Exchange.

Very important and valuable Freehold Building Ground at Paddington, lying between the Grand Junction Canal and the Harrow-road.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to SELL by PUBLIC SALE, at the MART, on TUESDAY, OCTOBER 28, at TWELVE (unless previously disposed of by private contract), a very important and exceedingly valuable PLOT of FREEHOLD BUILDING GROUND, land-tax redeemed, admirably considered for frontage to the Harrow-road, communicating with the Queen's-road, Porchester-road, and Westbourne-terrace bridges, extending in depth to the Grand Junction Canal, and having a wharf on the Junction Canal and the Harrow-road. This valuable spot offers sites for about fifty houses. The buildings in the immediate neighbourhood consist chiefly of respectable private houses, and it is about the only unbuilt-upon space of land for building—May be viewed, and particulars, with plans, had of Messrs. Clayton, Solicitors, 7, Mincing-lane, Lombard-street, at the Mart, and of Messrs. Norton, Hoggart, and Trist, 62, Old Broad-street, Royal Exchange.

IN BANKRUPTCY.—ISLINGTON.—A valuable LEASEHOLD BUSINESS PREMISES, situate in Clerkenwell-street, New North-road, with double range of upper and lower workshops, planing and joiners' shop, ironmongery warehouses, sawing-houses, large yard, fitted with timber stages and racks; counting-house, and dwelling-house, suitable for a person of an extensive trade in the building line, together with a pair of substantial brick-built Six-roomed Dwellings to Nos. 13, 14, 14 and 15 in the above-named street, also Nos. 1, 2, 3, and 4 dwarf cupboards; folding-doors, approached by a flight of stone steps, from pollen-ground, and yards in the rear, of the estimated value of 100 per annum, held for a term of eighty years from 1830, at a low ground-rent. The whole will be SOLD by AUCTION, by Mr. ALFRED DAY, at the AUCTION MART, near the Bank of England, on MONDAY, the 27th of OCTOBER, at TWELVE for THREE o'clock precisely, by direction of the Official Assignee in the bankruptcy. May be viewed till the sale.—Particulars may be had of Messrs. Phillips and Lilley, Solicitors, 7, Newgate-street, Lincoln's-inn; of Mr. Bowyer, Solicitor, Basinghall street, City; and of the Auctioneer, 23, City-terrace, City-road, near the Eagle Tavern.

In Bankruptcy.

MR. ALFRED DAY, at the AUCTION MART, near the Bank of England, on MONDAY, the 27th of OCTOBER, at TWELVE for THREE o'clock precisely, by direction of the Official Assignee in the bankruptcy of Mr. Rowland and Evans, Bankrupts.—May be viewed till the sale.—Particulars may be had of Messrs. Phillips and Lilley, Solicitors, 7, Newgate-street, Lincoln's-inn; of Mr. Bowyer, Solicitor, Basinghall street, City; and of the Auctioneer, 23, City-terrace, City-road, near the Eagle Tavern.

In Bankruptcy.

MR. ALFRED DAY has received instructions from the Assignees, to SELL by AUCTION, on the PREMISES, Clapham-street, Kennington, Surrey, on TUESDAY, OCTOBER 14, and following day, at TWELVE o'clock, without reserve, the fourth and last portion of the extensive STOCK, PLANT, and EFFECTS of a Builder; comprising an 8-horse steam-engine, a 3-horse steam-engine, a 10-horse locomotive boiler, circular saw-table, up and down frame ditto, planing-table, grooving, mortising, moulding, and tenoning ditto; Silvester's patent dovetail machine, Smith's and Hand's ditto, and cedar plank, in various thicknesses; pine planks, yellow deals, Christiania ditto, sheet and pipe lead, force pumps, closet pans, firkins of white lead, pails, brushes, oils, colours, ironmongery, bags of nails, brads, pullies, locks, sash-weights, ditto fastenings, bolts, hinges, cut and wire, paper-hangings, plate and sheet glass, coloured ditto, thirty cargo-nine boards, cards, sawing machines, office desk and fittings, iron safe, stools, nests of pigeonholes, glue-pots, timber stage, the whole of the gas fittings and effects.—May be viewed on the Saturday and Monday previous to the sale. Catalogues may be had of Messrs. Phillips and Lilley, Solicitors, 7, New-square, Lincoln's-inn; of J. Nicholson, Esq. Official Assignee, 24, Basinghall-street; and of the Auctioneer, City-terrace, City-road, near the Eagle Tavern.

TO TIMBER MERCHANTS, BUILDERS, CARPENTERS, AND OTHERS.

MR. LEREW will SELL by AUCTION, on the PREMISES, 43, Union-street, Somerstown, on MONDAY, OCTOBER 13, at ELEVEN for TWELVE, 2 Lots, Wall's Lease, 40 Years, 15 Lots, Leasehold, and HAVEN'S Lease of 14 years, 1 Lot, Leasehold, comprising, dry cut staff, 35 doors, ranges, stoves, ironmongery, scaffold poles, ladders, &c. Also, on Saturday Nov. 8, Valuable Household Furniture, Pianoforte, &c. Catalogues of the Premises; and of the Auctioneer, Carlton-terrace, Hampstead-road.

SALES BY AUCTION.

SYDENHAM.—For absolute and unreserved Sale.

MR. MARSH has received instructions from the Executors of the late Thomas Hunt, Esq. to SELL by AUCTION, without the slightest reserve, on the PREMISES, Wells Road, Sydenham, on TUESDAY next, OCTOBER 28th, at THREE for FOUR o'clock, in Sixteen Lots of 10,000 each, Seven capital STOCK, SECOND DITTO, PLACE, and other BRICKS. The Premises are close to three Railway Stations, and in the highly excellent state. May be viewed the day prior and morning of sale, and catalogues obtained on the Premises, and at Mr. Marsh's Offices, 3, Charlotte-row, Mansion-house.

TO CONTRACTORS, TIMBER MERCHANTS, BUILDERS, CABINETMAKERS, PACKING-CASE MAKERS, and OTHERS.

MR. MARSH has received instructions to SELL by AUCTION, on the PREMISES, Messrs. Robinson and Bertram's Saw Mills, Swan-street, Grange-road, Bermondsey, on WEDNESDAY next, OCTOBER 15, at TWELVE o'clock, the genuine and first-class STOCK, consisting of about 2,000 squares of dry prepared flooring, in two to four yard lengths; consisting of 1¼ x 7, 1 x 8, 1 x 9, and ¾ x 7 (3 cut 2) inch dry yellow, 2 x 9, and 2 x 7 (3 cut 2) inch, 1 x 7, and 1 x 9 dry white deals and battens, and about 3,000 3 x 7 and 3 x 9 yellow, and 2½ x 7 and 3 x 7 dry yellow and white deals and battens, and 14 11 best dry bricklayer pine planks, and other useful timber. Luncheon will be provided for purchasers.—May be viewed the day prior and morning of sale, and catalogues obtained on the Premises; at the Swan Tavern, and upon the property; and at Mr. Marsh's Offices, 3, Charlotte-row, Mansion-house.

TO TIMBER MERCHANTS, BUILDERS, COACHMAKERS, CHAIRMAKERS, CABINETMAKERS, AND OTHERS.

MR. MARSH has received instructions to SELL by PUBLIC AUCTION, on the PREMISES, Yorkroad, Lambeth, near the Terminus of the South Western Railway, on TUESDAY, the 28th OCTOBER, at TWELVE o'clock precisely. Seventy Loads very superior American Beech Planks, Twenty Loads dry Ash Plank Twenty Loads English Elm Timber, Twenty Loads English Oak Timber, Ten Loads Lime-tree Planks, Five Loads Lime-tree Plank, Two Walnut trees, 360 Feet Deals, with a quantity of useful Quartering and other goods, particulars of which will appear in catalogues. Catalogues issued two days prior to Sale, and had of W. Cooper, Esq. 13, George-street, Mansion House; Duke of York, York road, Lambeth; Place of Sale; and of the Auctioneer, Philpot-street, Commercial-road East.

GODSTONE, Surrey—Valuable Freehold Land, within a few minutes' walk of the Railway Station.

MR. MARSH has received instructions to SELL by AUCTION, at the MART, on THURSDAY next, OCTOBER 23rd, at TWELVE, in seven lots, about eighty acres of valuable FREEHOLD BUILDING LAND, in the parish of Godstone, Surrey, possessing very extensive frontages both to London and the road to the railway station, divided into lots ranging from five to twenty acres, affording to purchasers an excellent opportunity for selecting most charming sites for the erection of mansions or first-class villa residences, and as it is proposed to restrict the erection of houses to one on every five acres, each purchaser will be ensured against the annoyance of being surrounded by houses of inferior character. Stone, bricks, lime, sand, and gravel can be obtained in the immediate locality, at a remarkably cheap rate. In addition to the numerous trains to and from Redhill and Reigate from the metropolis daily, the property is within 2 miles of the Caterham Station on the Croydon line, by which it is believed will be extended to the Godstone Station, by which it is proposed will be brought three miles nearer to London and the two tunnels between Godstone and London avoided. Season tickets are issued by the South-Eastern Railway Company at very reduced prices. The situation is remarkably healthy, and the neighbourhood proverbially healthy and picturesque.—May be viewed, and particulars, with conditions of sale, obtained at the Mart; of Messrs. Bannow, Solicitors, Greenwich; at the principal Inns in the locality; and at Mr. Marsh's Offices, 3, Charlotte-row, Mansion-house.

The remaining and most valuable portion of the Surplus Property of the South-Eastern Railway Company, at Hastings, about 20 Miles of which are important Freehold Building Land, presenting desirable opportunities for building speculations.

MR. MARSH has received instructions from the Directors of the South-Eastern Railway Company, to SELL by AUCTION, at the SWAN HOTEL, Hastings, on TUESDAY, the 28th of OCTOBER, at THREE o'clock precisely, 182 PLOTS of the remaining and most valuable portion of the Company's SURPLUS LAND at Hastings, offering most desirable sites for the erection of shops and private residences, adjoining the town, and possessing frontage to the railway and to the railway station, to the road from Battle, and proposed new road conferring great advantages on the property. May be viewed; and particulars and conditions of sale, and plans, obtained at the several railway stations; the Swan Hotel, Hastings; of Mr. Thomas Ruse, Surveyor to the Company, Hastings, London-bridge Terminus; and at Mr. Marsh's Auction and Estate Offices, 2, Charlotte-row, Mansion House, London.

Important Sale of Freehold Building Land, at Tottenham, Plumpton, Sutton, and Stopher.

MR. MARSH has received instructions to SELL by AUCTION, at the MART, opposite the Bank of England, on THURSDAY, OCTOBER 23rd, at TWELVE o'clock, in lots, several very valuable PLOTS of FREEHOLD BUILDING LAND, situate at Edmonton, Tottenham, Sutton, Surrey, and Stepney, possessing important frontages, and exceedingly eligible for building purposes. Particulars and plans may be obtained at the Angel, Edmonton; Greyhound, Croydon; and at Mr. Marsh's Offices, 2, Charlotte-row, Mansion House, London.

Valuable Waterside Premises on the Regent's Canal, Kingsland-road, with Cement Kilns, Steam Engines, & at Islington, near Liverpool-road.

MESSRS. EVERSFIELD and HORNE are instructed by the Mortgagees to SELL by AUCTION, at the MART, in NOVEMBER, in two lots, the beneficial LEASE of the extensive and well-known PREMISES, situate on the Canal Wharf near the Cambridge Kingsland road, together with a great expense by Messrs. Frean and Co. for the manufacture of cement, but equally applicable for many other purposes. Held for a long term, at a moderate ground-rent; also an improved rent of 34l a year, arising out of a plot of ground opposite Tuscany Wharf.—May be viewed by leave of the tenants and particulars had of Edwards Jennings, Esq. Solicitor, 1, New Inn, Lincoln's-inn, at the Mart, and of the Auctioneers, 54, Parliament-street, or Coal Exchange.

GRAY'S-INN LANE. Important Business Premises, suitable for Builders, Whitewrights, Pianoforte makers, Coal Proprietors, or Jobbers.

MESSRS. EVERSFIELD and HORNE have received instructions from the Executors of the late Mr. Thomas Nesham, to SELL by AUCTION, at the MART, in NOVEMBER, in lots, an acceptable offer by private contract not previously made), the beneficial LEASE of the extensive BUILDERS PREMISES in Liverpool-street, Gray's-inn lane, lately occupied by the late firm of Locke and Nesham, and which comprise a large open yard, with two long ranges of well-lighted workshops, fitted up with tenoning and mortising machines, worked by steam-power, large covered drying-sheds, smiths', painters', and plasterers' shops, counting-house, timber stages, and numerous other requisites for the business, enclosed by gates and lighted with gas. Held on lease for a long term, at the low ground-rent of 8l per annum.—May be viewed, and particulars had of Messrs. Kempster, Solicitors, Kennington-lane; at the Mart, and of the Auctioneers, 54, Parliament-street, or Coal Exchange.

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The Builder.

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BUILDERS' BENEVOLENT INSTITUTION.—The NINTH ANNIVERSARY DINNER will be held at the LONDON TAVERN, on WEDNESDAY, 29th inst. Mr Alderman WILLIAM LAWRENCE, President, in the Chair.

Gentlemen desirous of promoting the interests of this Institution, by becoming stewards will be pleased to forward their names to the Treasurer, Mr. GEORGE BIRD, 38, Edgware-road; or to the Secretary, at the Offices, 19, Southampton-street, Bloomsbury.

A. G. HARRIS, Secretary.

COMPETITIONS.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The Trustees for Sale of a Freehold Estate of two acres (including the British Spa and near the Crystal Palace, requires PLANS for LAYING OUT the same for building purposes, showing the necessary roads, sewers, &c. the whole to be clearly defined and appropriated in suitable lots and laid down to a scale of two chains to one inch, from actual admeasurement. The following premiums are offered: For the plan adjudged the best for the purpose, 10 guineas; for the second, 5 guineas; for the third 3 guineas. The plans to which the above premiums shall be awarded will be retained by and be the property of the trustees. Further particulars may be obtained of Mr PEACOCK, Builder, near the Rail Road Station, Norwood, close to the property. The Trustees will peremptorily on the 1st day of DECEMBER next to examine the plans, which are to be previously forwarded, enclosed and sealed, to the Secretary's Office, Auction Mart, London, addressed to the Trustees of the White Horse, Norwood Estate.

TO SURVEYORS. — NOTICE. — NORWOOD, BRULAH SPA ESTATE, near the Crystal Palace. It having been intimated to the Trustees that the time mentioned for the Delivery of the Plans is insufficient, they have determined to EXTEND the same to MONDAY, DECEMBER 8, at the same place.

WELLINGTON TESTIMONIAL.—To SCULPTORS and ARCHITECTS. The Committee are desirous of receiving DESIGNS for a COLUMN and STATUE to be erected in honour of the late Duke of Wellington, at Liverpool.

The amount at present at the disposal of the Committee is about £5000, and if they have not sufficient to be carried out for that sum, they are desirous that it should be, but Artists will be at liberty to send in a separate design, either for the Column alone, or for the Statue and Pedestal.

The competitors must accompany their designs by estimates of the cost, either for the Column and Statue combined, or separately, as stating the basis (and if made, which they propose to employ.

A premium of £50 will be given for the design which, in the opinion of the Committee, is selected for the purpose.

Each design to be marked, with a motto or device, and have one of the Author is not to appear, but to be put in a separate sealed letter, bearing on the outside a corresponding motto or device.

The design, for which the premium may be awarded to become the property of the Committee.

All communications to be addressed to the Chairman of the Committee, at the Town-hall, Liverpool; and the designs must be delivered there, free of expense, on or before the 1st day of NOVEMBER next.

Town-hall, Liverpool, September 20, 1856.

TO ARCHITECTS and OTHERS.—The Burial Board for the Parish of Aylesbury is desirous of receiving PLANS, DESIGNS, and separate SPECIFICATIONS and ESTIMATES, comprising one or more plans and specifications, for LAYING OUT, PLANTING, and PEOPLING a NEW BURIAL GROUND, with suitable entrance gates, and for BUILDING a LODGE and TWO CHAPELS thereon. The ground contains 6 acres, and is adjoining the present burial ground; further information obtained at the Office of the Board. The Board will not be bound to employ the person whose designs, plans, or drawings, may be adopted; but in the event of his not being employed, will pay him a premium of ten guineas, and his designs, plans, drawings, and specifications shall then become the absolute property of the Board. The amount of the estimated expense, under each of the following heads, must be stated, viz.—Laying out ground; Planting; Fencing; Entrance Lodge; Chapels; Boundary Walls; Roads, Paths, and Drainage. Each plan must be accompanied by a sealed letter containing the name and address of the author, and have a motto or device thereon, which will be noted on the plan when made and the plans, &c., if approved of, to be open. The Board do not bind themselves to accept the lowest or any tender.

By order of the Board,

J. M. LENSON, Clerk to the Board.

Aylesbury, October 10, 1856.

COMPETITIONS.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The local authority of the borough of Lurkhall, in the forest of Rogate, Sussex, require PLANS for the LAYING of SEWERS with levels, sections, &c. the whole to be clearly defined and laid down to a scale of one chain to the inch. The following premiums are offered for the plans adjudged the best by the Committee, 20l.; for the second best, 10l. The plans to which the above premiums shall be awarded will be retained by, and be the property of the local authority. The Committee will meet on the first MONDAY in DECEMBER next to examine the plans, which are to be previously forwarded, enclosed and sealed, to their Office, Station-yard, Redhill, where further particulars and a map of the borough may be seen.

FREDK. BONNY, Inspector.

TO ARCHITECTS and SURVEYORS.—WHITE HORSE ESTATE, NORWOOD.—Competitors for the Premium of 10*l.* offered by the owner of this estate for the best plan for building purposes, can have a copy of one recently made from actual survey, and guaranteed to be correct, for one guinea.—Apply to Mr SMITH, Surveyor, Edenbridge, Kent

TO ARCHITECTS. — The Scarborough Cliff Bridge Company are desirous of procuring DESIGNS for ENLARGING and otherwise IMPROVING the SPA SALOON, accompanied with detailed working drawings, specification, and estimate. The Concert room is to be made efficiently large to accommodate 1200 persons, exclusive of an orchestra for fifty performers, and to afford room to one, and other refreshments. The Company will award to the author of the best design in their judgment, the sum of 50*l.* and to the author of the second best design, the sum of 20*l.* Designs and specification for which premiums are awarded will become the property of the company who will not bind themselves to employ the author to superintend or carry out the works. The company will pay either of the premiums unless a sufficient Tender be made for the actual execution of the works within the amount of the author's estimate. The designs must be deposited with Mr ROBERT WARD, the Secretary to the Cliff Bridge Company, Scarborough, free of all expenses, on or before the 29th NOVEMBER next, marked with an emblem or motto on the outside, and enclosing a sealed letter, with the name and address of the author. The designs not approved will be returned to the authors on application. By order of the Committee of the Cliff Bridge Company.

ROBERT WARD, Secretary.

Scarborough, October 18, 1856.

CONTRACTS.

TO BUILDERS.—WEST BROMWICH SCHOOLS.—Parties desirous of TENDERING for the ERECTION of the above Schools, can see the Plans and Specifications at the Offices of RICHARD CUDDICK, Esq. Solicitor, No. 2, West Bromwich, on and after MONDAY, the 13th inst. and Tenders to be sent to the same place on or before the 27th inst. The lowest Tenders will not necessarily be accepted.

JAMES WILSON, F.S.A. Architect

1, Belmont, Bath, October 8th, 1856.

TO BUILDERS. — MAGOR SCHOOLS, MONMOUTHSHIRE. — Plans and specifications for SCHOOL BUILDINGS, to be erected close to the Magor Station, on the South Wales Railway, may be seen at the Rev. JOSEPH MATHEWS, Ash Cottage, near Magor. Tenders to be sent to either of them, addressed as before the 21st OCTOBER. The lowest or any Tender cannot necessarily be accepted.

PRICHARD and SEDDON,
Diocesan Architects, Cardiff.

THE CONSERVATIVE LAND SOCIETY.

Trustees.

Viscount Ranelagh.
Right Hon. R. A. C. N. Hamilton, M.P.
Hon. C. Lowther, M.P.
J. C. Cobbold, esq. M.P.

To ROAD CONTRACTORS, &c.—The Executive Committee are prepared to receive TENDERS for CONTRACTING a ROAD, BUILDING a WALL, and other WORKS on the St. Margaret's Estate, Isleworth, Middlesex. The drawings and specification may be seen at the Offices of the Surveyor, Mr. GEORGE MORGAN, 31, Parliament-street, on and after MONDAY, the 20th of OCTOBER, between the hours of ELEVEN and TWO o'clock. Tenders to be delivered on or before TWELVE o'clock on SATURDAY, the 25th of the same month, at the Secretary's Offices, and endorsed "Tenders for Roads," &c. The Executive Committee do not bind themselves to accept the lowest or any Tender.

CHARLES LEWIS GRENFELL,
3, Northumberland-street, Strand.

TO BUILDERS, CONTRACTORS, and OTHERS.—NEW WINDSOR CEMETERY.—The Council of the Royal Borough of New Windsor, as the Burial Board of the aforesaid Borough, are prepared to receive TENDERS for the ERECTION of TWO CHAPELS, CURATORS' HOUSE, ENTRANCE GATES, BOUNDARY FENCES, &c. and for the Formation of the Roads, Paths, and Drains connected with the Cemetery. The plans, drawings, specifications, and forms of tender can be seen, and bills of quantities obtained, at my Offices, Windsor, on WEDNESDAY, the 15th inst. and from that day until FRIDAY, the 24th of October, between the hours of TEN and FIVE. Tenders, in the usual form, and addressed to the Chairman of the Burial Board, Architects, Messrs. DUTTON and WOODMAN, 1, Grey Friars-road, Reading. The Tenders are to be prepared and delivered in separately, as follows:

No. 1.—For Erection of Chapels, Curator's House, and Entrance Gates, &c.

No. 2.—For Boundary Fences, &c.

No. 3.—For Roads, Paths, and Drainage.

Contractors may tender for one or more of the lots of the works. All tenders must be delivered at my office in sealed envelopes addressed to me, HELEN Clock, and on MONDAY (return or NOVEMBER next, endorsed "Tender for Cemetery Works," and not addressed to any individual member of the Council.

The Council do not bind themselves to accept the lowest or any tender.

HENRY DARVILL, Town Clerk.

Windsor, October 13, 1856.

CONTRACTS.

ROYAL ENGINEER CONTRACT. — The War Department being about to enter into a CONTRACT for the CONSTRUCTION of a ROAD, BRIDGE, &c. at SHOEBURYNESS, on the Essex coast, may be desirous of TENDERING for the WORKS, may inspect the plans and specification thereof, and receive all necessary information relative thereto, by applying either to Mr. CARTWRIGHT, Clerk of Works, at the Royal Engineer Office, Grand Depôt, Woolwich; or to Mr HOPKINS, Clerk of the Works, at Shoeburyness, between the hours of TEN a.m. and FOUR p.m. up to the 22nd inst. The Tenders to be delivered at the office of the Director General of Contracts, War Department, Pall-mall, London, on or before TWELVE o'clock on the 23rd of OCTOBER, 1856.—The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Grand Depôt, Woolwich, October 3, 1856.

ROYAL ENGINEER CONTRACT.—The War Department being about to enter into a contract for LAYING DOWN a FIRE MAIN at the Royal Ordnance Hospital at Woolwich, such persons as may be desirous of TENDERING for the same, may inspect the plans and specification, and receive all necessary information relative thereto, by applying to Mr. CARTWRIGHT, Clerk of Works, at the Royal Engineer Office, Grand Depôt, Woolwich, between the hours of TEN a.m. and FOUR p.m. up to the 22nd inst. Tenders to be delivered at the Office of the Director General of Contracts, War Department, Pall-mall, London, on or before TWELVE o'clock on the 23rd of OCTOBER, 1856. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Grand Depôt, Woolwich, 11th October, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall-mall, London, on or before MONDAY, the 27th day of OCTOBER, 1856, from persons desirous of CONTRACTING for WORKS to be EXECUTED in improving the fortification at Dover Drawings and specifications of the works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Archcliff Fort, Dover, between the hours of TEN and FOUR o'clock, from FRIDAY, the 17th inst. until SATURDAY, the 25th of OCTOBER, 1856 (Sundays excepted). A person belonging to the Royal Engineer Department will attend each day at the Western Heights Barracks for—TEN to TWELVE o'clock, to point out the works and explain the drawings. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and severally, to the amount of a penalty of £1000 for the due performance of the contract. Tenders for the above work to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed "Tender for Work at Dover."

N.B.—The War Department reserve to themselves the right of rejecting the Tender of any of the Tenderers.

Royal Engineer Office, Dover, October 15th, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall-mall, London, on or before MONDAY, the 27th day of OCTOBER, 1856, from persons desirous of CONTRACTING for ADDITIONS and ALTERATIONS to the Western Barracks at Dover. Drawings and specifications of the works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and forms of Tender obtained at the Royal Engineer Office, Archcliff Fort, Dover, between the hours of TEN and FOUR o'clock, from FRIDAY, the 17th inst. until SATURDAY, the 25th of OCTOBER, 1856 (Sundays excepted). A person belonging to the Royal Engineer Department will attend each day at the Western Heights Barracks for—TEN to TWELVE o'clock, to point out the works and explain the drawings. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and severally, to the amount of a penalty of £1000 for the due performance of the contract. Tenders for the above work to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed "Tender for Work at Dover."

N.B.—The War Department reserve to themselves the right of rejecting the Tender of any of the Tenderers.

Royal Engineer Office, Dover, October 15th, 1856.

LLANDUDNO IMPROVEMENT ACT, 1854.—To SEWER CONTRACTORS, &c.—Parties desirous to CONTRACT for the CONSTRUCTION of the MAIN SEWER in the Town of Llandudno, may see the plans, sections, and specifications prepared by T. MACCOLL SMITH, Esq. C.E. at the office of the Commissioners, between the hours of TEN o'clock a.m. and FOUR o'clock p.m. daily. Tenders, under seal, to be sent into the Office before MONDAY, the 27th of OCTOBER next. The Commissioners do not bind themselves to accept the lowest Tender; but in the event of one being accepted, the party or parties will be required to give security for the due performance of his or their contract. The Council must also find a quantity of screwing jacks, pipes, invert and junction blocks, which the contractor will have to take at a price.

WANTED, a well-experienced competent Person, to act as CLERK of the WORKS, to superintend and take charge of the above Works being properly carried out.—Applications, stating terms, accompanied by satisfactory testimonials or references, to be made to the Commissioners' Office, before the 25th inst.—By order,

JOHN WILLIAMS, Clerk to the Commissioners.

Improvement Commissioners Office, sept 22 1856.

SUSSEX COUNTY LUNATIC ASYLUM. — BUILDERS.—Notice is hereby given, that the JUDGES intend to receive TENDERS for the BUILDING of a PAUPER LUNATIC ASYLUM for the County of Sussex, to be erected on the Estate of Sir Thomas READ, the 1st day of DECEMBER next, on or before which day further Tenders will be received by the Committee of Visitors at the Shire Hall, Lewes, and not afterwards.

By order of the Committee of Visitors,

JOHN CHILLMAN, Clerk.

CONTRACTS.

BRADFORD CORPORATION WATER-WORKS.—TO EXCAVATORS, MASONS and GENERAL CONTRACTORS.—The Waterworks Committee of the Bradford Corporation will be prepared to receive TENDERS for the EXECUTION of the following WORKS on WEDNESDAY, the 29th day of OCTOBER, at ELEVEN o'clock in the FORENOON, for the purpose of receiving TENDERS or PROPOSALS for the following WORKS:—

CONTRACT C.—The excavating, forming, and completing of a STORE RESERVOIR, of about sixty acres in extent, near to Chelker House, in the township of Draughton, and parish of Skipton, with the Culverts, Waste Pit, and other Works connected therewith, including the diversion of the Skipton and Otley turnpike road for about half-a-mile in length.

CONTRACT D.—The excavating, forming, and completing of a STORE RESERVOIR, of about sixty acres in extent, on the Barden Beck, in Barden Broad Park, in the township of Barden and parish of Skipton, with the Channels, Residuum Lodges, Culverts, Valve Well, Waste Weirs, Waste Water Channel, and other Works connected therewith; also, the building and completing of a Branch Conduit of about 720 yards in length from such Store Reservoir, to Main Conduit hereinafter mentioned.

CONTRACT E.—The excavating, forming, and completing of a MILLOWNERS' COMPENSATION RESERVOIR, of about nine acres in extent, on the river Dibb, near to Grimwith, in the townships of Appletreewick and Hartlington, in the parish of Burnsall, with the Culverts, Valve Well, Waste Weir, Waste Water Channel, Gauge Basin, Residuum Lodges, and other Works connected therewith.

CONTRACT F.—The forming and completing of about 17½ miles in length of the main Aqueduct or Conduit for bringing an improved supply of water to the town and borough of Bradford, wherein about 5 miles will have to be covered by means of tunnelling, and about 44 miles will consist of a cast-iron main pipe, and which Contract may be subdivided as follows:—

Division No. 1.—Main Conduit from the end of Barden Beck Branch, in the township of Barden, to Addingham low moor being a length of about 7,830 yards, including the Barden Tunnel and parish of Skipton, with the Draughton Tunnel of about 1,760 yards in length, and the Chelker Tunnel of about 1,830 yards in length, with the leading and laying down of about 930 yards in length of Cast-iron Pipe of 36 inches in diameter for crossing the Ings Beck Valley, near Draughton, and a Branch Conduit of about 330 yards in length for bringing the water from the above named Chelker Reservoir to such Main Conduit.

Division No. 2.—Main Conduit from the end of Division No. 1, at Addingham low moor, to a public highway passing through Holden Wood, in the township of Silsden, and parish of Kildwick, being a length of about 7,875 yards, including the Silsden Tunnel of about 1,970 yards in length, the Swartha Tunnel of about 960 yards in length, the lead leading and laying down of about 200 yards in length of Cast-iron Pipe of 5 inches in diameter for crossing the Holden Beck Valley, near Holden Wood, and the Holden Beck Branch Conduit of about 310 yards in length, of which about 110 yards will be tunnelled.

Division No. 3.—Main Conduit, from the end of Division No. 2, at Holden Wood, to East Morton, in the town ship of Morton East and West, and parish of Bingley, being a length of 5,890 yards.

Division No. 4.—Main Conduit, from the end of Division No. 3, at East Morton, to a public highway at Heaton, near to the Service Reservoir now in progress there, being a total length of about 9,270 yards, including the Greetland Tunnel, of about 320 yards in length, the Gilstead Tunnel, of about 545 yards in length, and the leading and laying down of about 1,200 yards in length of Cast-iron Pipe of 30 inches in diameter, for the valley of the Morton Beck, at East Morton; and a further length, of about 4,900 yards in length of Cast-iron Pipe, of the diameter, for crossing the valley of the river Aire, near the passage of the river Aire and the Leeds and Liverpool Canal, below Thorpe Mill, near Shipley.

The Committee do not bind themselves to accept the lowest or any other Tender or proposal. Plans and specifications may be seen, and further information may be had, from and after MONDAY, the 6th day of OCTOBER, on application to Mr. J. W. LEATHER, Civil Engineer, Leeds.—Bye-order,

W. H. HUDSON, Town Clerk.

Bradford, September 23rd 1856.

* Instead of the 22nd, as before advertised.

LONDON and NORTH-WESTERN RAILWAY.—CONTRACTS for STORES.—The Directors are prepared to receive TENDERS for the SUPPLY of the undermentioned STORES, viz

No. of Contract.		No. of Contract.	
1	Brass Steel, and Brass and Iron Tubes for Locomotives, &c.	19a	Lead, Ingot, Sheet, and Pipe.
		20	Iron, Yorkshire.
3.	Copper.	20b	Tyre, Bire.
4.	Canvas.	22	Ironwork.
5.	Carpets and Rugs.	23	Wheel Cast Steel
8	Coals.		Oils, various, and Turpentine.
9.	Crucibles.		Oilcloth.
11.	Copper and Brass Work.	26	Tin Block
12	Cutlery.	9	Tin Sheet and Spelter.
13	Drapery.	9	Tin Sheet and Spelter.
14	Deal Trimmings.	1	Varnishes.
15	Deal Timber.	2	Sundries, consisting of Baskets, Felt, Candles, Soap, Brooms, Pitch, Lamps, Stone, Hose, Pipes, Fire Bricks, Sieves, Cement, India rubber, Flannel, Cheese, &c. &c.
16a	Glass Plate.		
16b	Glass, various.		
17a	Iron Tee and Penn'ls.		
17 b	Nails and Packs.		
17 c	Screws.		
17d	Spikes.		
17 f	Lamp Irons.		
18	Leather.	31	Hats.
18a	Leather.	35	Caps.
19.	Lead, White and Red.		

Specifications and forms of Tender may be had on and after MONDAY, on TUESDAY, on application to the Secretary, Euston Station Londo. Tenders (sealed) for each Contract are required separately, and parties applying should state the particular Contract or Contracts for which they propose to tender. Patterns will be inspected on and after MONDAY, OCTOBER 20th, from TEN till FOUR o'clock, at the Company's Pattern-room, Euston Station; and any further information required may be obtained on application to the Heads of the several Departments. Tenders must be sent in on or before TEN o'clock on MONDAY, NOVEMBER 3rd. By order of the Directors,

CHAS. F. STLWART, Secretary

Euston Station, Oct 14th, 1856.

BOARD of WORKS.—WHITECHAPEL DISTRICT.—Notice is hereby given, that a meeting of this Board will be held on MONDAY, the 27th day of OCTOBER instant, at SIX o'clock in the evening, at the office of the Board, No. 15 Great Alie-street, Whitechapel, to receive TENDERS from persons willing to CONTRACT for the several WORKS connected with the SEWERS and DRAINS of the district, more particularly described in the specification or schedules of contract prepared by the direction of the Board; such Tenders to particularise the variation of price (if any) for the respective terms of two, three, four, or five years the Board reserving to themselves the right to determine the return the period of the duration of the contract. A copy of the specification and form of Tender may be obtained at the office of the Board upon payment of the sum of one shilling per specification.

All Tenders must be delivered at the Office of the Board before FOUR o'clock in the afternoon of the day of meeting; and any Tender which is not upon the printed forms supplied by the Board and duly signed by the person or persons tendering, will be rejected. The Board, however, do not bind themselves to accept the lowest or any Tender.

15 Great Alie Street, Whitechapel, October 18 6

DEVIZES CORN-EXCHANGE.—To BUILDERS.—The Town Council are prepared to receive TENDERS for the execution of the different Works required to be done in the ERECTION and COMPLETION of the PROPOSED CORN EXCHANGE. The plans and specifications may be seen at my Offices, between the hours of TEN and FIVE, on and after MONDAY, the 20th instant; and any further particulars may be obtained on application to Mr. WILLIAM HILL, Architect. All the first Lots Sealed Tenders to be sent to me, superscribed "Tender for Corn-exchange," on or before FRIDAY, the 31st inst. Security will be required for the due performance of the contract. The Council will not pledge themselves to accept the lowest or any other Tender. No allowance for estimates. ALEX. MEEK, Town clerk.

Devizes, October 8, 1856.

CONTRACTS.

GLASGOW CORPORATION WATER-WORKS.—LOCH KATRINE AQUEDUCT—KELLY and DUNTREATH CONTRACTS.—To CONTRACTORS.—The Magistrates and Council of the City of Glasgow, as Commissioners under the Glasgow Corporation Water Works Act 1855, are now ready to receive, and hereby invite TENDERS for the EXECUTION of further portions of the Loch KATRINE AQUEDUCT, which will be comprised in Two Contracts, viz.:—"No 4, or Kelly Contract," extending from the Village of the Duchray to the Valley of the Endrick, being a length of about 6½ miles; and, "No. 5 or Duntreath Contract," extending from the Valley of the Endrick, by Killearn, to Strathblane, being a length of about 5 miles. In No. 4 there will be Two Tunnels of the respective lengths of 1,175 and 1,418 yards, with various shorter ones, varying from 20 yards to 726 yards in length, and various Iron and Masonry Aqueducts. In No 5 there will be Two Tunnels, 318 and 880 yards respectively in length, and various Masonry Aqueducts. Each Contract will include all relative work. Plans, sections, drawings, and specifications, will then be ready for inspection on and after WEDNESDAY, the 15th inst., in the Town-hall, at the Cross of Glasgow, entry by No 12, Trongate-street. Copies of specifications and quantities may be obtained, by intending Contractors on application to the Subscriber, at his Office 24, Miller-street, Glasgow; and any further information may be obtained at the Offices of J. F. BATEMAN, Esq. the Engineer, in Manchester; and from Mr. HILL, Assistant Engineer, Loch Ard; and Mr MOORE, Assistant Engineer, at Milnavie, who will point out the line of Works.

Tenders for the construction of the Works, addressed to the Commissioners, sealed, and marked "Tender for Kelly Contract," or "Tender for Duntreath Contract," as the case may be, must be delivered to Mr. BURNET, at his Office, 24, Miller-street, Glasgow, on or before WEDNESDAY, the 29th OCTOBER current, at TWELVE o'clock noon.—By order of the Committee,

JOHN BURNET, Secretary.

Waterworks Office, 24, Miller-street, Glasgow, Oct. 6, 1856.

SMETHWICK LOCAL BOARD of HEALTH.—To LAND SURVEYORS, &c.—Survey and Plans for the District.—The Local Board of Health hereby give Notice, that they are prepared to receive TENDERS for a SURVEY and PLANS of the District of the Hamlet of SMETHWICK in accordance with the Public Health Act, 1848. Conditions and particulars for the survey and forms of Tender may be had, and specimen plans, and a plan showing the boundaries of the district and describing the proposed town part of it, may be seen on application to Mr. NICHOLS, Surveyor to the Local Board of Health; at the Offices of the Board, in Rolfe-street, Smethwick. Sealed Tenders, addressed to the Chairman, specially endorsed "Tender for Survey," must be sent to Mr. RALPH DOCKER, Solicitor, Clerk to the Local Board of Health, Rolfe-street, Smethwick, on or before the 1st day of NOVEMBER, 1856. The Local Board do not pledge themselves to accept the lowest or any other Tender.

By order, RALPH DOCKER, Clerk to the Local Board.

Rolfe-street, Smethwick, October 6th, 1856.

PARTIES desirous of CONTRACTING for the ERECTION of a CALVINISTIC CHAPEL, at Llandudno, may see the plans and specification on and after MONDAY, the 13th, at our Office, Llandudno. Tenders to be delivered, not later than NOVEMBER 8, to Mr. WILLIAMS, Tai, Newyddyn. The Committee do not bind themselves to accept the lowest Tender. The Contractor will be required to find sureties for the due performance of the several Works.

WEHNERT and ASHDOWN.

43, Charing-cross, London, and Llandudno

TO STEAM-ENGINE MAKERS.—The Town Council of the Borough of Dorchester, acting as the Local Board of Health for the same borough, are desirous of receiving TENDERS from persons willing to CONTRACT for the ERECTION, with duplicate boilers, of suitable STEAM POWER and PUMPS, at Dorchester, to raise 1000 gallons of water per hour from a well to a height estimated at 140 feet, and to force the same to a further elevation of 30 or 40 feet. The parties Tendering are required to specify the description and power of the steam-engine and pumps they propose to erect and the necessary consumption of fuel per hour to work the same and to forward their Tenders to Mr. SYDENHAM, Town Clerk, Dorchester, on or before the 1st NOVEMBER next. The Council do not bind themselves to accept the lowest or any Tender.

Dated October 10th, 1856

HART AND SON,

IRONMONGERS AND MANUFACTURERS,

53, 54, 55, & 57, WYCH-STREET, STRAND,

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PULPIT LIGHTS, CANDLESTICKS, GAS STANDARDS and BRACKETS, CHURCHES, CHAPELS, &c. lighted with GAS or CANDLES in the Mediæval or Classic Styles.

First-class Prize Medal, Paris Exhibition, 1855.

Specimens at the Hardware Court, Crystal Palace, Sydenham. Illustrated Price-catalogues post-free on application.

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ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK.

Sole Manufacturers of Delbrook's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

AUSTIN'S IMPERIAL

PATENT SASH and BLIND LINE

can be obtained of all

ROPEMAKERS, IRONMONGERS, MERCHANTS, FACTORS, and WHOLESALE HOUSES, in TOWN or COUNTRY.

Established 1774.

TO ARCHITECTS and BUILDERS.—HAWKINS'S REGISTERED COPPER and TINNED-IRON SASH CHAIN is greatly approved for its strength, durability, and facility in running over pulleys; and when worked at its warranted load will be found one of the most useful and efficient inventions for hanging window sashes of any weight up to a ton. May be purchased from every respectable ironmonger in the kingdom.

Manufactory, No. 27, Dale-end, Birmingham.—*The Builder*

Specimens sent free upon application

IRONMONGERY,

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THE LARGEST STOCK AT

THE LOWEST PRICE,

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SOLE LICENSEES and MANUFACTURERS,

No. 3, Mansion house-place, London, and No. 6, Berkley-street, Birmingham.

For Plan, Section, and Description, see "The Builder," May 17.

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IRON BUILDING AND ROOFING WORKS,

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PATENT GALVANIZED IRON.

Sheets, corrugated and plain; Fencing and Telegraph Wire, Bars, Rods, Hoops, Nails, Screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.

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Roofing orders promptly and carefully attended to.

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BUILDINGS HEATED BY HOT WATER.

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DRYING CLOSETS for HOSPITALS UNIONS, ASYLUMS, &c.

BATHS, RANGES, GAS-STOVES.

HOT-PLATES STEAM and GAS-COOKING APPARATUS.

for HOTELS, MANSIONS, &c.

G. B. C. has recently fitted up the Crystal Palace Kitchens with Gas cooking arrangements upon an extensive and most complete scale. Ornamental and Constructive Ironwork.

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PATENT PLUMBIC ZINC.

GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about	18 oz.	per foot super.	
12	20	"	"
13	23	"	"
14	26	"	"

Full particulars and the reduced price sent by post on application to

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A. MOREWOOD and CO.

(late Morewood and Rogers),

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PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,

PLAIN or CORRUGATED, and Curved of all Gauges.

Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.

Also the Patent Galvanized Tinned Iron Tube, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building at the

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Iron of every description galvanized.

SAVING IN GAS.—D. HULETT, INVENTOR and PATENTEE.—The Mercurial Gas Regulator is the only efficient instrument for ensuring wholesome and uniform lighting, equalising the pressure, and preventing any irregularity in the height of the flame.—D. HULETT and CO. 33, High Holborn, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).

WORKS—GLASS HOUSE YARD, opposite the Entrance to the London Docks

GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.

TUNED BY MACHINERY

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system, which give superior tone and facility for ringing.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

WROUGHT-IRON GIRDERS

For BRIDGES and BUILDINGS,
MANUFACTURED AND GUARANTEED AS TO STRENGTH.
CAST-IRON GIRDERS for BRIDGES and BUILDINGS.
Castings of every description.

ROLLED WROUGHT-IRON FLITCHES
For TRUSSING BETWEEN TIMBER.

SPIKES, RIVETS, CUT NAILS, WROUGHT DITTO, SCREWS, BOLTS AND NUTS, BAND IRONS, CHAINS, &c.

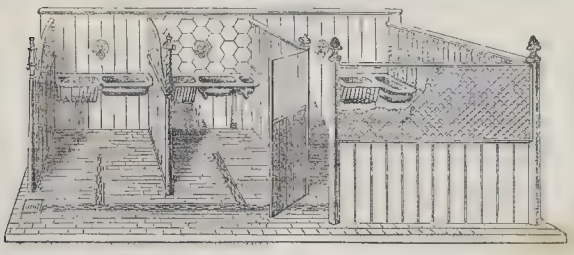
CONTRACTORS' PLANT, RAILS, EARTH WAGGONS,
And IRON WORK for WOOD WAGGONS, &c.

MATTHEW T. SHAW, 64, CANNON-STREET (late with C. J. Mare & Co.)

Such arrangements are made for Despatch and Punctuality that Orders can be executed in a few days.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH and WROUGHT IRON RACK, united to an iron top-plate, and forming one complete and useful fixture, having Cottam's Patent Noiseless Halter Guide and Collar-Rein attached, the tail of which is taken to the back of the manger, and works with ease and freedom up or down the guide-bar. Cottam's new Patent Seed-Box, of galvanised sheet iron, is an important addition to the above fittings, being simple in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings, Head and Durable Corn-Bins.

Improved Surface Drain, with safety covers. Sanitary Traps, and every article for the harness room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.

The new Illustrated Catalogue for 1856, and estimates gratis, upon application to

COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

FLAVEL'S PRIZE KITCHENER.

The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

SOLE AGENTS:
BENHAM AND SONS,
19, WIGMORE-STREET, LONDON;
and at the Crystal Palace, Sydenham.

STEVENS AND SON,

ENGINEERS,
IRON AND BRASS FOUNDERS AND MANUFACTURERS;

CONTRACTORS
FOR THE
ERECTION OR ALTERATION OF GAS-WORKS FROM TWENTY LIGHTS UPWARDS,
With Buildings, Mains, Meters, Service-Pipes, Lamp-Posts, Lamps, and Gasfittings
WATERWORKS FOR THE SUPPLY OF TOWNS,
WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.

Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds; these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c.
Gas Cooking Stoves and Ranges on the most improved principles.

GAS-FITTING IN ALL ITS BRANCHES.

GAS CHANDELIERS OF ALL SIZES, IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS.
DEVICES FOR GAS ILLUMINATION.

IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.

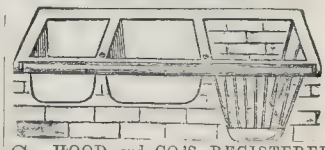
These Turnstiles have been selected for the Entrances of the Great Exhibition, New York.

PATENTEES OF THE SEMAPHORE RAILWAY SIGNAL.

Signals for communication between Guard and Engine Driver. Railway Stores and Lamps of every description.

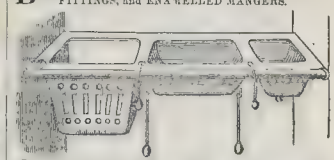
DARLINGTON WORKS, 16 to 19, SOUTHWARK-BRIDGE ROAD, LONDON.

PATRONISED BY H. R. H. PRINCE ALBERT



S. HOOD and CO.'S REGISTERED STABLE-FITTINGS, with FRONT REVOLVING ROLLER, plain or enamelled GIRDERS (cast and wrought-iron), COLUMNS, Sash-Weights, Rain-Pipes, Eaves Gutters, variously moulded Ornamental Rain-Pipe Heads, of Gothic and other designs, and all castings connected with buildings, in London time, and at country prices.
CASTINGS WAREHOUSE, 68, UPPER THAMES-STREET.

BARTON'S PATENT SAFETY STABLE FITTINGS, and ENAMELLED MANGERS.



THESE FITTINGS will be found to possess all the latest and most important improvements, and are of the best manufacture. An assortment of Stable furniture in stock. Iron Hurdles, Gates, Fencing, Tomb-railings, &c. New illustrated Catalogues forwarded on receipt of two postage stamps. JAMES BARTON, Ironfounder, &c. 373, Oxford-street, London.

IMPORTANT to ENGINEERS, MILLOWNERS, &c. NORTH WOOLWICH ELASTIC STEAM PACKING (Canvas and India Rubber), at 1s. 6d. per pound. Rings 3d. per lb. extra, as supplied to her Majesty's dockyards. CAUTION.—Non-genuine unless stamped, thus S. W. SILVER and Co.—Works, North Woolwich.

TESTIMONIALS

"Commercial Mills, Cornbrook, Manchester, Oct. 6, 1854.

"GENTLEMEN,—We have been using almost exclusively, for the last three years, your Packing for stuffing boxes and steam and water joints, previous to which time we tried all the sorts which came under our notice, but yours we consider decidedly the best and most economical. We are, yours respectfully,

"JOSHUA SCRIVENER and SONS."

"King and Queen Iron Works, Rotherithe.

"London Nov 11, 1854.

"GENTLEMEN,—We have tried your Patent Packing for some time in our steam-engines, and also in steam-pipe joints, and find it efficient and economical, and to be much superior to the ordinary hemp packing. It is especially serviceable in the slide valve.—Yours truly, "HOWARD RAVENHILL and CO."

"Works, Deptford, Jan. 29, 1856.

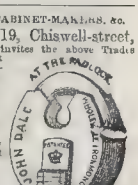
"I have pleasure in stating that the Packing of Messrs. S. W. Silver and Co.'s has been in use in the various parts of the engines on board the steam-ships of the company, and given every satisfaction. "J. BEARDMORE, Engineer,

"General Steam Navigation Company."

Copies of further testimonials forwarded on application to S. W. SILVER and CO. Nos. 3 and 4, Bishopsgate-street Within, opposite the London Tavern.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs, 9d. per inch, and upwards
Register Stoves, 6d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
4 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15
Feet Cottage Ranges, with ovens and back boilers, 32s. each.
3 feet self-acting ditto, ditto, 54s. each
Air Bricks, 4s. per doz.

Best Fine Cut Clasp and Rose.

¾	1	1½	2	2½	3	3½	3½-in. & larger.
11s. 6d	16s. 6d.	15s. 6d.	15s. 6d.	15s. 6d.	15s.	14s.	per cwt.

And every material required in the building, fell-hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

LIGHTNING CONDUCTORS.—R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot. R. S. NEWALL and CO.'S Patent Copper Rope Conductor is being applied by architects, engineers, and scientific men in all parts of the world.

COPPER and IRON CORD for WINDOW SASH-LINES.

OFFICES, Gateshead-on-Tyne.
13, Strand, London.
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RADIATING & REFLECTING STOVE.

WILLIAM S. BURTON'S

New Register Stove combines completely the well known principles of both Stephen's and Sylvester's celebrated Patent stoves, while it has others equally valuable, which are peculiarly its own, and for which a patent has been granted. Its reflecting and radiating powers are perfect, it is very simple, and cannot be put out of order, consumes but little fuel, is most cleanly and cheerful in use, while its general appearance, no fender being needed, is most imposing.

Prices, complete, black or bronzed, from 2l. 10s.; bright, 3l. 5s. and upwards. One may be seen in action in his showrooms, which contain such an assortment of fenders, stoves, ranges, fire-irons, and general ironmongery, as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with bronzed ornaments and two sets of bars, 4l. 15s. to 13l. 13s.; ditto, with ormolu ornaments and two sets of bars, 8l. 8s. to 22l. Bronzed fenders with standards, 7s. to 3l. 12s.; steel fenders, 2l. 12s. to 11l.; ditto, with rich ormolu ornaments, 2l. 15s. to 18l. Fire-irons, from 1s. 9d. the set to 3l. 3s.

The late additions to these extensive premises (already by far the largest in Europe), are of such a character that the entire of EIGHT HOUSES is devoted to the display of the most magnificent stock of

GENERAL HOUSE IRONMONGERY

(including Cutlery, Nickel Silver, Plated Goods, Baths, Brushes, Turnery, Lamps, Gaseliers, Iron and Brass Bedsteads, Bedding, and Bed Hangings), so arranged in sixteen Large Show Rooms as to afford to purchasers long facilities in the selection of goods that cannot be hoped for elsewhere.

Illustrated Catalogues sent (per post) free.

39, OXFORD-STREET; 1, 1a, 2, and 3, NEWMAN-STREET; and 4, 5, and 6, PERRY'S-PLACE, London.

Established 1820.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1½	7s. 4d.
15	1¾	7s. 6d.
15	1¾	8s. 0d.
15	2	8s. 6d.
15	2¼	9s. 0d.

THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches) is now being extensively used in the leading GOVERNMENT WORKS, DOCK BUILDINGS, BANKS, ASYLUMS, BARRACKS, WAREHOUSES, PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in London and in all parts of the kingdom.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.

London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

ECONOMIC COOKING-STOVE.—

DEANE, DRAY, and CO. recommend with confidence their IMPROVED COOKING-STOVE to the notice of the public. It is cheap in first cost, simple in construction, easy of management, capable of doing a large amount of work with a comparatively small consumption of fuel, and is manufactured in sizes suitable for large or small families. In operation daily in the stove and fender department of Deane, Dray, and Co.'s establishment, where may also be obtained engravings with prices, or forwarded free by post.—DEANE, DRAY, and CO., opposite to the Monument, London-bridge. Established A.D. 1700.

DR. ARNOTT'S SMOKE-CONSUMING GRATE.

Will this Grate be come universally used?

It advantages over every other consist in—

1. A saving of 50 per cent in fuel.
2. Its being a cure for a Smoky Chimney.
3. Its not requiring one half the attention of an ordinary fire.
4. Its being perfectly safe.

A Prospectus, with a Second Series of Testimonials, just issued, from all parts of the country, will be sent on application.

F. EDWARDS, SON, and CO. 41, Ludgate-street, Oxford street.

VENTILATING STOVES! SUSPENSION

STOVES!—Approved by thousands of purchasers, and recommended as the two best, cheapest, most healthy, and economical for churches, chapels, halls, schools, warehouses, shops, greenhouses, bedrooms, libraries, &c. Prospectuses, with prices, sent post-free.—DEANE, DRAY, and CO. Stove Range, Ironmongery and Furnishing Warehouse, London-bridge.

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, even of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c., where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

BATHS and HOT-WATER APPARATUS.

J. TYLOR and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fixing given. J. TYLOR and SONS, Manufacturers, Warwick-lane, Newgate-street, London.

MR. S. EGAN ROSSER, Warming and Ventilating Engineer, &c.

(successor to the late Mr. John Sylvester, C.E.) has REMOVED from Great Russell-street, Bloomsbury, to No. 6, CANNON-ROW, PARLIAMENT-STREET, WESTMINSTER.

A PRIZE MEDAL for SUPERIOR LOCKS

was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. &c. 6d. each.

J. H. BOOBBYER (late STEICH and BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

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RELIANCE LOCK and CHEMICAL FILLED WROUGHT-IRON FIRE-PROOF SAFES, DOORS, ROOMS, &c. Manufacturers of cash, deed, and paper boxes, embossing and copying presses, letter balances, and every description of lever locks and street-door latches. To be had at the General Lock and Safe Warehouse, 30, Walbrook, City. List of prices on application.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED

TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's Improved Ventilators. HULETT and CO. 5, High Holborn.

NEW PATENT MACHINE for

MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.

House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 58, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

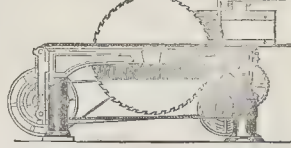
P.S. Steam Engines and Machinery attracted for

AMERICAN MACHINERY.—L. D. OWEN

and CO. Importers, have on hand at 187, Tottenham court-road, London, Woodworking Machinery, manufactured by Messrs. Buck and Co. consisting in part of Planing, Tonguing, Morticing, Mortising, and Sawing Machines, of the best structure, which they offer at prices which cannot fail to suit.

N.B. Machinery from the works of Messrs. Buck and Co. may be seen in operation at the Royal Arsenal, Woolwich.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Roller and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace. A descriptive Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. Kings-road, Chelsea, London.

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From BIRMINGHAM direct

Builders, Contractors, and others, supplied with Nails, Iron, and Ironmongery of every description, at the

LOWEST BIRMINGHAM PRICES,

A complete LIST of which will be forwarded upon application to BLYTH and BIANCHI,

Nail Manufacturers and General Factors, BIRMINGHAM; or at 16, Gresham-street, LONDON.

WOOD-CUTTING MACHINERY,

JOHN MCDOWALL and SONS,

WALKINSHAW FOUNDRY, JOHNSTONE, near Glasgow,

MANUFACTURERS of VERTICAL SAW-FRAMES (driven by straps),

For cutting balks of timber, from 5 feet on the side down to the smallest deal frame.

Patent vertical saw-frames, of the foregoing dimensions, with steam-power attached, circular cross-cut radial sawing machines; patent moveable ditto; patent horizontal cross-cut sawing machines, for heavy timber; planing machines, for working boards from a ¼ of an inch thick to 6-inch deck plank; revolving planers, for squaring and shaping heavy timbers, as used by ship-builders, &c.; patent curvilinear sawing machines, for circles, sweeps, and straight cutting, well adapted for ship-builders; power morising and tenoning machines; moulding machines, single and double; veneer mills of all sizes, with all appendages; scale-board machines, for hat-boxes, &c.; patent silent feed motions for saw-frames; and every description of machinery for cutting and shaping timber, all constructed of iron, of the best materials, and first-class workmanship. Mr. M'Dowall has been in the engineering and millwright business for upwards of 36 years, but during the last 24 years he has directed his attention particularly to the manufacture of wood-cutting machinery, as evidenced by the numerous patents he has obtained for its improvement, and by the extensive orders his firm has been favoured with from the British and other European Governments and private establishments in almost all parts of the world; and from their large and commodious premises, and first-class plant made for every department of the work without regard to cost, the largest contracts can be executed with a regularity, accuracy, and despatch, which cannot be exceeded by any other firm in Europe.—Applications as above for further particulars, will be promptly attended to.

CLARK and HUNT'S IRONMONGERY,

STOVE, and METAL WAREHOUSE, 139, Shoreditch.

A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler

30	32	34	36-inch.
28s.	30s.	32s.	34s.

Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—

34	36	39	42-inch
54s.	56s.	58s.	60s.

Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 2½d.

Register Stoves, with Solid Bars, per inch, 6d.

Improved New Pattern Circular Cheek Register, with strong Bars and Trivits, 5d. per inch.

Best Solar ditto, with Fire Brick Back, per inch, 10d.

Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2	2½	3 inch.
	10d.	1s. 1d.	1s. 8d. per yard.
Cast Gutters—4 inch, 8d. per yard.			

O G Gutters	4	4½ inch.
	1s. 5	1s. 2d. per yard.

	2	3	4	5	6
Patent Line	3s. 6d.	4s.	5s.	7s.	9s. per gross.

6-inch Rd. Ward Mortise, with Best Furniture and Patent Spindles, 2s. 9d. each. Light Elliptic and Register Metal, 14s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.

Brick Moulds kept in stock. Any size made to order.

Best Cut Clasp and Rose Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 in.
10s. 6d.	10s. 6d.	10s. 6d.	13s.	14s. per cwt.

Best Sheet Cut Floor Brads..... 13s. per cwt.

Best Cut Lath Nails..... 16s. "

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS'

WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSES, 19, Horseferry-road, 1, New Peter-street, Westminster.

GREAT REDUCTION IN PRICES.

RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	10d.	1s. 1d.	1s. 3d.	1s. 7d.	1s. 10d.	2s. 2d.	2s. 8d.
Half-round Gutters	7½d.	8d.	9d.	1s.	1s. 3d.		
O G Gutters		1s. 6d.	1s. 1d.	1s. 2d.	1s. 4d.		
Ditto, with plain clips cast on		1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.		
Ditto, with Iron clips ditto		1s. 2d.	1s. 3d.	1s. 5d.	1s. 7d.		

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 9d. per dozen.

Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.

Best Cut Lath Nails ..... 16s. 6d. "

Best Zinc Sliding Nails ..... 40s. "

Best Glues ..... 47s. to 53s.

A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.

Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

COLLINGE'S PATENT HINGES.—

Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

FACING FOR BUILDINGS COMPANY—TAYLOR'S PATENT.

BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,

REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.

STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond-stones, and the Stone Ashlar never injuriously weighted by the settlement of the Mortar joints of the inside Brickwork. The INSIDE of CHURCHES and HER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences. It can be had ready for fixing from the quarries at a small e for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other uildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

Mr. JOHN TAYLOR, ARCHITECT, OFFICES OF THE COMPANY, 40, KING-STREET, CORNER OF CHEAPSIDE.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1854 s manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only, scription of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and RROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS NECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

THE SEVRES GLASS COMPANY.

LEGENDRE AND TURPIN'S

WHOLESALE ESTABLISHMENT for the supply of CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality;

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,, 1840 ..	1,000	347	0	0	1,347	0	0
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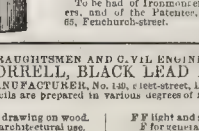

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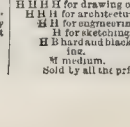

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The Builder.

Vol. XIV.—No. 715.

PROJECTIONS and projecting buildings in the metropolis are just now occupying the attention of many of our town readers. In another part of our impression, a report of a case, at the Clerkenwell Police Court, will be found, wherein it will be seen that the District Surveyor, forced, as we have reason to believe, by pressure from without, to act against his better judgment, summoned the owners of certain houses in the New-road, Pentonville, who had built over their forecourts, on the ground that the additions so made were projections beyond the general line of fronts, and that as they had not obtained the permission of the Metropolitan Board of Works, these were contrary to the Building Act. The 26th section of the Act says,—

"Except in so far as is permitted by this section in the case of shop-fronts, and with the exception of water-pipes and their appurtenances, copings, cornices, facias, window dressings, and other like architectural decorations, no projection from any building shall extend beyond the general line of fronts in any street, except with the permission of the Metropolitan Board of Works hereinafter mentioned."

The sitting magistrate ruled (as was settled over and over again by the official referees under the late Buildings Act), that these additions were not projections from a building, but buildings themselves, and therefore did not fall within his jurisdiction.

Considerable misapprehension appears to exist with respect to projecting buildings, and district surveyors have been blamed for not interfering, when, in truth, they have no control in the matter. The provision against the erection of buildings "beyond the regular line of buildings" is made in the Metropolis Local Management Act, section 143 of which says,—

"No building shall, without the consent in writing of the Metropolitan Board of Works, be erected beyond the regular line of buildings in the street in which the same is situate, in case the distance of such line of buildings from the highway do not exceed 30 feet, or within 30 feet of the highway where the distance of the line of buildings therefrom amounts to or exceeds 30 feet, notwithstanding there being gardens or vacant spaces between the line of buildings and the highway.

And in case any building be erected contrary to this enactment, it shall be lawful for the vestry or district board in whose parish or district such building is situate to cause the same to be demolished or set back (as the case may require), and to recover the expenses incurred by them from the owner of the premises in manner provided by this Act."

The Board of Works have had under consideration for some time a letter to the District Surveyors with reference to this matter (see p. 546, *ante*), requesting them to inform builders and others who may desire to build on forecourts that the consent of the Board must first be obtained, and to call the attention of the Board to any cases in which their warning may have been disregarded. This request, if made, the District Surveyors will doubtless attend to, but they have no power to go further.

Touching the interpretation of the expressions, "the general line of fronts in any street," and "the regular line of buildings," the Board, in the letter referred to, say they "regard these terms as implying the line of houses in the street, *as originally designed and built, without reference to subsequent additions*, or so far as built when these Acts came into operation."

There are many cases in which no declaration of the Board could enforce such a reading, and sending it out will simply serve to cause delay and vexation. We have a case in point before us at this moment. The forecourts, 30 or 40 feet in length, of a range of houses have been built over for some time past, with the exception of one about the centre. On this the owner is about to build, and he is informed by the surveyor to the Local Board that he must obtain the consent of the Metropolitan Board of Works before he begins, or he will involve himself in trouble. No declaration in the world can make the term "regular line of buildings" apply in this case to any but the line of shops on each side already brought out: the owner will, of course, therefore pay no attention to the intimation, beyond denying the necessity, and as no Local Board of sane men would think of fruitlessly involving the parish in law, by causing a building put up in such a position to be demolished (the only course open), the requirements of the Board are brought into contempt.

We are quite as anxious as the Metropolitan Board can be to preserve the thoroughfares from invasion (our endeavours to that end date very long before theirs), but it is useless to attempt to go beyond the law and apply the same rule to all cases, without reference to circumstances.

In respect of "projections," the Board have been very stringent, and loud are the complaints which reach us both of injurious delay and injustice. Take one case: the builder of a house, in a rural suburb, standing some distance from the footway in its own garden, desired to have a small bow-window. The adjoining house on one side is in the same hands, and there is garden ground on the other, yet the Board refuse the application. Surely this is an unnecessary interference with private will, and is, moreover, greatly opposed to the improvement of our street architecture.

The Board should be careful: if they are not swamped by the sewers, they may get impaled on "projections."

THE PROGRESS OF ARCHITECTURE IN OUR OWN COUNTRY.*

In 1820, the year when George IV. began his *reign*, the Glyptothek, at Munich—by Klenze—was commenced for the Crown Prince, afterwards Louis of Bavaria, out of the savings of his private purse. This building more than any other, exemplifies what there is of value in the distinctive characteristics of modern German architecture. There is a generic difference between the design here and that of the Walhalla. The latter building, externally, is little more than a reproduction of the old Greek temple,—placed, however, upon a grand site—and not, like the parallel efforts in Anglo-Greek architecture, incongruous in its accessories, and half developed as to details. The Walhalla was not actually commenced till the year 1830. Internally, it has greater novelty of design.† In the Glyptothek, however, the architect has held in view principles of art in the application of old styles, such as in the course of these papers, we have recognised and maintained as those which should be acted upon in all parallel cases. Schinkel—who, in the museum at Berlin, and others of his buildings, worked the Classical styles in the same spirit—has left on record his opinion of the means through which original architecture may be produced at the same time that adequate regard is paid to precedent. The notes were given to the world by Dr. Waagen. Schinkel refers to the *indiscriminate* use of old models, and of the error in another case, of designing a building *solely* with reference to its intended use and construction; he perceives how far practical considerations should prevail so as to render the appearance of a building consistent with the purpose,—yet how far, on the other hand, artistic feeling should conjoin with the influence of ancient monuments, to give the character of a work of art. The artist-architect, he says, must consider what the age demands as *essential* in architectural works; he must review the past, and see what has already been produced for similar objects, and what modifications may be necessary; and, lastly, he must determine in what manner the *imagination* must work, so as to create *new matter*, and so that that may harmonize with the ancient part,—so that, without losing sight of the original *style*, the design may produce the impression of an entirely new one, in which assimilation to the old style may still be recognized, and afford an additional charm.* Such was the principle which was actually carried out in the best works of Schinkel and Klenze. How far was it not in advance of the system adopted in the use of the Greek models in England?

We therefore apprehend that we differ greatly from the measure of the modern German school, taken by Mr. Gwilt, a writer from whom we must always differ with regret. Mr. Gwilt, in a work to which we have before referred,† and which was written expressly to disprove the high estimate formed of the school, felt that the Germans had "trusted too much to decoration, and too little to general forms;" that "in the endeavour to unite the Grecian school, strictly so called, with the arrangements of the Italian school, they have produced a style which partakes of the beauties of neither, because the one is destructive of the other;" and he doubted whether such union would be *ever* tastefully made.

That there are no errors of general design and detail in the buildings of Berlin and Munich, we would not say. In the latter city, indeed, with all its architectural splendour, there are things which we, especially, with the views of art which we have expressed, must regret. One work is an imitation of the Pitti palace at Florence; another essays to reproduce the Arch of Constantine; another the Loggia dei Lanzi; another the Basilica of St. Paul-without-the-Walls, at Rome; and so on,—but not universally. In the elaborate interior decoration of some of these buildings, and in many details of architectural ornament by Klenze, Gärtner, Zeibland, Ohlmüller, and others, a fertility in design is displayed, such as contemporary English architects had no field for, afforded to them; and the talent for which, therefore, they generally neglected to cultivate. Bavaria, indeed, possesses many buildings partaking of a higher principle of art than the imitations which have been referred to.

That which we regard as the distinctive style of Germany from about the time when Schinkel and Klenze began their career, in common with the style which generally prevailed in England, was one which bore *a certain* relation to Greek architecture. A relation, indeed, the German bore, but one that was essentially different to the relation of the English architecture. Instead of gaining that pleasure of association between a new work and an old style, which Schinkel has referred to, the English architect lost that pleasure in the very act of attempting solely the imitation.

Unsuccessful as all imitation, then, is—from the very nature of imitation—the architect never could have the opportunity of imitating. We speak not of pecuniary means. That is a point worth considering in a fair estimate of British works; but it is a point which has been somewhat too often advanced, as though in extenuation of radical errors against *art*. In the English "Greek" architecture, an imitation of a portion of a Greek building—the portico—and that portion even wanting the elements of plan which made the chief expression of the Greek portico,—was set on to an undecorated structure which was distinctly separate and opposite to it in every feature. There was no combination, no design; in short, no *art*. The nature of the error we may hope is now understood; and had not the taste for the classical styles passed out of fashion, the merit of some few English architects who were capable of rising above the general character of Anglo-"Greek" architecture, might be appreciated

* See page 522, *ante*.

† A view of the interior was given in the *Builder*, vol. x page 505

* These views will be found at greater length, in the *Builder*, vol. vii. p. 484, "Schinkel on Art-Education."

† "Elements of Architecture," &c.

better than it is. Gandy, and in some degree Wilkins, Inwood, and Basevi, were of the minority that we allude to. In the general fashion of Anglo-Greek architecture, there is ever the appearance of unsuccessful attempt,—not that incompleteness which is inevitable in all human works—or that, perhaps incidental to the best art, which allows the mind of the observer to fill up something,—but a pretension along with which you are asked to suppose this thing away, or take that thing as real, or to receive, in short, as good art and evidence of design, a result, whereof the prominent expression tells the absence of the very intellectual operation which goes to produce art. Some portion of the art-result, as we shall shortly argue, may be due to mere form—that is, regarding form apart from what has also to be viewed with reference to art—namely, structure. The observer, however, must be party, as it were, to the separate appeal as preferred to his eye; he must recognize that such an appeal is justifiable in the particular case, for the attainment of the beautiful in form, —the value of which last itself, he appreciates,—though his understanding will not bear being asked to subvert itself, in order that an actual structural requisite shall be departed from. Thus, on the one hand, art-caprice in forms which have structural office, and, on the other, the notion that sometimes gets abroad, that mere truth of structure is all that is needed to produce art and beauty, seem to be both prejudicial to the result of good architecture.

These considerations are worthy of being held in view in any comparison of the works of England and Germany.—Mr. Gwilt seems to have taken exception chiefly to the details,—which we regard as not generally discordant with the style, and as singularly original in conception; he objects to what he calls the combination of Greek and Italian architecture, and he seems to us to give too little credit to the perception of the real beauties of the original style, and to the new inventions which are manifest. But it will be well to describe one or more of the German works.

The Glyptothek at Munich is a building occupying an area of ground about 220 feet square, and consists of a *suite* of halls or galleries surrounding an internal court, from which, excepting the two apartments at the back, the whole building is lighted. It consists of a single floor, raised in the main part of the plan about 5 feet above the ground level; and the general height is about 42 feet. Externally, the architecture pertains to the Greek character; but internally the halls are domed and arched over in the Roman system. The view in the *Builder* (vol. x. p. 185), from Klenze's work, will serve to explain the character of the style and decoration,—but wanting the colour, which, considering the purpose of the building and the views of the architect, it is essential to take into consideration in judging of the result. The principal front has in the centre an octostyle portico, with, however, a range of four columns behind, in antis, and a single doorway in the rear wall. The pediment and roof are carried up to a greater elevation than the wings of the front, the entablature of the main order passing clear over those wings. The height to the top of the acroterium is 68 feet. It shows the slight perception of the chief beauties of classical architecture, that this portico was during long, almost a solitary modern instance of the use of two ranges of columns. Indeed, until the building of the National Gallery and the Royal Exchange,—where, however, the rearward columns are less numerous and on a different principle,—the portico of the Glyptothek was generally referred to as unique. We have, however, mentioned the use of two ranges of columns, though on a different principle of plan, by Harrison, of Chester. The order at the Glyptothek is Ionic,—the capitals having sculptured neckings, and the shafts of the columns being unfluted. The pediment is enriched with sculpture. The wings, which, as we have said, are less in elevation, have their own entablature and an attic, and these last do not butt against the central block of building in the ordinary way; for, there is a slight recess, so that the mouldings may return—an angle being thus produced uniform with the angle of the building,—an anta pilaster being at the angle in each case. The space between these antæ, in each wing, has three "tabernacle niches" with statues. The pediments of the niches have acroteria, and the cornice of the entablature has a range of antefixæ, closely set. It is through ornaments of this description, which he is fond of introducing, and which have both Greek character and novelty of design,—that much of Klenze's merit in the treatment of details consists. Mr. Gwilt, however, we shall find is of a different opinion.

The whole front stands upon three exceedingly deep steps, a resource which is of some value in the old Greek temples. The value of a basement of steps has been, perhaps, too little turned to account in modern buildings. In the Glyptothek, however, we are not sure that there is no impression of an inconvenience at the entrance; and which requires the filling up of the deep risers with practicable steps. Again, another architect would probably not have made the steps the same in height, along the front—considering the difference between the centre and the wings: but the unison of the design is served by the arrangement.

Mr. Gwilt complains, first, that the wings have no more relation to the central building than to any other building. The antifixæ do not perform their real office of hiding the joints of tiles, the attic at the back being in contradiction to them: the niches might have been taken from Diocletian's palace, with the addition of Greek foliage on their pediments; and they are so large as to overpower the portico; "steps are made for ascent," and "are only proper and beautiful as the ascent they afford is easy;" and finally, there is no correspondence in character between the external and internal architecture. There is some force, it must be admitted, in most of these objections. The design, however, remains a work of great beauty, and far in advance of anything produced at the same time in England. The difficulty of managing the portico we have referred to on a former occasion. It is desirable that such a feature should appear endwise to a block of building; but on this principle, where there are wings attached, unison of character is not easily retained; and the portico, as at the London University College, is apt to be stilted up, so as to suggest the practical inconvenience which at the college, seeing that the entrance is never used, we infer must actually exist.

Of the other objections, the point as to the accordance of interior and exterior, surely approaches to hyperoriticism. Would discordance be discovered? If so, it must be painfully obvious in another remarkable work, of much more recent date, where comparatively little has been said of it,—namely, St. George's Hall, at Liverpool.

We must omit description of the decorations of the Glyptothek,—not because they are of no importance in the history of art, but because they do not happen to belong to our more immediate question. The galleries and apartments, however, we may say, include the Egyptian Hall, the Etruscan Hall, the Hall of Ægina,* Hall of Apollo, and Hall of Bacchus, the Hall of Niobe, Hall of the Gods, Hall of the Trojans, Hall of Heroes, Hall of the Romans, Hall of Sculpture, and another called the Hall of Modern Sculpture. The vivid colouring of the walls and ceilings of a museum is justified by Klenze, who has said:—"Too great simplicity has prevailed in Italy and other countries in the treatment of museums; and the dull stony hue adopted, does not at all suit ancient monuments: a certain richness of decoration is necessary, and deep colours should be used on the walls, to make these antique statues appear to advantage." It may be well to note, as expressing an opinion acted upon out of England, that imitations of coloured marbles are used generally. It is also worth mentioning, that whilst on the frieze opposite the entrance, there is an inscription ascribing the formation of the collection, and the erection of the building, to the king, Louis,—over a door on the left is an inscription in honour of the architect, and over one on the right, an inscription in honour of the painter Cornelius.

* The Hall of Ægina is that which is shown in the view before referred to.

The other chief building about which Mr. Gwilt might be at issue with us, would be Schinkel's Museum, at Berlin. This building forms an unbroken oblong of 276 feet by 170 feet; and the principal façade, which is at one of the longer sides, consists of a grand colonnade of eighteen fluted Ionic columns of 40 feet in height, and broad antæ at the angles. The columns rest upon a solid stylobate, or podium, of the same height as the basement story of the other fronts, and unbroken, except by a flight of steps in the centre, occupying the width of seven intercolumns. Within, this central portion has four columns in antis, beyond which is a low screen with open-work bronze doors, inclosing the staircase,—the upper part of which, however, appears, and gives the distinctive character to that part of the building viewed from the exterior. The general rearwall of the portico is enriched with marbles, and was designed to receive paintings in fresco. The entablature of the order supports sculptured eagles, one over each column. A rotunda occupies the centre of the building. This has a gallery borne by columns, and is domed over at the top. Mr. Gwilt objects to the appearance of the staircase, as contradictory to the idea of a single story, conveyed by the order; to the general want of variety; to details, such as doors cutting through the stylobate at the sides of the building; and to many other points,—one of which may now be worth inquiring into.

In the museum by Schinkel there is what neither the writer above named, nor many English architects, will approve, namely, a want of agreement structurally and decoratively between the domed ceiling of the central hall, and the raised centre of the building, quadrangular on plan, which conceals the dome externally, and which, with angle pedestals and sculpture on them, is an important feature in the design. But whilst we recognize and have argued for the consideration of both structural propriety and effect,—as required along with other attributes in design, to ensure the best result,—we must feel that it is impossible to give equal force to all those attributes under ever varying circumstances, and that it must rest with the particular architect to choose the proportion which each ingredient of composition should bear to the others. Now, we fearlessly assert, that, in all old styles, so high has been the value attached, and properly attached, to *effect*, that not only details, but portions of a structure, will be found designed and built, at all events as to their main principle of form and structure, for no purpose but effect. What was the often quoted example of the Gothic spire? Aye! and many another leading feature of the old cathedral plan and section? We know that the attempt has been made to suggest use for the stone-vaulted ceiling below the actual roof covering. Of course, with people of this day, in their houses, a ceiling has its use. But can it be supposed that such use was perceived by the mediævalists, or that if it had been, we should have had, as we have, the majority of old churches *un*ceiled in stone or plaster; in short, can it be doubted that the stone-groined, ribbed, and bossed ceiling owes its origin solely to the desire for effect. The external dome covering in the case of St. Paul's Cathedral is, therefore, not wholly indefensible, any more than it is in the majority of other chief structures with domes; and it may be inquired whether the opposite principle of treatment, as in the Pantheon and Santa Sophia—where the external and internal curvature in the main correspond—in having the supposed structural propriety, does not sacrifice externally, the greater part of the especial beauty of the form. However, all that we contend for is, that the problem of reconciling the internal domed ceiling, which it is not desirable to carry to great height, with the external dome which it may be reasonably desired not to keep low, may be viewed in all, and not in one only of its bearings. The eye and even the judgment, we say, will tolerate much that is designed solely for effect: the unprejudiced observer requires not positive identity of form and structure, but simply does *not* tolerate glaring inconsistency, or prominent want of unison, between one and the other. It may, therefore, at once be conceded, that such

a fault, if it become one, of exalted apprehension of the value of mere effect, is to be found in the works of the German classical school. In the Pinacothek, by Klenze, an arched ceiling is formed under an enclosure of square sectional outline; but the case is really one which is too frequently found to require any lengthened notice, had it not been prominently advanced in disparagement of both the German and other sections of the classical school.

Mr. Gwilt objects to the Museum, that it seems more like the composition of a scene-painter, than of an architect. We, however, recognising a distinction between the two, and believing that mere scene-painters' art can never produce good *architecture*, believe also that the painter-like power of composition which Schinkel possessed, and for which his education specially qualified him,—the power which Reynolds recognised in Vanbrugh, and for which the education of the theatre has often stood architecture in good stead,—is one of those things which not less than regard for structural propriety is needed at this day, to bring back the art into the way of realizing its grandest results.

THE EARLY WATER SUPPLY OF LONDON.

Once upon a time a few pleasant streams of water were sufficient for the purpose of supplying a considerable part of old London with one of the necessaries of life. These were the river of Wells, the Wall-brook, Old-bourne, Langbourne, and others, which ran cheerily along and provided the citizens with a temperate beverage before the invention of the tea-pot.

As far back as the beginning of the thirteenth century, the streams were pronounced to be insufficient for the purpose to which they had been put, and certain merchants from abroad who dealt in wood, being prevented (as were other foreigners) from landing their wares, the wood-dealers offered to the Corporation of London 50 marks per annum, and a fine of 100*l.* to be allowed to warehouse their goods, and this having been agreed to, the fine was largely added to by several worthy London traders, and water was brought from six springs, or heads, as they were called, at Tybourne: this supply was brought to the City by means of lead pipes of 6-inch bore.

For the reception of the Tyburn water a cistern of lead, castellated with stone, was first erected in Westcheap, in 1285.

The necessity for additional fountains or conduits soon became urgent. Old-bourne (Holborn), a rivulet spring which rose near the Middle-row, not far from the bottom of Gray's-inn-lane, became polluted, and passed ignominiously into a sewer. Wall-brook, which entered the City through the wall, between Bishopsgate and Moorgate, emptying into the Thames at Dowgate, was stopped by the numerous bridges, &c. which were erected in this direction. Langbourne rose near the east end of Fenchurch-street, and ran to Sherbourne-lane, where the stream divided and was lost in the Wall-brook on Dowgate-hill.

The river of Wells was much obstructed in the neighbourhood of Clerkenwell by the mills of the Knights of St. John of Jerusalem, and other similar works, which were situated where Turnmill-street lately was, and Hockley-in-the-hole, a spot to which we have referred in the *Builder* lately, and eventually became a foul ditch, which it was necessary to arch over and mingle with the murky waters of the Fleet.

The number of conduits in London supplied with water from the neighbouring fields, soon increased to nineteen. There was one at Aldgate, and others at Cole-abbey, Aldermanbury, Cornhill, Fleet-street, Cripplegate, Lothbury, Dowgate, Holborn-hill, Stocks-market, and other places.

In 1401, the prison called the Tun, in Cornhill, was converted into a conduit for the Tyburn water. Although the prison was converted to this wholesome use, it seems that a cage for the jail birds was still kept attached, as were the stocks and a pillory, in which were exhibited bakers, millers, and other dishonest traders.

John Wells, mayor, improved the City con-

EARLY WATER SUPPLY OF LONDON.

Conduit, Knightsbridge.

Conduit formerly in Pall-mall.

Map showing Heads of Water.

duits; and in 1439, the Abbott of Westminster granted to the mayor and citizens of London, "one head of water, containing 26 perches in length and one in breadth, together with all its springs, in the manor of Paddington."

In the days when John Wells was mayor, the Fountain heads, Tyburn, &c. were pleasant places, and a praiseworthy spirit was shown by the City officers to preserve their purity; and it must have been a sight which would afford both pleasure and amusement, to see the mayor accompanied by the aldermen and citizens, during their periodical visits to the *heads*, from whence the conduits were supplied; hunting a hare before dinner, and a fox after dinner, in the fields beyond St. Giles, near Tyburn.

About 1453, Will Eastfield, mayor, founded a conduit, near Shoe-lane, supplied from Paddington, and communicating with the *Great Conduit-head, in Marylebone-fields*. In 1478, the inhabitants of Fleet-street got leave to found conduits at their own charge, one to be set at the standard above mentioned, near Shoe-lane, and the other at Fleet-bridge. The former of these was richly decorated. The tower was of stone, with images of St. Christopher on the top, and angels round about lower down, with sweet sounding bells. Before them, when open by an engine placed in the tower, they at divers hours of the day and night chimed such tunes as were appointed. This work seems to have soon got into decay, for we find that it was rebuilt in 1582, and cost, including charges in others of the fountains, 2,000*l.*

The water-supply at the Stocks-market was not protected by any building, and the frequenters of the place addressed the worshipful the Lord Mayor as follows:—

"Beseeching your good lordship and masterships, the inhabitants dwelling about the stocks, that by the space of five or six years past a vent of water hath run by a pipe of lead besides the stocks—which pipe of lead, by reason that it is not closed, is daily hurt with horses and carts,—it may therefore pleasure your good lordship and masterships, and all of our masters of the common council, to grant and give licence unto the said inhabitants, upon their own proper cost and charges, to make or cause to be made a little postern of stone, with a cistern of lead therein—drawn out in cocks to the common weale of the said inhabitants there about dwelling. This at the reverence of God and in the way of charity."

In addition to the water of "Father Thames," the brooks and conduits—there were also several springs—the Holy-well, near Shoreditch; Clement's-well, Clerkenwell (not far from the west end of the church); Skinners'-well, near Clerkenwell-green, where the plays of the parish-clerks were enacted: more to the east were Foy's-well, Tod's-well, Loder's-well, and the horse-pond in Smithfield: the streams running from these wells formed a considerable portion of the water of the river of Wells above alluded to. There were also Crowder's-well, adjoining to St. Giles's Churchyard, on the north-east; Dame Annis the Clear, at Hoxton; and not far from this was a spring, enclosed by a conduit, part of which ran into a deep pond, where so many accidents happened, that it was called the "perilous pool." A goldsmith and citizen of London, named Kemp, who had purchased the land, converted the Perilous-pool into large pleasure-baths, which he called the Peerless-pool. Great credit is due to this gentleman for being the first to shadow forth an idea of bathing for the million. Some interesting particulars respecting the management of this place will be found in "Hone."

We must not omit to mention the White Conduit at Pentonville, which became famous in consequence of its surviving so many similar erections. Three fields north of this conduit were the remains of a Roman camp, probably part of that used during the contest with Boadicea and the Britons. About a dozen years ago a considerable extent of entrenched work, which formed part of this ancient defence, could be traced.

The water-works of the Dutchman at London-bridge, and the introduction of the New River, rendered the supply from the conduits of less importance, and the increase of the traffic causing them to become obstructions, many of them were removed; and at the present time, so far as we are aware, they have all vanished, with the exception of one at Knightsbridge, of which we give an engraving.

In searching recently amongst the prints and drawings in the King's Collection at the British Museum, we came by accident on a carefully-executed but old-fashioned plan, with the following heading, which gives a good idea of the manner in which the water supply was formerly managed;—"A Survey of the Conduits, &c. to Whitehall, St. James's, &c. in 1718."

In the Hyde-park, or *Hide-park*, as it is spelled in the sketch, on the south side of the *lamp road* from Kensington, are nine dots, with lines branching from one to the other. These are marked on the adjoining engraving:—

"SOFT WATER.

1. The principal head, emptying into 9.
2. The principal head of Westminster Abbey main.
3. Another head, emptying itself into the said main.
4. Ditto.
5. Mrs. Birket's conduit, to serve her houses at Knights-bridge.
6. A small head, which empties into No. 9.
7. Ditto.
8. Another head that runs to 9.
9. *The receiving conduit, called the* STANDARD."

This conduit, of which we give a view, may still be seen in Hyde-park, close to the first shops that occur after passing the Duke of Wellington's house in going towards Brompton, and nearly opposite what was the "Chinese Exhibition."

10. The cistern upon the main, which serves St. James's.
11. A cesspool-house upon the main, which serves Whitehall."

"So much," as honest John Stow would have said, "for ye soft water supply of Mrs. Birkett's houses at Knightsbridge, St. James's, Whitehall, and Westminster Abbey;" and no doubt favoured individuals had reason to be thankful in contrast with their neighbours.

"HARD WATER.

12. This at Mary-bone-street, the principal head in Lord Harborough's cellar.
13. Sherrard-street, Soho, corner of Queen-street, the second head.
14. The third head: this in Queen-street, towards Windmill-street, Soho.
15. At the corner of Coventry-street and Princess-street the Receiving Conduit," which was probably similar to that at Knightsbridge, or the "pants" or fountains, which are still remaining at Newcastle-upon-Tyne, Durham, &c.

"16. In a court leading from Whitcomb-street a small head branches into the main." It runs along the side of Hedge-lane, then a green road without houses, which passed between the present Suffolk-street and the National Gallery, and from thence to Charing-cross, the King's-mews, &c.

17. The grand well emptying into 20.
18. The head discharged at 19.
19. The receiving-conduit conveying the water to 20—(17, 18, 19 in the King's-mews).

20 was a stone cistern in Inner Scotland-yard. The author of this map observes that the Hedge-lane ducts—conduits and mains—are out of repair by neglect and encroachment.

It is curious to notice the changes which have been made since 1718. The heads of soft water 1 to 9 were on the margin of what is now the Serpentine (then not formed), and have merged into that water.

In the King's collection there is a drawing of older date, which we engrave, of a conduit on the site of what is now St. James's-square, and was then a green with bushes in it. In the background of the print is St. James's and Westminster Abbey, before the building of Wren's western towers. This conduit was probably that on the main marked 10 on the plan.*

Great as is the need in many respects even now for improvement in the water supply of the metropolis, it is difficult to give an idea of the former state of things. Lilly, the astronomer, in his Life, mentions that he himself and London apprentices generally, at that time, were employed for some hours during each day in carrying water from the Thames for household use. The wells of London must, like the rivulets, have been long unfit for human use, and it is fearful to think of the condition of the "hard water" supply to Whitehall, which had its source in Lord Harborough's cellar and heads in the places pointed out in the plan. The soil, long before the water was disused, had been saturated by numerous cesspools and other pollutions.

* The letters on the upper part of the map had reference to some contemplated remarks on the water-supply and drainage of the Golden-square district, but these we postpone.

THE LIVERPOOL MUSEUM AND FREE PUBLIC LIBRARY COMPETITION DESIGNS.

THE sixteen selected designs for the Liverpool Museum and Library are now exhibiting to the public at the St. George's Hall. The committee have recommended the two plans on which to confer the first and second premiums, and have thrown them open to inspection, I suppose, that they may hear what the public have to say in the matter. Feeling a deep interest in a proper selection being made, I have paid the plans several visits, and now ask the privilege of venturing my opinions on them, leaving others to judge if these opinions be correct. Before entering upon my criticism, it will be necessary, that all may more thoroughly understand the subject, to state some of the requirements set forth by the committee.

The site proposed for the building is a slightly irregular parallelogram, 250 feet frontage by 180 feet deep, bounded on the back and front by two streets, and on the sides by houses and shops, not in possession of the committee. The principal *façade* will face the open ground on the western side of St. George's Hall: the difference of level at the extreme corners of the building is 16 feet, and it will stand on a much lower level than the hall.

It will be seen from this description that two essential points are to be kept in view, viz. to place the structure on a high base, to prevent, if possible, the dwarfing effect of its magnificent neighbour the Hall, and to light the rooms independently of windows in the sides, which might be built up at any time by the owners of the adjoining land. The sizes and purposes of the several rooms were also set forth, a distinct block of buildings for the library, and a suite of rooms for the Derby museum, being insisted upon. A central hall, surmounted by a dome, to serve as a gallery for statues and other works of art, was suggested for the consideration of the competitors; and lastly, the cost was not to exceed 20,000*l.* The lending library, at first proposed, was afterwards abandoned.

The first impression received on viewing the plans, is the very general adoption of the dome and central hall as a distinguishing feature, the competitors evidently considering this the first condition of success. Every variety of cupola is here to be seen, from that at St. Paul's to a Turkish minaret: circular, square, ogive, flat, elliptical, with lanterns, both plain and highly decorated, are all here; but what is surprising, almost the only plan in which the dome is omitted is recommended for the first premium. It seems, therefore, that competitors should consult their own judgment rather than the loose suggestions of those who have not studied the subject. A few of the competitors, doubtful of the utility of making an architectural feature of it, have timidly kept it down to saucer proportions, thereby producing a positive objection externally.

The artistic labour exhibited in some of the perspective views is excessive, that being generally considered also a great essential for success; but however much they strike the eye as pictures from the artistic handling, brilliance of colour, and picturesque treatment of the figure groups, a person of correct taste cannot but regret that in many instances this treatment has a tendency to mislead, and is employed effectually to the neglect of the higher qualifications of art.

The designs may be divided into two classes, that most generally adopted being an arrange-

ment of the rooms around a central hall, forming a compact block, so condensed in plan as to allow space for obtaining light by windows in the sides; the other being quadrangular, with an open space in the centre for obtaining light. The design recommended for adoption is a combination of both systems.

Under the first class is to be placed the design marked "Cupola," containing a very large central hall, circular in plan, with a gallery around the interior supported on columns, and the whole crowned with a very flat dome, intended to be used both for a sculpture gallery and museum. Apart from the undesirability of exhibiting two such different classes of specimens together, the design, though superior to many, contains its own condemnation, in being incapable of extension. There is also not that distinction between the library, museum, and Derby collection, very properly insisted on in the particulars of requirement. The style is Italian, a very large portico forming the entrance, and giving the façade rather a dumpy appearance.

The plan marked "Experto crede" contains the germs of a good design, but is not worked out as practically as it should have been. The evils of competition are in this plan well exemplified; for the designer having in his mind's eye the success of plans that evince a total disregard of the means at disposal, has determined to take the first premium at all hazards.

He has surmounted the library—here the principal feature, and a copy of the one erecting at the British Museum, with a very ornate dome of preposterous dimensions. The plan has the merit of being the only one in which sufficient space has been left for storing the volumes, 80,000 of which have to be provided for. The façade is a handsome one, depending on fenestration for effect. Coupled attached columns indicate the height of the top story, the absurdity of columns several stories in height, as in many of the designs, being well avoided. The museum occupies the whole of the front, and is capable of extension, but the rooms want unity of arrangement, appearing as if divided off at random.

"Bis dat cui cito dat" is a very elegant design, but does not characteristically show its purpose. The requirement of two distinct blocks of building has been met, but in doing so the plan has lost unity of arrangement. The architect must be unacquainted with the ground, or he never would have placed the entrance to the library in a back street. The beauty of a square room for a reading-room is questionable, and the arrangement of the museum, in galleries around rooms the full height of the building, reminds one too much of the universal exhibitions. The decoration of the interior is extravagant.

"Pro fide Christiana"—a very creditable design, but too cubical-looking. The cupola is well designed in itself, but combines badly with the rest of the building. One cannot but be struck with the want of utility in all the cupolas. To make it an effective feature, it should have height, but not one of the competitors has been able to find a use for it commensurate with the expense. The central hall is effectively managed, and the libraries are distinct and well arranged, though deficient in store accommodation. The museum portion is not laid out on a sufficiently regular system, nor is it capable of great extension. Taken as a whole, the design is, however, one of the best.

In "Vasari," the quadrangular system is fully carried out—indeed to the injury of distinctness in the general divisions. The designer has very meritoriously been trying to produce a building within the means at the disposal of the committee: I regret to say the result has been a very bare interior. The whole of his perspective drawings he would have done wisely to have left at home, and trusted to the front elevation and accompanying model, which give a much more satisfactory explanation. The portico would be a failure, if executed. Considerable design has been shown in the elevation; the chief merit of which is that it expresses its purpose much better than the generality of the others.

The next design claiming notice is marked "Peter," who boldly declares that it would cost 50,000*l.* to carry it out. O, Peter, I honour thy truthfulness! It appears to be in part a reproduction of the Liverpool Custom-house.

"Usui Civium decori Urbium," is a "Paxton" design, the exterior studded with glass domes, not unlike those on the far-famed and universally admired Brighton Pavilion.

* * * * *

"Omega."—The elevation suggested by that of St. George's Hall. A forest of piers and columns disfigures this plan, which is not capable of extension. The manner in which the library is formed in the wings is worthy of praise. The heating apparatus has been gone into heavily.

"Alma."—The design recommended for the second premium possesses an elevation taken from the Hôtel de Ville, at Paris. Why the committee should have recommended this plan I am unable to conceive, as the style is quite out of character with the purpose of the building, and the cost would be enormous. It is incapable of future extension. Such a flagrant violation of the conditions should never be rewarded, or a great injustice will be done to many of the competitors.

"Con Amore."—The distinguishing feature in this design, and the one which most recommends it, is unity of arrangement. A central hall, with an arcade around, and open to the roof, intended for the display of statuary and painting, unites the several parts of the building. The stairs are ingeniously thrown back far into the building, in approaching which you have to pass through the hall. The harmonious effect of the interior is worthy of praise. The plan of the building resembles an inverted ⊥, the sculpture hall occupying the centre, and the wings on either side being in the form of the letter L, one of which is appropriated on the ground-floor to the library, and the other to the museum. The plan admits of extension in a more satisfactory manner than the others. In the elevation a series of terra-cotta reliefs, in long panels, on the upper story, is used to display the purpose of the building. The lower story advances beyond the main wall, which will be carried on arches: it is relieved with a series of niches, proposed to be filled, from time to time, with statues to distinguished Liverpool men. The two wings advance slightly in front of the lower story, and have a bold projection above. The central columnar portico is the most prominent feature: it has the defect of showing two stories high. The absence of windows, only one in each wing appearing in front, is a grave defect, for the light being obtained partly from skylights in the advancing lower story, and partly from semicircular lights in the main wall, hid from view by a balustrade, converts the wall into a mere screen, and is one of the common expedients resorted to for obtaining breadth of effect in classical architecture. St. George's Hall should be a warning to architects against resorting to such expedients, and though darkness may be tolerated in corridors, it will not be in a museum of which the professed purpose is to exhibit everything to the best advantage.

The library as before stated occupies a suite of rooms in one wing of the building, forming the letter L in plan: in the extreme corner is a staircase connected with the females' reading-room, which is situated above the students' room: this should have been on the same floor. The difference in the height of the rooms is objectionable, and will be anything but pleasing; for the principal reading-room occupying the re-entrant angle, is divided into two parts—one the full height of the building, with a gallery around; the other only one story high. The unity and completeness of the library portion has been sacrificed to that of the general plan, by squeezing it into a wing the counterpart of the museum. One large room for the general reading-room, one for the students, and one for the females, of easy access to the librarian, would form a far better arrangement, and one which is, I think, imperatively demanded, as a more complete monument to the munificent merchant who has advanced 6,000*l.* towards building it. There appears to be insufficient provision made for storing the books, an important point in connection with the plan. The library, generally, is not equal to what the public have a right to expect. It was to form, according to the requirements, a distinct and self-contained block; and Mr. Picton stated at the council meeting, that that condition had been complied with in this plan better than in any of the others: with all due deference to his opinion, I am unable to comprehend how a suite of rooms, with the museum over, constitutes a self-contained block. The future extension of the building is shown in block on the plan, but we are left in the dark as to whether the one in connection with the library is for the extension of that department: if so it will, when complete, be a still more irregular affair: if for the museum, how is it to be connected with the other wing? The museum does not provide sufficient accommodation in wall space, and the Derby collection is not sufficiently distinct from the other parts: indeed, it appears that, although the sculpture-hall constitutes a very handsome feature in itself, the space for the more useful portion of the museum and library has been curtailed to make a fine hall and entrance. I am also decidedly of opinion that the building wants elevation, considering the site on which it will be placed.*

The committee have had a difficult task before them, and have, I think, done all in their power to arrive at a correct decision: they cannot be blamed, therefore, in recommending this plan for adoption when the competitors themselves by their vote pronounced it the best. The council have, however, done wisely in referring the two plans to their surveyors; and, although disagreeable, it will be their duty, if the amount exceeds the stipulated sum, to call another competition, and give architects an example for their future guidance in Liverpool competitions, and to show them that the conditions are not made to be infringed. It may be all very well for the chairman to say, "Not one of the sixteen can be executed for the sum named." How many of the rejected sketches, I would wish to ask him, could have been executed for that sum? I feel convinced that if this plan were adopted, something more applicable than "Con Amore" would be produced. The competitors might have the 250*l.* divided among them according to merit, and a premium need not be offered for the second competition.

A general review of the merits of this large collection of plans, after having studied each separately, impresses one with anything but a favourable opinion of the good resulting from competition. The crudeness of many, the impracticability of most, and the want of elegance in the few that are practicable, are most striking. Considering that these sixteen designs were picked by an architect, from 116 sketches, I should have expected something much superior. If the 100 rejected sketches were inferior to the worst of these, displayed less arrangement in the plan, greater meagreness of effect, general poverty of design, and want of harmonious proportion with breadth of effect, then we may truly say the best men keep back. I recommend another competition only for the purpose of raising the morality of competition generally, and leading architects to attend to the first essential, which is to produce the greatest result with the least money—the most difficult problem an architect has to solve.

A.

LIVERPOOL MUSEUM AND LIBRARY COMPETITION.

You a month or two since forshadowed a doubt as to whether the result in the above competition would be altogether satisfactory. I was disposed then to quarrel with your want of faith; but events have proved you were right. After so much has been said and done in the matter, the result is most extraordinary. The instructions to the competitors were, that the library was to be kept distinct from the museum, in a "self-contained block." Arrangement was to be made for future increase, and the cost not to exceed 20,000*l.* The advisability of a dome was also suggested, and the building required to be in harmony with St. George's Hall.

Now, sir, so far from the committee selecting according to these rules, they have ignored them!

* The author of the selected design, "Con Amore," calls upon us, with a number of remarks equally unfounded and discreditable to him, to give "our reasons for not naming the author of the designs chosen" in this competition. As it would be useless to give reasons for not doing what we have, in truth, done, we will simply refer him to p. 536 of our Journal, and advise him before he again makes insulting charges to be sure that his grounds are good.—Ed.

The design of "Con Amore" deviates from many of the rules, and the design of "Alma" is in opposition to all! "Con Amore's" design has not the library clearly distinct, does not well arrange for extension, at least not without blocking up numerous windows, would cost probably 30,000*l.* and has no dome. "Alma's" design has not the library separate, has no provision for extension, would cost probably 60,000*l.* has no dome, and is not in character with the "Hall," —resembling much a large French hotel!

It appears to me, that when rules have been laid down for the guidance of the competitors, the decision is to be regarded as very much less a matter of taste than a matter of rule. It is that design which keeps closest to the "instructions" which, I think, should be chosen, not the most showy. At the late meeting of the Liverpool town council, one of its members very sensibly thus expressed himself with respect to the first-chosen design:—"I want to know," said he, "whether the decision, under the circumstances, is fair to the other competitors. I want to know what the cost of the building would be. If I am told that that work can be executed for 20,000*l.* I can only say that I do not think Mr. Picton himself would execute it for such a sum. It may be that other competitors have purposely kept their estimates much lower. They may not have given us so good a design, because, perhaps, they were afraid of exceeding the sum of 20,000*l.* Now, if you allow some gentlemen to figure away, and give you splendid designs which would cost 30,000*l.* or 40,000*l.* (and I should think the cost of this design would be nearer 30,000*l.* than 20,000*l.*), then I think it can hardly be said that the prize has been fairly awarded." Committees complain that the competitors disregard the rules: it is simply the consequence of committees setting these rules aside in adjudicating. Dashing, high-souled fellows, who are up to competitions as well as all other things, on principle bravely disregard all rules, and very properly often get their reward by the realization of their magnificent conceptions in bricks and mortar, or pocketing a premium; while those poor, feeble-minded men, who seek success by humble obedience to the instructions issued, are justly punished by the defeat and contempt which their pusillanimity and ignorance of competition committees so justly deserve. All that is left them to do is to pocket the affront (in lieu of the premium), and, like Scott's dwarf, throw up their arms, and cry "Lost! lost! lost!" A trial has been made, in the Liverpool competition, of getting the votes of the competitors,—a scheme which, I consider, has proved a total failure. Had the competitors met to openly discuss the respective merits of the designs, and then come to a decision by a show of hands, a good result might have been arrived at, but not by each sending in privately his opinion, after perhaps only a hasty and insufficient glance at the drawings, and the forming consequently an erroneous opinion of them,—in some cases perhaps not giving an honest opinion; and when, as in this case, the competitors have many of them disregarded the rules, it is not to be expected they will vote for those who have not: in doing so they would condemn themselves

There is some little chance still of matters being righted in this competition, but not much, as a disposition is now shown to allow "Con Amore" a few thousands more. The old result! M.

TASTE AND ARCHITECTURE IN THE METROPOLIS.*

Perhaps there was never a time when so much could be accomplished to raise the character of our art and the position of its professors as the present. If we look around, we shall perceive unmistakable evidence of a new and glorious field opening for the efforts of genius. With a Court willing to foster talent, a Government awakening to the importance of art, and a people able to pay for its realization, we have every reason to expect that the next few years will be an era in the architectural world of improvement and progress.

This overgrown metropolis, with its hundreds of miles of dull monotony, with its overcrowded thoroughfares, with its smoke-laden atmosphere, and with its noble river reeking with miasma, is becoming every day more unbearable to its inhabitants. All must feel that the time has come when some comprehensive schemes for the mitigation of these serious evils must be carefully planned and quickly executed. The danger for our Government to avoid is, the following in the steps of some of its predecessors, and expending vast sums of money in half-digested schemes, which have the effect of permanently increasing the difficulties already to be encountered.

Judging from past efforts made in such works, the mistakes that have been committed appear to have arisen from an absence of foresight in those who had the control of them, large sums having been expended upon public works which have proved inadequate to the growing necessities of this ever-increasing population.

With regard to the taste hitherto evinced in such matters, I am afraid that the nation has not much to be proud of; for, although there has been a considerable amount of practical knowledge displayed, the question of artistic effect has seldom been considered.

It has often struck me that a public committee of taste, composed of men of acknowledged ability, and perfectly accustomed to judge of works of art, would be an exceedingly useful body. They should have no personal interest to serve, and their actions should be open to the scrutiny of all.

Great public works, that are for the benefit of millions, and to last for ages, should not depend on, or be influenced by, any political party. To execute such works in a manner that they shall remain lasting memorials of a people's greatness in science and taste, requires long experience in order to perfectly appreciate every difficulty that may exist; the greatest foresight to avoid those which may arise in future; and considerable knowledge of art to guide the judgment in matters of taste.

How is it possible to insure these qualifications when the men who have the management of such important affairs are from day to day liable to be displaced by others who come to the consideration of, to them, a fresh subject with different views and altered plans. I am the more inclined to dwell upon this topic because all our shortcomings in matters of taste connected with metropolitan improvements may be traced in a great measure to this evil. * * *

The architectural profession will watch with some degree of anxiety the result of the forthcoming competition for the new public offices and Westminster improvements. Sir Benjamin, having justly earned the thanks of the profession for giving us such a glorious opportunity of proving the skill and talent that exist amongst us, will also receive our gratitude if his influence is exerted to insure a perfectly impartial decision, for we have too long suffered under the deadening effects of the chicanery so constantly occurring in competitions. If the Minister for Public Works should possess as much taste as he has energy, let us hope that he will remain long in despotic power; so as eventually to save us as a nation from being branded as a dull fat-witted people, incapable of appreciating matters of taste and art.

Judging from our neighbours in France, and elsewhere, art flourishes with more vigour under despotic powers than under our liberal government. We are accustomed to say that "two heads are better than one," but I fear questions of taste form the exceptions to the rule. At all events, I would rather trust one man of genius, with the consideration of our metropolitan works, than be forced to act upon the opinions of fifty chosen out of a mixed community; because I believe, as a nation, we do not possess that innate feeling for art, which is to be found among the people of continental states. In connection with Westminster improvements, it is necessary to consider whether the new National Gallery is to form any part of the scheme, as, I suppose, we may take for granted that it will not occupy the proposed site at Kensington. This question should be at once mooted, as no really comprehensive scheme can be devised without previously entering thoroughly into these considerations. Such an important structure would naturally form a feature in any proposed plan for such improvements. * * * * * * *

Another matter which should occupy the attention of practical and thinking men, is the eventual appropriation of the seventy closed graveyards of London. An architect of learning and taste, in a pamphlet, entitled "Ancient and Modern Westminster," published in 1839, writes as follows, concerning the Abbey monuments:—"But perhaps the best of all methods to effect a harmonious union between St. Margaret's Church and the Minster would be the erection of a tomb-house or cloister between the two, for the reception of the mural monuments, which so much disfigure and deteriorate the effect of the interior of the Abbey Church, whose venerable walls and pillars have moreover been most barbarously mutilated and defaced, by the vile manner in which these parasitical excrescences have been affixed. Most valuable as records of departed worth, these monumental tablets, if arranged *seriatim* in a tomb-house, within a moderate distance from the sight, would present an instructive lesson to the passer-by, while the exterior of the building would add breadth to the western front of the church, and materially assist in remedying the injuries which it has sustained in the deprivation, one after the other, of the picturesque edifices with which it was surrounded." Such a building would indeed be a fit and worthy tribute paid to departed greatness; nor could there be a more appropriate spot chosen for its realization.

But why not extend the scheme to all the closed cemeteries of the metropolis? The adoption of the plan of arched shrines, which is so admirably exemplified in the Central Cemetery at Liverpool, for the fine statue of Huskisson, would protect our marble and our bronze, and all perishable materials of sculpture, from the weather for centuries. It is evident that these graveyards must not remain in their present state, nor can they be allowed to become the receptacle for parish lumber, not at all an unlikely event unless attention is occasionally directed to them.

As the subject of national monuments now occupies the attention of the Government, the future appropriation of these places becomes an important item in the question. Many of them contain the ashes of some of the most eminent men that this country has produced, whose memories at present are barely saved from oblivion by the half-decayed and sunken footstones, overgrown with weeds, marking their last resting-place. There are some who must always live in their works, but others have rendered great benefit to their country, who are already, by the majority of people, unknown, and whose services, although acknowledged, have never been rewarded. What could be more graceful than to erect statues of them, artistically grouped in covered shrines, as near as possible to the spot containing their mortal remains; and make these places, which have proved so detrimental to the sanitary condition and to the moral feeling of the people, the means of instruction and example, by the honour thus awarded to true merit? At St. Mary Overie, Southwark, we might place Gower the poet, and Shakspeare's brother Edmond, Fletcher, and Massinger,—a group of theatrical names. The Temple Church would give us barons from Runnymede, and a hero of as great a civil strife, Selden, to adorn its porch. About St. Paul's, great city names might be assembled for a thousand years past. Bunhill-fields Cemetery should have John Bunyan, and many of the grave leaders of Dissent, in their living features, to encourage freedom of religious thought and piety for a thousand years to come. The same remarks will apply to more than fifty other graveyards of various extent all about this multitudinous town. We can all feel the propriety of what is now doing in this way beyond the walls. It would be a graceful and instructive homage to the mighty dead of olden times to apply the like care to the sacred repositories of their bones. Each little spot will be found to contain some name worthy of a special memorial; and the sanitary principle which has fitly closed these places will be the more respected as so many safety-valves for all times; besides their future destination and the endearing memorials of our good ancestors. And I have no doubt there are many of their descendants who would gladly subscribe towards the honour thus shown to their forefathers. The beauty of the precincts of some of our cathedrals is an encouragement to the proposed work; and there are not wanting, among our neighbours across the Channel, examples which show that the old graveyards, as well as old ramparts of cities no longer fortified, may be made to contribute largely to popular enjoyment.

* The following passages are from Mr. A. Allom's address at the meeting of the Architectural Association, reported in our last number.

PROPOSED ST. JAMES'S HALL: PORTION OF INTERIOR AT LARGE.

THE PROPOSED ST. JAMES'S HALL.

Sir,—Looking to the plans for the proposed St. James's Hall, London, I doubt if there be sufficient provision for entrances and waiting-rooms. The prospectus particularly states that "the facilities for approach and exit will be amply provided for;" but I conceive that the carriage approaches are not good, and, therefore, ask for your attention to them. It may be said that there are but two, for the one in Little Vine-street has no outlet, and is so narrow that carriages cannot turn without extreme danger; and yet this I suppose is the one which the prospectus describes "as the separate entrance for the convenience of her Majesty and the Royal family."

The two carriage entrances spoken of, in thoroughfares good enough in themselves, seem to me inappropriate for the purposes of the hall, as it is evident that only one carriage at a time can stop opposite the doorway you have engraved. Access to this and the other in Regent-street will have to be gained across wide pavements, with a throng of passers-by, who in such thoroughfares cannot be stopped by the police. It must also be borne in mind that, in situations like these, the Board of Works will not permit the erection of porticoes.

The hall itself, to be really convenient, should be nearly on the ground level. As it is proposed to let the smaller halls below, they will not be available as waiting-rooms; so that, with small means of carriage approach, the company, some two thousand in number, will have no where to wait but in the narrow lobbies. Conceiving that all this requires looking to, I would, with the best feeling, bespeak attention to the subject before it is too late.

The Sacred Harmonic Society are constantly drawing attention to the want of sufficient means of ingress and egress from Exeter-hall, but are unable to induce the proprietors to make any improvement in this respect.

Publicus.

The question addressed to the directors of the proposed new hall, is a very serious one, and will doubtless receive attention. We add, to our former illustrations of the intended building, a portion of the interior of the great hall, showing more clearly than in the small view the character of the decorations proposed by Mr. Owen Jones.

With reference to the just complaints against Exeter-hall, the directors of the Sacred Harmonic Society say in their last report:—"Whether these appeals will in time have weight with those who have an easy remedy in their own hands, or whether the question will be allowed to remain in abeyance until some awful calamity forces Government interposition to *compel* a safe and reliable mode of exit from all places of public resort (Exeter-hall included), the committee rest assured that the members of the society and the public will absolve them from any consequences arising from what has been described as the *'culpable neglect'* of others."

PROVINCIAL NEWS.

Aylsham.—On 29th ult. the foundation-stone of a new Town-hall, &c. was laid by the Marquis of Lothian. The proposed structure is to consist of a large apartment to be used as a town-hall, a corn-exchange, and a ball-room; and a newspaper-room, with a library and reading-room overhead. The dimensions of the large room are to be 29 feet by 59 feet, and of the other rooms 17 feet 6 inches, by 22 feet 6 inches. The large room will be open to the roof, and will be about 29 feet high. The upper portion of the roof will be of glass. The exterior of the building will be in red brick with stone dressings. The plans have been prepared by Mr. Bartram, under the direction of a committee; and the works are to be executed by Messrs. Burrell and Bartram. The necessary capital has been raised by a company of shareholders, and it is estimated that the total outlay (including 750*l.* paid for land) will be about 1,800*l.*

Weymouth.—Many of the workmen who were engaged on the new waterworks are now being discharged, in consequence of the approaching completion of the works. The reservoir on the

top of Membery-hill, which is several hundred feet above the level of the sea, is nearly finished, and will be capable of containing 11,000 hogsheads. This cistern will be kept constantly full, the water being raised by machinery from the bed of the river below.

Weston-super-Mare.—A public meeting of the ratepayers was held at the Town-hall, Weston-super-Mare, on Tuesday in last week, for the purpose of selecting a design for the new Town-hall. A premium of fifteen guineas was offered for the best plan of the proposed building, to be erected at a cost not exceeding 2,000*l.*; and twenty plans were sent in. After some discussion a committee was appointed to consider the plans, and report to another public meeting.

Worcester.—At a recent meeting of the Town Council and Board of Health for this city, the town clerk laid before the council three of the contracts for the drainage and water-works, in order that the common seal of the body might be attached to them. The surveyor, Mr. Purchas, estimated the cost of pipes at 5,800*l.*; the cost of pipe-laying at 2,400*l.*; of engines and machinery for waterworks at 2,500*l.*; and the sewerage works at 14,706*l.*; estimating also the annual expense of keeping all these in repair at about 330*l.* The contracts under notice were those for pipes, for pipe-laying, and for the waterworks, engines, &c. That for the sewerage was not yet signed by the persons who tendered.

Tewkesbury.—The Severn improvement is at length progressing towards completion, in accordance with the original plan of the promoters. The works at Tewkesbury comprise a lock 120 feet long by 32 feet wide, with which is connected a pound 165 feet long by 80 feet wide, enclosed by a third pair of gates, so that the whole distance between the upper and the lower gates, 285 feet, will be available as one lock-chamber, and a steam-tug, with her fleet of vessels, will be locked up at one lift without delay. The weir will be 500 feet in length, and of sufficient height to raise the low water at Tewkesbury 6 feet above its present level. Both the lock and the weir will be constructed in new channels, excavated for the purpose across the Ham, and thus the present very acute bend in the Severn at the upper lode will be cut off. The tenders, twelve in number, for the excavation of the new river course, were delivered on Thursday before last; and at the meeting of the Board of Works on the following day, the tender of Mr. William Tredwell was found to be the lowest, and being below the estimate of the engineer, it was accepted. It is intended, says the *Worcester Chronicle*, that the lock and the weir shall be constructed under the more immediate charge of the engineer, and therefore they will not be executed under contract. In addition to the works at Tewkesbury, it is proposed to complete the several embankments between that place and Gloucester, and to construct others where experience has proved they are required; and thus the whole of the navigation of the Severn, under the jurisdiction of the commission, will be perfected, except at the city of Gloucester, where much local improvement is required.

Devonport.—The foundation stone of the north wing of the new barracks was laid on Tuesday week, on which occasion the contractor, Mr. Roach, entertained a large number of the builders of the three towns, and several friends, in the mess-room of the old barracks. The workmen employed were also regaled in an adjoining building.

Aberystwyth.—The erection of the clock-tower here is far too slowly carried on. The architect, Mr. Owen, has recently inspected the work, and expressed his regret at the slow progress made, recommending the employment of additional workmen, to secure it against the effect of frost and thaw. It is to be hoped, by those living in the neighbourhood, that the committee will act upon the recommendation.

Newcastle-under-Lyme.—The opening of the new schools in connection with St. George's Church, Newcastle, took place on Tuesday before last. The schools stand at the entrance to the town from the Liverpool-road. The style is Early English, and a semi-ecclesiastical character has been given to the edifice, to identify it with the church to which it belongs. The schools, which are denominated "St. George's Mixed and Infant Schools," consist of a school-room, 67 feet long by 30 feet wide; a class-room, 20 feet long by 15 feet wide; each having a gallery and open timbered roof; and two rooms, each 15 feet by 6 feet, to be used as sub-class-rooms, and partly for hats, bonnets, &c. There is a dwelling-house attached. The exterior walling stone is from the Kerridge quarries, near Macclesfield, which harmonizes in colour with the Hollington stone dressings. Welch green slates have been used for the roof covering. Mr. John Evans, of Macclesfield, has executed the whole of the works (his contract being 1,345*l.*), under the direction of Mr. James Trubshaw, by whom they were designed.

Staveley (*Sheffield*).—Schools for the education of the children of the workmen of this mining district have been erected and opened. The building is modern in style. It contains schools for boys and girls, and a public hall in the centre. There is a separate entrance to each of the schools by a porch. The size of the school-rooms is 60 feet by 22 feet, and 28 feet high, and the centre hall is 45 feet by 35 feet, and 45 feet high, with painted open roof: there is a belfry, and the building is surmounted by a spire 76 feet high. The interior is furnished with an organ, built by Mr. Holt, of Leeds, for 200*l.* and there is a gallery in front of it for the accommodation of the choir. There are anterooms which may be converted into laboratories. Several small villas, closely adjoining, are intended as the residences of some of Mr. Barrow's agents.

Lincoln.—The wet weather of late, says the *Lincolnshire Chronicle*, has retarded building operations in Lincoln; but so soon as we have a change, several houses will be commenced above the hill, in St. Botolph's parish, and in St. Swithin's. A great drawback to extensive building will arise from the scarcity of bricks. Mr. Ward will require for the militia buildings all he can make, and the new brick-yard on Crosscliffe-hill cannot supply more than 200,000 beyond the number required for the erection of kilns and manager's house.

The Brooms.—Last week, the foundations were commenced of new schools, with class-rooms, &c. for 150 boys, together with a master's residence attached, in connection with the Roman Catholic Chapel at the Brooms. The buildings are arranged to allow of future extension, to accommodate the same number of girls. Mr. Arch bald M. Dunn, of Newcastle, is the architect, and Messrs. Gibson and Stewart, of the same town, are the contractors.

CHURCH-BUILDING NEWS.

Wooburn.—The church here was re-opened on the 11th ult. after being repaired and restored. The large tower, arch, and west window were planked up and unseen: high boxes and pews, in all shapes, sizes, and positions, filled the area of the church: a huge pile of rough woodwork on the right-hand contained pulpit, prayer-desk, and clerk's closet: on the left a large parlour-pew, canopied, blocked up the chancel arch; and the floor, pavement, and walls were much dilapidated. At a cost under 700*l.* according to the *Windsor Express*, the architectural character of the edifice has been resuscitated. The chancel floor is laid with encaustic tiles by Minton: on it stand the old brasses in York stone. The east window still invites replacement by a better. Nothing has as yet been done to the exterior of the church.

Thurlby.—The restoration of Thurlby Church having been completed, it was again opened on Tuesday in last week. An unsightly gallery in front of the lower arch has been removed, and the arch opened, and a portion of it is found to belong to the Saxon era. The windows have been newly glazed, and the stone-work replaced where necessary. A portion of the western end of the church, used as a receptacle for coals, rubbish, &c. has been cleansed and thrown open to each aisle, the northern part being appropriated as a baptistry, and the ancient Norman font placed in it. The chapel, used as a school-room, has been opened, and again attached to the chancel, and is now occupied by the organ and choir. The seats are open, and uniform with the original oak seats. The work has been executed by Messrs. Sneath, of Boston; Harrison, Story, and Jebb, of Bourn, and by persons residing in Thurlby.

Ipswich.—The work on the new church at California has been resumed. Mr. Brown, of Norwich, architect, has inspected the building, and coincides with the builder, Mr. Plumstead, that the walls were inadequate to support the intended roof (a point on which the latter and the architect of the work disagreed), and expressed no surprise at the fall of the east gable. Mr. Brown suggested several alterations which will, it is said, be embodied in a report to the committee.

Bury.—The foundation of St. Peter's Church, Bury, was laid on Friday before last by Earl Jermyn. The site is on a piece of ground approaching the Suffolk General Hospital. The length of the edifice from east to west will be 96 feet, width of nave 26 feet, with porch, surmounted by a tower and spire of modest proportions, on the south side: the materials are cut flint and rubble, with stone dressings: the style Early Decorated. It is calculated to contain 450 persons. Upwards of fifty workmen employed upon the building were provided, on the laying of the stone, with a substantial dinner, the builder (Mr. Farrow) occupying the chair, and his foreman (Mr. Jackaman) the vice-chair.

Buckingham.—Mr. Chesterman, of Banbury, who has contracted to erect the new Congregational Chapel for the sum of 1,152*l.* has commenced operations, and the old chapel and premises are now in ruins. The new building is to be in the Gothic style, and capable of accommodating about 700 people.

Faringdon (*Berks*).—One of the small Norman windows in the south aisle of the parish church has been filled with painted glass, as a memorial of the late Mrs. Bryan Reynolds, of this town.

Chieveley (*Berks*).—The new chapel at Curridge, in this parish, built by Mrs. Stacpoole and Miss Wasey, of Prior's-court, was opened on Sunday week. The building, which, besides the chapel and school, combines a residence for the master and mistress, was designed by Mr. Teulon, of London, and, under his superintendence, was built by Mr. Higgs, of Cold Ash. It is of the Early English style. The chapel terminates to the east in an apse, which is separated from the rest of the room by a wooden screen, across which a curtain is drawn during the week-days, and thus a small chancel is formed for Sunday use.

Sumbrook.—The church of St. Luke, Sambrook, was consecrated on the 2nd instant. It is designed in the Middle Pointed or Decorated style, and consists in plan of a nave, chancel, north aisle, vestry, and south porch. At the west end of the nave rises a bold shingled bell-cage, standing 40 feet above the ridge of the roof: it has perforated sides, and terminates in a double-broached spire, having gabled spire-lights in the lowest part. The north aisle is separated from the nave by an arcade of three arches. The roofs are all of lofty pitch, open timbered, and stained. The chancel is fitted up with oak benches, and paved with Minton's encaustic tiles. The east window is filled with painted glass by Messrs. Gibbs, of London. The pulpit, sedilia, and font are worked in Caen stone. The nave and aisles are filled with open benches of stained deal. The circular traceried window in the west wall has painted glass by Mr. Lavers, of London, and is placed by Admiral Roberts as a memorial to his deceased wife. The walls of the church throughout are ashlared with local stone. The church contains sittings for 230 persons. The builders are Messrs. Nevett, of Troubridge, who have also built the parsonage-house and schools; the whole being from the designs of Mr. Ferrey, of London, architect.

Edgbaston. (*Birmingham*). — The Congregational chapel was opened on Wednesday in last week. The building is capable of accommodating 1,000 persons. It is built of stone, from Tower-hill, Perry Barr, with Bath stone dressings, and is in the new Geometrical Decorated style. The plan comprises tower and spire, nave, transepts, and vestries. Internally, the nave is lighted by four windows on each side, and at the east end by a large triangle, ornamented with tracery. The internal dimensions are as follow: Length of nave, 83 feet; width, 41 feet; width of transepts, 26 feet; height to ridge of roof,

50 feet. The tower is 84 feet in height, and consists of three stages. The spire, which is entirely of Bath stone, and 86 feet in height, is divided by bands into three stages, and terminates with a finial, surmounted by an arrow for a vane. The chapel has been erected from the designs and under the superintendence of Mr. Henry Yeoville, of Birmingham, by Messrs. Barnsley and Sons, at an expense (exclusive of the ground, which cost about 1,400*l.*) of 5,500*l.*

Liverpool.—St. Philip's Church, Hardman-street, has been reopened, and considerable alterations and improvements have been made in the interior. A new chancel has been added, in which, says the local *Journal*, is placed an extremely rich and elaborate stained-glass window, the largest that has been for many years fixed in this town. The window is divided into three spaces of eight compartments in each space, representing the Patriarchal, the Mosaic, and the Christian periods: four figures and four groups illustrate each era. The tracery is filled with the emblems of the four Evangelists, the Trinity, and the Dove. It has been designed and executed by Messrs. Forrest and Bromley, of Liverpool. Messrs. William Jones and Co. of Liverpool, were the contractors for the joiner's and brick-work. There has also been fixed in the church a hot-air apparatus, supplied by Mr. William Bennett.

Oxford.—The restoration of the tower of the church of St. Mary the Virgin is drawing towards completion. The process of strengthening the tower, by forty-eight screw bolts, has been finished under the direction of Mr. Scott. As an additional security, the buttresses in the north-east and north-west angles of the tower have been strengthened by the removal of the belfry staircases, and replacing them with solid masonry. The staircases will, therefore, ascend from a different point. The other alterations now in progress consist in the elevation of the old belfry floor, so as to disclose the point of the moulded arch on the west side of the tower, hitherto obscured, and the renovation of the mural sculpture which runs round the whole interior. The work has been executed by Mr. Gardner, of Oxford, builder, under the superintendence of Mr. Sheffield, clerk of the works. A proposition, says the local *Herald*, was made last year for the entire restoration of the church, and the parishioners agreed to be responsible for 500*l.* towards carrying out that object, independent of private subscriptions, which were estimated at 250*l.* more. The expense of the restoration was estimated at 3,000*l.* out of which the chancel would cost about 1,000*l.*

Ancoats (*Manchester*).—An endeavour, made by a committee of ladies to raise a sum (400*l.*) sufficient for a stained glass east window for St. Andrew's church, has, according to the *Manchester Courier*, been very successful. A design has been furnished by Mr. Wailes, of Newcastle-upon-Tyne. The window, which is one of the largest in Manchester, consists of two tiers of lights, seven in number, with tracery in the head. As all the money for completing the design has not yet been subscribed, it is intended to fill in the tracery, and the upper series of lights first. The designs in the tracery represent the call of St. Andrew, the patron saint of the church, and his crucifixion: with the monograms of the Saviour,—J. H. S. and A. O. At the sides are represented "St. Michael and all angels,"—seraphim and cherubim. The compartments of the window contain our Saviour and the twelve Apostles with their symbols. The upper row of lights is surmounted with canopies, while the principal events of the life of the Saviour are delineated progressively, from the triumphal entry into Jerusalem, the consecration at the Supper, the announcement of the traitor, the sop being given to Judas, the agony in the garden, the betrayal by a kiss, and the bearing of the Cross. There are also the symbols of the four evangelists, the types of the offering of Isaac, Solomon on his throne, the Resurrection, the unbelief of Thomas, the commission to St. Peter, the Apostolic mission, the ascent from Bethany, and the descent of the Holy Ghost on the day of Pentecost. These subjects are all arranged according to one general design. Canon Richson ordered the window on the strength of the promises given, and it is expected that the upper portion will be completed this year, if possible before Christmas.

Scarborough.—The chief stone of the Roman Catholic church of St. Peter was laid on Friday in week before last. Mr. Goldie is the architect. The workmen partook of a supper at Milson's Castle Hotel, when about fifty-eight sat down.

FOREIGN INTELLIGENCE.

A prize of 10,000 *francs* has been offered by the Duke de Luynes, a known art-patron, to the person who shall discover the most important new process for the improvement of photography, especially for a means of fixing sun-pictures and making them durable. Artists of all nations are invited to compete, and the award will be made by the committee of the Photographic Society of France, of which M. Luynes is a member.

Cornelius's composition of the frescoes which have to adorn the niche of the high altar of the new cathedral of Berlin, will be exhibited at Dresden, according to the general wish of the art-world there.

The highest Monument in Europe.—A very massive cross has been erected on the summit of the Champ-rousse, one of the mountains which surround Grenoble. The situation of this spot is very commanding and conspicuous, close to glaciers and eternal snow. That such a vista has been always appreciated by men, is proved by the fact that a cross stood previously on the spot where the new one is now erected. When digging for the foundation, Roman coins were discovered.

METROPOLITAN BOARD OF WORKS.

At an adjourned meeting of the Board, on the 15th inst. a motion by Mr. Crellin, to the effect that the points of outfall originally proposed at Barking-creek and Woolwich-marshes be retained, and *deodorizing works* added there, was lost by the votes of eighteen members to two, on an amendment by Mr. Offor, which was "the previous question." A motion was then brought forward by Mr. Turner, to the effect that the sewage be discharged into the river at *Long Reach*; and an amendment thereon by Mr. Doulton, to the effect that plans be prepared by the engineer for discharging the sewage by two main sewers, one on each side the river, with outlets at Sea Reach, was lost by the votes of twenty-three to ten against it. The further consideration of Mr. Turner's motion was then adjourned till Wednesday next.

Mr. Wilkinson, in the course of the proceedings, proposed that members of the Board should visit Leicester and other places for information on the subject of deodorizing; and from communications which have been forwarded to us from Leicester we feel strongly persuaded that this ought to be done.

We are overwhelmed with correspondence in which the Board is blamed in no measured terms for waste of time with regard to this most important question. Simply driving on the Board to action in this particular and all-important matter might do more harm than good; but as it is most urgent that some efficient course should be adopted, and as we are persuaded the Board of itself is not competent to settle the question, is it not desirable (or requisite rather) that a committee of engineers and architects, in whom the public would place confidence, should be at once appointed to advise the Board on the course to be adopted?

COMPETITIONS.

Deptford Cemetery.—The Burial Board of St. Paul's, Deptford, have chosen the designs sent in by Messrs. Tinkler and Morphew, subject to the approval of the Bishop, and their being carried out for the stipulated sum. It may be remembered that these gentlemen have recently been appointed architects to the Lewisham Burial Board, whose land joins. The chapels are connected, and have porches and one bell-tower in the centre. The total quantity of land in the two cemeteries is thirty-three acres; and as the architects have the whole under their superintendence, it will afford them an opportunity of preserving a unity of design, which we hope will not be lost sight of.

SCENERY AND THE STAGE.

The "Midsummer Night's Dream," at the Princess's Theatre.—In selecting the play of "A Midsummer Night's Dream" for his fifth great revival, Mr. Kean has not had opportunity of adhering to chronological truth and costumic propriety with the strictness that made the plays of "Macbeth," "Sardanapalus," "Henry the Eighth," and "The Winter's Tale," such popular exponents of those most desirable qualities in dramatic representation.

Amongst the number of those unparalleled compositions which have rendered Shakespeare the delight of all ages, there is none more filled with beautiful poetry, glowing imagination, and playful *abandon* than this favourite effort of one who has so well deserved the title of "Fancy's child."

But whilst the early period of Greek history, to which the existence of the chief characters in the play, namely, *Theseus* and *Hippolyta*, is referred, presents, on the one hand, but the rude beginnings of that perfection of architecture which afterwards raised Athens to the pinnacle of fame for refinement and art; so, on the other hand, do the more modern, but most exquisite creations of Oberon and Titania, and, later still in period, the undercurrent of mirth that accompanies the play throughout, in the inimitable vagaries of *Quince*, *Bottom*, and their companions, draw us farther and farther from the indulgence of revelling in the classic. Nevertheless, what opportunity there was for architectural display has been seized upon; the period of highest excellence in Greek art embraced; and two scenes of great beauty in point of execution, and correctness and research in point of detail and precedent, have been produced.

Theseus, son of Ægeus, king of Athens, ascended the throne B.C. 1235, and laid the foundation of the future greatness of the Athenians. He united into one body the twelve independent states into which Cecrops had divided Attica, and made Athens the capital of the new kingdom. He added much to the city, and instituted the festival of the Panathenæa, in honour of Athena or Minerva, the patron goddess of the city. He divided the citizens into three classes; the *Eupatridæ*, or nobles; the *Geonori*, or husbandmen; and the *Demiurgi*, or artizans. After an absence from Athens, he was dethroned and murdered, through the treachery of Lycomedes. Hippolyta, queen of the Amazons, was conquered by Theseus, and, according to some authors, afterwards married to him.

Where anachronisms abound, it is wise to adopt a period of the greatest interest in history that will suit the purpose. The buildings of Cecropian Athens were probably rude in construction — perhaps of Egyptian type, and conveying but the shadowing forth of what afterwards resulted from study and advanced civilization. The time of Athens's greatest splendour therefore has been selected, and an extra claim established upon the attention and interest of the audience.

The first scene gives a general view of the city of Athens, as it might have been in its perfection, and discloses at once the principal buildings that have rendered it the study for all time. The point of view is a terrace adjoining the supposed palace of Theseus, and near the actual site of the Lyceum. In the centre is the Acropolis, and the position whence seen discloses at once the Parthenon and the two triple temples of the Erectheium and the Propylæa. To the left of the Acropolis is the Theatre of Dionysus or Bacchus, wherein the poetry of Æschylus, Sophocles, and Euripides was wont to be recited; and nearer stands the magnificent Corinthian, peripteral, decastyle temple of Zeus Olympius, called the Olympieius. In the distance is the Museium hill, surmounted by a temple. To the right, somewhat in the distance, is the Temple of Theseus, and streets, temples, porticoes, and public buildings of all kinds occupy the unappropriated space, and convey an excellent idea of the classic city. Much labour has evidently been bestowed in this architectural restoration, and with good effect.

In the last act are what may be called two architectural scenes. In the first, an interior

in the palace—in which Theseus and Hippolyta listen to the actors—the Corinthian capitals and entablature are polychromatised. The last scene, discovering Oberon and Titania and their trains, shows a vast peristyle in parallel perspective, consisting of a Corinthian colonnade upon each side, raised upon a lofty podium, enclosing an almost endless flight of steps, which conduct to a decastyle portico in the extreme distance. The revels of innumerable fairies up and down this wide extent conclude the play with becoming *éclat*.

An audience, filling every part of the theatre, expressed, by loud plaudits, their unqualified approbation of Mr. Kean's exertions in this revival. Perhaps the touching story of Pyramus and Thisbe,

"Juvenum pulcherrimus alter,
Altera, quas Oriens habuit, prælata puellis,"

was never travestied by a more comic party than was led by Harley and F. Mathews on Wednesday night. For the rest, the parts are ably supported, and in the general getting up of the play no expense or care has been spared. The pastoral scenery is beautifully painted, and was much appreciated.

Our short notice of this play would be incomplete without a few words upon one who, as long as the immortal work of Shakespeare is extant, will ever be associated with it in undying music,—Felix Mendelsohn Bartholdy. Born in 1809, this great composer before the age of 17, had already written the Overture to "A Midsummer Night's Dream," a masterpiece, which one of the greatest of our English musicians and profoundest of critics upon the art has pronounced to be "a perfect marvel of the human mind." The electrical effect produced in London by this inspiration of genius, seemed to mitigate in some degree the loss to the world caused by the death of Beethoven, and point to one upon whom his mantle had fallen. In 1829 Mendelsohn paid his first visit to England, and in a visit to Scotland again illustrated his susceptibility to impressions, and his power of depicting them by music, in his Overture to "Fingal's Cave."

From this period Mendelsohn rapidly progressed in reputation, producing numerous works that rank with those of Beethoven, Mozart, Spohr, Handel, Haydn, Rossini, and others whose works are "not of a day, but for all time." It was in 1843, whilst in Switzerland, that he completed the music to Shakespeare's dramatic poem of "A Midsummer Night's Dream," and on the 12th of October of that year, the play, with the music, was first performed in the private theatre of the King of Prussia, at Potsdam. Thus, twenty years after writing the overture, he elaborated the ideas contained in it, and developed the wondrous fancy of the first thought. The Scherzo in G minor, is one of the most effective orchestral works in that form ever written. In the lovely two-part song and chorus, "Ye spotted Snakes," in the Notturno, in E major, replete with tenderness and beauty, —in the fanciful agitato — in the magnificent Wedding March, which scarcely has its equal,— and in the brilliant and fairy-like chorus at the end of the play, he completed the grand conception of his youthful genius, and, as Benedict observes, "with such ingenuity, that the most difficult critic could discern no artificial joining of the parts, but seeming, in fact, as though the whole had been the offspring of one simultaneous inspiration." Mr. Hatton is a worthy interpreter of this great musician's works.

PROCEEDINGS UNDER METROPOLITAN BUILDING ACT.

PROJECTIONS.

At the Clerkenwell Police-court, on Tuesday, the 30th ult. Mr. William Hollingsworth and Mr. Samuel Allard were summoned by Mr. R. L. Sibley, district surveyor, for making an addition to the houses Nos. 6 and 10, Pleasant-row, Pentonville, "such additions being a projection from a building, and extending beyond the general line of fronts in the street, and such projection having been made in default of the permission of the Metropolitan Board of Works having been previously received or obtained, agreeably with section 26 of the Metropolitan Building Act, 1855."

Mr. Cooke, who appeared for Mr. Hollingsworth, stated that his client's building was, in reality, an addition to the house. The owner of the adjoining house had made an addition to his some time back. He contended that the New-road was not a street, but a turnpike road. Several distinct lines of frontage had long existed in the New-road—one of shops and one of houses, and there was no regular or general line. In this case the fronts had already, to a considerable extent, been brought out on each side, and the intervening space was being filled in by shops, so that this could not by any possibility be deemed a projection beyond the general line of fronts, and not being a projection, no consent on the part of the Metropolitan Board was necessary.

Mr. Sibley stated that the Metropolitan Board had refused permission to make the additions. Feeling the matter to be an important one, and not wishing to take upon himself the responsibility, he had been desirous of obtaining the directions as to what course he should pursue in the matter. The whole question at present was, whether these additions were in point of fact projections or not beyond the general line of fronts in the street; and it had been thought desirable, as the simplest mode of proceeding, to raise the question before a magistrate, and procure his opinion upon it.

Mr. Corrie, the sitting magistrate, reserved his judgment till the following Tuesday, when he said that in his opinion the word "street" included the New-road; that he did not, on a careful consideration and examination of clause 26 of the Metropolitan Building Act, 1855, deem that that clause applied in the case of buildings; that it appeared to him parts of buildings, architectural decorations, &c. were meant to be dealt with under that clause; that he considered it most unlikely that the Legislature could have contemplated a double jurisdiction, the course to be pursued in the case of buildings being clearly pointed out and specially provided for under the Metropolis Local Management Act; that in this case there was no projection from any building beyond the general line of fronts in the street, and his judgment was therefore in favour of the defendants.

The cases were accordingly dismissed.

VENEERING WITH VULCANITE.

In a recent article of the series lately quoted by us from the *Mechanics' Magazine*, on the subject of Vulcanite, are the following remarks on its use in veneering:—"The extraordinary toughness of the veneers prepared for the covering of furniture, however simple in form or ornate in design, is remarkable. The exquisite beauty of the slightly-relieved patterns upon some of this veneer ought not solely to weigh in its recommendation, inasmuch as, in the act of rolling or pressing the material into veneer, the process adopted may either involve the most finished and intricate designs, or simply a plain surface. There is an additional feature in this method of rolling or pressing these veneers and the material itself: a perfect and indelible polish is simultaneously obtained in those parts where it is required to give relief to the rest. In a word, finish is consequent upon the act of making the veneer, and the act of pressing or rolling the material into veneer is the ultimate act of its finish. But what is, perhaps, the most surprising fact to those not familiarly acquainted with the nature of the material, is to see done, or to take themselves a hammer, and strike the delicate tracery of the vulcanized surface in right earnest, without making the slightest impression upon it, or effacing its polish in the least. The handles of knives, cornices, brackets, and other articles in vulcanite which are electro-plated, may be struck a very severe blow with the hammer—a blow, indeed, which would leave its mark to some depth upon gold in the solid—without the merest perceptible indentation. Furniture veneered with vulcanite may be made to assume at once both finish and perfection of character, with an amount of labour scarcely appreciable. The facility with which this veneering may be effected upon any kind of woods is perfectly startling. The cabinet-maker has but to steep the veneer for a few minutes in boiling water, and a sheet of it becomes as tractable as moist paper. Thus he may veneer round and over the sharpest curves and angles, and cover a surface with the ease of the paperhanger." There are various specimens of this kind of veneering, we may add, as well as a great variety of other articles made of vulcanite, in the Crystal Palace at Sydenham.

By the way, is there not a limit to the obtainment of Vulcanite? And is it not time some chemist were turning his attention to the possibility of obtaining (as some time since suggested by us) an artificial substitute for the natural caoutchouc by the transformation of bituminous or resinous and albuminous compounds?

River Weaver.—Mr. E. Leader Williams, jun. C.E. has been elected engineer to this navigation. There were 115 candidates for the appointment.

Miscellanea.

Paving *versus* Puddles in St. Pancras.—Knowing you to be antagonistic to routine and abuse, I trespass upon your space in order to call the attention of "those in authority" to the neglected and disreputable condition of the footways in and about St. Pancras-road, whose many *toll-gates* would at least cause one to look for efficiency in the particular complained of. For the last few days of damp weather it has been impossible to walk from Old St. Pancras Church to the Workhouse without danger of breaking bones, or being half submerged in endless pools. From the Catacombs by the Church, to the Vestry-hall, paving, properly speaking, there is none; and on the opposite side of the way, by the turnpike, and quite round the Crescent, it is pristine soil, in moist weather speedily rendered into mud. So, likewise, from the foot of King's-road to the end thereof, the flags are broken and inefficient. This, too, in the immediate neighbourhood of the presiding genii's seat of government! *Lux a non lucendo* may be truly said. I am not of a vengeful disposition, but if your echo of my humble complaint reach not the ears of the Board of Purposes, of Works, or of action in some sort, I sincerely hope that the offending party or parties may speedily tumble over broken flags, and be precipitated into oozy streams of rain-water, that so this unworthy state of things may be put an end to.—Judex.

The Water Supply in St. George's, Hanover-square.—A tract by Dr. Druitt, one of the medical officers of health, forming a "Report on the quality of the Water used in the In-wards of the Parish of St. George, Hanover-square," has been printed by order of the vestry. It contains a chemical analysis of the waters from many of the sources of water supply, such as the Grand Junction, and the pumps connected with the surface gravel throughout the district. The Grand Junction water is regarded as on the whole satisfactory and wholesome at present; but some of the pump-water appears to be much otherwise, although in other cases the water from these sources is held to be remarkably good. Among the worst is the bottom pump in Hanover-square, which contains offensive mud, and that in Hertford-street, Mayfair, which is too highly charged with carbonate of iron even for medicinal purposes. The Berkeley-square well is sunk to the chalk or sand, under the London clay, and is of a very different quality from the surface gravel supply, being much softer and more alkaline, and less impregnated with organic matter: it is said to be strikingly similar to Seltzer water in composition, though much weaker and free from effervescence. As a cooling drink, in inflammatory tendency of the blood, it is recommended; but for tea it tastes soft and flabby; and, on the whole, to most persons, this water is said to be not so pleasant and bracing as the more crisp and hard waters of the surface gravel.

Alarm at Manchester Free-trade Hall.—During the inaugural ball last week, some alarm was caused by a sharp crack which was heard in the supper-room. The room was crowded at the time, and, a cry being raised, "The floor is giving way," there was a rush to the stairs and lobby. The excitement, however, subsided almost immediately: nothing further occurred to excite alarm, and the room was subsequently again crowded at different times. It was thought and said at the time that the noise was most probably caused by a slight explosion of gas between the floor of the supper-room and the ceiling of the assembly-room; but such was not the fact. The truth, according to the *Manchester Guardian*, is this:—Between the floor and the ceiling below there are substantial trussed girders, to which were added two stout iron tie-rods, for additional security. The noise which caused the alarm resulted from the stripping of the threads of the screw from the end of one of the rods, and the flying off of the nut. It is believed to have been caused jointly by the rod being screwed up too tightly, some defect in the threads, and the motion imparted to the floor by the large number of persons standing at the tables or moving about. The stability of the floor was not, however, at all affected, for, despite the long and severe test subsequent to the alarm, nothing was displaced or strained, nor was the slightest damage of any kind done beyond the starting of the rod.

Cork School of Art.—At the last meeting of the committee, Sir John Gordon in the chair, it appeared, from the report of the managing committee, that the number of pupils under instruction for the quarter amounted to 592, of whom 450 were pupils of the National Schools, and 142 were male and female students of the Central School, and the fees amounted to 83*l*. 8*s*.—an amount, as regards attendance and fees, far exceeding any former year at this season. It was resolved that the exhibition should open on the 22nd, when the mayor was to attend to present the prizes to the students.

Lecture on Labour at Keswick Mechanics' Institute.—On Friday evening before last a lecture was delivered in the lecture-hall of this institute by the Right Hon. Joseph Napier, LL.D. M.P. on "Labour and Knowledge in connection with the Condition and Prospects of the Working Classes." The Rev. T. Wilson, B.A. president of the Keswick Mechanics' Institute, presided. The lecturer, in course of his address, pointed out the difference between properly-regulated labour and drudgery, and urged that labour and knowledge in every sphere of life should go together. He pleaded for the claims of those more generally known as the working classes. To give to the working classes a taste for knowledge, and a desire to rise in their position by virtue and intelligence, was a work worthy of the greatest perseverance; for as the workman was superior to his work, so was the mind superior to matter, and it would be found that the human mind could not be left in its undeveloped and ignorant state without the suffering by society of those penalties which a state of ignorance involves. He animadverted on the notion entertained by some against a popular increase of knowledge, on the ground that presumption and infidelity would be fostered by it, and maintained that nothing was so presumptuous in itself, or so expensive and injurious to society, as ignorance. In showing the connection between knowledge and labour the lecturer pointed out how labour without knowledge is misapplied, and how knowledge without its application to labour is fruitless. He next proceeded to notice the influence of knowledge on labour amongst our manufacturing population. That powerful agent, steam (which was exceeded only by the wonders of the electric telegraph), had placed manufacturing industry in a new era. The great pyramids of Egypt, on which were employed 100,000 men for twenty years, would, by the aid of our steam agency, have been erected with comparative facility.

Away with the London Toll-bars. — The *Morning Chronicle* justly exclaims,—"Pikes must go! London in A.D. 1856 is a vastly different place from that London which witnessed the infancy of toll-gates. We are too much occupied now to waste our valuable time in one of the forty-six vehicles that are always blocked up for ten minutes every time Mrs. Brown takes the family coach through Notting-hill Gate. These gates must be altogether removed, and the roads will, to all intents and purposes, become the mere streets which they really are, and nothing more."

Accidents.—An engineer at the St. Martin's Baths and Washhouses, Leicester-square, while descending, on Monday in last week, into the Artesian well, to repair one of the pumps, fell off the rope-seat by which he was let down by windlass, and was killed on a stage a few feet from the water. A knot in the rope-seat had slipped, and must have been carelessly tied.——A stonemason, at Burnely, last week, while preparing a scaffolding in Trafalgar-street, fell against a wall, 15 feet below where he stood, and died in an hour or two afterwards.——A bridge just erected over the river Perry, at Yeaton, near Baschurch, has fallen, killing one man and injuring another. The centres were being knocked out, too soon it would appear, by advice of the deceased himself.——At Ripon, on Sunday before last, the roof of an occupied house fell in, but without injury to any one: the building is a very old one.

Suffolk Institute of Archæology, Statistics, &c.—The quarterly meeting of this society was held on Thursday in last week. The company met at Horringer church, where the president, the Rev. Lord Arthur Hervey, having alluded to the restoration of the church a few years since by Mr. A. J. Brooke, Mr. Tymms read a paper on its history and architecture. The archæologists then proceeded to Rickworth Rectory, the residence of the Rev. Lord Arthur Hervey, where in the dining-room the exhibition of antiquities was arranged. Various presents were here announced. The Rev. Henry Creed then read a paper on rings, considering them in their religious, superstitious, useful, and ornamental purposes. The paper was illustrated by a large number of examples. The president then read a memoir of the House of Hervey, and the company afterwards proceeded to the mansion of the marquis, where they were received by Earl Jermyn, M.P. Lord Hervey, and other members of the family, and variously entertained. Ickworth church, the mausoleum of the Hervey family, was next visited; also Chevington-hall and church.

"What Twopences will do."—In consequence of a notice appearing in your paper of two lectures I lately delivered at Lancing, I have had several applications for information from different parts of the country. I beg to inform your readers, through you, that I shall be happy to forward copies to any of them who will favour me with their address, or should they prefer it, an enclosure of three postage stamps would save me from expense. W. White, Jun.

45, Upper Bedford-place, Russell-square.

Destruction of the Teredo Navalis in Docks.—A French naturalist, M. Quatrefages, suggests that a weak solution of mercury (corrosive sublimate, we presume), thrown into the water, will destroy the milt of the teredo, and consequently prevent fecundation of the eggs, thus exhausting the molluscs in the bud. Professor Owen suggests that the power of the teredo to bore into wood and stone depends on muscular friction, the muscular substance being perpetually renewed while the wood or stone wastes away, of course, without renewal.

Opening of the Mechanics' Institute at Basingstoke.—The winter session of this Institute opened with a lecture by the Earl of Carnarvon, on the history of Hants, in which his lordship regretted the past deficiencies in county histories, and made some reflexions on the general attachment of all for the native soil and home of their fathers. Some nations, or governments rather, had endeavoured to tear up ancient land-marks, and even to root out native languages; but it was rather curious, he said, that wherever the Anglo-Saxon race existed, there a different spirit was to be found. It was the fashion of our cousins across the Atlantic to talk sometimes as if the old order of things had passed away, and the new world had really outweighed the balance of the old. But there was not one American writer of note who did not show, in almost every page of his writings, a yearning for that period when America and England should be one. There was hardly an American who came to this country who did not visit it as his home rather than as a foreign land. And even in the names which the rude and unlettered colonists had assigned to the places of their residences,—such as New England, New Hampshire, New Plymouth, New Portsmouth, Canterbury, and a crowd more,—they might see that England, as it were, was receiving a fresh tribute of allegiance, and the Americans themselves were unconsciously bowing before that same altar which they, in ignorance, worshipped. And if they chose to narrow their thoughts from great nations to home and things around, what man was there then among them who did not seem to dwell with pleasure on the stories he heard in his youth from his father or some earlier generation? Who had not thought with pleasure that the very same house in which he was born and educated, and the very same hearth on which he sat, had witnessed the birth and education of former generations, and of all that one loved of humanity;—that in the same church in which he weekly knelt, there his forefathers knelt. The meeting was a crowded one, and the proceedings formed a sort of wind-up to a conference of the Hants and Wilts Adult Educational Society, which had been held in the forenoon at Basingstoke.

The Architect of the New Theatre at Moscow.—The Emperor Alexander has given the cross of a commander of St. Vladimir to M. Albert Cavos, architect of the new theatre at Moscow, and has also settled upon him an annuity of 6,000 francs.

The Atlantic Submarine Telegraph. — The Magnetic Telegraph Company having placed ten subterranean gutta percha insulated conductors of over 2,000 miles each at the service of the experimenters during the hours of the night of 2nd inst.—Professor Morse, from America, who appears to have come over for the purpose, and Dr. Whitehouse and Mr. Bright experimented with the lines in connection, and, according to Mr. Morse's report, with perfect success, so as to establish the complete practicability of telegraphing between Europe and America, *vid* the Atlantic Ocean, and thus disproving or dispelling Professor Faraday's fears of the impracticability of such a mode of communication. Signals were telegraphed from one end of the 2,000 miles to the other, at the maximum rate of 270 per minute upon the telegraphic register, a speed commercially advantageous. A public dinner was given at the Albion Tavern, to Professor Morse, on Thursday in last week, in acknowledgment of his services in the development of the electric telegraph, and likewise with a view of expressing an opinion of the importance of a submarine communication with America. The chair was taken by Mr. W. Fothergill Cooke, one of the directors of the Electric Telegraph Company. In proposing the health of Professor Morse, the chairman stated his opinion that the system introduced by the Professor was the best, it being the most simple, permanent, and certain.

Houses for Workmen in Paris.—The *Moniteur* of the 23rd ult. mentioned that grants of money were allowed from the funds of the State for the construction of lodgings for workmen. These encouragements not only apply to buildings entirely new, but also to the owners of houses who would add one or more stories to them for the purpose of dividing them into small apartments. Proprietors may, on application at the secretary's office of the Minister of the Interior, inform themselves of the conditions on which the grants for the last-named operation may be obtained. The cost of lodgings has led to a very serious state of things in Paris.

The Iron Trade. — The quarterly meetings of the members of the iron trade, in the central districts, have been held during the past week. The decision of the preliminary meeting to maintain the prices which have for some time nominally ruled—namely, 9*l.* for bars, 10*l.* for hoops, and 10*l.* 10s. for sheets and plates, has been confirmed; but "these prices," says the *Staffordshire Advertiser*, "so far as the make of most houses in this district are concerned, considerably exceed the rates at which iron of very fair quality has for some time been sold." Pig iron is considerably lower than at the commencement of the quarter. Fair cinder pig for foundry purposes is quoted by the paper just named, at 3*l.* 12s. 6d. and good mine pig from 3*l.* 15s. to 4*l.* 2s. 6d. Even the Shropshire pigs, which, from their excellent quality, always fetch a high price, are offered at cheaper rates. Ironstone is more plentiful, and also tends downwards, 17s. 6d. being the price of the best qualities of blue flats.

Improved Working-class Dwellings at Bristol.—The first building purchased by the Bristol branch of the Metropolitan Association for the Improvement of Dwellings for the People, has been opened. It formed the old City School, in Christmas-street, a spacious range of three sides of a quadrangle. It has been altered on the plans of Messrs. Foster and Wood, and now contains thirty-three family dwellings, of two or more rooms, each with scullery, water supply, and many other advantages, which are too often wanting in the poor man's home. Only about two-thirds of the capital of 1,000*l.* is subscribed, but a second building is in rapid progress in Limekiln-lane, a neighbourhood in which lodgings are scarce and dear, and the committee are anxious to arrange for a third and fourth in other parts of the city, but they need more friends and more funds to enable them to prosecute the work.

Yorkshire Architectural Society.—The anniversary of this society was celebrated on Thursday before last, at York, the Rev. Canon Randolph in the chair. A satisfactory report, as regards the operations of the society during the past year, was read; but, from the discussion which followed, it appeared that the society is unable, from limited pecuniary means, to extend its usefulness. The society has incurred a heavy payment in the item of printing, as respected its connection with the United Society, whose proceedings were published in a lengthy, elaborate, and costly manner; and it was suggested whether it would not be expedient for the society to withdraw from the United Society, and print such of its own proceedings as were deemed advisable in a more simple form, and at a reasonable rate, whereby the society would have more funds at its disposal for effecting church restorations and other similar works.

Tests of Pure Water. — The following practical rules for testing the wholesomeness of the water, says Dr. Marcet, in the *Medical Times*, will be useful. — 1. The water must be perfectly colourless and transparent, leaving no deposit when allowed to stand undisturbed.—2. it must be quite devoid of smell. —3. When litmus paper is immersed into the water, the colour of the paper must remain unaltered.—4. The water when boiled must not become turbid.—5. About half a table-spoonful of the fluid being evaporated to dryness on the spirit-lamp, there must be a slight residue left at the bottom of the spoon not turning black from organic matters.—6. The residue obtained by evaporating to dryness a sample of the water in a porcelain cup upon the tea-urn, must not become black on the addition of a solution of sulphuretted hydrogen.

Gas.—The sale of shares of the Birkenhead and Claughton Gas Works, at the Clarendon-rooms, Liverpool, on Saturday in last week, induced the attendance, says the *Albion*, of a large company, and, although the whole 600 shares were not sold, the prices realised upon about one-third of the number offered was from 75*l.* to 78*l.* per share. The executors withdrew the remaining lots at 75*l.* each, 50*l.* paid, but, had they been inclined, they could readily have sold all at 70*l.* Mr. W. Jackson, M.P. offered a few general explanations, and Mr. Beloe read a statement, showing the nett profits to have increased from 4,800*l.* per annum, in 1847, to 8,900*l.* in 1856; and that the income from supplying water to shipping, had increased in the same period from 39*l.* per annum to 400*l.* Several of the purchasers are commissioners of Birkenhead: many shares were sold after the auction, but at full prices.

New Use for Lamp-posts. — A speculative gentleman recently proposed to hire the gas-posts and lamps, of the town of Chester, from the Watch Committee, and to give them 1,000*l.* a-year for their use. To reimburse himself, he intended to turn the posts and lamps into instruments of advertising; and he calculated upon making 25,000*l.* by it. The Watch Committee, however, rejected the offer, the shopkeepers being opposed to it, as an arbitrary and vexatious tax upon them.

Ventilation.—A simple contrivance for ventilating dwellings, churches, &c. has, it is said, been invented by Mr. M'Kinnell, secretary of the Glasgow Athenæum: it consists of two tubes, one within the other, the inner one with a broad flange on its lower end, spreading like the bell of a trumpet, within the room. This inner tube opens to the outer air, and is meant to allow the escape of the foul or heated air. Attached to the outer tube is an arm which passes to the outer air; and while the inner tube is causing an upward and outward current, the arm leads the exterior and pure air into the concentric opening formed between the two tubes, where there is a constant downward and inward current. The flange mentioned spreads the air in a thin film across the ceiling of the apartment. Acting upon the discoveries of Dr. Stenhouse, the inventor proposes to attach to the supply-tubes of his ventilator a thin sieve of crudely broken charcoal, through which the atmospheric air will pass in its way to the room—the charcoal acting as a deodoriser and detergent.

"The Book of the Thames."—Mr. and Mrs. S. C. Hall announce a work under this title, to be published in the "Art-Journal." The river will be described from its rise in Trewsbury Mead to its junction with the German Ocean at the Nore—a distance approaching 300 miles, navigable nearly to its source. Among the subjects illustrated will be the picturesque river scenery, ancient ruins and remains of antiquity, baronial residences, historic sites, places associated with memories of great men, bridges and locks, the botanical productions, the fish, the insects, peculiar to the Thames and its banks; and the barges and boats. The picturesque scenery, and its varied accessories, will be confined to Mr. W. S. Coleman; while for matters antiquarian they confide in Mr. F. W. Fairholt, whose drawings and notes cannot fail to be of great importance to the work. The work will appeal to a large and varied class of readers.

The Miseries of a Millionaire. — "It is stated," says the *Union*, "that Baron James de Rothschild is at present much in the same predicament as Frederick the Great of Prussia was, when he could not get a miller, whose tenement stood in the way of an improvement the king was making at Sans-Souci, to give up his property for love or money. The baron, it seems, has set his heart upon a piece of land belonging to an old lady, a neighbour of his at Boulogne-sur-Seine, and which is most inconveniently wedged in between his own domains. The land is hardly worth 50,000 francs, and yet the baron has successively offered from 100,000 francs to 1,000,000 francs for it without success. The old lady, not content with this, has brought an action against him to prevent his breaking up a road which he has brought from the commune, and which cuts his private park in two. She insists upon its being preserved, as a necessary communication with her own property."

Kilpeck Church, Hereford.—That beautiful specimen of rough Norman architecture, the door of which Mr. D. Wyatt has in the Crystal Palace, is most dreadfully neglected, the churchyard is in a filthy state, and the interior requires renovation, the hideous gallery pulled down, open seats instead of deal box pews, and some stained glass windows. Now the patron has 15,000*l.* a year, and for about 400*l.* the restoration might be made: as much was done a few years ago by a society.—C. de Vere.

Rolling Railway Switches. — Messrs. David and William Brown, of Smethwick, have specified their patent for improvements in rolling railway switches from railway bars, and in rolling taper ends on other bars requiring the same. This invention consists of the following methods of giving a taper figure to railway bars for railway switches and crossings, and in rolling taper ends on other bars requiring the same. The inventors mount a pair of rolls, the surface of which are eccentric to their axis; the said surfaces passing uniformly from a curve of a minimum to a curve of a maximum radius. During the revolution of the rolls, their surfaces gradually approach, and anything rolled between them is consequently tapered. A portion of one or both rolls is cut away, and the rail or bar to be tapered, the end of which has been properly heated, is introduced between the rolls when the cut-away portions are opposed to each other. By the revolution of the rolls their curved faces seize the rail or bar, and give it a taper figure, which rail or bar is returned to the workmen at that side of the rolls where it was introduced. An adjustable stop is placed in front of the rolls so as to arrest the rail or bar at the proper point on its introduction between the rolls. Instead of making both rolls eccentric, one only of them may be eccentric, and the other have a cylindrical figure. The top roll may be raised and lowered by means of screws acting on the bearings or journals in which the roll works. In tapering railway bars to make switches, the inventors subject both ends of the same to the action of the rolls, thereby tapering it at both ends: by then dividing the bar into equal parts, two switches are made therefrom.

Crystal Palace in Winter.—An influential shareholder of the Crystal Palace, says the *Morning Star*, sends us the following:—"The experience that has been gained at the Surrey Gardens, and other similar institutions, clearly proves that winter opening of the Palace would be a step well patronised by the public, and would increase the value of the season tickets, and become an extra source of profit to the company. To carry out such a project successfully, it would be requisite that the main promenades should be well lighted, and that at various points in the building a series of side courts should be fitted up, at each of which either theatricals, marionets, vocal and instrumental music, poetical illustrations, conjuring, ventriloquism, equestrianism, cosmoramas, and panoramas, or dissolving views, might take place, while at other places a series of scientific and popular experimental lectures might be arranged, so that the taste of all visitors would be gratified. The grounds might afterwards be illuminated, and fireworks, baloon ascents, and other out-door amusements arranged. The extra cost of these fêtes need not be very great to the company: no extra attendants would be necessary above those required in summer for the flower-shows, &c. as the Palace need not be opened until noon on each day. The cost of the various performers and lecturers may easily be ascertained, and supposing 20,000 lights to be required for five hours, and that the gas could be obtained at the usual price of 5s. per 1,000 feet, the cost of lighting would amount to only 125*l.* per night. The Palace might be opened for these fêtes at five o'clock, and close at ten or eleven o'clock, trains on the railways arranged both to the City and West End, and thus this magnificent building would become the chief place of amusement in the metropolis." Were the Crystal Palace to require gas, the company could supply themselves with it, by the erection of an apparatus for the purpose, at probably one-half of 125*l.* per night. By means of gas, very novel and brilliant effects might be brought out at the Crystal Palace. The suggested arrangements for winter, we may add, could also be made available for evening entertainments almost all the year round, thus contributing a new class of frequenters, namely, those closely and continuously engaged all day in business, who would be glad of such an opportunity of breathing country air in the evening, and relaxing their care-worn minds at same time by varied amusement and instruction.

Antiquities from Kertch.—Some spoils from the Museum at Kertch have arrived which will possess considerable interest. The *Hampshire Telegraph* says,—"They are the full-sized figures, in marble, of a lion and lioness; and although the hand of Old Time has told upon them, they still possess in their outlines proofs of the skill with which they were sculptured. There is nothing to the uninitiated eye in the way of inscription to indicate their date or place of sculpture, but those who have some knowledge of such matters attribute them to the period of the ancient kings of Pontus, of whose realms the Crimea was a portion: probably they date from the time of that celebrated monarch Mithridates, surnamed the Great. However near the fact this conjecture of their date may be, it is impossible to gaze on these relics of an age long since gone by without deep feelings and reflections being excited. They are destined for the British Museum, and will no doubt attract much attention from antiquaries."

The Department of Art.—Your correspondent, C. H. W. who writes upon the subject of the prize medals of the Department of Science and Art, has fallen into a slight error, caused, doubtless, by the obscure manner in which the returns and tables of that department are presented to the public. In the Metropolitan Spring Exhibition of 1855, 195 medals were awarded among 991 works, and 186 of the premiated drawings were selected to form an exhibition, which was sent wandering through the provincial towns of the kingdom.* The subject, however, requires an investigation, as, indeed, does the whole system of Government superintendence of art and science as administered by the Department of Science and Art.—Crusty.

Tenders for Wells. — The following tenders have been received by the Board of Works for the Wandsworth district, for sinking fourteen wells, 20 feet deep, 7 feet in clear the digging: half-brick steining:—

	For each well.
Tickner	£53 11 3
Denning	39 0 0
Thompson	30 10 0
Speller	27 0 0
Bailey	26 0 0
Baxter	18 15 0
	Labour digging only.
Brown	£ 9 0 0
Jux	7 10 0

* 3 Rep. D. S. A. p 232.

Destruction of Weeds in Paved Paths and Courts.—The following method is said to be adopted at the mint in Paris, and elsewhere, with good effect: 100 lbs. of water, 20 lbs. of quick-lime, and 2 lbs. of flour of sulphur, are boiled in an iron vessel; the liquor allowed to settle; the clear part drawn off; and, being more or less diluted, according to circumstances, it is to be used for watering the alleys and pavements. The weeds will not reappear for several years. The liquid, however, will be death to the box or other plants upon the borders of such plots or paths, if it be allowed to reach the roots.

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Gentlemen, — After eight years' trial of your Patent Revolving Shutters, erected here, I can safely pronounce them most effectual in their action, and they have given me the utmost satisfaction.

I am, Gentlemen, yours truly,
Geo. Downe.

155, Leadenhall-street, August 7th, 1856.

TENDERS

For warehouse and premises, Fetter-lane, Fleet-street, for Messrs. Shaw and Son. Mr. T. H. Donaldson, architect. Quantities supplied:—

Wm. Cubitt and Co.	£2,900 0 0
I'Anson	2,884 0 0
Lucas, Brothers	2,849 0 0
Myers	2,787 0 0
Jay	2,690 0 0
Lawrence	2,640 0 0
G. Mansfield and Son	2,640 0 0
Piper and Son	2,427 0 0

For building a warehouse for Mr. Horn, Hounsditch. Messrs. Tress and Chambers, architects.

Nagle	£1,369 0 0
Sands and Co.	1,355 0 0
Ring and Stanger	1,342 0 0
Hawks	1,300 0 0
Raley	1,238 0 0
Turner	1,219 0 0
Evans	1,195 0 0
Keast and Moore	1,183 0 0
Wood and Son	1,170 0 0
Downs	1,160 0 0
S. H. Hocken	1,129 0 0
Furnival	1,060 0 0
Harmer	1,057 0 0
Freeman	1,050 0 0
Civil	957 0 0

For the extension of weaving-sheds and enlargement of shopping, at Worcester-cross, Kidderminster. Messrs. Biddlake and Lovatt, architects:—

Elliott, Wolverhampton	£1,405 0 0
Smith, Stourbridge	1,390 0 0
Ankrett, Kidderminster (accepted)	1,250 0 0
Walker, Evesham	1,233 0 0
Burkitt, Wolverhampton	1,157 0 0
Edmunds & Son, Kidderminster	1,110 0 0

For the erection of a new Congregational Church, at Sedgley, Staffordshire. Same architects. The carriage of materials given:—

Elliott, Wolverhampton	£1,638 0 0
Nelson, Dudley	1,546 0 0
Peacock, Sedgley	1,546 0 0
Cox and Sons, Tipton	1,457 0 0
T. and G. Lilley, Ashby-de-la-Zouch	1,428 0 0
Blackham, Sedgley	1,405 0 0
Burkitt, Wolverhampton (accepted)	1,331 0 0

For rebuilding 17 and 18, Cornhill. Mr. John Barnett, architect. Quantities prepared by Mr. Richard Roberts:—

	Bath Stone.	Portland Cement.
Carter	£10,477 10 0	£9,023 0 0
Bowley	10,289 10 0	8,916 0 0
Messrs. Lawrence	9,450 0 0	8,100 0 0
Hayward and Nixon	9,299 0 0	8,420 0 0
Lawrence and Sons	9,081 0 0	7,887 0 0
Jay	9,007 0 0	7,643 0 0
Wilson	8,974 0 0	7,329 0 0
Lucas, Brothers	8,739 0 0	7,731 0 0
Myers	8,697 0 0	7,961 0 0
Browne	8,462 0 0	7,317 0 0

For schools (Whitechapel Charities), Leman-street, Whitechapel. Mr. Beck, architect. Quantities supplied:—

		Extra cost of Granite Plinth.
Smith and Co.	£3,806 10 0	£107 0 0
Hall	3,759 0 0	96 0 0
Ashby and Son	3,099 0 0	77 0 0
J. Willson	3,647 0 0	100 0 0
I'Anson	3,498 0 0	45 0 0
G. Mansfield and Son	3,402 0 0	88 0 0
Jacobs	3,460 0 0	100 0 0
Little	3,450 0 0	77 0 0
Piper	3,413 0 0	67 0 0
Hill (accepted)	3,407 0 0	71 0 0
Browne and Co.	3,395 0 0	175 0 0

For alterations and additions at Windlesham Hall, Surrey, for Mr. Ashton. Mr. T. C. Clarke, architect. Quantities not supplied:—

	House.	Conservatory, &c.
Lawrence and Sons	£1,140 0 0	£123 0 0
Woodroffe (Reading)	940 0 0	57 10 0
Mills and Son (Egham)	787 15 4	76 0 0
Oades and Son (Egham)	749 0 0	59 0 0

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*** White lead is much adulterated. The evil, however, may be with the oil.

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A FIRST-CLASS Plain and Decorative PAPERHANGER, PAINTER, and DISTEMPERER is in want of EMPLOYMENT. No objection to the country.—Direct to H. K. Mr. Broad's, Hairdresser, New-cut, Lambeth.

TO ENGINEERS, &c. OF MILLS, PUBLIC WORKS &c.

A PRACTICAL MECHANICAL ENGINEER OFFERS his SERVICES as ASSISTANT, or to any entire charge, &c. at any establishment where machinery, &c. is employed; or to carry out any works that may be required. He is a good draughtsman, and can produce most satisfactory references as to his abilities and respectability. A small salary would be accepted where a good practice offered.—Address, H. M. Mr. Harding's, 25, New Broad-street, City.

TO ENGINEERS AND CONTRACTORS.

A HIGHLY-RESPECTABLE MAN, of general mechanical pursuits, who has been engaged several years in the carrying out some of the most important works in the country, viz. earth-works, bridges, tunnels, drainage, road-making, ballast-burning, also the erection of stations, warehouses, &c. is de-irous of meeting with a RE ENGAGEMENT. The highest testimonials can be produced for ability and integrity.—Address, R. E No. 8, Church-street, Upper-street, Islington.

TO ARCHITECTS, BUILDERS, AND OTHERS.

AN experienced Practical Man, well versed in construction, is a good draughtsman, can take levels, measure, &c. requires a SITUATION as CLERK of WORKS or GENERAL FOREMAN. No objection to a country town, or to go abroad.—Address, A. T. 41, Haliet-street, Hoxton.

N.B. Unexceptional testimonials.

MARBLE CHIMNEY-PIECES, and every other description of marble work, supplied to builders and the trade at about HALF the USUAL PRICE, in many instances less than slate.—Manufactured by the LONDON and CONTINENTAL MARBLE COMPANY, at their own Quarries in France and Belgium.—Office and Depôt, 3, Crooked-lane, London-bridge.—Estimates given for works to any amount.

MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY-PIECES lately imported from the Continent. They comprise Statuary, Giallo di Siena, Vert Rouge, Dove, Black and Gold, Rouge de Belmont, Bardiglio, and other choice foreign marbles; and are designed with great taste, and executed by first-class artists.—On sale, in the show rooms of Messrs. EVANS, SON, and CO. King William-street, London-bridge.

LLOYD'S MARBLE WHARF, Thames-bank, Pimlico, adjoining Vauxhall-bridge. – Italian Statuary, Veined, Sicilian, Dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

BUILDERS, ARCHITECTS, AND MASONS.

MARBLE. – The ITALIAN MARBLE COMPANY beg to call the attention of Architects, Builders, and others connected with the trade, to their large and well-assorted STOCK of VEIN SICILIAN, and other MARBLES. The liberal system of business adopted by this company, the superior quality of their marble, and their very moderate scale of prices are combined, to form an inducement to buyers. An inspection is solicited at the Depôt Bridge Wharf, Millbank, adjoining Vauxhall-bridge, where no other persons are authorised to sell except Mr. Baxter, Wharf Foreman, or the undersigned.

WILLIAM W. BONNIN, Secretary

PURBECK MARBLE can be had of Mr. JAS. VOSS, Corfe Castle, Dorset.

THE LIZARD SERPENTINE COMPANY manufacture and sell in block and slab the beautiful stone now raised from the lower beds of their quarries. Chimney-pieces, Columns, Fonts, and ornamental works on view, at 20, Surrey-street, Strand.

HENRY COX, Manager at the Lizard.
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MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.

THOMAS JACKSON begs to draw the attention of the public to the most extensive stock of Marble Chimney-Pieces in the Metropolis; consisting of a selection of upwards of two hundred, and manufactured by machine power from the finest Italian and other marble, and with that careful attention to the details and finish so necessary in good marble work. The Stock consists of elegant Fawley-Roon Chimney-Pieces in Statuary Marble; bold, massive Chimney-Pieces, in Black, Black and Gold, Bardilla, Sienna, Verd Antique, Brocatella, Dove, St. Ann's, and Serpentine Marble, suitable for Dining-Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Emperor's Red and Amber Marble, for Boudoirs, Brenkfast-Rooms, best and secondary Bed-Rooms, &c.; also, Monuments, Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the most classical designs, and in all the varieties of the finest Italian and British Marble, at the lowest remunerative prices.

BRAMLEY FALL! BRAMLEY FALL! On account of greater facilities than possessed by any one else, TRICKETT and PERRINS are prepared to supply in any quantity BRAMLEY FALL STONE, at greatly reduced prices, having opened the extensive quarries in the Hawksworth Cutting, on the North-Eastern Railway, near Horsforth. The stone is of the same quality as the well-known Old Bramley Fall and Horsforth Quarries, but has the advantage of being of a lighter and more uniform colour. The North-Eastern Railway Company have put side gauges on both sides of the railway. Powerful cranes are fixed, so that the stone can be got to any size, and the stone being loaded in the quarries at the railway sidings can be forwarded the same day to any part of the kingdom, or supplied in London river or Selby or Hull, in any quantity.—For particulars apply to JOHN TRICKETT, Stone Merchant, Headingley, near Leeds, or to SAMUEL TRICKETT, Victoria Stone Wharf, Isle of Dogs, London.

BANGOR WHARF, King's-road-bridge, Camden-town. STRINGFIELD and COOPER, late W. W. Rawlins, beg to call the attention of Builders and others to their stock of Bangor slates, lime, plaster, Roman, Portland, and Keene's cement, blue lias, Dorking and chalk lime, plasterers' hair, Yorkshire plain, pan, and ridge tiles, glazed sewer pipes, closets, and traps, Welsh bre-bricks, gravel and shells for garden paths, ballast, sand, &c. Materials landed, wharfed, and carted.

QUARRY WORKED STONE.—Architects, Masons, and Builders would effect a great SAVING in cost by ordering bases, plinths, templates, sills, corbels, imposts, cornices, copings steps, staircases of all kinds, moulded or plain, squares or spandril, from the quarries ready worked for fixing. Experienced foremen are kept, and the stone is clean worked, and carefully packed or stowed, and delivered direct to one bottom by vessel or rail, without transhipment. Estimates given on application, accompanied by plans or sketches, to SAMUEL TRICKETT, Stone-wharf, Isle of Dogs, or to JOHN TRICKETT, Headingley, Leeds, Yorkshire.

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YORKSHIRE PAVINGS, LANDINGS, STEPS, COPINGS, CURBS, SILLS, SINKS, and CHANNELS of Horsehill, Robin Hood, Park Spring, and Gaspay, in Blocks, Headstones, or Slabs; Purbeck Paving, Sinks, Curbs, Ricksto nes, Pitchers, and Squares; Caithness Flags, Firestone, Newcastle and Bilston Grindstones; Portland Stone in Blocks, Landings, Slabs, &c.; Darley Dale, Cean Stone, Bramley Fall, Bath, Huddlestone, Park-wood, and other Block Stones. Valentia Slate slabs, coarse Slates, Cornish, Aberdeen, Guernsey, and other Granites, Marble, in Block and Slabs, supplied from the Wharfs, Millbank-street, City Basin, and Deptford; also direct from the quarries by vessel or rail.—Address, FREEMAN'S WHARF, 27, Millbank street, Westminster.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FIELD RANSOME, Whitehall wharf, Canon-row, Westminster; or Patent Stone Works, Ipswich.

GATES and GEORGE, CAEN, AUBIGNY, and GENERAL STONE MERCHANTS.
CAEN WHARF, ROTHERHITHE, LONDON.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 248, High-street, Southwark, near the Townhall.

TO CONTRACTORS, ROAD SURVEYORS, &c.—FOR SALE, about 800 YARDS BROKEN BOMBAY GRANITE, at present in Guernsey; 500 Broken Hobart Town; and 600 ditto Port Phillip. Also a Large Quantity of other Granites, broken or otherwise, at very reasonable rates, by the ton or yard.—Apply to Mr. CHARLES ROSS, 2, Stepney-causeway, Ratcliff; or at Folly-wharf, Isle of Dogs, Poplar.

WELSH GRANITE.—The Welsh Granite Company, Carnarvon, supplies Pitching or Paving Sets of this Material to order. The Sets, which have for several years been extensively used in Manchester, Bristol, Leeds, and other large towns, combine in a higher degree than any others, the qualities of roughness in wear and durability. The stone is also well adapted for foundation courses, plinths, &c. for public buildings and for mill-stones.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terrace at the Royal Palace Slough, with the Heat or Cumnan under Royal Charter.—For terms apply to Mr. C. HOAR, Haytor Granite office, 4, Millbank-row, Westminster.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—TREGELLES and TAYLOR, 84, Old Broad-street. Manager—JAS. J. TRATHAN, Liskeard
This Granite is selected for the New Westminster-bridge.

MARKET-WHARF, REGENT'S-PARK-BASIN—WEST-END DEPOT, for Yorkshire Paving Portland and Derby Stone, Bangor Slates, Slabs, &c. Ale Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods SCALES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

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MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab Marble mortars, &c.

STONE! STONE! STONE! — To the TRADE. –The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Self-face Slab, Granite Pitching and Curb, Guernsey Broken Road Materials, and every other description of stone, at JOHN KNIGHT and SON'S, Devon Wharf, Mile-end. York tooled paving, 3s. 6d. per 100 feet; slab for hearths, 4l. per foot sup.; slab for chimney-pieces, 3d. per foot sup.; 8 by 3 window-sills, 6d. per foot run; 13 by 3 coping, 8d. per foot run; box chimneys (any opening), 8s. 6d. each. Terms cash on delivery.

BATH STONE OF BEST QUALITY
RANDELL and SAUNDERS,
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List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts

AMERICAN OILSTONES, superior to all other Oilstones for sharpening Edge Tools. Can be cut to any shape or size. AMERICAN OILSTONE DUST, 2s. 6d. per lb Patentee of the Engineers' Ratchet Drilling Brace, from 21s. each. JOSEPH FENN, Tool Manufacturer, 105, Newgate street, London.

FOR IMMEDIATE SALE, FORTY BOX CHIMNEY-PIECES, at 8s. 6d. each; also Marble ones, some of which have carved trusses, at 30s. each. Capital Stone Sink, 6 feet long and 30 inches wide, for 15s. being less than half-price.—Also a Cast-iron Table with revolving top. Apply to M. MAY, 5, Bath-row, New-road, Worcester.
N.B. Bath-row is in the rear of the Premises, 31, Brook street, New-road

SLATE.—An assortment of the best BANGOR ROOFING SLATE ON SALE, at Bridge-wharf, Millbank. Apply to Mr. GEORGE BAXTER, Foreman.

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôt, at Bangor, or to transmit by railway. Also Slabs of all sizes.—Orders to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor.

PARIS EXHIBITION. — ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1843. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immensurably less than that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of loo-tables, chiffoniers, consoles, &c.; baths, lavatories, washstands, cisterns, columns, vases, pedestals, and brackets; washstand tops, billiard tables, linings to halls, vestibules, and dairies. Price lists can be had on application to Mr. MAGNUS, 20 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed in any single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery Bethlem Hospital, various Lunatic Asylums, the ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; and at Messrs. Braby's, Belvidere-road, where terms may be obtained.

WELSH SLATES for SALE.—A cargo of fine WELSH SLATES, about 200 tons, now in the river; sizes suitable for builders. Approved bills would be taken —Apply to Messrs. WILKINSON and CO. 23, Gresham-street, City.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by steam power, laid down in the best manner, or supplied in any quantity. Information for using forwarded with material. Post-office orders or reference in London promptly attended to. Estimates given for every kind of the above work.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations,
FROM 2s. 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Peloneeau and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

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W. and J. STUDDS, Sole Proprietors of the WEST DRAYTON GRAVEL PITS, lately removed from No. 21 Wharf, Harrow-road, to 9, North Wharf-road, Paddington, have now on sale good Garden and Screened Gravel. For terms, &c. apply at the Wharf
Contractors supplied to any extent.

DRAUGHT and DUST EXCLUDER from 1d. to 6d. per yard, easily fixed to doors and windows. Sole Patentee, R. HELBRONNER, 235, Regent-street Wholesale and retail.

NO CHIMNEY WANTED for RICKETS'S PATENT CALORIFERE GAS STOVES in CHURCHES, HALLS, or SHOPS;
And for Conservatories, or any close Apartment, a Pipe can be attached to carry away the burnt air.

RICKETS'S CHEAP GAS STOVE, Price £1. 15s.
Made of Sheet Iron, suitable for Heating small Countinghouses, Bedrooms, Cellars, &c. &c.
MANUFACTORY, AGAR-STREET, STRAND, LONDON.
Liberal Discount to Builders.

LOANS, from 10l. 10s. to 100l. advanced within twenty miles of London, repayable weekly, or otherwise, at 2½ per cent. for twenty-five weeks, and 5 per cent. for fifty weeks. Forms, price 6d. by post, three postage stamps to be enclosed.—METROPOLITAN LOAN COMPANY, 1, Craven-street, Strand. Established 1834. Office hours from TEN to FOUR. ROBERT NORTON, Secretary.

MORTGAGE.—500l. to 35,000l. ready to be ADVANCED, on Freehold or Leasehold securities—Apply to J. SHEPPARD SCOTT, Esq. Architect, &c. 16, New Broad-street, City.

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TO ENGINEERS.—TO BE DISPOSED OF, the LEASE, MACHINERY, and TOOLS of an ENGINEERING ESTABLISHMENT, situate about four miles from London-bridge, within a few paces of two railway stations. The premises are well arranged, comprising a factory, with turnery over, engine and boiler house, pattern-room, smiths' and carpenters' shops, two counting-houses, foreman's dwelling, and large yard, with separate entrances. The machinery includes a horizontal steam-engine, planing machines, screw-cutting and turning lathes, drillings, &c. &c. For further particulars, apply to Messrs. FULLER and HORSEY, Bull-street, City.

NOTICE.—The Original Friendly Society of Carpenters and Joiners beg to since, that they have REMOVED to a more convenient house to hold their meetings, from George the Fourth, Chester-street, Regent's-park, to the EDINBURGH CASTLE, WELBECK-STREET, CAVENDISH-SQUARE. HENRY PARR, Secretary.
October 13, 1856.

FOR HIRE, a SPACIOUS TENT, adapted for the Laying of Foundation Stones for Public Buildings, &c.
Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduce prices.
Apply to H. PIGGOTT, 113, Fore-street, City.

ROYAL POLYTECHNIC. — Entire new Series of Novelties. — Lecture, with Experiments and Dissolving Diorama of Designs of New Pieces of Manufacturing Iron and Steel, by J. H. Pepper, esq. every Day, at Three, and every Evening, except Monday and Saturday, at Eight. New Entertainment by Leicester Buckingham, esq. entitled, "Life in the West," illustrated by Dissolving Views, painted by G. Harvey, esq. Montanari's Wax Figures, illustrating the Ethnology of Mexico.—Management of Miss Grace Alsop, and Mr. and Mrs. Cooper, for their Musical Lectures, entitled "Recollections of the Opera," and "Melodies from Many Lands," every Tuesday, Thursday, and Saturday Evening.—Monday Evening, Lecture by Mr. Walter Rowton, on the Writings of Charles Dickens.—The Evening Classes in connection with the Examination of the Society of Arts are delayed, for the convenience of pupils still joining, till the 20th inst. at seven, p.m.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modeling cornices, decorations &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 80, Old Broad-street, London; to Mr. M'NEMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO
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TATHAM and CO,
14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale or retail, at his wharf, 8, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment on advantageous terms.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and ROMAN CEMENTS.—T. H. BOORMAN, WILD, and CO. MEDWAY LIME and CEMENT WORKS, LOWER HALLING, near Rochester. Agent at the Works Mr. THOMAS WEEKES.
Agents in London, Messrs. GEORGE POTTER and CO. Lime-merchants, Purfleet-wharf, Earl-street, Blackfriars, and No. 19, North wharf-road, Paddington.

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These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Basin and Export Raiting Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Magic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire bricks, Grind-stones, Cement Chimney-tops, ditto Vases, Buttering, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfective non-absorbent). STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, Goose-yard, Lombard-street.

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PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs. Warehouse, No 1, Wharf, Paddington-basin.

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ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements used at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only, Portland Cement.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS Millbank-street, Westminster; and Seel street, Liverpool

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COWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 4, South Wharf, Paddington.

NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now building GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a moderate price.
All applications for prices and terms will meet with prompt attention.
N.B. Please observe the lime is ground at the works, not in London.

BLUE LIAS LIME.—Messrs. GREAVES and KIRTHAW having completed their Works on the Birmingham and Oxford, one of the Great Western Railways, at Harbury, are now prepared to supply LUMP and GROUND LIME of the same fine quality from the Quarries on the Great Western Railway, at Greaves's Blue Lias Lime, Portland, Bath, and Lias Cement Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

HUBBUCK'S PATENT WHITE ZINC PAINT,
The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither hear nor from all climes a t upon it. It is entirely free from any noxious or pernicious property. Those direful maladies paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil, and where it is used with Paint, Varnish, &c. To prevent the prejudice against Zinc paint, which the adulterated article must otherwise produce, it is now sold in the Wholesale Paint dealers in Original Packages, each cask stamped, HUBBUCK LONDON PATENT. And when so marked, the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Waterworks Companies, Coal-Mine Proprietors, Builders, Contractors &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, made on the same principle and from the same materials as used by the late firm of SWINDELLS and BROTHERS. J. C. is prepared to enter into contracts with any of the above branches that may favour him with their orders. The advantage to be derived from the above Cements, manufactured by J. C. over all others, are their extraordinary hydraulic properties.—Samples and references may be had on application either at the Works, Ashton New-road; or the Warehouse, 5, Broom-street, Shudehill Manchester.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS Millbank street Westminster

COLES, SHADBOLT, and CO.
CEMENT and PLASTER MANUFACTURERS,
LIME BURNERS
Brick, Tile, Drain-pipe, Hair Lath, and Fire Goods Merchants.
ST JAMES'S and THORNHILL WHARFS,
Caledonian road, London.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and the use who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal wagger's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 16, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southham, Warwickshire.

DAVIES and NORMAN,
CROWN WHARF, GREAT SCOTLAND YARD.
ROMAN and PORTLAND CEMENTS,
LIME, BRICKS, TILES, SLATES, FIRE GOODS, &c.
STONEWARE PIPES, PANS, TRAPS, &c.
A Liberal Allowance to the Trade.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS,
12, UPPER GROUND-STREET, Blackfriars (Surrey side),
7, NORTH WHARF ROAD, Paddington.
WILLIAM PEERS begs to inform the trade he is in a position to supply the best GREY STONE LIME recently manufactured from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s 9d. per ton.
Small ditto, ditto, 6d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works on the Medway, near Rochester

TO BRICKMAKERS and OTHERS.—TEN ACRES of very valuable EARTH TO BE LET, on ROYALTY For terms, apply to Mr. JOHN BARNETT, No. 3, Verulam-buildings, Gray's-inn.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick making, Flints for building and pottery work, Foundry Loam, Whiting Whitine (and for whitewashing), Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can load along side the stairs at Grays. MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above named articles can also be procured, as well as all kinds of fire goods, both Welsh and Newcastle, Fire-clay, Fire-brick, Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.
General Office—No. 13, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE and RED GAULT PAVIOURS' BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the fire bridges).
THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.
Malm Place, half-washed Stocks, and Place Bricks, also on sale. The whole are sound, well burnt, and nearly free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the counting-house, Hoxton Brickfield, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand, also ground ballast, constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

THE PATENT BRICK MACHINE COMPANY are orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine in existence. Trains from London-bridge to Warlingham (close to the field), leave at 8 and 9.30 a.m. and 3 p.m.; return at 9.55 a.m. and 3.5 and 7.55 p.m.
HENRY C. GUY, Secretary.
37, King William street, City.

T. HALE, BRICK and TILE KILNS, BRENTFORD.—12-inch Paving Tiles, 17s. per 100; 9-inch ditto, 10s. 6d. ditto; Paving Bricks, 4s. ditto; Pan Tiles, 3s. ditto; Plain Tiles, 2s. 6d. ditto; 3-inch Drain Tiles, 3s. 6d. ditto; 4-inch ditto, 4s. ditto; 3-inch 2-feet Drain Pipes, 3d. per pipe; 4-inch 2-feet ditto, 4d. ditto; 6-inch 2-feet ditto, 6d. ditto; 8 inch 2-feet ditto, 8d. ditto; 9-inch 2 feet ditto, 9d. ditto.—Elbows, Bends, Oven Tiles, &c for cash

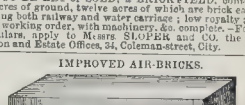
TO LIME-BURNERS, BRICKMAKERS, and OTHERS.—1,000 Chaldrons of LIME GAS BREEZE are required to be REMOVED, in weekly average quantities, from PEARCE'S WHARF, LIMEHOUSE-CUT.—Offers of price per chaldron to be forwarded to A. H. STILL, Manager, Gas Works, Burr Common-lane

ROUPELL-PARK BRICKFIELDS, LOWER NORWOOD, SURREY, near the Crystal Palace, Entrance, Norwood end, Palace-road.—BRICKS of the first class. Red Kiln Bricks, Cutters, Dressings, Facings, and Paviors, Clamped ditto, Yellow and Pale, Seconds, Pavors, and Pickings, Washed Stocks, Stocks, and Place.—Apply to TRUMAN and Co. Norwood Lodge, Palace-road, Roupell-park, Lower Norwood, Surrey.

TO FIRE-BRICKMAKERS. — TO BE LET, the MAKING of FIRE-BRICKS, at a large Establishment, in the County of Durham. None but experienced workmen of good character need apply.—Further particulars may be obtained on application to S. H. E. care of Messrs. HOWES and Co. 7, Thavies Inn, Holborn.

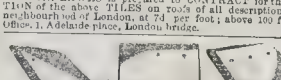
TO BRICKMAKERS and OTHERS.—TO BE LET or SOLD, a BRICK FIELD, containing fifteen acres of ground, twelve acres of which are brick earth, commanding both railway and water carriage; low royalty; the field in full working order, with machinery, &c. complete.—For further particulars, apply to Messrs. SLOPER and CO. the Gresham Auction and Estate Offices, 34, Coleman-street, City.

IMPROVED AIR-BRICKS.



ILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain-pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed sewerage Pipes, Ornamental Quoin Blocks, &c.
Tividale, Staffordshire.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the EREC-TION of the above TILES on roofs of all descriptions, in the neighbourhood of London, at 9d. per foot; above 100 feet, 8d.—Office, 1, Adelaide place, London-bridge.



BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price all each tile of about 18 inches long, stop-ends and outlets, so that any run can be put them up, or, if over 100 feet are required, a man will be sent to fix them at 6d. per foot. This charge to include tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURORS," page 980, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world

CONIAM'S PATENT IMPROVED ROOFING TILE.—These tiles are light from overlapping each other by a raised edge, which also prevents the drift of rain or snow, and at the same time, offers considerable saving in timber. To be obtained of C. PHILLIPS, Potter, Weston super-Mare.

HOGG'S GARDEN EDGE TILES: a cheap, elegant, and durable substitute for Box Edging, 13s. per Hundred, or 4d. per yard.

Exhibited at Court of Inventions, Crystal Palace; and at the Office of "The Builder."
Full particulars from Mr. R. BLACKET Witham, Essex.

PANTILES, PAVINGS, &c. — J. H. ANDREWS, Wisbeach, Cambridgeshire, begs to offer pantiles at 50s. per 1,000; floor bricks and 6-inch pavings, at 37s. 6d. per 1,000, 9-inch pavings, at 55s. 6d. per 1,000, plain tiles, at 45s. per 1,000, delivered Cambridge.—Delivered on trucks in London on Eastern Counties Railway.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Panels, Transoms, Weeds, Balusters, Chamfered Bases of Columns, Pavings, Facings, Plain Bricks, and Dressings, Sills, Chimney Shafts, and Pots, and other Articles, manufactured by J. M. BLASHFIELD, the Adelaide Imperishable Terra Cotta, at Millwall Docks, and Island Wharf, No. 1, Wharf, Pratt-street, Paddington-basin.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

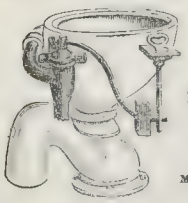
SALT-GLAZED STONEWARE, FIRE-CLAY, AND TERRA-COTTA WORKS,

NEAR BARNSLEY, YORKSHIRE.

The Proprietor, E. B. BEAUMONT, manufactures every description of STONEWARE for drainage, building, sanitary purposes, and fancy ware, from clays which have been subjected to the most searching analyses, and proved to be of the most tenacious and indissoluble qualities. The pipes are wrought by Spencer's Patent Machine, by which tube and socket are one, without a manipulated joint, and rendered the more compact by high pressure; and as every improved apparatus has been made available to secure the highest excellence with great economy of labour, the goods are put upon the market at a considerable reduction from the prices charged for others at all assimilating in quality, whilst the stock on hand is always sufficiently large to provide for works of the greatest magnitude. THE TRADE LIBERALLY TREATED WITH.

Price-lists and Diagrams sent free on application,—
At the WORKS.....To Mr. WM. FORD Darfield Fire clay Pottery, near Barnsley.
In LIVERPOOL.....To Mr. JOHN SIDDALL, 30, Shaw's-row.
In MANCHESTER...To Mr. B. CONSTERDINE, Hunt's bank.
In GLOUCESTER....To D. B. WILKINS, Westgate Wharf, Gloucester.
In LONDON.....To Mr. J. D. JONES, 27, Buckingsbury; and Goods Depot, No. 4 Warehouse, King's-cross (Great Northern Railway).

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing,

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

ON SALE AND HIRE,

SINGLE AND DOUBLE PUMPS IN WROUGHT IRON

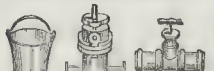
TO ANY DEPTH,

FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.

Sizes, from 3-inch to 15-inch barrels.

N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

B. FOWLER and CO.'S FARM and COTTAGE PUMPS, 30s



All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps, Engine Frames, Horse Gear, Crabs, Pulley Blocks, Wrought Pails, and Rubbish Baskets, Newr Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s. per foot super together with every particular of its cost and adaptation, can be obtained of Messrs. H. F. BURT and CO. 2, Charlotte-row, Mansion-House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is CROSS'S WHOLESALE WAREHOUSE, 22 GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 22, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. painted.
Ditto .... 42s. per doz. galvanized.

Upper Ground street, Blackfriars Bridge, Surrey Side.

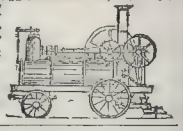
WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead.	1 10 0
2½ „	long 3 3	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron	2 3 0
3½ „	ditto 3 6	flanged pipe,	2 12 0
4 „	ditto 3 6	as required.	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from underground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage. May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

PORTABLE STEAM-ENGINES and PUMPS Kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.



Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS, Engineers and Contractors, John's-place, Holland-street, Southwark, London.

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

TO CAPITALISTS, BUILDERS, and BRICKMAKERS.—TO BE SOLD by private contract, a FIVE-HORSE POWER STEAM-ENGINE, together with other machinery used for the purpose of brickmaking. Also, TO BE LET, a valuable BRICKFIELD, at a rent and royalty, situate at Deptford. Kent, near to estates on which buildings are being rapidly erected.—For further particulars apply to Messrs. WIRE and CHILD, Solicitors, 9, St. Swithin's-lane, City.

STEAM-ENGINE and BOILER for SALE. A 16-horse engine, complete; boiler, 25 feet long, 4 feet diameter; 30 feet shafting, seventeen drums, and fourteen Plummer blocks.—Apply to JACOBS and HYMAN, Thornhill-bridge Wharf, Caledonian-road, King's-cross.

WINDOW BLINDS.—FULLER, BROTHERS, Manufacturers of every kind of Inside and Outside WINDOW BLINDS, warranted of the best materials and workmanship, at the lowest possible prices. Builders and the Trade supplied. A List forwarded on application.—29, Charlotte-street, Blackfriars-road; and at Sydney, New South Wales.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 3s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application, post free.

THE FOREIGN PASTE, so celebrated for Cleaning Marble Chimney-pieces, sold by Messrs. FORTNUM, MASON, and CO. 182, Piccadilly; HANNAY and CO. 63, Oxford-street; NEWBURY and CO. St. Paul's Churchyard; and at the Depôt, two doors from Islington Church.—J. SMITH, Agent.

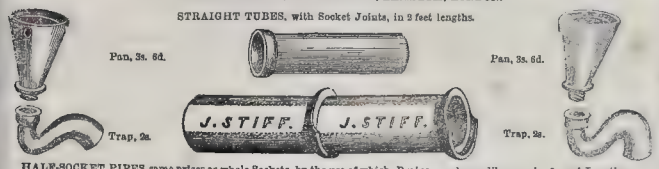
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz. :—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Horton.

Drawings, with Prices, will be forwarded free, on application.

THE NORTH DEVON POTTERY COMPANY,

MANUFACTURERS OF SUPERIOR SALT-GLAZED STONEWARE PIPES, &c.

LONDON DEPOT, BALTIC WHARF, KINGSLAND-ROAD.—AGENT—Mr. E. COOK.

CLEARANCE PIPE. (ESSENTIAL IN CASE OF STOPPAGE)

A LIBERAL DISCOUNT ALLOWED THE TRADE.

MANUFACTORY, NEAR BIDEFORD, NORTH DEVON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES, DOULTON'S HALF-SOCKET PIPES, DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS, DOULTON'S PATENT JUNCTION BLOCKS, TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					2½d. per foot.
4	"	"	"	"	3d. "
6	"	"	"	"	5d. "
9	"	"	"	2s.	9d. "
12	"	"	"	"	1s. "
15	"	"	"	1s. 5d.	"
18	"	"	"	2s. 6d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

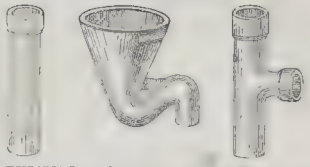
MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 89, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb 11, 1856

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

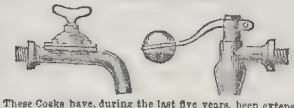
The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

HANCOCK'S PATENT VULCANIZED INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Diving-dresses of superior make, and improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

MACINTOSH INDIA-RUBBER WAGON COVERS, at reduced prices. Stocks of different sizes are always ready, and can be inspected at our Warehouse, MOSES, SON, and DAVIS, 14 and 15, Aldgate High-street, and at the Factory, India-Rubber Steam Works, Bow-common.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT.—Second Testimonial.—" March 10th, 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

SALES BY AUCTION.

TO BUILDERS, IRONMONGERS, STOVE-GRATE MAKERS, and OTHERS.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, at the WAREHOUSES, Belle Sauvage-yard, Ludgate-hill, on THURSDAY, OCTOBER 23rd, and following day, at ELEVEN each day, in lots, a PART of the extensive STOCK of the Sheffield Company's Stove Grate and General Ironmongery Warehouses, all of the newest patterns and designs, including 100 polished steel register-fronts, with ormolu mounts, as Hanoverian, Rumford stoves, 50 wrought-up ranges for cottagers' cooking-stoves, 50 hall and shop stoves, 50 steel fenders with ormolu mounts, 200 bronzed and black fenders, 250 sets fire-irons, bronzed umbrella-stands, hat-stands, card tables and tables, an assortment of elegant Berlin bronzes, in groups of figures, ink-stands, medallions &c.; 20 curtain rollers, 30 round and oblong pig-troughs, 500 yards rain-water pipe and guttering, 30 tons stove and range metal, air-bricks, dampers, and frames, an assortment of builders' ironmongery, in locks, nails, hinges, screws, bolts, and bars &c.; furnishing ironmongery, panel and sash, bath, bell, ware, and enamelled saucepans, fine plated goods in nursing range moulds, irons, coal vases and scoops, toilet sets, 30 gas chandeliers, 500 chain, cable, and anchor proofs, 400 lanterns, 2 dozen gas brackets, an improved reflecting telescope, 30 gas patent pumping machines, a few tools of smiths' shop, standard weights and weighing machine, counting-house fittings, and other effects.—To be viewed on Tuesday and Wednesday previous to the sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

VICTORIA-STREET, WESTMINSTER.—SECOND PORTION.—Sale of new Building Materials, Plant, Stock, and Utensils of a Builder.

MESSRS. FULLER and HORSEY are instructed to SELL by AUCTION, on the PREMISES, Victoria-street Westminster, on MONDAY, OCTOBER 20th, and following days, at ELEVEN each day, in lots, a short portion of the SECOND PORTION of the STOCK of well-seasoned NEW BUILDING MATERIALS, partly prepared yellow and white deal flooring boards, 21 feet cube Portland stone, 7 inch 2-inch tooled York paving, 5,000 feet self-faced ditto, 2,000 feet York landings, 3 to feet cube Kirk stone, 1,500 feet cube granite bottoms, grates, &c., a stock of fire-bricks, 10 inch and 9 inch stone rain water-pipe, 15 slate cisterns, 30 coils iron pipe 10,000 feet iron tube, an assortment of Ts, elbows, bends, sockets, &c., cottage lamps, fittings, varnishes, 20 cwt. red and white lead, and colours, 2 pieces paper-hangings, &c. The plant and tools include 7 hoisting machines and chains, mortar-mill, sweeping-machine, 5 stone trucks, 7 asphalte pots, crab-crane, rocks and falls, 2,000 scaffold boards, 1,000 scaffold poles, 10 to 40 feet; 1,000 feet run 3-inch plank, 500 deep scaffold poles, 6 ladders, 20 benches, barrows, 6 brass finishers' tables, smiths' forge, vice, anvil, bench, air furnace, moulding trough, and boxes, 2 painters' machines, 2 pair steps, and trestles; an assortment of boxes, stocks and dies, steel tools, and numerous other effects.—To be viewed two days previous to the sale, when catalogues may be had, on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

800 TONS OF IRON

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed to SELL by AUCTION, on MONDAY, OCTOBER 27th, at ELEVEN, at the WORKS, Blackwall, by direction of the Assignees of Mr. C. J. Mare, in lots, 800 TONS WROUGHT-IRON, including bar iron, of Bowling, Lowmoor, and best scrap bars, plates, bolts, and angle iron, 200 tons scrap iron 50 tons nails, 30 tons puddled bars, 40 tons rolled scrap slabs, 50 tons hammered slag, 30 tons scrap blooms &c. To be viewed on Friday and Saturday prior to the sale when catalogues may be had at the Works of Chas. Lee, Esq., Official Assignee, Accountant's, of Messrs. Lawrance, Nelson, and Bowen, Solicitors, 61 Lincoln's-inn-fields; Messrs. Peacock and Nixon, Solicitors, Wardrobe place, Doctors' Commons; of Messrs. Pullen and Son, 60, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

PRELIMINARY ANNOUNCEMENT.

MESSRS. FULLER and HORSEY in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees of Mr. C. J. Mare, to SELL by AUCTION, on the ENSUING MONTH, the whole of the LOOSE STORES and TOOLS of the extensive shipbuilding yards and iron works at Blackwall and West Ham, including 100 tons rivets, 30 tons screws, bolts and nuts, 20 tons cast and clays, 50 tons cross irons, 2 tons engineers' steel stubs, an expensive planing, horizontal, and other braces, stocks, taps and dies, &c.; 100 wrought-iron anvils, 30 tons smiths' tools, in top and bottom swages, mandrils, hammers, &c.; 200 tons iron flasks, crane shank and hand ladles; flask weights, several weighing-machines, brass-founders' and finishers' tools, Pulet punching machine, the shipwrights' patent, Hyatt's planing machine, contractor's portable steam engine and boiler, three Cornish steam-boilers, crab cranes, blocks and falls, many tons of chain slings, mooring chains, chain-cables, &c.; 50 brass barrel lift-pumps, ships' water-closets, ships' pumps, five tons brass fittings, a large assortment of general ironmongery, 1,000 dozen files, 100 joiners' benches, joiners' cramp and tools, 10 inch and 9 inch planing machines, circular and shearing cropper, 50 oak trees, several hundred feet of mahogany, expensive propeller cabin fittings, several thousand feet pine and beech, shipwrights' tools, 20 barges and skiffs, three wrought-iron barges, counting-house fittings and a large assortment of miscellaneous effects. More detailed advertisements will shortly appear. Catalogues are being prepared, and will shortly be obtained at one shilling each of Messrs. Pullen and Son, 60 Fore-street, or of Messrs. Fuller and Horsey, Billiter-street, City.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on TUESDAY, 11th NOVEMBER, next, and following day, at ELEVEN each day, on the PREMISES the Albion Works, Upper-street, Islington, a very valuable and powerful self-acting boring machine, drilling machine, two very powerful lathes, for turning large and small castings, cutting screws, and planing, engine smiths' forges, a large assortment of engineers' and smiths' tools, foot-lathes, engines and boiler, shafting, pumps, screws, apparatus, a valuable collection of wood patterns, in wood and iron, stores of every description, and numerous other effects. At the same time will be SOLD, the LEASE of the PREMISES, comprising a substantially-built factory, of two floors, the upper story used as a fitting shop, turnery, and store-room. The lower floor used as an erecting shop, turnery, engine house and smith's shop, a workman's dining room, stable-yard, &c., convenient residence, and offices, held on lease for a term of twenty-six years, at a rent of 80l per annum.—The Premises may be viewed till the sale; and the Machinery on Monday previous. Particulars and catalogues had on the Premises, and of Messrs. Fuller and Horsey, Billiter-street, City.

TO PLASTERERS, BUILDERS, AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on TUESDAY, the 21st of OCTOBER, at ELEVEN o'clock, on the PREMISES, Victoria-street, Westminster, in lots, PLASTERERS' TOOLS and MODELS, including many scarce and valuable ones, as wreaths, fruits, cups, heads, spandrils, friezes, festoons, cornices, pedestals, trophies, &c.; also the plant of a builder, comprising timber, deals, and battens, and the plant of a builder, comprising timber, deals, and battens, and the Sale; and catalogues had at the War Department, Pall-mall; the [illegible] and of Messrs. Fuller and Horsey, Billiter-street, City.

TOWER.—SALE of STORES.—By order of the Secretary of State for War, SOLD by PUBLIC AUCTION, on MONDAY, OCTOBER 20th, at ELEVEN o'clock, on the Tower premises, by [illegible] APPROVED [illegible] Regent's Canal Dock, Limehouse, Middlesex, [illegible] Deal Decks, Ale, Porter, Cocoa, Preserved Milk, Meat Biscuit [illegible] without a catalogue.

SALES BY AUCTION.

Very important and valuable Freehold Building Ground at Paddington, lying between the Grand Junction Canal and the Harrow-road.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to OFFER FOR SALE, at the MART, on FRIDAY, OCTOBER 24, at TWELVE (unless previously disposed of by private contract) a very important and exceedingly valuable PLOT of FREEHOLD BUILDING GROUND, land-tax redeemed, having a very considerable frontage to the Harrow-road, commencing with it with the Queen's-road, Porchester-road, and Westbourne-terrace bridges, extending in depth about 120 feet, and lying immediately between the Grand Junction Canal and the Harrow-road. This valuable spot offers sites for about fifty houses. The buildings in the immediate neighbourhood consist chiefly of most respectable private houses, which is almost the only unoccupied space adapted for building.—May be viewed, and particulars, with plans, had of Messrs. Clayton, Cookson, and Wainwright, Lincoln's-inn; at the Mart; and of Messrs. Norton, Hoggart, and Trist, 69, Old Broad-street, Royal Exchange.

Valuable Water-side Premises on the Regent's Canal, Kingsland-road, with Cement Kilns, Steam Engines, &c., and an improved Rental of 90l a year

MESSRS. EVERSFIELD and HORNE are instructed by the Mortgagees to SELL by AUCTION, at the MART, in NOVEMBER, in two lots, the beneficial LEASE of the extensive PREMISES, known as Tussey Wharf, near the Kingsland Bridge, Kingsland, fitted up as a great expense by Messrs. Freeman and Co. for the manufacture of cement but equally applicable for many other purposes. Held for a long term, at a moderate ground-rent; also an improved rent of 90l a year, arising out of a plot of ground opposite Tussey Wharf. May be viewed; believe the tenants and particulars had of Messrs. Gwynn, Jay, and Salwey, Esqs. Solicitors, 12, New Broad-court; at the Mart; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

GRAYS-INN LANE.—Important Business Premises, suitable for Builders, Whitewrights, Pianoforte makers, Cab Proprietors, and others.

MESSRS. EVERSFIELD and HORNE are instructed to SELL by AUCTION, at the MART, in NOVEMBER next, an acceptable offer by private contract being previously made, the beneficial LEASE of the extensive PREMISES in Portsdown-place, Gray's-inn-lane, immediately occupied by the late firm of Locke and Nesham, and which comprises a large open yard, with two long ranges of well-lighted workshops, fitted up with planing and moulding machinery, worked by steam power, large covered drying-sheds, smith's, painter's, and plasterer's shops, counting-house, saw-pit, timber stages, and other conveniences; the whole inclosed with folding gates and lighted with gas. Held on lease for a long term, at the low ground-rent of 65l per annum.—May be viewed, and particulars had of Messrs. Kenrick, Solicitors, Kenrington-lane; at the Mart; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

TO BRICK AND LIME MERCHANTS, CONTRACTORS, BARGE OWNERS, AND OTHERS.

MESSRS. EVERSFIELD and HORNE are instructed by the Mortgagees to SELL by AUCTION, in NOVEMBER, TWELVE SAILING BARGES, adapted for the coasting trade, of about 70 tons each, and some of which will go into the docks. They may be viewed lying at anchor in that part of the river, and will be sold without reserve. The day of sale will be shortly announced, and parties wishing for particulars will have them sent by applying to the Auctioneers, 40, Parliament-street, or Coal Exchange.

CHELMSFORD.—TO FARMERS, BUILDERS, and OTHERS. TO BE SOLD BY AUCTION, by

VALPY and STOKES, on THURSDAY, the 23rd of OCTOBER, 1856, on the PREMISES, Prittlewell, by order of the Trustees under the Will of Mr. Abraham Wyer, for the benefit of his children, about 500,000 BRICKS and TILES, consisting of white and red kiln bricks, pollers and arch stocks, also an old pantile roof and drain-pipes; also, the brick kiln, as stood, William's pipe-machine, barrows, boards, brick tables, moulds, &c.; about ten tons of prime meadow hay, two horses, two fat heifers, thatched shed in yard, 5l, with drawings of the pipes, &c. Sale to commence at TEN for ELEVEN o'clock precisely.—Catalogues may be had at the Place of Sale; Office of the Auctioneers; and at the neighbouring Inns.

TO FARMERS, CARPENTERS, BUILDERS, AND OTHERS.

MR. LENGLAND will SELL by AUCTION, on the PREMISES, Highbury Cottage, Lower-road, Islington, on TUESDAY, OCTOBER 21st, at TWELVE for ONE o'clock precisely, the SECOND PORTION of valuable BUILDING MATERIALS, consisting of a large quantity of sound, old Oak Posts, Floor Boards, Joists, Rafters, Quartering, about 2000 Pan and Pin Tiles, Twenty Tons of Iron, Pebble, and other Paving; a large quantity of Scaffold Boards and Poles, Portland Cart, a large Cistern, a quantity of Christians and other Deals and Deal Planks, Iron Ranges, Register, and other Stoves; a quantity of Timber, Doors, Sashes, and Frames, Four-wheel Chaise, Couch house Gates, Twenty Stacks of Firewood, and various other useful articles.—May be viewed; catalogues had on the Premises, and of the Auctioneer, 3, Shepperton-street, New North-road, Islington.

VALUABLE FREEHOLD LAND, EAST BARNET.—TO BE SOLD by PRIVATE CONTRACT, about THIRTY ACRES of compact and valuable FREEHOLD BUILDING LAND, finely situated in the vicinity of the Great Northern Railway station and already partly in every way adapted for building purposes, being extensively fronted to the high road on each side of the railway, and also most well-formed roads. The situation is noted for its salubrity, scenery, and facility of communication with London.—For further particulars apply at Mr. MINNES'S Offices, 11, Great George-street, Westminster.

FREEHOLD LAND TO BE LET, on the Rise Thereof, between the river and the Victoria Docks, Canning-town, Essex.—To BUILDING LEASES for ninety-nine years. This land has not only the advantage of river frontage, but is surrounded on the land side by streets of the best class of houses, as will more fully appear by the Plans of the estate now to be seen, and upon which sites for 300 Villas, Shops, and Houses are marked out.—Apply to Mr. JOHN WOOLLEY, 6, Duke-street, Adelphi; or to Messrs. KING-FORD and FORMAN, 5 Bedford-row, Holborn.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases, [illegible] Plots from one to four acres for large villa residences; smaller plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 6, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Cornhill.

FREEHOLD LAND TO BE LET, on Building Lease for ninety nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

TO BUILDERS and CAPITALISTS.—FOR SALE, by PRIVATE CONTRACT, about TWELVE ACRES of eligible BUILDING GROUND, situate in the township of Whitley, and adjoining the borough of Tynemouth. The ground lies on one of the most beautiful and extensive views on the east, overlooks the Whitley, or North Rocks, is about one mile distant from the Tynemouth Railway Station, and is approached by a good and level road.—Particulars may be obtained on application to Mr. WM. DUNN, Solicitor, Pilgrim-street, Newcastle-upon-Tyne, or to Messrs. J. CLARKE, Newcastle, and Ross, Architects, Darlington, with whom plans of the estate are deposited.

BUILDING LAND TO BE LET for 900 years, near the new Railway Station, Norwood, and elsewhere. Money and bricks, if required.—Apply to Messrs. BLAKE and SNOW, Solicitors, 22, College-hill, Cannon-street, City.

TO BUILDERS.—Some very eligible Lots of FREEHOLD LAND, suitable for the erection of houses of the value of from 2 or 300l each, situate at Tulse-hill; Lower Norwood; Walthamstow; near the Railway Station at Harrow; and Penge.—Also, TO BE LET on Building Leases at moderate ground-rents.—Apply to Mr. JAMES HIGHAM, 79, Farringdon-street.

BUILDING LAND TO BE LET, at HALLSVILLE....Term 1,000 years, for small cottages.
CANNING TOWN " 1,000 " for small cottages.
NORWOOD..... " 1,000 " for villa residences.
STRATFORD..... " 100 " for small cottages.
POPLAR..... " 98 " for fourth-rate houses.
Advances 70l. to 90l. at 5 per cent. on each cottage
Apply to Mr Wm ELLISON, Architect, Stansby road, Limehouse.

TO BE LET, or LEASE to be SOLD, very extensive PREMISES in BERMONDSEY, and within ten minutes' walk of London-bridge, well adapted for a contractor or builder. They consist of a large yard, twelve-roomed house, including two offices, with garden in rear, joiners' shop for two to thirty benches, scaffolding or deals, &c upwards of 200 feet long, two saw-pits, two large sheds, stabling for twenty horses, the whole containing nearly an acre of ground, and will be let at very low rent — Apply to ROBERT WARD and SON, Timber Merchants, 5, Oxford-street.

TO FIXTURE-DEALERS, UPHOLSTERERS, BUILDERS, and COACHMAKERS — TO BE LET, on Lease, or the FREEHOLD to be SOLD, those capital PREMISES late in the occupation of Archibald Hawke, in Great Queen-street, Lincoln's-inn-fields, extending into Peer-street, occupying an area of more than 6,000 feet, including capital light workshops for forty-five benches. Two convenient houses in front and two other dwellings, with stable behind, timber-yard, saw-pit, &c. — Apply to Mr. MASON, 8, Union-court, Old Broad-street.

WIMBLEDON. — Valuable BUILDING LAND TO BE LET on building leases, situate within a few minutes' walk of the railway station, commanding fine views and in a healthy situation. Immediate application is requisite. For particulars apply to Messrs. ASHPITEL and WHICHCORD, 2, Pooll's-corner, Westminster; or 22 Fenchurch-street.

REIGATE, SURREY, within Three Quarters of an Hour's Ride of London. — TO BE SOLD, a very desirable SITE for a RESIDENCE, with about TEN ACRES of FREEHOLD LAND, ornamentally timbered, situate on the southern slope of Reigate-hill, about half a mile from the Reigate Town Station, on the South Eastern Railway, commanding extensive views, and affording an opportunity for building a house in the most favourable locality rarely to be met with. Sold by Private Treaty. For particulars apply to Messrs. PAGE and LEES, Estate Agents and Auctioneers, Reigate and Dorking, Surrey.

GREEN-STREET, LEICESTER-SQUARE. — TO BE LET, the commodious BUSINESS PREMISES, No. 17, in the above street.—The premises may be viewed on application within, and particulars obtained of W. C. REED, Architect, 64, Old Broad street, City.

AN old-established SMITH-SHOP TO LET, with Shop-side, Two Fires, Tools, Stocks and Dies and Vice's to match. Coming in about 1st Apply at No 2, Meard's-court, Wardour-street.

TO CARPENTERS, BUILDERS, &c.—A BUSINESS TO BE DISPOSED OF as above, situated a few miles east of London: for stock, implements, goodwill, &c., together with three leasehold cottages, each let at 8l. The stock can be separated from the purchase, and a part of purchase remain unpaid, if preferred, to suit the convenience of parties; or the whole will be disposed of, if such is desired. Any one in want of a business will apply —Direct to G. A. at the Office of "The Builder."

BUILDER'S BUSINESS WANTED.—Any party wishing to dispose of an old-established JOBBING BUSINESS in or near the city, where over eight months' credit is not given, and which is of the value of 400l, may hear of a purchaser by sending particulars addressed to G. G. Office of "The Builder."

TO UPHOLSTERERS and CABINET-MAKERS.—TO LET, with immediate possession, an old-established BUSINESS in the above branches, situate in one of the most flourishing market towns in Kent where an extensive trade has been carried on for many years, and may still be increased. The premises are replete with every convenience. Satisfactory explanation given in consequence of the present proprietor leaving on account of ill health. Apply personally or by letter, post-paid, to J. L. 27, Mount-street, Grosvenor-square.

BUILDER'S BUSINESS for DISPOSAL.—TO BE DISPOSED OF, an old-established BUSINESS with a first-class connection, situate in a manufacturing town in Cheshire. The premises are complete in every respect, and may be had either with or without the house, which adjoins the yard. Rent moderate; stock well selected. The amount required will be about [illegible] Satisfactory reasons given for disposing of the same. Apply, if by letter, post-paid, to Messrs. [illegible] Solicitor, Macclesfield, Cheshire.

London: Printed by George Wyman, of 11, Hatton-street, Brunswick-square, in the Parish of St. George, Bloomsbury, Printer, at the Printing-office of Cox, Wyman, & Co., Great Queen-street, Lincoln's-inn-fields, in the Parish of St. George-in-the-Fields, in the County of Middlesex. Saturday, October 18, 1856.

The Builder.

A JOURNAL FOR THE

Architect, Engineer, Operative & Artist.

Vol. XIV.—No. 716. OCTOBER 25, 1856. Price Fourpence. *Stamped 5d.*

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BUILDERS' BENEVOLENT INSTITUTION. The NINTH ANNIVERSARY DINNER will take place on WEDNESDAY NEXT, 29th inst. at the London Tavern.
Mr Alderman WILLIAM LAWRENCE, President, in the Chair.
Tickets, 21s each, to be obtained of the Treasurer, Mr. GEORGE BIRD, the Secretary; at the Office, 19, Southampton-street, Bloomsbury; the Stewards; and at the London Tavern.
A. G. HARRIS, Secretary.

ARCHITECTURAL EXHIBITION, SUFFOLK STREET GALLERIES, PALL MALL EAST. All drawings to be sent in on the 1st and 2nd DECEMBER next. Department for Materials, Decorations, Manufactures, &c. connected with Building. The Committee have a little floor and counter space, and some wall ditto, still unappropriated.—Applications should be made at once, by letter (to Mr. JAMES EDMESTON, jun, Honorary Secretary).
JAS. FERGUSSON, F.R.A.S. 20, Langham place, Regent-street,
JAS. EDMESTON, Jun 5, Crown court, Old Broad street. } Hon. Secs.

TOWN SURVEYOR WANTED.—The Commissioners for the Improvement of the Town of Scarborough are desirous to ENGAGE an experienced person as SURVEYOR and CLERK. He will be required to devote the whole of his time to the duties of his office, viz. to take levels and draw plans, sections, specifications, and estimates for sewerage works, and the laying out and repair of streets, and must possess a sufficient knowledge of building to advise on and carry out ordinary works. He will be required to superintend the paving, flagging, macadamising, sewering, and scavenging of the town. His duties as clerk will be to keep the accounts of the Commissioners, to convene the requisite meetings, keep minutes of proceedings, conduct correspondence, and to carry out generally the provisions of the Improvement Act. Salary 150*l* per annum. Three months' notice required to terminate the engagement. Applications, stating age and qualifications, with testimonials, to be sent on or before the 3rd of NOVEMBER next, addressed to the Chairman of the Commissioners, 15, Queen-street, Scarborough.
Scarborough, October 16, 1856.

BOROUGH of PRESTON.—LOCAL BOARD of HEALTH. WANTED, immediately, a SURVEYOR for the Borough of Preston, under the Public Health Act, 1848, at a salary after the rate of 250*l*. a year. He will have to take charge of all works (including waterworks) within the Borough of Preston, and of such waterworks, or any portion of the same without the Borough, when the same are constructed, as he may from time to time be required by the Board. He must also take charge of such other works without the Borough as he may from time to time be required by the Board. He must devote the whole of his time to the duties of his office, and not be engaged in any other office business or employment whatever. He will be called upon to give security, pursuant to the 34th section of the Public Health Act, 1848. The list of duties, as agreed upon by the Local Board, may be had on application to the Town Clerk of Preston.—Sealed applications and testimonials, endorsed "Application for the Office of Surveyor," must be sent to the Town Clerk of Preston, on or before SATURDAY, the 1st of NOVEMBER, 1856.
ROBERT ASCROFT, Town Clerk.
Preston, 16th Oct 1856.

COMPETITIONS.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The local authority of the borough of Linkfield, in the foreign of Reigate, Surrey, require PLANS for the LAYING of SEWERS, with levels, sections, &c. the whole to be clearly defined and laid down to a scale of one chain to the inch. The fol[illegible] [illegible] plans [illegible] [illegible] MONDAY [illegible] DECEMBER [illegible]
[illegible] BONNY Inspector

COMPETITIONS.

WELLINGTON TESTIMONIAL.—To SCULPTORS and ARCHITECTS.—The Committee are desirous of receiving DESIGNS for a COLUMN and STATUE to be erected in honour of the late Duke of Wellington, at Liverpool.
The amount at present at the disposal of the Committee is about 6,000*l*. and if their intentions can be properly carried out for that sum, they are desirous that it should be, but any Artist will be at liberty to send in a separate design, either for the Column alone, or for a Column and Statue.
The competitors must accompany their designs by estimates of the cost, either for the Column and Statue combined, or separately, and stating the description of material which they propose to employ.
A premium of 50*l*. will be given for the design which, in the opinion of the Committee, is the best for the purpose intended.
Each design to be marked with a motto or device, and the name of the Author is not to appear, but to be put in a separate sealed letter, bearing on the outside a corresponding motto or device.
The design for which the premium may be awarded to become the property of the Committee.
All communications to be addressed to the Chairman of the Committee, at the Town-hall, Liverpool; and the designs must be delivered there, free of expense, on or before the 1st day of NOVEMBER next.
Town hall, Liverpool, September 20, 1856.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The Trustees for Sale of a Freehold Estate of 500 acres, including the Beulah Spa, and near the Crystal Palace, require PLANS for LAYING OUT the same for building purposes, showing the necessary roads, sewers, &c. the whole to be clearly defined and apportioned in suitable lots and laid down to a scale of two chains to one inch, from actual admeasurement. The following premiums are offered:—For the plan adjudged the best by the trustees, 150 guineas; for the second, 100 guineas; for the third 50 guineas. The plans to which the above premiums shall be awarded will be retained by, and be the property of, the trustees. Further particulars may be obtained of Mr. PEACOCK, Builder, near the Jolly Sailor Station, Norwood, close to the property. The Trustees will meet on the [illegible] day of DECEMBER next, to examine the plans, which are to be previously forwarded, enclosed and sealed, to the Secretary's office Auction Mart, London, addressed to the Trustees of the White Horse, Norwood Estate.

TO SURVEYORS. — NOTICE. — NORWOOD, BEULAH SPA ESTATE, near the Crystal Palace. It having been intimated to the Trustees that the time mentioned for the Delivery of the Plans is insufficient, they have determined to EXTEND the same to MONDAY, DECEMBER [illegible], at the same place.

TO ARCHITECTS and OTHERS.—The Burial Board for the Parish of Aylesbury is desirous of receiving PLANS, DESIGNS, and separate SPECIFICATIONS and ESTIMATES, comprising ground plans, sections and elevations for LAYING OUT, PLANTING, and FENCING a NEW BURIAL GROUND with suitable entrance gates, and for BUILDING a LODGE and TWO CHAPELS thereon. The ground contains four acres, a plan of which may be seen, and further information obtained at the Office of the Board. The Board will not be bound to employ the person whose designs, plans, or drawings, may be adopted, but in the event of his not being employed, will pay him a premium of ten guineas, and his designs, plans, drawings, and specifications, shall then become the absolute property of the Board. The same are to be sent, free of expense, under seal, without the author's name, but with a motto, on or before the 7th day of NOVEMBER next; and a sealed letter, containing the name and address, must be sent therewith, which will be opened after selection made, and those plans, &c. not approved will be returned. The Board does not pledge itself to accept any plan, &c.
R. M. BENSON, Clerk to the Board.
Aylesbury, October 10, 1856.

TO ARCHITECTS. — The Scarborough Cliff Bridge Company are desirous of procuring DESIGNS for ENLARGING and otherwise IMPROVING the SPA SALOON, accompanied with detailed working drawings, specification, and estimate. The Concert-room is to be made sufficiently large to accommodate 2[illegible] persons, exclusive of an orchestra for fifty performers, with two retiring rooms, and other conveniences. The company will award to the author of the best design in their judgment, the sum of 40*l*. and to the author of the second best design, the sum of 20*l*. Designs and specification for which premiums are awarded will become the property of the company, who will not bind themselves to employ the author to superintend the carrying out of the works. The company will not pay either of the premiums unless a sufficient Tender be made for the actual execution of the works within the amount of the author's estimate. The designs must be deposited with Mr ROBERT WARD, the Secretary to the Cliff Bridge Company, Scarborough, free of all expenses, on or before the 29th NOVEMBER next, marked with an emblem or motto on the outside, and enclosing a sealed letter, with the name and address of the author. The designs not approved of will be returned to the authors on application. By order of the Committee of the Cliff Bridge Company,
ROBERT WARD, Secretary.
Scarborough, October 15, 1856.

CONTRACTS.

TO CONTRACTORS.—SOUTH WALES MINERAL RAILWAY. The Board are prepared to enter into a CONTRACT for the CONSTRUCTION of the entire RAILWAY and WORKS, from the Briton Ferry, near Neath, in South Wales, to the Head of the Valley at Glyncorrwg, a distance of about [illegible] [illegible] plans, and sections may be seen at the offices of I. K. BRUNEL, Esq. [illegible] Duke-street, Westminster, [illegible] [illegible] South Wales Mineral Railway [illegible] [illegible] Messrs. [illegible] [illegible] Westminster [illegible] NOV. [illegible] [illegible] the lowest Tender [illegible]
Oct. 1[illegible], 1856. ROBERT PARSONS, Sec[illegible]

CONTRACTS.

TO BUILDERS, CONTRACTORS, and OTHERS.—NEW WINDSOR CEMETERY. The Council of the Borough of New Windsor, as the Burial Board thereof, are prepared to receive TENDERS for the ERECTION of TWO CHAPELS, CURATOR'S HOUSE, ENTRANCE-GATES, BOUNDARY FENCES, &c. and for the Formation of the Roads, Paths, and Drainage connected with the Cemetery. The plans, drawings, specifications, and draft contract can be seen and bills of quantities obtained, at my Offices, Windsor, on WEDNESDAY, the 29th instant, and from that day until FRIDAY, the 7th of NOVEMBER next, between the hours of TEN and FIVE. Information and bills of quantities can also be obtained by application to the Architects, Messrs. POULTON and WOODMAN, 1, Grey Friars-road, Reading. The Tenders are to be prepared and delivered in separately, as follows:—
No. 1. For Erection of Chapels, Curator's House, and Entrance-Gates, &c.
No. 2. For Boundary Fences, &c.
No. 3. For the Formation of the Roads, Paths, and Drainage.
Contractors may Tender for one or more of these divisions of the works. All Tenders are to be sealed up, endorsed, and sent in to me on or before ELEVEN o'clock, a.m. on MONDAY the 10th of NOVEMBER next, endorsed, "New Windsor Cemetery Tender," No 1, 2, or 3, as the case may be.—The Council do not bind themselves to accept the lowest or any of the Tenders.
HENRY DARVILL, Town Clerk.
Windsor, October 13, 1856.

ROYAL ENGINEER CONTRACT.—The War Department being about to enter into a contract for LAYING DOWN a FIRE MAIN at the Royal Ordnance Hospital at Woolwich, such persons as may be desirous of TENDERING for the same, may inspect the plans and specification, and receive all necessary information relative thereto, on applying to Mr. CARTWRIGHT, Clerk of Works at the Royal Engineer Office, Grand Depôt, Woolwich, between the hours of [illegible] a.m. and FOUR p.m. up to the 29th inst. Tenders to be delivered at the Office of the Director General of Contracts, War Department, Pall mall, London, on the 31st OCTOBER, 1856. The War Department reserve to itself the right of rejecting the whole or any of the Tenders.
Grand Depôt, Woolwich, 11th October, 1856.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director General of Contracts, Pall-mall, London, on or before SATURDAY, the 15th day of NOVEMBER, 1856, from persons desirous of CONTRACTING for WORKS to be EXECUTED in [illegible] the Fortifications at Dover Castle. A specification of the works to be executed may be seen by persons fully competent to undertake the work [illegible] and specifications and forms of Tender obtained at the Royal Engineer Office, Dover, between the hours of TEN and FOUR o'clock, from SATURDAY, the [illegible] of NOVEMBER to FRIDAY, the 14th of NOVEMBER, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of [illegible]*l* for the due performance of the contract. Tenders for the above work to be addressed to the Director General of Contracts, Pall mall, London, and endorsed "Tender for Works at Dover Castle."
N B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, October [illegible], 1856.

WIGAN LOCAL BOARD of HEALTH.—WATERWORKS. To ENGINEERS, CONTRACTORS, EXCAVATORS, and OTHERS. The Local Board hereby give Notice, that they are prepared to receive TENDERS from parties willing to undertake a Contract for the FORMATION of a TUNNEL about [illegible] yards in length and 18 feet internal diameter, with shafts and tunnel entrances, and also, for EARTHWORK, PUDDLING, &c. in embankments for storage reservoir, including masonry, brickwork, &c. in valve and outlet wells, gauge basins, and retaining walls; also a tunnel, under site of embankment, and a waste-water channel, &c. The drawings and specifications may be seen, and any further information may be obtained on and after the 1st day of NOVEMBER next, on application at the Office of the Local Board of Health, Wigan; or at the Offices of ROBERT RAWLINSON, C.E. 34, Parliament-street, Westminster. Specifications and duplicate forms of Tender, Schedules, and Bills of Quantities, may be had on payment of one guinea each. Quantities supplied. Sealed Tenders to be delivered at the Office of the Local Board, Wigan, before TWELVE o'clock on FRIDAY, the 14th day of NOVEMBER next, endorsed "Tender for Waterworks Contract." The Local Board do not bind themselves to accept the lowest or any Tenders.
WILLIAM ACKERLEY, Solicitor to the Local Board.
Wigan, October [illegible], 1856.

TO BUILDERS and OTHERS.—GARSTON LOCAL BOARD of HEALTH. The Local Board hereby give Notice, that they are prepared to receive TENDERS from parties willing to enter into CONTRACTS for the following WORKS:—
1st. House and Offices for the Board.
2nd. Yard Walls and Tool House only.
3rd. Yard Walls and Outbuildings.
The Tenders must state a sum for each of the above-mentioned works; and also a gross amount for all the works on the three Contracts. The plans, drawings, and specifications may be seen, and any further information may be obtained, on application at the Office of ARTHUR HOLME, Esq. [illegible] Court street, Liverpool. Sealed Tenders must be delivered at my Office before TWELVE o'clock on MONDAY, the 17th day of NOVEMBER next, endorsed "Tender for Contract No. [illegible]," as the case may be. The Local Board do not bind themselves to accept the lowest or any Tender; and the parties whose Tenders may be accepted will be required to enter into a bond, with two sufficient sureties for the due performance of [illegible]
[illegible] LLOYD, Clerk to the Board.
Liverpool, October [illegible]

For remainder of Contracts see next page.

CONTRACTS.

LONDON and NORTH-WESTERN RAILWAY COMPANIES for SUPPLY.—The Directors are prepared to receive TENDERS for the SUPPLY of the undermentioned STORES, viz:

No of Contract		No. of Contract	
1	Brass Cast, and Brass or Iron Tubes for Locomotives, &c.	9a	Lead Pipe, Sheet, and Pipe
2.	Copper.	9b.	Iron Yorkshire.
4.	Canvas.	9b.	Tyre Bars.
5	Carpets and Rugs.	9	Ironwork.
6	Coals.	9	Wheel
9	Crucibles.	9	Oil, Lamp, &c.
11	Copper and Brass Work	9	Oils various, and Turpentine
12	Colours	9	Glass
13	Dressstery	9	Tin, Block
14	Cast, Trimmings.	9	Zinc Sheet and Spelter.
14.	Cotton, Waste.	1	Watches
15	Glass Plate	2	Sundries consisting of Baskets, Pail, Candles, Soap, Brooms, Brushes, Iron Hose, Pipes, Engine Stands, &c.
16a	Glass, various.		
17a	Brushes, and Pencils.		
17b	Nails and Packs.		
17c	Screws.		
17d	Gas Fittings.		
17f.	Lamp Cottons.		
18.	Leather	11	Hats.
18a	Leather.	11a.	Caps
19.	Lead, White and Red.		

Specifications and Forms of Tender may be had on and after MONDAY, OCTOBER 20th, on application to the Secretary, Paul Station, London Bridge, of the Terminus of the Companies' printed separately, and parties wishing to obtain Contracts particular Contract, relate to for which the proposal is taken. Forms and Specifications may be had on MONDAY, OCTOBER 20th, from TEN till FOUR o'clock, at the Euston Station's Pattern-room, Euston Station; and any further information required may be obtained by application to the Secretary at the Paul Station Departments. Tenders are to be delivered before TEN o'clock on MONDAY, NOVEMBER 3rd. By order of the Directors,

CHAS. E. STEWART, Secretary.

Euston Station, Oct 11th, 1856.

DEVIZES CORN-EXCHANGE.—To BUILDERS.—The Town Council are prepared to receive TENDERS for the execution of the different Works required to be done on the ERECTION and COMPLETION of the PROPOSED CORN EXCHANGE. The plans and specifications may be seen at my office, New on the hours of TEN and FIVE on and after MONDAY the 20th instant, and any further information required may be obtained of Mr WILLIAM HILL Architect, Albion-street, Leeds. Sealed Tenders to be sent to me, superscribed "Tender for Corn-exchange," on before FRIDAY, the 31st instant. Security will be required for the due performance of the contract. The Council will not pledge themselves to accept the lowest, or any other Tender. No allowance for journeys.

ALEX. MEEK, Town-clerk.

Devizes, October 8, 1856.

BRADFORD CORPORATION WATER-WORKS.—To EXCAVATORS, MASONS, and GENERAL CONTRACTORS.—The Waterworks Committee of the Bradford Corporation will meet at their Room, in Oxford-row, on WEDNESDAY, the 29th DAY of OCTOBER, at ELEVEN o'clock in the FORENOON, for the purpose of receiving TENDERS or PROPOSALS for the following WORKS

CONTRACT D.—The excavating, forming, and completing a Storage Reservoir, on Scarr Hill, in the township of Bierley, Bierley Beck, in Bierley Road Park, in the township of Bierley and parish of Skipton, with Earthworks, Stone Retaining Walls, Culverts, Valve Well, Waste Weirs, Waste Channel, and other Works connected therewith; also, the building and completing of a Branch Conduit of about 720 yards in length, from such Storage Reservoir, No. 1 of the Contract mentioned.

CONTRACT E.—The excavating, forming, and completing of a MILLOWNERS' COMPENSATION RESERVOIR, of about 16 acres in extent, on Scarr Hill, in Bierley, in the township of Apperthwaite and Horton, in the parish of Bursall, with the Culverts, Valve Well, Waste Weir, Waste-Water Channel, Grate Basin, Resolvent Embankment, and other Works connected therewith.

CONTRACT F.—The forming and completing of about 171 miles in length of the main Aqueduct for bringing an improved supply of water to the town and borough of Bradford, whereof about 4 miles will have to be executed by means of tunnelling through hills, and about 3 miles will cross valleys on open embankments, and the Contract may be sub-divided as follows:

Division No. 1.—Main Conduit, from the end of Bierley Beck Branch, in the township of Horton, to Apperthwaite Moor, being a length of about 7,830 yards, including the Barden Tunnel of about 1,760 yards in length in the Branch from the Storage Reservoir, No. 1 of the Contract, to Clayton Heights, 1,320 yards in length, with the deep cutting down of about 80 yards in length of Clayton Pipe of 30 inches in diameter for crossing the Ing Beck Valley, near Draughton, and a Branch Conduit of about 132 yards in length for bringing the water from the above-named Chelker Reservoir into such Main Conduit.

Division No. 2.—Main Conduit from the end of Division No. 1, at Addingham low moor, to a public highway passing through Holden Wood, in the township of Silsden, and parish of Kildwick, in a length of about 2,277 yards, including the Silsden Tunnel of about 1,970 yards in length, the Swartha Tunnel of about 330 yards in length, the Lothersdale Tunnel of about 660 yards in length of Cast-iron Pipe of 30 inches in diameter, for crossing the Holden Beck Valley, near Holden Wood, and the Holden Beck Branch, Contract No. 4, of 70 yards in length, of which about 11 yards will be tunnelling.

Division No. 3.—Main Conduit, from the end of Division No. 2, at Holden Wood, in the township of Keighley, to the Stone Pipe of Mort in East and West, and parish of Bingley, being a length of 5,830 yards.

Division No. 4.—Main Conduit, from the end of Division No. 3, at East Morton, to a public highway at Heaton, near the Reservoir Reservoir now in progress there, being a total length of about 4,370 yards, including Thornbeck Tunnel, about 220 yards in length, the Cullingworth Tunnel of about 1,320 yards in length, the Cullingworth Pipe of 30 inches in diameter for leading and laying down of about 1,283 yards length of Cast-iron Pipe, of 30 inches in diameter, for crossing the Morton Beck, at East Morton; and a further length, of about 4,090 yards in length of Cast-iron Pipe, of 24 inches in diameter, for crossing the River Aire, and the Leeds and Liverpool Canal, below Hurst Mill, near Shipley.

The Committee is not bound themselves to accept the lowest or any of the Tenders, and the Plans may be seen, and further information may be had, from and after MONDAY, the 20th day of OCTOBER, on application to Mr. J. W. LEATHER, Civil Engineer, Leeds.—By order,

W. H. HUDSON, Town Clerk.

Bradford, September 24, 1856.

* Instead of the 22nd, as before advertised.

BOARD of WORKS.—WHITECHAPEL DISTRICT.—Notice is hereby given, that a meeting of this Board will be held on MONDAY, the 27th day of OCTOBER instant, at SIX o'clock in the evening, at the vestry-room, No. 15 Great Alie-street, Whitechapel, to receive TENDERS from persons willing to CONTRACT for the execution of the several WORKS required to be done in the SEWERS and DRAINS of the district, mentioned and described in the specification or schedules of contract prepared by the direction of the Board; such Tenders to particularise the terms of price (if any) for the respective items of service or materials, reserving to themselves the right to determine the term the period of the duration of the contract. A copy of the specification and form of Tenders may be obtained at the office of the Board, on application of his which sum will be returned to persons tendering. All Tenders must be delivered at the OFFICE of the Board before FOUR o'clock in the afternoon of the day of meeting, and any Tender which is not upon the printed forms prepared by the Board, and duly signed by the person or persons tendering, will be rejected. The Board, however, do not bind themselves to accept the lowest or any Tender.

ALFRED TURNER, Clerk.

15, Great Alie-street, Whitechapel, October, 1856.

CONTRACTS.

BRECON and ABERGAVENNY CANAL and RAILWAY.—Persons desirous of CONTRACTING for the REPAIR and MAINTENANCE of the above, for the term of three years, from the 1st day of JANUARY next, are notified to receive notice of the Works which may be seen at the offices of the Clerk at Navig ion House, near Abergavenny, or at the under-signed at Brecon, addressed to see the Clerk before, addressed to the Committee of Proprietors, under cover, to the Clerk as above, on or before the 3rd day of DECEMBER next. The Canal is about thirty three miles in length, one Railway about 8½. On the former is one aqueduct over Pen Dail, one tunnel and six locks, besides numerous smaller aqueducts, bridges, cuttings, and other works.

MATHERY, WILLIAMS, and COBB.

Brecon, October 20th, 1856.

GRANITE and IRON LAMP-POSTS.—The Vestry of the Parish of Bethnal green will meet at the Town hall, Bethnal green road, on THURSDAY, the 6th NOVEMBER next at ELEVEN o'clock in the forenoon precisely, to receive TENDERS and then CONTRACT for supplying GRANITE and CAST IRON POSTS complete to the several specific ations, which may be seen at the Office of the Surveyor, Tow pall-buildings, from whom any further information required may be obtained on the Premises named by the Contractor only.—Tenders addressed to the Clerks of the Vestry, must be delivered at the Town hall Office on or before WEDNESDAY, the 5th NOVEMBER. The Board do not bind themselves to accept the lowest or any Tender.—By order,

BRUTTON and VOSS, Vestry Clerks

Town hall, Bethnal green, 20th Oct., 1856.

TO SCAVENGERS and DUSTMEN.—The Vestry of the Parish of Bethnal green will meet in the Town hall, Church-row, Bethnal green road, on THURSDAY, the 6th NOVEMBER next at ELEVEN o'clock in the forenoon precisely, to receive TENDERS and then CONTRACT for cleansing and removing ASHES, DUST, &c.; likewise for cleansing down the Public Sewers and all the Roads, Streets, and Public Places within the parish for one year from the 25th March next, specifications which may be for inspection at the Office of the Surveyor, Town-hall buildings, on or before TUESDAY, the 4th of NOVEMBER, when Tenders will be received by the Surveyor accordingly. Tenders sealed (with a Tender-mound note enclosed) and addressed to the Clerks of the Vestry, must be delivered at the Town hall Office, on or before TUESDAY, the 4th of NOVEMBER, The Board do not bind themselves the highest accepting any or no Tender. By order, BRUTTON and VOSS, Vestry Clerks.

Town-hall, Bethnal green, 20th Oct., 1856.

FLINTS.—The Vestry of the Parish of Lewisham will meet at the Board-room, at the Manor House, Lewisham, Kent, on TUESDAY, the 28th day of OCTOBER inst. at ELEVEN o'clock in the forenoon precisely, to receive TENDERS for supplying FLINTS, to be delivered at the Free Dock, a Chinese walk, at such times and in such quantities, as may be directed. The Vestry do not bind themselves to accept the lowest or any Tender. Sealed Tenders, signed by the proposed contractor, with the names and description of two sufficient sureties for the performance of his contract, to be left at my Office on or before SATURDAY next, the 25th inst. The legal charges of the contract to be paid by the successful party. No deviation from the same; and no Tender will be received or accepted unless made on one of the printed forms to be obtained at my office.

By order, CHARLES HILL, Vestry Clerk.

Offices, Manor House, Kirkdale, Oct 24, 1856.

ST. SAVIOUR'S DISTRICT.—To CONTRACTORS, BUILDERS, and OTHERS.—The Board of Works for Saint Saviour's District invite proposals or receive TENDERS for the PERFORMANCE of the WORKS, in making the requisite cuttings from Joines and Inlines to the main and other sewers and other necessary works connected with drainage, sewerage, within the district, for the term of one, two, or three years. The Tenders to be based on the schedule of prices printed for the purpose of the Board, a copy of which can be had upon application at the Board-room, on deposit of 1s. 6d. to be refunded on the Tender being sent in, or schedule returned. The contractor will have to enter into a bond with approved sureties in the printed form attached to such specimen, and the said two sureties to execute a joint and several bond, in 50l. conditioned for the performance of the contract by the contractor in the form by the contractor.—The Board do not bind themselves to accept the lowest or any Tender. By order of the Board,

HERBERT STURMY, Clerk.

Board-room, Emerson-street, Bankside, October 23, 1856.

GLASGOW CORPORATION WATER-WORKS.—LOCH-KATRINE AQUEDUCT—KELTY and DUNTRIATH CONTRACTS.—The Magistrates and Council of the City of Glasgow, as Commissioners under the Glasgow Corporation Water Works Acts, 1855, are now ready to receive proposals for the MASONRY and BRICKWORK of SECTION of further portions of the LOCH KATRINE AQUEDUCT, which will be comprised in Two Contracts, viz:—No. 4, or Kelty Contract," extending from the Valley of the Duchray to the Valley of the Endrick, being a length of about 8½ miles; and, No. 5, or Duntreath Contract," extending from the Valley of the Endrick, by Killearn, to Strathblane, being a length of about 5½ miles. Each of these will be in two sections of the respective lengths of 1 175 and 1,418 yards, with various shorter ones, varying from 20 yards to 720 yards in length, and in various Tunnel and Masonry Aqueducts. In No 5 there will be two Tunnels, 316 and 80 yards respectively in length, and various Masonry Aqueducts. Each Contract will include all the Iron Pipes necessary. Plans, drawings, and specifications, with the hereby Transaction and Conditions, may be obtained, by intending Contractors on application to the Subscriber, at his office 32 Miller-street, Glasgow; and any further information may be obtained at the office of J. F. BATEMAN, Esq. Civil Engineer, Manchester; and from Mr. HILL, Assistant Engineer, Loch Ard; and Mr MOORE, Assistant Engineer, a Milngavie, who will point out the line of Works.

Tenders for the construction of the Works, addressed to the Commissioners, sealed, and marked "Tender for Kelty Contract" or "Tender for Duntreath Contract," as the case may be, must be delivered at the Office of the Subscriber, 32 Miller-street, Glasgow, on or before WEDNESDAY, the 29th OCTOBER current, at TWELVE o'clock noon. By order of the Commissioners,

JOHN BURNET, Secretary.

Waterworks Office, 23, Miller-street, Glasgow, Oct. 6, 1856.

TO BUILDERS.—The Vestry of Clerkenwell will meet at the Vestry-hall, Upper Rosoman-street, on THURSDAY, the 30th inst to receive TENDERS for ERECTING NEW ENGINE HOUSE, with Boiler-house adjoining. Plan and specification to be seen at the Vestry-hall, daily, between TEN and FOUR o'clock. Tenders to be sealed and endorsed "Tender for Fence."

TO BUILDERS and CONTRACTORS.—The Burial Board for the Parish of Lewisham require TENDERS for the DRAINAGE, FORMING of ROADS, LAYING OUT the GROUNDS, and BUILDING LODGE and WALLS to their new Cemetery Grounds, situated on the road from Lewisham to Sydenham. The plans and specification can be seen at the Office of the Architects, Messrs. INGLEDEW and MORPHEW, 4, Queen-street, place, Cannon-street, and any further information had of the Clerk to the said Board, at his Office, Grove-place, Lewisham. The Board do not bind themselves to accept the lowest or any Tender. The party whose Tender may be accepted will be required to enter into a bond, with two sufficient sureties, for the due performance of the Contract.—Tenders to be delivered at Mr. EAGLETON'S Office before ELEVEN o'clock a.m. on the 4th of NOVEMBER next.

CONTRACTS.

BURNHAM SEWERAGE WORKS.—Persons desirous to CONTRACT with the Local Board of Health for the district of Burnham for the construction of certain PUBLIC SEWERS, and other Works connected therewith, and the amendment and completion of certain Works in progress in the plans, sections, drawings, and specifications of the same, together with a form of Tender, at the Office of the Local Board, and obtain any further requisite information about the 1st of Messrs. DYMOND and SONS, 10, Bedford-circus, Exeter. Tenders are to be forwarded to the Clerk on or before THURSDAY the 13th day of NOVEMBER next. The Local Board do not pledge themselves to accept the lowest Tender, nor to accept any unless made in the prescribed form

ROBERT SALISBURY, Clerk to the Local Board.

Dated Burnham, Somerset, 20th October, 1856

TO BUILDERS.—TENDERS WANTED for the ERECTION of a FEMALE TRAINING SCHOOL, in Dale-gate, Durham, with accommodation for forty-two pupils, with class-rooms and offices. The plans and specification may be seen, and other information obtained on application to Mr. JEREMIAH BOWMAN, County Courts, Durham. Sealed Tenders will be received by the Rev. J. G. CROMWELL, Training School, Durham, on or before MONDAY, the 10th NOVEMBER.—The Committee do not bind themselves to accept the lowest or any Tender. JOHN G. CROMWELL, Secretary.

Durham, October 23 1856.

SURBITON.—TENDER for FLINTS.—The Surbiton Improvement Commissioners hereby give Notice, that they will receive TENDERS for SUPPLYING from 600 to 700 CUBIC YARDS of BROKEN FLINTS, to be delivered on the Roads in the District of Surbiton. Full particulars may be had at the Office of the Commissioners, Victoria-road, Surbiton, any day between FIVE and SEVEN in the afternoon, and Tenders addressed to the Clerk at the Office, to be sent to me before THREE o'clock on MONDAY, the 27th day of OCTOBER inst; and the Commissioners do not bind themselves to accept the lowest or any Tender

JAMES BELL, Clerk to the Commissioners

Dated the 17th day of October, 1856

TO OVEN BUILDERS.—The Guardians of the Poor of the Hudson Union are ready to receive TENDERS for the ERECTION of TWO OVENS, with the requisite flues, &c., on the premises of the Workhouse in Great Ilford-lane. The specification, plans, and form of contract, to be seen at No. 23, Fin place, Holborn, between TEN and FIVE o'clock on any day (Sunday excepted), and the workhouse premises can be viewed on application to the Master, at the Workhouse. Tenders, in sealed envelopes, marked, "Tender for Ovens," must be delivered at No. 23, Lin place, on or before MONDAY, 3rd NOVEMBER next; and parties tendering must attend at the Workhouse on WEDNESDAY, the 5th of NOVEMBER next, at SEVEN p.m. when the Tenders will be taken into consideration by the Guardians.—Dated 18th October, 1856.

EDWARD WALLWYN JAMES, Clerk.

REBUILDING of the CHURCH of ST. MICHAEL DERBY.—To BUILDERS.—The Committee appointed to carry out the REBUILDING of ST. MICHAEL'S CHURCH, will meet on MONDAY, the 10th DAY of NOVEMBER to receive TENDERS for the EXECUTION of the WORKS connected therewith. Parties desirous of tendering may inspect the plans and specifications at my Office, Post-office Chambers, Derby, after the 28th inst, where copies of the bills of quantities, form of Tender, and further instructions and information may be obtained. The committee do not bind themselves to accept the lowest or any Tender, and will require the usual securities for the due performance of the contract.

HENRY I. STEVENS, Architect.

Derby, October 23, 1856.

TO BUILDERS, HOUSE PAINTERS, AND DECORATORS.

STOCQUELER and SAUNDERS' PATENT ELEVATOR and OBSERVATORY.—The earnest attention of all persons interested in effecting a great saving in the expenses of scaffolding, and the time expended in the erection and removal, is called to the advantages of the patented invention, consisting of a series of grooved and expanding lathes, supported by iron uprights, protected by a circular railing. The Elevator stands upon a triangular basis, of only 7 feet on each side, and can be worked from place to place by one pair of hands. The platform consists of seating capable of holding with perfect security, to a height of from 10 to 50 feet, or even 100 feet, in the course of two or three minutes, and depress it with equal rapidity. At any of the height thus attained, the inner and outer walls of churches, chapels, courts of justice, public halls, market-places, railway termini, manufactories &c. can be lath and plastered, painted, grained, cornices and capitals modelled, machinery fixed, &c. without interruption to the business carrying on within the edifice. The machine is likewise of great utility in the erection and repair of lofty walls and chimneys, and in carrying up bricks, mortar and building materials; also in painting, whitewashing, and repairing roofs of houses. The entire weight of the machine, at the highest elevation to effect an observation of 50 feet is not more than 15 cwt. in all. It can be drawn by a youth with the hire. It is firmer at the highest elevation than the mast of a ship, even unsupported by ropes. If necessary for purposes of transport, or admission to any building with a narrow entrance, it can be taken to pieces, and put together again in two or three hours. Full particulars as to prices, &c. may be known on application to ARCHER and CO. 2 Russell-court, St. James's Palace, from whom authority may be obtained to see the Elevator.

GASELIERS in GLASS or METAL.—The increased and increasing use of gas in private houses has induced WILLIAM BURTON to direct the attention of the various manufacturers in metal and glass all that is new and choice in BRACKETS, Pendants, and Chandeliers, adapted to dining, passage, and drawing-rooms, as well as to have some designed expressly for him; these are ON SHOW over his SIXTEEN LARGE ROOMS, and present, for novelty, variety, and purity of taste, an assemblage of the newest Tuition that is made in this country. The prices range from that with three lights to 36l. 10s. and there is not to be found in the kingdom a more elegant and most remarkable in the kingdom—the Guinea Lustre. At the same time additions to these extensive premises (already by far the largest in Europe), are of such a character that the entire of DR. FINCH'S late house to the Duke of Northumberland, NO. 39, NEWMAN-STREET, HOUSE RON MONGER (including Furniture), at auction. Fitted to Gas, Baths, Bricks, Tanners, Bedsteads, Cornices, Brass Beads, Gilt Mouldings, Bells, Hangings, Carpets, Kitchen Ranges, Large Stone Mantels, &c. to which is appended a large assortment of Gas Fittings, Lustres, Brackets, &c. purchased by WILLIAM BURTON in the selection of goods for the Establishment.

DR. FINCH'S Large Copper Cistern, Gas Fittings, Lustres, Brackets, &c. may be viewed on Tuesday and Wednesday, and Catalogues had on the premises, 39, OXFORD-STREET; 1, 1a, 2, and 3, NEWMAN-STREET; and 4, 5, and 6, PERRY'S PLACE, LONDON.

DR. FINCH'S Lease.

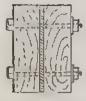
BRIDGE for SALE.—An IRON BRIDGE, with its substantial abutments of MASONRY, TO BE TAKEN DOWN and REMOVED. The Bridge consists of 2 spans of 24ft 10ins. each. The arch is segmental, 100 feet span, with a rise of 9 feet from the springing of the abutments to the soffit of the arch. The width from centre to centre of the outside ribs is 30 feet. The bridge and abutments are of the most substantial character, and the whole work has been built and is now in perfect order. For further particulars apply to DUNCAN and ENGLISH, Bow, Middlesex.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c.—The Trade supplied on the best and most liberal terms, with Bells, Cranked Wire, Gas Fittings, Brackets, and Joints of all descriptions; Brass Bending, Brass and Iron Turning, Cocks and Valves, Brass and Brass Plating, Coffin-plates, Rings and Lacquered Gas Tube for Picture Rods, Brass Rules, &c. &c.

Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Iron Metal, &c. &c.

RICHARD EVERARD'S, Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

WROUGHT-IRON GIRDERS
For BRIDGES and BUILDINGS,
MANUFACTURED AND GUARANTEED AS TO STRENGTH.
CAST-IRON GIRDERS for BRIDGES and BUILDINGS.
Castings of every description.



ROLLED WROUGHT-IRON FLITCHES
For TRUSSING BETWEEN TIMBER.
SPIKES, RIVETS, CUT NAILS, WROUGHT DITTO SCREWS, BOLTS AND NUTS, BOND HOOPS, CHAINS, &c.
CONTRACTORS' PLANT, RAILS, EARTH WAGGONS,
And IRON WORK for WOOD WAGGONS, &c.

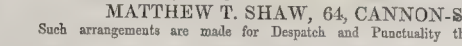
MATTHEW T. SHAW, 64, CANNON-STREET (late with C. J. Mare & Co.)
Such arrangements are made for Despatch and Punctuality that Orders can be executed in a few days.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,
IS AS
CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.
Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to
THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.
ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.
THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.
Many roofs covered with zinc thirty-five years ago have never required repairs.

TYERMAN'S PATENT HOOP-IRON BOND,
FOR BUILDING PURPOSES.
ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES
beyond the current Price of Hoop-iron.

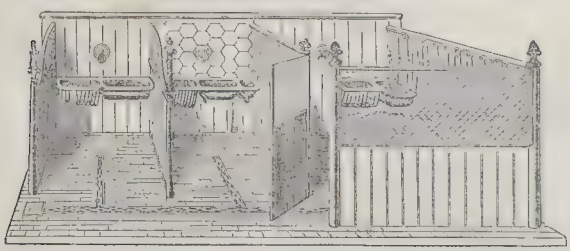
Gauge.	In. wide.	Per 1,000 ft.
No. 16	1¼	7s. 9d.
15	1½	7s. 6d.
16	1¾	8s. 0d.
18	2	8s. 6d.
15	2½	9s. 6d.



THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 11¼ inches) is now being extensively used for the fastening of TIMBER WORKS, DOCK BUILDINGS, BANKS, ASYLUMS, BRIDGES, VIADUCTS, PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in London and in all parts of the kingdom.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.
London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.
AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT-IRON RACK, united to an iron top plate, and forming one complete and useful fixture having Cottam's Patent Noiseless Hayter Guide and Collar-Rein attached, the ball of which is taken to the back of the manger, and works with ease and free action up or down the guide-bar. Cottam's new Patent Seed-Box, of galvanized iron, is an important addition to the above fittings, being simple in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.
Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings, Long and Durable Corn-Bins.
Improved Surface Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.
The new Illustrated Catalogue for 1856, and estimates drawn up on application to
COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

BENJAMIN FOWLER and CO.
FIT UP HEATING-APPARATUS OF ALL KINDS,
For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,
And for every purpose where artificial heat is required.
They also erect DRYING ROOMS for ASYLUMS, UNIONS, DOMESTIC and MANUFACTURING PURPOSES upon the most improved principles, and upon the largest or smallest scale.
STEAM COOKING and BATH APPARATUS FIXED;
Also PUMPS, for DEEP or SHALLOW WELLS,
To be worked by hand, horse, or steam power;
AND ALL KINDS OF
ENGINEERS', MILLWRIGHTS', or SMITHS' WORK, for Public or Private Establishments.
The most ample references from a long experience in the above branches can be given.
BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

B. FOWLER, HOLMAN, and CO.
SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.
The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve wags three times as at present, and is capable of all kinds of work required in a pump, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails wrought and cut, Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. 6s. 6d. each.
J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 60 years, for the supply of Goods from the best Manufactories, at the lowest prices.
14, Stanhope-street, Clare-market, London.

JOHN TANN'S NEW PATENT RELIANCE LOCK and CHEMICAL FILLED WROUGHT-IRON FIRE-PROOF SAFES, DOORS, ROOMS, &c. Manufacturers of cast-, steel, and paper boxes, embossing and copying presses, letter balances, and every description of lever locks and street-door latches. To be had at the General Lock and Safe Warehouse, 30, Walbrook, City. List of prices on application.

CHUBB'S LOCKS, with all the recent improvements; STRONG FIRE-PROOF SAFES, CASH and DEED BOXES. Complete lists of sizes and prices may be had on application.
CHUBB and SON, 57, St. Paul's-churchyard, London; 28, Lord-street, Liverpool; 16, Market-street, Manchester; and Horsley-fields, Wolverhampton.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, conchhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work for building and other purposes. Engines, machinery, patent axle-trees, sugar-mills, &c.

HEATING BY HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give numerous references to Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to the seen in extensive operation at their Premises, King's-road, Chelsea.

BATHS and HOT-WATER APPARATUS. J. TALLOW and SONS' ILLUSTRATED CATALOGUE of BATH WORK, &c. to be had on application. Estimates and Plans for Fixing given. J. TALLOW and SONS, Manufacturers, Warwick-lane Newgate-street, London.

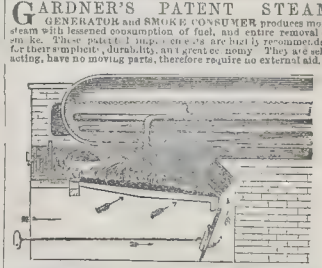
DR. ARNOTT'S SMOKE-CONSUMING GRATE.
Will this Grate be ever quite out-of-use?
It has advantages over every other extant, in—
1. A saving of 20 per cent. in fuel
2. Its being a cure for a Smoky Chimney
3. Its not requiring one half the attention of an ordinary fire.
4. Its being perfectly safe.
A Prospectus, with a Second Series of Testimonials, just issued, from all parts of the country, will be sent on application.
F. EDWARDS, SON, and CO. 42, Poland-street, Oxford-street.

VENTILATING STOVES! SUSPENSION STOVES!—Approved by thousands of purchasers, and recommended as the best, cheapest, most healthful, and economical for churches, chapels, halls, schools, warehouses, shops, greenhouses, bedrooms, libraries, &c. Prospectuses, with prices, sent post free. DEANE, DRAY, and CO. Stove Range, Ironmongery and Furnishing Warehouse, London-bridge.

HOT-WATER APPARATUS of the best construction, adapted for warming and ventilating hothouses, conservatories, public and private buildings, improved boilers, self-acting regulators, pipes, &c.; hot-air, drying, and hydraulic apparatus; portable engines; shafting and other machinery supplied or erected by S. S. PARKER, Bath.

REGISTER STOVES, with PATENTED IMPROVEMENTS.—DEANE, DRAY, and CO. invite the attention of purchasers to their Stock of STOVES for drawing and dining rooms; also, a large assortment of PATTERNS, suitable for sitting-rooms offices, bed-rooms, &c. In Fenders and Fire-irons, DEANE, DRAY, and CO. are constantly introducing every novelty at the lowest prices. DEANE, DRAY, and CO. Stove, Range, and General Ironmongery Warehouse, London-bridge. Established A.D. 1700.

GARDNER'S PATENT STEAM GENERATOR and SMOKE CONSUMER produces more steam with less coal, complete prevention of fuel, and entire removal of smoke. These patent improvements are highly recommended for their simplicity, durability, and great economy. They are self-acting, have no moving parts, therefore require no external aid.



They are applicable to all Furnaces, Locomotives, Marine Engines, Boilers, Hot-water Boilers, Open or Fire Kitchen Ranges, Hot-plates, &c. Can be applied to, or made to the PATENT No. 2, Norfolk-street, Middlesex Hospital; to Messrs. BRIDGWAY and BEALY, 198, Dorset-street, Fleet-street; or to Z. D. BERRY, Albion Works, Wilton-road, Pimlico.
Testimonials, &c. may be seen, or forwarded on application.

CAST-IRON PIPES, BRICKWORK FOR OUTFALLS, &c.
RAIN PIPES, &c.—F. A. TIDDEMAN and CO. St. Ann's Wharf, Earl-street, City, near Blackfriars-bridge, manufacture and have for sale Rain Pipe Heads, Shoes, Elbows, &c. half-round and O.G. Gutters, Socket Pipes for Water or Gas, Range Pipes, Hot Water Pipes and Cheese's Sash Weights, and other castings. Brickwork for Brooks' Drains of every description, Tide-way, Arches, &c. executed at short notice in parts of London. Price-list sent to all communications. Contracts taken to any extent. Goods delivered. A parcel-cart.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.
ANDREW CLARK and COMPANY, LEAD MERCHANTS,
THE BEAR GARDEN LEAD WORKS, SOUTHWARK,
Sole Manufacturers of Dellwik's Patent Autogenous Soldering Apparatus, and by the appointment of Messrs. Acturine Chemists to their Patent Leaden Q.
UNITING LEAD TO LEAD WITHOUT SOLDER.
Leaden Chambers or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.
PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

MR. S. EGAN ROSSER, Warming and Ventilating Engineer, &c (successor to the late Mr. John Sylvester, C.E.) has REMOVED from Great Russell street, Bloomsbury, to No. 6, CANNON-ROW, PARLIAMENT-STREET, WESTMINSTER.

IRONMONGERY,
PFEIL AND STEDALL,
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

PATENT GALVANIZED IRON SHEETS and TILES.
TUPPER and CARR, Manufacturers.
Works—Limehouse and Birmingham. Offices—3, Mansion-house-place, London.
N B—Iron of every description galvanized.

MALLET'S PATENT BUCKLED PLATES.
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS.
No. 3, Mansion house-place, London, and No. 6, Berkley-street, Birmingham.
For Plan, Section, and Description, see "The Builder," May 17

JOHN HENDERSON PORTER,
ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET

JOHN WALKER,
Corrugated Iron Manufacturer, Iron Founder, Iron Roof Bridge, and Portable Building Contractor,
IRON MERCHANT, &c.
Offices and Works Mill-wall, Poplar, London.

SKAIFE and POLLOCK,
Manufacturers of
PATENT GALVANIZED IRON.
Sheets, corrugated and plain; Fencing and Telegraph Wire, Bars, Rods, Hoops, Nails, Screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.
IRONWORK GALVANIZED.
Roofing orders promptly and carefully attended to.
Office—Commercial-road, Limehouse, London.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.				
12	"	"	20	"
13	"	"	23	"
14	"	"	26	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

A. MOREWOOD and CO.
(late Morewood and Rogers),
Dowgate Dock, Upper Thames street, London, and Baskerville Works, Birmingham,
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, pails, skips, &c of all sizes.
Also the Patent Galvanized Tinned Iron Tube, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c
Estimates given for Roofs, and every description of Galvanized Building, at the
OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

SAVING IN GAS.—D. HULET, INVENTOR and PATENTEE.—The Mercurial Gas Regulator is the only efficient instrument for ensuring wholesome and uniform lighting, equalizing the pressure, and preventing any irregularity in the height of the flame.—D. HULET and CO. 85, High Holborn, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c &c.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).
WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

IRON FOUNDRY, Harrow-street, Lant-street, Southwark.—W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Railing, and Newel Bars, Iron Copings, Panels, Foot Scrapers, Area Gratings, Sash Weights, &c. Also Fly and other Wheels, Riggers, Pinions, Engine and Lathe Castings; Forge Backs, Furnace Bars, Kilns, Pans, Pipes, Tank Plates, and other Castings, to patterns or drawings.

CANNON IRON FOUNDRY, 80, Goswell-street, St. Luke's.—JONES and BLAXTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wheel Plates, &c.
BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Rangers, &c. always in stock.

FOUNDRY AND IRON WORKS,
65, DRURY-LANE, and CHARLES-STREET, DRURY-LANE
GLOVER, BROS.,
Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION, either structural or ornamental.
Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathes, and Steam-engines; Ranges of Hot-plate Metal. An improved Soot Door, adapted for internal work.
A large stock of Rain-water Pipes, Plain and O G Gutters, Air-bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings, Hurdles, &c.
Plain and Ornamental Vases 20 per cent cheaper than Terra-cotta.
Estimates given for Iron Buildings, Wrought-iron Roofs, Greenhouses, Staircases, Wrought-iron Girders, Fireproof Doors Book Safes and Fire Resisting Iron Shutters. Ranges of various sorts for furnishing purposes, and the improvement with every attention to all orders.
GLOVERS' IRONWORKS,
165, DRURY-LANE, and CHARLES STREET.

PATENT MACHINES FOR WORKING in WOOD.—These celebrated Machines have been awarded a number of prize medals by many scientific institutions, and also by the Great Exhibition in London, and are now extensively used by the Indian, American, and all the principal governments in Europe; also by eminent Contractors, Builders, Shipwrights Mathematicians, and other workers in wood. Their operations are in every respect superior, either in hard or soft wood, for planing, squaring up, moulding, tenoning, mortising, grooving, rebating, sawing, and boring, which they perform in a very rapid and superior manner, at a greatly reduced cost.—Sold only by WILLIAM FURNESS, Patentee, 20, Lawton-street, Liverpool, from whom full particulars may be obtained, and all the machines can be seen at work

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
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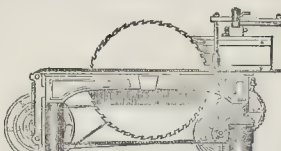

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Yellow Deals, from	20	"
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The Builder.

Vol. XIV.—No. 716.

THE FIRST requisite to the efficient conducting of business, is a well-arranged office: the operation of *planning*, which is part of the architect's professional duty, must be preliminary; or inconvenience and attendant expense will follow on through every detail of official or mercantile affairs. Every man of business—every efficient secretary of a company—feels the force of this; and, had he no knowledge of what exists, would infer that the multifarious official business of the British empire demanded a local habitation in which the highest architectural talent of the world had worked on the problem of its *icnography*, or distribution. However, at length, conviction seems to have come to the intelligence of our governing classes, that an expenditure of tens of thousands of pounds annually on officerent, on repairs, alterations, and removals, does not involve any great ministerial wisdom: and we suppose it is even conceded by a British Government, that architectural effect and decoration are worth caring for in themselves; and that they really do not require, even with elaborate workmanship, an addition to that which may have been considered hitherto the requisite outlay, bearing any very gigantic proportion to it.

This, then, being the singularly happy state of progress, it is a matter of some interest to the country that the appeal to architects should be intelligibly and adequately expressed. But, assuming that by *the laws of supply and demand*, or "higgling of the market"—or whatever else is the *lingo* of the political economists,—competition affords the consumer the best article at the lowest price,—a result, however, which is not attained so long as *adulteration* prevails, and the consumer has not the ability to judge; assuming, and it is a very large assumption, that the difficulties of getting an honest, or, at least, a really *judicial* arbitrament, in architectural competitions, can be got over,—as they have never been yet,—there is much more than this to be attended to, for the success of the present project. Truly, as we took occasion to show, when noticing the drawings submitted in the Barracks' Competition,—if only the requisite *time* could be given by persons accustomed to examination of drawings, much of the injustice of the present system might be removed; and if exhibitions of designs were made sufficiently public, and if a copy of each set of drawings and specification were given to each competitor, each one, and the whole art, might gain somewhat by the system. As to the Barracks' Competition we may remark, that nothing of that kind has been done; and as the barracks now in progress seem to be going on without regard to any claims of either "successful" or "unsuccessful" competitors, we may point to that case as an instance of what occurs where Government offer premiums.

One difficulty as to competitions is, that neither the Government, nor municipal or parochial bodies, nor the profession itself, have the bulk of the *facts* of the existing practice before them. If competition is to be made use of in future, and if we were to look to its furnishing the best design in what is perhaps the most important case ever presented during the history of British architecture, it would have been well for the Government to know what has occurred, even though it could not *per saltum* institute the whole remedy. It might be supposed—considering that, in the present position of the profession, nearly all architects, at some time or other in their lives, look to competition as one means of success—that the circumstances as they arise must be accurately known, though opinions might differ as to the general advantage from competitions, or the means of making them contribute to the advancement of our art. Such, however, we continually find is far from the case: an architect knows just what has occurred to himself, or to an immediate circle of friends, and seems very quickly to forget even that small measure of experience. As some testimony that there is foundation for what we say, we may allude to the wonderment that seizes every one at the sight of the drawings in any competition. Could any man, professional or not, have believed in many recent cases, that so large a number of architects could be found ready to expend the labour necessary to the preparation of designs, and on the mere chance of getting an inadequate premium? Nay, this is a very moderate interrogatory. We have some claim to give the opinion, that few, even competitors, ever during the slight inspection which they are able to make of the drawings, reach apprehension of the amount of unrewarded merit and thankless labour uselessly put forth. Be it observed, that of this there were not even the means of knowing anything, until public exhibition of drawings became in certain cases the practice. Now, we are not going to pursue lamentations over this state of affairs, though we might well regret the fatality which allows the talent which is proved to exist in the profession, to have little direct influence upon the advancement of our art. It may be a contingency in all mundane things, that in the progress towards some general gain, much individual effort must be wasted. The point that we would advance is, that until *facts* are apprehended, it is impossible to word any announcement of a competition—as, for example, that for the proposed Government offices—so that the result shall bear any fair relation to the object, to the particular intentions of the projectors, and to the capabilities of British architects.

The first step which Government should take—which would secure results applicable to all future competitions,—a step which Government especially could take,—should be the collection of evidence and the collation of facts. This done, the terms of the announcement could be given, without some of the mistakes, which, we fear, are made in the recently issued notification and particulars.

Instead of this, everything seems to be doing in a hurry. The "junior members" of the profession—who are certainly not those least likely to be familiar with the working of competitions, and whose efforts it would be well to enlist—were hardly represented at the meeting with Sir Benjamin Hall; and they are, as announced at the last meeting of the Architectural Association, about to offer a memorial for further time for preparing their drawings,—the date named, even after the extension, being in any case altogether too near for study of the subject.

But we were about to refer to the plans and printed particulars. These, as most of our readers know, comprise a short announcement of the premiums offered and the subjects of competition, with some particulars of the area required for the accommodation of the several offices, and the sizes of the rooms in the case of the Foreign Office and War Office, for which complete drawings are wanted. "Some instructions," as to accommodation required, are of course necessary in such cases, — for opinions about sizes of rooms are dependent upon the habits of individuals, or particular methods of transacting business. Beyond this sort of information, however, and some general arrangements to assist the comparison of different designs, the less that there is in the way of "instructions," the better for the object.

Now the plain and logical mode of proceeding after deciding upon the general locality for the offices, and estimating the superficial area for each office, from some study of the wants by the departments themselves, would have been to invite designs for a general block plan of the buildings with the open spaces and the general street improvements connected with them. Afterwards, and not till then, the demarcation of the site or sites could have been made on the selected plan for the disposition of that part of the metropolis; and drawings could have been asked for, for the Foreign Office and War Office, or any other section of the scheme, upon the areas allotted to them; but, instead of that course, an attempt is made to mark out a general enclosing line, and to complicate the general scheme, and to negative its value by settling upon a site in the very midst of the whole ground for the Foreign Office and War Office. The *Times*, with somewhat more *acumen* than we generally find where architectural improvements are discussed, may well say about the two offices, that "it is quite possible that the two successful designs, if by different hands, may not exactly fit the space." Not merely is it possible,—it is very *improbable* that those two will accord, even with each other. If that is the case as to one part of the plan, what is the obvious inference as to the general scheme? What member of the Government would ask for plans and detailed drawings for a picture-gallery or drawing-room before he had decided upon the plan of the house of which the room was to be a part? Would he suppose that the one apartment designed, would *happen* exactly to niche in to some space left for it by magic, in the plan prepared by a different hand? Yet this is the sort of course which, in the Government competitions, it is assumed can be followed out.

Again, for the effect of street architecture, which must be realized by plan,—by grouping of buildings,—by placing them in certain positions with reference to lines of street,—no scheme can work well which does not operate on the whole of the area which may be required, unhampered by any restrictions either of circumscribing outline or internal filling-in.

In short, the present scheme is, as the newspapers seem to perceive, "rather indeterminate;" and the "terms of the invitation" are sufficiently "vague." But the error, as in other such cases, is in giving "instructions," whilst the *data* do not exist on which to base them: such *data*, except as to area of accommodation, can only be got from designs themselves.

A chief difficulty on looking at the plans of the site is—what is the precise meaning of the red line? It surrounds an area of most irregular form. It takes in the present Treasury buildings, and even the site of Sir Charles Barry's proposed buildings at the Houses of Parliament, south of Bridge-street; but it leaves it to be inferred that the Admiralty and the Horse Guards are to remain as at present. Thus the "concentration of departments" is not to be carried out as regards the Commander-in-Chief's department and War Office; and as "the Admiralty, Somerset House," is to have a certain number of superficial feet, whilst no mention is made of its head department, it must be supposed that a similar separation in that case is to be kept up. And, finally, it is stated that, "architects must, in addition to the offices above enumerated, provide for further buildings (to be afterwards appropriated as the Government may determine) to such an extent as may be consistent with proper open spaces and

thoroughfares;" all which may be clear to the Board of Works, but will hardly be so to architects here or abroad. Still, as we said, for the object of a competition, "instructions," in the ordinary sense, are not what should be given to architects, or looked for by them. The object should be not to fetter invention in any degree whatever: *information* should be given as to any views of the projectors on points such as those of convenience and area of accommodation, which peculiarly are based on extra-professional contingencies; and it may be well, where funds are limited, that the competitors should be apprised how much money there is to spend; but beyond this, "instructions" only interfere with the freedom of suggestion on one side, or the freedom of selection on the other; or in the sequel, they have to be cast aside altogether; and a flagrant injustice and robbery has to be committed, that the executed work may not suffer through the mistake of its own projectors.

Belonging to the objectionable sort of "instructions" in competitions, are those which are not uncommon, as to a matter—namely, the style—which it is sufficiently difficult for any one to convey an exact meaning about, and of which the definition, as we have held, tends to interfere with the exercise of invention—and all "instructions" that *dictate* any particular feature of plan or principle of arrangement. For example, it would be quite right for the committee in such a case as that of the Liverpool competition, to express an idea of preference for a dome, or for a certain distribution of plan opposed somewhat to the ordinary principle of concentration; but the reasons for the preference should be given; and then the committee of selection might fairly announce that they would not hold themselves as bound to any particular form or principle, seeing that the same objects might possibly, by those who had made architecture and icnographic distribution their study, be secured in some better way. "Instructions," however, are put forth with clauses, some of which express mere whims, and some of which are inserted as it would seem from the pure notion that competitors want something or other—it is not exactly known what; whereas all that architects should wish to know is what there is peculiar to the case in question as compared with buildings of the same class; or to have settled a few points which may facilitate comparison between the designs sent in; and to feel assured that he who produces the best design will receive the premium, and be engaged to superintend the work.

In the case of the Government offices, the announcement and "instructions" aim at far more than it is possible to attain at once. The subject of the *concentration of departments* is one of vast extent, and intricate in its ramifications; and the means to attain the object, or even the exact nature of the object to be attained, are not to be decided upon in a hurry,—as the Government itself has found. A subject of such difficulty requires more than a few months for its solution,—but that is not what we would immediately discuss. Every elaborate process of thought must go through successive stages,—generals and details cannot be aimed at together without resulting confusion. We assume that the vicinity of the Houses of Parliament is that which should be chosen as the site for Government offices. We will suppose, also, that the wants of the Government are definable to themselves,—recollecting that evidence has been collected, and much consideration given to the subject. The next step, according to all logic, surely would be to bring the evidence and the existing stage of the inquiry before the profession, and receive their professional contributions to the disentanglement of the matter.

That, however, is not done. The exact site of the general concentration of offices is marked out,—as witness the red line. The distribution of the several departments within such boundary, presumably the intention in offering 800*l.* in premiums for the block plan, design No. 1, is no object,—as witness the existence of "the part of the site tinted yellow," containing nearly 200,000 superficial feet, or nearly one-fifth of the whole. To ask for a design showing "the best mode of concentrating the principal Government offices on a site comprised within the space bounded by a red line," and having regard to improved communications with the Houses of Parliament and the Surrey side of the river, whilst one-fifth of the site stretching across into the middle of it, is appropriated, shows that want of clear-headedness somewhere in official quarters, which tends only, in time of peace, to national discredit for public works, and in war to recurring disasters.

Plans will be received of course—more than Westminster-hall will hold. Somebody will get the 500*l.* first premium, and whoever he is, may thank his stars, seeing that he never in any other case could have hoped to get even 50*l.* so easily. For, from a problem of the greatest difficulty, as the really efficient arrangement of Government offices is, the projectors have cut out so much, or imposed directions in so many places, that what is left is no problem at all, so far as design is concerned. It is something novel for us to find premiums excessive in proportion to the labour: but as the "instructions" for the Government offices at present stand, the premiums involve mere squandering of public money. Sad it is to witness the alternate parsimony and wanton waste,—the apathy, and the hurry, which by turns, and with equal force, mar the growth of art, and the improvement of the metropolis. It is not British architects who are to be credited with the continual mistakes over which all good patriots grieve, and which all lovers of art lament. The architects err only in *assuming* that there exists in self-constituted "patrons," necessarily superior wisdom in questions—which are, perhaps, difficult,—but which belong, and peculiarly belong, to the employment and patronage of architects—whilst those "patrons" apparently do not give the obviously required and simple attention to the sense and effect of their "instructions,"—much less have they collected the evidence preliminary to the apprehension of one of the most difficult questions of the day—as that of competition in art, and especially in architecture, is. We do not know what may be esteemed necessary to be done at such a juncture as the present, for ministerial *éclat*, and a paragraph in a Queen's speech, or what for the making of *political capital*: but we too constantly see questions of art, as others of a different character, taken up in the merely factious spirit of "the ins" and "the outs,"—so that we are reasonably suspicious now, where we find so much that is hurriedly put forth, and in terms not the best for the asserted object.

Definite areas of accommodation for the several offices being given, competitors should have been allowed to make their own suggestions both as to the general site, and the mode of dividing and utilizing it. Probably, excellent suggestions might have been received for the conversion of ground including the south side of Great George-street. Suggestions have appeared in several quarters for the opening up of the end of St. James's-park, and its extension to the river. Is not something of the sort *desirable*, at least; and would it not have been well to allow the suggestion to appear on paper? Yet for any such plan, the site, as at present marked out, allows no chance. The site of Richmond-terrace, and the ground along the east of Whitehall, might be admirably well appropriated. Yet no competitor can offer a design making any use of that ground, and receive a premium, unless through an act of injustice to the other competitors. Sir C. E. Trevelyan, in his evidence, even suggested a plan for the concentration of the offices, in which he comprehended the full use of the Whitehall site, and new buildings for the Admiralty and Horse Guards. We should not have approved of his scheme in so far as it included a building, following Inigo Jones's design for Whitehall Palace;—because, with a full sense of the loss to art which there often is from the modification or abandonment of well-considered plans,—we doubt whether it is generally advisable to go so far back for designs, and whether existing architectural talent could not produce something equally good in art, original, and more appropriate. But the main idea deserved to be left for the consideration of architects. We are tempted to ask whether any supporters of the Government dwell in Richmond-terrace The Duke of Buccleugh, hard by, it was said, got his lease renewed, to the disadvantage of any project such as the present, during the time of the Derby-D'Israeli administration. Are there any supporters of the Government farther north, with whom it is not thought desirable to interfere? We have no business with the game of politics, some may say:—but if the present project fails, the failure which may originate with political arrangement will assuredly get laid on the shoulders of "our architects," like many another crime for which they have stood the scapegoats. To remove Sir Charles Barry's excellent work on the west side, would be quite in accordance with that which has been in public works the practice, without reference to architectural improvement or the economic application of public funds. But, it is not well to throw away anything of value that we have; a perfectly successful design might be carried out, retaining those buildings; or, were there proper freedom for suggestion,—providing another building as an opposite feature on the eastern side of Whitehall. All such points, we say, it was desirable to leave open, and to court suggestions upon. It would have been at the same time necessary to decide what would be done as to the departments of the Horse Guards and the Admiralty, if it be not even now necessary to make the intentions of the Government clear. In the large plan, the Horse Guards and the Banqueting House, like other public buildings, except those within the red line, are shown with a dark shade; whilst the Admiralty, from no explained or comprehensible reason, is left like ordinary buildings, with a light shade. Were Dover House to be removed, as suggested in the scheme of Sir C. E. Trevelyan, the portico and screen-wall would deserve to be preserved, and re-erected somewhere else.

The following letter will speak for itself. As we know it to come from a foreign architect, though not a Frenchman, we have given it in the writer's own idiom. We shall continue our observations next week:—

Monsieur l'Editeur,—Vous avez cautionné bien juste et à propos les architectes Anglais au regard le Programme pour un Palais d'Industrie à Amsterdam, leur indiquant sur l'expérience faite dernièrement avec les concours à Lille.

Je viens de recevoir le Programme pour "the concentration of the principal Government Offices, London," avec le clausule, p. 17, "*If the architect* to whom a premium may be awarded in respect of designs Nos. 2 and 3, or either of them, *shall be employed* to superintend the execution of the work, he will not be entitled to receive such premium, but he will be paid a commission at the rate of 5 per cent. upon the outlay."

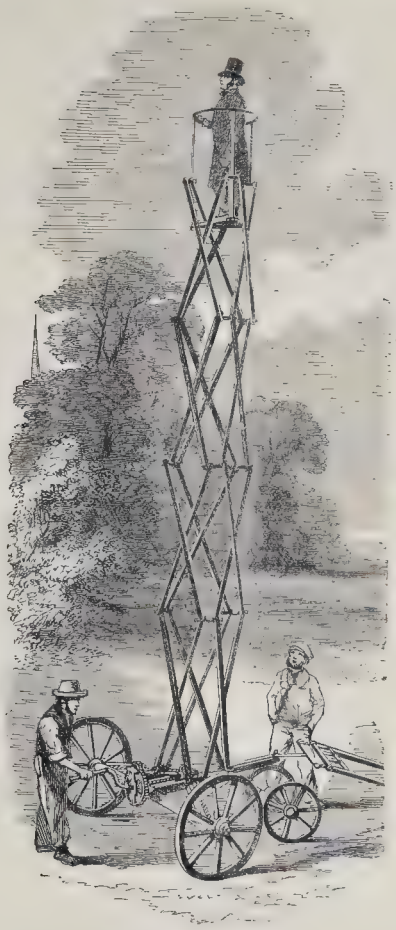
Cette phrase, il me semble, indique que le Gouvernement Britannique réserve le pouvoir de faire exactement le même que vous venez de condamner, dans un de vos derniers nombres, dans les juges à Lille: c'est à dire, que si l'architecte couronné n'est pas *l'homme du Gouvernement*, on lui payera son dessin—le résult d'un génie supérieur et probablement de plusieurs années d'études—en disant pour la reste, allez-vous promener.

Il est possible que "the Commissioners of her Majesty's Works and Public Buildings" pénétrés de justice vis-à-vis les architectes, mais au même temps moralement responsable vis-à-vis la nation, pour les grandes frais des travaux, ont pris le sudit précaution en cas que l'auteur du projet couronné serait jeune homme, et qu'ils n'ont pas rêvé de l'injustice exposé; parceque supposez que l'architecte couronné serait jeune, tant mieux. Il s'est montré d'être un grand artist et les "clerks of works," qui sont généralement des hommes très expérimentés en Angleterre, suffiront pour assister dans l'exécution des détails pendant l'érection.

J'ai pris la liberté, Monsieur l'Editeur, de vous faire part de mes vues dans l'intérêt général des architectes, et si vous êtes de mon opinion, alors je vous prie, par le moyen de votre feuille admirable, de demander aux *commissioners* une résolution arrêter, ou qu'ils ont l'intention de donner la direction des travaux à l'architecte couronné—*oui* ou *non*? Bien entendu qu'ils peuvent sauver 1,600*l.* pour la caisse publique et faire justice au même temps, admittant, comme un rule, que l'architecte n'est pas payé pour le dessin s'il reçoit 5 per cent. sur les frais des travaux. S——.

THE PATENT ELEVATOR.

One day when the allied armies were before Sebastopol, Mr. Stocqueler, well known as a writer, and in connection with the "Gallery of Illustration," mentioned to us that he had conceived the idea of applying the principle of what is known as "the lazy-tongs" in the construction of a machine to raise an observer to a considerable height, so as to afford a view of the interior of the fortifications; and we agreed that even if it should be useless at Sebastopol, there were many purposes to which builders and surveyors might apply it. In conjunction with Mr. Saunders, it seems, he has carried out the idea, and has patented the machine produced,



THE PATENT ELEVATOR.

which is represented in the annexed engraving. A view having already appeared in our widely-spread and excellent contemporary the *Illustrated News*, it has been already seen by many of our readers, but, in the hope of being further useful to the inventor, we reproduce it.

It will be observed that a series of tiers of expanding laths, each lath 6 feet in length, worked by a wheel acting on a spindle, rises from the three sides of a triangular base, carrying up an individual, secured by a circular railing, to a height of 50 or even 100 feet, according to the dimensions of the base. Its utility in superseding scaffolding to a great degree is obvious. For cleaning the inside of the roofs of churches, chapels, halls, and museums; painting and repairing the fronts of houses; assisting firemen to direct the jets of water upon burning houses; facilitating reconnaissances and observations; rendering ladders and climbing unnecessary in gathering fruit, lopping the branches of tall trees, and watering conservatories; painting and caulking the sides of ships;—in fact, for all purposes in which a certain elevation, without the expense and incumbrance of scaffolding, is requisite, this invention will prove of much value. We do not know in what way the machine is prevented from tipping over, but doubtless this is placed beyond fear.

THE ARCHITECTURE AND SOCIAL CONDITION OF ENGLAND IN THE MIDDLE AGES.

In our notice of the meeting of the British Archæological Association in Bath, we mentioned that Mr. Tite, M.P. F.R.S. had read a communication on "The Architectural and Social Condition of England in the Middle Ages." We are now enabled to give the paper in full:—

I have had considerable difficulty in selecting a subject for the address which I have been requested to read this evening before the Archæological Association of Great Britain, especially in such a city as Bath, so abounding in learned archæologists and antiquaries.

My difficulty, as it respected the choice of a subject, arose also out of the consideration that almost every topic of antiquarian investigation, which I might undertake to place before you has been so completely illustrated by the society now residing with us, that on most subjects I must have unavoidably omitted many things which the greater part of the members do know, and it is not probable that I could say anything of importance which they do not. I have therefore rejected many such subjects which presented themselves to my mind, as being those with which the numerous associations for the preservation of antiquities, which characterize the present age, have made familiar even to their youngest members.

That which I have at length selected for your entertainment will consist of a slight sketch of the gradual improvement in the social manners and condition of the people of England during the Middle Ages, as evidenced by the improvement of their buildings and habitations, with a few remarks on the condition of the people themselves during the same period. Even this subject, however interesting, is, perhaps, not very novel; but you will probably allow me to plead the defence of Goldsmith's "George Primrose," and say, "the jewels of truth have been so often imported by others, that nothing is left for me to import but some splendid things that at a distance look every bit as well."

Whilst the Romans commemorated the coldness of the climate of Gaul by their proverb, "Colder than a Gallic winter," Cæsar expressly says of Britain that it was milder, and the cold not so intense; to which Tacitus adds, that the air was much loaded with vapours and obscured by mists and fogs. At this period the winter habitations of the aboriginal British were caverns and earth-houses; of which latter some specimens are considered to be still extant in Cornwall and in the western islands of Scotland. But the characteristic feature of the greater part of this country—the thick woodlands—must soon have led the inhabitants to reserve their subterranean excavations for granaries, and to commence that sylvan life in the "greenwood" which the romance of subsequent centuries has made almost immortal.

The island was at that time covered with those extensive forests which Leland has characterized as "horrida sylvis" (vi. 104), and even the very towns of the ancient Britons were a kind of forests, so much did the country abound with them, and so greatly did the people delight in them. In this rude and primitive state of society they formed also the most effectual national defences; and one of the principal difficulties the Romans encountered in pursuing their contest in Britain, was the making of their way through those woods, and guarding against the sallies of the inhabitants from their forests.

"That which the Britons call a town," say Cæsar and Strabo, "is a tract of woody country, surrounded by a mound and ditch, for the security of themselves and their cattle against the incursions of their enemies. The forests of the Britons are their cities, for when they have enclosed a very large circuit with felled trees, they build within it houses for themselves and hovels for their cattle." In the places where they resided, they also found the materials out of which, at least, the summer habitations of the most ancient British people were constructed; stakes of wood driven into the ground in a circle, interwoven with wattles, and covered over with boughs of trees. They had lofty tapering roofs, with an aperture at the top for the admission of light and the emission of the smoke.

The first improvement on these barbarous habitations was closing up the wattled walls with clay, for increasing both the warmth and substantiality of the cottage, and covering the clay after it was dry with a coating of lime, for of so ancient a date is the present practice of plastering and whitewashing in England. Then followed trunks of trees for the walls instead of boughs and wattles, and rude courses of stone for the foundations. To the stone period must also have belonged the practice—if indeed it ever existed—which a late antiquary considered as satisfactorily accounting for the gigantic monuments called cromlechs, and other kindred erections, that is, the stone houses which may have constituted some of the more substantial dwellings of the aboriginal British. If ever this practice did exist, the time of it must be limited, and not regarded as belonging to the forest-lands, but to the stony plains of England.

I have dwelt the longer on this age of earthworks and wigwam huts, because I consider it as the dark hour immediately preceding the dawn brought on by those enlightening arts which were introduced in consequence of the settlement of the Romans. Cæsar came hither solely for the advancement of his own glory and

the extension of the Roman power; but under the irresistible overruling direction of Almighty Providence, his ambition was made the means of first planting in Britain many of those noble arts of peace which at length became the ministering agents of civilization, of learning, and even of Christianity. When the Roman invaders are viewed in this light, we no longer behold a band of ruthless adventurers who came hither "for power, for plunder, and extended rule," but rather the personification of

> "The knight of arts and industry,
> And his achievements fair,"

by whose vigorous and wholesome, though rough exertions, the more virtuous of the captives in *The Castle of Indolence* were delivered and made happy.

Two of the most valuable improvements brought into Britain by the Romans were their military roads and their architecture. By their roads they penetrated an almost impassable country with four great highways, which the Saxons were always careful to maintain; and in the military stations erected on or near them, the Roman governors laid the foundation of many of our principal towns and cities. When the sanguinary struggles for superiority between the Britons and the Roman legions had at length subsided under Agricola, that enlightened general devoted his energies to the improvement of the natives of the country. He assisted them to build temples and market-places, courts and forums, and especially more convenient dwellings; some of which were villas, adorned with baths, porticoes, banquet-rooms, and mosaic pavements. Under the ameliorating influences of these improvements, he imparted to them an emulous desire for education, and some of the sons of the chiefs were induced to study letters, preferring, says Tacitus, "the natural genius of the Britons to the attainments of the Gauls." The Roman language was successfully cultivated, and those who lately disdained to use it were now ambitious of being thought eloquent. But with the civilisation of Rome came also her enervating luxuries, and the Britons gradually deviated into a taste for those indulgences—feasts and baths, and stately edifices, which they esteemed as refined politeness, though, in reality, adds Tacitus, "this constituted a part of their slavery."

Towards the middle of the fifth century the Romans left Britain; but they had constructed too many great architectural works during their long residence here, for any dependence to be placed on the statement that their art of building was lost in A.D. 298, when Constantius Chlorus sent away the artificers and mechanics to rebuild the cities in Gaul, and erect fortresses on the Rhine: certainly it continued long after; but there was an interval of misrule and confusion, in which but little could have been done for the comfort of the people in any way. The revival of architecture, however, has been often attributed to an ecclesiastic of very superior abilities, Benedict Biscop, who had spent several years in Rome, and was the first abbot of Wearmouth in the close of the seventeenth century.

After the arrival of the Roman clergy in Britain the first Christian churches erected in this country were of wood, as those of Northumbria and Holy Isle; and the prototype of Durham Cathedral was of split oak trunks, covered with reeds, like the walls of the wooden church at Greensted, in Essex. Hence it is not surprising to find that the Anglo-Saxon word for the erection of a building is "*getymbrian*"—to make of timber, which was retained even long after edifices were constructed of stone. But when Benedict had laid the foundation of his monastery at Wearmouth, in A.D. 675, he went into Gaul to inquire for *cæmentarii*, or masons, to erect for him a church of stone, after the Roman manner, which he well knew and admired, and thus introduced the Romanesque style into England. He sent also after other artificers, to make glass windows for the porches and cænaculum, and these foreigners taught their skill to the Saxons.

But, whilst ecclesiastical architecture existed in such a rude condition only down to the latter part of the seventh century, there can be no doubt that domestic edifices had been considerably improved, at least in size, arrangement, and convenience of form, though certainly not uniformly in material.

The period to which we wish especially to invite your attention is the Middle Ages, a time which is generally regarded to extend from the tenth to the end of the fifteenth century. There is not, however, anything like positive information extant on the subject of domestic architecture previous to the twelfth century, but it may be fairly considered that the general description of houses then existing was so well adapted to the ordinary state of society that their plan was established at a much earlier period. In prosecuting our subject from this date, I gladly take the opportunity of adding my testimony to the merit of the late Mr. Hudson Turner's "Account of Domestic Architecture in England from the Conquest to the end of the Thirteenth Century," and of acknowledging my obligations to that work in the present paper.

The circular hut of the Britain having become, under the Romans, a large rectangular apartment corresponding with the Italian atrium, the Saxons adopted it as the hall which formed the common chamber in the houses of the northern nations, and gave that familiar name and characteristic to English dwellings by which they have ever since been known. In the centre of the hall was the fire, and the smoke passed out at either an aperture immediately above it, or by any opening which it might find. By this fire sat the master of the house, with his servants, retainers, or hearth-companions. Here they ate in common, and at night they covered over the wood benches with beds and bolsters, and lay down to rest. In dwellings of more importance, the lord and his hearth-men went to their own sleeping apartment, which served also as a council-chamber; and hence originated that intense romantic fidelity between a chief and his followers, which, in general, nothing was capable of destroying. The "hearth-companions of the Saxon kings and nobles," says Mr. Hudson Turner, "have been compared, by writers of considerable erudition, to the counts of the palace of the Frank sovereigns;" and we may almost trace in them the prototypes of the Knights of Arthur's Round Table. Selden has a strong, nervous remark concerning the old English halls, and the benefit arising from the community of society. "The hall," says he, "was the place where the great lord used to eat; wherefore else were the halls made so big?—where he saw all his servants and tenants about him. He ate not in private, except in case of sickness. When once he became a thing cooped up, all his greatness was spoiled. Nay, the king himself used to eat in the hall, and his lords sat with him, *and then he understood men*."

The hall was usually constructed on the ground-floor, but a house is represented in the Bayeux tapestry, where it is erected over a lower story of three arches, and is entered by a flight of steps outside the building, being covered above by a pointed tiled roof. The other apartments of a large residence of this period comprised a private room, or bed-chamber; annexed to the hall, a kitchen, which opened out to the court or road; a larder, the sewery, and the cellar. The private chamber was frequently placed on the upper floor over these buildings, and was called a "solar," probably, a sun chamber; but the cellar was on a level with the hall. A manor-house of this description was sometimes entered through an outhouse, which subsequently became a porch, and was also surrounded by a court and wall. John Rous, the antiquary, attributes to the Normans a great improvement in the low and mean domestic dwellings of the Anglo-Saxons; but he probably alludes to the wooden buildings with wide porches, capacious halls, large parlours, and jutting-out stories of upper apartments, erected in cities and towns. At even this early date London began to exhibit some good houses, for security's sake erected in connection with each other. They were made of wood, but in some instances were surrounded with gardens, orchards, and private chapels.

But, whilst improvement in the houses erected in towns and cities went gradually and constantly forward, the people of England who resided in the country districts do not generally appear to have made much progress in the external construction of their dwellings during the remainder of the time called the Middle Ages. The cause of this circumstance may fairly be attributed to the calamities brought upon the nation by the York and Lancaster civil wars; but a very curious account of the rude appearance of the English country dwellings is contained in William Harrison's interesting "Description of England," prefixed to "Holinshed's Chronicle," in 1587:—

"In old time," says this valuable tract, "the houses of the Britons were slightly set up, with a few posts and many *radels* (rafters), with stable and all offices under one roof; the like whereof is still to be seen in the fenny countries and northern parts unto this day, where, for lack of wood, they are enforced to continue this ancient manner of building. It is not in vain, therefore, in speaking of building, to make a distinction between the woody and plain soils; for, as in these our houses are commonly strong and well-timbered, so that in many places there are not above 4, 6, or 9 inches between *stud* and stud,—so, in the open or champaign country, they are enforced, for want of stuff, to use no studs at all, but only frank-posts, raisins, beams, prick-posts, groundsels, summers (or dormants), transoms, and such principals, with here and there a girding, whereunto they fasten their splints-or radels, and then cast it all over with thick clay, to keep out the wind, which otherwise would annoy them. Certes, this rude kind of building made the Spaniards, in Queen Mary's days, to wonder; but chiefly when they saw what large diet was used in many of those so homely cottages, insomuch that one of no small reputation amongst them said after this manner;—'These English,' quoth he, 'have their houses made of sticks and dirt, but they fare commonly as well as the king.' In like sort as every country-house is thus apparelled on the outside, so is it inwardly divided into sundry rooms above and beneath; and, where plenty of wood is, they cover them over with tiles; otherwise with straw, sedge, or reed; except some quarry of slate be near hand, from whence they have for their money so much as may suffice them."'

"In plastering of our fairest houses over our heads we use to lay first a *laine* or two of white matter tempered with hair upon laths, which are nailed one upon another, or sometimes upon reed, though more dangerous for fire; and finally cover all with the aforesaid plaster, which, beside the delectable whiteness of the stuff itself, is laid on so even and smoothly as nothing can be done with more exactness. The walls of our houses on the inner sides, in the like sort, be either hanged with tapestry, arras work, or painted cloths, wherein either diverse histories, or herbes, beasts, knots, and such like are stained; or else they are ceiled with oak of our own, or wainscot brought hither out of the East countries; whereby the rooms are not a little commended, made warm, and much more close than otherwise they would be."

Fuller, with his usual quaint conceit, says, that in 1587 began beautiful buildings in England, as to the generality thereof, with "those whose homes were but homely before." It will be remembered, however, that many richly-decorated Tudor edifices had been erected more than half a century before; but it is possible that he refers to that plain external appearance of extensive residences which is thus mentioned by Harrison:—

"This also hath been common in England, contrary to the customs of all other nations, and yet to be seen—for example, in most streets in London,—that many of our greatest houses have outwardly been very simple and plain in sight, which inwardly have been able to receive a duke and his whole train, and lodge them at their ease. Hereby, moreover, it is come to pass that the fronts of our streets have not been so uniform and orderly builded as those of foreign cities, where, to say the truth, the utter-side of their mansions and dwellings have oft more cost bestowed upon them than all the rest of the house. Of old time our country-houses, instead of glass, did use much lattice, and that made of wicker or fine rifts of oak in chequer-wise. I read also, that some of the better sort, in and before the times of the Saxons, who, notwithstanding, used some glass; also, since the time

of Benedict Biscop, the monk that brought the feat of glazing first into this land, did make panels of horn instead of glass, and fix them in wooden frames. But as horn in windows is now quite laid down in every place, so our lattices are also grown into less use, because glass is come to be so plentiful, and within a very little as good, cheap, if not better than the other."

Then follows this noble testimony of the same author, as to the merits of English artificers, and the improved and stately edifices which were in progress at the period :—

"The ancient manors and houses of our gentlemen are yet, for the most part, of strong timber, in framing whereof our carpenters have been, and are, worthily preferred before those of the like science among all other nations. Howbeit, such as be lately builded are commonly either of brick, or hard stone, or both; their rooms large and comely, and houses of office farther distant from their lodgings. Those of the nobility are likewise wrought with brick and hard stone, as provision may best be made; but so magnificent and stately, as the basest house of a baron doth often match in our days with some honours of princes of old time."

With this extract, which conducts the story of English domestic architecture to the commencement of its prosperity, I will conclude this portion of these hastily compiled notices.*

THE ACCIDENT AT THE SURREY MUSIC-HALL.

Our readers have all, doubtless, heard of the frightful and distressing occurrences at the new Music-hall, in the Surrey-gardens, on Sunday evening last, when the hall being crowded with persons to listen to the preaching of Mr. Spurgeon, an alarm was created, and, in the rush to escape, six or more persons were killed on the stairs, and a large number injured. It is unnecessary for us to go further into particulars; but, serving as this melancholy accident should, to enforce the entreaties we have for years addressed to the proprietors of other places of amusement and general resort, we may not let it pass without one or two observations. The means of egress from the Surrey-hall are much more ample than in many other buildings: there are four staircases, for which, it will be remembered, we gave praise in our account of the hall (p. 396), but on the same occasion we pointed out very earnestly, as a matter for regret, the narrowness of the treads of the stairs (being "winders") next the handrail, and urged that accidents would occur if these were not altered. We have not the slightest desire to impute blame, or to cause annoyance, but we should not be doing our duty if we did not again point attention to this arrangement. Had the form of the stairs been different, disasters under the circumstances would, doubtless, have occurred, but that these were increased by it we cannot for a moment doubt. Indeed, we find one of the witnesses saying, "I was running downstairs, and fell. I had hold of the bannister, but leaving hold fell, owing to the stairs *being narrower at one end than the other*." The sister of the witness who was behind her, was killed. This form, indeed, might have contributed to the failure of the handrail, since it compelled all who were at the narrow end of the step to exert a force upon it.

What would be the consequence of a panic in some of our London theatres, where the arrangements are absolutely such as to prevent egress? Experience is wholly disregarded. Some years ago an alarm of fire was raised in the theatre at Newcastle-upon-Tyne. People living now remember the loss of friends on that fatal night. The staircase from the gallery was very steep, and on the cry of fire being raised, the people rushed down it. There were no other means of exit, and the confusion was terrific. It was by no means easy under ordinary circumstances, to get safely down this precipitous way. The barrier at the pay-box increased the difficulty, and, if we remember rightly, more than a dozen men, girls, and women, were hurried out of life. After that, various doors were made, leading from parts of the gallery, which could be thrown open in case of a similar accident.

Since that time many similar calamities have taken place,—those at old Sadlers Wells and at the theatre at Glasgow will be remembered,—but we have not been taught by these costly lessons. The population of large towns is increasing daily, and so is the tendency to erect large halls, theatres, and other places of assembly, and a warning is now more than ever needed.

We have received a number of letters touching the sad occurrence at the Surrey Gardens, and insert the following :—

I quite agree with the complaints so often made respecting the difficulty of *egress* from our public buildings, and you have long advocated a change in this respect. I could not help remarking when at the new Music Hall, Surrey Gardens, last season, that all the French casements on the ground-floor opened inwards, and to this, among other things, may be attributed the fearful loss of life on Sunday evening last. I do consider it is absolutely necessary for the security of the public that all the doors and accesses to all our places of public resort should be made to open outwards. Had this been the case on Sunday evening the result would have been very different, as nearly one-third of the enclosure around the lower floor is formed of doors and windows. I have often trembled at Exeter Hall when I have thought of the difficulty of egress in case of an alarm, and I am very glad to see that efforts are being made to arouse the proprietors to a sense of their duty to the public in this respect. Should an alarm be raised there, the consequences would, of necessity, be far more serious than those at the Surrey Gardens, on account of the long flights of stairs. What but an unwise economy should prevent a similar access to Exeter Hall on the other side of the building to the one from the Strand? Is it not very important that a survey of all public buildings should be at once made, having the question of *access* and *egress* more particularly in view? This question *cannot—ought not* to be left to remain in its present state.—E. O. S.

VENTILATION OF HOSPITALS.

It is not possible to over-estimate the advantage of such a position of the windows in a hospital as will permit of a thorough current of air through the wards whenever the weather is favourable for its admission. When this cannot be obtained, it is more especially essential that the permanent ventilation of the building should be provided for on the most liberal scale.

In almost all the hospitals that have been erected in this country, where permanent, or, as it has been termed, scientific ventilation has been introduced, the provisions have been far too limited for a successful result.

At a recently erected hospital in London, where a system of ventilation was incorporated into the building, the quantity of air admitted into a ward containing nineteen beds is not more than sufficient for the sanitation of the space occupied by a single patient. It is this homœopathic administration of the important element,—air, which has deservedly brought *scientific* ventilation into disrepute. The proportion of 3 to 5 cubic feet per individual per minute, assigned, by some of the chief authorities on the subject, as the proper quantity of fresh air necessary for the maintenance of a healthy action of the system, is, in all cases where apartments are continuously occupied, far too small. This calculation involves the widespread fallacy that the air vitiated by respiration may be withdrawn without contaminating the surrounding air. The air expired from the lungs has not a temperature sufficiently elevated to raise it to even a couple of feet above the head, without its undergoing diffusion from the combined influence of the general law of gases and of the rapidity with which it parts with its excess of temperature, and the disturbing effects of currents of air, the direction of which is only capable of being partially controlled.

When then we have the case of a large room, with a flat ceiling, and a single, or at most two or three openings for ventilation, the impregnated air, unable to move away with sufficient rapidity, floats about in the upper regions of the room until, becoming gradually cooled by contact with the ceiling, it ultimately joins the descending current always existing against the external walls, and falls to the lower part of the room, there to receive a second dose of contamination.

Ventilation of such places, to be effective, should be as much as possible approximated to that of the external atmosphere. In the open air, in its ordinary state, the noxious exhalations are rendered innoxious by their dilution in the atmosphere. Buildings which possess a large number of openings, freely communicating on all sides with the external air, admit of the full operation of this process of dilution; but such structures are obviously inapplicable in this climate, where the admission of direct currents of air is impracticable during two-thirds of the year.

Hence we are driven to scientific means for obtaining such an artificial ventilation as shall compensate, so far as may be, for the loss of natural ventilation.

The provision for permanent ventilation being, however, expensive, both in construction and maintenance, and the cost, in most cases, increasing with the quantities in which fresh air is supplied, it has been considered very necessary to ascertain the *minimum* proportions in which air may be admitted consistently with an adequate ventilation. These proportions have been determined by the practice of some eminent French engineers at from 10 to 20 feet per minute for each individual; and M. Peclet is of opinion that, for hospitals, a ventilation of about 18 feet per bed per minute would be fully effective. In this, however, he differs from M. Morin, who tested, by his experiments at the Hospital Beaujon, that the quantity of air discharged varied from 24 to 36 feet cube per patient per minute, and that this amount of ventilation was hardly sufficient.

In the left wing of the Hospital Lariboissaire, where the rate of ventilation varies from 12 to 24 feet per minute for each bed, I am able to state, from actual observations, that there is a decidedly perceptible taint in the atmosphere of the wards. In the newly-erected portion of Guy's Hospital, the ventilation ranges from 40 to 60 cubic feet per bed per minute, and no trace of taint exists in the air of any of the wards.

With an admission of air of from 40 to 60 cubic feet per patient per minute, the principle of dilution is so perfectly carried out that no special currents or veins of vitiated air exist; and under these circumstances it is of little importance, as regards sanitation, whether the ventilation is effected upon the *ascending* or *descending* systems, by current of air traversing horizontally (as would be the case if the ward were ventilated by open windows on each side) or in any other mode. There is, however, a manifest advantage in extracting from the vicinity of the beds, and so creating a movement of the air towards each bed, which tends to confine any unpleasant odours or vitiated products to the locality in which they are generated, and to prevent their diffusion throughout the general atmosphere of the ward. This object may generally be best accomplished by successive descending strata of air sinking from the upper part of the room towards the floor, and having their outlet near and below the level of each bed. The same end might be answered if an ascending movement were adopted, by placing an opening for extraction over each bed; but, in this case, the products of respiration, &c., mixing with the ascending currents, would be subject to the disturbance to which these currents are themselves liable in rising towards the ceiling. Where, as is generally the case, an upward ventilation is sought to be accomplished by one or two extraction-openings in a flat ceiling, it is impossible to prevent the vitiated air from being disseminated throughout the atmosphere of the ward; and then it is only by a system of dilution, effected by the introduction of a very large quantity of fresh air, that the proper sanitation of the ward can be accomplished.

In reference to the position of water-closets, it appears to be admitted* that noxious exhalations may be prevented from diffusing themselves, by establishing currents of air "always

* To be continued.

* Certainly not by us. Ed.

setting in from the wards to the water-closets;" but, in order to *ensure* the constant maintenance of such a current, it is necessary that the architect should adhere to two points. In the first place, he must have the courage to resist firmly all persuasion to render the windows of the water-closets capable of being opened. If they can be opened, it is certain that the attendants, under a mistaken idea of sweetening the place, will throw them open,—the probable consequence being that, instead of a movement of the air into the closet, there will be a current from the closet towards the ward. Many otherwise well-ventilated places have the purity of their atmosphere contaminated from this cause. The second point is to counteract the pumping action of the door every time it is opened. This may be effected by a lobby with double doors, opening inwards, and so contrived that one door cannot be opened until the other is closed; the lower panels of both doors being hung as valves also opening inwards. It is so often difficult, in planning a building, to find a suitable position for the water-closets against any of the external walls, that an arrangement which would prevent them from being offensive when surrounded by rooms or passages is worth study.

S. E. Rosser.

PARIS.

Exhibition of the great Prizes and Art Works from Rome.—Amongst the best calculated arrangements of the Paris *Académie des beaux Arts* is the sending of their pupils to Rome (and Athens), with the obligation to forward specimens of their progress home for public exhibition. The exhibition of the competitors for the prizes of this year is not much approved of, and an art-critic of note, M. Du Pays, expresses himself to the effect,—that "our young artists desert the *great gods* to serve the *dii minores*,"—a reproach which may be carried to a still more comprehensive extent. In the department of painting, the prize offered was the Return of young Tobias, accompanied by the angel Raphael. The first great prize was awarded to M. Clément, pupil of Messrs. Drolling and Picot. The subject for sculpture was Romulus, the vanquisher of Acron. M. Maniglier obtained the great prize, but although the nude figure is satisfactorily executed, an utter absence of pronounced character or personality is regretted. The first great prize in sculpture was awarded to M. Gaillard. The prize in architecture was for a Palace of the French Embassy at Constantinople—a most appropriate subject, connecting the students of art with the greater concerns of the State. In this department the pupils exhibited a good amount of imagination, carried nearly into the precincts of the *mille et un nuits*. The first great prize was awarded to M. Guillaume; the second to M. Moyaux.

Of the art-works sent from Rome, M. Du Pays says that they have nothing of Roman in them. Still, the *supplice* of a Vestal by M. Baudry is a picture of some good parts. Amongst the architectural works there is the design for a grand Post-office by M. Lenoit; studies after the temple of Erectheus by M. Ginain; and an interesting restoration after the funeral monuments of the Via Appia, by M. Ancelet.

The new Cascade, Longchamp, Bois de Boulogne, Paris.—The works of the cascade of Longchamp have been completed in five months. In the construction of the ornamental rocks and of the basin 2,000 cubic mètres of the grit of the Forest of Fontainebleau have been employed, and 4,000 cubic mètres of *béton*. The largest blocks, after having been cut in the quarry, were dressed more accurately at Longchamp. The superior basin, which serves as the reservoir to the cascade, has 7,000 square mètres of surface, and can contain about 10,000 cubic mètres of water. It is alimented by the surplus of the great lake, by means of a little rivulet, which traverses the *Mare aux Biches*, and forms, even at that place, a fine cascade. The main cascade spends, in its greatest effect, 1,200 cubic mètres in the hour. It is composed of a main waterfall of 9 mètres in height, and breaks over the rocks in a very picturesque manner, while lateral cascades issue from the rocks right and left. The waters then received in a basin situated more below, are conducted by a serpentine rivulet across the plain of Longchamp, and congregate in the three sheets of water situated along this plain, below the new Hippodrome. The completion of these works will consist in the planting of the different *pièces*, which surround the scenery. Until the great artesian well of Passy and the other hydraulic works in the neighbourhood are terminated, the lake and the cascades of Longchamp will be supplied by the steam pump of Chaillot.

METROPOLITAN BOARD OF WORKS.

Last week we expressed a doubt whether the Metropolitan Board of Works would ever bring the subject of their endless discussions, motions, and counter-motions, amendments, and negative resolutions, to a satisfactory conclusion. One very obvious reason for such a doubt (not to speak of others), consists in the number of its talking members, and a suggestion has been made, that the Board be divided into two parts, one to consider and decide upon the drainage question, and the other to deal with street improvements, the architects' reports, and such like. It is thought, with some reason, that thus there would be less display of talking talent and more of quiet judgment and decision. As the *Morning Herald*, in treating of this suggestion, justly remarks, the Board is either too small or too large: if it consisted of a much larger number, the passive force of many silent members, impatient of too much talk, would effectually put down all superfluous speaking; and if it consisted of fewer members, a great incentive to ambitious display would be removed, and much less talk and much more real work done.

Failing some such remedy as that suggested, it is thought probable that a less effectual and less satisfactory cure will be wrought from within,—that a large number of the more silent members, the actual men of business, will grow tired of meetings which last for five or six hours, and in which little real business is done, and will relax their attendance, while the press will report the proceedings with brevity, and so diminish the oratory and increase the business performed. The Board are altogether at sea on the drainage question: what they determine one day they undo the next: and having neither compass nor rudder aboard, drift at the will of every wind that blows. On the 22nd, the resolution of a previous meeting negativing the engineer's report as it relates to the outfall B, was rescinded by twenty-five to ten, and an amendment on a succeeding motion,—to the effect that the plan B (Erith Marshes) be adopted, and presented to the Chief Commissioner, with an intimation that the Board had had other plans under consideration for the discharge of the sewage below Gravesend, which would add one or two millions to the outlay, not for the benefit of the metropolis, but to meet the wishes of the inhabitants of Kent and Essex, residing on the banks of the river; but that, if the Government would provide for the additional expense, the Board would undertake the works,—was carried by 24 to 7. To chronicle such proceedings is simply waste of time and space.

We would mention the appointment of Mr. Alderman Cubitt on the Board to represent the City, in room of Mr. T. H. Hall, deceased; and that Mr. Woolrych, the Clerk to the Board, has confirmed the views we expressed last week as to the declaration of the Board touching general lines of front.

LIVERPOOL LIBRARY AND MUSEUM COMPETITION.

Several architects, who submitted sketch-designs in competition for the Liverpool Free Library and Museum, are anxious to obtain an exhibition of the ninety-nine rejected; and have asked us to mention the desire, and to invite those who concur in the idea to send the mottoes of their designs to our office, so that a judgment may be formed as to the wisdom of taking any further steps in the matter. We willingly comply with the request, and will render any further assistance in our power.

ANGMERING, SUSSEX.

Angmering Church has been rebuilt all but the tower. Like most Sussex churches in that neighbourhood, it is of flint. A north aisle was added, and it now consists of a chancel and mortuary chapel, with nave and south aisle, upon the original foundation; the north aisle not having before existed, and the tower stands west of the nave.

The church is seated with oak throughout: the chancel and mortuary are laid with glazed encaustic tiles. The mortuary has an enamelled cross on the stone communicating with the vault, and is enclosed with wrought-iron gates, gilded upon azure. The reredos has a good deal of colour, both in the texts and general surface. All the windows of the chancel and mortuary are glazed with subjects; the east window of the chancel recording the birth, death, and resurrection of our Lord; the north window the institution of the Lord's Supper; and the other three, six subjects of miracles. The east window of the mortuary (a three-light) contains the last acts of Abraham, Isaac, and Jacob; and the Ascension of our Lord in the head of the tracery. The two south windows have respectively "The Raising of Jairus's Daughter," and "The Widow's Son."

The arches throughout, both of arcading and windows, have texts illuminated upon the surfaces.

A lich gate is erected at the east end, the principal entrance from the village to the churchyard. Beside it is the sexton's house, overlooking the churchyard; and in connection with this is a vestry-hall for parish meetings.

The road runs along the east side of these buildings; and immediately opposite are the National Schools; so that the whole forms one group, and is represented in our engraving. The most interesting feature is the fact, that the whole of this work was done through the munificence of a private gentleman resident in the parish, W. G. Kinleside Gratwicke, Esq. at whose entire cost the whole was carried out under the direction of Mr. S. S. Teulon.

"CHURCH BUILDING."

Under the title "Church Building," the current *Quarterly* has an article "against the improvidence which begins an undertaking without funds to complete it, and the disingenuousness which asks for subscriptions in the name of charity and necessity, and applies them to the purposes of taste,"—which, moreover, the writer urges is not usually shown. "The taste for architecture," writes the reviewer, "which is one of the characteristics of the present day, is indulged at any sacrifice of sense and prudence." With much truth in the article, the doctrine inculcated that the sums spent upon wood carving and stonework should be used to "alleviate the ills of the flesh, and to give immortal life to benighted souls," carried out thoroughly, would bring us again to log-huts and skins for clothing. The same number contains an interesting article on the topography of "Ancient Rome."

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

The following is a list of the ordinary meetings for the Session 1856-7:—

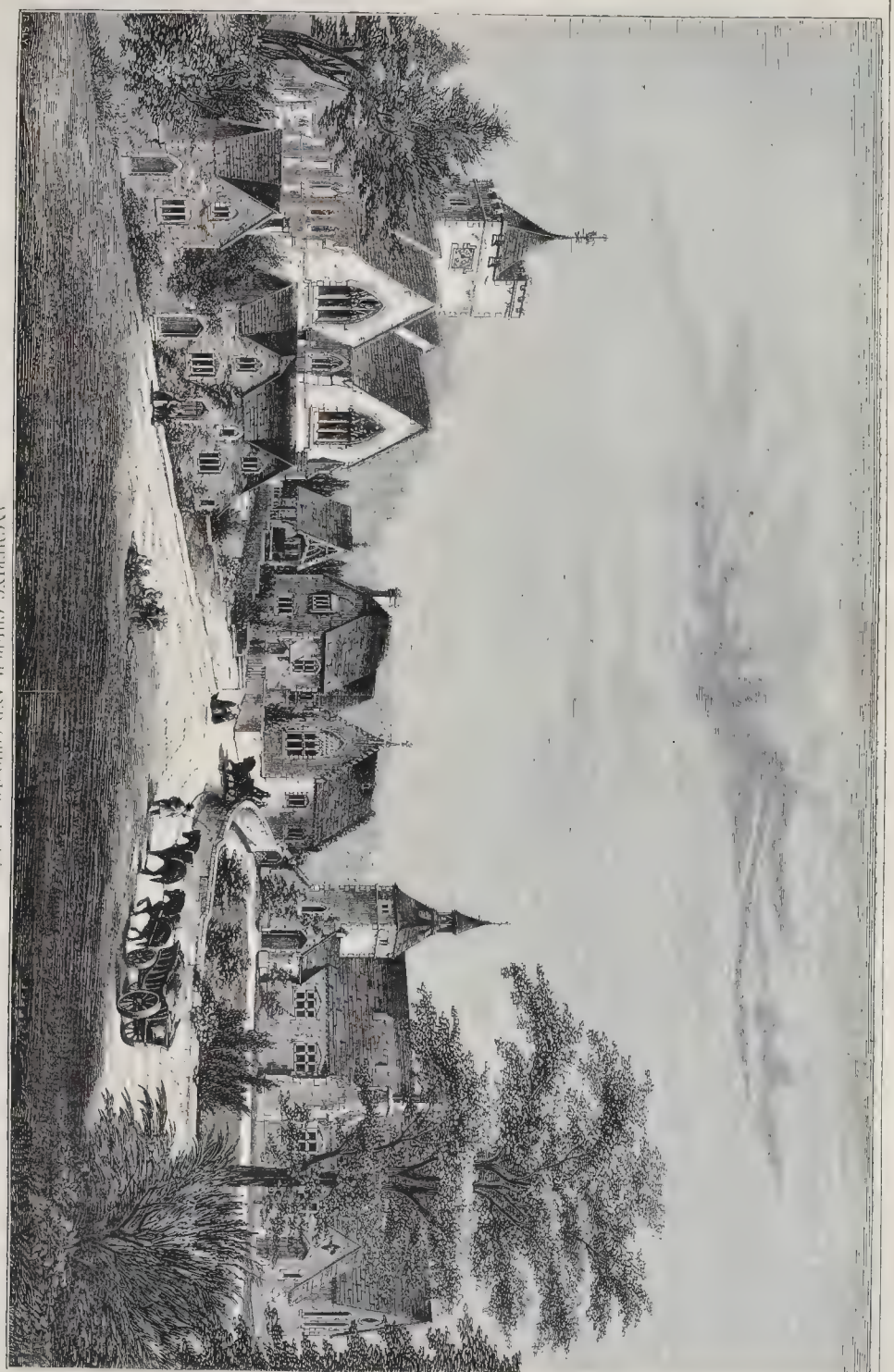
1856. (Monday) November 3rd and 17th; and December 1st and 15th.

1857. (Monday) January 12th and 26th; February 9th and 23rd; March 9th and 23rd; April 20th; May 4th (the annual general meeting of members only) and 18th; June 1st and 15th.

The library is open to members from ten to five daily, between the 20th of October and the 31st of August (excepting the Easter and Christmas weeks), and on the evenings of Mondays, Thursdays, and Fridays during the Session, from seven to ten.

THE DINNER FOR THE BUILDERS' BENEVOLENT INSTITUTION.

We wish to draw special attention to the circumstance that the ninth anniversary dinner of the Builders' Benevolent Institution is to take place at the London Tavern on the 29th inst. (Wednesday next), Alderman Lawrence in the chair. The result, we feel assured, will not fall short of previous contributions in aid of this excellent charity. The number of members ought to be much larger, even, than it is.



ARDINGLY CHURCH AND SCHOOLS, SUSSEX.

CHURCH-BUILDING NEWS.

Grantham.—The cemetery committee has appointed a sub-committee to obtain information and report on the best mode of laying out the grounds. The chapel, or rather chapels, says the *Lincolnshire Chronicle*, have given rise to much criticism, for, as viewed from the road, they form one building, standing north and south, which is considered contrary to all rule for an ecclesiastical edifice. But the fact is, the Episcopal Church does stand east and west, with the door on the north side. The Nonconformist building is placed north and south, with the door at the south end, opposite to that of the Church. The small breadth of ground between the two doors is covered in, forming a grand entrance or vestibule to both edifices, and producing the appearance of one large instead of two small buildings.

Shearsby.—The chapel of Shearsby has just been restored. The old pews have been removed, and open seats erected in their stead. The screen has been restored, but has been removed farther into the chancel, to allow of more room for seats. The church formerly held about 120 persons, but will now seat 180. The chancel has been filled with oak stalls, the remaining seats in the body being of deal. A carved stone pulpit has been erected in the place of the old wooden one near to the screen, and also a new stone font. Thirty-seven new seats have been erected in the nave, and the seats now occupy the whole of the church. The church is paved throughout with plain red and black border tiles. A new east window has been put in. The roof, which was formerly of lead, has been raised several feet higher, and is now covered with tiles. The tower has not been touched. It is intended to restore the remaining feature of the church when funds can be raised. The total cost of the restoration is about 700*l.* and about 600*l.* were raised in donations.

Market-Rasen.—On the 10th inst. the parish church of East Keal, which had been for some time under extensive repair, was re-opened This edifice now consists of a tower (in which are five bells), a nave, north and south aisles, and a south porch. The expenses have been met by the subscriptions of the landowners and occupiers of the parish; the rector (the Rev. John Spence) having entirely rebuilt the chancel, and given, in addition, a contribution to the general repairs. The whole sum expended has been about 1,400*l.*

Bangor.—The church of Bangor, having become very dilapidated, has been restored. The nave has undergone thorough repair, with new oak sittings, and the chancel has been rebuilt, having a window of three lights in the east, with a narrow margin of coloured glass, at the expense of Mr. J. L. Davies, M.P. of Blaendyffryn, the member for the boroughs of Cardiganshire. On the 26th ult. the reopening took place.

Bridgnorth.—The new Roman Catholic chapel, erected outside the North-gate, has been opened. The chapel also answers the purpose of a school-room, the altar being screened off. The building is in the Early English style, and is of stone; that for walling being from Sir John Acton's quarry, at Oldbury; and the window dressings, crossings, &c. being of Bath stone. The chapel is 60 feet by 25 feet; and has an open timber roof of high pitch. The timber-work is stained and varnished. The gable of the chapel to the street has a four-light pointed window, and is terminated by a cross. Over the ridge is placed a bell-cot of wood, a few feet from the gable end. At the side of the chapel is a small vestry and house for the priest. The roofs are covered with Broseley tiles, in alternate bands of red and blue; the latter having rounded ends. The architect was Mr. Robert Griffiths, of Quatford.

Hanwood.—The parish church of Hanwood, near Shrewsbury, has been lately enlarged, repaired, and restored, and was reopened on Tuesday in week before last. The church, which is of brick, has been enlarged by lengthening the nave 13 feet, adding a porch on the north side, and a vestry on the south. The roof has been stripped, lined, and re-covered with blue and red tile; the ceiling re-covered, and the inside of the roof thrown open, repaired, and lined with red deal, and stained; the south wall partly rebuilt; the wood frames removed, and the window openings altered, and filled with Pointed windows, in Grinshill stone, except the east window. The old timber bell-turret was taken down to allow of the lengthening of the church, and has been replaced by a new one. The inside of the church has been re-floored and paved; the chancel raised two steps; the old tablets, wainscot, and rail, repaired and refixed. The gallery and sittings therein, and the seats and reading-desk in the nave, are new, of stained deal. The memorial windows in the chancel are the work of Mr. David Evans, of Shrewsbury. The whole of the works have been carried out by Mr. H. Thomas, from the plans and under the superintendence of Mr. Randal. The sum raised for the works was 500*l.*

Crewe.—The foundation-stone of the new church dedicated to St. Michael, about to be erected at Crewe, has been laid. The site is near Crewe-green. The church is intended to accommodate upwards of 200 people, and will be erected at the cost of Lord Crewe. It will be of Gothic architecture. The exterior will be of red brick, interspersed with blue; the interior, of white bricks interlined with red ones, with string courses of encaustic tiles. There will be a stone plinth round the building, and dressings of Hollington stone, with marble columns introduced at the angles of the buttresses, doors, and windows. There will be a bell-turret with a stone spire at the north-west angle of the church. The roof is to consist of open principals, covered with tiles of peculiar pattern.

Eastwood (Nottingham).—Upwards of 3,000*l.* out of 4,000*l.* required for the restoration of Eastwood church have been subscribed. Of this sum 1,000*l.* have been given by Mr. J. Pemberton Plumptre, of Fredville, Kent, brother of the rector. The Butterley Company have subscribed 400*l.* and another company, 250*l.*; Mr. R. Barber, of Eastwood, architect, 50*l.*; Lady Palmerston, 50*l.* &c. Designs have been prepared by Mr. Barber, and the corner-stone was to be laid on Friday in last week. The building will be of stone, and contain 800 sittings, and will cost 4,200*l.*

Jarrow.—Some time ago, says the *Shields Gazette*, a number of working men, chiefly belonging to Glasgow and its neighbourhood, members of the United Presbyterian Church, settled themselves at Jarrow for the purpose of following their avocation as iron shipbuilders, and there not being any place of worship in connection with their church at the place, it was resolved by them to form one. Feeling, however, the disadvantages connected with their present place of worship, it being far too small, they determined to take steps to erect a more commodious and central place of worship, together with a public school-room attached, the want of the latter of which they had long felt in the way of the education of their families. To accomplish this object a subscription list was opened, and which has met with very encouraging success, not only among the members themselves, but from their employers and others. The foundation-stone of the Presbyterian church and public school-room was laid on Monday before last. The edifice will be of brick, and will be in the Gothic style of architecture. The upper part will form the church, capable of seating about 400 persons,—the under portion of the building to form the school-room and vestry. Mr. Ellison presented the site on which the church will be erected, which is on the Jarrow Grange Estate, and adjoins the new road leading to the shipbuilding works. Messrs. Palmer, Brothers, provide the woodwork; Mr. Robert M'Vey, in the employment of Messrs. Palmer, designed the building. Mr. Charles Miles is the builder. On the occasion of laying the foundation-stone, all work in the building yard of Messrs. Palmer was for the day suspended, and the vessels on the stocks and in the river adjoining were decorated with flags.

Londonderry.—The foundation-stone of the new Congregational chapel, Great James-street, Londonderry, was to be laid on Thursday before last. The intended church will be in the Early English style of architecture, with a tower and spire. It will have two entrances,—one from Great James-street, the other from Queen-street, and be capable of affording accommodation to from 600 to 700 persons. There will be a school-house adjoining. The design was furnished by Mr. Raffles Brown, architect, and Mr. Robert Maxwell, of Londonderry, is the contractor. The cost of the building will be about 2,000*l.*

Tipperary.—The consecration of the (R.C.) church of St. Mary took place on Sunday before last. The structure is cruciform. The ceiling, according to the local *Free Press*, is stuccoed in a varied style. The pilasters at either side are plain, but present an enamelled and polished surface.

PROVINCIAL NEWS.

Stafford.—St. Mary's new National Schools, Stafford, were opened on Thursday in last week. The building occupies a site on the south side of the parish church. It is in the Decorated style, of brick, with casing of Weston stone, and Bath stone dressings. It forms two sides of a quadrangle. A wing forming a third angle was originally contemplated. The building includes a boys' school, 52 feet long by 18 feet wide; and girls' school, 66 feet long by 18 feet wide; with class-rooms attached to each; and a teacher's residence. The schools have open-timbered roofs and triplet windows. There is a hot-water apparatus for heating in winter. The schools are calculated to accommodate 350 children. The design for the building was furnished by Mr. Scott, and has been carried out under the superintendence of Mr. H. Ward, of Stafford, architect. Mr. C. Espley, of Stafford, was the contractor.

Ryde.—It is proposed to enlarge the town-hall at a cost of about 500*l.*

Coventry.—The corporation here have at last decided to erect at once the long-talked of lock-up for the city, the present one being most inconvenient and otherwise unsuitable. Plans were prepared by Mr. Murray, and a contract entered into for the proposed building, which has already been commenced, and is, we believe, to form part of an extensive range of corporate buildings contemplated to be built as an extension of St. Mary's Hall. We also notice that the old Blue-coat School has been pulled down and a new one erected, which is Gothic in style and of suitable design.

Derby.—The Midland Railway Company have a building in course of erection on the open space of ground between the Midland Hotel and the railway offices, which will be devoted to the purpose of a shareholders' meeting-room, and a mechanics' institution for the servants and workmen of the company. The foundation-stone of this building was laid by Mr. Ellis on Tuesday before last. By encouraging the game of cricket, the formation of a band, and the establishment of a library and reading-room, the directors have shown that whilst considering their own material interests, they are not neglectful of the moral and intellectual elevation of the servants in their employ; and the building now in progress will admit of lectures, classes, and concerts. The building is to be a substantial structure of stone and brick, the inner measurement being 80 feet by 40 feet. It is to be two stories high, the basement story comprising four class-rooms for the institution, heating apparatus, store-room, and porter and ticket offices. On the second floor will be a large room intended for the shareholders to meet in: the dimensions of this apartment are 65 feet by 40 feet: a platform for the directors will occupy a space at one end. Mr. George Thompson, of Derby, is the contractor. The design and plans were made by Mr. John Sandars, architect to the Midland Company.

Warrington.—The new Market-hall here was opened on Wednesday in last week. It is in the Italian style of architecture, and built by Mr. Bann, of Stockport, from the design of Mr. James Stevens, of Manchester. The cost of the building and site will be about 12,000*l.* Externally the structure is of brick, with polished stone dressings: it is divided into bays with pilasters having moulded caps and bases, and has a stone base running round it. There is a three-light window, 20 feet in height, in the gable front facing Cloth-hall, and the openings are filled in with ornamental cast-iron frames for glass. The other windows face Cheapside

and Golden-square. The principal entrance, which is opposite the new street out of Sankey-street, has a circular-headed doorway, on each side of which are rusticated columns with enriched capitals, supporting a carved pediment, bearing the arms of the corporation. The entrances have iron gates. Internally, the hall is divided into two parts, connected by an archway: the rooms severally measure 86 feet by 63 feet, and 34 feet by 22 feet. Besides the stalls, &c. there is in the larger hall an ornamental fountain, 6 feet 6 inches in diameter, supplied with a continuous stream of fresh water. In the basement story are ten cellars. A market shed, 130 feet by 50 feet, and 31 feet high, adjoins the hall: it is supported on cast-iron columns and pilasters, and is paved with hard sets.

Manchester.—A new warehouse, which is being erected on the east side of Ducie-bridge, says the local *Courier*, has suffered considerable damage from the bursting of a water-pipe, by which the foundation was rendered insecure; and the building gradually settled down, rendering its partial re-construction necessary. One of the pillars was washed away and an arch pushed in; a division wall shattered, although it was 2 feet thick and tied in with three bands of hoop iron 3 inches by 4½ inches; and the basement story, which had been fitted with shafting and some machinery, was flooded, and left covered several inches thick with mud. The brick flooring was also torn up. The damage was roughly estimated at 250*l.* or 300*l.* The contractor is Mr. Davison, of Cheetham.

Durham.—The contracts for the erection of the Durham County Lunatic Asylum have been signed. The works have been let to Mr. Neile, of Bradford, for 17,000*l.* There were four other contracts sent in for the erection of the whole of the works—one at 19,496*l.*; another at 22,662*l.*; a third at 23,276*l.*; and the fourth at 24,021*l.* The amount for which the works have been let—namely, 17,000*l.*—will not be the whole cost of the erection of the building. In addition, about 10,500*l.* will be required, including 4,800*l.* for bricks, 850*l.* for fire-proof floors, 300*l.* for gas fittings and pipes, 200*l.* for turret-clock and bell, 250*l.* for a steam-engine and pumps, and 200*l.* for gate-lodge, besides a per-centage for extras and other miscellaneous items.

Whitehaven.—There has been a movement on foot for some time for increasing the harbour accommodation at the port of Whitehaven, Cumberland, by the construction of a wet dock. Mr. Burrell, C.E. laid before the board of trustees lately an estimate of the cost of constructing the outer or sea wall of a wet dock, according to a plan prepared by Mr. Rendel, C.E. The total cost of this wall Mr. Burrell estimates at 34,980*l.* but he recommends the wall of the basin to be built along with it, and this, he believes, will cost 6,238*l.* more, making a total of 41,118*l.* In answer to a question from the Earl of Lonsdale, Mr. Burrell said he thought the work might be completed in about two years. The subject was referred financially to the harbour committee.

Lochee.—A local correspondent of the *Dundee Warder* says, in reference to this place,—"No small amount of ornament has been added to our High-street, by the erection of a few respectable-looking buildings, among which the U.P. [United Presbyterian] Church stands conspicuous. The alterations and additions to this structure are after a design furnished by Mr. M'Laren, architect, Dundee."

Nairn.—The approach of railway communication from the south has stimulated the residents in Nairn to exert themselves in the improvement of their harbour. The town council have, for some time, had under consideration a plan for the erection of a low-water pier, at which steamers could touch at all times of the tide, and they have got a plan from Messrs. Stephenson and Leslie, engineers, by which, at the cost of 9,000*l.* such a desirable improvement may be secured. At a public meeting, lately held, according to the *Banffshire Journal*, a full approval of the scheme was given. The work will, therefore, it is expected, be commenced shortly. A similar improvement is to be made on the harbour at Invergordon, on the opposite side of the Firth.

ARCHÆOLOGICAL SOCIETIES AND ARCHITECTS.

The architect of St. Clement's School, at Worcester, and the Lickey Church,—Mr. Day, complains loudly of the abuse of these buildings in the report of the Worcester Diocesan Architectural Society. He says,—"I am informed that the author of this report is an adult student in architecture, and am much surprised that the committee should adopt any opinion not supported by professional ability of high standing, seeing that a professional man's reputation is everything to him, and that mine in this instance has been grossly assailed." And he adds that, "If the committee of the Architectural Society have any desire to foster and encourage architecture, in the broad sense of the term, they would respect its professors, however humble, and treat their work with proper consideration; and in future, I trust they will confine themselves to the carrying out the objects of their society, according to their rule."

We are unable to speak of the justice or injustice of the criticism on the present occasion, but we can bear witness to the reckless expression of condemnatory opinions on the part of other societies, founded on half knowledge, and would endorse the advice that they should be careful how they assail a professional man's reputation, without knowing all the circumstances under which the work was executed, and the conditions he was called upon to fulfil.

LIVERPOOL ARCHITECTURAL AND ARCHÆOLOGICAL SOCIETY.

At the second meeting of this society, held on Wednesday evening, the 15th, the president, Mr. S. Huggins, in the chair, it was proposed that the society should memorialise the town council, to take into consideration the propriety of amending the local Building Act. After some discussion, it was agreed to postpone the question to the next meeting.

Mr. Picton made a communication on the subject of *architectural* ornament. He said one principal objection taken to the modern Italian style, as well as the ancient classical, was the entire want of flexibility in regard to its ornament. One ornament in a building was a copy of every other, and the natural effect was insipidity and sameness, and the want of imagination. In one respect that was just, and attempts had been made by modern architects to introduce something more of nature into the style adopted. He had lately been attempting something in a humble way in that direction, and he had some photographs of what he had been doing, which he would submit to the meeting. They were capitals arranged from natural foliage. The capitals were executed in Caen stone. The capitals were all from natural foliage, that of the vine, the hop, and other plants. The designs were for the Italian style.

The President remarked that there was one objection—the angle of the tile being supported by flowers. He thought there should be something inorganic. There was a great deal of English foliage which was applicable to ornament. He did not see why they should be confined to the acanthus, and felt convinced that all the ornaments of the Gothic were applicable to the classical styles.

Mr. Verelst then read a paper "On Farm Buildings," and introduced and explained plans of such buildings.

ACCIDENTS AND FAILURES.

Bishopsgate-street, London.—On Saturday, the 11th, a disaster occurred at No. 191, Bishopsgate-street, which might have been attended with very serious results. Some time ago the house in question was burnt, and it is now being restored by Messrs. W. Cubitt and Co. As we understand, it had been found necessary to put in new girders to carry the third floor. One end of one of these had been let into the party-wall: the other end had been shored up until the wall was made ready for it, when suddenly the girder came down and carried the under floors and all beneath it to the ground, burying a number of men in the ruins. Most providentially the timbers fell in an inclined direction, so as not to crush the men, who thus all escaped with their lives, though in some cases injured. The girder and old floors had been overloaded, and we have received some severe strictures on the carelessness which led to the accident.

St. Mark's, Torquay.—In the night of Monday, the 13th inst. the greater part of the tower of this church, then in progress, and just ready for the roof, fell down, doing considerable damage to the adjoining parts. The tower stood on arches, at the intersection of the transepts with the body of the church. Indications of something wrong were seen by one of the committee on the preceding Friday, in the Bath stone jambs and arches of the tower, and these were more obvious on Saturday. The builder, however, apprehended no danger, but went on erecting the upper part of the tower, completing it on Monday night; and on Tuesday morning it was all down. It is thought that the work was pressed on too rapidly for the nature of the materials used, and that the portion immediately above the main arches gave way under the pressure of the upper part. It appears that, although the drawings were furnished by a London architect, he had nothing to do with the execution of the work. There was no clerk of the works, even; the committee having great confidence in their builder. It would be useful to know the nature of the stone used, the thickness of the walls above the arches, and the weight of the superincumbent portion.

STEAM PAVING-RAMMER.

On reading your remarks respecting the ramming of pavement by steam power, it is very clear there would be no difficulty about it. Mr. Reddin, the contractor, has a machine in his yard at work which, if it were on wheels, would do exactly: the rammers would, however, have to be of wood instead of iron. This machine is employed at present for stamping all the broken stone and earthenware picked up in London by the dust-carts into fire-proof sand; and, what is remarkable, they tell me that they get upwards of twenty tons a week. Gentlemen living in the country, who are building and making roads, should inspect this machine at work: it will give them, as it has me, a very different idea about stamping-machines.

A. B.

Observing in your number of the 4th inst. an article upon "Street Paving by Steam-power," I am reminded of a machine which I saw in action in Birmingham, some thirty years ago or more. I cannot remember the name of the inventor, but doubtless some of your readers in that neighbourhood, upon being reminded of the fact, will do so. The machine was moved by steam at pleasure, and the rammers were about six in number, of some 12 to 18 inches square, working in a line close to each other, and capped or wrung with iron, to prevent the bursting of the base of the working piles: they were also weighted to give the necessary driving power. The piles or rammers were lifted and fell in succession, and the effect of ramming down any part of the pavement which had arisen was to lift that part which had been sunk, thus restoring the road to a level.

R. M. B.

SHELLAC FOR BUILDING PURPOSES.

In a recent number of your valuable journal, under the heading, "Notices of New Patents," it appears that a Mr. J. E. Cook, on the 27th December, 1855, took out a patent for a novel and original chemical compound (to wit, Shellac and Methylated Spirit), applicable for building and other purposes. The object of this gentleman in protecting his invention is obvious, and I should not trouble you by writing on the subject, had I not, on recommending the preparation in question, lately been cautioned against infringing the identical patent. I have not the least desire to damp Mr. Cook's ardour in publishing (and protecting ere he does so), any useful invention of which he is the real originator, but I do strongly protest against his arrogating to himself a position he has no right or title to assume. In contradistinction to Mr. Cook's patent rights (although he really has no *locus standi*, either in law or equity), I beg to assert my right to be known as the first person who introduced and practically applied this composition to building purposes, and consequently ought to receive that modicum of praise (if any), that interested parties might feel disposed to award. To substantiate my claim, I beg to call your attention, and that of your readers generally, to the following facts:—In June, 1842, while engaged on a large Government contract, in which marine glue was specified to be used, I found it solidified long before the workmen could possibly make a joint. Owing to this failure, I and a professional friend racked our wits to ascertain the best

method of rendering the glue sufficiently fluid to enable the work in hand to be completed in accordance with the conditions. Numerous experiments were made to find a solvent, resulting, by accident, in the discovery now (after a lapse of fourteen years) coolly appropriated by Mr. Cook, without search or inquiry, and unblushingly trumpeted forth to the world as an emanation from his fertile brain. It may not be irrelevant to remark, that the secret has been published far and wide, that patent liquid glue, patent knotting, and numerous other patents (all infringements, by the bye, on Mr. Cook's), have been in use several years, and that I have used the composition in engineering and architectural work; and, in fact, applied it in all ways and for all purposes where such a material was required. In conclusion, I consider the patent compound (when properly manufactured), so truly valuable to all parties connected with the building business generally, that I should at the first have sent full particulars for insertion in your widely-circulated paper, if in its preparation great care was not required to prevent dangerous accidents.

F. G. Mulholland.

COMPETITIONS.

Norwich Union. — The following is the present state of the new workhouse competition: — At the last monthly meeting of the guardians, Mr. Wilde gave notice, that he would move that a resolution, passed at a previous meeting, that the plans should be examined by a gentleman to be appointed by Sir John Walsham, should be rescinded; and at a meeting held on Tuesday, the court rejected this proposition, and decided to adhere to the former arrangement. The committee appointed to examine the plans had resolved, nearly unanimously, to recommend the designs of "Humanitas," as deserving of the first prize of 100*l.* and those of "X," as deserving of the second prize of 50*l.*; but after the decision to which the court came, their recommendations were not entertained. This will serve as an answer to several correspondents.

St. Helen's.—The Burial Board has selected the designs of Mr. Thomas D. Barry for the erection of the three chapels, lodges, &c. and also for the laying out of the grounds.

ARCHITECTURAL EXHIBITION.

The committee announce, very properly, to those intending to apply for space in the department for models, carvings, decorations, specimens of manufactures, and inventions connected with building that in all cases they will expect a contribution for space occupied, and that it should be stated whether floor, ceiling, wall, or counter room, is required. Workmen will be allowed to set up or fix from 1st to 29th of November, but no longer; and applications must be made before the 1st of that month. We attach considerable importance to this branch of the Exhibition, and we hope to find it largely increased. It can scarcely be doubted that exhibitors benefit largely.

Several gentlemen have agreed to deliver lectures on the Tuesday evenings during the season; and, as before, the last lecture evening will be reserved for a description of the articles exhibited.

THE SANITARY STATE OF LONDON.

Dr. Letheby, medical officer of health for the City, presented his first annual report on this subject to the City Sewers Commission, on the 14th instant. From this interesting and instructive document, it appears that the total mortality of the year is 2,910; and that this number is 490, or nearly 70 per cent. less than the average of the last eight years: the death-rate of the whole city has been thus reduced from a general average of 24 per 1,000 of the inhabitants to 22. Satisfactory as this diminution of mortality to a certain extent is, there are various considerations peculiar to London which moderate one's gratification very considerably in the circumstances. Thus, London is perpetually reinvigorated by the infusion of fresh blood from the country, which, though it raises the per cent d gree of healthfulness in the community already there domiciled, is itself soon reduced to the average standard, while the mortality of the infantile life native to London is fearful. Thus, while in England the mortality of children under five years of age is about 68 in 1,000, and *in the country districts only* 37, *in the city of London it is* 82, *and in the western division of it, it is* 104! This represents a mortality that is 52 per cent. over the average of England, and 181 per cent. over that of the country. In short, for every single death that should occur among the inhabitants of the city of London, there are nearly three deaths! and while in all England, towns included, the mean duration of life, even with men who have reached the twentieth year of their age, is forty years, in London it is but thirty; and in the west of London only twenty-eight — twelve years, of so short a life as even forty is, being thus cut off by the noxious influences of the City! Taking a man of twenty from the country districts of England, the consequence is still more fearful, such a man having the fair average expectation of living to sixty, or no less than thirty-two years more than a west of London man of twenty, and thirty more than any average Londoner of twenty; in other words, a man of twenty, because he has lived and continues to live in London till he dies, at thirty, sacrifices an additional thirty years' lease of life by the time he himself reaches the average London limit of life. Let us ever remember that an immense proportion of this difference is quite preventible, or within the power of practicable sanitary amendment. In eight years 2 per cent. per 1,000 of mortality has been *deducted* from twenty-four mainly by sanitary measures.

THE MEMORIAL CHURCH AT CONSTANTINOPLE.

We understand that it was proposed to collect, at the Royal Institute of Architects, information respecting the construction and materials applicable to the memorial church at Constantinople, together with samples, to enable competitors to judge of the nature, colour, and cost of the various stones, marbles, &c. to be obtained. We, doubtless, in common with many of your provincial subscribers, have been anxiously expecting to find in your pages some report as to the results of that proposition; as, without any information upon these and other points, it is impossible that we can enter the lists of the competition upon anything like equal terms with those of our professional brethren, who may have access to such a collection as that proposed.

We have heard it suggested, that the prejudice of the Turks to the sound of bells would preclude the use of towers and spires; but we presume the same objection would apply equally to the church itself and the doctrines to be preached there. Surely, unnecessary concession of the principles of Christian architecture is to be deprecated. P. and B.

*** The Institute of Architects expressed their willingness to receive information on the subject, specimens of materials, &c. for the advantage of competitors, but up to this time nothing has been sent. The honorary secretaries of the committee for the church are the parties to apply to.

THE ARCHITECTURAL SOCIETY OF THE ARCHDEACONRY OF NORTHAMPTON.

The autumn meeting of this society, in conjunction with the Northampton Photographic Society, was held at Northampton, on Wednesday in last week. The Rev. Lord Alwyne Compton was in the chair. There was a good attendance. The Lecture Hall, in Gold-street, where the meeting was held, contained an interesting collection of objects, including a photographic exhibition.

The Chairman, in opening the proceedings, mentioned that a Photographic Society had been formed in connection with the Architectural Society, and that this was their first united meeting. The spring meeting of the Architectural Society had been held in conjunction with other societies at St. Albans, when interesting papers were read on the Abbey, by Mr. Scott; and by Mr. Poole, on colour in building materials.

The Rev. T. James, one of the secretaries, then read the annual report, which stated that there was nothing in the proceedings of the past year to modify the usual congratulatory tone of their report; nor had the year been marked by any extraordinary occurrence beyond the common routine of the society's labours and results.

The report was adopted, and a report of the Photographic Society read and also adopted.

A paper on a Greek helmet found, in 1854, in the river Tigris, near the track of the retreat of the 10,000, was read by Mr. M. H. Bloxham, a report of which, and of the other proceedings, appears in the *Northampton Herald*.

A paper by Sir H. Dryden, on the parsonage at Eydon and parsonages generally, was then read, in which the design of Eydon parsonage was criticised as that of a Cockney, which, the reader said, would probably explain its ignorance of country requirements. Many of the supposed defects in the original design, however, were the result of the reduction of the estimate, and not attributable to the architect at all, as testified by the rector of Eydon himself at the close of the paper.

An evening meeting was held, Sir H. Dryden in the chair, when the attendance was small.

A paper on church bells and belfries, by the Rev. Abner Brown, was read; after which another on improvements in hanging church bells by Mr. W. L. Baker, C.E. was read by the brother of that gentleman, who stated, towards the close of it, that the substance of Mr. Baker's plan had been used for the Westminster great bell, by Mr. Denison, Q.C. without leave and without acknowledgment. He accused Mr. Denison of infringing the patent of his brother, whom, however, he advised not to spend his money in a prosecution for piracy. At considerable length, he proceeded to point out the piracy, lamenting that his brother's means prevented him seeking compensation from the law, and appealing to the public for a decision. A few remarks upon the preservation of bell towers concluded the paper.

Mr. W. T. Maunsell hoped that the public would not condemn Mr. Denison unheard. Our readers have already heard something on both sides.

THE PUBLIC HEALTH ACT AND TOTTENHAM.

My attention was on Friday (10th) drawn to a paragraph in your paper of the 11th inst. containing a communication from the chairman of the Local Board of Health of Tottenham with reference to the working of the Public Health Act, and the success of Mr. Pilbrow in carrying out its provisions in this parish. I can scarcely presume that the "chairman" intended his communication to represent the opinions of *the whole Board* upon this subject, for I am not aware that he submitted it to the Board, of which I was a member at the time he forwarded it to you. I have since—that is, on Saturday, the 11th—after seeing the paragraph in your paper, sent in my resignation to the chairman, not, however, being induced to do so by the paragraph in question, but because I cannot conscientiously be a party concerned in the expenditure of an additional sum of 10,000*l.* to the 26,000*l.* and upwards already expended upon our parish, to continue a system of the successful working of which I entertain the *strongest* doubts, and which by the report I now take the liberty to enclose for your perusal is as strongly opposed by the parishioners. John Fullagar.

*** The report in question confirms in the fullest manner the only complaint made in our observations which led to the letter from the chairman of the Board, namely, shortness of water; and strengthens our exhortion to remedy the evil, because "a short water supply is liable to make people look with impatience at the means in progress, however wise." We have since received a letter from Mr. Charles D. Johnson, a ratepayer, objecting even more strongly than Mr. Churchwarden Fullagar to the way in which the Local Board have acted.

OXFORD.

COLLEGE AND CITY IMPROVEMENTS.

The work of alteration and improvement has been very active at some of the colleges during the long vacation.

The restorations of Christ Church Cathedral have now been carried out. The interior displays features hitherto obscured by the bad arrangement of the stalls and pews, and the interposition of the organ and screen, and exhibits fully the architectural proportions of the building. The seating, formerly containing room for about 100, is now increased to 220; and about 150 sittings have been erected in the north transept for the public. The present position of the organ in the south transept is regarded as an improvement. Still these alterations may be termed incomplete, the present being simply a temporary arrangement, the other portions of the design remaining to be carried out at a future period. Another improvement at Christ Church is the laying down of a complete hot-air warming apparatus beneath the hall.

Exeter College, within the quadrangle, presents, says the *University Herald*, a curious appearance, scarce anything being visible, but heaps of stone and piles of masonry in course of rapid demolition. When the works now in progress are carried out, all that will remain of the old college will be the three sides of the large quadrangle. Mr. Scott is the architect, and Mr. Symm, of Oxford, the builder.

At Balliol, the new College Chapel, the foundations of which were scarcely completed at the end of last term, has arisen to within 7 or 8 feet of the intended height of its side walls, and will, is all probability, be roofed about Christmas. The material of which the structure is built is Bath stone and red stone, the latter from Staffordshire and Warwickshire quarries. The white and red are intermixed with each other in irregular and eccentric courses in the process of building. The style of the edifice is Early Decorated, and it will be 74 feet in length by 29 feet wide in the interior. The architect is Mr. W. Butterfield, of London, and the builders are Messrs. Ruddle and Thompson, of Peterborough.

At Magdalen College, the Founder's Tower has

been thoroughly repaired, from designs by Mr. Scott. A quantity of mouldering tapestry has been taken from the walls, where it had hung for centuries.

At Brasenose, the old stained glass window, which adorned the eastern end of the chapel, has been removed into a corresponding situation in the ante-chapel, its place being filled by an entirely new window by Messrs. Hardman, of Birmingham. The window is illustrative of different passages in the last stage of our Lord's history, and comprises the entry into Bethlehem, the Last Supper, the Agony in the Garden, Judas betraying Him, the blindfolding and scourging, the journey to the Cross, the bearing of the Cross, the Crucifixion, and the laying in the tomb.

Worcester College has received the addition of a clock, one dial of which faces Beaumont-street, the other overlooks the colonnade, in the quadrangle. A Pives' Court has been erected in the Common-room Garden, for the use of the Fellows, and another (but a much larger one) in the College-close, for the recreation of the undergraduates.

Wadham has been lighted with gas.

New College hall has been repainted and decorated.

At Queen's College, the pediment surmounting the east side of the great quadrangle, which was in danger of falling, is in the course of being strengthened and restored.

In the City, several improvements have also been executed, but the majority of them, though very desirable, hardly call for especial mention, except the widening of Pacey's-bridge. The new erection is supported by iron girders, and railed with the same material: it allows an additional width of road of about 8 feet, with pavements for foot-passengers, and a good granite thoroughfare for vehicles. The designs and specifications were prepared by the city surveyor, Mr. J. Galpin.

STEREOSCOPIC EFFECTS WITHOUT THE STEREOSCOPE.

I am happy in being able to corroborate your correspondent, "J. E. D." as to the stereoscopic effects without the stereoscope. I have discarded that instrument for some months, as being both cumbersome and useless; and while my friends, who have not had patience to obtain the effect with the naked eye, are fumbling over one subject with the stereoscope, and complaining that stooping over the instrument makes their heads ache, I can look at half a dozen pictures. The only hindrance to an almost unlimited enjoyment, is the cost of the dual pictures: if these could be produced at a cheap rate, the entertainment would be greatly extended.

Being an invalid, and confined to my bed, I found it difficult at a distance from the window to get a sufficient light to fall upon the opening of the stereoscope, and still more difficult to twist myself round so as to bring my eyes in the right line to look through the lenses. Under these circumstances, it occurred to me I might possibly do without the stereoscope. I, therefore, turning my eyes from the window, took the pictures in my hand, and looked at them intently for a few seconds. At first I found it difficult to keep my gaze steady, and the pictures underwent a variety of phases, but by perseverance I at last succeeded in fixing the centre picture, when it came out clear, sharp, and in beautiful relief. The lateral pictures were not quite so distinct as the central one, but they also stood out in considerable relief. From that time I have found no difficulty.

I. W.

SANITARY STATE OF NETHER KNUTSFORD.

A meeting of the ratepayers of this place was called together recently, in compliance with a requisition from the chairman of the local Nuisances Removal Committee, to consider and decide as to what was to be done in consequence of the prevalence of epidemics in the town and the bad state of its drainage, the prevalence of cesspools, the state of the swampy moor adjoining the town, &c. on all of which subjects the Nuisances Removal Committee had previously reported to their constituents, the ratepayers. Letters from the medical men of the town were read, complaining of the bad state of health of the town, and strongly urging that something should be forthwith done to get rid of the foul air and fœtid gases to which that bad health was attributable. There was a good deal of "discussion," if it can be so called, in which the strongest reasons against doing anything were clearly traceable to the pockets of the ratepayers, and in course of which their Nuisances Removal Committee were repeatedly reproached for expending the immense sum of 30*l.* in preliminary investigations and advice given by a competent engineer, a "Manchester Man," as he was rather sarcastically called by contrast with "Old George *Potter*," who, Mr. Swineburne maintained, was "fully competent to make a plan for a drain in the town," or their "own (highway) surveyor, Joshua Hewitt, with a bricklayer," who were equally competent—not to *survey* those *highways* the sewers and drains of Knutsford, and suggest a connected scheme for their improvement, but,—"to *make* any drain or sewer that might be required." Mr. Swineburne appears to have thought that the Knutsford sewerage should have been Pottered for the 36*l.* expended on "the Manchester Man," for he complained that it had been spent "without raising a single stone in Knutsford." It will excite no surprise, under these circumstances, that a resolution to the effect "That a general survey of the town is necessary; that Mr. Shorland ['the Manchester Man'] be instructed to make such survey, and to furnish the committee with his report and working drawings for such alterations in, or addition to, the present sewerage as he may think necessary," was indignantly rejected, and an amendment, moved by a Mr. Ashton, and seconded by a *Major* Hope, to the effect "That no such sewer is necessary," at once carried by the ratepayers present; and, moreover, that six out of what appears to have been eleven of their "Nuisances Removal Committee" resigned in disgust. Some of the voters were overheard at the meeting privately jeering as to the absurdity of cesspools, &c. being imagined to be unhealthy; and one gentleman, according to the *Macclesfield Courier*, which reports the whole proceedings, triumphantly asked,—"What is more healthy than a pig's-stye close to your door?" Well done *Nether* Knutsford!

THE CEMETERIES IN THE EAST OF LONDON.

A few weeks back you remarked upon the disgraceful state of the cemeteries in the east of London. Having to superintend some works in Bethnal-green, I can endorse your statement, and think it high time that something should be done to put a stop to an evil which will surely some day breed disease of the most dreadful nature. You state in your article that, on an average, 130 bodies are buried every Sunday in the Victoria-park Cemetery. The smallness of this burial-ground must surely open the eyes of the public to the disgraceful manner in which the corpses are interred.

The cemetery is surrounded by habitations occupied by the working-class, chiefly consisting of weavers who toil in doors all day; and what few open spaces are in the neighbourhood, they are being built over as fast as possible. In some hot summer, the exhalations from this mass of corruption will bring on the plague, or some other frightful calamity.

To prove that the Government are aware of the disgraceful manner in which funerals are conducted in this place, I will quote from a Report of one of their officers to the Home Office. He states:—"I stayed on the ground about an hour, and during that short time saw from thirty to forty coffins put into graves,—I cannot say buried, for nearly all of them were left uncovered while I stayed." In another portion of the Report, the officer gives us an idea of the decency shown to the feelings of the mourners, he says, "I noticed a funeral party following to the grave the coffin of a young child, and while the bereaved mother was leaning over to take a last look of that which contained what was so dear to her, one of the men (without waiting a minute until the poor woman had left), lowered upon her child's another coffin, and hid it from her sight."

I leave the public to judge of the manner in which the last feelings of respect are paid to the dead, and ask of you, as an old advocate of local improvements, to use your most powerful pen, by pointing out the evil which will surely ensue from the dreadful nuisance situate amongst a class of people who breathe the nauseous air from morn to night. Amongst so many Government officials, surely there is somebody in office who can command sufficient authority to prevent this burial-ground to receive further interments.

A Clerk of Works.

A DAM FOR THE RIVER THAMES.

In submitting this my plan to you, I beg to state I have been for years considering of the best remedy for the state the river is in at the present time. My plan is to lock, dam, and flush it.

Take for this purpose possession of the river above Battersea-bridge and Chelsea-bridge. Form two working locks on the Surrey or Battersea side of the river, and place the piers and flood-gates *at an angle*, bringing the line to the Middlesex shore, to the upper side of Kensington-creek, in order to have the longest space in the widest part of the river above Battersea-bridge. The last starling or pier would end there, and the whole dam be formed of self-acting gates, to allow of the free passage of the flood tide, when high enough to open them, and when the tide recedes, they would close of themselves.

The weir I would form by excavating the marsh land on the Middlesex shore, above Cremorne-gardens: this should be nearly a quarter of a mile long, forming a tumbling-bay for the surplus water that might be on the upper side the dam-gates. After high water, the locks should be large enough to take several barges or other vessels at the same time.

The starlings or piers should be made of piles driven into the bed of the river, to ordinary low-water mark: on the top of these place an iron pipe of 5 or more feet diameter, in an oblique direction, fitted with sluice-traps, and finishing with masonry to above high water mark. The piers should be of an oblong shape, and so placed that the lower end of one should be even with the upper end of the other, to allow the dam-gates to close upon the next pier at the ebbing of the tide. By this plan all the surplus water that was left from the flood-tide, as well as the water of the river, would only come over the weir except in cases of much land water being out, and then the flood-gates in the piers might be made use of to get rid of any excess.

Having formed the lock-dam and weir, it would make the river navigable for barges, steam-boats, as well as other craft, to above Richmond, at all times; and having a great body of water always at command, five minutes would suffice to form a lock, which steam-boat proprietors would sooner do than scratch over the ground as they now do for two or more hours: at the same time you would form a river that any might envy.

Then, as to flushing the river below Battersea, I would propose to open all the flood-gates in the pipes in the centre of the piers, at one hour before it is low water at London-bridge, which would effectually rid the bed of the Thames of what had been accumulating for ten hours before. If some such plan as this is not adopted before the piles of the new bridge at Westminster are drawn, there will be no possibility of navigation above Battersea-bridge, and I fear very little below. The whole river now above is more like a dry ditch for seven or eight hours per day, and the poor fish seem parboiled without any place where to find shelter.

John Dyer.

Miscellanea.

Gas Purification.—A new mode of purifying and increasing the quantity of illuminative coal gas has been invented by Mr. Basford, engineer, and patented. According to the specification of the patent and other printed documents, it appears that he has substituted charcoal, saturated with lime-water and brought to a red heat, for the lime used in the ordinary process; that he has reduced the cost of the apparatus by two-thirds; that the gas he produces is absolutely free from sulphur and ammonia—realising an amount of gas to the extent of 15,000 cubic feet per ton of coal, which formerly, in the best of the old processes, produced little more than 8,000 feet; that there are no waste products, the tar itself being converted into gas, or, in combination with the charcoal, into a valuable pigment which may be used in the arts.

Gas.—The Stockton Council met on 9th instant, to consider the propriety of purchasing the old gas-works. A committee was appointed to inquire as to the works; and an examination of the accounts of the company, says the *Gateshead Observer*, showed that, with every successive reduction in price, from the old charge of 6*s.* 8*d.* per 1,000 cubic feet, the consumption and profits had increased—the most profitable reduction of all being the latest, viz. to 4*s.* 6*d.* Thus, as in so many other instances, has our confident and oft-reiterated prediction been completely justified,—without any thanks, we may note, from even a single one of the gas companies so largely benefited by the wholesome compulsion under which alone almost all of them have been induced, in consequence of the efforts of their imaginary *enemy*, but real friend the *Builder*, to reduce their exorbitant charges. At a public meeting, since held, a vote was given in favour of purchase by the Corporation; and at an adjourned meeting of the Council, on 16th instant, it was resolved, almost unanimously, to purchase the works.

Value of Land, Oldham. — On Saturday, a special jury case was tried at the Town-hall, before Mr. J. J. Aston, barrister, respecting the value of a plot of land required for the new waterworks. The land measures 8*a.* 3*r.* 21*p.* and is situated at Norman-hill Farm, and belongs to Mr. John Taylor, surgeon, Liverpool. Mr. Taylor claimed 2,600*l.* for the land: this was considered exorbitant, and the corporation offered 400*l.* which was thought to be more than its worth. Mr. Thomas Chaffer, surveyor and bridgemaster for the hundred of Blackburn, valued the land at 1,786*l.* Various other estimates were tendered. Mr. C. E. Cawley, C.E. valued it at 238*l.* and Mr. W. Bell, surveyor, at 272*l.* The jury gave a verdict for 435*l.* The verdict being above 400*l.* the expenses have to be borne by the corporation.

Improved Band Saws.—Mr. W. Exall, of Reading, Berks, says the *Mechanics' Magazine*, has patented several improvements in belt saws. The improvements consist, first, in heating by blow-pipes or lamps the cast or forged hoop or ring out of which the band saw is to be made during its passage through rollers or dies, for the purpose of reducing it to the proper thinness; secondly, in giving the blade its proper temper by continued rolling between hard rollers, or by repeated drawing through dies as in drawing wire; thirdly, tempering the hoop in its entire shape by heating it when in that shape in a suitable oven, and then plunging it into oil or other suitable fluid.

"Projection" Cases.—Your very just remarks cannot fail to have been duly appreciated by your numerous readers, professional and non-professional. A section, and I believe a small one only, of the Metropolitan Board, have put a construction on the Building Act it will not bear,—and one which is legally untenable. Even for projections, porticoes, &c. &c. as was observed some time ago, a strong *primâ facie* case exists, as they are not illegal under the Act, the consent of the Board *simply* being required for them. Surely, with the adjoining owners' consent, these matters might have been left in the district surveyors' hands. As regards the sewage question, why, sir, let me ask, is not the best engineering advice had? Rendel, Simpson, Cubitt, Hawkshaw, Brunel, Stephenson should be appealed to without delay: the matter is one with which the Board is not competent to deal.—O. P.

Careless Procedure as to Ruinous Buildings. — A correspondent, "R. S. T." points attention to the very dangerous state of premises on the west side of Garlic-hill, Thames-street, which have been in the course of demolition for the last four weeks, at least, but the removal of which for some reason or other has been stopped. The walls are, it seems, nothing but a mass of rubbish, which a blast of wind might blow down; and directly underneath is an entry which leads up to some inhabited houses, warehouses, &c. and numbers of people pass and repass through this place during the day; while, at dinner times, a dozen or more boys may be seen playing about the ruins. The imminent risk of some serious accident is but too obvious, and it is to be hoped that the attention of the authorities will forthwith be given to this, to say the least, careless procedure.

Glass in Farm-steadings.—A homestead has just been erected on the farm of Bucklerhole, on the estate of Rockall, says the *Border Advertiser*, on a plan which is new in that district, although not to our readers. The whole buildings, in fact, suited for a farm of 200 acres, are comprised in a shed 90 feet in length by 72 feet in breadth. The shed is divided into four parts by three rows of iron pillars, which support the roof. Each of these parts is 18 feet in breadth and 90 feet in length. Each part is covered with a ridge roof, one-half of slate and the other of glass, so that ample light is given through the whole interior without any windows in the walls. The outer walls and interior supporting pillars are 11 feet in height, and in addition to this there is the height of the sloping roof. Each pillar is hollow, and rain falling upon the roof descends through, and is carried off by drains below the flooring. Once within the steading there is light, dryness, and complete shelter from the weather for animals and implements; while, under such agreeable circumstances, a considerable portion of the operations of the farm can be carried on. Ample ventilation is secured by openings both in the walls and roofs.

Improvement of Exeter Cathedral Precincts.—At a recent meeting of the Exeter Commissioners of Improvement, it was unanimously resolved to agree to and second a proposal made in a memorial by certain influential gentlemen to the Dean and Chapter, requesting that the unsightly wall of Chancellor Harington's garden on the north be lowered, so as to effect a great public improvement, without sacrificing the privacy of the Chancellor's house. A correspondent of the *Exeter Flying Post* ("Common Sense"), says, in reference to this matter: "The whole thing appears a bit of burlesque: the object of the memorialists is to obtain a better view of our cathedral, a most praiseworthy object; but taking down a bit of wall will not effect this object: the Rev. Chancellor's house ought to come down, and the citizens of Exeter, in conjunction with the Dean and Chapter, ought to pay for it. The east end of the cathedral ought to be entirely free. I trust, therefore, the Dean and Chapter will consider this matter, and see whether they cannot make some offer to the commissioners by which a really great and necessary improvement could be made." Besides the ugly and unsightly house of Chancellor Harington, there is another inhabited by the Rev. J. Corfe, which ought also to come down, and a better view of the cathedral could then be obtained on that side.

Legal Times of Work, Meals, and Sleep for Artificers in the Reign of Henry the Eighth.—The following may interest some of your readers. [*Notes and Queries.*] I copy it from a small and very old black-letter tract, printed by "Robert Wyer for Rycharde Bankes," without date, entitled,—"The Ordynal or Statut, concernynge Artyfycers, Seruauntes, and Labourers, newly prynted with dyuers other thing therunto added." "Item. It is enacted by ye sayd statute made in the vi yere of kyng Henry the viii. the iii. chaptyre, that euery artyfycer and labourer shal be at his worke betwene the myddes of Marche and the myddes of Septembre before fyue of the clocke in the mornynge, and that he shall haue but halfe an houre for his brekefaste, and an houre and an halfe for his dyner at such tyme as he hath to slepe by the statute, and when he hath no season to hym appoynted to slepe, then he shall haue but one houre for his dyner, and halfe an houre for his noone meate, and that he departe not from his worke tyll betwene vii. and viii. of the clocke at nyght. And that from the myddes of Septembre to the myddes of Marche, euery artyfycer and labourer to be at their worke in the spryngynge of the daye, and departe not tyll nyght. And yf that any of the sayde Artyfycers or labourers do offende in any of these Artycles, that then theyre defaultes to be marked by hym or his deputy that shall paye theyr wages, and at the wekes ende theyr wages to be abated after the rate. And that the sayde artyfycers and labourers shall not slepe in the day, but onely from the myddest of Maye vnto the myddest of August." Robert Wyer and Richard Bankes were printers and publishers who flourished *circa* 1530. I fancy *The Ordynal* above mentioned has escaped the notice of Dibdin, as it is not to be found in the list he gives of the works executed by Wyer and by Bankes. *The Ordynal* must have been published between 1530 and 1540.—Henry Kensington.

Coventry School of Art.—A public meeting of the subscribers and friends of this institution was held in St. Mary's Hall, Coventry, on Friday before last, Sir Joseph Paxton in the chair. The secretary read the report, which stated that, notwithstanding the annual Government grant had been withdrawn by the Department of Science and Art, and other great changes made, the committee are enabled to report the continued progress and increase of the school, and that all claims upon the funds of the institution had been liquidated. Upwards of fifty new subscribers had been added to the list. The number of students entered on the books during the past year (including the four public schools), amounted to 384, against 349 the preceding year. Sir Joseph Paxton's prize had created considerable competition among the ladies, had produced some excellent designs, and had tended to direct the art learnt in the schools to the local wants of the town. In reference to this, Sir Joseph said he could not allow any of those ladies who had honoured him by coming forward at his request, to go without a prize. He hoped they would all accept some little token of his esteem for their ingenuity. In order to stimulate the talent of the city, he intended to offer a prize of 10*l.* for which any ribbon designer would be eligible to compete, during the ensuing year. He also proposed to offer a prize of 10*l.* for competition among warehousemen. He proposed, also, in order to attract attention to that branch of the trade, to give a prize of 10*l.* for the best design for a watch-case. The competitors, in each case, must for the time be in the school, as he wished to encourage the school as well as the staple trades of the city. They wanted a better building for the school, and they wanted more attention from the 20,000 persons who were engaged in the ribbon trade, and those wants must be supplied if the Coventry School of Art was to progress as hitherto it had progressed.

Plumstead Central Schools.—These schools are now open. They comprise schools for 1,000 children and adults, with residences for the teachers, and cover nearly half an acre of ground. Messrs. Fox and Henderson were the builders. The building funds comprised 1,000*l.* from the War Department, 1,000 shilling and 1,500 sixpenny subscriptions from Plumstead parishioners, and 100*l.* from Sir Charles Fox. Mr. Henderson gratuitously furnished the plans and superintended the erection. The vicar of Plumstead complains of the *Times* calling these schools the "Woolwich National Schools, upon Plumstead-common," and thinks it bad enough that the Royal establishments at Plumstead should be called "Woolwich Arsenal:" Plumstead, he remarks, is something more than either a marsh or a proposed Metropolitan cesspool.

Balmoral.—The furniture of the new Castle of Balmoral is, it appears, of a peculiar character. All the draperies and coverings of the apartments are of one pattern, though different in costliness of fabric. The design is a tartan, with red and white check. There is no paint on any of the internal doors: the wood is highly polished.

Goat Island-bridge at Niagara.—The *Niagara Falls Gazette* gives the following description of this structure:—This bridge across the east branch of the Niagara River is situated in the rapids, about 60 rods above the cataract, on the site of the old wooden bridge. It is 360 feet long, and consists of four arches, of 90 feet span each, supported between the abutments on three piers. The piers above water are built of heavy cut stone, and are 22 feet long and 6 feet wide, tapering one foot in the height. The foundations are formed of foot square oak timber, strongly framed and bolted together in cribs filled with stone, and covered with timbers at the surface of the water. These timber foundations are protected against wear and injury from ice by heavy plates of iron, and, being always covered with water, will be as durable as the stone. The superstructure is of iron, on the plan of Whipple's iron-arched bridge. The whole width is 27 feet, affording a double carriageway of 16⅔ feet, and two foot-ways of 5½ feet each, with iron railings. The arches are of cast iron, and the chords, suspenders, and braces of wrought iron. The abutments and piers were erected under the plan and direction of Mr. A. H. Porter, one of the proprietors, and the superstructure under Messrs. S. and J. M. Whipple, the patentees.

Builders' Clerks. — Please to lend us poor builders' clerks a helping hand towards deriving some little benefit from the Early Closing Movement. Our hours generally are longer than any other clerks—half-past eight to seven, and in some places eight; and on Saturdays, owing to have to pay at different jobs in town and country—often later. I think it would be to our employers' interest to allow us to work until five, and then leave, instead of the present system of dining in the middle of the day, which generally unfits us for anything like work for an hour or two afterwards: it would also give us an opportunity for a little self-improvement, and would be received as a boon by builders' clerks generally, including—¼ Scale.

The New Theatre at Moscow.—This immense building has six ranges of boxes, combining Italian privacy with French openness. The grand tier is immediately above the pit tier. In the body of the house there are 480 stalls, and the theatre altogether accommodates 2,300 persons, with abundance of room for each. The style of decoration is a combination of the Renaissance and the Byzantine. The colours are mainly white and gold and light blue, with crimson damask draperies. The ornaments are all embossed with gilding: there are none painted. The state-boxes are magnificent saloons on either side of the stage: a third box facing it is reserved for the Imperial household. The stage is said to be the broadest in Europe, being 22 French mètres broad: it is not so deep, however, as the stage of La Scala at Milan. The architect was Mr. Albert Cavos, who also designed the St. Petersburgh theatre and the Grand Post-office.

St. Anne's Church, Limehouse.—The restoration of St. Anne's Church, Limehouse, is in active progress. Subscriptions amounting to about 800*l.* have been given. A penny subscription, collected at the church doors on Sunday before last, realised upwards of 10*l.*: 700*l.* are still required to complete the edifice.

The late Mr. Francis Wishaw, C.E.—We cannot allow another week to transpire without recording our regret on learning of the untimely and sudden death of Mr. Francis Wishaw. As Secretary of the Society of Arts at one time, and as the inventor of improvements in telegraphing, and of various other suggestions, and a claimant of the original idea of the Great Exhibition of 1851, Mr. Wishaw will be remembered by many of our readers. He was in the fifty-second year of his age at the time of his death, on the 6th inst. from apoplexy. Notwithstanding the possession of a highly inventive and suggestive mind, we are sorry to learn that, like too many other inventors, Mr. Wishaw did not realize much pecuniary profit from his life-long efforts.

Clearing Sewage Water.—A method, said to be new, is described by the *Hampshire Advertiser* as having been discovered by the Officer of Health at Southampton, by which he can render clear and almost inodorous the foulest sewage water. "At the cost of about 13*l.*" says the paper named, "he can precipitate, say the matter from 870 tons of sewage, about one-sixth, or 120 tons of which will be a fertilizing deposit of a valuable character for top-dressing."

Limited Partnerships and Agricultural Improvement.—As a means of overcoming the deficiency of labourers, and in order to keep pace with the times, a number of the principal farmers in Devonshire have formed a Steam-thrashing Company, under the Limited Liability Act, for the purpose of employing steam-thrashing machines in various parts of the county. The company, if successful, will also employ reaping-machines and other mechanical inventions.

New Buildings in Edinburgh.—There are several public structures in the course of erection in this city. Robertson's School, Newington, is now completed. The grounds are in the course of being laid out, and a janitor's lodge is to be erected at the entrance. The building is 74 feet in length, built of red stone, and, according to the local *Post*, which describes this and other improvements, is a sort of Gothic in design. In Cross-causeway, a new church of antique design is being built. The church of Dr. French, in College-street, is in course of being pulled down, and the new fabric will be on a line with the street. At Fountainbridge, a territorial church was erected some time back. Some other ponderous buildings have also been added to the street architecture in this quarter. Near St. Leonard's, several blocks of houses and shops have recently been erected. In Buccleuch-street, near the Meadow entrance, a large building has been raised, containing numerous houses for the less wealthy classes. At the Grange, on the property of Sir William Dick Lauder, quite a new town is springing up,—streets of villas and isolated houses. The Treasurer's office for the Edinburgh Parochial Board is being erected at the entrance of the workhouse. A wing of the house to the south is still wanting, says the paper just named; and had this defect been supplied, it would have spared the necessity of erecting buildings, now converted into a fatuous ward, in the centre of the street, thus precluding, as does the new Free Church, the retrieval of the ground—a measure which would have allowed of a grand broad approach to the Meadows, and have secured a fine, wide, and noble prospect; allowing, too, at this splendid entrance to the capital, of the erection of statuary or other ornamental works.

TENDERS

For New Wesleyan Chapel, Highbury. Mr. E. Laws, architect. Quantities not supplied:—

Ashton	£4,995	0	0
Adamson and Son	4,695	0	0
Patman and Fotheringham	4,582	0	0
Williams	4,177	0	0
W. Smith	3,830	0	0
Clever	3,700	0	0
W. T. Purkess	3,351	0	0
Wiltshire and Warr	3,340	0	0

TO CORRESPONDENTS.

"P. E. M."—"J. S. R."—"J. P."—"C. F. M."—"Thoughtful Worker."—"L. B."—"S. P. X."—"J. W."—"M."—"A Subscriber, not professional"—(see below).—"A Clerk of the Works" (in type).—"T. T."—"B. G." (the position close to the river would not be advantageous for pictures).—"S. R. G."—"S. de J."—"E. O. S."—"J. S." (thanks not desired).—"W. S."—"G. & S."—"H. P."—"Intending Competitor."—"W. P."—"G. S." should send us the information for the good of the public).—"W. P. (a solution of corrosive sublimate has been recommended).—"T. S." ("The Society for Improving the Condition of Labouring Classes, 21, Exeter Hall.)—"A. M. D."—"B. H."—"Pee Cane" (the char. e should be f r addition to one hou e only).

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the Editor, and not to the Publisher.

ADVERTISEMENTS.

ARCHITECTS, BUILDERS, ENGINEERS, and SURVEYORS, can be IMMEDIATELY SUPPLIED with COMPETENT ASSISTANTS (temporary or otherwise). Those only recommended whose efficiency and qualifications can be guaranteed. The registry is open to employers, or lists furnished therefrom (free), on application to Mr. RICHARD'S, Engineer and Surveyor, 4, Trafalgar-square.

ARCHITECT'S ASSISTANT WANTED, salary two guineas per week, quick, and thoroughly capable of preparing late and working drawings, specifications and estimates. Address, stating acquirements and references, to ARCHITECT, Post-office, Leigh-street, Burton-crescent.

AN APPRENTICE WANTED to a MARBLE and STONE MASON.—Address, J. B. No. 21, Cornwall-place, Holloway. A premium required.

WANTED, a FOREMAN of CARPENTERS, to take CHARGE of a SHOP, in the country.—Application to be made to S. D. Office of "The Builder," stating age and terms.

WHARF FOREMAN WANTED.—He must be married, and about 35 years of age; have a practical knowledge of slates in work; also of setting and measuring builders' materials; also [illegible] work, and if capable of making rough drawings [illegible] so, will be preferred.—Address by letter, A. B. care of J. J. Sanders, Stationary, New road, Fitzroy-square.

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MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability. Slabs and Tiles for fireplaces and Hearths. Cornices for Tables, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

BEADON'S EAVES GUTTER TILES.—Mr. LAWES is prepared to CONTRACT for the DIRECTION of the above TILES on roofs of all descriptions, in the neighbourhood of London at 7d. per foot, above 100 feet, 6d.—Office, 1, Adelaide-place, London-bridge.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SELF-ACTING.
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 23 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge includes tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "RECORDS OF THE JURIES," page 931, of the Great Exhibition, rank the Manufacture known so long as "The Theories," Tunstall, Staffordshire, as the first of the kind in the world

CONIAM'S PATENT IMPROVED ROOFING TILE.—These tiles are light from over lapping each other by a raised edge, which also prevents the drift of rain or snow, and at the same time, forms a good ventilating channel. To be obtained of C. PHILLIPS, Potter, Weston super-Mare.

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Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Pavior, Red and Brick, Copings, Kitchener, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Millwall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin

TALC.—A large quantity of this mineral product, including some fine specimens, is now on SALE, by Mr. MOORE, Whole-sale Ironmonger, 12 and 13, Earl-street, Seven dials, for the supply of Ironmongers, Engineers, Stove, Gas, and Philosophical Instrument Manufacturers, and others.

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This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country; an extensive assortment of specimens and patterns commencing at 1s. per foot super. together with every particular of its cost and adaptation, can be obtained of Messrs. H. P. BURT and CO. 2, Charlotte-row, Mansion-house; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

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REVOLVING SHUTTERS, IN IRON AND WOOD, BRASS SASH-BARS, STALL-BOARD PLATES, AND EVERY DESCRIPTION OF METALLIC SHOP-FITTINGS.

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TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 1855 was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

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Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

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BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,

REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.

STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond stones, and the Stone Ashlar never injuriously weighted by the settlement of the Mortar joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences, at less cost for carriage, &c. prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

Mr. JOHN TAYLOR, ARCHITECT, OFFICES OF THE COMPANY, 40, KING-STREET, CORNER OF CHEAPSIDE.

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WHOLESALE ESTABLISHMENT for the supply of CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality;

WINDOW-GLASS, Shades, Moderator Globes, Lamp Glasses, Bottles, and other Articles in White Glass, at

131, UPPER THAMES-STREET, LONDON-BRIDGE.—WORKS: SEVRES, NEAR PARIS.

CHEAP AND DURABLE ROOFING.

By Her Majesty's Royal Letters Patent.

F. McNEILL and CO. of LAMB'S-BUILDINGS, BUNHILL-ROW, LONDON, Manufacturers and ONLY Patentees of

THE PATENT ASPHALTED FELT, FOR ROOFING HOUSES, VERANDAHS, SHEDS, &c.

Patronized by

HER MAJESTY'S WOODS AND FORESTS,
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HONOURABLE EAST-INDIA COMPANY,
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HER MAJESTY'S ESTATE, ISLE OF WIGHT,
ROYAL BOTANICAL GARDENS, REGENT'S PARK,

And by the most eminent members of the Royal Agricultural Societies of England, Scotland, and Ireland; at whose great national shows it has been exhibited, and OBTAINED THE PRIZE. For being the best and cheapest article for roofing; also used for under slates at the Royal Agricultural Society's House, Milman ver-square. Its advantages are lightness, warmth, durability and economy. It is impervious to rain, snow, and frost, and a non-conductor of heat and sound. The Felt can be cut to any length, by 32 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples, with full directions as to its uses and the manner of applying it, with TESTIMONIALS, some of the first of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 33 per cent in fuel is effected. The TRADE are respectfully solicited to send their orders DIRECT to the FACTORY, as the surest means of having supplied with the genuine article, and in lengths best suited to their roofs. They are likewise CAUTIONED AGAINST MISREPRESENTATION, as ONLY WORKS in Great Britain where the above roofing is made are F. McNEILL and CO.'s Manufactories, LAMB'S-BUILDINGS, BUNHILL-ROW. Roofs covered with the Felt to be seen at the Factory, and at the new Vice-Chancellors' Courts, the passages and offices leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

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CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot; also in Cases of 300 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 21s.; 24s., 26s. 28s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1¼d. per foot. Larger sizes up to 21 by 14, 2½ per foot. Ground Glass, in Cases 9d. per foot. Crown and Sheet British and Foreign Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price lists and estimates forwarded on application to ROBERT METCALF, 30, Princes-street, Leicester-square.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, and for glazing, of unrivalled quality and finish: ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Decorative and ornamental glass for windows, staircases, doors, &c. Estimates and lists of prices may be had, or will be forwarded free on application. Show-rooms and warehouses, 313, OXFORD STREET.

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PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOUTH PLATE-GLASS COMPANY, 68, Basinghall-street.

CRYSTAL SHEET GLASS, first, second, and third quality, in assorted cases of 50 feet each, suitable for pictures, at one penny per foot; also 16 oz. and 21 oz. English sheet glass, in cases 200 feet each, 3rds, 38s.; 4ths, 30s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1¼d.; larger sizes, up to 23 by 14, 2½; ground-glass, in cases, 9d. per foot; Crown and Sheet British, Patent and Rolled Plate, Rough Plate, Fluted, Stained Sheet Glass for Churches, Conservatories, &c., Ornamental Wired Glass, &c., G. FARMILOE and SON, 118, St. John's-street, West Smithfield.

SUPERIOR BRITISH PLATE-GLASS, at VERY LOW RATES.—The Union Plate-glass Company, having recently completed considerable improvements and additions to their works, respectfully inform their friends that they are now able to supply orders without delay, and invite the attention of the trade to the low rates at which their now much esteemed manufacture is sold.—Lists of prices may be obtained on application at the Works, Pocket Nook, St. Helen's, Lancashire; the Warehouse, 90, Hatton-garden, London, and 45, Piccadilly, Manchester; Messrs. C. and J. MALLOCH, 30, Turner's-court, Glasgow; Messrs. JOHN DIX and CO. Bath-street, Bristol; Messrs. H. SHERTHORPE and SON, Cork-hill, Dublin; Messrs. FORREST and BROMLEY, 21 and 23, Lime-street, Liverpool; Mr. WILLIAM HENRY HOLMES, Westgate-street Newcastle-on-Tyne.—Rough Plate Glass from ¼ in. to ¾ in. thick for windows, roofs, mechanics' shops, market-halls, railway stations, &c.—Beautiful and highly-finished polished plate-glass for shop-fronts and all other glazing purposes, and for silvering.—Superior Silvered Plate-glass Mirrors of all sizes.

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IMPROVED REVOLVING SHUTTERS. FRANCIS MICKABY and DUNN are now enabled to offer the following reduced prices: IRON SHUTTERS, double riveted, with machine-cut worm gear, complete, at 4s. 6d. per foot. WOOD SHUTTERS, with worm gear complete, at 3s. 6d. per foot. Machine-drawn Brass Sash Bars and Stall board Plates made to any design.—84, Gray's-inn-lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 110, Broadwall.

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S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

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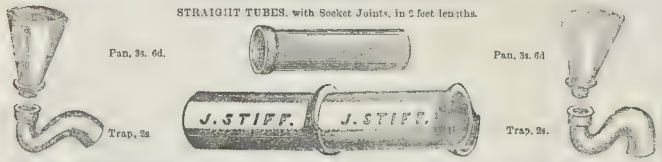
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS

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Messrs. BUTCHER and SMITHS, Ravensbourne Wharf, Greenwich.

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Drawings, with Prices, will be forwarded free, on application

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Extensive Reduction in the Prices of Salt-glazed Stoneware Drain-pipes, Flue-pipes, Bends, Single and Double Junctions, Closet-pans, &c. &c.

The Proprietors of the above Works are now prepared to supply the various articles used in drainage &c. in any quantities. The pipes, &c. are made by skilful and experienced men, with the assistance of new and powerful machinery, by which they are subjected to an immense pressure, and burnt by intense heat to an unusual degree of hardness. They are made from clay of the finest quality, the produce of the estate, and will bear comparison with goods manufactured in any part of the kingdom.—A list of prices, or any information may be obtained, on application to the Manager, Mr. J. T. BOUNSALL, Bournemouth, near Poole; or the Agent in London, Mr. G. R. WHITTON, 17 and 18, Princes-street, Lambeth.

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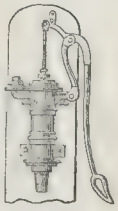
The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,



which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive sines and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 8 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS,
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Manufacturers and Patentees.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS,

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c adapted for any depth. Hydraulic pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power

Iron Pulls 38s. per doz. painted.
Ditto .... 48s. per doz galvanized.

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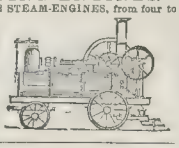
STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready for work on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c &c



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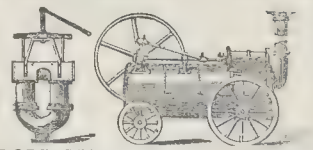


PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

BUILDERS and OTHERS requiring a quantity of PAPERHANGING and PAINTING to be done, would find it advantageous to them by applying to BALDWIN and SON, as they would have no objection to taking a house or carcase in payment for the same.—Address J. BALDWIN and SON, Papermakers, Manufacturers, Painters, &c. 62, St John street, Clerkenwell.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER HANGINGS is GROSS'S WHOLESALE WAREHOUSE, 22 GREAT PORTLAND-STREET, Oxford-street, where you can select from the LOWEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators Venders, and large consumers will do well to visit this establishment.

NO CHIMNEY WANTED for RICKETS'S PATENT CALORIFERE GAS STOVES in CHURCHES, HALLS, or SHOPS;

And for Counting-houses, or any close Apartment, a Pipe can be attached to carry away the burnt air.

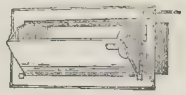
RICKETS'S CHEAP GAS STOVE, Price £1. 15s.

Made of Sheet Iron, suitable for Heating small Counting-houses, Bedrooms, Cellars, &c. &c.

MANUFACTORY.
AGAR-STREET, STRAND, LONDON.
Liberal Discount to Builders.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an



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With single pulley, from 6s. each; with leading pulley, from 8s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required. HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 11, Union-street, Borough; and of all respectable ironmongers, builders, &c.

SMOKY CHIMNEYS.—TWO YEARS' TRIAL, and PERFECT SUCCESS of RUTER'S PATENT WIND GUARD, in curing the most inveterate Smoky Chimneys, induces the Patentee to recommend all persons suffering from that nuisance to try one.

Price 10s.

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BONUS

THE DIRECTORS OF THE STANDARD LIFE ASSURANCE COMPANY request attention to the advantages of joining the Company before the 30th of November next, when the books will be closed for the current year, and the lists of Policies completed for 1856, with reference to the right of participation at future Divisions of Profits. Such Policies will rank for Five Years' Bonus in 1860, and will secure One Year's additional claim for Profits at each future Division over later Entrants.

EXAMPLES OF BONUS ALREADY DECLARED.

Date of Policy.	Sum in Policy.	Bonus Additions to 1855	Sum in Policy with Bonus Addition.
30th Nov. 1825 ..	£1,000	£1,132 0 0	£2,132 0 0
,, 1840 ..	1,000	887 0 0	1,887 0 0
,, 1845 ..	1,000	582 0 0	1,582 0 0
,, 1849 ..	1,000	347 0 0	1,347 0 0
,, 1853 ..	1,000	174 10 0	1,174 10 0
,, 1850 ..	1,000	64 0 0	1,064 0 0

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John Scott, esq. 4, Hyde-park-street.
Sir Anthony Oliphant, C.B.
Francis Le Breton, esq. 3, Crosby-square.

THE STANDARD LIFE ASSURANCE COMPANY was established in 1825, and its progress has been most successful. During the ten years from 1825 to 1835, the Assurances effected amounted to upwards of Four and Half Millions sterling; and during the year from 1854 to 1855 alone, the New Assurances amounted to upwards of 600,000l.; being the LARGEST BUSINESS transacted in Great Britain during that period by any Assurance Office.

The LARGE FUNDS which the Company have accumulated are invested on the security of Land and in Government Securities, and these securities are subject to investigations by professional gentlemen at intervals of five years. Such an investigation took place last year, when the Committee reported that "the whole of the Investments are of the very best and safest description, and they have no hesitation, in stating their belief that there is not one of them which would not be accepted as a security if it was now proposed to the Board for the first time."

The INCOME of the Company is about a quarter of a Million sterling.

The position of the STANDARD, and its whole terms and conditions, are such as to give it the strongest claims on public support.

WILL. THOS. THOMSON, Manager
H. JONES WILLIAMS, Resident Secretary.
LONDON, EDINBURGH.
83 King William-street. No. 3, George street.
Agents to all the principal Towns in the Kingdom

DRAUGHT and DUST EXCLUDER from 1d. to 6d. per yard, easily fixed to doors and windows. Sole Patentee, R. HELBRONNER, 265, Regent-street. Wholesale and retail; and at Messrs. BURGESS and KEY'S, 97, Newgate-street.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Sea or Vapours, Damps, and Salt Water; also intense Heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that 6cwts of Wolston's Torbay Iron Paint will effectually cover as much surface as 14cwts. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Iron Work, Gas-holders, Tanks, Boiler Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all priming purposes, the saving will be immense. May be obtained at the TORBAY IRON PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

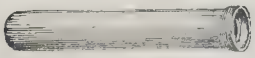
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Cloisets-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

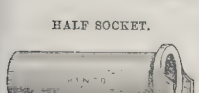
A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

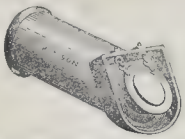
EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET.





WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

REDUCTION IN THE PRICE OF CLOSET-PANS

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pan.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES, DOULTON'S HALF-SOCKET PIPES, | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

SOCKET.

HALF SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at				2½d.	per foot
4	"	"	"	3½d.	"
6	"	"	"	6½.	"
9	"	"	"	9d.	"
12	"	"	"	1s. 6d.	"
15	"	"	"	2s. 6d.	"

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The composition of the red-ware is entirely one by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

GREAT REDUCTION in the PRICE of

STONEWARE POTTERY from this date.

VICTORIA POTTERY, LEIGH, near SOUTHEND: London Establishment, Falcon Wharf, 86 Bankside.—DAVID MORNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. Feb 11, 1854

LAMBERT'S SELF-CLOSING

LAVATORY AND CLOSET VALVE

No. 7.

Is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 20 to 200 feet; they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS. LAMBERT and SON,

Brass Founders and Engineers,

Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the GREATEST COTTAGE CLOSET yet produced. Price complete, 19s. 6d each.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

TO ARCHITECTS and BUILDERS.—

T. TRELOAR, 42 Ludgate-hill, Manufacturer, supplies Cocoa-nut Fibre Matting, Door mats, Hassocks, &c. of the best quality, on the most reasonable terms. Warehouse, 42, Ludgate-hill.

WINDOW BLINDS.—TYLOR & PACE,

Window Blind Manufacturers, 104, New Bond street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 8d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade, forwarded on application post free.

MONEY, on Mortgage or Otherwise.—To

BUILDERS and OTHERS.—£2,000 to be advanced upon Mortgage or otherwise, upon approved securities.—Send in particulars, or call personally, between the hours of ELEVEN and THREE, at the Offices of Messrs. BANKER and MILSON, Architects, Surveyors, and Civil Engineers, 58, Lincoln's-inn-fields. No charge for the survey, unless the property is approved of, and the money advanced.

MONEY.—10,000l. held in trust are ready

to be invested in the purchase of Freehold or Leasehold Property, or Loans granted, either by the way of mortgage, or upon the deposit of deeds for a short period. Small personal security taken for moderate amounts, and advances made in anticipation of rents, where the advertiser might be appointed collector.—Apply, by letter, pre-paid, or personally, to Mr. THOMAS, 3, Whitehampton-street, New North-road, Hoxton.

SALES BY AUCTION.

...TONS OF IRON.

MESSRS. FULLER and HORSEY, in ... instructed by Messrs PULLEN and SON, ... in street, to SELL by AUCTION, on MONDAY, OCTOBER 27, at ELEVEN, at the Works, Bow, Bromley, and Bow-lane, by the Assignees of Mr. C. J. Mare, in lots, 800 TONS WROUGHT-IRON, including 200 tons ... Bowling, Lowmoor, and best scrap bars, plates, bolts, and angle iron, 200 tons scrap iron ... nails, tools, portable bars, stations, lead, pulleys, iron ... merchandise, and 100 tons scrap irons &c.—To be viewed on ... and parties proceed to the sale after catalogues may be had at the Works; of Chas. Lee, Esq. Official Assignee, Aldermanbury, of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Evans, and Newson, Solicitors, Wardrobe place, Doctors' Commons; of Messrs. Pullen and Son, 59, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE, BLACKWALL.—TO IRONMASTERS AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on the PREMISES, Blackwall, in lots, on MONDAY, NOVEMBER 3, at ELEVEN, the EXTRA POWERFUL GEARING, with the TOOLS and UTENSILS, the LOFTY ROLLING MILL and FORGES, including sixty pairs of rolls for plates, bars, bolts, angle, T, and beam iron, weighing 165 tons; twelve tons mill couplings, a new 20-inch tooth spur driving-wheel, 13 feet diameter, in segments; a ditto, 9 feet diameter; one ditto, 6 feet diameter, geared; five spare pinions, two new till hammers, 5 tons each; one new cam-head, six tons; four pair new joints, and bolts; one new 5-ton hammer, for Nasmyth's steam-hammer; fifty tons anvils, and hammers for ditto; fifty tons of tools for ditto; two tons cam arms, five tons tilt-hammer faces, twenty tons counter balance weights, twenty iron hand rollers, ten rail trollies, ten iron barrows, eleven wrought-iron coal-shoots, two double-rail lane cranes, two patent lever weigh-beams with scales, and weights, and other effects.—To be viewed on Friday, Saturday previous to the Sale, when catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Wardrobe place, Doctors' Commons; of Messrs. Pullen and Son, 59, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—TO IRONFOUNDERS, SMITHS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on the PREMISES Blackwall, in lots, on TUESDAY, NOVEMBER 4, and on following days, at ELEVEN each day, the TOOLS, UTENSILS, and STOCK of the IRONFOUNDRIES and SMITHS' SHOPS; 70 tons broken cast-iron, six tons Bluestone pigs, 10 tons flasks, core boxes, loam-rings and flutes, 70 tons cold-iron girders, intended for the new bridge at Westminster; five tons new patent furnace bars, six very superior wrought-iron crane ladels, from one to ten tons, with ladle-hooks, lifting-chains, slings, and bars, 6 tons chain slings, twenty tons flask weights, flask beams and hooks, screws, tackle and trucks, cast-iron horses, two hydraulic riveting machines, a large and valuable collection of wood patterns, pattern makers' benches and tools, seasoned boards, fifty wrought-iron anvils, from 3 to 5 cwt. on cast-iron stands; 100 cast-iron swages, nearly complete, tongs, four fans, bellows, 12 tons bottom swages, chisels and punches, bolt tools, hand and sledge hammers, sets, stocks, fans and die-steel tools, ten tons fuel in stockers, and numerous other effects.—To be viewed on Friday and Saturday previous to the sale, when catalogues may be had at the works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Wardrobe place, Doctors'-commons; of Messrs. Pullen and Son, 59, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—TO BOILER-MAKERS AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on the PREMISES, Blackwall, on FRIDAY, NOVEMBER 7, at ELEVEN, the Tools of the entire BOILER MAKING DEPARTMENT, and THREE SECOND-HAND MARINE BOILERS, in good condition, having been used but a very short time; 16 tons beautiful slabs and plates, twelve large metal punches, twenty thirty wrought-iron portable forges, troughs, ten tons boiler-makers' tools, bears, cramps, dollies, hammers, &c. ratchet braces, steel tools, stocks, taps, and dies, a powerful punching machine, twenty tons bolter rivets, cask cranes, bolts and rails, chain slings, proving-pump, weighing-machine, one pair of marine boilers collectively of 80 horses power, with 360 brass tubes in each; another 60-horse power marine boiler, adapted for a pair of 40-horse power engines—all of them in good condition, and have been used but for short period only; and numerous other effects.—To be viewed six days prior to the sale, when catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Pullen and Son, 59, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—TO LIGHTERMEN AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on the PREMISES, at Blackwall, in lots, on MONDAY, NOVEMBER 10, at ELEVEN, 16 OPEN RIVER BARGES, two new iron sloaker built coal lighters, two tank barges nearly new, one lug-boat, three skiffs, two iron barges, one iron decked punt fifty tons, two large open iron punts, two shiks' boats, and six flat boats; the barges are all in good condition, many of them having been built for the works at the New Bridge at Westminster; the tonnage varies from 40 to 70 tons each; the two new coal lighters were built for the present season by Messrs. Stapleton Company, and are each about fifty tons burden, 48 feet length overall 14 feet 6 inches beam, depth of hold 7 feet 4 inches, iron deck and combings to hatchways, rudders, and mast steps.—To be viewed six days prior to the sale, when catalogues may be had at the Works; of Chas. Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Pullen and Son, 59, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—STORES OF IRONMONGERY, STEEL, COPPER, AND BRASS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on MONDAY, NOVEMBER 17, and following days, at ELEVEN, at the Works, Bow, Bromley, and Bow-lane, in lots, the STORES of IRONMONGERY, STEEL, COPPER, and BRASS, including 700 dozen ... and Ibbotson's; fifty tons lofty and nails, assorted 4,000 feet copper and brass tube, thirty cwt. block tin, two tons brass work in hinges, cocks, unions, washers, and waste; valves, five tons old copper, ... tons fitting, and sheet copper, two tons second-hand brass work, ten cwt. brass wire, six 15-inch ship's bells, thirty 9-inch brass lift pumps, twelve 9-inch brass pumps, two 7-inch Bowman's pumps, 150 brass force pumps, 6, 5, and 4 inches, 150 brass lump buckets and boxes, 7 to 4 inches, 1,000 feet gas tube, 2 ... 100 feet 8-inch ... ten cwt. iron ... one ton ... 100 feet ... waste, five weighing machines, one ton oil files, ...

Catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Evans, and Newson, Solicitors, Wardrobe-place; ... of Messrs. Pullen and Son, 59, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

SALES BY AUCTION.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on TUESDAY, 11th NOVEMBER, 1856, and following days, at ELEVEN, the valuable STEAM ENGINE PREMISES, the Atlas Works, Union-street, Southwark, unless ... disposed of by private contract, of which due notice will be given, the MACHINERY and TOOLS of the ATLAS WORKS, including a large and powerful self-acting horizontal boring, drilling, and screwing machine, ten very powerful lathes, for engine turning, chasing, screw-cutting, &c. &c. and other machines; a large assortment of cast iron and wrought-iron work, consisting of engines, and boilers, shafting, and gearing, screw-propellers, and apparatus, a valuable collection of new patterns, in wood and metal, for marine engines, and numerous other effects. At the same time will be SOLD, the LEASE of the PREMISES, comprising a substantially-built factory, of two floors, 70 feet by 50 feet; with a fitting shop, turnery, engine house and smithy shop, a workmen's dining room, stable-yard, a convenient residence, and offices, held on lease for a term of twenty-six years, at a rent of 80*l.* per annum.—The Premises may be viewed till the day of Sale. The Machinery on Monday previous.—Particulars and catalogues may be had on the Premises, and of Messrs. Fuller and Horsey, 13, Billiter-street, City.

KIBBERDY WOOD and STOCKING GREEN, Radwinter near Saffron Walden, Essex.—TO BE SOLD by AUCTION, by

MESSRS. NOCKOLDS and KING, upon the PREMISES, at TEN o'clock, on FRIDAY, NOVEMBER 7, 1856, about 48 OAK TIMBER TREES and 5 Oak Saplings, growing in Kibberdy Wood and on Stocking Green, the property of Messrs. Lee and Son, of Hamlet Court, Radwinter, and Mr. Simpson, of Radwinter.—Mr. Nockolds will be on the ground from Tuesday, the 4th November, to Monday, the 10th, to meet purchasers, and will give credit upon approved security.—Mr. Nockolds's Offices, New House Farms, Radwinter; of whom catalogues may be had; also at the Office of the Auctioneers, Saffron Walden.

FREEHOLDS, TWICKENHAM.—Two Pairs of small Houses (Cro-by Villas), House and Shop, and Three Plots of Building Land, with a Pair of Carcases, TO BE SOLD (in Eight Lots, separately or otherwise) by AUCTION by

MR. ABRAHAMS, at KING'S HEAD INN, Twickenham, on THURSDAY, NOVEMBER 6th, at THREE o'clock precisely (unless sold previously by private contract), in the main road from Twickenham to Hampton, opposite Sir Wm. Clay's park, and within a convenient distance of Hampton Court, Bushey Park, and Richmond.—Half the purchase-money may remain on Mortgage, at 5 per cent.—Particulars, at the Auction-room; of Messrs. Johnson and Co. Clement's-lane, Lombard-street; and Mr. F. F. Toole, 3, Sutherland-street, Walworth-road.

COLNEY-HATCH, MIDDLESEX.—1,500, 60 Bricks, part to shoot.

MR. A. RICHARDS will SELL by AUCTION, on the PREMISES, Colney-hatch, Park, a short lease from the Great Northern Railway Company, on WEDNESDAY, OCTOBER 29, at TWELVE, 1,500 of STOCK and PICKED BRICKS, 10,000 MALM ditto, part stacked, in lots; also a large quantity of BATS.—May be viewed the day previous and morning of Sale; catalogues obtained of Messrs Chambers and Forbes, Surveyors, 7, Great Tower-street; also at the usual Inns; of Mr. Parsons, on the Estate; and of the Auctioneer, Tottenham.

KENTISH TOWN WHARF, CAMDEN TOWN.—about Lease of the extensive Wharf, Premises, &c.; Forty Cart, Van, and Nag Horses; Dung and Manure Carts; Water ditto; Seventy Ton Scale Beam; Barges; Barrows; Implements; Pheatons, Dog Carts, Vans, &c.

BAKER and SON will SELL by AUCTION, on TUESDAY, 4th NOVEMBER, at TWELVE, on the PREMISES, near Le Roi's Cap Inn, the New Cattle Market, and the North-Western Railway, the valuable LEASE (unless previously disposed of by private contract) of the extensive WHARF, STONE-YARD, TIMBER and DEAL YARDS, STABLING for eight horses, SHEDS, &c. &c. with the several important frontage to the Regent's Canal. Also, the excellent STOCK, consisting of fine timber, deals, battens, &c. including three valuable colts, fifteen dust and dung carts, eleven nearly new water or liquid manure carts, three strong timber carriages, one ditto, nearly new, with sliding seats, two chaise carts, two sliding carts seven ten waggon, harness, trucks, weighing machine, planks, skids, utensils, &c. &c.—May be viewed the day prior to the sale, and particulars had of Messrs. Lovell, 14, Gray's-inn; and of the Auctioneers, Kilburn.

PIMLICO.—Stock-in-Trade and Effects of a Stone-Merchant

MESSRS. EVERSFIELD and HORNE have received instructions to SELL by AUCTION, on the PREMISES, No. 4, Wilton-street, Grosvenor Bridge, on THURSDAY, OCTOBER 30, at ELEVEN for TWELVE, in consequence of the proprietor removing to Bridge-row Wharf, the whole of the excellent STOCK; comprising 5,000 feet of Portland York Paris Spruce, Peter Newton, and Gazeley stone, in block and scantling; 20,000 feet of tooled and self-faced York paving, landings, steps, cills, sinks, and other plain and ornamental work; also the carts, trucks, carts, and implements, two travelling cranes, and other effects.—May be viewed two days previous, and catalogues had on the Premises, and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

Valuable Water-side Premises on the Regent's Canal, Kingsland-road, with Cement Kilns, Steam Engines, &c. and an improved Rental of 150*l.* a year.

MESSRS. EVERSFIELD and HORNE are instructed by the Mortgagee to SELL by AUCTION, at the MART, on TUESDAY, NOVEMBER 25, in two lots, the Benefit LEASE of the extensive PREMISES, known as Tuscany Wharf, near the Canal Bridge, City Road, fitted up at a great expense with Steam and Crane power, and admirably adapted for the Cement trade, or equally applicable for many other purposes. Held for a long term, at a moderate rent; also an improved rent for a term, arising out of a plot of ground opposite Tuscany Wharf.—May be viewed by leave of the tenants, and particulars had of Edwards and Reynolds, Esqs. Solicitor, 12, New Broad-court; at the Mart; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

GRAYS-INN LANE.—Important Business Premises, suitable for Builder, Wheelwrights, Pianoforte makers, Cab Proprietors, or a Dairyman.

MESSRS. EVERSFIELD and HORNE have received instructions from the Executors of the late Mr. Thomas Needham to SELL by AUCTION, at the MART, on TUESDAY, NOVEMBER 25 (unless an acceptable offer by private contract be previously made), the Beneficial LEASE of the extensive BUILDER'S PREMISES in Portpool-lane, Grays-inn-lane, lately occupied by the late firm of Locke and Needham, and which consist of Dwelling-house, with counting-house and board-room, workshops, fitted up with tenoning and mortising machinery, worked by steam-power, large covered drying-sheds, smith's, painter's, and plasterer's shops, coach-house, saw-pit, timber-sheds, and other convenient buildings, inclosed by handsome gates and lighted with gas. Held on lease for a long term, at a low ground-rent of 60*l.* per annum.—May be viewed, and particulars had of Messrs. Kingdon, Solicitors, 4, Bedford-row; at the Mart; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

TO BRICK AND LIME MERCHANTS, CONTRACTORS, BUILDERS, AND OTHERS.

MESSRS. EVERSFIELD and HORNE ... SELL by AUCTION, ... of the river, and will be sold without reserve. The day of ... Coal Exchange.

SALES BY AUCTION.

THE next LIVERPOOL PERIODICAL AUCTION SALE of MAHOGANY and other FURNITURE WOODS, Baltic and American WHITEWOODS, &c. will take place on WEDNESDAY MORNING, the 5th NOVEMBER next, at ELEVEN o'clock precisely, in the WOOD SALES-SHEDS, Brunswick-quay, Near the Docks, Liverpool.—Carriage-free steaming full fortnight's credit; may be had on application to EDWARD CHALONER, Wood Broker and Measurer, 6, Esplanade, Queen's Dock, Liverpool.

LANCING-TERRACE, MORTLAKE, SURREY.—Freehold House and Building Land.

MR. ATKINS is instructed by the Proprietors (with the consent of the Mortgagee) TO SELL by AUCTION, at the MART, opposite the R.E., on THURSDAY, OCTOBER 30, 1856, at TWELVE PRECISELY, THREE PRETTY GOOD Substantial, newly-erected, DWELLING-HOUSES, of handsome elevation, with bow windows to the whole height of the front, and lofty rooms and gardens in the rear. The houses are fitted up with all the modern improvements, which render them suitable for domestic comfort and economy.

N.B. The Premises have water supply and unexceptionable drainage. Also, THIRTY-TWO PLOTS of valuable FREEHOLD BUILDING LAND adjoining, with the exception of one lot free of building.

The above property is situate in the parish of Mortlake, Surrey, on the Lower Richmond-road, and within three minutes' walk of the Mortlake Railway Station.—The property may be viewed seven days previous to the Sale, on application at the Entrance Piers, particulars, and conditions of sale, at the Auction Mart; and of Messrs. Johnson and Co. Bedford-row; and Messrs. Mardon, Son, and Gribble, Solicitors, No. 2, Bedford-row; and Messrs. Mardon and Son, Lancaster-terrace, Mortlake, the Auctioneers, Richmond; Mr. Sawyer, Mortlake; Mr. Bidder, St. John's-grove, Richmond, the Auctioneer, Mart-yard of the Auctioneer, Surveyor, and Estate Agent, Lewisham, Kent.

TO BUILDERS, DECORATORS, PERSONS RE-PAPERING THEIR HOUSES, AND OTHERS.

JONES and BONHAM will SELL by AUCTION, on TUESDAY next, 28th OCTOBER, at TWO o'clock in the afternoon precisely, a large assortment of capital PAPER HANGINGS, in every variety, suitable for the Trade and private persons, consisting of stone, plain, velvet, and marble papers, for drawing-rooms, halls, dados, parlour staircase, and landings, with borders to match; they will be sold in lots, at the order of the manufacturer.—On view Monday and morning of sale, and catalogues at the Rooms, Leicester-street and Princes-street, Leicester-square.

OAK TIMBER.—Black Park, and Burley Farm, Langley, and Fulmer Common, Bucks.

MESSRS. HERON and SON will SELL by AUCTION, at the CROOKED BILLET, Iver Heath, Bucks, on FRIDAY, OCTOBER 31st, 1856, at ONE o'clock, by order of R. Harvey, Esq. the Proprietor, in lots, sixty-eight OAK TIMBER TREES and fifty-one OAK SAPLINGS, in the lane near Fulmer-common, leading to Oxford and Denham; nine oak trees and four oak saplings, on Fulmer-common; forty oak trees and seventy oak saplings at Roades Farm; fifteen oak trees and ten oak saplings in the field opposite Rowley Farm; sixteen oak trees and seven oak saplings, in Black Parkwood. The above trees and saplings are all felled and have been drawn close to good hard roads, about three miles from the Grand Junction Canal at Uxbridge, and will be found well worth the attention of railway contractors, builders, wheelwrights, and others requiring good timber, some of the trees being very large.—May be viewed seven days prior to the sale, by applying to Mr. George Payne, Fulmer Heath, Bucks; and of Messrs. Heron and Son, Auctioneers and Valuers, Uxbridge, Middlesex.

SCOTCH AND LARCH FIR POLES.—Iver Heath, Bucks.

MESSRS. HERON and SON will SELL by AUCTION, at the CROOKED BILLET, Iver Heath, Bucks, on FRIDAY, OCTOBER 31st, 1856, at ONE o'clock precisely, by order of G. Hanson, Esq. in lots, about 7,500 LARCH FIR POLES, and 1,000 SCOTCH FIR POLES, well lopped and top-rowed from Lord Boston's Plantation, Iver Heath, Bucks. The above are sold in order that the land may be used for agricultural purposes, and an excellent opportunity will thus be afforded to Contractors, Builders, Carpenters, and others, of obtaining straight useful poles. An excellent plantation, which is also for sale, adjoins the first-named, and is about two miles from Uxbridge. May be viewed seven days prior to the sale, and catalogues may be had at the Crooked Billet, Iver Heath, Bucks; and of Messrs. Heron and Son, Auctioneers and Valuers, Uxbridge, Middlesex.

TO ENGINEERS, BOILER-MAKERS, and OTHERS.—TO BE DISPOSED OF, the STOCK and PLANT of an ENGINEER and IRON FOUNDER, situate in a large seaport town in the south of England. The premises are spacious and well arranged, with great facilities for land and water carriage. The plant has at work a number of employing upwards of fifty hands. As the tools are all in good order, and the business is well established, this is a favourable opportunity for an enterprising engineer with a moderate capital.—Letters to be addressed to B. Taylor, Esq. Hampton-park, Surrey.

TO PLUMBERS, PAINTERS, DECORATORS, and GAS-FITTERS. A genuine BUSINESS TO BE SOLD (a bargain).—For particulars apply to Mr. J. Trott, 3, Charlotte-place, Queen's-elm, Brompton.

TO PLUMBERS, PAINTERS, and GLAZIERS. TO BE DISPOSED OF, an old established BUSINESS at the West end of London, in the above line. This presents a very valuable opportunity to any one with desire of commencing business on his own account. Parties desirous of treating privately only, on applying on to Mr. W. ROBERTSON, 36, Pall-mall, Hay-hill, St. Blackfriars.

IRON FOUNDRY and STOVE GRATE MANUFACTORY PREMISES. TO BE DISPOSED OF, a small but lucrative BUSINESS, established more than 30 years. In full operation. In full operation. The original proprietor is retiring in favour of his son, who has recently died, and in consequence the business is for disposal. It presents a most eligible opportunity to any one man possessing a knowledge of the trade. Age, 40 will be required. The stock, tools, and patterns, 200*l.*—Apply to Messrs. FULLER and HORSEY, Billiter-street, London.

TO ARCHITECTS and ENGINEERS.—For SALE, upon moderate terms, to a professional man able to work it, the OUT-FOURTH of a newly-patented PATENT DRIVEN IRON SCREW PILE, with Removable Screw-blades, &c. Reference, &c.

TO UPHOLSTERERS and CABINET-MAKERS.—TO LET, with immediate possession, an old-established BUSINESS, in the above line, situate in one of the best thriving market towns in Berkshire, an extensive trade has been carried on for many years, and may still be increased. The premises are replete with every convenience. Satisfactory explanation given on application to Messrs. Wyatt and Son, 31, Bow-lane, Cheapside; or to John Sarle, High-street, Basingstoke, Hants.

London: Printed by Charles Wyman, of 13, Hunter-street, Brunswick-square, in the County of Middlesex, Printer, at his Printing Office, No. 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Paul, Covent Garden, and Published by him at the Office of the Builder, No. 2, York-street, Covent-garden, in the Parish of St. Paul, Covent Garden, and County of Middlesex.—Saturday, October 25, 1856.

The Builder.

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ARCHITECTURAL EXHIBITION, SUFFOLK-STREET GALLERIES, PALL-MALL EAST. All drawings to be sent in on the 1st and 2nd DECEMBER next. Department for Materials, Decorations, Manufactures, &c. connected with Building. The Committee have a little floor and counter space, and some wall-ditto, still unappropriated. Applications should be made at once, by letter (to Mr. JAMES EDMESTON, jun, Honorary Secretary),

JAS FERGUSSON, F.R.A.S
28, Ingelam-place, Regent-street,
JAS EDMESTON, jun } Hon. Secs.
5, Crown-court, Old Broad street,

NOTICE.—All Public Schools for the Instruction of the Poorer Classes, may obtain an allowance towards providing Examples, &c. for teaching Elementary and Mechanical Drawing, by application by letter to the Secretary (the Department of Science and Art, Cromwell road, Kensington, London, W.

NORMAN MACLEOD, Registrar.

THE CENTRAL SCHOOL of ART for TRAINING TEACHERS, and for the PUBLIC, will OPEN at the new Premises, at Cromwell-road, Kensington Gore South, on MONDAY, the 3rd of NOVEMBER.—Prospectus may be obtained on application personally, or by letter.

NORMAN MACLEOD, Registrar.

COMPETITIONS.

TO SURVEYORS and OTHERS.—PREMIUMS for PLANS.—The local authority of the borough of Linkfield, in the foreign of Reigate, Surrey, require PLANS for the LAYING of SEWERS, with levels, sections, &c. the whole to be clearly defined and laid down to a scale of one chain to the inch. The following premiums are offered for the plan adopted the best by the Committee, 20l.; for the second best, 10l. The plans to which the above premiums shall be awarded will be retained by, and be the property of the local authority. The Committee will meet on the first MONDAY in DECEMBER next to examine the plans, which are to be previously forwarded, enclosed and sealed, to their Office, Station-road, Redhill, where further particulars and a map of the borough may be seen.

FREDK. BONNY, Inspector.

CONTRACTS.

LONDON and NORTH-WESTERN RAILWAY.—CONTRACT for PERMANENT WAY MATERIALS.—The Directors of the London and North-Western Railway Company are prepared to receive TENDERS for the SUPPLY of the undermentioned MATERIALS :—

160,000 Sleepers.
8,000 Tons of Chairs.
350 Tons of Fish Plates.
305 Tons of Spikes.
100 Tons of Bolts and Nuts.

Specifications, with Iparticulars, may be obtained on application to the Permanent Way Office, Railway Station, Stafford. Tenders addressed to the Secretary, at this office, to be sent in on or before MONDAY, 10th NOVEMBER, 1856, by order,

CHAS. E. STEWART, Secretary.

Secretary's Office, Euston Station, October 27, 1856.

TO BUILDERS.—TENDERS WANTED for the ERECTION of a FEMALE TRAINING SCHOOL, in Gilesgate, Durham, with accommodation for thirty two pupils, masters and other information obtained, on application to Mr. JOHN HOWISON, County Courts, Durham. Sealed Tenders will be received by the Rev. J. G. CROMWELL, Training School, Durham, on or before MONDAY, the 10th NOVEMBER.—The Committee do not bind themselves to accept the lowest or any Tender.

JOHN G. CROMWELL, Secretary.

Durham, October 29, 1856.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the office of the Director-General of Contracts, Pall-mall, London, on or before SATURDAY, the 15th day of NOVEMBER, 1856, from persons desirous of CONTRACTING for WORKS to be EXECUTED in improving the Fortifications at Dover Castle. A specification of the works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and Specifications and forms of Tender obtained at the Royal Engineer Office, Dover, between the hours of TEN and FOUR o'clock, from SATURDAY, the 1st of NOVEMBER, to FRIDAY, the 14th of NOVEMBER, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 2,000l. for the due performance of the contract. Tenders for the above work to be addressed to the Director General of Contracts, Pall-mall, London, and endorsed "Tender for Works at Dover Castle."

N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Dover, October 24th, 1856.

CONTRACTS.—WAR DEPARTMENT.—To BUILDERS and CONTRACTORS. — The Commanding Royal Engineer at Aldershot hereby gives Notice, that sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, until TEN o'clock on FRIDAY, 7th NOVEMBER, 1856, from parties willing to CONTRACT for the CONSTRUCTION and ERECTION of a WOODEN BUILDING, for Quarters for the Assistant Adjutant-General and Assistant Quartermaster-General to the Forces Plans and specifications may be seen, and forms of Tender obtained, on applicat on at the Royal Engineer's Office, Aldershot. The War Department reserves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Aldershot, October 24, 1856.

WAR DEPARTMENT.—The Director-General of Contracts, Pall-mall, London, will receive TENDERS from such persons as may be willing to CONTRACT for the PURCHASE and REMOVAL of FOUR HOUSES belonging to the War Department, situated in Lancaster-street, Birmingham, and attached to the Small Arms Establishment. The purchase Tenders may be accepted will be required to pay into the hands of the Inspector of Small Arms the sum agreed upon previous to the delivery of the houses into his possession, and all the work under the contract for the removal of all the buildings within three weeks from the date of the surrender of the Sub-Sheds and vacant places of the contract may be ordered at this office any day Sunday excepted, between the hours of ELEVEN and THREE, before the 3rd NOVEMBER, 1856. The Tenders to be delivered in London on or before the 30th NOVEMBER, 1856, addressed to the Director-General of Contracts, War Department, Pall-mall.

Commanding Royal Engineer's Office, War Department, Birmingham, October 30th, 1856.

TO CONTRACTORS.—Notice is hereby given, that TENDERS will be received at the Office of the War Department, Pall-mall, London, on MONDAY, the 3rd day of NOVEMBER, for FORMING, Metalling, and Draining Roads to be made to connect the CONSTRUCTION TWO COFFER-DAMS, Royal Embankments, across Hilsea Creek, near Portsmouth, in the county of Hants. The plans, specifications, and conditions of contract may be seen, and every information obtained, on application at this Office, on and after the 25th OCTOBER, 1856, between the hour of TEN and FOUR o'clock, Sundays excepted. Tenders to be endorsed, "Tender for the Construction of Two Coffer-dams, &c. across Hilsea Creek, near Portsmouth, in the county of Hants."

Royal Engineer Office, Portsmouth, October 23, 1856.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives Notice, that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall-mall, on or before the 3rd NOVEMBER next, for ERECTING the BARRACKS at the Forncett-road Arms ground. Plans may be seen, and printed schedules and forms may be obtained, at the Royal Engineer Office, 11, James-street, Pimlico, between the hours of ELEVEN and THREE o'clock, from the 20th to the 28th NOVEMBER next, inclusive. The War Department reserve to itself the right of rejecting the whole or any of the Tenders.

11, James street, Pimlico, October 20th, 1856.

TO CONTRACTORS, BUILDERS, IRONFOUNDERS, POTTERS, and OTHERS. — The Board of Works for the Wandsworth District, are desirous of receiving TENDERS separately for the following CONSTRUCTION of the undermentioned SEWERS, and other Works in connection therewith, viz :—

	Yards lineal
In the parish of Putney ..	925 of 3 feet 9 inches by 2 feet 6 inches.
Do. do. ..	825 of 3 feet 3 inches by 2 feet.
Do. do ..	814 of 12-inch pipe.
Do. Streatham ..	1 culvert barrel
Do. Tooting ..	1,012 feet 6 inches by 2 feet 6 inches.

And also (in separate Tenders for each of the parishes of Battersea, Clapham, Putney, Streatham, To ting and Wandsworth, for the various JOBBING WORKS in repairing and making good to sewers and gullies, for the term of one, two, or three years at the option of the Board. And also, in one Tender for the whole district) for the SUPPLY of STONEWARE PIPES and IRON WORKS, for the term of one, two, or three years, at the option of the Board. Plans, specifications, and conditions may be seen at the Office of the surveyor to the Board, Mr. D. W. YOUNG, District Surveyor, Wandsworth common, where also forms of Tender may be had on application. No other form of Tender will be accepted. Two sureties will be required for the due performance of each contract. Tenders are to be delivered under seal at the Offices of the Board, on or before TUESDAY, the 11th day of NOVEMBER next. The Board do not pledge themselves to accept any Tender.—By order of the Board of Works for the Wandsworth District.

ARTHUR ALEX. CORSELLIS, Clerk to the Board.

Balmebrke-grove, Wandsworth-common, Oct. 30, 1856.

CONTRACTS.

GRANITE and IRON LAMP-POSTS.—The Vestry of the Parish of Bethnal-green, will meet at the Town-hall, Church-row, Bethnal-green-road, on THURSDAY, the 6th NOVEMBER next, at ELEVEN o'clock in the forenoon precisely, to receive TENDERS, and open the CONTRACT for 150 tons of GRANITE, and fifty IRON POSTS, pursuant to the several specifications, which may be seen at the Office of the Surveyor, Town-hall aforesaid, from whom any further information may be obtained on the day above mentioned. Separate accurately Tenders addressed to the Clerks of the Vestry, must be delivered at their Town-hall Office, on or before WEDNESDAY, the 5th NOVEMBER. The Board do not bind themselves to accept the lowest or any Tender.—By order,

BRUTTON and VOSS, Vestry Clerks.

Town-hall, Bethnal-green, October, 1856.

TO SCAVENGERS and DUSTMEN.—The Vestry of the Parish of Bethnal-green will meet in the Town-hall, Church-row, Bethnal-green-road, on THURSDAY, the 6th of NOVEMBER next, at ELEVEN o'clock in the forenoon precisely, to receive TENDERS and enter into contract for collecting and removing ASHES, DUST, &c., likewise for carting away the Dust and Soil from and out of the various streets and places within the parish for one year, pursuant to certain specifications, which lie for inspection at the Office of the Surveyor, Town-hall aforesaid, from whom any further information may be obtained accordingly. Tenders sealed (with a £10-pound note enclosed) and addressed to the Clerks of the Vestry, must be delivered at their Town-hall Office, on or before WEDNESDAY, the 5th of NOVEMBER. The Board reserve to themselves the right of accepting any or no Tender.—By order,

BRUTTON and VOSS, Vestry Clerks.

Town-hall, Bethnal-green, October, 1856.

ST. SAVIOUR'S DISTRICT. — To CONTRACTORS, BUILDERS, and OTHERS.—The Board of Works for St. Saviour's District are desirous of receiving TENDERS for the PERFORMANCE of the WORKS in making the requisite entrances in, houses and buildings on the main and other sewers in the District connected with drainage and sewerage, within the district, for the term of one, two, or three years. The Tenders to be made on the schedule of prices printed for the purpose of the Board, a copy of which can be had on application at the Board room, on payment of a sum not exceeding One Shilling per set; or, schedule returned. The contractor will have to enter into a contract, according to the printed form attached to such schedule, and he and his sureties to execute a joint and several bond, in such conditional for the due performance thereof. All the Tenders must be sent in the printed form of Tender, with names of sureties named to schedule, and must be sent in the Tenders to the Board at the Board room, Union-road, Lambeth, on or before HALF-PAST FOUR o'clock, in the afternoon of WEDNESDAY, the 5th day of NOVEMBER next. The Board will pay the contractor the amount of his contract, but must be bound by the contract and bond in the schedule to be entered into by him or any Tender. By order of the Board,

HERBERT STURMY, Clerk.

Board-room, Emerson-street, Bankside, October 22, 1856.

BURNHAM SEWERAGE WORKS.—Persons desirous of CONTRACTING with the Local Board of Health for the district of Burnham for the construction of certain PUBLIC SEWERS, and all Works connected therewith, and to complete the same, are invited to inspect the Plans, Sections, Drawings, Specifications, and Conditions of Contract with such Tender as may be approved of by the Local Board, at the Office of the Local Surveyor, Mr. EDWARD DYMOND and SONS, 31, Bedford-row, Holborn, London, where information of the Terms of Payment may be obtained. Tenders to be delivered to the Board's Surveyor, on or before the 10th day of NOVEMBER next. The Local Board do not pledge themselves to accept the lowest Tender, nor to consider any not made in the prescribed form.

ROBERT SALISBURY, Clerk to the Local Board.

Dated Burnham, Somerset, 29th October, 1856.

CONTRACT for a ROAD and FOOTPATHS. The Seaton Improvement Commissioners require TENDERS for the FORMATION of from 1,100 to 1,200 yards of ROAD and FOOTPATHS, in Harbour-road, Seaton, Devon. A Specification and several particulars of the required works may be seen at their office, Seaton, between FIVE and SEVEN o'clock; or at my Office, 37, Leadenhall-street, London. Tenders to be sent in before MONDAY, the 10th NOVEMBER next, at ELEVEN o'clock.

JAMES BELL, Clerk to the Commissioners.

Dated this 29th day of October, 1856.

CONTRACT for a ROAD and FOOTPATHS. The Seaton Improvement Commissioners require TENDERS for the FORMATION of from 1,100 to 1,200 yards of ROAD and FOOTPATHS, in MAPLEBROAD, SEATON. A specification and general particulars of the required works may be seen at the office of Mr. Leigh, Seaton, between FIVE and SEVEN o'clock; or at my Office, 37, Leadenhall-street, London. Tenders to be sent in before MONDAY, the 10th NOVEMBER next, at ELEVEN o'clock.—Dated this 29th day of October, 1856.

JAMES BELL, Clerk to the Commissioners.

TO OVEN BUILDERS.—The Guardians of the Poor of the Holborn Union are ready to receive TENDERS for the ERECTION of TWO OVENS, with the requisite flues, &c. on the premises of the Union Workhouse, Gray's Inn-lane. The specification, plans, and form of contract may be seen at the Board-room, between TEN and FIVE o'clock, any day Sundays excepted, and the work and premises can be viewed on application to the Master, at the Workhouse. Tenders, in sealed envelopes, addressed to the Board, must be delivered at No. 6, Ely-place, on or before MONDAY, the 3rd of NOVEMBER next; and parties or their agents must attend at the Workhouse on WEDNESDAY, the 5th of NOVEMBER next, at SEVEN p.m. when the Tenders will be taken into consideration by the Guardians.—Dated this 31st day of October, 1856.

EDWARD WALLWYN JAMES, Clerk.

[For remainder of Contracts see next page.

CONTRACTS.

SUSSEX COUNTY LUNATIC ASYLUM.

To BUILDERS.—Notice is hereby given, that the TIME for RECEIVING TENDERS for sundry works proposed to be done in erecting a Pauper Lunatic Asylum for the County of Sussex, has been EXTENDED to MONDAY, the 1st day of DECEMBER next, on or before which day, therefore, Tenders may be sent in, but after that time no Tender will be received. By order of the Committee of Visitors.

Lewes, 8th October, 1856. WM. POLHILL KELL, Clerk.

TO ROAD CONTRACTORS and OTHERS.

In the open fields of the Parish of Long Melford, certain ROADS are about to be FORMED, plans and sections of which, and the specifications of works, may be seen at the Offices of Mr OAKLEY, 49, Bouchier-street, Islington, or Mr TILLEY to PARK, by persons desirous of Tendering for the work. All Tenders to be delivered at the Doughty-street Office previous to the 11th November instant.

N.B. The lowest Tender may be refused.

TO GAS-FITTERS, LANTERN-MAKERS, &c — PARISH of ST. PANCRAS, in the County of Middlesex DEPARTMENT of WORKS.—The Right Worshipful the Vestry of the Parish of St Pancras will meet at the Office of the Department of Works, 10, Pleasant-cott, Hampstead-road, on MONDAY, the 10th day of NOVEMBER next, at FOUR o'clock in the afternoon to open and consider Tenders from persons willing to SUPPLY 300 CAST-IRON STREET LAMP POSTS, agreeably to the terms of Contract, to be sent on and after TUESDAY, the 4th day of NOVEMBER, at this Office, where also a PATTERN POST may be seen. Security will be required for the due performance of the contract. The Vestry do not bind themselves to accept the lowest or any Tender. Further particulars may be obtained on application to Mr WILLIAM BOOTH SCOTT, Chief Surveyor to the Vestry, at his Office, as under. Tenders to be delivered at this Office by or before TWELVE o'clock at noon, on the said MONDAY, 10th day of NOVEMBER proximo. By order,

G. W. F. COOK, Vestry Clerk.

Department of Works, 10, Pleasant-street, Hampstead-road, 29th October, 1856.

TO GAS-FITTERS, LANTERN-MAKERS, &c.—PARISH of ST. PANCRAS, in the COUNTY of MIDDLESEX.—DEPARTMENT of WORKS.—The Right Worshipful the Vestry of the Parish of St Pancras will meet at the Office of the Department of Works, 10, Pleasant-cott, Hampstead-road, on MONDAY, the 10th day of NOVEMBER next, at FOUR o'clock in the afternoon to open and consider Tenders from persons willing to SUPPLY 300 CAST-IRON STREET LAMP POSTS, agreeably to the terms of Contract, to be sent on and after TUESDAY, the 4th day of NOVEMBER, at this Office, where also a PATTERN POST may be seen. Security will be required for the due performance of the contract. The Vestry do not bind themselves to accept the lowest or any Tender. Further particulars may be obtained on application to Mr WILLIAM BOOTH SCOTT, Chief Surveyor to the Vestry, at his Office, as under. Tenders to be delivered at this Office by or before TWELVE o'clock at NOON, on the said MONDAY, 10th day of NOVEMBER proximo. By order,

G. W. F. COOK, Vestry Clerk.

Department of Works, 10, Edward-street, Hampstead-road, 29th October, 1856.

TO IRONFOUNDERS, &c.—PARISH of ST. PANCRAS, in the COUNTY of MIDDLESEX.—DEPARTMENT of WORKS.—The Right Worshipful the Vestry of the Parish of St Pancras will meet at the Office of the Department of Works, 10, Pleasant-cott, Hampstead-road, on MONDAY, the 10th day of NOVEMBER next, at FOUR o'clock in the afternoon to open and consider Tenders from persons willing to SUPPLY 300 CAST-IRON STREET LAMP POSTS, agreeably to the terms of Contract, to be sent on and after TUESDAY, the 4th day of NOVEMBER, at this Office, where also a PATTERN POST may be seen. Security will be required for the due performance of the contract. The Vestry do not bind themselves to accept the lowest or any Tender. Further particulars may be obtained on application to Mr WILLIAM BOOTH SCOTT, Chief Surveyor to the Vestry, at his Office, as under. Tenders to be delivered at this Office by or before TWELVE o'clock at NOON, on the said MONDAY, 10th day of NOVEMBER proximo. By order,

G. W. F. COOK, Vestry Clerk.

Department of Works, 10, Edward-street, Hampstead-road, 29th October, 1856.

NOTICE of PURCHASE. — ROBERT SLADE begs to inform the public and customers of EDWARD SIMMS late of Wilton-road, Pimlico, that he has purchased the Goodwill, Trade, Utensils, and Stock-in-Trade of the said EDWARD SIMMS situated at Wilton-road, Pimlico, where a choice assortment of FLOORING BOARDS are always kept on hand. Also for descriptions of timber at the lowest possible price. The system of keeping prepared flooring boards was first introduced in London at this yard.

NOTICE of REMOVAL. — EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton-road, Pimlico, to the KING'S-ROAD, CHELSEA, where the same orders can be promptly executed as heretofore. Please address, E. SIMMS, King's-road Saw-mills, Chelsea, opposite Manor-street.

TREES for Cemeteries, Public Parks, &c.—A very extensive and choice STOCK of WEEPERS, ORNAMENTAL TREES, SHRUBS, EVERGREENS, &c. may be had of WILLIAM BARRATT, Landscape Gardener and St. John's Nurseries, Wakefield

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected STOCK of DEALS, and the reduced Prices of prepared Flooring, &c.

Inch Yell. or Flooring	18s. per square.
4-inch ditto	15s. "
Pine Plank, 12 3 by 11, from	£21 per 120
Yellow Deals, from	20 "
Spruce Deals, from	18 "
Yellow Battens, from	18 "

A List of Prices forwarded on receipt of a postage-stamp.

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MAHOGANY and WAINSCOT seasoned by Stanyon's New Patent Process. JOHN STANYON submits an inspection of his stock. The above process gives time to season his wood in the most perfect manner, and is the only reliable process generally adopted. Address, Willow Patent WOOD SEASONING WORKS, Lady Lake Grove, Mile-end-road.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of its kind ever established, a large assortment of PREPARED FLOORING and MATCHED BOARDING, seasoned and ready for use, from ½-inch to 1½-inch thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses. Sawing Battens, Planks, Scantling, Quartering, Boarding, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of FLOORING and MATCHED BOARDING, from ½ inch to 1½ inches thick, seasoned, and ready for use; also, Mahogany, Mouldings, Window Linings, and all kinds of timber required for Building purposes.—Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Spruce, 2s.; Pine Plank, 3s. 6d. Mahogany, 6d.; 2½ Yellow Battens, from 11½. 10s. Carriage free to any part of town.—T. FORMAN, 1, Walnut tree walk, Lambeth-walk.

MOULDINGS BY MACHINERY. Capping, Sash bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to

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SAWING, PLANING, AND MOULDING MILLS,
KING'S-ROAD, CHELSEA.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark Bridge Wharf, Southside

ROBINSON and BARTRAM, SAWING and PLANING MILLS, BELVIDERE-ROAD, LAMBETH, and SAW-STREET, BERMONDSEY, having completed powerful MACHINERY for SAWING TIMBER, for building purposes, will be glad to receive ORDERS in this Department, and beg to assure their friends that all favours shall be executed in the best manner, and with the utmost punctuality and despatch.

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ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NORES, and Contractor, Corporation of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:

4-inch white, 13s. 6d. per square; 4-inch yellow, 15s. per square;	
5-inch white, 18s. per square; 5-inch yellow, 15s. per square;	
6-inch yellow, 16s. 6d.; 7-inch yellow, 20s.	

Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of design forwarded on application.

GRAINING by MACHINERY.—The present system of graining is far surpassed by the use of BELLAMY'S PATENT GRAINING MACHINES, by which an ordinary workman can produce first-class work, and at an immense saving of time. The designs are perfect imitations of the choicest specimens of fancy woods and patterns of the first artists. The Patent Graining Company are now prepared with a large and well-assorted stock of instruments, which they offer to grainers, painters, builders, and others without royalty.

Grained paper in imitation of all kinds of fancy woods of the choicest descriptions, in the piece, or in sets for panels, &c. wholesale and for exportation. Pattern boards and cards for the trade in great variety

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STAINING DEAL TO IMITATE ALL KINDS of WOODS It requires NO SIZING, and will stand the exposure to the weather. Price 6s. per gallon. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 44, James-street, Oxford-street; also Manufacturer of Improved Knotting and Decorative Varnishes.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c. — A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, spirit lackers, and dutching spirit. The present price is 6s. 6d. to 7s. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 97, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
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LOCKS, HINGES, HANDLES, BOLTS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham.
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SAWING and PLANING MACHINES, with all the latest improvements, made by THOMAS ROBINSON and SON, may be seen working at their Premises, the Railway Saw Mills, Redhill. Also patent Launch Saw Cutting, cut all Planing circles. Prices sent by post on application.

TO BE SOLD, and must be removed in a few days, a 10-TON TRAVELLING CRANE, tramway, on stage 40 feet open pile, with 2 cranes and 2 winches. Apply to 3, Wharf Horse-road, Paddington. Particulars, apply to Messrs RAYE and SONS, Solicitors, Symond's-inn, Chancery-lane

TO ARCHITECTS and BUILDERS.—HAWKINS'S REGISTERED COPPER and TINNED-IRON SASH-HANGS, greatly approved for its strength, durability, and ease in working over pulleys, and will be found at its warrant load will be found one of the most useful and efficient inventions for hanging window sashes of any weight up to 4 cwt. May be obtained of every respectable ironmonger in the kingdom. Manufactory, No. 37, Dale-end, Birmingham.

TO BUILDERS, CONTRACTORS, and OTHERS.—FOR SALE, the undernoted CAST-IRON GIRDERS, which, not having been properly, but are now not required, on account of the works being stopped:—

3 Girders, 26 ft. 6 in. long, by 11 in. deep at centre, and 8 in. at ends, weigh about 2½ cwt. each
12 Girders, 21 ft. 9 in. long, by 12 in. deep at centre, and 8 in. at ends, weigh about 19½ cwt. each
28 Girders, 19 ft. 6 in. long, and 11 in. deep at centre, and 8 in. at ends, weigh about 15 cwt. each
4 Girders, 16 feet long, by 10 in. deep at centre, and 7 in. at ends, weigh about 6½ cwt. each.
14 Girders, 14 ft. long, by 9 in. deep at centre, and 6½ in. at ends, weigh about 6½ cwt. each.
4 Girders, 13 feet 6 in. long, by 10 in. deep at centre, and 7 in. at ends, weigh about 6½ cwt. each
2 Girders, 13 feet long, by 10 in. deep at centre, uniform section, weigh about 18½ cwt. each.
18 Girders, 9 ft. 6 in. long, by 8 in. deep at centre, uniform section, weigh about 3½ cwt. each.

The above may be seen at Dunfermline Foundry; or any further information obtained, from JOHN WHITELAW, Dunfermline, N.B. who will receive offers for the whole, or any portion. The girders can be tested to the usual extent, according to the size, and certificate of proof furnished.

Dunfermline, October 28, 1856.

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THE LARGEST STOCK AT
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IRON BUILDING AND ROOFING WORKS,
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SKAIFE and POLLOCK,
Manufacturers of
PATENT GALVANIZED IRON.
Sheets, corrugated and plain; Fencing and Telegraph Wire, Bars, Rods, Hooks, Nails, Screws, and manufactured Articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.
IRONWORK GALVANIZED.
Roofing orders promptly and carefully attended to.
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PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.				
13	"	"	20	"
13	"	"	24	"
14	"	"	36	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON.
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A. MOREWOOD and CO.
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Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Piles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
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WORKS GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
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NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and
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"GENTLEMEN,—We have been using almost exclusively for the last three years, your Packing to our stuffing boxes and steam and water joints, previous to which time we used all the sorts which came under notice, but yours we consider decidedly the best and most economical.—We are, yours respectfully,
"JOSHUA SCHOFIELD and SONS."

"King and Queen Iron Works, Rotherhithe.
"London, Nov. 11, 1854.
"GENTLEMEN,—We have tried your Patent Packing for some time in our steam-engines, and also in steam-pipe joints, and find it effectual and economical, and to be much superior to the ordinary hemp packing. It is especially serviceable in the slide valve.—Yours truly, "HOWARD RAVENHILL and CO."
"Works, Deptford, Jan. 29, 1856.
"I have pleasure in stating that the Packing of Messrs. S. W Silver and Co. has been in use in the various parts of the engines on board the steam ships of the company, and it gives very satisfaction. "J. BRADBRIDGE, Engineer,
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AUSTIN'S IMPERIAL
PATENT SASH and BLIND LINE
can be obtained of all
ROPEMAKERS, IRONMONGERS, MERCHANTS, FACTORS, and WHOLESALE HOUSES, in TOWN or COUNTRY.
Established 1774.

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AT THE FOLLOWING REDUCED PRICES:—

IRON REVOLVING SHUTTERS, double riveted, with machine-cut Worm-gear, complete, at 4s. 6d. per foot.

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BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,

REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.

STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond-stones, and the Stone Ashlar never injuriously weighted by the settlement of the Mortar joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences. It can be had ready for fixing from the quarries at a small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

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HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 185 was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

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Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

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WHOLESALE ESTABLISHMENT for the supply of CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality;

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CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 49 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non conductor

INODOROUS FELT, for damp walls and for damp floors, under carpets and floor cloths. Price ONE PENNY per Square Foot.

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Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

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NAILS and IRONMONGERY From BIRMINGHAM direct.

Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the

LOWEST BIRMINGHAM PRICES,

A complete LIST of which will be forwarded upon application to BLYTH and BIANCHI,

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TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most effectual yet invented, is made by T. SMITH, of 14, Queen-street, Oxford-street, near Argyll-street, where a working model can be seen, or a sketch will be sent on application.

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NEW GLASS GAS STOVE.—NEALL'S PATENT; Unique, Elegant, Efficient, and Inexpensive; price only 30s.—This valuable invention combines the important advantages of light and heat, with perfect freedom from smoke or smell, forms an ornament to a drawing-room or gentleman's hall, and is equally available for public or private offices.—DEANE, DRAY, and CO Gas Engineers, London-bridge, S.E. London Agents. The trade supplied.

RADIATING and REFLECTING STOVE. WILLIAM S. BURTON'S NEW REGISTER STOVE combines completely the well-known principles of both Stephen's and Sylvester's celebrated patent stoves, while it has others equally valuable, which are peculiarly its own, and for which a patent has been granted. Its reflecting and radiating powers are perfect. It is very simple, and cannot be put out of order, consumes but little fuel, is most cleanly and cheerful in use, while its general appearance, no fender being needed, is most imposing. Prices, complete, black or bronzed, from 2l. 10s.; bright, 14l. 8s. and upwards. One may be seen in action in his Show-rooms, which contain such an assortment of fenders, stoves, ranges, fire-irons, and general ironmongery, as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with bronzed ornaments, and two sets of bars, 4l. 14s. to 13l. 13s.; ditto, with ormolu ornaments and two sets of bars, 8l. 8s. to 22l. Bronzed fenders, with standards, 7s. to 4l. 12s.; steel fenders, 2l. 15s. to 11l.; ditto, with rich ormolu ornaments, 3l. 15s. to 18l. Fire-irons, from 1s. 9d. the set to 4l. 4s.

The late additions to these extensive premises already by far the largest in Europe, are of such a character that the entire of EIGHT HOUSES is devoted to the display of the most magnificent stock of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel Silver, Plated Goods, Baths, Brushes, Turnery, Lamps, Gasoliers, Iron and Brass Bedsteads, Bedding and Bed Hangings), so arranged in Sixteen Large Show-rooms as to afford to parties furnishing, facilities in the selection of goods that cannot be hoped for elsewhere. Illustrated catalogues sent per post free.—39, Oxford-street; 1, 1a, 2, and 3, Newman-street; and 4, 5, and 6, Perry's-place.

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Superior Rolled Brass for Engravers, Castings in Pine and Common Brass, Gun Metal, &c. at

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CIRCULAR-SAW.—TO BE SOLD, a Saw-table, saws, and Iron-wheel 5 feet diameter, for hand power. Second-hand, well made, and in excellent working order.—Apply to J. BARNETT, 13, Wells-street, Oxford-street.

COMPLETE IMMUNITY from FIRE, THIEVES, and GUNPOWDER. EDWIN COTTERILL, Inventor, Patentee, and Sole Manufacturer of the Royal Climax Detector Locks. The only locks which have not been picked, and cannot be blown up with gunpowder. Descriptive drawings, with testimonials, and full report of the unsuccessful attempt of Mr. Hobbs to pick the Climax Detector Lock (an ordinary commercial one), at Manchester, forwarded free.—Manufacturer of Fire-proof Safes and Chests. Patent Double and Single-Action Door-Springs, &c. &c.—4, Victoria-street, corner of Regent-place, Birmingham.

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CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 38s.; 4ths, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½d. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3½d. per foot. Crown and Sheet British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 26, Soho-square.

By Royal Letters Patent.

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COCKCROWN, 18 Tables, per crate, 30s.; H 16 oz. SHEET, 2d per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 3d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 5d. and 6d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3½d. ENAMELLED, 6d. per foot. Tiles and slates from 6d. each. Sashes primed and glazed, 3d. per oct. HELY'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

Catalogues and Prospectuses free.

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TO BUILDERS, CONTRACTORS, &c.

THORNTON and CRANE, FOREIGN WINDOW GLASS IMPORTERS and GLAZIERS' PATENT DIAMOND MANUFACTURERS, having now entered into contracts with some of the largest houses on the continent for the supply of Glass manufactured expressly for the British market, can supply the same at the following low cash prices:—[illegible] sheet, 2½d. per foot; 16 oz. 2½d.; 21 oz. 2¾d.; 26 oz. 3d.; 32 oz. 3½d.; 42 oz. 4d.; 45 oz. 4½d. forwarded on application, post free, to THORNTON and CRANE, 8, Blucher-road, Camberwell, London.

CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s.; 4ths, 30s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 22 by 14, 2d.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

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"	II.	" Egypt	8 "
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"	V.	" Pompeii	4 "
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"	VIII.	" the Arabs	3 "
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" 1830	1,000	867 0 0	1,867 0 0
" 1835	1,000	582 0 0	1,582 0 0
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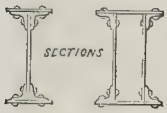

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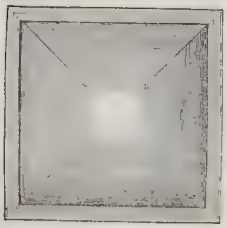

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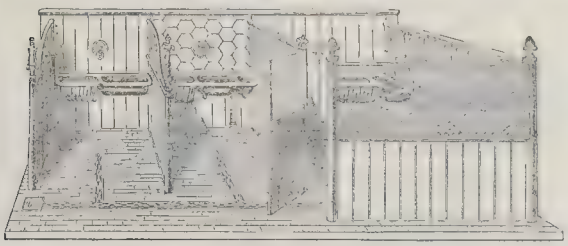

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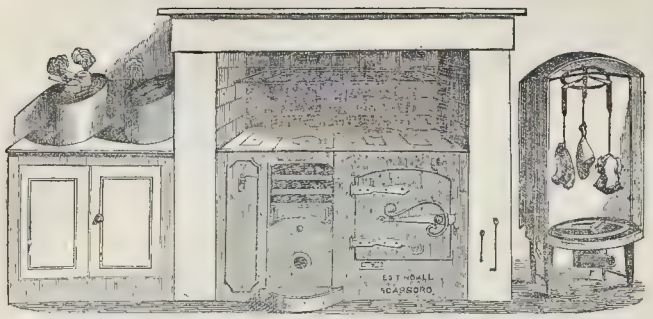

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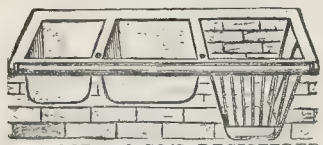

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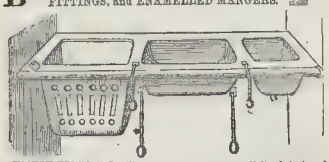

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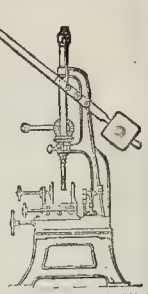

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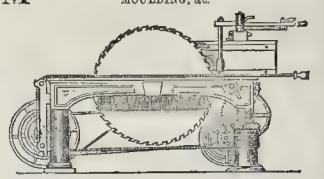

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The Builder.

VOL. XIV.—No. 717.

SELDOM has such an opportunity been afforded to architects to distinguish themselves as is offered by the invitation for designs for the concentration of public offices, and the erection of buildings for the Government between Whitehall and Westminster Abbey: never was so much anxiety manifested by those in power to commence a series of improvements which should tend to make London one of the most beautiful cities in the world. And it must not be imagined because we differ in some particulars, that we are not grateful to Sir Benjamin Hall for the prospect which is opening. It is because we would have it a success, redounding alike to his credit and the glory of the country, that we broach our objections. Mr. Hunt, too, has spared no pains, and is entitled to our warm acknowledgments for an anxious desire to secure a good result. Nevertheless, we must continue to object to the determination as to the site and arrangement of two of the principal buildings, before obtaining designs for the general scheme. One effect of the Government "instructions" beyond those already urged, arising from the demarcation of the ground, and the attempt at precision as to two of the offices, is to shut out entirely suggestions for combining the offices into one general building, or combination of attached buildings. We do not give very great importance to the point that there would be saving of expense by the erection of one building, nor to that of a possible saving in messengers' departments and other minor divisions or adjuncts to the chief offices; because, in a great structure, there is no escape from the *multiplication* of conveniences; and all that is really gained appertains rather to the advantage of communication under cover, than to saving of time. The principal offices, even now, if ill lodged, are, except the War Office, pretty close to one another: and what seems mainly wanted is more room for each, and accommodation for other departments, such as the several commissions. We, however, repeat, that it was worth while to leave the competitors unfettered, to apply their skill to the working out the problem in the best way that might present itself to them,—though affording them better means of studying the general principles of the distribution of Government offices than they have at present.

The mode in which the barracks' competition was taken up by the competitors in that case would have served to show what it was the Government interest to get made the direction of efforts in the present instance. In every group of apartments, or group of buildings, the first step in *ichnographic* distribution is to fix on the centres of the system, and to place the other parts of the scheme in due relative position, and all parts of subdivisions in similar relation to their centres. Thus, as we pointed out at the time of the competition referred to, whilst some of the competitors then made the parade-ground the *focus* or key-note of their system, others had chosen the commanding officer's quarters, others a covered drill-court, and so on. Each of these proposals was not equally desirable; but they generally afford us the allusion required to explain what is the proper and logical way of going to work on the plan of any building which is to answer its intended purpose. Now, by restricting their view of required accommodation to two of the intended offices, and as to these offices, by directing floors, dimensions, and positions, where they should rather have supplied information as to the working of official business, the Government seem to us to have shut themselves out from receiving plans of the very character which they most require. Having regard to any public object, it has been far too much the custom to treat architects as mere mechanical aids, not gifted with the faculty of discerning the requirements in special classes of buildings,—and in this architects have too much acquiesced. But in truth, there is really nothing that requires so much of special study, and so clear a knowledge of things apparently non-architectural, as the matter of plan: each class of building, and in trades each separate calling, requires its specially designed structure,—and so much so, that architects might with advantage devote themselves, more than they do, to such special classes of building. Now the Government require to draw the special study of architects to their mode of conducting official business—assuming this to be good: and then the next step to be made to and not by the Government should follow in the submitting of the proposals for practically working the business out, so far as it is dependent upon *structural* arrangement. We can make no attempt now to decide what should be centres of radiation in the plan of offices, whether they are under one roof or several roofs: but we do observe in glancing through the particulars of accommodation required in each of the two offices for which complete sets of drawings are wanted, that there are general reception-rooms, libraries, messengers' rooms, telegraph offices, printers' rooms, office-keepers' and house-keepers' rooms, repeated in different buildings, and in different parts of the same building, and which are distributed, up and down stairs, on no system of labour-saving that we have as yet fathomed. The arrangement, as defined, may be good; but it would have been better to leave both these details and the general plan to be suggested, rather than, by imposing restrictions, prevent the furnishing of something better.

With reference to the general plan, even after the above expressions of opinion, some observations of a different character may here be offered. The plan supplied, "No. 2, showing the river Thames, with the leading thoroughfares," &c. is to, perhaps, an unnecessarily large scale; but it does not take in the area of London which the competitors will have to consider. No scheme for the distribution of the offices will be complete without it is accompanied by the most careful consideration of the means of communication across the river, and these must be viewed with reference to the direction of the Westminster-bridge-road at its further end, the convergence of *routes* at the Obelisk, and even the proposed street from the London-bridge station. We do hope, however, this will result in the completion of Westminster-bridge in its present site. Again, the *level* of the Thames embankment, a matter by no means easy to decide, it will be desirable to pay some regard to. Thus, to treat the case as it deserves, the remodelling of the plan of *London*, rather than of the small area of "Plan No. 2," will have to be considered.

Our attention has been called to an apparent incorrectness in the plan No. 2, in the neighbourhood of Westminster Hall. One correspondent says:—

"Why are not the Law Courts on the west side of Westminster Hall shown on the said plan as now existing? Though no architect will wish to interfere with Sir Charles Barry's building, the Law Courts will probably be considered by some competitors for design No. 1, and as such, especially for foreign architects, should be accurately delineated on that plan. In the number of the *Builder*, September 3rd, 1853, St. Stephen's porch, south of Westminster Hall, is drawn 40 feet wide; while, on the Government plan, it is shown no less than 135 feet wide. The Government plan also shows a block of building in the re-entering angle west of St. Stephen's porch, not now existing: the large octagonal turret at the north-west angle of the Law Courts is also shown too far south in reference to Westminster Hall, and the block of building shown north of the Law Courts one would not suppose to be meant to indicate an open shed and uncovered latrines. The whole of the Law Courts and St. Stephen's porch are evidently drawn too far south in reference to Westminster Hall, and as in Sir C. E. Trevelyan's evidence, relative to the consolidation of the public offices, mention is made to provide for the Courts of Law at Somerset House, and it may appear to many that this block of building interferes with the approaches, as well as being an ugly projection to the Palace, an accurate plan of this portion is very desirable."

It will be best that competitors should look to the ground itself where practicable.*

Respecting the site, a correspondent of one of the newspapers has urged the claims of Victoria-street. That locality, however, would be less central, especially having regard to the facilities of communication which there are by water. Our objection is not to the part of Westminster chosen, but to the attempt to define the site rigidly, or rather as to the *doubt* which after all is left, even as to the value and meaning of the red line.

It is quite obvious that a considerable addition should be made to the 352,000 superficial feet which are the sum of the accommodation named as required for all the offices. Only 30,000 feet of the 352,000 appear to be given to departments which are of the nature of commissions; and if the numerous minor departments which it must be a chief object to concentrate are accommodated, we shall probably be under the figures in taking three times 30,000 as nearer the item. So that we should then get an area of 412,000 superficial feet. But, were the Horse Guards and Admiralty, Whitehall, to be provided for, we should make the total 520,400 superficial feet, or say, adding a fourth 30,000 feet, 550,400 superficial feet. Now, we presume the "approximate area required" refers to the building area, and that in calculating the ground wanted, addition must be made for the courts, as well as the streets. Taking the precedent of the Houses of Parliament, there the courts and the river terrace would appear to amount to somewhat less than a fourth of the building area; but these proportions are very greatly altered by taking into consideration a portion of surrounding street of adequate width, say 40 feet, when we are brought to the conclusion that, to any total superficies of *building* area of large dimensions, an addition of two-thirds of it should be estimated and made—to allow for the internal courts and surrounding streets. The courts of the Houses of Parliament are of course of ample dimensions,—and less might be sufficient in many cases. Taking our number 550,400 superficial feet for the building area of all the Government offices, and adding to it two-thirds for courts and streets, we get the number 917,332 superficial feet for the whole area. If the site bounded by the red line were to be adhered to, it would be ample for all the offices, seeing, as it appears to us, it *exceeds* a million superficial feet, by the number 35,000. In the case of the Foreign Office and War Department, together, 96,000 superficial feet are set down as wanted, which, adding as before, the large proportion, two-thirds, would give 160,000 feet as the ground required, whilst the yellow tint marks out 176,000 feet. Thus, it must be admitted there would be *space* for the two buildings, without the designs of different competitors interfering with each other. The west end of the ground, or that next the park,

* We have been asked what is meant precisely by "Light Indian Ink," in which the drawings are to be made, and whether this expression will include sepia. The term appears to have been used in the instructions to architects competing for the Houses of Parliament in 1835. Some of our readers, who remember whether or not sepia drawings were exhibited on that occasion.

which is proposed for the Foreign Office, would certainly be best, having regard to the official residence; but the site next the Parade would have been appropriate for the War Department.

We should be glad, however, if even now the whole subject of the competition could be reconsidered, with a view to a fresh announcement, in terms calculated to call forth the exertions of architects, in a form better calculated to serve the object of the Government. Failure will probably result from the attempt to take, at one and the same time, steps which are properly sequential, and from hurrying on to a decision where the simple *data* of the case have been allowed no chance of entering into the apprehension of competitors. For ourselves, we protest, in time, that we will not hold failure as in any way conclusive against the architects of England, and their ability to provide "some building worthy of the metropolis." We recollect no previous autumn in which so many competitions have been in hand: those called the younger members of the profession, in whom no small portion of the talent of the profession resides, can hardly do themselves any justice, even if they can compete at all, in the short period between this date and the 20th of March; and we hope, therefore, that the memorial which is about being presented from the Architectural Association will be treated with the consideration that it deserves.

LAMBETH PALACE.

All who travel on the "Silent Highway" know the venerable weather-beaten towers and the other picturesque clumps of buildings which, surrounded by a high wall, form Lambeth Palace. They are comparatively few, however, who have had the privilege of passing through the Tudor gateway into the palace itself, and as the Surrey Archæological Society were, by the kindness of the present archbishop, to hold a meeting there on Friday, October 31st, to examine the various matters of interest which it comprises, we have made an opportunity to give sketches of some parts of it. Passing through the entrance, we find ourselves in a courtyard, so to speak, of considerable size, rendered pleasant by flower-beds. The inside of the gate-house, which is a large and massive structure of red brick, ornamented with vitrified diamond patterns, is partly covered with ivy. On one side is the library, founded by Bancroft, which contains a large number of valuable books and manuscripts. The exterior of this is in that mixed style of bright red brick and white stone facings, with pedestals and globes and other decorations, peculiar to the time of Charles I. or a little before. The inside of the library, with its plain wooden roof and bookcases projecting at intervals, shows how difficult it has been, even in this large space, to find accommodation for the valuable contents. In this case, as well as in some other libraries, such as those at the Guildhall and Sion College, it is to be regretted that but few students are generally to be met, in a great measure owing to a belief on the part of many who would avail themselves of such libraries, that it is difficult in the first instance to obtain admission, and afterwards that, although great civility is shown by the custodians, visitors are viewed to some extent as intruders, giving trouble which would otherwise be avoided.

The late archbishop, Dr. Howley, did much for the comfort of his successors, by building a suite of apartments in the Tudor style, and took care to preserve and restore the ancient portions. The "guard-room," with its picturesque wooden roof, is hung round with the full-length portraits of past archbishops. The chapel, in the Early English style (built between 1244 and 1270), has been restored; the Purbeck marble pillars have been cleaned of whitewash, and a new roof put up. The windows are filled with diapered stained glass, and the ashes of Archbishop Parker (1575) placed in a prominent part, and suitably inscribed: the stalls and other carved woodwork of this chapel are of a light colour, and do not harmonise well with the general aspect of the building; the walls, too, being at present destitute of monuments or other decorations, are thrown out by the rich colour of the windows into grey masses, which offend the eye. The restoration of the chapel was the last of Dr. Howley's works at Lambeth Palace; and while the men were fixing the armorial bearings over the entrance shown in the engraving, the intelligence of his death was brought.

From the chapel, through the doorway referred to, we pass into a square apartment of considerable size: the roof is covered with panels, enriched with carvings of some beauty; in the centre is a massive post, also of wood; and the other door shown in the engraving leads to the Lollards' Tower. In this place is a primitive sort of spiral staircase, of wood, with a stout rope instead of handrail, which leads to various mysterious passages, in which are chambers of quaint appearance. After ascending to a considerable height the staircase becomes darker and narrower; and mounting several steep steps, we come to a small door, so thick and heavy that it is with difficulty it can be made to turn upon its hinges. The woodwork is clamped with iron, "within and without;" and just beyond this is another door, equally strong. In the latter there is a small peep-hole, which, at a comparatively recent date, has been covered by an iron plate. Pushing this door open, we are inside what is called the prison. This small apartment, which is situated at the top of the tower shown in one of the engravings, is lined with thick planks of wood, and with its two little windows looks like a portion of some weather-worn ship. On the planks which are within reach are several inscriptions of painful interest, intermixed with crosses and other devices. Fixed into the walls there are eight iron rings, to which prisoners may have been chained. Through the narrow windows there is seen between the branches a pleasant peep of the river, on which the steamboats are passing rapidly along, and the old abbey of Westminster, nearly hidden by the Houses of Parliament. The whistle from the neighbouring railway station reminds one of the change of times, and, looking with mingled feelings at the carved records on the walls, and feeling thankful that opinion is freer now than formerly, we wend our way towards the garden. Before we go out, however, it may be worth while to mention that the crypt engraved is of the same date as the chapel, and extends completely below it. This is an interesting fragment of ancient London which has not been very accessible.

After the meeting, we may have an opportunity to say a little more.

THE ARCHITECTURE AND SOCIAL CONDITION OF ENGLAND IN THE MIDDLE AGES.*

In reflecting on the condition of the people during this period, one cannot but feel that it is one of the characteristics of the present day to run into extremes, and one phase of this extravagance is shown in the enthusiastic manner in which everything relating to time past is spoken of. It is doubtless a pleasant thing to carry oneself back to the days long since gone, and conjuring up an earthly paradise of chivalry and honour, valiant knights and fayre ladies, revel therein, till we believe in the creations of our imaginations; but, this is a kind of amusement tending to substitute fancy for reality, to lead our minds astray, and to undervalue the happiness we enjoy in living at a time when personal freedom is guaranteed to all men, as opposed to that period when the only right was that of the strongest. It appears to me to be a mistake to believe that, because men builded fair churches, they were necessarily virtuous and happy, that they had all the knowledge that was good for them to know, and that all the discoveries of modern times are at the best but negative gain.

With this view, therefore, a few moments may be usefully spent in some slight, but, I hope characteristic sketches, indicative of a state of things not so harmonious as is often believed. During the reign of the Conqueror, the whole state of the country was, of course, so disorganised, that it would be difficult to form any fair opinion of the social condition; but, during the reign of William Rufus, things became a little more settled, and then the general principles of Norman, or thoroughly feudal, government showed themselves in full force,—that is to say, the high and mighty oppressed and cruelly used all parties who came under their power. The "Saxon Chronicle" says distinctly, "things followed their usual course, and the royal officers, worse than robbers, pillaged without mercy the granaries of the farmer and the goods of the trader." The tradesmen and artificers were, at the will of the lord, compelled to perform any work that might be imposed, as was exemplified by Vidamme di'Omfreville, who seized the property of the English because they refused to build his castle without payment of wages, in some shape; and the king himself set so little store by law, that he, by force of arms, compelled men to labour at the Tower of London and the erection of his Hall at Westminster. Again quoting from the work before named, "the provinces to which these labours were assigned were cruelly tormented: each year that passed was heavy and full of sorrow, by reason of the vexations without number and the multiplied tributes." Whenever the king moved from place to place, instead of his presence being the assurance that the laws (such as they were) were carried out, it would appear that his passing through the country was rather a curse than a blessing, for that it was the custom of his attendants to ravage the country far and near, and what they could not consume they compelled the owners to carry to market and sell for their profit: in fact, their outrages were so great that had they been in an enemy's country they could not by possibility have been more atrocious, and in many cases so great was the fear entertained of a visitation from royalty, that the inhabitants at the first intimation of the king's approach forsook their homes and took shelter in the most remote forest glades.

It may be said that this is a view of society taken during the reign of a weak and bad monarch; but let us turn to Henry I. and see if any improvement can be discerned. Henry had the name of the "Saxon" given him by his Norman followers, probably because he was suspected of some affection for the great body of his subjects, and also because Matilda, his queen, was a Saxon; but from contemporary history, one would be puzzled to find any example of very strong favouritism for the people he was named after. The *Chronicle of Peterborough*, taking a few detached lines, will give an idea of the state of the nation, and show the general amelioration as we must presume it to have been.

"The year 1105 was awfully miserable on account of the loss of the harvest and by the severity with which the tributes were levied. 1110 was worse from the same cause and the addition of a dowry for the king's daughter, which was exacted by the king. And later, when money was wanted to carry on the war with Robert, Duke of Normandy, a great tax was laid on, and the collectors were guilty of the most brutal violence towards the Saxon citizens and farmers: they destroyed the dwellings of those who were poor, and as to those who had property, false accusations were prepared against them, the accused dared not appear, and in consequence of non-appearance when cited, the property was confiscated."

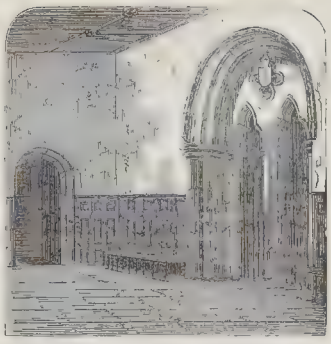
During the reign of Stephen we should hardly expect much social happiness, but everything we can imagine would fall short of that which is described by a quotation from a contemporary, made by Sir James Macintosh. He says, "In this king's time all was depression and evil and rapine. Against him soon rose rich men: they had sworn oaths, but no truth maintained: they were all foresworn, and forgetful of their troth. They built castles, which they held out against him. They cruelly oppressed the wretched men of the land with castle work. They filled the castles with devils and evil men. They seized those whom they supposed to have any goods, men and labouring women, and threw them into prison for their gold and silver, and inflicted on them unutterable tortures: some they hanged up by the feet, and smoked with foul smoke;

* By Mr. Tite, M.P. See p. 579, *ante*.

LAMBETH PALACE.

The Crypt.

The Lollards' Tower and Part of Chapel, from the Gardens.



Doorway of the Chapel and Entrance to the Lollards' Tower.

some by the thumbs, or by the beard, and hung coats of mail on their feet. They put them into dungeons with adders, snakes, and toads. Many thousands they wore out with hunger. This lasted the nineteen years that Stephen was king, and it grew continually worse and worse. They burned all the towns: thou mightest go a day's journey and not find a man sitting in a town or an acre of ground tilled. Wretched men starved of hunger: to till the land was to plough the sea."

As might have been expected from the genius of Henry II. some improvement took place even in extortion. Instead of seizing anything he wanted, "*vi et armis*," he proceeded in a way rather more courteous, though equally efficacious in raising supplies. His usual custom was, after having caused a list of the richest burgesses in the various cities to be prepared, to summon a number before him on a certain day. The honour of being admitted to an audience with majesty was then granted: the summonses admitted neither of excuse nor delay: they appeared before the throne in small parties, for it would seem that Henry was rather averse to demonstrations and monster meetings. When, however, they came, it was signified to them, through an interpreter, what was the sum required, and then they were directed to forfeit one-tenth of their estate as valued by the property-tax commissioners of the time being. The disobedient were by parental care of government lodged at the public expense till all was paid. It is singular, as showing the position of the conquered with reference to the conquerors, "the twice 10,000 for whom earth was made," that while they were honestly and fairly dealt with, the Saxons and Jews were maltreated in a precisely similar way, and, indeed, were on the same footing.

These few early examples will serve to show the state of our countrymen during the four reigns immediately after the Conqueror: they then gradually improved, but yet the arbitrary spirit apparent in all their proceedings was a long time in being eradicated. Long after the time I have just been mentioning, this legal-sounding document appears as under the authority of Edward III.: — "Know, all men, that we have charged William of Walsingham to take, in our City of London, as many painters as he may require, and to put them to work in our hire, and to keep them at such work as long

as he may require them, and if any one is found rebellious to this order, he is to be arrested and kept in prison until the orders to the contrary are given." An order of the same kind is extant, charging the officers of the palace to take a certain number of individuals who were agreeable in their persons, and competent players and singers. Travellers of the fourteenth century were amazed at the number of serfs in England, and the excessive harshness of their condition, compared with those on the Continent. Even so late as 1380, all men who were called "bonds," that is to say, the agricultural labourers, were slaves both in persons and goods, obliged to pay a heavy demand for the small estate which supported their families, not having the power to abandon that portion of the earth without the permission of their landlords, for whom they were compelled to perform any labour without wages of any kind. They could be sold by their masters with their houses, their cattle, the utensils of labour, and their children.

The system of making a hundred responsible for the conduct of any of its members, introduced into England by Alfred, and continued to a certain extent during the Middle Ages, hardly seems to have answered the intended end, for robbery, and examples of confederation of robbers for mutual protection seem to have been the most prevalent offences. In the time of Henry III. it was complained that the castles belonging to great men were in many cases no better than dens of thieves, especially in Hampshire, where they were so powerful that the judges dared not find any one guilty, and the king himself complained that when he travelled, they plundered his baggage, drank his wine, and treated him with contumely. It was a common thing for even the highest of the land to be retained by the bold knaves until a ransom was paid. Peter King, of Jerusalem, who visited England in 1363, was robbed on the highway of his money and baggage. And the robbers were not all so good-natured as Robin Hood, as may be judged from a motto which a famous one had embroidered on his coat,—"I am Capt. Warner, commander of a troop of robbers, an enemy to God, without pity, and without mercy." The laws for the prevention of crimes were good for the age, but who could enforce them? for on the one hand was the temporal power of the wicked by means of this confederation, and on the other the corruptness of the judges, which became so glaring, that in 1280 they were tried by a Parliament in Westminster, found guilty, and fined a sum equal to 1,000,000*l.* of our money, and the Chief Justice of the Common Pleas having been found guilty of inciting his followers to commit a murder, and protecting them afterwards, was condemned to be hanged. William, of Malmesbury, writing, in 1320, says, "that there is not one of the King's ministers or judges who does not receive bribes, and very few who do not extort them."

During the most brilliant period of English architecture, belief in astrologers, necromancy, and all the usual handmaidens of imaginative ignorance reigned supreme: no man engaged in any undertaking without consulting the stars; and though, doubtless, there were men who had imbibed more enlightened ideas, yet as they possessed but little means of communicating what they had learned, their knowledge died with them, or whatever learning they had was empirical, for although we can hardly conceive the possibility of any opposition to the inductive principles of modern science, yet during the Middle Ages they were either unknown or despised in their application to physical learning.

In Italy, the sumptuous churches, glowing with the masterpieces of sculpture, mosaics, and painting, that are the boast of the world, were mostly done in a state of society unequalled for profligacy and unusual corruption. Petrarch, in a letter to a friend, describes the Papal court in his time as follows:—

"What I tell you is not from hearsay, but from my own knowledge and experience. In the city there is no piety, no reverence or fear of God, no faith or charity, nothing that is holy, just, or humane. Why should I speak of truth, where not only the houses, palaces, courts, churches, and the thrones of popes and cardinals, but the very earth and air seem to teem with lies? A future state, heaven, hell, and judgment, are openly turned into ridicule as children's fables. Good men have of late been treated with so much contempt and scorn that there is not one left amongst them to be an object of their laughter."

And now let us turn to consider a little of the domestic economy of our forefathers, and see if the fancies in which some writers have indulged about the hospitable plenty and comfort that always reigned in the houses of the worshipful of the land are warranted by the facts of the case. The roast beef of old England, "the very fame of whose name has grown into our being," was positively unheard of: the only use that beeves were of was undoubtedly to salt and boil, and bread was a great luxury, not in common use even by the nobles; and as to the nut-brown ale, what could it have been before the time of Henry VII. when hops were first introduced into this country? The records of the Percy family, in the time of Henry VII. show the extreme coarseness of the mode of living: and an extract or two from the household book of that famous family will give a better idea of the manner in which the most famous noble of the time lived than anything else I know of. The permanent household numbered 166 persons, and the average of guests was 50; and the whole of the washing for these 216 persons was for one year 10*s.* a sum probably equal to 10*l.* in the present day, most of which was for the chapel linen. From Midsummer to Michaelmas was the only time they indulged in fresh meat, and the instructions say, "My lord has on his table, for breakfast, at seven in the morning, a quart of beer and wine, two pieces of salt fish, six red herrings, four white ones; and, on flesh days, half a chine of beef or mutton boiled." At dinner, men ranking as knights had a table-cloth, which was washed once a month; and as they had no napkins, and the fingers were extensively used in feeding, this portion at least of their linen must have been in a delightful condition. Until the thirteenth century, straw was the bed of kings; and before that date the king and his family slept in the same chamber. The first change was to throw a coverlid over the sleeper, then another was used, and the persons undressed, their linen being substituted for blankets. Beatrice says she would "as lief sleep in the woollen," which shows, I think, that such a thing was done even in Shakspeare's time. The use of nothing but coarse dirty woollen next the skin, seldom changed, and the heavy, exciting nature of the highly-salted food, on which all lived, of course tended to produce those diseases for which hospitals were founded in this city, as in most others. Dogberry, in "Much Ado about Nothing," says that he had assisted in perfuming a musty room; a passage which, the commentators say, alludes to a custom rendered necessary by a total abstinence from brooms, brushes, and soap and water.

It would be easy to continue these sketches to show how, with the providential discovery of printing, knowledge became extended and accessible. Men began to think, and liberty and freedom, after many struggles, were established. Then domestic buildings in like manner improved with increasing civilization, and doubtless tended to promote it.

But it is to be regretted that with these increasing personal comforts, the house of God was often left desolate, and His temples neglected. The study of antiquities was thought to be "an idle thing," and the dealers in pots and pans were laughed at by Pope, and sneered at by Swift, and the wits of the day.

I cannot do more than refer with extreme gratification to the existence of a better state of things, nor can I venture to describe how that was brought about. All I can commend to the present meeting is to associate with the study of antiquities the sentiment of infinite gratitude to Divine Providence for our personal and political advantages as a people, and, not the least, for that principle of veneration for "the place where His honour dwelleth," which is one of the most satisfactory features of the times. In this spirit, then, I venture to urge this meeting to pursue those studies which connect the present with the past, and enable us, for all that has gone before, whether morally or intellectually, to learn lessons for the future.

To those of my hearers who wish to study the subject of domestic architecture, I cannot do better than refer them to the works of my much-esteemed friend, and your visitor, Mr. J. Britton, who was the first to call attention to the subject, and to whom the architect, the antiquary, and the archæologist are so much indebted.

THE HISTORY OF THE PANORAMA.

The inventor and original proprietor of the Panoramas in Leicester-square, was Mr. Robert Barker. In connection with some particulars of his son, Mr. Henry Aston Barker, who died on the 19th of July last, Mr. G. R. Corner has favoured us with the following account of the invention.

Mr. R. Barker, who had invented a mechanical system of perspective, and taught that art at Edinburgh, where he was resident, was walking one day with his daughter (the late Mrs. Lightfoot) on the Calton-hill, when, observing her father to be thoughtful, Miss Barker asked him what was the subject of his thoughts. He replied, that he was thinking whether it would not be possible to give the whole view from that hill in one picture: she smiled at an idea so contrary to all the rules of art; but her father said he thought it was to be accomplished by means of a square frame fixed at one spot on the hill: he would draw the scene presented within that frame, and then shifting the frame to the right or left, he would draw the adjoining part of the landscape: and so going round the top of the hill, he would obtain the view on all sides: and the several drawings being fixed together and placed in a circle, the whole view might be seen from the interior of the circle, as from the summit of the hill.

This idea he forthwith put in execution, and drawings were made by his son, Henry Aston, then quite a youth, of Edinburgh, from the Calton-hill, with Holyrood-house in the foreground.

But the greatest difficulty remained. The drawings being made on flat surfaces, when placed together in a circle the horizontal lines appeared curved instead of straight, unless on the exact level of the eye; and to meet this difficulty Mr. Barker had to invent a system of curved lines peculiarly adapted to the concave surface of his picture, which should appear straight when viewed from a platform at a certain level in the centre.

This difficulty, with many others of a similar nature, which may more easily be imagined than described, having been surmounted, Mr. Barker exhibited his picture—first in the Archer's Hall, Holyrood, and secondly in the Assembly-rooms, George-street, New Town, Edinburgh, and afterwards at Glasgow.

So much was thought of the discovery of its being possible to take a view beyond the old rule of forty-five degrees, that Mr. Barker was induced to take his invention to London, where he waited upon a Scotch nobleman with whom he was acquainted (I believe Lord Elcho, son of the Earl of Wemyss), and who was so greatly pleased with the plan, that he encouraged Mr. Barker to paint and exhibit pictures in London, and even assisted him in the most essential manner,—by an advance of money.

Thus encouraged, Mr. Barker, after exhibiting his view of Edinburgh in the spring of 1789, in a large room at No. 28, Haymarket, determined to exhibit a picture of London, for which the drawings were made by Henry Aston Barker, from the top of Albion Mills, near the foot of Blackfriars-bridge, on the Surrey side. The scene on the Thames was the Lord Mayor's procession by water to Westminster on the 9th of November. These drawings were afterwards etched by H. A. Barker, and aqua-tinted by Birnie, and published in six sheets, 22 inches by 17.

This view was more than half a circle, and was exhibited in the year 1792, in a rough building at the back of No. 28, on the eastern side of Castle-street, Leicester-square, where Mr. Barker then resided.

In the year 1793 Mr. Barker took a lease of a piece of ground in Leicester-place and Cranbourne-street, where he erected the large exhibition-building in which the Panoramas have

been ever since, and are still, exhibited. The large circle is 90 feet in diameter, and the small upper circle is constructed within it, being supported by the centre column. It was opened in 1793 with a view of the Grand Fleet at Spithead.

As a good name was considered essential to the success of the novel experiment on the public taste, Mr. Barker applied to his classical friends, who furnished him with the very expressive and appropriate name of *Πανοραμα*.

Mr. Barker's Panorama was not, however, without rivalry, even in its early days: Mr. Robert Ker Porter (afterwards Sir Robert), painted and exhibited at the Lyceum three great historical pictures,—of the storming of Seringapatam in 1799, of the siege of Acre, and of the battle of Alexandria, March 21, 1801. The printed descriptions and outline sketches of Seringapatam and Alexandria are now before the writer. These three pictures were three-quarters of the circle. He afterwards exhibited at the same place a great historic and panoramic picture of the battle of Agincourt, which picture he presented to the corporation of London, and it is still in existence, we can hardly say preserved, at Guildhall.

In the year 1802, Mr. Barker's eldest son, Thomas Edward Barker, who was not an artist, but had been an assistant to his father in the Panorama, and Mr. Ramsay Richard Reinagle, afterwards R.A. who had painted at the Panorama for Mr. Barker, entered into a partnership, and erected a rival panorama-building in the Strand.

In Knight's "London," vol. vi. p. 283, it is said that the process of painting the panoramas is distemper, but that is an error, except as to the original picture of Edinburgh and that of London: the panoramas are oil paintings, and the canvas has been used for several pictures, one being painted over the other as long as it would last, except some of the pictures of the small circle, which, after having been exhibited in London, were sold for exhibition in the provinces.

After much patient energy and perseverance, Mr. Barker, ably assisted by his son Henry Aston, succeeded in establishing the Panorama in the favour of the public; and at his death, which happened on the 8th of April, 1806, at his house in West-square, Southwark, at the age of sixty-seven,* he left a comfortable provision for his widow and family.

Henry Barker continued to be the chief assistant of his father in the Panoramas until his father's death in 1806, when, being his father's executor, he took the Panorama into his own hands, and by his eminent artistic taste and skill in his particular branch of art, by his energy, perseverance, and good judgment in selecting and placing before the public what was agreeable to them, he succeeded not only in paying off some incumbrances which had been left by his father, but in realizing the handsome provision made by his father's will for his mother and sisters, and making a moderate and well-merited provision for himself and his own family.

Mr. Barker frequently travelled, to take his own drawings for his pictures, which were always remarkable for faithfulness and truth. His first journey was in 1799, to Turkey, where he took the drawings for the Panorama of Constantinople, which was exhibited in 1802. A picture from the same drawings was exhibited by Mr. Burford in 1829. These drawings were engraved and published in four plates.

Henry Barker went to Paris, and drew a panorama of it during the Peace of Amiens. He was on that occasion introduced to, and noticed by, Napoleon, then Premier Consul, by whom he was addressed as Citoyen Barker.

The naval victories at the commencement of this century afforded admirable and most popular subjects for the Panorama, and Henry Aston Barker's knowledge of nautical matters, and accurate representation of shipping, &c. attracted the attention, and obtained for him the friendship, of Nelson, who was much pleased with the pictures of his victories of the Nile and Copenhagen. He was first introduced to Nelson by Sir William Hamilton, at Palermo, in 1799; and was kindly received and treated by him at Copenhagen, where he went in 1801 to take drawings for a picture of the Baltic.

The Peninsular campaign also furnished admirable subjects for pictures of the battles of Salamanca, Vittoria, Badajos, and others, of which Mr. Barker presented such able and spirit-stirring representations to the British public.

The drawings for these pictures were made chiefly, if not entirely, by Mr. Burford; but Mr. H. A. Barker went to Malta, where he made drawings of that port, exhibited in 1810; of which the writer has a vivid recollection, being the first Panorama he ever saw. He also went to Elba, where he renewed his acquaintance with the Emperor Napoleon, by whom he was graciously received. And after the battle of Waterloo he visited the field, and went to Paris, where he obtained from the officers at head-quarters every necessary information on the subject of the battle.

A set of eight etchings by Mr. J. Burnett, from Mr. Barker's original sketches of the field of battle, were printed and published. His drawings of Gibraltar were also published in two large sheets.

He went to Venice with Mr. J. Burford, to take views for a Panorama, which was exhibited in 1819.

His last grand Panorama was the coronation procession of George the Fourth: exhibited in 1822.

The Panorama of Waterloo was very successful. It had been painted on an older picture, but was not painted out, being laid by and re-exhibited some years later, and was even then so attractive, that it hung on the walls until, from decay, it fell from its fastenings, and was removed piecemeal.

The rival Panorama in the Strand was purchased, in 1816, by Mr. Henry Barker and the late Mr. John Burford, who paid a considerable sum to Mr. Reinagle, and secured an annuity to Mr. R. E. Barker and his wife for their lives, as the price of their interests in the Strand Panorama, which Mr. Barker and Mr. John Burford then kept open in partnership; Mr. Barker retaining to himself the Panorama in Leicester-square. But the Panorama of Waterloo had, fortunately, been so successful as to give Mr. Barker the opportunity, which he then required, of retiring from the labours and anxieties ever attendant on exertions to please the public; and in, or previous to, 1826, he transferred the management of both Panoramas to Messrs. John and Robert Burford, who had been the able and much esteemed assistants of himself and his father for many years.

Mr. John Burford dying, however, in 1827, was succeeded by his brother, Mr. Robert Burford, the present able and indefatigable proprietor of the Panorama in Leicester-square, which still continues its interest and attraction for the public, although the rival exhibitions of the Coliseum and the Diorama in the Regent's-park have not been able to hold their ground.

* See *Gentleman's Magazine*, vol. lxxvi. p. 389.

STEEL AND MALLEABLE IRON FROM PIG.

THE BESSEMER AND UCHATIUS PATENTS.

The evidence as to Mr. Bessemer's process is still as contradictory as ever, and we would have refrained from further remark on the subject in the meantime, till the muddle of conflicting evidence should settle and clear a little; but in justice to Mr. Bessemer, we quote a few of the only remarks by himself which have come under our notice since he read his paper to the British Association at Cheltenham. This we feel all the more inclined to do, that he intimates that he has not, and will not, become a party to any newspaper correspondence on the subject, "relying wholly on the truth prevailing against all evil report, and awaiting patiently the effect upon the public mind of those commercial proofs that are day after day accumulating and carrying conviction to the minds of all practical men."

The remarks alluded to were addressed to a gentleman connected with the Liverpool Polytechnic Society,—namely, Mr. C. F. Salt, the secretary, who had intimated to Mr. Bessemer that a discussion on the subject of his process was going on at the meetings of the society, and that any remarks of his own which he might choose to make would be read to the members.

In reference to an alleged adverse experiment reported to have been made at the Mersey Iron and Steel Works, Mr. Bessemer says,—

"I feel bound to mention the honourable way in which Mr. Clay, of the Mersey Iron and Steel Works, wrote to me, and expressed his surprise at seeing in print that the rolling of a small piece of iron at their works was called "an experiment to test my plans," and at once offered to write to the papers to say that what had been done at the Mersey Iron Works afforded no proof whatever for or against my invention, and could not properly be considered as an experiment. I, however, declined his kind proposal, because I have not, nor will I become a party to any newspaper correspondence on the subject."

At the close of his communication to Mr. Salt, Mr. Bessemer says:—

"As promoters of science, I doubt not that the members of your society will be pleased to hear that ample proofs will soon be afforded of the utility of my invention, by its commercial working in several establishments; licenses for the whole duration o my patents having been already purchased, by eminent houses in the iron trade, to the extent of 130,000 tons annually. I enclose you a correct sectional sketch of a railway bar, which may be seen at the office of our firm. It was rolled direct from a 10-inch square ingot, having only passed through the rolls fourteen times. The metal was not previously piled, or in any way previously wrought; and notwithstanding the extremely difficult section, not the smallest portion of the flange was torn up. To render the fabrication of this form of rail practicable on the whole plan, twice-rolled iron must be used to form the flange, and 10s. per ton extra is being paid for them in consequence. My process has also been applied to the manufacture of tin plates with the most complete success. You are, doubtless, aware that charcoal iron is used by the trade at an extra cost of several pounds per ton, the best puddled iron failing to produce the requisite toughness. I enclose a small portion of some sheets rolled from one of my ingots. They are much thinner than are ever required by the trade, in order to show the extraordinary malleability and toughness of what has been called my 'burnt cast iron.'"

Mr. Salt handed round the specimen alluded to, which, says the *Liverpool Journal*, in reporting the proceedings, was of extreme tenacity, and as pliable as paper. He concluded by saying that whatever decision the society might come to, it was evident that Mr. Bessemer was not afraid to meet the question.

Another new process for the production of steel from pig iron is now dividing the public interest and attention with that of Mr. Bessemer, namely, that of Captain Uchatius, engineer-in-chief of the Imperial Arsenal at Vienna. An experimental trial of this process was recently exhibited at the Albion Engine Works, Blackfriars-road, in presence of numerous spectators, by Mr. Charles Lenz, co-partner of Captain Uchatius, and is favourably reported in some of the daily papers. From the account of it in the *Morning Post*, it appears that crude iron was converted into steel of increased weight in course of less than three hours. The ingot was not then tested, but is said to have had every external evidence of being perfect in quality. It was to be forwarded to the steel works of Messrs. Spencer and Son, at Newcastle-upon-Tyne, to be tilted into bar steel for further tests. Meantime an ingot of the new steel, said to have been made a few days previously in presence of several eminent scientific men, was tested, and declared to be of excellent quality. Tools made by Messrs. Rennie out of another ingot are said to have possessed all the qualities of fine English cast steel.

The process of Captain Uchatius is, like that of Mr. Bessemer, exceedingly simple, though of a different nature. The pig iron is first granulated and then mixed with oxygenating materials, such as sparry iron itself, the oxygen in which combines with a portion of the carbon of the pig, which carbon is thus liberated in the gaseous form, while a small per-centage of the sparry iron is even converted into metal, and added to the mass of steel thus produced.

During the proceedings, it is said, much approbation was expressed by all present of the simplicity and rapidity of the new process, as well as of the quality of the specimens of steel

shown, and hopes, it is added, were expressed, more especially by the railway engineers there, that so valuable a discovery would be immediately made available—its importance in reducing the cost of steel being unquestionable, as applied to the innumerable new uses it would inevitably be turned to in preference to iron—the expense for steel tyers, axles, piston-rods, shafts, and other important working parts of machinery being estimated as not exceeding the price now paid for first-class iron, whilst in durability and strength there is no comparison.

Surely some result of first-rate importance to the world at large will ere long come out of all these promising novelties.

FOREIGN INTELLIGENCE.

The Dresden Museum—begins to exercise a mighty, increasing attraction on the great artists and art-amateurs of Germany; and during the last weeks, men, like Schnaase, Förster, Gerhard, and others, have visited it, to witness the grand effect produced by well-known masterpieces, seen in a novel arrangement and a new light. This, again, imparts activity and spirit to the *ateliers* of the living. Professor Reischel has completed, of late, the great Göthe and Schiller groupe, destined for Weimar. It is quite in keeping with his renowned Lessing statue, but more colossal and more satisfactory on account of the great contrast of characters plastically represented. M. Reischel proceeds now on two new works—a monumental statue of Maria Weber, which will be placed near the theatre, Dresden; and a splendid Quadriga, for one of the castles of Germany. Professor Hähnel has completed a statue, which has received general applause in both the exhibitions of Dresden and Berlin—viz. one of Raffaelle, whose chaste and pensive character of form, as well as the fine and careful execution, makes it a remarkable work of art. This noble statue is an improved copy of that made in sandstone, which stands on the southern entrance of the New Museum of Dresden, being placed in juxta-position with one of Michelangelo, of the same artist.

Dürer Album.—This fine art-production, published at Nüremberg (12 parts, and 36 fols.), is intended for rendering again the fine wood-engravings of Dürer, which have become most rare by the lapse of time. Kaulbach and M. Kreling have made the selection, and superintend the execution of the modern artists.

Rome.—The *Palazzo Rondanini*, made ever to be remembered by Göthe's Biography, is undergoing extensive repairs. The *largest* palace, however, of the holy city, is "Le Isole Britanniche," at the intersecting angle of the Piazza di Popolo, and the Via Babuina, to the left of the Corso.

Increase of Villas on the Continent.—The stretching forth of railways even in the most retired nooks of the continent, hitherto hardly known to the tourist and amateur, causes also the erection of villas in the finest localities. The Villa *Weinburg*, on the Swiss bank of the Bodensee, deserves notice. It is situate at that angle of the mountains where the Rhine carries its waters into the sea, and is surrounded by luxuriant plantations of vine, fruit, and fig-trees. The old Villa Weinburg has been now united with the Sternburg, situated somewhat higher up, by a colonnade and verandah, affording the finest views up to the very centre of the great Swiss Alps.

Canton de Vaú.—It is peculiar that the building of a railway should have given rise to actual political demonstrations. Still so it is: the Vaudois say that they will oppose the building of the Oron line, "with their last dollar and their last man." The building of the railway by an armed intervention and protection is spoken of.

Meteorological Observations—are now made in France regularly, in fourteen different localities, and the data communicated daily to Government, and to the Astronomical Observatory of Paris. These places are Dunquerque, Mezières, Strasburg, Clermont-Tonnerre, Paris, Havre, Brest, Napoleon-Vendée, Limoges, Montoban, Bayonne, Avignon, Lyons, and Besançon.

Munich.—M. Sattler's Cosmoramas.—These pictorial illustrations have excited a deal of interest in Germany, and are said to be superior to anything hitherto seen. Even the choice of scenery is very fortunate. The little rock-temple of Ipsambul, on the Nile, whose oblique yellow rocks of sandstone, transected horizontally by red seams, are lighted up by a lurid, mystic sun, act enticingly on every beholder. Much praised also is the representation of St. Saba, near Jerusalem, whose perpendicular rocks, reaching both upwards and downwards, present a hardly sufficient space for the many monasteries which are built in it, like nests of pigeons. Many other views are of equal interest.

Meeting of German Artists.—At the end of last month, the long-announced meeting of the *Bildenden Künstler Deutschlands*, took place at Bingen, on the Rhine. One of the first results of the deliberation was, that next year a *general* German art-exhibition should take place, for which, preliminarily, Berlin, Dresden, Dusseldorf, Frankfort, Munich, &c. were designed. It was further resolved, that deputations of all German art-schools and art-circles (*Kunst-Schulen und Kunst-Kreisen*) should meet, even the next spring, as a preparatory general assembly, and that this committee should also have the direction of the exhibition. Frankfort-on-the-Maine, the Free German city, was elected by general acclamation as the place for the first general art-exhibition to be held.—The painter, M. Müller, spoke on the little protection German art-works enjoy with reference to being pirated by unprincipled publishers, and demanded that the legislature should interfere in their behalf.

THE LATE CHEVALIER CANINA, ARCHITECT.

It is with deep regret that we have to announce the death, on his way home to Rome, of the Commendatore Canina, who so recently paid a lengthened visit to this country, to direct the commencement of the works of internal decoration at Alnwick Castle, which his Grace the Duke of Northumberland had confided to his care, in conjunction with Mr. Salvin. He died at Florence, on the 17th of October last, of congestion of the brain. His decease will be a great loss to the archæological world, as his whole life had been devoted to the study of classical antiquities, which he had illustrated by most important works. His researches in Etruria, and his more recent discoveries on the Appian way, are of great value, and he had in contemplation other large undertakings of no less consequence. We hope shortly to be able to give more precise particulars of this learned author, who was a corresponding member of the Royal Institute of British Architects, and the first foreigner on whom the Royal Gold Medal of that body was conferred.

TOMB OF THE DUKE OF EXETER IN ST. KATHARINE'S, THE REGENT'S-PARK.

Most of our London readers doubtless know that to the north of the Coliseum there is a modern church in the Gothic style, with its grassy quadrangle, surrounded by gabelled houses and a school. It is, however, comparatively few who are aware that inside this church, built in a new neighbourhood, there are some relics of Old London, which are well worth a visit.

As far back as the reign of King Stephen, in 1148, an hospital dedicated to St. Katharine was founded and established near the Tower of London by Queen Matilda. This continued to flourish for a time, and was suppressed, but was re-founded on the same site, with endowment, in 1273. The establishment continued for many years to enjoy the patronage and benefactions of several queens of England. The mastership is in the gift of the Queen *Consort*;—if there be no such person, the Queen Dowager. In the year 1825-6, the old church of St. Katharine, by the Tower, and the hospital, were removed, to make way for the St. Katharine's Docks. By the direction of George IV. the present site was secured, and the buildings were erected in 1827, under the superintendence of Mr. Poynter, the architect. Some of the relics of the old church were removed, and amongst them the fine tomb which in its present shape is the subject of our engraving.

It formed part of a chantry chapel, and an engraving in Gough's "Sepulchral Monuments" indicates the advanced state of decomposition at which it had arrived. The chapel was, of course, annihilated with the old church, and Mr. Poynter saved all that it was possible to bring together again, and did the best he could with it. Out of Westminster Abbey it is unequalled by any similar structure remaining now in London. On the base is inscribed the following:—

"This monument was erected in the Collegiate Church of St. Katharine, near the Tower, to the memory of John Holland Duke of Exeter, Earl of Huntingdon and Ivry, Lord of Sparr, Admiral of England, Ireland, and Aquitaine, Knight of the most noble order of the Garter, and Constable of the Tower. He died the V. of August, M.CCCCXLVII. Also, to the memory of his two wives, viz.: Anne, daughter of Edmund Earl of Stafford, by whom he had issue Henry Holland, the late Duke of Exeter of that surname, who married Anne, sister of King Edward the Fourth, and died without issue; and Anne, daughter of John Montacute, Earl of Salisbury, by whom he had issue one daughter, mother to Ralph Nevil, third Earl of Westmoreland." Below is engraved,—

"These remains, having been carefully removed from the original place of interment, were deposited in this chapel, as were those of the other persons whose monuments and gravestones were transferred to it from the Collegiate Church aforesaid."

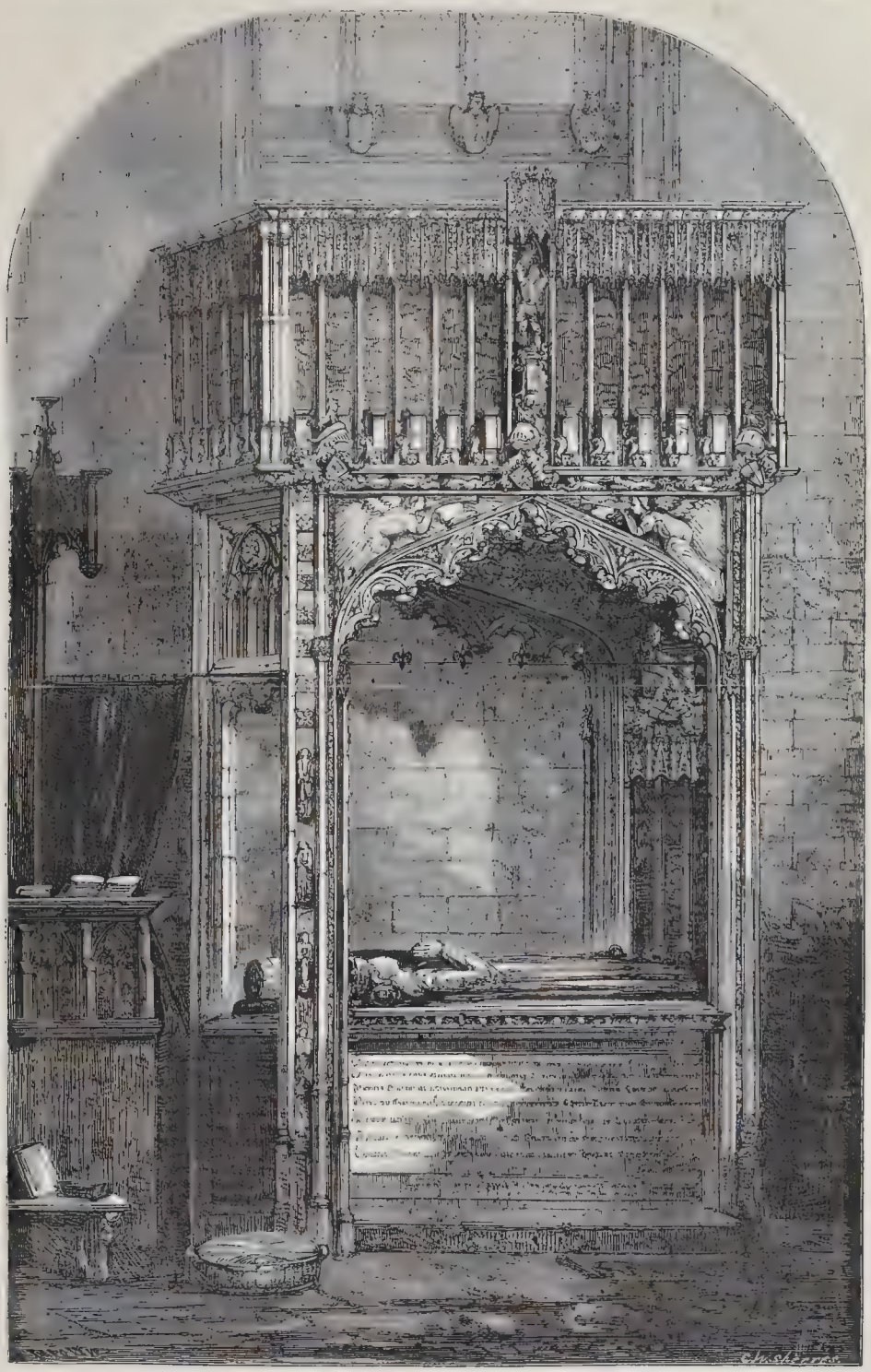
A good general idea of this fine tomb may be gathered from the engraving: the details, however, require examination. In some parts along the mouldings are well-designed groups of sporting subjects,—"Reynard" and the goose, monkeys in chains, and other quaint devices. The shields of arms and crests are coloured and gilt. The effigies represent the Duke, one of his wives, and his sister.

The old wood pulpit from St. Katharine's is also preserved, and is a curious example of the elaborate carved work of the sixteenth and seventeenth centuries: in the panels are bas-relief views (two views of old St. Katharine's), which are cut in defiance of all rules of perspective: it is, however, well worthy of preservation, as a characteristic example of a peculiar style of art. Some of the carved seats, similar to those in Henry the Seventh's Chapel in Westminster Abbey, have also been saved; as have also some of the corbels formed by crowned angels, bearing shields. These, with additions, have been arranged round the present church, with the arms and dates of the reigns of the English queens from Matilda's time. The organ, of about the reign of George the Second, has also been preserved; as well as some of the old monuments, one of which is so characteristic of the style of epitaph fashionable at the time of its composition, that we are tempted to give it. The inscription is on a *gold* plate within a frame.

"Here dead in part whose best part ne'er dyeth,
A benefactor, William Cuttinge, lyeth;
Not deade if good deedes could keepe man alive,
Nor all deade, since good deedes doe men revive.
Gonvile and Kaies his good deeds men record,
And will, no doubte, his praise for them afford:
Saincte Katrins eke neer London can it tell:
Goldsmythes and Marchant Taylers know it well.
Two Country's towns his civil bounty bleste,
East Dereham and Nortonfitzwarren West:
More did he then this table can unfold,
The worlde his faime this earth his earth doeh hold."

"He deceased ye 4 daie of March, 1599."

COVERED WALKING-PLACES.—"J. B. N." asks whether an eligible spot could not be found in the heart of London (say some west-end square, Berkeley-square, or the purlieus of May-fair, having a large frontage in Piccadilly), that might be converted into a locality like that of the Palais Royal, with its shops, galleries, *restaurants*, *cafés*, walks and shaded trees, fountains, *cabinets d'aisance* (so much wanted in the great thoroughfares of London), with a part of it covered over with glass, with a view to exercise on a rainy day? He says,—"This plan would answer better than planting trees all over London: it would be sure to answer, and pay well. A hint in your paper might start a limited liability company having these objects in view."



TOMB OF THE DUKE OF EXETER; ST. KATHARINE'S, IN THE REGENT'S-PARK.

CHURCH-BUILDING NEWS.

Harlaxton.—The church of St. Mary and St. Peter, at Harlaxton, near Grantham, is an ancient building, with tower and spire, side aisles, nave, and chancel. Time and inattention had made considerable inroads into its walls and roofs: in fact, the decayed state of the timber and bulged walls would not admit of a repair; and had it not been for the munificence of George Gregory, Esq. of Harlaxton Manor, destruction must have been the consequence; but that gentleman gave directions for the roof to be taken off, and replaced by one of new English oak, covered with lead; also for the walls, buttresses, porch windows, and battlements, to be restored, defraying the whole cost, nearly 1,700*l.* The work has been executed by Mr. John Wilson, of Grantham, according to the original design in the mouldings, &c. The whitewash, so prevalent in village churches, has been, as far as practicable, scraped off, and the surface of beautiful circles and columns once more exposed to view. An unsightly gallery has been taken away. The roof is supported by carved corbels. The porch, pinnacles, and crosses, are new. The stone used is from the original Ancaster Quarries, of which stone, we are told, the church was built, some five hundred years since, and which is now at the base in a perfect state of preservation. Drainage and ventilation have had the effect of removing the damp and offensive smell so frequently complained of in village churches: the drainage has not been done, as is often the case, by making a channel, but by an effectual under-drain that receives the water from the roof, and takes it entirely out of the churchyard.

Tiptree (*Essex*).—The consecration of St. Luke's church, Tiptree-heath, took place on Friday in week before last. The edifice partakes somewhat of the Norman style. It is built of red brick, the windows being dressed with Caen stone, and it has a rather peculiar appearance. Internally, the appearance is more singular still, the arched pillars which support the roof being of variegated brickwork. The roof is vaulted. At the chancel end of the church is a painted window, representing the birth, baptism, crucifixion, resurrection, and ascension of the Saviour. The window is the gift of Mrs. Burney, wife of Archdeacon Burney. The erection of the church has occupied about twelve months, and the architect was Mr. Ewan Christian. The site was presented by Lord Verulam, and the cost of the erection, which is about 2,000*l.* has been defrayed by subscriptions, the Venerable Archdeacon Burney, Mr. Mechi, Mrs. Gee, and Mr. C. J. Round, each subscribing the sum of 100*l.* It is contemplated to build a parsonage and school houses. The church will accommodate about 500 persons, and the sittings will be all, or nearly all, free.

Portland.—The foundation stone of a new chapel, for the Independents of this place, was laid on 14th ult. The chapel will be 54 feet by 41 feet, with deep front gallery: side galleries may be added when necessary. It will afford accommodation for 500 persons. A school-room will be added, which can be thrown open in time of service by the removal of a sliding partition. The rebuilding of the chapel will cost about 400*l.*: towards this sum about 75*l.* only have as yet been raised, chiefly among the congregation, and the working men have given an amount of labour, in addition to which they are contributing fourteen shillings weekly by pence. The English Chapel Building Society have promised 50*l.*

Exmoor.—A new church lately erected at Simonsbath, Exmoor, was consecrated on Saturday before last. A whole town, says the *Taunton Courier*, is rising on this secluded spot.

Glanogwen (*Penrhyn*).—The new church which has just been erected, at the sole cost of Col. the Hon. E. Douglas Pennant, M.P. in the village of Glanogwen, has now been consecrated. The edifice consists of a tower and spire, nave and chancel, with side aisles, and a vestry, and is calculated to accommodate about 700 persons. It is in the Early Decorated style, of beginning of fourteenth century. The walls are of gray stone, excavated on the spot. The door and window dressings, and the external dressed stonework are of Stourton stone. The internal stonework is from the Bath quarries. The whole of the chancel fittings are of oak. The pulpit is of stone panelled and carved. The chancel aisles intended for children are separated from the chancel by open screens, of light character. The whole of the windows in the chancel are filled with quarry glass having ecclesiastical devices upon them, and coloured borders: they were executed by Mr. Lavers, of London. The roofs are open, and of Baltic fir, stained and varnished, and the plaster between the rafters is coloured blue. The tower is at the south-west corner of the nave, and is surmounted by a spire 100 feet high. The principal entrance is by a south porch. The extreme length of the church is 111 feet within the walls, width, 45 feet. The architect is Mr. T. H. Wyatt, of London, under whose direction the works have been carried out by Mr. Ebenezer Thomas, of Menai-bridge, builder. Mr. Benmore has acted as clerk of the works. The cost has been about 6,000*l.*

Coventry.—Mr. Apsley Pellatt, M.P. recently laid the foundation-stone of a Baptist Chapel, on a site in St. Michael's churchyard, Coventry, at the corner of Hay-lane. The new edifice will be the Decorated in style, and is calculated to accommodate 660 persons (on ground-floor and in galleries). The cost will be about 3,000*l.* The architect is Mr. James Murray; and the builder, Mr. George Taylor, both of Coventry.

Higham Ferrers.—The church here has, we understand, been surveyed, with a view to restoration, and we hear that a plan has been prepared estimating the cost at 3,225*l.*

Leeds.—A monument to the memory of the late Mrs. Blesard has been placed in St. Mark's Church, Woodhouse, Leeds. The monument, which has been executed in Caen stone, is in the Perpendicular style of architecture, and is erected under the north-east window of the church. The design consists of one sepulchre arch, enriched with double foliated hanging tracery, the spandrils filled in with foliage, and the monogram, "S. B." with deep-moulded jambs and arch-mould, with ornaments and scriptural text. The spandrils above the arch are filled in with cut diaper work, the whole being surmounted with an enriched cornice and Tudor flower. The buttresses at the sides are diapered, with niches and crocketed canopies, terminating with a carved capital and angels in a kneeling attitude. The base of the tomb, where the recumbent figure is usually placed, is filled in with quatrefoil panelling and scriptural text—on the edge of the moulding. In addition to the tomb, the window above has been appropriated as a memorial window, in connection with the monument. The window contains three main lights. The lower subject is "The Last Supper," Our Lord being the chief and central figure, with St. Peter and St. John at either side, the remaining space being filled in with the other Apostles. The seat upon which Judas sat is overturned and fallen in front. The table (the form of which is taken from an early example by Giotto in Padua), runs through the whole, and connects all together. The subject of the upper part is "Our Lord blessing little children:" the chief figure is surrounded by groups of little children, with female figures at the sides bringing children to Our Lord, and the Apostles looking on. The whole is within ornamental canopies. The upper tracery of the window is filled in with angels, the emblem of St. Mark, and the initial letters of the lady to whom the memorial is erected. The background of the subjects are in both cases diapered. The monument has been designed by Messrs. Dobson and Chorley, of Leeds, architects; and the whole has been executed by Mr. Mawer. The stained glass window is the work of Messrs. M. and A. O'Connor.

Otley.—The foundation-stone of a New Connexion Methodist chapel was recently laid in this town. The site for the chapel and schools is in Westgate, on the Burley-road. The building has been designed by Mr. J. T. Fairbank, of Bradford, and will consist of school-rooms for 250 children, and a chapel capable of seating 400 persons. The style of building will be Grecian, with two Ionic columns in front, and a flight of steps leading to the chapel from the road. The ceiling of the chapel will be partly carved, and enriched with panels and mouldings. Stone will be the principal material used for building. The total cost will be 1,200*l.* One-half of the whole cost will, it is anticipated, be raised before the completion of the building.

Shotley Bridge.—It may be remembered that the new Roman Catholic Church, which had just been completed on one of the highest points of Shotley-hill, was almost totally destroyed during a severe hurricane in February last. It is now being rebuilt, upon an entirely new plan, from the designs of Mr. Archibald M. Dunn, of Newcastle, architect, and the contract is taken by Messrs. Gibson and Stewart, and Messrs. Wait and Howard. The new designs include a tower and spire; and more than the usual precautions, we are informed, are being taken to strengthen the walls and roofs, &c. which the great exposure of the situation renders necessary to prevent the possibility of such a calamity occurring again.

North Shields.—The laying of the foundation-stone of the United Presbyterian Church, North Shields, took place on Monday before last. The new church will occupy an area of 76 feet by 50 feet, in Northumberland-square, and will afford accommodation for 660 persons. The front portion of the building, which is about 34 feet high, says the *Shields Gazette*, is to be of an ornamented Roman character, with six inserted Doric columns, the angles terminating with pilasters and an entablature, finishing with a balustraded battlement, and having circular windows between the columns, with imposts and archivolts; the whole standing on an ornamented rustic basement and door case. The entrance to the chapel is in the centre, with a staircase on each side leading to a gallery. The chapel will be heated by hot air. The façade will be built with Prudham stone. The building is designed by Mr. John Dobson, of Newcastle, architect, and the contract for completing the whole of the work is let to Messrs. James and Matthew Robson, of North Shields, builders.

Guernsey.—The general cemetery at the Foulon is in progress. The site contains thirteen vergées of land. Over the entrance will be an archway, with ornamental iron gates, and railing on either side. On the north entrance will be the entrance lodge. The chapel will be nearly on the summit of the ascent. It is to be in the Early Pointed style of Gothic architecture, with a bell-turret, terminating in a spire. A triplet window, with simple tracery, is proposed for each end of the chapel, and two-light windows are to be in each of the sides. The roof internally will have arched principals, which, with the fittings, will be of deal, stained. The architects are Messrs. Poulton and Woodman, of Reading, who have recently been the successful competitors in preparing plans for cemeteries at Windsor and Basingstoke, and for a church at Dorchester. The contractors are Mr. Edward Hart for the chapel, lodge, and entrance, and Mr. James Duquemin for the laying out and enclosing of the land. The aggregate contracts for these works amount to upwards of 1,200*l.* The contractors are under an engagement to have the whole completed in nine months.

PROVINCIAL NEWS.

Watford.—The inauguration of the new corn exchange here took place on Wednesday in last week. The work was commenced in May, 1855, by a company, who had subscribed 4,000*l.* in 400 shares of 10*l.* each; it having been decided that a first-class hotel should form part of the scheme, and that for this purpose the Essex Arms and adjoining property should be purchased, and the corn exchange be there erected, and the hotel be partially reconstructed. Mr. Murray, of Coventry, the architect, superintended the work, which was finished in March, 1856. Circumstances, however, prevented the public inauguration of the building until last week. The corn exchange adjoins the inn, being separated from it by the gateway, and connected with it by a passage or gallery which crosses the gateway, and leads directly to the apartment built a few years since for the Watford Lodge of Freemasons. There are side entrances to the exchange from the gateway. The front entrance is from the High-street. The corn-exchange hall has a spheroidal roof with side-roof

lights. On one side there are a few offices for the larger merchants, and at one end a room used for refreshments when the hall is occupied by public assemblies. Above are billiard-room and committee-room. The cost of the erection of the exchange was 1,200*l.* The remainder of the capital has been expended in the purchase of the property and the improvement of the hotel.

Lindfield.—For a small place like Lindfield, says the *Brighton Herald*, a very important work has been undertaken. New national schools have just been completed, at an outlay of 1,630*l.* and a rectory adjoining is in course of erection, to be worth 3,000*l.* The lay purchaser of the tithes is causing the rectory to be built close to the church, and he offers to sell it to the parish, together with thirteen acres of land, for 1,500*l.* (half its value) provided that sum can be raised by May, 1857. To the same source the parish owes the National Schools, just completed; and which are to be purchased by subscription, on like advantageous terms. They are, like the rectory, in the immediate neighbourhood of the church, and the three buildings harmonise in the general character of their architecture, which is Gothic. The schools are of the decorated middle period. The building comprises three rooms, one for boys, one for girls, and a third, detached, for infants. The dimensions of the two first rooms are 40 feet by 20 feet; those of the latter, 25 feet by 18 feet. In height, all are similar—to the eaves, 12 feet; to the roof ridge, 24 feet. The roof is open, the oak of the chief woodwork being visible; the interspaces covered with plaster. There is a moveable partition between the boys' and girls' schools, which will admit of their being thrown into one room, for lectures or meetings. Each room is designed to accommodate 100 children: about 178 infants can be admitted. The population of Lindfield is only 1,900. The walls are of stone drawn from the neighbourhood, Paxhill, with dressings of the fine white Scames-hill. The roof is tiled; but without being glaringly red. It is surmounted by an ornamental bell-turret. One doorway leads to the entire building. The architect is Mr. J. Clarke, of London.

Ryde.—The plan for giving increased accommodation and enlarging the Town-hall of Ryde, was laid before the Market Committee on Tuesday before last. It is estimated to cost between 500*l.* and 600*l.* and was approved by the committee, who are to recommend it for adoption.

Plymouth.—The National and Infant Schools for the parish of Charles having long been found far too limited, the supporters of the schools have determined to try to remove the inconvenience by the erection of additional schools. Messrs. Damant and Reid, the architects, prepared the plan, which the Council on Education approved of, and a contract was entered into with Messrs. Finch and Pethick, builders, for the execution of the work. The site chosen is in a field at the northern part of the borough, called Magdalen-park, or Charlestown. The building will be in the simple Gothic style. There will be two rooms in the school, one of which will be 79 feet by 18 feet, and the other 68 feet by 18 feet; and they are calculated to accommodate 300 boys: the class-room will be 18 feet by 16 feet. These rooms and the class-room will form two sides of a square, one front facing the north and the other the east. The estimated cost of the erection, independent of fittings, is 1,365*l.* of which 1,065*l.* have already been subscribed, leaving 300*l.* still to be raised. The foundation-stone was laid on Wednesday before last.

Worcester.—On Monday last the local Board of Health were to meet to authorise a mortgage on the rates for 10,000*l.* wherewith to commence the drainage and waterworks for this city. By that time the sewerage contract was to be signed. If it was found necessary to borrow the whole 40,000*l.* says the *Worcester Chronicle*, which it will not be, even then the amount of principal and interest to be repaid each year would only amount to 2,600*l.* which it would only require a tenpenny rate to defray; and that a large income will be derived from the water-supply is certain. The population has greatly increased within the last five years, houses are in great request, and trade generally is brisk.

Bristol.—The committee appointed by the Bristol town-council to select a site for the new lunatic asylum have agreed on the purchase of 18 acres of land near Fishponds Church. The price agreed on is 120*l.* an acre. It is probable that four or five acres more will be added.

Liverpool.—The shore north of the Huskisson Dock, says the *Albion*, swarms with labourers, who are proceeding rapidly with the construction of a new dock of 14 acres, a lock 100 feet wide and 500 feet long, and a square basin at the north end of the lock. The works are in an advanced state, and will probably be completed in less than twelve months. There are two 80 feet entrances from the south end of the new dock into the Huskisson Dock, the division being made by an island, on which a monster iron bridge, 204 feet long, will work on what is technically called a "live ring," or its own centre, so that both entrances will be opened or closed with one operation. The masonry is under the superintendence of the Messrs. Hartley. The excavating is in the hands of Messrs. Brassey and M'Cormick.

Seacombe (Liverpool). — The school-room erected in connection with the Wesleyan body resident in Seacombe was opened on Thursday in last week. The room is 65 feet long by 22 feet wide, and is calculated to accommodate 150 persons. There is an infants' school on the south side. It is 45 feet long by 18 feet wide, and is calculated to contain 100 infants. The play-grounds of the school are divided by the infant-school. The whole is covered by an open-timbered roof of stained and varnished pine. The edifice is in the Gothic style, from a design by Messrs. Hay.

Sunderland.—The new lighthouse erected on the South Pier, Sunderland, from designs by Mr. T. Meik, C.E. has been put in operation. One peculiarity in the construction is, that it can be removed should any alteration at the pier call for its being shifted.

THE IMPROVEMENT OF THE KINGDOM.

MANY of our counties have not a decent town in them, and are almost in as primitive a state as when they were formed some centuries since. The improvement of the country generally, and the increase of the smaller towns, is an object much to be desired, as the metropolis and the manufacturing districts are over-populated,—every available space being filled with buildings, to the exclusion of air and the space sufficient for exercise. In Scotland and the agricultural districts the population is comparatively scanty: they do not bear a fair proportion of the increase, which they could do by forming societies upon the limited liability system for improving the towns and public buildings, aided by the principal contractors and builders of the country, and the local gentry, railway directors, and the public authorities; not upon the present system of merely erecting long lines of brick and mortar streets, without the least taste or ornament, but after the most approved designs of English and continental architects, including the latest improvements, with plenty of space and cheap railway accommodation. It is not necessary to make every town as large as London or Manchester, but were many of our towns that have a population of less than 10,000 increased so as to accommodate that number, and one here and there within a circuit of fifty miles of London to 50,000 (Brighton only within that distance having that number of inhabitants), a better distribution of the population would be made, and they would enjoy many advantages that large towns only possess.

An increase of the population would be a great benefit were our institutions more perfect and employment more general, so that they could be better distributed throughout the country, and the many thousands that are in great distress or filling our prisons might, were they instructed as well as others, not only keep themselves from want, but from the vicious habits that idleness promotes. At present there is no system in the improvements: some parts having an excess of population, there being no attraction to draw them to the less improving and thinly-populated districts, an equalization of the population would not be desirable. What we require is, greater improvement generally throughout the country, with easy and cheap means of access, and at least one handsome town of not less than 10,000 inhabitants in every county.

When the last return of the census was made, Rutlandshire, which is half the size of Middlesex, had only 23,000 inhabitants, with two small towns, and is still without any sort of newspaper; and Wiltshire, which is most favourably situated for improvement, had less inhabitants than upon the previous return; nor has Huntingdonshire, although of the same age as the other counties, arrived at sufficient importance to require a local journal. There are many other counties in which the inhabitants go to bed early because they have nothing to do, and where old maids and bachelors hoard their tens and hundreds of thousands to leave behind, instead of, like good Christians and British subjects, employing them to benefit their fellow creatures.

H.

THE WORKS AT WESTMINSTER ABBEY.

A CORRESPONDENT, referring to our recent note of doings in Westminster Abbey, asks how far the restoration in progress on the north side of the Abbey, externally, is in keeping with the rest of the building The writer. says,—"That more particularly alluded to is a feature on the tops of the new buttresses, like a small dog-kennel, while the old buttresses are surmounted by a pinnacle."

The buttresses, terminating in a form like a small dog-kennel, as our correspondent expresses it, are those which were restored some time ago, under Mr. Blore: it is to the buttresses on which men are now at work that the pinnacles are being restored: these are of later date (fifteenth century) than those Mr. Blore restored, which is considered a sufficient excuse for reverting to what the present architect imagines to be the right form. The one pinnacle which has been completed may not strike all as a particularly beautiful specimen, but we may be sure it has not been determined on without due thought and research. Sir Christopher Wren unfortunately left very little of the old work to assist to a right decision.

THE GUIDES IN WESTMINSTER ABBEY.

WITH reference to a recent article in the *Builder*, my attention was particularly drawn to that portion of it relating to "The manner of showing the Abbey" to the public, from which it may be inferred, that if visitors to the Abbey were permitted to ramble about among the tombs of our kings and queens without a guide, as they are in Poets'-corner and the nave, greater satisfaction would be given than by the method now pursued, viz.,—that of "their being conducted by a guide through that portion of the Abbey called the Chapels." Permit me, therefore, to offer my opinion by way of reply, having been myself a guide to the tombs in Westminster Abbey for more than fifteen years, during which period it has been my duty to conduct many thousands of persons through the chapels. I say many thousands, from the circumstance of my having taken a peculiar interest in my position as guide, and curiosity having led me to number my companies from day to day, as I took them through,—I found at the expiration of ten years that I had conducted, to view the tombs of the regal dead, more than a hundred thousand souls, and I think, of almost all nations upon the earth; the contemplation of which has often afforded me matter for thought and reflection, and has emboldened me thus to address you on the subject. I need hardly say that, during such a period of time, much of the general feeling of the public visiting the Abbey must have developed itself to my mind as an attendant at such a place of almost overwhelming importance; and I am prepared to assert, that a large majority of visitors to the tombs, if left only for a few moments in a chapel by themselves, would be anxiously inquiring, "Where is the guide?" and of this we had ample proof during the season of the Great Exhibition of 1851. At that time we (the attendants) were placed in the various chapels (as now advised by the *Builder*), and, although the tombs were not actually "ticketted," still there were plans of all the chapels, and large cards descriptive of the monuments, placed in abundance in all directions throughout the chapels; notwithstanding which, many were the complaints, because there was "no guide?" and almost incessant solicitations for some one to describe the monuments "in the usual way," were being made by the masses

who resorted to the Abbey at that memorable time; whereas, on the other hand, numerous, indeed, have been the verbal testimonies which I and others of my fellow-guides have had from our respective parties, expressive of their satisfaction after having passed through the series of chapels. Believing therefore, as I do, on the ground of long experience, that the present system of "showing the Abbey," so far from being objectionable, on the contrary meets with the approval of by far the greater portion of persons who visit this pile of antiquity and greatness; I sincerely trust that you will favour me with space for these few remarks in your interesting and valuable paper.

LUKE BERRINGTON.

THE BUILDERS' BENEVOLENT INSTITUTION DINNER.

THE ninth anniversary festival of this valuable institution, founded for the purpose of granting pensions and giving relief to aged and decayed members of the building trades, was held on Wednesday, at the London Tavern. Mr. Alderman Lawrence, the president, took the chair, and was supported by Mr. Alderman Cubitt, M.P. Mr. Alderman Rose, Professor P. L. Simmonds, Mr. Myers, Mr. G. Bird (the treasurer), Mr. Couzens (the founder), Mr. G. Smith, Mr. T. Piper, Mr. Weston, Mr. Pilcher, Mr. G. Godwin, Mr. J. Higgs, Mr. G. Gregson, Mr. F. Meakin, Mr. Snooke, Mr. J. Gardiner, Mr. J. Bird, Mr. G. Head, Mr. J. Harvey, Mr. J. Thorn Williams, Mr. Mathews, Mr. T. Stirling, Mr. W. Todd, jun. Mr. J. Blashfield, and other influential members of the building trade. The usual loyal toasts having been proposed and responded to,—

The Chairman gave "Prosperity to the Builders' Benevolent Institution," and in the course of his remarks stated that he was proud to see so many present on this, the first time he had been among them on such an occasion. There were many present who could testify even from among their own friends to the great vicissitudes of the building profession; and such were the drawbacks and difficulties that attended the building trade, that no one could tell who might be the next to want the aid of this, one of the best institutions in this metropolis. Such being the case, he called upon them, who now had the means, to come forward, and by their annual subscriptions make this one of the foremost of those charitable institutions which are the boast and the glory of this great country.

Mr. Alderman Rose returned thanks for the Army and Navy in a stirring little speech, and

Mr. Thos. Piper proposed the health of the President genially and well.

Mr. Alderman CUBITT, M.P. in replying to the toast of "The Patrons of the Institution," said that although the charity had only been founded for a short period, he might say that it was now firmly established. It had taken root, and he was happy to see that it was growing up rapidly, and he hoped that it might flourish and live as long as that great metropolis might last. He had been told that there were 16,000 names in the "London Directory" of persons connected with the building trade, and if they would only come forward and subscribe but a little they would be the means of raising the Institution to the highest pinnacle of success. It was a source of much gratification to see so many young men present on that occasion, as a denial to the often repeated assertion that the young men of the present day were less earnest than those of old.

Mr. Couzens, in replying on behalf of the Vice-presidents and Trustees, said that although the charity was, he was glad to say, going on prosperously, yet money was required for the building fund. Another election of candidates was to take place in a few days, and if they would only subscribe liberally, the directors would be enabled to take in a larger number than had been announced.

The Chairman gave the toast of "The Architects and Surveyors," coupling with it the name of,—

Mr. Godwin, who, in replying, spoke of the builders of this country, well-informed and powerful, as a body heretofore unexampled, and urged that the number of subscribers should be much larger than it was. He still looked for the union of several similar societies, including masters, foremen, and operatives, into one large Builders' Benevolent Institution.

The Chairman next gave "The Brighton Branch of the Institution, the Chairman, Directors, and Hon. Secretary."

Mr. Joseph Bird, in returning thanks, directed attention to the claims of the institution for public support. He was glad to announce, in reference to the building-fund, that one gentleman had given the ground, another the bricks, another the cement and lime, and he thought he might say that there was a gentleman present who would slate the building for them. All that was now wanted was for some one to present the timber, and do the carpenters' and joiners' work.

Some other toasts followed, and Mr. A. G. Harris (the secretary) read the list of subscriptions, which amounted to 330*l.*

Mr. G. Bird, in replying to the toast of "The Treasurer," said he was surprised at the low amount that had been announced, and he really must say it was a disgrace to the builders that a larger sum had not been subscribed: it ought to have been 3,330*l.*

Let us hope that it may be made up during the year. The dinner passed off very pleasantly.

THE BOARD OF WORKS DRAINAGE SCHEME.

MR. LESLIE has lodged a protest against the scheme determined on, for thirteen reasons, including the following:—

"Because I believe that the plan B is a direct violation of the Metropolis Local Management Act; inasmuch as the sewage and filth of the metropolis will avowedly flow back into the metropolis, and to a far greater extent than is on the plan avowed.

Because plan B involves the necessity of two monster cesspools, the one on the Kent side, being only five-eighths of a mile by land, and not one mile by water measurement, distant from the boundary of the metropolitan area.

Because I believe that the expenditure in plan B is of the most exceptionable character; comprehending between the junction of the middle and high level sewers for Middlesex, at the East and West India Dock Railway, and the monster cesspool at the outlet in Essex, at Halfway-Reach, 78,380 feet, in double and triple lines of iron flat-bottomed sewers, the whole of which are to be out of the ground, and exposed to expansion and contraction from varying atmospheric temperatures, and still further to the effects of frost and thaw.

Because plan B includes four separate pumping stations.

Because I believe that macadamized roads, scrapings, and mud from the streets and land-surface drainage, are not sewage; and that by the 135th section of the Metropolis Local Management Act, the sewers therein directed to be made and completed by the 31st day of December, 1860, are expressly for sewage only.

Because I believe that ponding back this extraordinary mixture by tide-locked outlets at Halfway-reach for at least eight hours in every twelve hours, is not the proper method to improve the sanitary condition of the metropolitan population, which is the great and leading feature of the Metropolis Local Management Act.

Because I believe that plan B, by withdrawing the rain-water, and all the surplus house supply waters, which by existing sewers now fall into the Thames on both banks, from Putney and Fulham all through the metropolis eastward, and carrying those waters in costly channels down to Halfway-reach, will, by depriving the river of so much of its present scouring power, occasion deposits in the pool, and be greatly injurious to the commerce and navigation of the Thames.

Because, by the enormous expenditure of 3,300,206*l.* carried by Mr. Deputy Harrison's amendment on Mr. Wilkinson's motion on the 22nd instant, instead of thereby benefiting Woolwich and Plumstead, we shall not only inflict a serious injury on those places in the metropolis, but also upon the inhabitants of Erith, Dartford, Greenhithe, Northfleet, and Gravesend, all of whom might have been most materially benefited, and the people's highway of the river Thames most materially improved if the Surrey and Kent line had been taken as the main discharge of the sewage of the metropolis."

THE MANCHESTER EXHIBITION BUILDING.

CONSIDERABLE progress has been made with the building for the Manchester Exhibition of Art Treasures in 1857. The central arch of the front is nearly completed. Some decoration is to be introduced into several of the windows. The two end windows of the transept will be of floriated design in iron; and before each window there will be a screen of iron of similar pattern on the outside, to act as a break to the force of the wind: this screen will be stayed from the main building. The design for these windows is by Mr. E. Salomons. The strengthening framework is also a suggestion by this gentleman. The placing of the pillars is proceeding rapidly. The roof principals are semi-circular: they are sent from the contractor's works in sections, which are riveted upon the ground. Those for the great hall, which are 56 feet span, are composed of double sheets of iron, riveted with T irons at each edge, giving to each principal a depth of 16 inches. In the centre of the great hall there will be no trusses to the principals: the ridge principals for the side aisles, 24 feet span; and the semi-circular ones, for the picture galleries, 48 feet span, will be trussed. The pillars are 24 feet apart. The roof principals will be only 12 feet apart in the great hall; one being placed upon each couple of pillars, and one between them upon an ornamental bracket cast on the girder. The two lines of external standards will be only 8 feet apart; and the sheets of corrugated iron being of that length, with the corrugations running horizontally, there will be no perpendicular lines of sheet joinings between the pillars.

The design and details for the railway station have been finally settled. On the south side of the building, and almost parallel with it, a platform 800 feet long will be erected, of which 500 feet will be covered, and it can be extended. The length of the platform will accommodate thirty-five carriages. The platform will be covered with a simple girder roof of 24 feet span. To connect the exhibition building with the platform, a corridor will be erected in a line with the east end; or, perhaps, more strictly speaking, there will be an extension of the front of the building for this corridor. It will be a continuation of the brick front with the same kind of windows as in the front of the building. The corresponding wall of the corridor on the other side will be an ordinary ornamental brick wall. The ordinary girder roof will cover the corridor, which, according to the local *Courier*, from which we quote, will be 12 feet wide. The railway station will be erected by Messrs. Young and Co. for the railway company, from designs by the architect, Mr. Salomons.

The plans for the refreshment-rooms and other necessary adjuncts to the Exhibition have not yet been definitely approved by the committee.

From the rapidity with which the pillars are raised, and the fact that all the necessary materials are now upon the ground, a very few weeks, it is believed, will show that the building will be erected within the time originally specified.

As a precaution against damage by fire, the ground space is divided into patches 12 feet wide, by brick walls, varying in height with the fall of the ground; while other walls run lengthwise on each side of the great hall.

Mr. J. B. Waring has been appointed by the committee to collect and arrange the Museum of Byzantine, Mediæval, and Renaissance Art, consisting of carvings in wood and ivory, metal work and jewellery, keramic art, and tapestry.

RECENT PATENTS.

TOLHAUSEN, A. An improved machine for boring and other cutting operations in stone and other mineral substances of similar character. (A communication.) Dated Jan. 25, 1856. (No. 196.)—Claims: 1. The combination of a screwed socket and nut, or their equivalent, a base piece, and a collar or other suitable shoulder on the boring bar, whereby the power applied to the nut, or equivalent to move the boring bar, and feed the cutter to cut in an upward direction, or outwards from the inner extremity of the hole, and the resistance of the stone to the action of the cutter, are made to keep the bar and its appendages steady, and a cumbrous frame is rendered unnecessary. 2. The application of a cutter to the boring bar in such a manner that it may be drawn entirely into the bar. 3. Arranging the cutter to swing from a bearing within the boring bar, and to work through, and slide upon a bearing in a slot in a rod, which slides longitudinally through the boring bar, or what is equivalent, arranging it to swing from a bearing attached to a rod, which slides longitudinally through the boring bar, and to work through and slide upon a bearing in a slot in the bar.

Brooman, R. A. Improvements in machinery for boring and excavating. (A communication.) Dated Jan. 7, 1856. (No. 55.)—This invention consists of certain machinery whereby earth, stone, and rock are bored and excavated: the *débris*, or parts dug out, are deposited out of the track of the machine; and the machine is made to propel itself forward, all these actions being simultaneous, and communicated from the same prime mover.

Pockson, J. Improvements in the construction of roofing and other tiles. Dated January 21, 1856. (No. 159.)—This improvement consists in forming tiles in two distinct parts, one called the upper, the other the under tile. The under tiles are constructed so that when cut in cross section they present the form of a V: the upper tile is made in the same way, but is exactly the reverse when cut in cross section, representing the form Λ. When in use, the upper tile lies over and covers the junction of the adjacent sides of the two under tiles. They also have a projecting band on their under surface, to attach them to the tile lath.

Jarvis, C. and T. D. Clare. A new or improved oven or kiln to be used in the manufacture of coke and pottery, and for heating and drying generally. Dated January 7, 1856. (No. 52.)—The patentees construct ovens or kilns in which the heated air or flame from a furnace is made to circulate around a lining or cistern, in which the coal to be coked, or matters to be heated or dried, are contained. They also connect a number of these ovens or kilns together, so that the heated air and flame from the first shall pass through the whole.

Bakewell, T. H. Improvements in ventilating, warming, and cooling rooms and other places. Dated January 15th, 1856. (No. 110).—Several new plans or principles originate under this and a former patent

of the patentee. 1. The forcing power in combination with extraction applicable both to warming and cooling rooms, changing air, &c. 2. The mode of providing a small heated place, whether tube or otherwise, through which the air may be forced or drawn, for the purpose of heating it. 3. The plan of forming a chilling tube or other cold space through which the air may be either drawn or forced, for cooling apartments in summer, and certain uses for the assistance of art and science. 4. A mode of combining other elements of air by introducing certain odours, gas, and various purifying powers, in order to separate or destroy the effect of impure or contaminated particles of air, too minute to be visible, but sufficiently powerful to be injurious.

Squires, W. W. Improvements in preventing the bursting of pipes and tubes for conveying liquids. Dated January 17, 1856. (No. 132).—Claims: 1. The adaptation of a described small air-tap and of the air-valve below the stop-cock; also, a mode specified of drawing off or "letting on" water or other liquids, by means of valves or flaps actuated by levers and wires or communicators. 2. A grooved or tubular opening to the stop-cock, forming an improved stop-cock. 3. A perforated plug or valve, with suspending wire working within a tube. 4. A perforated plug or valve with the tube attached. 5. The attachment of air tubes, as specified, for admitting air to tubes or pipes for conveying liquids.

FREEHOLD *versus* LEASEHOLD.

At Gizeh we gaze marvel-fill'd
On pyramids, wondrous with mystery;
And we blush for the gimcracks we build,
Which will never perplex future history.
Our place-brick and road-drift metropolis,—
Zinc, compo, and like false pretences,—
One-half ever ready to topple is,
And t'other's not worth the expenses.

Had Carnac, or Thebés, or Luxor,
Been built upon sixty-year leases,
Would Egyptians have built of such muck, sir,
That long since had tumbled to pieces?
I wot, such were likely their case,
And now they had not lived to moulder;
So away with the short building-lease,
Saith a stanch-building franchised freeholder.

ABERDEEN GRANITE.

THE TOTTENHAM BOARD OF HEALTH.

I HAVE observed in your paper of to-day (25th), a communication from my friend, Mr. Fullagar, whose assumption is quite correct, that I did not address my letter to you on the subject of the Tottenham Sewage Works, in my official capacity as chairman of the Local Board of Health. Our local differences can but little interest you: yet, as the report of the Parish Committee *v.* Local Board of Health, has been transmitted to you, I beg the favour of your also receiving a subsequent address of the Local Board to the parishioners. This will, I think, satisfy you that, though the new Water-Works (carrying out by the Local Board for the sole purpose of remedying an, on all hands, admitted want), are strongly opposed by some of the parishioners, the proceedings of the Local Board are not so objected to by the majority as is asserted.

W. WARNE.

THE TREES IN LAMBETH.

MY indignation was aroused on hearing of a notice from our vestry, ordering the parishioners to cut and mutilate their trees, and thereby spoil what little appearance of the country we possess. Now, it is the more general opinion, that their time would have been much more advantageously employed had they been arranging measures for adding to the beauty of our public roads, by planting rows of plane-trees at the edges of the footpaths, wherever the width of the roads would allow, such as in the Kennington-road, from the Asylum to the Horns at Kennington, and again from Newington Church all up the Clapham-road, as far as the parish reaches in those roads. These would, in a few years, form fine avenues and be an ornament to that part of the parish. Only look at the fine effect of those few plane-trees at the edge of the pavement in Piccadilly, near Park-lane.

Our French neighbours adopt this plan, but to our shame our authorities have not arrived at that state of civilization and taste: if they had, our roads and entrances to London would have been far more elegant than at present.

Our Lambeth authorities seem to delight more in such dilapidated buildings, stenches, and all sorts of nuisances, as may be found at the water-side, between Lambeth-palace and Vauxhall-bridge; otherwise steps would have been taken, before this time, to have had a handsome terrace erected on the site of such rubbish; and being opposite to a clear space on Millbank, it would have been one of the most desirable places of residence near the metropolis, and with a handsome row of plane-trees, this terrace would have been found a delightful promenade for the inhabitants of this part of the parish.

R. M. W.

Miscellanea.

THE LONDON CITY WATER-SUPPLY.—From a report to the City Sewers Commission, by their engineer and surveyor, Mr. Haywood, it appears that although for many years the New River Company, the only one which has pipage within the City, has afforded water gratuitously for public purposes; that in the belief that it would continue to be gratuitously given, the commission have arranged the means of cleansing their sewers, &c.; and that this was done with the full knowledge and co-operation of the company; that, with regard to public halting-places, a supply was many years since undertaken, to be given at a nominal payment of 5s. each per annum; that from time to time this has been repeated until sixty-nine such places have been erected, which are almost wholly dependent upon water for being maintained in a wholesome and decent condition; nevertheless, the New River Company now give notice of their intention to charge, in future years, at the rate of 6d. a thousand gallons for all the water that may be required for public purposes; that rate of charge being the very highest which, by their Act, they can make, and the same as they charge to brewers and large consumers, who, it may be assumed, make profit by the use of the water they buy. The supply to the Sewers Commission will thus, as estimated by Mr. Haywood, cost no less than about 2,000*l.* per annum, otherwise a serious check to the progress of sanitary improvement must ensue. A correspondent, "Aqua," referring to this procedure on the part of the Water Company, suggests that, for such purposes as those for which the City Sewers Commission chiefly require water, and for many other similar purposes, amongst the general public, it would be advisable to form a Thames Water Company, through whose pipes a plentiful supply of unfiltered or partially filtered water could be supplied to all, at a cheap rate, so that the New River Company, being freed from anything like unremunerative supply, could be fairly called upon, not only to reduce their own prices, but to give a much more plentiful supply to the City at large than at present. There is no question, however, that where one system of pipes is sufficient, a single company can supply the article at a cheaper rate than any two could do; and that double pipage in such case would be so much capital sunk or thrown away.

A METROPOLITAN STEAM WASHING COMPANY.—The works of this new company are situated at Wharf-road, City-road. The patent, it seems, is that of Messrs. J. Wallace and Co. of Glasgow, originally taken out for bleaching, but subsequently applied to washing. The privilege has been sold, it appears, to Messrs. Cockran and Co. bleachers, for four years, at about 3,000*l.* a year. The dash-wheel forms the leading feature in the process. The patent has been taken for the union of steam with the dash-wheel. Each wheel is divided into four compartments, and each compartment holds 100 shirts: the 400 shirts are washed in thirty minutes. The diameter of the ordinary wheel is 6 feet and a half, but those for blankets are 9 feet, and will hold twenty-five blankets in each compartment: these are cleansed also in about thirty minutes. The shaft is hollow, admitting simultaneously the supplies of steam, soap, and soda, but by different pipes. Each wheel makes twenty-one revolutions in a minute, and the goods enclosed have two falls on each revolution, making forty-two falls per minute. The weight washes the goods. The company propose to wash for laundresses at so much per pound weight. There are drying and laundry rooms also on the premises, and Manlove's drying or rinsing apparatus is at work there.

ROYAL INSTITUTE OF BRITISH ARCHITECTS.—At the first ordinary general meeting of the session, to be held on Monday evening, the 3rd of November, a communication will be read from His Grace the Duke of Northumberland, being a description of the works executed and now in progress at Alnwick Castle, Northumberland, prepared by the late Cavaliere Canina and Mr. Salvin.

VICTORIA-STREET, CLERKENWELL.—I beg to call your attention to the dangerous condition the City Improvement Commissioners have allowed the roadway of this never-to-be-formed street to remain in, as I find on inquiry of a parish official that the matter rests entirely with them. The roadway is a slough of about one foot to eighteen inches deep in mire and mud.

A CLERKENWELLER.

*** Preparations for paving it are understood to be in progress.

OXFORD ARCHITECTURAL SOCIETY.—At the first meeting held in the Society's rooms, Holywell, on Wednesday, October 22, the Rev. J. E. Millard, B.D. of Magdalen College, in the chair, the report of the committee was read: it reviewed the principal architectural works carried on in Oxford during the Long Vacation. The Hon. H. C. Forbes then read a paper, urging that whereas the poor, who from their greater numbers ought on this ground alone to meet with as much or greater consideration than the rich, are much less thought of, and, indeed, in some churches their presence seems almost ignored; and that "the simplest way to meet this evil and to remedy this defect, seems to be to make our churches entirely free, and to have all the sittings in the area of our churches appropriated to the laity, unreserved in any sense, open in short and free to the first comer, the only desirable restriction being, perhaps, that men and women should not be mixed together, but sit on the different sides of the nave respectively." Mr. Parker was in favour of free but appropriated seats, considering other arrangements unsuited to the habits and character of the English.

RAILWAY TRAFFIC RETURNS. — Great Western, week ending October 19, 30,193*l.* 8s. 10d.; corresponding week last year, 28,755*l.* 18s. 6d. Lancashire and Yorkshire, 22,436*l.* 7s. 2d.; last year, 20,136*l.* 5s. 6d. Manchester, Sheffield, and Lincolnshire, 10,028*l.* 2s. 8d.; last year, 9,206*l.* 9s. 10d. Shrewsbury and Birmingham, 1,850*l.* 2s. 9d.; last year, 1,490*l.* 2s. 3d. Edinburgh, Perth, and Dundee, and Scottish Central, 6,437*l.* 12s. 9d.; last year, 5,958*l.* 11s. 4d. Grand Trunk of Canada, week ending September 27, 5,553*l.* 5s. 10½d.; last year, 4,920*l.* 3s. 6d. Midland Great Western (Irish), week ending October 19, 6,032*l.* 4s. 1d.; last year, 3,441*l.* 19s. 8d. Belfast and Ballymena, 1,049*l.* 7s. 5d.; last year, 854*l.* 10s. 6d. Belfast and County Down, 278*l.* 13s. 7d.; last year, 276*l.* 7s. 4d.

RELICS FROM TROY.—Some interesting relics from ancient Troy, Dardanus, and the neighbourhood, are now at the Patent Carving Works in Belvidere-road, Lambeth.

THE SHAKSPEARE PROPERTY AT STRATFORD-ON-AVON.—The trustees of the new fund of 2,500*l.* given by Mr. John Shakspeare for the completion of the preservation and separation of the house at Stratford-upon-Avon, in which Shakspeare was born, have just purchased the two properties, one on each side of the house in Henley-street, known as "Banke's property," for 1,000*l.* and "Warden's property," for 450*l.* During the ensuing spring and summer the trustees will apply the rest of the money in their hands to the further accomplishment of the object in view.

NORMAN DOMESTIC ARCHITECTURE.—An archæological discovery has been made in pulling down a house in Hatter-street—originally Heathen-street, Bury St. Edmund's. Behind the masonry enclosing a fire-place was found an open hearth, with stone jambs of what the local *Post* says is undoubted Norman in character, carrying a mantle-tree of chesnut, in excellent preservation, but of a later date. There is also a fine framework of moulded oak girders and joists for the floor above. The form of the jambs is a triple shaft, with square members between them: the capitals are cushion-shaped, with some remains of the conical ornament, and there is a trace of fresco-colouring. The height of the jambs is about 5 feet, the width of the opening 7 feet, and the funnel of the chimney of the same size gradually contracted.

TELEGRAPHIC COMMUNICATION WITH AMERICA.—Arrangements, it is said, are being made for the formation of a company to lay down across the Atlantic a line of telegraphic communication upon the principles patented by Mr. Thomas Allan, of Edinburgh. This new rope is described as differing entirely from all other sub-marine ropes, combining considerably increased conductibility and strength with such a diminution in weight that the entire cable to connect England with America may be conveniently carried in one vessel. A rope on this principle can be laid down, it seems, at a cost not exceeding 200,000*l.*

MATERIAL FOR MODELLING.—Allow me to ask, through the medium of your paper, whether there is any composition that a sculptor could use wherein he could model his subject at once, without the expense, trouble, and labour of afterwards casting his model in plaster. At the present time this becomes a serious consideration to many artists who might be disposed to compete for the Wellington monument in St. Paul's. If there should not be such a composition, would it not be a good subject for a premium at the Society of Arts? The composition should be nearly white, and not liable to crack when dry.

A SUBSCRIBER.

*** Mr. Hiram Powers, the American sculptor, has more than once described his mode of modelling at once in plaster of Paris, so as to avoid the trouble and cost of moulding.

PROJECTED SHIP CANAL FROM SHOREHAM TO LONDON.—A company is in course of formation for the transport of vessels of whatever tonnage, by means of canal, directly to or from Shoreham and London, thereby avoiding the risk, danger, and expense at present attached to vessels having to go round the Foreland. The number of vessels yearly lost or seriously injured in the Downs, off the Foreland, or on the Godwin and Margate sands, is considered as of itself a sufficient warranty for an undertaking like the present. The loss to Lloyds of property alone exceeds annually a million sterling. The only difficulty in the way of the proposed scheme appears to be the entrance to Shoreham Harbour, but this, it is said, is not insuperable. It is intended to extend the pier half a mile out to sea, and there will then be water enough for vessels of the largest burden to enter, 18 feet being the minimum, and 35 feet the maximum depth of water. There are, it is said, no other engineering difficulties in the way of cutting the canal, and a line of railway is intended to run along its side for towing by locomotives.

ALLEGED NEW DISCOVERY NEAR THE MOSQUE OF OMAR AT JERUSALEM.—The Rev. Mr. Bellew, in a letter from Jerusalem, in the *Times*, last week, states that while investigating, as far as the Pasha's permission and the prejudices of his servants allowed him, the interior and precincts of the Mosque of Omar, and the supposed site of the Temple of Solomon, he accidentally discovered, on the extensive level grassy platform, set with olive-trees, which stretches between the four localities of the Mosques of Omar and El Aksa, the "Beautiful Gate," and the south-eastern corner of the city walls, a small opening in the ground where an arch had recently fallen in, revealing a vault beneath, and that on examining the whole of this platform of olives minutely, he became satisfied that the entire area from the Mosque El Aska to the "Beautiful Gate," is one mass of vaulted chambers, showing that the vast platform, which can only be compared to that of Baalbec, is artificial. The series of foundations and archways, he also remarks, to which these vaults belong, comprise enormous blocks of stone and cyclopean pillars, only to be matched by those at Palmyra and at Baalbec. Mr. Fergusson, in a subsequent letter to the *Times*, expresses his opinion that the vaults referred to by Mr. Bellew are no new discovery; that they are the same as those already recorded in Mr. Catherwood's plans and details; and he regrets that the work of this latter gentleman (who perished some years since in the *Arctic* steamer) has not yet been published, but suggests that it might be so if sufficient interest were shown on the subject. In reply to Mr. Fergusson, Mr. Bellew, who had, meanwhile, come home from Jerusalem, reiterates his assertion, that he is not even yet aware that the vaults to which he refers have ever been discovered till now by any European but himself, and he intimates his knowledge also of those really before discovered and recorded by Mr. Catherwood.

ARCHITECTURAL ASSOCIATION.—At a meeting of the members of the Association on the 17th ult. a memorial to Sir Benjamin Hall, asking for an extension of time for sending in the designs for the proposed new Government offices, moved by Mr. C. Gray, and seconded by Mr. Herring, was determined on. A paper on "Vale Crucis Abbey" was read by Mr. R. Druce, wherein he urged the value of a little carving put in the right place, when funds are small. An interesting conversation followed.

THE LONDON SATURDAY CONCERTS.—Under this title the first of a series of twelve concerts was given on Saturday last at the St. Martin's Hall, which, although clashing somewhat with the "Concerts for the People" already established, we willingly welcome. Mr. Stammers, under whose management they are, has got together rather a stronger company than is ordinarily found at concerts of the moderate cost of these: Madame Zimmerman, Remenyi, the violinist, and Distin, the trumpet-player, are among the soloists. Special mention must be made of the Orpheus Glee Union, by whom some charming specimens were rendered of this elegant style of music.

FALL OF TOWER IN THE BURY NEW-ROAD, MANCHESTER.—Some local discussion is going on as to the cause of this disaster: Messrs. Crowther and Bowden were called in by the committee to inquire into the cause of it, and it is complained that their report has not been made public. One commentator in the Manchester *Guardian* says,—"The committee, in giving their report, admit that the foundations were put in without forethought or any reasonable precautions, and 'the construction having been arranged with the utmost regard to economy,' 'became seriously affected by the irregular settlement, and the quality of the work, as executed, was not such as to withstand their united influences.'"

THAMES TUNNEL.—During the week ending 25th October, 18,789 passengers passed through the tunnel, and paid 78*l.* 5s. 9d.

ARRIVAL OF THE SOULAGES COLLECTION OF ITALIAN ART.—A number of noblemen and gentlemen, representing almost all the great interests of art and manufacture in the metropolis and the provinces, have just imported into this country, at their own risk, M. Soulages' collection of Italian art of all kinds, bronzes, pottery, furniture, &c. The collection arrived safely last week from Toulouse. It is celebrated as possessing unique examples of the works of the great artists of the sixteenth century, M. Angelo, Pisani, Cellini, Maestro Giorgio, &c. The purchase has been made, as our readers have already heard, on the understanding that the collection should be offered to the Government at its cost, and that, if declined, it should be sold by public auction, and any surplus applied to promote art. It will be forthwith exhibited to the public for criticism, and when public opinion has been obtained, the offer of sale will be made to the Government.

SECOND REPORT ON STATE OF SHOREDITCH.—The second quarterly report on the sanitary condition of Shoreditch, by Dr. Barnes, the medical officer of health for the district, has just been printed for the vestry. It states that important progress has been made in improving the sanitary state of many parts of the parish, by filling up cesspools, repairing drains, ventilating, paving, whitewashing, &c. and increasing the water supply and storeage. The existence of underground tanks for storeage is deprecated, and their contents shown to be very foul and unwholesome. The prevalence still of typhoid fever is noted, the excess in Shoreditch beyond the average elsewhere throughout the metropolis being as thirty-five to twenty-eight. The report contains various tables, showing the state of epidemic and other diseases in the district for the quarter ending 27th September last.

NEW PARK FOR GLASGOW.—The committee of the City Council, appointed to inquire as to a site for a public park on the south side of the river, have reported that they have obtained an offer of a very eligible property, containing 143 acres, for 30,000*l.* and unanimously recommend the acceptance of the offer.

ST. ALBAN'S ARCHITECTURAL AND ARCHÆOLOGICAL SOCIETY.—The general meeting of this Society was held on 15th ult. Archdeacon Grant, D.C.L. in the chair. After some official and other proceedings, Mr. John Evans, F.S.A. read a paper on "Jewish Coinage," and the Rev. R. Gee, rector of Abbott's Langley, one "On the Curiosities of Heraldry," showing the connection between heraldry and architecture, and the circumstances in which many coats of arms originated.

PARIS IMPROVEMENTS.—The works of the Louvre, it seems, are to be suspended. The exterior walls will be completed, but the interior, with its proposed decoration, will be left to be carried out under more favourable auspices.

THE PROPOSED NEW ROUTE WEST AND EAST THROUGH SOUTHWARK.—A meeting of the inhabitants of the parish of St. Saviour's, Southwark, was held on 23rd ult. in the vestry-room, to consider the plan of Mr. Irving, approved by a committee of the Metropolitan Central Board of Works, and now before that Board, for the formation of a line of street from High-street, Borough, to Blackfriars-road, where a junction would be effected with Stamford-street. The meeting was numerously attended, and several plans were discussed, Mr. Eli Richards ultimately moving a resolution to the effect that the line of new street from London-bridge to Blackfriars-road be as near as may be the line laid down on the plan submitted by Mr. Taylor (which runs along by the wall of Barclay and Perkins's brewery from nearly opposite the church at London-bridge, instead of from the south side of York street, as on the plan of Mr. Irving, sent to the meeting from a member of the Central Board's committee). An amendment was moved by Mr. Tomkins, to the effect that the plan proposed of opening a new street from the south side of York-street, and taking down all the houses between it and Red Lion-street, would be prejudicial to the trade of the locality; and that the taking down of the houses between Red Lion-street and the Town-hall be recommended to the consideration of the Metropolitan Board. The amendment was lost, and Mr. Richards's motion carried by a large majority of the meeting assembled.

[ADVERTISEMENT.]

27 and 28, Bishopsgate-street, Aug. 1st, 1856.

GENTLEMEN,—After twelve years' experience of your Patent Iron Revolving Shutters, I have much pleasure in testifying to their great superiority over all others; and if I were to put in a new front to-morrow, I should most decidedly give them the preference.

I am, Gentlemen, yours, &c.
ROBERT ALEX. ROONEY.

Messrs. Clark and Co. 15, Gate-street, Lincoln's-inn-fields, Engineers.

[ADVERTISEMENT.]

CHUBB'S FIRE-PROOF SAFES are constructed of strong wrought iron, and the Detector Locks, which secure them, are gunpowder proof. Among recent instances of the security they give to their contents from fire and thieves are:—

Messrs. W. Jones and Sons, Cotton-mills, Manchester. Offices totally destroyed by fire, all the papers preserved in a Chubb's Safe.

Fire at Manchester, Sheffield, and Lincolnshire Railway. Secretary's and other offices burnt, the papers and a large number of bank notes preserved in a Chubb's Safe, although, from the intense heat, the knobs and handles of the safe were melted.

MANCHESTER. — Total destruction of Messrs. Rylands and Son's Warehouses. A large Chubb's Safe (had twelve years previously) in the midst of the flames for fourteen hours, the books and papers were uninjured by the fire.

GUNPOWDER DEFEATED.—Daring attempt to blow open a Chubb's Safe with gunpowder, in the countinghouse of Mr. Blair, Millgate, Manchester, completely unsuccessful, though the force of the explosion moved the safe from its position.

GUNPOWDER DEFEATED.—Another attempt on a Chubb's Safe, with gunpowder, in the offices of Messrs. Nicholson and Co. Cousin-lane, London, proved futile, although the thieves had first used crowbars. The money, deeds, and bills were all found perfectly secure.

Reference to the respective firms as to the correctness of these statements is permitted.

THE LATEST GUNPOWDER DEFEAT.—In the burglary at Mr. Harrison's offices, near Walsall, on 11th instant, six men attempted to blow open the iron safe with gunpowder, but the lock, which was one of Chubb's Patent, resisted their efforts. It is only right to state that the safe itself, which was afterwards broken open with a sledge-hammer, was not of Messrs. Chubb's manufacture, but merely a common one. — (See *Wolverhampton Chronicle*, October 15, 1856.)

Complete Illustrated Price Lists of Chubb's Safes, Detector Locks, Cash and Deed Boxes, sent on application.

CHUBB and SON, 57, St. Paul's Churchyard, London.

TENDERS

For mansion at Sutton, in Surrey, for Mr. William Cooper. Mr. William Reddall, architect:—

Scott and Cornwall	£7,518	0	0
Brass and Sons	6,983	0	0
Lucas, Brothers	6,815	0	0
Saunders	6,800	0	0
Johnson	6,545	0	0
Mansfield and Son	6,398	0	0
Ashby and Sons	6,373	0	0
Norris	6,294	0	0
Lawrence and Sons	6,284	0	0
Nicholson and Sons	6,158	0	0
Burton, Henry	6,086	0	0

For a range of workshops for Messrs. Broadwood and Sons, in the Horseferry-road, Westminster. Messrs. F. and F. Edwards, architects. Quantities furnished:—

W. Cubitt and Co.	£9,980	0	0
Kelk	9,962	0	0
G. Mansfield and Son	9,943	0	0
G. Baker and Son	9,550	0	0

For re-building the South Sea Chambers, Threadneedle-street. Messrs. Nelson and Innes, architects:—

Carter	£7,941	0	0
Fish	7,500	0	0
Harding	6,961	0	0
Todd	6,798	0	0
Lucas	6,700	0	0
Piper	6,609	0	0
Jay	6,386	0	0
Myers	6,085	0	0

For house and temporary church, William-street, Pimlico. Mr. Wardell, architect:—

	House.	Church.	Total.
Jackson	£3,745	£2,375	£6,120
Kelly	3,563	2,486	6,049
Miers	3,063	2,134	5,197

TO CORRESPONDENTS.

"C. F. M." (we have no reason to doubt the correctness of our information. Tenders for part of the work for the Lewisham Board were advertised for last week; and the *working* drawings are now before the Deptford Board).—"W. R."—"Block-Plan" (a *block-plan* shows merely the outline of the building or other object represented in plan).—"Thoughtful Worker" (oil on stonework dries out and becomes inoperative. It is not required for good stone, and will not save bad).—"B. H." We shall always be glad to receive the information offered).—"C. S."—"T. B."—"J. B. W."—"J. E."—"C. P."—"J. S." Southampton (we shall be glad to see the drawings).—"*Finem Respice.*"—"J. P. W."—"J. M."—"*Florent Maestas.*"—"R. B. E."—"A. B." Southwark (send us the particulars).—"W. S."—"F. R."—"E. R. B."—"H. H. R."—"R. L. S." (thanks).—"¼ Scale."—"J. B."—"C. H. W."—"R. F. S. Y." (it is not an accepted term)—"F. T. M."—"Plasterer."—"G. W. S."—"F. C."—"Esperance."—"Economist."—"Knutsford" (next week).—"T. C."—"A. S."—"C. B."—"W. A."—"J. F. P."—"Insure the Bridges."—"A Surveyor" (the process named would, we have no doubt, be successful. Lime-water would be much cheaper, but might not be so effectual).—"Common Sense" (a larger number of trees would not flourish).

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 80, Old Broad-street, London; to Mr MONUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail at his wharf, 6, Upper Thames street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED, 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTH-FLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brick-work, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL. — Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO, CEMENT, STUCCO PAINT. — CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road Office, 4, George-yard, Lombard-street.

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PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs, Warehouse, No. 1, Wharf, Paddington-basin

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ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements (read at the Institute of Civil Engineers), to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

CHARLES RICHARDSON,
3 & 6, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 6, South Wharf, Paddington.

NOTICE.

CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor tropical climes act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil, and where it is used with Size, Varnish, &c. To prevent the prejudice against Zinc paint, which the adulterated article must otherwise produce, it is now sold by the Wholesale Paint-dealers in Original Pakages, each cask stamped, HUBBUCK—LONDON PATENT. And when so marked, the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

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CEMENT and PLASTER MANUFACTURERS,
LIME BURNERS,
Brick, Tile, Drain-pipe, Hair Lath, and Fire Goods Merchants
ST JAMES'S and THORNHILL WHARFS,
Caledonian road, London.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal gauger's pass, by which the purchaser may know the exact weight delivered. — Orders addressed to the London Depôt, 16, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

DAVIES and NORMAN,
CROWN WHARF, GREAT SCOTLAND YARD.
ROMAN and PORTLAND CEMENTS,
LIME, BRICKS, TILES, SLATES, FIRE GOODS, &c.
STONEWARE PIPES, PANS, TRAPS, &c.
A Liberal Allowance to the Trade.

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SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump into boats, at the Works. Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS,
12, UPPER GROUND-STREET, Blackfriars, Surrey side,
7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 8d. per ton.

Small ditto ditto, 4d. per ton.

Barges loaded in a few minutes.

Woulham-hall Grey Stone Lime Works, on the Medway, near Rochester.

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Water-works Companies, Coal-Mine Proprietors, Builders, Contractors, &c. JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, is prepared to enter into contracts with any of the above branches that may favour him with their orders. The advantages to be derived from the above Cements, manufactured by J. C. over all others, are their extraordinary hydraulic properties.—Samples and references may be had on application either at the Works, Ashton New-road; or the Warehouse, 5, Broom-street, Shude-hill, Manchester.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
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BRICK-FIELDS, QUEEN'S-ROAD,
PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
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BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Writing Whiting Sand for ashphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods both Welsh and Newcastle. Fire-clay, Flare burnt Lime, and Marble and Temper Lime, and here lime is packed in hogs-heads, casks, jars, &c. for exportation.

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THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Warlingham (close to the field), leave at 6 and 9·30 a.m. and 3 p.m.; return at 9·55 a.m. and 5·5 and 7·55 p.m.

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37, King William-street, City.

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WILLIAM GILBERT, Manufacturer of all kinds and colours of Tiles, Quarries, Drain pipes, Moulded Bricks, Brackets, Vases, Chimney-pots, Stoneware Glazed Sewerage Pipes, Ornamental Quarry Blocks, &c.
Tividale, Staffordshire.

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For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Rugby.

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WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that 62lbs. of Wolston's Torbay Iron-Paint will effectually cover as much surface as 112lbs. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

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Pumps in Wrought and Cast Iron and Brass, cored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barns, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

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Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B The above can be worked either by hand, horse, or engine power.

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Ditto .... 48s. per doz. galvanized.

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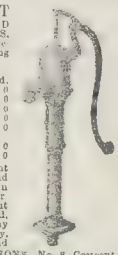
WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, cottages, mansions, tanks, and wells of any depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.	£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead, 1 10 0
2½ „	long 3 3	gutta percha 1 14 0
3 „	ditto 3 3	or cast iron 2 3 0
3½ „	ditto 3 6	flanged pipe, 2 12 0
4 „	ditto 3 6	as required, 3 3 0
5½ „	short, with 15 feet of lead pipe attached, ready for fixing	2 14 0
5½ in.	long ditto ditto	2 18 0



The short-barrel Pump is very convenient for fixing in situations of limited height and space. For the supply of coppers and sinks in wash-houses with soft water from under-ground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage. May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

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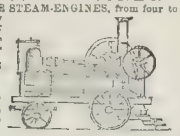

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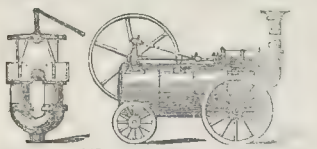
Engineers and Contractors,
Johnson's-place, Holland-street,
Southwark, London.



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LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,
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STORES—70, SOHO-STREET, LIVERPOOL.

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SINGLE AND DOUBLE PUMPS IN WROUGHT IRON
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Sizes, from 3-inch to 15-inch barrels.

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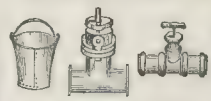

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These Pencils are prepared in various degrees of hardness and shades.

H H H H for drawing on wood.	F F light and shading.
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AMERICAN OILSTONES, superior to all other Oilstones for sharpening Edge Tools. Can be cut to any shape or size. AMERICAN OILSTONE DUST, 2s. 6d. per lb. Patentee of the Engineers' Ratchet Drilling Brace, from 21s. each.—JOSEPH FENN, Tool Manufacturer, 165, Newgate-street, London.

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PARIS EXHIBITION. — ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1846. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of loo-tables, chiffoniers, consoles, &c.; baths, baptistries, altar-tablets, pilasters, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now made of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; and at Messrs. Brabv's, Belvidere-road, where terms may be obtained.

ROOFING SLATES, or COVERING, or SLATE CISTERNS, SINKS, SLABS, or SLAB WORK. T. B. HANSFORD, being part owner of an extensive quarry, is actually enabled to supply the above at price considerably lower than the usual quotations, but his friends, and the trade generally, may rely on first-class materials and workmanship. 12-inch slate paring, 45d. per foot super.—Trenuiga-wharf, Ratcliff-cross.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1838.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner, or supplied in any quantity. Information for using it sealed with material Post-office orders or reference in London promptly attended to Estimates given for every kind of the above work.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
FROM 2s. 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Poloneeau and Limmer Asphalte Office, Monument chambers, 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

BUILDER'S BUSINESS WANTED.—Any party wishing to dispose of an old-established JOBBING BUSINESS, in or near the City, where six or eight men are constantly employed, and which could be improved, can hear of a purchaser by sending particulars addressed to G. C. 5, Kent-terrace New Cross-road, Deptford.

TO CARPENTERS, BUILDERS, &c.—A BUSINESS TO BE DISPOSED OF as above, situated a few miles east of London; for stock, implements, goodwill, &c. together with three leasehold houses, price 450l. nett. The stock can be separated from the purchase, and a part of the purchase remain unpaid, if preferred, to suit the convenience of parties; but it is requested by the proprietor, that none but such as are in want of a business will apply.—Direct to G. A. R. at the Office of "The Builder."

TO BE DISPOSED OF, an old-established BUILDER'S BUSINESS, with a good Jobbing connection Coming in the selling Stock-in Trade, Goodwill, &c. 6 or 7l. The whole of the money not required at once.—Apply to Mr. C. BROWN, West-cross place, Hammersmith

IRON FOUNDRY and STOVE GRATE MANUFACTORY, JERSEY.—TO BE DISPOSED OF, a small and lucrative BUSINESS, established more than 30 years, in Jersey, and now in full operation. The original proprietor retired on an independence realized 12 years ago, in favour of his son, who has recently deceased, an event in consequence the business is for disposal. It presents a most eligible opportunity to any young man possessing a knowledge of the trade. No goodwill is required. The stock, trade, and patterns, sold —Apply to Messrs. FULLER and HORSEY, Billiter-street, London.

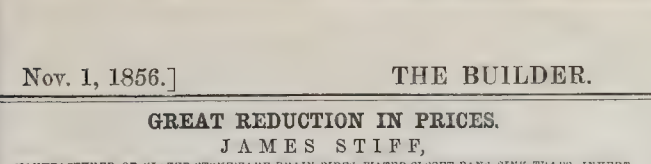
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz. :—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, Kingsland-road, Camden-town.
Messrs. COLES, MADBOLT, and CO.'S, St James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. HITCH and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					2½d. per foot.
4	"	"	"	"	3½d. "
6	"	"	"	"	5d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 5d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that road earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

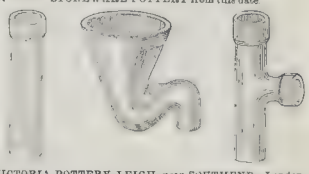
MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date



VICTORIA POTTERY LEIGH, near SOUTHEND, London Establishment, Falcon Wharf, 99 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—

LAMBERT'S PATENT.

These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street London.

DRAUGHT and DUST EXCLUDER from 1d. to 6½d. per yard, easily fixed to doors and windows. Sole Patentee, R. HILLINGTON, 7, Accrington-street, Wandsworth-road; and at Messrs. BURGESS and KEY'S, 97, Newgate-street.

NO CHIMNEY WANTED for RICKETS'S PATENT CALORIFERE GAS STOVES in CHURCHES, HALLS, or SHOPS;

And for Counting-houses, or any close Apartment, a Pipe can be affixed to carry off the vitiated air.

RICKETS'S CHEAP GAS STOVE, Price £1. 15s.

Made of Sheet Iron, suitable for Heating small Counting-houses, Bedrooms, Cellars, &c. &c.

MANUFACTORY, AGAR-STREET, STRAND, LONDON.

Liberal Discount to Builders.

SALES BY AUCTION.

Valuable Water-side Premises on the Regent's Canal, Kingsland-road, with Cement Kilns, Steam Engines, &c. and an improved Rental of 94l a year.

MESSRS. EVERSFIELD and HORNE are instructed by the Mortgagee to SELL by AUCTION, at the MART, on TUESDAY, NOVEMBER 25, in two lots, the beneficial LEASE of the extensive PREMISES, known as Tuscany Wharf near the Canal-bridge, Kingsland-road, fitted up at a great expense by Messrs. Freen and Co. for the manufacture of cement, but equally applicable for many other purposes. Held for a long term, at a moderate ground-rent; also an improved rent of 94l a year, arising out of a plot of ground opposite Tuscany Wharf.—May be viewed by leave of the tenants, and particulars had of Edward Jennys, Esq. Solicitor, 13, New Roswell-court; at the Mart; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

Re C. J. MARE, BLACKWALL,—TO IRONMASTERS AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on the PREMISES, Blackwall on MONDAY, NOVEMBER 10, in lots, the EXTRA ROLLS and GEARING, with the TOOLS and UTENSILS of the ROLLING MILLS and FORGES, including sixty pairs of rolls for bar, rod, nail, bolt, and hoop iron, from 1 ton to 5 tons weighing 165 tons; twelve tons mill couplings, a new 30-inch tooth spur driving-wheel, 13 feet diameter, in segments; a ditto, 9 feet diameter; one ditto, 6 feet diameter, reared; five spare pinions; two new tilt hammers, 5 tons each; one new cam-head, six tons; four pair new pinion standards; one new 5-ton hammer, for Nasmyth's steam-hammer; fifty tons anvils, and hammers for ditto; fifty tons of tools for ditto; two tons cam arms, five tons tilt-hammer faces, twenty tons counter balance weights, twenty iron heads for rolls, ten steel ditto, bolts, nuts, T, and L bars, eleven wrought-iron coal-shoots, two double-purchase crabs, five patent lever weighing-machines, scales, and weights, and other effects. To be viewed on Friday and Saturday previous to the Sale, when catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newdon, Evans, and Newdon, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—TO IRONFOUNDERS, SMITHS, AND OTHERS

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on the PREMISES, Blackwall, in lots, on TUESDAY, NOVEMBER 4, and two following days, at ELEVEN, the TOOLS, UTENSILS, and STOCK of the FOUNDRIES and SMITHS' SHOPS; 100 tons broken cast-iron, six tons Blowdown pigs, 150 tons flasks, core boxes, loam rings and plates, 150 tons cast-iron girders, intended for the new bridge at Westminster; five tons new patent furnace bars, six very superior wrought-iron crane ladels, from one to ten tons, with slings and gearing; sheak and bench anvils, twelve to two chain slings, twenty tons flask weights, flask beams and hooks, screws, ten stocks, cast-iron borers, two hydraulic girder proving machines, a large and valuable collection of wood patterns, pattern makers' benches and tools, seasoned boards, fifty wrought-iron anvils, from 3 to 5 cwt. on cast-iron stands; 100 cast-iron swages, twenty cast-iron troughs, ten tons rod tools, top and bottom swages, chisels and punches, bolt tools, hand and sledge hammers, sets, stocks, taps, and dies, steel tools, ten tons faggotting monkeys, and numerous other effects.—To be viewed on Friday and Saturday previous to the sale, when catalogues may be had at the works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newdon, Evans, and Newdon, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Fuller and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—TO BOILER-MAKERS AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on the PREMISES, Blackwall, on FRIDAY, NOVEMBER 7, at ELEVEN, in lots, the TOOLS of the BOILER-MAKERS' DEPARTMENT, and THREE SECOND-HAND MARINE BOILERS, in good condition, having been used but a very short time; 150 tons bending slabs and plates, twelve large anvils, swages, mandrils, thirty wrought-iron portable forges, troughs, ten tons boiler-makers' tools, bears, cramps, dollies, hammers, &c. ratchet braces, steel tools, stocks, taps, and dies, ten tons boiler-stay screws, twenty tons boiler rivets, crab cranes, hollow falls, chain slings, proving-pump, weighing-machine, one pair of marine boilers, collectively of 80 horses power, with 360 brass tubes in each; and one 6-horse power engine, suitable for a pair of 30-horse power engines all of them in good condition, having been used but for a short period only; and numerous other effects.—To be viewed six days prior to the sale, when catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newdon, Evans, and Newdon, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Fuller and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—TO LIGHTERMEN AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on the PREMISES, at Blackwall, in lots, about fifty tons burden, 46 feet length overall, 14 feet 6 inches beam, depth of hold 7 feet 4 inches, iron decks and combings to hatchways, rudders, and mast steps.—To be viewed six days prior to the Sale, when catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newdon, Evans, and Newdon, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Pullen and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—STORES OF IRONMONGERY, STEEL, COPPER, AND BRASS

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignee to SELL by AUCTION, on MONDAY, NOVEMBER 17, and following days, at ELEVEN, at the WORKS, Blackwall, in lots, the STORES of IRONMONGERY, STEEL, COPPER, and BRASS, including 5 tons iron bars, Burton and Ibbotson's; fifty tons bolts and nuts, assorted, 1,000 feet copper and brass tube, thirty cwt. block tin, two tons brass work in hinges, cocks, unions, washers, and waste; valves, five tons old copper and brass, thirty cwt. sheet copper, two tons second-hand brass work, ten cwt. brass wire, six 15-inch ship's bells, thirty 24-inch brass lift pumps, twelve 30-inch brass pumps, two 7-inch Downton's pumps, 150 brass frame illuminators, 4, 5, and 6 inches; 180 brass pump buckets and boxes, 7 to 4 inches; 1,000 feet gas tube, 1,000 elbows, brass sockets, including 5 tons iron Burton and Ibbotson's; fifty tons bolts and nuts, assorted, 1,000 feet copper and brass tube, thirty cwt. block tin, two tons brass work in hinges, cocks, unions, washers, and waste; valves, five tons old copper and brass, thirty cwt. sheet copper, two tons second-hand brass work, ten cwt. brass wire, six 15-inch ship's bells, thirty 24-inch brass lift pumps, twelve 30-inch brass pumps, two 7-inch Downton's pumps, 150 brass frame illuminators, 4, 5, and 6 inches; 180 brass pump buckets and boxes, 7 to 4 inches; 1,000 feet gas tube, 1,000 elbows, brass sockets, including 5 tons iron bars, 100 tons ship rivets, 200 gross wood screws, ten dozen shovels, ten cwt. iron wire, ten cwt. hammers, one ton welded and cut rings, four dozen iron buckets, five tons studded chain, ten cwt. shackles and bolts, five dozen wood blocks, two tons rope, six coils spun yarn, fifty dozen augurs, 500 feet new leather straps, ten cwt. cotton waste, five weighing-machines, one ton old files, and other effects. To be viewed on Friday and Saturday previous to the Sale, when catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrence, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newdon, Evans, and Newdon, Solicitors, Wardrobe-place, Doctors'-commons; and of Messrs. Fuller and Horsey, Billiter-street, City.

SALES BY AUCTION.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on TUESDAY, 11th NOVEMBER, 1856, and following days, at ELEVEN o'clock each day, on the PREMISES, the Atlas Works, Rotherhithe, unsurpassed Southern effects. At previously disposed of by private contract, of which due notice will be given, the MACHINERY and TOOLS of the ATLAS WORKS, including a large and powerful self-acting boring machine, drilling-machine, ten very powerful lathes, for engine turning and screw-cutting, vices and benches, steel tools, four smiths' forges, a large assortment of engineers' and smiths' tools, two steam engines, and boiler, shafting, and gearing, screwing apparatus, a valuable collection of new patterns, in wood and iron, stores of iron, and numerous other effects. At the same time will be SOLD, the LEASE of the PREMISES, comprising a substantially-built factory, of two floors, the upper story used as a fitting-shop, turnery, and store-room. The lower floor used as an erecting shop, turnery, engine house and smith's shop, a workmen's dining-room, stable-yard, a convenient residence, and offices, held on lease for a term of twenty-six years, at a rent of 80l. per annum.—The Premises may be viewed till the sale, and the Machinery on Monday previous. Particulars and catalogues may be had on the Premises, and of Messrs. Fuller and Horsey, 13, Billiter-street, City.

KIRKBURDY WOOD and STOCKING-GREEN, Railwaster, near Saffron Walden, Essex (70 BEARS sold by AUCTION).

MESSRS. NOCKOLDS and KING, upon the PREMISES, at TEN o'clock, on FRIDAY, NOVEMBER 7, 1856, about 340 OAK TIMBER TREES and 200 Oak Poplars, as now lying in Kirkburdy Wood and on Stocking-green, by the side of the road leading from Walden to Radwinter. The trees are of good quality, long lengths, and well worthy the attention of builders, coachmakers, and others. Six months' credit will be given upon approved security on all purchases over 40.—May be viewed by applying to the Railster at Wills Alle and New House Farms, Radwinter; of whom catalogues may be had; also at the Office of the Auctioneers, Saffron Walden.

TO TIMBER MERCHANTS, BUILDERS, CABINET-MAKERS, CONTRACTORS, AND OTHERS.

MR. MARSH has received instructions from the proprietor to submit to PUBLIC SALE on the PREMISES, Philpot-street, Commercial-road East, on TUESDAY, the 11th NOVEMBER, at ONE o'clock precisely, Twelve Loads superior Quebec Birch, Five Loads Dry Ash Plank, Five Loads Dry Hornbeam Plank, Two Loads Dry Live Oak, Three Loads Dry Sycamore Board and Plank, 3,000 feet Dry Mahogany Boards and Plank, with Pine Plank. Floor Boards and other Goods, more particulars of which will appear in catalogues.—May be viewed two days prior to Sale.—Catalogues had of W. Cooper, Esq. 13, George-street, Mansion-house; and of the Auctioneer, Philpot-street, Commercial-road East.

EAST-STREET, WALWORTH.—To GOVERNMENT CONTRACTORS, BUILDERS, BUILDING MATERIAL DEALERS, and OTHERS

MR. PEAKE is directed to SELL by AUCTION, on the PREMISES as above, on THURSDAY, NOVEMBER 6th, 1856, at TWELVE o'clock, without the least reserve, TEN BUILDERS' CARTS, three dobbin carts, twelve sets thill harness, four axle-engines, four ringing-engines, large quantity of rain-pipes, traps, and bends, new rye-grass, wheeling planks, 100 battens, fir timber, about 15 cwt. nails, bar and rod iron, 1,000 sacks various, quantity of new iron, useful ironmongery, zinc, stove, and a variety of materials.—May be viewed the morning of sale, and catalogues obtained of Mr. Peake, Builders' Auctioneer, 44, Tooley-street, Southwark.

TOWER.—SALE of STORES.—By order of the Secretary of State for War.—TO BE SOLD, by PUBLIC AUCTION, in the TOWER, on WEDNESDAY, 5th of NOVEMBER, 1856, at ELEVEN o'clock, in the forenoon precisely, the following STORES, lying at the Victoria (London) Docks, viz. Blankets and Rugs, Sheets (cotton and linen), Waterproof Sheets and Coats, Hospital Clothing, Great Coats, Belts and Pouches, and pair Meadow Mat 1, containing about 2 acres; also two other Residences, with Gardens, and two enclosures of Land, Victoria Docks.

MESSRS. FAREBROTHER, CLARK, and LYE are instructed by the proprietor (removing to his estate in Hertfordshire), to sell at GARRAWAYS, on WEDNESDAY, NOVEMBER 12, at TWELVE (unless in the meantime an acceptable offer be made to purchase the whole, or to rent the large residence and 18 acres of land), the following very valuable FREEHOLD ESTATES, situate within three miles of London between Stockwell and Tulse-hill, and comprising Stockwell Lodge, a spacious family residence, replete with comfort, and upon which a very large sum has been expended within a few years in additions of new reception-rooms, &c. standing in its own beautiful grounds, with lawn, kitchen garden, hot and green houses, conservatory, shet of water, stabling, farm-yard, and about 18 acres of park-like meadow land, ornamented with timber and plantations, and for many years the favourite residence of Henry Smith, esq., and in the undisturbed possession of this portion of the property may be had. The adjoining freehold residence, with its lawn, pleasure-grounds, kitchen garden, paddock, and stabling, with about 4½ acres of land, in the occupation of John Gladstone, esq., at the very low rent of 200l. per annum. Also two capital houses and gardens, fronting Stockwell lane, one in the occupation of Edward Foley, at 31l. per annum, and the other on lease to Mr. Palmer, at 60l. per annum, two lodges let at 40l. per annum, and two enclosures of meadow land, with extensive frontage, adapted for building purposes. Particulars and plans may be had of C. G. C. Oriel, Esq. Solicitor, 36, Alfred-place, Bedford-square; at Garraway's; and at the Offices of Messrs. Farebrother, Clark, and Lye, Lancaster-place, Strand.

Important to Railroad Contractors, Timber Merchants, and Others.—Tunbridge Wells, Frant, Robertsbridge, and Etchingham Stations, South-Eastern Railway.

MR. GEORGE NEWMAN is instructed to SELL by AUCTION, without any reserve, in about ten days from the present date, about 600 good SCOTCH and LARCH FIR and DEECK SLEEPERS; also a large quantity of FENCING, in excellent condition, and now lying at the above-mentioned stations.—Further particulars in a future advertisement. Auction, Estate and Valuation Offices, Tunbridge Wells, and Hastings.

LORDSHIP LODGE, TOTTENHAM.—Valuable Building Materials.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to SELL by AUCTION, on the PREMISES, Lordship-lane, half a mile from the Hornsey Station on the great Northern Railway, and 1½ mile from Tottenham Station on the Eastern Counties Line, on TUESDAY, NOVEMBER 11, at TWELVE, the valuable BUILDING MATERIALS of Lordship Lodge, with the stabling, coach houses, vinery, and buildings, comprising upwards of 2,000 superior stock bricks, large quantity of excellent timber in roofs, floors, and partitions, flooring battens and boards, mahogany and other doors with plate-glass sashes, frames and fittings, elegant Italian marble and other chimney-pieces, about seven tons of lead in gutters, ridges, and flats, lead and iron lift-pumps, mahogany water-closets, stoves, ranges, cupboards, and other fixtures, stone portico, York and pebble paving, coach-house gates, posts and rails, iron palisades, and other fencing, the vinery with large iron pipes and hot water apparatus, and other effects.—May be viewed the day previous to the sale.—Catalogues had at the Inns at Hornsey, Tottenham, and Edmonton; and of Messrs. Norton, Hoggart, and Trist, 62, Old Broad-street, Royal Exchange.

SALES BY AUCTION.

WELL-SECURED GROUND-RENTS AND VALUABLE LEASEHOLD RESIDENCE

MESSRS. BEADEL and SONS are instructed to SELL by AUCTION, at the MART, Bartholomew-close, London, on TUESDAY, NOVEMBER 11th, 1856, at TWELVE o'clock, in lots, NINEPEEN valuable GROUND-RENTS, well secured upon ten houses in Upper Berkeley-street West: No. 14, Great Cumberland-place, Hyde-park; and Nos. 1, 2, 3, and 4, Cumberland-mews, producing 183l. 4s. per annum, for an unexpired term of thirty-two years; also an improved rent of 52l. 8s. per annum, arising from capital leasehold premises, No. 15, Norfolk-street, Park lane, with coach-house and stable in Hamyard, in the rear, for an unexpired term of twenty and a half years from Lady-day last.—Particulars and conditions of sale may be obtained of Messrs. Lee and Bolton, Solicitors, 2, Broad Sanctuary, Westminster: at the Mart; and of Messrs. Beadel and Sons, 25, Gresham-street, London.

NEW WINDSOR ESTATE. — Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences, with Stabling, which are much needed in this beautiful locality. The situation is the finest in or near Windsor, abutting on the Park and Long Walk, and commanding a splendid view of the Castle. Within ten minutes' walk of the Great Western and fifteen minutes' walk of the South-Western Railway Stations. Advances can be had by responsible parties.—For particulars apply to Mr. WILLIAM SIM, Architect and Surveyor, 3, Danes-inn, Strand.

FREEHOLD LAND, Land-tax and Tithe Redeemed. — TO BE LET, on Building Lease for Ninety-nine Years, One Plot on each side of Eden Villa, Milton road, Stoke Newington, 34 feet front by 104 deep; One Plot, 21 feet front, 200 feet deep—houses let on both sides, near the Oak Tavern, in Oakfield road, Anerley, Surrey, near the Crystal Palace; One Plot, 46 feet frontage, 110 deep, in Grenville-row, adjoining the Gardens in Hanley-road, Horsey-rise; One Plot, 37 feet front, 113 deep, in Saxon-road, Coborn New road, Bow—a house built on the same side, on the other the gardens of Sarah Grange; One Plot, 16 feet front, 118 deep, in Leytonstone-road, Essex, opposite Bunney's Nursery, and adjoining a row of six houses, all let.—Apply to F. J. WEIGHTMAN, of Eden Villa, as above.

FREEHOLD BUILDING LAND.—TO BE SOLD, together or in two lots, TEN ACRES, with frontage to good newly-made roads of nearly 4,000 feet, exclusive of the second frontage of eighteen corner plots, close to a station, four miles from the City, well suited to a land or building society. Price moderate.—Apply to D. B. SLADEN, Esq. Solicitor, 9, King's arms-yard, Moorgate-street, City.

VALUABLE FREEHOLD LAND, EAST BARNET. — TO BE SOLD by PRIVATE CONTRACT, about THIRTY ACRES (in separate fields or plots), of FREEHOLD BUILDING LAND, finely situated in the vicinity of the Great Northern Railway station, and admirably adapted in every respect for building purposes, having extended frontages upon the high road on each side of the railway, and also upon newly-formed roads. The situation is noted for its salubrity, scenery, and facility of communication with London. — For further particulars, apply at Mr. THYNNE'S offices, 11, Great George street, Westminster.

FREEHOLD LAND TO BE LET, on the River Thames, between the river and the Victoria Docks, being very near the dock entrance, on BUILDING LEASES for ninety-nine years. This land has not only the advantage of river frontage, but it is bounded on the land side by a branch of the Eastern Counties Railway, into which sidings may be made.—Plans of the property may be seen, and particulars had of Mr. JOHN OAKLEY Land Agent and Surveyor, 60, Doughty-street; and of Messrs. KINGSFORD and DORMAN, Solicitors, No. 23, Essex-street, Strand.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety-nine years, with power of enfranchisement. Plots from one to four acres for large villa residences; smaller plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 8, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Gray's-inn-square.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to respectable parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

TO BUILDERS.—TO BE LET, on advantageous terms, TWELVE PLOTS of BUILDING LAND at Chelsea, in a first-class position, with 18-feet frontages.—Apply to J. SHEPPARD SCOTT, Architect, &c. 16, New Broad street, City.

BELSIZE-PARK, HAMPSTEAD.—A portion of this PARK will be LET on BUILDING LEASES to respectable builders. There are bricks on the ground, and the roads and sewers are completed. Money, if required, would be advanced on mortgage.—Apply to Mr. WILLIAM THOMPSON, Architect, 3, Conduit-street West, Westbourne-terrace.

BRICK and TILE YARD and LAND, for Villa Residences.—The Branchlife Estate, near Worksop, situate on the Manchester, Sheffield, and Lincolnshire Railway.—TO BE LET, from FIFTEEN to TWENTY ACRES of excellent BRICK CLAY, from 19 to 14 feet thick, which has been tested and found to be superior to any other in the vicinity. A lime quarry is in full work on the estate, producing lime of the very best quality. Arrangements might probably be made for working the lime and the brick clay together. A tramway runs from the north of the estate to the main line on the south and the Chesterfield and Cromwell Canal also passes through the estate, and they immediately adjoin the brick clay, so that every facility for transport, and establishing a first-rate brick and tile yard is thus afforded. Much of the land is highly suitable for villa residences. It runs on the north side of the estate, abutting out of sight the lime quarry; commanding a southern aspect, and beautifully picture que panoramic views over the four ducal estates by which it is surrounded, and is always well supplied with game. Every encouragement will be afforded to a builder who would take land for villa residences. Shireoaks Station adjoins this estate, which is only three miles from the improving town of Worksop, and fifteen miles from Sheffield.—Permission to view and make trial of the clay, and further particulars, may be obtained of BRODHURST and HODDING, Solicitors, Worksop.

BUSINESS PREMISES.—WANTED, by the Advertiser, PREMISES suitable for a Carpenter and Builder; West-end preferred.—Apply by letter to L. H. No. 19, Mitre terrace, Downham road, Kingsland.

SPARE ENGINE POWER.—WANTED, for a temporary purpose, a LIGHT ROOM, with Two to Three Horse Power, within ten minutes' walk of the Royal Exchange. Apply, by letter, to R. Messrs. Hooper and Cull's, 13, Lombard-street.

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The Builder.

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ARCHITECTURAL EXHIBITION, SUFFOLK-STREET GALLERIES, PALL-MALL EAST. All drawings to be sent in on the 1st and 2nd DECEMBER next. Department for Materials, Decorations, Manufactures, &c. connected with Building. The Committee have a little floor and counter space, and some wall ditto, still unappropriated. Applications should be made at once, by letter (to Mr. JAMES EDMESTON, jun, Honorary Secretary).

JAS. FERGUSSON, F.R.A.S., 20, Langham-place, Regent-street, } Hon. Secs.
JAS. EDMESTON, Jun., 5, Crown-court, Old Broad-street, }

DEPARTMENT of SCIENCE and ART TRAINING SCHOOL, Kensington Gore South.—The Classes for Mechanical, Engineering, and Architectural Drawing, for the Autumn Session, HAVE NOW COMMENCED. Fees—Morning Class 4*l.*; Evening, 2*l.* per session.

THE CENTRAL SCHOOL of ART for TRAINING TEACHERS, and for the PUBLIC, OPENED at the new Premises, at Cromwell-road, Kensington Gore South, on MONDAY, the 3rd of NOVEMBER. Prospectus may be obtained on application personally, or by letter.

NORMAN MACLEOD, Registrar.

NOTICE.—All Public Schools for the Instruction of the Poorer Classes may obtain an allowance towards providing Examples, &c. for teaching Elementary and Mechanical Drawing, by applying by letter to the Secretary of the Department of Science and Art, Cromwell-road, Kensington, London, W.

NORMAN MACLEOD, Registrar.

COMPETITIONS.

TO ARCHITECTS.—The Directors of the Berwick Corn Exchange Company (Limited) invite Architects to furnish DESIGNS for a new CORN EXCHANGE, with Committee Rooms, &c. for the town of Berwick. Sketches of ground-plan and other particulars may be obtained from the undersigned; but it is desired to leave architects unfettered as far as possible, not only as to general design, but as to the internal arrangements of the proposed building. There will be awarded for the design which shall be adopted (with the subsequent addition of complete specifications), the sum of 40*l.*; and for the design next most approved of, 15*l.*; and these designs shall become the property of the Company. With each design must be lodged an estimate of the cost of carrying it into execution. Designs intended for competition must be lodged with the undersigned on or before the 1st JANUARY next.—By order,

STEPHEN SANDERSON, Secretary.
Sandgate, Berwick, November 4, 1856.

BOROUGH of SUNDERLAND.—SEWERAGE WORKS.—To PLUMBERS, SANITARY ENGINEERS, and OTHERS.—The Corporation of the Borough of Sunderland, being now engaged in carrying out their Sewerage Works, are anxious of adopting the most approved WATER-CLOSETS in connection with these Works; they therefore offer a PREMIUM of FIVE POUNDS and THREE POUNDS respectively (together with the recommendation of the Council), for the two water-closets, which, in their opinion, are best suited for the Borough.—Specimens, complete with all cisterns required and ready for attaching to the main, with the price affixed, are to be forwarded, free of charge, on or before the 10th of NOVEMBER next, to WILLIAM CROZIER, Esq. C.E. Borough Engineer, of whom any further particulars may be known.

By order, WILLIAM SNOWBALL, Town Clerk.
Sunderland, October 23, 1856.

COMPETITIONS.

STOKE PARK ESTATE COMPANY.—To IRONFOUNDERS and OTHERS.—WANTED DESIGNS and ESTIMATES for about One and a Half Miles of WROUGHT-IRON HURDLE FENCING, 4 feet high; to include Seventy-two 4½-feet Gates, to work double. The estimate to include fixing in the ground. Tenders to be sent sealed to Mr. M. H. BROWN, Surveyor, 12, High-street, Coventry, on or before the 17th of NOVEMBER, 1856.—This advertisement will not be repeated.

CONTRACTS.

NOTICE to BUILDERS and CONTRACTORS.—ORDNANCE WORKS.—The Commanding Royal Engineer of the Dover District hereby gives Notice, that sealed TENDERS will be received at the Office of the Director-General of Contracts, Pall-mall, London, on or before SATURDAY, the 15th day of NOVEMBER, 1856, from persons desirous of CONTRACTING for WORKS to be EXECUTED in improving the Fortifications at Dover Castle. A specification of the works to be executed may be seen by persons fully competent to undertake the work (none others need apply), and Specifications and forms of Tender obtained at the Royal Engineer Office, Dover, between the hours of TEN and FOUR o'clock, from SATURDAY, the 1st of NOVEMBER, to FRIDAY, the 14th of NOVEMBER, 1856, Sundays excepted. The party whose Tender may be accepted for the work will be required to enter into a bond, with two eligible securities, jointly and separately, to be bound under a penalty of 2,000*l.* for the due performance of the contract. Tenders for the above work to be addressed to the Director-General of Contracts, Pall-mall, London, and endorsed "Tender for Works at Dover Castle."

N.B.—The War Department reserve to themselves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Dover, October 15th, 1856.

NOTICE to BUILDERS.—The Commanding Royal Engineer of the London District hereby gives Notice, that sealed TENDERS, addressed to the Director-General of Contracts, will be received at the War Department, Pall-mall, on or before the 29th NOVEMBER next, for ERECTING the BARRACKS at the Forcing ground, Kensington. Plans may be seen, and printed schedules and forms may be obtained, at the Royal Engineer Office, 11, James-street, Pimlico, between the hours of ELEVEN and THREE o'clock, from the 10th to the 28th NOVEMBER next, inclusive. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.
11, James-street, Pimlico, October 25th, 1856.

CONTRACTS.—WAR DEPARTMENT.—To BUILDERS and CONTRACTORS.—The Commanding Royal Engineer of the Aldershot District hereby gives Notice, that sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, until TWELVE o'clock on FRIDAY, NOVEMBER 21, 1856, from parties willing to Contract for the TAKING DOWN, REMOVAL, and RE-ERECTION of the POLICE ESTABLISHMENT at Aldershot Camp, within four weeks from the notification of the acceptance of the Tender. Plans may be seen, and specifications and forms of Tender obtained, on application at the Royal Engineer Office, on and after the 13th instant. The War Department reserves the right of rejecting the whole or any of the Tenders.
Royal Engineer Office, Aldershot, Nov. 5, 1856.

TO CONTRACTORS, BUILDERS, IRONFOUNDERS, POTTERS, and OTHERS.—The Board of Works for the Wandsworth District, are desirous of receiving TENDERS (separately for each parish), for the CONSTRUCTION of the undermentioned SEWERS, and other Works in connection therewith, viz.:—

		Yards lineal
In the parish of Putney	..	225 of 3 feet 9 inches by 2 feet 6 inches.
Do.	do. ..	585 of 3 feet 3 inches by 2 feet.
Do.	do ..	814 of 12-inch pipe.
Do.	Streatham	118 of 3-feet barrel.
Do.	Tooting ..	760 of 3 feet 9 inches by 2 feet 6 inches.

And also (in separate Tenders for each of the parishes of Battersea, Clapham, Putney, Streatham, Tooting, and Wandsworth), for the various JOBBING WORKS in repairing and making good to sewers and gullies, for the term of one, two, or three years, at the option of the Board. And also, in one Tender (for the whole district), for the SUPPLY of STONEWARE PIPES and IRONWORK, for the term of one, two, or three years, at the option of the Board. And also for LAYING PIPES, and for the SUPPLY of HORSES on HIRE per WEEK.—Plans, specifications, and conditions may be seen at the Office of the Surveyor to the Board, Mr. D. W. YOUNG, Bolingbroke-grove, Wandsworth-common, where also forms of Tender may be had on application. No other form of Tender will be accepted. Two sureties will be required for the due performance of each contract. Tenders are to be delivered under seal at the Offices of the Board, on or before TUESDAY, the 11th day of NOVEMBER next. The Board do not pledge themselves to accept any Tender.—By order of the Board of Works for the Wandsworth District,

ARTHUR ALEX. CORSELLIS, Clerk to the Board.
Bolingbroke-grove, Wandsworth-common, Oct. 30, 1856.

TENDER for MASONS' WORK.—The Board of Works for the Fulham District are prepared to receive TENDERS from Contractors for certain PAVING WORKS, &c. in small and large quantities, a description of which is set forth in a printed schedule, to be had at the Office, Broadway House, Hammersmith. Parties tendering, must, in plain figures, place the price in the rule column in the schedule, opposite to the description of work therein given; and be prepared to give two sureties for the due execution of the Contract. The said Contract to be in force from the date of the signing thereof to Christmas, 1857. Any further information thereon may be had on application to Mr. BEAN, Surveyor to the Board. Tenders to be addressed to the Chairman, marked on the outside, "Tender for Paving Works," and sent in on or before SIX o'clock on WEDNESDAY, the 19th instant. The Board do not engage to accept the lowest or any Tender.—By order,

November 6, 1856. W. LOVELY, Clerk.

CONTRACTS.

TO CONTRACTORS.—The Local Boards of Health for the districts of Dewsbury, Batley, and Heckmondwike, are prepared to receive TENDERS for the COMPLETION of a PURE WATER STOREAGE RESERVOIR, at BROADSTONE DIKE, adjoining Potter's-gate-road, in the Township of Foolstone, in the Parish of Kirkburton, in the County of York, of the diversion of Broadstone Dike, and the necessary gauge basins, valves, &c. connected therewith. Also for the COMPLETION of the EXCAVATING and LAYING DOWN a PURE WATER CONDUIT and INVERTED SYPHON, between that reservoir and the termination of Contract No. 1, near Dunford-bridge. The contractor will be entitled to the use of the plant now on the works upon the terms to be mentioned in the specification. Plans, sections, &c. may be seen at the Offices of Messrs. MORGAN and HORN, C.E. 1, Westgate, Huddersfield, on and after the 10th NOVEMBER next, and copies of the specification and conditions may be obtained there, or at the Office of the Dewsbury Board on payment of 10*s.* on and after the above date.—Tenders, sealed and endorsed "Tenders for Broadstone Dike Reservoir," to be sent under cover to either of us, on or before the 17th day of NOVEMBER next.

CHARLES OLDROYD, } Clerks to the said Local
THOMAS DEAN, } Boards of Health.
Dewsbury, October 30, 1856.

TO BUILDERS.—TENDERS are required for the COMPLETION of TWO SEMI-DETACHED VILLA RESIDENCES, at present in carcase, situate at the west end of London. The specifications and plans may be seen on and after the 10th inst. at the Offices of Mr. J. ARCHER, Solicitor, 11, Tokenhouse yard, City. The party whose Tender is accepted must enter into proper written security for the due performance of his contract.—The proprietor does not pledge himself to accept the lowest or any Tender.

TO ROAD CONTRACTORS and OTHERS.—In the open fields of the Parish of Acton, Middlesex, certain ROADS are about to be FORMED, plans and sections of which, and the specifications of works, may be seen at the Offices of Mr. OAKLEY, 60, Doughty-street, London, daily, from TEN to FOUR, by persons desirous of Tendering for the work. All Tenders to be delivered at 60, Doughty-street, on or previous to the 11th NOVEMBER instant.

N.B. The lowest Tender may be refused.

TO ROAD CONTRACTORS and Others.—TENDERS are required for the MAKING of ROADS and SEWERS at WEST HAM, Essex. The plans and specification of the works may be seen at Mr. PATMAN's Offices, 31 Great James street, Bedford-row.

TO BUILDERS.—PETERSTON-SUPER-ELY, St. Fagan's Station, South Wales Railway.—Plans and specifications for a PARSONAGE HOUSE, in the above parish, may be seen at our Office at Cardiff. Tenders to be sent to our Offices, as under, on or before the 22nd of NOVEMBER. The lowest Tender not necessarily accepted.

PRICHARD and SEDDON,
Diocesan Architects, Llandaff and Cardiff.

SYDENHAM CHAPEL, FOREST-HILL.—The Building Committee of the above Chapel having made considerable alterations in the plans, are desirous of receiving fresh TENDERS for the same. The plans, specification, and form of Tender can be seen at the Offices of the Architects, Messrs. TINKLER and MORPHEW, 4, Queen's-street place, Cannon-street. Tenders to be sent in before TWELVE o'clock on WEDNESDAY, the 12th, to the Baptist Mission House, 33 Moorgate-street, addressed to the Building Committee of the Forest-hill Chapel.

GLASGOW CORPORATION WATER-WORKS. POSTPONEMENT of TIME for RECEIVING TENDERS for No. 4, or KELTY CONTRACT.—To CONTRACTORS. The Magistrates and Council of Glasgow, as Commissioners under the Glasgow Corporation Waterworks Act, 1855, hereby intimate that they have POSTPONED the TIME for RECEIVING TENDERS for No. 4, or KELTY CONTRACT, as formerly advertised, and that further Tenders will be received, if lodged in the manner and within the period after specified. The works extend from the valley of the Duchray to the valley of the Endrick, about 8½ miles, and include two tunnels, of 1,175 and 1,418 yards respectively, with various shorter ones, varying from 20 to 723 yards in length, and some iron and masonry aqueducts. The plans, sections, drawings, and specifications, will again be exhibited in the Town Hall, at the Cross of Glasgow, on and after WEDNESDAY, the 5th NOVEMBER current, where or from the Subscriber, copies of specification and quantities may be obtained; and all further necessary information will be furnished on application at the Office of the Engineer, J. F. BATEMAN, Esq. in Manchester; or to Mr. G. H. HILL, Assistant-Engineer, Loch Ard, Mr. ALFRED MOORE, Assistant Engineer, Milngavie (who will point out the line of works); or to the Subscriber. Tenders for the construction of the works, addressed to the Commissioners, sealed and marked "Tender for Kelty Contract," must be delivered to the Subscriber, Mr. BURNET, at his Chambers, 23, Miller-street, Glasgow, on or before TUESDAY, the 18th NOVEMBER current. The Commissioners do not engage to accept the lowest offer.—By order,

JOHN BURNET, Secretary.
Waterworks Office, 23, Miller-street, Glasgow,
1st November, 1856.

ALL SAINTS' CHURCH, CROFT.—To BUILDERS and OTHERS.—Persons willing to CONTRACT for the REBUILDING of a PORTION of the TOWER of All Saints' Church, Croft, may inspect the plans and specifications at the Office of Mr. STEPHEN LEWIN, Architect, Boston. Tenders to be delivered in to the Churchwardens on or before the 20th DECEMBER.
Boston, November 1, 1856.

[*For remainder of Contracts see next page.*

CONTRACTS.

TO BUILDERS and CONTRACTORS.—Builders wishing to TENDER for the various WORKS required to be done in the ERECTION and COMPLETION of a FREE METHODIST CHAPEL, to be built at Spalding, in the county of Lincoln, may see plans and specifications, and obtain every particular, by applying between the hours of TEN a.m. and FIVE p.m. at our Offices on and after the 10th day of NOVEMBER, to the 15th inclusive, and at the Baptist School-room, Spalding, from the 1[illegible] to the 2[illegible] of NOVEMBER inclusive.
BELLAMY and HARDY, Architects and Surveyors.
Offices, 3, Broadgate, Lincoln, October 7, 1856.
N.B. The Trustees do not pledge themselves to accept the lowest Tender.

PARTIES willing to ESTIMATE for FINISHING the PLASTERING of TWELVE HOUSES, and take a house as part payment, may have the particulars by applying at the office, on or before the 1[illegible] inst. at 24, Fitzroy-terrace, Maldon-road, Haverstock-hill. None but responsible parties need apply.

PARTIES willing to ESTIMATE for JOINERS' WORK of several HOUSES can have the particulars, by applying at the office, on or before the 12th inst. at 24, Fitzroy-terrace, Maldon-road, Haverstock-hill. None but responsible parties need apply.

HALIFAX CORPORATION GAS-WORKS. The Mayor, Aldermen, and Burgesses of the Borough of Halifax, are prepared to receive TENDERS from competent persons for MANUFACTURING and DELIVERING several hundred tons of CAST-IRON PIPES and APPENDAGES. Copies of the specification, with a form of Tender, and the probable quantities annexed thereto, may be obtained, on application to Mr G. W. STEVENSON, the Borough Engineer; and the Tenders must be delivered at my Office in the Town-hall, Halifax, on or before THURSDAY, the 20th day of NOVEMBER next ensuing.—By order,
EDMUND MINSON WAVELL, Town-clerk.
Halifax, October [illegible] 1856.

METROPOLITAN BOARD of WORKS.—To BUILDERS, CONTRACTORS, and OTHERS.—The Metropolitan Board of Works hereby give Notice that they will be ready, on THURSDAY, the 13th inst. to receive sealed TENDERS from parties who may be willing to contract for the CONSTRUCTION of BRICK SEWERS, 3,269 feet in length, or thereabouts, with other WORKS in connection therewith, in Pembroke-road, Foxley-road, and other places, Kensington, in the county of Middlesex, and for the maintenance of such works in complete repair for the term of twelve calendar months. Plans, sections, and a specification of the works, together with the form of tendering, may be inspected and other particulars obtained at the Office of the Board, No. 1, Greek-street, Soho-square, between the hours of NINE a.m. and FOUR p.m. until THURSDAY the 13th inst. Tenders, addressed to the Metropolitan Board of Works, must be delivered at the Office of the Board, before FOUR o'clock on that day, and no Tender will be received after that hour. The Board do not bind themselves to accept the lowest or any Tender, and the party whose Tender shall be accepted will be required to provide two approved sureties for the due performance of the works.
E. H. WOOLRYCH, Clerk of the Board.
No. 1, Greek-street, Soho-square, November [illegible], 1856.

TO CONTRACTORS.—SOUTH WALES MINERAL RAILWAY.—The Board are prepared to enter into a CONTRACT for the CONSTRUCTION of the entire RAILWAY and WORKS from the Briton Ferry, near Neath, in South Wales, to the Head of the Valley at Glyncorrwg, a distance of about 11½ miles. Specifications, plans, and sections may be seen at the Offices of I. K. BRUNEL, Esq. 18, Duke-street, Westminster, on and after the 27th instant. Tenders, endorsed, "Tender, South Wales Mineral Railway," to be addressed to the Secretary, at the Offices of Messrs. BAXTER, ROSE, and NORTON, 3, Park-street, Westminster, on or before the 24th day of NOVEMBER next. The Directors do not bind themselves to accept the lowest Tender.—By order.
Oct. 17, 1856. ROBERT PARSONS, Secretary.

VICTORIA WHARF, PIMLICO.—ROBERT DANIEL begs to inform his customers and the trade that this wharf is let or sold, and the BUSINESS is REMOVED to Bridge-row Wharf, Upper Belgrave-place, Pimlico.

TO CAPITALISTS, Manufacturers, Potters, Brick and Tile Makers, and Persons engaged in Porcelain Works.—A most valuable PATENT TO BE SOLD, for Ireland, for the economising of the heat from kilns and boiler furnaces, for drying purposes, ventilation, and consumption of smoke.—For information, apply to CARPMAEL and CO. 4, Old-square, Lincoln's-inn, London.

TO SCULPTORS, MASONS, IRON-FOUNDERS, and OTHERS.—The Burial Board of Toxteth Park are willing to receive from parties having for SALE, MONUMENTAL TOMBS, RAILING, or other DEVICE for FENCING TOMBS or GRAVES. The same to be set up in the Toxteth Park Cemetery at the sender's risk and cost. For further particulars apply to the Clerk to the Burial Board, Public Office, 24, [illegible]-place, Toxteth Park, Liverpool.—Nov. 5, 185[illegible].

JOHN TANN'S NEW PATENT RELIANCE LOCK and CHEMICAL-FILLED FIRE-PROOF SAFES, DOORS, ROOMS, &c. Manufacturers of cast and deed boxes, [illegible] every description of lever locks and street-door latches. To be had at the General Lock and Safe Warehouse, [illegible], Walbrook, City. List of prices on application. Several second-hand SAFES for SALE, at half the original cost.

TO IRONMONGERS, BUILDERS, &c.
PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr Arnott's Improved Ventilators. HULETT and CO. 55, High Holborn.

WANTED, a CIRCULAR SAW-BENCH, of the [illegible] improved construction. One adapted for as great a [illegible] as possible [illegible] machine, would be favourably considered. Reply, stating price and particulars, to Messrs. W. PEARSON and Co. Machine Makers, Leeds.

TO BE SOLD, a bargain, a VERTICAL SAWING FRAME and SAWS complete, to be delivered at any place on the Great Northern line of rail.—For particulars, apply to Mr ABBOTT, 2, Bedford-row, Gray's-inn.

MR. S. EGAN ROSSER, Warming and Ventilating Engineer, &c. (successor to the late Mr John Sylvester, C.E.) has REMOVED from Great Russell-street, Bloomsbury, to No. 6, CANNON-ROW, PARLIAMENT STREET, WESTMINSTER.

AUSTIN'S IMPERIAL
PATENT SASH and BLIND LINE
can be obtained of all
ROPEMAKERS, IRONMONGERS, MERCHANTS, FACTORS, and WHOLESALE HOUSES, in TOWN or COUNTRY.
Established 17[illegible]

COMPLETE IMMUNITY from FIRE, [illegible] EDWIN COTTERILL, [illegible] Patentee and Sole Manufacturer of the Royal Climax Detector Locks. The only locks which have not been [illegible] [illegible] Descriptive drawings [illegible] [illegible] [illegible] [illegible] street, corner of Regent place, Birmingham.

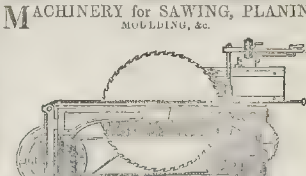
CORRUGATED IRON.—A large quantity of CORRUGATED IRON TO BE SOLD below the market price. Apply for particulars, to COTTAM and COTTAM, St Pancras Ironworks, London. Iron Roofs, corrugated and galvanized Stores, Houses, &c. for home and exportation upon a principle requiring no skilled labour to fix them.—COTTAM and COTTAM, St Pancras Ironworks, Old St. Pancras-road, London.

IRON CHURCHES, STORES, &c.—For SALE. Substantial Corrugated Iron Stores, Churches, Dwelling-houses and every description of Buildings, adapted to all climates. Iron Roofs constructed for all parts of the world. An Iron Church with sittings for 75 people for hire or sale. To view and for further particulars apply to SAMUEL HEMMING, Clift House Works, Bow, London.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, 56, & 57, WYCH-STREET, STRAND,
London

LOCKS, HINGES, HANDLES, BOLTS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham.
Illustrated Price-catalogues post-free on application.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames on Bench, Roller and Chain Planing Machines, Deal Saw Frames, and all other kinds of Machines, for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches and also a smaller one with Boring Apparatus may be seen at the Machinery Department, Crystal Palace.—A descriptive Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. King's-road, Chelsea, London.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

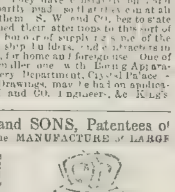
J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.

TUNED BY MACHINERY.

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system, which give superior tone and facility for ringing.



TO IRONMONGERS AND THE TRADE GENERALLY.
D. HULETT and CO. Manufacturers of GAS CHANDELIERS, HALL LANTERNS, GLASS LUSTRES, &c. &c. A large assortment of the newest designs always on show; every article marked in plain figures. Patentees and manufacturers of the Mercurial Gas Regulator. Complete pattern book and price list, 10s. 55 and 56, High Holborn.

TO ARCHITECTS, &c.—The IMPROVED SELF-ACTING WATER-BAR for FRENCH CASEMENTS, the best and most effectual yet invented, is made by J. SMITH, of 14, Queen-street, Oxford-street, near Argyll-street, where a working model can be seen, or a sketch will be sent on application.
N.B.—Espagniolette Bolts of a superior quality, at reduced prices.

TO BE SOLD, and must be removed in a few days, a 10-TON TRAVELLING-CRANE, tramway, carriage, and gear complete, 16 feet long by 48 feet wide. To be seen at 24, Wharf, Harrow-road, Paddington. For particulars, apply to Messrs. KAYE and SON, Solicitors, Symond's-inn, Chancery-lane.

CONTRACTORS' RAILS for SALE.—Flat Bottom, 42 lbs to the yard, in excellent condition. Engine Truck, will carry 30 tons. Quantity of Railway Wheels and Axles, Earth Waggons, Iron Bodies, Dredger for Sale, in first-rate working order. Apply to MATTHEW T. SHAW, 61, Cannon-street, City.
P.S. 2,000 tons of old double headed rails wanted, f. o. b. in the Thames or Liverpool.

PATENT MACHINES for WORKING on WOOD.—These celebrated Machines have been awarded a number of prize medals by many scientific institutions, and also by the Great Exhibition in London, and are now extensively used by the Indian, American, and all the principal governments in Europe; also by eminent Contractors, Builders, Shipwrights, Machine-makers, and other workers in wood. Their operations are in every respect perfect, either in hard or soft wood, for planing, squaring up, moulding, tenoning, mortising, grooving, rebating, sawing, and boring, which they perform in a very rapid and superior manner, at a greatly reduced cost.—Sold only by WILLIAM FURNESS, Patentee, 26, Lawton-street, Liverpool, from whom full particulars may be obtained, and all the machines can be seen at work.

GALVANIZED IRON WATER-CISTERNS AND TANKS.
TUPPER AND CARR, Manufacturers.
Works, LIMEHOUSE and BIRMINGHAM.
Offices, 3, MANSION HOUSE-PLACE, LONDON.
N.B.—Iron of every description Galvanized.

MALLET'S PATENT BUCKLED PLATES.
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS.
No. 3, Mansion house-place, London, and No. 6, Berkley-street, Birmingham.
For Plan, Section, and Description, see "The Builder," May 17.

PATENT GALVANIZING and CORRU-GATING IRONWORKS (Improved Process).
WORKS, GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

IRONMONGERY,
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

JOHN HENDERSON PORTER,
ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

JOHN WALKER,
Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor.
IRON MERCHANT, &c.
Offices and Works, Mill-wall, Poplar, London.

SKAIFE and POLLOCK,
Manufacturers of
PATENT GALVANIZED IRON.
Sheets, corrugated and plain; Fencing and Telegraph Wire, Bars, Rods, Hoops, Nails, Screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.
IRONWORK GALVANIZED.
Roofing orders promptly and carefully attended to.
Office, Commercial-road, Limehouse, London.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

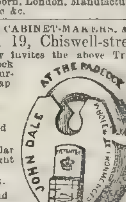
No. 11 gauge	weighs	about	18 oz.	per foot super.
12	"	"	20	"
13	"	"	23	"
14	"	"	26	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON,
to whom all letters must be addressed.

A. MOREWOOD and CO.
(late Morewood and Rogers),
Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

SAVING IN GAS.—D. HULETT, INVENTOR and PATENTEE.—The Mercurial Gas Regulator is the only efficient instrument for ensuring wholesome and uniform lighting, equalizing the pressure, and preventing any irregularity in the height of the flame.—D. HULETT and CO. 55, High Holborn, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.
JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs, 2½d. per inch, and upwards.
Register Stoves, 5d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3 feet Cottage Ranges, with ovens and back boilers, 32s. each.
3 feet self-acting ditto, ditto, 34s. each.
Air Bricks 4s. per doz.

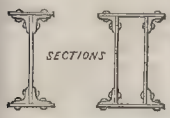
Best Fine Cut Clasp and Rose

1¼	1½	2	2¼	2½	3-in. & larger.
16s. 6d.	16s. 6d.	15s. 6d.	15s. 6d.	15s.	14s. per cwt.

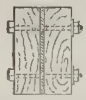
And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter prepaid.

LOSH, WILSON, and BELL,
NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and
STEWART'S PATENT CAST-IRON GAS and WATER PIPES.
Office, No. 7, Sise-lane, London.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axle-trees, sugar-mills, &c.



WROUGHT-IRON GIRDERS
For BRIDGES and BUILDINGS,
MANUFACTURED AND GUARANTEED AS TO STRENGTH.
CAST-IRON GIRDERS for BRIDGES.
Wrought-iron Doors, Boiler, & General Smiths' Work.
BUILDERS' CASTINGS OF EVERY DESCRIPTION.



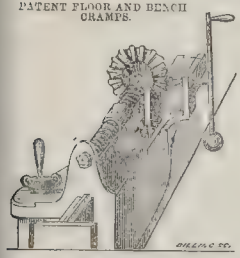
ROLLED WROUGHT-IRON FLITCHES
For TRUSSING BETWEEN TIMBER.
SPIKES, RIVETS, CUT NAILS, WROUGHT DITTO, SCREWS, BOLTS AND NUTS, BAND HOOPS, CHAINS, &c.
CONTRACTORS' PLANT, RAILS, EARTH WAGGONS,
And IRON WORK for WOOD WAGGONS, &c.

MATTHEW T. SHAW, 64, CANNON-STREET (late with C. J. Mare & Co.)
Such arrangements are made for Despatch and Punctuality that Orders can be executed in a few days.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,
IS AS
CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.
Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to
THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.
ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIR FOR AT LEAST TEN YEARS.
THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.
Many roofs covered with zinc thirty-five years ago have never required repairs.

WILLIAM BISSELL,

PATENT FLOOR AND BENCH CRAMPS.



PATENT COMBINED LIFTING JACK.

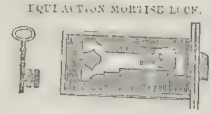
Patentee,

EQUI-ACTION LOCK.

PATENT REGISTERED REGULATING SCREW.

CUPBOARD-TURN.

EQUI-ACTION MORTISE LOCK.

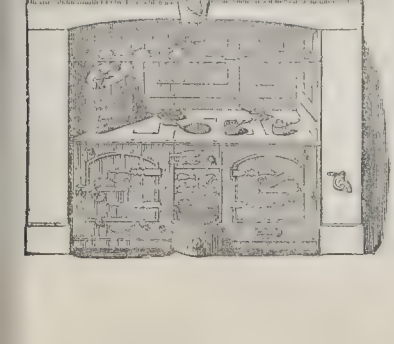


MANUFACTURER OF HARDWARE, WHOLESALE AND BUILDERS' IRONMONGER,
UNION-STREET, HORSLEY FIELDS, WOLVERHAMPTON.

STEVENS AND SON,
ENGINEERS,
IRON AND BRASS FOUNDERS AND MANUFACTURERS;

CONTRACTORS
FOR THE
ERECTION OR ALTERATION OF GAS-WORKS FROM TWENTY LIGHTS UPWARDS,
With Buildings, Mains, Meters, Service Pipes, Lamp Posts, Lamps, and Gasfittings
WATERWORKS FOR THE SUPPLY OF TOWNS,
WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.
Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds; these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c.
Gas Cooking Stoves and Ranges on the most improved principles.
GAS-FITTING IN ALL ITS BRANCHES.
GAS CHANDELIERS OF ALL SIZES, IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS.
DEVICES FOR GAS ILLUMINATION.
IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.
These Turnstiles have been selected for the Entrance of the Great Exhibition, New York
PATENTEES OF THE SEMAPHORE RAILWAY SIGNAL.
Signals for communication between Guard and Engine Driver. Railway Chairs and Lamps of every description.
DARLINGTON WORKS, 16 to 19, SOUTHWARK-BRIDGE ROAD, LONDON.

FLAVEL'S PRIZE KITCHENER.



The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

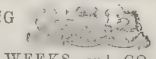
They are admirably adapted for the Cure of Smoky Chimneys.

SOLE AGENTS:
BENHAM AND SONS,
19, WIGMORE-STREET, LONDON;
and at the Crystal Palace, Sydenham.

RADIATING and REFLECTING STOVE.—WILLIAM S. BURTON'S NEW REGISTER STOVE [illegible] and with such [illegible] which has [illegible] and [illegible] Prices complete [illegible] and upwards. One may be seen in action in his Show-room, which contains such an assortment of fenders, stoves, fenders, fire [illegible] where, either for variety, novelty, beauty of design, or exquisite [illegible] Bright stoves, with bronze [illegible] standards, 7s to 5l 12s; steel fenders, 2l 15s to 11l; with rich [illegible] Prices [illegible] sent free by post. WILLIAM S. BURTON, 39, OXFORD-STREET; 1, 1A, 2, and 3, NEWMAN-STREET; and 4, PERRY'S-PLACE.

REGISTER STOVES, with PATENTED IMPROVEMENTS.—DEANE, DRAY, and CO invite the attention of purchasers to their Stock of STOVES for grates in building rooms; also, a large assortment of PATTERNS, [illegible] for selection from those in use at the Establishment of DEANE, DRAY, and CO are constantly introducing [illegible] Register Stoves. DEANE, DRAY, and CO. Stove, Range, and General Furnishing Ironmongery Warehouse, London-bridge. Established A.D. 1700.

VENTILATING STOVES! SUSPENSION STOVES!—Adapted by [illegible] and [illegible] to [illegible] chimneys must not [illegible] in all [illegible] DEANE, DRAY, and CO. [illegible] Stove, Range, and General Furnishing Ironmongery Warehouse, London-bridge. Established A.D. 1700.

HEATING BY  HOT WATER.

JOHN WEEKS and CO. Kingsland, Chelsea, HOT WATER APPARATUS MAKERS. Public Buildings of every description and of the largest dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. beg to refer to numerous references to Churches, Dwelling-houses, Warehouses, &c., where they have fixed their Hot Water Apparatus. They have several extensive Stoves on view at their Premises, which are in full Operation.

BATHS and HOT-WATER APPARATUS. J. PEACOCK and SONS' ILLUSTRATED CATALOGUE of BATH WORK, Cocks, Valves, and Hot-water Apparatus, Patent Portable Baths, Showers, Foot Baths, Metal Bedsteads, Warm Clothes Horses, Mangles, Wringing Machines, &c., sent free by post on application to J. PEACOCK and SONS, Manufacturers, 113, Oxford-street, London.

DR. ARNOTT'S SMOKE-CONSUMING GRATE.
Will this Grate be more universally used?
Reasons in favour of every householder doing so:—
1. A saving of upwards of one-third.
2. Increased warmth and cheerfulness.
3. It does not require one half the attention of an ordinary fire.
4. Lasting perfect.
A Pamphlet, with Views and Section of Testimonials, and Issued, from all parts of the country, will be sent on application to F. EDWARDS, SON, and CO. 42, Ludgate-street, City, London.

NEW GLASS GAS STOVE—NEALL'S PATENT, [illegible] Economy, and Elegance, [illegible] Stove has the effect of [illegible] and is especially adapted for [illegible] and [illegible] Stove forms an ornament to a drawing-room or [illegible] hall, and is equally available for public or private offices. DEANE, DRAY, and CO. Gas Engineers, London-bridge, Established A.D. 1700. The trade supplied.

HOT-WATER APPARATUS of the best construction adapted [illegible] Hot water [illegible] Boilers, specially [illegible] Patent [illegible] Boilers, self-setting regulators, pipes, &c.; hot-air, drying, and hydraulic apparatus; portable engines; shafting and other machinery supplied complete. [illegible]

WILLIAM HARMER'S SMITHS' WORK STORE and RANGE MANUFACTORY and IRONMONGERY METAL and ZINC WAREHOUSE, 19, [illegible] Road, [illegible] New Bridge-street.
GREAT REDUCTION IN PRICES
RAIN WATER GOODS in 5-ft. lengths per yard

Sizes	2 in.	2½ in.	3 in.	4 in.	4½ in.	5 in.
Pipes	3½d	4½d	5½d	7½d	8½d	9½d
Half-round Gutters	7½d	8½d	9½d	1s	1s 2d	1s 4d
O. G. Gutters	1s 0d	1s 3d	1s 6d	2s	2s 3d	2s 6d
Outside Angles	1s	1s 3d	1s 6d	2s	2s 3d	2s 6d
Internal Angles	1s	1s 3d	1s 6d	2s	2s 3d	2s 6d

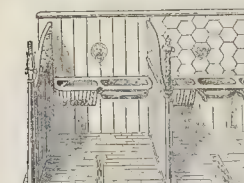
Sash Weights, 7s 6d per cwt.; Air Bricks, 3s 3d. per dozen.
Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 in. each
1s.	1s.	1s.	1s. 6d.	2s.

Best Cut Floor Brads ..... 12s 6d. to 13s 6d. per cwt.
Best Cut Lath Nails ..... 15s 6d. "
Best Zinc Spring Nails ..... 4s. "
Best Glues ..... 47s. to 56s. "
A large Stock of Ellipitic and Register Stoves, and Kitchen Ranges of the newest [illegible]
Estimates given for and fixing Hot Water or Cast Iron Work, including Hot Water, &c.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT-IRON RACK, united to an iron top-plate, and forming one complete and useful fixture, having Cottam's Patent Noiseless Halter-Guide and Collar-Rein attached, the bait of which is taken to the back of the manger, and works with ease and freedom up or down the guide-bar. Cottam's new Patent Seed-Box, of galvanized sheet-iron, is an important addition to the above fittings, being simple in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings, cheap and Durable Corn-Bins.

Improved Surface-Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.

The new Illustrated Catalogue for 1856, and estimates gratis, upon application to

COTTAM AND HALLEN, 2, WINSLEY-STREET, OXFORD-STREET.

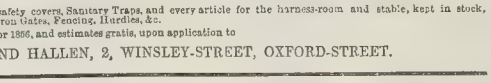
TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1¼	7s. 0d.
15	1½	7s. 6d.
15	1¾	8s. 0d.
15	2	8s. 6d.
15	2½	9s. 0d.



THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches) is now being extensively used in the leading GOVERNMENT WORKS, DOCK BUILDINGS, BANKS, ASYLUMS, BRIDGES, VIADUCTS, PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in London and in all parts of the kingdom.

Sole Manufacturers—THOMAS PERRY and SONS, Highfields Works, Bilston.

London Depôt—ST. ANN'S WHARF, EARL-STREET, BLACKFRIARS.

BENJAMIN FOWLER and CO.

FIT UP HEATING-APPARATUS OF ALL KINDS,

For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,

And for every purpose where artificial heat is required.

They also erect DRYING-ROOMS for ASYLUMS, UNIONS, DOMESTIC and MANUFACTURING PURPOSES upon the most improved principles, and upon the largest or smallest scale.

STEAM COOKING and BATH APPARATUS FIXED;

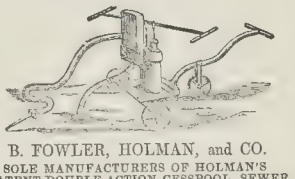
Also PUMPS, for DEEP or SHALLOW WELLS,

To be worked by hand, horse, or steam power;

AND ALL KINDS OF

ENGINEERS', MILLWRIGHTS', or SMITHS' WORK, for Public or Private Establishments.

The most ample references from a long experience in the above branches can be given.



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SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.

The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve ways three times usual size, made to suit liquors of all kinds, hot or cold, is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

TO BUILDERS, CONTRACTORS, and OTHERS.—FOR SALE, the undernoted CAST-IRON GIRDERS, which were made to order, but are now not required, on account of the works being stopped:—

3 Girders, 26 ft. 6 in. long, by 13 in. deep at centre, and 8 in. at ends, weigh about 9½ cwt. each.
12 Girders, 21 ft. 9 in. long, by 13 in. deep at centre, and 8 in. at ends, weigh about 16½ cwt. each.
28 Girders, 19 ft. 6 in. long, and 11 in. deep at centre, and 8 in. at ends, weigh about 12½ cwt. each.
4 Girders, 16 feet long, by 10 in. deep at centre, and 7 in. at ends, weigh about 6¼ cwt. each.
14 Girders, 14 ft. long, by 10 in. deep at centre, and 6½ in. at ends, weigh about 6¼ cwt. each.
4 Girders, 13 feet 6 in. long, by 10 in. deep at centre, and 7 in. at ends, weigh about 5¾ cwt. each.
2 Girders, 13 feet long, by 15 in. deep at centre, uniform section, weigh about 4¾ cwt. each.
18 Girders, 9 ft. 6 in. long, by 8 in. deep at centre, uniform section, weigh about 3¼ cwt. each.

The above may be seen at Dunfermline Foundry; or any further information obtained, from JOHN WHITELAW, Dunfermline, N.B. who will receive offers for the whole, or any portion. The girders can be tested to the usual extent, according to the size, and certificate of proof furnished.

Dunfermline, October 28, 1856.

FOUNDRY AND IRON WORKS,

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GLOVER, BROS.,

Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION, either structural or ornamental.

Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathes, and Steam-engines; Range and Hob-plate Metal. An improved Soot Door, adapted for internal work.

A large stock of Rain-water Pipes, Plain and O G Gutters, Air-bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings, Hurdles, &c.

Plain and Ornamental Vases 20 per cent. cheaper than Terra-cotta.

Estimates given for Iron Buildings, Wrought-iron Roofing Greenhouses, Staircases, Wrought-iron Girders, Fireproof Doors, Bookcases and Strong Rooms, Tanks and Boilers, and every description of ironwork to specification, and the work executed with every attention to quality and despatch.

GLOVERS' IRON WORKS,

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IRON FOUNDRY, Harrow-street, Lant-street, Southwark.—W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Railing, and Newel Bars. Iron Coping, Panels, Tomb Enclosures, Area Gratings, Sash Weights, &c. Also Fly and other Wheels, Riggers, Pintons, Engine and Lathe Castings; Forge Backs, Furnace Bars, Kilns, Pans, Pipes, Tank Plates, and other Castings, to patterns or drawings.

CANNON IRON FOUNDRY, 80, Goswell-street, St. Luke's.—JONES and BLAXTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wheel Plates, &c.

BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c. always in stock.

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ANDREW CLARK and COMPANY, PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK,

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

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From BIRMINGHAM direct.

Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the

LOWEST BIRMINGHAM PRICES,

A complete LIST of which will be forwarded upon application to BLAKE and BRANCH,

Nail Manufacturers and General Factors, BIRMINGHAM; or at 19, Gresham street, LONDON.

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CHUBB and SON, 57, St. Paul's-churchyard, London; 28, Lord-street, Liverpool; 16, Market-street, Manchester; and Horsley-fields, Wolverhampton.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. 6s. 6d. each.

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FIRE-PROOF CONSTRUCTION.—FOX and BARRETT'S PATENT.

This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete; so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron in the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface either of the ordinary flooring-boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, as superseding the necessity for cast-iron girders and brick arches, and as bringing the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

Further information may be obtained of the Proprietor of the patent,—Mr BARRETT, 12, York-buildings, Adelphi.

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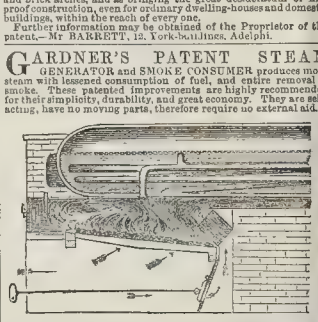

They are applicable to all Furnaces, Locomotives, Marine Engines, Ovens, Pottery and other Kilns, Common Fire, Kitchen Ranges, Hall and Hot-air Stoves.—Application to be made to the PATENTEE, 24, Norfolk street, Middlesex Hospital; to Messrs. BURRIDGE and HEALY, 118, Dorset-street, Fleet-street; or to Z. D. BERRY, Albion Works, Wilton-road, Pimlico.

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R. S. NEWALL and CO.'S Patent Copper Rope Conductor is being applied by architects, engineers, and scientific men in all parts of the world.

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130, Strand, London.
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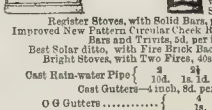
CLARK and HUNT'S IRONMONGERY STOVE, and METAL WAREHOUSE, 159, Shoreditch. A great variety of Elliptic, Register, and other Stoves, Cottage and Rest Ranges fitted, always in Stock.



Improved Self-acting Cottage Ranges, with Large Oven and Boiler

20	32	34	36-inch
28s.	30s.	32s.	34s.

Best Self-acting Ranges with Oven and Back Boiler, Bright Wrought Bars

34	36	38	42-inch
54s.	56s.	58s.	60s.

Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 2½d.

Register Stoves, with Solid Bars, per inch, 5d.

Improved New Pattern Circular Check Register, with strong Bars and Trivets, 5d. per inch.

Best Solar ditto, with Fire Brick Back, per inch, 10d.

Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe	2 inch.	3 inch.
	10d.	1s. 1d.

1s. 3d. per yard.

Cast Gutters—4 inch, 8d. per yard.			
O G Gutters	4 inch.	4½ inch.	
	1s.	1s. 2d. per yard.	

	2	3	4	5	6	
Patent Line	3s. 6d.	4s.	5s.	7s.	9s.	per cross.

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Best Cut Clasp and Rose Nails.				
1¼ in.	2 in.	2½ in.	3 in.	
16s. 6d.	16s. 6d.	15s. 6d.	15s.	14s. per cwt.
Best Sheet Cut Floor Brads				13s. per cwt.
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HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 185 was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

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Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

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BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,

REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.

STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond-stones and the Stone Ashlar never injuriously weighted by the settlement of the Mortar joints of the ... de Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dwelling Houses, Lodges, Stables, &c. of Private Residences, ... on the principles as small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced ... de and set ... de in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

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WHOLESALE ESTABLISHMENT for the supply of CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality;

WINDOW-GLASS, Shades, Moderator Globes, Lamp Glasses, Bottles, and other Articles in White Glass, at 131, UPPER THAMES-STREET, LONDON-BRIDGE.—WORKS: SEVRES, NEAR PARIS.

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MANUFACTURED JOINERS' WORK AND MOULDINGS OF EVERY DESCRIPTION ON THE SHORTEST NOTICE, AND AT THE LOWEST PRICES, PACKED AND FORWARDED TO ALL PARTS OF THE COUNTRY.

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PATENT REVOLVING WOOD AND IRON SHUTTERS,

WITHOUT MACHINERY,

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MANUFACTURER OF METALLIC DRAWN SASH-BARS, STALL-BOARD PLATES, &c.

ANCIENT HOUSE FURNITURE

In order to supply the deficiency which has hitherto existed in Furniture suitable for the many Mansions that have been erected or restored in the MEDIÆVAL STYLES, Messrs. CRACE have directed particular attention to this subject, in addition to their other works, and have prepared appropriate specimens in the various branches of Furnishing.

STUFFS for HANGINGS, in simple Worsted Damask, in Silk; also in Tapestry of Banderkin.

CARPETS, plain or in rich Velvet pile, with appropriate Borders

PAPER-HANGINGS of various kinds

OAK CABINETS, Buffets, Octagon Library and Occasional Tables, Benches, Chairs, and other useful and appropriate Furniture

The whole of the above-mentioned Furniture, &c. is designed by the late Mr. A. W. PUGIN, Architect.

To render this Furniture generally available, a considerable portion has been arranged in the simplest manner, consistent with it ancient character.

14, Wigmore-street, January, 1852.

By Royal Letters Patent

THE COSMOPOLITAN GLASS

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HEELY and WARING, Managers.

CCC CROWN, 18 Tables, per crate, 30s.; H 16 oz. SHEET, 9d per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SHEET SQUARES, 100 feet boxes, 2d. per foot; PARTLEY'S PATENT ROUGH PLATE, from 6d and PERFORATED VENTILATING GLASS, 1s.6d. per foot; CRYSTAL SHEET GLASS, 4d., 5d., and 6d. per foot; FLASHED RUBY, 1s. GROUND SHEET, 3d. ENAMELLED, 5d. per foot. Tiles and Squares from 6d. each. Sashes primed and glazed, 10 per cent. PELVYS PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

Catalogues and Prospectuses free.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES of their PATENT PLATE GLASS, BRITISH PLATE, covered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 310, OXFORD STREET.

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CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 38s; 4ths, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 1½d. per foot. Larger sizes in Lots by 14, 2½d. per foot. Ground Glass, in Cases 9d. per foot. Crown and Sheet British and Patent Plate. HARTLEY'S Patent Rolled Ribbed Plate, British and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price lists and estimates forwarded on application to ROBERT METTAM, 30, Princes street, Leicester square.

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CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures at superior glazing, from 3½ to 6d. per foot, Belgian sheet glass, in cases 200 feet each, 3rds, 38s; 4ths, 30s; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 1½d.; larger sizes, up to 23 by 14, 2½; ground-glass, in cases, 9½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

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CHARLES KNOWLTON, 60, Borough-road.—EMBOSSING, GLASS STAINING, GLASS WRITING, &c. Architects, Builders, &c. supplied on the lowest terms. Stained Quarries in stock.

FIXTURES for COUNTING-HOUSE, SHOP, or OFFICE. Mahogany counters, desks, part top, small counter, pollard at one end, 2 flaps size to fit ... any top of theirs, 2 ... desks, and 2 feet of ... drawers, with ... books, &c. ... Brunswick-street, Brunswick square.

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"	III.	" Assyria and Persia	3
"	IV.	" Greece	8
"	V.	" Persia	4
"	VI.	" Byzantium	4
"	VII.	" Arabia	8
"	VIII.	" the Alhambra	4
"	IX.	" Turkey	3
"	X.	" Music	4
"	XI.	Ornaments from Pompeii	5
			48

Chapter			Brought forward	48 Plates
"	XII.	Ornaments from the Indian Exhibitions of 1851 and 1853		7
"	XIII.	The Ornament of the Hindoos		3
"	XIV.	" the Chinese		4
"	XV.	" the Celtic races		3
"	XVI.	" the Middle Ages		7
"	XVII.	" the Period of the Renaissance		10
"	XVIII.	" the Elizabethan period		3
"	XIX.	" the Italians		6
"	XX.	A series of Leaves drawn from Nature as Models of Ornament		10
				100

The Author will endeavour in the several chapters to define the apparent origin, and trace the development of the several styles of Ornament. He will proceed to ascertain the laws which govern the production, both of such works as are to be admired, and which will further attempt in the 20th chapter to show how, bearing in mind those general laws which he finds applied by the workers of nature and man, we may hope to find inspiration, as they yet go forward, and, whilst availing ourselves of the experience of all time, may be enabled to produce works in harmony with our own more advanced position in the history of the world.

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II. French Affairs.
III. Church Building.
IV. Miss Lucy Aiken's Memoirs of Voltaire.
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ROYAL POLYTECHNIC.—Next Monday Evening, the first night at Eight, Mr Pepper will lecture on the Chemistry of the Breakfast Table, also on "The Bessemer Process of Making Iron and Steel," every Morning at Three, and Tuesday, Wednesday, and Friday Evenings at Eight. Mrs. Mary E. Webb, a coloured native of Philadelphia, U.S. will deliver a Dramatic Reading of "Hiawatha," next Thursday Evening, the 13th, at Eight. N.B. Mrs. Webb is the lady who read before her Grace the Duchess of Sutherland, at Stafford House. Mr. Robertson, assisted by Leicester Buckingham, Esq. will read "Life in the West," illustrated by Dissolving Views, painted by J. Harvey, Esq. every Morning and Evening, at a Quarter past Four, and a Quarter past One. Most beautiful Large Wax Figures, illustrating the Pathology of Mexico, now increased by a curious model of the Siamese Twins—admission to the whole, 1s.—The new lecture "on the Chemistry of Fireworks," will be repeated next Wednesday, the 12th, at Three and Eight.

The Builder.

VOL. XIV.—No. 718.

ON Monday last, the 3rd inst. there was a considerable muster at the Royal Institute of British Architects to inaugurate the new session, one result of which has been the receipt by us of two or three letters complaining as usual of the want of room, and the mode in which the seats are placed, as imposing pains and penalties on long legs. The Council are still seeking for better premises; but have not yet hit upon the right.

Professor Cockerell, R.A. took the chair, and a list of donations was announced, including a portion in continuation of Dr. Lepsius's great work on Egypt, being the ninth delivery, from the King of Prussia; vols. 5 and 6 of "Gli Edifizj Antichi Dei contorni di Roma," from the late Commendatore Luigi Canina; Mackenzie's "Architectural Antiquities of the Collegiate Chapel of St. Stephen, Westminster," from the Commissioners of H.M. Woods and Works; and a portion of the "Grammar of Ornament," from the author, Mr. Owen Jones.

We should mention, too, a medal in bronze, struck in memory of the late Abel Blouet, architect; presented by Madame Blouet, who, it seems, has endowed the French Architectural School with 1,000*l.* for the provision of a periodical prize. The "Grammar of Ornament," let us take the opportunity of saying, promises to be an admirable and important work.

The evening was to have been appropriated to a description of the works now in progress at Alnwick Castle, for the Duke of Northumberland, in the design of which Signor Canina had assisted, but in consequence of his untimely death, Professor Donaldson had drawn up a memoir of the lamented archæologist, the reading of which and the statements that followed occupied so much of the time at the disposal of the meeting, that it was not thought desirable to do more than introduce the subject, by a description of the ancient castle: the account of the new works and proposed decorations will be brought before the next meeting. When the memoir had been read, the chairman bore eloquent testimony to the value of Canina's continuous and most fruitful labours: and Mr. Ashpitel, who had examined Rome under his guidance, spoke at some length to the same effect. We shall best please our readers by printing Professor Donaldson's graphic memoir *in extenso*.

Let us simply add, as respects the Institute, that arrangements have been made for several papers on important topics, and that there is every reason to expect a stirring and valuable session.

A BRIEF MEMOIR OF THE LATE COMMENDATORE CANINA, ARCHITECT.

WHEN I undertook to bring before you the important subject of the description of the works, now carrying on from the designs of Mr. Salvin and the Signor Canina, at Alnwick Castle, the seat of his Grace the Duke of Northumberland, I little thought that our feelings were to have been saddened by the recent intelligence that we have received, of the decease of the Commendatore, our honorary and corresponding member, who has taken so great a part in these interesting alterations, and under the influence of whose living spirit I had thought that my words would have been uttered.

But he is no more! having died of congestion of the brain, at Florence, on the 17th of last month, as he was returning to Rome after a lengthened stay in England. A considerable portion of his sojourn here he had, by the special invitation of the duke, passed within the hospitable walls of Alnwick, which he had visited in order to put into operation certain works for the internal decorations that he had designed for his Grace, and the last three weeks he had lived under my own roof as my old friend and guest. Just before he left my house, he put into my hand a letter, of which the following is a translation:—

"Bolton-gardens, Russell-square,
"22nd September, 1856.

"To T. L. Donaldson, Esq.

"Honorary Secretary of Foreign Corrrespondence to the Royal Institute of British Architects.

"Most valued sir, and beloved friend,—

"From your own house I have to make the request, that at the first meeting, which will be held by the R. I. B. A. you will present vols. v. and vi. of my work upon the 'Antique Edifices of Rome, and its Campagna,' of which publication, relating to the edifices of the city, the first four volumes have already been transmitted, and which, together, complete the entire work. This, not only by its fulness, but also by the importance of the monuments illustrated therein in all their architecture, may, perhaps, deserve distinct consideration, and that especially from being entirely executed by a not lazy artist, who only seeks to promote the study and progress of the best and most improved kind of architecture. Particularly anxious to act with the greatest possible concurrence in the views proposed by his Grace the Duke of Northumberland, and animated by the same desire, I beg to submit to the judgment of your distinguished Institute, some of the principal perspective drawings of the internal decorations which his Grace is about to have executed in his castle at Alnwick. He has in pursuance of this intention, arranged that they should be sent to be exhibited at one of the first meetings, accompanied by a description drawn up by myself. These drawings have been made in a masterly manner by the architect, Montiroli, whom I recommend to your artistic institution. You were so good as to come to Alnwick in August last, and to examine carefully the proposed internal decorations. You will therefore be able, where necessary, to give more minute particulars of the work; as will also my most honoured friend, Professor Cockerell, who accompanied you on that occasion.

My object in the exhibition of these drawings is not limited to the wish of merely making known what has been decided to be carried out at Alnwick Castle, but to promote a more extensive application in England of that kind of noble decoration which was the result of the studies made by our masters at the revival of the fine arts, in Italy especially, upon the most ancient monuments of Rome, and from which circumstance this style became at once noble, and adapted to modern uses. To this general scope and purpose are particularly directed the intentions of his Grace, and worthy of consideration is the following paragraph in the last letter, which I received from Alnwick, dated yesterday:—"I pray you to present my best compliments to Professors Cockerell and Donaldson, and to assure them how sensible I am of their kindness in taking such a deep interest in this subject, which I hold to be of national importance, that is to promote a more extensive system of artistic instruction in England in that style of decoration." And the nation, as regards architecture, being well represented by the distinguished professional men composing the R. I. B. A., that body will be able authoritatively to promote the noble intentions of the duke, as will also other influential personages, already known by their patronage of the fine arts. I seize with pleasure the opportunity thus offered to me of renewing the expression of my sentiments, and of the deep esteem and consideration which I entertain for the members of the Institute, to whom I beg you will present them, and believe me, my dear sir, your most devoted friend and servant,

L. CANINA"

This letter shows the generous motives by which he was animated; by a sincere respect for the Institute, to which he was anxious to present a complete series of his works; by the desire to communicate to them, as representing the arts in this country, a statement of the principles which guided him in carrying out the views of the princely owner of Alnwick; and by that deep love of architecture, which was one of the moving principles of his existence, and which he wished to diffuse wherever he went, and widely as his influence existed.

I am at this moment not in possession of any authentic details connected with his early life and studies. I can only relate what I learned from himself casually from time to time, while we were together, and my own impressions derived from his works. He told me that at the time I was in Rome pursuing my studies, between 1818 and 1822, he was engaged with Vasi, the eminent publisher, who wrote various guides of Roman antiquities, and of Rome itself. The name of Vasi is justly celebrated, as well from his Itinerary, as from being attached to very large and fine views of St. Peter's at Rome, which convey better than any other representatives of that stupendous monument, an adequate idea of its vastness and majesty. The drawing and execution of these plates are perfect.

The first important work of Canina, as an author, appears to be his History of Ancient Architecture, divided into the three series of Egyptian, Greek, and Roman, the second edition of which consists of three folio volumes, of 705 plates, and nine volumes of text, in 8vo. In this collection he presents the reader with illustrations of all the then known remarkable monuments of antiquity, derived from every authentic source, with remarkable patience and judgment, and the text forms a most valuable *résumé* of all that has been written by various ancient authors upon this special subject. It thus affords a very complete source of reference to those whose studies are turned upon the history of ancient monuments.

About the year 1842, he visited Turin, where he remained three months, and being invited to give his ideas upon a proposed new church, to be erected on the site of that of St. John, in that city, he availed himself of the opportunity to develope at considerable length his opinions of the proper form of a Christian church, which he conceived to be that of the Early Christian Basilica, like that of St. Paul's without the walls, at Rome; not that he intended to adopt the type throughout every minute detail, but to assume that form as the basis. Moved by this great predilection of his, the Signor Canina, under the auspices of his Majesty Carlo Alberto, King of Sardinia, published in 1843, a folio volume, which reviews the history, distinctive form, properties, and decorations of the ancient Roman Basilicas. He discusses the various theories to which the obscure description of Vitruvius has given rise. He then reviews in detail the several examples of the Early Basilicas, analyzes the several parts with their various uses, and not confining his illustrations to Rome, but extending his inquiries to the individual erections of Constantinople, Ravenna, Aix la Chapelle (ancient *Aquisgrana*), Pavia Milano, Palermo, Venetia; and at the end he illustrates, in several plates, his own application of the principles which he had discussed, to the proposed Church of St. John, for which he had prepared a design in the Christian Basilica style, with a large peristyled court in front.

I must confess that, valuable as I consider his learned researches on the subject to be, I cannot concur with him in his conclusions, for I do not consider the Christian Basilica a form adapted to a church; it is meagre in its effect, producing an impression not at all equivalent to its size and cost. In the course of his text, he alludes to a very curious authority for the disposition of a church at that time, and the names of the several parts: it is St. Paulinus, who in his poems and in his letters to Severus, refers most frequently to these matters, and particularly describes the Basilica of St. Felice, at Nola, of which city he was bishop, and the church of which he rebuilt in A.D. 402. (*Paulinus, Poemata, Natalis decimus.*)

Canina next devoted his studies to the immediate edifices of ancient Rome and the Campagna, and published four volumes of plates illustrating the former, and two devoted to the Campagna, which were followed by a folio volume of nineteen plates, as a topographical *exposition* of ancient Rome. He then entered upon the investigation of the important monuments of the Roman Forum—a subject which had been distracted by the contentions of the rival systems of French, German, and Italian antiquaries, and which had caused a strife, that set all the archæologists by the ears.

The drawings of this admirable production show more of purity of style, profounder knowledge of the disposition of ancient monuments and larger ideas than any previous one of our author. He differed materially from the German school in his conclusions, making the length of the Roman Forum extend from the capitol towards the Coliseum. The text accompanying these plates is a most valuable collection of the authorities who have treated on the subject.

His next work was a topographical plan of the Campagna of Rome, full of profound research.

From these he next turned his attention to Jerusalem, in a folio volume entitled "Researches upon the Architecture of the Ancient Jews and of the Temple of Jerusalem," and then resumed his Roman studies by a folio work of fifty-three plates upon ancient Tusculum, detailing the villas, the Forum, the theatre, and other antiquities which still remain upon that classic site; and always by his descriptions throwing new light upon the manners and customs of the ancients in reference to their edifices. This work was undertaken under the auspices of the Queen Dowager of Sardinia, to whose family Tusculum belongs.

But his researches were now to take a more remote epoch, and to seek for illustrations in a field which has since, within the last twenty years, been so fruitful of evidence of the history of the earlier inhabitants of Italy; and which have brought to light antiquities, such as cities, city-walls, tombs, vases, and other curious objects, dating prior to the foundation of Rome itself.

The city of Veii has its folio volume of forty-five plates, meant only for private distribution, and prepared at the expense of the Dowager Queen of Sardinia, already alluded to. Ancient maritime Etruria is described and demonstrated, with its monuments, in four folio volumes and 136 plates.

These works introduce us into arts, buildings, and other monuments revealing influences of Greek origin, and developing a school anterior to the earliest of any of the Roman buildings.

Our indefatigable author next published a folio volume of forty plates upon domestic architecture, applying the most graceful forms of all ancient people to modern uses. Thus carrying out his great endeavour to throw as much of the ancient taste as he possibly could into the various productions of modern times, he sought to influence the mechanical arts, so as to lead to a revival of the antique forms, dispositions, and proportions.

His last, and it may truly be called, his "Opus magnum," consists of two folio volumes, containing the results of his excavations on the old Via Appia for a distance of six miles from the walls of Rome to Boville, with the announced intention of soon continuing his publication from Boville to Ariccia, and which, doubtless, he would have fulfilled, had he been spared to complete his grand scheme. Many of you will recal the vivid manner in which our vice-president, Mr. Tite, on his return from Rome in 1855, described at one of our meetings the impressions produced on his mind, when, in company with Canina, he visited the successful results of his labours on the Via Appia. The tombs, the paved road, the mile-stones, the villas, the circi, the amphitheatres, the Fora, and other important edifices, which the encumbered ruins, pile upon pile, were made to yield to the labour and intelligence of our friend, of a scale little inferior to those, so well known to all of us, in Rome; not less rich in decoration, nor less novel in design — a mass of fresh inscriptions to illustrate still further ancient customs and ancient history. Such are the subjects of these two volumes among the most important of modern times. The same plate shows, in one part, the shapeless masses of brick or tuffo work, which were above the surface, or the mounds formed of overthrown fragments. In the other part of the sheet are revived the several monuments restored by the intelligence of the author and his assistants, with their marbles, their columns, their sculptures, and their domes; and one seizes, as by inspiration, a conception of glories and splendour, of which the dreary Campagna had hitherto seemed to present no idea.

I have alluded thus cursorily to twenty-four folios of plates, and to ten or twelve of closely-written 8vo. volumes of text; but these are not the only fruits of his laborious researches and fertile imagination. He published an enlarged supplementary edition of "Desgodetz," and wrote numerous very important papers, which are inserted in the "Annali dell' Instituto Archeologico" of Rome. While in England, I placed before him my series of illustrations of antique medals, and he then mentioned the intention to compile a work on the architectural medals which represent the monuments of classic Rome, a subject which he had hitherto not treated with the weight that it deserved, his representation of medals attached to his plates, being very loosely, and in some instances very inaccurately rendered by his draughtsmen. He had it also in contemplation to collect the materials for a treatise on the ornamental parts of the domestic architecture of the ancients. Some of the fragments that he had disinterred on the Via Appia, an accurate study of the paintings of Pompeii, with their fantastic representations of villas, alcoves, and slightly-proportioned columns, and other similar airy features, and the frescoes of the Thermæ, at Rome, with various remains in the Roman museums on the bas-reliefs, and the contemplation of the component parts of the candelabra that Piranesi had put together, compiled from antique fragments, produced the conviction on his own mind that the Romans allowed a license of form and proportion in their domestic art quite distinct from the severer rules of monumental architecture; nay, opposed to it. He conceived that from these *indicia* he could construct a perfect system of domestic decoration, at once light, plastic, graceful, and reasonable; and it was a great source of delight to him to find such a system constructively and actually carried out in the Crystal Palace at Sydenham. Much as he disapproved, and with justice, of the total absence of artistic taste evidenced in its design, yet he visited it twice, with the express object of more definitely realizing in his mind the ideas which had hitherto been floating in it on that subject, without being able to conceive a precise natural mode of structural application, which the Crystal Palace seemed to offer. The development of this notion would have been a curious exercise for his ingenious mind, and we might have been taught by it to set greater store by the endless facilities which iron, in its application to edifices, affords, relieving us from the shackles of severe art, to revel, not unreasonably, yet freely and untrammelled, in all the flights and fancies that the most poetic imagination could conceive, and justified by the precedent which antiquity itself offered.

The Commendatore Canina had travelled much throughout Europe, and had studied on the sites themselves the monuments of Sicily and Greece proper. His recent visit to England was the second that he had made to this country. His researches and labours were appreciated by many princes and sovereigns, and he was decorated with a profusion of orders of various countries. But the distinction which he valued most was the position he held as director of the Museum of the Capitol, and the title of Commendatore, which ranked him among the forty nobles of Rome. This gave him just pride, as did also the Royal Gold Medal conferred upon him by this Institute in 1849, with the approval of her Majesty and Prince Albert.

Like Piranesi, and other Roman authors, he had the whole of the branches of publication carried out in his own house, in the Via Gregoriana. The type of his text was composed and carried through the press under his own roof: one room or more was occupied by draughtsmen and engravers; another contained the presses by which the engravings were printed; and, with the exception of one or two works, all were prepared and published at his own expense.

He was of early habits, rising while in England at five or six o'clock in the morning, and immediately setting himself to work pen in hand. He was punctilious in his correspondence, and obliging in his disposition. He undertook the engagement for Alnwick from no sordid object or intention of gain, but merely, as he took a formal occasion to assure Mr. Cockerell and myself, with the express and declared intention, full of generous disinterestedness, to carry out the wishes of the Duke of Northumberland for the promotion of art, and to do justice to his patron and friend, the Cardinal Antonelli, by whom he was introduced to his Grace. He was very susceptible of criticism and opposition of opinion, and deeply resented the strictures of the German *litterati*, who disputed his scholarship, and the critiques of the French, who called in question his taste. He was not free from the superstitious sentiments common to many of his countrymen, and, from an intuitive dread of consequences, would never allow his portrait to be painted, nor his bust to be modelled. By a friendly stratagem, I induced him to visit Messrs. Maull and Polyblank's photographic establishment, and, after much persuasion, prevailed upon him to permit his likeness to be taken, as one of the notabilities of the day. But it did violence to his feelings, and, to avert the "*malocchio*," he arranged (as he thought unobservedly) the fingers of his right hand, as a charm against the evil consequence that he feared,—a presentiment which the sad event of his death so soon after almost seemed to realise. The photograph faithfully represents the serious character and deep thoughtfulness of the scholar, but his expressive features, however, in moments of familiar and social relaxation, were often lighted up by a most pleasing smile.

His decease will produce a great void in Rome, where his acquirements and judgment were fully valued. His opinion was a high authority on all matters of classic archæology, and many an artist recognises in him a judicious adviser and patron. He was naturally reserved and slow to form friendships, being distrustful of the depth of quick attachments; but, when once a friend, he continued so firmly and warmly, and thought no personal exertion or sacrifice too great to serve those he valued.

He was truly a giant in the archæological and architectural literature of classic antiquity; and, however various may be the opinions of men upon his erudition and taste, all must agree that he had great acuteness of perception on antiquarian subjects, and a very enlarged acquaintance with ancient art, for which he had the most supreme veneration, as also for the works of the masters of the fifteenth and sixteenth centuries. Although occasionally influenced by certain deep prejudices, particularly in regard to mediæval art, yet he has rendered essential service in the elucidation of the history of architecture. He has abridged the task of future labourers in that field of research, and has left a body of information and instruction in his numerous tomes far beyond that produced by any other previous scholar. It would be difficult to find any more earnestly and disinterestedly devoted than he to the highest and noblest principles of our art.

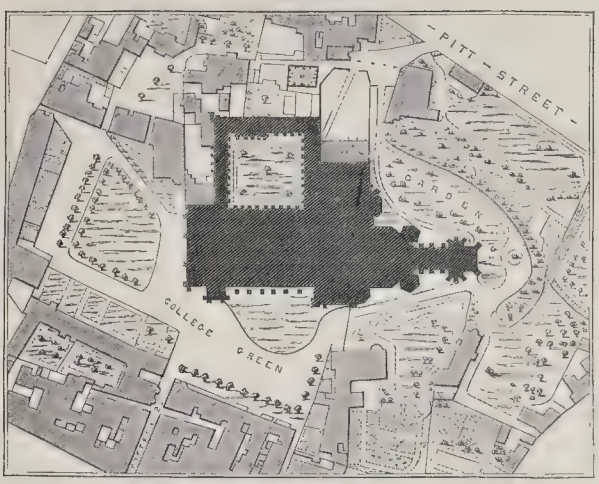
And it is a striking and touching coincidence, that Canina and Braun, the leaders of the rival systems of the two schools of archæological research at Rome, the Italian and the German, should have died within a few weeks of each other; and thus left the field open to other, but it would be bold to say to abler or more zealous minds.

THOS. L. DONALDSON.

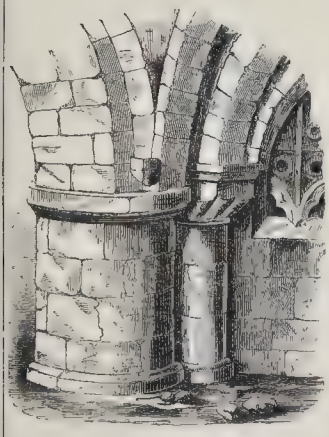
FOREIGN INTELLIGENCE.

Italy: Palladio, &c.—M. Magrini has published several interesting memoirs on the principal architectural monuments of Vicenza, but his work on Palladio has become little known out of Italy. It is entitled "Memorie;" Memoirs on the Life and the Works of Andrew Palladio, together with the series of twenty-seven of the Writings of the same Architect. By Abbate Antonio Magrini. Padua, 1855. 8vo. —In Verona Conte Orti Manara is constantly active, and amongst his writings on the buildings and antiquities of that city, is a late Memoir on the Antiquities of Sermione. The Central Commission for the preservation of architectural monuments has connected itself with the Museums of Vicenza, Padua, Verona, &c. whereby especially the dilapidation and exportation of art-works of the Italian *Nationality* is to be prevented.

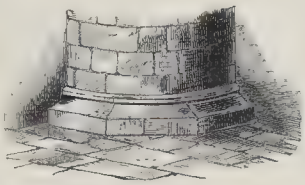
GLOUCESTER CATHEDRAL.



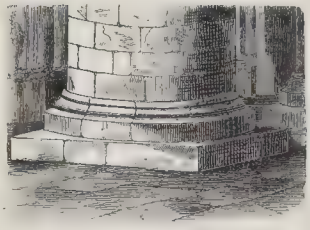
Plan, showing Approaches and Improvements at the East End.



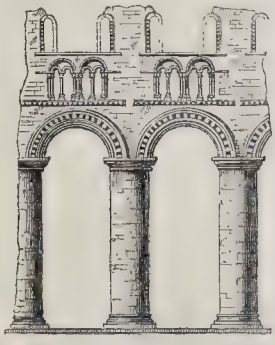
Circular Casing and Relieving Arches (the Abacus of Pier is seen above the cylindrical column).



Modern Base, now removed.



Base, as Restored.



Remains of first Church, with the later Additions removed.

As it now is.

THE IMPROVEMENTS AT GLOUCESTER CATHEDRAL.

During the last two or three years considerable alterations have been made in the immediate vicinity of Gloucester Cathedral, and the restorations, both of the interior and exterior of the fabric itself, have been gradually progressing.

The east and north sides of the edifice are now entirely opened to view by the removal of the College-school playground, and by the sacrifice of a considerable portion of the Canons' garden. The plan we give shows the present arrangement of the adjacent ground, laid out in walks and drives, in lieu of damp and dirty yards, kitchen gardens, dilapidated old houses, walls, and trees, which, by preventing any proper current of air, always kept the lower portion of the building in a damp state. This garden, from which the Cathedral can be most satisfactorily seen, is, by the kindness of the Chapter, open to the public from early in the morning until sunset.

An immense quantity of soil has been removed from the building itself, in some parts 3 feet in depth, and the whole space has been thoroughly well drained. So long ago as 1846, the conductor of this Journal, at the Gloucester Congress of the British Archæological Association, drew attention to the damage that was accruing from the accumulated earth, and urged its removal, so that we regard with interest the fulfilment of the recommendation.*

The crypt, some time since filled with rubbish and dirt of all kinds, damp, and excessively dark, from the windows having been blocked up to prevent the soil and water coming in from the outside, with one chapel entirely closed up with bones, and the general appearance, and atmosphere, such as to forbid, rather than invite an entrance, has now been thoroughly cleaned out: the bones have been buried: a great accumulation of soil has been removed, and the original levels of the floors exposed, excepting in the centre part, which, on account of the rising of water, cannot, it is said, be lowered. The windows have been opened, and glazed, in two instances, with old painted glass, which, from time to time, has been found in the Cathedral,—in closets, and elsewhere.

The old tiles, also, which have been found in the excavations that have been made, are laid down in one of the chapels.

The whole of this work has been carried out with care, and with a desire to lose nothing of the old character, without any attempt to put the various parts in their primitive state of repair, but with a view only to their preservation.

The various effects of light and shade, as now seen in the crypt, are peculiarly fine; and the arrangement and construction of the piers and arches can be readily understood; from which it is evident that great alterations have, from time to time, been made. The large semi-circular columns against the walls, though of great antiquity, are not parts of the original structure, but are casings in which are inclosed the former and smaller piers; and the ribs springing from their capitals are built *under*, and with a view to support the groins.

* At the evening meeting of the second day, Mr. Monckton Milnes, M.P. in the chair, Mr. Godwin, after reading a paper by Mr. Repton on some architectural peculiarities in the Cathedral, said,—"that he had the greatest respect for those placed in authority, and he almost felt that a society had hardly any business to come into a town to find fault; but he was afraid that by strangers too cautiously acting upon that principle, and from persons on the spot being restrained by feelings of delicacy from alluding to matters which must come under their observation, parties who had the government and care of important public buildings went on, from year to year, till at last they found out that the buildings were falling into ruins; and, surprised at the fact, they might then say that this would never have happened if persons had warned them of it, so that proper steps might have been taken to prevent it in time. It was with the greatest respect, then, that he begged to solicit the attention of the authorities to the state of Gloucester Cathedral, being quite satisfied that unless some proper supervision was exercised, and some professional architect occasionally consulted, hereafter considerable expense would be entailed which might now be saved. He hardly liked to go into particulars, but he would point out that a great injury was being done to the fabric by the enormous accumulation of earth that had taken place all around the old building, but which might be more especially observed on the south side of the cathedral entering from Westgate-street. There, from 8 to 10 or even 12 feet of earth had accumulated against the walls of the building, and was quietly but most assuredly perpetrating the ruin of the structure. He trusted this warning would be received in the spirit in which it was thrown out: this noble cathedral did not belong to Gloucester merely, nor to England merely, but to all the world, and all the world was interested in its preservation."—"*Transactions of the British Archæological Association, at its Third Annual Congress, held at Gloucester, August* 1846."

The chapels in the crypt were all used as places for divine worship, as in each there are the remains of altars and piscinas.

The centre portion of the crypt, which can now be seen without artificial light, is worthy of attention. It is divided by two rows of small columns from which spring groined arches, carrying the floor of the choir above. The bases and capitals of these columns are much out of level, falling considerably from west to east, and from north to south; and the bases themselves are about 2 feet below those of the piers in the aisles.

The changes effected in this part of the edifice have served to make it one of the most interesting and picturesque features of the Cathedral. We shall give a view of it in another number.

The last work undertaken, and just brought to a completion, is the restoration of the nave, which has consisted chiefly in the removal of the coats of white and yellow washes from off the stonework, and in the renewal of such stones as, from the effects of fire, were too dilapidated to remain.

In proceeding with this work, several matters worthy of remark presented themselves. The vaulting shafts were found to be of marble. They are now polished, and form a very striking feature.

The bases of the large piers were discovered to be modern, and were evidently placed against the piers at the same time that the nave was paved (in the reign of George III.), as they rested on the paving itself. The original level of the nave floor was 10 inches lower than at present, and the base, as now seen, stood on a square pedestal. On this lower level there is yet existing the remains of an encaustic tile floor. The bases were renewed at that time, doubtless on account of their dilapidated condition, caused by fire, the same which produced so much decay in the lower part of the piers themselves, and from which the red tint arises, which gives the oolite at first sight the appearance of red sandstone. The fire alluded to occurred prior to the erection of the present vaulting by Abbot Foliet. The bases are now all restored, according to the old example.

On the large piers remains of painting were found, but so mutilated as to be unintelligible, excepting in one instance, which appears to have been monumental, and is an interesting example of its kind.

The vaulting shafts, with their capitals and bases, the bosses in the roof, and some few of the mouldings and strings, had remains of painting upon them, sufficient to indicate the original arrangement of the colours.

The actual remains of the Norman work in the nave were, during the recent restorations, readily traced when the whitewash was removed. The small arches in the clerestory are now very distinct, as seen in the engraving.

One painted window, a copy of the old glass, has just been put up in the clerestory by Messrs. Hardman.

The scheme, mentioned in the *Builder* some months back, for filling the cloisters with painted glass, is steadily progressing.

We need only add, that the various works have been done under the direction of Mr. Frederick S. Waller, architect.*

MEETING OF THE SURREY ARCHÆOLOGICAL SOCIETY IN LAMBETH PALACE.

The meeting of this society, mentioned in our last, proved very successful, in spite of the very bad weather, which rendered "Bishop's-walk" a river of slush (more shame to the Lambeth authorities for allowing it to be so), and when the Bishop of Winchester took the chair there were more persons present than the ancient "Guard Chamber," described in our last, could accommodate.

The Bishop made a very pleasing introductory address, and some routine business having been transacted,

Mr. W. H. Black read a "Brief Account of the Manuscripts and Records in Lambeth Palace;" and also a paper on the "Title of the Palace and Manor of Lambeth." Mr. Black was enabled to produce all the more curious works which he described. The most ancient of them was a manuscript copy of a book of Aldhelm, Bishop of Sherborne, composed in the eighth century, and entitled "De Virginitate." The writing itself of this copy is, in the opinion of Mr. Black, from the pen and hand of the famous Alcuin. Another rare literary treasure is a superb Arabic copy of the Koran, once the property of Tippoo Saib, and which came into the possession of the English at the capture of Seringapatam. It is said to have been written about 400 years ago, and has been pronounced the "finest Koran of Asia." We may notice among the other portions of this interesting collection a number of wills, one of which is that of the poet Gower. In the second paper, Mr. Black traced the exchange of Lambeth, or "Lamb Hythe," by the then diocesan of Canterbury, the monks and bishops of Rochester, for the manor of Darent, in Kent, on the 7th of April, 1195.

Mr. Stockham Flower having read,—"Some Passages in the Life of Archbishop Laud;" the Rev. Charles Boutell then read a paper descriptive of the principal objects of interest in the palace, of which the following is an abstract:—

Lambeth, or Lambithe, before the Conquest, formed part of the estate of Goda, sister of Edward the Confessor. It was granted to Rochester Priory by her second husband, Eustace, Earl of Boulogne, and ultimately confirmed to that house by William I. and Rufus. An exchange was subsequently effected between Rochester Priory and the Primate, for the purpose of enabling the latter to build a suitable residence for himself and his successors. A monastic establishment was in existence at Lambeth from a very early period; and here, from the same early period, the Primates had their London lodging, and here they performed many of their most important duties. It subsequently became their fixed residence. The exchange with Rochester, which brought Lambeth under the complete control of the Archbishops of Canterbury, was effected during the primacy of Archbishop Richard, the successor to Becket; and it is probable that the necessary works for erecting the archiepiscopal residence were commenced either by Richard himself or by one of his immediate successors—Baldewyn, Hubert Walter, or Stephen Langton. It is on record that Archbishop Boniface (the seventh from Becket), in consequence of a somewhat decided misunderstanding with the Prior of St. Bartholomew, was enjoined by the Pope, by way of penance, to erect a palace for himself and his successor at Lambeth. He greatly enlarged the edifice which his predecessors had constructed. Archbishop Chicheley, the munificent founder of All Souls' College, Oxford, built very considerably: the well-known Lollards' Tower was erected by him; and he also rebuilt or repaired the great hall. Archbishop Stafford, who succeeded Archbishop Chicheley, also made considerable and important additions, particularly to the stables and adjoining buildings. The great gateway was the work of Archbishop Morton, whose rebus it bears: it was built on the site of a decayed ancient one. Archbishop Cranmer and Cardinal Pole also made additions; and in 1610 Archbishop Bancroft founded the library. Archbishop Abbot in later years added to the books, and Archbishop Sheldon, besides further additions, arranged the entire collection. In his will, Archbishop Abbot mentions that the founder of the library was Bancroft.

Various details as to the respective works of the several primates were then given, and the chapel and its crypt were pointed out as the earliest existing portions of the pile of buildings. The collection of archiepiscopal portraits having been also described, and the works erected by the late Primate noticed, the members and visitors proceeded, under the direction of Mr. Knyvett and Mr. Boutell, to inspect the chapel, library, and Lollards' Tower.

The crypt, of which we gave a view in our last (page 591), was not opened. Our sketch probably shows the reason.

The bareness of the interior of the chapel was strongly felt. It affords an admirable object for appropriate decoration, and might be made into a minor *Sainte Chapelle*. The glass in the windows is not pleasing.

On returning to the Guard Chamber, Mr. W. W. Pocock read a paper, of which we give an abstract:—

ON SOME ROMAN REMAINS DISCOVERED AT WALTON-ON-THE-HILL, SURREY.

Though not equal to the splendid works found at Bignor, in Sussex, and Woodchester, in Gloucestershire, the discoveries already made on Walton-heath are amongst the most considerable relics of Roman magnificence yet brought to light within the county of Surrey, and form but a small portion of what probably have still to be uncovered. They are situate towards the southern verge and highest point of the heath, which, geologically considered, forms a portion of the southern vein of the chalk basin in which London is situate, Epsom-downs and Box hills being contiguous portions. It lies in the crow's flight from London to Chichester, and in a direct line from Richborough, the Rutupiæ of the Romans, to Walton-on-Thames, next which they first crossed, and built their first bridge over the Thames.

"Chichester, probably the Regnum of Antonimus, was, in the time of that emperor, reached from London through Winchester and Clausentum, or Southampton. But at a later date the road from Chichester ran by Bignor and Pulborough, in Sussex, to Oakwood, in Surrey, by Ockley and Anstie Bury Camp to Dorking, where it crossed the river not far from the church, and through the greater portion of this distance it still remains under the name of Stane-street. From Dorking it must have run towards London through Wallington and Streatham, either over Mickleham-down or Walton-heath; the road over which latter, still in use, has a very Roman aspect." This south-eastern portion of our island was the first reduced by the Romans, and Cogidunus was by Claudius made king of at least a portion of the reduced territory, the seat of his kingdom being at Chichester.

The Romans occupied Surrey extensively: Brayley, in his history of the county, enumerates twenty-six distinct localities in which their remains are found, and to these he might have added many more. In 1772 a brass figure of Esculapius was found on Walton-heath, together with bricks, tiles, and a portion of a flue. A large earthwork, supposed to be the prætorium of a Roman camp, was still discernible in 1808. The masonry, till lately remaining, consisted of foundations (principally of flints) of walls, apparently about 1 foot thick, running about 3 feet deep, the pavements being about 1 foot below the adjoining surface. They "extend over a space of not more than 40 yards square, but a very little removal of surface soil reveals abundant remains of Roman fictilia at very considerable distances around." Several pavements have been found formed of coarse tessellæ, 1 inch or 1½ inch square, and one ornamental one about 21 feet square, the design being a central circle containing an urn and enclosed in a square, surrounded by four semicircles and four squares, the latter disposed at the angles, and the whole included within a square formed by a bold and unique border. "In general outline it greatly resembles one found in Dyer-street, Cirencester, some eight years ago, the whole of the interior of which consists of a circle and parts of circles within a square framework. But the introduction of the central and angle squares in the Walton design give such an admixture of straight lines and curves as produce a force and character of expression the other does not possess. In absence of representations of living forms, and in paucity of colours, it is inferior to many found in various parts of the country, but in beauty of outline, severity of taste, and boldness of handling, it is equal to any. It is to be regretted that it was executed in so perishable a material that removing or preserving it uncovered seems quite out of the question."

By far the greater portion of the cubes employed were only sun-dried, of two separate colours, one light and the other dark brown: some few were cubes of chalk and the remainder

* Mr. Waller has recently published "A General Architectural Description of the Cathedral Church of Gloucester" (Day and Son Gate-street, Lincoln's-inn-fields), containing some photographic view of the building, and a number of interesting lithographed details.

portions of broken red Samian pottery. The general size was half-an-inch square.

Pliny, who intimates these pavements originated among the Greeks, and were employed by them for covering their flat houses, informs us they were introduced among the Romans by Sylla, and hints they suggested "a large portion of the mural and other decorations that followed. With this agrees sufficiently what Vitruvius remarks, that the pavements formed the most important part of the internal embellishments." When employed on the ground-floor, the situation almost invariably selected for the rooms of entertainment, they were either formed on the solid ground, which was well rammed, and frequently covered with a foundation of concrete, and always of pounded brick, or else on piers at short intervals, covered with tiles to support the concrete foundation. Their winter apartments, and in these northern climes all their better rooms, when floored with these pavements, were constructed with these hollow floors, called suspensuræ, and with less accuracy hypocausts, the object being to pass fire or heated air under them for warming the apartment by means of furnaces adjoining.

The pavement in question was formed on the solid ground, with but a slight foundation of pounded brick, and we may therefore conclude this was not a principal apartment, but probably a tablinum, or entrance-hall, especially as almost adjoining it is a large excavation, 60 feet by 25 or 30 feet, abounding with remains of the materials peculiar to the construction of suspensuræ, and which we may, therefore, safely conclude was the site of some of the principal rooms. If, therefore, the tablinum was of the size and character indicated by this pavement, the whole structure, if in keeping with it, must have been on a scale of magnificence inferior to none of the Roman dwellings yet known in this country.

A coin of Antoninus Pius, fragments of pottery, glass, and iron, all defective, have been found, and a portion of lead which had dropped as it melted, leading to the conclusion the building had been destroyed by fire. The various tiles and bricks exhibit precisely the same features as those found in other parts of the country.

After a communication by Mr. W. H. Hart, "On the History of the Manor of Hatcham," and one from Mr. G. R. Corner, "On two Deeds executed by Elias Ashmole, for the Conveyance of his House in South Lambeth," the meeting separated.

SANITARY ACCOMMODATION FOR AN ARMY IN THE FIELD.

Military reform seems to be the order of the day. So long as change is improvement, no one ought to object. But there may be change without improvement; and our military rulers should recollect that wholesale copying from continental patterns will not, in all cases, insure improvement. England cannot hope to rival continental nations in massing numbers of men, but she may fairly and reasonably expect, out of her superior race of men, and greater wealth, to produce a more perfect army; and, by due forethought and care, place and maintain her smaller number to the best advantage. Crimean experience ought to have inculcated sound wisdom; but if some of the changes spoken of are carried out, we fear the results will not be improvements. The French and the Sardinian armies used *tents d'abri*. We hear it said the British army is to have *tents d'abri*. On sanitary grounds, we most earnestly hope not. A *tent d'abri* is such a tent as three soldiers carry, in addition to their arms, clothing, and ammunition,—a few jointed sticks, and portions of canvas, which piece up into a dog-kennel form, or an inverted V (Λ), extending some 5 feet in length. Under such a covering or tent, three men may creep, but only to poison each other with foul air. Better let each man have a thin sheet, or sheets of oiled silk or Macintosh to lie on, and to cover him, and so breathe the free air, untainted by human lungs. If our generals admire *tents d'abri*, because continental armies use them, let them test the sanitary results before adopting them; and, if there is any truth in the assertion that "air uncontaminated by human lungs is necessary to health," we shall never place soldiers where their own breath must inevitably be their poison. Clothe men in good woollen garments, let them have sound shoes, proper food well cooked, a warm blanket, and add to these necessaries a light pillow-case sort of Macintosh cover (not close at the sides) to protect the body from the wet ground; and, with the knapsack for a pillow, men will have more chance of health, sleeping with the face exposed to the open air, and the lungs capable of taking uncontaminated breath, than under *tents d'abri*. The marching load will be lighter, and the beneficial uses greater. Bivouacing can only be the occasional work of an army: lengthened occupation involves quarters: *tents d'abri*, like the old man to Sinbad, are, to the soldier, a permanent marching load; and, in use, each such tent becomes a poison generator. We must reiterate:—Avoid introducing any change which shall expose our army to such influence The French and Sardinian armies used *tents d'abri*: the French and Sardinian soldiers suffered from fever to a terrible extent. Foul air generates fever,—a lung-tainted air the most deadly form of fever. Therefore all means should be taken to avoid exposing our men to such forms of contamination.

An army in the field must have shelter; and, as we have explained, if the men are to have health they must breathe fresh air. Tents and huts should be of the best possible material and most perfect construction, to give protection and secure warmth with ventilation. The ordinary bell-tent is only second to the *tent d'abri* in mischief: under such a cover men poison each other, and in winter are starved, in summer scorched. We write from experience and not from theory. Bell-formed tents should not be used, but the Indian marquee, of double material. Either side or ends, or both, of such tents, can be raised so as to form an open veranda, giving protection from the sun, and free ventilation. We have, however, a suggestion to offer to our tent-makers. Cannot they combine hut and tent, so as to have means of temporary shelter, portable and warm? Let clean pine battens be got out, such as are used for Venetian window blinds: let these be mounted or fixed on canvass or cloth (like Swiss or German mats and kettle-holders), so that they will roll and strap for carriage. Tents and huts may be constructed of such material, which shall be portable, waterproof, and warm: there must be a light portable framing; the whole fitting and screwing in sections, so as to form tents or huts larger or smaller, as may be required. Metal-guarded eyelet-holes may be formed, and cords may be used as for tents and marquees. In all cases the sides and ends should admit of being lifted horizontally, so as, in fine weather, to open the inner space to fresh air, and give shelter at the same time. The timber and cloth combined will give lightness with great strength, facility for packing, and in use will resist the transmission or the radiation of heat. Glass for light may be combined with the timber and cloth. Pins, screws, or cords should alone be used, and not nails, in fixing.

THE COLUMN WHICH SUPPORTED THE GOLDEN TRIPOD OF THE TEMPLE OF DELPHOS, NOW AT CONSTANTINOPLE.

Some excavations are at present being made on the Square of Astuseïdan, the ancient Hippodrome, where now stands the Mosque of Achmed, built by the spoils of the *Spina* and the *Carceres*. They have for object to discover the foundations of *three* monuments—the Egyptian obelisk, which Theodore the Great erected in the year 390, after his victory over Maximian; the high pyramid, which is connected with the name of Constantine Porphyrogenet, and which the Turks have despoiled of its gilt copper plaques which it was once covered with; in fine, of the serpentine column of the Temple of Delphos, 2,335 years old. The base of these three monuments is now entirely uncovered, and walls like those which surround the temples of the Roman *Forum* support the earth heaped around, and permit a free view of the monuments. The column of the Temple of Delphos is formed by the windings of three serpents, made of copper. It must have been much higher in its original condition, but its present height is about 7 mètres. Its top was formerly composed of three serpents' heads, which supported the golden tripod. Tradition says, that one of these heads was severed by a blow of the sword by Mahomed II. The two others were stolen in 1700; but an *Ulema* says, that they are still secreted amongst the lumber of the Mosque of Ste. Sophia. This column was conveyed from Delphos to Constantinople, by Constantine the Great, as an ornament for the *spina* of the great Circus, when that population of statues, those immense stores of columns, of obelisks and rare marbles, were barbarously destroyed by a then barbarous and uncouth people. There existed two *versions* relative to this serpentine column: one considered it as a talisman for the charming of serpents, erected by Apollonius of Thyana, as an imitation of the bronze serpent erected by Moses in the desert; the other ascribes to this monument a nobler, purely religious origin—an opinion confirmed by the *inscription*, discovered only of late. Herodotus, Diodorus Siculus, Zosimus, Sozomenes, Eusebius, Cornelius Nepos, and other authors have mentioned this once ornament of the Temple of Delphos; and Pausanias (*Phocica*, book i.) says clearly, that in his time the column still existed, but that the King of Phocida had taken away all that was of gold. The inscription is in the old Eolian dialect.

LECTURES AT THE ARCHITECTURAL MUSEUM.

The course of lectures now in progress of delivery at the Architectural Museum, by the Rev. Mr. Boutell, are strictly elementary, and consist of descriptions of the actual contents of the Museum, accompanied with references to the edifices from which the casts have been taken. The lecturer further points out whatsoever appears to claim special attention, whether in the Museum collections, or in various buildings, and insists on the importance of a widely extended, as well as careful, system of architectural study.

In the two lectures already given, the subject has been carried on to the close of the thirteenth century.

Special attention has been directed to the fine collection of casts from the Triforium of Notre Dame, Paris, which has lately been added to the Museum; also to the casts from Venice, deposited by Mr. Ruskin; and to the sculpture of the thirteenth century as exemplified at Lincoln, Salisbury, and Westminster Abbey. In giving a detailed account of the Early English work in Worcester Cathedral, the lecturer animadverted strongly upon the works now in progress there.

BLACKBURN TOWN-HALL.

The council-chamber at the new Town-hall was occupied by the council last week. The style of the building is Italian. It covers, within the boundary walls, an area of nearly 2,600 square yards. The west or entrance front is 120 feet long, and 62 feet high to the top of the parapet; the ground-floor being rusticated with plain dressings to the windows and entrance-gates. The first-floor has Corinthian columns between the windows supporting the cornice. Over the cornice is an attic, the panels of which are filled with festoons of fruit and flowers. Above the cornice of the attic is a perforated parapet or balustrade, and at its angle the chimneys are grouped together, and rise to the height of 71 feet from the flagging. The windows of the first floor have enriched dressings, the grouped ones at each end of the front having also large balconies carried on moulded consoles. The other fronts are of a plainer character, that towards the Market-place having a Doric portico over the magistrates' entrance-door. The police-office and prisons are at the east end of the building, the entrance to the prison-yard being under a rusticated gateway. On two sides of the building is an open area, giving light to the basement, and inclosed by a solid stone parapet. On the ground floor, the vestibule is 49 feet 6 inches by 36 feet. On its right is a news-room, 51 feet by 37 feet. On the left, and occupying a corresponding space,

are the council-room, 51 feet by 24 feet, the town-clerk's office, and muniment-room. The ceilings of the vestibule, council-chamber, and news-room, are deeply panelled. Behind the vestibule, and separated from it by a corridor 9 feet wide, is the police-court, 54 feet by 35 feet, and 26 feet high, lighted by a glass dome, 12 feet in diameter. On one side of this court is the mayor's parlour, 25 feet by 18 feet; a smaller police-court, 36 feet by 24 feet; clerk's office, attorneys' and other rooms; and on the other side are the public entrance to the large court, and rooms for the clerks connected with the business of the court. On the east side are the police-office and the prison, containing eighteen cells. The first floor is reached by two stairs, one from each end of the corridor behind the vestibule. One of these stairs is 23 feet by 12 feet, and gives access to the first floor, and also to the various floors on the north side of the building. The other, or principal staircase, is 24 feet square, the steps being 7 feet clear length, and the balustrade of stone, and leading to the large room and rooms connected with it on the first floor. The walls of this staircase are to be finished with scagliola pilasters. The west front is wholly occupied by a large room or hall, for public meetings, 114 feet long by 50 feet wide, and 34 feet high, giving an area of more than 600 square yards, thus affording sitting room for more than 1,200 persons, or standing room for 3,600 persons. There are other rooms on this floor connected with the large hall. Two of them are 44 feet 9 inches by 24 feet 6 inches, and 25 feet by 18 feet respectively, and are each 19 feet high. In the second and third floors are the borough surveyor's office, the keeper's house, &c. On the north side there is a house for the superintendent of police. In the basement are the offices of the collectors and inspector of nuisances, rooms for the police, cellars for the warming apparatus, &c. There are also two towers, containing ventilating shafts, each 80 feet high. To secure the confidence of large assemblies, the stairs are all made of stone: there are four large outlets from the large assembly-room, and the corridors, passages, &c. are fire-proof. Mr. Patterson is the architect of the building.

PROVINCIAL NEWS.

Banbury.—The prospectus of the Banbury New Corn-Exchange Company has been issued, from which it appears that the capital is to be 5,000*l.* in 1,000 shares of 5*l.* each, deposit 1*l.* per share, and that the building is to be erected on Corn-hill. A second company is being registered, as but too usual in such cases. This latter reasonably states that they wish to afford an opportunity of selecting a site and a building best adapted for the purpose in view. They add, "It is believed that a site can be secured at about half the cost of that which is now attempted to be forced on the public, and which will embrace double the space of that site, and consequently supply much greater accommodation." It is a pity such differences were not obviated, as they tend to diminish the chances of either scheme being realized.

Cheshunt.—A new school, on the British system, has been recently erected here by voluntary contributions, in front of the Dissenting Chapel in Cheshunt-street. The building, which will accommodate about a hundred scholars, was opened on Monday in last week.

Hertford.—On the subject of local changes and improvements, the *Hertford Mercury* says, —The works of the Hertford and Welwyn Railway are proceeding rapidly in the neighbourhood of Hertford. The foundations over the Lee near the Priory are laid, and the works near the Porthill-road are also in an advanced state. The permanent way is ready for traffic for about four miles, the rails having been laid down. The foundations of the new bridge over the River Lee, at the entrance to Hartham from the Priory Farm, are also completed, and the excavations for the new dock, close to the same spot, have been made. The sewage works of the New River Company are also in a state of forwardness. The cast-iron drainage-pipes, for the auxiliary sewer from Cowbridge, have been carried under the bed of the river, to the east of the Priory Farm. The channel for the new sewer through the King's Mead is also cut. The sewerage works are progressing in the rear of St. Andrew's-street, where the River Beane has been diverted into a new channel, and the old bed of the river is in course of being filled up. In a little time Hertford will be so changed in its aspect that we shall hardly know it. Docks, railway bridges, new water-courses, sewers, and deodorizing works are changes which "the oldest inhabitant," we dare say, never expected to see.

St. Leonard's-on-Sea.—The St. Mary Magdalen National Schools, St. Leonard's-on-Sea, which have been very recently completed from the designs of Mr. Teulon, and have been carried out by Mr. J. Howell, builder, Hastings, have been formally opened. The Rev. W. W. Hume's exertions in connection with the liberality of the Dowager Lady St. John, have been mainly instrumental in the erection of this large edifice. The building is in the Middle Pointed style of architecture, with schools, class-rooms, and teacher's residence adjoining, of native bricks, laced with black bricks, and Caen stone dressings, which gives to the whole an ornamental appearance. The school-rooms are 40 feet by 17 feet 6 inches, and are divided by a moveable screen, with open timber roofs, wrought and stained. The cost of the building has been 2,300*l.* The site for the same was given by Mr. Eversfield.

Liverpool. — It is proposed to build a new workhouse for the West Derby Union. At a meeting of the local guardians, on Wednesday in last week, Mr. Pitts, after referring to the overcrowded state of the workhouse, moved "that a special committee be appointed to inquire into the best means to be adopted with a view to obviating the difficulty referred to." He would suggest the propriety of abandoning the present workhouse, and erecting a new one in a rural district of the union, with a farm of, say a hundred acres of land, attached to it. He thought the requisite quantity of land, 100 acres, might be had for 10,000*l.* and he believed a building capable of accommodating a greater number of inmates than the one now in existence might be built for 20,000*l.* He was also prepared to say that, if the farm were properly worked, a clear profit of 1,500*l.* a-year might be realised from it. This would be a considerable relief to the ratepayers, and if the new workhouse were erected, the Government might be induced to buy the present hospital for a barracks. An amendment was moved to the effect, that the further consideration of the subject be deferred for three months, and was ultimately modified to a recommendation that the subject be referred to the visiting committee, and carried by eight to six.

Another "Hartlepool." — It is intended shortly, says the *Northern Express*, to lay out the whole of the ground at the west side of the large lake, running in the direction of the village of Hart, as building sites for villa residences, &c. The plans are already made. The town will be called "Middle Hartlepool."

North Shields.—The opening of the Sailors' Home at North Shields took place on Tuesday in week before last, in the presence of the Duke of Northumberland and an immense concourse of spectators. It is erected on the New Quay, at a cost to the Duke of about 8,000*l.* The building is 83 feet 6 inches by 95 feet, four stories in height, and built of chiselled ashlar masonry. The style is Roman-Ionic. The ground-floor story is rusticated with circular-headed windows, filled with plate-glass. The two stories above have Ionic pilasters and caps, with entablature, and an attic story surmounts the whole. The arrangement of the ground-floor of the building consists of a marine board-room, shipping-master's office, and seamen's waiting-room, entry-offices, cooking kitchen, superintendent's rooms, washhouse and laundry, bath-room, and other conveniences. The several floors above are arranged and fitted up with sixty berths for seamen, and accommodation for ninety more when required; also rooms appropriated for schools, a dining-hall, smoke-room, and superintendent and servants' rooms, &c. The sleeping berths are heated with hot water, and ventilated, and the whole establishment lighted with gas. The design (originally made by Mr. B. Green), has been carried out by Mr. John Green, of Newcastle, architect. The site was also presented by the Duke of Northumberland.

Aberdeen.—This city, it is said, is about to become one of the principal military depôts in the country, new barracks being contemplated for the accommodation of 2,000 soldiers, and a place for ball practice of 900 yards in length. ——A meeting of gentlemen favourable to the erection of a new Music-hall in Aberdeen, or the adaptation of the Public Rooms to that purpose, was lately held in the Council Chamber, the Lord Provost in the chair. At present there is no hall in Aberdeen of a size sufficient to warrant the risk of bringing hither musical performers of the highest class. A statement was read, showing that a new hall of the size and kind required could be erected for about 5,000*l.* A committee was appointed to consider the several plans detailed, or any others that may be suggested, with power to call in the assistance of architects or surveyors, and to report to a future meeting.

STAINED GLASS.

Angmering.—The whole of the stained glass in the church here, it appears, was executed by Messrs. C. and A. Gibbs, of New-road. One window was the gift of a lady, and another the gift of the rector, the Rev. Henry Reekes. All the others were executed for Mr. W. G. K. Gratwicke, of Ham House, Angmering.

Upper Tooting.—A memorial-window has been recently erected in the east end of the north aisle of Trinity Church, Upper Tooting. The design is in the Decorated style of painted glass, to harmonise with the architecture of the church. In the three lower openings, three subjects are introduced—the Nativity of our Lord occupying the centre, and the Baptism of our Lord and the Last Supper the side openings, these last representing the Institution of the two Sacraments. All the subjects are placed upon a rich polished ground, surrounded by a running border, the effect of this deep colouring being to give a greater contrast to the panels containing the groups. In the lower part of the centre opening, beneath the subject there represented, the armorial bearings of the family are introduced, and a memorial inscription runs along the bottom of the window. In the head of the window, *Agnus Dei* is introduced as the peculiar symbol of our Lord, and is placed upon a deep ground, surrounded by a rich border, to carry up the colouring in the lower portion of the window. The borders, drapery, and foliage, &c. have been drawn, we are informed, from the best existing examples of decorated glass; and, in the subjects, the only deviation from the old treatment has been to introduce more correct drawing, instead of the distorted and ill-drawn figures generally met with in specimens of old painted glass. The colours introduced into the window are principally those obtained by Mr. Winston, and one or two other scientific persons, who have analysed the best specimens of old coloured glass, and the result of their investigation now enables artists to obtain colours nearly equal to the best samples existent of ancient glass; the various tints of the several colours being now largely made by Messrs. Powell, of Whitefriars. The window is erected to the memory of Mrs. Elizabeth Henry Butterworth, of Upper Tooting, by a near relative; and the artist, by whom it has been executed, is Mr. George Hedgeland, of Lisson-grove.

Wantage.—A large stained-glass window has been inserted at the east end of the chancel of Wantage Church, the restoration of which is in progress. The cost of the window has been defrayed by a subscription raised shortly after the death of the late Mr. William Trinder, for providing some memorial of the deceased. The style of the stone work, which is new, is of the Early Decorated period. The window was designed by Mr. Street, the diocesan architect, and executed by Mr. Hardman, of Birmingham. The figures represented are St. John, St. Paul, St. Peter (to whom the church is dedicated), and St. Andrew; the Incarnation of Our Lord, and His Crucifixion.

Bromyard.—The new east chancel window of Bromyard Church has now been filled with stained glass, the design being effigies of the

four Evangelists, in niches, upon a geometrical pattern, on which are emblazoned their symbols and other devices. In the centre quatrefoil of the tracery is the Dove descending, and on either side are the sacred monograms of Jesus and Alpha and Omega. This window has been erected by voluntary contributions. The glass was designed and executed by Mr. G. Rogers, of Worcester.

Nottingham.—A stained-glass window has been placed in the central compartment at the east end of St. John's Church, Leen-side, in this city. Looking from the interior of the church, the first or left-hand lancet contains two medallions, illustrating the life of our Lord—namely, the lower one the birth, and the upper one the crucifixion. The former comprises a group, and the latter only a single figure. The expense of this light has been defrayed by subscription, and its object is expressed, in the inscription at the bottom, to be as a tribute of affection to the Rev. John Montagu Valpy, A.M. the incumbent. The central compartment contains three medallions, exhibiting subjects connected with the life and ministry of St. John the Baptist, to whom the church is dedicated—namely, St. John preaching repentance, baptizing Christ, and pointing to our Saviour as the Lamb of God. It was placed in the church as a private memorial, in memory of John Bradshaw, and of Ruth his wife, by their youngest son. The third or right-hand light contains two medallions, corresponding in size and style with those in the left-hand compartment. The lower subject consists of a group of figures, comprising the angel and the Marys at the sepulchre after the resurrection; the angel pointing upwards. The upper design contains a figure, representing our Lord ascending. The origin of this part of the window is given in the inscription as being to the memory of John Clarke, who was drowned in the Trent, 26th of June, 1856, dedicated by his employers and fellow-workers. The windows have been painted by Mr. Clutterbuck, of Stratford, Essex.

Wilburton.—The church of this parish has had a stained-glass window erected at the east end, as a memorial to the late Miss Pell, by the Hon. Lady Pell and other members of this family. The two principal subjects are the Crucifixion and the Ascension. The artist was Mr. Ward, of Soho.

Whitby.—The east window of Grosmont church, consisting of five lancet lights, has just been filled with stained glass, in memory of the late Mr. H. Belcher, through whose exertions the church, school, and parsonage were erected, and an endowment provided. The subjects in the centre light are the Crucifixion, Resurrection, and Ascension of our Lord, on one side His Baptism, and on the other the Last Supper, with the symbols of the four evangelists; while in the remaining two are represented the visit of the women to the sepulchre on the morning of the Resurrection, and our Lord with the two disciples going to Emmaus. Along the foot of the window is the inscription. The window has been executed by Mr. Barnett, of Leith, and the expense defrayed by the joint contributions of many of Mr. Belcher's friends.

NEWHAVEN CHURCH, SUSSEX.

In the course of the late excursion of the Sussex Archæological Society, to Newhaven and Denton, Mr. M. A. Lower read some notes on the churches of both those localities. Newhaven is a rising place: it was here, it will be remembered, that Louis Philippe landed after the revolution that drove him from the throne of France. Mr. Lower said of the church here:—

At a period when a feeling in favour of church restoration is widely prevalent, it is most desirable to collect memoranda concerning our old churches, previously to their undergoing that process. Posterity may like to know what any parish church was like antecedently to the great changes in form, arrangement, and decoration, which are now going forward; but without some records of this kind, it will, in many cases, be hard to judge what portions of the edifices have been removed, altered, or retouched. Far be it from me to condemn the prevailing desire to enlarge and adorn these temples of the Most High, or even, upon sufficient authority, to restore them to their ancient condition. But it is the duty of every true antiquary to protest against much of what is called restoration, but which is too often rather a destructive than a conservative measure. I am sorry to say that instances are not rare, even in archæological Sussex, in which ancient features have been so tampered with, that it will henceforth be hard to decide what is original and what is merely imitated; and, without exemplifying my remark, lest I should be thought to offend against charity, I will simply observe that more injury has been done to Sussex churches within the last fifteen years, by the application of zeal without knowledge than has accrued from the neglect of centuries, or the whitewashings and other beautifications of a thousand churchwardens of the old school. If I might be permitted to make a practical suggestion on this subject, I would say to the gentlemen officially concerned with parish churches everywhere—"If you are not conversant with mediæval architecture, be careful before you remove a single stone, or even before you call in the aid of your architect, to consult some experienced antiquary who knows your church and has studied its minutest features. Such a person will generally have a keener perception of what ought to be retained than the professional church builder, who is not unfrequently biassed by his own views of the beautiful and structurally convenient, to say nothing of the flights of fancy and the violent anachronisms in which some of that fraternity occasionally indulge.

These remarks have not been called forth by any proceedings connected with this locality. Of the two churches brought under our notice to-day, one stands much in need of restoration; the other has been partially rebuilt, without the injury of a single ancient feature.

Of the *history* of Newhaven Church little is known. Newhaven is a comparatively modern name, having originated within the last three centuries, and since the river Ouse has been made to debouche here instead of, as formerly, at Seaford. The ancient name of the parish (Meeching), though clearly of Saxon origin, is not mentioned in Domesday Book. The place must, however, have been of some little importance in Norman times, since the church clearly belongs to that period. * * * * * *

In Bishop Bower's Visitation, 1774, the following account is given of "Meeching, alias Newhaven Rectory. Patron, the king. Rector, Ezekiel Bristed, A.M. of Aberdeen, in Scotland: instituted 1694. Church and chancel in good repair without, but the walls, floor, and some seats of both very nasty and indecent within; the communion-table indifferent, but the cloth bad; a small silver chalice and cover, and pewter plate, pretty good; the pulpit and desk very dark; the pulpit cloth and cushion scandalous! no carpet for the communion-table; the surplice, Bible, and common prayer-book in good order; the steeple and one bell the same; two other bells lost many years ago; no chest nor poor box; the chancel repaired by the rector; parsonage-house, &c. in good order; families, forty-nine, no Dissenters, no Papists. Value in the king's books, 8*l.* 8*s.* 4*d.* discharged from first fruits. Divine service and sermon by the rector; the Holy Sacrament administered at the three solemn festivals and at Michaelmas. Communicants, about fifteen. Nine acres of glebe."

The church at that period was extremely small, consisting, besides the tower and apse, of a nave only. Subsequently, it was considerably enlarged in the worst possible taste. Quite recently, as you are aware, it has undergone a thorough renovation.

The only ancient portions of the building are the tower and a very small semicircular apse attached to its eastern side. The Rev. J. L. Petit, in his account of this church, in the *Archæological Journal* (vol. vi. p. 138), observes that it is "almost, if not quite, unique, as an English specimen of a tower with an eastern apse immediately annexed to it without the intervention of any other chancel." He adds, "the arrangement is common enough on the continent." Though I have a great *penchant* for continental churches, I cannot boast of a large acquaintance with them, and the only one I have seen in this respect like Newhaven, is at Yainville, in Normandy, on the right bank of the Seine, between Duclair and Jumieges. This I encountered quite unexpectedly in a summer excursion during the present year; when at a sudden turn of the road I involuntarily exclaimed, "Why, here's Newhaven Church!" As a matter of course I sketched it; and having subsequently taken a sketch of Newhaven from the same point of view, one may, on inspection, easily note the extraordinary points of resemblance—the same corbelled band beneath the eaves, the same double belfry window in each face of the tower, and the same flat buttressed, semicircular apse, with the same diminutive eastern window. There are, however, some points in which the Norman and the Sussex church disagree—yet so strong is the general likeness of these sister edifices that there is no great stretch of probability in assigning them both to precisely the same epoch, if not actually to the same architect, in the twelfth century.

I may observe here that both Mr. Hussey, in his account of this church, and Mr. Dawson Turner, in his notice of Yainville, describe the towers as "central," which appears to me to be an incorrect use of terms. In general effect the towers of both churches stand, not in the centre, but at the east end of the buildings, and I need not inform the people of Newhaven of the Irish sailor's joke, that their church sails "stern foremost." Since I have mentioned Yainville church, it may be interesting to remark that the apsis of that building, with its peculiarly high-pitched roof, so strongly resembles the upper portion of the much debated round towers of Ireland, that Mr. Turner concludes that the latter were "undoubtedly of Norman origin."

CHURCH-BUILDING NEWS.

Thaxted.—Some restorations of a portion of Thaxted church, lately effected, are peculiar in character. It was found that, from the immense weight of the tower and spire, the stonework of the great western door had become in a very dangerous state, and that it would be necessary, in order to carry out a reparation, that some very careful shoring should be resorted to. The matter was accordingly placed under the management of Mr. Erswell, of Saffron Walden, builder, and, by the aid of needle shoring, the whole of the stonework has been renewed and refixed; and a new tracery-headed window is in course of preparation, and will shortly appear over the western entrance.

Hendon.—The rural church of All Saints, Hendon, in the Hampstead Heath vicinity, has recently been erected, together with a parsonage and schools. The plan of the church comprises a nave, 70 feet long by 30 feet broad, and a chancel, 22 feet long by 17 feet broad, with a recess for the organ. The nave is so designed that large transepts can be added, as well as aisles. The height to the top of the roof is 46 feet, and there is a bell-turret, covered with oak shingle. The style is Decorated Gothic. The fittings are of deal, stained and varnished. The chancel is paved with Minton's tiles, and the east end painted. The present accommodation does not exceed 350 sittings. Mr. Talbot Bury is the architect. The requisite funds, except 900*l.* to 1,000*l.* which remained to be supplied, were raised by the incumbent (Rev. W. H. Shore) and Mr. Joseph Hoare.

West Kington (Wilts).—The church of West Kington has been rebuilt and re-opened. The rebuilding was conducted by Mr. G. W. Gabriel, of Bristol, architect. The church, dedicated to St. Mary, stands on an eminence overlooking the secluded village. It has been entirely rebuilt, with the exception of the tower at the west end, the upper portion of which is of a later style of architecture than the body of the church, and forms a conspicuous object for many miles. The church is in the shape of a Greek cross, the nave, transepts, and chancel being nearly of equal length, and has been built on the old foundations, in the Early English style of architecture. The old high pews have been removed, and their space occupied by square-headed, low, open benches of stained deal, varnished. The roof is of deal, stained, and formed with interlacing rafters, with braces at the intersection of the transept: it is restored to its original pitch, and covered with the stone tiles of the neighbourhood. The nave is paved with Peake's metallic tiles, and the chancel with Minton's encaustic tiles. The chancel is separated from the nave by a low, open screen, in lieu of the high carved oak screen, which was found too decayed to be replaced, and is fitted up with open traceried stalls, and carved poppy-heads, with a platform for a harmonium on the south side, and sacristy on the north. The east window is a triplet, with freestone arches and detached Purbeck marble shafts inside, filled with stained glass, by Bell, of Bristol, and is the gift of a parishioner, the centre compartment representing the Crucifixion of our Saviour, with St. Mary and St. John in the side lights. The south-east window of the chancel (a doublet) is also filled with stained glass by the same artist. There is also a small single-light window in the south side of the chancel, filled with stained glass, by Mr. Bell, and the gift of the architect: it is to the memory of

Bishop Latimer, some time rector of this parish. The old pulpit, from which the great Protestant champion and martyr preached, has been carefully restored and replaced at the north-east angle of the nave. The old western gallery and vestry have been removed, and the tower arch, which is a lancet, the imposts enriched with dog-tooth ornaments, restored to its original height: the west window of the tower is lengthened, and thrown open to the body of the church. The church will accommodate, as restored, about 380 persons. The restoration will cost about 800*l*.

Weston-Super-Mare.—At a recent meeting of the building committee of the New Independent Chapel, out of seven designs sent in from three architects, one of a Gothic character was selected, having a spire, and calculated to seat from 500 to 600 persons, with school-rooms, &c. "The plans were examined and discussed," says a contemporary, "ere the names of the architects were known, and on the opening of the envelopes it was found that the one selected was by Messrs. Pritchett and Sons, the father and brothers of the respected minister."

Wells.—The restorations in St Cuthbert's church, Wells, are proceeding, chiefly under the superintendence of the churchwarden, Mr Willmott. The two unsightly galleries which formerly stood, or rather were suspended, between two of the pillars at the eastern end of the nave, have been removed, and a considerable portion of the new seats are already fixed. It is, we believe, intended to complete the new seating of the church as far as the western side of the two transepts; and this, with the removal of the pulpit to a position further eastward, will more than exhaust the present restoration fund.

Highbridge.—The foundation-stone of a new church was laid at Highbridge, in the parish of Burnham, on Wednesday week. The expense of erection is being defrayed by Miss M. A. Poole, daughter of the late Mr. Ruscombe Poole, of Bridgwater. The new church will be dedicated to St. John the Evangelist. The architect is Mr. Norton, of London (the architect also of St. Audries' church and Bedminster church). The contractor is Mr. Palmer, of Weston-super-Mare. The edifice is to be completed by Lady-day, 1858.

St. Audries (Somerset).—St. Audries' Church has been rebuilt, at the expense of Sir A. A. Hood and Sir P. Acland, barts. The church is in the Early Decorated style, with a tower at the west end of the north aisle, having a turret capped with a small spirette, and surmounted with a gilded cross and vane. The edifice is conspicuously placed at the head of the Quantock range: it occupies the same spot as the old church, and is in fact an enlargement of the same plan, and comprises a nave with north and south aisles, the attached tower at the west end of the north aisle serving as a baptistry, the east end forming an organ-chamber and vestry, with a south porch as the principal entrance. The material used is Doulting stone, both inside and out, for the arches, windows, and facing of the walls, which are built of solid blocks of hewn sandstone, from the neighbouring parish of Sampford Brett. The parapets are pierced with tracery. In the interior the columns supporting the arches are monolithic blocks of Babbicombe marble, polished. The stone corbels are carved in foliage, birds, &c. by Mr. Farmer, of London. The roofs are open timbered, high pitched, and with carved cornices. The whole roof is of solid English oak, grown on Sir Peregrine Acland's estate at Fairfield. The pews, which are of the same material, with carved bench-ends, are all low, and calculated to seat about 250 persons. The pews, pulpit, reading-desk, reredos, and chancel-stalls, were made and carved in tracery and foliage, by Mr. Davis, of Taunton. The baptistry has a groined roof in stone, and the approach from the nave is under an acute arch, similar arches being introduced at either end of the north aisles, viz. the baptistry and organ-chamber, thus giving an appearance of length to that side of the church. The font basin is octagonal, and of Devon marble, supported on eight pillars of Cornish serpentine, and a base of Plymouth black marble, polished. In this part of the building is a small stained glass window, typical of baptism, by Messrs. Hardman, of Birmingham. The subjects in it are Moses passing through the Red Sea, and John baptising the Saviour in the Jordan, with the figures of angels in the upper lights. There are two stained glass windows in the chancel chapel, filled with figures of the Virgin and Child, and St. Etheldreda, under canopies; and the east window of two lights—subject, the Annunciation—the Angel Gabriel in one light, and the Virgin in the other, with the Spirit, as a dove, descending, under canopies formed of lilies. The side chancel window represents the Incredulity of St. Thomas, and the Ascension of our Lord, the presentation in the Temple, and our Saviour preaching on the Mount. The eastern window has the Crucifixion occupying the whole three lights, and Agnus Dei surrounded with a choir of angels. It is the gift of Sir Peregrine Acland, as a memorial of his late wife. All these windows have polished marble shafts. The stained glass was furnished by Mr. O'Connor, of London. The other windows throughout are filled with Powell's diapered quarries, with coloured borders. The covering of the roof is composed of slabs of Bath stone. The floor and passages of the nave are laid with Minton's tiles, and the chancel with Minton's encaustic tiles. The steps internally are of polished Plymouth marble, and those outward are of granite: the copings of the roof are all surmounted with stone crosses. Underneath the church, as much stone (about 1,000 tons) has been used as sufficed for the whole superstructure, in giving solidity and permanence to the foundation, and forming catacombs for the Acland, Hood, and St. Aubyn families, with a small space for the family of the rector. The church is heated with hot air throughout, on the plan of Mr. Haden, of Trowbridge. Mr. Norton was the architect. The plumber's work was by Mr. Sydenham, of Taunton. The Doulting stonework was by Messrs. Wall and Hook, near Stroud: the other was executed by the workmen employed on the estate, under the personal supervision of Sir P. Acland.

Hadley.—This village, of 1,200 persons, is situated about a mile from the parish church of Wellington. It was therefore determined to make an attempt to erect a church in the village. The requisite sum was raised, and a church has been built, and consecrated. Messrs. Nevett, of Ironbridge, were the builders employed. The church is built upon a piece of rising ground at the eastern extremity of the village, adjoining Wombridge parish. It is in the Early English style, of brick, with dressings of Grinshill stone. There is a stone spire of about 60 feet high, at the west end, with one bell. The roof is covered with blue tiles and ornamental ridge tiles. There is a small porch, with oak door. The interior is very plain, and the open stalls are of stained deal, and varnished. The east window is plain, with the exception of a bordering of ruby glass, presented by Mr. Getley, of Hadley. At the west end is a gallery. A small octagonal vestry, approached from the chancel, is placed on the south side. The roof is open timbered. There is accommodation for nearly 300, and the greater portion of the sittings are free. The architect is Mr. Owen, of Southsea.

Shrewsbury.—The new Roman Catholic Church, Shrewsbury, was opened on Wednesday in last week. It is called the Church of our Lady of Help and St. Peter of Alcantara. A cardinal, four bishops, and forty of the clergy assisted at the opening. The edifice has been erected mainly through the liberality of the late Earl of Shrewsbury. It is built from the designs and under the superintendence of Mr. E. W. Pugin. It has been raised upon the town walls, and therefore occupies a prominent site. The church has been built by Mr. Wullon, of Wolverhampton, and the cost will be about 4,000*l*. The foundation was laid with considerable trouble by reason of the strata of sand which lay at a short distance from the surface. For the same reason one part of the design had to be abandoned. It was originally intended to have a tower and spire on the south side of the west end, the height of which when completed would have been nearly 300 feet; but owing to the state of the ground it was found that there would not be sufficient foundation to support the superincumbent mass. The church, however, has been completed without the spire. The style of architecture is Gothic, of the Early Decorated period. The ground plan consists of nave, aisles, two confessionals, chancel, Sacramental chapel, and sacristy, connected with the residence of the officiating priest by a cloister. The exterior is of white freestone. There is a clerestory, the windows of which are triangular. The west-end gable is surmounted by a bell-turret, on which is placed a gilt ornamental cross. The roof is covered with dark blue tiles, and ornamental crest. Ornamental crosses are fixed at the apex of the roofs of the nave and chancel. The west door is approached by two flights of steps. The archway of the principal door is enriched with carved capitals to the pillars. The seats are open, and of stained wood. The east window is of stained glass. The centre figure represents the Virgin (the patroness of the church) with her Son. On the right hand are St. Winefred and St. James; on the left, St. Charles Boromeo and St. Peter of Alcantara. Messrs. J. Hardman and Co. of Birmingham (who are at present filling in the windows of the Houses of Parliament with stained glass), supplied the window. The ornamental iron work is by the same firm. The floor of the chancel is laid with encaustic tiles, and the roof is open timbered work—plain as yet, but intended to be highly decorated. The reredos behind the altar, commencing from the floor, is relieved by the insertion in the wall of blue and yellow encaustic tiles, from Minton's. It is divided into four compartments—containing Scriptural subjects—two on each side of the tabernacle. In the left compartments the subjects are, the Annunciation and the Nativity of our Lord; on the right, our Lord at the Marriage Feast changing water into wine, and the Crucifixion. Each of these compartments is fixed upon a pedestal, underneath which are placed blue and white encaustic tiles, of the *fleur de lis* pattern; and over each is a Gothic canopy, decorated with finials and two angels playing musical instruments. In the spandrils is a kind of red amber marble, which throws out the carving. The tabernacle in the centre has a canopy with pinnacles and finials. There are four angels in this canopy, which rises to a considerable height. The whole is worked in Caen stone, of which also the altar is composed. It is the workmanship of Messrs. Lane and Lewis, of Birmingham. At the west end is placed a font, also in Caen stone, and by the same firm as the reredos and altar. The length of the nave of the church is 69 feet; breadth, 28 feet; aisles 11 feet wide.

Eastwood (Notts).—The foundation-stone of the new church of St. Mary, at Eastwood, before noticed, was laid on Friday before last. The church is to be erected on the old site. It will be in the Early Decorated style, with open timber roof, and calculated to seat 800 persons on the ground-floor. It will consist of nave, 72 feet 6 inches, by 24 feet 6 inches; chancel, 31 feet 6 inches, by 24 feet 6 inches; with north and south aisles, 72 feet 6 inches, by 13 feet 6 inches each; the extreme length from east to west being 130 feet, and the extreme width 60 feet. The north aisle being carried forward, will form an organ chamber and vestry. The edifice will be surmounted by a square tower of three stories, 112 feet high to the top of the stair turret. The architect is Mr. Robert Barber, and the builder, Mr. J. Fisher. The estimated cost, as we have said, is 4,200*l*. of which sum about 1,000*l*. are still deficient. A substantial repast after the stone-laying was prepared by the committee for the workmen, upwards of forty in number, the contractor occupying the chair.

Over Tabley.—St. Paul's church, Over Tabley, which was destroyed by fire in February last, having been restored on a plan furnished by Mr. Salvin, was recently re-opened.

Waterloo.—The foundation-stone of a new Wesleyan chapel was laid in the village of Waterloo, near Liverpool, on Friday in last week. The works are now in progress. The building is being carried out by Mr. J. Sanders, of Liverpool, builder. Mr. A. Lea is clerk of the works. The design of the building was furnished by Mr. James Wilson, of Bath, architect. The building covers an area of nearly 3,000 square feet, and is 36 feet wide by 62 feet long, ex-

clusive of class-room, porch, &c. The style is Gothic, of the early decorated period, with high pitched gables and roofs, which are in one span throughout, with ornamental crest at ridge, and a moulded corbel table at eaves, with grotesque spout-heads. The front gable, towards Bath-street, is pierced with a five-light traceried window, with moulded joints and mullions. Two buttresses, surmounted by small pinnacles, are on either side of this window. The sides are divided into five bays, with two-light traceried windows in each, with a porch in the second bay from the front nearest Bath street, and a class-room in the last bay on the opposite side. Internally, the roofs are open timbered, stained, and varnished. The accommodation is for about 350, in open pews.

Heywood (*Manchester*).—The ceremony of opening a new Roman Catholic chapel, dedicated to St. Joseph, was celebrated on Sunday, the 11th ult. by the Roman Catholic bishop of Salford, with pontifical high mass. The building is in the Transition style of Early English, and consists of lady chapel and nave. It is 86 feet by 35 feet clear, and will seat 800 people. The architect was Mr. W. Nicholson, of Manchester, and the contractor Mr. Thomas Tully, of Strangways, Manchester. In the lady chapel there is a stained glass window, by Messrs. Edmundson and Son, of Manchester. The subject is St. Joseph and the Virgin, under canopies, from designs by the architect.

Barwick.—The old church of All Saints, at Barwick-in-Elmet, near Leeds, after undergoing some renovation and alteration, has been reopened. A new and high-pitched roof has been erected, and the high square pews have been replaced by open benches, those in the nave of deal, and those in the chancel of oak. The walls and stonework have been stripped of whitewash, and replastered. The west arch has been thrown open, and a new organ, by Messrs. Foster and Andrews, of Hull, has been placed under it, showing the window over it. The ancient characteristics of the church have been preserved, as also the east window, of Decorated style. The improvements have been effected by the efforts of the Rev. C. A. Hope, the rector, aided by the contributions of his parishioners and the neighbouring gentry. The alterations have been made under the superintendence of Mr. G. F. Jones, of York, architect. The contractor was Mr. Brown, also of York.

Greenock.—A new chapel has been erected at Ardgowan, near Greenock. It is in the Decorated style of architecture, and has been built for Sir Michael Robert Shaw Stewart. Mr. Henderson, of Edinburgh, was the architect. The large east altar window has been filled by Messrs. C. and A. Gibbs with rich stained glass, suited to the style of architecture: there are seven subjects in the window from the New Testament, and thirty-seven pieces of tracery, all fitted with appropriate emblems and foliage.

Drumcrée (*Armagh*).—The church of Drumcree, near Portadown, in the diocese of Armagh, has been reconsecrated. The building, as described by the *Belfast Newsletter*, is of the Early English style (the thirteenth century), of very simple character. It consists of a nave, with clerestory, side aisles, chancel, and robing-room. It affords accommodation for 500 persons on the ground floor, and there are no galleries. The building is 99 feet 6 inches in length, by 49 feet wide. The masonry is of basalt stone, from a quarry in the neighbourhood, with Scotch sandstone dressings. The roofs are open, and the timber-work is stained and varnished. The aisles are divided by cut-stone circular columns, and arches, with moulded caps. The pulpit, reading-desk, and pews, are all executed in Baltic fir, stained and varnished. The east window, side windows of chancel, and quatre-foils in gables, are filled with stained glass, as also a memorial window, erected by Mr. E. E. Atkinson, of Dublin. The floor of the chancel is laid with Minton's tiles. The old tower has been furnished with new windows, &c. in keeping with the new building; and the spire with weatherwings, to give it the character of a broach spire. An entrance pier and gate, with yard wall, have been also erected, and a house for the sexton, in keeping with the style of the church, has been erected by the parishioners. The designs and plans for the church were furnished by Mr. Joseph Weiland, architect to the Ecclesiastical Commissioners, and carried out under the superintendence of Mr. Wm. Fullerton, the diocesan architect. The building was erected by the firm of Messrs. Hugh Henry and Son, at a cost of nearly 3,000*l*.

TO OLD FREEMASONRY.

Stoop from your blissful realms, old glorious men!
Whose shades still float among the cool aisled aisles,
And wander, with our thoughts, in aged piles.
Can ye not open to our dazéd ken
Gone forms of loveliness? Behold! again
Base toes have martiall'd, in their subtile wiles,
An Art-less army: even now their files
Stand in your hallow'd foot-prints! Then, oh! then,
We call, in anguish, through the distant old
(Who, else, are nothing when we know you not),
Striving for ends that, long time since, were held
As passing lovely! Must ye be forgot!
Shall borrow'd sameness meet us as we roam,
And England bow before imported Rome?

Was it for this great olden deeds were done?
Was it for this ye wander'd thro' the land,
Raising new beauties with unselfish hand?
To be all else but worship'd! Are there, on earth, none
So blest but something steals athwart the sun,
Which, unassisted, ripens to an end
The boy-dreams of the heart that, growing, tend
To emulate the past? Your race is run;
And glories thicken in the wake of years,
Making your unknown memories a light
To cheer the gather'd darkness of our fears!
Say, is there nothing now; no more delight?
Never! Oh! say not that to Pagan climes
We yield the majesty of bygone times!

Shall we not strive to keep your greatness green?
Must the star wane, the reverential few
Resign their glories to a soul-less crew?
Must we not be again what ye have been?
Now false taste flourishes, and panders mean,
Do sell their names to fortune. Oh! renew
The beautiful again. Mayhap, to you
Boy-dreams are palpable; yet have you seen
The bright moon darken'd by a passing cloud,
And felt the small stars pining for her light.
Thus do we pine, the while abortions shroud
Old God-like splendours in perpetual night.
Can there be hope? Yes! truth must still survive:
Ye mighty dead, I hear ye whispes, "Strive."

J. F. F.

HEREFORD IMPROVEMENT.

We see by a local paper that the Hereford cattle-market and sewerage have been executed, and the accounts finally wound up, at 450*l*. under the contract sum.

The cattle-market, which covers an area of four acres, fitted up with cattle and sheep pens, and a shed 640 feet long, and 24 feet wide, covered with corrugated galvanized iron, was opened on the 19th ult.—the tolls received on that day being 95*l*.

The sewerage was completed on the stipulated day named in the contract. About 600 houses have been connected with the main sewerage during the execution of the works: about 200 houses are deriving pure water from the new waterworks. The water is pumped, by a 20-horse engine by Messrs. Simpson and Co. from the river Wye into a reservoir 103 feet above the river level, and capable of holding four millions of gallons. It is afterwards filtered in two filtering-beds before it enters the main.

The contract amount for the whole of the works was 22,000*l*. The works were begun in May, 1855, and the inhabitants already feel and appreciate the beneficial effects of these sanitary works. It is estimated that the cattle-market tolls and water-rate will pay the interest on the money borrowed for constructing the works.

Mr. T. Curley, of Hereford, was the engineer, and Mr. Wm. Moxon, of Dover, the contractor.

METROPOLITAN BOARD OF WORKS.

DEPUTATION TO SIR BENJAMIN HALL.

On Wednesday last a deputation from the Metropolitan Board of Works waited on Sir Benjamin Hall, at the office of Public Works, with the amended drainage scheme, lately adopted by the Board, and plans of other improvements, for Sir Benjamin's approval.

The engineer, Mr. Bazalgette, was required by Sir Benjamin to enter at great length into the details of his plan, and to explain how it was that a scheme (plan B) already to some extent condemned by the Board (if the reports in the daily press were correct), was now presented for his approval. The subject, he at length said, should have his best and most speedy attention.

The plan for improvements at Covent-garden was then submitted by Mr. Marrable to Sir Benjamin, who said he had very serious complaints to make against the Board, for not having much sooner given their attention to these improvements, and for now bringing before him plans as to which he was called upon to decide at once, that notices might issue by the 15th instant: it was really too bad, he declared; and indeed, on the whole, it would appear that the deputation was considerably snubbed. The Southwark improvements were another subject, Sir Benjamin said, on which he felt it his duty to talk to the deputation most seriously, and he then recapitulated what he had done, and what the Board had not done, and reiterated his opinion that it was really "too bad." Finally, Sir Benjamin said that if the plans were sent to him on Monday, he would put aside other business and attend to the subject, but hoped such delays would never again occur.

SANITARY CONDITION OF KNUTSFORD.

The inhabitants of this rural town are suffering much inconvenience from the imperfect draining of the streets, and the consequent unhealthy state of their dwellings. During the present week several respectable families have been in a high state of alarm at the sudden sickness of their children and domestics. The medical gentlemen called in have reported that the air in the houses, which enters through the private sewers, is of a very poisonous character, and threatens fatal results unless something of a sanitary nature be instituted without delay by the constituted authorities. See, for confirmation, the Macclesfield *Courier and Herald* of October the 18th.

In the majority of cases, the air enters direct into the houses from the openings in the sewers in the public streets, as was the case in the instance here more particularly alluded to, where the poisonous gases entered a dwelling at 8 yards' distance from the sewer opening, and caused the almost immediate sickness of four children, two of whom were thrown into convulsions, and the two others seized with sickness and purging and accompanying feverish symptoms, the sickness being also experienced by others of the household.

In addition to the account you lately gave of our sanitary state and doings, I beg to state that our Nuisances Committee was composed of twelve (not eleven), exclusive of the surveyor of the highways. Six, as stated by you, resigned in disgust at the meeting. Five others, I now add, equally disgusted, refuse longer to act, so that there are left but two of the body, Mr. Swinburne, the chairman of the Board of Guardians of the Altrincham Union, and Mr. Joshua Hewitt, *ex officio* member, and the surveyor of the highways. C.

THE LIVERPOOL LIBRARY AND MUSEUM COMPETITION.

At the monthly meeting of the Liverpool town council, on the 30th ult. a report was submitted to the effect that the design of "Con Amore," without the sculpture, could not be executed under 30,000*l*. or 32,000*l*. and that of "Alma" under 76,000*l*. in its present condition, or 57,000*l*. reducing it to the condition of other plans, and what that means we do not exactly understand. It will be remembered that these are the two designs to which the council were recommended by the committee to award the first and second prizes; but the consideration of the question had been adjourned for the purpose of ascertaining whether either of them could be carried out for the sum of 20,000*l*. the amount stated in the advertisement. The proceedings on Thursday include a letter from Mr. W. Brown, M.P. urging the council to adopt the design of "Con Amore," and stating his willingness, in that case, to give an additional 6,000*l*. as a donation, if the council would meet the difference. The chairman of the Library and Museum Committee moved that the first prize of 150*l*. be awarded to "Con Amore," and the second prize of 100*l*. to "Alma." This proposition was adopted on a division; but the question as to the adoption

of the design was left to the consideration of the new council.

That grave injustice, likely to prove a serious hindrance to the improved administration of competitions, has been done, none can question. The committee throw the blame on the sixteen selected competitors, and say that not one of the sixteen designs could be carried out for the stipulated sum. They ignore the fact that the initial injustice is to be referred to their own first selection from the 115 designs originally submitted.*

THE LIVERPOOL WELLINGTON TESTIMONIAL.

I SEE by the advertisements, that the committee of the Liverpool Wellington Testimonial propose to erect a statue upon a column to commemorate our hero.

Since this barbarous impalement of our celebrities seems likely for some time hence to disgrace us, in spite of all that common sense and common taste can urge against it, I have thought that our sculptors might save themselves much trouble and expense by associating in the production of a well-considered and properly conventionalised model for a bronze dummy, which, as any figure will answer as well as another, or as none, when so stylated, might, when duly labelled with the name of the worthy it is proposed to honour, be hoisted to its post out of sight, and there permanently do duty on his behalf. The terms on which castings for such occasions might be had could be easily arranged by the combining artists.

ECONOMIST.

LIVERPOOL ARCHITECTURAL SOCIETY.

AT the third meeting of this society, held on the 29th ult. Mr. Huggins in the chair, attention was drawn to the opening of the "Architectural Exhibition" in December next.

Mr. Picton stated that a few weeks ago he had an opportunity of inspecting the new town-hall at Leeds, designed by Mr. Broderich. Externally, it was not so imposing as St. George's Hall, but internally it was a work of equally great merit. The laying of it out was equal to anything he had ever seen, and superior to their own hall in that respect. Mr. Horner agreed with what had been said by Mr. Picton.

A paper was then read "On the Liverpool Building Act," pointing out what were considered to be its inconsistencies and weaknesses, with the view of inducing the society to memorialize the town council to consider the desirability of amending it.

A discussion ensued, but the determination was adjourned for a fortnight.

Mr. Picton said there might be some ambiguity in Acts of Parliament, but in the attempt to attain perfection he was afraid they would complicate the thing and plunge into a series of blunders which they had no conception of. In proof of this, he referred to the Metropolitan Building Act, which was far more stringent and oppressive than their own. They had got King Log, and he did not oppress so much; but if they got rid of him they would have King Stork to oppress them far more.

INSTITUTION OF CIVIL ENGINEERS.

PREMIUMS.

THE Council of the Institution of Civil Engineers have awarded the following premiums for papers read during the session 1855-56:—

1. A Telford medal and a Council premium of books to Mr. John Murray, for paper "On the Progressive construction of the Sunderland Docks."

2. A Telford medal to Mr. Heppel, for paper "On the relative Proportions of the Top, Bottom, and Middle Webs of Iron Girders and Tubes."

3. A Telford Medal to Mr. Henry Robinson, for paper "On the Past and Present Condition of the River Thames."

4. A Telford Medal to Mr. C. R. Drysdale, for paper "On Steep Gradients of Railways, and the Locomotives employed."

5. A Telford medal to Mr. F. M. Kelley (New York, U.S. America), for paper "On the Junction of the Atlantic and Pacific Oceans, and the practicability of a Ship Canal, without Locks, by the Valley of the Atrato."

6. A Council premium of books to Mr. G. Herbert, for paper "On the Construction of Buoys, Beacons, and other Stationary Floating Bodies."

7. A Council premium of books to Mr. Evan Hopkins, for paper "On the Vertical Structure of Primary Rocks, and the general Character of their Gold-bearing Varieties."

8. A Council premium of books to Mr. Heinke, for paper "On Improvements in Diving Dresses and other Apparatus for Working under Water."

9. A Council premium of books to Mr. J. Baillie (Vienna), for paper "On the Application of Volute Springs to the Safety-valves of Locomotive and other Boilers."

10. A Council premium of books to Mr. W. Kemble Hall (U.S. America), for paper "On the Causes of the Explosions of Steam Boilers."*

* We are asked to notice that the decision as to an exhibition or not of the rejected sketches will remain open another week.

THE ARCHITECTURAL ASSOCIATION.

BYE-LAWS SUGGESTED BY THE INSTITUTE OF ARCHITECTS.

AN ordinary meeting was held on the 31st of October last, when the following letter from the honorary secretaries of the Royal Institute of British Architects was read, enclosing the following draught addition to the Bye laws, now under consideration by the Council, with a view to its submission to a special general meeting, either as it stands, or with such modifications as may be thought fit:—

"The Council may, from time to time, admit to the library and museum, and to the ordinary general meeting (subject to such regulations as the Council may from time to time make), such persons as they shall approve, who shall be satisfactorily shown to them to be engaged in the office of an architect, either in the study of architecture, or in its practice in such office, or partially as principals. Such persons to pay an annual subscription of one guinea, but to have no right to interfere in the affairs of the Institute: and they are to be called 'Graduates of the Royal Institute of British Architects.'"

Regulations made by the Council in pursuance of the above Bye-law:—

"Every person desirous of being admitted under the last mentioned bye-law must be proposed agreeably to the form No. VIII. in the Appendix, wherein must be inserted his Christian name, surname, description, the office in which he may be engaged, the nature of his engagement, as pupil, assistant, or part principal, and his usual place of residence; and this form must be subscribed by him, and, at least, three fellows, associates, or graduates, or any three of them, who shall testify their personal knowledge of them.

The recommendation of every such person must be delivered to the secretary, who shall submit the same to the Council; and if they shall see no objection, the recommendation shall be signed by the chairman of the Council, and be read at the first subsequent ordinary meeting, and hung up in the room; and at the following ordinary meeting, the candidate shall be balloted for by all the graduates then present, in the same manner as in the case of the election of fellows and associates; provided, nevertheless, the Council shall have the power of admitting six graduates in the first instance, without the previous submission of the names to the ordinary meeting, and without ballot.

When a person is elected a graduate, one of the secretaries shall immediately inform him of his election by letter: and he shall not be considered entitled to the privileges of a graduate until he shall have signified his acquiescence in the election.

Every person elected a graduate shall pay his first annual contribution within two months of the day of his election, otherwise his election will be void.

With a view to encourage practical studies, fellows, associates, and graduates shall be invited to attend on certain evenings to be fixed by the Council, intermediate to the ordinary meetings of the Institute, for the purposes of mutual improvement, the communication of information, reading essays, &c., of making sketches on subjects to be arranged at such meetings, a selection of which sketches shall be publicly exhibited on the ensuing ordinary meeting.

The Council to have the power of allotting the sum of 10*l*. 10s. annually, or such sums as they may direct, for the purchase of premiums to be awarded to those whose sketches shall be deemed to possess the greatest merit; the persons submitting sketches to be the judges.

It shall be lawful for the Council, or any seven members thereof, concurring in a vote at a meeting specially summoned, to declare that the admission of a graduate shall be cancelled; and thereupon notice of such resolution shall be given to him, or left at his place of residence, as specified in the form No. 8, and he shall accordingly cease to be a graduate.

No graduate is to introduce any person whatever into the rooms of the Institute. Every graduate shall conform to all such rules and regulations as may from time to time be made by the Council for the use and preservation of the property of the Institute, and for the conduct and proceedings of the graduates."

The following resolution was then proposed by Mr. Gray, seconded by Mr. Herring, and carried unanimously:—

"That the Committee be empowered to consider the letter from the Secretaries of the Royal Institute of British Architects just read, and to embody an answer to the same in the letter which they are to submit for the consideration of the members at the general meeting to be held on the 14th of November next."

Mr. Wigley then delivered an interesting address upon "Mediæval Architecture in Palestine," which was illustrated by plans and photographs.

* The first meeting of the new session will be held on Tuesday, November 11th, when a paper by Mr. D. K. Clark, "On the Improvement of Locomotive Stock," will be read and discussed.

CLOTHWORKERS' HALL, LONDON.

THE Company of Clothworkers are about to erect a new hall on the site of their now destroyed old one, on the east side of Mincing-lane, Fenchurch-street, and our engraving represents the entrance front of it, which has been designed and is about to be carried out by Mr. Samuel Angell. Samuel Pepys was Master of the Company in 1677, and presented a handsomely chased silver cup and cover, still in the possession of the Company. The clothworkers stand the twelfth on the list of the twelve great companies of London. To quote Mr. Timbs's "Curiosities of London,"—"The clothworkers were originally incorporated by Edward IV. in 1482 as shermen (shearers), and were united with the fullers in 1528 by Henry VIII. the conjoined fraternity being then named clothworkers. James I. incorporated himself into the clothworkers, 'as men dealing with the principal and noblest staple wares of all these islands, woollen cloths.' Among their pageants is that of Sir John Robinson, Lord Mayor 1662-3, 'reviving the true English and man-like exercise of wrestling, archery, sword, and dagger;' when, at his mayoralty feast in Clothworkers' Hall, he entertained the King, Queen, and Queen-mother, the Duke and Duchess of York. The hall was in part destroyed by the Great Fire: 'but strange,' says Pepys, 'it is to see Clothworkers' Hall on fire these three days and nights in one body of flame, it having the cellars full of oyle.' The *Gazette* of Sept. 8, 1666, announces the Fire to have stopped near Clothworkers' Hall. The list of the Company's charities is remarkable for its number of anniversary sermons and lectures, and for its bequests for blind persons. The Company's Almshouses (now at Islington) were originally in Whitefriars, on part of a garden belonging to Margaret Countess of Kent, held by her of the prior of that friary.

Howes relates that James I. being in the open hall, inquired who was Master of the Company; and the Lord Mayor answering 'Syr William Stone,' to him the King said, 'Wilt thou make me free of the clothworkers?' 'Yea,' quoth the Master, 'and thinke myself a happy man that I live to see this day.' Then the King said, 'Stone, give me thy hand; and now I am a clothworker.'"

The ground-floor of the new building will be principally devoted to offices and for the business departments of the company, reserving a fair proportion for that important appendage to civic halls—a kitchen. The *piano nobile* will be occupied by the livery-hall and court and livery drawing-rooms.

The hall will be 80 feet in length by 40 in width, and 40 high, approached by a spacious staircase surmounted by an octangular pendentive dome.

The front in Mincing-lane, represented in our view, is intended to be of Portland stone.

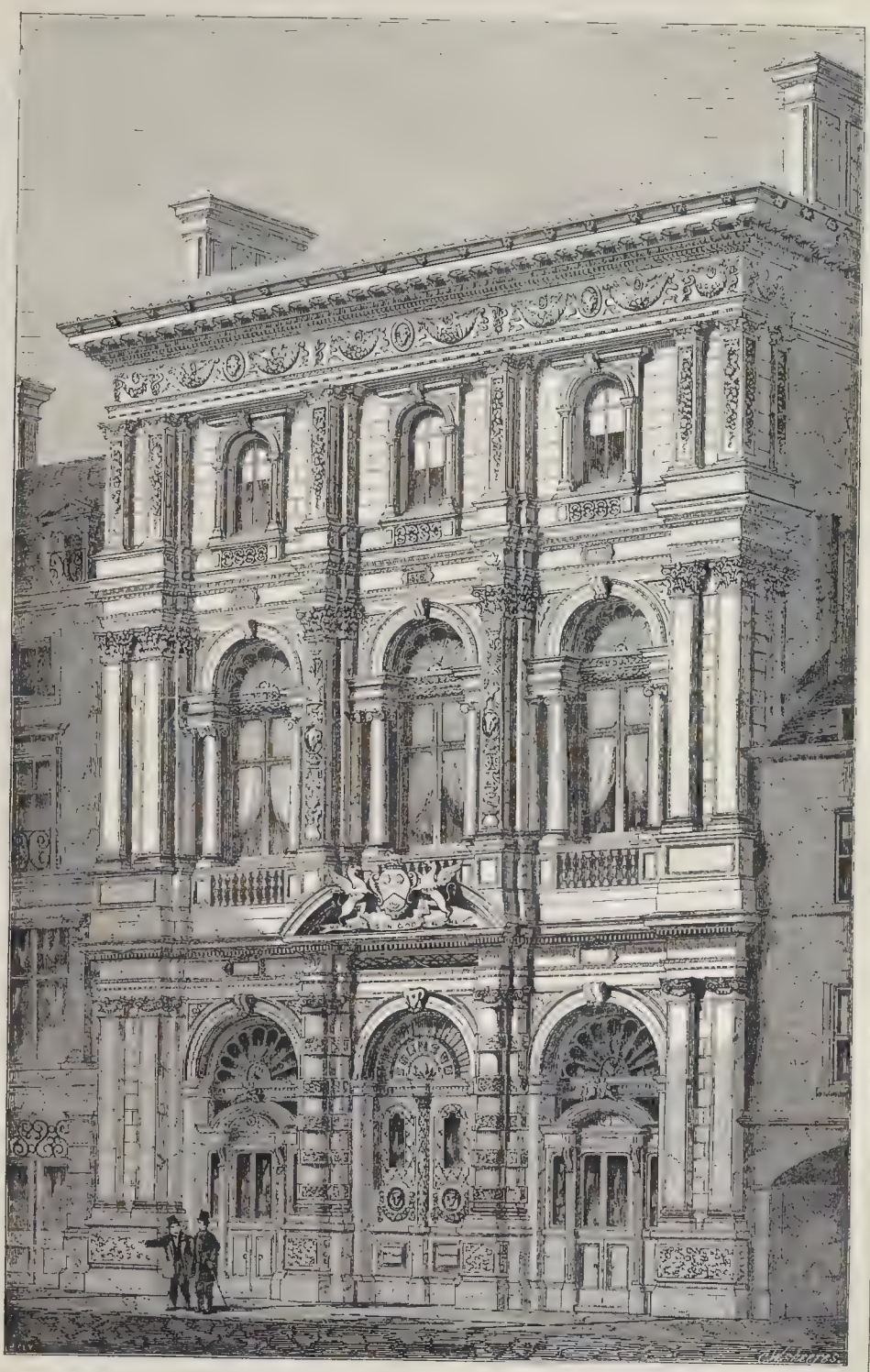
BUILDERS' CLERKS.

I FULLY echo the sentiments of "¾ Scale," and beg to add that many of us commence business at six in the morning, having, of course, to rise at five o'clock, and do not leave till eight in the evening.

Now, sir, what time have we for improvement, or self-culture? If I sit down to read, I fall asleep; and if I attend a lecture, I feel the same, though I often attempt it at the risk of rising late in the morning. As a class of intelligent men, I think we ought to receive some consideration: we are not machines, though we now merely live to work and sleep, spending our lives like a horse or dog.

Pray, sir, use your powerful pen among the building trade, and get us the Saturday half-holiday. It has been proved easy of accomplishment, by adding three hours extra labour over the other five days of the week; and if our large firms would make an attempt, all others would follow; and I think I can see a great moral revolution as the result.

¾ SCALE.



CLOTHWORKERS' HALL, LONDON.—Mr. Samuel Angell, Architect.

THE ÆSTHETIC PRINCIPLES OF ARCHITECTURE.

Architecture is a branch of the fine arts which in this country was long left to slumber in the backgrounds of science, and its principles, which have such an innate tendency to elevate the mind, are but little understood. It has been left to those whose fortunes and position in life have enabled them to study *in respublica scientiæ*; an extraordinary genius appearing once now and then on the world's stage, and, like the large comets, astonishing us by their lustre and then disappearing; but, as Shakespeare says, "the works of good men live after them;" so their works still exist, the wonder and admiration of all intellects. England, as a nation, may be said to know little of architecture; and, for a long time prior to the time of Inigo Jones, it was in a very degraded state; but he arose and trimmed the lamp: then the devastation caused by the Great Fire of London gave scope to the genius of Wren.

Although, perhaps, no country in the universe is in any way equal to our own, in respect of being dotted thickly over with miserably inartistic though happy homes, lying like gems set about with the poetry of external nature; yet there are a few here and there in which some degree of architectural talent has been displayed; and, like the evening star, they light up, and throw a halo round, the surrounding atmosphere; and let us hope to see the higher impulse of architectural genius expressed in the erection of still more beautiful and sylvan retreats.

People seem to think of architecture as if it referred only to bricks and mortar, or abstruse mathematics, comprising simply crooked problems.

> "Surely the time shall come
> When this fine overplus of might,
> No longer sullen, slow, and dumb,
> Shall leap to music and to light."

So sang the prophetic voice of the poet, and he has lived to see the shaking amongst the dry bones. Our archæological societies are teaching us to look behind the broken column and the ruin, and there see the genius from whence such divine conceptions emanated, and which could impress itself into a material form.

In the garden of architecture, so cheering a spot to the lover of the history of our earth, reposes all that is beautiful in science, where the lofty mind of man, aspiring towards heaven, has left its noble impress,—where we may obtain a glimpse of bygone nations, whose history is imprinted with an indelible hand on the stones, truly verifying the poet's assertion—

> "Sermons in stones, and good in every thing."

Let us then take courage: "with a heart for any fate," let us arise and be doing, remembering the immortal destinies of man, and the hopes that are ever surging our hearts and rising upward:—

> "Build on in hope, with pillar, dome, and tower,
> Not for the present, but a distant hour.
> Brief is the span of life: the builder eyes
> His deep-thought plan, and sees the walls arise;
> Anticipates the whole, and then expires
> Ere half accomplished. Yet his genius fires
> The lasting pile. Not men, but nations too,
> By such defy oblivion."

It concerns all to know the most interesting features of architectural beauty. Those æsthetic principles of architecture which enable us in our travels to see something more than beautiful scenery, and which in this England of ours is especially valuable from the many relics of antiquity still left us, and *in summa excellentia* to see living poetry in "those wrecks of another world whose ashes still are warm," those fallen arches and arch-crushed columns and choked-up vaults, or in those beautiful and heaven-aspiring pinnacles and spires, that flash in the sunlight like a meteor, and which seem to give us glimpses of that glory never to be forgotten; telling us, like gleams on a sunset sea, what once hath been.

> "The architect
> Built his great heart into those sculptured stones,
> And with him toil'd his children, and their lives
> Were builded with his own into the walls
> As offerings unto God."

Things inanimate are possessed of life: the old ruin and grey relic of antiquity pleading haughtily for glories gone, speak in voices which most people hear not: they are like eternal lamps in the bright city of God; but,—

> "Vanish'd is the ancient splendour,
> And before my dreamy eye
> Wave those mingling shapes and figures,
> Like a faded tapestry."

What we can see of the remote past through the deepening shades of time is as of some great unknown sea, on which some solitary ship is afloat, whose course we can but dimly trace through the clouds which every way gather around her.

How truly has it been said (in the "Seven Lamps of Architecture"), "How cold is all history, how lifeless all imagery, when compared to that which the living nation writes, and the uncorrupted marble bears! How many pages of doubtful record might we not often spare, for a few stones left one upon another! The ambition of the old Babel-builders was well directed for this world. There are but two strong conquerors of the forgetfulness of men, Poetry and Architecture; and the latter in some sort includes the former, and is mightier in its reality: it is well to have, not only what men have thought and felt, but what their hands have handled and their strength wrought, and their eyes beheld." This is the grand æsthetic principle of architecture, the concatenation of the world-history written in imperishable characters on the uncorrupted marble, so that all may behold, and seeing learn if they will, "the primal art of man."

Thus in all time, from the monolithic column to the trilithons of Stonehenge, from the propylea of Pericles to the fantastic Alhambra, we behold the same spirit of beauty—the same eternal æsthetic principles of architecture. Let us for a moment go back to the origin of these principles, and we shall find that they may be traced even to the expulsion of man from Paradise. When he thus became exposed to the vicissitudes of wind and rain, of sunshine, fierce as it doubtless was, and cold in all its intensity, to which, among the floral bowers of Paradise he had been unaccustomed, and looking back and seeing the gates of his former home shut for ever against him, and round about him the "wide, wide world," in all the glory of its freshness, then did the new knowledge he had gained of good and evil thrust with irresistible force into his soul, the thought of what he had lost and what he had gained, and his distress gave birth to the hut; not, let it be remembered, the unseemly wigwam, or the grovelling thing of mud we generally think of with the word hut. No! the infancy of humanity had not degenerated to the level of the North-American Indian or the Esquimaux. Was he not fresh from Eden? Did he not remember what he had lost, and would he not endeavour in some sort to get at least a semblance of his former abode? Here, then, his primal want was supplied, and it contained in itself the elements of the beautiful, and the genius of man here first expanded itself into a material form.

F. E. D.

THE UNJUST INCOME-TAX.

As Editor of the *Builder*, which has for so many years watched over the interests of the trade, do let me call your attention, and ask for your assistance, in exposing the very unjust way in which our property is dealt with under that jumble of inconsistencies and inequalities, and legalized plunder and robbery, the Property and Income Tax Act.

In the first place, sir, contrary to the old and equitable principle of the poor-rate, we are taxed on the *gross rent*, from which nothing is allowed to be deducted for repairs, although it must be quite obvious to every practical person that repairs constitute a heavy deduction from rent before it can be considered as income. I know the Government, with characteristic dislike to thought and trouble, object that frauds might be committed were pleas for individual reductions permitted. This seems plausible. Were the Government, however, inclined to do us justice, nothing could be simpler than to enact that a certain per centage, easily determined, should be in all cases deducted from the gross rent to get at the net or taxable income. A per centage of this kind might not meet every individual case in any one year, but on an average of years, would at least offer a fair approximation.

Our second grievance under the income-tax, is the house-tax, seeing, that though nominally a charge on the tenant, it is in reality an additional 2½ and 3½ per cent. income-tax levied exclusively on house proprietors. Why I say house proprietors pay the house-tax is, that the landlord in letting his property, must ask just so much less rent as the tax amounts to, or the tenant will reckon it as so much additional rent. If he agrees to take the premises with the tax, it is quite evident he would give the same amount as rent merely, were the tax not in existence. Another point is also quite evident, that the proprietor of property letting for 20*l.* a-year and upwards also pays to the Government 2½ to 3½ per cent. more than the owner of house property of the same value which happens to be in the shape of tenements under 20*l.* a-year.

A Country Builder.

P.S. I see an association has sprung up in London, to attempt to reduce the amount of the tax to 7*d.*: could they accomplish their object, that would be a substantial benefit, and I most heartily wish them success.

WHO IS TO BLAME FOR BAD PLASTER WORK?

Having read the remarks in your valuable Journal upon bad plaster ornaments, may I be allowed to ask the above question, *Who is to blame?* the man who styles himself a plasterer, or the architect? I think it is often the latter.

I have been in the habit of visiting several architects' offices, and have seen them busily employed in getting up very highly-finished drawings for plaster ornaments, and have tendered for the execution of the same, putting such prices as I have thought would pay me for the labour required, believing the architect would require the work to be finished, according to the specification, in "the very best and most workmanlike manner;" with a farther provision, "the architect to have the power to discharge any man off the work that he may think is not capable of doing the work he is employed on."

I have seen at these very jobs cast-work almost *blind*, as it is termed, and the very same men attempting to do the work, who, only a few months before they styled themselves plasterers, were carrying the hod as labourers at different jobs under the same architect.

May I again ask the question, who is to blame?

A Plasterer, who has served his Time.

FALL OF AN ARCH AT THE ART-TREASURES EXHIBITION, MANCHESTER.

One of the small side arches of the main entrance facing Stretford New-road, which was on the eve of completion, fell, on Friday in last week, killing one man and injuring seven others more or less severely.

At the inquest held on the body of the deceased workman, Mr. Dredge, the engineer, as representing the contractors, Messrs. Young and Co. was examined, and stated that he considered the rain and wind of the previous night as the immediate cause of the accident. The outside wall of the arch was 1 foot 10 inches thick, he believed, where it gave way. Bonding timbers were to have been placed in had not the accident occurred. It was intended to have placed purlins between the arch and the inner wall, to give stability to both. The timber was being prepared for this purpose, and would have been in that day had not the walls fallen. There were no tie-beams above the joists: in consequence of the inner wall not being sufficiently high there could be no tie-beams. Had the two walls been carried up simultaneously, and tie-beams introduced, it would have given additional stability to the building, but with the materials used, and the proportions of the two walls, he considered that tie-beams were not necessary, because the pans which were being placed in as the wall progressed would act as ties. The arch itself was bonded with hoop iron. There were props supporting the centres, and to the best of his belief there were diagonal props. His instructions to the men were to use the best materials. They had used Yorkshire lime in preference to Buxton, because it sets more rapidly at this season of the year.

Mr. E. Salomans, the architect to the committee concurred with Mr. Dredge as to the immediate cause of the accident, as did Mr. William Moody, the master builder. The architect also said that perhaps the rapidity with which the work had been done, and the necessity of the time for the erection of the building being so limited, may have tended to the result, partly from the mortar not having had time to set. He thought the plan adopted in this building was quite sufficient without tie-beams. His firm impression was, that there were, as was intended, angular spurs inside the arch, only leaving a height of 11 feet above where the spurs or "struts" reached to. He never had used, and never would use, permanent bond timber, as he considered it useless, and entirely dis-

approved of it. Tie-beams would have increased the strength, but were considered superfluous.

Mr. Moody said that fire-bricks, seconds, and common bricks had been used in the construction of the arch. The white face brick was set in Buxton lime. There were four spurs used for staying the arch when he left it on the previous night, two outside and two inside; the feet of which were bolted to pieces of wood in the ground. These spurs were again supported by a cross-brace and uprights. It was intended that the spurs should have remained until the arch was completed, and tied with the purlins to the other. Where the wall broke it was about 20 inches thick. Had the arch been finished in the morning, and the centre slackened in the afternoon, so as to allow the arch to feel its own weight a little, it might have stood the wind. Having been so recently keyed in it was not proper to do so before that day.

After deliberating about twenty minutes, the jury returned a verdict of "Accidental death."

ARCHITECTURAL "STEREOGRAPHS."

The chief engraving in the *Builder* of the 18th ult. namely, a portion of the interior of St. James's Hall, at large, happens to have the singularity of being almost completely *stereographic* (if I may use the term), mainly from the accuracy with which the two windows, &c. below, and the two sections of the roof ornaments above, have been drawn and engraved, so that the stereoscopic effect comes out almost perfectly by simply bringing the eyes into the right focus, as indicated in my previous communication on this subject; and this, too, in a way that no ordinary stereoscope can display, the engraving in question being far too large for admission as a slide. The accidental circumstance of this engraving being stereographic, suggests the possibility of the occasional adoption of a novelty in the *Builder*, namely, what may be called the architectural "Stereograph," especially were it possible, as I think it is, for the majority of your readers to acquire the knack of calling forth the stereoscopic effect without any stereoscope. The advantage of the stereograph to enable one to judge of architectural effect is very obvious, and the instance in point proves it even to be possible to produce an architectural stereograph of a building not yet realized in the solid. Indeed, from their geometrical exactitude, it must be much less difficult to stereograph architectural designs in this way than almost any others. Freed from the trammels of the stereoscope, there is scarcely a limit to the adoption of stereographic engravings in illustrated journals, as a new feature, developing a new faculty and a new pleasure. Such engravings would, of course, be copies of photographs taken from the round or the solid reality; but here we have, as I have noticed, in the engraving of St. James's Hall, a nearly perfect stereograph, taken from no round, and no photograph. The circumstance is certainly suggestive, and no publication would be so well adapted as the *Builder* to lead the way to such a novelty as the stereograph, whether engraved or photographed. As observed, however, there is *a condition* implied (though not an absolutely indispensable one, as I shall show), namely, the possibility of at least a majority of its readers acquiring, without much trouble, the knack of throwing the eyes into the right focus for the purpose of seeing the third or stereoscopic picture made up of the two composing the stereograph. It may be worth while, therefore, to say a little more on this subject. I have already remarked, that the ordinary expression, "crossing the eyes" (or "squinting," in fact), is an erroneous though rather a natural one to use, as that most likely to lead the ordinary reader to make a successful attempt at the requisite process; but, with the aid of Sir David Brewster, who, since my last, has explained this very process in a new publication called *The National Magazine* (No. 3, for 18th October), I shall now endeavour briefly to show how the eyes ought to be set, in order to bring out the stereoscopic effect without any stereoscope. There are, in fact, two modes of doing this, as Sir David remarks, the one by simply looking, as it were, *beyond* the stereographic pictures, to an imaginary point between as well as beyond them; and the other by in like manner directing the eyes to a similar point *nearer* than the stereographic surface. In the latter instance the stereoscopic picture appears of considerably smaller dimensions, as well as closer to the eyes, than the stereographic ones. In the former it is decidedly larger, as well as apparently more distant, and on the whole is far more beautifully and correctly brought out than the other, and preferable to it in all respects. Unfortunately, however, Sir David says, that the distant view is more difficult to see than the near one; yet it was the distant one that first, and as it were even involuntarily, struck in upon my sight; and, in the simple way in which I have taught others to apply a card on edge between the two stereographic pictures, it was also the larger and more distant that always appeared. I can now readily call forth, and keep steadily in view, either of them; but the near one, not the distant, was the more difficult to realise in my case. It is to be hoped, therefore, that by help of the card (or the open hand even), it will be found that the faculty of seeing the best of the two kinds of stereoscopic pictures without any stereoscope will not be limited to "Mr. Claudet and some others," as observed by a writer in the *Times* (to whom your publication of my last communication seems to have suggested the publication of his own remarks on this subject). The fact that your correspondent, "I. W." when induced, for mere convenience sake, to try it, found little difficulty in acquiring the habit of viewing the stereoscopic effect without any stereoscope, as well as the circumstance that, except in one or two instances, I have as yet found little difficulty in teaching it to others, seems to corroborate the idea that the faculty is *not* limited to a few, but is general, if not, indeed, with a little patience, readily acquirable by all who possess the use of both eyes. The adoption of the stereograph, however, in illustrated journals, need not depend entirely on the previous acquisition of this faculty or habit; for a modification of the stereoscope itself, I dare say, could be easily and cheaply adapted to the purpose of viewing the stereoscopic effect of stereographs, printed or photographed on the leaf of a journal, however large.

There are one or two peculiarities in the stereoscopic effect of the *Builder's* engraving of 18th ult. which are worthy of notice. The two sides of the view not being separated as two stereographic pictures usually are, in producing the third, or stereoscopic, harmonise and unite with it so well as to form, in all, a threefold repetition of roof ornament and of windows, shafts, &c.; and a new effect is even brought out which the architect did not design; for the slender shaft or pillar in the middle, which in the engraving is represented as running up along the wall and close to it, and then spreading out fan-like into the ornamental detail of the roof, comes forward, away from the wall altogether, and appears running up in front of the gallery or corridor, causing the ornamental roof, which it seems to carry, also to appear as if quite detached from the outer wall, and to be somewhat like a roof within a still higher roof. On the whole, the stereoscopic property of this engraving is certainly remarkable, if accidental, for a certain slight difference of a specific character, as well as a general similitude in the stereographs, appears to be requisite to the stereoscopic effect, and it almost seems as if this must have been purposely arranged in this case, only the effect is in some respects a little defective, though in the general features so wonderfully complete.

In regard to the remark of "I. W." as to the high price of stereographs, I entirely sympathise with him: it is, indeed, a pity that we cannot have them a little cheaper. When the printing-press is brought fully to bear upon this interesting branch of art, however,—as it even now seems in the way of being, if advertisements as to a new process in connection with which Mr. Roger Fenton's name appears may be trusted,—it is to be hoped that good stereographs will become much cheaper than they now are, more especially if the polychromatic process also can be applied or adapted to them: meantime I find that a great variety of French and other stereographs can be had at very reduced prices in a shop a few doors west of Somerset House, in the Strand. For excellence, as well as variety, however, Sir David Brewster—the perfecter of the stereoscope itself—recommends those of the Stereoscopic Company in Cheapside and Oxford-street.

J. E. D.

WHAT SETS HOUSES ON FIRE?

In a communication to the *Morning Advertiser*, Mr. F. B. Thompson treats of this subject, and after pointing out various ways in which spontaneous combustion may take place, especially by the action of water in connection with other substances, states that so long ago as July, 1804, the learned chemist, Bartholdi, presented to the French Institute an elaborate paper on spontaneous combustion, in which its origin was accounted for in ten different ways, namely;—1. Considerable friction. 2. Action of the sun. 3. Disengagement of caloric from non-combustible to combustible bodies. 4. Fermentation. 5. Wool, cotton, &c. mixed with oil. 6. Boiling linseed oil. 7. Torrefaction of vegetable substances. 8. Disengagement of phosphoretted and sulphuretted hydrogen. 9. Wet charcoal. 10. Contact of charcoal with combustible detonating bodies.

Surely, adds Mr. Thompson, it behoves every one, upon reading this list, to look around him in order to detect if possible any source of danger such as is here indicated; and I do believe that beneficial results would follow if the various insurance offices would take the trouble to circulate amongst their customers a brief list of precautions, with a signification that attention thereto might prevent, in case of accidents, any trouble as to the payment of claims.

There is one point in Mr. Thompson's important communication, however, of which we would wish to make a brief note, as it is a pity that, by any misunderstanding, the danger, great enough in all conscience, as this last year, with its stereotyped "cause unknown" of numerous fires, has singularly proved, should be anywise exaggerated, especially as regards that apparently but not really very innocent and harmless *extinguisher* of fires,—water. Mr. Thompson says "water is capable of oxydizing everything, and it cannot part with its oxygen without at the same time liberating an equivalent proportion of hydrogen," which he characterizes as "the most inflammable gas in existence." Now, as to the power of water to oxydize everything, and so inevitably to liberate its inflammable hydrogen, water is *not* decomposable by everything, even though it were indubitable that it can oxydize everything: in many cases water does oxydize without being decomposed at all or liberating any of its inflammable and dangerous hydrogen: in such cases, in fact, it only acts as a solvent and holder of the oxygen of the atmosphere with which, and not with its own oxygenous neutralizer and fixer of its inflammable hydrogen, it oxydizes many things. It is a very erroneous inference, therefore, that because water oxydizes everything, therefore everything is capable of setting free its dangerous hydrogen. Indeed, there are very few substances (comparatively to "everything") that *are* capable of evolving so dangerous an element as hydrogen from water. Nevertheless—and over and above the direct power of a few simple elements, such as potassium—when *two* elements come together, one of which is, at one and the same time, combustible, and also capable of seizing the hydrogen, while its fellow lays hold of the oxygen, the one will but too readily cause danger by running off with the incendiary hydrogen, while his confederate so assists him by holding down the oxygen. In such cases there is, indeed, danger, but not *necessarily* so where water only oxydizes by acting as an air solvent without being itself decomposed.

NEW GOVERNMENT OFFICES COMPETITION.

No one will doubt for a moment the wisdom of the stipulation contained in the "conditions" for the new Government Offices competition, that the drawings are all (both perspective and geometrical), to be tinted in "light brown Indian ink" (which term I presume includes the use of sepia). But surely it will not be just to those who would depend partly, or perhaps principally, on polychromy for effect, to be deprived of the only means of showing it. Some arrangement, by which architects intending the use of coloured material, may be enabled to make apparent their intention, certainly seems most desirable; and now that petitions are being sent to the authorities for extension of time, is the moment for urging this subject.

C. M. M.

I hope soon to see by your columns that the requisite Parliamentary notices have been given to the tenants of ALL the houses on the proposed site, both within the red line, and, as has been suggested, of those in the immediate vicinity, the FREEHOLDS of all of which should be purchased by the Government at *once*, leaving the tenants to be removed as the buildings progress, so that in cases where the leases have only short terms to run, these leases might be allowed to expire. Unless this course be adopted, the freeholders will be likely to grant fresh leases to their tenants (and probably at increased rents), with a view to greater compensation. The sites for the Foreign and War offices might, however, I think, be cleared during the next summer, if the Act were obtained early in the session.

AN INTENDING COMPETITOR.

LIQUID GLUE.—SHELL-LAC.

I HAVE read with interest Mr. Mulholland's excellent letter in the *Builder* for October 25th, and quite agree with his views on the subject of Mr. Cook's patent. A solution of shell-lac in spirit, simple, or mixed with other resins, has long been used for cements and varnishes; but, unlike your correspondent, I cannot see what danger is incurred in preparing it. For my own use, I make the "liquid glue" thus: having introduced the requisite amount of "shell-lac" (not powdered) into a tall, wide-mouthed bottle, add methylated spirit until its surface is level with the top of the shell-lac: sixty hours will perfect the solution, if the bottle is well corked and shaken occasionally; but if the solution is required for immediate use, the bottle must be immersed to the neck in hot water, and its contents stirred until homogeneous. Of course the "liquid glue" can be made of thicker or thinner consistency by varying the proportions of resin and spirit.

It is, I think, among the things "not generally known," that if a rather thin solution of good "orange shell-lac" be laid evenly upon a perfectly clear surface of *tin*, or other bright metal, when *perfectly dry*, the article will present an appearance similar to brass or lacquered goods, but of, in my opinion, a better tint. From three to five coats are required, which should be applied with a soft brush.

The hard, transparent film thus given will protect metal from the action of water, and tin cans, &c. may thus be rendered as durable in this respect as copper. As must be sufficiently evident, this process is by no means an expensive one.

WENTWORTH L. SCOTT.

ELECTION OF DISTRICT SURVEYOR FOR ST. MARY'S, NEWINGTON, &c.

THE Board of Works, at their meeting on Friday, the 31st ult. proceeded to elect a surveyor for the district of St. Mary, Newington, the central division of Lambeth, and the northern division of Battersea, under the Metropolitan Building Act. The following are the names of twenty-seven candidates who went to election, with the number of votes recorded in their favour:—

Hart, 8; Markham, 3; Tarring, 18; Hesketh, 18; Stock, 23; Lower, 3; Jarvis, 20; Stephenson, 4; Benham, 2; Gritten, 10; J. Billing, 11; Leddiard, 6; Lewis, 4; Bramwell, 1; J. H. Taylor, 26; Lett, 1; Johnson, 14; Parsons, 22; Badger, 2; Legg (D.S.), 8; Ridley, 2; G. Legg, 26; Cole, 12; Blore, 4; C. Barry, 9; Burford, 1; Barnett, 23.

The list was then reduced to the six highest on the poll. The votes were taken five times over, the lowest on the list being omitted each time, with the following result:—J. H. Taylor, 19, 23, 21, 20, 24; G. Legg, 18, 21, 18, 19, 14; Parsons, 18, 21, 19, 16; Stock, 15, 13, 15; Barnett, 13, 12; Jarvis, 12. And then, by a substantive motion, Mr. J. H. Taylor, the late district surveyor of Tottenham, dispossessed by the Building Act of 1855, was elected to the office.

"PROJECTIONS" UNDER METROPOLITAN BUILDING ACT.

The District Surveyor of Bermondsey v. *Norton.*—In this case, heard at the Southwark Police Court, the complaint was, that Norton "did make a certain projection from the building, No. 49, Long-lane, Bermondsey; the said projection extending beyond the general line of fronts in a certain street (to wit) Long-lane aforesaid, such projection not coming within the exceptions permitted by section 26 of the Metropolitan Building Act, and not having the permission of the Metropolitan Board of Works to such extension."

The projection is 11 feet square and 8 or 9 feet high, and consists of six rafters, framed into a plate at each end; the upper plate, or pitching-piece, resting on two iron brackets screwed to the frieze of the shop front, and the lower, or raising plate, resting on two posts standing in sockets let into the ground. On the rafters a tarpauling is stretched, and secured to hooks. The projection is wholly on the fore-court of the house.

At the hearing, on the 21st October, the district surveyor having explained the nature of the projection, and put in a drawing of it, and pointed out that it was considered by him contrary to the 26th section, rule 5, of the Act, the magistrate, Mr. Burcham, adjourned the case to the 25th October, and in the meantime inspected the projection and the localities.

On the 25th, the magistrate, after reading the 143rd section of the Metropolis Local Management Act, relating to buildings on fore-courts, and the 26th section of the Building Act, decided that the construction was a projection within the meaning of the Act, notwithstanding the argument of the builder that it was moveable, and had actually been taken down in less than half an hour; but he said, it would be difficult to convince him that it extended beyond the general line of fronts in the street.

The district surveyor urged the importance of the question submitted for the magistrate's judgment; and the attention which the subject of projections was receiving from the public, and from the Metropolitan Board of Works at every weekly meeting. He then argued that the general line ought, in this case, to be taken to coincide with the fronts of the main buildings in the block of buildings between Weston-street and West-place, which fronts were in a straight line from which there was but one slight projection on the ground story, at the other or western end of the block. That this was the rule upon which the official referees acted in interpreting a similar term under the late Act, and that this alone would afford protection to the neighbouring houses, which, in this instance, were dwelling-houses; to the occupiers of which, as a general rule, such a projection would be a great annoyance.

The magistrate said that the words of the Act were—"The general line of fronts in the *street*," not in any separate *block of buildings* in the street. He found the fronts of the buildings in Long-lane so irregular, that he did not see how he could settle any general line. Eastward of the building in question he found some main buildings as far in advance as this projection, and westward, a potato-stall and another shop were built forward up to the street itself; and that the projection in question did not advance beyond the line of these buildings.

The district surveyor said, that if the magistrate overruled his view of the general line being to be taken as the fronts of the buildings in the block, he must yet submit that the general line could not be deemed to fall in with a line stretched from the buildings the magistrate referred to eastward of this projection, to the projections he mentioned westward, a distance of more than 100 yards (really 133 yards), without touching any front at all, and crossing two streets. That even across this extreme distance, if a line were stretched upon the fronts of the main buildings, it would pass through the middle of the projection, and leave part of it extending beyond it; and it would extend still more so, if the line were made to touch other fronts in any intermediate points which would be fair in the magistrate's judgment.

The magistrate said, that he could not take upon himself to determine a general line in a street in which the fronts of the buildings are so irregular; and he declined to make an order, inasmuch as he could not consider the projection to be without all doubt beyond the general line. He therefore dismissed the summons.

THE DECORATION OF ST. GEORGE'S HALL, LIVERPOOL.

INTERNAL PAINTING.

ONE of the competitors in the Liverpool Library and Museum Competition deserves, I think, credit for the system of colouring intended for the interior of his building, and which was indicated by the sections,—a mode of decoration under any circumstances right, but when, as in this case, carved or constructed ornament could not be afforded, it had the additional advantage of being also the most economical. It strikes me as being singular that, whilst we have so many exteriors in the Classical styles, no attempt (excepting what has been lately done at the British Museum) has been made to carry out a characteristic style of coloured decoration in the interiors of our buildings. I was much struck, on lately visiting St. George's Hall, by, what I consider, the desecration of that fine building in its internal finishing. Outside, all is in character befitting the municipal hall and courts of justice of a great town,—noble, substantial, and truthful: inside, you see everywhere mockery and sham. No attempt has been made to sustain the character of the exterior by appropriate and truthful decoration,—materials being what they seem to be, and *paint*, where used, appearing as paint. The south entrance-hall is painted or papered to imitate granite: the corridors above on first floor are painted and beaded to imitate wainscot; whilst an immense sum has been thrown away in the New Concert-room in the same tasteless way, the walls being there grained in imitation of a great number of "fancy woods," with a vast amount of gilding—the latter being the "decorator's" unfailing resort, in the absence of taste, to produce a fine effect. But what, perhaps, is worst of all, is, that in *the* Hall the splendid polished *granite* columns are surmounted by capitals of *plaster*, painted for what I suppose is intended as an imitation of bronze. So long as they remain they convey a deep reproach. M.

IS A CIRCLE SEEN IN PERSPECTIVE AN ELLIPSE?

IN your review of Mr. Burchett's "Perspective" a few months ago, you remarked that this statement (page 78), "the student will do well to bear in mind that a circle seen in perspective is not an ellipse," betrayed a slip in knowledge of conic sections; and your remark produced an inquiry by many of the masters and students of Marlborough House concerning the truth of the statement. The book in which it occurs is by the head master of the Art Training School at Marlborough House, and is the text-book upon which all the examinations for certificates are conducted. The result of the inquiry before referred to is in my own mind a conviction that a circle seen in perspective *is* an ellipse; and this belief is shared by many of my fellow-students; but there are also many others who cannot realize the fact, and who believe in the Department's text-book. Now, if these men's faith on this subject was confined to their own practice, it would be hardly worth while to question its soundness; but such is not the case, and it is an alarming truth that a circle is put in perspective by means of the diameter and diagonals of a circumscribing square, and as a consequence, that a circle in perspective is not an ellipse,—I say it is an alarming truth that this doctrine is taught in the Training School for Masters at Marlborough House, and by the masters of every school of art in London. The book also, as being published with the Department's authority, must be received as the standard work on its subject by every school of art throughout the kingdom.

For these reasons, and without any ill-feeling toward those who believe what they have been taught, or toward the authority which has compelled them to believe it, but for a simple love of and desire for truth, I request you to set this matter at rest.

I am aware that as the doctrine which contraverts this statement is a modern one, the *onus* of proving its truth clearly rests with its originator, but this is, perhaps, expecting too much from one in authority.

ONE OF THE DEPARTMENT'S CERTIFICATED MASTERS.

*** Our correspondent attaches rather too much importance to the results which may arise from inculcating the error in question; but we will give the demonstration asked for.

SANITARY OPERATIONS IN LIVERPOOL.

FROM the report of Mr. James Newlands, C.E. the borough engineer, for 1853-56, it appears that in the three years 564 sewers have been constructed, in length 26 miles 182 5-6th yards, at a total cost of 53-634*l.* 15s. 9d.; and that 1,740 new gullies have been constructed, and yet the average quantity per annum of soil removed from all the gullies, old and new, is only 1,206 loads, while in 1850 the number of loads was 4,411. This diminution, it is remarked, is due to the better construction of the gullies. The report further states that 24,416 premises in the borough have been drained between the time the Sanitary Act came into operation, in July, 1854, and the 1st of March last; while the number of premises drained in the same period in the out-townships has been 2,057, being 1,500 more than the number drained under the old Act in sixteen months. During the three years sixty-four streets, of an aggregate length of 7,985 yards, have been paved by the Health Committee, and twelve streets, of the aggregate length of 1,457 yards, by the owners of the land. Since the introduction of the system of paving the streets with square sets, 289,904 superficial yards of Macadam and boulder paved roads have been converted into set paved streets, with large channel stones and granite curbs. The plan of using blocks of wood, in alternate courses, had been tried in Great Howard-street, but the wood speedily became depressed below the general surface. The quantity of flagging of footpaths laid in the three years has been 50,534 superficial yards. The Kilrush flagstone is stated to be the best that has been used. The cost of the recent re-numbering of the houses is set down at 875*l.* 5s. 9d. The cost of the scavenging staff in the year 1855 was 12,477*l.* 9s. 6d.; and for the last nine years the total cost has been 101,270*l.* 12s. 5d. Eleven of the large lamp-pillars, on raised platforms (from designs by Mr. Newlands) have been fixed in various localities in the past few months, and others are to be put up.

IRISH NEWS.

Dublin.—The dedication of the church or chapel of St. Joseph, erected in connection with the asylum named after the same saint, was performed on Wednesday week by the Papal Archbishop of Dublin. The institution of St. Joseph is one for the maintenance of aged and virtuous women. The church is in the modern Italian style of architecture. A large room, originally designed as a kind of vestibule to the church, which is separated from it by three arches, corresponding with the triple arches at the other extremity behind the altar, has been fitted up to accommodate a large portion of the congregation, and may now be looked upon as a permanent part of the church. The side walls present the appearance of a series of latticed arches, those on the right opening into a wide corridor, where it is proposed that the choir shall hereafter be placed. Over the latticed arches are stained-glass windows, three on each side. The ceiling, which is square, has deep panellings, the stucco of which is relieved with gilding, and from the centres of the panels are suspended a sanctuary lamp and two lustres. Above the altar is a copy, full size, of Murillo's picture of the Immaculate Conception, in the Louvre. There is also a full-length picture of St. Bridget, painted by a Maltese artist, and presented by the Right Hon. R. M. O'Ferrall. It is hung at the extreme end, opposite the altar. Of the six win-

dows, those next the altar on either side contain symbolical objects, such as the Lamb and the Cross, the sacred heart of Mary, the heart of St. Joseph, &c. On the next pair are represented, in three medallions on each window, the "Presentation of the Blessed Virgin in the Temple," the "Espousals," the "Annunciation," the "Nativity of our Lord," the "Epiphany," and the "Purification," with border work and mottoes; and, finally, on the two farthest from the altar are similar medallions, representing "St. Joseph warned by the Angel," the "Flight into Egypt," the "Return from Egypt," the "Finding of our Lord in the Temple," the "Interior of Nazareth," and the "Death of St. Joseph." These, and other windows, have been executed in Dublin by Irish artists. The tabernacle of the high altar is carved and gilt. On either side of the high altar are life-size figures of angels in an attitude of adoration; and beneath the altar is a group in plaster, representing Mary, the Mother of Jesus, weeping over His dead body. Behind the side altars stand figures of the Virgin and of Joseph, her husband, and in niches high above them there are figures of the archangels Gabriel and Raphael. The general tone of colour in the church is a mellow white. Over the vestibule is the principal dormitory of the asylum, which opens into the church by an arched window, latticed to correspond with the latticed arches below. This dormitory is used as the infirmary, whence the sick in their beds assist at Mass. In the porch are busts of the pope, Dr. Beytagh, &c.

Bannow (Wexford).—The Roman Catholic church at Bannow, county Wexford, has been opened. This church was commenced about twelve years ago, but owing to the death of Mr. Thomas Boyse (brother of the Rev. Richard Boyse, of Halkin-street, Belgrave-square), who was the principal contributor, combined with the famine and the emigration of parishioners occurring shortly after, it was not completed until week before last. The church is described to us as being a neat building, with bell-tower. There are three stained-glass windows: the large one is divided into compartments, containing the Evangelists. Bannow, adds our informant, is the birth-place of Mrs. S. C. Hall. The decorations are by Mr. Hughes, of Wexford.

Wexford.—The fine old Franciscan Church at Wexford is now undergoing a thorough repair, under the direction of Mr. Byrne, of Dublin, architect. Tenders are under consideration for the erection of a bell-tower about 80 feet high. Mr. Richard Pierce is clerk of works, and Mr. P. O'Connor the contractor for the repairs.

Cork. — The examination of the works of the students of the Cork School of Art by the inspector of the Department of Science and Art, took place on the 22nd ult. and resulted in the award of fourteen medals and sixteen honourable mentions, among ninety-nine works exhibited. Nine prizes were also awarded for examinations in perspective, geometry, and freehand drawing among thirty competitors. On the evening of Friday, the 24th ult. the prizes were distributed to the successful students by the Mayor of Cork, in the Athenæum, when upwards of 800 of the citizens were present, and the performances of a military band gave variety to the entertainment. The committee took advantage of the occasion to collect together some of the best specimens of art from private collections in the neighbourhood, and objects of *vertu* and antiquities, which form so attractive and interesting an exhibition that the committee intend to keep it open for a fortnight.

RECOLLECTIONS OF AN OLD TREE IN CLERKENWELL.

It is the fate of all things—man, tower, tree,
To stay their time on earth, and then decay.
HERBERT.

At the corner of Cobham-row and Coldbath-square, there has stood from time immemorial a noble horse-chestnut tree, which for some time past has exhibited no signs of vitality. Seasons have gone their round, and no green leaves, blossoms, or fruit appeared on any of its branches; until, at last, "What good is it?—cut it down: why cumbereth it the ground?"—and a once familiar tree lives only in our recollections.

Often have we sported beneath the wide-spreading branches of this patriarchal tree, at times and in season gathering from the ground a store of its nuts, and wishing they were edible and not so bitter to the taste. Oft, too, has our rest been broken, when the stormy wind agitated its branches with a mighty rushing noise; and sometimes have we started in our waking dreams when the pale moonlight was streaming through the window-panes, and the dancing shadows of its leafy boughs appeared spectre-like on yonder wall.

Some years ago a fine bough that hung low was lopped off, and the amputated part covered by a sheathing of lead, to prevent a renewal of its growth. More recently the bark was stripped from the trunk, and the smooth surface thus exposed made available by the bill-stickers for the display of their broadsheets damp from the press.

The height of the tree was between 70 and 80 feet, and the girth of the thickest part of the bole little less than 7 feet. It has been sawn down within a few feet of the ground, and serves, at present, the base use of an area gate-post.

Local history tells us that this was one of a grove of trees that once grew here in the extensive grounds of that ill-fated nobleman, Sir John Oldcastle, afterwards Lord Cobham, a great Reformer, and who, poor fellow! by the barbarous inhumanity and persecuting spirit of the age in which he lived, was hung in chains as a heretic, and roasted alive in St. Giles's Fields, in the year 1418, for his noble advocacy of the doctrines of Wyckliffe and an alleged conspiracy against the government of that redoubtable monarch, the hero of Agincourt, Henry V. His family mansion became a tavern, known as Sir John Oldcastle's Tavern; subsequently a Small-pox Hospital, specially for the reception of patients in the incipient stages of that disease, and such as caught it naturally. The building was afterwards reconstructed, and continued to be used as an hospital till 1795, when the charity was removed to the chief establishment at King's-cross. At a later period the property passed into the hands of the Countess of Huntingdon's connection, when the hospital building was converted into private dwelling-houses, which yet remain on the north side of the thoroughfare well known as Cobham-row.

W. J. P.

COMPETITIONS.

Congregational Church, Weston-super-Mare.—Seven designs for this building were received and examined by the committee: and one, marked "Labor et Spes," was selected, which was found to be by Messrs. Pritchett and Sons. The chapel consists of nave and aisles, and will seat about 600 persons. The spire will be about 100 feet high, and the style adopted is Late Decorated.

Notices of Books.

Elementary Course of Geology, Mineralogy, and Physical Geography. By Professor ANSTED. Second Edition. Van Voorst, Paternoster-row. 1856.

Advanced Text-book of Geology, descriptive and industrial. By DAVID PAGE, F.G.S. Blackwood and Sons, Edinburgh and London. 1856.

To the engineer, the architect, and the artist these two excellent treatises are of special value. They are both written for just such readers and students as the younger members of these professions and others to whom geology constitutes a specially useful study. Great efforts have been made to give them a popular and generally attractive form, and not to overload them with fact and detail, at least in an unsystematic shape. Professor Ansted's work is the larger and more comprehensive of the two, and the present edition has been considerably improved, by curtailments in some parts and extension in others. The "descriptive" portion has been mostly re-written, so as to afford a fresh sketch of this department of the subject, showing its present state. The "practical" portion is largely increased, and now constitutes something like a complete sketch of this important part of the subject, beginning with much valuable instruction and remark on the application of geology to engineering and architecture. To the importance of the subject to these professions we need scarcely now advert, having already on various occasions done so: neither need we enter more fully into Professor Ansted's valuable contributions thereon, the readers of the *Builder* having already had the benefit of the professor's extensive knowledge of subjects connected with it, at some length, in our own pages.

It is certainly true that great works may often be satisfactorily enough completed without the aid of geology, but unquestionably a knowledge of its deductions confers a certainty and security not otherwise obtainable.

"We have seen a tunnel," says Mr. Page, "carried through the wet and highly-inclined strata of a hill where every foot had to be arched with brick or stone, while the deviation of a few hundred yards would have carried the same through rock-masses, where not an inch of building would have been necessary. In ignorance of the limits of a coal-field, we have seen a railway carried along the outskirts, to which every coal proprietor has to lay down miles of tramway, more than the half of which would have been saved had the engineer had the necessary knowledge to have adopted a central course. The strata of the London, Hampshire, and Paris basins are now so well known to geology, that artesian wells can be sunk with certainty to this or that stratum; and so with every other district whose strata have been mapped and generalized by the geologist. Again, in deciding upon the collecting-field for the water supply of large towns, a knowledge of the rocks of the area is indispensable, so that deleterious mineral ingredients may be avoided, new lines of springs tapped, and waste by subterranean fissures and faults prevented."

But all this, as we have said, is now very well known to engineers and architects, and geological works constitute a standard contribution to the multifarious libraries of both professions: we thus quote the author more for the purpose of bringing him personally as it were to the recollection or notice of younger students, while recording the advent of his new publication, than with any other view. We may at same time remark, that it is not to engineering and architectural students and to builders alone, amongst our varied readers, that geology is useful, but also to the artist generally, and the landscape gardener, the surveyor, the landscape painter, and others.

In the preface to his "Advanced Text-book," Mr. Page briefly indicates his purpose in the issue of the series to which this new treatise belongs. As it is with every science, he remarks, so is it with geology: let an outline be given of its leading features, that the beginner may arrive at some notion of its purport and bearings: let this be followed by the details; and the details by the higher reasonings and philosophy of its problems. The present volume is that which gives the details. Yet the volume is carefully kept from being overloaded even with these, so as to disgust the learner, and retard his progress. What the author has aimed at, is the production of readable manuals for self-instruction, as well as class-books for schools,—treatises, which in their readableness, will embue the student with the spirit and methods of geology rather than cram him with its provisional or other details. This author's new volume, like Professor Ansted's "Elementary Course," appears to be a decidedly valuable contribution to the study of the interesting and important science of which it treats.

VARIORUM.

"THE Churches of Essex, architecturally described and illustrated," by Mr. George Buckler, architect (Bell and Daldy, 186, Fleet-street), has now reached the Seventh Part, which contains accounts of South Weald Church, Writtle Church (All Saints) Chelmsford Hundred, and St. Runwald's, Colchester, with illustrations and plans.——"A (full) Report of the Proceedings at the Ceremony of laying the Foundation-stone of the St. Thomas Charterhouse New School Building" in Golden-lane, by Mr. Gladstone, M.P. has been published in the form of a tract by Messrs. Longman and Co. In the course of the address of Mr. Gladstone (officiating for the Marquis of Lansdowne), the Hon. ex-Chancellor made impressive allusion to the moral *debt* which the west of London owes to the east. "He who builds a square or builds a street of palaces in the west end of London," he remarked, "builds along with it, and virtually calls into existence, other streets filled with the dwellings of tradesmen, and other streets again in the same neighbourhood, or not very remote, filled with the dwellings of labourers who wait upon these tradesmen, and are employed with them: the quarter of Belgravia builds the quarter of Bethnal-green." This, he observed, constituted the foundation of that great debt of which he spoke, and some slight beginning of a sense of responsibility in the west, with reference to the demands and necessities of the east, was now being felt.——A lively and entertaining lecture, by the Rev. A. B. Sutor, curate of St. Dunstan's in the West, on "The Worthies of St. Dunstan's," has been published, by

request, by Messrs. Bell and Daldy. Here we have introduced to us some of the more notable denizens of St. Dunstan's within the last two or three hundred years,—the exiled preacher and persecuted ecclesiastical reformer, Tyndal,—the talented and eloquent vicar of St. Dunstan's, Dr. Donne,—his friend and fellow-parishioner, "honest, yet meek, Isaak Walton, the master of anglers and one of the choicest of writers,"—his successor, the quaint, stern, and consistent Mr. Praise-God Barebones, a man somewhat misrepresented by old prejudices,—the banking Childs and Hoares,—and though last not least, immortal Sam, of Bolt-court.——"The Difficulties of the Metropolitan Drainage Question solved by the Sewage Works of Leicester," is the title of a pamphlet by Mr. W. F. Cooke, just issued by W. H. Smith and Son, of the Strand. It also contains "Extracts from Mr. Bazalgette's report, and a map of the proposed drainage to Barking-creek. The example set by Leicester is certainly a spirited and instructive one, and, as we have said, well merited the personal attention of the members of the Metropolitan Board; but whether it be capable of entirely *solving* the metropolitan drainage question remains to be seen: we are hardly prepared to go that length as yet.——A "Guide to the Caterham Railway, near Croydon, in Surrey, and to the Country around it," by Mr. Thomas Wright, of Brompton, the antiquary, has been published by J. R. Smith, of Soho-square. This is a vicinity interesting to us, on account of the prospect there is of its becoming one of those sites of improved dwellings for the higher class of Metropolitan *employés*, which arrangements with the railway companies having termini in the Metropolitan outskirts render possible. It seems that even already annual railway tickets at 7*l.* for first-class and 5*l.* for second-class are being issued to persons building houses on the property of the Caterham Railway Company, and we hear that Sir S. M. Peto, and some of the London bankers and merchants, have selected several hundred acres on this line for the erection of country residences for their clerks. The Caterham estate itself, we observe, is to be sold by auction, by Messrs. Norton, Hoggart, and Trist, at the Mart, on the 20th inst. There is abundance of building stone, brick-earth, lime and gravel, it appears, on the estate, and we hope to see, some of these days, a goodly display of improved dwellings for the jaded industrials of London reared in that vicinity.——The first part of the *National Magazine*, has now been issued by the (limited) company, in the Strand, who have associated themselves with its destinies. One useful feature in it is a chapter on Homes, and their improvement, with illustrations, which usually concludes each weekly number. The literary matter of this new periodical promises fairly, but would it not be well not to attempt so much in the way of illustration for so small a sum as twopence? We should rather have it with even one decidedly good engraving, than half a dozen "chops." It is impossible to give so much as is aimed at for so little, without merging into the usual sickening mediocrity, if the product merits even to be so called.——The "Hand-book of Zoology," by J. Van Der Hoeven, translated by the Rev. W. Clark, is a large and laborious work, in two volumes, one of which only has as yet been issued by the publishers, Messrs. Longman, and merits a more special and fuller notice than such a subject, however interesting to our readers as well as to others, is entitled to receive in the *Builder*. It is likely to form a standard book for reference, more than for cursory perusal, from the scientific and formal, yet interesting and instructive, way in which it is arranged.

The Essex County Surveyorship.—At the Essex Quarter Sessions, recently held, the question of a successor to the late Mr. Hopper was discussed, when it was suggested by one of the speakers that what they required was a practical man who understood building, and who would stand between them and the builder—not an architect nor a surveyor! Ultimately it was resolved to refer the matter to a committee which was named for the purpose, Mr. Burn, who had acted in the place of Mr. Hopper during his last illness, to continue to act till next session.

Miscellanea.

Essex Archæological Society.—On Thursday, the 30th ult. a meeting of this society was held at St. Osyth, the Rev. J. H. Marsden in the chair. The report read showed the finances to be in an improving condition. The chairman read a paper upon St. Osyth Priory; and a description of the wall paintings in Hadleigh church, Essex, was given by Mr. Cutts, who read a communication from a gentleman who had greatly interested himself in these remarkable relics. The remains of the old Priory were made available for the inspection of the visitors. The large rounded gateway, usually said to be of Norman workmanship and design, and respecting the date of which doubts had existed in the minds of former visitors, was made the subject of an opinion, by Mr. C. F. Hayward, who said that the Decorated style did not always infer a pointed arch; that the mouldings and the shafts (not isolated) of the gateway were of the Decorated period; and that the capitals of the pillars were verging upon the Early English sayle. Mr. C. H. Hayward gave a description and history, illustrated by photographs from Florence, Venice, and Rome, of inlaid stone-work, referring to the chequered facing of the Priory, as an illustration of how locality developed different architectural designs and deeds from a common and general idea.

Improvement of Lambeth.—I quite agree with the remarks of your correspondent, "R. M. W." in your paper of the 1st, respecting "The trees in Lambeth," and I would recommend the vestry to make more arrangements for the improvement and embellishment of our public roads: at the same time I do not agree with him in thinking that "our Lambeth authorities seem to delight in such dilapidated buildings, stenches, and all sorts of nuisances as may be found at the water-side, between Lambeth Palace and Vauxhall-bridge." It must be borne in mind that between Lambeth Palace and Vauxhall-bridge, dirty as it may appear, a great trade is carried on, which employs some thousands of workpeople; and, however disposed the authorities might be, they could not take such steps as "R. M.W." points out, without almost entirely changing the whole character of the locality. Nevertheless, I fully admit the desirability,—yea, the necessity of energetic steps being taken for its improvement in every possible way.—L. W.

Report on Alleged City Gas Nuisance.—At a court of City Sewers Commission, last week, the committee upon general purposes reported on this subject, recommending that the Commissioners lay the whole of the evidence and documents in the case before the Lord Mayor and Court of Aldermen, that they may direct such steps to be taken in the case as they may be advised. This the committee state as their recommendation after having consulted both the City solicitor and the solicitor to the Commission, which gentlemen, in a communication addressed to the committee on the subject, say,—"If upon a deliberate consideration of all the facts and circumstances brought under your notice, you disbelieve the evidence upon which the complaint is founded, we advise you to dismiss it altogether. If, on the other hand, were you sitting as a grand inquest, you would think the complaint sufficiently substantiated to warrant its being put in the course of trial, we are of opinion that it should be done by means of an indictment for a nuisance at common law," but that "applying the ordinary rules of legal construction to this case, we have great doubts whether the summary jurisdiction created by the Nuisances' Removal Act, and the other modern statutes to be read *in pari materia* with it, can be made applicable to gas-works: at any rate, these modern remedies for nuisances affecting the public health and comfort are an addition to, and not in substitution of, the common law."

The "Patent Elevator."—As one of the oldest subscribers to your valuable publication, I beg to address you on the subject of the "Patent Elevator," described in the *Builder*, and to inform you that several years ago the idea struck me that the principle of the "Lazy Tongs" might be applied for the purpose of a fire-escape. I then made a model (which I have now in my possession) precisely similar to that now patented, with the exception of a difference in the method of raising it, and showed it to Mr. Braidwood, the superintendent to the London Fire Brigade, with the view of patenting it. His observation prevented my doing so, as he stated that a similar model was then in the Polytechnic Institution, and was not considered so good as the fire-escape in use. I also showed it to a celebrated architect, who strongly recommended me to introduce it to the public for the purposes of the builder, decorator, &c.

D. Pennino.

*** The invention has also been claimed for another gentleman. A third correspondent, Mr. Telford, says there is an engraving of a similar "Elevator" in the *Mechanics' Magazine*, vol. II. p. 65 (1829).

Submarine Railways.—Mr. L. Coddé, of Paris, has invented a system of submarine communication, which he thus describes:—I employ iron tubes from 15 feet to 18 feet in length, 4 inches in thickness, and 18 feet in diameter, and which, when united together, form a single continuous tube, in which the railway is to pass. The tubes are provided internally at proper intervals with joints. To prevent water from entering the tubes when being sunk and previous to their junction, the extremities of the tubes are closed with iron plates, about ½ inch in thickness, screwed or bolted to the joints. The plate of the one tube is concave, and that of another convex; by which arrangement, when the tubes are united, the plates fit into each other completely, and the tubes being screwed or bolted to the joint, the interior of the tubes becomes hermetically closed. When all the tubes are united together, communication is opened through the whole length of the railway by removing the plates: the rails are then laid down by the ordinary means. Other arrangements are also described.

Science in the Workshop.—The first of two lectures on this interesting subject was lately delivered to the Coventry Institute, by Mr. Henry Gore, in St. Mary's Hall, Coventry. The lecturer, in course of his remarks, alluded to the superiority of Britain over other nations. That superiority, he said, was due in a great measure to her almost unlimited supply of fuel and raw materials for manufactures; but surrounding nations were bestirring themselves, were using the means placed at their disposal by recent improvements; and if England kept her position in future, it would only be by means of intellectuality in her artizans. It was necessary to educate that class so that they might know how to deal with raw material with the least possible expenditure of time and material. Instead of being particularly anxious that the children of artizans should be acquainted with the foreign roots from which words in their various languages were derived, the continental nations put them through a course of industrial instruction, and it would be well if the same course were pursued in this country. He came from Leeds, and he might tell them a very important fact. Much of the cloth sold in that neighbourhood as being manufactured there, was, in reality, made by the Austrians! and it was only fifteen years since that trade had been introduced into Austria. Having made reference to instances of a similar kind with reference to Bradford and Belgium, and the progress that foreign countries were making in manufactures supposed to be exclusively English, the lecturer said that he only threw out the hint because he was convinced that in proportion as the artizans were taught the science of common things, they made good workmen; and he was compelled, however reluctantly, to admit that, during the last five years, France, Prussia, Belgium, and Austria, had made almost more progress than had our own country since the introduction of steam. Now what would be the position of England in a few years if they did not at once take this bull by the horns?

The Half-holiday for Workmen.—I have watched with considerable interest the efforts making to secure a half-holiday by the operatives in the building trades. The men do not propose to have this half-holiday at their own expense: who, then, is to pay? The argument that they will do as much work in five and a half days as in six days, is simply ridiculous. Builders, as the pages of the *Gazette* unfortunately testify, are of all the tradesmen in this country the least able to bear any fresh burden. I grieve to say that a foolish and unwarrantable competition, which the public seem to insist on and encourage, has reduced the profits of the trade till it is almost impossible to live by it; that where one master succeeds to a competency, a hundred fail. With few exceptions, indeed, builders are poor men, and cannot afford to pay for holidays. The question then is—are the public prepared to pay? If I must judge from the amount of grumbling that almost invariably takes place when the bricklayer or mason present their "day bills," I should say, emphatically, no! Who ever pays an account to a joiner without alleging that the work has come to far more than he expected? and in very many cases these complaints are accompanied with severe strictures on the ability and industry of the operative. Who ever gets in estimates for a house but it comes to far more than he intended to spend, while the builder is very often asking even less than the work can be done for? I cannot, with these facts staring me in the face, believe that the public are prepared to pay. Suppose Mr. A. has a bricklayer engaged the first four days of the week, and the same workman works from Friday morning till Saturday at noon for Mr. B.: will Mr. A. be satisfied to pay for the half-holiday, or will Mr. B. who is unfortunate enough to have the man in his employment at the time, be content to pay? How will the architects, who are so jealous of builders' "day bills," arrange such an anomaly?

A Master in the Building Trade.

THE TIMBER TRADE.—From the Liverpool circular of Messrs. Duncan, Ewing, and Co. it appears that since 1st February the supplies to this port of North American colonial wood have been brought in 251 vessels, tonnage 194,983: during same time last year there arrived 209 vessels, tonnage 238,594. The average in the four years previous was 217,943 tons. From the North of Europe fifty-two vessels, 16,732 tons of wood laden, have arrived; whilst for the like time last year, twenty-eight vessels, 7,762 tons, arrived; the average of four years being 15,498 tons. The active demand for both timber and deals has been somewhat checked by the state of the money market, coupled with the advanced period of the year, when there is usually a curtailment of building operations. The supply of square timber in the aggregate has been about equal to an average, but of deals considerably short of an average.——At Lossiemouth, in the north of Scotland, a cargo of red wood and square timber was recently put up to auction, and the whole was speedily sold at an average price of about 1s. 5d. to 1s. 5½d. per cubic foot.

SILICATE STARCH.—An invention of some general interest and curiosity is beginning to attract attention in Lancashire. It is a discovery by Mr. Leigh, of Manchester, surgeon and analytical chemist, of a substitute for the *size* hitherto made from flour, and used to an enormous extent in the manufacture of cotton cloth. This substitute is a silicate of soda, or preparation of sand and soda. It is calculated that a saving of 25 to 50 per cent. will be effected by the adoption of this instead of flour size, whilst the quantity of flour which will be set at liberty for the purpose of food, should it become generally adopted, will be equal, it is thought, to about, 3,000,000*l.* to 3,500,000*l.* worth per annum,—a hopeful redeliverance of the staff of life to its more legitimate purposes; but it is a sad circumstance, revealed in the recent agitation against adulterators of articles of food, that flour itself is often adulterated with just such silicates, and is but too likely to be so now, we fear, more than ever. The adaptability of soluble silicate of soda as starch, or size, will be obvious to all who know that with water it forms a gelatinous mass not unlike solution of gum, and the only wonder is that the discovery or suggestion of Mr. Leigh was not long since made and practised.

MONEY REMITTANCES BY ELECTRIC TELEGRAPH.—To afford facility to the public for the rapid remittance of sums of money, the Electric and International Telegraph Company have organized a branch of their establishment for that purpose. Money deposited with the company will be advised by telegraphic order, and be paid out to the parties named in the order, in accordance with the conditions printed on the company's forms. The towns between which these remittances can now be made are;—"From London to Liverpool, Manchester, and Newcastle-upon-Tyne; from Birmingham, Bristol, Dublin, Edinburgh, Exeter, Glasgow, Hull, Leeds, Liverpool, Manchester, Newcastle-upon-Tyne, Plymouth, Portsmouth, Sunderland, and York, to London.—By order, J. S. Fourdrinier, Secretary." Thus, by a sort of natural necessity, the new "Mercury," the swift "Messenger," while he holds in one hand the magical *transporting* wand, in the other grasps *the purse*. These money remittances by telegraph are, doubtless, the beginnings of a great system which is likely to supersede post-office remittances,—we trust with safety equal to its swiftness.

APPLICATION OF MACHINERY TO AGRICULTURE.—The effect of the Exhibition of 1851 upon the sale, throughout England, of agricultural implements, has, it seems, been remarkable. Taking alone the firm of Messrs. Clayton and Shuttleworth, of Lincoln, Mr. E. Denison reports that during 1851 they sold 140 portable steam-engines; in 1852, 243; 1853, 284; 1854, 363; 1855, 491; so that, during the four last-named years, the firm had sold 1,320 engines, equal to 8,701 horses' power. Each of the several agricultural machine-makers reported that since 1851 the sale of such machinery had steadily increased. In 1851 the average of the engines sold was five horses' power, but the average of those now sold is seven horses' power; and the export of machinery to the continent has been constantly increasing. In Norfolk, Lincolnshire, and elsewhere, these portable engines are much used. The machine most patronized by landholders in some districts is the tile-pipe draining machine; and none, it is said, has produced a greater revolution.

PATHS IN ST. PANCRAS.—Let me call attention to the infamous and dangerous condition of the footway in and near the Northumberland Arms, Bagniggewells-road: there is a sudden dip or fall of about 18 inches to a lower level—the whole reflecting little credit on the parochial authorities under "the Act for the *better* local Management of the Metropolis." The remark applies in a modified degree to the whole pavement between King's-cross and Acton-street.—A SURVEYOR.

THE GREAT CENTRAL GAS CONSUMERS' COMPANY.—The eleventh half-yearly meeting of the shareholders of this company was held on Friday last, in the London Tavern, the meeting being very numerous, when a dividend of 8 per cent. was declared; and the chairman announced that Mr. Croll, being dissatisfied, and having intimated that he should throw up his contract, and the directors also being dissatisfied, the contract with Mr. Croll to supply gas of a certain illuminating power at 1s. 9d. per 1,000 cubic feet, with 0½d. per candle in addition for every candle supplied whenever the shareholders have received their 10 per cent. or out of the surplus fund, would come to an end at the end of the seventh year, of which six had already expired. Some talk took place as to a rumoured claim to an immense amount which Mr. Croll had made, or meant to make, upon the company. The chairman stated that Mr. Croll had made no special claim, and that he had been regularly settled with. Mr. Croll was present, and spoke of some claim he had, that he "might not be deemed as quietly acquiescing in the chairman's statement."

IRON MANUFACTURE.—Mr. W. Clay, of Liverpool, has specified an improvement in manufacturing wrought iron: his invention consists in taking crude or cast iron, or fine metal, in the melted state, and reducing it to a granular form in water; or by letting it fall from any convenient height through a perforated plate, whereby it will be divided into small particles; and, by descending through an atmosphere charged with oxygen gas, the divided molten metal will, during its passage through the air, be decarbonised, or partially decarbonised. Mr. Clay also proposes sometimes to charge the atmosphere with an additional dose of oxygen, or some other decarbonising gas. The particles of molten iron, after falling from a height through the air, may be allowed to fall into water below, whereby the decarbonisation is carried still farther.——Mr. J. G. Martein, whose inventions have been so frequently spoken of in connection with Mr. Bessemer's iron-making process, has just filed the specification of a further patent for improvements in the manufacture of iron. This new invention, as described in the *Mechanics' Magazine*, from his own specification, "consists in using or applying certain materials to the liquid iron thus subjected" (that is according to his former patent) "to the action of air or steam, for the purpose of purifying, or assisting in the purifying, of the iron; and I use or apply those materials to the iron, in the liquid state in which it comes from the furnace, in such manner that they shall become blended with or disseminated through the metal, so as to act upon every part of it, as far as practically may be." Among the materials used are chlorine, when the metal contains sulphur, manganese, &c. when it contains "silicate" [query silicon]; and oxydating substances, such as spathose ore and manganese, &c. for the purpose of assisting in the decarbonization of the metal. The last claim appears to be nearly identical with that of Captain Uchatius, engineer-in-chief of the Imperial Arsenal of Vienna, as described by us on 1st inst.

INAUGURATION OF FRANKLIN'S STATUE, AT BOSTON, U.S.—This event took place on the 17th ult. The statue is the result of a subscription of the citizens, amounting to nearly 10,000 dollars. It is of bronze, 8 feet high, after a model by Greenough, the sculptor, also a native of Boston. The pedestal consists of three pieces of verd-antique marble, from Roxbury, Vermont: it stands on a granite base; so that the feet of the statue are 10 feet from the ground. The inauguration was celebrated by a public procession, and the route was by many sites associated with Franklin's name and fame;—the old printing-office where he worked as an apprentice to his brother; the old tallow-chandler's shop where he made candles; his birthplace, Franklin-street, and the monument previously erected to his memory, &c. The new monument occupies a site in front of the City Hall. Amongst the relics carried in the procession were the old Franklin press, and a printer's frame, or case-staud, once occupied by Benjamin Franklin.

BLANDFORD CEMETERY.—The Bishop of Salisbury has long refused to consecrate this new cemetery, because the Burial Board would not comply with his request that a communion table and rail be placed in the Episcopal Chapel. A correspondent says,—"It may perhaps not be uninteresting to some of your readers to learn, that a temporary table and rail were placed in the chapel, and that the portion of the cemetery appropriated to the Church of England was consecrated by the bishop, on Thursday, the 30th ult. and the table and rail removed again from the chapel the same day." The two chapels are nearly alike, in the Early Pointed style of Gothic architecture, built of local rag stone, with Bath stone dressings. The cemetery contains four acres: a wide road separates the consecrated from the unconsecrated ground.

CELLAR-PLATES.—The slippery time—winter—is fast approaching us. Our cellar-plates are generally very dangerous to walk on at that season: all the various ones in use have some fault or other. I send you a suggestion for one I think free from the objections at present in force. It is that there shall be two; the under one within to be of glass—the thick opaque kind; the upper, level with the pavement, to be of stone, in open cross-bar form. Thus, we should have light in the cellar and safety to the street passenger. In the latest one I have seen in use, the framework is of iron filled in with glass: this gives light, but it also gives danger, for glass is as slippery as the old iron plates were. Rough paving-stone is about the least slippery substance we can select,—and by an *open* stone plate at the surface, and one of glass directly under, I think the desired object would be attained.—A THOUGHTFUL WORKER.

FOG IN GREEK-STREET.—SIR: I was out on business a considerable time the other evening in the fog; and, always wishing to improve on circumstances, I observed nothing moving on but very slow coaches, such as I remember to be usual fifty years ago. It was from their having to move in a fog of not their own creating. But seeing this brought me to compare it with the slow coaches in the City Guildhall, dubbed the Metropolitan Board of No Works, I thought of their groping their way through the fog of their own creating. The slow coaches of that Wednesday evening were to be admired: their caution was necessary, because the fog they were in was not of their own seeking, whereas the metropolitan slow coaches have themselves created their fog to fumble in for their own amusement, to the great injury of others.—S. P. X.

THE SCOTTISH NATIONAL MONUMENT TO WALLACE.—From a statement made at a recent public meeting in Stirling, it appears that upwards of 2,000*l.* have now been collected towards the fund for the Wallace monument. Large sums are said to be expected from England and Ireland, America and Australia.

TERMINATION OF THE MASONS' STRIKE AT NEWCASTLE-UPON-TYNE.—The masons who have been so long on strike for a half-holiday had a meeting on Thursday week, when it was agreed that they should commence work again on the same terms as before. They had stood out about three months.

[ADVERTISEMENT.]

CHUBB'S FIRE-PROOF SAFES are constructed of strong wrought iron, and the Detector Locks, which secure them, are gunpowder proof. Among recent instances of the security they give to their contents from fire and thieves are:—

Messrs. W. Jones and Sons, Cotton-mills, Manchester. Offices totally destroyed by fire, all the papers preserved in a Chubb's Safe.

Fire at Manchester, Sheffield, and Lincolnshire Railway. Secretary's and other offices burnt, the papers and a large number of bank notes preserved in a Chubb's Safe, although, from the intense heat, the knobs and handles of the safe were melted.

MANCHESTER. — Total destruction of Messrs. Rylands and Son's Warehouses. A large Chubb's Safe (had twelve years previously) in the midst of the flames for fourteen hours, the books and papers were uninjured by the fire.

GUNPOWDER DEFEATED.—Daring attempt to blow open a Chubb's Safe with gunpowder, in the countinghouse of Mr. Blair, Millgate, Manchester, completely unsuccessful, though the force of the explosion moved the safe from its position.

GUNPOWDER DEFEATED.—Another attempt on a Chubb's Safe, with gunpowder, in the offices of Messrs. Nicholson and Co. Cousin-lane, London, proved futile, although the thieves had first used crowbars. The money, deeds, and bills were all found perfectly secure.

Reference to the respective firms as to the correctness of these statements is permitted.

THE LATEST GUNPOWDER DEFEAT.—In the burglary at Mr. Harrison's offices, near Walsall, on 11th instant, six men attempted to blow open the iron safe with gunpowder, but the lock, which was one of Chubb's Patent, resisted their efforts. It is only right to state that the safe itself, which was afterwards broken open with a sledge-hammer, was not of Messrs. Chubb's manufacture, but merely a common one.—(See *Wolverhampton Chronicle*, October 15, 1856.)

Complete Illustrated Price Lists of Chubb's Safes, Detector Locks, Cash and Deed Boxes, sent on application.

CHUBB and SON, 57, St. Paul's Churchyard, London.

BREACHES OF CONTRACT BY WORKMEN.—A return moved for by Mr. M'Mahon, M.P. shows that in 1855 there were 2,345 persons summarily convicted and committed to prison in England and Ireland for breach of contract in neglecting work or leaving service, against 3,215 in 1854. Of these 2,345, 1,541 were convicted and imprisoned in England, 109 in Wales, and 695 in Ireland. In 1854, 2,427 were convicted in England, 102 in Wales, and 686 in Ireland.

TENDERS

For the erection of a pair of cottages and a pair of villas on the Stratford estate of the Temperance Permanent Land and Building Society. Mr. William Ellison, architect:—

	Cottages.			Villas.		
J. Atkinson	£547	10	0			
E. Lawrence	518	0	0			
H. J. Harvey	497	0	0	837	0	0
A. Symmons	495	0	0	1,000	0	0
W. Chapman	450	0	0	960	0	0
Jas. Pilkington	440	0	0	930	0	0
Preedy	430	0	0			
M. A. Wood & Son	430	0	0	645	0	0*
James Rivett	425	0	0	1,033	0	0
J. Mayo	395	0	0	775	0	0
John Ellis	390	0	0	750	0	0
Wm. Reed	376	0	0	780	0	0
John L. How	345	0	0	573	0	0
Adams and Cross	336	0	0*	721	0	0

* Accepted.

For house and temporary church in William-street, Pimlico. Mr. Wardell, architect. [The list sent us last week was incorrect]:—

	House.	Church.	Total.
Bird	£3,899	£2,499	£6,398
Kelly	3,886	2,432	6,318
Jackson	3,764	2,375	6,139
Myers	3,563	2,134	5,697

For alterations and additions to premises Nos. 5 and 6, Bury-court, St. Mary Axe, for Mr. J. Oxford. Messrs. Tillott and Chamberlain, architects. Quantities not supplied:—

Lawrence and Sons	£1,490	0	0
Brass and Son	1,324	0	0
Ashby and Sons	1,310	0	0
Heath and Son	1,284	0	0
Rider	970	0	0

TO CORRESPONDENTS.

"Aquarius."—"S. A."—"E. P."—"E. A. D."—"W. O'B."—"J. P."—"T. W."—"R. L. S."—"F. E. H."—"W. C. W."—"Dr. C." (shall appear).—"T. C. L."—"One who is neither Quack nor Doctor" (would take us too far out of our province).—"E. W. T."—"T. O."—"A. B." (does not say in what district; or give his name).—"T. T." (some particulars of the Nelson Monument will be found in our volume for 1850, p. 174).—"G. H. M."—"J. B. W."—"H. C."—"J. B."—"W. J. P."—"W. P. G."—"Major-General T."—"A District Surveyor."—"A. D." (shall appear).—"Clericus" (we are forced to decline recommending). —"H."—"A Constant Reader."—"J. C."—"J. F. M."

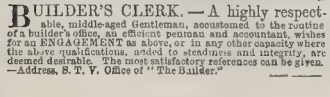
"Books and Addresses."—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without blistering. These Paints have been tested for five years on Her Majesty's Dockyards, and two Official Reports made thereon, which testify that 6lbs. of Wolston's Torbay Iron-Paint will effectually cover as much surface as 12lbs. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon, London Depôt, Chamberlain's Wharf, Lettersons or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

IMPORTANT TO BUILDERS.



REGISTERED CAST-IRON CHIMNEY-HOPPER and CHIMNEY-BAR COMBINED, ensuring a perfect formation of the Flue, and rendering smoky chimneys impossible. One trial will cause their adoption in every building. Price from 8s. 6d. each, according to size.
IRON GIRDERS and COLUMNS to MODEL or DRAWING.
IRON PIPES and connections for gas, water, and liquid manure.
RAIN-WATER PIPE and EAVE GUTTERS, at wholesale prices. Also, O.G. Gutters, Sash-weights, STABLE FITTINGS, pumps, tomb railing, cattle and pig troughs, and COLUMNS with caps and bases, and every kind of Lindley castings, in stock, at LYNCH WHITE'S Iron Wharf, Upper Ground-street, London, near Blackfriars-bridge.

BUILDER'S CLERK.—A highly respectable, middle-aged Gentleman, accustomed to the routine of a builder's office, an efficient penman and accountant, wishes for an ENGAGEMENT as above, or in any other capacity where the above qualifications, added to steadiness and integrity, are deemed desirable. The most satisfactory references can be given.—Address, S. T. V. Office of "The Builder."

FOREMAN GLASS-CUTTER.—WANTED, in a Window-glass Warehouse at the West-end, a FOREMAN GLASS-CUTTER. He must be thoroughly conversant with the crown, sheet, and plate glass trade, and able to make out his invoices and estimates. Security will be required.—Apply first by letter to R. A. Office of "The Builder."

MR. S. D. DARBISHIRE takes this mode of informing those gentlemen to whom he has not written, that the situation advertised for in the last number of "The Builder" is filled up.—Pendlebury, Nov. 7, 1856.

WANTED, immediately, TWELVE good CARPENTERS.—Apply at the New Farm Buildings, Shrubus Castle, near Tetsworth, Oxon.

WANTED, a MAN, who thoroughly understands the PRACTICAL WORKING of CARTON PIERRE. The engagement will be for the country. Letters, stating terms and where last employed, to be addressed to A. B. 15 Oldham-street Liverpool.

WANTED, TWO good MARBLE MASONS who can carve and cut letters.—Apply to JOSEPH B. ROBINSON, Carving Works, Derwent-street, Derby.

TO CARPENTERS.

WANTED, a respectable Man, about 35 or 40 years of age. He must be a good workman, and of active business habits.—Address by letter in own handwriting, stating where last employed, to R. A. Office of "The Builder."

TO ARCHITECTS.

WANTED, immediately (in the country), an ASSISTANT, thoroughly competent to prepare all requisite drawings, specifications, set out quantities and to undertake the superintendence of works generally. The applicant must state terms and furnish satisfactory references and testimonials as to ability and general character.—Address, A. A. Mr. Henry Ingledew's Stationer, 73 Bond-street, Leeds.

TO BUILDERS, &c.

WANTED, by a respectable middle-aged Man, an ENGAGEMENT as MEASURING and ESTIMATING CLERK, or BUILDER'S BOOK KEEPER, either wholly or partly. Unexceptionable references.—Address, C. C. No. 6, Hall-street, Arlington-street, New North-road.

TO BUILDERS' CLERKS.

WANTED, by a respectable Firm in the County of Oxford, a good and efficient CLERK, who is thoroughly understands Builders' Book-keeping, taking out quantities, and is a fair draughtsman.—Address stating age, terms, and reference, to X. Y. Z. Post-office, Banbury.

TO GLASS STAINERS.

WANTS EMPLOYMENT, a LEAD GLAZIER; can manage stainers' kilns, and make colours.—Address, S. W. Office of "The Builder."

TO MASTER MASONS AND BUILDERS.

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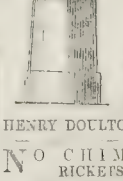

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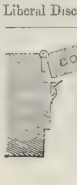

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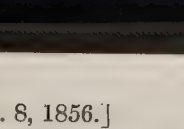
A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.
STEPHENS' DYES or STAINS for WOOD. The Patentee extract from a letter the Proprietor has obtained leave to make public:—"Worcester, December 5, 1855. Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the cheapest and most real wood of any I have ever used.—I am, sir, your obedient servant, "SAMUEL GRIMES, Builder.
"To Mr. Henry Stephens, 54 Stamford-street, London."
Samples and prospectuses free to any part of the kingdom.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c. — A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, paint lackers, and fine turpentine. The present price is 6s. 6d. to 7s. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Leather-lane, and 14 and 15, Dorrington-street, Holborn, London.

VENTILATION.—PURE AIR.



Sheringham's Ventilator for the admission of pure air through an EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 8s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not improved when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 106, Blackfriars-road, and 127, Union-street, Borough; and of all respectable ironmongers, builders, &c

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HENRY COX, Manager at the Lizard.
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MARBLE and STONE CHIMNEYS.—THE MARBLE CHIMNEYS of various designs and colours, most of them fixed, are now on view at the Cambridge Hearth Marble Sawing-Mills. The proprietor has again enlarged his workshops, and erected so much improved machinery, as to be not only to compete, but to be able to manufacture more, and consequently cheaper than any house in the trade.
The Trade supplied.

MARBLE.—The ITALIAN MARBLE COMPANY have just landed, and constantly keep an assortment of MARBLE MORTARS and GARDEN VASES of all dimensions. Orders executed for the above, and every description of Italian works of art. Vein and Sicilian marble blocks of all sizes.—Yards at Bridge Wharf, Millbank, adjoining Vauxhall-bridge, to WILLIAM W. BONNIN, Secretary.

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THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Birdlip, dove black, black and gold, Sienna, St. Ann's, statuary, serpentine, red antique, &c. Portland, Hardhill, Park Spring, and other stone, in blocks, slabs, landings, York and headstones, Yorkshire paving, granite curb, &c. All goods carefully packed and forwarded to any part of England.—THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY-PIECES lately imported from the Continent. They comprise Statuary, Giallo di Siena, Vert Rouge, Dove, Black and Gold, Rouge de Belmont, Bardiglio, and other choice foreign marbles; and are designed with great taste, and executed by first-class artists—On sale, in the show-room of Messrs. EVANS, SON, and CO. King William-street, London Bridge.

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50 Tons Maltese Stone, on board steam-ship Sydney.
150 Tons ditto, on board steam-ship Castalia.
200 Tons Shingle and Sand, on board steam-ship Victoria.
Parties desirous of purchasing the quantity in either ship, or the lot, are requested to send offers, the vessels will remain at the Australian Royal Mail Steam Navigation Company's, 76, Gresham House. Purchasers must take the Stone, &c. at their own expense, within a week from their offers being accepted.

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STONE! STONE! STONE!—To the TRADE.—The cheapest premises for selling for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Bedding Slab, Granite Pitching and Curb, Guernsey Broken Road Materials, and every other description of stone, is JOHN KNIGHT and SONS, Devon Wharf, Mineral Yard, Stamford-street, Blackfriars.—Portland stone landings, 6d. per foot run; slab for hearths, 4d. per foot sup.; slab for chimney-pieces, 9d. per foot sup.; 9 by 3 window-sills, 6d. per foot run; 18 by 9 coping, 8d. per foot run; box chimneys, any openings, 8s. 6d. each. Terms cash on delivery.

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By Her Majesty's Royal Letters Patent.

F. McNEILL and CO. of LAMB'S-BUILDINGS, BUNHILL-ROW, LONDON, Manufacturers and ONLY Patentees of
THE PATENT ASPHALTED FELT, FOR ROOFING HOUSES, VERANDAHS, SHEDS, &c.
Patronized by
HER MAJESTY'S WOODS AND FORESTS,
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HONOURABLE EAST-INDIA COMPANY,
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ROYAL BOTANICAL GARDENS, REGENT'S PARK,
And by the most eminent Engineers, Surveyors, and Architects, both of England, Scotland, and Ireland; at whose great national show in Leicester-square, in 1851, it OBTAINED THE PRIZE, for being the best and cheapest article for roofing; also used for under slates at the Royal Agricultural Society's House, in Hanover-square. Its advantages are its low cost, durability, and economy. It is impervious to rain, snow, and frost, and a non-conductor of heat and sound. The Felt can be had in any length, by 33 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples, with full directions as to its use, and the manner of applying it, with TESTIMONIALS, some of them of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 25 per cent in fuel is effected. The TRADE are respectfully informed that they can be supplied DIRECT to the FACTORY, as the largest houses of note are supplied with the genuine article, and when by the best suited to their roofing is made are F. McNEILL and CO.'s Manufactories, LAMB'S-BUILDINGS, BUNHILL-ROW. Roofs covered with the Felt may be seen at the Eastern side of the new Vestry Hall, St. Clement's, Clare-market, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

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N.B. The Stone which I offer as above, must come into extensive use. I should think it exceedingly suitable for the London market."—I. L. Dubosq, Esq.
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This Granite is selected for the New Westminster-bridge.

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Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

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SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the several sizes, which they are prepared to supply at the usual terms, for shipment from their depôt, at Bangor, or to transmit by railway. Also Slabs of all sizes. Orders to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor.

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CISTERNS of LARGE DIMENSIONS for BREWERIES, DISTILLERIES, BLEACHING-HOUSES, and MANURE-TANKS
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Paving for Railway Stations, Malt-houses, Breweries, Balconies, Conservatories, Warehouses, &c.
CHIMNEY-PIECES, Baths, Tombstones, Pedestals, Washing-tubs, Troughs, and every other Article of Slabwork, PLAIN or IN SCULPTURE.
Self-faced Flags for Barns, Outhouses, or Street Paving.
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For Damp Walls, and Lining Iron Houses,
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Brick, Lime, and Cement Merchants,
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BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

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All applications for prices and terms will meet with prompt attention.
N.B. Please observe the lime is ground at the works, not in London.

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Is the result of practical experiments and long experience; it is unfailing in its application. Entire houses have been papered a few days after plastering. In repairs of old plastered walls it is invaluable. A moderate room can be papered for 2s. 6d.
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HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor tropical climes act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil, and where it is used with Size, Varnish, &c. To prevent the prejudice against Zinc paint, which the adulterated article must otherwise produce, it is now sold by the Wholesale Paint-dealers in Original Packages, each cask stamped, HUBBUCK—LONDON—PATENT. And when so marked, the quality is guaranteed THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works opposite the London Docks, London.
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

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Brick, Tile, Drain-pipe, Hair Lath, and Fire Goods
ST. JAMES'S and THORNHILL WHARFS,
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ROMAN CEMENT, made at the above works, may be had fresh from the kilns daily—a great advantage to dealers and sewer contractors, especially in winter time.
PORTLAND CEMENT, of the best quality, strength, and Colour, manufactured in Kent. This cement will carry more sand than any of the Lias Cements, so much of which is now brought into the market, and sold as Portland.
PLASTER of PARIS, direct from the quarries, both coarse and fine, whole-sale and retail.
LIME, Grey Stone, Chalk, and Blue Lias Lime, fresh and well-burnt, a constant and regular supply of which may be had by the barge or yard.
A large assortment of Glazed Stoneware Drain-pipes, of the best Lambeth make; Yorkshire Plain, Pan, and Paving Tiles; Welch Fire bricks, Lumps, and Tiles; Hair and Laths, always kept in stock.
These goods are of the best quality, and sold at the lowest possible prices.
N.B. Shipping orders promptly executed.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce or demand the canal ranger's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 16, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southham, Warwickshire.

DAVIES and NORMAN, CROWN WHARF, GREAT SCOTLAND-YARD.
ROMAN and PORTLAND CEMENTS,
LIME, BRICKS, TILES, SLATES, FIRE GOODS, &c.
STONEWARE PIPES, PANS, TRAPS, &c.
A Liberal Allowance to the Trade.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump lime, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS,
32, UPPER GROUND-STREET, Blackfriars (Surrey side),
7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works on the Medway, near Rochester.

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Waterworks Companies, Coal-Mine Proprietors, Builders, Contractors, &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, is prepared to enter into contracts with any of the above trades that may favour him with their orders. The advantages to be derived from the above Cements, manufactured by J. C. over all others, are their extraordinary hydraulic properties.—Samples and references may be had on application either at the Works, Ashton New-road; or the Warehouse, 5, Broom-street, Shude hill, Manchester.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Pariors, and Pickings of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge of it themselves.
Manufactory, Islington-green, and Pinc. Bricks also in sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pickings of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS.—Mr. Rydon having made more than he requires for the builders on his estate, Highbury New-park, would be willing to enter into arrangements with builders and others for supplying first-class STOCK and RED BRICKS on reasonable terms. For particulars, apply at the Estate Office, Bell's Farm, Stoke Newington Green.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the fire bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also STOCKS, of FINE QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS.—White and Red Facing Bricks, and hard Clinkers for paving stables, &c. can be delivered by Thames or Eastern Counties Railway at ten per cent under the usual prices.—Apply to W. and W. WRIGHT, Springfield, Essex.

HERMITAGE BRICK WORKS, FULHAM, STOCK BRICKS of superior quality FOR SALE at 20s per Thousand, cash.—Apply to J. JOHNSON, at the Works

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for sulphate, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 300 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle), Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.
OFFICE—No. 13, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

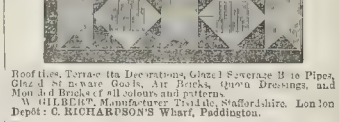
TO BRICK, TILE, and PIPE MAKERS. An improving BUSINESS TO BE LET on LEASE.—Inquire, A. B. Forest-hill Station (by letter only), in the first place.

THE PATENT BRICK MACHINE COMPANY invite orders for their IMPROVED MACHINES. One of them is working in a field at Caterham, near Croydon, and arrangements are made with the owner for bearers of a letter from the Secretary, to see it in operation every Thursday and Friday. It is the most simple machine invented. Trains from London-bridge to Warlingham (close to the field), leave at 6 and 9.30 a.m. and 2 p.m.; return at 9.55 a.m. and 5.5 and 7.36 p.m.
HENRY C. MOUNT, Sec.
37, King William-street, City.

BRICKFIELD TO LET, 3½ miles from Town.—Clay for about 14,000,000 of Bricks.—Apply to Mr. C. BROWN, House and Estate Agent, West Croft-place, Hammersmith.

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability. Slabs and Tiles for Fireplaces and Hearths, Curbs for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Purposes, may be had, in great variety at their Warehouse, 2, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

BLUE, RED, and WHITE FLOOR-TILES.



Roof tiles, Terra-cotta Decorations, Glazed Stoneware Pipes, Chimney Pots, Garden Pots, Air Bricks, Quoin Dressings, and Moulded Bricks of all colours and patterns.
W. GILBERT, Manufacturer, Tunstall, Staffordshire. London Depôt: C. RICHARDSON'S Wharf, Paddington.

BEADON'S PATENT IMPERISHABLE GUTTER TILES,
For Spouting Roofs of Houses either old or new, whether of thatch, slate, or tile, and other structures.
See Advt.
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloucester, Bridgwater, and Ruabon.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPÔT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "Terro-Metallic," is the exclusive right of the Proprietor; and, thirdly, that the "Reasons for the Increase of Price," for the Great Exhibition, make the Manufactories (such as long as "The Pitchers," Tunstall, Staffordshire, as the first of the kind in the world

CONIAM'S PATENT IMPROVED ROOFING TILE. These tiles are light from overlapping each other by a raised edge, which also prevents the drift of rain or snow, and, at the same time, effects considerable saving in timber. To be obtained of C. PHILLIPS, Potter, Weston super-Mare.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crests, Label Mouldings, Trees, Crosses, Vases, Balusters, Capitals and Bases of Columns, Jambs, Fresh Bricks, Coping, Kitchen and other Sinks, Chimney Shafts, and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin.

TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,

which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS,
8, Crescent, Jewin-street, London.
Manufacturers and Patentees.

R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS,

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c., adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, singly or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 3s. per doz. painted.
Ditto .... 4s. per doz. galvanized.

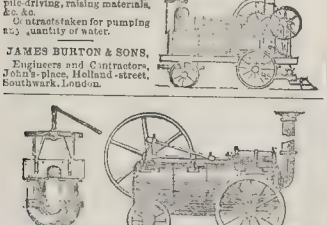
Upper Ground-street, Blackfriars Bridge, Surrey Side.

CONTRACTORS' STEAM-ENGINES. — TO BE LET, on HIRE, or for SALE several NEW and SECOND HAND STEAM ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MIDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,
Engineers and Contractors,
John's-place, Holland-street,
Southwark, London.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

FOR SALE, a capital 8-Horse High-pressure Horizontal STEAM-ENGINE, Pipes, &c. complete, and Cornish Boiler, about twelve feet long, and five feet diameter. Also, a nearly new CIRCULAR SAW-BENCH, by W. N. PARSONS, shafting, gear, and 10-foot fly-wheel, &c. To be sold together or separate.—Apply to Mr. BARRINGER, York street, York-road, Lambeth.

STEAM-ENGINE.—FOR SALE, a strong, High-pressure Horizontal Steame engine, of 25 horse power. May be seen by applying to Mr. PORTER, at Cubitt's Works, Grosvenor-road, Pimlico.

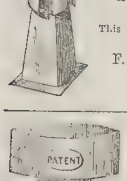
GALVANIZED WINDGUARDS.

No. 1. 3 feet high, 14 in. by 9 in. bottom, 18s.
No. 2. 4 " " " " " 20s.

A DISCOUNT ALLOWED TO THE TRADE.

This Windguard is highly recommended by the Manufacturers,

F. EDWARDS, SON, and CO.
42, POLAND-STREET,
OXFORD-STREET.



SMOKY CHIMNEYS.—TWO YEARS' TRIAL, and PERFECT SUCCESS of FULL'S PATENT WIND GUARD, in curing the most inveterate SMOKY CHIMNEYS, induces the Patentee to recommend all persons suffering from that nuisance to try one.

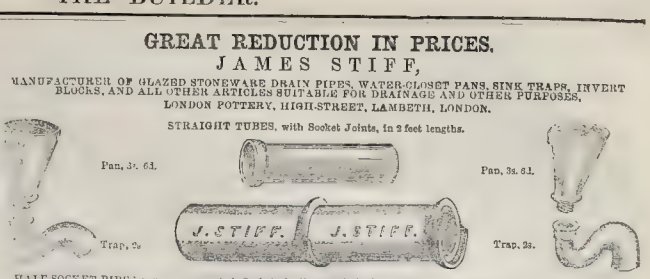
Price 10s.

To be had of Ironmongers and Builders, and of the Patentee, at his Office, 63, Fenchurch-street.

TO LIME and CEMENT DEALERS, TILE and DRAIN-PIPE MANUFACTURERS, and OTHERS. A Brick Merchant, having a well-situated wharf fronting the Thames at Hammersmith, where there is an opening for the above local trade, and only requires it for the loading and unloading of bricks, would be happy to treat with any one for LETTING the whole or part, which has every requisite for carrying on a good trade. A timber and sawing yard could be added advantageously. Further particulars of Mr. LLOYD, Brickmaker, Shepherd's Bush, Middlesex.

GREAT REDUCTION IN PRICES.
JAMES STIFF,
MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

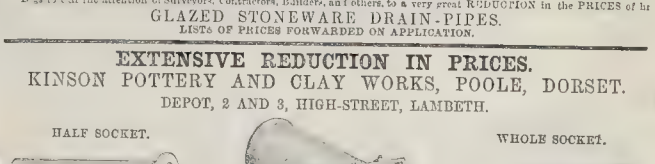
May be had also at the following wharfs, viz.: —
Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road, City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Duvers-wharf, Chelsea; Pratt-wharf, Kings-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RAGG, LE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.
Drawings, with Prices, will be forwarded free, on application.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his
GLAZED STONEWARE DRAIN-PIPES.
LISTS OF PRICES FORWARDED ON APPLICATION.

EXTENSIVE REDUCTION IN PRICES.
KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.
DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

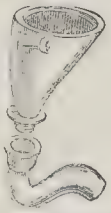


Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Fronties, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

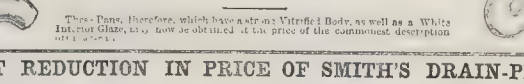
REDUCTION IN THE PRICE OF CLOSET-PANS



DOULTON AND WATTS,
LAMBETH POTTERY, HIGH-STREET, LAMBETH,
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to
5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, can now be obtained at the price of the commonest description ever made.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.

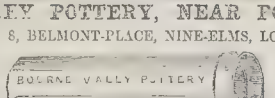


THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of JAMES PILBROW, Esq. En lieu er to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, which obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted.
DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.
MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

BOURNE VALLEY POTTERY, NEAR POOLE, DORSET.
DEPOT, 8, BELMONT-PLACE, NINE-ELMS, LONDON.



EXTENSIVE REDUCTION IN THE PRICES OF SALT-GLAZED STONEWARE DRAIN-PIPES, FLUE-PIPES, BENDS, JUNCTIONS, CLOSET-PANS, &c. &c.

The Proprietors of the above Works are prepared to supply the various articles used in drainage, &c. in any quantities. The pipes &c are made of the finest clay, the produce of the estate, by skilful and experienced workmen, assisted by new and patent machinery, and are so thoroughly vitrified by the intense heat to which they are subjected, as to prevent the possibility of the absorption of any liquid. They will bear comparison with goods made in any part of the kingdom.

Lists of prices, and any other information may be obtained, on application to the Manager, Mr J. T. BOUNSALL, Bournemouth, near Poole; or of the Agent in London, Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth.

THE FARNLEY IRON COMPANY, WORTLEY, NEAR LEEDS,

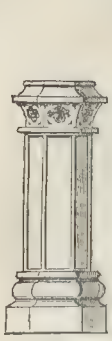
MANUFACTURERS OF

FIRE-BRICKS, PATENT GLAZED STONEWARE DRAIN PIPES, CLOSET-PANS, ORNAMENTAL TRUSSES, BRACKETS, MODILLIONS, PEDESTALS, VASES, &c.;

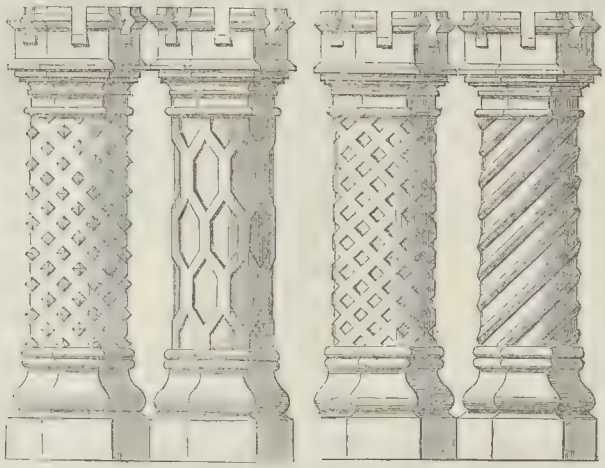
ALSO OF

TERRA COTTA CHIMNEY-TOPS,

In upwards of One Hundred Patterns, of various dimensions and of first-rate design, a few of which are given below,—scale half an inch to a foot.

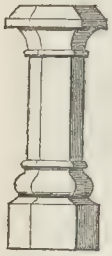


No. 67.—Wind-guard. 3 ft. 0 in.



Nos. 46, 47, 48, and 49.—4 ft. 4 in. high. 6 ft. 0 in. " 9 ft. 0 in. "

No. 69.—3 ft. 6 in.



No. 38.—3 ft. 6 in. 4 ft. 2 in.

No. 13.—Ornamental Square. 2 ft. 3 in. 2 ft. 6 in. 2 ft. 9 in.

No. 24.—Wind-guard. 3 ft. 6 in.

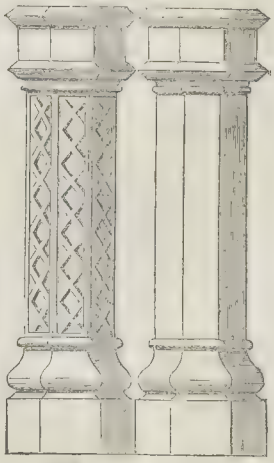
No. 3.—2 ft. 6 in. 2 ft. 6 in.

No. 14.—2 ft. 6 in. 2 ft. 10 in. 3 ft. 8 in.

No. 13.—3 ft. 1 in.

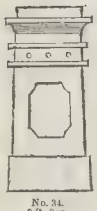
No. 68.—Plain [illegible] Square. 3 ft. [illegible] in. 4 ft. 2 in. 4 ft. 8 in.

No. 76 (round).—1 ft. 10 in. high.



No. 75 (square).—1 ft. 10 in.

No. 30.—4 ft. 3 in. 6 ft. 0 in.



No. 34. 2 ft. 9 in.

No. 12. 2 ft. 9 in.

No. 74. 4 ft.

No. 21. 6 in. square. 2 ft. 6 in. 3 ft. 0 in. 3 ft. 6 in.

No. 4. 2 ft. 3 in.

No. 71. 4 ft. 3 in.

ARCHITECTS' DESIGNS CAREFULLY EXECUTED, AND WITH QUICK DESPATCH.

Prices quoted are delivered free in Leeds, on Boat or Rail, for any part of the Kingdom.

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LONDON..... No. 14, York Chambers, York Buildings, Adelphi; No. 16, Bath-place, New-road; St. Ann's Wharf, Limehouse.
BIRMINGHAM.. No 7, Essy-row; also 22, Cambridge-street, and Lawley street.
BRISTOL..... No. 14, Nelson-street.
LIVERPOOL.... No. 9, Russell-street; 83, Renshaw-street; and Shipping Wharf, Leeds-street.
NEWCASTLE.... W. B. Wilkinson and Co. Prudhoe-street.
GRIMSBY..... P. G. Skipworth.
MANCHESTER.. No. 42, Travis-street, and 23, 24, and 25, Birmingham-street, London-road.
HULL..... No. 60, Queen-street, and Wellington-street.
BRADFORD..... H. Iron [illegible].
LEEDS..... Wellington-street, adjoining the Midland Station, and Shipping Wharf, Victoria Works, Ill-market.
SUNDERLAND.. W. B. Wilkinson and Co. Queen street.
WARE..... G. E. Rous, Stone Merchant.

WHERE DRAWINGS, WITH PRICES, &c, MAY BE OBTAINED.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES, DOULTON'S HALF-SOCKET PIPES, | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS DOULTON'S PATENT JUNCTION BLOCKS

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

THE FARNLEY IRON COMPANY, WORTLEY, near LEEDS.

Manufacturers of FIRE BRICKS, TILES, QUARRIES, &c., White Building Bricks, Fire-clay CHIMNEY-TOPS, in Norman, Egyptian, Saxon, Tudor, Grecian, Gothic, and Elizabethan styles.

TERRA COTTA

Fountains, Vases, Pedestals, Capitals, Trusses, Brackets, &c., in great variety, which for beauty and elegance of design are unequalled The designs of Architects modelled with the greatest exactness.

Also of PATENT GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, &c., well adapted for pressure, being made extra pressed under "Spencer's Patent." Superior White Glazed CLOSET PANS, TRAPS, &c.

The Works of the Company are situated in the immediate vicinity of the well known bed of WORTLEY FIRE CLAY, and their manufacture of BRICKS, for the use of Forges, Gas Companies, Foundries, Potteries, and Glassworks, is confidently recommended for all purposes where extreme heat is required. Their GROUND CLAY is also particularly adapted for the manufacture of CRUCIBLES, MELTING POTS, &c

OFFICES AND STORES:

LONDON .....No 14 York-chambers, York-buildings, Adelphi; No 16, Bathplace, New-road; St. Ann's-wharf, Limehouse.
BIRMINGHAM..No 7, Fleet row; also 92, Cambridge-street, and Lawley-street.
BRISTOL .....No. 14, Nelson-street.
LIVERPOOL ..No. 9, Russell-street, 83, Renshaw-street, and Shipping wharf Leeds-street
NEWCASTLE. ..W. B. Wilkinson and Co. Prudhoe-street.
GRIMSBY.....P. G. Skipworth.
MANCHESTER..No. 48, Travis-street, and 23, 24, and 25, Birmingham-street, London-road.
HULL .....No. 60, Queen street, and Wellington-street.
BRADFORD ....Hirton-road.
LEEDS ....Wellington-street, adjoining the Midland Station and Shipping-wharf, Victoria-works, Hunslet;
SUNDERLAND..W. B Wilkinson and Co. Queen-street.
WARE.....G. E. Kins, Stone Merchant.

Where Drawings, with Prices, &c. may be obtained.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.

GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

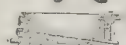
THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Brankseа is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Brankseа Island, Poole, Dorset.

UNDERHAY'S PATENT REGULATOR CLOSETS for constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in fixing, and a better flush of water obtained in use.



Pan, Valve, Self-acting, and Servants' Closets, on this principle, may be seen at the Works. They are very cheap, their efficiency is guaranteed. 5,000 of them have been sold, and no instance of failure has occurred.

These Stool-valves are cheaper, stronger, and more ornamental, than any other Many thousands are in use, and greatly approved of.

Manufactured by CHARLES BOTTEN and SON, Brass Founders, Crawford passage, Clerkenwell, London.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

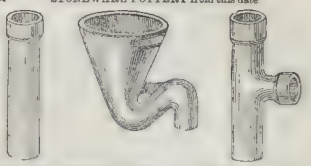
MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 89, Bankside.—DAVID MUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES

3 inch bore, in 2 ft. 6 in. lengths, at				2½d. per foot
4	"	"	"	3½d. "
6	"	"	"	6d. "
9	"	"	"	9d. "
12	"	"	"	1s. 6d. "
15	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

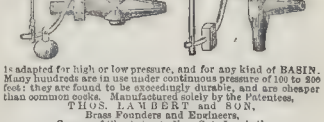
The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street London.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE

No. 7.



is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet; they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentee,

THOS. LAMBERT and SON,

Brass Founders and Engineers,

Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 1l. 8s. 6d. each.

TO WATER COMPANIES, LOCAL BOARDS OF HEALTH, AND OTHERS.

LAMBERT'S NEW VALVE COCK,

For Preventing Waste of Water.

If so constructed that it cannot be left open accidentally or wilfully, and further it will at each action deliver a specific quantity, and under the same pressure this quantity will never vary.

It is peculiarly adapted for closets, self-acting or otherwise.

Price, complete for high pressure, 10s 6d. each.

" " low " 12s 6 " "

THOS LAMBERT and SON, Patentees and Manufacturers, Founders and Machinists, Short-street, New-cut, Lambeth.

SALES BY AUCTION.

Valuable Waterside Premises on the Regent's Canal, King-land-road, with Cement Kilns, Steam Engines, &c. and an improved Rental of 24l. a year.

MESSRS. EVERSFIELD and HORNE are instructed by the Mortgagees to SELL by AUCTION at the MART, on TUESDAY, NOVEMBER 25, in two lots, the beneficial LEASE of the extensive PREMISES, known as Tuscany Wharf, near the Canal-bridge Kingsland-road, fitted up at a great expense by Messrs. Freen and Co. for the manufacture of cement, but equally applicable for many other purposes. Held for a long term, at a moderate ground-rent; also an improved rent of 24 a year, arising out of a plot of ground opposite Tuscany Wharf.—May be viewed by leave of the tenants and particulars had of Edwin Jennens, Esq. Solicitor, 15, New Boswell-court; at the Mart; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

TO ENGINEERS AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on TUESDAY, 4th NOVEMBER, 1856, and following day, at ELEVEN o'clock each day, on the PREMISES, the Atlas Works, Emerson-street Southwark, unless previously disposed of by private contract, of which due notice will be given, the MACHINERY and TOOLS of the ATLAS WORKS, including a large and powerful self-acting boring machine, drilling-machine, ten very powerful lathes, for engine turning and screw-cutting, punching machines, shears, four smiths' forges, a large assortment of engineers' and smiths' tools, two steam engines, and boiler, shafting, and gearing, screwing apparatus, a valuable collection of new patterns, in wood and iron, stores of every description, and numerous other effects. At the same time will be SOLD, the LEASE of the PREMISES, comprising a substantially-built factory, of two floors, the upper story used as a fitting shop, turnery, and store-room. The lower floor used as an erecting shop, turnery, engine house and smith's shop, a workmen's dining-room, stable-yard, & convenient residence, and offices, held on lease for a term of twenty-six years, at a rent of 80l. per annum.—The Premises may be viewed till the sale, and the Machinery on Monday previous. Particulars and catalogues may be had on the Premises, and of Messrs. Fuller and Horsey, 13, Billiter-street, City.

TO TIMBER MERCHANTS, BUILDERS, CABINET-MAKERS, CONTRACTORS, AND OTHERS.

MR. MARSH has received instructions from the proprietor to submit to PUBLIC SALE on the PREMISES, Philpot-street, Commercial-road East, on TUESDAY, the 11th NOVEMBER, at ONE o'clock precisely, Twelve Loads superior Quebec Birch, Five Loads Dry Ash Plank, Five Loads Dry Hornbeam Plank, Two Loads Dry Lime Oak, Three Loads Dry Sycamore Board and Plank, 3,000 feet Dry Mahogany Boards and Plank, with Pine Plank, Floor Boards, and other Goods, particulars of which will appear in catalogues.—May be viewed two days prior to Sale.—Catalogues had of W. Cooper, Esq. 13, George-street, Mansion-house; and of the Auctioneer, Philpot-street, Commercial-road East.

SURREY, Three Miles from London. — Very valuable Freehold Detached Residences, with beautiful Pleasure Grounds, Fish Ponds, and park like Meadow Land, containing about 26 acres; also two other Residences, with Gardens, and two enclosures of Land, very eligible for building.

MESSRS. FAREBROTHER, CLARK, and LYE are instructed by the proprietor (removing to his estate in Hertfordshire) to sell at GARRAWAYS, on WEDNESDAY, NOVEMBER 19, at TWELVE (unless in the meantime an acceptable offer be made to purchase the whole, or to rent the large residence and 18 acres of land), the following very valuable FREEHOLD ESTATES, situate within three miles of London, between Stockwell and Clapham, and comprising Stockwell Lodge, a spacious family residence, replete with comfort, and upon which a very large sum has been expended within a few years in additions of new reception-rooms, &c. standing in its own beautiful grounds and park, kitchen garden, hot and green houses, conservatory, sheet of water, stabling, farm-yard, and about 18 acres of park-like meadow land, ornamented with timber and hedgerow, and for many years in the sole occupation of Henry Smith, esq. The immediate possession of this portion of the property may be had. The adjoining freehold residence, with capital pleasure-grounds, fronting Clapham-park-road, and the stabling, with about six acres, in the occupation of John Gladstone, esq. at the very low rent of 240l. per annum. Also two capital detached residences, fronting Poke-road, one in the occupation of Edwin Harford, esq. at 112l. per annum, and the other on lease to Mr. Palmer, at 60l. per annum, two lodges let at 14l. per annum, and two enclosures of meadow land, with extensive frontage, adapted for building purposes.—Particulars and plans may be had of C. G. C. Oriel, Esq. Solicitor, 36, Alfred-place, Bedford-square; at Garraway's; and at the Offices of Messrs. Farebrother, Clark, and Lye, Lancaster-place, Strand

LORDSHIP LODGE, TOTTENHAM.—Valuable Building Materials.

MESSRS. NORTON, HOGGART, and TRIST have received instructions to SELL by AUCTION, on the PREMISES, Lordship-lane, half a mile from the Tottenham Station of the Eastern Counties Railway, on TUESDAY, NOVEMBER 11, at TWELVE, the valuable BUILDING MATERIALS of Lordship Lodge, with the stabling, coach houses, vinery, and buildings, comprising upwards of 250,000 superior stock bricks, large quantity of slates, excellent timber in the floors, and partitioning, folding doors and sashes, flooring boards, moulding and other deals with plate-glass sashes, frames and fittings, elegant Italian marble and other chimney pieces, about seven tons of lead in gutters, ridges, and flats, lead and iron lifting pumps, cisterns, soil pipes, closets, stoves, ranges, cupboards, and other fixtures, the portico, York and purple paving, greenhouse pates, posts and rails, iron palisades, and other fencing, the vinery with large iron pipes and hot-water apparatus, and other effects.—May be viewed the day previous to the Sale, and catalogues had at the Inns at Hornsey, Tottenham, and Edmonton; and of Messrs. Norton, Hoggart, and Trist, 62, Old Broad-street, Royal Exchange.

WELL-SECURED GROUND-RENTS AND VALUABLE LEASEHOLD RESIDENCE.

MESSRS. BEADEL and SONS are instructed to SELL by AUCTION, at the MART, Bartholomew-close, London, on TUESDAY, NOVEMBER 4th, 1856, at TWELVE, the following VALUABLE HOUSE and GROUND RENTS, well secured upon ten houses in Upper Berkeley-street West; No. 14, Great Cumberland-place, Hyde park; and Nos. 1, 2, and 4, Sumner-place, Brompton, producing 283l. 4s. per annum, for a unexpired term of thirty-two years; also an improved rent of 70l. 8s. per annum, arising from capital leasehold premises, No. 25, Norfolk-street, Park-lane, with coach-house and stables in Ramyard, in the rear, for an unexpired term of twenty and a half years at a low ground-rent.—Particulars and conditions of sale may be had at the Mart; of Messrs. Hearnes, 2, Broad Sanctuary, Westminster, at the Mart; and of Messrs. Beadel and Sons, 25, Gresham-street, London.

LIMEHOUSE.—To BUILDERS, CARPENTERS, and OTHERS.

MR. SITGRAVE will SELL by AUCTION, on WEDNESDAY, NOVEMBER 12, at ELEVEN o'clock, at the PREMISES, St. Andrew's-road and Kirk's-row (both near the Limehouse Church), Limehouse, Middlesex, the Dwelling-houses, Shop, Workshop, Timber-yard, and Premises, known as Nos. 1 and 2, St. Andrew's-road, and Nos. 1 and 2, Kirk's-row, Limehouse, in the occupation of the proprietor, who is going abroad, the STOCK and UTENSILS-IN-TRADE of a builder, comprising 300 new and well-seasoned deal boards, 1½ hogsheads, 400 feet of well-seasoned Norway and Christiansand board and plank, 3,000 feet of mouldings, 1,000 feet of quartering, 20 Portland chimney-pieces, work-benches, barrows, ladders, scale beam, planks, and weights, oak and fir scantling, wheeling planks, two 2-inch cast-iron pumps, a large quantity of firewood, about 6 tons of useful iron, set of chair-cases, a nearly new 4-inch-wheel brick-cart, and a variety of useful materials.—May be viewed one day prior to the sale, and catalogues had in the Premises; Britannia Tavern, Limehouse; New Globe, Mile-end; and of the Auctioneer, at his Rooms and Offices, 28, Leadenhall-street.

SALES BY AUCTION.

TO BUILDERS AND OTHERS.—RUSH-GROVE, WOOLWICH, KENT.

MR. G. HUDSON has received instructions from the Lords Commissioners of the Admiralty, to SELL by AUCTION, upon the PREMISES, adjoining the Royal Marine Barracks, on MONDAY, NOVEMBER 10, 1856, at ONE for TWO o'clock, in lots, the BUILDING MATERIALS and HOUSE FIXTURES of the range of buildings lately occupied by General Crawford together with the Greenhouse, and the surplus materials of the house adjoining; and at the same time will be SOLD, about 2 acres of good stand old plain TURF, now in store, in lots of 5,000 each.—Catalogues may be had at Her Majesty's Dockyard, Woolwich, and of the Auctioneer, Brewer-street, Woolwich.

VALUABLE FREEHOLD LAND, EAST BARNET.—TO BE SOLD by PRIVATE CONTRACT, about THIRTY ACRES (in separate fields or plots) of FREEHOLD BUILDING LAND, finely situate in the vicinity of the Great Northern Railway station, and admirably adapted in every respect for building purposes, having extended frontages upon the high road on each side of the railway, and also upon newly-formed roads. The situation is noted for its salubrity, scenery, and facility of communication with London. — For further particulars, apply at Mr. THYNNE'S Offices, 11, Great George street, Westminster

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety-nine years, with power of enfranchisement. Plots from one to four acres for the erection of villas, and smaller plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 6, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Gray's-inn-square.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand

BRICK and TILE YARD and LAND, for Villa Residences.—The Braneliffe Estate, near Worksop, situate on the Manchester, Sheffield, and Lincoln-hire Railway.—TO BE LET *from* FIFTEEN to TWENTY ACRES of excellent BRICK CLAY, from 12 to 14 feet thick, which has been tested and found to be far superior to any other in the vicinity. A lime quarry is in full work on the estate, producing lime of the very best quality. Arrangements might probably be made for working the lime and the brick clay together. A tramway runs from the north of the estate to the main line on the south; and the Chesterfield and Stockwith Canal also passes through the estate, and they immediately adjoin the brick clay, so that every facility for transport, and establishing a first-rate brick and tile yard is afforded. Much of the land is highly suitable for villa residences. It rises on the north side of the estate, shutting out of sight the lime quarry; commanding a southern aspect, and beautifully picture-que panoramic views over the four ducal estates by which it is surrounded, and is always well supplied with game. Every encouragement will be afforded to a builder who would take it for villa residences. Shireoaks Station adjoins the estate, which is only three miles from the improving town of Worksop, and fifteen miles from Sheffield.—Permission to view and make trial of the clay, and further particulars, may be obtained of BROADHURST and HODDING, Solicitors, Worksop

FREEHOLD LAND FOR SALE.—Thirteen Acres—situate within 100 yards of the first station on the Woolwich Railway, and within five minutes of London, in a high gravelly soil, and well adapted for building. Twelve acres more adjoining may be had if required. Further particulars may be had by letter to W. H. care of Mr. Richardson's, Chemist, Kingsland

REIGATE, SURREY, within three-quarters of an hour's ride of London.—TO BE SOLD, a very delightful SITE for a RESIDENCE, with Stabling, and about Freehold Land ornamentally timbered, in the finely situate on the southern slope of Reigate-hill, about half a mile from the Reigate town station on the South-Eastern Railway, commanding extensive views, and affording an opportunity for building a house in its favourite locality rarely to be met with. Soil dry.—For particulars, apply to Messrs. PRICE and SONS, Estate Agents and Auctioneers, Reigate and Dorking, Surrey.

NEW WINDSOR ESTATE. — Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences, with Stabling, which are much needed in this beautiful locality. The situation is the finest in or near Windsor, adjoining the Park and Long Walk and commanding a splendid view of the Castle. Within ten minutes of the Great Western and fifteen minutes' walk of the South-Western Railway Stations. Any plan will be laid by responsible parties.—For particulars apply to Mr. WILLIAM SIM, Architect and Surveyor, 3, Danes-Inn, Strand.

TO BUILDERS AND OTHERS.—High-street, Bromley, Middlesex.

MR. T. S. SMITH has been instructed to LET by TENDER to be sent in by SATURDAY, NOVEMBER 29, 1856, on a building lease for seventy years, about ONE ACRE of valuable FREEHOLD BUILDING LAND, but if not deemed eligible without three plots of land now thereon, known as "Bromley House," near the Bow Railway Station, having a commanding frontage to the High-street of about 300 feet, offering a desirable opportunity for erection of shops and houses, being the only available spot now left for building in the High-street.—May be viewed, and printed forms of Tender and further information obtained of Mr. T. S. Smith, Auctioneer and Surveyor, 44, Lombard street, and Upton, Essex; where a plan may be seen.

WESTON-SUPER-MARE, SOMERSET. The important and valuable "WEST COTTAGE PROPERTY," in the very centre of the town, close to the railway, and the whole entirely fronting the sea, is now offered for SALE. The whole is freehold, with immediate possession.—Plans, &c. of R. G. PHILLIPS, Esq. Westonsuper-Mare

TO BUILDERS. — TO BE LET, on lease, for 75 years, 18 fee FRONTAGES, on the best part of Chelsea, suitable for 10-roomed houses. Arrangement for advances can be made. Also TO BE SOLD or LET, 6 acres of FREEHOLD LAND, at Wick Bridge. Apply to Mr. J. SHEPPARD SCOTT, Architect, 16, New Broad-street, City.

IMPORTANT TO BUILDERS AND CAPITALISTS.

UNITED TRADESMEN'S FREEHOLD LAND SOCIETY.—The leasehold ESTATE at HORNSEY, purchased by the Trustees, consisting of about forty acres, and within three minutes' walk of the station, will next summer be accessible from the City by means of the Metropolitan Railway. Persons desirous of possessing land in this charming and picturesque neighbourhood, can do so immediately by joining this society. Plots, 30l. each; subscription, 2s. per month; at their Office, 61, Savage-Bank, Goldsmith's-place, Hackney-road, on the third Wednesday in each month, from seven until Nine o'clock. Capitalists and others desirous of possessing land at once can do so by application to Mr. J. LAWLESS, 1, Thurlow-place, Hackney-road; or to Mr. DANIELL, Hornsey, and Estate Office, 23, Keppel-street, Russell-square. The ground on the first portion of the estate being the only part on which a tavern can be built, is delightfully situated on the high road leading to Tottenham, and is within two minutes' walk from the Hornsey Station, to be disposed of, with all its privileges, for the sum of 500l.—Apply as above

TO BE LET, large roomy PREMISES, with good Stabling and Carriage Entrance, situated 20, Old-street, St. Luke's.—Inquire as above.

ST. MARY, ISLINGTON.—Vestry Hall.—The Committee appointed by the Vestry of this Parish for that purpose, hereby give Notice, that they are ready to receive particulars from persons who may be willing to DISPOSE of LAND in this Parish, sufficient for the ERECTION of a suitable VESTRY HALL and OFFICES for the business of the Vestry.—Particulars, stating the tenure, extent locality, and amount of purchase-money, to be sent to the Vestry Offices, on or before the 15th day of NOVEMBER instant

JOHN LAYTON, Vestry Clerk.
Vestry Offices, 21, Milner-square, Islington, Nov. 6, 1856.

TO BRICKMAKERS, BUILDERS, and OTHERS. — TO BE LET, or DISPOSED OF, with immediate possession, a BRICKYARD, with building sites, containing 4a. 3r. 20p. close to the Sea, to London, by railway and water. There is an abundant supply of red and white clay (a quantity of which is prepared), the latter capable of making finest white Suffolk facing bricks. Sand chalk and water on the premises. Also plant and every requisite for immediate use. Also TO BE SOLD, cheap, about 200 000 excellent WHITE SUFFOLK FACINGS, SECONDS, and RED BRICKS, loaded rail-barge and railway truck.—For London.—For particulars and specimens, apply to Mr. E. LEVETT, Brentwood, Essex.

COMMODIOUS BUSINESS PREMISES TO BE LET, containing, amongst other conveniences, a large Artist's Studio, lighted from above.—May be viewed on application to the premises, No. 37, Great-street, Leicester-square, and particulars obtained of W. C. REED, Architect, 64, Old Broad-street, City

BLACKFRIARS. — TO MANUFACTURERS.—Excellent Warehouses or Workshops (138 feet by 24), Shop, and Dwelling-house, in Blackfriars, TO BE LET on Lease. Rent, 105l. per annum. For further particulars apply to F. BROUGHTON, Esq. Solicitor, 4, Falcon square, City.

DUNSTABLE.—Eligible and Commodious BUSINESS PREMISES TO BE LET, with convenient Domestic Apartments immediately adjoining, situate in the High-street, having a frontage of 40 feet, by a depth of 124 feet. The Warehouses and Offices (erected not long since) have been built with a view to the Straw Business.—Apply to W. C. REED, Architect, 64, Old Broad-street, London

EXCELLENT large and light WORKSHOPS TO BE LET, in the neighbourhood of the Strand and Covent garden, where steam-power may be erected, if desired.—Apply to Mr. CHARLES COLWILL, Builder, Brydges-street, Strand.

TO BE SOLD or LET, and entered upon immediately, extensive PREMISES, upon which is a steam-engine of 20-horse power, suitable for a mill or an linseed crusher, contiguous to both rail and water carriage.—For particulars, apply to Mr. ABBOTT, 26, Bedford-row, Gray's-inn

TO BE LET or SOLD, a bargain, large COVERED PREMISES, 300 feet in length, very light and dry; the whole of the premises fitted up with gas; with excellent dwelling-house and gateway; suitable for any person in want of a ground-floor. The Premises are situated near the Great Northern Railway, and New Smithfield Cattle Market.—Inquire of J. SPELLER, 49, Bingfield-street, Caledonian-road.

LARGE MANUFACTURING PREMISES, in Park-lane, TO BE LET. Inquire at 121, Long-acre.

TO PAINTERS, DECORATORS, PLUMBERS, &c. — A genuine BUSINESS TO BE DISPOSED OF, offering an opportunity to any one wishing for a good business seldom to be met with.—Apply to Mr. JOHN TROTT, 3, Caroline place, Queen's-Elm, Brompton.

TO ARTISTS.—WANTED, an ORIGINAL PICTURE, to occupy a centre panel in the head of a large and elaborately wrought Bedstead, to be exhibited in the Art Treasures Exhibition at Manchester, in 1857. A premium of 45 guineas will be given to the successful competitor.—Particulars of which may be had on application to RICHARD CHARLES, Cabinet Manufacturer, Warrington, Lancashire.

IMPORTANT to the ENGINEERING PROFESSION.—SAFE and RAPID TRANSMISSION of DOCUMENTS. — Plans, Deeds, Law Papers, Samples, and Articles for private use, &c. forwarded daily at THREE p.m. to all parts of the Continent, with the Mails direct throughout, by the CONTINENTAL EXPRESS PARCELS AGENCY, of which the proprietors are the sole correspondents of the Royal Francais Post-office, the Belgian Government, Railway, and agents of the mail packets between Dover and Ostend. Rates fixed and moderate, tables of which, with every information, to be had at the Office, on application at the Chief Office, 32, Gracechurch-street, London.

N.B. Parcels to be sent the same day must be at the Chief Office by THREE p.m.

TO BREWERS, DISTILLERS, DYERS, MILL-OWNERS, and OTHERS who have Steam engines, and to all who feel an interest in the establishment of baths and washhouses, or who for any purpose may require a plentiful supply of hot water at little expense.—The discharged steam from high-pressure engines, as is well known, with few exceptions is conducted either through the roof into the open air, into a drain below, or into the chimney-shaft, and is consequently entirely wasted; whereas, by means of a noiseless, simple, compact, and comparatively inexpensive apparatus it may be made available for heating water to boiling point in any quantity up to what can be obtained from the consumption of three-fourths of the fuel used in driving the engine. By the use of this apparatus in connection with an engine of one-horse power only, a sufficient supply of hot water is insured for the constant use of from ten to twelve baths, at their minimum rate per session in proportion as the engine increases in power; and wherever engines range from six to ten-horse power or upwards, both baths and wash-houses may with advantage be constructed together. Although preferable, it is not always necessary that the apparatus should be on the same street as the engine, as the water or heat would be lost by a short pipe conveyance of three or four yards. The apparatus has been in use upwards of five years in a large public institution with perfect success, and I can confidently answer for its being adapted for the purpose specified, so that it will render the establishment of baths and washhouses practicably easy in many parishes where they would otherwise be entirely out of the question on account of the great expense. Diagram, with full particulars may be had on application to the Patentee, JAMES BARRIS, Hanwell, Middlesex

PLANTING the GROUNDS of SUBURBAN RESIDENCES, CEMETERIES, &c. to produce immediate effect. The undersigned has a most extensive STOCK of ORNAMENTAL TREES and SHRUBS, fit for present planting, some of which are 20 feet high, and may be removed with perfect safety. They comprise the best and most effective varieties, and upon ornamental gardening either as screens or as single objects, or for shrubberies and single ornamental lawn plants.—May be inspected, and priced obtained on the premises, which is 4½ miles from Hyde park-corner.—R. GLENDINNING, Chiswick Nursery, London.

LONDON: Printed by CHARLES WYMAN, at the Printing Office of Cox (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St Paul, Covent-garden, both in the County of Middlesex.—Saturday, November 8, 1856.

The Builder.

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LONDON LITHOGRAPHERS' ASSOCIATION LITHOGRAPHY. Efficient hands in every department. Printers, Draughtsmen, Writers, &c. may be obtained by application to the Secretary, at the Society-house, "Horse and Groom" Tavern, Wheatstone-park, Lincoln's-inn-fields, London. The Committee meet every Monday evening at Half-past Eight, to enrol members.

NOTICE is hereby given, that the PARTNERSHIP heretofore subsisting between us, the undersigned, as Carpenters and Builders, at Islington, the Partnership Middlesex, under the style or firm of "Dove, Brothers," is this day DISSOLVED by mutual consent, as regards the undersigned, William Warren Dove. All the debts and liabilities of the firm up to this day, will be borne and paid by the undersigned, Benjamin Dixon Dove and Frederick John Dove, who will continue the business under the firm of "Dove, Brothers," as heretofore; and all persons indebted to the firm, are required to pay the same to the undersigned Benjamin Dixon Dove and Frederick John Dove. And further that the said William Warren Dove will carry on his business at South-grove, Mildmay-park, Bull's-pond.—Dated this 10th November, 1856.

W. W. DOVE.
B. D. DOVE.
F. J. DOVE.

COMPETITIONS.

TO ARCHITECTS and OTHERS.—The Burial Board of the Parish of Castleford, in the Riding of the county of York, are desirous of receiving PLANS, DESIGNS, and ESTIMATES, comprising ground-plans, sections, and elevations for the LAYING OUT, SURVEYING, and FENCING the proposed NEW BURIAL GROUND; and also for TWO CHAPELS and a LODGE, with ENTRANCE-GATES, to be erected and fixed thereon. The site contains four acres, two-thirds of which are to be appropriated for burials according to the rites of the Church of England, and the remainder for burials otherwise than according to such rites. The chapels are proposed to be in one building, divided by a partition wall in the centre; and the road there is, with the lodge, fence wall, and other buildings, and including the sewers and entrance-gates, is not to exceed 950*l*. The Board will award to the author of the best design, in their judgment (subject to the approval thereof by the Bishop of the diocese), the sum of five pounds. The design, for which such premium is awarded, will become the property of the Burial Board, who will return all unapproved designs to their respective authors on application. Competitors must state the amount of architect's charges for furnishing all necessary working drawings, and superintending the works, if the Board should require their services. A plan and section of the ground may be inspected, and further information obtained on application to the Clerk of the Board; or a tracing and full particulars will be furnished on receipt of seven stamps by post-office order or in postage stamps. The designs must be deposited with the Clerk of the Board, free of expense, on or before the 20th DECEMBER next, marked with an emblem, or motto, on the outside, but without any other distinguishing mark; and accompanied by a sealed letter, addressed to the Board, having the same motto or emblem on the outside, and inclosing the name and address of the author or Re order.

THOMAS SYKES, Solicitor, Clerk of the Burial Board.
Castleford, near Normanton, Nov. 12, 1856.

CONTRACTS.

SUSSEX COUNTY LUNATIC ASYLUM. TO BUILDERS.—Notice is hereby given, that the TIME for RECEIVING TENDERS for laundry works, purposed to be erected at the Asylum, near Hayward's Heath, in the County of Sussex, has been EXTENDED to MONDAY, the 1st day of DECEMBER next, on or before which day, therefore, Tenders may be sent in, but after that time no Tender will be received. By order of the Committee of Visitors.

Lewes, 8th October, 1856. WM. POLHILL KELL, Clerk.

CONTRACTS.

NOTICE to ENGINEERS and OTHERS. WAR DEPARTMENT CONTRACT.—The Principal Officers of her Majesty's War Department hereby give Notice that they will receive Proposals from such persons as are desirous of entering into a CONTRACT, from the 28th NOVEMBER, 1856, to 31st MARCH, 1862, for PUMPING WATER for the use of the TROOPS &c and for KEEPING in REPAIR and PRESERVATION the GOVERNMENT WATERWORKS at the Temporary Barracks, Curragh of Kildare, in the Curragh District. The person declared the contractor will have the free use of the existing waterworks for the purposes of this Contract. The Tender to be in a lump sum at per annum, paid for quarterly, and the Contract to be determinable at the end of any quarter after the 31st MARCH, 1858, on either party giving the other three months' notice in writing, after that date, or determinable by the War Department at any period, and at a moment's notice, should the contractor fail in affording the necessary supply of water, or be dissatisfied with the manner in which the service is performed by the contractor. Persons desirous of Tendering for this Contract, will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle yard, Dublin. The existing waterworks may be seen, and letters of Tender, with terms of Contract, and all information obtained, on application at the Royal Engineer's Office, at the Curragh. Approved security to the amount of 400*l* will be required for the due performance of the contract; and the War Department reserve to themselves the right of rejecting the whole or any of the Tenders. The letters to be sealed and addressed to the Inspector-General of Contracts, War Department, Pall-mall, London, so as to be received on or before the 21st day of NOVEMBER, 1856, and to be marked on the outside, "Tender for Pumping Water at the Curragh Camp."

Commanding Royal Engineer's Office, Dublin,
November 8th, 1856.

NOTICE to BUILDERS and CONTRACTORS.—WAR DEPARTMENT WORKS.—The Director-General of Contracts will receive TENDERS for the execution of WORKS for a PORT and BARRACK BUILDINGS, &c. at Les Hommeaux Florains Rocks, Alderney. The Tenders to be delivered on or before THURSDAY, the 27th NOVEMBER, 1856, after which date no Tender will be received. The drawings of the works may be seen, and forms of Tender, with all other required information, may be had at the Royal Engineer's office, Alderney. The Tenders to be addressed to the Director-General of Contracts, War Department Pall-mall, and endorsed, "Tender for Works, Hommeaux Florains Rocks, Alderney."

Royal Engineer's Office, Guernsey, Nov. 4, 1856.

TO CONTRACTORS.—SOUTH WALES MINERAL RAILWAY.—The Board are prepared to enter into a CONTRACT for the CONSTRUCTION of the entire RAILWAY and WORKS, from the Briton Ferry, near Neath, in South Wales, to the Head of the Valley at Glyncorrwg, a distance of about 11½ miles. Specifications and plans and sections may be seen at the offices of I. K. BRUNEL, Esq. 18, Duke street, Westminster, on and after the 27th instant. Tenders, endorsed, "Tender, South Wales Mineral Railway," to be addressed to the Secretary, at the Offices of Messrs. BAXTER, ROSE, and NORTON, 3, Park street, Westminster, on or before the 24th day of NOVEMBER next. The Directors do not bind themselves to accept the lowest Tender.—By order,

Oct. 17, 1856. ROBERT PARSONS, Secretary.

TO BUILDERS, DECORATORS, and PAINTERS.—The House, No. 20, Phillimore place, Kensington, to be REPAIRED according to a specification, to be seen on the Premises, on MONDAY and TUESDAY next. Tenders to be sent on WEDNESDAY, to G. GORDON STANHAM, Esq. Abbots Cottage, North-end, near Hammersmith gate, Architect. The lowest Tender not necessarily accepted.

GLASGOW CORPORATION WATERWORKS.—POSTPONEMENT of TIME for RECEIVING TENDERS for No. 4, or KELTY CONTRACT.—To CONTRACTORS.—The Magistrates and Council of the City of Glasgow, Commissioners under the Glasgow Corporation Waterworks Act, 1855, hereby intimate that they have POSTPONED the TIME for RECEIVING TENDERS for No. 4, or KELTY CONTRACT, as formerly advertised, and that further Tenders will be received, if lodged in the manner and within the period after specified. The works extend from the valley of the Duchray to the top of the Kelty Cundrock, about 4½ miles, and include two tunnels, of 1,175 and 1,148 yards respectively, with various open cuts, varying from 20 to 723 yards in length, and some iron and masonry aqueducts. The plans, sections, drawings, and specifications, will again be exhibited in the Town Hall, for the City of Glasgow, on and after the 25th instant, at the Office of the Engineer, J. F. BATEMAN, Esq. in Manchester; or to Mr. J. H. HILL, Assistant-Engineer, Loch Ardinglas, will point out the line of work. Sealed Tenders for the construction of the works, addressed to the Commissioners, sealed and marked "Tender for Kelty Contract," must be delivered to the Subscriber, Mr. JAMES BOYD, Bridge Chambers, 34, Miller street, Glasgow, on or before TUESDAY, the 18th NOVEMBER current. The Commissioners do not engage to accept the lowest offer.—By order,

JOHN BURNET, Secretary.
Waterworks Office, 82, Miller-street, Glasgow,
1st November, 1856.

RESTORATION of LIMEHOUSE CHURCH.—The Committee for the Restoration of Limehouse Church, are desirous of receiving TENDERS for the MASONRY, PLUMBING, and SLATING WORKS, and for the CARPENTER and JOINER WORKS, and for the PAINTING, GLAZING, and PAPER HANGING, into separate Tenders. The Drawings and Specifications may be seen at Mr. ARTHUR W. BLOMFIELD'S, 54, Great Marlborough street, and at the Vestry-clerk's Office, Limehouse Church. Tenders must be sent in for TEN distinct works, viz.—The Contractor for the Masonry to send in a Tender for the lowest or any Tender.—Dated this 7th day of November, 1856

JOHN DICKEN, Honorary Secretary.

CONTRACTS.

HAMPTON-COURT BRIDGE and WALTON BRIDGE TOLLS.—TENDERS will be received from any person desirous of RENTING the TOLLS authorised to be taken by Act of Parliament for passing over the above bridges, from the first day next to Christmas last 1857, in separate Tenders. Sealed Tenders must be delivered at the Offices of GEORGE DAVIS, Surveyor, Uxbridge, Middlesex, on or before TWELVE o'clock of THURSDAY, the 18th of DECEMBER next. The Proprietors does not bind himself to accept the highest or any Tender.

METROPOLITAN BOARD of WORKS.—To BUILDERS, CONTRACTORS, and OTHERS.—The Metropolitan Board of Works hereby give Notice that they will be ready, on THURSDAY, the 20th instant, to receive sealed TENDERS from parties who may be willing to contract for the CONSTRUCTION of a BRICK SEWER, 2,434 feet in length, or thereabouts, with other WORKS in connection therewith, on the Isle of Dogs, extending from the West Ferry road, eastward, towards the East Ferry road, in the county of Middlesex, and the maintenance of such works in complete repair for the term of twelve calendar months. Plans, sections, and a specification of the works, together with the form of Tender, may be inspected, and other particulars obtained, at the Office of the Board, No. 1, Greek street, Soho square, between the hours of NINE a.m. and FOUR p.m. until THURSDAY, the 13th instant. Tenders addressed to the Metropolitan Board of Works, must be delivered at the Office of the Board before FOUR o'clock on that day, and no Tender will be received after that hour. The Board do not bind themselves to accept the lowest, or any Tender, and the party whose Tender shall be accepted will be required to provide two approved sureties for the due performance of the works.

E. H. WOOLRICH, Clerk of the Board.
No. 1, Greek street, Soho square, Nov 13th, 1856.

ST. MARYLEBONE, NOVEMBER 8th, 1856.—NOTICE to BUILDERS and CONTRACTORS.—CONTRACT for SEWERS.—Notice is hereby given, that the Vestrymen of the Parish of St. Marylebone will meet in the Board room of the Court-house, on THURSDAY, the 20th DAY, the 22nd day of NOVEMBER, 1856, at ELEVEN o'clock in the forenoon to receive TENDERS for a NEW SEWER and REPAIRS to SEWERS, of SOUTH-STREET and MARYLEBONE-LANE, and for the BUILDING of a NEW PIECE of and SOUTH-STREET, in the parish.—Further particulars may be known, and the specification and drawings seen, on application to the Vestry's Surveyor, Mr. ROBERT WALLEN, daily. The Tenders to be sealed and addressed, "Tender for Sewers," and delivered to the Vestry Clerk, before ELEVEN o'clock on the forenoon of the said day of NOVEMBER, and no Tender will be received after that hour. The Vestry do not pledge themselves to accept the lowest or any of the Tenders. The Vestry, on their behalf, to be in attendance at the time for opening the Tenders. The Contractor to find satisfactory security for the performance of the Contract, and to pay the expenses of the bond and Contract.

By order, W. E. GREENWELL, Vestry Clerk.

TO BUILDERS and CONTRACTORS.—Builders willing to TENDER for the various WORKS required to be done in the ERECTION and COMPLETION of a FREE METHODIST CHAPEL, to be built at Spalding, in the county of Lincoln, may see plans and specification, in the every particular, by applying between the hours of TEN a.m. and FIVE p.m. at our offices on and after the 20th day of NOVEMBER, to the 24th inclusive; and at the Baptist School room, Spalding, from the 10th to the 22nd of NOVEMBER inclusive.

BELLAMY and HARDY, Architects and Surveyors.
Offices, 30, Broadgate, Lincoln, October 27, 1856.
N.B. The Trustees do not bind themselves to accept the lowest Tenders.

HALIFAX CORPORATION GASWORKS.—The Mayor, Aldermen, and Burgesses of the Borough of Halifax, are prepared to receive TENDERS from competent persons for MANUFACTURING and DELIVERING upwards of 1,000 tons of CAST-IRON PIPES and APPENDAGES. Copies of the specification, form of Tender, and the probable quantities required, may be obtained on application to Mr. G. STEVENSON, the Borough Engineer, and the Tenders must be delivered at his office in the Town hall, Halifax, on or before THURSDAY, the 20th day of NOVEMBER next ensuing. By order,

EDMUND MINSON WAVELL, Town-clerk.
Halifax, October 30, 1856.

TO BUILDERS, CONTRACTORS, and OTHERS.—Persons desirous of CONTRACTING for the ERECTION of a NEW HOUSE on the PENYRHEWL ESTATE, near Pontypool, may inspect the plans and specification, and obtain other information, on application, personally, to Mr WALKER, the White Lion, Pontypool, or by letter, to the Architects, on and after the 1st instant. The estimates to be sent to the White Lion Hotel, Pontypool endorsed "Tender for New House," and addressed to the Architects, not later than the 28th instant, who will meet the Proprietor and Contractors on the 29th instant, at the above Hotel, to open the Tenders but they do not bind themselves to accept the lowest or any Tender.

BIDDLAKE and LOVATT, Architects, Wolverhampton.

PENMAEN PARSONAGE-HOUSE.—Builders are hereby invited to send in TENDERS for the ERECTION of a PARSONAGE-HOUSE at Penmaen, in the Parish of Rhyn, in the county of Salop, from Plans, Specifications, and Quantities, which may be seen on the premises, and at the offices of Messrs. JONES and HUGHES, Architects, Liverpool, on and after MONDAY next, the 17th instant. Tenders to be sent to Mr. NORTON, at the Offices, 14, Old Boswell-court, London, on or before the 1st of DECEMBER.

[For remainder of Contracts see next page.

CONTRACTS.

TO BUILDERS.—Persons willing to TENDER for the various WORKS in the ERECTION of a CATHOLIC CHURCH, PRESBYTERY, and SCHOOLS, at Hadfield in the parish of Glossop, may see the plans and specifications at the Inn of Mr. Hadfield, from MONDAY, the 24th NOVEMBER to MONDAY, DECEMBER 8th, on which latter day, by TWELVE o'clock at noon, the Tenders are to be delivered, each, at the Office, situate on the Market-road, "Tender for St. Charles Church and Schools, Hadfield." No pledge is given to accept the lowest or any Tender.

WEIGHTMAN, HADFIELD, and GOLDIE, Architects.
Sheffield, November 8th, 1856.

MIDLAND RAILWAY.—The Directors of the Midland Railway are required to receive TENDERS for the ERECTION of GOODS WAREHOUSES, at the Derby Station. The drawings and specification may be seen, and further particulars obtained, upon application at the Engineer's Office, Derby Station, from the 19th to the 25th instant, inclusive, and at the Engineer's Office, Bridge-street Station, from the 26th instant to the 1st DECEMBER, inclusive. Tenders to be forwarded to the Secretary, Way and Works Committee, Derby Station, not later than TEN, a.m. on TUESDAY, 2nd DECEMBER next. The Directors do not bind themselves to accept the lowest or any Tender.—By order,

JOSEPH SANDERS, Secretary.
Derby, 13th November, 1856.

TO ROAD CONTRACTORS and OTHERS. TENDERS are required for the making of ROADS and SEWERS at West Horn, Essex. The Contract Lengths may be seen at Mr. PALMAN'S Office, at present resident, Road-corner. All Tenders to be delivered at Great Jane-street, near Lea, on or before FRIDAY, NOVEMBER 28th, 1856. The Lowest Tender not necessarily accepted.

TO SCULPTORS, MASONS, IRONFOUNDERS, and OTHERS.—The Burial Board of Toxteth Park are willing to receive from parties having for SALE, MONUMENTAL TOMBS, RAILING, or other DEVICE, for ENCLOSING TOMBS or GRAVES. The same to be set up in the Toxteth Park Cemetery at the sender's risk and cost.—For further particulars apply at the Office of the Burial Board, Public Offices, 24, Park-place, Toxteth Park, Liverpool. Nov. 5, 1856.

NOTICE of PURCHASE. — ROBERT SLADE begs to inform the public and customers of EDWARD SIMMS late of Wilton-road, Pimlico, that he has purchased the Lease of the Premises, as also the Stock, which has since been greatly increased by the said EDWARD SIMMS, situated at Wilton-road, Pimlico, where a large assortment of FLOORING BOARDS are always kept on hand. All other descriptions of timber at the lowest possible prices. The system of keeping prepared flooring boards was first introduced in London at this yard.

NOTICE of REMOVAL. — EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton-road, Pimlico, to the KING'S-ROAD, CHELSEA, where their orders will be promptly executed by foreman, Mr. Andrews. E. SIMMS, King's-road, Saw-mills, Chelsea, opposite Manor-street.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3l.; Spruce, 3s.; Pine Plank, 3s. 6d. Mahogany, 6d.; 2½ Yellow Battens, from 11l. 10s. Carriage free to any part of town.—T. FORMAN, 1, Walnut-tree walk, Lambeth-walk.

MOULDINGS BY MACHINERY. Capstan, sash bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to

E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S ROAD, CHELSEA.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—Southwark Bridge Wharf, Bankside.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory, the first he has ever established, a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from ½inch to 1½inch thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses. Sleeping Joists, Bonding Lathes, Oak Sills, Plank, and Scantlings. Mouldings to clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of FLOORING and MATCHED BOARDING, from ½inch to 1½inches thick, seasoned, and ready for use; also, Mahogany, Moulding, Wainscot, and all kinds of Timber required for Building purposes.—Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

TREES for Cemeteries, Public Parks, &c.—A very extensive and choice STOCK of EVERGREENS, ORNAMENTAL TREES, SHRUBS, EVERGREENS, &c. may be had of WILLIAM BARRATT, Landscape Gardener, &c. St. John's Nurseries, Wakefield.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected STOCK of DEALS, and the reduced Prices of prepared Flooring, &c.

Inch Yellow Flooring	18s. per square.
4-inch ditto	15s.
Pine Plank 12 3 11 to 14	per 120
Yellow Deals, from	90 "
Spruce Deals, from	76 "
Yellow Battens, from	72 "

A List of Prices forwarded on receipt of a postage-stamp.
N.B.—All Sawn Goods delivered within two miles free of cartage.
Borough-road, Southwark, and Elm street, Gray's-inn-lane.

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process.—JOHN COUMBE solicits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he sells at prices generally charged for wet wood.—Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile-end-gate.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—BROOMFIELD and SON, Importers of Builders and the Trade generally, to their STOCK of DRY FLOORING, &c. Good yellow wood is a comparative short space of time, be

½inch white, 13s. 6l. per square; ¾-inch white, 15s. per square; 1-inch white, 16s. per square; 1-inch yellow, 15s. per square; 4-inch yellow, 18s. 6l.; 1-inch yellow, 20s.

Timber, Deals, Battens, &c. at the lowest remunerative prices.
A liberal discount allowed on mouldings for exportation. Book sent gratis forwarded on application.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

ROBINSON and BARTRAM, SAWING and PLANING MILLS, BELVIDERE-ROAD, LAMBETH, and SWAN-STREET, BERMONDSEY, having completed powerful MACHINERY for SAWING TIMBER, for building purposes, will be glad to receive ORDERS in this Department, and beg to assure their friends that all favours shall be executed in the best manner, and with the utmost punctuality and despatch.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that they have completed their extensive arrangements, and will be happy to execute all orders entrusted to their care with despatch and punctuality. Wet and dry docks, and powerful cranes for landing heavy goods, afford them a position not to be obtained elsewhere. A large assortment of seasoned prepared flooring, match boarding, &c. &c. always in stock at reduced prices.

TO FRENCH POLISHERS, CABINETMAKERS, BRASS-WORKERS, &c. — A considerable reduction has taken place in the prices of French polish, white and bright hard spirit varnishes, stuff, hard wax, and finishing spirit. The present price is 8s. 6d. to 9s. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 67, Leather-lane; and 14 and 15, Bourlngon-street, Holborn, London.

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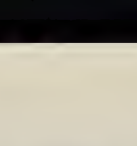

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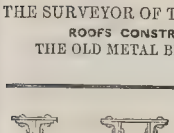

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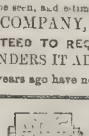

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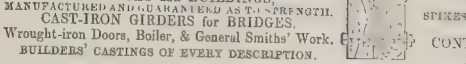

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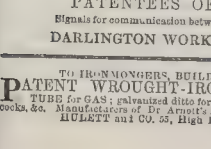

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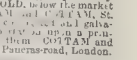
HEATING BY  HOT WATER.

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Sheets, corrugated and plain; Fencing and Telegraph Wire, Bars, Rods, Hoops, Nails, Screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.
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Roofing orders promptly and carefully attended to.
Office.—Commercial-road, Limehouse, London.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.				
12	"	"	20	"
13	"	"	23	"
14	"	"	26	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

A. MOREWOOD and CO.
(late Morewood and Rogers),
Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets.
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c., of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

MALLET'S PATENT BUCKLED PLATES.
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS,
No. 3, Mansion-house-place, London, and No. 6, Berkley-street, Birmingham.
For Plan, Section, and Description, see "The Builder," May 17.

PATENT GALVANIZED IRON SHEETS and TILES
TUPPER and CARR, Manufacturers.
Works—Limehouse and Birmingham. Offices—3, Mansion-house-place, London.
N.B.—Iron of every description galvanized.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).
WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

IRONMONGERY,
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

JOHN HENDERSON PORTER,
ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

A PRIZE MEDAL for SUPERIOR LOCKS
was awarded to J. H. BOOBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, so much admired, &c. &c. &c. &c.
J. H. BOOBYER (late STURCH and BOOBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.
14, Stanhope-street, Clare-market, London.

JOHN TANN'S NEW PATENT
RELIANCE LOCK and CHEMICAL-FILLED FIRE-PROOF SAFES, DOORS, ROOMS, &c. Manufacturers of cash and deed boxes, copying presses, every description of lever locks and street-door latches. To be had at the General Lock and Safe Warehouse, 30, Walbrook, City. List of prices on application.—Several second-hand SAFES for SALE, at half the original cost

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.
JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.

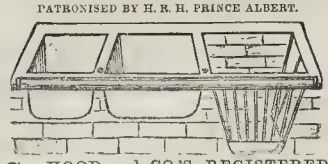
Elliptic Stoves, double backs, 2½d. per inch, and upwards.
Register Stoves, 8d. 6d. 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
2 ft., 2l. 18s.; 2 ft. 6 in., 3l.; 4 ft., 3l. 15s.
3-feet Cottage Ranges, with ovens and back boilers, 32s. each.
3 feet self-acting ditto, ditto, 34s. each.
Air Bricks, 4s. per doz.
Best Fine Cut Clasp and Rose.

½	¾	1	2	2½	3	3-in. & larger.
16s. 8d	16s. 6d	17s. 6d.	18s. 6d	19s	21s.	per cwt.

And every material and article for the building, blacksmith's, boiler's, and brassfounder's trades at equally low prices.
List of Prices sent on application at the warehouse, or by letter prepaid.

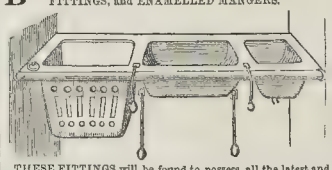
LOSH, WILSON, and BELL,
NEWCASTLE-ON-TYNE.
Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and
STEWART'S PATENT CAST IRON GAS and WATER PIPES
Office, No. 7, Sise-lane, London.

PATRONISED BY H. R. H. PRINCE ALBERT.



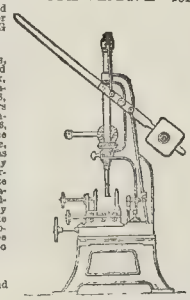
S. HOOD and CO.'S REGISTERED STABLE-FITTINGS, with FRONT REVOLVING ROLLER, plain or enamelled. GIRDERS (cast and wrought-iron). CULLENS, Sash-Weights, Rain-Pipes, Eaves-Gutters, variously moulded. Ornamental Rain-Pipe Heads, of Gothic and other designs, and all castings connected with buildings, in London time, and at country prices
CASTINGS WAREHOUSE, 68, UPPER THAMES-STREET.

BARTON'S PATENT SAFETY STABLE FITTINGS, and ENAMELLED MANGERS.



THESE FITTINGS will be found to possess all the latest and most important improvements, and are of the best manufacture. All kinds of Stable-furniture in stock. Iron Hurdles, Gates, Fencing, Tomb-railings, &c. New illustrated Catalogues forwarded on receipt of two postage-stamps. JAMES BARTON, Ironfounder, &c. 370, Oxford-street, London.

NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



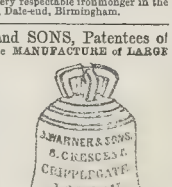
House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Watling-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self-feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.
P.S. Steam Engines and Machinery contracted for.

IMPORTANT to ENGINEERS, MILLOWNERS, &c.—NORTH WOOLWICH ELASTIC STEAM-PACKING (Canvas and India Rubber), at 1s. 4½d. per pound (Rings, 3d. per lb extra), as supplied to her Majesty's dockyards. CAUTION—None genuine unless stamped, thus—
S. W. SILVER and CO.—Works, North Woolwich.
TESTIMONIALS.
"Commercial Mills, Cornbrook, Manchester, Oct. 6, 1854.
"GENTLEMEN, We have been using almost exclusively, for the last three years, your Packing to our stuffing boxes and steam and water joints, previous to which time we tried all the sorts which came under our notice, but yours we consider decidedly the best and most economical.—We are, yours respectfully,
"JOSHUA SCHOFIELD and Sons."
"King and Queen Iron Works, Rotherhithe.
"London, Nov. 11, 1854.
"GENTLEMEN,—We have tried your Patent Packing for some time in our steam-engines, and also in steam-pipe joints, and find it efficient and economical, and to be much superior to the ordinary hemp packing. It is especially serviceable in the slide valve.—Yours truly, "HOWARD RAVENHILL and CO."
"Works, Deptford, Jan. 29, 1856.
"I have pleasure in stating that the Packing of Messrs. S. W. Silver and Co. has been in use in the various parts of the engines on board the steam-ships of the company, and given every satisfaction. "J. BEARDMORE, Engineer,
"General Steam Navigation Company."
Copies of further testimonials forwarded, on application to S. W. SILVER and CO. Nos. 3 and 4, Bishopsgate-street Within, opposite the London Tavern.

PUNCHING and SHEARING MACHINE.
WANTED, to purchase, a good second-hand Punching and Shearing Machine, to punch and shear a five-eighths plate.—Apply to Messrs. TURNER and CO. King's Lynn, Norfolk.

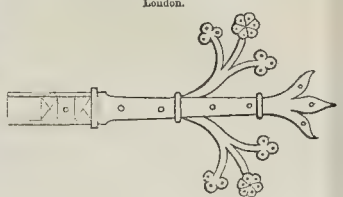
TO ARCHITECTS and BUILDERS.—HAWKINS'S REGISTERED COPPER and TINNED-IRON SASH-CHAIN is greatly approved for its strength, durability, and facility in running over pulleys; and when worked at its warranted load will be found one of the most useful and efficient inventions for hanging window-sashes of any weight up to 4 cwt. May be obtained from every respectable ironmonger in the kingdom. Manufactory, No. 27, Dale-end, Birmingham.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.



J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.
Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, unity or in peals.
TUNED BY MACHINERY.
Stocked and wheels ready for fixing. Old Bells recast or taken in exchange.
MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system, which give superior tone and facility for ringing.
The great 16-ton Bell, for the Houses of Parliament, was made by JOHN WARNER and SONS, 1856, under their Patent.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, 56, & 57, WYCH-STREET, STRAND,
London.

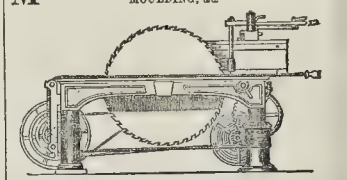


LOCKS, HINGES, HANDLES, BOLTS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham.

AUSTIN'S IMPERIAL
PATENT SASH and BLIND LINE
can be obtained of all
ROPEMAKERS, IRONMONGERS, MERCHANTS, FACTORS, and WHOLESALE HOUSES, in TOWN or COUNTRY.
Established 1774.

COMPLETE IMMUNITY from FIRE, THIEVES, and GUNPOWDER.—EDWIN COTTERILL, Inventor, Patentee, and Sole Manufacturer of the Royal Climax Detector Locks. The only locks which have not been picked, and cannot be blown up with gunpowder. Descriptive drawings, with testimonials, and full report of the unsuccessful attempt of Mr. Hobbs to pick the Climax Detector Lock (an ordinary commercial one), at Manchester, forwarded free.—Manufactory of Fire-proof Safes and Chests. Patent Double and Single-Action Door-Springs, &c. &c.—16, Vittoria-street, corner of Regent-place, Birmingham.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Roller and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines, for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches, and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace.—A descriptive Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. King's-road, Chelsea, London.

ESTABLISHED 1817.
WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSES, 19, Horseferry-road, and 1, New Peter-street, Westminster.
GREAT REDUCTION IN PRICES.
RAIN WATER CASTINGS, per yard.

Sizes—2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	10d.	1s. 1d.	1s. 3d.	1s. 7d.	1s. 10d.	2s. 4d.	2s. 8d.
Half-round Gutters	7d.	8d.	9d.	1s.	1s. 2d.
O G Gutters	1s. 0d.	1s. 1d.	1s. 2d.	1s. 4d.
Ditto, with plain clips cast on	1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.
Ditto, with lion clips ditto	1s. 2d.	1s. 3d.	1s. 5d.	2s. 2d.

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.
Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails ..... 15s. 6d. "
Best Zinc Slating Nails ..... 40s. "
Best Glues ..... 47s. to 53s. "
A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.
Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

TO BUILDERS, CONTRACTORS, and OTHERS.—FOR SALE, the undernoted CAST-IRON GIRDERS, which were made to order, but are now not required, on account of the works being stopped:—
3 Girders, 26 ft. 6 in. long, by 13 in. deep at centre, and 8 in. at ends, weigh about 30½ cwt. each.
19 Girders, 21 ft. 9 in. long, by 12 in. deep at centre, and 8 in. at ends, weigh about 16¼ cwt. each.
98 Girders, 19 ft. 6 in. long, and 11 in. deep at centre, and 8 in. at ends, weigh about 12¾ cwt. each.
4 Girders, 16 feet long, by 10 in. deep at centre, and 7 in. at ends, weigh about 6½ cwt. each.
14 Girders, 14 ft. long, by 9 in. deep at centre, and 6½ in. at ends, weigh about 6¼ cwt. each.
4 Girders, 13 feet 6 in. long, by 10 in. deep at centre, and 7 in. at ends, weigh about 5¼ cwt. each.
2 Girders, 13 feet long, by 12 in. deep at centre, uniform section, weigh about 18½ cwt. each.
18 Girders, 9 ft. 8 in. long, by 8 in. deep at centre, uniform section, weigh about 3¼ cwt. each.
The above may be seen at Dunfermline Foundry; or any further information obtained, from JOHN WHITELAW, Dunfermline, N. B., who will receive offers for the whole, or any portion. The girders can be tested to the usual extent, according to the size, and certificate of proof furnished.
Dunfermline, October 28, 1856.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.
ANDREW CLARK and COMPANY, PLUMBERS,
THE BEAR GARDEN LEAD WORKS, SOUTHWARK,
Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of
UNITING LEAD TO LEAD WITHOUT SOLDER.
Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.
PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

FACING FOR BUILDINGS COMPANY—TAYLOR'S PATENT.

BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,
REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.
STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond stones, and the Stone Ashlar never injuriously weighted by the settlement of the Mortar joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences. Room to be had ready for living from the quarries at a small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE, HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

Mr. JOHN TAYLOR, ARCHITECT, OFFICES OF THE COMPANY, 40, KING-STREET, CORNER OF CHEAPSIDE.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 185 was manufactured by HARTLEY'S PATENT—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

THE SEVRES GLASS COMPANY.

LEGENDRE AND TURPIN'S

WHOLESALE ESTABLISHMENT for the supply of CRYSTAL WHITE SHEET GLASS,
First, Second, and Third Quality;
WINDOW-GLASS, Shades, Moderator Globes, Lamp Glasses, Bottles, and other Articles in White Glass, at
131, UPPER THAMES-STREET, LONDON-BRIDGE.—WORKS: SEVRES, NEAR PARIS.

MARBLE GALLERIES, 17, Newman-street, Oxford-street.—Mr. ALFRED E EDWARDES, (upwards of ten years with the London Marble Company), has opened the above premises, lately in the occupation of the late celebrated sculptor, under the firm of EDWARDES, EDWARDS, and COMPANY, with the largest stock of BRITISH and FOREIGN MARBLE CHIMNEYPIECES, &c. &c. in London. EDWARDES, EDWARDS, and CO. solicit the favour of an inspection of their stock by architects, builders, and others connected with the trade; and beg to assure them that for design, style of execution, and price, it will be found unrivalled. Estimates for every description of marble work.

MARBLE and STONE CHIMNEYS.—150 MARBLE CHIMNEYS of various designs and colours, most of them fixed, are now on view at the Cambridge Heath Marble Sawing-Mills. The proprietor has again enlarged his workshops, and erected such improved machinery, as not only to compete, but is able to manufacture more, and consequently cheaper than any house in the trade.
The Trade supplied.

MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY-PIECES lately imported from the Continent. They comprise Statuary, Giallo di Siena, Vert Rouge, Dove, Black and Gold, Rouge de Belmont, Bardiglio, and other choice foreign marbles; and are designed with great taste, and executed by first-class artists. On sale, in the show rooms of Messrs. EVANS, SON, and CO. King William street, London-bridge.

MARBLE CHIMNEY-PIECES, and every other description of marble work, supplied to builders and the trade at about HALF the USUAL PRICE, in many instances less than slate. Manufactured by the LONDON and CONTINENTAL MARBLE COMPANY, at their own Quarries in France and Belgium.—Office and Depôt, 3, Crooked-lane, London-bridge.—Estimates given for works to any amount.

MARBLE WORKS by WATER-POWER. TO BE LET, for a term of years, a Marble Works by water-power. The premises are capacious, and contain two water-wheels, double rubbing and polishing beds, three saw-frames, circular rubbing-plate, and complete fixtures for carrying on a large trade. Quarries affording a variety of beautiful fossil black and other marbles in the immediate neighbourhood. There is a good wholesale trade established, and the works are near two railway stations. To a working man possessing a few hundreds this is an opportunity seldom to be met with. Rent of premises, water, &c. 30*l*; price of machinery, &c. 80*l*. Disposed of in consequence of ill-health.—For particulars address A. Y. Z. Post-office, Leek, Staffordshire.

BUILDERS, ARCHITECTS, AND MASONS.

MARBLE. — The ITALIAN MARBLE COMPANY beg to call the attention of Architects, Builders, and Others connected with the trade, to their large and well-assorted STOCK of VEIN SICILIAN, and other MARBLES. The liberal system of business adopted by this company, the superior quality of their marble, and their very moderate scale of prices are combined, to form an inducement to buyers. An inspection is solicited at the Depôt Bridge of Marf, Millbank, adjoining Vauxhall-bridge, where no other persons are authorised to sell except Mr. Baxter, Wharf Foreman, or the undersigned.
WILLIAM W. BONNIN, Secretary.

MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.
THOMAS JACKSON begs to draw the attention of the public to the most extensive stock of Marble Chimney-Pieces in the Metropolis; consisting of a selection of upwards of two hundred and manufactured by steam power from the finest Italian and other marble, and with that careful attention to the details and finish so necessary in good marble work. The Stock consists of elegant Drawing-Room Chimney-Pieces in Statuary Marble: bold, massive Chimney-Pieces, in Black, Black and Gold, Bardilla, Sienna, Verd Antique, Brocatella, Dove, St. Ann's, and Serpentine Marble, suitable for Dining-Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Emperor's Red and Amber Marble, for Boudoirs, Breakfast-Rooms, best and secondary Bed-Rooms, &c.; also, Monuments Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the most classical designs, and in all the varieties of the finest Italian and British Marble, at the lowest remunerative prices.

LLOYD'S MARBLE WHARF, Thames-bank, Pimlico, adjoining Vauxhall-bridge.—Italian Statuary, Veined, Sicilian, Dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

GATES and GEORGE, CAEN, AUBIGNY, and GENERAL STONE MERCHANTS.
CAEN WHARF, ROTHERHITHE, LONDON.

STONE! STONE! STONE!—To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Self-face Slab, Granite Pitching and Curb, Guernsey Broken Road Materials, and every other description of stone, at JOHN KNIGHT and SONS, Devon Wharf, Mile-end. York tooled paving, 38s. 6d. per 100 feet; slab for hearths, 4*l*. per foot sup.; slab for chimney-pieces, 8*d*. per foot sup.; 8 by 3 window-sills, 6*d*. per foot run; 11 by 3 copings, 8*d*. per foot run; box chimneys (any opening), 8s. 6*d*. each. Terms cash on delivery.

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The Builder.

VOL. XIV.—No. 719.

BIT by bit, and this not slowly, the Palace of Parliament, the greatest architectural work of modern times, approaches completion. The pinnacled turrets of the Victoria Tower are being proceeded with rapidly, and by the end of the year the whole outline of this enormous building will be seen. Long may it stand a symbol of the stability, the dignity, the power, and the greatness of the kingdom! The pinnacles measure 70 feet in height from the top of the parapet on the tower, no trifling work of themselves. Viewed from the ground, the man now at work at the crane is little bigger than your hand. Who shall tell — who asks, indeed — how many sleepless nights this structure has cost its architect? Putting aside the question of art, its successful completion in a constructional point of view must be regarded as a great achievement. Had the foundation proved insufficient, had it settled unequally and fallen out of upright, had an arch yielded, or the ponderous groined vaulting slipped, loud of course would have been the outcry,—ruinous, probably, the blame. But disaster being avoided, difficulties overcome, the structure successfully raised, how few stop to appreciate the comprehensive grasp of all circumstances, the prevision, and the varied skill demanded for the result!

The exterior of the Peers' Entrance and offices was represented on a previous page (219, *ante*). The Peers' Staircase is now finished, and we give a view of it in our present number.* It will come into use on the re-assembling of Parliament. Metal gaseliers, not yet determined on, will hang from the crown of each vault. The flooring and the risers of the steps are of tiles.

If we pass up this staircase and gain the Prince's Chamber, the apartment between the House of Lords and the Royal Gallery, we shall find the masons at work there, fixing Mr. Gibson's marble group of Her Majesty between Justice and Clemency against the wall which is immediately at the back of the throne. The Queen is represented as seated on a high pedestal: Justice stands at the foot on her right hand, Clemency on her left. These figures are much too large, and lead one to view favourably the course pursued by the Egyptian sculptors in making the hero or ruler much larger than the surrounding figures. Moreover, the three figures seem scarcely to accord. Putting these objections on one side, the whole group is much too large for the position, and is altogether out of place. It is much to be regretted, and, indeed, will scarcely be believed out of England, that the architect has no voice in determining either the character or position of the sculptural and pictorial decoration of the building: strange to say, he is not even a member of the commission to whom it is entrusted. In the present case the chamber, intended for sculptures and carvings of an entirely different character, is dwarfed, and its congruity is destroyed.

In making these observations, we must not omit to acknowledge the genius and skill shown by the sculptor: the figure of Justice, in particular, is a noble work. It would be better if the two standing figures were removed, and made to take elsewhere an independent position.

In the Peers' corridor, at the other end of the house, one of the panels formed to receive frescoes has been filled by Mr. Cope, R.A. The subject is the Landing of the Pilgrim Fathers it is a picture of great excellence and beauty.

In St. Stephen's Hall, the want of congruity between the building and the sculpture introduced, just now alluded to, is strikingly apparent. The size of the statues destroys the hall, and there is no agreement in sentiment. The last statue put up here, is that of Fox, by Mr. Baily, R.A. a thick, short-legged figure, in modern costume, said to be a good likeness, but agreeing very ill with the locality. It may be anticipated, however, that this incongruity will make itself more and more felt, and that at some future time these statues, many of which are admirable works, will be removed to a more appropriate gallery, and their place will be supplied with sculpture more suitable in size and character.

Passing out through Westminster-hall, where elaborate brass candelabra are being put up, in readiness for the meeting of Parliament, let us go over to the Clock Tower, and look at the great bell now hanging at the foot of it. It weighs 15 tons and 8½ cwt. is 7 feet 10 inches high, 9 feet 5½ inches in diameter, and was cast by Messrs. John Warner and Sons, of Jewin-street-crescent, in the City, under the direction of Mr. E. Beckett Denison, Q.C. It has a considerable thickness of metal in the sound bow, the rim round the mouth of the bell: it is there 9⅜ inches thick. It has come to be called "Big Ben of Westminster," in honour of Sir Benjamin Hall, the Chief Commissioner of Public Works, and has already make some noise in the world, though it has not yet a tongue in its mouth. This appendage, however, arrived while we were looking at the bell on Monday, and is said to weigh 13 cwt. and 26 lbs. The shape of the bell is not a pleasing one, and we must confess that the staring inscriptions to the honour and glory of the casters and others, on the outside of the bell, gave us less pleasure in the reading than some of the quaint lines we have at times puzzled out in ancient belfries, midst the remnants of Jack Daws' nests and the dust of gone-by centuries, nervous lest the clock should strike, but determined nevertheless to bag the inscription. This, however, is a minor consideration (though thousands yet unborn will go up to look at "Big Ben" in his nest); the great point is the tone, and we sincerely hope, and, indeed, have no reason to fear, that this will prove to be all that can be desired. Mr. Denison, in the second edition of his "Lectures on Church Building," a book wherein much cleverness is obscured by more egotism, says:—

"It is a great mistake to suppose that musicians, as such, are the fittest persons to be appointed to judge of the goodness of bells. Unless they are conversant with bells, and know by experience what kind of sound ought to come out of a given weight of bell metal, their opinion is not worth as much as that of many a bell-ringing cobbler, who does not know one musical note from another, but who knows very well the difference between a good bell and a bad one. Musicians, of course, are the persons to judge whether the bells of a peal are in tune with each other. But that is the smallest part of the business; for a set of cast-iron pots might be in as perfect tune among themselves as the finest peal of bells in the world; and moreover, the tune or note of a bell can be altered by cutting, whereas the tone or quality of the sound is incurable if it is bad. Moreover, musicians are very apt to condemn bells which are not of some musical note exactly: which is a piece of pure nonsense: for the names or pitches of the notes are only conventional, and I am told by those who understand such things much better than I do, that what is called in musical slang 'concert pitch' has been raised so much within living memory, that bells and other unchangeable instruments which used to be of the note C would now be called B. So long as the bells are in tune among themselves, and the tone of each bell is good in itself, it does not signify a farthing what their notes may be called; for it is nothing but a question of names after all."

The art of bell-founding appears to have sunk very low of late: the fact of the two principal bell-founders in England having failed in three successive attempts (viz. Messrs. Mears twice, and Messrs. Taylor, of Loughborough, once) to produce a satisfactory peal of bells for the chimes of the Royal Exchange has been brought forward to prove the truth of the assertion. In the Westminster bell a composition with more tin in it than is usual in modern bells has been adopted:—

"The modern bell-founders (writes the author we have quoted) say that it ought to be four of copper to one of tin; and so they put in the metals in those proportions, or as near as they can guess at them. But tin wastes more than the copper in melting, and, moreover, the less tin is put in, the more any given waste alters the proportion; and, therefore, the bell comes out probably about 4½ to one, or even lower (as all these alloys are called high or low, according as there is much or little tin in them). I find that a considerable majority of the French authorities give 3½ to one as the right proportion, and some three, and only one is four to one. And still further, it is found by analyzing a piece of Old Tom of Lincoln, that the tin and a little antimony together are only one-fourth of the whole, or one-third of the copper; and in the old York bell metal also the tin is not one-fourth, but one-third of the copper."

Accidents out of the question, bells are generally cracked by being worn thin where the clapper strikes. "Ben" is to be hung in a manner of which our readers have heard something, so that when worn in one place he may be turned in the stock, and thus offer another part of himself to the clapper. Where the bell is to be placed appears to be still unsettled. Mr. Denison, in a recently published letter, calls upon Sir Benjamin Hall to see that it is hung in the upper part of the cast-iron roof of the clock tower, as otherwise half the sound will be wasted. This would be the best place for it in that respect; but if this requirement was not understood by Sir Charles Barry before the roof was constructed, it may now be difficult to provide the necessary strength.

* See page 27.

SIR B. HALL AND THE METROPOLITAN BOARD OF WORKS.

THE MAIN DRAINAGE SCHEME—SOUTHWARK IMPROVEMENTS.

THE Chief Commissioner, as we expected, has returned the plan for the main drainage of the metropolis submitted to him by the Board, believing it to be at variance with the statute, which says,—"And such Board [the Metropolitan Board of Works] shall make such sewers and works as they may think necessary for preventing all, or any part, of the sewage of the metropolis from flowing or passing into the River Thames in or near the metropolis, and shall cause such other sewers and works to be completed on or before the 31st day of December, 1860."

Sir Benjamin Hall points out in his communication, that up to the 6th of October the Board had always postponed and ultimately rejected the plan they had since submitted. Were we not correct in saying, that "to chronicle such proceedings was simply waste of time and space?"

The chairman, in communicating the reply to the Board, on the 12th, stated his belief, that if a deputation were appointed to consult with the Chief Commissioner, it would be in their

power to arrive at a conclusion on this subject, satisfactory to the Board and to the public. Friday, the 14th, was named to consider the question.

A deputation from the Board went to Sir Benjamin Hall, on Monday, the 10th, with the plan selected by them for the Southwark improvements, when Mr. Thwaites explained the route proposed. The line, he said, begins slightly below the Obelisk, in Wellington-street, at the south corner of York-street, without interfering with St. Saviour's Church, continuing on the north side across Red Lion-street and Counter-street, avoiding the Borough-market, which being corporate property, would be very expensive. It then avoids a clump of almshouses, called the College Almshouses, having a burial-ground and a church in the centre, passing close to Messrs. Barclay and Perkins's brewery, which occupies 11 acres, and which was not touched, as, if it were, the outlay would exceed the cost of the entire thoroughfare. It then passed on to the Southwark-bridge-road, taking off a small part of Messrs. Potts' extensive vinegar works, thence to the north of Messrs. Easton and Amos's ironfoundry, continuing its course to the south-west angle of some other almshouses, and on to a point marked on the plan "B," in the Blackfriars-road, exactly opposite Stamford-street. Although upon the plan, he continued, the street appeared to present a considerable curve, still upon the large scale of its construction it would be scarcely perceptible; but it was absolutely necessary, in order to avoid the enormous expense of trenching upon the valuable properties he had referred to. The proposed width of the street was 70 feet from front to front, with 12 feet footpath on either side.

A second deputation then took the place of the first. The gentlemen comprising this deputation appeared on the part of the inhabitants of High-street, Southwark, and were ushered in by Mr. Harris, member of the Metropolitan Board of Works for the district of Southwark.

The leader of the deputation, Mr. Newsom, said the inhabitants of the Borough were seriously affected by the stoppage of the thoroughfare, which commenced at the narrow part, caused by the projecting clump of houses, commencing with the Town-hall. Instead of the opening for the new street commencing at York-street, they desired that the opening should be lower down to the south, including the removal of the projecting clump of houses, as also the Town-hall. This plan could be carried out at an estimated cost of 41,000*l.* less than the plan proposed by the Metropolitan Board. It was something like Mr. Pennethorne's plan, which was generally approved.

A third deputation followed, with a plan, of which we need say nothing.

The Chief Commissioner has since signified his approval of the road proposed by the Board. It is to be regretted that it is not straighter.

CRYPT, GLOUCESTER CATHEDRAL.

In the notice of the improvements at Gloucester Cathedral, given last week (p. 603), we mentioned the change that had been effected in the *crypt*, under the direction of Mr. Waller, and described its present appearance. The engraving in our present impression will serve to make that account clearer.

AN ACCOUNT OF LONGLEAT, WILTSHIRE.

At the entertainment given here by the Marquis of Bath to the members of the Wiltshire Archæological Society, the Rev. Canon Jackson, of Leigh-delamere, read a very interesting account of this noble domain. Sir Richard Hoare derives the title from *Longa* and *Lata*, long and broad, as descriptive of the valley in which the house is situated. Mr. Jackson thinks differently, and says,—The word *leat* is an old noun, from the Saxon verb to lead, and signifies a water-course or aqueduct. There is near Plymouth an artificial channel of this kind, a celebrated piece of engineering made by Sir Francis Drake, for supplying that town with water, which bears the name of *The Leat*. The word also occurs in old Acts of Parliament. In Scotland, a mill-stream used to be called a mill-*leat*. The changes here have been so great, that it is of course difficult to say what may have been in ancient times, but it is most likely that the stream from Horningsham, which supplies the present garden, was originally used by some long channel for turning a mill.

The oldest document in which the name occurs is in Latin, dated A.D. 1289 (9 Edw. II.), nearly 600 years ago, in which the tythes of the church of Lullington, near Frome, were granted to the priory of "Lange-lete." Here, therefore, its regular history begins.

It was sold to Sir John Thynne in 1540. It was then a very humble place. And now let Mr. Jackson speak for himself:—

A fire having furnished Sir John with an excuse, in or about 1566, he sent for his architect, and gave the order for Longleat.

But who was the architect that he sent for? I am not aware that there is any positive written evidence of any kind, to show who he was. The accounts in the building, with all items of payment, are carefully preserved; but singularly enough, no architect's name appears in them. Tradition, it is true, names the man, and as that tradition has been consistent and uniform, I see no reason why it should be doubted. But before we try to settle that point, or rather, for the very purpose of helping to settle it, it may be useful to inquire for a few moments what style of house architecture had hitherto prevailed in England; and if the new house at Longleat was totally unlike the country houses that had preceded it, how came it to be unlike? how came this novelty of style to be adopted here?

Now the domestic architecture of any country in ancient times would take its character very much from the condition in which that country might be, especially with regard to the personal safety of the inhabitants. When England was torn in pieces by baronial jealousies, and one noble lord went to make a morning call upon another, not to leave a card and ask him to dinner, but to batter his house down about his ears,—in such precarious circumstances, the thicker the walls of the house were, the better for the gentleman on whom the call was made. A man's house is still his castle, *de jure*, in the eye of the law; but in those days his house was his castle, *de facto*. The houses of the nobility were nothing else than fortified dungeons, of which you have some very good examples at no great distance, in the ruins of Wardour, and at Nunney near Frome. The necessity of providing for self-defence became less and less, but the fashion lingered long after the necessity had ceased. Houses were next built in the form, and with much of the appearance, but without much of the real strength of castles. They had tower and gateway, battlement, and moat;—very feudal to look at, but not very strong, and certainly confined and dull to live in. One of the most complete specimens of this kind in England is Haddon Hall, in Derbyshire.

In the reign of Henry VII. these castellated houses were chiefly built with high ornamented gateways, and large projecting windows. I do not recollect any example near us; but the front of St. James's Palace, in London, and of Eton College, may be familiar, and will give an idea of the kind of house alluded to. This style may be described as having been, in the main, what is commonly called the Gothic, the pointed architecture of churches applied to that of houses, in order to take off the prison-like look of the Old English Castle.

We have in Wiltshire the remains of several private houses of gentry which will give a fair notion of what they generally were previous to the time of Sir John Thynne, in 1540. There is, first of all, South Wraxhall House, near Bradford, the property of Mr. Long, of which the oldest parts are thoroughly ecclesiastical. The gateway is of Henry VIII.'s reign—and other parts are of the reign of Elizabeth and James, with modern alterations. Place House, Tisbury, a grange of the Abbess of Shaftesbury, of the fourteenth and fifteenth centuries—ecclesiastical of course—most of the building gone—a gate-house left—the rest now a granary and dairy.

Norrington, in the Hundred of Chalk, an old house belonging now to the Wyndhams, built by the Gawens in the reign of Henry IV. has ecclesiastical windows. At Woodlands, near Mere, and at Potterne (the latter once the occasional residence of the Bishops of Sarum) there are, I understand, vestiges of houses of this class. The Bishop's Palace at Salisbury has some very ancient portions, but it has been so frequently altered by successive prelates, that it is not easy to distinguish which they are. Great Chalfield House, near Bradford, late in the fifteenth century, about 1490, is as good a specimen as we have of the old English manor-house; very collegiate in its appearance, yet having a vestige of the castle style in its moat and gate-house. The prevailing tone of house architecture before the reign of Henry VIII. was certainly ecclesiastical. And this explains in some degree why it is that one is so often told by the farmer's wife, at an old house, "they do say it was once a nunnery, or kind of abbey like." Not that there were such establishments in one-half the places in which they are thus supposed to have been, but the style of building, corresponding with that of nunneries and abbeys, often leads to the idea that they could have been nothing else. Henry VIII. who turned over many new leaves in England, introduced, amongst other changes, a novel style of house building. The style which he patronised (and, with all his faults, a nobler patron of the arts never existed in this country), was the ancient classic architecture of Greece, then lately revived in Italy. Upon the ecclesiastical or Gothic style, now beginning to expire, was engrafted the Corinthian, Ionic, or Tuscan. This is the way in which this kind of architecture is generally described: but it is considered by some to be, after all, a distinct and independent style of itself, of which we have, as yet, no proper history. The first known specimen of it is said to be on a monument in Canterbury Cathedral to Bishop Warham, who died in 1532. Of this novel mixture, Longleat is one of the purest examples. The house has also this peculiarity, that whereas we have, upon the whole, very few examples remaining of any old English mansion in its entire original state, this may be regarded, externally, as a complete specimen of its period. Most houses have been added to and altered; but Longleat, with very slight exception, is the same, as to the exterior, as when it was designed. The balustrades, the cupolas, and statues on the top are not original, but rather later—the present hall-door is also later—but, I believe, with these exceptions, the house has undergone, externally, no material change from the day it was first built. There are the large mullioned windows, of the earlier period of Henry VII.—and of the three stories, the pilasters in the lower one are of Doric character, in the middle Ionic, in the highest Corinthian—the chimneys are also in the form of columns, though, from its pilasters and entablatures, the architecture of the house, when examined, would be pronounced Grecian, or Italian. Still, its general effect and appearance are, after all, very much that of the old English Ecclesiastical. It is not really Ecclesiastical, because there are neither pointed windows nor tracery here: all is square; but the house has the old look, owing to the bold projection of the windows, and the varied outline of the roof, produced by the turrets and lofty chimneys. Observe, by the way, that the eight turrets, on the roof, are not placed at regular intervals, but in some kind of disorder. Perhaps this was done on purpose; the effect being to increase in the mind the idea of magnitude. For where everything is in exact symmetry, and all parts correspond, the eye takes in the whole object, and measures the plan at once, but irregularity leaves the eye perplexed, and more is left to imagination.

This new Italian fashion of Henry VIII.'s reign, was upon the whole adhered to in the reign of Edward VI. and the early part of Elizabeth. We have of this period, in Wiltshire, Littlecott, which retains much of its old character, though altered, and the south front of Corsham House, built in 1583. Longford is also of this date, but it is upon a somewhat eccentric model, borrowed from an island in Denmark. The Longleat style began to decline towards the reign of James I. much fantastic ornament and unmeaning device being introduced; still, during the decline, some very beautiful houses were built, of which we have good specimens in Wiltshire—in the Duke's House at Bradford, Charlton Park, and Stockton House.

Having now described to you in a few words

THE CRYPT, GLOUCESTER CATHEDRAL.

the kind of house that prevailed in England, down to the time of Sir John Thynne, and having shown that he was one of the first to adopt the new fashion, we have now to answer, if possible, the question, who was the architect employed by him? The tradition before alluded to is, that it was built from the design of John of Padua. That has been the constant belief; and, if nothing can be produced to the contrary, there is every reason for adopting it. In favour of it we certainly have these facts: Holbein the painter, and this John of Padua, are the two foreigners generally understood to have been employed by Henry VIII. in introducing the new kind of architecture. Of Holbein's taste in that direction, we have a specimen in Wiltshire, in the very pretty porch, formerly attached to the house, but now erected apart in the gardens of Wilton. But the misfortune is, that about this John of Padua no one is able to tell us anything at all. To use a term now growing much into use, John of Padua is a *myth*. Who he really was, what his family name was, whether he was born or only educated at Padua, what his works were before he came to England, we have, I believe, not a morsel of information. The little that is at present known upon the subject is merely this, that a person of the name was sent for by Henry; was appointed on his arrival, in 1544, to an office, the very title of which was entirely novel, "the deviser of his Majesty's buildings;" and that, by a deed dated in that year, the king assigned to him a certain daily stipend for his services. About three years afterwards (1547) Henry died. But the pension was renewed under Edward VI. by the Duke of Somerset, Protector, who took the Italian by the hand. In 1549 the duke employed him to design his great palace, in the Strand, called Somerset House; not the present building of that name, but the original one long since destroyed. Now old Somerset House, built by John of Padua, is always described as having abounded in ornaments of Roman architecture, and as having greatly resembled Longleat. This being so, does it not in some degree strengthen the ancient tradition as to this house? We find the Italian, architect to the Protector; Sir John Thynne, secretary to the Protector. The duke builds a palace in the Strand; the secretary, a few years afterwards, another near Warminster. Both palaces are in the newly introduced, and therefore highly fashionable, Italian style. The ornaments of the one strongly resemble those of the other. Now, in the absence of all positive proof upon the subject, yet, with this old tradition asserting the fact, and with these points of coincidence to support it, I think it may fairly be put to you, as an archæological jury, now sitting, as it were, on the very body—does not the circumstantial evidence favour the tradition, that Longleat was designed by John of Padua?

There is another nobleman's house in England still remaining, of about the same date as Longleat, and very strongly resembling it. Wollaton House, near Nottingham, built for Sir Francis Willoughby, and now the property of his descendant, Lord Middleton. Mr. Britton, in the 2nd vol. of his Architectural Antiquities, published in 1809 (p. 108), observes of Wollaton, that though the name of its architect is not positively recorded, yet when the general design, in composition and detail, is carefully compared with Longleat, there can be no hesitation in attributing the two buildings to the same artist. Indeed, he adds, "The uniformity of proportion in the pilasters, windows, and architectural ornaments, would lead us to suppose that these parts of the two houses were executed from the same working drawings." The resemblance here spoken of is certainly considerable, not only in the outside, but within; the two halls being very much upon the same model, corresponding very closely in arrangement, construction of roof, and style of screen.

At Wollaton House, two architects are believed to have been concerned. The first was John Thorpe, a person much employed in palatial edifices at that time. The second, his successor, John Smithson, as appears by a monument in Wollaton Church. From the resemblance between Wollaton and Longleat, some have fancied that John Thorpe and John of Padua may have been one and the same person. It was not uncommon for English patrons of art to fit out young men for study abroad; and it is not impossible that one who trudged away from his native village with a knapsack on his back as plain John Thorpe, may, after serving his apprenticeship to the Muses under the genial sun of Italy, have applied revival principles to his own name, and have come back to Old England a fine gentleman, to be thenceforth called Giovanni di Padova. But I am not aware of the slightest ground for supposing that such was the case in this instance. Thorpe is said to have been a native of Norfolk, and seems to have been always called by his English name. Some of his plans have been lately published by Mr. C. J. Richardson, in a work on Old English Mansions. He designed amongst others the following houses:—Theobald's Burghley, Wimbledon, Holdenby, Kirby, and Old Buckhurst.

In the meantime, whilst we have been settling what style and what architect Sir John Thynne shall choose for his new house, we have left him waiting to begin it. I will, therefore, only add upon this point one thing more, which is, that finding no mention of name or payment, or any notice of any kind of any architect whatever, some have said, that after all, Sir John was his own architect. It is hardly probable that this should have been the case in the proper sense of the word: it is not unlikely that having been furnished with designs he worked them out himself, and was his own clerk of the works. His accounts of the building are still preserved here. They commence 21st January, 1567 (which, according to modern reckoning, would be called January, 1568), and continue to 29th March, 1578, during which time rather more than 8,000*l.* had been spent; a sum which, of course, requires to be multiplied considerably to give any approximate notion of the cost in money of our own day.

With so many workmen about, one would fancy that Sir John would not be over well pleased to hear that Queen Elizabeth was coming to pay him a visit. Yet she came, for it is mentioned in the account of her progress in 1575, that she favoured him with her company on her way from Bristol. From Longleat she passed on to pay the like honour to Sir William Sharington, of Lacock Abbey, and subsequently went to Wilton. Queen Elizabeth was no builder of palaces herself: she had no occasion, having inherited a sufficient number from her father. It answered her purpose a great deal better to encourage her ministers to build large houses in which she might go to visit, and half ruin them by the compliment. Sir John Thynne died in 1580, leaving the larger portion of the outside finished, and from the Hall to the Chapel Court inside: no part of the western side seems to have been finished in his time. As to grounds, nothing seems to have been provided, mention being made only of a garden, hop-yard, and orchard, which were probably the old ones of the Priory.

The outer shell of a large house, 220 feet long by 180 feet deep, is certainly something, but by no means all. It is a skeleton, which, to look comely and to serve life's uses and luxuries, requires to be filled up, fattened, clothed, and adorned. These operations Sir John left to his successors. I believe that the building accounts were not continued after the founder's death; but there is a short descriptive summary of the progress and changes which took place under the various succeeding owners. The oak screen and wainscot of the hall were amongst the additions by his son, Sir John. Sir James, the fourth owner, employed Sir Christopher Wren, by whom a principal staircase was made; and a hall door, which, however, was afterwards removed to a school-house at Warminster. The old priory barn, which stood near the south-west corner of the house, was converted into stabling; and the Priory kitchen garden was walled and planted. In 1663, king Charles II. accompanied by the queen and Duke of York, visited Sir James Thynne.

In 1670, the estate came to Mr. Thomas Thynne, made eminent by Dryden, and who was assassinated by Count Konigsmark, and others employed by him, in Pall-mall, on the 12th of February, 1682.

Mr. Thynne having died without children, Longleat passed (in 1682) to his second cousin, Thomas Thynne, of Kempsford, in Gloucestershire, who was immediately created Baron Thynne, of Warminster, and first Viscount Weymouth. This nobleman held the property for thirty-two years, from 1682 to 1714; and, from the chronicle of the alterations in the house, it appears that he had a considerable share in them. The domestic chapel was now finished It was consecrated 19th August, 1684; the sermon (from 2 Chron. vii. 16) being preached by Richard Roderick, B.D. of Christ Church, Oxford, and Vicar of Blandford Forum, Dorset; afterwards printed, with a dedication to his lordship.

Large improvements, in the taste of the age, seem to have been made in the gardens. Indeed, it would almost appear as if the first ornamental garden of any size was made at this time. The style adopted was the Dutch, introduced into England by William and Mary. Lord Weymouth laid out his ground according to the plan shown in the old engraving of the house by Kiproves, and long avenues, with vistas and artificial mounds, were planted: the original *leat* was widened at intervals into fish-ponds, all rigorously angular: flower-beds were described in chequered and geometric figures; the very gooseberry and currant bushes in the kitchen-garden drilled to grow in squares or parallelograms, trimmed up as stiff and stately as lords and ladies at the court of the Hague. From

the front door of the house, a long raised terrace, on a level with the highest step, projected forward to the entrance-gates.

* * * *

From dates, and other circumstances, it would appear that the house at Longleat must now have remained without a resident proprietor for forty years. There was the minority of seventeen years, to May, 1731; and then on coming, or soon after coming, of age, the second Lord Weymouth appears to have forsaken it, and to have lived in an old manor-house in the village of Horningsham. He died at the early age of forty, in 1751, and was buried in Horningsham Churchyard. He was ranger of Hyde-park and St. James's-park. His son, the third Lord Weymouth, was eighteen years old at his father's death. On coming of age, in 1754, he found plenty to do; the garden and ornamental grounds in the Dutch style (as introduced by the first Lord, and as seen in the old print) having fallen, not only into disorder, but wholly out of fashion: the taste for foreign gardens had gone by. For the work of restoration he called in the celebrated landscape gardener of the day; who, from his invariable habit of pointing out to his employers the great capability of their grounds, earned for himself the name of Capability Brown. So great a personage deserves a stately introduction: let Cowper marshal him in.—

> "Lo! he comes:
> The omnipotent magician, Brown, appears:
> He speaks: the lawn in front becomes a lake;
> Woods vanish! hills subside and valleys rise;
> And streams—as if created for his use—
> Pursue the track of his directing wand—
> Sinuous or straight, now rapid and now slow,
> Now murmuring soft, now pouring in cascades—
> E'en as he bids! In circumstance or owner studies
> 'Tis finished; and yet, finished as it seems,
> Still wants—a mine to satisfy the cost."

Obedient to this magical wand, the Dutch formalities disappeared; plants and trees, released from regimental discipline, were ordered to stand at ease, or to take up new positions more agreeable to the principles of English liberty. The great difficulty appears to have been how to manage the water: the natural stream was by no means commensurate with the *grandeur* of Longleat. I do not bestow that epithet on this place without sufficient reason; because the impression produced upon most minds, when the whole view of this house, gardens, and demesne lies under the eye, surveying it from a height, certainly is, that taking it altogether it is the very *beau ideal* of an English baronial residence. John Aubrey (not unhappily) calls it the most august house in England. The natural hills and valleys, the great masses of wood with which the hills have been clothed, the extensive range of park, the command of prospect, and the style of the house itself, produce, altogether, a character of grandeur, which is in this country at least peculiar to Longleat. Mr. Repton justly observes that there is a vast difference between the grand and the great. For example, 4,000 acres with a paling round them, and a cotton factory in the centre, all in the middle of Salisbury Plain, might be great; but nobody would think of calling them grand. Greatness of dimension is one thing: greatness of character is quite another. The two are often confounded; but, though the difference may not, perhaps, be so easy to describe, the eye detects it in a moment. Therefore, to bring the water forward into proportion with all the other features of Longleat was absolutely necessary. The stream itself was nothing but a watercourse, large enough for driving the old Priory mill, but insignificant in appearance when passing through spacious grounds close to a spacious mansion. In the artificial Dutch garden the brook had been enlarged a little into a straight canal and fishponds, as seen in Kip's view; but when these were abolished the problem was how to give greater expansion to the water. Various plans were considered, and the one adopted at a prodigious expense (as Cowper's introduction prognosticates), was to produce the idea of a large river flowing through the demesne, widened by serpentine lines into a lake. The Viscount Weymouth, by whom this alteration was made, was a Lord of the Bedchamber to George III. (1760), master of the horse to Queen Charlotte (1764), and Lord Lieutenant of Ireland (1765). In 1789 he was created Marquis of Bath, and in September of that year he had the honour of receiving, as guest at Longleat, the king, queen, and princesses, with a suite of forty persons.

The words of Mr. Repton, speaking in 1803, apply with equal propriety in 1856. "This magnificent estate, so far from being locked up to exclude mankind from partaking of its scenery, is always open, and visitors are allowed freely to amuse themselves; which circumstance tends to enliven the scene; to extend a more general knowledge of its beauty to strangers; and to mark the liberality of the noble proprietor in thus deigning to share with others the good he enjoys."

THE VENTILATION OF HOSPITALS.

In your number for October 25th, a writer on "The Ventilation of Hospitals" appears to have devoted much study to this intricate subject, and to have weighed all matters connected with it in a masterly and scientific manner. May I be permitted, however, to offer a few observations on the above interesting subject, and to state (on the threshold) that mere scientific disquisition, and theoretical argument, though they be founded on the surest basis, will not suffice to settle the inquiry, and place the matter in a perspicuous and intelligible form. I have been a professional observer of the system of ventilation adopted by our public hospitals, for the last twenty-five years, and I must add, with all courtesy to the writer in question, that he takes merely a scientific, and, therefore, a very partial view of the point under consideration. His expressions are occasionally somewhat vague: thus, he remarks, "The air expired from the lungs has not a temperature sufficiently elevated to raise it even to a couple of feet above the head, without its undergoing diffusion from the combined influence of the law of gases, and of the rapidity with which it parts with its excess of temperature, and the disturbing effects of currents of air, the direction of which is only capable of being partially controlled."

The observation which shortly follows is not borne out by practical experience, viz. that "the admission of direct currents of air is impracticable in this climate during two-thirds of the year. Hence we are driven to scientific means for obtaining such an artificial ventilation as shall compensate, so far as may be, for the loss of natural ventilation."

In these and other remarks which follow, it is evident that your correspondent has not studied the subject *au fond*: in short, he has not "walked the hospitals," as a student in scientific ventilation, for a quarter of a century. I would, therefore, beg to add a few remarks and suggestions to those already made by Mr. Rosser. In the first place, we cannot fail to be struck with the fact, that allusion is rarely made in these matters to the great and main source of a vitiated hospital atmosphere: it is not the expiration of so many cubic feet of deoxidized air per minute, by twenty or thirty inmates of a sick room; neither is it the superadded impure exhalation from the pulmonary surfaces in diseases of the respiratory organs, as in bronchitis, consumption, inflammation of the lungs, &c. &c.; but it is the general noxious malaria which is constantly passing off from the bodies of individuals labouring under some of the severest forms of disease which "flesh is heir to." For instance, a non-professional friend of mine can walk, with perfect impunity, down the centre of our largest wards, but if he converses with the patients, or sits for a few minutes near the beds, he is usually seized with what he terms a "distressing light headache." During the twenty-five years in which I have had the honour of being connected with the Middlesex Hospital, we have had (if I may so say) three distinct systems of ventilation,—that of the old hospital of 1830, that of 1836, and that of 1849. In the last improvement, ventilation has been carried out in a complete and most satisfactory manner. The windows are tripartite, and open inwards from 2 to 8 inches: they are worked upon a semicircular plate by an iron handle and upright rods and slides. The summits of the walls of the new wards are also furnished with a given number of perforated zinc plates, which allow communication with the exterior air, and, excepting in seasons of intense cold, these are rarely all closed. Our walls are composed of non-absorbing surfaces, by means of Parian cement; and we have wholly abandoned curtains to the beds, unless it be in special cases.

By such precautions, those fearful pests of our metropolitan hospitals, erysipelas, gangrene, pyæmia, and fevers, &c. have entirely left our wards, and although we have had a larger share of typhus during the past summer than usually, yet I am thankful to add that there has not arisen a single instance of contagion. Erysipelas and pyæmia, so frequent and fatal in our old hospitals, are now rarely seen in the wards as idiopathic diseases. In short, it may be asserted that where a perfect system of ventilation is adopted by means of external air, with such a position of the water-closet as is met with in our building, there can be no opportunity for any foul air to obtain a "nidus" around the beds: the diffusion throughout the general atmosphere of the ward becomes so complete that, although the windows are closed, the open zinc traps pour in a constant supply of cold air, which feeds the ward fires and carries any foul admixtures up the chimneys.

Our closets are provided with double doors, so that "the pumping action" of a single door is avoided. A lobby exists between each door, and the whole range of closets is extra-mural of the building from the basement upward. The seats are fitted with self-acting flushings for the pan, and the only complaint that is made is of the disagreeable draught from the action of the ward-door when the inner door is improperly fixed open. This may be obviated by adjusting the inner door with self-closing hinges.

In conclusion, therefore, it may be observed that Mr. Rosser's statement that "when an upward ventilation by one or two extraction openings in a flat ceiling is sought to be accomplished, it is impossible to prevent the vitiated air from being disseminated throughout the atmosphere of the ward," must be taken with reserve, for there have been such extraction openings in operation in the walls of our back wings since 1849, and the sanitary influence upon the patients has been most decisive and satisfactory. GEO. CORFE, M.D.

ARCHITECTURAL NOTES IN ANGLESEA.

THE town of Beaumaris seems to have been of no importance before the erection of the castle and walls by Edward I. Anglesea had been held by the English from the year 1277, when the fleet of that nation subdued it with little opposition on the part of the Welsh. Frequent insurrections, however, determined Edward to erect a fortress and keep a garrison in the island; and after the rising of the Welsh under Mudoc, son of Llewellyn, in 1294, it was begun in the same year, and finished two years after. The work is a gigantic one, when the difficulty of transit at the period in which the castle was built is taken into consideration; and it seems doubtful whether modern engineers could erect a fortress of such bulk and solidity in a shorter time, and at the same time attend to the high finish and perfect adaptation of all the various parts, such as are apparent here. The remedy applied by Edward to avert the disturbances and revolts so frequent before the erection of the castle, appears to have been effectual: no more is heard of the town that makes any figure in history till the period of the Great Rebellion, when the castle and town were garrisoned for the king. They were, however, surrendered to the Parliament shortly afterwards with little resistance. On the imprisonment of Charles they were again seized by the Royalists, and again attacked by the Parliamentary forces under General Mytton. On this occasion a more spirited resistance was made. A battle ensued, which, though partly favourable to the Royal troops, ended in their withdrawing within the town. Captain Lloyd, of Penhenllys, of the Royal forces in the town, however, being pressed by the enemy, thought fit to run away, after locking up his detachment in the church. Here they fought manfully, and caused the loss

of many officers and men to Mytton's army. The position of the church is indeed well calculated for defence, as it stands on a rising ground, and overlooks the town wall to the west—the wall serving as an outer defence, while the raised churchyard commands the entire town. Driven from this position, the castle still held out, but was afterwards surrendered on honourable terms. From being in the possession of the Crown, this fortress passed afterwards to the Bulkely family.

The castle, standing as it does in a flat meadow, and very little above high-water mark, is not very conspicuous, as are Conway and Caernarvon Castles; nevertheless, the building itself is even more strongly fortified than these larger buildings. No precaution has been neglected for its security, owing to the natural position being defective for defence. It stands within 100 yards of the beach, at the south-east angle of the town walls, but outside them, and quite detached from them. The moat is very wide, and was formerly connected by a short canal with the sea: in fact, a kind of dock was formed under the castle walls, where vessels could unload stores at the gates: the ring for mooring still remains fixed in one of the towers. A long wall projecting towards the south, pierced by two galleries, and strengthened by two small towers, crosses the moat from the south front, and is evidently intended as a protection for the vessels moored at the gate. The main body of the castle is encircled by a wall, having massive round towers at each angle, beside minor ones at short intervals, while on the north and south sides are strong gate-houses: that at the north has two round towers, corbelled out from square bases, set anglewise, and is very picturesque: the south gate is of very different design, and of fine proportions. A broad square tower projects beyond the wall, its north front being, as it were, opened as far back as the line of the curtain wall, by three lofty recessed arches of pointed form, and the roof of these recesses is formed by ribs following the form of the outer arch. In the centre compartment the gate is pierced through the wall, the arches being about half the height of the arched recess; while in each side compartment is a small sallyport, sufficient to admit only one man at once. Neither of the gate-houses stands in a direct line with the corresponding gates in the main building. The inner building is a paralellogram, 190 feet by 170 feet. At each corner, and in the centre of each side wall, is a huge round bastion, while the north and south ends have each two bastions in the centre, between which are the main gates. The interior is remarkable for the great hall, which stands on the north side, having five windows towards the inner court, which are of a design peculiar to the castles of Edward I. They are very large when compared with the usual proportions of castle windows, the inner arches being segmental pointed, the outer a flattened ellipse. There appear to have been a transome and mullion in the lower half, but no remains of tracery can be discovered, notwithstanding the great breadth of the windows: possibly it may have been framed in wood. Each habitable room has had a large and well-wrought fireplace, of almost identical design, though varied in size. The great hall has two corbelled out from the wall, with a flat lintel and the masonry above, sloped back, till it dies into the wall, near the ceiling. The roof of the hall has been of timber, supported by moulded corbels, rather low down the inner walls, and from their standing at two different heights, probably a superior and inferior set of principals were used to form the roof.

The rooms in most of the round towers have an arch, either pointed, or the segment of a circle, thrown across them, to support the floors and roofs. At the south side of the castle-yard, a similar building to the hall has apparently stood, having like that round staircase turrets at each angle towards the court, but only the foundations now remain. The chapel stands in the centre of the east side, in the round bastion: five narrow lancet windows light it, and its interior shape is semi-octagon, its proportions and appearance being similar to the apse of a church. It is simply groined with chamfered ribs, and in each angle of the chapel stands a clustered pier attached to the wall, and bearing an arch and the groining, the centre of the arch being pierced by a pointed window, but the vast thickness of the wall allows but little light to enter. An arcaded and cusped panelling surrounds the whole of the lower part of the chapel; and on the west side, two panels are pierced, forming a double doorway, entering first a gallery that runs in the thickness of the wall round the castle; and on the other side of this gallery, a moulded arch opens into the courtyard, though there appears to have been originally a suite of rooms of slighter construction on this side of the Castle-yard, as there are the remains of a fireplace in the wall near to the chapel door. Either a wooden gallery, or a low building with a terraced roof, must have run along the east and west sides of the court, as doors from the towers and the chapel open into the court-yard, some 9 or 10 feet from the ground. The masonry of the walls throughout seems to give some evidence of the haste in which the castle was erected, being an irregular mixture of the slaty stone of the neighbourhood with cubical blocks of Penmon stone, but the outer walls seem to have been brought up to one even line above the first tier of loopholes, as though it had first been finished to that height, and made defensible, and afterwards raised to its present height.

The south-west bastion, and a few other portions of the inner building, have cubes of Penmon stone regularly alternated with slaty limestone of darker shade, thus giving a diapered or chess-board appearance to the masonry. It is worthy of note, also, that where a round or elliptical arch is used in the window or door recesses, or inner arches, that the outer arch is pointed, and *vice versa*: thus in the hall the inner arch is pointed, the outer a flattened ellipse. In the mouldings of the chapel, which, unfortunately, are much too delicate for the gritstone in which they are cut, there is a prevalence of chamfers and shallow hollow mouldings, unusual for the period, and the whole of the ornament is formed by tracery and mouldings: no sculptured foliage, heads, or masks are anywhere used. Though Beaumaris Castle may lack the picturesqueness of many others in the principality, it is one of the best preserved and strongest, and in some points more interesting than most others.

Of the town walls there are a few remains. On the west side of the tower, running at right angles with the strait from north to south, stands the largest fragment, and a few hundred yards towards the north stands another fragment, about 30 yards long, running from east to west. There are some faint traces in the old houses a little beyond this that may be the remains of a gate with a projecting barbican. The wall facing the Menai Strait was taken down in 1831 to build the Bulkely Arms Hotel and a terrace of new houses. It joined the west wall by turning towards the north-west, thus cutting off the angle, and forming a portion of an octagon towards the shore. This last-named portion was standing six years ago, but the builders of new houses have been allowed to use it as a quarry, and this summer workmen were busy rooting up the last fragments of its foundations for the sake of the stones. They complained to me of the extreme hardness of the mortar, which tradition says was poured in hot. The wall of the town shows no trace of towers. It is roughly built of large unhewn blocks of stone, but the strength of the mortar makes it very strong. The thickness is about 5 feet, and the parapet is built of the same rough stone, and neither crenellated nor loop-holed: it is much inferior work to the castle. The main portion may be 150 yards long, beginning about 50 yards from the beach, and terminating at the churchyard. A new street is projected, which will destroy this and several other very interesting relics, that ought to be spared if possible.* E. W. C.

Election of Surveyor for District of Newington.—We are asked to mention that the number of votes recorded for Mr. Henry Hart, was nine instead of eight, as stated.

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* To be continued.

SHOWING WESTMINSTER ABBEY.

In the *Builder* (p. 597, *ante*) was published a communication from Mr. Luke Berrington, one of the guides of Westminster Abbey, in reply to some remarks on the present manner of showing that place. Mr. Berrington states that, during the time of the Great Exhibition, the plan proposed of throwing open the tombs of the kings, &c. to visitors without the attendance of guides was tried, *and it is satisfactory that no complaint of damage seems to have been made.* The writer says, "I am prepared to assert that a large majority of visitors to the tombs, if left only for a few minutes in a chapel by themselves, were anxiously inquiring, 'where is the guide?' and although the tombs were not actually 'ticketted,' still there were plans of all the chapels, and large cards, descriptive of the monuments, placed in abundance in all directions throughout the chapels." Now, these cards are still lying about, and show a rough ground-plan of each chapel; and the position of the various tombs is numbered,—for instance, No. 1. Edward the Confessor's shrine: No. 2. Queen Eleanor; No. 3. Shrine of Henry V.; and so on. Some who visit the Abbey do not understand ground-plans, and others will not take the trouble to look at them; and even to those who do, this reference is by far too brief and uninteresting: if, however, there were placed against each tomb, as recommended, a small tablet on a stand, of good design, not fixed to the monument, on which would be legibly inscribed the date, &c. of the tomb, and a few brief yet well selected particulars of the person who there rests, such notes immediately in conjunction with each object would make the Abbey serve the purposes of a vast and deeply interesting book: the notes would be useful to those not much learned, and also be the means of refreshing the memory of the better informed: and, moreover, the guides or custodians of the Abbey would be at hand in the various places to answer any inquiry. It might also be worth while to translate some of the most interesting inscriptions, which are in Latin, into English, both in the chapels and other parts of the Abbey; for instance, many who read on the plain yet appropriate slab which covers the resting-place of Addison,—

"ADDISON.

No'er to these chambers, where the mighty rest,
Since their foundation came a nobler guest,
Nor ere was to the bowers of bliss conveyed—
A fairer spirit, or more welcome shade;
Oh, gone for ever—take this last adieu,
And sleep in peace next thy loved Montague.

Egerton Earl of Ellesmere.

P. C. 1849. "Born 1672, died 1719."

many of those, we say, who read this English inscription, and who are not Latin scholars, would like to be helped to decipher the inscription on Lord Montague's monument, which is adjoining. The venerable Abbey might be made most useful as a place where the youth of both sexes could learn impressive lessons on the history of their own country, in the presence of the forms, and close to the ashes, of illustrious personages, who have figured in former times; and for this purpose more is required than the half-hour's ramble amongst the tombs with the guides. Hundreds of parents would like to take their families to Westminster Abbey, and, in their own way and with patience, explain the various and interesting particulars connected with the place. Many teachers of schools might also be glad to avail themselves of the opportunity of explaining to their pupils these historical stone records.

Sometimes twenty-five or thirty persons follow the guides like a flock of sheep, and it takes, perhaps, three minutes—it may be not so much—to show the Confessor's Chapel, a thing of picturesque beauty in itself, and abounding in associations. No doubt some of this number are of the description of sightseers who rush up to London for a week and have the whole town to see in that time. In one day they do the Thames Tunnel, the Tower, the Mint, they fly into the docks and bonding-houses, catch a peep at the Lord Mayor in the Mansion-House, Gog and Magog in Guildhall, run through the Rotunda at the Bank, the Royal Exchange, look in at St. Paul's, snatch a hasty dinner, hurry to get in time to one of the theatres, and, as

Pepys says, "so home" in a cab, with head aching and bewildered. This class of persons, no doubt, approve of the most rapid manner of showing monuments, for they do not care so much about the sights as being able to say what they have seen, and to boast "What do you think of that for a day's work?" There are, however, many in each company who would fain ponder amougst the tombs, either for the purpose of learning history, or in the enjoyment of the thoughts and ideas which cannot fail to be suggested even to the heedless.

THE DISCOVERY AT CHRIST CHURCH, OXFORD.

THE OXFORD ARCHITECTURAL SOCIETY.

At the second meeting of this society, held on the 5th inst. the Master of University College in the chair, Mr. James Parker said he had been deputed that evening to describe the curious chamber which had been so recently found during the repairs of the cathedral, and he would mention the four theories which had been suggested respecting it. He had a very effective drawing which Mr. J. Billing, the architect who was so satisfactorily restoring the cathedral, had kindly made, he believed, especially for the benefit of that society.

Immediately beneath the large organ-loft, the builders, in digging a trench for the hot-air pipes, came suddenly upon some masonry which proved to be a stone-built chamber, 7 feet long by 5½ feet wide by 7 feet high. The interior was plastered, with three small incised crosses marked on it, and also some traces of red colour. There was also a small recess, about a foot square, on the north side, and another a little larger on the south side. In one corner there was what seemed to be the springing of an arch either for the vaulting, or as a sort of shoulder to support slabs of stone which might have been the original covering. On the east side it seemed that a great part of the wall was wanting, so that, possibly, there might have been an entrance-doorway upon this side, the jamb of which both the architect and builder thought they could detect. The whole had been covered up, and upon the materials which they possessed, they had now to bring to bear what evidence they could from analogy or history of the original purpose of the cave.

The only similar instances which had been suggested were the crypts of Hexham and Ripon; but in both these cases there were a series of underground chambers, with passages leading to them, so that worshippers might enter and pray before the relics which were placed there. The first theory, then, was, that the subterranean building was a Reliquary Chamber, but the difficulty of access seemed rather to overthrow this theory.

Next it was suggested that, if not used for the exposure of relics, it might have been used for their safe custody, either as a usual receptacle for the costly shrine when not wanted for any ceremony, or for concealing it, with other valuable property, in time of danger. However, to this it may be said, that it would be a very awkward place for the ordinary keeping of the shrine,—and in the last position, viz. at the entrance to the choir, likely to be chosen for a place of concealment.

Thirdly,—He would suggest that it might have been the burial-chamber of St. Frideswide, and he therefore entered somewhat into the history of the present building, which was built by Wimund on the spot where St. Frideswide was buried. This virgin saint had been interred in the church belonging to her own nunnery; but this, as it was of wood—as was usually the case with churches at the time—had been totally destroyed by fire. There was, however, to this theory more than one grave objection, *e.g.*—that there was no room for a coffin to have been placed in this chamber from east to west, as was the customary mode of Christian burial in early times. Also, that the portion of the arch in the corner seemed to prove it to be the work of a period not anterior to the Norman Conquest.

He had still, however, a fourth theory, which he thought it right to mention, though he was not prepared with the arguments upon which it was founded,—namely, that it was connected with an altar tomb or shrine above, and might have been used for the purpose of effecting miracles, as there was room for a man to move about in it, and it seemed to have had originally an entrance, and probably a passage from the east end of the church.

Mr. Bennett differed with Mr. James Parker as to the probability of its being the grave of St. Frideswide. Its position was against it. It was neither near the high altar, nor yet in the centre of the church. It was not in accordance with what is known of sepulture at the time, and besides that, the orientation he considered also much against the theory. At the same time he would say a few words on the theory which Mr. Parker had mentioned last of all. He had seen constantly, on the continent, instances of the exhibition of images of saints at the entrance to the choir; and although he did not find, after a careful examination of the miracles which are recorded to have been wrought at the shrine of St. Frideswide, any notice of moving figures, yet he did find records of many which seemed to depend on a bright halo of light being suddenly and mysteriously thrown round the shrine, which might have been easily effected by any one concealed in such a chamber as this.

THE PURIFICATION OF THE THAMES.

Engineers may inlay the earth with sewers a hundred miles long, but the Thames will not be purified except by the removal of those vast banks of sewage guano which have formed under the noses of our forefathers since the time of Alfred the Great. Talk of Peruvian deposits indeed! Here are millions of tons of solid sewage, which, if it possesses but half the amount of fertilizing quality imputed to it, may at once be sold (*in situ*) by auction to our agriculturists: if it bring but a shilling a ton it would be all profit to our corporation.

It is to these mud-banks, stirred by tide and churned up by a hundred paddle-wheels from morning to night, that the filthy state of the river is entirely due. We cannot suppress steam-boats; but, with the consent of our conservators, we may abolish mud.

I propose, then, that a thousand barges be bought or hired, and twenty thousand strong arms employed to fill them with this "precious stuff." Father Thames will be but too glad to redeem his character by "tiding" it to the wilds of Essex or the marshes of Kent; and let the farmers be thankful and pay for it like Britons when brought to them, or suffer the shame of seeing it thrown into the sea.

If proof of the common sense and truth of these remarks be required, it may be had at a trifling cost, viz. filling a pint pot with Thames water at four o'clock in the morning, and another at four o'clock in the afternoon, at a given spot; then evaporating the water of each, and weighing the dry residuum. The difference of weight of solid matter of the samples will give the sum total of the paddle-wheel influence on the mud-banks before alluded to. E. P.

THE GOVERNMENT COMPETITIONS.

It may be useful to the profession to know, that the remaining sheets of the Westminster detail survey are lying at the office of the Metropolitan Board of Works, Greek-street, Soho-square. The sheet that joins on to the one issued by the Government to architects, contains the entire detail of the new palace, the Abbey, and Abbey precincts, &c. together with all the private property extending some distance up Birdcage-walk. This survey was carefully made by me in the year 1849, for the then Commissioners of Sewers. S. A. Matthews.

DECORATION OF THE LONDON GUILD-HALL, ON THE 10TH, AND THE "SHOW."

According to the newspapers, the ball was fitted up with portraits of the Sovereigns of Europe, and the eastern window had a representation of Peace descending from above encouraging Agriculture and Commerce. On the western window were delineated the arts, poetry, painting, sculpture, music, and architecture, in the centre of which was placed the glass star, and over the gallery, on the south side of the hall, was the now well-known plume of feathers of spun glass.

On either side of the entrance to the lobbies leading to the Council Chamber, stood a golden figure of Plenty, with baskets of flowers on their heads. The first lobby contained Bell's "Eagle-slayer," and a statue of "Genius chained," by Durham.

On the north side of the Aldermen's Court-room, a large temporary conservatory was fitted up, in the centre of which was the statue of Australia, by Bell, backed up with a picture representing Melbourne, painted by Mr. Frederick Fenton. There was also in the Aldermen's room a bust of the Right Hon. the Lord Mayor, by Lough; the statue of Dorothea, by Bell; and the statue of Whittington, by Carew. The representation of the Bayeux tapestry, mentioned by us on a previous occasion, and some other decorations of other years, appear to have performed service in the approaches.

In the "Show," in the morning, the proposal made in this journal some years ago, at the advent of Lord Mayor Musgrove, to improve the character of the pageant, was to some extent followed out by the introduction of some allegorical devices by Mr. Sheriff Mechi, which seemed to excite more interest than any other portion of the procession. These devices consisted of a traction engine and an endless railway, specially adapted for agricultural purposes, drawn by six horses (Boydell's patent); a prize reaping-machine in a car, decorated with agricultural produce from Tiptree-hall Farm, drawn by four horses (Burgess and Key's patent); and a steam plough drawn by two horses (Fowler's patent).

BUILDING ACCIDENTS.

Fall of a Bridge near Darlington.—A bridge, just erected over the Tees at Dinsdale, fell last week while the men were removing the centres from the arches. Two of the men were killed and several severely injured. The bridge was being erected on old stone buttresses, turning upon them four brick arches, three spanning the river, and one land arch on the Durham side, varying from 45 feet to 48 feet span. When the arches gave way, nothing remained but the land arch and the stone buttresses.

Fall of a House at Longton.—An old house in George-street, close to the gable of which some excavations for a cellar had been brought in close proximity, fell last week, while inhabited by a family of poor people, who all, however, escaped in time.

Fall of Scaffolding near Rochdale.—An accident took place at a new house in course of erection at the Sparth bar, on Thursday in last week. The third story was nearly up, and the scaffolding was so insecurely fixed that just as the men were commencing work it fell down. The planks, bricks, and mortar fell upon the men, and most of them were sadly cut and bruised about the head.

Fall of a Floor in Perth.—In Bridgend, a savings-bank for children has existed for some time, called the Kinnoull Penny Savings Bank. The business was conducted in an old house for cheapness. On Saturday a greater number of depositors than usual were ready with their pennies: when the doors opened, a rush ensued, and down went the floor, accountant, depositors, and all, into the cellar. Happily, no great harm was done, and the savings were all saved.

Fall of a House in Paris.—The inhabitants of the Faubourg St. Antoine were lately alarmed by the fall of a house, in course of erection, in the Passage Richard Lenoir, No. 7. It had already reached the third story, and its present destruction, says *Galignani*, is complete. Under the rubbish were buried six workmen. One had received dangerous wounds, and another expired on the way to an hospital.

THE EARLY WATER SUPPLY OF LONDON.

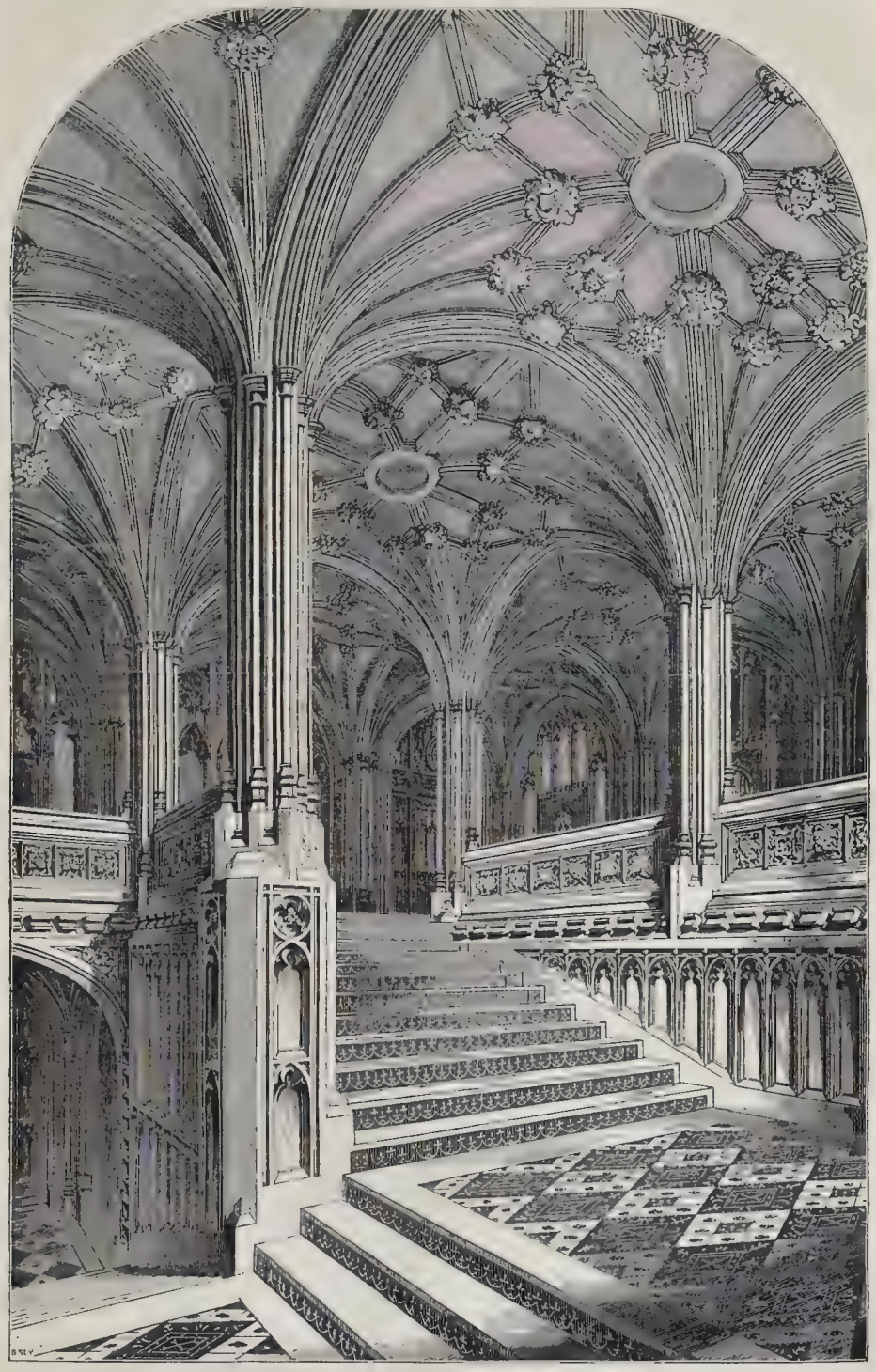
With reference to your account of the conduits which supplied a part of London thirty years ago, thirty years ago I made some examinations in Lamb's Conduit-street at the northern end, and found some remains of what I take to have been Lamb's Conduit, and which I have every reason to believe still continue in the same state. There were two conduits under the middle of the street, with arched communication, and a doorway into the front area of No. 42, Lamb's Conduit street.

This neighbourhood originally consisted of a fine yellow red gravel, of some 12 or more feet deep, resting on a clay, and appears to have been abundantly supplied with fine water running on the clay, as the many old pumps and receptacles prove. Among these last I may class another construction under the back premises of No. 2, Chapel-street, Lamb's Conduit-street, evidently an ancient conduit, 6 feet wide and 8 feet 6 inches high, built in a chalk-like freestone, with blunt-pointed arch of the same material.

With respect to the conduit in Conduit-street, Hanover-square, the channel which supplied it—a brick sewer-like construction—ran past the fronts of the houses in Avery-row, behind Bond-street. It was partially destroyed some thirty years ago, when the large sewer was rebuilt there, at which time I saw some 30 feet in length of it in very good condition.

Some twenty-five years ago the paving commissioners of St. Andrew's, Holborn, and St. George's the Martyr, caused wells to be dug and pumps to be erected in various parts of these parishes, for supplying the carts for watering the streets, among the rest at the west end of Middle-row, Holborn. The surveyor of pavings under whose directions these wells were dug, told me that the influx of water into the excavation for that well was so great that they could not keep it sufficiently down with the means at command to enable them to carry it so deep as intended. This accords with your notice of the "Old Bourne, a rivulet spring which rose near the Middle-row, not far from the bottom of Gray's-inn-lane." Aquarius.

A Glass Roof for the Post-Office, St. Martin's-le-Grand. — A massive scaffolding in the vestibule of the Post-Office has been raised in order to replace the roof with one of glass. Other alterations are in progress to remove the entire receiving-department to the south wing.



THE PEERS' STAIRCASE, WESTMINSTER PALACE.—SIR CHARLES BARRY, R.A. ARCHITECT.

[See p. 621, in present number.

CHURCH-BUILDING NEWS.

Newark. — The new burial-ground here, though in an unfinished state, has been opened for interments. The ground is about 9½ acres in extent, and is situated on the London road. The chapels are in the Gothic style of architecture, and were designed by Messrs. Bellamy and Hardy, of Lincoln; and built by Mr. J. Whitworth, of Newark. They are erected in the centre of the ground, being united by a lofty arch, under which passes the principal walk, and over it stands a decorated steeple and spire, 80 feet in height. The entrance lodge is of brick and stone. The front palisade and entrance-gates were designed by Messrs. Bellamy and Co. and cast at the foundry of Messrs. Midworth, of Newark.

Norwich.—The completion of the restoration of St. Peter's Church, it seems, is now determined upon, and the nave is to be benched in a similar but less costly style to the chancel benching: 400*l.* have been already contributed, and 200*l.* more are required for this purpose.

Sutton-cum-Lound. — The parish church of Sutton-cum-Lound, near Retford, has been re-opened. Opposite to the springing of the Norman chancel arch, the architect has put a half arch as an abutment in the north aisle, also a buttress opposite the south side of the church. The east window, of the Flamboyant style, has now been restored. Throughout the church there is carried out a high-pitched roof, with carved stone heads, at the springing of each principal. The nave south wall has been cased throughout with new ashlar stone. In the same side of the church the architect has put in two traceried windows in the Perpendicular style. The porch has been rebuilt. The interior fittings are of oak, having panelled heads with poppy-heads, and some old benches have been cleaned and restored, the rest being made of deal stained to assimilate with the others. The flooring is of red deal, the aisles being of rubbed Yorkshire stone, and the chancel is paved with similar stone. The stained glass centre light in the east window is a figure of our Lord seated, and below this the Crucifixion. It was painted by Mr. O'Connor, of London. The edifice has had all its pinnacles, battlements, carved gurgoyles, and cornices, restored. The churchyard was also partly levelled, and the walks widened and laid with gravel. Mr. Arthur Wilson, of Peterborough, architect, was entrusted with the restoration of the church, as well as that of the church and the building of the Rectory-house, at Treswell, near Retford. Mr. William Lee, contractor, Mr. Roberts, joiner and builder, and Mr. W. Welch, plumber, all of Retford, carried out the designs of the architect.

Maidstone.—The vestry of Maidstone have just resolved to purchase, from the Earl of Romney, 20 acres of ground, near Mangravit Wood, for a cemetery. The price they are to pay is 3,775*l.* Plans for chapels, &c. were to be presented at a future vestry meeting.

Guildford.—The cemetery for the town of Guildford was consecrated by the Bishop of Winchester on the 29th ult. The ground contains 4 acres, one third of which is appropriated for the use of the Nonconformists. The chapels are built in the Early Decorated style, being equal in size: the Episcopal Chapel has a bell turret. Godalming stone is employed for the general walling, with Bath stone dressings, to the chapels, and red brick dressings to the sexton's lodge. The total cost, including purchase of land, was 1,900*l.* The works have been carried out under the superintendence of Mr. Robert Wheeler, by Messrs. J. Moon and Son, builders, Guildford. Mr. W. Smith was sub-contractor.

Fosbury (Dis). — Christ Church, Fosbury (Wilts), recently erected, at the expense of Mr. R. C. L. Bevan, was consecrated on 30th ult. by the Bishop of Salisbury. The church is late Middle Pointed, consisting of a nave, ritual chancel, organ-chamber north of the chancel, with vestry and south-western tower. The distinction between nave and chancel is, that the chancel is elevated on a dais, that the timbers of the roof are elaborated, and that the windows differ from those of the nave, the seats being stallwise. The windows are glazed throughout with Grisaille glass, in varied floriations from natural productions, being relieved with colour. There is a considerable number of texts about the church, arranged polychromatically. Externally, the church is of flint; the freestone work of Bath. The windows have discharging arches, alternated with a peculiar glazed brick of the locality and stone. The tower has three stages, the lower forming a porch, the interior of which is in constructive colours, of brick, and the tower is surmounted by a beacon turret, terminating the staircase to the respective stages. A parsonage-house, in the same period, is built in connection. Mr. Teulon is the architect, and Messrs. Fassnidge, of Uxbridge, are the contractors who executed the work.

Bradford.—The old parish church of Bradford, says the *Bath Chronicle*, is at length to undergo some kind of reparation, if not of actual restoration, and the work has already been commenced. The chancel gallery has been removed, the chancel arch restored, and that and the altar flooring raised and newly paved: the high, old-fashioned pews have given place to new low oak stalls; and it is in contemplation to increase the accommodation very considerably by re-seating throughout. A stained eastern window is in course of erection, and other alterations and improvements are contemplated.

Curland (Taunton).—The new parish church of Curland, perhaps the smallest church in the county, says the *Taunton Courier*, was opened for Divine service on Tuesday before last. The new building occupies the site of the old one. It has been rebuilt principally at the cost of the Rev. Prebendary Lance, rector of the adjoining parish of Buckland St. Mary. The church is built of flint, with Ham-hill stone for the windows, &c. It is from a design by Mr. Ferrey, carried out by Mr. Davis, of Taunton. The mason's work was under the superintendence of Mr. J. Billing, of Buckland St. Mary: the glazing was by Mr. Gould, of Chard; the painting and diaper work for the reredos by Mr. A. Stansell, of Taunton; and the tablets containing the commandments, in illuminated characters, by Mr. T. D. Ward, of Taunton. The roof is low pitched, and of stained deal, and at the west end is a small open bell turret. The eastern window (a three-light with medallions), is filled with stained glass: the centre piece is the Crucifixion, and the side lights represent the Agnus Dei, and the Pelican feeding her young. The pews are low and plain: about seventy persons, including children, may be accommodated with seats. The church has been constructed of the old materials, together with those of the old chancel of the church of Buckland St. Mary, from which also the west window, together with four out of the five side windows have been given.

Shrewsbury.—Arrangements are being made for the transfer of the contract for the cemetery works to Mr. Treasure, of Newport. The new cemetery buildings, according to the architect, are being proceeded with satisfactorily.

Lilleshall (Shropshire).—The parish church of Lilleshall has been restored and reopened. Mr. Norton was the architect employed. The south wall has been rebuilt, with new buttresses, and windows in harmony with the general design. The small Norman doorway, marking the original limit of the chancel, has been restored and let into the building. The south porch has been rebuilt with a gabled roof in ornamental carving, and the old doorway has been preserved. In the interior the unsightly western galleries have been removed. The three-light window in the south wall of the chancel has been reconstructed and filled with stained glass by Mr. O'Connor, in memory of Lord Frederic Leveson Gower. The subject is the ascending Saviour in the midst of his disciples. Immediately beneath it is a brass memorial tablet, by Mr. Hardman, of Birmingham, with inscription. The chancel is paved with Minton's encaustic tiles, a present from the manufacturer to the vicar. The communion-table, of carved oak, ornamented, is the gift of Mr. Yates, of Shiffnal, the builder. The open sittings in the chancel, as well as those in the body of the church, are of Christiana fir, stained and varnished. The nave arcade has been pierced by a new arch. The oak roof has been freed from paint and whitewash. The doors are constructed of solid oak, with hinges and decorative scrollwork in iron. The lectern of carved oak was presented by the architect. The apparatus for warmth is that patented by Mr. Haden, of Trowbridge. The tenders sent for the necessary works varied from 1,860*l.* to 1,145*l.*; and the whole amount subscribed towards the restoration was 1,044*l.* 5s. 6d. The stained window, which cost 59*l.* was erected by the unaided contributions of the parishioners. The lancet window, depicting the Good Shepherd, and executed in stained glass by Mr O'Conner, was the gift of Mrs. Ralph, of Hornington Grange, associated with her six sisters, the Misses Iles, of Binbrooke-hill, Lincolnshire. There is still a deficit of 200*l.* The old church accommodated 256 adults, and 120 children: the present provides 530 sittings, 404 free.

Lichfield.—Within these last few weeks workmen have been actively employed in making alterations in Lichfield Cathedral. The principal alteration hitherto effected is the removal of eight walls that filled up eight arches, four on each side of the chancel, at the end nearest the communion-table. The chancel, in consequence, is much lighter: a view of the aisles to the chancel, with the monuments they contain, is also obtained, and the proportions of this part of the structure are brought more fully under the eye. A large window that surmounted the screen separating the nave from the chancel, has also been removed, and it is intended to remove the organ over the screen, which intercepts the view of the roof, from end to end. The walls were erected about fifty years since under the direction of Mr. Wyatt, for warmth; but hot water-pipes are now being laid down. The workmen employed lately discovered, beneath the pavement, a stone coffin, containing a skeleton, the legs of which were covered by a pair of old-fashioned boots: there was no remnant of any other article of apparel, and the boots, except the soles, were much decayed. It is conjectured that the skeleton is that of one of the cavaliers or republicans by whom the cathedral was defended when besieged, during the civil war, by Lord Brooke, or Prince Rupert.

Willenhall.—St. Ann's Episcopal Chapel, just opened, had its origin in a design to raise a school-room, licensed for Divine service. Mr. Henry Jeavons had a strong desire to enlarge the original proposition, by making the structure ecclesiastical in its character and purposes. This gentleman, with subscriptions to no great amount, undertook the whole responsibility of the work, without an architect. The walls are of columnar basalt, obtained from a quarry at Bentley, and the dressings freestone. The edifice is said to be in the Early English style, with porch, nave, chancel, and vestry. Accommodation is provided for 200 worshippers in open sittings, free.

West Derby (Liverpool). — The new parish church of West Derby village has been consecrated. The church is in the Decorated style of fourteenth century, and is cruciform, with a massive tower. Mr. Scott was the architect; Mr. A. Walton acting as his assistant and clerk of works. Mr. Barker, of West Derby, was the builder; and Messrs. Jones and Jump, of Liverpool, executed the joiner's work. The edifice is built of the red sandstone found in the neighbourhood, excepting the interior and ornamental work, which is in white Yorkshire stone. The plan being cruciform, comprises nave, aisles, transepts, north and south chapels, and apsidal chancel. The length of the church is 155 feet, the breadth 60 feet. The tower is 175 feet high. There are seats for 1,200, all plain open benches. The roof is very lofty, and is supported by two rows of pointed arches on massive pillars, slightly ornamented. At each end of the church is an illuminated window. That at the west end is of large size: it has been placed there as a memorial of the late Earl of Sefton, and cost 450*l.*: it was designed and executed by Mr. Wailes, of Newcastle. The leading figures are the four great Prophets, with minor designs, embracing scenes from the Old and New Testaments. The cost of the church is estimated at 12,000*l.* raised by voluntary contributions.

Birkenhead. — The College of St. Aidan, at Claughton Firs, Birkenhead, has been inaugu-

rated by a grand banquet, presided over by the Marquis of Westminster. St. Aidan's College is a theological training-school. The land was purchased from the Birkenhead Commissioners for 9,325*l.* and the building has already had some 12,000*l.* or 14,000*l.* expended upon it. When complete it will form a quadrangle: at present only the principal *façade* and west wing are constructed. The style is the decorated Tudor. The building has three floors above the basement story. There are single residences for seventy-six students in the west wing, besides lavatories, lecture-rooms, and bath-rooms. When the whole of the plan has been completed the college will comprise upwards of 200 residences. The principal lecture-room and dining-hall are at present temporary buildings in rear of the front. To the right of the entrance-hall are the present library and museum of the college. Immediately over the entrance-hall, and occupying the principal portion of the first floor, is the chapel, which will accommodate about 150. The whole of the east end of the front is devoted to the residence of the principal and his family. The architects are Mr. Wyatt, of London, and Mr. Henry Cole, of Birkenhead.

St. Helen's.—A contract has been made by the burial-board with Sir R. Gerard, for land near to Windleshaw Abbey, for a cemetery for the parish, and the board has been authorised to borrow 14,000*l.* to purchase the land and erect the necessary chapels thereon.

Salford.—On Thursday before last the top stone of the spire of the Episcopal Chapel at the Cemetery was set by Mr. J. P. Pritchett, of Darlington, the architect. The spire is 90 feet high, and the spires of the other two chapels will be 80 and 70 feet respectively. The chapels are Episcopal, 36 feet by 20 feet; Protestant, Dissenters, and Roman Catholic, 33 feet by 18 feet each, and will, with the lodge, cost 2,500*l.*

Ennerdale.—The old parish church at Ennerdale, says the *Carlisle Journal*, is to be taken down next year. A new erection in its place will be begun about February, and finished probably about midsummer. The funds are provided by subscription. Mr. C. Eaglesfield is the architect.

Aberlemno (*Brechin*).—The parish church of Aberlemno, says last week's *Montrose Review*, after having undergone extensive repairs and alterations, was opened on Sunday last for public worship. The work is not yet completed. An apparatus for heating it is being erected. The walls have been heightened, Gothic windows inserted, and the roof renewed. The designs and plans were furnished by Mr. Maclaren, of Dundee, architect.

Kildalky (*Meath*).—The consecration of Kildalky Church, county of Meath, took place on 23rd ult. The church has been built by Mr. Sharpe, from the design of Mr. Joseph Welland.

PROVINCIAL NEWS.

Fulbourn.—A glass cylinder, containing one of each of the current coins of the realm, a vellum scroll, with inscription, &c. was lately abstracted from the Cambridgeshire Lunatic Asylum works at Fulbourn, three miles from Cambridge. The stone was laid on the 30th of September, and the thieves, to get possession of the coins, of the value of 2*l.* 1s. 8d. had to remove several layers of bricks, and to lift, by means of leverage, a stone weighing half a ton.

Bristol.—The new West of England Bank, on the Exchange, will be opened, says the local *Times*, for business on the first day of the new year, if not earlier. The paper quoted, in rather a high-flown article on the subject, says, "Marvellous as is its ornamental front, we think the bank interior just as provocative of admiration, with its vestibule or entrance-hall, like a little Temple of the Winds, with circular sides and dome supported on graceful caryatides,—its spacious chambers for directors and its manager's parlour,—apartments fit for financial princes. The wonder of all, however, is the great banking saloon, with its Corinthian pillars and rich roof, as elaborate and gorgeous as moulder and gilder can make it; there being on the ceiling (as some one remarked) a foretaste of the treasures to be stowed away in the cellars. It is a most superb apartment, and, if architectural attraction could reconcile a man to any rate of discount, no customer should ever go away dissatisfied. On the west side of the saloon is a most gorgeous alcove, in which, with rays of a golden glory above his head, the manager sits enthroned, commanding a view of all that is going on in the great banking saloon, while a side door leads him, by a step or two, into that small but awful apartment, destined yet to act like a vapour-bath on many a poor body,—we mean the sweating-room. The subterraneous parts of this pecuniary palace are hardly less interesting than those above. The strength of the underground apartments is very great."

Devonport.—The Keyham tunnel, which is being executed by Mr. Smith, of London, contractor, is now drawing to a close. A passage has been effected between Keyham and the dockyard. The length of the tunnel, says the *Plymouth Times*, is nearly three-quarters of a mile: it passes under Moon-street, Morice Town, continuing its course under the gun-wharf to the dockyard, at a level above the elevation of the highest spring-tides.

Warwick.—The Warwick drainage and waterworks are being proceeded with by Mr. Marriott, the contractor. The tanks in the park and near West-street are finished: pipes are being laid: the filter-beds near Porto-Bello are made, and the engine-house is nearly completed. Foundations have been put in for the water-tower in Market-street.

Stockport.—The corner-stone of the Portwood new bridge over the Goit, leading from Warren-street to Wharf-street, Portwood, has been laid.

Masham.—The inauguration of the Riddell Memorial Mechanics' Institute at Masham took place on Monday before last. The structure is from a design by Messrs. Perkin and Backhouse, of Leeds, architects, and is in the plain Italian style of architecture, presenting three elevations. It consists of a large class-room, fitted up with desks and benches, similar to the National Schools, a reading-room, a library, vestibule and staircase, parlour, kitchen, &c. on the ground floor, and lecture-room 40 feet by 20 feet, and 20 feet high, with ornamental roof and panelled ceiling, a committee-room and ante-room, a room for a museum, &c. on the upper floor. The whole cost has been raised by subscription and bazaar, as a memorial of the late Rev. Thomas Riddell, vicar of the parish.

Dunse.—The new Corn Exchange in New Town-street, Dunse, has been opened. The building has been erected at a cost of 1,100*l.* raised partly by a company of shareholders of 2*l.* 10s. per share, and partly by donations. It has been erected after a design by the late Mr. Cassy, a local architect. The foundation-stone was laid in June, 1855. The exchange is lighted from the roof, which is of stained wood in the interior.

Stow.—A new Town-hall has been erected here, according to the *Border Advertiser*. The ground floor contains, besides kitchen and other conveniences, refreshment-room, and the reading-room and the museum, divided by a sliding partition, and having separate entrances. The hall is 43 feet by 28 feet with open roof of stained wood. It is lighted by four windows, two in each end.

Glasgow.—Messrs. Forgan, Marshall, and Waddell, of this city, have contracted for the Duntreath division of the Loch Katrine Waterworks, at a trifle above 48,500*l.* which, says the local *Gazette*, is below Mr. Bateman's parliamentary estimate. This contract embraces about five miles of country, commencing near the village of Strathblane, and running past the village of Killearn.

Inverness.—The new harbour works at Inverness include the extension of the principal pier 210 feet nearer the town, and the construction of a long embankment from the wooden bridge to the Thornbush Pier. The last of these works has been going on since May 1855, under the superintendence of Mr. Macmillan, who designed the embankment, and Mr. Syme, contractor. The embankment is 1,200 feet long, and from 50 to 150 feet broad. The slope averages about 35 feet in depth, and is formed of masonry, topped with green turf. On the extension of the Old Quay, Mr. Hendry, the contractor, has had a number of men employed all this summer. When completed, the harbour branch of the Inverness and Nairn Railway will be run along the pier. The railway is already within a few yards of the quay.

STAINED GLASS.

Fincham.—Mr. Wilmshurst has just completed and fixed, in the church at Fincham, near Downham, Norfolk, two memorial windows. One represents the Resurrection of our Lord: the other, in memory of John de Fincham (the founder of the church), contains sacred emblems, with inscription and armorial bearings in the tracery, &c. The west window was painted by Mr. Wilmshurst for the same church a short time since, and is filled with figures of the four Evangelists, beneath canopies; various emblems filling the space beneath the figures.

Denton.—A stained glass east window has just been erected in the chancel of Denton church, to the memory of the late Mr. John Lewis Lamotte, brother of the rector. The window consists of three openings, with tracery, and is in the geometrical Decorated style of architecture. In the three principal openings are the figures of St. James, Our Lord, and St. John, on pedestals. Over each figure is a canopy work, the whole being enclosed with a border. Two smaller windows have also been erected north and south of the chancel, representing the Birth and Baptism of Our Lord. These windows are the works of Messrs. C. and A. Gibbs, of London.

Kersal Moor (*Manchester*).—Another painted window has been added to St. Paul's church, Kersal Moor. This church, says the *Manchester Courier*, possesses some of the finest stained glass windows of any ecclesiastical structure in the diocese of Manchester, mostly the gifts of wealthy and benevolent members of the congregation of the rector, the Rev. H. W. McGrath, M.A. The new window is in the south aisle, and is the gift of Mr. John Harding, of Broughton, in memory of his father. It is in the Perpendicular style, and consists of three lights, with trefoil heads, the emblems and tracery being in accordance with the character of the general architecture of the church. The centre light of the window contains the Agnus Dei, and on either side are the emblems of the four evangelists, St. Matthew being typified by an angel bearing a scroll, St. Mark by the lion, St. Luke by the bull, and St. John by the eagle. The borders are composed of oak foliage, and roses, in green, violet, ruby, and blue. The window is the production of Messrs. M. and A. O'Connor, of London.

THE GAS COMPANY OF BUENOS AYRES.

The English newspaper, *British Packet*, published at Buenos Ayres 27th September, 1856, contains a lengthy report from the directors of the Buenos Ayres Gas Company, from which we learn that since May 23rd, 1856, a plentiful supply of excellent gas has been furnished for public use. The average consumption during the month of September, 1856, has been at the rate of 30,000 cubic feet per day: the present gas-making apparatus is sufficient to produce 100,000 cubic feet per day.

In June, 1855, the company's engineer, Mr. Wm. Bragge, concluded the contract with Messrs. Edw. T. Bellhouse and Co. of Manchester, for the buildings, engineer's work, main-laying, and completion of the whole for the sum of 46,955*l.* On the 25th of March, 1856, the city was first publicly lighted with gas; and in the beginning of July the company possessed a complete manufactory, capable of producing and distributing above thirty million cubic feet of gas per annum, with nearly thirty miles of main piping, varying in bore from 12 inches to 3 inches.

The report of the directive commission says,—

"The contract entered into with Messrs. E. T. Bellhouse and Co. for the erection of the works, has been now completed with very trifling exceptions; and it is an act of justice towards the contractors to record here the due fulfilment of their contract, both as regards the prompt execution of the works and the quality of the materials employed. It is due to their liberality, and the indefatigable activity of our engi-

neer, Mr. William Bragge, appointed superintendent of the works, by mutual consent, that the distribution of gas for public and private consumption was commenced on the 25th of May, and has since continued with uninterrupted regularity."

The gas-making apparatus consists of the following:—Fifty D-shaped retorts, about 8 feet long each, set in beds of five retorts each, the flues descending to an underground main flue; the hydraulic main, 15 inches diameter, with ascension and dip pipes; complete scrubbers and condensers, set perpendicularly; four circular dry lime purifiers, 8 feet diameter, each having five shelves for lime, with a central change valve box, surmounted by a crane swinging round on the centre, so as to lift any of the purifier covers; a large station meter and governor, two single-lift gas-holders, 60 feet diameter and 18 feet deep, on the self-balancing principle; with the necessary valves, connection pipes, &c. The buildings in the establishment are strong and well designed for their purpose, built of the native brick (13 inches by 6 inches by 1½ inch), set in lime mortar. The gasholder tanks are of similar brickwork, but set in cement. The octagonal chimney is built of bricks made in the country, of the English size, 9 inches by 4½ inches by 3 inches. There is an 8-horse steam-engine for pumping, and for turning, boring, grinding, &c. in the workshop; and a complete ironfoundry, with its independent engine, for blowing the cupola, where lamp-posts, brackets, pipes, and fittings, are being cast for the use of the company. Dwellings for the manager, and for the workpeople employed on the works, are being erected.

HOW TO MAKE A FIRE IN A COMMON GRATE WHICH SHALL SAVE HALF THE COAL AND BURN THE SMOKE.

Under the heading as above the *Builder* published, on the 2nd of February in this year, certain rules for arranging the materials in a common fire-grate to accomplish the promise of the heading. As the instructions given have been followed by many, and as the results are reported to be successful (a glow of triumph), it may not be out of place at this time to re-publish the new method of fire-making, with "additions and emendations."

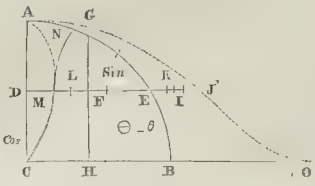
Clean out your grate: cover the bottom with a plate of sheet iron, cut to fit: place your coals in the grate to the level of the underside of the top bar, keeping the larger ones to the front, to prevent waste. Light your fire on the top by means of paper, wood, and coke (the cinders of a previous fire), or any prepared fire-lighting material, and allow it to burn downwards undisturbed. Never poke from beneath; but, if the fire is dull, gently disturb and draw together the upper portion of coal and cinders, allowing the fire to burn gradually downwards.

By this method a pleasant fire is obtained sooner than by lighting from beneath; the smoke is burned; there is neither dirt nor dust underneath the grate, and a warmer fire is obtained with about half the quantity of coals. The plate of sheet-iron is an improvement: but this a correspondent, "E. R." pointed out (p. 150, No. 684). If all the house fires in the metropolis were made and burned on the improved plan, there would be no visible smoke: and think of the saving, by consuming half the weight of coals now used!

There is an old proverb in the West of England, which must now reverse its point. When anything was about to be done stupidly or wrongly, the party concerned was said "to be as bad as the Irishman, who, in laying a fire, put the coals in first, and wood on the top." It has been said the plan is Irish, fires having been lighted from the top in "Old Ireland" "time out of mind." If this is so, Paddy has been right for once. Robert Rawlinson.

Colour in Slating.—A good effect is often the result of accident: being short of green slate, and not wishing to use that horribly cold blue, I intermixed the red Bangor in stripes, allowing the green slate to predominate: the effect is *very* good. The *light* colour should always begin and be deeper, the *dark* end the roof. The course ran 5 green, 3 red; 4 green, 3 red; 4 green, and 3 red.—Somerset.

THE TRISECTRIX AND THE CUBITRIX, TWO NEW MECHANICAL CURVES.



Describe a quadrant A B C. Draw the sine D E; bisect D E in F. Draw the sine G F H.

Make F I = chord E G, E J = 2 E I, E K = ⅓ E J, D L = ⅓ D E, L M = E K, and the chord E N = E M.

Then the point N trisects the arc A E, and M is a point in the trisectrix A M C.

Make the arc A E = three times arc A N, E M = chord E N, D L = ⅓ D E, E K = L M, and E J = 3 times E K.

Then E J is as the cube of E M. and J is a point in the cubitrix A J O.

$$ME = 2\,(\sin.\tfrac{1}{3}\theta),\quad EJ = (2\,(\sin.\tfrac{1}{3}\theta))^3.$$

By the construction—

(1.) $\sin.\frac{1}{3}\theta = \frac{1}{2}\sin. + \frac{1}{2}(((1-\frac{1}{4}\sin.^2)^{\frac{1}{2}} - \cos.)^2 + \frac{1}{4}\sin.^2)^{\frac{1}{2}} - \frac{1}{2}\sin.)$.

(2.) $\cos.\frac{1}{3}\theta = (1-(\sin.\frac{1}{3}\theta)^2)^{\frac{1}{2}}$.

By differentiating (1)—

(3.) $\cos.\frac{1}{3}\theta = \cos. + \left(\frac{-\frac{1}{4}\sin.\cos.}{(1-\frac{1}{4}\sin.^2)^{\frac{1}{2}}} + \sin.\right)((1-\frac{1}{4}\sin.^2)^{\frac{1}{2}} - \cos.) + \frac{1}{4}\,si.\,co.\,((1-\frac{1}{4}\sin.^2)^{\frac{1}{2}} - \cos.)^2 + \frac{1}{4}\sin.^2)^{\frac{1}{2}}$.

$-\frac{1}{2}\cos.$

By putting into these three forms the extreme values of sine and cosine, viz.—sine = 1, cosine = 0, and sine = 0, cosine = 1, it is seen that (2) and (3) are identical, and consequently that (1) is true; otherwise we must suppose that the general formula of differentiation $\frac{dy}{dx} = \frac{df(x)}{dx}$ may be true for the extreme values of x and y, and untrue for the intermediate ones, which is absurd.

The construction was suggested by an approximation published in the *Mechanics' Magazine*. vol. lxiii. p. 564, col. 2. J. P. W.

THE ANCIENT BELL-STEEPLE OF WORCESTER CATHEDRAL.

At the anniversary meeting of the Worcester Diocesan Architectural Society, recently held, Sir T. Winnington read the following paper on the Clochium or Ancient Bell-Steeple of Worcester Cathedral:—

The object of this association has hitherto been to illustrate the architectural remains of edifices that either wholly or partially exist at the present time, to describe them in detail, and reconstruct, as far as conjecture or analogy will permit us, the original design and intention of their founders. I now propose very briefly to call your attention to a building, of which no trace (as far as I am aware) is now existing, but which has been rendered familiar to local antiquaries by the ancient documents that describe it in the fullest detail, and the drawings it is our good fortune to possess of its form and structure. I allude to the clochium or leaden steeple of the Worcester Cathedral, and will for that purpose make use of the elaborate description contained in the "Observations on Worcestershire, by Mr. Nathaniel Tomkins," a manuscript in my possession:—"The leaden spire, anciently called ye Clochium, was the belfry until the year 1374, when the tower of the church was finished. It consisted of an eight-sided base of stonework, of height even with the embattlements of the church, viz. 60 feet. It was placed so near the church that there was only space between for processions. The diameter of the base of stone was 60 feet; the thickness of the walls 10 feet; the spire of lead above the base of stone in height to the weathercock 50 yards, and the entire height with the stonework and spire 70 yards from St. Michael's churchyard. The weathercock was on a level with the neat spire of St. Andrew's Church, in Worcester; but St. Andrew's Church standing upon a little lower ground, its weathercock is from the ground 77 yards, or 231 feet. That which most amazed beholders was the excellency (in this spire) of the contignation of such massive timber, all of which being Irish and unsawed, polished only with the axe, not having one sawed side. 'It was the design,' says the enthusiastic writer, 'of no ordinary Vitruvius: for all dimensions the like is not perhaps in Europe.' The bells were but five, as we perceive by the frame and stocks whereon they hanged, which were left in the place when the bells were gone. They were of equal weight and tone with those at York, viz. 6,600 lbs. the biggest, and unison with an open pipe of 25 inches long, but in the apprehension of some men the double thereof, the greatness of the sound deceiving their judgment in the tune." Mr. Tomkins then proceeds to compare the bells with some that at that period existed in the Palace Yard at Westminster, as well as others in the cathedral churches of Exeter and Lincoln, and makes use of mechanical terms relating to their sound and quality, which, as I do not profess myself competent to explain their meaning, I have purposely omitted. It would, indeed, require a scientific lecture on music fully to comprehend this portion of the manuscript. Mr. Tomkins then goes on to describe the great gatehouse, the lavatory, dormitory, with many other portions of the cathedral and its precincts. From the description I have just quoted it will appear that the clock, or rather bell steeple, was a building of no ordinary importance, both in structure and elevation, the latter exceeding the central tower of the cathedral (from the description, though it hardly appears to do so in the drawings), and rivalling the spire of St. Andrew's; I mean the ancient spire, measuring 231 feet, now replaced by its elegant and taper successor, which exceeds it in height by about 15 feet, but probably far beneath it in architectural beauty. We have reason to believe that this bell steeple was erected by St. Wulstan, who, while prior of the church, before his episcopacy, between A.D. 1052 and 1062, built a tower for the bells, probably the base on which the spire was raised. It survived the removal of the bells, or possibly a portion of them only 273 years; for we learn that in the year 1647 the leaden steeple adjoining St. Michael's Church was pulled down, and the materials sold for 617*l.* 4s. 2d.; the principal part of which was given to repair several churches in the county, damaged in the civil wars. Dodderhill had 80*l.* Castlemorton, 80*l.* and the rest in proportion. In a pen-and-ink drawing of the cathedral, executed somewhere about 1670, in the Dineley MSS. the basement of this tower is represented, in only one story, much less elevated than the battlements of the church as heretofore described, probably the remnant of the destruction in 1647. Fuller, in his "History of Abbeys," has given a rhyming translation of the Latin inscriptions on the bells in this steeple, which is quoted in Green's "History of Worcestershire." The detached belfry, though not a general, has been far from an unusual feature in the ancient cathedral and conventual churches of this realm: the towers of the original Norman churches being for the most part low, and of lantern construction, rendered some other contrivance necessary for the bells. At Chester, parallel with the west front, and a short distance to the north, stands a massive square tower, 120 feet in height, the upper story octagonal, flanked with small turrets. At Salisbury formerly stood a tower, multangular in form, surmounted like that in Worcester by a leaden spire, with walls and buttresses similar to the Chapter-house and cloisters, and a single pillar of Purbeck marble in the centre, supporting the bells and spire with its leaden covering. Abbot Lichfield's tower, at Evesham, built in the latest period of Pointed architecture, stands in a line with the north transept of the destroyed Abbey Church. There is a tradition also of one adjoining Tewkesbury Abbey: other instances probably exist; nor is the detached steeple uncommon in parochial churches: we have numerous examples in England, particularly in the eastern counties, and not unfrequently, but in a ruder form, in the county of Hereford. The round towers of Ireland, with their much disputed origin and

antiquity, invariably attached to religious edifices or their remains, claim some analogy with this subject. Nor must we forget the campanile of the Lombard churches in Italy, with their fine proportion and exquisite details of brick and marble, so well known to all admirers of ecclesiastical architecture, which, too, form some contrast to the single and rude edifices of northern Christianity, one of which we have attempted to describe in this paper.

DOVER.

The extensive works at the Castle, contracted for by Mr. Diggle last year, in repairing old and building new batteries, have just been completed. The excavations for the foundations of the officers' quarters have been finished by Messrs. Lee and Lavers, who have shifted upwards of 100,000 cubic yards of chalk from the inside to the outside of the castle walls. There is an extensive slip of earth and consequent destruction of a retaining wall at the foot of it near this work, and appearances of similar ones around. Mr. Moxon has been declared the successful competitor for the new officers' quarters at about 40,000*l.* some people say, to be erected from the designs of Mr. Salvin, in the mediæval style.

The works going on at the western heights, in raising the barracks, draw to a close: these likewise are being carried out by Mr. Moxon.

The works at the Dover end of the East Kent Railway have been commenced by the sinkage of a shaft for a tunnel under the western heights, which will bring the terminus of the new line right into the middle of the town, and close on the harbour. The Breakwater, a gigantic work, goes on slowly but surely. The sea made fearful havoc in this locality last month, destroying several engine-sheds and part of the up line of the South-Eastern Railway, and doing damage to the sea groins.

TENDERING FOR GLASS.

It is a frequent source of complaint, that glass manufacturers and dealers are often applied to for estimates in language so ambiguous, that no definite foundation can be laid whereon to base their calculations. Architects and builders frame their specifications in this same style, speak of best seconds crown, as if they were thinking of bread, and often specify weights and sizes incompatible with the manufacture. To-day I have to estimate for a large quantity of window glass for a public company. The specification is thus:—"Glass flattened slabs, best thirds, in plates, about 40 inches by 30 inches, ⅛ inch thick." Now, of course, we ask what kind of glass is meant? Why, flattened slabs of course. But flattened slabs are crown, and will not cut a square 40 inches by 30 inches; neither can flattened slabs be made ⅛ inch thick.

Again, presuming flattened sheet is required, what thickness is wanted? Again we have the reply, one-eighth: but if you look on a trade list, which is supplied gratuitously by any respectable glass dealer, no mention is made of one-eighth; but the sheet-glass is distinguished as to thickness, by its weight in ounces, as 15oz. 21oz. 26oz. or 32oz. to the foot super. We now come to the last question—What quality? Why, best thirds, of course—don't you see it written down so? Will you or any one else explain what is meant by *best thirds*? We have best, seconds, thirds, fourths, and horticultural qualities. From these remarks you will see that a plan which is adopted by this company to ensure correctness is, by the ambiguity of the terms employed, calculated to defeat its own object. Suppose I estimate for thirds quality, and my neighbour imagining best thirds means seconds, and estimates so, he, of course, *cæteris paribus*, will lose. Again, if I estimate for 32 oz. as one-eighth, and my neighbour for 26oz. I do not think I should be troubled with a reply to my quotation. In short, if I estimate for twelve and my neighbour for six, no comparison can be fairly and properly instituted. Vitreus.

BAD PLASTER CAST-WORK.

As a remedy against bad plaster work, I beg to suggest a plan which I know to have been adopted by the architect of a princely mansion not far from Buckingham Palace, during the whole of the time it was in progress. On each of his full-size drawings for the plaster ornament was stated "To be thoroughly understood." After being modelled to his satisfaction, it was got into plaster and sent to him for approval: if satisfied, he sent it as a specimen to his clerk of the works at the building, for him to keep in his possession, in order that the whole of the work, when fixed, should be equal to the specimen he had, which he did not fail to carry into effect all through the work. It is well known that, with most of the builders, quantity is everything, and quality not much thought of. If a man does his work too well he is discharged, perhaps by a foreman who knows but little about what he is talking of, and is only noted for his ignorance and abuse, and prefers having an Irish hawk-boy or labourer to a man who does his work as it ought to be. Surely, if architects were more generally to interfere, such a state of things would not long exist. By so doing, they would be conferring a benefit which it would be impossible to appreciate too highly. If plaster cast-work is done as it ought to be, it will equal, if not excel any other description of ornament.

A Practical Man.

RECENT PATENTS CONNECTED WITH THE BUILDING TRADES.*

Taylor, J.—*An Improvement in Constructing and Facing Walls.* Patent dated from Feb. 14, 1856. No. 383.—The facing material is made into slabs, each with a flange or projecting rib at the back (which is not new). A wall is constructed of brick-work, concrete, and the facing slabs or tiles. In constructing a wall only the brickwork is run up, leaving headers projecting at intervals (on the side to be faced) which support the flanges or ribs of the facing slabs: concrete is poured in to fill up the space between the facing slabs and the brickwork, the concrete resting on the flanges, and aiding in bonding the brickwork with the slabs.

Schwartzkopff, L.—*Improvements in Apparatus for Raising Mud and Soil from the Bottoms of Rivers and other Waters.* Dated Feb. 9, 1856. No. 350.—A centrifugal or rotary pump is fixed on board a vessel, with a steam-engine for working the same. From the pump descends a suction-pipe arranged so as to admit of its lower end being moved to and fro. The lower end is fitted with an instrument which, on being moved with the pipe, stirs the soil at the bottom of the water, and soil together with some water is continually raised by the pump.

Chance, J. T.—*Improvements in Furnaces used for Flattening Glass.* Dated Feb. 1, 1856. No. 283.—In this invention the beds on which the glass is flattened and cooled are placed each on a frame consisting of two parallel bars or rails connected together. These bars or rails rest on and are carried by the upper surfaces of rollers, which move on two parallel fixed rails. The rollers for each bed are kept correctly in position in respect to each other by a frame and axles, and they are kept correctly on the fixed rails on which they move by flanches or grooves to the peripheries of the rollers, or to the rails on which they move.

Howard, J.—*Improved Apparatus for making Moulds for Castings.* Dated Feb. 5, 1856. No. 313. *Claims.*—1. The use of a sliding-rod or mandril, or its equivalent, for carrying up the pattern through the moulding-plate into the mould box or flask, and withdrawing it therefrom when the operation of moulding has been effected. 2. The use of moulding-plates, constructed as described, for sustaining the moulded sand, and allowing of the withdrawal through them of patterns of which the wheel and plough-frame are the type. 3. A general arrangement of apparatus described.

Cowper, C.—*Certain Improvements in Impregnating Wood with Preservative and Colouring Materials, and in Apparatus for that purpose.* (A communication.) Dated Feb. 14, 1856. No. 388.—This invention comprises—1. Completely enclosing the wood in a vessel into which the liquid is introduced, and connecting one end of the piece of wood by means of a plate with the exterior of the vessel, and causing the liquid to be pressed upon with a greater pressure than that to which the aforesaid end of the piece of wood is exposed; by which means the liquid is caused to percolate through the wood, and at the same time to press the end of the piece of wood against the aforesaid plate. 2. Completely enclosing it in a close vessel, and connecting a plate to one end of the piece of wood, as described, and then passing the liquid through the wood in both directions alternately. 3. Certain apparatus for carrying the invention into effect.

Muratori, C.—*Improvements in the Waterproofing of Hangings or Ornamenting Stuffs.* Dated Feb. 11, 1856. No. 352.—This invention consists in coating cloths, &c. for making them waterproof, with a composition which prevents dampness penetrating them, and, being of a drying nature, is adapted to the ornamenting of them by printing, painting, &c. so as to render them applicable to the decoration of apartments. The composition is composed as follows: 100 parts in weight of Palermo white, ground or triturated either with white or drying oil purified, and five parts of litharge.

Bergner, T.—*Embossing Veneers, so as to represent Carvings in Wood.* (A communication.) Dated Feb. 5, 1856. No. 311.—This invention consists in placing veneers between dies, one of which (the matrix) has its surface formed to the desired pattern, and the other (or plate die) having cavities corresponding to the projections of the matrix. One or both dies are moderately heated, and the veneers between them submitted to a considerable pressure. The hollows on the back of the veneer are afterwards filled up with any plastic substance.

Thomas, G. C.—*An Improved Method of Hardening and Tempering Steel.* (A communication.) Dated Feb. 5, 1856. No. 307.—This invention consists in hardening, tempering, and restoring steel, by applying to it, when heated, a finely pulverised compound of chloride of sodium, bichromate of potash, and prussiate of potash. For ordinary purposes the proportions should be 21 parts of the chloride of sodium, 8 of bichromate of potash, and 8 of prussiate of potash.

* From the *Mechanics' Magazine* and other sources.

Notices of Books.

Table of Quarter-Squares of all Integer Numbers up to 100,000. By Samuel Linn Laundy, A.I.A. Layton, 150, Fleet-street. 1856.

This laborious table appears to have been carefully calculated, checked, and printed. The author states that it was entirely calculated in duplicate, the types set up from one of the workings, and the proofs read from the duplicate, and after correction stereotyped and again read by duplicate, the printing being ultimately taken from the corrected stereotypes. The table comprises about 200 pages in imperial octavo, and by it the product of two factors may be found by the aid of addition and subtraction alone for all integer numbers up to 100,000. Its utility to the architect and civil engineer in estimating superficial and cubical quantities, and to the surveyor in the admeasurement of land, we need not advert to. The author is not the first who has computed a Table of Quarter-Squares, but the great extension given to the table in the present volume constitutes a decided advantage, giving it a power ten times greater than Voisin's, and five times greater than Merpaut's, and supplying the means of operating directly upon all factors of five digits.

The Treasury of Geography: designed and commenced by the late Samuel Maunder, and continued and completed by William Hughes, F.R.G.S. London: Longman and Co. 1856.

This new volume, of upwards of 900 pages of close but clear print, forms a most comprehensive and inestimable treasury of geographical information, physical, historical, descriptive, and political, comprising a succinct account of every country in the world. It is preceded by an introductory outline of the history of geography, a familiar inquiry into the varieties of race and language exhibited by different nations, and a view of the relations of geography to astronomy and the physical sciences. The late professor of geography in the College for Civil Engineers, Mr. Hughes, appears to have done the late Mr. Maunder's idea of the work great justice, and he has succeeded in embuing it with that popular and peculiar interest for which his predecessor in such tasks has become so well known. The mass of miscellaneous knowledge and information brought to bear upon such a work, and here condensed in a most readable and entertaining form, must have been immense, and may well have constituted the favourite study for many years of its able continuer and completer, Mr. Hughes. The volume is, besides, well illustrated with maps and engravings.

Miscellanea.

Monument to the late Marquis of Londonderry.—A meeting of the Londonderry Memorial Committee was held on Friday week, in Belfast, to consider the tenders for the execution of the work. It was found that the plan of Mr. Boyd, of Belfast, which received the first prize, and that of Mr. Barr, of Newry, which obtained the second, could not be carried out. The committee adopted the tender of Mr. Lanyon, and entrusted the execution of it to Mr. Hugh Dixon, of Newtownards, who engages to complete it at 2,000*l.* A building committee was then appointed to arrange and superintend the work.

THE NORWICH ARCHÆOLOGICAL SOCIETY.—The quarterly meeting of this society was held on Thursday in last week, at the Guildhall, Norwich. A paper was read by the Rev. J. Gunn, on the derivation of the names of parishes, &c. in Norfolk. Mr. Harrod exhibited a sketch of a discovery of a perforated buttress that had been recently made at the east end of the Dutch Church. The president, Sir John Boileau, introduced the subject of the "Manchester Art Exhibition." If any of the members, he said, knew of any old rood-screens or altar-pieces which were available for the exhibition, they would be doing good service to the effort which was about to be made, by sending information to Mr. Scharfe. Mr. Harrod trusted that no existing rood-screens would be taken to pieces for that purpose, a sentiment in the propriety of which we entirely concur. There must be plenty of detached fragments in the county, he remarked, amply sufficient for the object of the exhibition. The president thought it would be wrong to take down what were up in their proper places, but where they were used for pew-backs, or in similar positions, there could be no harm done.

CAMBRIDGE ARCHITECTURAL SOCIETY.—The first meeting of the above society for the term was held on Wednesday, October 29th. In the absence of the president, the chair was taken by the Rev. W. M. Campion, of Queen's College. The secretary read a paper on the Church of the Holy Spirit, at Wisby, in Gottland, which he had visited during the long vacation, prefaced by a sketch of the history of the island. The paper was illustrated by a series of lithographs, drawn by a Danish architect. The church is of a peculiar construction, being an octagon, of two stories, with an octagonal aperture in the roof of the lower church, opening to that above. Its date is about 1200 A.D. The Rev. G. Williams, of King's College, then gave a short account of the progress of Church Restoration in Germany, particularly with reference to the Cathedral of Cologne, and the Church of St. Gereon, in the same city.

KILKENNY ARCHÆOLOGICAL SOCIETY.—The November meeting of this ever-increasing association was held at Kilkenny on Wednesday in last week, when fifteen new members were elected and various presentations made and communications of interest received or read. Amongst the latter was one on "Ardmore Round Tower, county of Waterford," by Mr. John Windele, of Cork; and others on the Woods and Fastnesses and on the Scandinavians in ancient Leinster, by a member of the society.

PROPOSED NEW FOOT BRIDGE OVER THE THAMES AT RICHMOND.—The executive committee of the Conservative Land Society have taken measures for the construction of a new foot-bridge across the Thames, as an appendage to the present railway-bridge, and a direct communication between Richmond, Isleworth, and the society's property at St. Margaret's. Mr. George Morgan, the architect and surveyor to the society, has prepared a plan, with access at the Middlesex and Surrey ends by light spiral staircases, without injuring the design of Mr. Pennethorne. The project has received the sanction of the South-Western Railway Company, and of the corporation of London as conservators of the Thames. It now requires the assent of the Woods and Forests, inasmuch as the spiral staircase on the Surrey side would touch the property of the Crown.

IN LEICESTER-SQUARE, an example of work in the Early Decorated style, is approaching completion. It forms an extension of Messrs. Seal and Co.'s bank. The front is of Anston stone, with Purbeck marble shafts to the jambs of the openings and the angles. The internal mahogany fitting, and likewise the stone and wood carving, are too highly finished. The architect is Mr. John Billing; the builder, Mr. Thomas, of St. John's-wood.

THE CHARTERED GAS COMPANY.—At the half-yearly meeting of this company, Mr. Benjamin Hawes, governor, in the chair, the report stated that the balance of profit for the half-year was 22,052*l.* 10s. 9d. against 20,419*l.* 14s. 3d. for the corresponding period of last year, enabling the directors to recommend a dividend at the rate of 7*l.* per cent. per annum, free of income-tax. The report was unanimously adopted, and the dividend declared.

"STUDENTS OF THE ACADEMY."—Sir,—Can you inform me, through the medium of your paper, the requirements that are necessary to become a student of the Royal Academy? I have inquired at the Academy, and the porter could not inform me.

AN ARCHITECTURAL PUPIL.

*** An architectural design and drawing from plaster must be first submitted to the keeper, together with a letter from some person of repute, giving assurance of the moral character of the applicant. If the drawings are approved, the candidate is required to make a design and a freehand drawing of ornament within the walls of the Academy, from which the Council decide on his application for admission.

THE IRON TRADE.—This trade is by no means in a promising or active state at present. In the South Staffordshire and East Worcestershire districts some ironmasters, who can do so, have resolved to blow out furnaces and reduce their make, and the question of an acknowledged reduction of price has even been under consideration. The trade is equally dull at Liverpool, where Welsh and Staffordshire makers are said to have already conceded reductions ranging down to 20s. per ton in some brands of the latter make of iron. The Scottish pig-iron market is in upward movement, and not so slack.—Mr. Bessemer is already dragged into Chancery with his patent,—not by his best known rival Mr. Martien, but by Mr. Birch, manager of the Bowling Ironworks, who maintains that an invention of his, already patented and in use for eighteen months, is identical with that of Mr. Bessemer. This process, which is thus alleged to have stood the test of eighteen months' practice, is described as the conversion of pig into malleable iron by a single process, so that this grand impracticability must be supposed to have been actually in every-day progress, while clever fellows were proving its impossibility. We know nothing personally, however, of the merits of Mr. Birch's process. The patent of Capt. Uchatius, we hear, has passed into the hands of the Ebbw Vale Iron Company, who must have satisfied themselves of its importance and utility. The Uchatius steel is said to have been found to be an excellent material for rails.—The iron trade in France appears to be growing in importance. Both home production and importations have considerably increased of late.

INAUGURATION OF THE MANCHESTER MECHANICS' INSTITUTE BUILDING.—Lord Palmerston favoured with his presence a meeting of the members and friends of the Manchester Mechanics' Institute on Thursday in last week, for the purpose of inaugurating their new building; and the reception with which he was greeted by the 3,000 or 4,000 persons assembled was of the most enthusiastic and flattering character. Mr. Oliver Heywood, the president of the Mechanics' Institute, occupied the chair; and the Premier was accompanied to the platform by Lady Palmerston, the Earl of Wilton, Sir Benjamin Heywood, the Mayor of Manchester, the Mayor of Salford, Mr. Brotherton, M.P. the Dean of Manchester, and other gentlemen of local influence and position. Lord Palmerston addressed the meeting at some length, in a style suited to the occasion; and took the opportunity of highly complimenting the Institute on the magnificence of their new building. The objects and purposes to which it is to be devoted naturally led his lordship to expatiate at some length on knowledge and instruction. The first object of instruction (he remarked) ought to be that which we have been told is the meaning of education—to teach a man how to live; and, to teach a man how to live, his attention ought first to be directed to that pursuit to which he means to devote himself through life. There, indeed, he should drink deeply, and there he should endeavour to perfect his knowledge; but ought he on that account not endeavour to enlarge his mind, to extend his views, and obtain information on other matters not connected with the business of his profession? But we are told you will make him a mere smatterer in knowledge. Better be a smatterer in knowledge than ignorant and uninstructed. There are many lines of information which it is most essential for a working man to pursue, but from which, were it not for institutions such as this, he would be hopelessly excluded.

MEAKIN'S DOMESTIC FIRE-ESCAPE.—In Bridge-street, Blackfriars, several experimental trials have been made with a new fire-escape, invented by Mr. Meakin, of Baker-street. The apparatus was fixed to the centre window of the third floor, 40 feet in height. By pulling a handle connected with a continuous wire, an alarm-bell is set in motion, with a powerful ring, sufficient to awaken the inmates and the immediate neighbourhood. The same act frees two coils of strong galvanised wire rope, which, in their descent, uncoil, and disclose two metal handles. These secure communication with the street, when a telescopic basket may be immediately attached and run up to the top windows.

APPROPRIATION OF SEWAGE.—I beg leave, in addition to the suggestion of "O. P" as to the sewage question, to hint that the question,—which is the best way of employing sewage manure, and, in particular, which is preferable, solid or liquid manure, should be referred to some of our leading agriculturists. Can any manure be deodorised without losing a great deal of its agricultural value, and by what process? How far will the commercial value of sewage manure compensate the trouble and expense of carriage to a certain distance beyond the precincts of the town? In what proportion is sewage manure to be distributed in the neighbouring districts; or in other terms, in what districts will it be specially useful? These suggestions have been neglected as yet, I believe.

W. O'BRIEN.

CORN EXCHANGE, DEVIZES.—Now that the tenders are opened, and the very unsatisfactory fact forced on the committee, that Mr. Hill's plan cannot be done for his estimate, and some 400*l.* beyond it, we look to you as the defender of those that are shabbily treated, to publicly say a few words on the matter. Why did the committee resolve to adopt Mr. Hill's plan in preference to that by Mr. Phipps, which had met with their approbation, at the first two or three meetings? It is asserted that it was not his former plan, modified or amended, that was produced, but an entire new design, far more elaborate than his first, and having in it several fresh forms of arrangement. Mr. Hill almost guaranteed his design at 1,500*l.* The committee have borrowed money from the corporation already, and now talk of endeavouring to collect 400*l.* more, which seems extremely unfair to all the competitors.—LOOKER-ON.

INSTITUTION OF CIVIL ENGINEERS.—On the 11th inst. the session was commenced, Mr. Robert Stephenson, M.P. president, in the chair, by the reading of a paper by Mr. D. K. Clark, "On the Improvement of Railway Locomotive Stock," which had been read in abstract at the last meeting in May before the recess, and had been subsequently printed and circulated amongst the members. The discussion was opened, and it was announced that it would be continued throughout the whole of the next meeting (the 18th).

THE ART TREASURES BUILDING AT MANCHESTER.—Another of the men, Bernard Farley, having died from the late accident by the fall of part of the front of the Art Treasures building on the 31st ult. an inquest was held before Mr. Herford, the borough coroner, to inquire into the circumstances. After hearing the evidence of Mr. Crowther, architect, and that of Mr. Foster, an extensive builder, the jury found a verdict of "Accidental death;" but expressed an opinion that the arch was too light in construction, and that the accident might not have happened if due care had been taken in staying the work while in progress. In the course of the inquiry, Mr. Ashton, a member of the executive committee, who, with Mr. Edmund Potter, another member, was in attendance, said that the evidence just given by the architect agreed on the whole with the conclusion to which the committee had come after an investigation made for their own satisfaction, but he wished to state that, on the ground simply of the limited time allowed for rebuilding the arch, and the state of the weather not admitting of so much brickwork being done over again with certainty, the committee had resolved to pull down the other two arches, and to erect three of iron in their places. This would also meet the views of any one who might suppose that there was possibly an instability about the brickwork, which the executive committee did not believe was the case. He said the resolution to erect the façade of iron and glass had been carried in the committee before Farley's death, and the whole building would now, therefore, be of iron, placing the security of the whole beyond doubt.

COMPLETION OF THE TYNEMOUTH SEWERAGE WORKS.—From a report made by the local Public Health Act committee to the town council of Tynemouth, it appears that "while the extent of the works actually executed considerably exceeds the original estimate, the total cost, 12,500*l.* including materials still on hand, falls short of the estimated cost of the whole works, as stated in Mr. Rawlinson's report to the council, dated October, 1854." The council are therefore, as might be expected, highly satisfied with the result; and, while confirming the report, have voted their cordial thanks to Mr. Rawlinson "for his comprehensive report on the completion of the main sewerage works of the district, and the ability shown by him in his plan and estimate, and also for the attention paid by him and his assistants, Mr. M'Kie and Mr. Lawson, in the execution of the works." The council at the same time voted their "best thanks to Mr. Hugh M'Kie, for the attention and ability shown by him in the discharge of his duties as resident engineer, in superintending and directing the execution of the main sewerage works of the district. Also that a bonus of 100*l.* be given to Messrs. Travis and White in substitution of all amounts claimed by them for extras of their contract for the main sewerage works, and in consideration of their having completed the works within the time contracted for." The report of Mr. Rawlinson was also ordered to be printed.

"ADDITIONS, ALTERATIONS, AND REPAIRS."—Will you explain to your readers and the public generally, that although notice is not necessary to be given in case of "a necessary repair not affecting the construction" of a building, in the case of a "repair affecting the construction" of any building, such notice is necessary. Many very vague ideas are created by the word repair: in some cases, the rebuilding almost *in toto* is called a repair.

A DISTRICT SURVEYOR.

MANUFACTURES ABROAD.—In your impression of the 8th inst. I observe a notice of a lecture delivered by me a few days ago at Coventry. In one of the sentences a slight error occurs, which I trust you will allow me to correct. I am reported to have said, "that I came from Leeds, and that much of the cloth sold in that neighbourhood as being manufactured there was in reality made in Austria, and it was only fifteen years since that trade had been introduced into Austria." What I did say was, "that much of the cloth sold as coming from that neighbourhood, and as being manufactured there, was in reality made in Austria and other parts of Germany. Such a trade, fifteen years ago, would have been impossible." In making these remarks, I was alluding to the lessons to be learnt from a comparison of the goods sent from the same localities, as displayed in the Great Exhibition of 1851, and then in that of Paris in 1855. I was endeavouring to show that the rapid improvement which was taking place in certain manufactures on the continent was mainly to be attributed to the practical character of the system of education adopted in their schools. Permit me to thank you for having noticed my poor efforts in the cause of artizan education. I learnt the rudiments of science at the *carpenter's bench*, and I sincerely hope the day will come when SCIENCE will be substituted for rule of thumb in every branch of industry throughout our land.—H. GORE.

THE "FLAT PRESSURE PROCESS" OF STEREOTYPING.—Mr. James Hogg, of Edinburgh, the publisher, has patented a new process intended to supersede the stucco and the paper process of stereotyping, by means of a composition of various ingredients in a finely pulverized state, and forming a substance of the consistency of putty, which, by gentle pressure, after smoothing the surface, takes an accurate impression of the types, and is dried by slight heat on hot plates partly while still in contact with the types. A saving of 50 per cent. in the waste of types is thus, it is said, effected, and the stereotyping metal can be safely heated to a proper pitch so as to ensure a sound article, while the matrices themselves can be preserved as readily as can stereotyped plates at present.

BATHS AND WASHHOUSES.—It is stated that the aggregate receipts at thirteen establishments in the metropolis, from January to December, 1855, inclusive, amount to 24,526*l.* 7s. 2d. In corresponding period of 1848 (two establishments) were received 2,806*l.* 5s. 1d. showing an increase, in 1855, over the corresponding period of 1848, of 21,630*l.* 2s. 1d.

ALUMINIUM.—This light and elegant metal begins, it appears, to come into more general use, at least in France. The eagles which surmount the colours of the army, hitherto made of copper gilt by galvanism, are now made in aluminium, thus lightening the weight of the flag by nearly 2¾ lbs. Aluminium is more sonorous than bronze, and is consequently brought into use for musical instruments. Spoons and forks, drinking-cups, &c. have also been formed of it. The weight of the new metal is about one-fourth that of silver. Fine silver being worth 225f. the killogramme and aluminium 300f. a piece of the latter equal in size to a kilogramme of silver will only be worth 75f. instead of 225f. Thus an article which, in silver, would cost 50f. would be only 16f. in aluminium.

THE TEMPLE OF MOYNESS AGAIN.—We deeply regret, says the *Forres Gazette*, to be informed that some weeks since a party, among whom were the lord of the manor, the Earl of Cawdor, and Mr. Stuart, of the Archæological Society of Edinburgh, visited the site of the dilapidated temple, and caused several excavations to be made in the ground: they were rewarded by finding an urn in the centre of the displaced causeway; but the trenched up ground is left open, rendering the destruction now as complete as can well be imagined. Hundreds of travellers, it adds, have visited the Moyness Temple since our first notice of it. Hundreds more will regret to find its rocking-stone split into fragments; the remaining boulders overturned; the centre causeway torn up, and the site seamed with the unmannerly burrowing of barbarous relic-hunters.

ARCHITECTURAL LIBRARIES.—It has struck me that the student of architecture is under one disadvantage peculiarly his own. To become a true architect a man must read. Now, books on architecture are not only so expensive as to be beyond the reach of most young men, but, from their peculiar character, being uninteresting to the general reader, are seldom to be met with in our public libraries, and thus the young architect is deprived of his necessary food. I have thought that this evil might be remedied by the formation of "Architectural Libraries:" a small annual subscription from the various architects and their clerks, together with the loan or gift of books not in present use by their owners, would soon accumulate a very useful fund of knowledge, which, under proper regulations, might be of service to a large number.

LECTOR.

STEAM PILE-DRIVING MACHINERY.—Mr. Robert Morrison, of Newcastle-upon-Tyne, has patented a machine or apparatus for driving piles by the direct action of steam, by which two or more rows of piles may be driven simultaneously without the necessity for any lateral or transverse movement being imparted to the pile-driving mechanism, and consequently the expense of driving temporary piles and erecting platforms for the machine to traverse laterally upon from one row of piles to another is obviated. The *Mechanics' Magazine* says,—According to this invention one, two, or more steam cylinders and driving-rams are employed, according to the number of piles to be driven at one time, the distance between such cylinders and rams corresponding to the width between the centres of the rows of piles. As fast as each pile in a row is driven the machine is traversed forward between the rows to the next piles, and so on, until the whole of the piles in each row are driven. The driving-rams are made solid, and the pistons are forged or cast in one piece therewith. A stuffing-box is fitted on to each end of the cylinders, and the driving-rams work through both the stuffing-boxes, which thus serve as guides without the necessity for any other means of steadying them during working. The small steam-engine which it is proposed to employ for raising the cylinders after they have done their work, and hoisting fresh piles to deposit under the rams, is an inverted trunk-engine, the lower end of the trunk being flattened to such an extent as will balance the weight of the piston trunks and connecting rod.

BUBBLE "ASSURANCE" COMPANIES.—Under the title "J. W. Howell's Bubble of the 'General Industry Life and Fire Assurance and Sick Fund Friendly Society' burst, by George Cruikshank," this gentleman has published a brief tract, in which, in his usual trenchant way, he demolishes one of those numerous bubbles which have of late been blown by needy, speculating, and but too often positively dishonest characters. In the present instance, Mr. Cruikshank was himself *hooked* in the first place, *pro bono publico*; but the clever "projector" found, at length, that he had caught a tartar and not a gudgeon, and the result is indicated in the title of the tract. Mr. Cruikshank pledges himself to endeavour, next session of Parliament, to get an Act passed making it a criminal offence to use names without consent in prospectuses of new companies. On the introduction of the Bill for this very desirable Act, the gentleman whose manœuvres shall have more especially led to its preparation, *may* have an opportunity of justifying himself in Parliament (or else not), since it appears that, being anxious to have more than one string to his bow,—that is his fishing-rod,—he was lately, at one and the same moment, a candidate for the borough of Sligo on the one hand, and for the somewhat less ineligible office of "Inspector of Nuisances" to a metropolitan parish, at 30s. a week, on the other; so that should he succeed in obtaining a seat in Parliament by next session, he may have it in his power either to forward Mr. Cruikshank's objects, or to frustrate them, as may seem meet to the hon. member for Sly-go, as Mr. C. seems to be naturally inclined to call him.

INSURE THE BRIDGES.—What may appear to be impossibilities must not always be taken as such. About forty years ago I was in my apprenticeship, and was not then a great lover of labour. My foreman used to tell me if I did not alter I should never set the Thames on fire. I have not altered in this respect; but I still expect, through the drowsiness of the Metropolitan Board of No Works, without any great effort of labour, to set the Thames on fire. Very little water remains now in it, and the various gases and foul filth will soon get rid of the little remaining water, and then blazes will play most beautifully along it.—S. P. X.

[ADVERTISEMENT.]

27 and 28, Bishopsgate-street, Aug. 1st, 1856.

GENTLEMEN,—After twelve years' experience of your Patent Iron Revolving Shutters, I have much pleasure in testifying to their great superiority over all others; and if I were to put in a new front to-morrow, I should most decidedly give them the preference.

I am, Gentlemen, yours, &c.
ROBERT ALEX. ROONEY.

Messrs. Clark and Co. 15, Gate-street, Lincoln's-inn-fields, Engineers.

TO CORRESPONDENTS.

"*British Vulcanite*"—Our correspondent, "C's." endeavours to convert a waste material to a useful purpose are meritorious, but he somewhat misapprehends our object in pointing attention to the limited resources of nature for the production of vulcanite, as we have occasionally done, and hence to the desirability of extending these limits by the artificial production of caoutchouc itself, by a transformation of bituminous or other substances which, chemists know, have been found to be capable of producing a tough gum, in certain circumstances, very like caoutchouc, and probably a special experimental inquiry might lead some talented chemist to the discovery of a substance not only like but in all respects *identical* with india-rubber, and cheaply producible from an abundant or inexhaustible source.

"E E." (many communications on the subject have appeared in our columns, but we cannot refer).—"W. T." (yes. Apply at Parliamentary Office, Great Turnstile, Holborn).—"J. L."—"T. J." (consult a lawyer).—"Charity may begin at Home."—"Floreat Majestas."—"W. J. S." (shall be looked to).—"S. A. E."—"A Londoner."—"G. T." (the proposition is an old one).—"Subscriber."—"E. L. P."—"W. L. S."—"J. F." (shall appear).—"H."—"P. T. J."—"Stein" (we decline recommending).—"Economist."—An architectural "X." (the names of glass painters most employed are constantly appearing in our pages).—"J. B."—"Mr. M'L."—"J. D."—"Mr. Powell" (letter having appeared elsewhere, it is unnecessary for us to insert it).—"An Unemployed G E."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

ADVERTISEMENTS.

PARTNERSHIP.—A gentleman of long standing in the profession, having completed foreign engagements, is desirous of PURCHASING a SHARE of a well-established BUSINESS, either in London or the provinces.—Address, L. P. care of the Housekeeper, 4, Lothbury, City.

TO BUILDERS' CLERKS

A CLERK is REQUIRED in the OFFICE of a LONDON BUILDER. He must have considerable experience in making up accounts, taking out quantities, and measuring extra works.—Address, C. J. Office of "The Builder."

TO SURVEYORS AND BUILDERS' CLERKS.

A JUNIOR CLERK is WANTED by a Builder in London. He must be a good and expeditious writer, and accustomed to accounts.—Address, stating full particulars, age, and salary required, to J. M. Office of "The Builder."

TO PARENTS AND GUARDIANS.

A BUILDER and HOUSE AGENT, has a VACANCY for a respectable YOUTH, as IN-DOOR APPRENTICE, where he will be treated as one of the family. Apply to J. J. C. 8, Great Cumberland-street, Marble-arch.

TO WORKING GAS-FITTERS, MECHANICS, and SMITHS.—The Malvern Improvement Commissioners require a FOREMAN, to reside on their Gas-works, rent free. He must be a mechanic, competent to manage the works, to repair the gas and water sluice cocks and hydrants, a fair smith, able to repair the working tools, and to lay and make all repairs to the gas and water services and mains. He must be able to read and write, as he will have to keep the time sheets. All applications to be made, by letter, by the 29th NOVEMBER inst. stating wages expected, and give references as to ability and honesty, addressed to JOHN SKEY, Esq. Clerk to the Town Commissioners, Great Malvern, Worcestershire.

WANTED, an active, steady, practical MAN, as FOREMAN in an Engineer's and Founder's Establishment. He must be a good general mechanic; have a thorough knowledge of smith's and founders' work, and be able to make working drawings, take out quantities, &c.—Apply to BUNNETT and CO. Engineers, Deptford, Kent.

MARBLE WORKERS.

WANTED, a steady, energetic MAN, well acquainted with sanding and polishing marble work for making chimney-pieces.—Apply, by letter, to T. C. Office of "The Builder."

TO ARCHITECTS' ASSISTANTS.

WANTED, by a London Architect, a Person thoroughly competent to undertake CHARGE of an OFFICE. Must be a neat and thoroughly practised draughtsman, with a good knowledge of making out specifications, &c. &c. State the amount of salary required, and address, post-paid, to E. W. W. Post office Tottenham-place, Tottenham-square.

WANTED, an ASSISTANT, by a Land-agent, Surveyor, and Auctioneer, practising in the country, who must be experienced in the general routine of the business, and a fair draught-man. Security for 200*l.* will be required.—Address, X. Y. Z. Post-office, Watford, Herts. fully describing qualifications, and stating age and salary required.

WANTED, a Person to Manage a Private GAS WORKS. He must be a good smith, as he will be required to do what smithwork may be necessary on the premises. Wages 30s. per week. Good references required, both for character and proficiency.—Address, by letter only, to G. W. Messrs. Smith and Elders, Booksellers, Dorchill.

TO BUILDERS.

WANTED, by a Practical Man, aged 36, a SITUATION as FOREMAN, either in town or country. Good reference can be given where last employed.—Address, A. B. 41, Arlington-street, New North road.

TO BUILDERS, PAINTERS, AND PAPERHANGERS.

WANTED, by a Young Man, a SITUATION as PAINTER, GLAZIER, and PAPERHANGER. Can do writing or graining. Is a handy man generally. Wages, 18*s.* per week. This is worthy of attention.—Address, A. B. 8, Anne-street, Pentonville hill.

TO CIVIL ENGINEERS AND SURVEYORS.

WANTED, by a Young Man, an ENGAGEMENT as DRAUGHTSMAN. He has been employed on extensive town surveys; is a good plotter, and understands surveying and the use of the theodolite. For testimonials, &c. apply to F. F. Mr. Coope's, Queen-street, West Bromwich, Staffordshire.

TO BUILDERS

WANTED, a SITUATION, by a Young Man who can make fair and working drawings and specifications, take out quantities, &c. He is a good builder's accountant, and can superintend works. Good references. Salary very moderate.—Address, A. B. 66, Bemerton-street, Caledonian-road.

WANTED, a SITUATION as ASSISTANT in an ARCHITECT'S OFFICE, by one who has been articled to an eminent surveyor, and can give satisfactory testimonials. Salary moderate.—Address, E. V. City News-rooms, 54, Cheapside.

TO BUILDERS AND OTHERS.

WANTED, by a Young Man, aged 20, a SITUATION as CLERK in a BUILDER'S OFFICE; he can write a good hand, copy drawings, and is willing to make himself generally useful. Three years good character from last employer. No objection to the country.—Address, 108, Post-office, Lisle place, Eaton-square, London.

TO BUILDERS.

WANTED, to ARTICLE a YOUTH to the BRICKLAYING for THREE YEARS. To finish learning his trade. A small premium will be given.—Address, Mr. KELSEY, 20, Goodge-street, Tottenham-court-road.

TO MASTER PLUMBERS AND BUILDERS

WANTED, by a Young Man, aged 26, EMPLOYMENT as PLUMBER'S LABOURER.—Address, D. P. 16, Little Bath-street, Leather-lane, Holborn.

TO CONTRACTORS, ARCHITECTS, AND BUILDING SURVEYORS.

WANTED, by a Young Architect, who has acted three years as Clerk of Works, OUT-DOOR EMPLOYMENT in superintending works, measuring, or in any other capacity affording a good opportunity for further improvement. Has a good practical knowledge of building operations, and will be well recommended by present employer. Salary, 35s. per week.—Address A. B. 231, Oxford road, Manchester.

WANTED, by the Advertiser, a SITUATION as CLERK in a Timber Merchant's Office, or Salesman in a Retail Timber and Deal-yard. Writes a good hand, and is quick at accounts.—Address, G. H. 63, Lucas-street, Commercial-road East.

TO CARPENTERS AND BUILDERS.

WANTED, by a Young Man who has just completed his apprenticeship, an ENGAGEMENT as an IMPROVER. Has been accustomed to hence-work. Wages not so much an object as a good shop. No objection to the country.—Address, J. T. No. 3, New Kent-road.

TO SAW MILL PROPRIETORS

WANTED, EMPLOYMENT, as SECOND HAND at MOULDING or PLANING MACHINE by a steady industrious Young Man, who can make himself generally useful in a Mill.—Apply by letter, pre-paid, to Y. Z. 62 Richard-street, Commercial-road, East.

TO CARPENTERS AND JOINERS.

WANTED, by a respectable Young Man, who has served his time to the above trade in London, a PERMANENT SITUATION. Moderate wages will be accepted. Address, P. W. 63, Chiswell-street, Finsbury.

WANTED, a SITUATION, by an experienced Man, as FOREMAN of CARPENTERS or JOINERS. Address, J. B. 31, Nicholl-square, Hackney-road.

TO BUILDERS AND OTHERS.

WANTED, by a respectable Young Man, a SITUATION as CLERK, TIMEKEEPER, FOREMAN, or to MANAGE a small BUSINESS; is acquainted with the practical part of the trade, and has been upwards of three years in the office of his present employers, to whom reference can be made.—Address, A. Z. Post-office, Brighton.

TO ARCHITECTS, &c.

WANTED, a SITUATION for EVENING EMPLOYMENT, by an ARCHITECT'S ASSISTANT; he is fully qualified to undertake any office work, such as perspectives, working or fair drawings, taking out quantities, writing specifications, &c.—Address, F. B. Charing-cross Post-office.

WANTED, EMPLOYMENT, as CARPENTER and JOINER. The advertiser is an efficient workman, aged 36. Wishes to get into a respectable shop, or could act as FOREMAN, in a small shop. He is a moderate draughtsman. Has no objection to any part of England.—Address, A. H. Office of "The Builder."

TO CARPENTERS AND BUILDERS.

WANTED, by an Improver, a SITUATION in a CARPENTER'S SHOP, a Young Man, of quick business like habits, 20 years of age. Can have good testimonials from last employer. Wages no object.—Address, W. C. 3, Lower Queen-street, Lower-road, Islington.

WANTED, EMPLOYMENT, by a Youth, aged 18, who has been 2½ years at the Plastering &c.—Wages, 12s. per week. Good character. Address, Y. X. Office of "The Builder."

TO ARCHITECTS AND SURVEYORS.

THE Advertiser is desirous of an ENGAGEMENT in the office of a London Architect or Surveyor; is a good designer and draughtsman, and practically acquainted with building generally.—Address, G. B. Peterson's, 18a, Robert-street, Grosvenor-square.

TO BUILDING ESTATE OWNERS and OTHERS.—The Advertiser, having had fourteen years' experience in the department of a Solicitor's Office, where the management of several Building Estates in and near London has been conducted, wants a RE-ENGAGEMENT, at a liberal salary.—Address, A. B. care of Mr. Walters, News-agent, Bell-yard, Temple-bar.

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THE Advertiser, having had experience in the surveying branch of the profession, a neat draughtsman, and well acquainted with the general routine of an office, is desirous of an ENGAGEMENT with an ARCHITECT and SURVEYOR.—Address, A. B. care of Mr. Douglass, News Agent, 16, Little Knight Rider-street, Doctors'-commons.

THE Advertiser is desirous of a RE-ENGAGEMENT as ESTIMATOR, or in a builder's establishment, where the general office duties are confined to one person. Unquestionable references as to character and ability.—Address, C. C. No. 6, Hall-street, Arlington-street, New North-road.

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THE Advertiser, accustomed to making plain and perspective drawings, with a general knowledge of quantities, is desirous of a SITUATION as above.—Address, R. M. 71, St. John's wood-terrace, St. John's-wood.

THE Advertiser is desirous of obtaining a RE-ENGAGEMENT as CLERK to a BUILDER, CONTRACTOR, or ARCHITECT. Experienced in the usual duties, a fair draughtsman, and accustomed to superintend work. Aged 27.—Address T. M. Cook's, Maiden-lane, Covent-garden.

TO LANDLORDS, HOUSE AGENTS, AND OTHERS

EMPLOYMENT WANTED by a handy Man, who can do Jobbing, Plastering, Whitewashing, Painting, Glazing, Paper-hanging, Set Stove, and do other jobbing work, and willing to make himself generally useful, and study the interest of his employers. Wages, the Guinea per week.—Direct A. B. No. 18 L. ndon-street Caledonian road, Islington.

BUILDER'S CLERK.—A highly respectable, middle-aged Gentleman, accustomed to the routine of a builder's office, an efficient penman and accountant, wishes for an ENGAGEMENT as above, or in any other capacity where the above qualifications, aided by steadiness and integrity, are deemed desirable. The most satisfactory references can be given.—Address, S. T. V. Office of "The Builder."

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A FIRST-CLASS WRITER would undertake a permanent SITUATION in a respectable house (country preferred). Has no objection to assist in the grainings. Terms moderate.—Direct, post-paid, to A. B. 131, Holborn-hill, London.

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AN ARCHITECTS ASSISTANT is desirous of meeting with an ENGAGEMENT. He has been nine years in the profession, during which time he has had considerable experience in the duties of an Architect's Office, is a capital draughtsman and colourist, and has been accustomed to preparing working and finished drawings and specifications, taking out quantities, surveying, and levelling.—Address, J. T. 7, Upper Park-street, Greenwich.

TO ARCHITECTS

AN ASSISTANT (aged 22), desires an ENGAGEMENT, either permanent or temporary, to assist in competition. Under-stands the preparation of working and highly-finished drawings; good writer and artistic colourist, with a knowledge of perspective and versed in office-work generally.—Address, P. P. 2, Halifax-street, Peckham.

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A YOUNG MAN wishes to ARTICLE himself, for Two or Three Years, as an IMPROVER in the above branches. Wages not so much an object as a good shop, where he may have a good opportunity for improvement. Good references given as to character and sobriety. Can work, if required, at the paper-hanging.—Address, A. L. L. S. 20, Star-street, Paddington.

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AN Architect, in an extensive and increasing practice in a provincial town, wishes to meet with a Gentleman well qualified to assist him in the PREPARATION of PLANS for public competition and the general work of his office, for one year. No remuneration would be given further than an equal share of all work obtained in competition. At the expiration of the period, should it be deemed of mutual advantage, the advertiser would be willing to enter into terms for a share of his general practice.—Address, giving references, &c. to A. Z. Gresham Club, King William-street, City, London.

TO GENTLEMEN, BUILDERS, AND OTHERS.

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A YOUTH wishes to obtain a SITUATION in a Builder's Establishment where his time would be partly employed at the bench, and partly at the counting-house, if required to take working drawings. Salary not so much an object as an opportunity of improving.—Apply or address to F. G. 14, Henrietta-street, Brunswick-square.

AS RESIDENT CLERK of WORKS, and Head Carpenter in a Nobleman's Family, or Public Works, a Young Man, who practically understands all the branches of Building, &c. &c. Having lived many years in the above capacity with a family of distinction, to whom high reference can be given. Address, pre-paid, to A. M. A. 34, King-street, Soho, London.

TO COUNTY ARCHITECTS.

AN ARCHITECT, of considerable experience, capable, if required, of taking the entire direction of an office, and of works in progress wishes to obtain an ENGAGEMENT with a County Architect. Satisfactory references will be given.—Address, T. M. Office of "The Builder."

TO ARCHITECTS.

A GOOD DRAUGHTSMAN, who is accustomed to make fair and working Drawings, and has had experience in practical details and construction, will undertake drawings at his own residence, or at their Offices. Terms moderate.—Address, A. Z. 30 No 66 Cheapside, City.

TO ARCHITECTS.

A FRENCH GENTLEMAN, Fellow of the Imperial School of Paris, who is a first-class draughtsman and colourist, and is thoroughly conversant with Classic and Modern Arch tecture and Art, has published an Architectural Work, is desirous of JOINING an ENGLISH ARCHITECT, either permanently or for the completion of pressed for Public Offices.—For further particulars and references, apply by letter to Mr. W. BLACKETT 68, Lancaster's-buildings, London.

A YOUNG MAN, who served five years to an eminent Architect, and has since been in the employ of gentlemen of eminence, is now desirous of EMPLOYMENT wherever attention is required, or where he could turn his ability as to working plans drawing and architectural knowledge.—Letters to A. W. 24, Wilmington-square.

TO CIVIL ENGINEERS AND ARCHITECTS.

A YOUNG MAN wishes for an ENGAGEMENT in an office of the above. Can make finished and working drawings, take out quantities and has a tolerable knowledge of surveying and levelling.—Address his letter to C. L. care of Mr. D. Fosse, 24, Broad-street Buildings, City.

TO LAND SURVEYORS AND CIVIL ENGINEERS.

A RESPECTABLE YOUNG MAN wishes to obtain a SITUATION as an ASSISTANT to a Land Surveyor or Civil Engineer. Understands surveying, levelling, &c. Has no objection to the country or to go abroad. Salary not so much an object as a permanent situation.—Address, W. B. 34, Bennett-street, Portman-square, London.

A Nexperienced practical CLERK of WORKS is open to a RE-ENGAGEMENT.—Address, W. P. care of Mr. Atkinson, 20, Lambeth-road, Southwark, London.

TO ARCHITECTS, SURVEYORS, &c.

A GENTLEMAN, an ARCHITECT, experienced in the preparation of fair and detail drawings, draughting specifications, measuring quantities, measuring up works, and preparing accounts, and other duties of an architect's and surveyor's office; also has been accustomed to set out works, and the direction and superintendence of workmen, and is well acquainted with every branch of the building trade, desires an immediate ENGAGEMENT, at a moderate remuneration.—Address X. Y. Z. Office of "The Builder."

A PRACTICAL CARPENTER and JOINER wishes a RE-ENGAGEMENT as GENERAL or SHOP FOREMAN, or Superintendent on an Estate. Country not objected to.—Address, ALPHA, 134, East-road, Hoxton. R.R. Unexceptionable testimonials.

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A PRACTICAL MAN, competent to prepare plans, elevations, sectional and working drawings, accustomed to superintend buildings, &c. wishes an ENGAGEMENT in an ARCHITECT'S OFFICE. Would accept a temporary engagement. Country not objected to.—Address, A. B. 9, Buckland-street, New North-road, Hoxton.

A MILLWRIGHT and ENGINEER, of considerable experience, is in WANT of a SITUATION, either as FOREMAN or as MILLWRIGHT, to keep the machinery or engines of any kind in repair. Good reference can be given.—Address to A. B. 113, Vauxhall-walk, Lambeth.

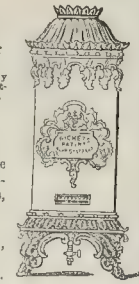
TO BUILDERS AND CONTRACTORS.

A MEASURER, ESTIMATOR, BUILDERS' ACCOUNTANT and a good DRAUGHTSMAN, of many years' experience, is TEMPORARILY ENGAGING to BUILDERS upon reasonable terms.—Address, Mr. WILLIAMS, Office of "The Builder."

A YOUNG MAN, 33 years of age, who has had many years' experience as bookkeeper, is desirous of meeting with EMPLOYMENT, either temporary or permanent, in making up tradesmen's accounts, whether in a small or large way of business.—Address, Y. T. C. Office of "The Builder."

ROYAL POLYTECHNIC.—On Tuesday Evening next, the 18th inst. at Eight, John Leslie, Esq. representative of the Parish of St. George, at The Metropolitan Board of Works, will deliver a Lecture "On London, viewed from the great Charter of sanitary Reform, the Metropolis Local Management Act."

NO CHIMNEY WANTED for RICKETS'S PATENT CALORIFERE GAS STOVES in CHURCHES, HALLS, or SHOPS;



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Made of Sheet Iron, suitable for Heating small Countinghouses, Bedrooms, Cellars, &c. &c.

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Liberal Discount to Builders.

SHEET WINDOW-GLASS.—Messrs. PACK, BARDEN, and Co. have now on hand a large Stock of Best Window-glass, nearly 15 inch thick, 44 by 30 to 50 by 20, 3rd and 4th, from 21s. to 44s. per case, 2 to 4 feet.—25, Weststreet, Smithfield.

GLASS PAINTING.—Messrs. HEATON and BUTLER late of 94, Albany-street, Regent's-park, beg to call attention to their GRISAILLE DESIGNS for Ornamental and Glere-tory Windows, produced at an unusually moderate cost, silvered painted by hand. 33, Gloucester-place, New-road (opposite Cremorne gate).

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 1 0, 200, and 300 feet, suitable for Pictures and superior Glazing, from 2d. to 6d. per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 38s.; 4ths, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 10 by 8, 4½d. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3½d. per foot. Crown and Sheet British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

E. and W. H. JACKSON beg to call the attention of Builders and the Trade to the LOW PRICES at their PATENT PLATE GLASS, BRITISH PLATE, silvered and for glazing, of unrivalled quality and finish; ROUGH PLATE, CROWN, SHEET, COLOURED, and ORNAMENTAL GLASS, in every variety, of the best manufacture, at the lowest terms. Designs and estimates furnished for ornamental windows, either for house or church decoration.—All applications for estimates and lists of prices to be made at their warehouse, 315, OXFORD-STREET.

PLATE-GLASS.—Builders can be supplied with PLATE-GLASS of any size AT VERY REDUCED PRICES, upon application to the SOHO PLATE-GLASS COMPANY, 28, Soho-square.

STAINED-GLASS WORKS, 43, High-street, Camden-town.—Designs and estimates furnished for church and other windows, in any style, on application to WM. BELL, Glass Painter, as above. Quarry lights, plain and ornamental, at very low prices. Glazing in strong lead.

By Royal Letters Patent.

THE COSMOPOLITAN GLASS COMPANY, 29a, Oxford-street.

HENRY and WARING, Managers.

CCC CROWN, 1st Tables, per crate, 30s.; 1st 15 oz. SHEET, 2d. per foot; FOREIGN SHEET, 200 feet cases, 34s. per case; CROWN or SILVER SQUARES, 100 feet boxes, 20d. per foot; HARTLEY'S PATENT ROUGH PLATE, from 6d. and PERFORATED VENTILATING GLASS, 1s. 6d. per foot; CRYSTAL SHEET GLASS, 4d., 5d., and 6d. per foot; FLASHED RUBY, in GROUND SHEET, 3½d. ENAMELLED, 8d. per foot. Tiles and Slates from 6d. each. Sashes primed and glazed, 3d. per foot. HELE'S PATENT GAS SHADE SCREEN, for INDICATING and ADVERTISING at NIGHT.

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CRYSTAL SHEET GLASS, first, second, and third quality, in cases about 200 feet each, suitable for pictures and superior glazing, from 3½d. to 6d. per foot; Belgian sheet glass, in cases 200 feet each, 3rds, 38s.; 4ths, 30s.; squares, in boxes, 100 feet each, 6 by 4 to 10 by 8, 4½d.; larger sizes, up to 22 by 14, 2d.; ground-glass, in cases, 3½d. per foot; Crown and Sheet, British, Patent, and Hartley's Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c.; Sheet Lead, Pipe, White Lead, Oils, Colours, &c.

G. FARMILOE and SON, 128, St. John-street, West Smithfield.

CHARLES KNOWLTON, 60, Borough-road.—EMBOSSING GLASS STAINING, GLASS WRITING, &c. Architects, Builders, &c. supplied on the lowest terms. Stained Quarries in stock.

J. WILLIAMS, Manufacturing Joiner, 32, St. John-street-road, Clerkenwell.—Builders supplied with every description of joiner's work at the lowest remunerative prices. For cash. Goods for the country securely packed and forwarded to any destination.

N.B. A full list of prices on application, or by post on receipt of a penny stamp.

IMPROVED REVOLVING SHUTTERS. FRANCIS RICKABY and DUNN are now enabled to offer the above at the following reduced prices:—IRON SHUTTERS, double riveted, with machine-cut worm gear complete, at 4s. 6d. per foot. WOOD SHUTTERS, with worm gear complete, at 3s. 6d. per foot. Middle draw. Bras-Sash Bars and Stall-board Plates made to any design.—34, Gray's-inn-lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a post-stamp, a full list of prices will be returned. Workshops, 11, Broadwall.

CHURCH FURNITURE MANUFACTORY and ECCLESIASTICAL WAREHOUSE, COX and SON, 28 and 29, Southampton-street, Strand (corner of Maiden-lane). Church Furniture, made on the premises, under able superintendence, is supplied on the most reasonable terms. Several examples, and also works in hand, may be seen, consisting of carved oak communion tables and chairs, altar-rails, reading-desks, sling-desks, fauld stools, sacramental bread cutters, &c.; ecclesiastical metal work; pulpit and branched lights; communion-plate; pole carpets and pulpit hangings; emblematical communion linen and altar cloths, both woven and embroidered.

BATH, PORTLAND, and ROMAN CEMENTS. The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Roman Cement for all modelling purposes, decorations &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lime and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 7, Gold Broad-street, London; to Mr. MONUMENT, 4, Carlton-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes.
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
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PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality for beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 2, Upper Thames street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which their manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, Glass Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road, Office, 4, George-yard, Lombard-street.

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PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs.
Warehouse, No. 1, Wharf, Paddington-basin.
11 George-yard, Lombard-street, City

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. • Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers), to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring—sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

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CHARLES RICHARDSON, 3 & 6, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY AND KENT BRICKS,
PORTLAND, ROMAN, AND OTHER CEMENTS,
TAMWORTH GLAZED SEWAGE PIPES
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.
3 & 6, South Wharf, Paddington.

NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now burning GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.
All applications for prices and terms will meet with prompt attention.
N.B. Please observe the lime is ground at the works, not in London.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cements.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor tropical climates act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil, and where it is used with Size, Varnish, &c. To prevent the prejudice against Zinc paint, which the adulterated article must otherwise produce, it is now sold by the Wholesale Paint-dealers in Original Packages, each cask stamped, HUBBUCK—LONDON—PATENT. Any article so marked, the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works opposite the London Docks, London.
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal company's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 36, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

DAVIES and NORMAN,
CROWN WHARF, GREAT SCOTLAND-YARD.
ROMAN and PORTLAND CEMENTS,
LIME, BRICKS, TILES, SLATES, FIRE GOODS, &c.
STONEWARE PIPES, PANS TRAPS, &c.
A Liberal Allowance to the Trade.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Waterworks Companies, Coal-Mine Proprietors, Builders, Contractors, &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, is prepared to enter into contracts with any of the above branches that may favour him with their orders. The advantages to be derived from the above Cements, manufactured by J. C. over all others, are their extraordinary hydraulic properties.—Samples and references may be had on application either at the Works, Ashton New-road; or the Warehouse, 5, Broomstreet, Shadehill, Manchester.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for them elves.
Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pit Sand of a proved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury, New-park, would be willing to enter into arrangements with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Dell's Farm, Stoke Newington Green.

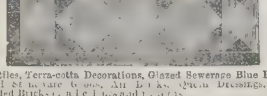
THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.
N.B.—Lime, Cement, Slates, Fire-bricks, &c. and all kinds of Building Goods.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS.—White and Red Facing Bricks, and hard Clinkers for paving stables, &c. can be delivered by Thames or Eastern Counties Railway at ten per cent. under the usual prices.—Apply to W. and W. WRIGHT, Springfield, Essex.

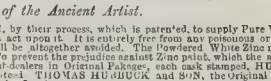
BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for ashpluite, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle), Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and beer in casks in hogsheads, casks, jars, &c. for exportation.
General Office—No. 12, GEORGE-YARD, LOMBARD-STREET
Letters addressed to Grays, Essex, will meet with immediate attention.

BLUE, RED, and WHITE FLOOR-TILES,



Roof-tiles, Terra-cotta Decorations, Glazed Sewerage Blue Pipes, Glazed Stoneware Gas and Jointing Pipes, Chimney-pots, and Moulded Bricks, of all kinds and patterns.
W. GILBERT, Manufacturer, Tividale, Staffordshire. London Depôt: C. RICHARDSON'S Wharf, Paddington.

COLES, SHADBOLT, and CO. CEMENT and PLASTER MANUFACTURERS, LIME BURNERS.
Brick, Tile, Drain-pipe, Hair Lath, and Fire Goods Merchants.
ST. JAMES'S and THORNHILL WHARFS, Caledonian-road, London.



BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses either old or new, whether of thatch, slate, or tile, and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 12 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This chance to include tiles delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Roxby

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 581, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

PATENT TERRA-COTTA.
Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Pmed-street, Paddington-basin.

TO ROAD CONTRACTORS and OTHERS.
To be had, gratis, a quantity of HARD COKE, either by barge or cart—Apply to WILLIAM WINN, Curtain-road, Shoreditch.

DOULTON'S TERRA-COTTA CHIMNEY-TOPS,
TWO SHILLINGS EACH,
TWO FEET HIGH, AS SKETCH.

H. DOULTON & CO.'S
CHIMNEY-TOPS
ARE OF A STONE COLOUR,
AND ARE
QUITE IMPERISHABLE.
Some were erected in London Thirty Years ago, and are now as sharp and perfect as when first made.
About Forty different Patterns are kept in Stock, Drawings and prices of most of which will be sent on application to
HENRY DOULTON & CO. High-street, Lambeth.

GALVANIZED WINDGUARDS.
No. 1. 3 feet high, 14 in. by 9 in. bottom, 18s.
No. 2. 4 " " " " " 30s.
A DISCOUNT ALLOWED TO THE TRADE.
This Windguard is highly recommended by the Manufacturers,
F. EDWARDS, SON, and CO.
42, POLAND-STREET,
OXFORD-STREET.

SMOKY CHIMNEYS.—TWO YEARS' TRIAL, and PERFECT SUCCESS of DUFF'S PATENT WIND-GUARD, in curing the most inveterate Smoky Chimneys, induces the Patentee to recommend all persons suffering from that nuisance to try one.
Price 10s.
To be had of Ironmongers and Builders, and of the Patentee, at his Office, 65, Fenchurch-street.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water; also intense heat without blistering. These Paints have been tested for five years in the Navy, and by Railway and Engineering Companies, which testify that by the use of Wolston's Torbay Iron Paint will effectually cover as much surface as 14 lbs. of either White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Public Works, Ironwork and other from Roofing, Fencing, Shipping, Bridges, Wood or Iron, Stucco and Cement Fronts, Stoney and Sandstone will be found the Best Paints for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

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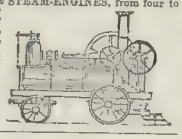
WARNER'S PATENT
VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short	1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long	3 3	gutta percha	1 14 0
3 „	ditto	3 6	or cast iron	2 8 0
3½ „	ditto	2 6	flanged pipe,	2 12 0
4 „	ditto	3 6	as required.	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing.....			2 14 0
2½ in.	long	ditto ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from under ground tanks, or in hot forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

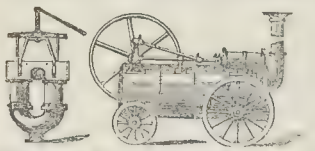
CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM ENGINES, of various powers, suitable for contractors' work generally. Apply to Messrs. MELVILL and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.



Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,
Engineers and Contractors, John's-place, Holland-street, Southwark, London.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

FOR SALE, a capital 8-Horse High-pressure Horizontal STEAM-ENGINE, Pipes, &c. complete, and Cornish Boiler, about twelve feet long, and five feet diameter. Also, a nearly new CIRCULAR SAW-BENCH, by W. N. PARSONS, shafting, gear, and 10-foot fly-wheel, &c. To be sold together or separately.—Apply to Mr. BARRINGER, York street, York-road, Lambeth.

FOR SALE, by private contract, a portable condensing STEAM-ENGINE, about 20 horse power (built by Peel and Williams). Cylinder, 18 inches in diameter, in cast iron casing, cast-iron beam, and connecting rod, six fluted columns, with entablature, standing on cistern, fly-wheel, 14 feet diameter, in segments, bright parallel motion, with brasses complete, and in good working order.—Apply to Mr. WRIGHT, Ironfounder, &c. No. 3, Finch-street, Old Montague-street, Whitechapel.

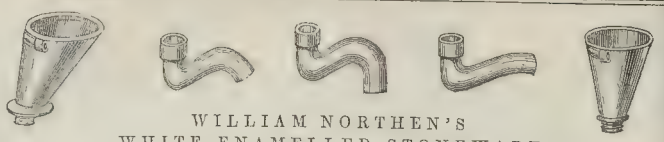
TO CAPITALISTS, BUILDERS, and BRICKMAKERS.—TO BE SOLD, by private contract, a FIVE-HORSE TOWER STEAM ENGINE, together with other machinery used for the purpose of brickmaking. Also, TO BE LET, a valuable BRICKFIELD, at a rent and royalty, situate at Deptford, Kent, near to roads on which [illegible] are being rapidly erected.—For further particulars, apply to Messrs. WIRE and CHILD, Solicitors, 9, St. Swithin's-lane, City.

STEAM-ENGINE.—FOR SALE, a strong, High-pressure Horizontal Steam-engine, of 35-horse power. May be seen by appointment to Mr. PORTER, at Cubitt's Works, Grosvenor-road, Pimlico.

DURABILITY of GUTTA PERCHA TUBING.—Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., VENTNOR, ISLE of WIGHT.—Second Totton-road, Hursley, Oct., 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.



WILLIAM NORTHEN'S
WHITE ENAMELLED STONEWARE,
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO
HENRY MILLICHAMP,
MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.
BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.
MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.
TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.
DOULTON & WATTS,
LAMBETH POTTERY, LONDON.

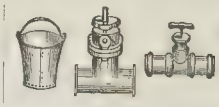
DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,
AND
LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,
With Handle, Lever, and Weight, ready for fixing,
Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

ON SALE AND HIRE,
SINGLE AND DOUBLE PUMPS
IN WROUGHT IRON
TO ANY DEPTH,
FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.

Sizes, from 3-inch to 15-inch barrels.

N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

B. FOWLER and CO.'S
FARM and COTTAGE PUMPS, 30s



All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps, Engine Frames, Horse Gear, Crabs, Pulley Blocks, Wrought Pails, and Rubbish Baskets, Sewer Lamps, Sluices and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

CHEAP, LIGHT, AND DURABLE ROOFING.

CROGGON'S PATENT ASPHALTE ROOFING FELT, has been extensively used and pronounced efficient, and particularly applicable for warm climates.

1st. It is a non-conductor.—2nd. It is portable, being packed in rolls, and not liable to damage in carriage.—3rd. It effects a saving of half the timber usually required.—4th. It can be easily applied by any unpractised person.—5th. From its lightness, weighing only about 2 lbs. to the square of 100 feet, the cost of carriage is small.—6th. Under slate, metal, or tiles, it is a most effective non-conductor.

CROGGON and CO.'s PATENT FELTED SHEATHING, for Covering Ships' Bottoms, &c., and deadening Sound.

DRY HAIR FELT, for Covering Steam Boilers, Pipes, &c., preventing the radiation of Heat, saving 35 per cent. of Fuel.

Samples, testimonials, and full instructions, on application to CROGGON and CO. 2, DOWGATE-HILL, LONDON.

TO ENGINEERS, RAILWAY COMPANIES, MILLOWNERS, &c.—VULCANIZED INDIA RUBBER for all kinds of Steam and Hot-water Joints, is now becoming indispensable in Engineers' Establishments. J. L. HANCOCK begs to offer the following Articles, which are now much improved from the Original Patent Process for such manufactures:—

FOR ENGINEERS.—Vulcanized Rubber Washers; Valves for Air-pumps, &c.; Engine Packing, in Sheet Rings, or Ropes; Pump Buckets, any size to order; Hose Pipes, made to sustain any amount of pressure, and to stand heat up to 300 deg.

FOR RAILWAY COMPANIES.—Buffer and Bearing Springs, Tires for Trucks, Cart and Van Covers, Hose Pipes of improved make, for Engine and Tender, Consisting Hose Pump to guard strength; Valves and Clacks made any size to order, Gauge-glass Rings and Compound Packing of any size or thickness.

FOR MILLS AND FACTORY USE.—Vulcanized Rubber Driving Bands, any length, width, or thickness. Rubber Washers of all sizes. Door and Machine Springs, Gas Bags, Flexible Gas Tubing, and Engine Hose.

Air-Beds, Cushions, Bolsters, and Mattresses, of all sizes; Fishing Boots and Stockings. Any article of this class made to pattern or size.

All orders punctually attended to, addressed JAMES LYNE HANCOCK, Vulcanized Rubber Works Goswell-road, London.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.
H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 149, Fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

H H H for drawing on wood.	F F light and shading.
H H for architectural use.	F for general use.
H for engineering.	B black for shading.
H B hard and black for drawing.	B B ditto ditto.
M medium.	B B B ditto ditto.
	B B B B ditto ditto

Sold by all the principal Stationers in town or country

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is GROSS'S WHOLESALE WAREHOUSE, 52, GREAT PORTLAND-STREET, Oxford-street, where you can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

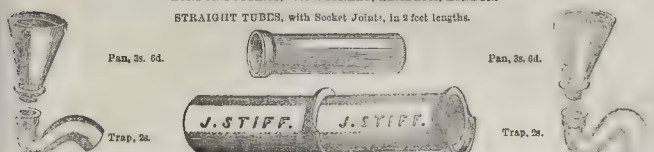
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.

Messrs. COLES, HEADBOLT, and CO.'S, St. James's and Phœnhall Wharfs, Caledonian-road, Pentonville.

Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.

Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. DOULTON'S HALF-SOCKET PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

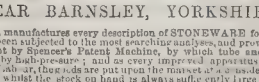
S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, on sale Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

SALT-GLAZED STONEWARE, FIRE-CLAY, AND TERRA-COTTA WORKS,



NEAR BARNSLEY, YORKSHIRE.

The Proprietor, E. B. BEAUMONT, manufactures every description of STONEWARE for drainage, building, sanitary purposes, and fancy ware, from clays which have been subjected to the most searching analyses, and proved to be of the most tenacious and indissoluble qualities. The pipes are wrought by Spencer's Patent Machine, by which tube and socket are one, without a manipulated joint, and rendered the more compact by Bain-pressure; and as every improved apparatus has been made available to secure the highest excellence with great economy of labour, the goods are put upon the market at a considerable reduction from the prices charged for others at all assimilating in quality, whilst the stock on hand is always sufficiently large to provide for works of the greatest magnitude.

PIPE TRADE LIBERALLY TREATED WITH.

Price lists and Diagrams sent free on application,—

At the WORKS.....To Mr. WM. FORD, Darfield Fire-clay Pottery, near Barnsley.
In LIVERPOOL.....To Mr. JOHN LIDDALL, 39, Shaw's-row.
In MANCHESTER.....To Mr. B. CONSTERDINE, Hunt's bank.
In GLOUCESTER.....To D. S. WILKINS, Westgate Wharf, Gloucester.
In LONDON.....To Mr. J. D. JONES, 27, Bucklersbury; and Goods Depot, No. 4 Warehouse, King's-cross (Great Northern Railway).

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb 11, 1856.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					2½d. per foot.
4	"	"	"	"	3½d. "
6	"	"	"	"	6d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 5d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—

LAMBERT'S PATENT.

These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 300 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action, and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Cresent, Jewin-street London.

TO WATER COMPANIES, LOCAL BOARDS OF HEALTH, AND OTHERS.

LAMBERT'S NEW VALVE COCK,

For Preventing Waste of Water.

It is constructed that it cannot be left open accidentally or wilfully, and further it will at each action deliver a specific quantity, and under the same pressure this quantity will never vary.

It is peculiarly adapted for closets, self-acting or otherwise.

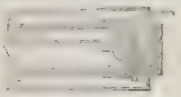
Price, complete for high pressure, 15s. 6d. each.

" low " 12s. 6d. "

THOS. LAMBERT and SON, Patentees and Manufacturers, Founders and Machinists, Short-street, New-cut, Lambeth.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an



EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 6s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 181, Blackfriars-road, and 117, Union-street, Borough; and of all respectable ironmongers, builders, &c.

SALES BY AUCTION.

Valuable Water-side Premises on the Regent's Canal, Kingsland-road, with Cement Kilns, Steam Engines, &c. and an improved Rental of 24l. a year.

MESSRS. EVERSFIELD and HORNE are instructed by the Mortgagees to SELL by AUCTION, at the MART, on TUESDAY, NOVEMBER 25, in two lots, the beneficial LEASE of the extensive PREMISES, known as Tuscany Wharf near the Canal-bridge Kingsland-road, fitted up at a great expense by Messrs. Freen and Co. for the manufacture of cement, but equally applicable for many other purposes. Held for a long term, at a moderate ground-rent; also an improved rent of 24l. a year, arising out of a plot of ground opposite Tuscany Wharf.—May be viewed by leave of the tenants, and particulars had of EDWARD JENNINGS, Esq. Solicitor, 12, New Boswell-court; at the Mart; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

SURREY, Three Miles from London.—Very valuable Freehold Detached Residences, with beautiful Pleasure Grounds, Fish Ponds, and parklike Meadow Land, containing about 28 acres; also two other Residences with Gardens, and two enclosures of Land, very eligible for building.

MESSRS. FAREBROTHER, CLARK, and LYE are instructed by the proprietor (removing to his estate in Hertfordshire), to sell at GARRAWAY'S, on WEDNESDAY, NOVEMBER 19, at TWELVE (unless in the mean time an acceptable offer be made to purchase the whole, or to rent the large residence and 18 acres of land), the following very valuable FREEHOLD ESTATES, situate within three miles of London, between Stockwell and Clapham, and comprising Stockwell Lodge, a spacious family residence, replete with comfort, and upon which a very large sum has been expended within a few years in additions of new reception-rooms, &c. standing in its own beautiful grounds, with lawn, kitchen garden, hot and green houses conservatory, sheet of water, stabling, farm-yard, and about 18 acres of park-like meadow land, ornamented with timber and plantations, and for many years the favourite residence of Henry Smith, esq. The immediate possession of this portion of the property may be had. The adjoining freehold residence, with its lawn, pleasure-grounds, kitchen gardens, paddock, and stabling with about six acres, in the occupation of John Gladstone, esq. at the very low rent of 200l. per annum. Also two capital houses and gardens, fronting Stockwell-lane, one in the occupation of Edwin Harford, esq. at 112l. per annum, and the other on lease to Mr. Palmer, at 60l. per annum, two lodges let at 40l. per annum, and two enclosures of meadow land, with extensive frontage, adapted for building purposes.—Particulars and plans may be had of C. G. C. ORIEL, Esq. Solicitor, 36, Alfred-place, Bedford-square; at Garraway's; and at the Offices of Messrs. FAREBROTHER, CLARK, and LYE, Lancaster-place, Strand.

RUGBY.—Valuable Freehold Land, close adjoining the town; very eligible for building purposes.

MR. W. H. HEWITT has received instructions from the Trustees for Sale, to SELL by AUCTION, at the EAGLE HOTEL, Rugby, on THURSDAY, NOVEMBER 27th, at TWO for THREE o'clock precisely, in lots, a valuable FREEHOLD ESTATE, consisting of nearly forty acres of excellent meadow land, most eligibly situate close adjoining the town of Rugby, and extending from the Dunchurch to the Bilton-road. It is peculiarly eligible for building purposes, as it commands fine views over the surrounding country, and is within the limits of the Rugby School. The whole is at present in the occupation of excellent tenants at low rents, amounting to about 190l. per annum. May be viewed, and particulars, with plan of the estate, had at the Place of Sale; the Hen and Chickens, Birmingham; the Bath Hotel, Leamington; of Messrs. BELL, STEWARD, and LLOYD, Solicitors, 49, Lincoln's-inn-fields, London; of Messrs. HARRIS, SONS, and HUBBARD, Solicitors, Rugby; and at the Auctioneer's Offices, 11, Hart-street, Bloomsbury-square, London.

To BUILDERS, BUILDING SOCIETIES, and OTHERS.—Valuable Freehold Building Land, Residence, &c. (tithe free), with immediate possession, at Hersham, Surrey, within five minutes' walk of the Walton Station, on the South-Western Railway.

MESSRS. CHURCH and SON are directed to OFFER for SALE, by PUBLIC AUCTION, at the MART, opposite the Bank of England, on THURSDAY, NOVEMBER 27th, 1856, at TWELVE o'clock, in three lots, TWO very valuable PLOTS of FREEHOLD BUILDING LAND, and a substantial brick-built and conveniently arranged Freehold DWELLING-HOUSE, with range of outbuildings adjoining, and large garden in the rear, desirably situated on the high road from London, about half a mile from Hersham, 1½ from Walton, and within five minutes' walk of the Walton station on the South-Western Railway. Lot 1 comprises a Plot of Land at the corner of the high road and the road from Walton to Hersham, with a building frontage of about 333 feet, and an average depth of 264 feet, or thereabouts. Lot 2, a Plot of Land at the opposite corner of the same road, with a building frontage of 425 feet, and an average depth of 274 feet, or thereabouts; and Lot 3, a substantial brick-built Residence, fronting the road from Walton to Hersham, containing eight rooms, and all necessary offices, with chaise house, stable, and large well stocked garden enclosed with walls, in the rear, of the estimated annual value of [illegible]l. The land is well adapted for the erection of detached or semi-detached houses, the soil is good, and an abundant supply of water can be obtained at a trifling expense. It is surrounded by excellent roads and ornamental park-grounds. Its commanding situation, at the intersection of two wide roads, thus affording large building frontages, together with its contiguity to the railway station, particularly recommend it for building purposes.—Particulars and conditions of sale, with plans annexed, may be obtained of Messrs. BIRCHAM, DALRYMPLE, and DRAKE, Solicitors, 16, Parliament-street, Westminster; at the Mart; and of the Auctioneers, William-street, Woolwich.

15, HATTON-GARDEN, HOLBORN.—The extensive Town Stock of Plumbers' and Sanitary Ware, also Fixtures, &c. Absolute Sale, by order of Messrs. Penman, Brown, and Co. who are dissolving partnership, and giving up their present Premises.—To BUILDERS, PLUMBERS, PAINTERS, and OTHERS.

MESSRS. GREEN and SON, will SELL by AUCTION, on the PREMISES, as above, on THURSDAY, 20th NOVEMBER, at TWELVE, the extensive town STOCK of PLUMBERS' and SANITARY WARE, including pan closets, plug basins, hopper and servants' basins, valve and ship basins, urinals, closet cups and handles; also beer machine handles, toilet services, sets of jugs, tea services, butter dishes, &c. The fixtures and effects comprise a builder's cart, mahogany desk, stands, counters, drawers, matting, chairs, directory, &c. Notice.—Approved bills of exchange, at three months' date, will be taken from purchasers of stock for 20l. and upwards, or 2½ per cent. discount allowed for cash. May be viewed the day prior and morning of sale. Catalogues had on the Premises; at the Auctioneers' Offices, 18, Hatton-garden; and at their Sale Rooms, 44, Farringdon-street, City.

ADJOINING the HARRY the EIGHTH, Mile-end-road. To FARMERS, CARPENTERS, BUILDERS, and OTHERS.

MR. F. HALL will SELL by AUCTION, on the PREMISES, as above, on WEDNESDAY, NOVEMBER 19, 1856, a large assortment of excellent BUILDING MATERIALS, removed from the City for improvements; comprising plate glass sashes, four and six-panel front doors, panelled partitions, linings, marble and other chimney-pieces, and hearths; register and other stoves, capital oak and fir joist rafters, and ceiling joist; fifty squares of flooring-boards, twenty stacks firewood, and numerous other items.—May be viewed; and catalogues had on the Premises, and of the Auctioneer, Mr. F. HALL, Chester-street, Kennington.

Valuable Building Materials, Upper Holloway.

MR. F. HALL has been favoured with instructions to SELL by AUCTION, on TUESDAY, NOVEMBER 18, at TWELVE, on the PREMISES, near the Crown, Upper Holloway, the very excellent MATERIALS of Six modern Houses, comprising all the timbers of floors and roofs in [illegible] and other stoves, [illegible] chimney-pieces, firewood, and a large quantity of other useful effects.—May be viewed, and catalogues had on the Premises, and of Mr. F. HALL, Building Material and Builders' Auctioneer, Chester-street, Kennington.

SALES BY AUCTION.

IN BANKRUPTCY.—TO BUILDERS, PLUMBERS, AND OTHERS.

MR. D. A. RAMSAY is instructed by the Assignees of Mr. G. E. Woods, a bankrupt, to SELL by AUCTION, on the PREMISES, High-street, Peckham, on MONDAY, the 24th NOVEMBER instant, the STOCK in TRADE of a PLUMBER, &c.; also a quantity of building materials, household furniture, and other effects.—Catalogues may be obtained three days prior to the sale of H. H. STANSFELD, Esq. 76a, Basinghall-street; of J. P. MURROUGH, Esq. 5, New Inn; of Messrs. POCOCK and POOLE, 58, Bartholomew-close; and of Mr. D. A. RAMSAY, 79, King William-street, City.

NOTICE.—To MAHOGANY MERCHANTS, CABINETMAKERS, and OTHERS.—The next Liverpool Periodical AUCTION SALES, comprising cargoes of Mexican, St. Domingo, and City St. Domingo MAHOGANY, with Italian WALNUT WOOD, &c.; also, Baltic and American WHITE WOODS, will take place on WEDNESDAY Morning, the 26th inst. at ELEVEN o'clock precisely, in the WOOD SALES SHEDS, Brunswick and Toxteth Docks, Liverpool.—Catalogues, containing full descriptive particulars, may be had on application to EDWARD CHALONER, Wood Broker and Measurer, 6, East side, Queen's Dock, Liverpool.

TOTTENHAM.—NURSERY STOCK, by

MR. A. RICHARDS, on the PREMISES, Marsh-lane, Tottenham, a short distance from the Park Station on the Eastern Counties Railway, on TUESDAY, NOVEMBER 18, at TWELVE, in consequence of the ground being disposed of for building, FINE EVERGREENS; comprising Portugal and common laurels, Aucuba, Phyllirea, Arbor Vitæ, Rhododendrons, Bays, Cluster Pines, Arbutus, Laurestinus, Brooms, Hollies, Berberis, Box, Privet, Double Furze, Lime, Chesnut, and other Trees; a large assortment of Flowering Shrubs, &c. &c.—View the day preceding and morning of sale. Catalogues obtained on the Premises, and of the Auctioneer, Tottenham.

FREEHOLD BUILDING LAND for SALE at an annual rent-charge.—TO BE SOLD, about EIGHTEEN ACRES of very eligible BUILDING LAND, at Holloway, in large or small quantities, at annual rent-charges, whereby builders may erect and sell the houses as freeholds, instead of leaseholds, free from the oppressive Law of Forfeiture and Probate Duty.—Apply to Mr. PEACHEY, 17, Salisbury-square.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety-nine years, with power of enfranchisement. Plots from one to four acres for large villa residences; smaller plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 6, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Gray's-inn-square.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

FIRST-RATE BUILDING SPECULATION.—Some VALUABLE LAND, fronting a high road at Holloway, for one or more houses, is now to be had, at such a low price as to make it a most profitable investment. It is in the midst of finished and occupied houses, and no expenditure is required for roads or sewers. A PAIR of CARCASSES TO BE SOLD, on the same estate.—Apply to Messrs. ROBERTS & BALL, Architects, 16, Holles-street, Cavendish-square.

BRICK and TILE YARD and LAND, for Villa Residences.—The Brancliffe Estate, near Worksop, situate on the Manchester, Sheffield, and Lincolnshire Railway.—TO BE LET, from FIFTEEN to TWENTY ACRES of excellent BRICK CLAY, from 12 to 14 feet thick, which has been tested and found to be far superior to any other in the vicinity. A lime quarry is in full work on the estate, producing lime of the very best quality. Arrangements might probably be made for working the lime and the brick clay together. A tramway runs from the north of the estate to the main line on the south and the Chesterfield and Stockwith Canal also passes through the estate, and they immediately adjoin the brick clay, so that every facility for transport, and establishing a first-rate brick and tile yard is thus afforded. Much of the land is highly suitable for villa residences. It rises on the north side of the estate, shutting out of sight the lime quarry; commanding a southern aspect, and beautifully picturesque panoramic views over the four ducal estates by which it is surrounded, and is always well supplied with game. Every encouragement will be afforded to a builder who would take land for villa residences. Shireoaks Station adjoins this estate, which is only three miles from the improving town of Worksop, and fifteen miles from Sheffield.—Permission to view and make trial of the clay, and further particulars, may be obtained of BRODHURST and HODDING, Solicitors, Worksop.

IMPORTANT TO BUILDERS AND CAPITALISTS.

UNITED TRADESMEN'S FREEHOLD LAND SOCIETY.—The beautiful ESTATE at HORNSEY, purchased by the Trustees, consisting of about thirty acres, and within three minutes' walk of the station, will next summer be accessible from the City by means of the Metropolitan Railway. Persons desirous of possessing land in this charming and picturesque neighbourhood, can do so immediately by joining this society. Plots, 30l. each; subscription, 5s. per month; at their Office, the Savings' Bank, Goldsmith's-place, Hackney-road, on the third Wednesday in each month, from seven until Nine o'clock. Capitalists and others desirous of possessing land at once can do so by application to Mr. J. LAWLESS, 1, Thurlow-place, Hackney-road; or to Mr. DANIELL, Hornsey, and Estate Office, 92, Keppel-street, Russell-square. The ground on the first portion of the estate being the only part on which a tavern can be built, is delightfully situated on the high road leading to Tottenham, and less than two minutes' walk from the Hornsey Station, to be disposed of, with all its privileges, for the sum of 300l.—Apply as above.

TO BREWERS, DISTILLERS, DYERS, MILL-OWNERS, and OTHERS who have Steam-engines, and to all who feel an interest in the establishment of baths and washhouses, or who for any purpose may require a plentiful supply of hot water at little expense. The discharged steam from high-pressure engines, as is well known, with few exceptions is conducted either through the roof into the open air, into a drain below, or into the chimney-shaft, and is consequently entirely wasted; whereas, by means of a noiseless, simple, compact, and comparatively inexpensive apparatus, it may be made available for heating water to boiling point in any quantity up to what can be obtained from the consumption of three-fourths of the fuel used in driving the engine. By the use of this apparatus in connection with an engine of one-horse power only, a sufficient supply of hot water is insured for the constant use of from ten to twelve baths, and their number may be increased in proportion as the engine increases in power; and wherever engines range from six to ten horse power or upwards, both baths and washhouses may with advantage be constructed together. Although preferable, it is not absolutely necessary that the apparatus should be on the same side of the street as the engine, as but little heat would be lost by conducting the discharged steam a distance of some sixty or eighty feet, through insulated pipes under a roadway. The apparatus having been in use upwards of three years in a large public establishment with perfect success, it is now confidently anticipated, independent of its general usefulness, that it will render the establishment of baths and washhouses comparatively easy in many quarters where they would otherwise be scarcely thought of, on account of the usual expensive apparatus.—Diagrams, with full particulars, may be had on application to the Patentee, JAMES HARRIS, Hanwell, Middlesex.

BUILDING LAND TO BE LET, Wilson-street, Long-acre, suitable for workshops, dwellings, or stabling.—Apply to Mr. BARLOW, 11, Portman-street, Portman-square.

NEW WINDSOR ESTATE.—Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences, with Stabling, which are much needed in this beautiful locality. The situation is the finest in or near Windsor, abutting on the Park and Long Walk, and commanding a splendid view of the Castle. Within ten minutes of the Great Western and fifteen minutes' walk of the South-Western Railway Stations. Advances can be had by responsible parties.—For particulars apply to Mr. WILLIAM SIM, Architect and Surveyor, 2, Danes-Inn, Strand.

TO BUILDERS and OTHERS.—In consequence of a death, valuable PREMISES near Oxford-street are TO LET, upon a repairing lease, at a low rent, for nearly forty years to come. They consist of a spacious dwelling-house, and in the rear, with separate entrance, a tier of workshops. The whole calculated to produce a rental, when in repair, of from 230l. to 240l. a year.—Apply at the Estate Office, 38, Spital square, Bishopsgate.

TO BUILDERS, SURVEYORS, ENGINEERS, and OTHERS. Extensive PREMISES and WORKSHOPS, fitted up with steam engine, boiler, saw frame, moulding machine, &c. very complete with a double dwelling-house, &c. TO BE SOLD or LET, through the sudden death of the owner.—Apply on the Premises, No 18, Albany-road, Camberwell; or at Mr. H. Ashby's, Grocer, 9, High Holborn.

COMMODIOUS BUSINESS PREMISES TO BE LET, containing, amongst other conveniences, a large Artist's Studio, lighted from above.—May be viewed on application on the premises, No. 17, Green-street, Leicester-square, and particulars obtained of W. C. REED, Architect, 64, Old Broad-street, City.

DUNSTABLE.—Eligible and Commodious BUSINESS PREMISES TO BE LET, with convenient Domestic Apartments immediately adjoining, situate in the High-street, having a frontage of 40 feet, by a depth of 124 feet. The Warehouses and Offices (erected not long since) have been built with a view to the Straw Business.—Apply to W. C. REED, Architect, 64, Old Broad-street, London.

LARGE MANUFACTURING PREMISES, in Park-lane, TO BE LET.—Inquire at 121, Long-acre.

TO TIMBER MERCHANTS, &c.—TO BE DISPOSED OF, an old-established BUSINESS in the DEAL and TIMBER LINE, with a first-rate connection, situate in the centre of a city in the west of England. The premises are fitted up with steam saw-mills, and the rent is moderate, with a small but well-selected stock of deals, &c. A more favourable opportunity of embarking in business can be seldom met with. A satisfactory offer for partnership in the above business will receive attention.—Apply to Mr. S. N. WILMOT, Pain's-hill, Salisbury, Wilts.

TO PLUMBERS, PAINTERS, and GLAZIERS.—TO BE DISPOSED OF, an excellent BUSINESS, advantageously situated. An invaluable opportunity to any Three branch Man desirous of commencing, and who would not object to work practically in the business himself. The stock is not large, and only a nominal sum required for goodwill; and every facility will be given to those really requiring a lucrative business at a small outlay.—Apply to J. W. F. 14, Princes-terrace, Caledonian-road, Islington.

TUNBRIDGE WELLS.—To PLUMBERS, PAINTERS, GLAZIERS, &c.—TO BE DISPOSED OF, by Private Contract, the STOCK IN TRADE, Goodwill, &c. of the business carried on for many years by the late Mr. JOHN DOWKER, Grosvenor road, Tunbridge Wells. The Premises, admirably fitted up for the above-named trades, may be taken on lease, at a moderate rent, fixtures included. Apply to Mr. N. E. STEVENS, Architect, Dorset House, Tunbridge Wells.

THE SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY.—Instituted 1831.
Accumulated Funds—ONE MILLION STERLING.
Annual Revenue—ONE HUNDRED AND SEVENTY THOUSAND POUNDS.
Existing Assurances—FOUR MILLIONS AND THREE-QUARTERS.

At the Division of Surplus, at 1st March, 1856, a Policy for 1,000l. effected at 1st March, 1832, was increased to 1,571l. 18s. 10d. being at the rate of Two and a Quarter per Cent. per Annum on the sum assured. This addition may be converted into a present payment, or applied in reduction of the future premiums.

Profits are divided triennially, and belong wholly to the assured.

Policies effected before 1st March next will receive six years' additions at the division of surplus in 1862.

Copies of the Report by the Directors on the recent division of surplus, and all information, may be had on application at the Head Office, or Agencies.

ROBERT CHRISTIE, Manager.
WILLIAM FINLAY, Secretary.
Head Office—26, St. Andrew-square, Edinburgh.
Office in London—26 Poultry.
A. T. RITCHIE, Agent.

PROVIDENT CLERKS' MUTUAL LIFE ASSURANCE ASSOCIATION.—Established 1840.—Every description of Life Assurance effected.
WM. THOS. LINFORD, Sec.
15, Moorgate-street, London.

PROVIDENT CLERKS' BENEVOLENT FUND.—The attention of clerks is earnestly invited to the great advantages themselves and families may derive from this fund.
WM. THOS. LINFORD, Sec.
15, Moorgate-street, London.

LOANS, from 10l. 10s. to 100l. ADVANCED, within twenty miles of London, repayable weekly or otherwise, at 2½ per cent. for twenty-five weeks, and 5 per cent for fifty weeks. Forms, price 2d.; by post, three postage stamps to be enclosed.—METROPOLITAN LOAN COMPANY, 1, Craven-street, Strand. Established 1839. Office hours from TEN to FOUR o'clock.
ROBERT NORTON, Secretary.

SIX HUNDRED POUNDS to be LENT, by way of mortgage on Freehold or Copyhold Property.—For particulars, apply to Mr. HARRIS, Land Surveyor, 38, St. George's-square, Pimlico.

FOR HIRE, a SPACIOUS TENT, adapted for the Laying of Foundation Stones for Public Buildings, &c.

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.

Apply to H. PIGGOTT, 115, Fore-street, City.

LONDON: Printed by CHARLES WYMAN, at the Printing Office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "THE BUILDER," 1, York-street, in the Parish of St. Paul, Covent-garden, both in the County of Middlesex.—Saturday, November 15, 1856.

The Builder.

AN ILLUSTRATED WEEKLY JOURNAL FOR ARCHITECTURE, ENGINEERING, ARCHÆOLOGY, AND THE ARTS.

Architect, Engineer, Operatives & Artist.

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BUILDERS' BENEVOLENT INSTITUTION.

—NEXT THURSDAY.—The ELECTION of THREE PENSIONERS, two males and one female, will take place at the London Tavern, on THURSDAY next, 27th inst.

Mr. Alderman WILLIAM LAWRENCE, President, in the chair.

Polling commences at TWELVE, and closes at THREE o'clock precisely.

A. G. HARRIS, Secretary.

ARCHITECTURAL EXHIBITION.—All

Drawings must be delivered at the Galleries, Suffolk-street, Pall-mall East, on 1st or 2nd DECEMBER, between NINE and SIX. Provincial Exhibitors should arrange with their local Hon. Secs. to send in one package, which, if consigned to Mr. GREEN, of Charles-street, Middlesex Hospital, will be carefully unpacked and delivered. Subscribers have the privilege of introducing a friend to, or of transferring their tickets for the lectures. Season Tickets will be Half-a-crown, as before.

JAS. FERGUSSON, F.R.A.S. } Hon. Secs.
JAS. EDMESTON, Jun. }

ARCHITECTURAL EXHIBITION,

Suffolk-street, Pall-Mall East, London. 'List of local honorary secretaries who will afford every information in their respective localities

BATH	J. ELKINGTON GILL, Esq.
BIRMINGHAM	W. W. BATEMAN, Esq.
BISHOP'S STORTFORD	G. E. PRITCHETT, Esq.
BOMBAY	R. KNIGHT SMART, Esq.
BRIGHTON	JAMES WOODMAN, Esq.
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WINCHESTER	JOHN COLSON, Esq.
WOLVERHAMPTON	E. BANKS, Esq.
WORCESTER	W. J. HOPKINS, Esq.
YORK	GEORGE F. JONES, Esq.

JAS FERGUSSON, F.R.A.S. }
JAS. EDMESTON, jun. } Hon. Secs.

TO ARCHITECTS AND DRAUGHTSMEN.

Ironmonger Hall, Nov. 14, 1856.

ARCHITECTURAL ASSOCIATION.—

The Members of the Architectural Association, and the Profession generally, are respectfully informed that the DRAUGHTSMEN'S REGISTER has been REMOVED to the OFFICE of Mr. S. C. CAPES, No. 3, Furnival's-inn, Holborn, where Architects requiring Assistants may consult the Register free of expense.

Draughtsmen, although not members of the Architectural Association, may, without expense, have their names entered upon the books, on application as above.

T. W. GOODMAN, } Hon.
J. A. HUNKER, } Secs.

TO MASTER LITHOGRAPHERS and

LITHOGRAPHIC PRINTERS. — The Trade Benefit Society of Lithographic Printers, instituted 1833, has been REMOVED from the Brown Bear, Bloomsbury, to the WHITE HORSE, 100, HIGH HOLBORN, where all communications for first-rate workmen are respectfully requested to be made to

J. PEACOCK, Secretary.

COMPETITIONS.

TO SURVEYORS and ARCHITECTS.—

The Burial Board for the Parish of Watford, in the county of Hertford, are desirous of receiving within five weeks from the date of this Advertisement PLANS, DESIGNS, SPECIFICATIONS, and ESTIMATES, comprising ground plans, sections, and elevations for Fencing in a Field (called Old Fields), in the parish of Watford, Herts, leaving sufficient space for a footpath on the west side thereof, commencing at and running from the public highway or carriage road at or near Coney, otherwise Colney Butts, at the south-west corner of the said field to a footpath on land of the Earl of Essex at the north-west corner of the said field; for Erecting Two Chapels, one on the consecrated, and the other on the unconsecrated portions; a Reading-room; Sexton's House with Board-room; and for Laying out the Land as and for a Burial-ground, with a sufficiency of roads and of pathways to afford access to the graves), and to mark every grave space. The Board will not bind themselves to employ or engage the person whose plans, designs, specifications, and estimates, or any or either of them may be approved, but in case he should not be employed or engaged, the Board will pay him a premium of Ten Guineas for the same, when they shall become and be the absolute property of the Board. The Board will not pay any charge or expense for preparing, and they will not bind themselves to accept or approve any plan, design, specification, or estimate. A plan of the land is deposited with the Clerk, and may be seen at his office at Watford at any time between the hours of TEN and FOUR in the day time, till within two days of the expiration of the time hereby limited. All plans, &c. to be sent by PRIDE. "The Clerk of the Burial Board," at Watford (free of expense), on the day the five weeks will expire, and those not approved will be returned free of expense in such way as the owner may request.

Watford, 20th November, 1856.

TO ENGINEERS, IRONFOUNDERS,

BUILDERS, &c.—The Corporation of Sandwich are about to ERECT a NEW SWING BRIDGE over the River Stour, at Sandwich, Kent, in place of the old bridge. Competent persons, willing to undertake the work, are therefore invited to furnish Plans, Estimates, &c. for such Bridge, either of Iron or Wood; the estimate to cover the total cost of fixing the new bridge complete for traffic. The Corporation do not bind themselves to act upon, or pay any remuneration for any such plans, estimates, &c. which are to be sent in to the Town-clerk, marked "Tender for Bridge," on or before the 15th day of DECEMBER next.—Further information, if required, may be obtained of the Town-clerk.

CONTRACTS.

TO BUILDERS.—Persons willing to

TENDER for the various WORKS in the ERECTION of a CATHOLIC CHURCH, PRESBYTERY, and SCHOOLS, at Hadfield, in the parish of Glossop, may see the plans and specifications at the Estate Offices, in Glossop, from MONDAY, the 24th NOVEMBER, to MONDAY, DECEMBER 8th, on which latter day, by TWELVE o'clock at noon, the tenders are to be delivered, sealed, at the offices aforesaid, and endorsed, "Tender for St. Charles Church and Schools, Hadfield." No pledge is given to accept the lowest or any Tender.

WEIGHTMAN, HADFIELD, and GOLDIE, Architects.

Sheffield, November 8th, 1856.

MIDLAND RAILWAY.—The Directors of

the Midland Railway are prepared to receive TENDERS for the ERECTION of a GOODS WAREHOUSE, at the Bristol Station. The drawings and specification may be seen, and further particulars obtained, upon application at the Engineer's office, Derby station, from the 18th to the 25th instant, inclusive, and at the Engineer's Office, Gloucester Station, from the 26th instant to the 1st DECEMBER, inclusive. Tenders to be forwarded to the Secretary, Way and Works Committee, Derby station, not later than TEN, a.m. on TUESDAY, 2nd DECEMBER next.—The Directors do not bind themselves to accept the lowest or any Tender.—By order,

JOSEPH SANDERS, Secretary.

Derby, 13th November, 1856.

TO BUILDERS.—The Guardians of Bethnal-

green, London, are desirous of receiving TENDERS for BUILDING an ADDITIONAL WING to the UNION ESTABLISHMENT, near Victoria Park. Plans and particulars may be seen on application to Mr. E. N. CLIFTON, Architect, No. 8, Gresham House, Old Broad-street, City. The Guardians do not bind themselves to accept the lowest, or indeed any Tender. Those builders who may feel inclined to submit Tenders for the proposed building, are requested to meet at Mr. CLIFTON'S Office aforesaid, on SATURDAY next, at TWELVE o'clock at noon, when every information on the subject matter in question will be afforded accordingly. Dated this 18th November, 1856.—By order,

ROBERT BRUPTON,
Clerk to the Board of Guardians of Bethnal-green.

CONTRACTS.

NOTICE to BUILDERS and CONTRAC-

TORS WAR DEPARTMENT WORKS.—The Director-General of Contracts will receive TENDERS for the execution of WORKS for a PORT and BARRACK BUILDINGS, &c. on Lee Hommemeux Floraine Rocks, Alderney. The Tenders to be delivered on or before THURSDAY, the 27th NOVEMBER, 1856, after which date no Tender will be received. The drawings of the works may be seen, and forms of Tender, with all other required information had at the Royal Engineer's office, Alderney. The Tenders to be addressed to the Director-General of Contracts, War Department Pall-mall, and endorsed, "Tender for Works, Hommeaux Floraine Rocks, Alderney."

Royal Engineer's Office, Guernsey, Nov. 4, 1856.

NOTICE to BUILDERS and OTHERS.—

WAR DEPARTMENT CONTRACT.—The Principal Officers of her Majesty's War Department hereby give Notice, that they will receive PROPOSALS for the following CONTRACT, viz.: For COATING the ASPHALTED ROOFS of SIX HUTS with TAR, &c. and keeping the same in repair and clean, from date of acceptance of Contract until the 25th JULY, 1857, at the temporary Barracks, Curragh of Kildare. Persons desirous of tendering for the same will receive every information on application at the Commanding Royal Engineer's Office, Lower Castle yard, Dublin; and at the Royal Engineer's Office at the Curragh, and may obtain letters of Tender, with the terms of contract. The letters of Tender to be sealed, and addressed to the Under-secretary of State for War, "The Director-General of Contracts, War Department, London," so as to be received on or before the 28th day of NOVEMBER, 1856, and to be marked on the outside, "Tender for Work at the Curragh Camp."

Commanding Royal Engineer's Office, Dublin,
13th November, 1856.

TO GAS CONTRACTORS and IRON-

FOUNDERS.—Notice is hereby given, that TENDERS are required for the ERECTION of GASWORKS, and Lengths of about Thirty Miles of Main in the City of Bangor, North Wales. Tenders to be given for the supply of the Ironwork Materials, and the Foundation of the Works separately. Drawings and specifications to be seen at the Offices of Messrs. BRIGHTMAN, Engineers, Essex-street, Strand, London, on and after 21st of NOVEMBER. Tenders to be sent to the same address on or before the 2nd NOVEMBER.

TO CONTRACTORS.—SOUTH WALES

MINERAL RAILWAY.—The Board are prepared to enter into a CONTRACT for the CONSTRUCTION of the entire RAILWAY and WORKS, from the Briton Ferry Road, South Wales, to the Head of the Valley at Glyne rowe, a distance of about 11½ miles. Specifications, plans, and sections may be seen at the Offices of I. K. BRUNEL, Esq. 18, Duke-street, Westminster, on and after the 27th instant. Tenders, endorsed, "Tender, South Wales Mineral Railway," addressed to the Secretary, at the Offices of Messrs. BANKES, HORNE, and NORTON, Clerk's-court, Westminster, on or before the 24th day of NOVEMBER next. The Directors do not bind themselves to accept the lowest Tender.—By order,

ROBERT PARSONS, Secretary.

Oct. 17, 18.6

TO BUILDERS, CONTRACTORS, and

OTHERS.—Persons desirous of CONTRACTING for the ERECTION of a NEW HOUSE on the PENYRHEWL ESTATE, near Penpont, may inspect the plans and specifications, and obtain all other information, on application personally, to Mr. WALKER, the White Lion, Pontypool, or by letter, to the Architects, on and after the 10th instant. Estimates to be sent to the White Lion Hotel, Pontypool, addressed "Tender for New House," and addressed to the Architects, not later than the 28th instant, who will meet the Proprietor and Contractors on the 2nd of DECEMBER, at TWO o'clock p.m. at the above Hotel, to open the Tenders, but they do not bind themselves to accept the lowest or any Tender.

BIDLAKE and LOVATT, Architects, Wolverhampton

CLERKENWELL.—The Vestry of this

parish will meet at the Vestry-hall, Upper Rosoman-street, on WEDNESDAY, the 3rd of DECEMBER next, at TWO o'clock in the Forenoon, to receive TENDERS and to contract for ERECTING a new PUMP, with the requisite apparatus thereto, in Amwell-street. The specification may be seen and particulars obtained, between the hours of TEN and FOUR daily, at the Vestry-hall. Where Tenders sealed and directed "Tender for Pump," must be left on or before TUESDAY, the 2nd day of DECEMBER.

THOS. CROMWELL, Clerk.

PENMAEN PARSONAGE-HOUSE.—

Builders are hereby invited to send in TENDERS for the ERECTION of a PARSONAGE HOUSE, at Penmaen, in the parish of Mynyddyslwyn, near Newport, Monmouthshire. The plans and specifications can be seen on application to the Rev. REES JONES, at Myrtle grove, Blackwood, Newport, from MONDAY next, the 17th instant. Tenders to be forwarded to Mr. NORTON, Architect, 24, Old Bond-street, London, on or before the 1st of DECEMBER.

TO BUILDERS.—BOROUGH of WAL-

SALL. The Town Council of the Borough of Walsall, acting as the Burial Board, are prepared to receive TENDERS for the ERECTION of TWO CHAPELS, ENTRANCE LODGE, and ENTRANCE to the new Cemetery for the said Borough, according to Plans and Specifications which may be seen at the Town Clerk's Office, Bridge-street, Walsall, on and after MONDAY, the 24th of NOVEMBER, instant. The Board do not pledge themselves to accept the Lowest or any Tender, and the Contractor will be required to enter into a Bond with one or more sufficient sureties for the due satisfaction of the Board, for the due performance of the Contract. Sealed Tenders, endorsed "Tender for Cemetery Buildings," to be sent to the Town Clerk's Office on or before TUESDAY, the 2nd day of DECEMBER next.

SAMUEL WILKINSON, Jun. Town Clerk.

Walsall, November 13th, 1856.

[*For remainder of Contracts see next page.*

CONTRACTS.

TO BRICKMAKERS, SCAVENGERS, and OTHERS.—The Crown Estate Paving Commissioners do hereby give Notice, that they are ready to receive TENDERS from parties willing to contract for the REMOVAL during the year 1857, of the DIRT, CINDERS, and ASHES from the houses, buildings, and premises under their jurisdiction in that respect. Forms of Tender and further particulars may be obtained on application to me here, where Tenders, according to such forms, sealed, addressed to the Crown Estate Paving Commissioners, and endorsed "Tender for Dust," are to be left, at or before THREE o'Clock on WEDNESDAY, the 3rd day of DECEMBER, 1856.

FRANCIS ADAMS, Clerk to the Commissioners.

1, Whitehall place, Nov. 17, 1856.

MARBLE. — The ITALIAN MARBLE COMPANY have just landed, and constantly keep an assortment of MARBLE MORTARS and GARDEN VASES of all dimensions. Orders executed for the above, and every description of Italian works of art. Veins and Sicilian marble in blocks of all sizes — apply at Bridge Wharf, Millbank, adjoining Vauxhall bridge, to WILLIAM W. BONNIN, secretary.

TO BUILDERS, MASONS, AND OTHERS.

THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Bardilla, dove, black, black and gold, Sienna, St. Ann's, statuary, serpentine, verd antique, &c. Portland, Hareshill, Park spring, and other stone, in blocks, slabs, landings, and headstones. Yorkshire paving, granite curb, &c. All as desired, packed and forwarded by any part of England. THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

MARBLE GALLERIES, 17, Newman-street, Oxford-street.—Mr. ALFRED E. EDWARDS, (towards of ten years with the London Marble Company), has opened the above premises, lately in the occupation of Bailey, the celebrated sculptor, on lease for the firm of EDWARDS, EDWARDS, and COMPANY, with the largest stock of BRITISH and FOREIGN MARBLE CHIMNEYPIECES, &c. &c. in London. EDWARDS, EDWARDS, and CO. solicit the favour of an inspection of their stock by architects builders, and others connected with the trade; feeling sure to secure them that for design, style of execution, and price, it will be found unrivalled. Estimates for every description of marble work.

MARBLE and STONE CHIMNEYS.—15 MARBLE CHIMNEYS of various le ness and colours, most of them fixed, are now on view at the Cambridge Heath Marble Sawing-Mills. The proprietor has again enlarged his workshops, and erected so much improved machinery, so as not only to compete, but is able to manufacture more, and consequently cheaper than any house in the trade.

The Trade supplied

MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY PIECES lately imported from the Continent. They comprise Statuary, Giallo di Sienna, Vert Rouge, Dove, Black and Gold, Rouge de Belmont, Arcadia, and other choice foreign marbles, and are designed with great taste, and executed by first class artists. On sale, at the show rooms of Messrs. EVANS, SON, and CO. King William-street, London-bridge.

MARBLE CHIMNEY-PIECES, and every other description of marble work supplied to builders and the trade at about HALF the USUAL PRICE, in many instances less than slate.—Manufactured by the LONDON and CONTINENTAL MARBLE COMPANY, at their own Quarries in France and Belgium. Office and Depôt, 3, Crooked-lane, London-bridge. Estimates given for works to any amount.

LLOYD'S MARBLE WHARF, Thames-bank, Pimlico, adjoining Vauxhall-bridge.—Italian Statuary, Veined, Sicilian, Dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

TO SPECULATORS. — Any Person who would JOIN in WORKING a valuable QUARRY, and act as Agent in London if desired, would find it a most remunerating speculation. The only capital would be machinery, which would cost some 2 or 3 hundred pounds. The stone and all bare of the best quality, and will pay 50 per cent. on the outlay. The stone is heavier than granite, and fit for every sort of ornamental work, such as chimney-pieces, monuments &c. &c. The lime-kilns now at work will prove all the expenses. Guarantee against losses.—Address, MAJOR, Office of "The Builder."

EDGE-RUNNER or CRUSHING-MILL for SALE, with bed-stone and shaft, all complete, suitable for grinding lime, chalk, plaster, &c. Several FRENCH BURR STONES, and one superb 4-cut-opening TURNING LATHE.—Apply to C. T. CHRISTIE, Millwright and Engineer, 113, Vauxhall-walk, Lambeth.

STONES, GRANITES, SLATES, &c.—W. and J. FREEMAN supply the various British and Foreign Stones, Cornish and Aberdeen Granites, in scappled blocks or worked to specification. Also, the usual quarry worked articles of flags, landings, &c. direct from the quarries to Liverpool, Hull, or any of the outports (for exportation or otherwise), or rail to any part. Office and Show-room. Stocks of each description always ready for immediate delivery from their Wharfs, Millbank-street, Citt-road Basin, and (adjoining Commercial Docks) Deptford.—Office, 27, Millbank-street, Westminster.

RAWDON-HILL STONE.—Messrs. TRICKETT and PERKIN are prepared to execute orders to any extent for their most admired Building Stone. Depôts where large stocks are kept No. 3, Stone-wharf, Great-Northern Railway Station, Battle-bridge; Victoria Stone-wharf, Millwall, Poplar. Blocks quarried to suit customers for columns, cornices, landings, steps, lintels, templets, slabs, &c. Delivered to any part by vessel, railway, &c.

"This stone when better known, must come into extensive use I should think it exceedingly suitable for the London market."

C. L. Dresser, F.G.S.

Address, JOHN TRICKETT, Headingley, Leeds, Yorkshire; or, SAMUEL TRICKETT, Victoria-wharf, Isle of Dogs, London.

N.B. A large quantity of Foundation Landings for sale.

GATES and GEORGE, CAEN, AUBIGNY, and GENERAL STONE MERCHANTS, CAEN WHARF, ROTHERHITHE, LONDON.

STONE! STONE! STONE! — To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Self-face Slab, Granite, and all kinds of Rough Stone, Broken Road Materials, and every other description of stone, at JOHN KNIGHT and SONS, Devon Wharf, Mile-end. York-tooled paving, 8s. 6d. per 100 feet; slab for hearths, 4d. per foot sup.; for chimney-pieces, 8d. per foot sup.; 8 by 3 window-sills, 6d. per foot run; 13 by 3 coping, 6d. per foot run; box chimneys (any opening), 8s. 6d. each. Terms cash on delivery.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Town-hall.

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SCOLES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall wharf, Cannon-row, Westminster: or Patent Stone Works, Ipswich.

GRANITE.—The Welsh Granite Company, Carnarvon, supplies Pitching or Paving Sets of this Material to order. The Sets, which have for several years been extensively used in Manchester, Bristol, Leeds, and other large towns, combine in a higher degree than any others, the qualities of roughness in wear and durability. The stone is also well adapted for foundation courses, plinths, &c. for public buildings and for mill-stones.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace—Supplied by the Haytor Company under Royal Charter. For terms, apply to Mr. G. HOAR, Haytor Granite Office, 1, Millbank-row, Westminster.

GRANITE. — The Cheesewring Granite Company, Liskeard, Cornwall.

London Agents—THOMELIES and TAYLOR, 64, Old Broad-street. Manager—JAS J. TRATHAN, Liskeard.

This Granite is selected for the New Westminster-bridge.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS, MILLBANK-STREET, WESTMINSTER.

Marble of all kinds and of best quality, in block and slab. Marble masons and

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.

List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

WESTMORELAND SLATES.—TO BE SOLD, a bargain, about Fifteen Tons.—For price and further particulars apply to J. J. Glassock, Bishops Stortford.

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôt, at Bangor, or to transmit by railway. Also Slabs of all sizes.—Orders to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor.

SLATE.—An assortment of the best BANGOR ROOFING SLATE ON SALE, at Bridge-wharf, Millbank.—Apply to Mr. GEORGE BAXTER, Foreman.

PARIS EXHIBITION. — ENAMELLED SLATE. TWO FIRST CLASS MEDALS.—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1854. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of lavatory tables, chiffoniers, consoles, &c.; baths, baptistries, altar-tablets, pilasters, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies. Price-lists can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.

N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; and at Messrs. Brabys, Belvidere-road, where terms may be obtained.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, White friars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Any rubbish delivered per barge, in any quantity, alongside the Thames.

CROGGON and COMPANY, Manufacturers of PATENT ASPHALTE ROOFING, BOILER, RAILWAY, SHEATHING and INODOROUS FELT, For Damp Walls, and Lining Iron Houses, 2, DOWGATE-HILL, LONDON.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner or supplied in any quantity. Information for using forwarded with material. Post-office orders or reference in London promptly attended to.—Estimates given for every kind of the above work.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations, FROM 2s. 9d. PER SQUARE YARD.

Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.

Apply to JOHN PILKINGTON, Poloneeau and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London.

N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

AUSTIN'S IMPERIAL PATENT SASH and BLIND LINE can be obtained of all IRONMAKERS, IRONMONGERS, MERCHANTS, FACTORS, and WHOLESALE HOUSES, in TOWN or COUNTRY. Established 1824.

J. AND RILEY CARR, Bailey-lane Works, Sheffield, Manufacturers of Circular and Vertical Mill-saws, Veneer Segments, &c. Improved Guilleting, Topping, and Engineers' Files of superior quality. Patent Fluting Machine and Moulding Irons of every description.

COOK'S NEW PATENT COMPOSITION.

By Her Majesty's Royal Letters Patent.

TO IRON MANUFACTURERS, SHIP BUILDERS, Engineers, Iron Founders, Owners of Iron Ships and Steamers, Sugar Refiners, Zinc Manufacturers, Paper Makers, Oil-cloth Printers, Manufacturers of Mirrors, &c. By Her Majesty's Royal Letters Patent, COOK'S NEW PATENT COMPOSITION for COATING EXPOSED SURFACES, or SURFACES LIABLE to DECAY, OXIDATION, or DETERIORATION. Cook's New Patent Composition has, without the aid of a single advertisement, established its character as a preventive of Oxidation or Rust on all Metallic Substances,—as a Coating for Roman or Portland Cement, or Brickwork, to prevent their inherent alkali or salt from throwing off the Paint; and for Coating Walls of Rooms previous to Papering or Painting.

From Mr. John King, Builder, Liverpool.

"Saw-Mill, Scotland-road, Liverpool, 21st May, 1856.

Mr. J. E. Cook.—Sir: I had your New Patent Composition applied to the front of my house, which is built of brick, and must state that I never found any coating which answered the purpose at all equal to it; and I feel confident that if its capabilities were generally known it would come into universal use. I may add that it rendered the bricks quite impervious.

Yours respectfully, JOHN KING."

From Mr. Alexander Paterson, jun. Agent for the London and Manchester Plate Glass Company,

"Greenock, March 1, 1856.

Mr. J. E. Cook.—Dear Sir,—I have tried your Composition upon mirrors, and find that it effectually protects them from the effects of wet or damp.—I am, dear sir, yours truly,

ALEX. PATERSON, Jun."

From Mr. John M'Naught, House Painter and Decorator, Greenock.

"Mr. J. E. Cook.—Dear Sir: I had your 'Patent Composition,' applied to the outside of a house which was finished in Roman cement, and which is situated in an exposed part of the sea-coast, and, I am happy to state, with the most favourable results. I may also state that I gave the Roman cement one coat of your composition, and thereafter finished it with two coats of oil paint, in imitati n ashler, and have no hesitation in pronouncing it a first-rate job, there being no appearance of either alkali or salt of any kind coming upon the coating, as is usual in ordinary cases of common oil painting. I have no doubt but when your composition is better known, the use of it must become general.

Yours truly, JOHN M'NAUGHT."

Extract from a Letter in "The Builder," from F. G. Mulholland, Esq. the eminent Government Contractor.

"I have used the Composition in Engineering and Architectural Work, and in fact applied it in all ways and for all purposes where such a material was required. In conclusion, I consider the Patent Compound when properly manufactured) so truly valuable for all parties connected with the Building Business generally, that I should at the first have sent you full particulars for insertion in your widely-circulated paper.

(Signed) F. G. MULHOLLAND."

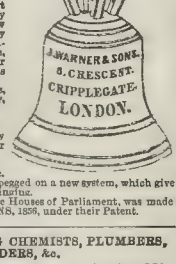
COST for ONE COAT, about 3½d. per SQUARE YARD ONLY.

HART AND SON, IRONMONGERS AND MANUFACTURERS, 53, 54, 55, 56, & 57, WYCH-STREET, STRAND, London.

LOCKS, HINGES, HANDLES, BOLTS, &c. First-class Prize Medal, Paris Exhibition, 1855. Specimens at the Hardware Court, Crystal Palace, Sydenham.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE. Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-iron Goods, and STEWART'S PATENT CAST-IRON GAS and WATER PIPES. Office, No. 7, Bise-lane, London.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.



J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.

Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.

TUNED BY MACHINERY.

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system, which give superior tone and facility for ringing.

The great 16-ton Bell, for the Houses of Parliament, was made by JOHN WARNER and SONS, 1858, under their Patent.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS, THE BEAR GARDEN LEAD WORKS, SOUTHWARK.

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not congregate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Works, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only f Portland Cement.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring.—Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

KEENE'S and PARIAN CEMENTS and PIENCH PLASTER, for internal uses. These well-known hard Stuccos dry quickly, and can be painted upon within a few days. Made and sold by JOHN BAZLEY WHITE and BROTHERS Millbank-street Westminster.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade, Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL. - Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Vases, Hyd. Lime, Lime, Laths, Slates, and Slate Slabs, Fire bricks, Grindstones, Percent Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Portlan

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO, CEMENT, STUCCO PAINT. — CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS

Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs. Warehouse, No. 1, Wharf, Paddington-basin.

CHARLES RICHARDSON, 3 & 6, SOUTH-WHARF, PADDINGTON BASIN. COWLEY AND KENT BRICKS, PORTLAND, ROMAN, AND OTHER CEMENTS, TAMWORTH, GLAZED SEWAGE PIPES BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 6, South Wharf, Paddington.

NOTICE.

CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cements. Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 80, Old Broad-street, London; to Mr. MONUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT. Glazed Stoneware Sewage Pipes. Brick, Lime, and Cement Merchants, TATHAM and CO. 14, South Wharf, Paddington.

PORTLAND and BATH CEMENTS. TATHAM and CO. 14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours. Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale or retail, at his wharf, 8, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

DAVIES and NORMAN, CROWN WHARF, GREAT SCOTLAND YARD, BLACKFRIARS, PORTLAND CEMENTS, LIME, BRICKS, TILES, SLATES, FIRE GOODS, &c. STONEWARE PIPES, PANS, TRAPS, &c. A Liberal Allowance to the Trade.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and Co. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured from the finest materials. Cement is applicable to orders received at Great Scotland Yard, or at the Works.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor tropical climes act upon it. It is entirely free from any poisonous or permicious property. Those direful maladies paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had ready ground in Oil, and where it is used with Size, Varnish, &c. To prevent the prejudice against Zinc paint which the adulterated article must otherwise produce, it is now sold by the Wholesale Paint-dealers in Oriental Packages, each cask stamped, HUBBUCK—LONDON—PATENT. And when so marked, the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered on board, the master has instructions to produce (on demand) the canal bargee's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 13, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS, 12, UPPER GROUND STREET, Blackfriars (Surrey side), 7, NORTH WHARF ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 8d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Waterworks Companies, Coal-Mine Proprietors, Builders, Contractors, &c. JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, is prepared to enter into contracts with any of the above branches that may favour him with their orders. The advantages to be derived from the above Cements, manufactured by J. C. over all others, are their extraordinary hydraulic properties.—Samples and references may be had on application either at the Works, Ashton New-road; or the Warehouse, 5, Broom-street, Shude-hill, Manchester.

TO LIME and CEMENT DEALERS, TILE and DRAIN-PIPE MANUFACTURERS, and OTHERS.—A Brick Merchant having a well-situated WHARF fronting the Thames at Hammersmith, where there is an open area for the above local trade, and only requires it for the loading and unloading of its coal, would be happy to treat with any one for LETTING the whole or part, which has every requisite for carrying on a good trade. A timber and sawing yard could be added advantageously.—Further particulars of Mr. LLOYD, Brickmaker, Shepherd's-bush, Mydd esex

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings of good and sound quality, constantly on sale at 1, Dukes Brick Piles, which are only a quarter of an hour's walk from the City. H. D earnestly invites purchasers to favour him with a visit, in order to inspect h's stock, and receive f r estimates.

Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from chalk, and a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Horton Brickfield, Grange-walk, near the Rosemary Branch, Islington.

N.B. Light-coloured Pit Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury, New-park, would be willing to enter into arrangements with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Dell's Farm, Stoke Newington Green.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS
Also COWLEY and KENT STOCKS, in any quantities
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.
N.B.—Lime, Cement, Slates, Fire-bricks, &c. and all kinds of Building Goods.

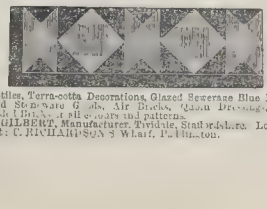
BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting Whiting Sand for ashphalte, Land Drain Pipes, Patent Drain Pipes, Gas tell for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle), fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.

General Office—No. 12, GEORGE-YARD, LOMBARD-STREET.

Letters addressed to Grays Essex, will meet with immediate attention.

BLUE, RED, and WHITE FLOOR-TILES.



Roof-tiles, Terra-cotta Decorations, Glazed Sewerage Blue Pipes, Glazed Stoneware Gullis, Air Bricks, Quoin Dressings, and Moulded Bricks, of all sizes and patterns.

W. GILBERT, Manufacturer, Tividale, Staffordshire. London Depôt: C. RICHARDSON'S Wharf, Paddington.

THREE HUNDRED THOUSAND BRICKS and BRICKFIELD, &c. TO BE DISPOSED OF, having a siding to railway at Chadwell-st Mary Station.—Apply to Mr. DEGGLE, Upnor, near Rochester.

TO BRICK-MERCHANTS and OTHERS. Parties willing to SUPPLY about 200,000 BRICKS, near King's cross and will take a part built House in lieu of payment, may be treated with.—Letters, addressed to A. B. Mr. Cliff's, Portland-place, 116, Edgware-road, Paddington, will have immediate attention.

TO FIRE-BRICK and SANITARY TUBE MANUFACTURERS.—TO BE DISPOSED OF, either the entire, or two-thirds of the interest in an established Manufacture of FIRE-BRICK and SANITARY TUBES, which has been advantageously carried on for several years, and admits of considerable extension. The firm have a lease of about seventy-five acres of land abounding in fire-clay of the finest quality; there are sheds and drying-rooms, and other erections adapted to the requirements of the trade; and the machinery is of the most approved description, including Spencer's patent presses. Valuable veins of coals and iron stone, crop out in immediate connexion with the beds of clay. Facilities for carriage by canal, or rail, exist within an easy distance of the works, which are most conveniently situated for the populous districts of Staffordshire. Wiltshire, and Hampshire. There are large contracts on hand sufficient to engage the concern for some time to come to persons of capital, and with a practical knowledge of the manufacture, the opportunity is a most desirable one. Every additional information will be furnished to bona fide applicants.—Apply to Mr. H. L. SYERS, Carleton-road, London.

COLES, SHADBOLT, and CO. CEMENT and PLASTIC MANUFACTURERS, LIME BURNERS, Brick, Tile, Drain-pipe, Hair Lath, and Fire Goods Merchants, ST. JAMES'S and THORNHILL WHARFS, Caledonian-road, London.

BEADON'S PATENT IMPERISHABLE GUTTER TILES.

For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile, and other structures.

SOLE AGENT,

J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It requires the room of a large amount of roofing, effecting a great saving in slates, &c. &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

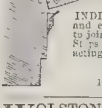
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 8d. per foot. This charge to include tiles (delivered in Agent's yard), cement, and labour. May be had in London, Gloster, Bridgwater, and Ruby

MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability, Slabs and Tiles for Fireplaces and Hearths, Covings for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouses, 7, Albion-place, Blackfriars-bridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade may not be misled, "TERRO-METALLIC" is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 281, of the Great Exhibition, rank the Manufactories known so long as "Peake's Patentees," Tunstall, Staffordshire, as the first of the kind in the world.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crests, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, Manufactured by J. M. BLASHFIELD, in Patent Imperishable Terra-Cotta, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin

TO ARCHITECTS and BUILDERS.—T. TRELOAR, 42, Ludgate-hill, Manufacturer, supplies Cocoa-nut Fibre Matting, Doormats, Brussels, &c. of the best quality, on the most reasonable terms.—Warehouse, 42, Ludgate-hill.



DRAUGHTS of COLD AIR round DOORS, sashes, or cupboard doors and windows, EFFECTUALLY PREVENTED by GREENWOOD'S patent INDIA-RUBBER STOPS, the most simple and effectual method of making air tight joints to joiners' or cabinet work, old or new. These Stops can be had in any length or pattern. Self-acting spring stops, for the hinging of doors.

The Trade supplied.

JOHN GREENWOOD, Patentee, 10, Artillery-street West, London-bridge.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water, also intense Heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that the Iron of Wolston's Torbay Iron Paint will chemically coat as much surface as three Pounds of Pure White or Red Lead, and that they resist atmospheric action better than Lead Paints. For all Public Works, Guaranteed and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all painting purposes, the season will be commenced, Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

TO BUILDERS AND PLUMBERS

The attention of the Trade is called to JOHN WARNER & SONS'

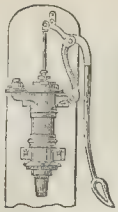
PATENT VIBRATING STANDARD PUMP,

which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 26 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.



R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

CONTRACTORS' STEAM-ENGINES. — TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,
Engineers and Contractors,
John's-place, Holland-street,
Southwark, London.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

STEAM-ENGINES for SALE, at the East London Ironworks, Cambridge-road, Mile-end-road. The best and most economical high-pressure horizontal engines always for sale.—Messrs. J. MUSTO and CO. having a large sale for these particular engines, endeavour to keep a stock either finished or in course of erection, which can be seen at their works. Satisfactory reference can be given, and engines of their make inspected at work in several parts of London. Workmanship and materials warranted.

TO CONTRACTORS. — STEAM-DREDGER, STEAM-TUG, and HOPPER BARGES.—TO BE DISPOSED OF, by Private Contract, a powerful STEAM DREDGING MACHINE, in excellent order—length over all, 88 feet, beam 26 feet, fitted with a 30-horse power condensing steam-engine and boiler with two furnaces, buckets, crabs, and every requisite; an iron clinker-built, paddle-wheel STEAM-TUG—length over all, 78 feet, 15 feet beam between paddles, fitted with 30-horse power condensing steam-engine and boiler; Twelve two-room HOPPER BARGES, with chains and crabs; one three-room ditto, and one open Coal Barge.—For further particulars, apply to Messrs PULLER and HORSEY, Billiter-street, City.

SMALL STEAM-ENGINE WANTED.—The Local Board of Health for the district of Croydon are desirous of obtaining a STEAM-ENGINE of 2 horse power, with fly-wheel and drum on the fly-wheel shaft (no boiler is required). Any person having such an engine, either new or second-hand, may send the price and particulars to Mr. THOMAS COX, Surveyor to the Board, Town Hall, Croydon, from whom any necessary information may be obtained.—By order of the Board,
HENRY RICHARDS, Clerk.

Croydon, 20th November, 1856.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 8s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 3s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade forwarded on application, post free.

WANTED, to BORROW £1,000. — The Local Board of Health for the district of Burnham, Somerset, are desirous of obtaining the above sum for the completion of Public Drainage Works, on mortgage of the special district rates, under the provisions of the Public Health Act, 11 & 12 Vict. cap. 63. Parties willing to advance this sum may obtain any further information on application to the Clerk, to whom all Tenders must be sent (stating the rate of interest required, and when the money can be advanced) on or before the 13th day of DECEMBER next. By order of the Board,
ROBERT SALISBURY, Clerk.

Dated Burnham, Somerset, 17th Nov. 1856.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,
IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

EXTENSIVE REDUCTION IN PRICES.

KINSON POTTERY AND CLAY WORKS, POOLE, DORSET.

DEPOT, 2 AND 3, HIGH-STREET, LAMBETH.

HALF SOCKET. WHOLE SOCKET.

Manufacturers of every description of Sanitary Glazed Sewage Pipes, Bends, Junctions, White Glazed Closet Pans, Gas Retorts, Furnace Blocks, Crucibles, Fire Clay, &c. &c.

The Fire Bricks made from the Clay of this estate have been tested, and proved to be in every respect equal to those of Stourbridge and Newcastle.

DRAWINGS AND PRICES MAY BE HAD OF J. COX, AS ABOVE.

KINSON CLAY, POTTERY, AND BRICK COMPANY, LIMITED.

THE PROPRIETORS of the KINSON CLAY WORKS and ESTATE, desirous of further developing the resources of their Property, and of increasing their means of production, have ESTABLISHED a COMPANY under the above title, which has been Incorporated pursuant to the provisions of "The Joint Stock Companies Act, 1856." An ample capital for all present purposes has been subscribed and paid, and a sufficient sum is left in reserve, uncalled up, to provide for an increased trade in all branches of manufacture and supply, with a desire to give dealers and the public confidence in the stability of the undertaking. It is intended to SUPPLY CLAY, and ALL ARTICLES of MANUFACTURE, of the best description, at reasonable prices, and the Proprietors are encouraged, by the experience of the past, to hope for a fair share of the custom of the trade in future. The resources of the Property in every department will be found fully equal to any demand, and purchasers may depend on having their ORDERS PUNCTUALLY EXECUTED.

It is requested that all Communications may be addressed to Mr. PAUL MATHEWS, the Manager, or to Mr. T. W. GREEN, Secretary, at the WORKS; to Mr. F. F. WHITEHURST, at the Company's Depôt, Bromford, Middlesex; or to Mr. JOSEPH COX, at 2 and 3, High-street, Lambeth, London. The late Proprietors gratefully acknowledge the support and encouragement hitherto received.—By order,

PAUL MATHEWS, Manager.
T. W. GREEN, Secretary.

Kinson Clay, Pottery, and Brick Company's Offices, near Poole, Dorset, October 17, 1856.

BENJAMIN FOWLER and CO.

FIT UP HEATING-APPARATUS OF ALL KINDS,

For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,

And for every purpose where artificial heat is required.

They also erect DRYING-ROOMS for ASYLUMS, UNIONS, DOMESTIC and MANUFACTURING PURPOSES, upon the most improved principles, and upon the largest or smallest scale.

STEAM-COOKING and BATH APPARATUS FIXED;

Also PUMPS, for DEEP or SHALLOW WELLS,

To be worked by hand, horse, or steam power;

AND ALL KINDS OF

ENGINEERS', MILLWRIGHTS', or SMITHS' WORK, for Public or Private Establishments.

The most ample references from a long experience in the above branches can be given.

B. FOWLER, HOLMAN, and CO.

SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.

The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve ways three times usual size, made to suit liquors of all kinds, hot or cold, is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale.

BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

LOANS, from 10*l.* 10s. to 100*l.* ADVANCED, within twenty miles of London, repayable weekly or otherwise, at 2½ per cent. for twenty-five weeks, and 5 per cent. for fifty weeks. Forms, price 2d.; by post, three postage stamps to be enclosed. METROPOLITAN LOAN COMPANY, 1, Craven-street, Strand. Established 1839. Office hours from TEN to FOUR o'clock. ROBERT NORTON, Secretary.

FOR HIRE, a SPACIOUS TENT, adapted for the Laying of Foundation Stones for Public Buildings, &c.

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.

Apply to H. PIGGOTT, 115, Fore-street, City.

TO ARCHITECTS, BUILDERS, CONTRACTORS, AND OTHER CONSUMERS OF GLASS.

HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

By a carefully prepared Estimate, it has been ascertained that FOUR-FIFTHS of the ROUGH PLATE, or non-transparent Glass, consumed in the United Kingdom in 185 was manufactured by HARTLEY'S PATENT.—thus affording the most incontestable evidence of its superiority over every other article of the kind, and as being the only description of Glass suitable for the purposes above named. It combines size and strength with economy of cost, and is manufactured in sizes expressly for RIDGE and FURROW ROOFS, giving a SPAN of TWELVE FEET, at a price not exceeding, weight for weight, that of Common Crown Glass. Its non-transparency renders BLINDS UNNECESSARY, and no scorching occurs in Greenhouses glazed with it; hence the preference given to this Glass for all Horticultural purposes.

For further particulars, apply to

JAMES HARTLEY AND CO. SUNDERLAND; AND PURFLEET WHARF, EARL-STREET, BLACKFRIARS, LONDON.

Sole Maufacturers of Lockhead's Patent Perforated Glass for Ventilation.

*** *Hartley and Co.'s Glass Tariff Newspaper will be forwarded gratis, on application.*

FACING FOR BUILDINGS COMPANY—TAYLOR'S PATENT.

BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,

REQUIRING THE CONSTANT EXPENSE OF PAINTING. EXTERNAL WALLS FACED WITH AN INDESTRUCTIBLE MATERIAL.

STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond-stones, and the Stone Ashlar never injuriously weighted by the settlement of the Mortar-joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences. It can be had ready for fixing from the quarries at a small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

Mr. JOHN TAYLOR, ARCHITECT, OFFICES OF THE COMPANY, 40, KING-STREET, CORNER OF CHEAPSIDE.

THE SEVRES GLASS COMPANY.

LEGENDRE AND TURPIN'S

WHOLESALE ESTABLISHMENT for the supply of CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality;

WINDOW-GLASS, Shades, Moderator Globes, Lamp Glasses, Bottles, and other Articles in White Glass, at

181, UPPER THAMES-STREET, LONDON-BRIDGE.—WORKS: SEVRES, NEAR PARIS.

SANDS AND EMERY,

CURSITOR-STREET, CHANCERY-LANE.

MANUFACTURED JOINERS' WORK AND MOULDINGS OF EVERY DESCRIPTION ON THE SHORTEST NOTICE, AND AT THE LOWEST PRICES, PACKED AND FORWARDED TO ALL PARTS OF THE COUNTRY.

Lists of Prices and Estimates forwarded on application.

GENUINE SEYSSEL ASPHALTE.

ORSI AND ARMANI.

THE EXCLUSIVE SUPPLY OF SEYSSEL ASPHALTE (FRANGY)

DIRECT FROM THE MINES.

REDUCTION IN THE PRICE FOR VARIOUS WORKS FIFTEEN PER CENT.

AND THE

WORK GUARANTEED FOR THREE YEARS.

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

PATENT METALLIC LAVA.

A printed List of the important Works for Flooring, Roofing, Covering of Arches, &c. &c. executed from 1848 to 1852, with this Material, may be obtained at the Office of

ORSI AND ARMANI.

THEIR PATENT METALLIC LAVA IS FIFTEEN PER CENT. CHEAPER THAN THE GENUINE SEYSSEL ASPHALTE OF MESSRS. O. AND A.

OR THIRTY PER CENT. LOWER THAN ANY OTHER MATERIAL CALLED BITUMEN OR ASPHALTE

Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality, in Cases of 100, 200, and 300 feet, suitable for Pictures and superior Glazing, from 3d. to 6d. per foot; also in Cases of 100 and 200 feet, assorted sizes. Belgium Sheet Glass, in Cases 200 feet each, 3rds, 28s.; 4ths, 30s. Squares, in Boxes of 100 feet each, 6 by 4, to 16 by 8, 1½d. per foot. Larger sizes up to 24 by 14, 2d. per foot. Ground Glass, in Cases, 3d. per foot. Crown and Sheet British and Patent Plate, HARTLEY'S Patent Rolled Rough Plate, English and Foreign Fluted, Stained Glass, Glass Slates, &c. &c. Price-lists and estimates forwarded on application to ROBERT METTAM, 30, Princes-street, Leicester-square.

PAINTED and STAINED GLASS-WORKS. N. W. LAVERS, 30, Southampton-street, Strand.—Specimens and various works in hand may be seen, and prices, with all information obtained, at the above address, of Subject, Grisaille, quarry, and other designs for church windows, &c.

By Royal Letters Patent.

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HELY and WARING, Managers.

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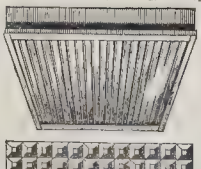

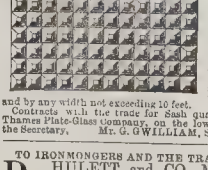

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WM. THOS. LINFORD, Sec.
15, Moorgate-street, London.

The Builder.

Vol. XIV.—No. 720.

REGISTRAR-GENERAL'S Reports, pamphlets on improving the dwellings of the labouring classes, reports of the societies both in England and Scotland which have that same end in view, the Report of the Board of Health on the Metropolis Water Supply, a pamphlet by Dr. Snow on cholera and the water supply, with various other cognate publications, have recently accumulated before us and invite attention. Touching the dwellings of the poorer classes, little is to be added to the facts gathered and statements made in these pages and in "London Shadows" long ago. Major-General Tremenheere, in his little pamphlet,* follows precisely the same line of argument, and gives few facts that are not to be found in the latter work, although we must presume it has not fallen under his notice, as it is not alluded to in the list of publications on the subject given by the writer. This, however, is not to be wondered at when we find medical Officers of Health going over the same ground and urging the same views, as if for the first time, wholly unconscious, apparently, of previous labours, although these were widely made known at the time by the whole periodical press of the kingdom.

Major-General Tremenheere, after quoting some account of the condition of courts and alleys in the metropolis, such as we have again and again laid before our readers, says, "the time, it is believed, has now passed for the existence of such extreme cases." Do not let him believe any such thing. The condition of many parts of London is as bad as it ever was. Some parishes are more overcrowded than they have ever been; and the new streets now in contemplation will further increase the evil, unless provision be made in time. The major-general, however, is satisfied that the state of things is quite bad enough, and his main object is to point out that, notwithstanding disadvantages and mistakes, the improved lodgings provided by the Metropolitan Societies have produced a gross rental averaging nearly 10 per cent. on the cost of the buildings, "which [rental], if one-half be taken as the proportion of ordinary current expenses, would leave a very fair return upon the capital expended;" and then he goes on to urge that measures should be adopted to spread these unquestionable benefits, so that their progress may not be left to chance or to the fitful and irregular flow of private capital.

"If," says he, "the application of public money to the drainage of land be justifiable, much more so would it be to the cultivation of better domestic habits amongst the poor, to the saving of human life, by draining, cleansing, and ventilating the narrow spots where so many thousands of our labouring population actually dwell. To what better object could the assistance of the public funds, at a low rate of interest, be lent? Here are three organised societies.

1st. The Society for Improving the Condition of the Labouring Classes.

2ndly. The Metropolitan Association for Improving the Dwellings of the Industrious Classes.

3rdly. The Marylebone Association for Improving the Dwellings of the Industrious Classes.

All have succeeded in effecting to a certain extent an acknowledged good, have the advantage of some years' experience, both in failures and successes, and possess all the requisite establishments for extending their operations, yet are cramped in available funds. What reasonable objection can there be to Government advances being made at a low interest to these societies? As a general rule, such direct aid from the State is, of course, objectionable, but the case is entirely exceptional. Will the Government, or the public, be satisfied that, out of the whole population of London, about 100 families only, of the industrious classes, every year, shall have the benefit of improved dwellings? This is about the proportion in which they have been affected by this movement for twelve years past."

The writer urges that,—"The locality of the late cattle-market at Smithfield is admirably suited for lodging-houses on the new plan, and it would be very desirable that portions of it should be devoted to that purpose. The committee appointed to inquire into the proper appropriation of that site have recommended that it be preserved as an open space; but owing, they say, to the irregularity of its outline, there will be some difficulty in the adaptation of the whole as a place of recreation. A favourable opportunity, which so rarely occurs in the very centre of the metropolis, is thus presented for granting, on moderate terms, building sites for improved dwellings for the labouring classes, who abound in that neighbourhood. In the parish of Clerkenwell, close by, there were, by the last census, 64,705 persons, the great majority of whom were working people with families.

The permanent inhabitants of this part of London consist principally of the labouring classes; all others, whose means admit, having their homes and families in the suburbs. Taking Smithfield as a centre, there is, perhaps, no other part of the world, within so small a radius, where the demand for human labour is so great as there; and, in like manner, there is probably no other spot which stands so much in need of good dwellings for the poor, nor one in which model lodging-houses, on an extended scale, would be so certain of success."

In future erections, the barracks and workhouse style must be avoided. Ordinary houses arranged so that the inhabitants of each floor should find on it all conveniences, and have no interference from the other occupants, would be the most popular.

A number of new model cottages are being erected in the neighbourhood of Paris, near the Abattoir Rochechouart. Twelve are now finished, each containing four lodgings, composed every one of four rooms, to be let at 150 francs a-year a lodging. These are to be devoted exclusively to the use of labouring men and their families, and are to have water and gas supplied by the town: 150 more of these châlets are to be erected in different parts in and about Paris, and already 15,000 applications have been made to the Administration for lodgings in them. Notwithstanding all these attempts to better the condition of the Parisian working classes in this respect, they are but drops of water to the ocean that is required to do real service; and the labourer finds but too often the utter impossibility of satisfying the demand of the landlord, and is frequently driven from the lodging he or she has long found becoming more and more out of the reach of the scanty means the most arduous labour supplies, just at the moment when all other habitations are also put further than ever beyond attainment, and when the winter, with its increased expenses, is at hand. The increase in the rents is enormous, the greatest discontent prevails, and Paris was never in a more dangerous condition than it is at this moment, in consequence of the want of lodgings at moderate cost.

A Supplementary Report, by Mr. W. Fowler, architect, published by the Association for Promoting Improvement in the Dwellings of Labourers in Scotland, contains many useful details and illustrations. The directors cannot too emphatically state that three separate apartments are the least accommodation that ought to be afforded for a proper division of the sexes in a labourer's family. Cottages which have but two rooms for labourers who have wives and children are bars to any social improvement. The directors find "that they cannot profess to give plans for cottages having all the requisites for comfort and social decency at a commercial remunerating per-centage on the outlay of their erection; and they are confident that, where such is insisted on, these humane provisions must to a great degree be sacrificed; but the directors do profess to afford directions for building cottages where a plain style is adopted, which shall embrace all these, and yet yield such a per-centage on the outlay, as, with a corresponding increase in the efficiency of their occupants as labourers, will prove highly remunerating to both landlord and farmer."

The Blue-Book issued by the General Board of Health contains two reports,* one on the Chemical Aspect of the Metropolitan Water Supply Question, by Professor Hofmann, chemist to the Museum of Practical Geology, and Mr. L. Blyth, lecturer on Natural Philosophy at St. Mary's Hospital; the other an engineering report by Messrs. Austin, Ranger, and Dickens, the superintending inspectors of the Board.

From the latter of these reports, as the more extended and professionally important of the two, we shall first glean a few particulars. It may be desirable, however, before dealing with general conclusions, in the outset to recall to mind the various particular sources from which the metropolis is supplied with water.

The old metropolitan water companies were nine in number, but the Plumstead, Woolwich, and Charlton Waterworks have been recently established for the supply of a district comprised within 'the Act for the local management of the metropolis.'

Five of these ten companies take their supplies from the river Thames, namely,—The Chelsea, Grand Junction, Southwark and Vauxhall, Lambeth, and West Middlesex.

The other five companies have the following sources of supply:—

The New River Company's sources remain unaltered. The supply is obtained partly from certain wells and springs in various places, but chiefly from the river Lea, near Hertford.

The East London Company derive their water wholly from the river Lea, but it is now taken from a point considerably higher up the river than formerly.

The Kent Company have for their source the river Ravensbourne, the point from which the supply is drawn being unaltered.

The Hampstead Company, from the first, obtained their small supply from certain ponds and wells, but have more recently been assisted by supplies from the New River and the West Middlesex Companies.

The Plumstead, Woolwich, and Charlton Consumers' Pure Water Company derive their supply from a well and boring sunk into the chalk, above the town of Woolwich.

The Grand Junction, the Southwark and Vauxhall, and the West Middlesex Companies, we may here add, have established their new works on three contiguous plots of land, on the banks of the Thames, at Hampton, and have erected buildings of similar design, which combine to produce an important effect. The mains of these three companies, from Hampton to their several establishments in London, run in parallel direction, as shown on a plan given with the reports, as far as Twickenham; and, at the point

* "Dwellings of the Labouring Classes in the Metropolis," by Major-General G. B. Tremenheere. Knight and Co. Fleet-street.

* Reports to the Right Hon. William Cowper, M.P. President of the General Board of Health upon the Metropolis Water Supply, under the Provisions of the Metropolis Water Act. London, 1856.

of divergence from each other, means of communication between the three have been formed for mutual aid in case of accident or repair.

According to the return furnished by the several water companies in 1850, it appeared that 270,581 houses were then supplied with water, the gross daily quantity delivered having been 44,383,332 gallons. The supply of water to the metropolis has now, it appears, reached the enormous quantity of upwards of eighty-one million gallons per day, *it having been nearly doubled in the short space of six years.* It is furnished to 328,561 of the 340,000 houses which now form the aggregate within the Registrar General's district. Thus, the average daily supply of water for all purposes, which in 1850 was 164 gallons per house, is now, in 1856, 246 gallons per house. The total nominal engine power employed and in reserve is equal to 7,324 horses. The mains and branch pipes for bringing the water from the several sources, and distributing it in the districts, exclusive of the private service pipes, form a total length of 2,086 miles. The filter beds cover an area of upwards of 40 acres. Before the passing of the Metropolis Water Act of 1852, considerably more than half the supply was not filtered: subsiding reservoirs were in such case the only means of clearing the water of impurities in suspension: these are now for the most part employed as well as the filter beds, the total area of subsiding reservoirs in use being upwards of 141 acres in extent. The filtered water is stored in fourteen covered reservoirs, comprising an area of nearly 15 acres, and in four uncovered reservoirs, of not quite 3 acres, which are beyond five miles distance from St. Paul's. The cost of the new works executed under the Metropolis Water Act, 1852, and the recent Acts of the several companies, has amounted to 2,282,824*l.*; making, with the former expenditure, as shown by the returns of 1850, the cost of the entire waterworks of the metropolis *upwards of seven millions sterling.* Even this amount, however, will fall short of the total expenditure; for the intermediate outlays between the former returns and the passing of the new Acts, and the cost of many works in hand, but not yet complete, are not included in this sum.

The result of the investigation by the superintending inspectors is,—

"1st. That the requirements set forth in the commencement of our report, comprising the 1st, 2nd, 3rd, 4th, 14th, and 17th clauses of the Metropolis Water Act, 1852, have, in all essential respects, been fully and satisfactorily complied with by the several companies (the provisions for constant supply not coming into operation until the 1st July, 1857). The new works have not, in fact, been limited to what a bare compliance with those provisions would have fulfilled. Measures have been adopted for the general improvement of the supplies, which evince a proper anxiety on the part of the companies in the discharge of the duties of their position towards the public.

2nd. That having regard to the serious state of contamination to which many of the rivers and streams of the country are being reduced by the drainage operations carried out in the neighbouring towns, and by the direct discharge of the sewage without any means adopted for the prevention of the pollution of the waters,—a condition which is evidenced to the inhabitants of the metropolis by the suddenly increased pollution of the Thames itself at the points whence their water supply has but recently been drawn,—we desire to recommend that early attention be directed to the towns draining into the Thames and its tributaries, and into the Lea and Ravensbourne, above the present sources of supply, so that measures may be adopted with regard to the drainage of those places which will permanently preserve the supply of water to the metropolis in its utmost practicable state of purity."

The report contains a favourable account of the result of Clarke's softening process, as applied at the Plumstead, Woolwich, and Charlton waterworks. "This scientific and ingenious process," it is remarked, "no longer remains in the position of a beautiful theory of the laboratory, of which the practical application is doubtful, it having now been in operation for two years on so large a scale with eminent success and advantage." Some over-estimates of its advantages, however, are pointed out, although the reporters state that there are few cases in which they should hesitate to recommend its adoption.

On the important subject of their second general conclusion, they remark that "whatever amount of pollution the river may now derive from the towns along its banks [bad as it is, we may add], is as nothing to what it will be when drainage works, for which some of these towns are already preparing, will have been carried out." What remedy would be comprehensive enough to meet so tremendous an evil, short of compelling each town to contribute a share of the cost of sewage-tunnels along the whole course of the rivers Thames, Lea, and Ravensbourne, and all the way to the sea, it would be hard at this moment, perhaps, to conjecture.

Notwithstanding the expense to which the Lambeth Company have gone in sending up to Thames Ditton for their Thames water, it appears that the Lambeth water has shown "very little more organic impurity under chemical analysis than the Thames Ditton water, which has been substituted for it:" in other words, the new supply is little better than the old, and is likely to become still worse than it ever was. It appears, however, from the chemical report, that (though such has been shown to be the natural state of the water) the waters supplied to the metropolis now do not contain more than one-half the organic matter which was present in 1851—a circumstance attributable of course to the efforts and works of the companies, and not to the state of the river, which, in fact, seems to be becoming worse and worse in a rapidly increasing ratio.

The ordinary organic pollution of the Thames, Dr. Snow urges,* is not the greatest evil that humanity has to contend with, at least in cholera seasons. He has been at great pains to prove, both on previous occasions, and more especially in his recently published tract on this subject, that while water contaminated with the grossest organic impurities in ordinary seasons, may not display any very glaring or special malignancy, no sooner is that same water impregnated, even to a very small degree, with the peculiar fæcal products of cholera, than those who drink or otherwise use it in a potable shape are liable to be suddenly and violently attacked by the same disease.

In the conclusion of the tract alluded to, Dr. Snow says,—

"It is probable that, when the facts brought to light by this inquiry are sufficiently known, no one will deny the influence of impure water in promoting the mortality of cholera; but it must not be supposed that it is mere impurity of an ordinary kind that causes the disease, for there are innumerable facts to prove that ordinary impurities have no such effect, and that it is only when the specific morbid matter of the disease gains access to the water that cholera is propagated. Thousands of people drank water from their own neglected cisterns, during the late epidemic, as impure as that of the Southwark and Vauxhall Company, without ill effect. An inquiry made by the vestry of St. James's, Westminster, proved that the contents of a cesspool had been percolating for months through the 3 feet of earth which separated it from the pump well in Broad-street; but although hundreds of people were daily drinking the water, and cholera was extending fearfully in many parts of London, only a few scattered cases occurred in the streets near the pump till the end of August, when, a case having happened amongst the persons using the privy connected with the cesspool above mentioned, more than 500 persons were attacked within two or three days.

In the cases in which the cholera poison gains access to a limited supply of drinking water, such as a tank or pump-well, the outbreak it occasions is always sudden, violent, and limited; but when a river is the medium of the propagation of the disease, its progress is more gradual and extended, being diffused amongst the whole population using the water.

It is hardly necessary to remark, that every circumstance which proves the communication of cholera through the medium of water, corroborates the views, explained at the beginning of this paper, regarding its propagation in the crowded houses of the poor; for it cannot be supposed that a morbid matter, which can produce its specific effects after being diffused and distributed through a quantity of water, could fail to act in an undiluted state."

The deaths, the author urges (and as we have before shown from his first book), which occurred in the last epidemical attack of cholera on the south side of the metropolis, "were six times as numerous in the houses supplied by the Southwark and Vauxhall Company as in those supplied by the Lambeth Company," the former supplying the inhabitants with water from the Thames at Battersea, while the latter, by that time, had brought it from Thames Ditton. This difference he ascribes to the especial pollution of the Thames within the metropolitan limits with choleraic virus derived from the metropolitan sewers.

In illustration of a lecture given by Mr. John Leslie at the Polytechnic on Monday last, a notice of which will be found on another page, the lecturer introduced a very remarkable map of London, thrown on the disc from a MS. map prepared by the Registrar-General, showing the average annual mortality of the various districts during ten years (1841 to 50, inclusive), and marking in black colour those parts, mostly bordering the river, where the rate of mortality is highest. Let us say in a parenthesis that this illustration alone will justify a visit to the Polytechnic on Tuesday next, when the lecture is to be repeated. And what did this death-map show? Why, that while in Putney and in the Hanover-square district, the average number of deaths annually in every thousand of the population was 16, and in Dulwich and Sydenham 14 only; in Bermondsey it was 28; in part of Chelsea, 31; in Shoreditch, 33; and in part of Greenwich no less than 47! What more striking evidence could be adduced that there are accidental and local causes in operation tending to shorten life, which causes, as Christian men, as political economists, and as egotists simply striving to save ourselves, it is our paramount and most pressing duty to strive to remove.

* "Cholera and the Water Supply in the South Districts of London in 1854." By John Snow, M.D. Reprinted from the "Journal of Public Health" for October, 1856.

THE PROPOSED DECORATIONS AT ALNWICK.

This subject, discussed at the Institute of British Architects, on Monday evening last, is so important to architects, and so interesting to the public generally, that I trust that a few additional remarks may not be considered misplaced, especially as the solution of the difficulty appears to lie in a different direction from that pointed out by the speakers on that occasion.*

Every one agrees that when the Duke of Northumberland undertook to repair the degradations of preceding centuries, and to restore Alnwick Castle to its former position, he had only one course to pursue, and that he was perfectly right in adopting the baronial style of the

* We shall give an abstract of the paper read at the Institute, and of the discussion that followed, hereafter. Viewing the proposed Roman decorations at Alnwick as a palpably injurious mistake about to be perpetrated at a great cost, we at once give insertion to the following protest, although our own deductions would be different.

middle ages, and was fortunate in selecting an architect so capable of carrying out his views as Mr. Salvin, whose restorations have met with universal approval.

So far, therefore, as the exterior was concerned, there was no difficulty; but when the question arose as to how the interior was to be decorated, the duke paused before adopting the suggestion of his architect, that the Mediæval style should be employed there also, inasmuch as no instance can yet be pointed to in which the Gothic style has been successfully adapted to the refinements and elegancies of modern society, or so as to admit of such art being employed with it as shall be only of the highest and purest class. Mr. Scott and others will, no doubt, dispute this doctrine, but the public are quite clear on the point; and neither at Windsor nor Westminster, nor among any of the hundreds of modern castles and mansions of England can one be quoted which is free from picturesque barbarisms utterly unsuited to modern times. This may be remedied in some future example, but till it is done the duke exercised a wise discretion in hesitating before embarking in so hazardous an experiment.

Having cast off the trammels of the course that at first sight seemed most obvious and rational, his grace was at liberty to choose wherever he pleased; and after mature deliberation he decided that the style of decoration found in the Italian palaces of the sixteenth and seventeenth centuries was the most noble in itself, and most suited to the refinements of modern society. Having fixed on this, he employed a Roman architect to import literally into his Northumberland stronghold the style and decorations of the Farnese or Borghese palaces.

This may have been a "Hobson's choice," but it is certainly a most unfortunate and melancholy predicament for a nobleman to find himself in, and the result must always be so painful a discord, that no one can long remain satisfied with it. You approach the castle through Gothic gateways, flanked by battlemented towers, and every stone, and every association breathes of mediæval England in her noblest and most picturesque period. You pass the threshold, and in one second you are as in a pantomime transferred to an Italian palazzo, where nothing speaks of the locality, or recalls the Hotspurs and Percys of former days. Were there no windows or doorways the illusion might be kept up, but every opening throughout the castle betrays the discord, and tells painfully the tale of the want of art in the present day.

Inigo Jones did exactly the same thing when he replaced the portals of old St. Paul's by a Corinthian portico; but his path was clear, and he hoped to see the whole of the old building cleared away, and replaced by classical forms; but as he left it, it was a counterpart of Alnwick Castle, or, perhaps, a better illustration would be, if an architect were now to propose to add the portico of the Parthenon to the front of Westminster Abbey.

The mistake seems to be, the bringing together two complete and well-defined styles belonging to different ages and countries, and copying each so literally as to produce the illusion that we have before us an example of the style imitated. The discord is obvious, and no even partially successful result has ever yet been obtained by such means.

The true solution, I conceive, would have been to abandon in the interior all direct adherence to any known style, and to introduce into it every elegance and refinement that the skill or taste of modern times could suggest.

I should have proposed to divide the ceiling into panels which should be most suggestive of constructive requirements, and at the same time most pleasing in form: these I would have enriched with such mouldings as were most suitable and appropriate, and would have adorned them with such colours as would have produced the most harmonizing effect, using always the highest and purest style of art available, without reference to whether it approached nearest to the Greek or Gothic type. The walls might have been hung, as is now proposed, with the richest satin; but the patterns should have been the most elegant the looms of Lyons or Italy could produce, and where paintings or sculpture could be introduced they should have been the best of modern times.

There is no incongruity in the art of the fourteenth and fifteenth centuries, as introduced into the cathedrals of the twelfth and thirteenth centuries, notwithstanding its superior elegance and refinement; and there would be as little incongruity in the pure art of the nineteenth being introduced into a castle of the sixteenth century, where it would appear without affectation, as the inevitable result of the change of time, and as, in fact, the goal to which the former style was tending. Each style would correctly represent the age to which it belonged, though differing from each other in the same ratio as the manners and feelings of the present duke do from those of the early Percys.

The furniture, the liveries, the manners and customs of the inhabitants, would all have been in strict accordance with the decorations of the interior, and the obvious common sense of the arrangement would have satisfied every one of its propriety; whereas now, the feudal castle, the Italian palazzo, and the English ducal establishment, are three things no two of which are in accord,—and the obvious connexion between the first and the last is cut across by the interpolation of the foreign element.

At the same time, it may be observed that there is less difference between the highest utterance of any two styles of art than at first sight appears, and when constructive propriety is the basis of decoration, real incongruity is almost impossible; and as the style of the interior must be in perfect accordance with the manners of the inhabitants, there can be no more incongruity in its appearance than in modern lords and ladies inhabiting a stronghold of a feudal baron of ancient days.

Had the noble duke adopted this course, he not only would have saved himself from an expensive mistake, which ninety-nine people in a hundred will certainly condemn, but he would besides have conferred on the arts of his country a benefit which can only be rendered by one of his liberal and enlightened mind, combined with his wealth and exalted position. J. F.

THE ARCHITECTURAL ASSOCIATION AND THE INSTITUTE.

At a meeting on Friday, the 14th of this month, there was a good muster of members and other architects, to discuss the two letters received from the Institute of British Architects (which have already appeared in our pages), one proposing the amalgamation of the two societies, the other enclosing a copy of by-laws, which the Institute proposed to add to their present code, and asking the opinion of the Association upon them. The discussion was kept up till a late hour, those who joined in it expressing themselves as convinced of the goodwill with which the Institute had come forward in the matter; but it was urged that the members of the Association would, if they joined the Institute, have no voice in the management of that society, and that there would be a restraint upon that free discussion which they enjoyed at present, and it was ultimately decided to forward to the Institute a reply, stating that the Association thought it better to stand alone, as there appeared to be sufficient room for the two societies.

The following is a copy of the letter which was decided on:—

Architectural Association, Lyon's-inn-Hall,
November 17, 1856.

To the Honorary Secretaries of the Royal Institute of British Architects.

Gentlemen,—We are instructed by the committee of the Architectural Association to address the following answer to your letter of the 17th of June last, which answer has been approved of at a general meeting of the members of the Association, convened for that purpose, and held on the evening of Friday, the 14th instant.

The committee desire hereby to acknowledge with sincere pleasure the many terms of sympathy expressed in your letter, and, above all, to thank you for the flattering proposal therein contained for the amalgamation of our society with that of the Royal Institute of British Architects.

After mature deliberation, the committee of the Architectural Association, at a meeting held on the 27th of September last, determined unanimously that it would not be expedient to recommend the amalgamation of the two societies, inasmuch as they believed that the interests of the profession would be best served by the two societies retaining their individuality; but in entering upon the consideration of a proposal of such importance to the younger branches of the profession, they were anxious to adopt the most liberal interpretation of your letter, and they therefore felt it necessary to ascertain the general opinion of the members of the Association.

The greatest obstacle to the proposed amalgamation was conceived to be that clause in the charter of the Institute, wherein the several grades of Fellows, Associates, and Students are defined,—whereas the leading principles of the Architectural Association are, "Equality of membership and perfect freedom of discussion." These principles have been found to work with considerable advantage to the society, and the committee saw, by the proposed union, that those who had met for years as equals, and as fellow-labourers in their art, would find themselves divided by distinctions, the justness of which the committee are unable either to appreciate or understand, and the utility of which is very questionable.

With regard to that portion of your letter suggesting co-operation with the Institute, the committee of the Association were most willing to meet your views as far as possible, and discussed the desirability of joining the Institute as a distinct body meeting under the same roof, and participating in the benefits of its library and its meetings; and, although this course appeared to have its advantages, yet it was thought that the independent feeling of our society would be sacrificed, and the present incentive to active exertion on the part of our members be lost, when the identity of the Architectural Association should be in danger of being merged with that of the Institute of British Architects.

In conclusion, the committee have endeavoured to consult the best interests, not only of the members of the Architectural Association, but also of the profession generally; and whilst they sincerely regret that obstacles should exist to prevent the amalgamation proposed, they do hope that the members of the Royal Institute of British Architects will assist the members of the Architectural Association in their sincere endeavours to improve themselves in their art; and also, as far as possible, to bring architecture so prominently before the public, that the art and its professors shall be more understood and respected than has ever yet been done.

The committee desire again to express their grateful thanks for the letter from the Institute, and hope that this answer will be received in the same spirit as must have dictated their letter.

We have the honour to be, gentlemen,
Your obedient servants,
(Signed) T. W. Goodman, } Honorary
James Alfred Bunker, } Secretaries.

Amongst the speakers, were Messrs. Gray, Kerr, Truefitt, Young, Cates, Digby Wyatt, Hayward, Arthur Allom, Papworth, &c. &c. The majority of the members who spoke, wished it to be distinctly understood, that the Association was not merely a body of students, but that it also represented the junior members of the profession. Mr. Digby Wyatt thought that, as they grew older, they would look upon themselves as rivals to the gentlemen of the upper house, however friendly they desired to be at present. The government of the Institute was freely discussed, with goodwill, both by its own members and by those of the Association.

It was announced with respect to the memorial to the chief commissioner for an extension of time for the preparation of designs for the proposed Government offices, that Sir Benjamin Hall had declined to alter the date for receiving designs from native architects, urging that much less time had been given for the designs for the new Houses of Parliament. From architects not residing in the United Kingdom, however, designs will be received up to the 4th of April.

As a member of both the above societies, may I request a corner in your valuable journal to express my dissent, in common with many more, from the answer of the Architectural Association to the admirable letter of the Institute, expressing their desire to render every facility towards the amalgamation of the two societies, and forwarding a draught addition to the by-laws, now under the consideration of the council.

I think it should be well understood that the views therein expressed cannot be taken as the general opinion of the young architects of London, or even of the Association itself. There were but twenty-one voters at the meeting held on the 14th instant, specially called to confirm or annul a letter brought up by the committee, rejecting the proposals of the Institute *in toto*.

Of the twenty-one voters, eight were in opposition, while the Association numbers about 130 members. This reply, therefore, must not be taken for more than it is worth.

The graceful dignity with which the Institute has recognised the efforts of the Association, and the evident desire it evinces to further the ends for which it was constituted; the means it proposes to adopt for the additional convenience and advantage of its younger members; and the healthy tone of its unreserved invitation to join hands with them,—have certainly left the Architectural Association without excuse. Everything that could be done in consistency with the dignity of the Institute and the provisions of its charter has now been done, and the onus lies on the shoulders of the Association, who still persist in maintaining a rival position, most injurious to the true interests of the profession generally—its younger

members especially—disregarding the example of Mr. Tite in the past, and the additional inducements offered by the Institute of to-day.

Without disputing the fact that there is room for reform in the Institute—more particularly with reference to the class of Associates,—yet, let me ask, is it not reasonable to expect that the Institute will be far more ready to hear and to act from the suggestion of the members of its own body, than from antagonistic elements warring against them from without?

If the proposed changes in the charter (though what is wanted has not yet been very clearly defined) would be attended with very considerable expense, will not the increase of its members daily weaken the strength of that argument, and make that a matter of minor importance, which it cannot be said to be now? And must not their divided interests act injuriously to both societies?

But waiving monetary considerations, can the Association offer any such *educational* advantages as those proposed to be given to the graduates of the Institute by the regulations made by the council in pursuance of the new by-law now under consideration? Had the Institute passed these rules without submitting them to the Association, they might have been construed the product of rivalry; but now there is no room left for the accusation. And if the Association is weakened or crushed, it will have but to condemn its own short-sightedness.

Yet, after all that has been said of the exclusiveness of the Institute, what is there to prevent the Associates discussing the merits of any public question affecting the interests of the profession generally? What is there in the present constitution of the Institute that would prevent some or all of the Associates meeting in committee and memorializing the Fellows on any subject they please? What restriction is there now to free and open discussion in the rooms of the Institute? What, except a proper sense of one's own ignorance in presence of superior ability. What is there to prevent the Associates of the Institute from accomplishing all and more than the Association has done?

I thoroughly believe that the present body of Fellows numbers men even more sincerely anxious to raise the character of the profession in its own eyes and that of the world than the most enthusiastic members of the Architectural Association, without their inexperience and precipitancy.

EDWD. COOKWORTHY ROBINS.

REGISTER OF ARCHITECTURAL DRAUGHTSMEN.

WE would direct attention to an advertisement from the Architectural Association, pointing out that the Register of Draughtsmen and Assistants wanting engagements has been removed to Mr. S. C. Capes's offices, Furnival's-inn, and mentioning that draughtsmen not members of the Association are equally entitled to enroll their names free. Members of the profession requiring assistants will find this register a very useful arrangement.

THE CRYSTAL PALACE.

THE collection of models for works executed by the late Charles Geerts, of Louvain, which will be found near the Byzantine Court, deserves careful study. These are not, as some of our contemporaries have stated, *casts* from his works, but his original models; and we learn that purchasers are sought for them for the benefit of his family. They are remarkable for religious feeling and expression.

This able sculptor, Geerts, who died on the 16th of June, 1855, was born at Antwerp, in August, 1807, so that he had not completed his 48th year: the number of his works is nevertheless very large. His first works, after the completion of his studies, appear to have been the busts which adorn the façade of the new theatre at Antwerp. Soon after, he was appointed professor in the Academy of Louvain. He was early attracted to the study of the religious sculpture of the fourteenth and fifteenth centuries. A scrupulous attention to the detail and ornamentation of the period also distinguished him. His reputation soon spread beyond Belgium, and in England his merit was early acknowledged. In 1847 he was elected corresponding member of the French Academy. Geerts carried the art of carving in wood to high perfection, as exemplified in the stalls he executed for Antwerp Cathedral. His death was deplored by all Louvain, and public homage was paid to the memory of the distinguished artist, who had founded in that town a flourishing school of sculpture. There were no fewer than seventy persons employed in his *ateliers* at the time of his death.

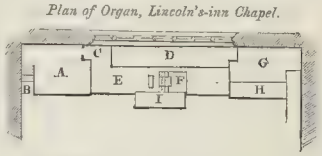
The picture-galleries have been re-arranged by Mr. Mogford. A number of the less important works have been removed, and some few new pictures added, with a manifest advantage. We were glad to hear that the sales during the past season amounted to more than 3,000*l.* and comprised about eighty-five pictures.

THE NEW ORGAN, LINCOLN'S-INN CHAPEL.

As the new organ at Lincoln's-inn Chapel is now complete, and has been opened, perhaps a short description of it may not be uninteresting more especially as it is a fine instrument, although cut up by the west window (20 feet wide) and want of space. In arrangement, it is similar to the organ in Westminster Abbey. It consists of the great organ on the south side, swell and part of pedal organ on the north, the choir being placed in front of the gallery, behind which are placed, sideways, the manuals or keyboard, which arrangement so simplifies the action as to render the touch as light as that of a small instrument, without the aid of the pneumatic apparatus: this, however, is applied in this instance to the draw-stop action, and so allows the composition pedals to be worked with the greatest facility. The principal bellows, about 18 feet long, are placed under the window; and, being the greatest pressure, supply the pedal organ direct, and also the several reservoirs at different pressures, which are placed directly under the respective organs to which they belong. With respect to the case, a different arrangement of the pipes on the north and south side was suggested, but of this the committee did not approve. The pipes of the choir organ have been illuminated as a specimen, in the hope that it will be carried out in other parts of the front. The instrument has been constructed by Messrs. Hill and Son, and contains the following stops:—Great organ, C C to F; bourdon and open diapason, 16 feet; open diapason, 8 feet; gamba, 8 feet; stopped diapason, 8 feet; octave, 4 feet; wald flute, 4 feet; octave quint, 3 feet; super octave, 2 feet; sesquialtra, 3 ranks; trumpet, 8 feet. Choir organ—Salcional, 8 feet; dulcian, 8 feet; gedact, 8 feet; gemshorn, 8 feet; suabe flute, 4 feet; piccolo, 2 feet; cormorne, 8 feet. Swell organ—Bourdon, 16 feet; open diapason, 8 feet; stopped diapason, 8 feet; octave, 4 feet; super octave, 2 feet; sesquialtra, 3 ranks; cornopean, 8 feet; oboe, 8 feet; vox humana, 8 feet. Pedal organ—Open diapason, 16 feet; violin, 16 feet; octave, 8 feet; 5 couplers.

Mr. Thos. C. Lewis was the architect.

Plan of Organ, Lincoln's-inn Chapel.



A. Great Organ.
B. Stairs.
C. Door.
D. Great Bellows, with large pedal pipes over.
E. Loft.
F. Key-board.
G. Swell organ.
H. Pedal organ.
I. Choir organ.

BATHS AND WASHHOUSES FOR THE MIDDLE CLASSES.

SOME time since there was a very humane suggestion for a considerable employment of women in making the delicate machinery of watches. I, too, have a proposition to make which is not altogether disinterested, but which, I think, would benefit scores of poor women. It is the establishment of public washhouses for the middle classes, and the employing the industrious at better wages than they could at all get from those who contract for washing. I have a wife and six children, and it costs me 70*l.* to put out the washing. Now, if my neighbours chose to erect baths and washhouses for the middle classes (united in same building, with the like convenience for the poorer classes), I think the benefits from such arrangements would be largely diffused, and economy carried into many families who have at present no remedy but to submit to the charges of those few who, having spacious drying premises for the purpose, are able to demand one invariable scale of prices, and thus victimize their customers.

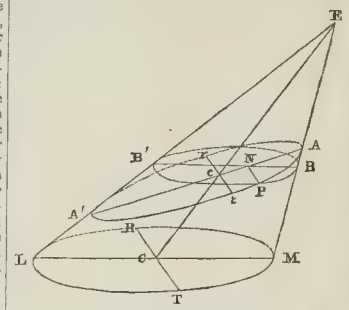
I need not say, if my scheme were carried out, that we might have in every district of our parishes self-supporting buildings of good character, conferring not only dignity, but great usefulness in every locality.

ONE WHO THINKS CHARITY MAY BEGIN AT HOME—ALTHOUGH IT SHOULD NOT END THERE.

THE PERSPECTIVE REPRESENTATION OF A CIRCLE IS AN ELLIPSE.

THE truth of the above proposition having been disputed, we propose, at the request of some of our correspondents, to submit to our readers a mathematical demonstration, which we hope will bring conviction to the minds of those who are capable of understanding the subject.

If we draw rays of light from a circle to the eye, they will form the surface of an oblique cone, having the said circle for its base. If, then, a plane (as the picture-plane) intersect this conical surface, the curve formed thereon will not be another *circle* unless the plane happens to be parallel to the base. That it will be an *ellipse* we demonstrate in the following manner, to any person acquainted with algebraic geometry:—



Let LEM be the cone formed as above described, E being the position of the eye, LM the circle of which we require a perspective representation. Let AA′ be the *picture-plane*, and BB′, another section parallel to LM, and which will evidently be a circle also (by sixth book of Euclid). Now, since AA′ and BB′ are in the same plane, therefore NP, which is perpendicular to BB′, is also perpendicular to AA′ (Euclid, book XI.).

Let AN = x, NP = y, AA′ = $2l$, then NA′ = $2l - x$.

By trigonometry, $\frac{NB}{NA} = \frac{\text{Sin. NAB}}{\text{Sin. NBA}} = \beta$ (say);

or NB = NA × β.

So also, $\frac{NB'}{NA'} = \frac{\text{Sin. NA'B}}{\text{Sin. NB'A'}} = \frac{1}{\alpha}$ (say);

or NB′ = NA′ × $\frac{1}{\alpha}$.

Since BB′ is a circle, it follows (Euclid, book VI.) that

$$NP^2 = NB \times NB';$$

$$\text{or, } y^2 = \frac{\beta}{\alpha} \times NA \cdot NA' = \frac{\beta}{\alpha}(2lx - x^2),$$

which is the well-known equation of an ellipse: therefore, the curve APA′ is an ellipse.

The foregoing does not invalidate the method of putting a circle in perspective by means of the circumscribing square and its diagonals and diameters, which is perfectly correct as far as it goes, and if correctly executed will in reality produce an *ellipse*. It must, however, be observed, that if RCT is a diameter of the circle, and at right angles to diameter LM, its projection, *rct*, will *not* be a *diameter* of the elliptic representation, nor will it divide that ellipse into two equal parts. This can readily be proved from the sixth book of Euclid.

A TAZZA OF WORCESTER WARE. — In our notice of the contents of the Ceramic Court, in the Crystal Palace, we were led to offer praise to Messrs. Kerr and Binns, of Worcester, for their praiseworthy and enterprising endeavours to maintain the reputation of the Worcester manufacture. Especial mention was made of their adaptations of the Limoges enamelling upon porcelain. We have since seen a tazza executed by them in this style, which displays admirable drawing, and a beautiful material. To effect such works requires so large an outlay, that the manufacturers cannot hope to be remunerated, unless they secure the sympathy of those in the higher classes who possess art feeling. The details of the tazza, even to the chasing of the raised gold, are perfect.

SEWERS AND THE SMOKE NUISANCE.

A CORRESPONDENT, who signs himself "Mercator," revives a proposition (several times made before),* to take the smoke of domestic chimneys into the sewers, and proposes thus to deodorize the latter. The writer says,—It must be evident to all that, if the smoke from a few large furnaces can be consumed, that emitted by the chimneys of dwelling-houses may be got rid of. The principle that has been successfully employed in the former case would answer equally well in the latter, and by this means the chimneys, which still vomit forth soot and blacks, would yield to science and modern improvement.

The consumption of coals in the metropolis is rated at 3,000,000 tons per annum.† A little more than 2,000,000 tons of these are consumed in private houses, so that they were always the principal cause of the smoke nuisance, and now render themselves doubly conspicuous, since the operation of an Act of Parliament has effectually cured the evil in the factories and workshops.

The great advantages of the proposed amelioration may be thus briefly summed up:—

1. The metropolis would be less exposed to the outbreak of fires, and conflagrations of every kind.

2. The general health of its numerous inhabitants would be materially improved.

3. Cholera and other epidemics, supposed to arise from the prevalence of bad odours, would not appear so frequently, and when they did come, would be less fatal in their effects.

4. The difficult question of ventilation would be solved.

5. Large chimneys not being required, the architect would have a field opened to him for roof-decoration.

6. The unsightly projections in dining-rooms, drawing-rooms, and other chambers, would disappear.

7. Great economy in the consumption of coal would be effected.

8. The householder's greatest pest—smoky chimneys—would be heard of no more.

The afore-mentioned results I propose to achieve, by means of chimneys closed at the top, so that no direct communication with the external air would be presented. The smoke being drawn downwards into the sewers would, in its downward course, carry with it the heated soot, uncontaminated with the moisture of the atmosphere, and would thus present it in the most favourable state to the gas-generating sewerage surface for the absorption of those smells which affect the atmosphere.‡ By coming in contact with the moisture of the sewers and the supernatant gases, the soot at once obtains an increased density, whereby the greater part of it falls on to the surface of the running fluid, leaving the fire under our engine-boiler only a small duty to perform in burning the remainder of the volatilized carbon and noxious gases. The soot enriches the sewers, and renders them valuable for agricultural purposes. It fixes and deposits the volatile salts, retaining in the sewerage its pristine invigorating and fertilizing qualities.

The draught required to draw the smoke into sewers, I propose to create by means of a fan,§ to be worked by a steam-engine, conveniently and ornamentally placed in the centre of a given block of houses.

The draught caused by the action of the fan at the back of the furnace of the steam-engine would draw the vapours from the neighbouring sewers over and through the fire of the furnace, which would be thus made to consume all those unprecipitated portions of carbon and noxious gases inimical to human life. In short, the fan draws the vitiated air from the apartments through the valves, the smoke through the apertures in the chimney conducts them both into the sewer, and then passes them through and over the fire, by which the water that generates the steam for the motive-power of the fan is heated.

The waste steam from the engine might be used to supply warm-water for baths, washhouses, or any purposes to which the poorer inhabitants of the district might turn it with advantage to themselves and the good of the community.

* Especially by Mr. Devey several years ago.

† See Henry Mayhew's "Great World of London." Part I. p. 39

‡ Freshly ignited charcoal will absorb several times its own weight of ammoniacal gas, and coal does the same in due proportion. These are most important facts.

§ The size of the fan behind the engine-fire, or the number of its evolutions, must be increased in proportion to the area to be ventilated.

LONDON AND THE CHARTER OF SANITARY REFORM.

ON Tuesday, the 18th, Mr. John Leslie gave a lecture at the Polytechnic Institution, Regent-street, "On London, viewed from the Great Charter of Sanitary Reform, the Metropolis Management Act," using the telling map of which we have already spoken as his principal illustration. The following is an abstract of the principal points in the lecture:—

The metropolis consists of 78,029 acres, including 3,500 acres of water, equal to 122 square miles, the City of London being rather more than one of the 122 square miles.

	Acreage.	Per Centage. Population.
The Middlesex, or northern side, has	41·6345	73·89
The Surrey and Kent, or southern side, has	58·3655	26·11
	100·000	100·00

The assessable value will be about 12,000,000*l.* sterling, and consequently a penny rate will produce 50,000*l.* At the census of 1851 the total houses occupied and unoccupied, and then building, was 327,391, and the population, 2,362,236. A close approximation, he said, gave eleven millions of tons of water passing up from the sea every flood tide through London-bridge, and fifteen millions of tons passing downward through London-bridge in every ebb tide for the all-wise purpose of preventing deposits by the increased scouring power. He then urged the folly of diminishing this scouring power by abstracting all the sewage and rain waters, and carrying them away together in many miles of costly sewers and miles of flat-bottomed iron sewers allout of the ground, and exposed to every variation of atmospheric temperature and to the effects of frost and thaw, by the former of which the northern sewage may be stopped, and by the latter the metropolis and adjacent country deluged with the filth of the metropolis. He showed that the metropolitan area was nearly five miles longer on the south and Surrey, and Kent side of the Thames, than the Middlesex side, and maintained that the great error was at the basis of all the calculations of plans A, B, C, and D, of the Metropolitan Board of Works. The combination of sewage and rain waters in the same channels increased expenditure in sizes of sewers and pumping establishments, in the following ratio for every twenty-four hours' discharge:—

Sewage and house water	509,926 tons.
Rainwater	529,067 „
	1,038,993

The increase being on the sewage only 103·75 per cent.

Mr. Leslie then read the 135th clause of the great Sanitary Charter, and maintained that the intercepting sewers were to be for sewage only, and to be completed by the 31st December, 1860.

He then showed that the plans of the Metropolitan Board of Works required monster cesspools, to pond back the sewage 9¼ hours in every twelve hours on both sides of the river, and placed in juxta position his estimate of sewage, which he stated was purposely a great exaggeration of the truth: Human excreta, he said, combined with house-water supplies, was a known quantity of daily amount: rain was a known quantity of only 24 inches in a year; and maintained from these facts that it was the extreme of folly to combine the discharge of the two in the same channels, and preferred following nature's laws, to lead the rain into the nearest points of the river to where it fell, in such large, and uncertain, and distant days of each year.

He calculated:—

	lbs.
Human excreta, solid	0·375
„ „ fluid	2 5
Expected water supply of 5 cubic feet to every man, woman, and child of the whole population	311·6
	314 475

Multiplying this one largely exaggerated quantity, Mr. Leslie said, by what the population is expected to number fifty years hence, in the year 1906, 3,500,000, and the twenty-four hours' discharge would be 491,367 tons, and the discharge from 2,500,000 population would be 350,976 tons.

The lecturer considered that there should be no cesspool reservoirs to pond up the sewage, but the discharge should be constant into deep sea water, and every minute the pumps at the sea end of the sewer should be in action, and then *each* minute's discharge would be—fifty years hence,—12,270 cubic feet; at present, upon the exaggerated estimate, only 8,764 cubic feet. A circular sewer, he said, 10 feet in diameter, with an inclination of 2 feet per mile, would discharge 12,900 cubic feet per minute when only four-fifths full, being 630 cubic feet more than the total discharge from three and a half millions of population in the year 1906. This 10 feet circular sewer, two bricks thick in cement, would take 700 bricks per foot run: of which, with cement and labour, the cost price would be 2*l.* per foot; that he allowed 1*l.* per foot run for digging; 1*l.* per foot run for contingencies and profit to the contractors, and made the total 21,120*l.* per mile.

Thirty-five miles from Putney, through the agricultural counties of Surrey and Kent, would take this sewer into 78 feet 6 inches of sea-water at high water; 8¼ miles by land, and 10⅛ miles by water below Gravesend, benefiting the largest amount of population, there being 47,000 acres on the Kent side below Plumstead, with nearly 50,000 population, the sewage of which would, by this sewer, be kept out of the river, besides the sewage of the whole metropolitan area passing from the northern division in culverts under the Thames.

It is to be repeated on Tuesday, as we have elsewhere mentioned, and we may then have an opportunity to mention some of the other points referred to.

VENTILATION OF ASSEMBLY ROOMS.

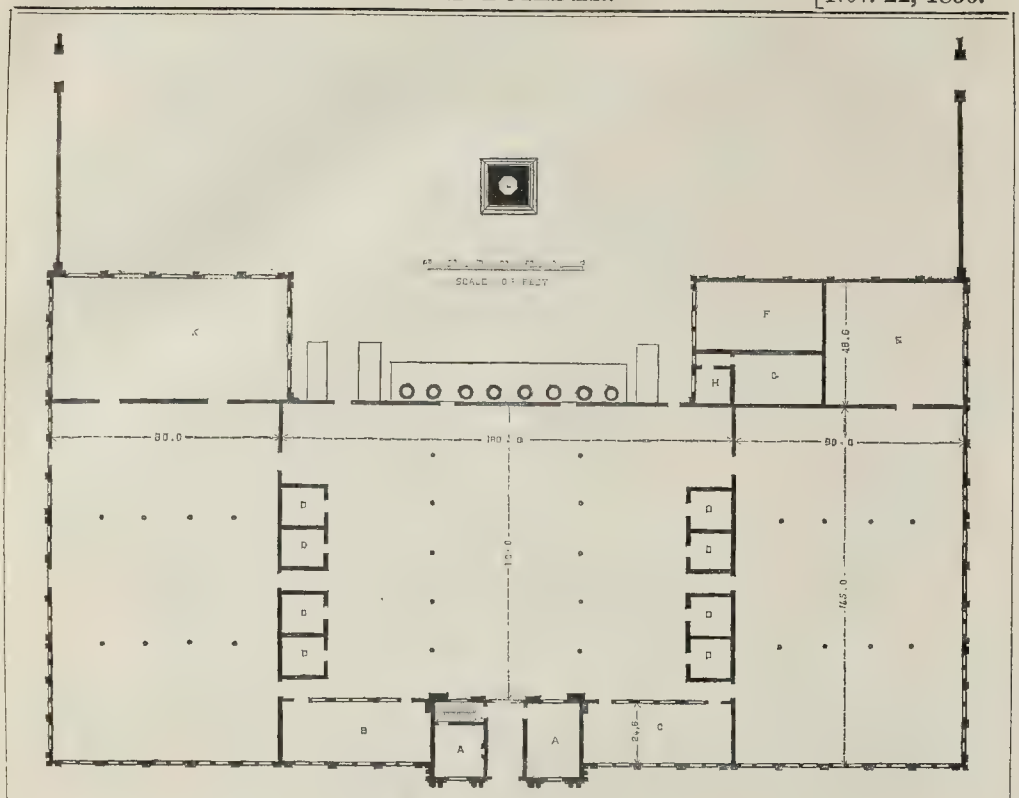
A VERY simple method of ventilation adopted at Winchester College School, at the Town-hall at Basingstoke, and several large buildings in Hampshire, by Mr. Sharp, C.E. is found to answer completely, we are told. After the system had been in action the first season at the Winchester College, the head master, Dr. Maberly, said "he scarcely knew what the headache was, but prior to the ventilation being effected he had seldom been a day without it."

The vitiated air is drawn from the building through openings in the ceiling communicating with air-trunks in the roof; these trunks are connected with an upright shaft of metal constructed in the chimney, which is heated by the fire used for warming the building: by this means the air in the shaft is sufficiently rarefied to produce an *upward current*. In the summer season, a small gas-light is burned in the shaft: the gas is lighted at a small door at the bottom of the metal shaft, and produces sufficient draft for ventilation in the summer. Fresh air is admitted through plates of perforated zinc let into the skirting round the room, which are under control by the means of slides: these can be so managed as not to cause an uncomfortable draft; at least so we are told.

ST. MARY'S TOWER, TAUNTON.

THE long doubtful question respecting the restoration or rebuilding of this tower seems at last about to be determined, if we may judge from an appeal now in course of circulation by the churchwardens. It may well be understood that the guardians of this beautiful structure would long hesitate in taking any step whereby the removal of the present tower would be involved, and they have taken pains to ascertain from competent authorities whether it was possible to repair and extensively restore the tower or not. We ourselves strongly incline to the latter course. The recently-appointed churchwardens, determined to resolve upon some mode of action, applied, we are told, to Messrs. Scott and Ferrey again for their opinion; and although it was deemed possible by these gentlemen to effect a partial restoration and repair at a great cost, they thought no thoroughly substantial renovation could be promised, so that the bells might again be re-hung and pealed. Under these circumstances, the authorities have determined (if the requisite funds can be obtained) to rebuild the tower, precisely the same as the present one in design; drawings and measurements, photographs and casts, having been made by Mr. Giles, of Taunton, for effecting this purpose.

The probable cost is put down at 6,000*l.*



PLAN OF SHELL FOUNDRY, ROYAL ARSENAL, WOOLWICH.

THE SHELL FOUNDRY, AND OTHER WORKS, WOOLWICH ARSENAL.

For some time past very considerable works have been going on in the Royal Arsenal, Woolwich, under the direction of Mr. David Murray, who holds the appointment of "Building Engineer," Messrs. Lucas, Brothers, being the builders. To these we have at different times alluded, and in our present number we give a plan of the new Shell Foundry, now approaching completion, and an external view of the central portion of it. It is constructed of red brick and stone. In other parts of the Arsenal, the new Gun Foundry for example, ornamental moulded brickwork has been introduced with very good effect. It will be seen from the plan that the area of the Shell Foundry, roofed in, is very considerable. The height of the chimney is no less than 223 feet 9 inches from the ground. The first brick of this was laid on the 2nd of April, and the last stone of the cap was set by Capt. Boxer, R.A. superintendent of Royal Laboratories, on the 15th of September last. It swallowed up about 290,000 bricks. The foundation of concrete is about 38 feet square and 23 feet deep, with courses of York landings. It is altogether a very excellent piece of work.

The area of the arsenal was about 139 acres until last March, when an addition was made by enclosing 114 acres of the adjoining marshes. A very large portion of the roads has been laid with granite pitching and iron tramways. The gas-works are rapidly approaching completion, and will be put into working order very shortly.

The large iron Ordnance Foundry and Boring Mill are being pushed on with much vigour. A large storehouse has also been finished lately, which has a frontage towards the river of about 235 feet.

The Rocket establishment is completed, and will soon be in an efficient state of working. The Composition establishment has been occupied now some short time. These two last consist of a very large number of detached buildings.

The Clothing establishment, although not in the Arsenal, is being erected under the direction of Mr. Murray, and now makes an imposing addition to the old Field Depôt near the barracks. While the boundary-wall, enclosing the marshes, and detaching the Arsenal from the surrounding property, is rapidly approaching completion: it is about a mile and three-quarters in length.

References to Plan.

A. A. Offices.	F. Boiler-room.
B. Smithery.	G. Engine-room.
C. Repairing-room.	H. Blowing-room.
D. D. D. Stores.	I. Cupola Stage.
E. Drilling Machines.	K. Coke Shed.

L. Chimney.

THE "NEW ROAD," LONDON.

At a time when from A to Z, from Stratford to Notting-hill, all are occupied in writing upon the embellishments of our public roads, and on the enlargement of our thoroughfares, permit me to call your attention, and through you the attention of the powers that be, to the *non*-embellishment and the contraction of one of the most important of our metropolitan roads,—"The New Road."

It is in the memory of all that at one time, from Lisson-grove to the Vinegar-yard, this road was flanked on each side by gardens: true, they were hardly kept with the ordinary neatness of English Cockney-gardens, yet, still, gardens they were, and as such admitted the free circulation of air. We have seen the corner-house replace the Michaelmas Daisy by a wooden box and table: we have seen the "Sweet-smelling wall-flower" give place to the "fragrant weed," and the London Pride changed into the Shining Pewter. We have observed the menagerie raise coop upon kennel, kennel upon coop, and the stone lion and stag look with silent contempt on the encaged live-stock. The ladder then raised its head to show the uninitiated how the uppermost coop was placed, and then the cowl crowned the whole. Up to this point, perhaps, little might be said; but the humble repairing tailor, whose sign-board was hid between two of these establishments, now in self-defence must advance his work to the pavement, and hence bricks and mortar. His near neighbour now takes the hint: a shop is built, and over it rooms, according as he is blessed with a family; and thus the gardens give way to irregular unsightly shops.

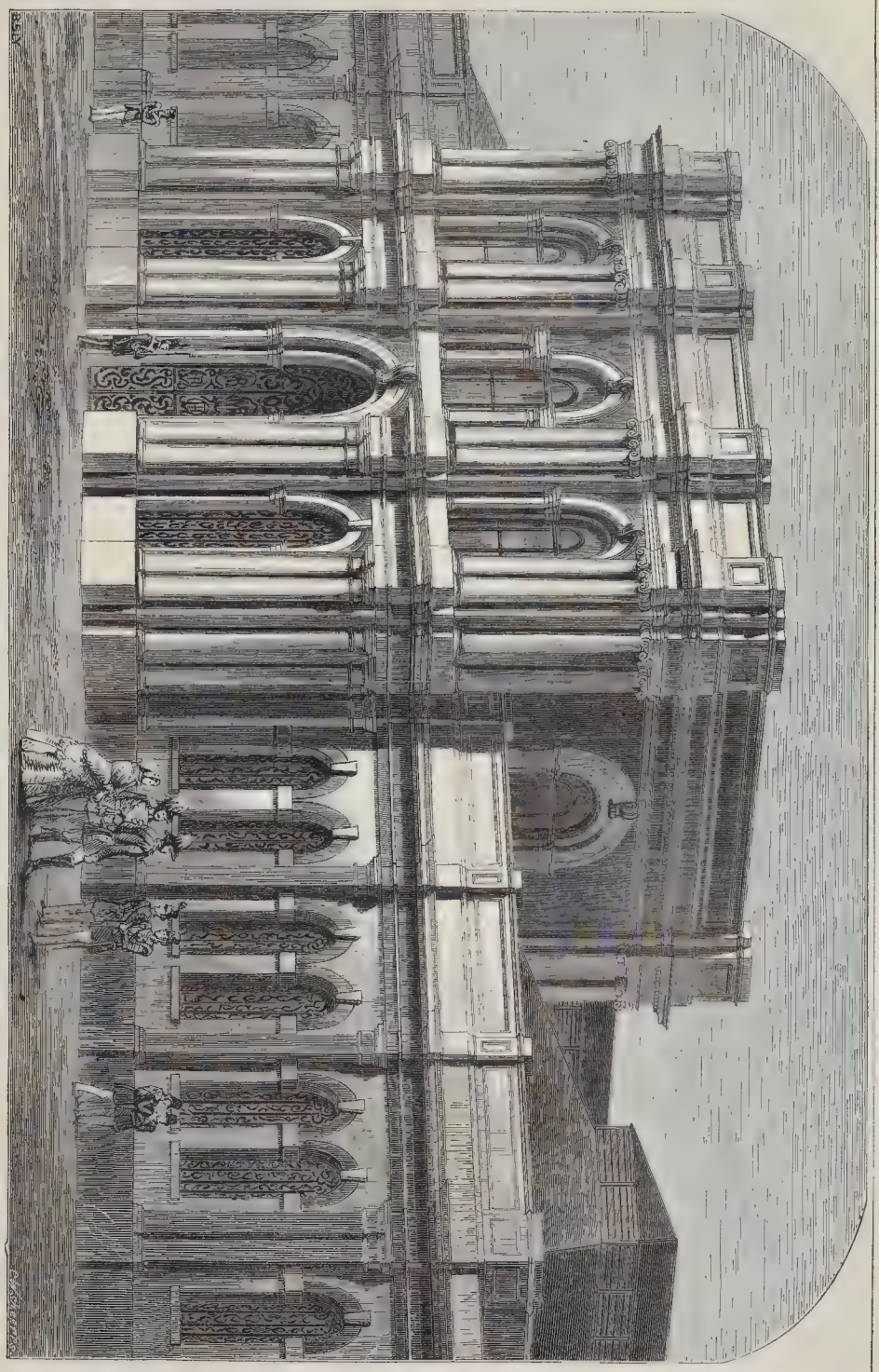
But the eye is not alone offended: if we glance at the part lying between Tottenham-court-road and Albany-street, we cannot fail to remark the contracted roadway and restricted footpath, in which even now with difficulty the traffic operates. Should this traffic but increase a little, we shall then hear of a deputation to the Board of Works for the enlargement of this part, and then the long bill of indemnities to shopkeepers, demolitions of houses, &c. &c.: all this a little forethought might have prevented, and still may, in part.

King's-cross again is another example; and, indeed, these remarks apply to many other roads entering London, and which should, in my opinion, form the subject of immediate and attentive consideration.

If the taste of the Londoners should turn towards boulevards, perhaps this is the finest site in London for such purpose, and each row of houses offers in itself a fine scope for the improvement of street architecture.

AN UNEMPLOYED C.E.

BARRACK IMPROVEMENTS. — The Government appear to have at last resolved to carry out an improvement, on a small scale, for which we have long contended, namely, the provision of separate accommodation for soldiers' wives. At Chatham, 6,000*l.* are about to be expended in providing separate rooms apart from the single men for married soldiers; and at Preston barracks, we also observe, a number of dwellings of a similar kind are about to be erected.



THE SHELL FOUNDRY, ROYAL ARSENAL, WOOLWICH.—MR. DAVID MURRAY, "BUILDING ENGINEER."

PROVINCIAL NEWS.

South Weald (*Essex*).—The new schools at South Weald, Essex, erected under the superintendence of Mr. Teulon, of London, at the sole expense of the vicar, the Rev. C. A. Belli, have been recently opened. The building consists of a school and school-house. The school runs parallel with the road, with its centre window set in a gable, with a tympanum occupied by a sculpture by Forsyth,—a guardian angel over children. The east and west windows are pointed, with plain tracery. The house which runs back the depth of the school is one story high, having all its rooms on the ground floor. The style is Early Middle Pointed, built in brick with freestone window frames. The east gable is surmounted by an hexagonal bell turret of stone. The interior of the school is of white brick worked with red, in a mosaic. All the arches are in alternated voussoirs of black and red, both internally and externally. The windows are glazed with suitable painted glass, presented by Sir Digby Neave, Bart. and Mr. W. Coope. The works are by Mr. Smith, of North Weald.

Chatham.—The authorities have given directions for plans to be prepared for a new hospital for the use of the troops, which will be built near the huts at Brompton, contiguous to the Casemate barracks.

Devizes.—The erection of the new corn-exchange building is said to be hindered by the fact that all the tenders are considerably above the sum named by the architect, Mr. Hill (viz. 1,500*l.*), as the required amount. The lowest tender was 350*l.* above this estimate, and the highest was between 1,200*l.* and 1,300*l.* in excess. The result is that the project is postponed till additional subscriptions can be obtained.

Weston-super-Mare.—A public meeting was held at the town-hall here, on Tuesday in last week, for the purpose of receiving a report from the committee appointed to examine the several plans for a new town-hall, when the ground-plans and elevations from Mr. Lysaght's designs, which the committee had approved of and recommended out of twenty, were accepted and adopted.

Bridgnorth.—The new market buildings are being completed, and before the commencement of another year will be in use. Mr. R. Griffiths is the architect. At a recent meeting of the town council, the lighting of the hall was taken into consideration, when it was resolved to have a central chandelier with twelve lights, and two others with eight lights each; to be suspended at a height that would not interfere with the line of vision. It was also resolved to have two side bracket lights near the platform. Mr. Griffiths produced a number of designs for the proposed chandeliers; and it was ultimately agreed that the chandeliers be procured from Messrs. Warner and Co. of London, after pattern No. 1, furnished by that firm. The cost of the chandeliers is estimated at about 60*l.* The windows looking into Listley-street Mr. Griffiths was directed to fit up with cast-iron frames and thick glass; one at least of the panes to open for ventilation to the butchers' market.

South Staffordshire.—The South Staffordshire Waterworks are progressing. After some difficulty with the first contractor, says the *Staffordshire Advertiser*, the reservoir at Lichfield is rapidly progressing, under the direction of Mr. J. Boys, the present contractor. The land purchased from the Earl of Bradford for the reservoir at Walsall has been handed over to the same contractor, the first sod of the reservoir being turned by the chairman of the company. The pipes for conveying the water through the district are now being laid down near Walsall. They have been produced by Messrs. Cochrane, of the Woodside Ironworks, near Dudley.

Hereford.—The Hereford cattle-market and sewerage have been executed, and the accounts finally wound up, at 450*l.* under the contract sum. The cattle-market, which covers an area of four acres, fitted up with cattle and sheep pens, and a shed 640 feet long and 24 feet wide, covered with corrugated galvanized iron, was opened on the 19th ult.—the tolls received on that day being 95*l.* The sewerage was completed on the stipulated day named in the contract. About 600 houses have been connected with the main sewerage during the execution of the works: about 200 houses are deriving water from the new waterworks. The water is pumped by a 20-horse engine, by Messrs. Simpson and Co. from the river Wye, into a reservoir of 103 feet above the river level, and capable of holding four millions of gallons. It is afterwards filtered in two filtering-beds before it enters the main. The contract amount for the whole of the works was 22,000*l.* The works were begun in May, 1855, and the inhabitants already appreciate the beneficial effects of these sanitary works. It is estimated that the cattle-market tolls and water-rate will pay the interest on the money borrowed for constructing the works. Mr. T. Curley, of Hereford, was the engineer, and Mr. William Moxon, of Dover, the contractor.

Liverpool.—On Wednesday in last week, it is said, water from Rivington reached Prescott for the first time, and the local *Mercury* states that it is expected that before the next meeting of the council, the water will be brought to Liverpool.

Elgin.—The new Bank buildings in Elgin are now roofed in and slated. "The Royal," says a local paper, is built of polished freestone from the Hospital Quarry, and is in the Doric style, and three stories in height. It occupies the west corner of North-street. The contractor is Mr. Lamb. The North of Scotland Bank is on the site of the Trades-hall. It is built of polished ashlar from the Newton Quarry, and is in the Corinthian order of architecture. It is likewise three stories in height. Mr. F. W. G. Urquhart is the contractor. Messrs. Reid, architects, designed both these buildings.

CHURCH-BUILDING NEWS.

Winwick.—The church of St. Michael, Winwick, has been restored and reopened. It is cruciform in plan. The transept windows have been opened and restored, as also a window on the north side of the nave. The tower arch has been opened and restored, at the west end of the church. The roofs of the nave and transepts are executed in oak and pitch pine, and are copies of the original roofs. The material and workmanship were provided by Messrs. Clarke and Barrett, by whom the restoration of the carcase of the fabric has been executed. The whole of the seating, together with the pulpit, prayer-desk, and font, are new, but the architect has preserved every remnant of tracery which remained of the old seating, and has copied the character of the old seats in the formation of the new. The whole of the internal fittings have been executed by Messrs. Ruddle and Thompson, of Peterborough. Besides the complete restoration of the church, the chancel has been entirely rebuilt. The latter was completed about three years ago, at a cost of 500*l.* laid out by the rector. The cost of the present restoration is about 1,200*l.*; so that the entire cost of the restoration is about 1,700*l.*; and the whole of this amount has been raised by the rector and parishioners, except about 150*l.* and this deficiency has been nearly cleared off by further contributions. The restorations have been carried out under the superintendence of Mr. E. F. Law, architect.

Mortimer (*Reading*).—The new church at Mortimer (West End) has been consecrated. The lord of the manor, Mr. Richard Benyon, of Englefield House, has erected the church, which is capable of accommodating about 200 persons, and has provided also a residence for the clergyman, for whose services the church has been endowed by the same gentleman.

East Molesey.—On the 30th ult. the Bishop of Winchester consecrated the new church of St. Paul, Kent Town, East Molesey, Surrey, which has been erected by Mr. F. J. Kent. The church is built in the Decorated style of Gothic architecture, and will consist, when finished, of a nave, with north and south aisles, chancel, with south organ chapel, and vestry on the north. The steeple will rise from the west end of the south aisle. At present only the chancel and three bays of the nave are erected, the arches being built up with a temporary wall of brick, so as to be capable of further enlargement: the columns of the nave arches are formed of massive blocks of unpolished granite, those of the chancel arch being polished Purbeck marble. The chancel is fitted up with open oak benches, placed stall-wise, and the altar is elevated on three steps. The sill of the south window of the chancel is lowered, so as to form sedilia for two clergymen.

Abingdon.—A vestry meeting was held on Thursday in last week, to receive a report with reference to the contemplated restoration of the tower and spire of St. Helen's church. It has now been determined to proceed with the work immediately. At a vestry meeting held some time since a report of Mr. Street, the diocesan architect, was read and discussed, and, upon the proposition of a ratepayer, it was determined to have the opinion of some other practical person, and Mr. J. H. Stacy was applied to for the purpose, but he declined to undertake the duty. Mr. Wilkinson, a local architect, was thereupon requested to make a report, the reception of which was the business for which the present vestry was called. Both reports were now read, and each recommended the adoption of immediate steps to restore the tower, the east side of which, it appeared, had bulged to the extent of 7 inches, occasioning considerable disorganisation of the fabric; and as it was the feeling of the meeting that the time had arrived when it would be inexpedient to delay the restoration of it, a proposition for a committee to be appointed to examine and select a plan, and proceed to carry it into effect, and lay before a vestry a report of the amount of the contract, was unanimously carried.

Pucklechurch.—The parish church of Pucklechurch was re-opened for divine service on the 4th inst. The old chancel of the church has undergone complete repair, from designs by the late Mr. Carpenter. The seats are all of the same proportions. A new stone pulpit and carved font have been substituted in the room of the others, and the gallery at the west end has been removed.

Tiverton.—The new chapel of St. John, in Pitt portion of Tiverton parish, Devon, was opened for divine service on the 1st inst. The building consists of nave, 43 feet by 21 feet, entered by a porch; chancel and arch, 18 feet 6 inches by 15 feet. The style is geometrical, the roofs open, of oak, that of the chancel boarded. Two bells, from the ruinous chapel which has given place to the new edifice, are hung in a turret at the west end. The walls are of the local stone, with quoins of Hanham stone, and Bath stone dressings. The outlay, aided by the materials of the old chapel, is about 800*l.* raised by subscription amongst gentlemen of the neighbourhood. Mr. Ashworth, of Exeter, is the architect, and the work has been carried out by Mr. Parish, of Tiverton.

Doncaster.—The time, says the local *Gazette*, is rapidly approaching, when the contractor for the rebuilding of the parish church will deliver into the hands of the Building Committee the work, so far as is comprised in the terms and extent of the existing contract. The committee, with the full sanction of the town, commenced the rebuilding of the church upon a scale which could not be entirely completed with the sum then subscribed. Hence, the contract was so arranged and divided, that the work might be stopped as soon as the nave had been carried up to the point where the tower commences—in the event of there not being sufficient funds to proceed with the remainder of the architect's scheme. In about two months from the present time, this stage will be reached. Then, the question will have to be asked—shall the contractor proceed with the second portion of the contract, namely, the tower? Or, for the want of sufficient funds, must the committee be compelled to relieve him from further obligations? In that case, all the arrangements of scaffolding, all the complications of machinery, the experience of workmen, the facilities of conveyance, and a long *et cetera*, will have to be dispersed and rendered comparatively useless; involving an extra cost of 2,000*l.* certain—probably more—whenever the time may come for the work to be resumed. This expensive contingency should be taken into the most serious consideration.

Blackburn.—The design of Mr. T. Oliver, jun.

architect, has been selected by the committee for the new Congregational Church about to be erected at Blackburn, in Lancashire. It will be entirely of stone, and have a tower and spire.

Teviothead.—The new church, which has been erected at the expense of the Duke of Buccleugh, was opened on Sunday before last. The style of the new building is Early English. The plans were furnished by Mr. Cowan, the duke's clerk of works at Bowhill.

Glasgow.—Among the improvements being carried out in connection with the cathedral, is the heating of the nave as adopted some time since in the Choir, or Inner High Church. The cost is estimated at 300*l.*

A HINT ON GLASS PAINTING.

My intention in this letter is to point out certain æsthetical views upon the above-named subject. At present, we are too grotesque and unnatural in the treatment of our subjects. We do not study truth sufficiently. This fact is now acknowledged by painters in oil, and the pre-Raffaelleite school are working upon this hypothesis. I would introduce this pre-Raffaelleitism into glass painting; but of course never attempt, as in the last century, to imitate oil painting, or try to gain the effect of that art, or in any way make the glass painting appear like a picture, but always let the following idea be predominant. The great object is to create a *glass* painting. Let the figures and drapery be natural; the position also. Do not use unnatural colours, and introduce absurdities in the shape of green wings to angels: use the colours of nature, and do not have too many; for, in modern glass, too minute mosaic is a failure; small pieces of red and blue appear at a distance purple; this is, as all know, from the different manufacture of the glass. Modern is even in thickness, the old is uneven: they were not able to manufacture glass of even thickness, and, consequently, from inferior manufacture they obtained those gem-like tints. The chief object to be attained should be distinctness, so that when you view a glass painting at a distance, you may perfectly see each tint and each figure, and thus understand the subject. Those leads, as Mr. Winston suggests, which cannot form outlines, should be hidden by the saddle-bars; and let there be always relief and perspective, as they harmonise with Gothic architecture. We want a new school: at present we are but servile imitators, obtaining all the faults of the old, but none of its beauties: study old glass, but don't copy it, for it did not harmonise with the Gothic architecture, because there was often no relief. Let our new school try to attain this, and they will succeed, if they keep to these leading rules. The old glass paintings were often unnatural, whereas Gothic architecture is truth all over.

Observer.

INQUIRY AS TO FALL OF BRIDGE NEAR DARLINGTON.

A great deal of evidence has been given at the inquest on the bodies of the two labourers, John Goldsbrough and John Wood, who were killed by the fall of the bridge in course of erection at Over-Dinsdale, near Darlington, and the inquest was adjourned from day to day, for four days, in consequence. It is quite impossible that we can enter into all the mass of evidence and opinion offered,* but we must select enough from the more important part of it to give some idea of the grounds on which a verdict of manslaughter was recorded against the inspector of the works.

William Dodds, carpenter, who on 4th inst. was taking out the centre of the arch nearest to the Yorkshire side of the Tees, stated that he observed a crack in the wall between the old work and the new, which led him to suppose that the new work was "dying," and settling from the old work of the abutment. He went through the arch to examine the other side and saw a similar crack, about 6 feet long, and close to the abutment on the Yorkshire side, above the arch. Goldsbrough asked him if he thought the bridge would fall, and he said he thought not. Got upon the bridge on the Durham side and passed along to the second of the four arches,—the first being a land arch. He then saw the fourth arch—the first from the Yorkshire side—fall from the abutment, and give way. The third arch rose up, on the falling of the fourth, and, subsiding, fell,—before the fall of (and while witness was still standing on) the second. The land-arch stood. The old abutment on the Yorkshire side, and the old portion of the three piers which carried the wooden viaduct, did not fall. The arch which first fell was rebuilt while the work was in progress, having given way.

John Howison, bridge-surveyor, county Durham, deposed that he prepared the plans and specifications. The work was taken by Mr. Richard Cail, of Durham, for (he believed) 635*l.* Witness appointed Christopher Turnbull, mason, as inspector. The arch that was rebuilt gave way because the old abutment slipped back against the bank. Means were taken to make the abutment secure, and it had proved to be so. The bridge was private,—the property of the Rev. W. S. Temple. Believed that the weight of the fourth arch, pressing upon the pier, had caused it to lean over towards the Durham side. The fall then took place—the first arch remaining because the pier was thicker, and not so high. It was Turnbull's duty to see that the old abutments and piers would carry the new work. It was not usual to build new arches on old piers. Good bricks and good cement were used. Bad bricks were brought at the commencement, and others were substituted.

William Taylor, foreman of the masons, ascribed the fall of the bridge to the giving way of the foundation of the pier under the fourth arch.

David Kerr, foreman of the bricklayers, agreed with Taylor as to the cause, and also as to the goodness of the bricks and cement.

Ralph Harrison, of Hurworth, cartwright and joiner, deposed that he was dismissed about a fortnight before the fall, because of something he had said as to the bridge coming down. He had mentioned to Turnbull that the fourth arch was giving way. Turnbull asked him what he thought the cause to be, and witness told him that was his look-out. Believed the reason to be the badness of the cement and the wideness of the joints.

Mr. James Trowsdale, of Stockton, contractor, said the arches had not been placed on new solid springing-stones, as specified. The joints in the brickwork were too wide, and the cement had been overdone with sand. These things were in the province of the inspector. In his opinion, the arches fell in consequence; and the piers were fractured in that way, and not by the yielding of the foundation.

Mr. Joseph Stephenson, C.E. was of opinion that the arches fell because a sufficient weight had not been put upon the haunches. The bricks were bad, the cement not good, and the workmanship was very defective. The inspector should not have allowed this. Some cement picked out by witness from the standing arch with his knife crumbled in his hand.

Mr. H. Marshall, acting on behalf of Mr. Cail, said that no blame could be attached to him in any way, Mr. Howison and his inspector having departed from the specifications in omitting the springers.

Mr. George Mason, C.E. Darlington, deposed to departures from the specifications and defective work. The sand, being three quarters loam, was unfit for use. The cement and some of the bricks were not good. Saw nothing to lead him to the conclusion that the foundations had shrunk. Would not endorse the plan. Would not have made such a design himself. It was the inspector's duty to see that the materials and workmanship were good.

Mr. Cail deposed, that he agreed with Hanson, of Musham, for bricks at 21s. 6d. per kiln, and rejected them as bad. The cement was from Erle's—(stated by Mr. Mason to be one of the best houses in the trade). There being an inspector over the works, he naturally expected that he would see to the workmanship being good. On his (Mr. Cail's) part, there was no stint.

Mr. R. Hodgson, of Whitwell, near Sunderland, C.E. said the mortar of the old work was very bad indeed. The old piers, Nos. 1 and 2, were considerably disturbed in the masonry down to the foundation, and the want of substantiality in the work below the offset might tend very materially to produce the falling of the bridge. There was great risk in turning arches on such piers, unless properly built. The standing arch he considered to be fair average work. Erle's cement was unobjectionable. The sand was bad unless the loam were carefully separated. The joints were not particularly thick, and bricks were much cheaper than cement. The engineer was responsible, and then the inspector. The arches were too slight, and in great measure led to the fall of the bridge, together with the want of a through springer course on the top of the piers. The half-rings of the arch were not properly bonded into each other by heading bricks. Would have taken down the piers to the level of the springers, and rebacked the arches entirely with new work. Had known bridges come down entirely from wet weather.

Mr. B. Lawton, of Newcastle, contractor, confirmed Mr. Hodgson's opinion as to the fall; as also did Mr. E. B. Reed, of Newcastle, contractor. The latter said he *could not have built a better bridge for the money:* would not have expected it to fall, but would have seen the architect as to the plan, and have objected to leaving the old piers standing above the springing part: below these, would have had no objection to build such a bridge.

The jury remained in deliberation for four hours, and more than once had to request the assistance of the coroner. Their verdict was in these words:—"The jury are of opinion that the deceased John Wood and John Goldsbrough came by their deaths in consequence of the falling of Over-Dinsdale bridge on the 4th of November, 1856, and that the fall of the bridge was caused by gross neglect on the part of Christopher Turnbull, the inspector of the works, against whom we return a verdict of Manslaughter."

Turnbull was accordingly committed to Durham, to take his trial at the winter gaol delivery. The Foreman of the jury further said: "The jury are also of opinion that blame is due to John Howison, architect of the bridge, and Richard Cail, the contractor, for having deviated from the original plan and specification." The Coroner: But that blame does not, in your opinion, amount to criminal responsibility? The Foreman: Not the slightest.

* A very full report of the greater part of this evidence will be found in the *Darlington Times* of 15th inst together with the summing up by the coroner.

THE RELATIVE VALUE OF LABOUR, SKILLED AND UNSKILLED.

A paper was read by Mr. Chadwick (late of the Central Board of Health), "On the Future of Manufacturers and of Manufacturing Labourers, and the Future of Agriculture and of Agricultural Labourers," at the agricultural section of the recent Congress of Bienfaisance at Brussels, and by the Congress directed to be printed in the Belgian *Moniteur*. In the first part of his paper Mr. Chadwick shows, by statistical evidence, as one of the results of his investigations as a commissioner of inquiry into the labour of young persons in factories, that in the earlier and more rude stages of manufactures, manual labour chiefly was required, but that the general tendency of improvements in machinery and processes is to reduce mere muscular toil, to put more and more of machinery for the economy of labour under one management, and to require a larger proportion of intelligence, skill, and trustworthiness, on the part of the operative—qualities which could only be obtained, and maintained permanently, by improvements in wages and general condition.

In respect to the future of the labouring classes in agriculture in England, it appeared to him to be under influences similar to those which promised favourably for the labouring classes in manufactures.

From particular inquiries which I have made, he continued, in various parts of England, I am assured that in agriculture as in manufactures, wheresoever labour-saving machines have been introduced, or labour-saving improvements in processes have been effected, more labour, of a higher quality, and better paid, has been required. At present, one great practical barrier to improvement in agriculture is the intractability, from ignorance and general low condition, of the labourers.

A quarter of a century ago there were riots, in which labour-saving machines were broken, but better views have now begun to prevail, and labourers have refused to do thrashing work by the flail, because, as they have justly and laudably said, that was work for a machine, which they would not degrade themselves by performing. On the other hand, common agricultural labourers, when they have been allowed to join gangs of Lancashire navvies, and have been "alimented" and seasoned to their tremendous discipline, on their return have astonished the farmers by doing an ordinary day's agricultural work before noon, and by putting their spades on their shoulders and going away for the rest of the day. A noble friend brought down to his estate in Dorsetshire a foreman accustomed to superior labour at piece-work. Judging of what would be his answer, I said to this foreman, "Will you not get this work done cheaply? Here the labourers are got for only 8s. a week." "But they would be dear at 6s." was the reply. "How is it here with your other class of artisans?" I inquired, "your journeyman bricklayers, for example, what sort of workpeople are they?" "Such as from their wages you, sir, would expect," was the answer. "And what wages are these?" "About 12s. per week." "And how many bricks do they lay in a day?" "Not more than between 300 and 400." "And how many do your town bricklayers lay, to whom you pay double wages?" "More than 1,000 a-day!" was the answer.

The most eminent of the "navvies" in England come from the hill districts of sandstone-grit and

granite in Lancashire and other northern counties, where there are favourable sanitary conditions of pure soft water and forced ventilation, and some natural drainage by winds and storms. Their alimentation, too, has been generally good. Some of the leading navvies have represented to me that they consider eleven pounds of meat per head per week as a necessary of life for good work, but I should not accept this as to the species of diet as an absolute dogma, for they themselves have admitted to me that eaters of oatmeal and potatoes (with milk), though in great quantities, have done good work with them: what, however, appears to be certain is, that a superior alimentation at the least is required, though it is by no means the sole requisite, and mental as well as bodily stimuli are needed for the attainment of superior work.

The superiority of a highly alimented and skilled labour has been maintained in every clime. A friend of mine, a civil administrator in India, the Right Hon. Holt Mackenzie, informed me some time ago that he had made a note of the comparative cost of Indian, Chinese, and English labour when he was in India, and that the general result was, "that for some works an English workman, of average efficiency, was equal to several Chinese, and one Chinese equal to several Indians (Bengalese), and this independently of the advantage or disadvantage of the tools employed. And the conclusion I drew," said he, and the conclusion which I too wish now to enforce, "was, that for estimating the cost of labour, or of the work done, there could not be a worse standard than the wages of the labourers."

Much in this instance might be ascribed to climate, but the spectacle has been presented in Calcutta of Lancashire artizans, imported at high wages, doing work there under the shade of umbrellas held over them by Hindoos, engaged at low wages to attend and perform this service. In the course of discussions on the subject with the members of the Congress met here, I have received much confirmatory testimony upon my view of the facts. One member of the Congress, a merchant, informs me that he has had ships built abroad, and also ships repaired in every principal port in the world; but he avows that, notwithstanding the very high wages of our shipwrights, he has found their labour as cheap as any he has elsewhere met with. In respect to agricultural labour, another of our colleagues, a landowner in Poland, who has been some years in England, and who has studied its agriculture, states to me that he found one German labourer equal to two Polish labourers; but that three Polish labourers—and these not serfs—were required to do work equivalent to one average English agricultural labourer. In this extreme difference, however, the difference of tools was included, with the difference of skill and energy. Admirable work is done by Anglo-Saxon men in Canada, and in the United States of America; but I repeat that I do not ascribe the difference of result mainly to race, because, as I have observed, the labour of Englishmen, depressed by maladministration and pauperism, is often as inferior as any other; and because depressed Irish labourers, when put into suitable training and condition, are found, according to the acknowledgment of English labourers, to keep step with the best.

SAFETY FOR BUILDING OPERATIVES.

I KNOW that it is only to utter a truism to say that it is the duty of every man to promote by all the means in his power the safety and well-being of the community; and for this reason I admire the disinterested philanthropy of such institutions as the Royal Humane Society, the Royal Society for Saving Life from Fire, the Life-Boat Society, and others of cognate design. But probably there are few persons more exposed to the risk of severe or fatal accident than the various operatives engaged in the erection of large buildings, or in the decoration or repair of churches and other large interiors; and, notwithstanding the generally very firm and scientific construction of scaffolding, one cannot but remark how needlessly exposed the workmen are to accident by the use of loose boards to work upon, and by the absence of protection on the street side. The suggestion which I therefore venture to make to builders in general is, that a rope-net should, as a matter of course, be stretched across *the front* or that part of the front of every scaffolding on which men are at work, and that a similar net or tarpaulin (unless the boards are bolted or otherwise fastened down) should be securely placed *under* the stage of boards in use, convenient and safe openings being left, or temporarily made for passing up materials. I would recommend also that a rope-net or tarpaulin, or sail, or several, should be invariably secured close under the boards on any extensive scaffolding erected for the decoration or repair of spacious interiors. The precautions described would not cost much, and would probably prevent many serious and some fatal accidents, not only to the workmen themselves, in the event of a false step backwards, or of an ill-secured board, but also to passers-by, from the fall of planks or bricks, or other materials. The records of our hospitals could tell a sad tale of broken limbs and loss of life from accidents in building operations, to say nothing of the destitution of widows and orphan children consequent upon them.

A LONDONER.

METROPOLITAN BUILDING ACT.

Additions, Alterations, and other Work.—In repairs affecting the construction of any external or party wall, the Act renders notice compulsory on the part of the builder. It is obvious that if any portion of such party or external wall be removed or pulled down, so as to render it necessary to rebuild the same, the construction of such wall is "affected" to the extent of such rebuilding. As regards rebuilding, the Act of 1844 made the pulling down of one story, or the extent of one-fourth the surface or superficies of front, a sufficient ground for condemning all other irregular wood partitions or other portions of a building. A most dangerous license is permitted by the present Act, which would allow a six-storied wooden house to be rebuilt in woodwork in the three upper stories, as the Act says one-half is to be measured in cubic contents, and by a subsequent notice the lower portions might also be rebuilt in woodwork. How cubic contents are to be measured is not explained, or whether the removal of roof is decisive on this point. The doctrine of superficial area of a building is far preferable to cubic contents, but the matter referred to is only characteristic of this loosely-drawn Act. The object of this is to explain that a rebuilding is not a repair, and that by the word "repair" is meant only such work as applies to the surface or facing of a wall.

A DISTRICT SURVEYOR.

Fee Case.—An additional story has just been erected, under my superintendence, on a house in Clerkenwell. The district surveyer declined taking the fee for the addition, viz. 1*l.* 3s. 9d. and claimed the sum of 3*l.* 6s. 3d. maintaining a fee was also chargeable for raising party-wall of one adjoining house, and party-wall and chimneys of the other. The raising was in both cases above the roof of adjoining house. The magistrate decided that the district surveyor was entitled only to the fee for the addition, of 1*l.* 3s. 9d. and he had to pay the costs.

W. P. G.

*** We advised the district surveyor to the same effect, before the case went to trial, in our notices to correspondents, October 25th.

Projecting Eaves.—We have just roofed in two houses with projecting eaves. Our ground landlord requests that we shall cement the projecting faces, according to the new Act, section 26. The district surveyor tells us we must cover it with zinc. If we put cement, he will make us alter it. As we have neither time nor money to lose, we appeal to you to settle the dispute between us.

P. and J.

*** It is still a question with some, if simply *covering* the eaves with fire-proof material fully complies with the requirement of the Act in this respect. If we admit, with the magistrate whose decision on this point we recorded some time ago, that it does so, then cement will serve the purpose as well as zinc.

GLASGOW ARCHITECTURAL ASSOCIATION.

ON Thursday in last week, Mr. C. H. Wilson delivered a lecture to the members of the Glasgow Architectural Association, on the subject of Glass Painting. The mechanical appliances necessary for the successful prosecution of the art were first treated of, and described. The lecturer remarked that the very imperfections and coarseness of the material employed by the glass painters of old gave their works a superiority over those of modern artists. The glass now used was too good, and allowed the rays of light to pass so directly through, that the windows were entirely wanting in that richness and solidity which was the distinguishing beauty of old painted windows, the glass of which broke and dispersed the rays of light. When modern glass was used for painted windows, the sun, when it shone upon them, appeared behind as a round fiery ball; while through the old windows the disc of the sun was not visible at all, and the only effect of their illumination by the sun was to increase their brilliancy. If we would have good painted windows, we must manufacture coarse glass for the purpose. Speaking of the three different styles of glass painting—the mosaic, the enamelled, and the mosaic-enamelled—the lecturer commended the British school for generally adhering to the first-mentioned, as the use of enamel so interfered with the transparency of the glass, that the windows so treated resembled a painted blind. This was, however, almost the only praise he was disposed to allow to the British artist, for as draughtsmen and designers they were far inferior to their continental rivals.

TO ARCHITECTS.—COMPETITION.

PRIZE OF FIVE POUNDS! *

Now, knights of the pencil, the compass, and square,
Arm yourselves for a tempting campaign.
Your paper lay down, your colours prepare:
Such a chance you'll not meet with again.

Attend then, I pray, all of ye who may,—
Of paper and pen make selection:
To Tom Sykes write—though him you may'nt like,
Of the ground, for plan and section!

But to him enclose,—or he'll oppose
Your having it, I'll be bound,—
Seven "bob" (the sum tix'd), so stump up like
"bricks,"
The prize to be won is "FIVE POUND."

And mind! you're required, before you're hired
By this fine Burial Board,
To name the rate you're prepared to take,
For attendance at Castleford!

When doubtless they expect to pay
(Oh, who'll be so deluded?)
Some three per cent. on money spent;
The premium (!) included.

Builders likewise, for you there's a prize,
Such as rarely appears in these pages:
For enclosing four acres (what rare undertakers,
To offer such excellent wages)!

Erecting a lodge (be sure 'tis no dodge);
Building chapels and laying down drains;
Keep within bounds, for NINE HUNDRED POUNDS
Is the sum you're to have for you're pains!

Now each of you ought, if you're caught
By this stupendous 'lur'ment,
To ask the Board to further afford
The expenses of your interment.

For you cannot long, be you e'er so strong,
Live on scanty food or raiment,
And you'll scarce procure (of that be sure)
Either by such poor payment.

E. G. B.

* See advertisement in the *Builder*, November 15th, 1856.

A STATUE FOR THE FOUNDLING HOSPITAL.

A TARDY act of justice has placed a statue to the memory of the founder of this hospital, Capt. Coram, on the stone structure, in the centre of the entrance-gates. The work is by Mr. Calder Marshall, R.A.; and the expense of it, comparatively small, has been defrayed by private subscription. The figure, which admirably represents the philanthropist, as handed down to us by Hogarth, is 8 feet high; and, besides being a just compliment to so good a man, will relieve the monotony of a line of low buildings hitherto offensive to the eye. It is executed in Caen stone, and is to our minds very satisfactory. It is to be hoped that the stone has been indurated.

MASTERS AND MEN: THE HALF-HOLIDAY.

HAVING read in your useful paper of November 8th ult. an article on the half-holiday movement, by a Master in the "building trade," you will allow me perhaps, as an operative in the same trade, to make a few observations on the same subject. A diminution of the hours of labour must be regarded as a great boon to the working classes, although I do not think the "half-holiday" would be such a boon as many of my fellow-workmen do. I quite agree with the "Master" about the inapplicability of the rule, and, indeed, I think it would militate against the working man's interest, as I will endeavour to show. For instance, a workman out of employ has a small chance of getting employment on a Friday or Saturday, owing to Saturday being a *short day;* much less chance he would have of getting employment on the latter part of the week if his employer had to give him a *half-day*. I cannot see, except in factories or public works, how such a rule could be applied. There are other objections I could state against the half-holiday, but I forbear on account of taking too much space.

Now, Mr. Editor, I would ask for a diminution of the hours of labour, not as a holiday, but as a necessary means of allowing the working man more time to cultivate the faculties of his mind, both moral and intellectual, and I need not tell you how little time the workman has under the present system for such purposes. It requires him not only to devote the greater part of his time, but a great part of his life, to provide for the necessaries of his existence, and those depending on him; at least the energies of his body and his mind are so much exhausted, that he is totally unfit to pursue any useful study. He may gulp down some light read-

ing, or something of that sort, but he cannot apply his mind to any subject that requires the exercise of thought. If he tries, he invariably feels drowsy, and soon falls asleep over it. But I am trespassing too much on your time. What I would say is this—Why could not our day's labour be fixed at eight hours instead of ten? That, Mr. Editor, would be a great boon to the working man, and I question very much whether either our employers or the public would suffer much by it. With respect to our employers, a sufficient time might be allowed to finish their present contracts before the rule came into operation; and as to the public, I have a very different opinion of it from what the "Master" has, to think it would emphatically refuse it.

ANDREW DAVIDSON, Bricklayer.

INSTITUTION OF MECHANICAL ENGINEERS, BIRMINGHAM.

THE general meeting of the members of this institution was held on the 5th inst. at the house of the institution, Newhall-street, Birmingham; Mr. S. Lloyd in the chair.

The Secretary having read the minutes of the previous meeting, held in Glasgow, the officers and council for the next year were nominated for election at the ensuing annual meeting, and several new members were elected.

The first paper read was a "Description of the Ventilating Fan at Abercarn Colliery," by Mr. E. Rogers, of Abercarn. This is a simple construction of revolving fan, employed for ventilating a coal-pit by mechanical means, instead of the ordinary mode of furnace ventilation. The fan is placed alongside the top of the pit, and is of large size, running at a comparatively slow speed: it is formed of eight vanes, fixed on a horizontal shaft, on the end of which is a crank driven by a small direct-acting steam-engine. The plan of ventilating mines in this manner, by employing large exhausting fans moving at a slow speed, is the invention of Mr. James Nasmyth, of Patricroft, by whom the present fan was designed and constructed.

The next paper was "On the Application of Steam Power to Agricultural Purposes," by Mr. W. Waller, of Lincoln, and formed the continuation of a previous paper on another branch of the same subject.

The last paper was a "Description of a Steam Pile Driver," by Mr. R. Morrison, of Newcastle-on-Tyne. The machine consists of a steam cylinder and piston, carried on an upright framework: the piston-rod itself, being very large in diameter, and of great length, acts as the hammer to drive the piles, being raised by the steam in the cylinder and then let fall on the top of the pile. The whole machine, with steam boiler and engine, is carried on a framework on wheels, which runs along on the top of the piles already driven, as the work progresses, without requiring any additional framing to support it.

After the meeting, Mr. F. Osler, of Birmingham, exhibited a gyroscope of a large size, for the purpose of illustrating the stability of the axis of rotation of a revolving body. A new steam pressure-gauge was also exhibited, by Mr. John Inshaw, of Birmingham.

LIVERPOOL ARCHITECTURAL SOCIETY.

THE fourth meeting of the current session of this society was held on the 12th, at the Royal Institution, Colquitt-street. Mr. S. Huggins, the president, occupied the chair.

Mr. W. H. Weightman, the secretary, announced various donations; and Mr. G. F. Chantrell exhibited an invert for sewers made by Mr. Cliff, of Wortley, near Leeds.

The discussion on the Liverpool Building Act was then resumed.

The Chairman, in opening the discussion, said he could not think that the sources of English law were so corrupt or so impotent as to justify the fears expressed by Mr. Picton at the last meeting. But if they were, when we knew that the Building Act we had was really bad, and that it was in the power of architects and builders to make a better, there would be something cowardly in abandoning the attempt to get another lest we should get a worse one. If they gave a worse one, then it would prove that something else wanted reforming as well as the Building Act. He felt bound to add that he saw no sufficient reason why there should not be a national Building Act, applicable to all towns in the kingdom.

Mr. John Hay said he did not see what necessity there was for a Building Act at all. He had been doing work in Glasgow and Edinburgh, neither of which places had a Building Act, and neither of which felt the want of one. He had also been doing work in London, but, though he had to come under the powers of a Building Act there, he certainly did not find anything so monstrously absurd in that Act as in the Liverpool Act.

Mr. Kilpin defended the Act, advising that they should rather—

> "Bear the ills [or bills] we have,
> Than rush to others that we know not of."

Mr. Picton followed on the same side of the question, and, after some other speakers had addressed the meeting, the proposition that the society memorialise the town council to take measures for obtaining an amended Building Act, was negatived by a majority of nine votes against seven.

COMPETITIONS.

Blackfordby.—The committee appointed to carry out the rebuilding of the chapel of St. Margaret, in answer to their advertisement received about thirty sets of designs, many of which possessed the usual qualification of being in cost far beyond the funds at the disposal of the author. After long consideration, the committee have decided to adopt the design of Mr. Stevens, of Derby, and intend to commence the work early next year. The present very dilapidated chapel is considered to be one of the oldest ecclesiastical buildings in the county (Leicester), its principal feature being its simplicity: it consists of nave and chancel, under one long roof, with bells in a turret at the west end: the windows are of the lancet form, a triplet at the east end, and of the plainest character: the floor has the peculiarity of being formed with a considerable inclination from the east to the west end.

The Liverpool Wellington Monument.—A large number of designs for the proposed monument to Wellington in Liverpool, have been, within the last few days, sent in by various competitors, and are now awaiting the decision of the committee. We trust that the designs will be exhibited to the public for a few days *before* the selection is made; for, although the monument is to be erected by subscription, the public have a vital interest in securing monuments calculated to raise, not lower, the standard of taste.

Liverpool Museum.—We are requested to mention, that the idea of exhibiting the rejected sketches has been given up.

MARINE CEMENTS.

THE following is an abstract of a paper on "The Materials employed in Marine Works," presented to the French Academy of Sciences, by M. Chatoney, engineer of the Ponts-et-Chaussées, and M. Rivot, mining engineer. A favourable report upon it has been made by a committee, consisting of the following gentlemen;—MM. Chevreul, Poncelet, Dufrénoy, and Marshall Vaillant.

Argillaceous or silicious limestone requires much pulverising before being subjected to the heat of the kilns, in order to produce a good quality of hydraulic lime or cement. A thoroughly compact texture, and a sufficient quantity of carbonate of lime at the surface, to protect it against the action of the sea-water, are necessary conditions of stability; but the best chemical composition of the materials can only be determined practically by experiments made almost on the very spot where the works are to be constructed.

Excellent silicious hydraulic lime may be artificially obtained by submitting to a moderate heat a mixture of 70 to 80 parts of pure limestone, and 20 to 25 parts of fine sand or flint; a definite silicate of lime ($Si.\ O^3 + 3\ Ca.\ O.$) which in forming a hydrate takes up six atoms of water. The more intimate the previous mixture of the materials the better.

The argillaceous hydraulic lime produced by burning either natural or artificial mixtures of limestone and clay, is not found to be so well adapted for use. The proportion of 20 to 22 parts of clay to 80 parts of limestone is found, upon the whole, to be the best. When the product contains too large a quantity of free lime, it is found advisable to use rather a clayey sand in mixing the mortar: this renders it more binding, and gives it greater power of resisting the action of sea-water. Too much clay would be very injurious, so that great care should be taken, and special experiments made, wherever this latter plan is adopted.

Cements which set quickly, and are prepared under moderate heat, are always difficult to manage in marine works, as they contain no free lime, and, consequently, their hardness is all that preserves them from the influence of the sea-water. They may, however, be improved by adding a certain proportion of lime, and letting the mixture stand a considerable time.

Natural or artificial cements, well burnt, and containing only a small portion of quicklime, such as those of Parker, the Medina, or the Portland, owe the great solidity which they acquire under water almost entirely to the presence of the hydrosilicate, as $Si.\ O^3 + Ca.\ O. + H.\ O.$ contains less water by half than the corresponding silicate produced in the hydraulic lime or cement, which is burnt at a lower temperature. These are found to answer best for works which are constantly immersed. They would probably not answer so well for those which are exposed on each side to the effects of water at varying heights.

Artificial pozzolana but seldom gives good results. With natural pozzolana fat lime should be used in preference to hydraulic lime, and it is most important to submit the mixture previously to a long soaking in a small quantity of water. This plan is adopted by the Dutch engineers, and tends to account for their remarkable success.

Sea water differs much from fresh water in its effect on different kinds of mortar and cement, not only from the constant and often violent action of the tide and waves, but from the various salts, carbonic and frequently hydrosulphuric acid held in solution.

Sea salt generally retards the setting of mortar and cement: the salts of magnesia exert but little action on free lime, or on the aluminate of lime.

The proportions of carbonic and hydrosulphuric acid vary much in different localities: they exert an action from the first moment of immersion until complete decomposition is effected, or at least till the cement becomes solid and impenetrable. They act first upon the free lime, and then upon the aluminate.

It has been noticed that where shells are very abundant, submarine works become covered with a sort of calcareous coating, which effectually protects them against all further action, and this protective influence of the marine animals may be best imitated by adding to the mortar or cement employed, free lime, in a proportion which must be determined experimentally for each locality.

Particular stress is laid on the following qualities, as essential to the formation of good hydraulic mortar:—

It is essential that the materials should be thoroughly pulverized before mixing, so that the combination may be as perfect as possible.

Sufficient free lime must be present to allow the carbonic acid in the water to combine with it, and form a protective coating of carbonate.

A long soaking of the materials is advisable, in order that the chemical combinations necessary for the ultimate stability of the mortar may take place before it is actually used.

Miscellanea.

THE LATE MR. POWELL, ARTIST.—We have received two communications in reply to some observations on this gentleman in the *Art-Journal*, asserting that the writer is wrong in his estimate of the deceased artist. One of our correspondents says,—"From a knowledge of what the late Mr. Powell's character was, during a considerable period of his life, and up to the time of his death, I feel justified in asserting that he was in no sense dissolute or profligate: he was, on the contrary, of reserved and thoughtful habits, and possessed, I firmly believe, of a mind that held him above the influence of any vicious gratification. It might perhaps be said of him, equally with any other young man, that he did not use to the utmost his opportunities; but so far from his having by a vicious course of life impaired his energies, and, himself, caused his premature death,—while instances might be adduced of his devotion to study having endangered his health,—I without hesitation challenge a support of the former implication." . . . "Among his fellow-students, and all who knew Mr. Powell, his name will never be mentioned but with respect." From observance of the manner in which the *Art-Journal* has been conducted, now, for many years, and of the unwillingness of its editor to give pain, we feel assured that no person will regret more than himself the admission into his pages of aspersions which may be found to be unjust, or more readily seek to remove them. We honestly believe the editor of that journal to be incapable of a wilful injustice either to the living or the dead.

GAS.—The Fareham Gas Company are erecting new gas works at a lower level, and removing from their old works, which stand near the top of a hill. ——At an influential meeting of the subscribers of the New Gas Company at Willenhall, on 4th inst. it was unanimously resolved "That if the Willenhall Old Gas Company reduce the price of gas to 5s. to all the consumers under 10,000 cubic feet, and 4s. 6d. to all consumers of more than that quantity, and insert a clause to that effect in their Bill, the public will withdraw all opposition; the reduction to commence at Lady-day next;" and further, "that in case the above proposition be not satisfactorily arranged within a month from this date, we are prepared to organise the strongest opposition in our power to the company obtaining their Act of Parliament." The Old Company had previously offered to reduce the price of gas to 5s. 4s. 9d. and 4s. 6d. as soon as a revenue of 1,500*l.* should be obtained. The purpose of their proposed application to Parliament is to obtain power to open the streets. The New Company have hitherto failed to carry out their scheme, only about 500*l.* instead of 750*l.* required having been paid up.

GREAT FIRE AT SOUTH METROPOLITAN DISTRICT SCHOOLS, SUTTON.—Nine hundred children (two hundred of them under seven years of age) were suddenly aroused from sleep in the dead of the night, between Wednesday and Thursday last, by the officers in attendance at this great establishment, on a serious alarm of fire, which was raging in the dormitories, and in a brief interval brought down the whole roof of a considerable portion of the building, and the floors beneath, besides one of the water-towers, the workshops, and other departments of the premises. The terror and confusion of such a scene may be imagined, but is beyond description. The appalling danger can only be realized when one keeps in view the deathlike depth of repose in childhood, and the difficulty of restoring the little creatures to the possession of their senses, and to even a glimmering self-consciousness of danger. With the utmost exertions of all in office, it took twenty-five minutes to turn them out, naked, on the lawn, in the midst of severe cold and drifting sleet, from the effects of which, doubtless, many of them will seriously suffer, although soon afterwards huddled into cottages, stables, and station-houses. Why should not the consideration of such possibilities as these have led beforehand to the adoption of as complete a fire-proof construction as could be had in the erection of especially such buildings? As it is, we fear that the narrow and extraordinary escape of so many hundreds of helpless children will but form an additional excuse for leaving such matters to chance and the chapter of accidents, as heretofore. Had not a single nursemaid happened to awake, and to be alarmed by a strong light streaming through a keyhole, all these hundreds of human beings might have continued to sleep till too late, as so many in such circumstances have done.

THE ACCIDENT AT THE MANCHESTER EXHIBITION BUILDING.—We are told that the operative bricklayers of Manchester, not being satisfied with the exculpatory verdict given at the inquest held on the first victim of the accident, and jealous of the honour of their trade, resolved to appoint a committee of their body to report upon the cause of the accident. The deputation inspected the ruins a day or two after the arch fell, and their report agreed in the main with the evidence of Mr. Crowther, architect, as to the imperfect mixing of the mortar, and the general want of care in the construction of such a mass of brickwork. They also inspected the brickwork then going on, and found equal fault with it; and expressed a confident belief that had a competent person belonging to the trade examined the work, he would immediately have put a stop to it. The deputation take exception to a remark made by the town-clerk of Manchester at the first inquest, that such accidents were unavoidable in connection with large works of that kind.

THE IRON TRADE.—In Yorkshire, Derbyshire, and Lancashire, the prospects of this trade are no better than when the state of the trade was last noticed; and in Staffordshire there is still a downward tendency, with talk of reducing wages. The season for many foreign orders has closed.

PRESERVATION OF INSCRIPTIONS.—Allow me to inquire if there be any mode of preserving the character of an inscription on *marble*, where exposed to the inclemencies of the atmosphere. About two years since certain tablets were affixed at the cardinal points to the plinth of a column, the engraved letters on which were coloured with a dark paint: these are now almost entirely effaced. Gilding, when applied to iron, retains its freshness: would it be equally retentive of its condition if applied to marble? or, is there any chemical preparation which would defend the restored characters in all their newness of strength and brightness? A SUBSCRIBER.

WATER-WORKS IN SOUTH AUSTRALIA.—The Local Government propose spending upon the Adelaide water supply the sum of 164,000*l.* The Water-works Commission, according to the *Australian and New Zealand Gazette*, include in their scheme an immense reservoir of eighteen acres in extent, to hold 60,000,000 gallons, to be constructed at an expense of from 13,000*l.* to 14,000*l.* They do not adopt the recommendation of the Legislative Council Committee to store 86,500,000 gallons, on the ground that "there will be a constant supply running into the reservoir from the Torrens." The *Register* thence argues that the only provision for storage required would be two small settling reservoirs for one day's consumption each, and a clear water one of same capacity, into which the water would flow from the filtering bed, and that thus a saving of 10,000*l.* or 12,000*l.* would be effected.

STAINED GLASS IN SCOTT MONUMENT, EDINBURGH.—The stained windows prepared by Mr. Ballantine from the designs of Mr. David Roberts, R.A. are now in their place, in the chamber entering from the first gallery of the Scott Monument in Princes-street-gardens. This apartment occupies the centre of the structure, immediately over the statue of Sir Walter, and was originally designed for a museum or repository of memorials of Scott. There are four principal windows, and the chief architectural ornamentation of the glass consists of Gothic canopies, with mosaic backgrounds, surmounting figures and armorial bearings supported on pedestal pillars, with foliated caps and panelled backgrounds of geometric tracery. The south window has an effigy of St. Giles, the tutelar saint of Edinburgh, habited in abbot's robes of eighth century. The north has an effigy of St. Andrew, the tutelar saint of Scotland. The west contains the arms of Edinburgh. The east has the ancient arms of Scotland. In each window an angel rising over a carved corbel holds a shield, on which the arms of Scott are blazoned, and the four windows are surrounded with labelled borderings, on which are inscribed lines from the "Lay of the Last Minstrel." After the full-sized drawings were made from Mr. Roberts's sketch designs, they were submitted to that artist, who revised the architectural and heraldic details. Mr. James Drummond also, we understand, furnished sketches for the figures of St. Andrew and St. Giles. There are four smaller windows filled in with glass of simple diapering. "The whole of the work," says the *Scotsman* in describing it, "has been executed with artistic skill, combining minute manipulation with breadth of effect. The colours are well secured and harmoniously arranged. Depth of tone and that flickering brilliancy so much desiderated in painted glass have been attained." The chamber will finally, it is expected, be furnished with memorials of Scott. "If the walls and groinings," adds the paper just named, "were decorated with scrolls, badges, and heraldic devices, carrying out the colouring of the windows in the Mediæval style of embellishment, and care taken that any furnishings were of similar character, the effect would be at once unique and beautiful." Externally, the filling up of the many empty niches with appropriate statues, as originally designed, has also yet to be seen to.

WHAT SETS HOUSES ON FIRE?—Your annotation in last week's *Builder*, upon the statement made by me in reference to the liberation of hydrogen from water, dwells upon a point on which, in my necessarily brief communication to the *Morning Advertiser*, I had not the opportunity of expatiating at length; but as it affects an opinion grounded upon an almost microscopical observation of the effects of the decomposition of water in the most minute proportions, I hope you will favour me by allowing me to say that I have reserved the full elucidation of this most important subject, according to my own experiments, for a pamphlet, which is now in the press. Of course, I cannot help entertaining a theory which I believe to be sound; and as it belongs to a class of subjects but little investigated, it is not surprising that my merely aphoristic remarks thereon should *appear* singular. When, however, I publish the facts which led to my conclusions, I have no doubt but that the influence even of infinitesimal decomposition will be accepted, if not as a ground of alarm, at least as a reason for precaution.—F. B. THOMPSON.

THE CEDARS, PUTNEY.—A large block of building, situated at the east end of this estate, is now being finished; and we are informed that the gardens and terraces are intended to be completed this year. There appear to be several hundreds of workmen employed by Mr. Rudkin, who is the contractor for the first portion. Mr. Eppy is the architect. It is estimated that the cost, when completed, will be little short of 25,000*l.*

HIGH PRICE OF LAND.—At a public auction last week of a small portion of land in the Harrow-road, the executive committee of the Conservative Land Society unsuccessfully offered the large sum of 5,000*l.* for less than two acres.

BEDFORDSHIRE ARCHITECTURAL AND ARCHÆOLOGICAL SOCIETY.—The annual public meeting of this society was held on Thursday in last week, Mr. Talbot Barnard, high sheriff, in the chair. Various objects of interest were exhibited, and the meeting was addressed by the chairman. The report regretted that circumstances had caused a temporary suspension of the public meetings of the society, and concluded by urging its claims on the county for an increased degree of support. A paper was read "On Festival Orientation," by the Rev. William Airy. Mr. Wyatt read one "On the Poets Laureate who have lived in Bedfordshire." Mr. Monkhouse read another "On Cold Harbours."

PARLIAMENTARY BILLS FOR NEW WORKS.—Amongst the advertisements of intention to proceed with Bills for new works in the ensuing session of Parliament, are the following:—Victoria (London) Docks.—Extension of time for completion of eastern cut and works; powers to make another cut and entrance thereto; further leases of the new works and present undertaking; power to sell the Steel-yard Estate, and make warehouses elsewhere; and for other purposes:—Swansea Harbour Trust and Swansea Dock Company.—Power to the Swansea Harbour Trustees to purchase and complete the undertaking of the Swansea Dock Company; power to the said trustees to make railways to the docks and harbour at Swansea; power to divert a street called the Strand; power to make dams across certain brooks or streams, and to divert waters of same; and for other purposes:—Victoria Gas Company.—Incorporation of company, with powers to construct gas-works, and to supply gas, &c. within certain parishes in the counties of Essex and Kent; powers to purchase, &c. lands for those purposes; to purchase and maintain, &c. existing works; and for other purposes:—Birkenhead Docks.—Alteration of Works; Construction of new works; and for other purposes.

THE CITY OF THE HUNDRED (TOLL) GATES.—The metropolis of England is the modern Thebes, so far as regards its "hundred gates." It is estimated by the *Globe* that there are literally about one hundred toll-bars by which the metropolis is hemmed in all round, at every point of the compass. "One hundred turnpike-gates," says the *Examiner*, in commentation, "are, in other words, 100 bars to our progress towards all points of the compass—100 interruptions of trade and traffic—100 lets and hindrances to commercial and social intercourse—100 quotidian stoppages on the highway and demands of our purses. The Englishman, and especially the Londoner, must assuredly have 100-horse power of endurance to submit as he does to this century of little persecutions. Multiply the vexation of any one stoppage at any one toll-bar by 100—multiply the product again by the number of people daily stopped and harassed, then multiply the result by the number of days in a calendar year, and you will have a grand annual total of hurry and worry, vexation and molestation, petty taxation and petty tyranny, which, if it could be represented to the eye by any figure or diagram, would be something enormous. The fortifications of Paris are for defence. The circumvallations of London are offence, simply." This intolerable offence we have ourselves not seldom commented on; but even this does not constitute the sum total of such *bars* to *progress*. There are many more closures of thoroughfares besides even the 100 turnpike-gates, to which a quiet and legal, but determined Rebeceaism ought to be opposed. Would that the Welsh blood of our active Home Secretary might only rise to Rebecca heat against the whole system: a sharp and short *Act* from him might very soon make a clean sweep of them.

THE METROPOLITAN BOARD OF WORKS.—The deputation agreed upon attended Sir B. Hall on Thursday, but too late for us to do more than mention it.

STATE OF WORSHIP-STREET POLICE-COURT.—Reiterated complaints have been made to the magistrates respecting the faulty construction and defective arrangements of this court. Amongst the grounds of complaint are the unwholesome state of the atmosphere, arising from imperfect ventilation and other causes, restricted and insufficient accommodation, the badly-arranged position of the dock and witness-box, and the confined condition of the passages and exterior approaches. In reply to remonstrances, it was intimated last week by Mr. Hammill that the subject in question had occupied his attention from the first day he had presided at the court. He had reason to be painfully sensible of the justice of the complaint. The impurity of the atmosphere was sufficiently explained by the fact that a capacious cesspool was situated in the very centre of the narrow courtyard, within a few paces of the side window of the court, and had not been cleansed out, or at all disturbed for nearly twenty years. The press appeared to be the magistrate's only hope of a remedy.

OUR GOVERNMENT OFFICES COMPETITION IN FRANCE.—The *Moniteur* publishes *in extenso* the conditions of the competition which has been opened by the British Government to the architects of all countries, for building an extensive set of Government offices in London, at Whitehall. The document sets forth in detail the dimensions and every other particular by which the plans are to be regulated.

A GOTHIC CASTLE AT CANNES.—The following letter from Cannes appears in the *Union* : — "Lord Ellenborough has purchased for 10,000*l.* the château in the Gothic style of M. Wolfid, at this place. Curious circumstances preceded this purchase. M. Wolfid, who is, it is known, a distinguished amateur in architectural art, drew up himself the plans of the château, and superintended its construction. In visiting the Highlands, M. Wolfid was much struck by a Gothic castle, magnificently situated on the banks of Ben Lomond; and, taking a sketch of it, he determined to erect one exactly like it at Cannes, on the picturesque heights which dominate the Brougham, Temple-Leader, Ormesson, and Borington Villas. The execution was promptly proceeded to, and for eighteen months past the high towers and battlements of the new edifice, which rise majestically, can be seen from a great distance at sea. Lord Ellenborough, who arrived at Cannes a few days ago, was astonished at seeing before him, 300 leagues from his own country, the old mansion of his ancestors in which he had passed his infancy. He immediately proposed, by force of guineas, to drive out the owner. His resolution was carried into effect in the course of a few hours. The noble lord has caused his armorial bearings to be put up everywhere, and he now resides there; but, instead of being enveloped in the fogs of Ben Lomond, its towers, donjon-keep, and battlements are reflected in the azured crystal of the Mediterranean waters." M. Wolfid must be a very great architect, indeed, to have effected all this from his sketch. It sounds like great nonsense.

THE NEW BARRACKS AT KENSINGTON. — The plans and sections for the new barracks at Kensington have been issued by the Government engineer, and may now be seen, we hear, at the engineer's office, James-street, Westminster. The site for the intended barracks, which will be constructed for the accommodation of both cavalry and infantry, is situated on the east of Westbourne-terrace, and between that and Kensington-gardens.

SALE OF FREEHOLD GROUND-RENTS AT CHELSEA. —During the week a sale of property of this description has been held at the Mart, by Messrs. Foster. The leases granted fall in at periods ranging from thirty-two to seventy years, and these with the reversions were sold on an average at twenty-six and a-half years' purchase.

MASKED AND ARMED BURGLARS AGAIN. — A correspondent having read, under the above heading, an account of a burglary in South Staffordshire, another addition to the long list of similar occurrences which have of late startled the public, refers our readers to Capt. Norton's "frictional paper grenade," for house defence, as exhibited and explained at the Crystal Palace, the Polytechnic Institution, the United Service Museum, and elsewhere. A short spout inclining downwards, through a well or window, as represented in the captain's little work on projectiles ["Norton's Projectiles." Hebert, Cheapside], affords a safe and effective means of directing the grenade: it will slide down by its own gravity, till it "comes to the scratch," at the end of the frictional cord, on a level, say, with the faces of the assailants, who will quickly be astonished by a flash of lightning, with a very palpable thunderbolt attached. Should the midnight disturbers have effected an entrance before being discovered, they are even more easily dealt with by means of the grenade.

TENDERS

For new Windsor Cemetery; Messrs. Poulton and Woodman, architects:—

Chapels and Lodge—	
Stacey	£1,610 16 0
Reynolds	1,496 0 0
Sturgis	1,365 16 0
Snowball	1,232 0 0
Wheeler	1,217 0 0
Wells	1,190 0 0
Hollis	1,176 0 0
Strong (accepted)	1,050 0 0
Laying-out and Drainage—	
Rentmore	285 0 0
Walker	284 10 0
Stacey	278 15 0
Pound	269 6 0
Hale	234 0 0
Church	215 0 0
Oliver	207 0 0
Snowball	205 0 0
Sargeant	195 0 0
Reynolds	179 10 0
Stidd	176 1 8
Hollis	166 7 0
Strong (accepted)	165 0 0

For erecting a rectory-house, at Llanhilleth, Monmouth; Mr. Norton, architect:—

Thos. Williams (Croesycelliog)	£1,096 0 0
Evan Evans (Maindee)	1,050 0 0
J. F. Williams (Pontypool)	1,025 0 0
H. Ramm, Abergavenny (accepted)	850 0 0

For new dining and drawing rooms, at Chalk Lodge, Cheshunt, Herts, for Mr. J. Lerick; Mr. S. Dyball, architect:—

Macey	£3,320 0 0
Green	3,200 0 0
Sark	2,974 0 0
Turner	2,966 0 0
Lefevre	2,910 0 0

For altering and fitting up a warehouse for Messrs. Borras and Edensor, St. Paul's Churchyard; Messrs. Tillott and Chamberlain, architects:—

Holland and Co.	£2,224 0 0
Ashby and Sons	1,967 0 0
Laurence and Son	1,942 0 0
Brass and Son	1,937 0 0
Rider	1,760 0 0
Jay (accepted)	1,491 0 0

For house and stables at Wanstead:—

W. Chapman	£1,599 0 0
T. Hedges	1,596 0 0
G. J. Soper	1,465 0 0
Humphreys	1,417 0 0
Partridge and Co.	1,277 0 0
Place and Lockwood	1,220 0 0
Chuther	1,180 0 0
Dove	1,160 0 0
Simmons	1,096 0 0
Turner	1,070 0 0

For the construction of new sewers and other works connected therewith, received by the Board of Works for the Wandsworth District:—

	Putney.*	Streatham †	Tooting ‡
Adamson	£1,724	—	—
Axtes	1,924	—	—
Barnes	—	£1.9	£882
Ennor	1,987	125	1,227
Forrest	—	95	—
Gardiner	1,617	75	936
Harrison	1,859	—	—
Hurst	1,740	82	809
Yeoman	2,344	133	1,113

* 235 yds. lin. 3 ft. 9 in. by 2 ft. 6 in. 1 bk.
685 „ 3 ft. 3 in. by 2 ft. 0 in. ½ bk. ct.
814 „ 12-in. pipes.
† 118 „ 3 ft. barrel, ½ bk. cement.
‡ 760 „ 3 ft. 9 in. by 2 ft. 6 in. ½ bk. ct.
734 „ 12-inch pipe.

TO CORRESPONDENTS.

Leicester-square.—In a notice of a Gothic building here, in the last number, "the stone and wood carving are to be highly finished," was, by a printer's error, made to read, "are too highly finished."—"E. G. B."—"S. H."(thanks).—"E. C. R."—"W. P."—"R. E. R."—"T. and M."—"Kingscote"—"E. T. L."—"H. P. H."—"King" (declined with thanks)—"Subscriber"—"An Old Cit."—"Alpha" (we prefer not to advise. The trouble taken by him would probably prove useless)—"Torquay" (the velocity proper for a circular saw depends on several circumstances, the quality of the wood, its freedom from moisture, the smoothness desired in the surfaces [information will be found in vol. ii of Holtzapffel's 'Turning and Mechanical Manipulation," p. 783)—"G. W. H. S."—"W. T."—"W. H. jun."—"W. M." (paper has not reached us).—"T. R. S."—"Mr M."—"Blazes."

NOTICE. — All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor;" all other communications should be addressed to the EDITOR, and not to the Publisher.

ADVERTISEMENTS.

BOROUGH of LEEDS.—WANTED, a competent Person to act as ASSISTANT in the Office of Mr. Edw Filliter, Borough Surveyor. He must be well and practically versed in sewering and surveying, have a knowledge of construction, and be a neat and expeditious draughtsman. He will be required to devote the whole of his time to the duties of his office. Salary, 100*l.* per annum.—Applications to be forwarded, accompanied by testimonials, addressed to "The Chairman of Streets and Sewerage Committee, Town-clerk's Office, Leeds," on or before the 7th inst. inclosed "Application for Office of Assistant to Borough Surveyor." The party appointed will have to enter upon his duties immediately.—By order,
Leeds, November 14, 1856. JOHN A. IKIN, Town-clerk.

CLERK of the WORKS. — WANTED, to superintend a church near town. None need apply unless thoroughly used to Gothic church work, and can produce good testimonials.—Apply, by letter only, stating terms and references, addressed T. B. Mr Bleasley, News Agent, 14, Great Marylebone-street. Postage to be paid.

CONSTANT EMPLOYMENT.—WANTED in a DECORATIVE ARTIST'S STUDIO, SEVERAL HANDS, capable of Painting the Human Figure with despatch. Any one used to Scroll Work &c.—Apply, with specimens, between TEN A.M. and FOUR P.M. at 8, Angel-terrace, St. Peter street, Islington.

MARBLE WORKERS.

WANTED, a steady, energetic MAN, well acquainted with sand rubbing and polishing marble work for mantelpiece pieces. Apply, by letter, to T. C. Office of "The Builder."

WANTED, a JUNIOR CLERK, in the office of an Architect, who has an extensive district under the Metropolitan Building Act. He must be able to draw fairly, and have had some experience in the working of the Act. His duties would be probably divided between in and out-door work, and to an honest mind the opportunities for acquiring practical information are unusually great. An Articled Pupil also required in same Office.—Apply to D. S. at Warren's Library, Lead-hall street, Finsbury-square.

WANTED, a respectable business Man, a practical PLUMBER, PAINTER, and GLAZIER, having a knowledge of general repairs, to assist in the management and make himself generally useful. No one need apply who is not willing to devote himself energetically to the business.—Apply by letter in own handwriting, stating terms, &c. to Messrs. HOPKINS and CO. Greek-street, Soho. References required.

TO PLUMBERS.

WANTED, a good PLUMBER, for a constant situation in the neighbourhood of London.—Apply to WILLIAM KELL, Grainer, &c. 6, Queen's-row, Pentonville, any morning from Nine to Eleven o'clock.

WANTED, a competent FOREMAN, who understands the management of workmen, can sketch, and prepare estimates for conservatories, heating and general ironwork.—Apply, stating age, salary, and qualifications, to A. B. Foreman, W. H. Smith and Son's, 1, Eden Quay, Dublin.

WANTED, a TOWN TRAVELLER, in the PAPERHANGING TRADE. Apply by letter only, to Messrs. HODGKINSON and BURNSIDE, 50, Upper Thames-street.

TO SHOP FOREMEN.

WANTED, as WORKING FOREMAN of CARPENTERS and JOINERS, a practical man, thoroughly acquainted with the trade in all its branches, competent to set out work and convert materials to the best advantage. None need apply who have not filled a similar situation.—Address, stating age, wages, and reference, X. Y. Z. Post-office, Wolverhampton.

WANTED, in a Builder's Establishment in the country, a respectable YOUNG MAN, whose time would be partly employed in the office, and partly at the bench, or otherwise to make himself generally useful. Satisfactory references will be required.—Address, A. B. Post-office, Bishops Stortford, Herts.

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WANTED, by a Young Man, a SITUATION as above, in town or country. Can measure timber, stone, &c. and is a good accountant.—Address, A. B. Office of "The Builder."

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WANTED, by a Young Man, a RE-ENGAGEMENT in either of the above. Understands surveying and levelling. Can draw, colour, and finish plans, &c. Has been engaged in London firms. A moderate salary required. Address, A. Office of "The Builder."

TO ARCHITECTS.

WANTED, by an Architect, who has had great experience in the superintendence of buildings of importance, an ENGAGEMENT as CLERK of WORKS. Unexceptionable references can be given.—Address, C. V. Office of "The Builder."

WANTED, a SITUATION as a good BRICKLAYER or PLASTERER. Can dress fronts down, tile or slate, and set work as per plan. Understands the business, and can be depended upon.—Address, H. H. No. 8, Charlotte-street, Portland-place.

TO BUILDERS AND PLUMBERS.

WANTED, by a steady, married Man, a constant SITUATION as PLUMBER or THREE-BRANCH HAND. Good references can be given.—Address, A. B. No. 6, Draycott-terrace, Chelsea.

TO BUILDERS, PAINTERS, AND GRAINERS.

WANTED, by a Young Man, a SITUATION as OIL GRAINER; can fill up time with writing or painting. Town or country. Address to F. M. at Mr. Jones's, 6, Thanet-street, Burton-crescent.

TO PAINTERS, BUILDERS, &c.

WANTED, by a Young Man, aged 19, a SITUATION as PAINTER and GLAZIER; would act as plumber's labourer. Wages not so much a consideration as a constancy. No objection to the country, or to go abroad. Address, W. H. 24, Seymour-place, Edgware road.

TO ENGINEERS AND MACHINISTS.

WANTED, a permanent SITUATION, by a Young Man, aged 19, who has had four years' experience at the vice and lathe, and can make himself generally useful. Moderate wages will be accepted. Address, A. S. 62, Chiswell-street, Finsbury.

WANTED, a SITUATION by a Young Man who has been for the last five years employed on a Railway Contractor's office on the Continent, where he has had the charge of the sections and plan. He has a good knowledge of the French language, and would have no objection to a situation in a Merchant's office, or otherwise, where such qualifications are requisite. The advertiser writes a good hand, is a fair accountant, can give satisfactory references, and has no objection to going abroad.—Apply J. H. B. Mr. Dilworth's, Newcastle, Staffordshire.

TO ARCHITECTS, SURVEYORS, &c.

WANTED, by a Gentleman who has been brought up in the office of an Architect and Surveyor, a SITUATION as ASSISTANT DRAUGHTSMAN. He has lately been engaged with an Engineer and Surveyor to a Local Board of Health, is also acquainted with mechanical drawing. Salary moderate.—Address, P. F. at Willan's Library, Bold-Street, Liverpool.

WANTED EMPLOYMENT, as CARPENTER and JOINER. The advertiser is an efficient sober workman. Town or Country.—Address, A. C. care of Mr. Turner, School of Design, William street, Wilmington-square Clerkenwell.

TO BUILDERS, PLUMBERS, AND DECORATORS.

WANTED, by the son of a respectable tradesman, that thoroughly understands his business, a SITUATION as PLUMBER, GLAZIER, PAINTER, GRAINER, and WRITER. Town preferred. Aged 20. Good testimonials can be given, having had the care of large jobs.—Address, F. F. STEVENSON, at Mr Smith's, 25, Strand.

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WANTED, by a thorough Practical Man, a RE-ENGAGEMENT as FOREMAN of a BRICKFIELD; has had the entire management of brick-works for upwards of thirteen years. His work of this season can be inspected.—Address, C. H. at Mr. Osborn's, 60, Fleet-street, Soho.

WANTED, by a CARPENTER and JOINER, a SITUATION, as MACHINIST, in a Builder's Shop. Can work mortising, tenoning, grooving, planing, or most machines. No objection to fill his time up at the bench if required. Age 30.—Direct to F. M. 21, Weston-place, Old St. Pancras road. Satisfactory references given.

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WANTED, EMPLOYMENT, by a General Workman, as PLUMBER LEAD and SASH GLAZIER, PAINTER, and PAPERHANGER. Town or country.—Address, A. B. 24, Tenison-street, Lambeth, Surrey. Good testimonials.—This may be relied upon.

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WANTED, by a thorough practical and experienced person, a SITUATION as CLERK of WORKS. Is a good draughtsman, and experienced in town, country, or church buildings. Satisfactory references from Architects and Public Boards.—Address, S. M. P. Office of "The Builder."

TO BUILDERS AND PLUMBERS.

WANTED, a SITUATION, by the Advertiser, who is a first-rate PLUMBER and a good GAS FITTER; if required, could fill up his time glazing.—Direct, M. N. Office of "The Builder."

WANTED, by an experienced, active Man, an ENGAGEMENT as CLERK of WORKS or FOREMAN, having had the general management of building works in town and country.—Address, E. T. 3, Tatchbrook-street, Pimlico.

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WANTED, EMPLOYMENT, as SECOND HAND at MOULDING or PLANING MACHINE, by a steady industrious Young Man, who can make himself generally useful in a Mill.—Apply by letter, pre-paid, to Y. Z. 69, Richard-street, Commercial-road, East.

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WANTED, a SITUATION, by a Young Man who can make fair and working drawings and specifications, take out quantities, &c. He is a good builder's accountant, and can superintend works. Good references. Salary very moderate.—Address, A. B. 35, Bemerton-street, Caledonian-road.

TO BUILDERS, CONTRACTORS, &c.

WANTED, by a Young Man, an ENGAGEMENT. He can measure, take out quantities, superintend work, make working and finished drawings, specifications, survey or level, and is a good accountant. He possesses steady, business-like habits, with integrity of character.—Address, L. M. N. Office of "The Builder."

TO MASTER MASONS, &c

WANTED, by an experienced, steady Man, aged 40, a SITUATION as a LETTER CUTTER and WRITER, both plain and ornamental, and to make himself generally useful as a monumental mason. Wages not so much an object as a permanent engagement. Understands drawing and colouring.—Address, B. A. 16, Margaret-street, Upper North-street, Poplar, London.

WANTED, by a SMITH, lately returned from the East, a SITUATION as WORKING FOREMAN for a railway company or builders. Good references can be given. No objection to any part of the world. Address, post paid, L. E L. Pither's Library, 2, Harrow-road, Paddington.

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WANTED, by a Practical Man, a SITUATION as FOREMAN PLUMBER. Satisfactory reference for leaving his late employer, where he has had the sole management of the above with one of our large contractors for upwards of three years. Has an objection to engage to go abroad. Address, T. M. No. 2 Macclesfield-terrace, City-road.

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WANTED, by an experienced Man, who is a good penman, a FEW HOURS' WRITING DAILY. Understands bookkeeping by single and double entry.—Address, S. T. 2, New Rochester-row, Westminster.

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THE Advertiser, who can give satisfactory references, desires a RE-ENGAGEMENT in a London or country office, where his services in designing, colouring, making plain and ornamental drawings, &c. would be required. For further particulars address R. Y. Post-office, New Brentford, Middlesex.

NEW GOVERNMENT OFFICES.—A Gentleman who has had great experience in preparing competition drawings, is open to an ENGAGEMENT in preparing the above for the profession.—Address, OMEGA, Spalding's Library, Nottingham.

BUILDER'S CLERK.—A highly respectable, middle-aged Gentleman, accustomed to the routine of a builder's office, an efficient penman and accountant, wishes for an ENGAGEMENT as above, or in any other capacity where the above qualifications, added to steadiness and integrity, are deemed desirable. The most satisfactory references can be given.—Address, S. T. V. Office of "The Builder."

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A GERMAN GENTLEMAN, quite conversant with the English, French, and Italian languages, and possessing a thorough knowledge of mathematics, such as the different and integral calculus pure and applied to mechanics; analytical and descriptive geometry, perspective drawing, trigonometry and its applications to surveying, levelling, &c.; and likewise sufficiently practically skilled as a mechanic to make models in metal wishes for an ENGAGEMENT in the ENGINEERING profession.—Apply to X Y. Office of "The Builder."

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A YOUNG MAN from the Country wishes for EMPLOYMENT at the Bench as an IMPROVER. Apply to W. P. 93, Thomas-street, Gibson-street, Waterloo-road.

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AN experienced CLERK of WORKS is open to a RE-ENGAGEMENT.—Address, N. T. care of Mr. Atkinson, 20, Lambeth-road, opposite the Blind School, Southwark, London.

TO ARCHITECTS, BUILDERS, &c

A PRACTICAL, experienced Person, who is a good draughtsman, wishes a RE-ENGAGEMENT as CLERK of WORKS or General or Shop FOREMAN, or general SUPERINTENDENT on an estate. Country not objected to. Good testimonials.—Address, ZETA, 41, Robert-street, Hoxton.

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A GENTLEMAN, who has had great experience in the profession, and fully competent to conduct the management of an office, wishes to meet with an ENGAGEMENT, with a view to a share or partnership.—Address, DELTA, Bridge's News-office, Sherrard-street, Golden-square.

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TO CARPENTERS and JOINERS.—A BUSINESS in the country TO BE DISPOSED OF, in an improving market town. This is an excellent opportunity for a person of business habits, the late proprietor having done a good trade, and will give the most satisfactory reasons for leaving. About 150*l.* required for stock, implements, &c.—Address, W. C. Office of "The Builder."

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TO ENGINEERS, FOUNDERS, and OTHERS.—TO BE DISPOSED OF, by private contract, the PREMISES and TOOLS of an engineer and founder, in excellent order. The premises are situate in the immediate vicinity of the intended new line of street from London-bridge to Blackfriars. They have recently been put into thorough repair, and are conveniently arranged. A lofty chimney-shaft has also been erected. The tools, which comprise numerous lathes, planing, drilling, and shaping machines, cupolas, foundry boxes, smiths' tools, &c. are all good, and ready for immediate work. The premises comprise, in addition to the manufacturing portion, two dwelling-houses, adapted for a foreman and a principal. The rent is 150*l.* per annum, including the use of a steam-engine and boiler. One half the purchase money may remain on mortgage.—For further particulars, apply to Messrs. FULLER and HORSEY, Bulter-street, City.

NO CHIMNEY WANTED for RICKETS'S PATENT CALORIFERE GAS STOVES in CHURCHES, HALLS, or SHOPS;

And for Conservatories, or any close Apartment, a Pipe can be attached to carry away the burnt air.

RICKETS'S CHEAP GAS STOVE, Price £1. 15s.

Made of Sheet Iron, suitable for Heating small Countinghouses, Bedrooms, Cellars, &c. &c.

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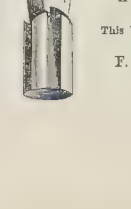

GALVANIZED WINDGUARDS.

No. 1. 3 feet high, 11 in. by 9 in. bottom, 18s.
No. 2. 4 " " " " " 20s.

A DISCOUNT ALLOWED TO THE TRADE.

This Windguard is highly recommended by the Manufacturers,

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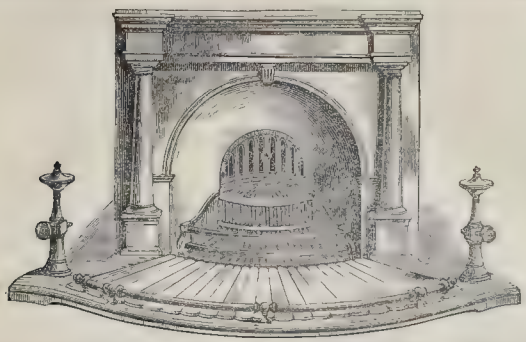
42, POLAND-STREET, OXFORD-STREET.



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WILLIAM S. BURTON'S NEW REGISTER STOVE

combines completely the well-known principles of both Stephen's and Sylvester's celebrated Patent Stoves, while it has others equally valuable, which are peculiarly its own, and for which a patent has been granted. Its reflecting and radiating powers are perfect, it is very simple, and cannot be put out of order, consumes but little fuel, is most cleanly and cheerful in use, while its general appearance, no fender being needed, is most imposing.

Prices, complete, black or bronzed, from 5l. 10s.; bright, 14l. 5s. and upwards. One may be seen in action in his show-rooms, which contain such an assortment of fenders, stoves, ranges, fire irons, and general ironmongery, as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with bronzed ornaments and two sets of bars, 4l. 14s. to 13l 13s.; ditto, with ormolu ornaments and two sets of bars, 5l 5s. to 26l. Bronzed fenders with standards, 7s. to 5l. 12s.; steel fenders, 2l. 15s. to 11l.; ditto, with rich ormolu ornaments, 2l. 10s. to 18l. Fire-irons, from 1s. 9d. the set to 4l. 4s.

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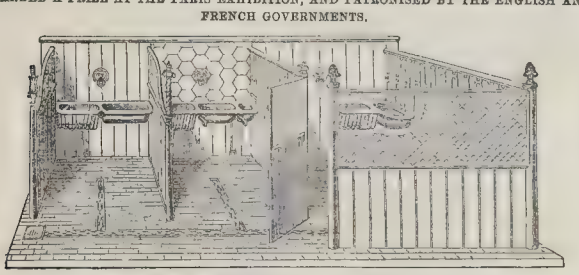

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Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH and WROUGHT-IRON RACK, united to an iron top-plate, and forming one complete and useful fixture, having Cottam's Patent Noiseless Halter-Guide and Collar-Hook attached, the ball of which is taken to the back of the manger, and works with ease and freedom up or down the guide-bar. Cottam's new Patent Seed-Box, of galvanized sheet-iron, is an important addition to the above fittings, being simple in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings, cheap and Durable Corn-Bins.

Improved Surface-Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.

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ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

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eyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
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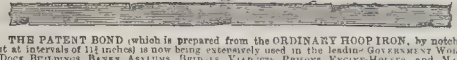

THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches) is now being extensively used in the leading GOVERNMENT WORKS, DOCK BUILDINGS, BANKS, ASYLUMS, BRIDGES, VIADUCTS, PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in London and in all parts of the kingdom.

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Elliptic Stoves, double backs, 2½d. per inch, and upwards.

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Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

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3-feet Cottage Ranges, with ovens and back boilers, 32s. each.

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Best Fine Cut Clasp and Rose.

½	¾	1	1½	2	2½	3-in. & larger.
10s. 6d.	16s. 6d.	19s. 6d.	16s. 6d.	12s.	14s.	per cwt.

And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid.

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N.B.—Espagnolette Bolts of a superior quality, at reduced prices.

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From BIRMINGHAM direct
Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the LOWEST BIRMINGHAM PRICES.
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Will this Grate become universally used?

Its advantages over two other consist in—

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A Prospectus, with a Second Series of Testimonials, just issued, from all parts of the country will be sent on application.

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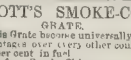
HEATING BY  HOT WATER.

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This improved system of fire-proof construction has been most extensively adopted, and its application has been extended to nearly EVERY DESCRIPTION OF BUILDING, whether public or private.

The system combines ECONOMY, with great simplicity of construction, perfect security from fire, increased durability, and many other important advantages.

The floors and roofs are formed by a combination of joists of wrought or rolled iron with concrete, so constructed that each floor becomes in effect a beam of artificial stone, with ribs of iron, the structure possessing great strength and rigidity, and forming a fire-proof foundation adapted to receive a finished surface, either of the ordinary flooring boards, or of cement, asphalte, tiles, slate, or other material.

Some of the largest and most important buildings in the kingdom are now in course of erection upon this principle, which is recommended to the notice of all who are interested in building, both as superseding the necessity for fire-resisting party and brick arches, and as insuring the great desideratum of fire-proof construction, even for ordinary dwelling-houses and domestic buildings, within the reach of every one.

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R. S. NEWALL and CO.'S Patent Copper Rope Conductor is being applied by architects, engineers, and scientific men in all parts of the world.

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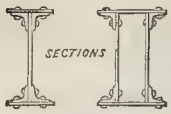

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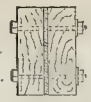
For BRIDGES and BUILDINGS,
MANUFACTURED AND GUARANTEED AS TO STRENGTH.
CAST-IRON GIRDERS for BRIDGES.
Wrought-iron Doors, Boiler, & General Smiths' Work.
BUILDERS' CASTINGS OF EVERY DESCRIPTION.



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For TRUSSING BETWEEN TIMBER.
SPIKES, RIVETS, CUT NAILS, WROUGHT DITTO, SCREWS, BOLTS AND NUTS, BOND HOOPS, CHAINS, &c.
CONTRACTORS' PLANT, RAILS, EARTH WAGGONS,
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Such arrangements are made for Despatch and Punctuality that Orders can be executed in a few days.

ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,
IS AS
CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.
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THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.
ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.
THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.
Many roofs covered with zinc thirty-five years ago have never required repairs.

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FOUNDRY AND IRON WORKS,
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Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION, either structural or ornamental.
Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathes, and Steam-engines; Range and Hot-plate Metal. An improved Soot Door, adapted for interval work.
A large stock of Rain-water Pipes, Plain and O G Gutters, Air-bricks, Sash Weights, Air-light Sewer Grates, Stable Fittings, Hurdles, &c.
Plain and Ornamental Vases 20 per cent cheaper than Terra-cotta.
Estimates given for Iron Buildings, Wrought-iron Roofing Greenhouses, Staircases, Wrought-iron Girders, Fireproof Doors, Book-safes and Strong Rooms, Tanks and Boilers, and every description of ironwork to specification, and the work executed with every attention to quality and despatch.
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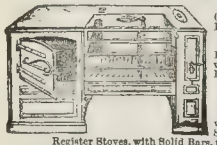
CLARK and HUNT'S IRONMONGERY, STOVE, and METAL WAREHOUSE, 159, Shoreditch.
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.



Improved Self-acting Cottage Ranges, with Large Oven and Boiler
30 32 34 36-inch
26s. 30s. 32s. 34s.
Best Self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—
34 36 38 42-inch
54s. 56s. 58s. 64s.
Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 2½d.
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Improved New Pattern Circular Check Register, with strong Bars and Trivits, 6d. per inch.
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Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipe { 2 | 2½ | 3 inch. / 10d. | 1s. 1d. | 1s. 3d. per yard.
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O G Gutters ..... { 4 | 4½ inch. / 1s. | 1s. 2d. per yard.

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Patent Line.....	3s. 6d.	4s.	5s.	7s.	9s. per gross.

6-inch Rd. Ward Mortice, with Best Furniture and Patent Spindles, 2s. 9d. each. Light Elliptic and Register Metal, 1s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.
Brick Moulds kept in stock. Any size made to order.
Best Cut Clasp and Rose Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 in.
10d. 6d.	12s. 6d.	12s. 6d.	15s.	14s. per cwt.

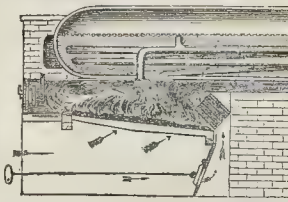
Best Sheet Cut Floor Brads..... 13s. per cwt.
Best Cut Lath Nails..... 16s. "

TO BUILDERS, CONTRACTORS, and OTHERS.—FOR SALE, the undernoted CAST-IRON GIRDERS, which were made to order, but are now not required, on account of the works being stopped:—
3 Girders, 26 ft. 8 in. long, by 13 in. deep at centre, and 8 in. at ends, weigh about 30½ cwt. each
12 Girders, 21 ft. 9 in. long, by 12 in. deep at centre, and 8 in. at ends, weigh about 16½ cwt. each.
93 Girders, 19 ft. 6 in. long, and 11 in. deep at centre, and 8 in. at ends, weigh about 12½ cwt. each.
4 Girders, 16 feet long; by 10 in. deep at centre, and 7 in. at ends, weigh about 6½ cwt. each.
14 Girders, 14 ft. long, by 9 in. deep at centre, and 6½ in. at ends, weigh about 4½ cwt. each.
4 Girders, 13 feet 6 in. long, by 10 in. deep at centre, and 7 in. at ends, weigh about 5½ cwt. each.
2 Girders, 13 feet long, by 15 in. deep at centre, uniform section, weigh about 8 cwt. each.
12 Girders, 9 ft. 6 in. long, by 8 in. deep at centre, uniform section, weigh about 3½ cwt. each.
The above may be seen at Dunfermline Foundry; or any further information obtained, from JOHN WHITELAW, Dunfermline, N. B. who will receive offers for the whole, or any portion. The girders can be tested to the usual extent, according to the size, and certificate of proof furnished.
Dunfermline, October 28, 1856.

TO BELL-HANGERS, GAS-FITTERS, IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire, Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Cornice-poles, Rings and Lacquered Cast Tube for Picture Rods, Desk Rails, &c. &c.
Superior Rolled Brass for Engravers, Castings in Fine and Common Brass, Gun Metal, &c. &c.
RICHARD EVERED'S, Brass and Bell Foundry and Metal Warehouses, Nos. 10, 11, and 12, Charles-street, Long-acre, London.

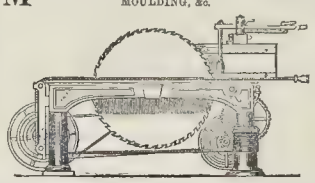
PATENT MACHINES for WORKING on WOOD.—These celebrated Machines have been awarded a number of prize medals by many scientific institutions, and also by the Great Exhibition in London, and are now extensively used by the Indian, American, and all the principal governments in Europe; also by eminent Contractors, Builders, Shipwrights Machinemakers, and other workers in wood. Their operations are in every respect perfect, either in hard or soft wood, for planing, squaring up, moulding, tenoning, mortising, grooving, rebating, sawing, and boring, which they perform in a very rapid and superior manner, at a greatly reduced cost.—Sold only by WILLIAM FURNESS, Patentee, 26, Lawton-street, Liverpool, from whom full particulars may be obtained, and all the machines can be seen at work.

GARDNER'S PATENT STEAM GENERATOR and SMOKE CONSUMER produces more steam with lessened consumption of fuel, and entire removal of smoke. These patented improvements are highly recommended for their simplicity, durability, and great economy. They are self-acting, have no moving parts, therefore require no external aid.



They are applicable to all Furnaces, Locomotives, Marine Engines, Ovens, Pottery and other Kilns, Common Fire, Kitchen Ranges, Hall and Hot-air Stoves.—Application to be made to the PATENTEE, 24, Norfolk-street, Middlesex Hospital; to Messrs. BURRIDGE and HEALY, 118, Dorset-street, Fleet-street; or to Z. D. BERRY, Albion Works, Wilton-road, Pimlico.
Testimonials, &c. may be seen upon application.

MACHINERY for SAWING, PLANING, MOULDING, &c.



SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Roller and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines, for Sawing, Planing, Groving, and Moulding Wood. They have constantly on hand machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches, and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace.—A descriptive Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. King's-road, Chelsea, London.

TO IRONMONGERS, BUILDERS, &c
PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure cocks, &c. Manufacturers of Dr. Arnott's Improved Ventilators.
HULETT and CO. 55, High Holborn.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spoon, Dr. Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, so much admired, &c. &c. 8d. each.
J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.
14, Stanhope-street, Clare-market, London.

JOHN TANN'S NEW PATENT RELIANCE LOCK and CHEMICAL-FILLED FIRE-PROOF SAFES, DOORS, ROOMS, &c. Manufacturers of cash and deed boxes, copying presses, every description of lever locks and street-door latches. To be had of the General Lock and Safe Warehouse, 30, Walbrook, City. List of prices on application.—Several second hand SAFES for SALE, at half the original cost.

CHUBB'S LOCKS, with all the recent improvements; STRONG FIRE-PROOF SAFES, CASH and DEED BOXES.—Complete lists of sizes and prices may be had on application.
CHUBB and SON, 57, St. Paul's-churchyard, London; 28, Lord-street, Liverpool; 16, Market-street, Manchester; and Hornsey-fields, Wolverhampton.

JOHN WALKER, Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor.
IRON MERCHANT, &c.
Offices and Works—Mill-wall, Poplar, London.

SKAIFE and POLLOCK, Manufacturers of
PATENT GALVANIZED IRON.
Sheets, corrugated and plain; Fencing and Telegraph Wire, Bars, Rods, Hoops, Nails, Screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.
IRONWORK GALVANIZED.
Roofing orders promptly and carefully attended to.
Office.—Commercial-road, Limehouse, London.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.			
12	"	20	"
13	"	24	"
14	"	26	"
15	"	28	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON,
to whom all letters must be addressed.

A. MOREWOOD and CO. (late Morewood and Rogers),
Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham,
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

IRON ROOFS, IRON HOUSES, and SHEDS.
TUPPER and CARR, Manufacturers.
Works—Limehouse and Birmingham. Offices 3, Mansion-house-place, London.
N.B. Iron of every description galvanized.

MALLET'S PATENT BUCKLED PLATES.
TUPPER and CARR,
SOLE LICENSEES and MANUFACTURERS,
No. 3, Mansion-house-place, London, and No. 6, Berkley-street, Birmingham.
For Plan, Section, and Description, see "The Builder," May 17.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).
WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

IRONMONGERY,
PFEIL AND STEDALL.
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

JOHN HENDERSON PORTER, ENGINEER AND CONTRACTOR.
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.

ESTABLISHED 1817.
WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and ZINC WAREHOUSES, 19, Horseferry-road, and 1, New Peter-street, Westminster.
GREAT REDUCTION IN PRICES.
RAIN WATER CASTINGS, per yard.

Sizes—	2 in.	2½ in.	3 in.	3½ in.	4 in.	4½ in.	5 in.
Pipes	10d.	1s. 1d.	1s. 2d.	1s. 7d.	1s. 10d.	2s. 4d.	2s. 8d
Half-round Gutters	7d.	8d.	9d.	1s.	1s. 2d.		
O G Gutters	1s. 0d.	1s. 3d.	1s. 8d.	1s. 9d.	1s. 6d.		
Ditto, with plain clips cast on	1s. 1d.	1s. 2d	1s. 4d.	1s. 6d.			
Ditto, with Iron clips ditto	1s. 2d.	1s. 3d.	1s. 5d.	1s. 7d.			

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.
Best Cut Clasp Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 to 6 inch.
16s. 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails ..... 15s. 6d. "
Best Zinc Slating Nails ..... 40s. "
Best Glues ..... 47s. to 53s. "
A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.
Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES. | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S HALF-SOCKET PIPES. | DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

WILLIAM NORTHEN,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,

Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of hi

GLAZED STONEWARE DRAIN-PIPES.

LISTS OF PRICES FORWARDED ON APPLICATION.

REDUCTION IN THE PRICE OF CLOSET-PANS

DOULTON AND WATTS,

LAMBETH POTTERY, HIGH-STREET, LAMBETH,

Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to

5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pan

BOURNE VALLEY POTTERY, NEAR POOLE, DORSET.

DEPOT, 8, BELMONT-PLACE, NINE-ELMS, LONDON.

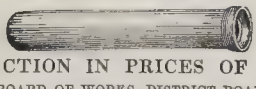
EXTENSIVE REDUCTION IN THE PRICES OF SALT-GLAZED STONEWARE DRAIN-PIPES, FLUE-PIPES, BENDS, JUNCTIONS, CLOSET-PANS, &c. &c.

The Proprietors of the above Works are prepared to supply the various articles used in drainage, &c. in any quantities. The pipes, &c. are made of the finest clay, the produce of the estate, by skilful and experienced workmen, assisted by new and patent machinery, and are so thoroughly vitrified by the intense heat to which they are subjected, as to prevent the possibility of the absorption of any liquid. They will bear comparison with goods made in any part of the kingdom.

Lists of prices, and any other information may be obtained, on application to the Manager, Mr. J. T. BOUNSALL, Bournemouth, near Poole; or of the Agent in London, Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.

TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTS, at the Works, Branksea Island, Poole, Dorset.

GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.

Messrs. COLLS, SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.

Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.

Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					2½d. per foot.
4	"	"	"	"	3½d. "
6	"	"	"	"	5d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 8d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

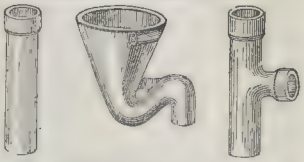
MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 80, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1856.

LAMBERT'S SELF-CLOSING LAVATORY AND CLOSET VALVE

No. 7.

Is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under continuous pressure of 100 to 200 feet: they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees,

THOS. LAMBERT and SON,

Brass Founders and Engineers,

Corner of Short-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipe without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street London.

TO WATER COMPANIES, LOCAL BOARDS OF HEALTH, AND OTHERS.

LAMBERT'S NEW VALVE COCK,

For Preventing Waste of Water.

Is so constructed that it cannot be left open accidentally or wilfully, and further it will at each action deliver a specific quantity, and under the same pressure this quantity will never vary.

It is peculiarly adapted for closets, self-acting or otherwise.

Price, complete for high pressure, 18s. 6d. each.

" " low " 12s. 6d. "

THOS LAMBERT and SON, Patentees and Manufacturers, Founders and Machinists, Short-street, New-cut, Lambeth.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an

EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 6s. 6d.

These Ventilators are arranged that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the external wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required.—HAYWARD, BROTHERS, sole Manufacturers, 196, Blackfriars-road, and 127, Union-street, Borough; and of all respectable ironmongers, builders, &c.

SALES BY AUCTION.

Re C. J. MARE.—SURPLUS MACHINERY AND STORES.

MESSRS. FULLER and HORSEY, in conjunction with Messrs PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, at the Works, Blackwall, on MONDAY, NOVEMBER the 24th, at ELEVEN, in lots, SURPLUS MACHINERY and STORES, including a nearly new cent actors' portable steam-engine of 8-horse power, two eg-end steam boilers, 24 feet and 36 feet long; eccentric cutting and punching press, two Fairbairn's patent rivetting machines, the castings for a pair of 250-horse power marine engines, forged work and brass work for ditto, four new marine boilers for ditto (incomplete), fly-wheels, spur and rigger wheels, set of pumps, six double and single purchase cranes, ten wrought-iron trollies, six weighing machines, bending and shaping slabs, fifty portable forges, forty pair wrought-iron blocks, ten anvils, smiths' tools, twenty tons broken cast-iron, twenty tons scrap-iron, and numerous other effects.—To be viewed three days prior to the sale, when catalogues may be had at the Works; of CHAS. LEE, Esq. Official Assignee, Aldermanbury; of Messrs. LAWRANCE, FLEWS, and BOYER, Solicitors. Old Jewry-chambers; of Messrs. NEWSON, EVANS, and NEWSON, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. PULLEN and SON, 80, Fore-street, Cripplegate; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Re C. J. MARE.—Pair of New Oscillating Marine Engines, of 177 horse power.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees of Mr. C. J. Mare to SELL by AUCTION, at the Works, Blackwall, on THURSDAY, NOVEMBER the 27th, a PAIR of new OSCILLATING MARINE STEAM-ENGINES, collectively of 350 horse power, nominal, diameter of cylinders, 70 inches, length of stroke, 5 feet 6 inches; the cylinder covers, intermediate shaft, rods, levers, and numerous other parts are polished bright, the boilers are tubular, and of the latest improved construction, they are fitted with Beardmore's patent smoke consuming apparatus, which is found to economize the consumption of fuel very considerably, and are capable of supplying steam equal to 2,000-horse power.—To be viewed at any time by special order. Catalogues may shortly be obtained of CHAS LEE, Esq. Official Assignee, Aldermanbury; of Messrs. LAWRANCE, FLEWS, and BOYER, Solicitors. Old Jewry-chambers; of Messrs. NEWSON, EVANS, and NEWSON, Solicitors, Wardrobe place, Doctors'-commons; and, with orders to view, of Messrs. PULLEN and SON, 80, Fore-street, Cripplegate; or of Messrs. FULLER and HORSEY, Billiter-street, City.

Re C. J. MARE TO SHIP-BUILDERS, TIMBER DEALERS, BUILDERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, at the NEW YARD, Blackwall, on MONDAY, DECEMBER 1st and following day, at ELEVEN each day, the LOOSE FITTINGS for the SLIPS, STOCK of TIMBER, PLANKING, DEALS, &c., including 150 sticks Memel and other timber, from 1 foot 6 inches, 2, on stage deals, 20 feet to 40 feet long, 12 inches by 2½ and 2; 3,000 ribbing shores, 2,00 stage standards 18 to 40 feet, both 6 by 3 scantlings, 10 pair large bilge ways, 70 fathoms oak, teak, and fir slabs, 3,000 keel blocks, 200 3-inch elm sliding planks, oak and elm tops, new oak and elm plank, 150 deck deals, shipwrights' cramps and tools, fittings of launch-ways, windlasses, two pole-driving machines, various fittings, and other effects.—To be viewed three days prior to the sale, when catalogues may be had, at the Works; of CHAS. LEE, Esq. Official Assignee, Aldermanbury; of Messrs. LAWRANCE, FLEWS, and BOYER, Solicitors. Old Jewry Chambers; of Messrs. NEWSON, EVANS, and NEWSON, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. PULLEN and SON, 80, Fore-street, Cripplegate; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Re C. J. MARE.—TO SMITHS, ENGINEERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, at the BELVARD, COOPERAGE and WORKS, in Prebend-gardens, Blackwall, on MONDAY, DECEMBER 8, at ELEVEN, in lots, the SMITHS' STOCK and STOCK of BAR IRON, including 50 anvils, 15 tons smiths' tools in top and bottom, swages, mandrils, rod tools, dollies, tongs, bolt tools, &c.; 30 smiths' troughs, shaping plates and blocks, grab cranes, weighing machine, 50 tons rod, bar, and hoop iron, 50 tons scrap iron, 5 tons ring bolts, 5 tons bolt ends, 2 tons chain, trucks, and trollies, cramps, and other effects.—To be viewed on Saturday next prior to the sale, when catalogues may be had at the Works; of CHAS LEE, Esq. Official Assignee, Aldermanbury; of Messrs. LAWRANCE, FLEWS, and BOYER, Solicitors, Old Jewry-chambers of Messrs. NEWSON, EVANS, and NEWSON, Solicitors, Wardrobe place, Doctors'-commons; of Messrs. PULLEN and SON, 80, Fore-street, Cripplegate; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Re C. J. MARE.—TO SHIP-BUILDERS, BOILER MAKERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the assignees to SELL by AUCTION, at the OLD YARD, Orchard place, Blackwall, on WEDNESDAY, DECEMBER 10 at ELEVEN, in lots, the loose TOOLS, including blade and blocks, levelling plates, boilermakers' bears, cramps, many tons of tools in hammers, sets, dollies, rod chisels &c 50 anvils 2 troughs, powerful crab crane, lifting jacks, blocks and falls, a large assortment of steel tools, punches and dies, screwing tackle, stocks, taps, and dies, chain and chain slings, a new iron sawbench, 30 circular saws, 30 dozen frame saws, steel moulding tools, 50 portable forges, 20 tons scrap iron, 50 tons plate, rod, and bar iron, and other effects.—To be viewed on Monday and Tuesday previous to the sale, when catalogues may be had at the Works; of CHARLES LEE, Esq. Official Assignee, Aldermanbury; of Messrs. LAWRANCE, FLEWS, and BOYER, Solicitors, Old Jewry-chambers, of Messrs. NEWSON, EVANS, and NEWSON, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. PULLEN and SON, 80, Fore-street, Cripplegate; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Re C. J. MARE.—Extensive Stores of Ironmongery, Copper, Brass and Lead.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on MONDAY, DECEMBER 15, and following days, at ELEVEN each day, in lots, at the WORKS, Blackwall, the extensive stores of IRONMONGERY, Copper, Brass, and Lead, including four tons bolt and sheet copper, five tons brass and composition spikes and nails, nine ton metal cocks, copper bolt rings, three tons cast and shear steel, twenty tons sheet lead and lead pipe, 200 bags wrought nails, fifty tons bolts and nuts, fifty cwt. glue, 1,000 gross tress screws, 4,000 gross iron screws, 1,000 dozen pair brass butts, 1,000 gross cabin hooks, cup and jug hooks, fifty dozen mortise locks and latches, fifty dozen turn-buckles, 250 dozen brass mortice thirty dozen brass dead-locks, 200 dozen pair brass sunk handles, twenty gross japann-d hooks, knobs, and spindles, forty dozen straight and necked tower bolts, 4to 6 inches; 100 dozen plain and inlaid ebony finger-plates, thirteen dozen sets of lock furniture, 200 dozen brass spring bolts, 1,000 brass cabin bolts, shutter lifts, brass case and till locks, 100 dozen files, stores of rope, white lead and colours, ships' pumps, plumbers' tools, and numerous items.—To be viewed on Friday and Saturday previous to the Sale, when catalogues may be had at the Works; of CHARLES LEE, Esq. Official Assignee, Aldermanbury; of Messrs. LAWRANCE, FLEWS, and BOYER, Solicitors, Old Jewry-chambers; of Messrs. NEWSON, EVANS, and NEWSON, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. PULLEN and SON, 80, Fore-street, Cripplegate; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Superior Chimney-pieces of Statuary Marble, some richly-sculptured, and of Dove and Vein Marble, in great variety.

MESSRS. ROBINS will SELL by AUCTION, at their ROOMS, Great Piazza, Covent-garden on TUESDAY next, NOVEMBER 25, at TWELVE, STATUARY MARBLE CHIMNEYPIECES, some richly sculptured, suitable for first-class drawing-rooms, others of a less expensive character, with trusses; black and Sicilian marbles, for dining-rooms and libraries, several of dove and Sienna marble; and a great var ety of vein marbles of smaller size.—On view three days prior, at the Auction-rooms, Covent-garden.

SALES BY AUCTION.

Valuable Water-side Premises on the Regent's Canal, Kingsland-road, with Cement Kilns, Steam Engines, &c. and an improved Rental of 24l. a year.

MESSRS. EVERSFIELD and HORNE are instructed by the Mortgagees to SELL by AUCTION, at the MART, on TUESDAY, NOVEMBER 25, in two lots, the beneficial LEASE of the extensive PREMISES, known as Tuscany Wharf, near the Canal-bridge Kingsland-road, fitted up at a great expense by Messrs. Freen and Co. for the manufacture of cement, but equally applicable for many other purposes. Held for a long term, at a moderate ground-rent; also an improved rent of 24l a year, arising out of a plot of ground opposite Tuscany Wharf.—May be viewed by leave of the tenants, and particulars had of EDWARD JENNINGS, Esq Solicitor, 32, New Bowcourt; at the Mart; and of the Auctioneers, 40, Parliament-street, or Coal Exchange.

To BUILDERS, BUILDING SOCIETIES, and OTHERS.—Valuable Freehold Building Land, Residence, &c. (the free), with immediate possession, at Hersham, Surrey, within five minutes' walk of the Walton Station, on the South-Western Railway.

MESSRS. CHURCH and SON are directed to OFFER for SALE, by PUBLIC AUCTION, at the MART, opposite the Bank of England, on THURSDAY, NOVEMBER 27, 1856, at TWELVE o'clock, in three lots, TWO very valuable PLOTS of FREEHOLD BUILDING LAND, and a substantial brick-built and conveniently arranged Freehold DWELLING-HOUSE, with range of outbuildings adjoining, and large garden in front, desirably situate on the high road from London, about half a mile from Hersham, 1½ from Walton, and within five minutes' walk of the Walton station on the South-Western Railway. Lot 1 comprises a Plot of Land at the corner of the high road and the road from Walton to Hersham, with a building frontage of about 33 feet, and an average depth of 264 feet, or thereabouts. Lot 2, a Plot of Land adjoining the corner of the same road, with a building frontage of 426 feet, and an average depth of 274 feet, or thereabouts; and Lot 3, a substantial brick-built House and premises, fronting the high road from Walton to Hersham, containing eight rooms and all necessary offices, with chaise house, stable, and large well-stocked garden enclosed with walls, in the rear, of the estimated annual value of 32l. The land is well adapted for the erection of detached or semi-detached houses, the soil is good, and an abundant supply of water can be obtained at trifling expense. It is surrounded by excellent roads and ornamental park-grounds. In commanding situation, at the intersection of two wide roads, thus affording large building frontages, and, after with its continuity to the railway station, particularly recommend it for building purposes.—Particulars and conditions of sale, with plans annexed, may be obtained of Messrs. BRICKMAN, DARTMOUTH, and DRAKE, Solicitors, 46, Parliament-street, Westminster; at the Mart; and of the Auctioneers, William-street, Woolwich.

BROMPTON HOSPITAL ESTATE.—Stock and Effects of a Builder and Contractor. Absolute Sale.

MR. PETER BROAD will SELL by AUCTION, by order of the Committee, on the PREMISES, on MONDAY, DECEMBER 1, and following day, the whole of the valuable STOCK and PLANT of a Builder, comprising a large quantity of scaffolding, stock bricks, paving-stone, flags, chimney-pots, and slate, Portland, and other stones, 20,000 feet deal boards, mahogany and other timber, cement, plaster, 6 tons of hair, ironmongery and brass goods, sheet and pipe lead, glass, plumbers' tools, timber, carpenters' benches, smith's forge, bellows, anvil, and tools. The erections of carpenters' and smiths' shops, sheds, counting-house, and various effects. On view the day prior. Catalogues on the Premises; at the Rose Tavern, Brompton-road; or at the Offices of the Auctioneer, 28, Poultry.

BRIXTON.—Builder's Stock-in-Trade, Carts, Waggons, Iron Hurdles, and Effects.

MESSRS. NORTON, HOGGART, and TRIST have received instructions from the Executors of the late Mr. W. J. Lee, to SELL by AUCTION, on the PREMISES, Notley's Brick field, Acre-lane, Brixton, on THURSDAY, NOVEMBER 27, at ELEVEN for TWELVE o'clock, the RESPECTABLE STOCK of CAPITAL RED PEPPER BRICKS; oak planks, fencing posts and rails, elm boards, fellocs, three tons of old iron, sashes and frames, about 15,000 capital white Suffolk bricks, large quantity of paving stones, York landings, paving sinks, steps and sills, Portland blocks and slabs, dove and veined marble, statuary, Yeovil and other chimney-pieces, grates, cisterns, capital waggons, ploughs, harrows, and iron hurdles, and miscellaneous items.—May be viewed on the preceding day the sale, and catalogues had, on the Premises; at the Crown Tavern, Acre-lane, Brixton; Horns Tavern, Kennington; and of Messrs. NORTON, HOGGART, and TRIST, 69, Old Broad-street Road-Exchange

KING'S CROSS.—Stock in Trade of a Brick, Pipe, Pipe, and Lime Merchant.—Steam-boiler, Steam-engine, Horses, Carts, and other effects.

MESSRS. PRICKETT and SONS will SELL by AUCTION, on the PREMISES, Great Northern Wharf, York-road, King's-cross, on WEDNESDAY, NOVEMBER 26th, and following days, at ELEVEN o'clock, the REMAINING STOCK of a BRICK, TILE, PIPE, and LIME MERCHANT; together with a 40-horse power boiler, 30-horse power steam-engine, pair of 4 feet 6 inch grinding burr mill-stones, two powerful crab cranes, capital carts, van, several sets of harness, cut crusher, chaff-cutting machine, oak office furniture, and other effects.—May be viewed the day prior to the sale, and catalogues obtained on the Premises; the Victoria Hotel, King's-cross; and of Messrs. PRICKETT and SONS, at their Auction and Estate Offices, 34, Southampton-buildings, Chancery-lane; and High-street, Highgate.

TO CABINETMAKERS, TIMBER MERCHANTS, BUILDERS, and OTHERS.—FOR SALE by AUCTION, without reserve, at the PREMISES, No 12, Carnation-road Shoreditch on MONDAY, 24th NOVEMBER 1856 at TEN for ELEVEN o'clock precisely, about SEVENTY LOGS CITY ST. DOMINGO, CUBA, and HONDURAS MAHOGANY. Also large quantities of Mahogany (Dry) in Flitches, Planks, and Boards; Cedar in Planks and Boards, Rosewood Planks, Walnut in Flitches, Burrs, Planks, and Veneers; Red Pine (Dry) Planks, Deals, and Battens; Maple Veneers, old Building Materials, and other Goods.—To be viewed two days previous to, and on the morning of Sale. Catalogues may be had on the Premises, and of THOMAS EDWARDS and SON, Mahogany Brokers and Auctioneers, 18, Pinner's Hall, Old Broad-street, City.

TO CABINET-MAKERS and BUYERS of MAHOGANY.—TO BE SOLD by AUCTION, on WEDNESDAY MORNING, 26th inst., at ELEVEN o'clock precisely, in the WOOD SALES SHEDS, Brunswick and Toxteth Docks, Liverpool:—

1,347 Pieces, of which 856 Pieces are Curls City St. Domingo Mahogany, being the cargo just landed, ex Mercutia, from the city direct.

On account of the Importers.

577 Logs and Curls St. Domingo Mahogany, being the cargo now landing, ex George Walker, from Porto Plata.

Apply to Messrs. A. Durant and Co. Merchants.

224 Logs and Curls St. Domingo Mahogany, just landed, ex Coronet, from St. Domingo.

Apply to Messrs. Bunt, Dand, and Co. Merchants.

210 Logs Honduras Mahogany, hourly expected to arrive, per Condenee

Apply to Messrs. Newell, Bunt, and Co. Merchants.

177 Planks Italian Walnut-Wood, just landed, ex Tiber, from Ancona.

On account of the Importers.

To which will be added the usual assortment of other Fancy and Furniture Woods. The Broker will be in London on Monday and Tuesday next, prior to the Sale, and will give the fullest particulars of measurement and description of each piece, may be referred to, on application, or with introductions to Messrs. Edwards and Son, at Messrs. Durant and Co.'s, 11 Tel, Manchester-street, Manchester-square, London.

EDWARD CHALLONER, Broker, Liverpool.

The custom of measuring mahogany in Liverpool yields to the buyer from 5 to 6 per cent, and the price is generally 5 per cent. more than in London; but, in Liverpool, the wood is accessible alike to all buyers, without exception; it is seen too, and sold and delivered at first hand, without the extra delay and measurements, with individual descriptions of each piece, &c.

MR. D. A. RAMSAY respectfully announces that the SALE advertised for MONDAY, 24th instant, is POSTPONED until further notice.—79, King William-street, City.

TO BUILDERS AND OTHERS.—HIGH-STREET, BROWLEY, MIDDLESEX.

MR. T. S. SMITH has been instructed to LET by TENDER (to be sent in by SATURDAY next, NOVEMBER 29th, 1856), on a building lease for seventy years, about ONE ACRE of valuable FREEHOLD BUILDING LAND (and tax redeemed), with or without the residence and other buildings now thereon, known as "Bromley House," near the Bow Railway Station, having a commanding frontage to the High-street, of about 300 feet, offering a desirable opportunity for the erection of shops and houses, being the only available spot now left for building in the High-street. May be viewed, and printed forms of Tender and further information obtained of Mr. T. S. SMITH, Auctioneer and Surveyor, 44, Lombard-street, and Upton, Essex, where a plan may be seen.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety-nine years, with power of enfranchisement. Plots from one to four acres for large villa residences; smaller plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 6, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWLER, and PEAKE, 1, Gray's-inn-square.

FREEHOLD LAND TO BE LET, on Building Lease for ninety nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

FREEHOLD LAND TO LET, on Building Leases.—The Rev. William Ford and Mr. Henry Webber, Executors of Richard Barford, Esq. late of Islington-park, have to offer TWO valuable PLOTS of FREEHOLD LAND, for building leases for a term of ninety years, in Barford-street, Liverpool-road, Islington. The land-tax is redeemed and the sewer is made. For particulars, apply to Mr. HENRY WEBBER, Timber Merchant, 31, Old-street, St. Luke's.

TWELVE PLOTS of BUILDING-GROUND, at West Ham, Stratford, Essex. They were allotted by a Land Society, and will be sold for less money than is already repaid; the balance may be paid by instalments. There are nearly fifty houses already on the estate, and the railway station will shortly be erected.—Apply to Mr. S. 195, Shoreditch, London

FIRST-RATE BUILDING SPECULATION.—Some VALUABLE LAND, fronting a high road at HAMPSTEAD, for one or more houses, is now to be let and may be had on such a lease as to make it a most profitable investment. It is in the midst of finished and occupied houses, and no expenditure is required for roads or sewers. A PAIR of CARCASSES TO BE SOLD, on the same estate.—Apply to Messrs. ROBERTS & BALL, Architects, 16, Holles-street, Cavendish-square.

EXTENSIVE PLOT of vacant GROUND, in a most important first-rate locality, adjoining Regent's-circus, with entrance from Oxford-street. Could be made available for a building operation of any character or magnitude. It is presumed from its extent and high class situation (nearly a quarter of an acre), to be eminently adapted for an arcade or any other similar public establishment carried out under the Limited Liability Act.—For particulars, apply to Messrs. GRAHAM and JACKSON, 37 and 38, Oxford-street.—May be treated for as a whole or separately.

LAND WANTED.—The Directors and Guardians of the Poor of the Parish of Marylebone having it in contemplation to remove the children from the workhouse, are desirous of receiving TERMS for the PURCHASE or otherwise of LAND, within a convenient distance, on a line of railway. Full particulars with a plan, if possible to be forwarded to the Secretary, at the Workhouse, on or before MONDAY, the 24th inst.—By order, (signed) THOS. B. RAE, Secretary.

Secretary's Office, Nov. 15, 1856.

TO BUILDERS and OTHERS.—TO BE SOLD, Valuable Plots of FREEHOLD LAND, having 101 feet frontage to the high road near Single Gate, Merton, suitable for building Villas.—For particulars apply to Mr. H. ROWLEY, Finsbury Freehold Land Society, 58, Bedford-row, Holborn.

WESTON-SUPER-MARE, SOMERSET. The important and valuable "WEST COTTAGE PROPERTY," in the very centre of the town, close to the railway, and the whole entirely overlooking the sea, is now open for SALE. The whole is freehold, with immediate possession.—Plans &c., of B. G. PHILLIPS, Esq Weston-super-Mare.

REIGATE, SURREY, within Three-quarters of an Hour's Ride of London.—TO BE SOLD a very desirable SITE for a RESIDENCE, with about TEN ACRES of FREEHOLD LAND ornamentally timbered, picturesquely situate on the southern slope of Reigate Hill, about half-a-mile from the Reigate Town Station of the South-Eastern Railway, commanding extensive views, and affording an opportunity for building a House in this favourite locality rarely to be met with. Dry Soil and Pure Water.—For Particulars apply to Messrs. PAGE and LEES, Estate Agents, Reigate.

WANTED, immediately, a PLOT of FREEHOLD GROUND, for building purposes (about two acres), close to a canal, a short distance from a railway, and within four miles of the City.—Address, stating full particulars and price, to A. B. (ground floor), 26, Bedford-row, Gray's-inn.

IMPORTANT TO BUILDERS AND CAPITALISTS.

UNITED TRADESMEN'S FREEHOLD LAND SOCIETY.—The beautiful ESTATE at HORNSEY, purchased by the Trustees, consisting of about thirty acres, and within three minutes' walk of the station, will next summer be accessible from the City by means of the Metropolitan Railway. Persons desirous of possessing land in this charming and picturesque neighbourhood, can do so immediately by joining this society. Plots, 30l. each; subscription, 6s. per month; at their Office, the Savings' Bank, Goldsmith's-place, Hackney-road, on the third Wednesday in each month, from seven until Nine o'clock. Applications to Mr. J. LAWLESS, 1, Thurlow-place, Hackney-road; or to Mr. DANIELL, Hornsey, and Estate Office, 92, Keppel-street, Russell-square. The ground on the first portion of the estate being the only part on which a tavern can be built, is delightfully situated on the high road leading to Tottenham, and less than two minutes' walk from the Hornsey Station, to be disposed of, with all its privileges, for the sum of 300l.—Apply as above

WATERSIDE PREMISES at LIME-HOUSE.—TO BE LET on LEASE, THREE spacious WAREHOUSES, abutting on the River Lee Cut, each measuring nearly 1,000 superficial feet, and containing about 20,000 cubic feet. Apply to Mr. WILLIAM ELLISON, Architect, No 19, Strand-road, Limehouse.

LONDON: Printed by CHARLES WYMAN, at the Printing Office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of the BUILDER, 1, York-street, in the Parish of St. Paul, Covent-garden, both in the County of Middlesex.—Saturday, November 22, 1856.

The Builder,

AN ILLUSTRATED WEEKLY PAPER FOR

Architect, Engineer, Operatives & Artist.

VOL. XIV.—No. 721. NOVEMBER 29, 1856. PRICE FOURPENCE. Stamped 5d.

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ARCHITECTURAL EXHIBITION, SUFFOLK-STREET GALLERIES, PALL-MALL EAST.—OPEN from 17th DECEMBER to 21st FEBRUARY.—LECTURES will be delivered, at EIGHT o'clock, on the following TUESDAY EVENINGS.

Jan. 6. On the Architectural Magnificence of Rome. Professor Donaldson.
„ 13. On the Use of Ancient Architectural Examples. The Rev. J. L. Petit, F.S.A.
„ 20. On the Application of Gothic Architecture to Civil and Domestic Purposes. The Rev. Charles Boutell, M.A.
„ 27. The Influence of Perspective Effect and Form on Architectural Design. Thomas Allom, esq.
Feb. 3. Suggestions on Architectural Composition. E. B. Lamb, esq.
„ 10. On Scottish Architecture. Robert W. Billings, esq.
„ 17. Observations on the Articles exhibited in the Department of Materials. James Edmeston, Jun. esq. Hon. Sec.

Admission to the Exhibition at any time, and to all the Lectures, by Season Tickets, Half-a-crown each, to be had, with all information, of

JAS. FERGUSSON, Esq. F.R.A.S. } Hon. Secs.
JAS. EDMESTON, Jun. Esq. }

Subscribers will be free at all times, and have the privilege of transferring their tickets for, or introducing a friend to, the Lectures.

ARCHITECTURAL EXHIBITION.—All Drawings must be delivered at the Galleries, Suffolk-street, Pall-mall East, on 1st or 2nd DECEMBER, between NINE and SIX. Provincial Exhibitors should arrange with their local Hon. Secs. to send in one package, which, if consigned to Mr. GREEN, of Charles-street, Middlesex Hospital, will be carefully unpacked and delivered. Subscribers have the privilege of introducing a friend to, or of transferring their tickets for the lectures. Season Tickets will be Half-a-crown, as before.

JAS. FERGUSSON, F.R.A.S. } Hon. Secs.
JAS. EDMESTON, Jun. }

ARCHITECTURAL, MECHANICAL, ORNAMENTAL, and PERSPECTIVE DRAWING CLASSES, are held at the London Mechanics' Institution, 20, Southampton-buildings, Holborn, on MONDAY and FRIDAY Evenings, under the superintendence of Mr. T. J. HILL. Terms: Non-members, 6s.; Members, 3s. 6d. Hours of attendance, from Eight to Ten. Subscription to the Institution, 6s. per quarter.—For further particulars, apply at the Institution. The new quarter commences FRIDAY, DECEMBER 5th.

W. S. SIMMONDS, Secretary.

COMPETITIONS.

TO ARCHITECTS, &c.

THE ST. JAMES'S CHURCH BUILDING COMMITTEE, SOUTHAMPTON, are desirous of receiving PLANS, DETAILED DRAWINGS, and SPECIFICATIONS, in conformity with the Rules of the Incorporated Society for Building Churches, and of the Church Commissioners, for the erection of ST. JAMES'S CHURCH, upon land lying between Hebers Bridge-road and Winchester-terrace, in the parish of St. Mary, and town of Southampton, on or before the 13th day of DECEMBER next. The church to contain 750 sittings, including 150 children (provision being made for additional accommodation if required at any future time), at a cost not exceeding 3,500l and to be completed with tower and spire, exclusive of lighting and warming; but a separate estimate will be required for the tower and spire, to enable the committee to erect the same now or at a future period. The sum of 50l. will be paid for the plans, drawings, and specifications retained, and the others will be redelivered to the parties applying for the same at the expiration of one calendar month from the said 13th day of DECEMBER next, but no charge is to be made for the plans, &c. returned. The plans, &c. to be sent to the Rev. W. H. WHITE, the Chairman of the Committee, at No. 15, Laura-place, Southampton.

Southampton, November 26, 1856.

TO ARCHITECTS. — WANTED, COMPETITION DESIGNS, for a NEW TOWN HALL, to be erected in ST. ANDREW'S. Cost of erection not to exceed 3,500l.—For particulars, apply to Messrs. GRACE and YOOLE, Town Clerks, St. Andrew's, Scotland.—St. Andrew's, Nov. 22, 1856.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer, Portsmouth, hereby gives Notice, that SEALED TENDERS will be received at the Office of the Director-general of Contracts, Pall-Mall, London, on or before FRIDAY, the 12th day of DECEMBER, 1856, from persons desirous of CONTRACTING for BUILDING a SCHOOL-ROOM and LIBRARY at Cambridge Barracks, Portsmouth. The plans and specification may be seen, and all necessary information obtained at this office, between the hours of TEN and FOUR, each day except Sunday, until the 11th proximo. The person whose Tender may be accepted will be required to provide two eligible securities, to be bound with him jointly and separately, in a bond of 400l for the due performance of the contract, by the 1st OCTOBER, 1857. The War Department reserves the right of rejecting the whole or any of the Tenders. No notice will be taken of any Tender unless upon the printed form, which can be obtained at this Office.

Royal Engineer Office, Portsmouth, November 25, 1856.

CONTRACTS.—WAR DEPARTMENT.—To BUILDERS and CONTRACTORS.—The Commanding Royal Engineer of the Aldershott Dist rict hereby gives Notice, that SEALED TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, until TWELVE o'clock on FRIDAY, 12th DECEMBER, 1856, from parties willing to CONTRACT for the CONSTRUCTION and ERECTION of ONE RESERVOIR, and ALTERATIONS of another, for the SUPPLY of WATER to the CAMP at ALDERSHOTT, within eight weeks from the date of notification of the acceptance of the Tender.—Plans may be seen; and specifications and forms of Tender obtained, on application at the Royal Engineer Office, Aldershott. The War Department reserves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Aldershott, November 23, 1856.

CONTRACTS.—WAR DEPARTMENT.—To BUILDERS and CONTRACTORS.—The Commanding Royal Engineer of the Aldershott District hereby gives Notice, that SEALED TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, until TWELVE o'clock, on FRIDAY, the 19th of DECEMBER, 1856, from parties willing to CONTRACT for the CONSTRUCTION and ERECTION of THREE WOODEN BUILDINGS, for Chaplain's Quarters at the Camp at Aldershott, within four weeks from the notification of the acceptance of the Tender. Plans and specifications may be seen, and forms of Tender obtained, on application at the Royal Engineer's Office, Aldershott. The War Department reserves the right of rejecting the whole or any of the Tenders.—Royal Engineer Office, Aldershott, Nov. 24, 1856.

CONTRACTS.—WAR DEPARTMENT.—To BUILDERS and CONTRACTORS. The Commanding Royal Engineer of the Aldershott District hereby gives Notice, that in consequence of additional buildings being required, the period for the receipt of TENDERS, advertised for on the 5th instant, for the Removal of the Police Establishment at Aldershott Camp has been POSTPONED; and that TENDERS will now be received from parties desirous of offering for the REMOVAL of the present POLICE ESTABLISHMENT, and ERECTION of ADDITIONAL BUILDINGS, until FRIDAY, the 19th DECEMBER, 1856. The plans may be seen, and specifications and forms of Tender obtained, at the Royal Engineer Office, on and after THURSDAY next, the 4th proximo. The War Department reserves the right of rejecting the whole or any of the Tenders.

Royal Engineer Office, Aldershott, November 25, 1856.

CONTRACT for SEWERS.—The Vestry of the Parish of Clerkenwell and the Board of Works for the Holborn District are desirous of receiving TENDERS for RE-BUILDING 150 feet of the old FLEET DITCH, and for the formation of a Side Entrance and works incidental thereto. The plans and specification can be seen at the Offices of the Board of Works for the Holborn District, Little Gray's-inn-lane, where Tenders are to be delivered on THURSDAY morning, the 4th of DECEMBER next, at TEN o'clock in the forenoon precisely. The lowest Tender will not necessarily be accepted.

ROBERT PAGET, Vestry Clerk, Clerkenwell.
S. W. HOPWOOD, Clerk to the Board of Works for the Holborn District.

November, 1856.

NORTH-EASTERN RAILWAY.—The Directors of the North-Eastern Railway are prepared to receive TENDERS for the undermentioned ARTICLES, in such quantities as they may require from the 1st January to the 30th June, 1857, delivered at the Company's Storehouses, at Newcastle, Gateshead, York, Leeds, or Hull. Payments for each month's delivery at the end of three months, or cash, deducting discount.

1. Timber, Deals, &c.
2. Best English Oak Wagon Wood.
3. Railway Keys.
4. Wrought and Cast Iron; and Railway Chairs.
5. Rails.
6. Heavy Ironmongery.
7. Steel, Files and Springs.
8. Tyre Hoops.
9. Brushes.
10. Wire Ropes, and General Hemp Cordage.

Forms of Tender may be had on application to Mr. BARNES, Stores, Gateshead, on and after TUESDAY, the 2nd DECEMBER, and Tenders must be sent in, addressed to the Secretary, at York, sealed, and marked "Tenders for Stores," on or before MONDAY, the 15th of DECEMBER. The Directors do not bind themselves to accept the lowest or any Tender.

JOHN OLEGHORN, Secretary.

York, 26th November, 1856.

CONTRACTS.

TO BUILDERS, CONTRACTORS, and OTHERS.—The Vestry of the Parish of St. George in the East, hereby give Notice, that they will meet on THURSDAY, the 4th day of DECEMBER next, at SIX o'clock in the evening, at the Board room of the Workhouse, Charles-street, Old Gravel-lane, to receive TENDERS from parties who may be willing to CONTRACT for the CONSTRUCTION of BRICK SEWERS, 660 feet in length, or thereabouts, with other WORKS in connection therewith, in John-street and Samuel-street, in the said parish, and for the maintenance of such works in complete repair for the term of twelve calendar months. Plans, sections, and a specification of the works may be inspected, and other particulars obtained, at the Vestry Offices, 40, St. George-street, between the hours of TEN and FIVE. The Vestry do not bind themselves to accept the lowest or any Tender, and the party whose Tender shall be accepted, will be required to provide two approved sureties for the due performance of the work.

W. L. HOWELL, Vestry Clerk.

Vestry Offices, November 21st, 1856.

LLANDUDNO IMPROVEMENT ACT, 1854.—To SEWER CONTRACTORS, &c.—Persons desirous to CONTRACT for the CONSTRUCTION of the WHOLE of the SEWERAGE in the town of Llandudno, may see the plans, sections, and specifications, prepared by T. MACDONALD SMITH, Esq. C.E. at the office of the Commissioners, between the hours of TEN o'clock a.m. and FOUR o'clock p.m. daily, on and after MONDAY, the 24th inst. Tenders (under seal to be sent in, addressed to the Clerk to the Commissioners, on or before THURSDAY, the 11th of DECEMBER next. The Commissioners do not bind themselves to accept the lowest Tender; but in the event of one being accepted, the contractor or parties will be required to give security for the due performance of his or their contracts. The Commissioners have on hand a quantity of sewerage bricks, pipes, invert and junction blocks, which the contractors will have to take at cost price with order.

JOHN WILLIAMS, Clerk to the Commissioners.

Improvement Commissioners' Office, Nov. 19, 1856.

MERTHYR TYDFIL LOCAL BOARD of HEALTH.—To IRONFOUNDERS, CONTRACTORS, and OTHERS.—Persons willing to TENDER for the ERECTION of a new IRON LATTICE BRIDGE of about 88 feet span, including abutments, retaining walls, and approaches, to be built over the river Taff, at Pontythun, in the parish of Merthyr Tydfil, may see plans, specifications, and obtain further particulars on application to Mr J. W. HARRISON, Surveyor to the Board, at his office in High-street, Merthyr, between the hours of TEN a.m. and TWO p.m. from the 1st of DECEMBER to the 15th DECEMBER inclusive. Tenders to be sent under cover to Mr. JAMES WARD RUSSELL, and endorsed "Tender for the Pontythun Iron Bridge," not later than MONDAY, 15th of DECEMBER.

N.B. The Board do not pledge themselves to accept the lowest or any other Tender.

JAMES WARD RUSSELL, Clerk to the Board.

Merthyr Tydfil, November 24, 1856.

TO BUILDERS, CONTRACTORS, and OTHERS. — Persons desirous of CONTRACTING for the ERECTION of a NEW HOUSE on the PENYRHEWL ESTATE, near Pontypool, may inspect the plans and specifications, and obtain all other information, on application, personally, to Mr. WALKER, the White Lion, Pontypool; or by letter, to the Architects, on and after the 19th instant. The estimates to be sent to the White Lion Hotel, Pontypool, endorsed "Tender for New House," and addressed to the Architects, not later than the 28th instant, who will meet the Proprietor and Contractors on the 2nd of DECEMBER, at TWO o'clock p.m. at the above Hotel, to open the Tenders, but they do not bind themselves to accept the lowest or any Tender.

BIDLAKE and LOVATT, Architects, Wolverhampton.

TO BUILDERS.—BOROUGH of WALSALL.—The Town Council of the Borough of Walsall, acting as the Burial Board, are prepared to receive TENDERS for the ERECTION of TWO CHAPELS, ENTRANCE LODGES, and ENTRANCE to the new Cemetery for the said Borough, according to Plans and Specifications which may be seen at the Town Clerk's Office, Bridge-street, Walsall, on and after MONDAY, the 24th of NOVEMBER, instant. The Board do not pledge themselves to accept the lowest or any Tender, and the Contractor will be required to enter into a Bond with one or more sufficient surety or sureties, to the satisfaction of the Board, for the due performance of the Contract. Sealed Tenders, endorsed "Tender for Cemetery Buildings," to be sent to the Town Clerk's Office on or before TUESDAY, the 2nd day of DECEMBER next.

SAMUEL WILKINSON, Jun. Town Clerk.

Walsall, November 20th, 1856.

TO BRICKMAKERS, SCAVENGERS, and OTHERS.—The Crown Estate Paving Commissioners do hereby give Notice, that they are ready to receive TENDERS from parties willing to contract for the REMOVAL, during the year 1857, of DUST, DIRT, CINDERS, and ASHES from the houses, buildings, and premises under their jurisdiction in that respect. Forms of Tender and further particulars may be obtained on application to me here, where Tenders, according to such forms, sealed, addressed to the Crown Estate Paving Commissioners, and endorsed "Tender for Dust," are to be left, at or before THREE o'Clock on WEDNESDAY, the 3rd day of DECEMBER, 1856.

FRANCIS ADAMS, Clerk to the Commissioners.

1, Whitehall-place, Nov. 17, 1856.

TO ARCHITECTS.

THE Directors of the MANCHESTER UNITY FRIENDLY SOCIETY are desirous to receive PLANS for the ERECTION of OFFICES in the City of Manchester. Plans of the land, the amount to be expended, and the requirements of the building, may be obtained on application to Mr. HENRY RATCLIFFE, 29, Dale-street, Manchester. Plans will be received up to MONDAY, the 15th day of DECEMBER.

[For remainder of Contracts see next page.

CONTRACTS.

TUNSTALL LOCAL BOARD of HEALTH.—NEW COVERED MARKET.—To BUILDERS, IRONFOUNDERS and others.—The Tunstall Local Board of Health are about to receive TENDERS for the EXECUTION of the several WORKS required in the ERECTION of a COVERED MARKET, according to the design and specification of G. T. ROBINSON, Esq. Architect, Leamington. The drawings and specifications may be seen for in WEDNESDAY, the 26th instant, to WEDNESDAY, the 24th day of DECEMBER, [illegible] Parade, Leamington. Any Builder, Ironfounder, or Tradesman who is desirous of tendering for the Works is required to apply at the Office of the Surveyor, where all further particulars may be obtained. After that time they will be for inspection at the Offices of the Local Board. Any Tender received [illegible] will not be proceeded to [illegible] and will be returned to [illegible]. The lowest Tender will not necessarily be accepted. By order, [illegible] Tunstall, Nov. 26, 1856. JOSEPH LOWNDES, Clerk.

GLOUCESTER CEMETERY. — Parties desirous of TENDERING for the ERECTION of TWO CHAPELS and TOWER and SPIRE, LODGE, and MORTUARY, in the ANGLICAN CEMETERY, for the Burial Board of the City of Gloucester, may see the plans and specifications at the Office of the Surveyor, Mr. MEDLAND and MANSELL, Gloucester, on and after the 1st day of DECEMBER next. Tenders are to be delivered, [illegible] the Board, on or before the 6th day of DECEMBER next, and the Board do not bind themselves to accept the lowest or any Tender. By order of the Board, Gloucester, November 20, 1856. A. H. JENKINS, Clerk

TO DUST CONTRACTORS.—The Vestry of the Parish of Chelsea will meet at the Board-room, at the MANOR HOUSE, King's-road, Chelsea, on TUESDAY, the 9th day of DECEMBER next, at Eleven o'clock in the Forenoon, precisely, for the purpose of [illegible] pursuant to the terms of a Draft Contract, marked "Dust Contract," now lying for inspection at the Offices of the Vestry Clerk, for the REMOVAL and REMOVING [illegible] ASHES, FILTH, and RUBBISH, from the Houses and other places within the Parish, during the term of [illegible] years, commencing on the 16th day of DECEMBER, and ending the 29th day of SEPTEMBER, 1859. Parties Tendering may appear personally on the day fixed for the Meeting, and [illegible] Tender, or may send a Letter to be opened at the Meeting of the Vestry and the Terms on which they [illegible] said Draft Contract. The costs, charges, and expenses of and [illegible] be paid by, and [illegible] Contractor with whom the said Contract shall be entered into, and [illegible] Contract will be prepared and [illegible] one to be left at the said Office, on or before SATURDAY, the 13th day of DECEMBER next, [illegible] Tenders or proposals may be made on one of the printed forms, to be obtained at the said Office. The Vestry do not bind themselves to any Tender. By order, CHARLES MILL, Vestry Clerk.

Offices of the Vestry, Manor-House, King's-road, Chelsea, November, 1856.

PARISH of BRIGHTON.—To BUILDERS and OTHERS.—The Burial Board for the Parish of Brighton are prepared to receive TENDERS from Persons willing to contract for the ERECTION of TWO CHAPELS, with Vestries and Central Tower, &c. and the Lodge, Lich Gates, and Mortuary Building, on the new Burial ground. The plans, drawings, specifications, and conditions of contract will be for inspection at the Parochial Offices, Church-street, Brighton, on FRIDAY the 28th day of NOVEMBER inst. until SATURDAY, the 13th day of DECEMBER next, between the hours of NINE and SIX; and further information may be obtained on application to ROBERT WHEELER, Esq. Architect, Board of Guardians, Southampton-street, Strand, London. Tenders are to be made on the Printed Forms prepared for the purpose, and delivered, on MONDAY, 15 DECEMBER inst. not later than TWO o'clock in the Afternoon, at the Offices, and for Chapels, &c. to the new Burial ground, Parish Offices, Brighton. Each Tender to be accompanied with a sealed Bond, [illegible] two sufficient and responsible persons of two sureties, who will be willing to enter into a bond for the due performance of the contract. The Burial Board will not be [illegible] lowest or any Tender. By order of the Board, SOMERS CLARKE, Vestry Clerk. Brighton, Nov. 24, 1856.

TO BUILDERS. — Persons desirous of TENDERING for Sundry ALTERATIONS and ADDITIONS to the HOUSE, Rose Rookes, near Wadhurst, Sussex, can see the plans and specifications at my office, and deliver MONDAY the 1st of DECEMBER. Tenders addressed to the Architect, and delivered on or before MONDAY, the 8th of DECEMBER, will be duly considered. Tenders for Works, Penns Rookes.—W. E. STEVENS, Architect, Dorset House, Tunbridge Wells, Nov. 26, 1856.

NOTICE of PURCHASE. — ROBERT SLADE begs to inform the public and customers of EDWARD SIMMS late of Wilton-road, Pimlico, that he has purchased of [illegible] the Premises and Stock which has since been occupied by the said EDWARD SIMMS situated at Wilton-road, Pimlico, where a choice assortment of FLOORING BOARDS is always on hand. All other descriptions of Timber will be supplied on the most reasonable terms. The system of keeping prepared Flooring Boards was first introduced in London by himself.

NOTICE of REMOVAL. — EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton-road, Pimlico, to the KING'S ROAD CHELSEA, where all orders will be promptly attended to. Price Lists free on application.—E. SIMMS, King's-road, Saw-mills, Chelsea, opposite Manor-street.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Spruce, 3s.; Pine Planks, 3s. 6d. Mouldings, 1½ to 2 Yellow Battens, from, 1/ 10s. Carriage free and put it down.—T. FORMAN, 1, Walnut tree walk, Lambeth walk.

MOULDINGS BY MACHINERY. Capping, Sash-bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to

E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S-ROAD, CHELSEA.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally, that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings. A large stock of dry flooring at low prices.—South Bank Bridge Wharf, Battersea.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of its kind ever established, a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from ¼-inch to 1½-inch thick, in Yellow or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Sills, Plank, and Scantlings. Mouldings in Oak or Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process. JOHN COOMBE submits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he sells at prices generally charged for wet wood. Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile-end-gate.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of FLOORING and MATCHED BOARDING, from ¾ inch to 1½ inches thick, seasoned, and ready for use, also, Mahogany, Moulding, Wainscot, and all kinds of Timber required for Building purposes.—Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY invites the attention of buyers to his largest and well-selected STOCK of DEALS, and the reduced Prices of prepared Flooring, &c.:

Inch Yellow Flooring.....	18s. per square.
¾ inch ditto	15s. "
1¼ inch Plank 12 & 13 by 11, from....	£21 per 120
Yellow Deals, 3 in	20 "
Spruce ditto from	13 "
Yellow Battens, from.....	12 "

A List of Prices forwarded on receipt of a postage-stamp.
N.B. All Saw Cuts delivered free in the Metropolitan Carriage Boundary, Southwark and Elm-street Goods Depôt.

GROWING TIMBER for SALE on the Builders Freehold Land Society's Estate at Haloway. For plans and particulars, apply at the Office. Tenders must be sent in on or before the 4th DECEMBER to

FRANCIS DAVESON COPE, Manager,
21, Southampton Buildings, Holborn.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NORRIS and CO. invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, viz.:

½-inch white, 12s. 6d. per square; ⅝-inch white, 15s. per square; 1-inch white, 18s. per square; ¼-inch yellow, 15s. per square; ¾-inch yellow, 18s. 6d.; 1-inch yellow, 20s.

Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs free on application.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

ROBINSON and BARTRAM, SAWING and PLANING MILLS, BELVIDERE-ROAD, LAMBETH, and SWAN-STREET, BERMONDSEY, having completed powerful MACHINERY for SAWING TIMBER, for building purposes, will be glad to receive ORDERS in this Department, and beg to assure their friends that all favours shall be executed in the best manner, and with the utmost punctuality and despatch.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that the above complete their extensive arrangements, and will be happy to execute all orders entrusted to their care with despatch and punctuality. Wet and dry docks, and powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring and other mouldings always in stock at reduced prices.

STAINING DEAL TO IMITATE ALL KINDS of WOODS it requires NO SIZING, and will stand the severest test to the weather, being equally well on. Varnishes for WAINSCOTING Stains may be had at the Factory, 44, James-street, Oxford-street; also Manufacturer of Improved Knotting Prepared Lime, for Painted Work, and Varnishes.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c. — A considerable reduction has taken place in the prices of French polish, white and it was held spirits varnish, and sealing wax, and in methylated spirit. The present price is 6s. 6d. to 7s. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs and all other materials equally low. A list will be forwarded on application to JAMES SLIPPER, 87, Leather-lane; and 11 and 15, Dorrington-street, Holborn, London.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Flooring, so extensively used in Paris and other continental cities, is now introduced into this country: an extensive assortment of specimens, patterns, and prices may be perfected, together with every particular of its cost and adaptation, can be obtained of Messrs. H. P. BURT and CO. 3, Charlotte-row, Mansion-House; or of Messrs. ARROWSMITH and CO. 80, New Bond-street.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, 56, & 57, WYCH-STREET, STRAND,
London.

LOCKS, HINGES, HANDLES, BOLTS, &c.
First-class Prize Medal, Paris Exhibition, 1855.
Specimens at the Hardware Court, Crystal Palace, Sydenham.

SAVING IN GAS.—D. HULETT, INVENTOR and PATENTEE. The Mercurial Gas Regulator is the only efficient instrument for ensuring wholesome and uniform lighting, equalizing the pressure, and preventing any irregularity in the height of the flame.—D. HULETT and CO. 35, Lime-street, London, Manufacturers of Gas Chandeliers, Glass Lustres, &c. &c.

NAILS and IRONMONGERY From BIRMINGHAM direct. Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the LOWEST BIRMINGHAM PRICES. A complete LIST of which will be forwarded upon application to BLYTH and BIANCHI, Nail Manufacturers and General Factors, BIRMINGHAM; or at 16, Gresham-street, LONDON.

TO SPECULATORS and CAPITALISTS. TO BE DISPOSED OF, the PATENT RIGHT of a valuable AMERICAN CHANGEABLE BANK LOCK, on the most secure principle. Can be seen and described, on applying to JOHN TANN, Patent Reliance Lock and Fire-proof Safe Manufacturer, 30, Walbrook, City.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Founder, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; Chimn, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, so much admired, &c. &c. &c. each.

J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.
14, Stanhope-street, Clare-market, London.

RADIATING and REFLECTING STOVE. WILLIAM S. BURTON'S NEW REGISTER STOVE combines comfortably the well known principles of both Stephens and Sylvester's celebrated patent stoves, while it has others equally valuable, which are peculiarly its own, and for which a patent has been granted. Its reflecting and radiating powers are perfect, it is very simple, and cannot be put out of order, consumes but little fuel, is most cleanly and cheerful in use, while its general appearance, no fender being needed, is most imposing. Prices, complete, black or bronzed, from 2l. 10s.; bright, 14l. 5s. and upwards. One may be seen in action in his Show-rooms, which contain an assortment of fenders, stoves, ranges, fenders, and general ironmongery, as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with bronzed ornaments, and two sets of bars, 2l. 14s. to 13l. 13s.; ditto, with ormolu ornaments and two sets of bars, 5l. 5s. to 29l. Bronzed fenders, with standards, 2l. 3s. 3s.; steel fenders, 2l. 15s. to 11l.; ditto, with rich ormolu ornaments, 3l. 19s. to 18l. Fire-irons, from 1s. 9d. the set to 4l. 4s.

The late additions to these extensive premises (already by far the largest in Europe) are of such a character that the entire of EIGHT HOUSES is devoted to the display of the most magnificent stock of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel Silver, Plated Goods, Baths, Brushes, Turnery, Lamps, Gasoliers, Iron and Brass Bedsteads, Bedding and Bed Hangings, so arranged in Sixteen Large Show-rooms as to afford to parties furnishing, facilities in the selection of goods that cannot be hoped for elsewhere. Illustrated catalogues sent (per post) free.—39, Oxford-street; 1, 1A, 2, and 3, Newman-street; 4, 5, and 6, Perry's-place, London.—Established 1820.

TO PLUMBERS.—TO BE SOLD a BARGAIN, a CASTING-FRAME, complete, with head and tail pan, iron cart on wheels, with strickles and plane.—Apply, X. Y. Z. Post-office, Nottingham.

TO ARCHITECTS and BUILDERS.—HAWKINS'S REGISTERED COPPER and TINNED IRON SASH-CHAIN is greatly approved for its strength, durability, and facility in running over pulleys; and when worked at its warranted load will be found one of the most useful and efficient inventions for hanging window-sashes of any weight up to 4 cwt. May be obtained from every respectable ironmonger in the kingdom. Manufactory, No. 27, Dale-end, Birmingham.

JOHN WALKER,
Corrugated Iron Manufacturer, Iron Founder, Iron Roof, Bridge, and Portable Building Contractor.
IRON MERCHANT, &c.
Offices and Works—Mill-wall, Poplar, London.

SKAIFE and POLLOCK,
Manufacturers of
PATENT GALVANIZED IRON,
Sheets, corrugated and plain; Fencing and Telegraph Wire, Bars, Rods, Hoops, Nails, screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.
IRONWORK GALVANIZED.
Roofing orders promptly and carefully attended to.
Office—Commercial-road, Limehouse, London.

TO ARCHITECTS, BUILDERS, AND THE TRADE.
PATENT PLUMBIC ZINC.
GREAT REDUCTION IN PRICE.
PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as sheet lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No. 11 gauge weighs about 18 oz. per foot super.			
12	"	20	"
13	"	24	"
14	"	26	"

Full particulars and the reduced price sent by post on application to
A. MOREWOOD and CO. DOWGATE-DOCK, LONDON, to whom all letters must be addressed.

A. MOREWOOD and CO. (late Morewood and Rogers),
Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.
PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,
PLAIN or CORRUGATED, and Curved, of all Gauges.
Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.
Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hoopiu Nails, Rivets, &c.
Estimates given for Roofs, and every description of Galvanized Building, at the
OFFICES and WAREHOUSE, DOWGATE DOCK, LONDON.

GALVANIZED IRON WATER-CISTERNS AND TANKS,
TUPPER AND CARR, Manufacturers
Works—LIMEHOUSE and BIRMINGHAM.
Offices—3, MANSION HOUSE-PLACE, LONDON.
N.B.—Iron of every description Galvanized.

PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).
WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.
GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.
ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.
A Discount allowed to the Trade.

IRONMONGERY,
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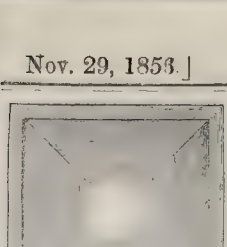
THE LARGEST STOCK AT
THE LOWEST PRICE,
5 AND 6, BROAD-STREET, BLOOMSBURY.

JOHN HENDERSON PORTER,
ENGINEER AND CONTRACTOR,
IRON BUILDING AND ROOFING WORKS,
GAS-STREET, BIRMINGHAM.
LONDON OFFICE—1, RICHES-COURT, LIME-STREET.



Plan and Section of Buckled Plate, Convex Side.

MALLET'S PATENT BUCKLED PLATES.

TUPPER AND CARR,

SOLE LICENSEES AND MANUFACTURERS.

THESE Plates are applicable to every purpose where strong, rigid, light, and durable lead sustaining surfaces are demanded: as for the Flooring of Bridges, Viaducts, Jetties, Fireproof Flooring for Buildings, Fireproof Partitions, Bulkheads, Doors and Shutters, the Plates in between Iron Palisades or Wrought or Cast Walls, the Centres of Iron or other Roofs, as for Railway Stations &c. The construction of Iron, Military, Colonial, or other Huts, Stores, and Iron Buildings of all sorts; the Construction of Water-Tanks; the Covering of Reservoirs of Waterworks; and, generally, for every purpose to which Corrugated Iron has been applied, but are many others to which that is inapplicable,—as, for example, the Construction of Balcony or Cantilevered Galleries, Projecting Footways, &c. The Plates differing their support entirely from themselves and the walls.

BUCKLED PLATES may be united to each other, or to the frame of the structure they cover, by either lap or butt joints, and either by screw bolts, rivets, or wood screws into timber; and the joints are made perfectly watertight when required, by putting and driving up, or by interposed strips of felt saturated in oil cement, or in tar and pitch, or by strips of vulcanised India-rubber, or by a thin layer of oil putty.

The sizes of the Patent Buckled Plates are—4 ft. by 4 ft.; 3 ft. by 3 ft.; 4 ft. by 2 ft.; and 3 ft. by 1 ft. 6in.

Other sizes by agreement.

For further particulars, prices, &c. apply to the Licensees,—

TUPPER AND CARR,

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ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and terms obtained on application to

THE SURVEYOR OF THE VIEILLE MONTAGNE ZINC MINING COMPANY, 12, MANCHESTER BUILDINGS, WESTMINSTER.

ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.

WROUGHT-IRON GIRDERS

For BRIDGES and BUILDINGS,
MANUFACTURED AND GUARANTEED AS TO STRENGTH.
CAST-IRON GIRDERS for BRIDGES.
Wrought-iron Doors, Boiler, & General Smiths' Work.
BUILDERS' CASTINGS OF EVERY DESCRIPTION.

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For TRUSSING BETWEEN TIMBER.

SPIKES, RIVETS, CUT NAILS, WROUGHT DITTO, SCREWS, BOLTS AND NUTS, BOND HOOPS, CHAINS, &c.

CONTRACTORS' PLANT, RAILS, EARTH WAGGONS,
And IRON WORK for WOOD WAGGONS, &c.

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Such arrangements are made for Despatch and Punctuality that Orders can be executed in a few days.

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ANDREW CLARK and COMPANY,

PLUMBERS,

THE BEAR GARDEN LEAD WORKS, SOUTHWARK,

Sole Manufacturers of Delbruck's Patent Autogenous Soldering Apparatus, invite the attention of Manufacturing Chemists to their Patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

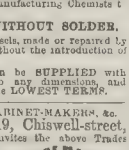
Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

SLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street,

Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheap ness by any house in London.



Elliptic Stoves, double backs, 3l. per inch, and upwards.

Register Stoves, 6d. 6d. 7d. 8d. and 9d. per inch.

Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—

3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.

2 feet Cottage Ranges, with ovens and back boilers, 33s. each.

3 feet self-acting ditto, ditto, 34s. each

Air Bricks, 4s. per doz.

Best Fine Cut Clasp and Rose.

1½	1¾	2	2½	3-in. & larger.
16s. 6d.	16s. 6d.	18s. 6d.	18s. 6d.	18s. per cwt.

And every material required in the building, bell hanging, upholstery, and brass-foundry trades on the most reasonable terms.

List of Prices had on application at the Warehouse, or by letter prepaid

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS'

WORK, STOVE and RANGE MANUFACTORY, and IRONMONGERY, METAL, and GLASS WAREHOUSES, 19, Horseferry-road, and 1, New Peter-street, Westminster.

GREAT REDUCTION IN PRICES

RAIN WATER CASTINGS, per yard.

Sizes	3 in.	4 in.	5 in.
Pipes	10d.	1s. 6d.	1s. 7d.
Half-round Gutters	7½d.	9d.	1s.
O G Gutters	1s. 6d.	1s. 7d.	1s. 9d.
Ditto, with plain clips cast on	1s. 1d.	1s. 2d.	1s. 4d.
Ditto, with lion clips ditto	1s. 3d.	1s. 5d.	1s. 6d.

Bash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.

Best Cut Clasp Nails.

1¼ in.	1½ in.	2 in.	2½ in.	3 to 6 inch.
16s 6d.	16s.	15s.	14s. 6d.	14s. per cwt.

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails ..... 15s. 6d. "
Best Zinc Slating Nails ..... 60s. "
Best Glues ..... 47s. to 53s. "

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Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

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R. S. NEWALL and CO. Patentees of the Copper Rope Lightning Conductor, supply Lightning Conductors, with the point and all staples complete for fixing, at one shilling the foot. R. S. NEWALL and CO.'S Patent Copper Rope Conductor is being applied by architects, engineers, and scientific men in all parts of the world.

COPPER and IRON CORD for WINDOW SASH-LINES.

OFFICES, Gateshead-on-Tyne.
149, Strand, London.
67, Hyde-park-street, Glasgow.
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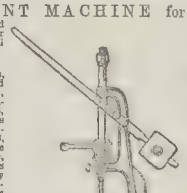
IRON FOUNDRY, Harrow-street, Lant-

street, Southwark.—W. F. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Railing, and Newel Bars, Iron Coping, Panels, Tomb Enclosures, Area Gratings, Sash Weights, &c. Also Fly and other Wheels, Riggers, Pinions, Engine and Lathe Castings; Forge Backs, Furnace Bars, Kilns, Pans, Pipes, Tank Plates, and other Castings, to patterns or drawings.

NEW PATENT MACHINE for

MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', POWIS, JAMES, and Co Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 26, Waldmar-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery constructed.

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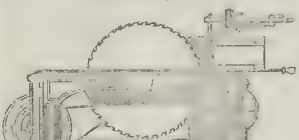

SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Roller and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines, for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand machinery, either wholly or partly made; so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches, and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace. A descriptive Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. Kings-road, Chelsea, London.

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Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axletrees, sugar-mills, &c.

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THIEVES, and GUNPOWDER. EDWIN COTTERILL Inventor, Patentee, and Sole Manufacturer of the Royal Climax Detector Locks. The only locks which have not been picked, and cannot be blown up with gunpowder. Descriptive drawings, with testimonials, and full report of the unsuccessful attempt of Mr. Hobbs to pick the Climax Detector Lock (no ordinary commercial one), at Manchester, forwarded free.—Manufacturer of Fire-proof Safes and Chests, Patent Double and Single-Action Door-Springs, &c. &c.—4, 16, Vittoria-street, corner of Regent-place, Birmingham.

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STOVE, and METAL WAREHOUSE, 178, Shoreditch.
A great variety of Elliptic, Register, and other Stoves, Cottage and best Ranges fitted, always in Stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler

30	32	34	36-inch.
22s.	24s.	28s.	34s.

Best self-acting Ranges, with Oven and Back Boiler, Bright Wrought Bars—

34	36	38	42-inch
5l.	5l. 5s.	5l. 15s.	6l. 5s.

Strong Elliptic Stoves, with Extra Back and Solid Bars, per in. 3½d.

Register Stoves, with Solid Bars, per inch, 5d.

Improved New Pattern Circular Cheek Register, with strong Bar and Plate, 2l. per inch.

Best Solar ditto, with Fire Brick Back, per inch, 10d.

Bright Stoves, with Two Fires, 40s. to 100s. each.

Cast Rain-water Pipes	2	2½	3 inch.
	10d.	1s. 1d.	1s. 3d. per yard.

Cast Gutters—4 inch, 8d. per yard.	4	4½ inch.
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	2	3	4	5	6
Patent Line	3s. 6d.	4s.	5s.	7s.	9s. per gross.

6-inch Rd. Ward Mortice, with Pad Furniture and Patent Spindles 2s. 9d. each. Lever Elliptic and Register Stoves, 1s. per cwt. Dr. Arnott's Ventilators, 4s. 6d. each.

Brick Moulds kept in stock. Any size cast to order.

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1½ in.	2 in.	2½ in.	3 in.
16s. 6d.	16s. 6d.	15s. 6d.	14s. per cwt.

Best Sheet Cut Floor Brads ..... 13s. per cwt.
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IRONMONGERS, &c. &c.—The Trade supplied on the best terms with House Bells, Zinc, Tube, and Copper Wire. Gas Pendants, Brackets, and Joints of all descriptions for Gas-fitting, in Brass and Iron; Tin, Composition, Iron and Brass Tubing, Cornice-poles, Rings and Lacquered Case Tube for Picture Rods. Desk Rails, &c. &c.

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IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

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TUNED BY MACHINERY

Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.

MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Coppers, and pressed on a new system, which gives superior tone and facility for ringing.

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NEWCASTLE-ON-TYNE.

Manufacturers of Bar Iron, Railway Bars, Forge and Engine Work, Cast-Iron Goods, and

STEWART'S PATENT CAST-IRON GAS and WATER PIPES.

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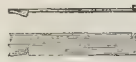
TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES.

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES beyond the current Price of Hoop-iron.

Gauge.	In. wide.	Per 1,000 ft.
No. 16	1¼	7s. 0d.
15	1½	7s. 6d.
15	1¾	8s. 0d.
15	2	8s. 6d.
15	2½	9s. 6d.



THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches) is now being extensively used in the leading GOVERNMENT WORKS, DOCK BUILDINGS, BARKS, ASYLUMS, BRIDGES, VIADUCTS, PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in London and in all parts of the kingdom.

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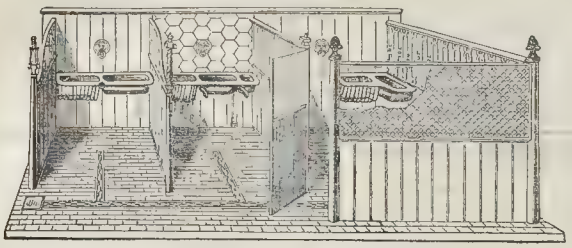
AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER-TROUGH, and WROUGHT-IRON RACK, united to an iron top-plate, and forming one complete and useful fixture, having Cottam's Patent Noiseless Halter-Guide and Collar-Rein attached, the ball of which is taken to the back of the manger, and works with ease and freedom up or down the guide-bar, Cottam's new Patent Seed-Box, of galvanized sheet-iron, is an important addition to the above fittings, being simple in construction, light and durable, promotes cleanliness, and is economical in its results. Also, the Patent Saddle and Harness Bracket combined, which can be used with great advantage where space is an object, as it can be turned up out of the way when not in use.

Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking. Patent Loose-Box Fittings, Cheap and Durable Corn-Bins.

Improved Surface-Drain, with safety covers, Sanitary Traps, and every article for the harness-room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &c.

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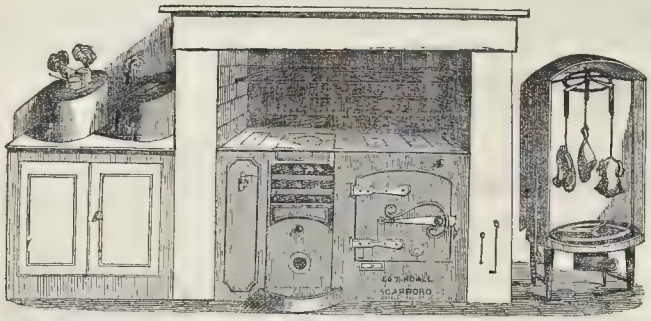
CORPORATE MARK—XLALL.—Granted by the Cutlers' Company, 1780.



Messrs. PARKIN and MARSHALL have also pleasure in stating that they are appointed Sole Wholesale Agents for the Sale of the undernamed Articles, manufactured by

MR. ENOCH OLDFIELD TINDALL, IRON WORKS, SCARBOROUGH, viz.:—

TINDALL'S PATENT PORTABLE MANGLES, WASHING AND WRINGING MACHINES, NAPKIN PRESSES, COOKING RANGES, LAUNDRY STOVES SANATORY TRAP AND GRATE, CHAFF CUTTERS, OAT, BARLEY, MALT, AND LINSEED MILLS, BEAN MILLS, OILCAKE BREAKERS PORTABLE SAW-MILLS, TURNIP CUTTERS, CULTIVATORS, PLOUGHS, HARROWS, &c. &c.

THE PATENT COOKING RANGES AND ROASTERS are now amongst the most complete and inexpensive before the Public, and are rapidly superseding the antiquated Ranges of our country.

THE IMPROVED LAUNDRY STOVE will heat Fifteen Flats at once, occupies only 12 inches in space, is removeable from one room to another, and will be found invaluable in Public Hospitals, Infirmaries, Laundries, and Private Families.

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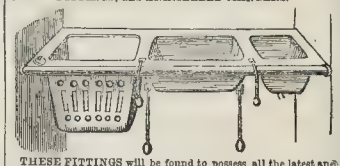

THESE FITTINGS will be found to possess all the latest and most important improvements, and are of the best manufacture. All kinds of Stable-furniture in stock. Iron Hurdles, Gates, Fencing, Tomb-railings, &c. New illustrated Catalogues forwarded on receipt of two postage-stamps.—JAMES BARTON, Ironfounder, &c. 370, Oxford-street, London.

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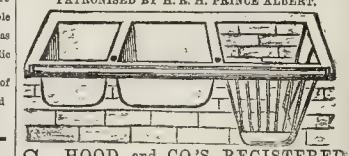

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IS NOW READY, AND MAY BE OBTAINED ON APPLICATION TO

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It contains:—

No. 1. TARIFF.—CROWN GLASS.
" 2. SHEET.
" 2R. SHEET FOR EXPORTATION.
" 3. HARTLEY'S PATENT ROUGH PLATE.
" 4. PATENT FLUTED.
No. 5. PATENT QUARRY.
" 6. PATENT DIAMOND.
" 7. PERFORATED GLASS FOR VENTILATION.
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HARTLEY'S PATENT ROUGH PLATE GLASS,

1-8th of an inch thick, or 2 lbs. to the foot; 3-16ths, or 3 lbs.; and 1-4th or 4 lbs. is now universally used for

RIDGE AND FURROW ROOFS, GREENHOUSES, RAILWAY STATIONS, MILLS, MARKET HALLS, BATHS AND WASH-HOUSES, FACTORIES, WORKSHOPS, SHIP-BUILDING SHEDS, AND OTHER EXTENSIVE BUILDINGS.

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Sole Manufacturers of Lockhead's Patent Perforated Glass for Ventilation.

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BUILDINGS PERFECTLY RESISTANT TO WET WITHOUT ADDITIONAL EXPENSE, OR THE USE OF COMPO,

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STONE-FACED BUILDINGS AT LITTLE MORE COST THAN CEMENT.

No necessity for Iron Cramps and Bond-stones, and the Stone Ashlar never injuriously weighted by the settlement of the Mortar joints of the inside Brickwork. The INSIDE of CHURCHES and OTHER BUILDINGS FACED WITH STONE instead of Plastering. Also Dining halls, Lobbies, Staircases, &c. of Private Residences. It can be had ready for fixing from the quarries at a small cost for carriage, or prepared at home. Can be used with the ordinary Bricks of any locality, and by the ordinary workman. The CHURCH faced inside and outside in this manner, and the other Buildings at SPRING GROVE HOUNSLOW, and elsewhere, can be inspected, and all particulars obtained, of

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THE SEVRES GLASS COMPANY.

LEGENDRE AND TURPIN'S

WHOLESALE ESTABLISHMENT for the supply of CRYSTAL WHITE SHEET GLASS, First, Second, and Third Quality;

WINDOW-GLASS, Shades, Moderator Globes, Lamp Glasses, Bottles, and other Articles in White Glass, at

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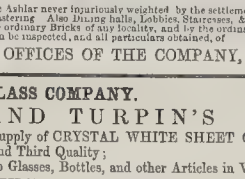

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"Monstrum horrendum, informe, ingens * * *

we might even conclude the line—

"cui lumen ademtum,"—

now grasps and gathers the fields on every side,—tops the heights of Highgate; fills up the hollows of Rotherhithe and the Isle of Dogs; *utilizes* cabbage-ground, ditches, and swamps; outruns the police at Notting-hill; and is altogether beyond the limited capacity and ability of any Board of Works.

The "village" Islington, as the poet knew it, is as much a part of town as any district within the sound of Bow bell, or "Big Ben."

"——— Where has commerce such a mart,
So rich, so throng'd, so drain'd, and so supplied
As London, opulent, enlarg'd, and still
Increasing London? " * * *

said Cowper; and he too, if living now, would wonder at the enormity of the growth, as at the inadequate provisions for it, in relations of a sanitary and moral nature, and haply would say again, with more of need,—

"God made the country, and man made the town."

Indeed, to estimate the *facts* of existing London, and gather anything beyond a confused impression of immensity, requires somewhat more than average intelligence,—whilst to grapple with the facts, with a view to improvements, may demand absolutely a colossal mind. When you hear, in the provinces, of a man who "knows London well," misdoubt the reality of the knowledge attributed to him. Show us such a man, and we would hold him a curiosity. "Horatio's servant once," who had a *friend* hard by, had not 'lighted more fortuitously upon a rare specimen of humanity.

Singular to the enlightened view of an age which recognizes the bearings of the situation and arrangement of towns, and the plan and construction of dwellings, upon morals and health, are the circumstances under which great cities have grown up. The advantages from the vicinity of a navigable river; in modern times, the concurrence of two or three roads or railways, or the means of assuaging "the insane thirst for gold," have sufficed to bring first a few sojourners, next a colony of huts, and then too generally a crowd of ill-ordered and ill-constructed buildings. Lastly of all, it is discovered that these have formed a town,—a town wanting in all the appliances which the place of habitation of man, in towns or single dwellings, requires,—and the more so, and the more elaborately devised, as the number of inhabitants is greater.

Perhaps in fixing on the site of a town—were it a matter of selection,—many arguments besides those of sanitary advantage would claim their share of attention. The choice of the site of London originally was, it may be said, a judicious choice,—for, it could not be taken into consideration that from one small spot, a vast area of habitations would be extended so as to form—not one city, but an accumulation of towns. These now necessarily vary very greatly in their conditions of soil and level; and they present, therefore, those contrasts which become so remarkable on every occasion of epidemic.

Clearly, however, whether or not the whole area now comprised in London is what should have been *utilized* for building purposes,—information of the conditions of it, especially as to soil and level, should be ready at hand. It is, indeed, obvious, that a survey of the site, and an examination of the soil should be the steps first taken, before any town or collection of houses is commenced. Where that is not done, the omission will have to be supplied; but, as in the case of a great metropolis, when impediments to such a survey may have grown up to an embarrassing extent.

One of the peculiarities of that accumulation of towns known as London, is the conformation, by which an immense portion of the area once was covered with water at every tide—and would, indeed, still be so, but for the means taken to prevent it. The *proportion* of the area referred to, is only understood by colouring a map so as to show it prominently. In some parts of London, now thickly populated, a mere island, like that which became the site of Westminster Abbey, appears as a habitable spot.

It is desirable that the method of showing many of the physical conditions of countries by means of maps, should be extended more generally than it has been to the case of towns and populous districts. Johnston's admirable "Physical Atlas" affords the suggestion of what might be carried further; and we may observe that there are many matters besides the street arrangement, or even the *physical* conditions of London, which might be well explained by maps, or better than they are at present. If the churches were prominently marked on one map, the schools on another, and public buildings generally with more distinctive marks than are now used, on a third, we think some advantage would accrue by so presenting the facts to the eye, which is not afforded by the present maps, or by mere tables of statistics. Again, the sites of the old remains, or the localities of important antiquarian discoveries, should be marked on a map. Parts of another plan, differently shaded, might show the conditions of mortality, crime, or ignorance, or of property, or pauperism, at the latest previous census or inquiry. Many other items of information should be found in an atlas of London—information which now is to be got only from detached maps (if there be such), or laboriously from other sources,—and such an atlas London requires. In short, to the great metropolis one might say,—Know thyself!

Believing that a knowledge of the nature and levels of the soil of London is essential to success in sanitary works and other improvements, we are glad now to meet with a very important contribution to the objects we have in view. Mr. Robert W. Mylne has issued a "Map of the Geology and Contours of London and its Environs,"* which to a scale of 3¾ inches to one mile, exhibits an area of 176 square miles—extending from Kew-bridge on the west to Plumstead Marshes on the east, distant sixteen miles; and from Hornsey on the north, to the Crystal Palace on the south, distant eleven miles—and shows the variations of level by contour lines, and the geological features of the surface of the ground in and around London, and gives much other useful information. The situation of the principal public buildings, and the junctions of the main streets and roads, are shown to identify localities. It is, perhaps, to be regretted, that the whole street and building plan is not filled in; but this might have required the purchase of a copyright, and have increased the cost of a map which already (at 2*l.* 10s. and 3*l.*) is somewhat expensive. The size of the map is 5 feet by 3 feet 5 inches. The materials have been derived from the author's own surveys and investigations, aided by contributions from the best sources.

* Published for the Author, by E. Stanford.

The importance of "contour maps" (showing lines of equal height), in the case of large and populous towns, is obvious. In the absence of such a map of the metropolis, the author says, a portion of his present work was undertaken nine years ago; and contour lines, deduced from various documents and extensive personal surveys, were laid down on Wyld's Map of "London and its Environs." In 1848, as our readers will remember, the Ordnance Department undertook to make for the Metropolitan Commissioners of Sewers of that day, a block survey of London with levels; and with these aids the author revised and extended his contour lines, and published, in 1851, on a small scale, a topographical and geological map. He remarks, that though the Ordnance skeleton plans referred to—on the scale of twelve inches to a mile—were an important addition to local information, no step was afterwards taken by any public department, either to complete and reduce to a more convenient size "those accurate surveys," or to construct a contour map. On the Continent almost all the capitals, as well as several of the principal towns, have been accurately contoured by their respective Governments; and in England within the last ten years, the counties of Lancashire and Yorkshire, with their important towns, besides several districts and towns in Scotland, have been similarly mapped on a scale of six inches to a mile, and published by the Ordnance Department.

The datum from which all the levels and contours in Mr. Mylne's map are taken, is the Thames High Water-mark, Trinity standard (London Docks, Shadwell entrance, 1800), which is 12½ feet above the mean tide level at Liverpool, or Ordnance datum. The contour lines represent 10 feet differences of altitude, and each 50-feet line is strongly marked and figured.

The map represents geologically, in twelve colours, the various surface soils. A large amount of accumulated ground in the old parts of the metropolis is omitted, and the original surface is substituted: also in the valleys and marshes, the alluvial deposits, varying from 2 feet to 4 feet, covering extensive beds of peat and gravel, are not shown: with these exceptions, the colours indicate the original surface soil. The geological information in the map is the result of some years' observation and inquiry, both as to the surface soils, and the substrata of London, in regard to which subject the author published a series of outline sections in 1850. He has also derived important data from the published papers and MSS. of the late Rev. H. De la Condamine, on the Woolwich district, and from the observations of Mr. Prestwich on the London tertiaries.

Besides the levels and geological features, many interesting facts relating to public works are recorded, such as the course of canals and level of water at the locks, the lines of railways and level of rails at the stations, the falls at mills and weirs, the area of the principal docks, the width of their entrance-gates, and the depth of water on the sills. The width of the River Thames, and the sectional area of the river, and maximum depth at high water, are given at several points; also, the level of the lowest spring tides, the lineal waterway of all the bridges, and the drainage area of the river. The position of the different waterworks establishments, according to the recent arrangements and improvements, are indicated, showing the level of the several filtering, storage, and service reservoirs. The boundaries of the thirty-eight new districts of the Metropolis

Local Management Act are also shown; and on another edition of the map, in place of the geological colouring, the districts are coloured, and the lines of the main sewers are marked, showing above sixty outlets into the river.

The lowest strata occurring within the metropolis are found to the south-east, or from the Plumstead boundary of the map up to between Brixton and Dulwich; for, in consequence of a remarkable disturbance, the chalk occurs at the surface, and various portions of the superimposed tertiary strata are exhibited. The Bagshot sands cap the Hampstead and Highgate hills to the north of London. The drift beds of gravel and sand, with the light argillaceous deposits forming brick earth, occupy the valleys and slopes of rising ground. Thus, in the south-east district are the striped sands, shelly clays and sands, and mottled clays of the Woolwich and Reading series; and from the Plumstead boundary to near the valley of the Ravensbourne, passing at the back of Greenwich Hospital, are silicious sands (Thanet sands). The chalk comes to a straight edge, in a line passing from Woolwich Dockyard, south-westerly, to the back of the Greenwich marshes, and again occurs in two small detached portions by the Kent Waterworks, between Deptford and Lewisham. The other tertiary strata just now mentioned, however, are interspersed with extensive tracts of the sandy clays, strong clays, and pebble bed of the London clay; and Shooter's-hill, 412 feet high; the Ravensbourne valley above Lewisham; part of the eminence adjacent to the Crystal Palace, 353 feet, and other parts, are shown as "gravel and sand." The London clay is chiefly found at the north-west of the metropolis, as at Wormwood-scrubs, Kensall-green, Portland-town, Regent's-park, Somers-town, Pentonville, Holloway, and part of Stamford-hill, and beyond these; but it also extends in narrow strips along Hackney-brook, to near Blackfriars-bridge, and to a spot at some distance in the rear of the National Gallery after following the line of the Serpentine, and encircling great part of the area of Bayswater and Kensington-gardens. It is also found at Wanstead, Leyton-street, and Church-end, north-east of the metropolis.

The "peat and alluvium" are shown in the Plaistow-marshes, the Greenwich-marshes, the Isle of Dogs, and at the Commercial Docks; south of Rotherhithe, at the Great Surrey Canal; in the lower part of the course of the River Lea; and south of Hungerford-market, and over a considerable part of Westminster. The general soil of London and of the bed of the Thames is gravel and sand, but brick earth is found at Turnham-green, Barnes, Shepherd's-bush, Fulham, Battersea; in the centre of the gravel at Kensington-gardens; in the City; at the Metropolitan Cattle Market; at Hoxton, Ball's-pond, and Stoke Newington; near Victoria-park, near Limehouse, and at Ilford, and other localities.

Information of the character above described of course renders the map of great service in many ways. A third version of it is announced, coloured to represent the districts and areas at present supplied by the different water companies. The mains will be marked in contrasted colours, and the sites of the principal wells and other particulars as to water-supply will be given on the same sheet.

Sewage Manure.—In reply to the questions asked by your correspondent, "W. O'Brien," respecting sewage manure,—Can *any* manure be deodorized without losing a great deal of its agricultural value? allow me to say, Perhaps not; but sewage manure, ere it has had time to enter into a decomposing condition, can most certainly be deodorized without losing any of its agricultural value, and not only so, but its value must be enhanced. As to the mode of effecting the deodorizing and consolidating, this is now generally known as the lime process (Higgs' patent), concerning which I send you testimonials.—W. H. jun.

THE STRUCTURAL AND DECORATIVE WORKS AT ALNWICK CASTLE, NORTHUMBERLAND.*

After the able papers you have heard from Professor Donaldson, there is little of interest that I can add.† But with your leave I should like to address to you a few words on the part I have taken in the alterations now in progress at Alnwick Castle.

In the spring of 1854, his Grace the Duke of Northumberland wrote to me from Rome, desiring to have plans and interior elevations of the entertaining rooms (copies of which are on the table), that he might consult some architects at Rome on the subject. Soon afterwards, designs for ceilings, &c. were forwarded to England for the opinion of some of his Grace's friends. Beautiful as these drawings were, I had great doubts of the propriety, as well as practicability, of introducing Italian art into a border castle. My own wish would have been to devise Mediæval decorations to a plan consistent with modern requirements, and that would have accorded with the exterior, as well as the associations of the place. I must here observe that I do not for a moment admit, what many opponents of that style urge against it,—that because the doors, the windows, and the ceilings are Mediæval, therefore the floors must be covered with rushes, and the furniture benches. It certainly was not the spirit of that style to be so cramped. The artists of those days availed themselves of the best the age produced, and the style will be most completely carried out in our present time by introducing all modern improvements that will conduce to elegance and comfort.

In this instance, however, be it observed, none of the ancient features remained internally; and indeed, the arrangement of the interior was so changed in the repairs of the latter end of the eighteenth century, that there was nothing of archæological interest to preserve; therefore, whatever was done, must necessarily be different from whatever existed in the old border fortress of the fourteenth, fifteenth, and sixteenth centuries.

His Grace having honoured me with instructions to prepare plans and elevations, my duty was to exert my utmost endeavours to arrange the best plan the nature of the structure would admit of, and to improve the external appearance by adding such features as it most required, at the same time giving every facility to the introduction of the designs of Commendatore Canina.

The foundation-stone of the Prudhoe Tower was laid by the duchess on the 25th of November, 1854, and by July in the following year, it was, together with the entrance, built two-thirds of its height, as well as rebuilding the dining-room, which had been found in too dilapidated a state to repair. 12,000 tons of new stone had been, up to that time, used in these buildings.

In the summer of 1855 the Commendatore Canini sent over Signor Monteroli, an architect, and Signor Bulletti, a carver in wood, the former to make drawings, full size, after the approved designs; the latter to carve samples to be taken to Italy to be executed, it being, at that time, intended that the whole of the ceilings and other decorations should be made in Italy.

His Grace having confided to me the general direction and execution of the works at Alnwick, it struck me, that not only the plain surfaces of the ceilings might be better done on the spot, but also some portions, at least, of the carvings, and that there was a most favourable opportunity for creating a school for carving in the Italian style. I found a person (Mr. John Brown) working for a cabinet-maker in Alnwick, who showed considerable dexterity in using his carving tools. I gave him a piece of the egg ornament to copy, in which he was so successful, that I sought out others, and gradually collected a sufficient force from Glasgow, Shields, Sunderland, and Newcastle, in all twenty-one men and six boys, who are now executing the carvings, under the direction of Sig. Bulletti, with Mr. Brown as foreman, in a manner that will be a credit to the country and themselves. For any similar employment, I can with great pleasure and satisfaction recommend them to your notice, not only as able artists, but orderly and well-conducted men.

On the walls there are plans and elevations of the castle as I found it: also, plans and elevations of the alterations now in progress.

By reference to the former plans, you will see a want of proper communication,—that the access to the drawing-room was through the saloon or the dining-room,—that the dining-room could only be approached through the drawing-room, or by a circuitous route in the bed-room passage and breakfast-room. The kitchen was also divided from the keep, in which the dining-room was situated, by an open archway, through which the carriages of the company were passing about the same time the dinner was crossing it. There are legends of patties having been blown about the court-yard. The library was far removed from the other sitting-rooms, so that after breakfast the company were separated, trusting to the next hospitable meal to bring them together again.

To obviate these defects and also increase the accommodation, I had to take down two towers,—one to make room for the Prudhoe Tower, in which are the library and the great staircase,—the other for a chapel and a staircase to the bed-rooms. I had also to obtain a better entrance, and by projecting a corridor on arches and corbels, I gained separate access to the various sitting-rooms, besides adding a picturesque feature to the exterior. The entrance is now from the covered drive in the inner court into a low hall, and thence, passing through the old wall of the waiting-room, by a staircase 12 feet wide, to a vestibule on the principal floor, 30 feet square; from thence into an ante-room, with a library on the left hand and the drawing-rooms on the right: the vestibule opens into the corridor before mentioned, and so on to the second drawing-room, the great dining-room, and the small dining-room. The vestibule also gives access to the chapel, and the passage to bed-rooms on that floor, and the staircase to the bed-rooms on the upper floor. In altering the present library into the private rooms of their Graces, I constructed a passage across the gateway, and at the end a lift from the kitchen, by which the patties may travel in safety.

These alterations caused no destruction of ancient buildings: for reference to a drawing, which shows the plan of 1630 distinguished from the plan of 1760, shows that many of the towers had been rebuilt in different positions. As, for instance, the tower on the drawing-room could not originally have been so near the hall, because a kitchen intervened. Neither could the original tower, west of the octagon towers of the gateway, have admitted the present library, and a dressing-room between it and the gateway. There is also another proof of their modern construction. In pulling down the tower where the Prudhoe tower now stands, a bottle was found in the wall, containing the following inscription:—

"This castle was built by Matthew and Thomas Mills, master masons, in the year 1764."

The mortar and masonry were also of a very different description from the old portions.

As far as my investigations go, I believe the only round tower to be that of the dining-room, and this one was in a very dilapidated condition,—the outer shell good, but the lower portions of the interior built with mud, and further weakened by three windows, that had been cut through the wall in the alteration of 1760.

This tower has had the delicate operation (which you all so well know), of having its interior picked out and a new one put in, while its skin remains the same.

During the last two years there have been about 200 men employed, viz.—Quarrymen and labourers, 42; workmen's labourers, 50; masons, 60; carpenters and joiners, 16; plumbers, 6; plasterers, 6; smiths, 10; painters and gilders, 8; carvers, 27; clerk of the works and foremen.

The building stone is from a quarry belonging to his Grace, three-quarters of a mile distant on Alnwick Moor. The steps are from

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* Read by Mr Salvin, at the Royal Institute of British Architects, November 17th.

† These papers, or portions of them, we shall give in a future number.

Rothbury Moor, twenty-two miles distant. Each step is in one stone, 12 feet long, and the landings of one stone, 12 feet square. Stones of 30 feet square and 50 or 60 feet long, may be obtained if required: its texture is very hard and of a beautiful white, free from marks or flaws.

A description of the internal decorations of Alnwick Castle, abridged from the specifications of Canina, was then given. The following is part of it:—

GENERAL ARRANGEMENTS.

It having been determined by his Grace that all the decorations should be executed after the best style of the first masters of the fifteenth and sixteenth centuries in Italy, particularly in Rome, and that nothing should be done without his approval, the execution of the various works in stucco, marble, wood, and other materials, will correspond in style and character with the best Italian work of the revival by the ablest artists; commencing at the entrance with simplicity, and increasing in richness of decoration according to the destination of the several apartments.

STAIRCASE.—GROUND FLOOR.

The *Ceiling* to be decorated with panels in stucco, with a little more ornament than in the entrance, and with a circular centre.

The *Wall* opposite the three arches to be faced with coloured marbles, with bands and compartments, of approved design; and this decoration to serve also as a continuation for the imposts and as base to the grand staircase. Opposite the stairs, an arch to serve for the decoration of a window recessed in the thickness, before which will be placed a statue or a group in marble, in order to cover the lines of the window, which are not in harmony with the internal decoration.

The *Pedestal* or *Dado* to be likewise of coloured marble, corresponding to the wall facing the entrance; and midway of this wall will be placed two candelabra, similar to those before mentioned.

The *Pavement* to be of the white stone of the country.

STAIRCASE.

The *Grand Staircase* to be decorated above with three large arches, forming together the respective cross forms of the vaulting. The arches to be decorated with stucco in compartments, with mezzotints in the ground, in imitation of the Loggie of the Vatican. A similar decoration for the ceiling, and for the ground of the arches in the walls above the imposts.

The *Walls* will be lined with coloured marbles, as also the piers of the arches, finishing at the imposts.

At the head of the stairs, on the principal floor, the same decorations will occur, with panels to correspond with the other arches; the existing windows being reduced to a convenient shape to adapt them to the character of the internal decoration. In the archway in front, and in the opposite one, will be placed a balustrade of marble, with a large candelabrum, likewise of marble, on a pedestal.

The *Flights of Stairs* to be divided by a landing, with another at the head, from which five steps lead to the vestibule or hall on the principal floor.

All the steps and landings to be of the white stone of the country.

Flanking the rake of the stairs will be a base or spandril, from which rise the pier of the arches, having imposts and dado of white marble, with compartments of coloured marble.

LIBRARY.

Ceiling.—This noble room, of a regular form, will be decorated with a flat ceiling in wood, carved and painted, with ornaments in the panels and compartments. There will be besides, in each of the main compartments, a trophy allusive to the Arts and Sciences.

The *Walls* will be covered with two tiers of bookcases, a staircase in the thickness of the wall, leading to a gallery, giving access to the upper cases.

Bookcases.—The bookcases will be carved or wrought in maple-wood, polished, the decoration being applied to forms and depths the same as those of the bookcases in the existing library.

Pictures.—In the upper part of the walls portraits of the illustrious family will be placed, on a ground ornamented and painted red.

Windows.—A large window of two heights, which occupies one side, precisely facing the entrance into the library, will be reduced to a form convenient for the internal decoration. At the sides will be placed the lower tier of bookcases, and in the space above portrait pictures, as already stated. In the same sides will be placed two portraits, sculptured in *basso relievo*, by Sig. Macdonal, of Rome.

Fire-places.—The three fire-places in this room will have chimney-pieces of various coloured marbles, with simple ornaments proportionate to their relative dimensions.

Other Windows.—At the left of the entrance of this room, at the end, another large window of two stories, crossed by the gallery to the second tier of bookcases, will also be reduced to a convenient form internally.

The wall fronting the large window will receive bookcases in two tiers, having in the centre the principal doorway marked with appropriate decorations.

Floor.—The floor of this room will be of wainscot, covered with a carpet.

SALOON.

Ceiling.—This room, for which the decorations were determined in the year 1855, is now far advanced. The form is regular, and polygonal in the centre, which occupies the interior of one of the circular towers of the castle. One portion of this ceiling was executed in wood with carvings, in August this year, to show the effect of the design made in Rome in the beginning of 1856.

A *Frieze*, with ornaments and boys on a red ground, painted in Rome by Sig. Mantovani, goes round the room, under the cornice, above which is a flat ceiling: below is an architrave, which also goes round the room; the whole forming a very rich and effective entablature.

Damask.—The walls will be covered with satin of a yellow colour, similar to Genoa tissue, of the height of 13 feet 3 inches.

Fire-place.—On the long side of the room, in the centre, will be placed a marble chimney-piece, executed in Rome, and decorated with two figures of slaves.

Doors.—In the centre of each end is a door, to be executed in the same style as the ceiling, having the same colours, and rich carvings on the panels and dressings.

Windows.—In the other walls the five windows will be decorated with archivolts carried by pilasters, within which will be painted ornaments, as also on the external part of the window shutters, to correspond with the rest of the decorations.

Window Curtains.—Rich hangings will be fitted to the windows.

The *Dado* will be of walnut-wood, from Italy, and of the height of 3 feet 6 inches.

The *Floor* will be of wainscot, covered with a carpet, harmonizing in design and colours with the rest of the decorations.

DRAWING-ROOM.

The drawing-room is of a polygonal form, composed of three sides, half octagonal, and one rectangular.

Ceiling.—A well-studied combination of the polygonal form produces the decoration of the ceiling. All this ceiling is executed in wood, and at present the ornaments are being executed: these will serve as a model, both for the carving and for the decoration in colour.

Frieze.—The frieze is composed of ornaments with boys, on a blue ground, already painted in Rome by Sig. Mantovani: a carved cornice over it will serve as an impost to the ceiling, and a corresponding architrave will complete the upper part of the decoration.

Chimney-piece.—In the centre of the longest side of this room will be placed a chimney-piece of white marble, with two canephoræ, which are being executed in Rome.

The *five Windows* round this room will have a decoration in wood, with pilasters and archivolts, and these will be painted with ornaments, as will likewise the shutters.

Damask.—All the walls will be covered with a red satin drapery, of Bolognese manufacture, from a drawing prepared for the purpose.

Dado.—In the part below a dado, like that in the preceding room, of dark Italian walnut.

The *Floor* will be of wainscot, covered by a carpet.

DINING-ROOM.

The rectangular form of this room offers a good opportunity for regular divisions, according to a drawing executed in Rome in 1856.

The *Ceiling* will be carved, and left with the natural tint of the wood. A cornice, with modillions, crowns the walls; and underneath it a painted frieze, divided into pictures of allegorical or historical subjects, as shown in a sketch by Sig. Mantovani.

Damask.—The colour of the damask for the walls to be carmine red; the height about 15 feet.

Chimney-piece.—In the centre of the long side of this room a large marble chimney-piece, composed of two figures, adapted from the most celebrated works of the ancients, agreeing with the remaining architectural decorations, but varying from all the other chimney-pieces.

Pictures.—Above this chimney-piece will be placed a large frame, carved to correspond with the ceiling and chimney-piece. It will contain a picture, now in the present library. On the other side walls will be placed similar portrait pictures.

The *Dado* will be of choice wood, divided into panels, alternately plain and carved, of the height of 4 feet 7½ inches. The carving to be of the style of that in the choir at Perugia, and other similar examples. In the divisions of the parts above will be arranged ornaments, supporting cornucopiæ for lights, as well as two small candelabra above the chimney-piece.

Doors.—To preserve symmetry, it is proposed to place doors, two at each end of the room, with moulded jambs and entablature, the panels and mouldings enriched with carvings.

THE CHAPEL.

The decorations of this chapel being in the Mediæval style, it is intended to introduce in the lower part mosaic decorations, especially in the parapet or fascia at the base of the windows; having compartments of Alexandrine work, like those in the ancient Basilicas, and in Westminster Abbey, composed of hard stones, such as porphyry, serpentine, &c.

The space under this parapet, down to the skirting of the floor below, will have like decorations; but instead of "Pietre dure" they will be of Majolica.

The *pavement* of the passage in the centre of the floor, and the space where the communion-table is placed, will be arranged in divisions of mosaic, like the parapet under the window.

Such is the brief statement of the structural and ornamental operations of the most important class, now carrying on at Alnwick Castle. The style of decoration that has been adopted will, of course, admit of a variety of opinions among artists and men of taste, arising from education, predilection, and consequent habits of thought. But, it will be allowed, that the style has not been selected without much and deep consideration, and is justified by the precedent of all periods. And all must agree, that the execution of the work is being carried out with a grandeur of idea, a munificence, a considerate love for the arts, and with a generous public spirit worthy the characteristic nobility of the princely line of the Percys. T. L. D.

In the course of the discussion which followed, the Chairman (Mr. Scott) observed, that there were few questions attended with greater difficulty to the architect than the mode of dealing with castles. For the last half-century it had been the fashion to build new castles; and although Mr. Salvin had built the most complete one—a perfect model of a mediæval fortress—that gentleman must excuse him for expressing his opinion that building castles was one of the greatest fallacies that could now be carried out. They were not necessary, as in the Middle Ages, and it was a great mistake to suppose that a building to be erected in the Mediæval style must be a castle. He most earnestly hoped that they had seen the last of *new* Mediæval castles. The restoration of *genuine* Mediæval castles was entirely another question. The examples which had come down to the present time were glorious remnants of the art, and of the noble thought of the artists of former days, who designed these structures with the greatest ability, and carried

them out with a grandeur of idea and a nobleness of sentiment unequalled by the works of any age. These venerable relics deserved the most careful conservation, and in any alteration of them it would be right, as Mr. Salvin had done, to restore them, in all general features, to their ancient state. These buildings, however, in most cases were now occupied by noblemen who had not, as in former times, to defend the borders against a neighbouring kingdom. He agreed with Mr. Donaldson, or rather with the sentiments of the Duke, expressed by Mr. Donaldson, that a nobleman of the present day should not immure himself in a fortress or live in a guard-room; but in going beyond that point, he thought it his duty, as representing in some degree the Gothic class of the profession, to say, that he believed there were others besides himself who would think the Duke had been mistaken in the rest of his logic. This difference of opinion he (the Chairman) wished to express in the most tender manner. The Duke had been animated with the most noble feelings, and had called to his assistance an architect who, in the particular style in question, was one of the ablest in the profession; and he had also secured the aid of one to whom they owed much for the learned manner in which he had investigated ancient art, and the valuable works he had produced, and in regard to whom the greatest respect and tenderness of treatment were due, from the melancholy circumstances of the moment. There was not the least reflection on the judgment of Canina. He had carried out the works at Alnwick most admirably in the style which had been chosen: the only possible reflection would be upon the logic of the Duke of Northumberland, which had induced him to adopt that style, and consequently to place the work in the hands of Signor Canina. His own opinion was that the art of the Middle Ages was just as capable of being applied to the wants of the present day, and particularly to the fitting up of Alnwick Castle, as the art of any other period. The great principles of decoration were the same in every style. Those principles arose from nature, and it was therefore quite compatible to carry out all that was required at Alnwick in the same style as the architecture of the exterior of the building, as in the style derived from the Renaissance Palaces of Rome; and further, that in doing so, Mr. Salvin might have done much more towards carrying out and developing a style of our own than could possibly be done by carrying out the Italian style. It might have been possible to take up the spirit of that style in such a manner as to have formed a style of our own; and with all due respect for the noble and generous sentiments of the Duke of Northumberland, and more especially for the great abilities of Signor Canina, he must repeat that he thought his Grace had made one of the greatest and most lamentable mistakes which had been made in the present day.

Mr. M. D. Wyatt, honorary secretary, observed that Mr. Scott had alluded to himself (Mr. S.) as identified with mediæval architecture in this country. Mr. Scott's sentiments, however, differed so much from the mediæval spirit, and were so consonant with the spirit of our own times, that he (Mr. Wyatt) thought he should be rescued from such an accusation. Mediæval decoration was generally spoken of as if it were necessary that the precedent of our forefathers should be taken exactly as they had left it to us. In this country, neither sculpture nor painting had been developed in such perfection in mediæval times as would be required now. A general code of grammar was an excellent thing; but he hoped that the chairman and all those who advocated the revival of mediæval art, would endeavour to disengage themselves from the rigid trammels of the past, and to fling away the shell, now that they were happily [illegible]

Mr. Pocock, Fellow, considered that the Duke of [illegible] architecture of the fifteenth and sixteenth centuries, because, in that style, the architecture of ancient Greece and Rome had, in fact, been reduced and adapted to modern wants. It was very different, however, with regard to mediæval architecture and decoration, which had not been so modified at present; but which he hoped it would be under the able hands of its professional admirers. A nobleman, however, seeing such an adaptation as the Italian style prepared to his hands, would naturally rather adopt it than attempt to carry out the mediæval style, and incur the risk of failure, without first [illegible] such something executed in accordance with it.

Mr. Jennings, Mr. Donaldson, Mr. Ashpitel, and Mr. Fowler, jun. also spoke.

Coating Iron with Copper, &c.—Mr. E. R. Southby, of Bulford, Amesbury, has patented some improvements in coating iron with copper; and Mr. W. Tytherleigh, of Birmingham, has patented a new or improved method of coating or covering iron, or articles of iron, with copper or alloys of copper.

THE PROPOSED DECORATIONS AT ALNWICK.

I feel most reluctant to make an act of individual munificence the subject of public discussion; and had it not been formally, and no doubt with the consent of the Duke of Northumberland, brought before the Institute, I should never have ventured to intrude my opinion; but such having been the case, and it chancing to be my turn to take the chair on the occasion, the discussion was really forced upon me, and I must plead this as my apology for begging you to insert the following remarks, intended to form a part of a chapter upon the restoration of ancient mansions in a little work I have in hand on the subject of secular architecture.—

"A truly lamentable error has recently been fallen into at Alnwick Castle. That stately structure, the home of the ancient Percys, a place replete with the most stirring historical reminiscences, and the scene of an infinity of romantic incidents, had, from the effects of time and injudicious alterations, in great measure lost its ancient character. The present Duke of Northumberland conceived the princely idea of its thorough restoration—a work which, so far as the exterior is concerned, would appear to have been exceedingly well carried out by his architect, Mr. Salvin. At this point, however, his Grace appears to have become alarmed, and to have asked himself whether he was to sacrifice his future comforts and the luxuries of modern life, and to immure himself within the stern apartments of a feudal fortress. The true answer is obvious, — that nothing of the kind was necessary; but that, on the contrary, he had before him the noblest opportunity ever offered of bending the beautiful style of the fourteenth century to meet the usages and refinements of the nineteenth; and I heartily commiserate the architect whose unhappy lot it has been to let it slip. Whether the princely lord of Alnwick thought he had no other alternative between the debased Gothic of Windsor and (what I hope I shall be pardoned for calling) the mimic feudalisms of Peckferton, I know not, but the result was this, that happening at the time to winter in Rome, his Grace became enamoured of the interiors of the Renaissance palaces, and fostered the unfortunate idea of making his ancestral residence a feudal castle without, and a Roman palazzo within; and this is now being actually carried into effect, in a manner so liberal and so costly, as only to render one's grief the more poignant, that a scheme conceived in so princely a spirit should be ruined by an unhappy error.

The works are not being carried out by the duke's excellent architect, Mr. Salvin, but by artists brought from Rome for the purpose, at the head of whom was the celebrated and now lamented Canina. From the description of the works given by Professor Donaldson (who, in conjunction with Professor Cockerell, has inspected, and I regret to say, approved, what is going on), it appears that most of the choicest works are to be executed in Italy; but that for the more ordinary carving, a school has been established on the spot under the direction of Italian artists; every possible pains being taken in instructing local workmen in the exotic art, as if it were now for the first time introduced into England. Conceive, for one moment, what would have been the result had all this liberality and energy been directed to instructing them in the true style of our own country; and had these simple workmen, instead of being perplexed by drilling them into producing forms of ornament which they cannot comprehend, and which have no relation to the forms of nature with which they are surrounded, been directed to study the ancient works within their reach, as at York, Durham, or Hexham, or in those cloisters of which it is said, that—

> "Nor herb nor floweret glistened there,
> But was carved in the cloister-arches as fair."

And if they had been then taught that the true mode of carrying the art to still higher and higher perfection, was to study and arrange for themselves the works of nature which surround them at every step, learning from them ever new beauties and ever fresh ideas—beauties and thoughts not belonging to one age of the world, but to all time—though varying in every country as nature has seen fit to give variety to its productions!

I will not dwell longer on this subject than to call attention to two singular and not uninstructive considerations which it suggests. The first is this—that though the so-called "revival of art" took place in Italy some three or four centuries back, and all Europe has been working at it nearly ever since, it appears, on the evidence of the most distinguished architect in Rome, that its best productions are the works of the first revivers. This certainly does not say much for it as a *progressive* art. The second is not unlike it—it is this: that though the revived Roman architecture was transplanted into England some 250 years since, and is considered by our architects to be so thoroughly acclimatized and naturalized that they stand by it as if it were as much the Englishman's birthright as Magna Charta itself, the unwelcome fact has at length oozed out, and, unpalatable as it must be, is confirmed by the united testimony of our two respected architectural professors, that if we wish to carry out the style in its perfection, the proper course is to import architects from Rome to do it. Surely this is sufficient proof that it remains an exotic art!"

I have, since writing the above, read with great interest the paper in your last number, bearing initials which can never fail to ensure attention. I remember remarking when I came from the discussion at the Institute, that the bearer of these initials had evinced that kind of amused interest in it which a man of conscious orthodoxy would feel in an argument between the advocates of two opposing heresies, and his letter quite carries out the idea. I really think, however, that the differences between my view and his are not, after all, very wide.

He exposes the error fallen into in language stronger than I was master of. He, of course, agrees with me also in thinking that the reproduction of the internal forms of a feudal fortress would have been a frivolity: we want no strongholds along our borders, and do not ask our nobles to immure themselves in mimic fortifications. He next agrees with me in the opinion that the true course would have been to introduce into the interior every elegance and refinement that the skill or taste of modern times could suggest, and he details the mode of doing this almost exactly as I should have done. Where, then, do we differ? Merely in this, that he thinks that this should have been done in utter forgetfulness of all pre-existing styles; while I, convinced that this is morally impossible, would make the finest period of our national architecture (which, by a happy coincidence, is the same which would appear to have been that of the old castle) the ground upon which I would have endeavoured to develope that free and untrammelled architecture which I would advocate.

It is quite clear that the result which "J. F." has in his imagination has considerable affinity to that which I also had in view: for while he describes the contrast between Italian and Gothic art as producing a "painful discord," a "pantomime," &c. he speaks of what he suggests as producing "little incongruity," and as being "in fact, the goal to which the former style" (that of the fourteenth century) "*was tending*." It is manifest from this that he considers the style which correctly represents the present age to have, to say the least, a far closer relationship to that of England in the fourteenth century than to that of Rome in the sixteenth.

I will not endeavour to defend the attempts which have been made at the adaptation of Gothic architecture to our wants from the criticisms to which they are naturally open. The earlier of them were made before the style was in any degree understood: many others have been placed in the hands of persons who, though known as good house-builders, were equally well known *not* to be Gothic architects. The Palace of Westminster is as superior to such works as Barry to Batty Langley. It may have its faults, but if the next great work in that style bears the same proportion in merit to Westminster which that bears to Windsor, I

will only say that it will be the glory of all lands and the admiration of all ages.

One great fault, if I may be allowed to say so, in the Westminster work is that its style is founded upon that of a period at which our architecture had long passed its prime, instead of taking as its groundwork the truly beautiful and refined style of St. Stephen's Chapel,—a work worthy of any age, and (as I believe) contemporary with Alnwick Castle.

GEO. GILBERT SCOTT.

INSTITUTION OF CIVIL ENGINEERS.

AT the opening of the session on the 11th instant, the president, Mr. R. Stephenson, on taking the chair, said, that for some time past the state of his health had been so precarious, as to render it doubtful whether he could remain in England to be present at the first meeting of the session: he had been extremely anxious on this point, as he wished to meet the members, before his departure on a journey which might have a duration of at least two months, and thus cause his absence at the period of the annual general meeting, when the election of the council and officers for the ensuing year would take place. The president then made some remarks on the office of president and on the papers read last session.

After the reading of a paper "On the Improvement of Railway Locomotive Stock," by Mr. D. K. Clark, Assoc. Inst. C.E. which had been previously printed and circulated, a communication was brought forward, claiming for Mr. James Kennedy, of Liverpool, the merit of having first introduced a locomotive with horizontal cylinders and a cranked axle, inasmuch as it was asserted that they were first applied by Mr. Kennedy in the "Liverpool," which was stated to have been started on the 22nd July, 1830, and was employed in aiding in the construction of the Liverpool and Manchester Railway.

Mr. Roger Salter, after the meeting, explained two models of his self-acting penstocks, or flushing machines, for cleansing house drains and sewers. These machines were of two kinds, the one having a valve hung horizontally, the other a valve, or gate, hung vertically. In house drains, a tank, or cesspool, was formed for the collection and retention of all the waste water running from the house, say in the course of one day, and thus this water which would otherwise possibly help to create the necessity for flushing, would itself act as a flushing medium. If the rain-water also was allowed to run into and collect in this tank, then the number of flushings would be increased. It was believed that the mechanical arrangements for making flushing tanks self-acting were novel and important.

THE LATE MR. J. M. RENDEL.

AT a meeting of the Institution of Civil Engineers, on the 25th inst. Mr. Brunel, on taking the chair, announced to the meeting the decease, on the 21st instant, of Mr. James Meadows Rendel, past president of the Institution, and proposed, as a mark of respect for the memory of the late distinguished member, to adjourn the meeting. This proposition was unanimously agreed to, several members availing themselves of the opportunity of expressing their respect and esteem for their late friend, and their sympathy with his family for the heavy loss they had sustained.

The late Mr. J. M. Rendel was a native of the West of England, where he was practically instructed in the executive part of the profession, and was early selected by that acute observer of talent, Mr. Telford, for laying out and constructing considerable lengths of turnpike roads in Devonshire and Cornwall; and the difficulties he there encountered and overcame, tended much to give him that self-reliance so useful to him in his subsequent career.

After being engaged in several large works in his native district, he undertook the construction of the cast-iron bridge over the River Laira, near Plymouth, at the express desire of the Earl of Morley, who had the discrimination to discover the latent talents of the young engineer, then only twenty-two years of age, and to his exclusive direction, with the approval of Mr. Telford, was entrusted the execution of that important work. It was commenced in the year 1824, and was completed in 1827, as described in the first volume of the Transactions of the Institution. This was soon followed by the construction of the floating steam-bridge for crossing the estuary of the Dart, near Dartmouth, somewhat on the same principle as those subsequently established by him for crossing the Hamoaze, between Torpoint and Devonport, as described in the second volume of the Transactions, and later still, those at Saltash, at Southampton, and at Portsmouth.

He was engaged also in the distribution of the water mains at H. M. Dockyard, Devonport, and on the waterworks at Edinburgh.

In the year 1838 he removed from Plymouth to London, and soon became extensively occupied on important works, and was engaged in the Parliamentary contests of that remarkable period in the history of engineering. Among the numerous works upon which he was occupied may be mentioned the Montrose Suspension Bridge; the Inverness Bridge; the Leith, and the East and West India and London Docks, where he designed and executed extensive improvements, amounting to partial reconstruction.

The design for the construction of docks at Birkenhead, Cheshire, of such an extent as to create a formidable rival to Liverpool, brought Mr. Rendel very prominently before the world, and the protracted contests on this subject will not only be long remembered in the history of Parliamentary committees, but the evidence given by the projector and other engineers, as now collected, forms a valuable record of the state of engineering practice. The almost incessant labour and the mental anxiety inseparable from this undertaking, were more than even his powerful constitution could support, and it is feared that they tended to shorten his valuable life.

The daring project of constructing a dock at Great Grimsby, by projecting the works far out upon the mud banks of the River Humber, was next successfully accomplished; and he commenced the two great works which alone suffice to hand down his name to posterity, beside those of Smeaton, Rennie, and Telford,—the Harbours of Refuge of Holyhead and Portland; both these works were conceived with the largest views, and have been carried on with great rapidity. In both cases the system was adopted of establishing timber stages over the line of the jetties and depositing the masses of stone, of all dimensions, by dropping them vertically from railway waggons into their positions; thus bringing up the mass simultaneously to above the level of the sea. In this manner, as much as 24,000 tons of stone have been deposited in one week, and to supply this vast demand, monster blasts of five or six tons of gunpowder were frequently employed.

Among the other works upon which Mr. Rendel was engaged, should also be mentioned the constructions on the River Lea, and the improvements of the Nene river; the latter a work of considerable difficulty, and not yet completed. He was also employed by the Exchequer Loan Commissioners to report upon the drainage and other public works in Ireland.

He was less engaged in railways than in hydraulic works, but in England he executed the Birkenhead, Lancashire, and Cheshire Junction line, and in India he had the direction of the "East Indian" and the "Madras railways," the former projected by Mr. Macdonald Stephenson, as the first of the vast system now being formed, and which will work such a revolution in the destiny of the Indian Empire. The Ceylon and the Pernambuco lines were also under his charge.

With his high qualities, which were fully appreciated, it need scarcely be mentioned that he rose rapidly to a very high position in his profession. He became a Fellow of the Royal Society, and was elected upon the council. He was a very early member of the Institution of Civil Engineers, having joined it in 1824. He had been for the last sixteen years upon the council, and held the post of president during the years 1852 and 1853.

MODEL LODGINGS IN THE STRAND.—A company, we hear, is being formed for the erection of a model lodging-house in Eagle-court, Strand. Miss Burdett Coutts has promised, it seems, to take 1,000*l.* of shares, if the remaining 4,000*l.* are subscribed; endowing St. Michael's Church, Burleigh-street, with the profits of her investment.

MEDALLIC ARCHITECTURAL ILLUSTRATIONS.

M. WIENER, of Brussels, of whose medals we have before had occasion to speak, is executing a series illustrative of the buildings of all countries. Of the English series (published by Messrs. Elkington) we have before us those representing, inside and out, Lincoln Cathedral, York Cathedral, and St. Paul's, London. That of Henry VII.'s Chapel, Westminster, is also nearly finished. These medals are exceedingly well executed: the effect given to the interior of St. Paul's, with the slight relief obtainable, is very striking. M. Wiener is the artist who made the medals for the Universal Exhibition of Paris.

It is to be regretted that medals are so little prized comparatively in Great Britain that the practice of medal die engraving is nearly confined to one family.

COMPETITIONS.

Aylesbury Cemetery.—We understand the designs of Messrs. Poulton and Woodman have been selected out of thirty-five submitted in competition. The buildings are to be in the decorated Gothic style, and the estimated cost is 1,800*l.*

Litchfield Museum.—A competitor asks for information respecting the competition plans of the "Litchfield Public Museum and Library," which were sent in on September 22nd.

Castleford Burial-Ground.—Mr. Sykes, the clerk to the local Burial Board, asks us for the name of the writer of the rhymes in our last, headed, "To Architects. Competition. Prize of Five Pounds;" seeming to think that they were rather directed against himself, than written to benefit the class to whom they are addressed. We cannot comply with his request, but he may rest assured there is no personal "malice" in the case. Mr. Sykes says:—

"E. G. B. cannot regret more than I did that the premium should be so low, but it was a matter over which I could have no control. The amount was *not* fixed by the Burial Board, but by the ratepayers in vestry assembled. It was at first proposed that the sum should be *two* pounds; and it was, I believe, only on my ridiculing the idea of such a sum being offered (which I considered would be an insult to the profession), that the larger sum was agreed to."

Berwick Corn-Exchange.—The "Memoranda for the use of Architects," just forwarded to me from Berwick, says:—"The total cost of the structure and fittings must not exceed 2,750*l.* * * * * * The architect whose design, primarily or otherwise, shall be proposed to be adopted, shall, on application by the company's secretary, furnish full and complete working specifications, and on doing so shall be entitled to receive from the company the sum of 40*l.* unless he be appointed surveyor of the works, in which case he shall perform the duties of a surveyor, or superintending architect, in the usual way, and be entitled to a commission on the expenditure at the rate of 5 per cent. (such commission not to exceed 125*l.* in the whole), and no more."

Now, according to the methods in use in London, 5 per cent. upon 2,750*l.* amounts to 137*l.* 10s.; and after vainly endeavouring to solve this discrepancy in other ways, I have come to the conclusion that probably, as Berwick-on-Tweed is a town by itself in the United Kingdom—with special Acts of Parliaments, laws, customs, and so forth—there is a special mode of calculation in use there. If this be so, it will, of course, be necessary to follow it in estimating for work to be done in Berwick; and I have, therefore, requested them to send me a copy of the Berwick edition of Cocker, to aid me in my estimate.

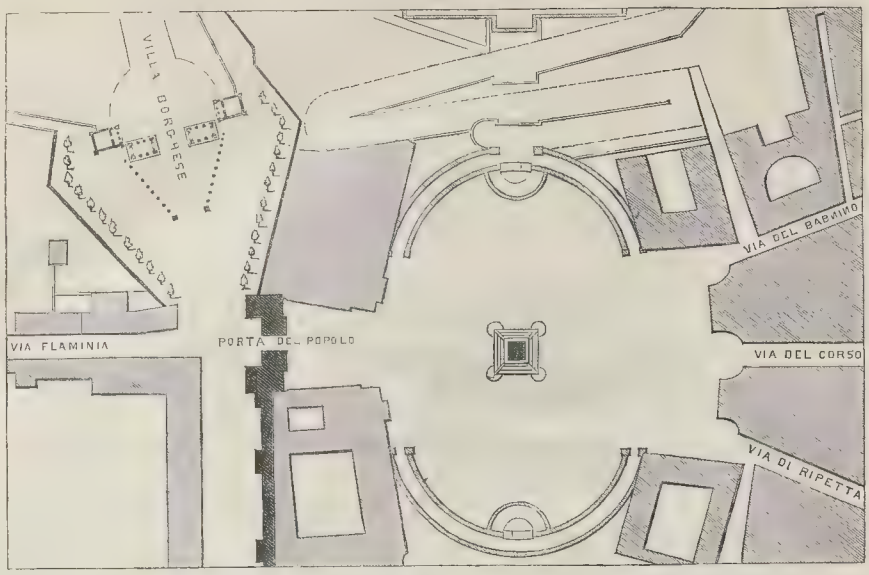
WALKER.

PROPOSED OFFICES FOR THE METROPOLITAN BOARD OF WORKS.

AT a meeting of the Metropolitan Board, held on Tuesday, the 25th instant, a report was brought up from a Committee on the Site of Offices, which recommended, "That a proposal be made by the Board to the Corporation of the City of London, for taking a portion of the site of the former Fleet Prison, in Farringdon-street, having a frontage of 100 feet, on a building lease, for a term of eighty years, at a rent of four guineas per foot."

Mr. Leslie objected that the report only referred to the frontage, and that there was no plan of the ground; and Mr. Hows said that to give four guineas per foot for a freehold in the City was absurd, especially while they had ground of their own, well adapted for the purpose, in Greek-street, Soho.

Various other members spoke and objected to the site, and at length the further discussion of the subject was adjourned till Friday.



PLAN SHOWING SITE OF THE VILLA BORGHESE, AND NEW ENTRANCE.

LONDON AND THE CHARTER OF SANITARY REFORM.

Mr. Leslie's second lecture, "On the Metropolis, viewed from the great Sanitary Charter, the Metropolis Local Management Act," at the Royal Polytechnic Institution, on Tuesday evening last, was attended by a much larger audience than the first, and who manifested deep interest in the subject.

The chief points brought out in this lecture were the uncompromising hostility of the lecturer to cesspools and cesspool reservoirs; that they were behind the age in which we lived, and were a disgrace to humanity. He cited the case of two houses he occupied in Conduit-street, where, in the year 1843, he had destroyed eleven cesspools, substituting very small tiles, at a uniform inclination of fall into the sewer, and that for a period of thirteen and a half years he had not been called upon for one sixpence additional expense: storm waters, rapid thaws, had all been discharged without the slightest inconvenience, and he considered, that while enjoying great sanitary advantages, he had been a great pecuniary gainer by the outlay, 12*l.* 10*s.* for each house; that his example was followed about fifteen months afterwards by Mr. F. O. Ward and Mr. Owen Jones, the same tradesman being employed to do both their houses exactly as his had been done. The lecturer then traced the sewage matter rapidly discharged from his house as fast as it was generated into the street sewer, and thence into the great cesspool reservoir of the King's Scholars-pond, and showed from an official report of the year 1849, that in its first mile from the river there were 6,000 loads of filth, and that this obnoxious deposit extended to a depth of about 30 inches for a mile and a half up the sewer; that a horse was introduced to drag a plough and harrow; that the only admission for the horse was at the outlet, and the operation was only possible for a very short period of each tide; that subsequently the plough and harrow were attached to a barge, and by keeping the gates closed until there was a difference between the level of the sewer and the Thames of 8 feet, then suddenly opening the gates, thousands of loads of the filth were swept into the Thames.

The lecturer asked if the audience supposed that this abomination was in some outlandish, uninhabited portion of the large metropolitan area? No; he said it was in the parish which he had the honour to represent at the Metropolitan Board of Works, St. George's, Hanover-square, in the fashionable district of Belgravia, passing all around her Majesty's town residence, Buckingham Palace, the mile and a half described terminating about midway up the Green-park, in the direction of White Horse-street, Piccadilly, from Buckingham Palace.

He showed that, in the last cholera visitation in the sub-districts of St. George, Hanover-square, the proportions of deaths in 1,000 persons were, twelve in Hanover-square, twelve in Mayfair, and forty-nine in Belgravia.

This brought out the remedy, which consisted, according to the lecturer's views, in passing this northern sewage in a culvert, under the bed of the river, to the deep intercepting sewer from Putney, through Battersea, Southwark, and so on to Sea Reach, as described in our last week's publication.

The lecturer then read the awful amount of mortality through those black portions of the map in Surrey and Kent, where the intercepting sewer would thoroughly and effectually drain. This mortality in several of these parishes exceeded a fifth of the whole population. The lecturer cited Milton, who was born in 1608, in Bread-street, Cheapside, as one of the earliest complainers of sewers:—

> "As one who long in populous city pent,
> Where houses thick and sewers annoy the air,
> Forth issuing on a summer's morn, to breathe
> Amid the pleasant villages and farms
> Adjoin'd, from each thing met conceives delight."

The lecturer then showed that the sanitary charter prevented the Metropolitan Board of Works from continuing or constructing any works that might be a nuisance, and he cited cases where disease had originated from opening cesspools and cleaning out house drains, and called upon his audience to examine immediately the state of the drains, and to abolish cesspools of every kind, these being quite as dangerous as having barrels of gunpowder under their habitations. He concluded with the announcement that he should give a third lecture in the same theatre, on Tuesday, the 2nd of December.

The Soulage Collection.—This very beautiful and important collection of works of Italian art, mainly of the fifteenth and sixteenth centuries, bought, as our readers know, by a body of gentlemen, with the disinterested view of securing it for the country, is now being arranged in Marlborough House, and will probably be opened to the public in the course of ten days. It consists of 800 objects, and will occupy three rooms. The works of art purchased at the Bernal sale will occupy two other rooms; so that, together, the exhibition will be one of great interest. We postpone some observations on the Soulage Collection, as we intend to illustrate one or two of the specimens.

ENTRANCE TO THE VILLA BORGHESE, ROME.

Seeking to place before our readers illustrations of some work of the late Luigi Canina as an architect, we have been enabled, by the kindness of Mr. Arthur Ashpitel, to engrave a view of the Entrance to the Villa Borghese, with a plan showing the site of the villa and the approaches. Mr. Ashpitel, in sending us the materials, writes as follows:—

"It gives me a melancholy pleasure to enclose the only drawings I have of the works executed by my late friend the Commendatore Luigi Canina. As may be expected of such a city of the past as Rome, there is little scope for the skill of the active practical architect. Except some new houses in the Piazza at the end of the Via Fontanella, and some additions to the Palazzo Borghese, I think I saw little of his works at Rome. His great restoration of the Aqueducts had been scarcely commenced, and nothing that he carried out at Turin has been published.

The annexed sketches, however, have especial interest. They consist of a new Entrance, or '*Ingresso*,' to the Villa Borghese, in lieu of that destroyed in the famous '*quarant' otto*.'

The prince had either seen or heard of the works executed at Munich, in the Greek style, for the King of Bavaria, and Canina's designs are based on the same style, but are no doubt in a purer taste.

The site is close to the entrance to Rome, by the beautiful Piazzo del Popolo. The design is that of a double Greek Propylaion: it is carried out to a fine scale, each of the columns being about 25 feet high, and the entire construction is that of the Attic period. The roofs, and their covering, acroteria, antefixa, everything is exactly as if it was in Attica. It is, perhaps, the only perfect imitation of ancient Greek art, in all its details, now in Europe."

Early Closing.—We are informed that a move in this direction has been made by the mahogany and timber merchants in the metropolis, a meeting having been held at Garraway's Coffee-house, on Monday evening, November 17, at which several influential members of the trade pledged themselves to the principle, and formed a committee for the purpose of canvassing the trade for its universal adoption.

ENTRANCE TO THE VILLA BORGHESE, ROME.—The Late Luigi Canina, Architect.

PROVINCIAL NEWS.

Bath.—An advertisement appears in the local *Chronicle* of a proposed public building to be undertaken by shareholders, to contain a music-hall of large dimensions, a winter garden, pump-room, &c. near the Marlborough-buildings entrance to the Victoria-park. It is projected that the winter garden (under glass, of course) should afford to residents and visitors a promenade in wet weather, and it is proposed to bring the Bath waters to the new pump-room, in pipes, the surplus water to be used for ornamental fountains in the grounds, which it is contemplated to lay out in the style of the gardens of the Tuilleries at Paris. To effect these objects it is calculated that a capital of 10,000*l.* will be required, and it is proposed to raise this sum in shares of 10*l.* each. The designs for the new building have been prepared by Mr. J. Wilson, of this city, architect.

Liverpool.—The Dock Committee last week considered a motion, to the effect "that a special committee be appointed for the purpose of laying out the land between the Prince's dock and the Canning half-tide dock, and [considering?] whether any and what alterations shall be made in the existing docks and basins, with a view of giving improved facilities to the trade of the port; and also to take into consideration the present defective approaches to the landing-stage, to confer with the special committee of the council as to the best means of improving them, and report to this committee." The vice-chairman (Mr. Rankin) was of opinion that it would be better that the sub-committee should take a very general instead of a limited view of dock extension and improvements, both as to the accommodation of shipping in the provision of wet and dry docks, and the giving of facilities to the approaches to the landing stage. That some extension of the docks must take place there could be no doubt, when they bore in mind that within the last half-century the trade of the port had doubled itself every fifteen years, and that since 1848 the return of the income showed an increase of 113 per cent. per annum. With these facts before him he would move as an amendment, "that a special sub-committee be appointed to consider and arrange a plan of dock improvement and extension, and to confer with a sub-committee of the council with regard to the approaches to the landing-stages, the widening of the streets along the line of docks, and the transfer of the baths (on George's-pier) and the adjoining lands from the corporation to the dock trustees." Some discussion followed, in the course of which an opinion was generally expressed that to include in the motion the wide question of dock extension would swamp the entire question, inasmuch as Parliament would in all probability decline to give them the necessary powers, having already thrown out a Bill for the purposes referred to by Mr. Rankin. The suggestion of Mr. Rankin with respect to the "baths and adjoining property" was ultimately included in the original motion, which was carried by 11 to 9, the words "in the existing docks and basins" having been first struck out. A committee was then formed.

Dudley.—The Netherton Tunnel Works are being rapidly proceeded with. The whole of the face work is being done with Tividale blue bricks, and the string courses, copings, inverts, canal curbings, quoins, drains, &c. with the same massive material, the moulded work being glazed on the face surface. This latter improvement is the invention of Mr. Gilbert, of the adjacent tile works, who is supplying the contractor.

Darlington. — A fountain, designed by Mr. Handyside and executed at his works, has been ordered for Mr. Pease, and will be placed in a stone basin, in Darlington Market-place. It will stand on a granite pedestal 2 feet above the level of the water, and is made of cast-iron. At the top, at a height of 14 feet from the base of the metal part, are figures of two children embracing, and betwixt them a bell-shape jet is fixed, which delivers a circular cascade enveloping the figures, and falling into a vase or basin, surrounded by six lions' heads, from the mouths of which six jets descend into a larger basin. The top basin is supported by three dolphins, from the nostrils of which six jets arise, which intersect the others. These are received into a large basin, which is supported upon a pedestal, having in each of the four square compartments a lion's head, from the open mouths of which the water is ultimately discharged into the stone basin.

Cockermouth.—The directors of the Cumberland Union Banking Company, finding that their old premises were inconveniently small, succeeded in purchasing the house lately occupied by Mr. E. B. Steel, which, by the direction of Mr. Charles Eaglesfield, they have converted into a banking establishment, by an entirely new arrangement of the ground-floor, and adding a new polished stone front up as high as the first-floor, which is of white stone, and the other part is finished with Portland cement.

CHURCH-BUILDING NEWS.

Kingscote (*Gloucestershire*).—The church here has been restored by Mr. Teulon. It has a chancel and nave, with western tower, and there is a chapel on the north side for Col. Kingscote's family. The architect has restored and in some places inserted new windows and has re-roofed both the chancel and the nave; re-seated the nave all in oak, with pulpit and prayer-desk, and put stalls in the chancel, with new sanctuary rails. The east window, a three-light early decorated, is glazed with grisaille glass, with some colour, and also the side lights. A canopy tomb, containing a sculpture in marble, by Manning, is laid on the north side of the sanctuary. The work has been completely carried out, and all the stone work of the tower, with its beacon turret, carefully restored.

Gloucester. — At the meeting of the town council on Thursday in last week, Messrs. Medland and Maberly's plan for the new cemetery was selected as the most desirable out of about sixteen, and the council are advertising for tenders for certain portions of the work.

Lydney.—On the 20th inst. the consecration of Aylburton chapel and burial-ground, in the parish of Lydney, took place. The chapel, rebuilt on a new site, given by Mr. Charles Bathurst, of Lydney-park, has been completed at his sole expense. It is dedicated to St. Mary, and consists of a nave, south aisle, and chancel, with tower at the west end.

Newcastle-under-Lyne.—The parish church has been closed for the purpose of effecting some improvements. One alteration, says the *Staffordshire Advertiser*, is the throwing open of the vestry to the body of the church, in order to give additional room for the children connected with the schools. In taking down the wall an old arch, in the Early English style, has been uncovered, and is in good preservation. It is supposed to have been one of the principal entrances to the church. The mode of lighting has been improved by a large coronal chandelier, suspended from the ceiling. Eight smaller lights are placed under the galleries.

Great Brington. — "The Rose Memorial" painted glass window has been completed by the artist, Mr. Geo. Hedgeland. It is composed in the Perpendicular style, to accord with the architecture of the building, and consists of five compartments with pierced tracery above; the three centre compartments being those in which the figures are painted. The wings are filled with a quarried ground, on which are inserted typical medallions, and the colour of the glass in the wings assimilates with that inserted in the piercings of the tracery above. The subject is "The Three Marys at the Sepulchre with the Angel after Our Lord's Resurrection." The devices in the quarried ground of the wing compartments are the emblems of the four Evangelists, the whole being surrounded by a crown border of fifteenth century.

Harrow.—Upwards of 4,000*l.* having been subscribed towards the completion of Harrow School Chapel, the works have been resumed, and it is hoped that in a year the two remaining portions of the design (including a memorial aisle to the Harrow men who fell in the Crimea) will be ready for use. From 800*l.* to 1,000*l.* will still be wanted, if the spire, projected by Mr. Scott, is to be a part of the work, and some minor details finished as they ought to be. The boys have opened a subscription for a new organ for their new chapel, and which already amounts to more than 200*l.* Two stained-glass windows of a costly description have been ordered for the chancel apse; one the produce of a collection in the chapel on founder's day last year, and the other the gift of a former Harrowian, now an undergraduate at Oxford. Others are expected to follow these, from subscriptions in the masters' houses and other sources.

Sedgefield.—The foundation-stone of a new chapel for the Wesleyan Methodists was laid in this village on Thursday in last week. Mr. Haswell, of North Shields, architect, was engaged to prepare plans and specifications for the new chapel.

Cockermouth.—The new cemetery here has just been completed: it occupies a piece of ground of about five acres, situated on the south side of the town, upon the side of the old road to Keswick. The grounds have been laid out by Mr. Charles Eaglesfield, of Maryport, architect, who supplied the plans, &c. for the chapels and lodge. The chapels are placed so that the divisional gravel-walk, which separates the consecrated from the unconsecrated ground, goes through betwixt the two chapels by an open archway surmounted by a tower and spire, adjoining which is a vestry and waiting-room for each chapel. The chapels are each lighted by three lancet windows on each side, and at the end of each there is a three-light lancet window, with a small circular light above. The roof, which is open timbered, as well as the other fittings, is stained and varnished. The walls are built of blue limestone, with white freestone dressings.——A new Roman Catholic Church has just been finished here, consisting of nave and vestry, provision being made to add a circular apse at some future time should they require additional room. The building is Gothic in character, and lighted by five cusp-headed two-light windows on each side. The south-west end has a triple-tracery window, and is surmounted by a bell-turret and cross. The roof is open, of stained deal, having curved ribs and hammer beams. The architect was Mr. Thomas Gibson, of Newcastle. The works were executed under the superintendence of Mr. Jonathan Cape, of this town, builder.

Sutton (*Suffolk*).—A school, capable of accommodating 120 children, with master's residence attached, has just been erected in this parish. The buildings are designed in the style of the old brick houses so frequently found in Norfolk and Suffolk, a picturesque effect being obtained by the introduction of moulded and black brick-work. The total outlay will be between 500*l.* and 600*l.* The works have been executed by Mr. Canham, bricklayer, and Mr. Whitehead, carpenter, both tradesmen residing in the village. The architects are Messrs. Morgan and Phipson, from whose designs the parish church is also about to be nearly rebuilt, and a new parsonage erected.

SCULPTURE FOR CEMETERIES.

Now that new cemeteries are being formed in every direction, would it not be well to consider how, independently of the plan upon which they are laid out and planted, they might be made ornamental by the introduction of gravestones of a more tasteful design than the hideous white slabs which at present seem indigenous to our churchyards? I have lately seen a pretty little cemetery, opened only two or three years ago, which is already disfigured by the stonemasons' work. You have, through the *Builder*, brought about very many improvements, and you can, through the same medium, draw attention to this subject. I would venture to suggest that a sum of money be offered for competition for the best series of designs, to be afterwards given to the public, for monuments and gravestones suitable for the middle and lower classes, for those persons who cannot afford to pay for novelty of design. Should this meet with your approbation, I am sure many would contribute towards such a prize, and many would try to gain it; and competent judges would, I think, be willing to undertake the task of deciding on the merits of the different competitors.

Being quite ignorant of the arrangements which would be previously necessary, and of the amount which ought to be offered for competition, I apply for advice on this subject. I would gladly undertake all that I, in my humble situation, could do towards raising a subscription for such an object.

A Member of a Mechanics' Institute.

THE HALF-HOLIDAY QUESTION.

In perusing the pages of your valuable publication of the 8th instant, headed "The Half-holiday for Workmen," and bearing the signature of "A Master in the Building Trade," and being connected with the movement as a committee of building operatives in Manchester and Salford, we beg the privilege of a reply. In doing so, we cannot but express our surprise that the master builder should proceed so prematurely to pronounce judgment before making himself conversant with the movement. The master-builder writes, that whilst the workmen do not intend to obtain it at their own expense, masters are unable to give it, and he is certain the public will not pay for it. We are of an opinion that the public will more readily accede to the workmen's request than in any other measure previously laid before it. Who but the public have so nobly contributed to the establishment of those useful and important Mechanics' Institutions, which are an infinite honour to our country, and show to the world that the claims of the operative are not disregarded by the higher classes of society? But what use are these institutions, however valuable, if the workmen have not an opportunity to use them for intellectual improvement?

Again, the master-builder wishes to know whether it is reasonable to suppose that if one of his workmen is called on to work on a Friday and Saturday for one of his customers, after working four days elsewhere, he will pay him two full days' wages? Our answer must be, No.

For his information we beg to state, that the principle laid down for the boon is, that a trifling advance be charged for the five days, so as to cover the cessation from work the three hours on the Saturday afternoon, and the time worked on Saturday morning be charged in proportion to time already worked on the five days; and, if disposed, the masters may so arrange their future contracts as to meet the desire of the operatives without difficulty or loss: and surely we may flatter ourselves on success, when we consider how generously the public have provided for the workmen's instruction in our free libraries and other institutions. Will the public not extend its philanthropy further, and thus place within our limits that which will prove a lasting benefit, not only to us, but to the working population of the country at large?

Hoping our request will be acceded to with perfect good feeling, is the wish of

THE COMMITTEE OF THE BUILDING TRADES OF MANCHESTER AND SALFORD.

CONFERENCE AS TO LONDON DRAINAGE SCHEME.

A deputation from the Metropolitan Board of Management met Sir Benjamin Hall, at the office of the Board of Works, Whitehall-place, on the 20th inst. when Mr. Thwaites reviewed the reasons of the Metropolitan Board for adopting the plan B, which the First Commissioner of Works had rejected, but expressed the desire of the Board to discuss the subject with him in a friendly spirit, a sentiment with which Sir Benjamin expressed his cordial concurrence. Mr. Thwaites asked him what plan would be satisfactory to the Government as to the point of discharge, and Sir Benjamin read a letter from Captain Burstall, R.N. whom he had consulted on the subject, and by whose decision he appeared inclined to abide.

Captain Burstall, in his communication, submitted "that the nearest point to London at which the outfall should be made so as at all times to be certain that the fullest proportion discharged at one-and-a-half hour before high water, would not flow in or near the inhabited part of the metropolis, is in the upper part of Erith Reach, fifteen miles from London-bridge, 7-8ths of a mile from Erith Church, and a quarter of a mile below Jermington Point, nearly opposite Rainham Creek. From this, as a point of outfall, commencing at one-and-a-half hour before the time of high water there, the upper portion of the sewage," he continued, "would (at springs) be opposite Barking Creek, and at neaps off Woolwich, in the lower part of the Barking Reach, near the metropolitan boundary. It cannot, therefore, be said that, even from this position, the sewage would be perfectly clear from the eastern limit of the metropolis area at spring tides, but it is certainly far enough from any inhabited district to guarantee that, with those inflows caused by the north and north-west winds, the river would not be polluted in the vicinity of Woolwich. The additional length of drain necessary to be constructed by this outfall is exactly one mile, and the additional portion of river above it thus freed from sewage, would be 7-8ths of a mile. For similar reasons as those above stated, I would beg to suggest that the outfall at the north should be at Rainham Creek, which would be an extension of 5-8ths of a mile beyond that proposed."

The letter concluded by pointing out some alleged discrepancies of proportion in the reservoirs on Mr. Bazalgette's plans, and on which some discussion took place between the latter gentleman and Captain Burstall. Mr. Carpmael then asked whether the deputation were to understand that the plan indicated in Captain Burstall's letter as to the points of outfall was satisfactory to the First Commissioner: to which Sir B. Hall replied, "Yes. What I mean to convey to the deputation is this,—that I have consulted Captain Burstall as to the nearest point of outfall that would meet the requirements of the Act, and Captain Burstall has stated that the two points set forth in his letter are the nearest points that would meet these requirements. I don't think I should be justified in asking you to go beyond these points. I should then be asking you to expend money for purposes other than was considered by the Legislature necessary for the metropolis. Therefore, I shall be perfectly satisfied as regards the outfalls if those set out by Captain Burstall be adopted. Of course, the capacity of the reservoirs must be accurately determined, because the fixing upon the point of outfall will be of no value unless the reservoirs are of such capacity as to allow the outfall within a certain space of time."

Subject to the general revision of their own engineer, "so far as they are concerned," therefore, the Metropolitan Board were given to understand that they were required to agree upon a plan fixing the point of discharge north and south, as indicated by Captain Burstall, no explanation as to which, Sir Benjamin intimated, could be allowed to alter its spirit and meaning, although the Metropolitan Board were free to go farther down the river if they chose.

Thus far, then, the matter is arranged, if we can properly say so, although we can scarcely consider the question as finally settled, even yet.

THE TRISECTRIX AND THE CUBITRIX.

In your number for November 15, there is a paper under this heading, signed "J. P. W." which, on examination, I find professes to solve the ancient problem of the trisection of an arc; for it is stated, that "the point N trisects the arc A E." I beg, however, to be allowed to point out two fundamental errors in the formulæ, which will, I think, completely nullify the solution. The equation (1.) may be put thus:—

$$\sin.\tfrac{1}{3}\theta = \tfrac{1}{8}\sin.\theta + \sqrt{\left\{(\sqrt{1-\tfrac{1}{4}\sin.^2\theta} - \cos.\theta)^2 + \tfrac{1}{3}\sin.^2\theta\right\}}$$

Now, if this equation is always true, it is so when $\theta = 180°$, or $\sin.\theta = 0, \cos.\theta = -1$, $\sin.\tfrac{1}{3}\theta = \sin. 60° = \frac{\sqrt{3}}{2}$. Putting these values in the equation, we have—

$$\frac{\sqrt{3}}{2} = \frac{2}{3}, \text{ or, } 27 = 16,$$

which is palpably false.

Secondly, the equation (3.) is obtained by differentiating (1.). If we take the case of $\theta = 0$, or, $\cos.\theta = 1$, $\sin.\theta = 0$, $\cos.\tfrac{1}{3}\theta = 1$; the equation (3.) becomes—

$$1 = \tfrac{1}{3},$$

another palpable error.

The "differential calculus" is a very keen weapon, which "J. P. W." has handled carelessly, and thereby cut his own figures; for he attempts to prove the truth of a simple trigonometrical formula by differentiating it!

E. W. T.

ELECTRO-TELEGRAPHIC PROGRESS.

The Atlantic telegraph is now assuming a very decided shape, so far as preliminaries to the actual spinning of the wire is concerned. "The Atlantic Telegraph Company (limited)" is already initiated at 117, Bishopsgate-street Within, and they have ordered the wire, and propose to lay it down next summer. The capital (350,000*l.*) is being collected in 1,000 shares, payable by instalments. The projectors are Mr. Brett, Mr. Field, Dr. Whitehouse, the electrician, and Mr. Bright, of the Magnetic Telegraph Company. A prospectus with other documents has been printed and privately circulated, further publicity being considered unnecessary. It is estimated that the net receipts will annually amount to 40 per cent. of the capital subscribed. Mr. Morse calculates that 14,400 words may be daily transmitted, or about 480 messages, and that arrangements may be made for doubling the number. The London messages sent between 10 a.m. and 3 p.m. will reach New York of course at earlier periods of what may be called the same business day on which they are sent, so that a message despatched at 10 a.m. on a Saturday, for instance, may reach an office in New York *before* 10 a.m. on that day, or, figuratively speaking, may be sent in "no time," and some little perhaps to spare over and above. The Americans will not be able to return the compliment in precisely the same way, but will also have it in their power to accommodate their London correspondents otherwise. All doubt and difficulty as to the practicability of laying and working the telegraph have disappeared, it seems, so that men of skill and experience, such as Mr. Morse, in telegraphing, and Lieut. Maury in nautical surveys and sea affairs in general, are quite confident of success. Lieut. Maury has invented a method whereby the cable will be secured, even though a storm may oblige the ship from which it is payed out to cut and run. Our Government have offered to aid in the work, and to assure the company in 4 per cent. on their capital for Government messages. A Government vessel will assist the United States one in the laying of the cable.—— The electric telegraph having reached Constantinople, efforts are being made to extend it to Alexandria in Egypt, and thence (as already conceded) to the Red Sea, whence a submarine line will continue it *viâ* the Persian Gulf to India.——The London and North-Western Company have at length adopted one of those numerous suggestions which we have assisted in urging for the public safety,—namely, a special train telegraph, by which at every two miles intelligence is conveyed of "train on," or "train off," or of accident by the way.——Notice is given that application will be made to Parliament next session for Acts incorporating, respectively, the European and Indian Junction Telegraph Company and the Atlantic Telegraph Company. Supposing these projects to be carried out, they will constitute two of the greatest enterprises of modern times. The former is to compose the intermediate link in the chain of telegraphic communication between London and India; whilst the latter company, as we have before noted, proposes to join the wires of the American telegraphs with those of Europe. Thus the complete engirdlement of the globe by the electric wire may be said to be on the cards as a project fully resolved on; for although it is not yet proposed to connect India *eastward* with America, so as to positively complete the whole ring or circle, India will really and practically be connected with America without that further link in the chain, so soon as the two projects resolved on are realised.

PLASTER CAST-WORK.

In reply to "who is to blame for bad plaster cast-work," I think it will be generally allowed that as there is scarce a master plasterer left, of any note, the builder having monopolized the whole, it is but right that he should bear his full share of the blame. Those who do not execute their own plastering sublet it to any one who will do it the cheapest, and most likely the worst: that party, after being largely employed for a time, in the end calls his creditors together: such a case occurred very recently.

Respecting the present system of contracting much might be said. It is quite evident the work requires to be carried out under a much stricter inspection then it has hitherto been. It is to be hoped that the Office of Works will set the example in that respect. If architects were to make a reserve of the plaster ornament, so that the execution of it might be more under their own control, that would be one way of meeting the evil complained of, and we might have the work fit to be seen when done, instead of the reverse, which is now generally the case.

A Practical Man.

THE SOCIETY OF ARTS.

The first ordinary meeting of the 103rd session of this society was held on Wednesday, the 19th, at their house in John-street, Adelphi; Colonel W. H. Sykes, the chairman of the council, in the chair. The chairman in his opening address congratulated the members on the increased comfort and accommodation which had been placed at their disposal since the last session, but reminded them that the Society of Arts and its domicile for nearly a century, would soon be separated by the termination of their lease, which would expire in ten years. He hoped that the society's next home would be suitable to its position and development. The present state of the silver currency and the gold question, were then adverted to; and the chairman subsequently stated, that as an additional incentive to candidates for examination beyond the honourable certificates of competency which they might obtain, the council had thought it desirable to institute money prizes, and for the prize fund further subscriptions were invited. The late Mr. Wood, chairman of the Board of Inland Revenue, was considerate enough to place at the disposal of the council, as prizes, a couple of situations in his department. His unexpected decease had, however, deprived the council of these rewards for competent candidates; but the council still hoped that the heads of departments will not be wanting in the desire to aid in their laudable efforts to stimulate self-instruction in manhood. The paper read at the last meeting was by Dr. Forbes Royle, F.R.S. "On Indian Fibres," being a sequel to "Observations on Cordage, Clothing, and Paper Materials."

THE ARCHITECTURAL ASSOCIATION AND THE INSTITUTE.

PERMIT me to say a few words in reply to the letter you have inserted from Mr. E. C. Robins, especially as it appears side by side with your own brief notice of the late meeting of the Association, and its purport is to cast some doubt on the existence of that *entente cordiale* between it and the Institute which you bear testimony to.

That there is the element of youth in the Association is true enough: the remark was never more so than of the present Committee; but that there is not in this question "inexperience and precipitancy" is amply proved by the very long time the Committee have taken to consider the proposal of the Institute. Their excellent letter in reply to it is before your readers, who, I feel confident, will see in it an entire absence of every unworthy motive short of that to which the official documents of the Institute give expression.

I question, sir, whether Mr. Robins's brother associates of the Institute (many of them eminent architects) will feel flattered by his peculiar definition of the cause of their taciturnity at its meetings; but of one thing I feel sure, and that is, that the acts of the two societies will be dictated by what they respectively consider best calculated to further the general welfare of the profession, rather than by that *pitting* of one society against the other so much to be deprecated in all our personal discussions of the question, and that there is little likelihood of the associates engaging with our Association in the noble game of "Leap-frog" or "Follow-my-leader," to which they are all invited in that gentleman's somewhat angry communication. WILLIAM YOUNG.

*** It would seem to be unnecessary for us to insert any other letters on this subject. The Association has carefully weighed the proposal to join the Institute, and, having decided in the negative, there the matter must rest, at all events for the present. We cordially wish the Association, as originally founded, the greatest success, convinced that the energetic prosecution of the objects it has in view must tend to further the interests of the art and its professors. We should, nevertheless, regret if it ultimately resolved itself into a body of architects eligible as members of the Institute, but holding off as opposed to its constitution or management. This, however, we need not now discuss.

ADORNMENT OF OUR ROADS.

"AN unemployed C. E." shows us, in your impression of the 22nd inst. how many of our principal public roads have been curtailed of their former fair proportions; how the gardens that formerly ornamented these roads, with their lawns, and bushes, and sweet-smelling flowers, have been covered with long rows of ugly shops; and how these thoroughfares have been thus contracted, thus disfigured, and thus injured. The evil of covering these gardens with buildings might have been more tolerated if the buildings had possessed any architectural beauty; but they do not; and instead we have miles of the clumsiest-looking shops that can be seen. No doubt the utilitarian tendency of the age, together with the neglect and carelessness, or incompetency, of the great majority of our parochial authorities, has been the main cause of it: every foot of space has been economised and made use of as much as possible, no one in authority apparently caring how or in what manner. The result is sad. London, the largest, the wealthiest, the most important and influential city in the world, may almost be regarded as the most ugly. True, the character of the suburbs is greatly improved; many villas and mansions there are a credit to us, but the general body of the metropolis is deplorably deficient in architectural embellishment and wise sanitary arrangements, and, consequently, injurious to the health and education of the inhabitants.

The dense patches of old, crowded, tumbledown houses in various parts—the haunts of vice and the sources of disease in this great metropolis—should be swept away; the principal public roads, particularly those entering the metropolis, should not be suffered to be further injured in the manner they have been; and means should be taken to make these and other principal thoroughfares not only as perfect as possible as regards communication, but as agreeable as possible as places of promenade. Hence they should be embellished, have more trees, more statues and fountains. The public never begrudge money's worth.

It is now established, upon good authority, that dwelling-houses, even of the most ordinary kind, may be built in strict accordance with sound architectural principles and design, and with a little ornament added to them, at very little more expense than the present workhouse style costs; and I think that our architects, for the sake of their own high art, ought to make this clearly manifest to the public.

Let the members of the Institute of British Architects and the Architectural Association, instead of devoting so much of their attention, as they do, to details, direct some of their studies towards the achievement of the best style of common dwellings on a large scale.

It is beyond all doubt that very much remains to be done in this direction; and by such improvements as I have briefly named the public health and morality would be greatly improved, and our metropolis made more worthy of a great nation. L. W.

Notices of Books.

A Manual of Gothic Surface Ornament. J. H. and J. Parker, London and Oxford.

MESSRS. PARKER are publishing a series of Manuals of Gothic Ornament, and the little book now before us is the third of the series. No. 1 was devoted to stone carving, No. 2 to mouldings. The object of the present manual has never before been separately treated on, and deserves to be carried even further in a more expensive work hereafter. The Manual, at 1s. 6d. with its *thirty plates*, is a miracle of cheapness, and could not have been produced but for the stores of illustrations the publishers are able to fall back upon. As a sample of the letterpress, and a useful exhortation, we extract the passage on the surface ornament most used in the Decorated style:—

"It is in this style that we find the greatest variety of diaper-work. It is always used in profusion, and of very various design. Natural objects are imitated with great exactitude: the leaves of the oak, the vine, and other plants are used, and sometimes animals are introduced.

This was certainly the best period of mediæval sculpture. All employed in art had applied themselves to their great instructor—Nature; and their study in this school had given to their works a freshness and a freedom not to be found at any other period. The woods, the fields, and the garden were laid under contribution, and their capitals, their crockets, and finials, were made up of truthful copies of real leaves and fruit. The river and the sea were not forgotten, for water-plants, and even sea-weed, were used for the purposes of decoration. But their skill was not confined to the mere *copying* of natural forms, but lay more in the *adaptation* of them to the architectural purposes for which they were wanted. The member on which they are used never loses its character: a capital is a capital, though composed of leaves, each of which is a truthful copy of nature. This adaptation requires artistic skill,—something more than mere manual dexterity; but these qualities seem to have been combined in the workmen of the fourteenth century, and must be again before we can have any original works equal to theirs. But there is no reason why modern workmen should not be at least equal to the earlier ones: the same nature is before them; the same inexhaustible magazine of form to draw from: the same materials exist in as great profusion as ever; and modern science and art *ought* to give to the workmen greater facility of execution than was possessed by their predecessors. Mind alone is wanting; the strong enthusiasm for the works of nature; the deep feeling for the beauties of external objects; and, above all, a solemn reverence for the Hand which formed and fashioned all these wonderful objects,—this is still wanting. The soul directs the hand; and, though it may not always be able to give form and substance to the imaginings of the mind, still no great work will ever be accomplished, no original conception ever be carried out, unless the two be combined."

The British Almanac; and the Companion to the Almanac or Year-book of General Information for 1857. London: Knight and Co.

THE "Companion" for the present year includes papers, amongst others, on the state of the Decimal Coinage Question, by Professor de Morgan; the Postal System; Arbitration in Trade Disputes; the Material Progress of British India (an elaborate view), and a paper on Metropolitan Communications and Thames Bridges, chiefly as to Westminster, attributed to Mr. Edward Hall. The section on Architecture and Public Improvements occupies twenty-four pages, and is illustrated by engravings of the Congregational Church at Wicker, Sheffield; the Peers' Staircase in the House of Lords; some details of Rochester and Westminster Bridges; and a view of Tavistock-chambers in Southampton-street, Strand, where Mr. Charles Gray has shown his skill in the management of brickwork, and established for himself a distinctive reputation. The article is succinct and comprehensive. Touching the use of external colour and of compo, the writer says, in his introductory observations,—

"Questions appertaining to architecture are now commonly discussed. Although the value of external colour in materials, and of truth in structure, have been too much neglected; for the future state of taste, it would be as unfortunate that either or both should prevail to the exclusion of other equally important attributes of architectural art, as that the present state exhibited in ordinary town and suburban buildings should be accepted as satisfactory. It is quite erroneous to view the use of imitative cement, or 'compo,' as maintained by 'our architects:' compo is demanded by the public and given by the speculative builders for several, with them, very cogent reasons. It is always worth inquiring whether the prevalence of any course may not partly arise from some element of correct principle, and whether a particular opposite course—even were it for a time attractive by its freshness—might not itself be a mere exchange from one partial form of acceptance of the several required principles of good architecture to another. For the best art in architecture will prevail only when *all* the attributes of the art are understood and put forth. Some of these proper attributes may be consistent with the use of cement: others may be absolutely inconsistent with it as an imitative material: effect as to colour may be got by treatment of brickwork, but it does not follow that every building which is so far successful, has all the attributes referred to, some of which may be best expressed by stone, which, it should never be forgotten, is the material which affords the most scope for expression, as well as for the development of all the attributes in their due relation. Where external colour is designed, —as properly it is in many buildings—coloured *materials* indeed afford the best medium of its application. But the highest efforts in external colour do not approach the beauty of what has been called 'Nature's own polychromy,' expressed by weather tints on the stone,—an element in the effect of architecture which, presenting as it does that contrast to the regularity of lines which is required, is of the highest value. The uniform or shining surface of cement is unfavourable to such effect; but equally in attempts to substitute for the work of Nature any strong artificial colouring, some degree of disadvantage is attendant. The argument from the smoke-laden atmosphere of towns must indeed have weight. Still it must be understood that the grandest architectural results are resigned or lost whenever so much impurity as now exists in a London atmosphere prevails."

Mr. Knight must pardon us, if, without any desire to find fault, we complain that a glance through the book has shown us more errors, typographical and otherwise, than ought to exist. We will mention a few, in order that the next issue may be corrected. Thus, the Office of Works is called Office of *Parks* (p. 39), and Mr. *Inman* is said to be the Surveyor of Works there instead of Mr. Hunt (p. 40). Colonel Lloyd, called the British Minister at Bolivia (p. 54), died at Therapia, we believe, in 1854. There is no such body as "The Commissioners of Sewers for the Metropolis" (p. 77), the Metropolitan Board of Works (not mentioned) should take its place. The Office of Metropolitan Buildings no longer exists (p. 78); nor does the School of Design, at Marlborough House (p. 79): the Department of Science and Art should be named instead of the latter. Mr. Thomas Cubitt was not eighty-eight when he died, but in his sixty-eighth year (p. 219). Daines's process is called *Davies's* (p. 224); and for Mr. Cuning, Dr. Oldling, Mr. Poulson, Messrs. Habersham, Mr. Chitton, Mr. William Cubitt, &c. should be read Mr. Cuming, Dr. Odling, Mr. Poulton, Messrs. Habershon, Mr. Clutton, *Sir* William Cubitt, &c. The writers of the articles could not have seen proofs. These, after all, however, are but specks, and "Knight's Almanac" continues to be an indispensable adjunct to every writing-table.

ALUMINIUM CHEAP AS IRON.—In an interview we recently had, says a writer in the *Medical Times*, with one of the firm of Rousseau, who have obtained a patent for a process of obtaining aluminium from clay, this gentleman informed us that he had little doubt of being able to obtain the metal at as low a price as iron: thus, in a few years we may be carried across the ocean in ships of aluminium, and our bells and musical instruments, all our cooking utensils, and an immense number of articles of daily use and ornament, will in all probability be made of this light, beautiful, indestructible product of clay.

Miscellanea.

River Lee Improvements.—The trustees of this navigation have for several years past been expending large sums of money in enlarging, rebuilding, and deepening the locks, bridges, and waterway, and giving increased facilities on the tidal arms communicating with the Thames at Bow-creek and Limehouse. Amongst other improvements, a new pair of locks have been built at Old Ford, and embankments made so as to throw the river into one level from the tidal portion to Tottenham Mills, a distance of about five miles, where a new lock was built some years since by the trustees. It is therefore anticipated that great facilities will be given to the eastern suburbs of the metropolis in the carriage of bricks, lime, manure, ashes, stone, and other heavy materials, by the saving in transhipment and increased freights carried. The works, according to the *Herts Mercury*, were opened for traffic on the 15th instant, by the Marquis of Salisbury, chairman of the River Lee Trust. The new locks are placed side by side, so as to economise water by working alternately from each other: they are 18 feet 6 inches wide by 100 feet long, and 16 feet wide by 90 feet long respectively, and have 7 to 8 feet of water over the cills, being fitted with every convenience for the increasing trade of the district.

Tendering for Glass. — The complaint of "Vitreus" is well founded. Architects and builders, however, are not so much to blame as the glass manufacturers, who publish a tariff made up of anomalies and absurdities originating in fiscal regulations of former days: the time has arrived for a change, and by referring to your advertising columns, at all events one new tariff will be seen adopting a more simple nomenclature, also abolishing hieroglyphics and high nominal prices. Attention to the definition of the qualities given will prevent the ambiguity complained of. A great desideratum is an authoritative work for the use of architects, builders, &c. giving a short account of each description of glass, so that it might be seen what weights and sizes were incompatible with the manufacture, with instructions as to the correct definitions: also, the applicability of the various sorts of glass; in short, how to put "the right article in the right place."—James Hartley.

A New Calculating Machine.—We read in the *Moniteur*, that M. Thomas, of Colmar, has lately made the finishing improvements in the calculating machine called the "Arithmometer," at which he has been working for upwards of thirty years. Pascal and Leibnitz, in the seventeenth century, and Diderot, at a later period, endeavoured to construct a machine which might serve as a substitute for human intelligence in the combination of figures, but failed. M. Thomas's "Arithmometer" may be used without the least trouble or possibility of error, not only for addition, subtraction, multiplication, and division, but also for much more complex operations, such as the extraction of the square root, involution, the resolution of triangles, &c. A multiplication of eight figures by eight others is made in eighteen seconds; a division of sixteen figures by eight figures in twenty-four seconds; and in one minute and a quarter one can extract the square root of sixteen figures, and also prove the accuracy of the calculation. The working of this instrument is, however, most simple. To raise or lower a nut screw, to turn a winch a few times, and, by means of a button, to slide off a metal plate from left to right, or from right to left, is the whole secret.

The "Builder's" Smokeless Fire.—I was much pleased to see the subject of "smokeless fires" brought under the notice of your readers again at this seasonable time of the year. A gentleman told me that he had tried it, and the fire was not touched, but kept burning from 7 a.m. to 7 p.m. We have had fires burning eight hours in the same way. But there is one thing in your correspondent's letter which I think is wrong: it is the recommending a piece of sheet-iron for stopping up the bottom of the grate. What would be much better is a piece of fire lump for a bottom, as also the sides and back, on the principle of Leslie's patent. A high authority in such matters says,—"A grate surrounded by iron is an absurdity, as the metal conducts the heat away rapidly: it should be backed and lined with fire-bricks or Welsh lumps, which throw out the heat with great power. In an open fireplace, the active combustion is wanted in front, and there only should air enter the fire: in most grates the air enters below, causing the greatest heat to be thrown upon the ashes. It may be thought that closing up the bottom would produce the same effect as allowing it to be choked up with ashes in a common grate, deadening the fire. But this is not the case if the bottom is placed slanting outwards, and formed of fireclay: the ashes can be removed in front, and from all the draught being in front there is a bright fire at the place where it is required."

H. Childs.

Lectures at Aldershott.—It is interesting to hear that a series of lectures, open to the whole garrison, are in course of delivery at this camp, on the following useful and entertaining subjects:—Capt. Collinson, Commanding Engineer, four lectures on Mechanics; Mr. Grant, Inspector of Schools, four lectures on Natural Philosophy; Capt. Murray, R.E. four lectures on Construction of Barracks; Rev. J. W. Hayward, Chaplain, four lectures on Geology and Natural History; Mr. Stent, architect, four lectures on Architecture; Mr. Watling, two lectures on Natural History; Rev. J. E. Sabin, Chaplain, two lectures on "Old England 160 Years Ago;" the Chaplain-General, two lectures on "Eminent Men who have risen from the Ranks;" C. Lefroy, esq. one lecture on "How the Earth is made;" and the Rev. T. R. Maynard, Chaplain, one lecture on "What I saw in Spain."

Power of a Railway Company over a Street Frontage Line.—In the Vice-Chancellor's Court, on 20th inst. *in causa* The London and Blackwall Railway Company *v.* The Limehouse District Board of Works.—Mr. Rolt and Mr. Greene, on behalf of the plaintiffs, moved for an injunction to restrain the defendants from demolishing and in anywise obstructing the progress and completion of the plaintiffs' buildings, now in course of erection on the plaintiffs' land, for the purpose of a new station and railway over the Commercial-road, and from demolishing or in anywise obstructing the progress and completion of any other erections or buildings, whether temporary or permanent, erected or built, or to be erected or built, for the purposes of the railway or station at Stepney, upon the ground purchased by or belonging to the plaintiffs, so that such erections or building as were intended permanently to remain do not project beyond the front or inner line of piers of their bridge now crossing the Commercial-road. The Board of Works for the Limehouse district, which had been constituted under the Metropolis Local Management Act (18th and 19th of Victoria, chap. 120), which received the Royal assent on the 14th of August, 1855, objected, on the part of the general board, as well as on their own part, to the proposed station of the plaintiffs at Stepney, on the ground that it was being erected beyond the regular line of buildings in Commercial-road, and that the previous consent in writing of the Metropolitan Board of Works, as required by the provisions of the Metropolis Local Management Act, had not been obtained.—The Vice-Chancellor, without calling for a reply, said that he must grant the injunction. He thought it plain upon the construction of the statutes that, express powers having been vested in the company by their Act for special objects for the benefit of the public, no general powers in a subsequent Act would override them.

Russian Archæological Discovery. — The labour of removing a cairn 250 feet in height, carried on for nearly five years, near Alexandropol, in Ekatarinoslaw, has just been completed, with the discovery of numerous articles of gold, silver, bronze, and clay, as also of iron shafts and rods, nails, skeletons of horses, and ornaments of gold, the whole in excellent preservation. In comparing the well-known passage in *Herodotus*, respecting the burial-place of the Scythian kings, with the present discovery, it is clear that this is one of the catacombs mentioned by him; and sanguine hopes are entertained of further discoveries.

Railway Matters.—The works at the Dover end of the East Kent line have been commenced by the sinking of a shaft for a tunnel under the western heights, which will bring the terminus of the new line right into the middle of the town, and close on the harbour.——The railway traffic returns for the United Kingdom for the week ending November 15, amounted to 424,964*l.*; and for the corresponding period of last year to 401,832*l.*: showing an increase of 23,132*l.* The gross receipts for the eight railways having their termini in the metropolis amounted to 180,591*l.*; and last year to 175,374*l.*: showing an increase of 5,217*l.* The increase on the Eastern Counties amounted to 1,065*l.*; on the Great Western to 2,306*l.*; on the London and North-Western to 1,410*l.*; on the London and Blackwall to 150*l.*; on the London, Brighton, and South Coast to 909*l.*; on the London and South-Western to 1,015*l.*; and on the South-Eastern to 353*l.*: total, 7,209*l.* But from this must be deducted 1,990*l.* decrease on the Great Northern. The receipts on the other lines in the United Kingdom amounted to 244,373*l.*; and for the corresponding period of 1855, to 226,458*l.*: showing an increase of 17,915*l.*——Herapath is of opinion, that before many years elapse, there must be separate lines for goods and passengers. Such is the magnitude of the goods traffic on the London and North Western, that, in 1855, the receipts for goods very nearly equalled those for passengers, being 1,353,500*l.* for the former, and 1,489,600*l.* for the latter, and exceeded the whole united working expenses, passenger duty, and rates and taxes by 22,400*l.*

The Turner Monument in St. Paul's.—In the Vice-Chancellor's Court, on Friday in last week, before Sir Richard Kindersley, the trustees of the late Mr. Turner, the artist, applied by petition for the residue of a sum of 1,241*l.* after payment of costs, to enable them to carry out the deceased artist's wish to have a monument erected in St. Paul's Cathedral, where he desired to be buried, "among his brothers in art." It was likely that tenders for designs might be invited, and prizes awarded for the best; but all the petitioners asked was, the sanction of the Court to enable them to be unfettered in their discretion. The Vice-Chancellor said he wished to leave the trustees as unfettered as possible, both as to the design and the erection of the monument, but, before the money was paid out, it was right the Court should have some tangible evidence of what it was wanted for. He wished the matter, therefore, to stand over till the trustees could mature their scheme, and bring it before him. It thus appears that, at all events, there is no longer any fear, such as there has been, that there would be no residue to expend, as funeral expenses, if they may be so called, according to the deceased's wish.

Art Exhibition at Norwich.—The Exhibition of Works of Art at Norwich has been opened. In reference to the progress of local art, especially in the Norwich school, a local paper says:—The attempt which has now for the last few years been in progress, to create, through the assistance of the Schools of Design, a more practical knowledge of the principles of art, both with a view to their application to manufactures, and to an improvement and elevation of the general taste of the nation, has not at present been, perhaps, so efficacious in Norwich as might have been anticipated. But this has not originated so much from a want of taste, or of an appreciation of the beautiful in nature and in art, as from the total want of direction in its pursuit. The School of Design and the Fine Arts Association have, to a certain extent, been instrumental in tending "To create a soul out of the ribs of death," and again to bring art to bear upon the public mind with as much force as could be expected in the time, considering the state of almost complete inanition which had existed for so long a period. The School of Design, both in reference to the public pupils and among the sons and daughters of the middle classes, whose inclinations, or whose decided and created tastes have led them to take advantage of the tuition of such an instructor as Mr. Claude Nursey, has, without doubt, given a stimulus to artistic taste that, as years flow on, must create a vast change in the general tone of the public mind. The exhibition of art treasures, even if it does not attain unmixed good, is, nevertheless, to be encouraged, since, whatever it realizes, undoubtedly tends to elevate the human race, and in elevating, to advance its moral power. In the Exhibition, which this day opens its doors to the public, there is much that is calculated to attain this end. Nor is this its only attraction, for on its walls the works of native artists are not only more numerous, but indicate that a stimulus has been given to their labours highly creditable to their powers and their industry.

Dangerous Buildings.—At the Marlborough-street Police Court, a few days ago, the Marquis of Salisbury was summoned under the Buildings Act, for allowing a house belonging to him, in Cranbourn-passage, to be in a dangerous state. On the report of the surveyor, the police took out the summons, which was served on Messrs. Nicholson and Co. the admitted agents or professional advisers of the marquis. The chimney still remained. Mr. Beadon referred to the clause in the Buildings Act, and remarked that it was most curiously worded. The notice must be by registered letter, to the owner or his agent. Instructions were given for a fresh summons to be served, according to the exact form prescribed by the Buildings Act.

The Fire, South Metropolitan Schools.—In your description of the fire at the South Metropolitan Schools there are some inaccuracies, which perhaps you will permit me to notice, though they are unimportant, and fewer than in other reports of the disaster. The "water tower" (or rather a tower containing a stone staircase) was not injured in any portion but its roof, though it was in the midst of the hottest flame. The "workshops" were in no part burnt, and there was no "drifting sleet" to add to the discomfort of the children. Respecting the importance of these buildings being fireproof there can be but one opinion, and I have hopes that the Board under which I act will now allow me to separate the building into divisions by stout walls and iron doors, the only impediment to this having been a most untoward lack of funds, altogether precluding the possibility of adopting anything like complete fireproof construction, the attempt to do which would have been tantamount to the abandonment of the scheme of establishing the schools.

Edwin Nash, Architect of the Building.

Chester School of Art.—The honorary secretary of this school, Mr. A. Rigg, announces the following as the result of the public examination in Drawing, held at the School, in September last:—About 750 were examined, and the awards received on 22nd October, were three medals, seventy-five prizes to those examined in the first or lowest grade, twenty to those examined in the second grade. In reference to the subject of drawing as a branch of general education, the writer says, "I trust the day is not far distant when none will be ignorant of what is so essential to every artisan. On the continent this, and modelling, as well as science, are really studied. Many positions in our large engineering and similar establishments are closed to English boys, because they have not attended to drawing. In the course of the summer I was in personal communication with the actual managing heads of three large engineering works, in three different counties, each employing one thousand men: in each case the managing head of the whole was chief of the drawing office, and in each case he was a foreigner. Surely parents will so arrange for their children, that the next generation may not have to look abroad to find persons qualified in science and drawing, to conduct some of the most important concerns in the kingdom."

"Big Ben."—We have received a letter from Mr. E. T. Loseby, urging that as the bell for the clock-tower at Westminster is for the clock, and will be struck, according to Parliamentary returns, by a hammer of 120 lbs. falling 6 inches, it is with such a hammer falling that distance it should be tried. He urges further, "that if the quality of the tone proves satisfactory, the referees should proceed to note its volume by stationing themselves at different distances from the tower in and about the neighbourhood of London, in order to compare the quantity of sound produced by this and other known bells; due allowance being made for the difference of size, the direction of the wind, and the state of the atmosphere, &c." The weight of the bell, misprinted in our notice, is 16 tons, 18 cwt. 1 qr. and 22 lbs.

The Worcester School of Art.—The annual meeting of this institution was to be held on Friday last, at the Music Hall, Worcester. The drawings of the pupils have been exhibited at the school, and a large number of visitors have inspected them. The exhibition contained a greater amount of advanced works, and the studies have been rendered more useful by their application to articles of manufacture. The number of pupils in the school is still on the increase, the average monthly attendance during the past year having exceeded that of the preceding by sixteen. The female classes also are on the increase, and the attendance is good.

Fatal Accident.—At Weymouth, on Tuesday in last week, two workmen engaged on the railway works ascended a scaffold erected for the purpose of laying the iron roofing on the goods shed, a height of 40 feet. The scaffold was kept up by a pole, sustained at each end by the iron girders, and spanning 30 feet. The men had resumed their labours but a short time, when the pole snapped asunder, and the whole of the scaffolding fell into the area below, together with the two unfortunate workmen. One of them, named Davis, was killed on the spot. The other, a foreman of the iron works, named Waterhouse, was taken up in an insensible and almost lifeless state, no hopes being entertained of his recovery.

Lighten our Darkness.—Notwithstanding all the letters and remonstrances that have appeared in the *Thunderer* and elsewhere, relative to the maltreatment of her Majesty's loving subjects on her Majesty's highway, Policeman X has not thought it proper to increase in vigilance sufficient to prevent these outrageous attacks on person or property, which, to the alarm of all peaceably-disposed citizens, continue to grace the police reports day by day. As punishment of the aggressor proves a very inefficient strapping-plaster for a broken head, or salve for rifled pockets, the following suggestion, emanating from my good woman and her darlings, may not fall unheeded on the hitherto torpid senses of the authorities. Mrs. Grundy and the pets (who nightly undergo a martyrdom of anxiety till my knock is heard at the door), with true feminine ingenuity, have struck out this remedy, which they, with native modesty, maintain cannot but prove an *infallible* preventive for the evil. "Let the gas-lamps be multiplied," say they, "all the dark corners made plain, the roads improved, and the pavements be laid down where needed; and *then* let us see who'll attempt to garotte, or who'll consent to be garotted!" Sir, the remedy suggested seems to me at once so simple, but practical, that I doubt not, by your kind indulgence, it will effect, if put in practice, the desired object, and so henceforth render unnecessary the harrowing fear and alarm now felt by Mrs. Grundy and the pets (bless them!) for the daily safety of their much-lover'—Paterfamilias.

Recent Excavations at Pompeii.—The public baths recently discovered are situated near the Stabian Gate, where the work of excavation was commenced in 1854, and where many objects of great interest have been discovered. A correspondent of the *Athenæum*, in a lively communication, gives the following account of them:—"I may say of these baths that they are the most important excavations that have been made for many years. In plan, they resemble the baths so well known, differing from them in certain decorations of stucco. The subjects of my description are much more magnificent, whilst the others are in a higher state of preservation. We enter from the street into a grand cortile, surrounded on two sides by a peristyle. This was the '*Spheristerium*,' where those who came to bathe played at *palli*. Two or three, both *spheri* and *palli*, were found within the portico, as, also, a stone, with this inscription, '*Pilicrepi Plaudite.*' The first chamber we shall enter is the '*Spogliatorium*,' where the bathers undressed. The vault of this room is adorned with painted, wavy decorations, which, for want of a better term, we should call Pompeian. On the left is the '*refrigidarium*,' a cold bath, round in form, and having niches all round for people to sit in, whilst another larger niche remains to show where the water came in at a gush. This bath is richly painted in fresco, with flowers; and in one of the compartments is the figure of a woman, nude, reclining on her side, with her back towards the spectator. Her hair has fallen back over her shoulders. The '*tepidarium*,' which follows after the cold bath, is oblong in shape. The roof and sides are ornamented with circular and octagonal figures, in the centre of which are various devices,—animals, a Pistrice, a lion, winged figures, dolphins,—in short, everything that the most capricious imagination could suggest. All round this chamber there are niches, which were used for holding the perfume vases. After the '*tepidarium*,' we meet with the '*ippocaust*,' or the '*caldarium*.' In shape it resembles the '*tepidarium*,' whilst the ornaments are principally composed of armour, arms, and trophies, worked in stucco in *rilievo*. At one extremity is a marble bath: at the other was a fountain. This bath stands on many small pilasters, under which passed the flames of the fire; thus warming the pavement and heating the lateral walls and passing off above. On the other side of the peristyle are several rooms painted in fresco. These must have been for those who were waiting for a bath; and the painted figures represent females or nymphs, nude, and holding fountains or vases in front of them. Besides these figures, there are also landscapes painted round the rooms. Cav. Bonucci is of opinion that the parts of the buildings I have been describing formed the baths devoted to the women. Varro says that these public institutions were divided into two parts,—'*virilia*' and '*muliebria*;' and there can be little doubt but that the portion recently excavated formed the '*muliebria*.' The '*virilia*' are now in the course of being brought to light. Fifteen men only are occupied in removing the mountain of scoriæ and dust which covers this remaining portion; and much interest exists among antiquaries to know the results of the operations. Amongst other objects found in these '*Bagni*' were some silver and bronze coins, which of course have been sent to the Museum. They were lying near a skeleton, perhaps of the Custode, for it was near the door. This public edifice is situated in the street which leads from the Forum to the Porta Stabiana, and is nearly opposite the beautiful shop richly decorated with marbles of various colours and designs, and in which were found many imperial coins."

Clitheroe Waterworks.—These works have recently been completed at a cost rather more than 10 per cent. under the Parliamentary estimate; which estimate included that per centage for contingencies. The mains are now charged with water, and the inhabitants are being supplied as rapidly as the company are able to put branch pipes into the houses, of which about 950 have already been fixed. Fire-plugs have been provided by the corporation. The recent supply was principally from wells, and unusually hard; the principal town well (one of the softest) being 23 degrees of hardness, and the others varying as high as 34 degrees, while the new supply is only four degrees, reducible by boiling to $2\frac{1}{2}$ degrees. The new supply is also said to be comparatively free from organic and solid matters. The water is procured from springs, that rise on the fells, $3\frac{1}{4}$ to $4\frac{1}{2}$ miles north of Clitheroe. The formation is of millstone grit, and from 560 to 1,300 feet above the mean level of the sea. The minimum yield of the sources in the most droughty seasons is over 300,000 gallons per diem, for the immediate supply of which amount the works have been constructed. The conduits and pipes, however, have been laid down of sizes to admit of their conveying a much larger quantity, which, without further powers being required can be supplied at a nominal expense. Although the population of Clitheroe in 1851 was only 7,244, in 1854 provision had to be made for 10,000 persons, at 30 gallons per head per diem. The supply is collected by means of earthenware conduits, and conveyed to a reservoir, about two miles north of the borough, at an elevation of 75 feet above the highest level of the district, and of 250 feet above the lowest. The main from the reservoir to the town, consists of 9-inch cast-iron pipes. The conduits and iron mains extend to a length of twelve miles. The cost of the works, inclusive of all extras, coating pipes, &c. but exclusive of land, Parliamentary, legal, and engineering expenses, is 13s. per head, and inclusive of all expenses, 1*l.* per head. The works were designed and carried out by Mr. Mc Landsborough, of Bradford, C.E.; Mr. J. Barker acting as clerk of the works (since appointed manager), and Mr. Booth, as inspector. The earthenware pipes were supplied by Messrs. Hayes, Brough, and Co. of Liverpool; the iron pipes by Mr. Clark, of Clitheroe; the fire-plugs, &c. by Messrs. Guest and Chrimes, of Rotherham; and the formation of reservoir, conduits, pipe-laying, &c. were executed by Mr. J. Metcalf, of Bradford.

Mr. Morewood and the Intercepting Drainage Plans.—Mr. J. L. Morewood, who has long been urging his plan for the main intercepting drainage of the metropolis, is again moving in this matter, having recently had printed and circulated a correspondence with Sir Benjamin Hall on the subject, in which, on the one hand, Mr. Morewood reminds Sir Benjamin of various favourable notices and opinions which he had taken of the writer and his plans; and claims the principle adopted by the Metropolitan Board, while also pointing out their deviations and complications based on that principle, and the additional expense to be thereby uselessly incurred; Sir Benjamin, on the other hand, denying that he had ever given any opinion in favour of Mr. Morewood's plan, although he had expressed himself in favour of a scheme for preventing the sewage from flowing into the Thames within or near the Metropolis.

Buildings in London.—A large block of chambers and offices, situate at the junction of Dowgate-hill and Turnwheel-lane, Cannon-street, has just been completed for Mr. J. W. Rimington. The building is four stories in height, exclusive of lofty cellarage and warehouse room in the basement, the whole of which is fireproof. The rooms on each floor are arranged either for letting in sets or singly. The whole are ventilated by means of air-flues in the chimney-shafts. Water and washing closets are fitted up on every floor. Fireproof strong-closets are provided for each set of rooms and in several of the single ones. The ground-floor windows are fitted with Bunnett and Corpe's patent revolving shutters. The contract price for the building and fittings was 8,382*l.* subsequently increased, by repairs to adjoining properties, and alterations occasioned thereby, to about 8,600*l.* Mr. R. W. Wright was the architect. The contractors were Messrs. John and Charles I'Anson; and Mr. William Backhouse was the clerk of works.

An Artesian Well at Norwich.—The first artesian well, it is believed, ever bored in this city, has been completed at the brewery of Messrs. Morgan, King-street. Mr. Thomas Clarke, the artesian well engineer to Her Majesty's dockyards, contracted for the works, and personally superintended them. For 38 feet below the surface a 6-feet cast-iron cylinder was sunk: at about 30 feet from the surface, and, of course, projecting 8 feet into the cylinder, a shaft or cast-iron pipe, 12 inches in diameter, commences its descent. For 12 feet the borings were found to be through loose flints, decidedly impregnated with sewerage deposits: to this, for about 16 feet, succeeded a kind of yellow marl, varying much in colour. The borings, after this, were through white chalk, with layers of flint at intervals of 3 feet, and this continued (the flint layers becoming harder, and the chalk more and more pure) until, at the depth of 200 feet from the surface, a copious supply of water was obtained. The borings were continued 38 feet further, to ensure perfect freedom from the slightest impurity or turbidity. When the bore pipe was removed, the water flowed into the cylinder at the rate of 500 gallons per minute. The water fills 8 feet of the cylinder, at the bottom of which is a 4-feet layer of concrete and cement, and from this, by means of force-pumps and other machinery, the supply is derived. After the steam-engines had pumped for twelve hours, the quantity of water was not reduced in the cylinder more than 4 inches. The flow of water is about 150 gallons per minute. The water, according to the *Norfolk Chronicle*, has been found, on analysis, to be of the very purest character, and admirably adapted for brewing purposes. The expense of the well is said to be comparatively trifling, not more than what many firms would pay in a few years for the former cost of water. Mr. Clarke, the engineer, is about being engaged in the construction of other works of similar character in Norwich.

WANTED: A NATIONAL GALLERY.—Allow me to offer a few remarks upon our *future* National Gallery. Common-sense says the present site is the only one suitable: "the public" echo this opinion; therefore I will not occupy your space upon this point, but will suggest to the President and members of the Royal Academy, that they, as a body representing the "arts" in this country, should ask the Government boldly to remove the soldiers and the workhouse, and purchase the block of houses running as far as Hemmings-row. This would afford ample space for a grand pile of buildings, worthy of our great and free nation. The building should form a quadrangle: it would be large enough for the gallery of old masters, modern masters, Royal Academy, and for the exhibition of some of our fine drawings and etchings, and for the print-room; thus bringing under one roof all our art-treasures, which now lie scattered, and difficult of access, as far as our splendid collection of prints and drawings by the great old masters are concerned. The entrance to the different galleries should be from the court-yard, which would enable the carriages to be removed from the front of the Royal Academy, and thus prevent the confusion which is now caused in Trafalgar-square during the "season." We want a "National Gallery," and why not put it on the "nation's best spot," and erect a building worthy of the greatest nation in the world? And what country can boast of so many great artists?

R. C.

"FEE CASE:" RAISING ADDITIONAL STORIES IN METROPOLIS.—Your correspondent, "W. P. G." does not correctly state the decision in this matter. The defendant, on applying for his expenses (and he appeared by counsel), was refused them by Mr. Corrie, who said it was a very proper case to bring before him. I am inclined to think the matter was viewed by him rather that it would prove a hardship on the builder, than that the fees were not legally due upon each of the three houses. All three houses being more or less affected by the works, it was not attempted to be proved that such works were only "in, to, or upon the same building." The builder, in the first instance, made an insufficient tender of *1l.* 1s. on the centre house. The notice given by builder met none of the requirements of the Act.

A DISTRICT SURVEYOR.

EXPOSURE OF GOODS.—POLICE ACT.—Our actual footways and roadways are being encroached upon to an alarming extent, particularly in the parish of Clerkenwell, which is becoming a Rag Fair;—bales of cotton and flannels 7 or 8 feet high on footways; old furniture, sofas, and arm-chairs in the roadways, which also display an attractive assortment of crockery. While so much cavil is made at any one building on or occupying his own ground or area, surely the very objectionable feature of actual obstruction on our footways and roadways themselves is one that should be promptly met, by proceeding, not under "Metropolis Local Management," but under the "Police Act." SISTE, VIATOR!

TENDERS

For the erection of a Calvinistic Chapel, Llandudno. Messrs. Wehnert and Ash own, architects.

Owen Thomas, Llandudno...	£1,870	0	0
Pritchard, ditto	1,793	0	0
R. Parry, ditto	1,594	0	0
J. Jones, Abergele	1,588	0	0
T. D. Carter, London and Llandudno	1,586	10	0
Williams and Parry, Llandudno	1,530	0	0
Roberts, ditto	1,508	0	0
D. Williams, ditto	1,500	0	0
David Roberts, ditto	1,480	0	0
Hughes and Davies, ditto	1,296	0	0
James Jones, ditto	1,285	0	0
William Davies, ditto (accepted)	1,280	0	0

For alterations to granary, Shad Thames. Mr. W. A. Boulnois, architect.

Myers	£1,723	0	0
T'Anson	1,684	0	0
Macey	1,590	0	0

TO CORRESPONDENTS.

Removal of External Colouring.—Are there any means of removing colouring from other wall, where the colour has been used by soap or some other ingredient? It will not yield to scrubbing with a hard brush, and possibly there may be some chemical agent which would operate in effecting the removal. The stone below is red sandstone, which has been faced.—R. G. B.

Construction of Baths.—A friend of mine is going to erect a bath, of about 21 feet square, to be heated from the underside. It must be water-right, capable of sustaining a heat of 400 or 500 degrees: it is proposed to have the floor of tiles. Could any of your correspondents inform me of the best mode of constructing it, as if supported upon brick-work and contraction would render it difficult to stanch? Also, is there any cement (for stanching the joints) capable of resisting the effects of heat? H.

"J. H."—"Artist."—"J. P." Leeds (we are forced to decline, uniformly).—"J. S."—"E. F."—"A Builder" (the district surveyor is entitled to a fee. The exemption applies only to "necessary repairs" not affecting the construction of external or party walls. In all cases do as we have already stated by the Committee of the House who framed the Act, repair surfaces only.—plastering, joiners' work, &c.)—"E. P. S."—"W. P. G."—"W. G."—"N. W. L."—"Bonhamite Inquirer."—"H. and B."—"Mr. R" (will appear).—"W. G. R."—"C. V."—"J. K."—"R. W. W."—"O. P."—"Alpha."—"H. B."—"W. G. B."—"W. G. R."—"G. T. W."—"H. D."—"An Articled."

ADVERTISEMENTS.

TO PARENTS AND GUARDIANS.

ARTICLED PUPIL WANTED.—A Land Surveyor, carrying on an extensive practice in a large and increasing town in the south of England, having the management of several very extensive buildings and other estates, and also several lucrative house and other agencies, is desirous of obtaining an OUT-DOOR ARTICLED PUPIL. From the extensive business transacted in the office, a pupil would possess superior advantages to obtain a thorough knowledge of his profession.—For particulars, apply by letter only, to A. B. 22, High-street, Southampton.

MARBLE WORKERS.

WANTED, a steady, energetic MAN, well acquainted with sanding and polishing marble work for making chimney-pieces.—Apply, by letter, to T. C. Office of "The Builder."

WANTED, a YOUTH, from 17 to 19 years of age: one who has been accustomed to a Builder's Office. He must be able to square dimensions, and roughly trace drawings.—Apply, stating where last employed, and salary required, to W. P. care of Mr. Hatchetts, Stationer, Moorgate-street, City.

FOREMAN OF CEMENT WORKS.

WANTED, a Person fully qualified to act as FOREMAN of CEMENT WORKS. He must be thoroughly acquainted with the manufacture of Portland cement. One who has held a similar situation would be preferred. None need apply whose character will not bear the strictest investigation. Applications, with testimonials or references, to be addressed to A. B. Office of "The Builder."

WANTED, in an ARCHITECT'S OFFICE, a YOUTH who can draw ornament and make himself generally useful.—Address, by letter, stating terms, and by whom last employed, J. C. 39, Moreton-terrace, Pimlico.

WANTED, a Person to Manage a Private GAS-WORKS. He must be a good smith, as he will be required to do what smithing work may be necessary on the premises. Wages 40s. per week. Good references required, both for character and proficiency.—Address, by letter only, to G. W. Messrs. Smith and Elders, Booksellers, Cornhill

WANTED, in the country, an ASSISTANT, who is a good Architectural Draughtsman, and has some knowledge of the surveying, quantities of brick-work and town improvements.—Apply personally, with specimens of work, at No. 22, Bedford street, Covent-garden.

TO BUILDERS' CLERKS.

WANTED, in the Office of a Builder, in Town, an ACTIVE, an active, steady young Man, who is experienced in making up accounts, measuring works, estimating, and taking out quantities.—Address, stating age, salary expected, and where last employed, to A. J. Office of "The Builder."

WANTED, by the Watford Local Board of Health, a person to fill the office of SURVEYOR, INSPECTOR of NUISANCES, and COLLECTOR of RATES; salary 100*l.* per annum, with a probable increase the second year. He must be competent to superintend the construction of all kinds of sewage and water works, and must find security for not less than 200*l.* Applications, with references and testimonials, to be sent, prepaid, on or before the 8th DECEMBER next, to Mr. J. SEDGWICK, Solicitor, Watford, Clerk to the Board.

TO BUILDERS' CLERKS.

WANTED, in a Builder's Office, a JUNIOR CLERK; one who has filled a similar situation preferred.—Apply by letter, in own handwriting, stating age, salary required, and references, to R. D. V. Office of "The Builder."

TO BUILDERS.

WANTED, a SITUATION, by a Young Man who can make fair and working drawings and specifications, take out quantities, &c. He has good builder's knowledge, and can superintend works. Good references. Salary very moderate.—Address, A. B. 58, Bemerton-street, Caledonian-road.

TO ARCHITECTS.

WANTED, by a Young Man, aged 19, who is about leaving an Architect's Office in London, a SITUATION, which will afford him opportunity for further improvement. He is a good draughtsman and colourist, can assist in getting out specifications, quantities, &c. and is well acquainted with the usual routine of an architect's office. A moderate salary only required.—Address, X. T. V. News-room, 154, Leadenhall-street.

WANTED, by an experienced Practical Man, a RE-ENGAGEMENT as CLERK of WORKS or General Foreman. Unexceptionable references. Address, B. Y. Office of "The Builder." No objection to the country.

WANTED, constant EMPLOYMENT, by a BRICKLAYER, aged 31. Well under-stands house and furnace, or stoneware kiln building and repairing. Capable of superintending a building or works. Reference of ten years from last employers.—Address to W. J. stating conditions and terms, to be left at Mr. Watts's, 3, Church-row, Lambeth-walk, Lambeth.

TO ARCHITECTS.

WANTED, a SITUATION, in an Office of repute, by a pupil who has recently and satisfactorily completed his articles with the usual routine of an active practice, to whom he can refer. Has a knowledge of and is used to working from sketches, quantities, &c. Address, C. D. Office of "The Builder."

WANTED, by a steady, competent Young Man, of good character, a SITUATION as ENGINE-DRIVER. Can be highly recommended. No objection to the country.—Address, S. W. B. 5, Ivy-place, High-street, Hoxton.

TO ARCHITECTS, &c.

WANTED, by the Advertiser, an ENGAGEMENT, as ASSISTANT. He has been in the profession two years, is a neat draughtsman, and is conversant with the usual routine of an architect's office.—Address, M. X. Inn, Caunterbury-street, Hackney-road.

WANTED, a SITUATION, as BUILDER'S CLERK, by a person of several years' experience in measuring, taking out the bills, and estimating. No objection to the country.—Address, C. C. No. 6, Hall-street, New North-road, London.

TO ARCHITECTS AND ENGINEERING SURVEYORS.

WANTED, by a Young Man, a RE-ENGAGEMENT in an Office of the above, as JUNIOR ASSISTANT, at a moderate salary. References satisfactory. Address, A. B. 500, Rosoll-street.

TO HOUSE DECORATORS, PAINTERS, &c.

WANTED, a SITUATION, by a Person who has been accustomed to keep the Books and make Estimates, &c. Sketching, &c. And also to the Decorative and Graining Writing, Furniture Painting, &c. Has been 6 years with the above employer, to whom he would wish to refer them, with other reference, if required. Country preferred.—Address, S. N. Post-office, Wandsworth.

WANTED, a SITUATION, by a Person of high moral character and general practical knowledge in the building trades, having been engaged the last ten years as manager in an art-builder's and carpet surveyor's office, preparing finished and working drawings and specifications, estimates, &c.; having had considerable practice in farm buildings, &c. would prefer a situation on an estate, or to assist in an agent's office, where he may make himself generally useful. Can give the most satisfactory references.—Address, Y. Z. care of Geo. Drayton, Stationer, Snow-hatch, Shrewsbury.

TO BUILDERS.

WANTED, a SITUATION as SHOP FOREMAN of CARPENTERS, in town or country. Good testimonials.—Address, prepaid, H. B. 75, Tooley-street, Borough.

TO SAW-MILL OWNERS, BUILDERS, AND OTHERS.

WANTED, by a Young Man, a SITUATION as SAW-SHARPENER, CIRCULAR BENCHMAN, or FRAME WORKER, or will take the management of a steam-engine. Can have good references from his late employer. No objection to the country.—Address, L. L. Office of "The Builder."

TO BUILDERS AND OTHERS.

WANTED, by a thoroughly practical and energetic man, aged 31, a SITUATION as SHOP or GENERAL FOREMAN. First-rate references and a most years' character can be given.—Address, A. B 8, Waterloo-terrace, Upper-street, Islington.

WANTED, by the Advertiser, a SITUATION in the HOT-WATER WORK. Used to gas-fitting. No objection to town or country.—Address, X. Y. Z. 22, Nesfield-street, Clerkenwell, London

TO BUILDERS, CONTRACTORS, &c.

WANTED, by a Practical Man, a SITUATION as FOREMAN of BRICKLAYERS, or INSPECTOR of any PUBLIC WORKS. Can have as to ten years' testimonials from one of the largest public bodies as to the duties of the day, where he acted as foreman.—Address, T. G. 1, Myatt-street, Camberwell New-road.

THE Advertiser seeks a SITUATION as CLERK to a BUILDER, CONTRACTOR, or ARCHITECT. He is a good draughtsman and accountant, experienced in the usual duties, and can superintend work.—Address, A. D. R. 33, Bryanstone-street, Strand

BUILDER'S CLERK.—A highly respectable, middle-aged Gentleman, accustomed to the routine of a builder's office, an efficient penman and accountant, wishes for an ENGAGEMENT as above, or in any other capacity where the above qualifications, added to steadiness and integrity, are deemed desirable. The most satisfactory references can be given.—Address, S. T. V. Office of "The Builder."

TO CONTRACTORS.

A GENTLEMAN, who has had the management of extensive railway works, waterworks, and other works, as CONTRACTOR'S AGENT, is desirous of a similar ENGAGEMENT, or as GENERAL SUPERINTENDENT of WORKS. He is thoroughly acquainted with all kinds of works, materials, labour, prices, &c. and can furnish most unexceptionable references and testimonials. Would probably not object to go abroad.—Address, Mr. B. Laburnum Villa, South Lambeth-road, London.

A MILLWRIGHT and ENGINEER, of considerable experience, is in WANT of a SITUATION, either as FOREMAN or as MILLWRIGHT, to keep the machinery or engines of any kind of mill in repair. Good reference can be given.—Address to A. B. 15, Vauxhall-walk Lambeth.

A YOUNG MAN, who has served four years to the PLUMBING, PAINTING and GLAZING, is desirous of obtaining a SITUATION as an IMPROVER, in the PLUMBING Way, as the object. Country not objected to.—Address, W. X. 93, Murray street, City-road.

TO CARPENTERS, BUILDERS, AND OTHERS.

A PERSON of thorough business and sober habits (aged 29) requires an ENGAGEMENT as CLERK or FOREMAN in a Builder's Establishment, or as manager of a small business, having a thorough practical knowledge of the business, and being a good draughtsman.—Address, R. R. DAVISON, 9, Sirewan place, King's road, Chelsea, London

TO BUILDERS AND RAILWAY COMPANIES.

AS GENERAL FOREMAN, FOREMAN of a large JOB, or FOREMAN of CARPENTERS, a good all-round Man, in all the branches and used to measurement, with first-class testimonials, having had to compete his engagement, is open to offer of the above.—Address, Z. A. 26, Edith-street, Great Cumberland-street, Hackney-road.

A YOUNG MAN, thirteen years in Architects' Offices, in Scotland, and well recommended in London, desires a SITUATION, with an ARCHITECT or BUILDER, at about 1*l.* per week, in town or country.—Address, C. C. Office of "The Builder."

TO CONTRACTORS, &c.

A SITUATION as SHOP, or FOREMAN of WORKS, by a thorough practical CARPENTER. Makes working drawings; can direct every branch of building; would take the entire charge of a job or other works. No object to reside in the country.—Address, A. B. 49, Bur on-street, Tavistock-square, London.

TO ARCHITECTS.

A GENTLEMAN, who has been six years in the profession, and served his articles in a provincial town, is desirous of entering a London office, and would OFFER his SERVICES for a period, on advantageous terms, to his employer. Competent to prepare finished, working, and detail drawings; is a good writer, thoroughly understands perspective and colouring, and could take charge of the duties generally.—Address, P. J. Post office, Tonbridge Wells.

TO ARCHITECTS.

AN ARCHITECT desires a RE-ENGAGEMENT as an ASSISTANT. For full particulars and references address P. S. Post office, New Brentford

AN ARCHITECT and SURVEYOR is desirous of a RE-ENGAGEMENT on moderate terms. Has been several years engaged in offices and superintended works.—Address, E. V. 68, City News-rooms, Cheapside.

A RESPECTABLE Practical Person, of good address, wishes a SITUATION as a BUILDER'S, as MANAGER of a BUSINESS, embracing if the branches; he is competent to keep the accounts, estimate, take out quantities, and also well versed in the general and other regulations of public bodies, &c. Can be highly recommended as to character, and would expect but a respectable situation.—Address, prepaid, L. L. VERT, Post-office, Commercial-road, Peckham.

BUILDER'S BUSINESS WANTED.—Any party wishing to dispose of an old established JOBBING BUSINESS, in or near the City, where a x or eight men are constantly employed, and which could be improved, can hear of a purchaser by forming partnership, addressed to G. C. 5, Kent-terrace, New Cross-road, Deptford.

FOR SALE, Six Marble Carved Truss CHIMNEY-PIECES, at 41 each; two at 2l. 10s. each; twenty-six stone box ones, at 10s. each; also a few sinks; a half price.—Apply to W. MAY, No. 5 (last house), Bath-row, Newroad

N.B.—Please to observe, Bath-row is a narrow passage on the New-road midway between Brook-street and the corner of the Hampstead road.

BUILDERS, ARCHITECTS, AND MASONS.

MARBLE. — The ITALIAN MARBLE COMPANY beg to call the attention of Architects, Builders, and Others connected with the trade, to their large and well-assorted STOCK of VEIN, SICILIAN, and other MARBLES. The liberal system of business adopted by this company, the superior quality of their marble, and their very moderate scale of prices are combined, to form an inducement to buyers. An inspection is solicited at the Depôt Bridge Wharf, Millbank, adjoining Vauxhall-bridge, where no other persons are authorised to sell except Mr. Baxter, Wharf Foreman, or the undersigned.

WILLIAM W. BONNIN, Secretary.

MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.

THOMAS JACKSON begs to draw the attention of the public to the most extensive stock of Marble Chimney-Pieces in the Metropolis; consisting of a selection of upwards of two hundred and 1 manufactured by steam power from the finest Italian and other marble, and with that careful attention to the details and finish so necessary in good marble work. The Stock consists of elegant Drawing-Room Chimney-Pieces in Statuary Marble: bold, massive Chimney-Pieces, in Black, Black and Gold, Bardilla, Sienna, Verd Antique, Brocatella, Dove, St. Ann's, and Serpentine Marble, suitable for Dining-Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Emperor's Red and Amber Marble, for Boudoirs, Breakfast-Rooms, best and secondary Bed-Rooms, &c.; also, Monuments, Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the most classical designs, and in all the varieties of fine finest Italian and British Marble, at the lowest remunerative prices.

MARBLE and STONE CHIMNEYS.—1000 MARBLE CHIMNEYS of various designs and colours, most of them fixed, are now on view at the Cambridge Heath Marble Sawing-Mills. The proprietor has again enlarged his workshops, and erected so much improved machinery, so as not only to compete, but is able to manufacture more, and consequently cheaper than any house in the trade.

The Trade supplied.

MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY PIECES lately imported from the Continent. They comprise Statuary, Giallo di Sienna, Vert Rouge, Dove, Black and Gold, Rouge de Belmont, Bardiglio, and other choice foreign marbles; and are designed with great taste, and executed by first-class artists.—On sale, in the show rooms of Messrs. EVANS, SON, and CO. King William-street, London-bridge.

MARBLE CHIMNEY-PIECES, and every other description of marble work, supplied to builders and the trade at about HALF the USUAL PRICE, in many instances less than slate.—Manufactured by the LONDON and CONTINENTAL MARBLE COMPANY, at their own Quarries in France and Belgium.—Office and Depôt, 3, Crooked-lane, London-bridge.—Estimates given for works to any amount.

LLOYD'S MARBLE WHARF, Thames-bank, Pimlico, adjoining Vauxhall-bridge. — Italian Statuary, Veined, Sicilian, Dove, Sienna, and other Marbles, for sale, at import prices. A resident manager on the wharf at all hours.

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STONE! STONE! STONE! — To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Seif-face Slab, Granite Pitching and Curb, Guernsey broken Road Materials, and every other description of stone, at JOHN KNIGHT and SONS, Devon Wharf, Mile-end. York tooled paving, 33s. 6d. per 100 feet; Slab for hearths, 4d. per foot sup.; slab for chimney-pieces, 3½d. per foot sup.; 8 by 4 window-sills, 6d. per foot run; 12 by 3 coping, 8d. per foot run; box chimneys (any opening), 8s. 6d. each. Terms cash on delivery.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman. Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Townhall.

BRAMLEY FALL STONE.—To ENGINEERS and CONTRACTORS.—The quality so well known and highly approved, in numerous public works, is SUPPLIED from the QUARRY at MEANWOOD, by the several Quarrymasters at Horsforth, with punctuality, and at the lowest possible rates, by JAMES AKEROYD and SONS, Gepton-wood Quarries and Canal Basin, Leeds

STONES, GRANITES, SLATES, &c.—W. and J. FREEMAN supply the various British and Foreign Stones, Granites and Aberdeen Granites, in scuppit blocks, or worked to specification. Also, the usual quarry-worked varieties of flues, landings, &c. &c. direct from the Quarries to Liverpool, Hull, or any of the outports (for exportation or otherwise), or by rail to any part of the kingdom.—Stocks of each description always ready for immediate delivery from their Wharfs, Millbank-street, Westminster Basin, and adjoining Commercial Docks) Deptford.—Office, 27, Millbank-street, Westminster

YORKSHIRE STONE.—The CHEAPEST PLACE in Yorkshire for all kinds of QUARRY-WORKED STONE, including Spandril Steps, Staircases of all kinds, Bases, Heads, Curbs, Landings, and Slabs, Hearthstones, &c. is at the ISLAND WHARF and SAWING-MILLS, LEEDS. All kinds of masonry clean worked for fixing, and carefully packed, to ruby truck or vessel, and forwarded direct to any part of the kingdom. For prices, &c. apply to JOHN DANIEL, Stone Merchant, LEEDS; or to ROBERT DANIEL, PIMLICO, LONDON.

BANGOR WHARF, King's-road-bridge, Cadogan-road, STINGFIELD and COMPANY, late W. W. Rawlins, beg to call the attention of Builders and others to their stock of Bangor slates, lathes, plaster, Roman, Portland, and Keene's cement, blue lias, Dorking and chalk lime, plasterers' hair, Yorkshire plain, pan, and ridge tiles, glazed sewer pipes, Cheltenham and brass, Welsh fire-bricks, gravel and shells for garden paths, ballast, sand, &c. Materials landed, wharfed, and carted

MARKET-WHARF, REGENT'S-PARK-BASIN.—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby stone, Bangor Slates, Slabs, &c. Ashlar, Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods of all kinds and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

BRAMLEY FALL! BRAMLEY FALL! On account of greater facilities than possessed by any one else, TRICKETT and PERKIN are prepared to supply in any quantity BRAMLEY FALL STONE, at greatly reduced prices, having opened the extensive quarries in the Hawksworth Cutting, on the North-Eastern Railway, near Horsforth. The stone is of the same quality as the well-known old Bramley Fall and Horsforth Quarries, but has the advantage of being of a lighter and more uniform colour. The North-Eastern Railway Company have put sidings in on both sides of the railway. Powerful cranes are fixed, so that the stone can be got to any size, and the stone being loaded in the quarries on the railway-trucks, can be forwarded the same day to any part of the kingdom, or supplied in London river via Selby or Hull, in any quantity.—For particulars apply to JOHN TRICKETT, Stone Merchant, Hunslet, near Leeds, or to SAMUEL TRICKETT, Victoria Stone Wharf, Isle of Dogs, London.

QUARRY WORKED STONE.—Architects, Masons, and Builders would effect a great SAVING in cost by ordering bases, plinthes, templates, sills, corbels, imposts, cornices, se pings steps, staircases of all kinds, moulded or plain, square or spandril, from the quarries ready worked for fixing. Experienced foremen are kept, and the stone is clean worked, and carefully packed or screwed, and delivered direct in one bottom by vessel or railway truck.—Prices and every information given on application, accompanied by plans or sketches, to SAMUEL TRICKETT, Stone-wharf, Isle of Dogs, or to JOHN TRICKETT, Hea tingley, Leeds, Yorkshire.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

GRANITE.—The Welsh Granite Company, Carnarvon, supplies Pitching or Paving Sets of this Material to order. The Sets, which have for several years been extensively used in Manchester, Bristol, Leeds, and other large towns, combine in a higher degree than any others, the qualities of roughness in wear and durability. The stone is also well adapted for foundation courses, plinths, &c. for public buildings and for mill-stones.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace. Supplying the Hay tor Company under Royal Charter.—For terms apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE. — The Cheesewring Granite Company, Liskeard, Cornwall.

London Agents—TREGELLES and TAYLOR, 51, Old Broad-street. Manager—JABEZ TRATHAN, Liskeard

This Granite is selected for the New Westminster-bridge.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS, MILLBANK-STREET, WESTMINSTER.

Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH

List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone-Office Corsham, Wilts

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES of the undermentioned sizes, which they are prepared to supply on the usual terms, for shipment from their depôt, at Bangor, or to transmit by railway. Also Slabs of all sizes, cut-to to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor

SLATES.—A Cargo of Welsh-Roofing SLATES, now lying on a Wharf in Thames-street, TO BE SOLD CHEAP for Ready Money, to make room quickly. They will be Sold, in lots, to builders.—Apply to Messrs WILKINSON and CO 26, Fresh-street, City

SLATE.—An assortment of the best BANGOR ROOFING SLATE ON SALE, at Bridge-wharf, Millbank Apply to Mr GEORGE BAXTER, Foreman.

SLATING, 22s. per square, in town; Slate Paving, 1½ in thick, averaging 4 feet in a stone, planed and squared, ready for laying 2s. 6d. per foot sup.; warranted stronger than 9 inch York (45,000 feet can be seen laid at Beal's Wharf, Peter-street. Purchase slates, slate cisterns, sinks, &c considerably lower than the usual quotations.—T. B. HANNAFORD'S Slate Works, Trevalga Wharf, Ratcliff cross.

PARIS EXHIBITION. — ENAMELLED SLATE—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal of the Great Exhibition of 1851, and the Medal of the Society of Arts, 1851. This beautiful material, as lasting and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of hot-water chiffoniers, consoles, &c.; baths, lavatories, altar-tablets, pill-sters, columns, vases pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 20 and 40, Upper Belgrave-place, Pimlico.

N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied. Every large dimensions and of superior quality They have been supplied to the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Knightsbridge Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; and at Messrs Bepbo's Belvidere-road, where terms may be obtained.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner, or supplied in any quantity. Information for being forwarded with materials. Post-office orders or reference in London promptly attended to.—Estimates given for every kind of the above work.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.

FROM 2s. 9d. PER SQUARE YARD.

Country Builders supplied with Asphalte for footings and bar floors, with instructions for using it.

Apply to JOHN PILKINGTON, Polonceau and Limmer Asphalte Office, Monument-chambers, 14, Fish-street-hill, London

N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

O. McCARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

PRIZE CATTLE SHOW of the SMITHFIELD CLUB.—The Annual Exhibition of Prize Cattle, Seeds, Roots, Implements, &c. &c. commences on TUESDAY MORNING, and closes on FRIDAY EVENING, 9th, 10th, 11th, and 12th DECEMBER. BAZAAR KING STREET and BAKER-STREET. Open from Daylight till Nine in the Evening Admittance, One shilling.

ROYAL POLYTECHNIC.—Great Attractions.—Next Monday Evening, the 1st December, at Eight, Lecture by G. A. Cooper, Esq. "On Music and Musicians," assisted by Mrs. G. A. Cooper, Miss Allegra, and Mr. Newport's Grand Choir of 100 Voices.—On Tuesday Evening, the 2nd, at Eight, John Leslie, Esq. will repeat his important Lecture "On London viewed from 'The Metropolis Local Management Act.'"—On Wednesday, the 3rd, at Four and Nine, Grand Juvenile Lecture, by Mr. Pepper, "On the Chemistry of Fireworks," with brilliant and tasteful illustrations by Mr. Darby, the celebrated pyrotechnist.—Also, Lecture "On Bessemer's New Process of Making Iron and Steel." for hours see programme.—Last Dramatic Reading of "Uncle Tom's Cabin," by Mrs. Webb, a coloured native of Philadelphia, U.S. on Thursday Evening, the 4th, at Eight.

TO BUILDERS and CONTRACTORS.—TO BE SOLD, a bargain, a superior large VAN, for heavy work; it is nearly new, and will be disposed of at one-half its cost. Apply at Bridge-row Wharf, Pimlico.

DOULTON'S TERRA-COTTA CHIMNEY-TOPS, TWO SHILLINGS EACH, TWO FEET HIGH, AS SKETCH.

H. DOULTON & CO.'S CHIMNEY-TOPS ARE OF A STONE COLOUR, AND ARE QUITE IMPERISHABLE.

Some were erected in London Thirty Years ago, and are now as sharp and perfect as when first made.

About Forty different Patterns are kept in Stock, drawings and prices of most of which will be sent on application to HENRY DOULTON & CO. High-street, Lambeth.

NO CHIMNEY WANTED for RICKETS'S PATENT CALORIFERE GAS STOVES in CHURCHES, HALLS, or SHOPS;

And for Conservatories, or any close Apartment, a Pipe can be attached to carry away the burnt air.

RICKETS'S CHEAP GAS STOVE, Price £1. 15s.

Made of Sheet Iron, suitable for Heating small Countinghouses, Bedrooms, Cellars, &c. &c.

MANUFACTORY, AGAR-STREET, STRAND, LONDON.

Liberal Discount to Builders.

SMOKY CHIMNEYS.—TWO YEARS' TRIAL, and FIFTY SUCCESSES of DUKE'S PATENT WINDGUARD, in curing the most inveterate Smoky Chimneys, induces the Patentee to recommend all persons suffering from that nuisance to try one.

Price 15s.

To be had of Ironmongers and Builders, and of the Patentee, at his Office, 65, Pentonville-road.

GALVANIZED WINDGUARDS.

No. 1. 3 feet high, 14 in. by 9 in bottom, 18s.
No. 2. 4 " " " " " 20s.

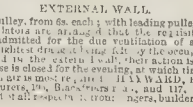
A DISCOUNT ALLOWED TO THE TRADE.

This Windguard is highly recommended by the Manufacturers,

F. EDWARDS, SON, and CO. 12, POLAND-STREET, OXFORD-STREET.

VENTILATION.—PURE AIR.

Sheringham's Ventilator for the admission of pure air through an



EXTERNAL WALL.

With single pulley, from 6s. each; with leading pulley, from 8s. 6d.

These Ventilators are adapted that the requisite quantity of air may be admitted for the due ventilation of an apartment without the slightest draught being felt by the occupants; and as they are placed in the exterior wall, their action is not impeded when the house is closed for the evening, at which time a constant supply of fresh air is most required. HOWARD, BROTHERS, sole Manufacturers, 108, Bunhill-row, and 117, Union-street, Bishopsgate, and their respective Ironmongers, builders, &c.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its remunerative properties, that it is not affected by frost, and does not seggetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of this and other Cements are laid at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster; and Seel-street, Liverpool.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days. Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stuccoing, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold.

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL — Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Magnic, Hair, Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent). STUCCO CEMENT, STUCCO PAINT. — CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS

Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs, Warehouse, No. 1, Wharf, Paddington-basin.

CHARLES RICHARDSON, 3 & 8, SOUTH-WHARF, PADDINGTON BASIN. COWLEY and KENT BRICKS. PORTLAND, ROMAN, AND OTHER CEMENTS. TAMWORTH GLAZED SEWAGE PIPES BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 8, South Wharf, Paddington.

NOTICE.

CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply the GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 30, Old Broad-street, London; to Mr. MONUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT. Glazed Stoneware Sewage Pipes. Brick, Lime, and Cement Merchants, TATHAM and CO. 14, South Wharf, Paddington.

PORTLAND and BATH CEMENTS. TATHAM and CO. 14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours.—Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

DAVIES and NORMAN, CROWN WHARF, GREAT SCOTLAND YARD. ROMAN and PORTLAND CEMENTS. LIME, BRICKS, TILES, SLATES, FIRE GOODS, &c. STONEWARE PIPES, PANS, TRAPS, &c. A Liberal Allowance to the Trade.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor tropical climes act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies, paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil, and where it is used with Size, Varnish, &c. To prevent the prejudice against Zinc paint, which the adulterated article must otherwise produce, it is now sold by the Wholesale Paint-dealers in Original Packages, each cask stamped, HUBBUCK—LONDON—PATENT. And when so marked, the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal company's note, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 16, South Wharf, Paddington. J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southham, Warwickshire.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF-ROAD, Paddington.

WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s 9d. per ton.

Small ditto, ditto, 4d. per ton.

Barges loaded in a few minutes.

Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

11, George-yard, Lombard-street, City

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Waterworks Companies, Coal-Mine Proprietors, Builders, Contractors, &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, is prepared to enter into contracts with any of the above branches that may favour him with their orders. The advantages to be derived from the above Cements, manufactured by J. C. over all others, are their extraordinary hydraulic properties.—Samples and references may be had on application either at the Works, Ashton New-road; or the Warehouse, 5, Broom-street, Shude-hill, Manchester.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton

N.B. Light-coloured Pit Sand or Ballast supplied by H. D. on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury New-park, would be glad to treat for disposing of the same with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Dell's Farm, Stoke Newington Green.

THE BEST HERTFORDSHIRE MALM SECONDS;

THE BEST WHITE SUFFOLK and RED FACINGS: WHITE SUFFOLK PERFORATED BRICKS; DEEP-RED RUBBING BRICKS.

Also COWLEY and KENT STOCKS, in any quantities.

J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.

N.B.—Lime, Cement, Slates, Fire-bricks, &c. and all kinds of Building Goods.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY

(Within a short distance of the five bridges).

THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.

Also, STOCKS, of FIRST QUALITY.

J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building, pottery work, Foundry Loam, Whiting, Whiting Sand for ashphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 300 to 400 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle), Fire-clay, Flare-burnt Lime, and Marble and Pamper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation

General Offices—No. 12, GEORGE-YARD, LOMBARD-STREET.

Letters addressed to Grays Essex, will meet with immediate attention.

TO BRICKMAKERS, LIMEBURNERS, and OTHERS.—3,000 CHALDRONS of BREEZE to be taken by craft from Pearce's Wharf, Limehouse-cut.—Tenders of price per chaldron to be forwarded to A. H. STILL, Manager, Gasworks, How-common-lane.

THREE HUNDRED THOUSAND BRICKS and BRICKFIELD, &c. TO BE DISPOSED OF, having a siding to railway at Wimbledon Station.—Apply to Mr. DEGGLE, Upnor, near Rochester.

COLES, SHADBOLT, and CO. CEMENT and PLASTER MANUFACTURERS, LIME BURNERS.

Brick, Tile, Drain-pipe, Hair Lath, and Fire Goods Merchants.

ST. JAMES'S and THORNHILL WHARFS, Caledonian-road, London.

WANTED to PURCHASE, immediately, 3,000 STOCK BRICKS, to be delivered alongside Canal, West Ham, Essex.—Apply at the Offices of Mr PATMAN, 31, Great James-street, Bedford-row.

TO EXCAVATORS, CONTRACTORS, and OTHERS.—WANTED, immediately, 1,000 YARDS of first-class PUDDLING CLAY, for dock purposes; to be delivered alongside Hay's Wharf, Mill-lane, Southwark.—Apply to ALLEN, SNOOK, and STOCK, Architects and Engineers, 6, Duke-street, London-bridge

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,

For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.

SOLE AGENT,

J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 9d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Ruaby.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 881, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Copings, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin.

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water, also intense heat without blistering. These Paints have been tested for five years in the Government Yards, and two Official Reports made thereon, which testify that 63lbs. of Wolston's Torbay Iron-Paint will effectually cover as much surface as 112lbs. of either White or Red Lead, and that they resist atmospheric action better than lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will find Builders and Painters, for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

DRAUGHTS of COLD AIR and DUST round room, office, or outside doors and windows EFFECTUALLY PREVENTED by GREENWOOD'S patent INDIA-RUBBER STOPS, the most simple and effectual method of making air-tight joints to joiners' or cabinet work, old or new. These Stops can be had any length or pattern. Self-acting spring Stops, for the bottoms of doors. The Trade supplied.

JOHN GREENWOOD, Patentee, 10, Arthur-street West, London-bridge.

THE SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY.—Instituted 1831.

Accumulated Funds—ONE MILLION STERLING.

Annual Revenue—ONE HUNDRED AND SEVENTY THOUSAND POUNDS.

Existing Assurances—FOUR MILLIONS AND THREE-QUARTERS.

At the Division of Surplus, at 1st March, 1856, a Policy for 1,000 effected at 1st March, 1839, was increased to 1,374l. 15s. 10d. being at the rate of Two and a Quarter per Cent. per Annum on the sum assured. This addition may be converted into a present payment, or applied in reduction of the future premiums.

Profits are divided triennially, and belong wholly to the assured.

Policies effected before 1st March next will receive SIX years' additions at the division of surplus in 1862.

Copies of the Report by the Directors on the recent division of surplus, and all information, may be had on application at the Head Office, or Agencies.

ROBERT CHRISTIE, Manager.
WILLIAM FINLAY, Secretary.
Head Office—26, St. Andrew-square, Edinburgh.
Office in London—26, Poultry.
A. T. RITCHIE, Agent.

PROVIDENT CLERKS' MUTUAL LIFE ASSURANCE ASSOCIATION.—Established 1840.—Every description of Life Assurance effected.

WM. THOS. LINFORD, Sec.

15, Moorgate-street, London.

PROVIDENT CLERKS' BENEVOLENT FUND.—The attention of clerks is earnestly invited to the great advantages themselves and families may derive from this fund.

WM. THOS. LINFORD, Sec.

15, Moorgate-street, London.

TO ENGINEERS, ARCHITECTS, and OTHERS REQUIRING a good HOUSE and extensive OFFICES.—The OFFICE of the CLERICAL, MEDICAL, and GENERAL LIFE ASSURANCE SOCIETY being about to be REMOVED to ST. JAMES'S-SQUARE, the present HOUSE and OFFICES, with Office Fittings and Fixtures, are now TO BE LET, or the LEASE, FIXTURES, and OFFICE FITTINGS, TO BE SOLD, on very moderate terms.—Inquire of Mr. FINNIS, House Agent, 85, Great Russell-street; or of the Secretary, on the Premises, 99, Great Russell-street, Bloomsbury.

NOTICE to BUILDERS and SEWER-CONTRACTORS.—TO BE DISPOSED OF, at a sacrifice, upwards of 1,500 feet of 12-inch STONEWARE DRAIN-PIPE.—For full particulars inquire of Mr. W. MERRY, Surveyor of Sewers, Vestry-hall, Harrow-road, Paddington. Office hours from Ten till Twelve a.m.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 8d.; gauze wire blinds, in mahogany frames, 8s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade forwarded on application, post free.

WINDOW BLINDS.—FULLER, BROTHERS, Manufacturers of every kind of Inside and Outside WINDOW BLINDS, warranted of the best materials and workmanship, at the lowest possible prices. Builders and the Trade supplied. A List forwarded on application.—98, Charlotte-street, Blackfriars-road; and at Sydney, New South Wales.

VARNISH.—Patent Transparent Indian-rubber Varnish, warranted to resist damp or moisture, is perfectly colourless, and can be prepared to any degree of lustre, so as to suit from a flatted ground to a polished surface. It is suited to prints, water-colour drawings, or paintings; to white marble and delicately-coloured papers, will protect the most delicately-flatted rooms from injury by water, &c.; it is suited to artists as a medium for colours; to light woods; for the interior of steam-boats, pianos, &c.; to coach painting and varnishing, as it will neither crack nor change colour. Specimens can be seen and samples bottles obtained of W. BLIZZARD, 15, Mill street, Hanover-square.

N.B. Sample bottles forwarded to the country on the receipt of eighteen postage stamps.

WARNER'S PATENT VIBRATING STANDARD PUMPS.—PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ "	long 3 3	gutta percha	1 14 0
3 "	ditto 3 6	or cast iron	2 0 0
3½ "	ditto 3 6	flanged pipe,	2 12 0
4 "	ditto 3 6	as required.	3 3 0
2½ "	short, with 15 feet of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from under ground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage. May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

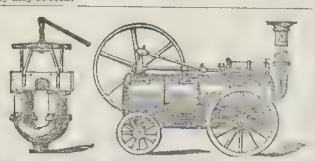
Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

Upper Ground-street, Blackfriars Bridge, Surrey Side.

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices, R. RICHARDS and CO. Pump Manufacturers and Engineers Upper Ground-street, Blackfriars-bridge (Surrey Side).

TO CONTRACTORS.—STEAM-DREDGER, STEAM-TUG, and HOPPER BARGES.—TO BE DISPOSED OF, by Private Contract, a powerful STEAM DREDGING MACHINE, in excellent order—length over all, 58 feet, beam 25 feet, fitted with a 30-horse power condensing steam-cranking and boiler with two furnaces, buckets, crab, and every requisite; an iron clinker-built, paddle-wheel STEAM-TUG—length over all, 78 feet, 7 feet beam between paddles, fitted with 30-horse power condensing steam-engine and boiler; Twelve two-room HOPPER BARGES, with chains and orabs; one three-room ditto, and one open Coal Barge.—For further particulars, apply to Messrs. FULLER and HORSEY, Billiter-street, City.

FOR SALE, a 12-horse power horizontal high-pressure STEAM-ENGINE, with superior boiler, safety-valve, gauges, &c.—Apply for full particulars to VICKERY and WILLIS, 107, Southwark-bridge-road.

STEAM-ENGINES for SALE, at the East London Ironworks, Cambridge-road, Mile-end-road. The best and most economical high-pressure horizontal engines always for sale.—Messrs. J. MUSTO and CO. having a large sale for these particular engines, endeavour to keep a stock either finished or in course of erection, which can be seen at their works. Satisfactory reference can be given, and engines of their make inspected at work in several parts of London. Workmanship and materials warranted.

WILLIAM NORTHEN'S WHITE ENAMELLED STONEWARE, UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 6s. 6d.; Closet, 3s. 6d.; Trap, 2s.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES. AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO HENRY MILLICHAMP, MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS, LAMBETH POTTERY, LONDON.

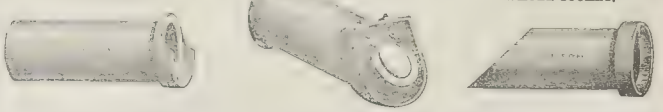
DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED, AND LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK, With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

KINSON CLAY, POTTERY, AND BRICK COMPANY, LIMITED.

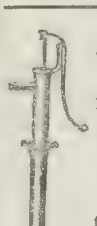
MANUFACTURERS OF EVERY DESCRIPTION OF SANITARY GLAZED SEWAGE-PIPES, CLOSET-PANS, FURNACE-BLOCKS, FIRE-BRICKS, GAS-RETORTS, CRUCIBLES, &c. &c.

HALF SOCKET. WHOLE SOCKET.



THE POTTERY is situate about a mile and a half from the town and port of Poole. It is worked by steam power, and the pipes are made of the most approved patent machinery, and will bear favourable comparison with any manufactured in the kingdom. The fire-bricks are from Dorset, and are home fully equal to all respects to those manufactured at Stourbridge and Newcastle. All articles are made from the clays and materials found on the estate. There is an inexhaustible quantity of all descriptions of Dorsetshire clay, used for pottery purposes, which can be supplied to the Staffordshire, North Country, and London markets, upon favourable terms.

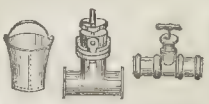
*** Lists of Prices, and all other information, will be furnished upon application to Mr. PAUL MATHEWS, Manager, or Mr. T. W. GREEN, Secretary, at the Works.



ON SALE AND HIRE, SINGLE AND DOUBLE PUMPS IN WROUGHT IRON TO ANY DEPTH, FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c. Sizes, from 3-inch to 15-inch barrels.

N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

B. FOWLER and CO.'S FARM and COTTAGE PUMPS, 30s



All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps, Engine Frames, Horse Gear, Crabs, Pulley Blocks, Wrought Pails, and Rubbish Baskets, Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

STEAM-ENGINE, of 30-HORSE POWER.—TO BE DISPOSED OF, a NEW HIGH-PRESSURE STEAM ENGINE, of 30-horse power, fitted up for a public company, and intended to be used without any kind of fixing or brick-work; is fully efficient for machinery or for mining purposes, has an iron chimney and travelling wheels, and may be seen at work at Messrs. MEDWIN and HALL'S, Engineers, 92, Blackfriars-road.

TO CAPITALISTS, BUILDERS, and BRICKMAKERS.—TO BE SOLD, by private contract, a FIVE HORSE POWER STEAM-ENGINE, together with other machinery used for the purpose of brickmaking. Also, TO BE LET, a valuable BRICKFIELD, at a rent and royalty, situate at Deptford, Kent, near to estates on which buildings are being rapidly erected.—For further particulars, apply to Messrs. WIRE and CHILD, Solicitors, 9, St. Swithin's-lane, City.

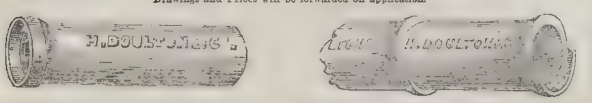
GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

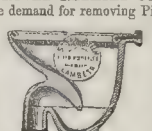
GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.



Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post-free, as also Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

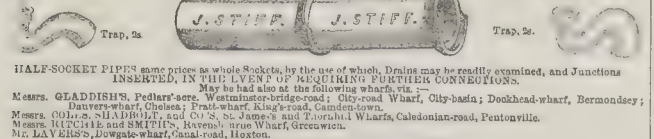
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, Kingsland-road, Camden-town.

Messrs. COLLS, SHADBOLT, and CO'S, St. James's and Thorpland Wharfs, Caledonian-road, Pentonville.

Messrs. HITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.

Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

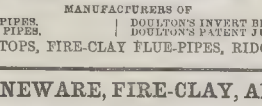
Drawings, with Prices, will be forwarded free, on application.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

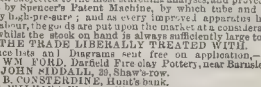


MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES, DOULTON'S HALF-SOCKET PIPES, | DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS. DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

SALT-GLAZED STONEWARE, FIRE-CLAY, AND TERRA-COTTA WORKS,



NEAR BARNSLEY, YORKSHIRE.

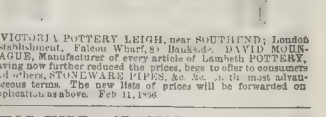
The Proprietor, E. B. BEAUMONT, manufactures every description of STONEWARE for drainage, building, sanitary purposes, and fancy ware, from clays which have been subjected to the most searching analyses, and proved to be of the most tenacious and indissoluble qualities. The pipes are wrought by Spencer's Patent Machine, by which tube and socket are one, without a manipulated joint, and rendered the more compact by high-pressure; and as every improved apparatus has been made available to secure the highest excellence with great economy of labour, the goods are put upon the market at a considerable reduction from the prices charged for others at all assimilating in quality, whilst the stock on hand is always sufficiently large to provide for works of the greatest magnitude.

THE TRADE LIBERALLY TREATED WITH.

Price lists and Diagrams sent free on application,—

At the WORKS.....To Mr. WM. FORD, Darfield Fire-clay Pottery, near Barnsley.
In LIVERPOOL.....To Mr. JOHN SIDDALL, 20, Shaw's-row.
In MANCHESTER..To Mr. B. CONSTERDINE, Hunt's-bank.
In GLOUCESTER....To D. & S. WILKINS, Westgate Wharf, Gloucester.
In LONDON.....To Mr. J. D. JONES, 37, Bucklersbury; and Goods Depot, No. 4 Warehouse, King's-cross (Great Northern Railway).

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 30, Banksside. DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. Feb 11, 1856

FOR HIRE, a SPACIOUS TENT, adapted for the Laying of Foundation Stones for Public Buildings &c

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.

Apply to H. PIGGOTT, 115, Fore-street, City.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED, manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES

3 inch bore, in 2 ft. 6 in. lengths, at			2½d. per foot.
4	"	"	3½d. "
6	"	"	5½ "
9	"	"	9d. "
12	"	"	1s. 3d. "
15	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is also done by the manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP, Enamelled White Inside, BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE, OLD FISH-STREET, near SAINT PAUL'S, LONDON.

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closet and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street London

TO WATER COMPANIES, LOCAL BOARDS OF HEALTH, AND OTHERS.

LAMBERT'S NEW VALVE COCK, For Preventing Waste of Water.

It is constructed that it cannot be left open sufficiently by wilfully, as if differently so that each action delivers a specific quantity, and under the same pressure this quantity will never vary.

It is peculiarly adapted for closets, self-acting or otherwise.

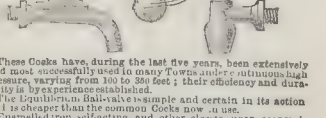
Price, complete for high pressure, 10s 6d. each.

For [illegible]

THOS LAMBERT and SON, Patentees and Manufacturers, Founders and Machinists, Short-street, New-cut, Lambeth.

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under enormous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO DRAUGHTSMEN AND CIVIL ENGINEERS.

H. MORRELL, BLACK LEAD PENCIL MANUFACTURER, No. 143, Fleet-street, London.

These Pencils are prepared in various degrees of hardness and shades.

H H H H for drawing on wood.	F F light and shading.
H H H for architectural use.	F for general use.
H H for engineering.	B black for shading.
H for sketching.	B B ditto ditto.
H B hard and black for drawing.	B B B ditto ditto.
M medium.	B B B B ditto ditto

Sold by all the principal Stationers in town or country.

SALES BY AUCTION.

Re C. J. MARE.—TO SHIP-BUILDERS, TIMBER DEALERS, BUTT DEALERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, at the NEW YARD, Blackwall, on MONDAY, DECEMBER 1, and following day, at ELEVEN each day, the LOOSE FITTINGS for the SLIPS, STOCK of TIMBER, PLANKING, DEALS, &c. including Memel and other timber, in balk and large scantling; 2 200 shape deals, 20 feet to 40 feet long, 12 inches by 3 and 9 by 3; 2,000 ribbing shores, stage standards 3 to 40 feet, 10,000 feet harpings, 10 pair large balk logs, 150 fathoms oak, teak, and fir slabs, oak and elm tops, new oak and elm plank, 120 deck deals, bird-cages, two pile-driving machines, various fittings, and other effects.—To be viewed three days prior to the sale, when catalogues may be had, at the Works; of Chas. Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry Chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Ward-robe-place, Doctors'-commons; of Messrs. Pullen and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—TO SMITHS, ENGINEERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, at the SELL-YARD, COOPERAGE and FORGES, in Field Orchard-place, Blackwall, on MONDAY, DECEMBER 8, at ELEVEN, in lots, the SMITHS' TOOLS and STOCK of BAR IRON, including 50 anvils, 15 tons smiths' tools in box, 20 bottom, sweep, and handrail, rod tools, dollies, tongs, bolt tools, &c.; 30 smiths' troughs, shaping plates and blocks, crab cranes, weighing machine, 50 tons rod, bar, and hoop iron, 50 tons assorted bolt rods, 20 tons fitting bolt rods, 4 tons chain, trucks, and trollies, cramps, and other effects.—To be viewed on Saturday previous to the sale, when catalogues may be had at the Works; of Chas. Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Pullen and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—TO SHIP-BUILDERS, BOILER MAKERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the assignee to SELL by AUCTION, at the OLD YARD, Orchard-place, Blackwall, on WEDNESDAY, DECEMBER 10, at ELEVEN, in lots, the loose TOOLS, including bending slabs and blocks, leveling plates, boilermakers' bears, stamps, many tons of tools in hammers, sets, dollies, rod chisels, &c. 50 anvils, 20 troughs, powerful crab cranes, lifting jacks, blocks and falls, a large assortment of steel tools, punches and dies, screwing tackle, stocks, taps, and dies, chain and chain slings, a new iron saw-bench, 50 circular saws, 30 dozen frame saws, steel moulding tools, 50 portable forges, 20 tons scrap iron, 50 tons plate, rod, and bar iron, and other effects.—To be viewed on Monday and Tuesday previous to the sale, when catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Pullen and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE. Extensive Stores of Ironmongery, Copper, Brass, and Lead

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on MONDAY, DECEMBER 15, and following day, at ELEVEN each day, in lots, at the WORKS, Orchard-place, Blackwall, the extensive stores of IRONMONGERY, Copper, Brass, and Lead, including 4cwt tops bolt, and nuts, copper, dry and tea brass and compositon spikes and nails, one ton metal coags, copper-bolt rings, three tons cast and shear steel, twenty tons sheet lead and lead pipe, 200 bags wrought nails, fifty tons bolts and nuts, fifty cwt. glue, 1,000 gross brass screws, 4,000 gross iron screws, 1,000 dozen pair brass butts, 1,000 gross cabin hooks, cup and jug hooks, fifty dozen mortice locks and latches, fifty dozen turn-backles, 250 dozen brass surplice rims, thirty dozen brass dead-locks, 200 dozen pair brass sunk handles, twenty gross japanned hooks, knobs, and spindles, forty dozen straight and cocked lower bolts, 40 to 6 inches; 100 dozen plain and inlaid ebony finger-plates, thirteen dozen sets of lock furniture, 200 dozen brass spring bolts, 100 dozen brass cabin cleats, shutter iffts, brass case and till locks, 100 dozen files, stores of rope, white lead and colours, ships' pumps, plumbers' tools, and numerous items.—To be viewed on Friday and Saturday previous to the Sale, when catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews and Boyer, Solicitors, Old Jewry-chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Pullen and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

BROMPTON HOSPITAL ESTATE.—Stock and Effects of a Builder and Contractor Absolute Sale

MR. PETER BROAD will SELL by AUCTION, by order of the Committee, on the PREMISES, on MONDAY, DECEMBER 1, and following day, the whole of the valuable STOCK and PLANT of a Builder, comprising a large quantity of scaffolding, stock bricks, paving-stones, flags, marble in blocks and slabs, Portland, and other stones, 20,000 feet deal boards, mahogany and other timber, cement, plaster, 6 tons of hair, ironmongery and brass goods, sheet and tape lead, glass, plumbers' tools, solder, 13 carpenters' benches, smith's forge, bellows, anvil, and tools. The erection of carpenters' and smiths' shops, sheds, counting-house, and various offices.—To be viewed the day prior. Catalogues on the Premises; at the Rose Tavern, Brompton-road; or at the Offices of the Auctioneer, 28, Poultry.

TOWER-HILL.—Building Materials of Five Houses.

PULLEN and SON are directed to SELL by AUCTION, on the PREMISES, on FRIDAY, DECEMBER 5, at TWELVE, in lots, all the valuable BUILDING MATERIALS and FITTINGS-UP of FIVE HOUSES, 23, 24, 25, 26, and 27, Royal Mint-street, near Tower-hill, comprising good sound brickwork, a large quantity of pantiles, oak and fir timber, in roofs and floors, glazed sashes, useful doors, partitions, flooring boards, shop fronts, stone paving, lead gutters and pipes, and useful fixtures and fittings up.—May be viewed the day previous, and catalogues had of Pullen and Son, 80, Fore street, Cripplegate.

TOWER.—SALE of STORES.—By order of the Secretary of State for War.—TO BE SOLD by PUBLIC AUCTION, in the TOWER, on WEDNESDAY, the 3rd of DECEMBER, 1856, at ELEVEN o'clock in the Forenoon precisely, the following stores:—Tents, Hair Beds, Bedding, Great Coats, Cloaks, &c. Boots, Saddles, Tools, various Old Iron and Steel, Fire-Engines, Iron Work of various descriptions, Accoutrements, and miscellaneous articles.—May be viewed at the Tower, from TEN to FOUR o'clock, on the three days previous to the sale, and Catalogue had at the War Department, Pall-mall; the Tower; and Royal Arsenal, Woolwich, on payment of Sixpence each, which will be allowed to purchasers.—No person will be admitted to view the lots, or into the Sale-room, without a catalogue.

To TIMBER MERCHANTS, BUILDERS, CABINET-MAKERS, and OTHERS.

MR. MARSH will SELL by AUCTION (without reserve), on the PREMISES, Philpot-street, Commercial-road East, on WEDNESDAY, DECEMBER 3, at TWELVE precisely, SIX HUNDRED DRY DEALS, PLANKS, and BATTENS; 900 sawn Pine Planks and Battens; 2,000 feet mahogany, in board and plank; 100 squares prepared floor-board, ten loads of birch, in planks and logs; quantity of useful quarterings, &c. with other goods.—Particulars in catalogues. Catalogues issued three days prior to sale; and may be had of William Cooper, Esq. 13, George-street Mansion House; and of the Auctioneer, Philpot-street, Commercial-road East.

SALES BY AUCTION.

MILE-END OLD-TOWN, STEPNEY, MIDDLESEX.—Valuable Freehold Estates, mostly let at ground-rents

MR. W. H. DEAN will SELL by AUCTION, at the MART, on THURSDAY, DECEMBER 11, at TWELVE, in eight lots, by direction of the Trustees, under the will of Mr. E. Johnson, deceased.—Lot 1. A FREEHOLD ESTATE, land-tax redeemed, comprising a capital dwelling-house, yards, extensive shed, buildings, rope-walk, and paddock extending over 4a. 1r. 3p. lying and situate on the south side of Bow common-lane, Mile-end, Stepney, now occupied by Messrs. Soanes, and leased for a term, of which 20½ years will be unexpired at Christmas, 1856, at a ground-rent of 28l. per annum. N B. This land will be exceedingly valuable for building purposes at the end of the term, being distant about ¾ mile only from London.—Lot 2. A Freehold Estate, free of land-tax, comprising a public-house known as the Gunmakers' Arms, Canal-road, Stepney, and Seven adjoining Dwelling-houses, being Nos. 1, 2, 3, 4, 5, 6, 7, Windsor-terrace; leased for a term, of which 30½ years will be unexpired at Christmas, 1856, at a ground-rent of 36l. per annum.—Lot 3. A Freehold Estate, free of land-tax, comprising six dwelling-houses, being Nos. 8, 9, 10, 11, 12, Windsor-terrace, Canal-road, Stepney, leased for a term, of which 31½ years will be unexpired at Christmas, 1856, at a ground-rent of 12l. 5s. per annum.—Lot 4. A Freehold Estate, free of land-tax, comprising six dwelling-houses, forming part of Jeffrey's-terrace, Bridge-street East, Canal-road, Stepney, let by two separate leases, for a term of which 29½ years will be unexpired at Christmas, 1856, at ground-rents of 10l. 17s. 6d. per annum.—Lot 5. A Freehold Estate, free from land-tax, comprising 21 dwelling-houses, in Victory-row, White Horse-lane, Stepney, and three dwelling-houses and shops adjoining, leased for a term, of which 29 years will be unexpired at Christmas, 1856, at a ground-rent of 42l. per annum.—Lot 6. A Freehold Dwelling-house, with Shop and Bake-house, with loft over and ovens behind, No. 18, at the corner of Bancroft's-place, Mile-end-road, Stepney, leased to Mr. Downham for a term of which 18½ years will be unexpired at Christmas, 1856, at the rent of 30l. per annum.—Lot 7. A Freehold Estate, free of land-tax, comprising five dwelling-houses, being Nos. 12, 13, 14, 16, 17, Bancroft's-place, Mile-end-road, Stepney, leased under four several leases which have 13½ years unexpired at Christmas, 1856, at ground-rents amounting to 13l. 11s. 6d. per annum.—Lots A piece of Freehold Ground, containing a frontage of 28 feet by a depth of 88 feet, with the Cottage erected thereon, situate in Bow common-lane, leased to Mr. George Newman, for the term of which six years will be unexpired at Christmas, 1856.—Also a Leasehold Estate, comprising about 2a. 3r. of ground, situate in the rear of Savill-place, Stepney; held under a lease granted to Edward Johnson, now deceased, for 69½ years, of which nine years will be unexpired at Christmas, 1856, at a ground-rent of 10l. per annum. About 3 acres of this ground was demised by the said Edward Johnson, together with the cottage and ground, to Mr. George Newman, for forty years, of which 31 years will be unexpired at Christmas, 1856, at a ground-rent of 42l. per annum.—May be viewed, with leave of the tenants, and particulars, with conditions of Sale, may be had at the Mart; of Messrs. Esq. Solicitor to the Vendors, 10, Gould-square, Crutchedfriars, London; and of the Auctioneer, Stratford, Essex.

TO CONTRACTORS, TIMBER-MERCHANTS, BUILDERS, CARPENTERS, DEALERS, AND OTHERS

MR. MARSH will SELL by AUCTION, on the PREMISES, Acorn Timber Wharf, Canal-bridge, Old Kent-road, on TUESDAY, DECEMBER 9th, at TWELVE o'clock, foreign TIMBER and DEALS, mahogany and wainscot board, English oak and elm trees, prepared floor-boards, oak planks and scantling, seventy new cement casks, two 4-inch wheelbarrows, sixty lance-figured white wood planks for cabinet work, ash and beech planks, elm boards, oak sash sills, joist and quartering, posts, pales, and rails, 50,000 stock bricks, light cart, a steam engine of 4-horse power, and numerous surplus materials. Approved bills will be taken from purchasers above 50l. at three months' date.—Catalogues may be had at the Place of Sale; Greyhound Inn, Croydon; Rose Inn, Dartford; Clifford's Inn, Fleet-street; Bromley; Sun Hotel, Chatham; Crown Inn, Rochester; White Hart Hotel, Reigate; Royal Star Hotel, Maidstone; Rose and Crown, Tunbridge; Angel Hotel, Gosford; Woolpack, St. Albans; White Horse, Uxbridge; and of Mr. Marsh, 3, Charlotte-row, Mansion-house.

To CARPENTERS, CABINET and PACKING-CASE MAKERS, BUILDERS, and OTHERS

MR. C. F. SMYRK will SELL by AUCTION, on the PREMISES, Stamford House, Church-street, Camberwell, on TUESDAY NEXT, the 2ND OF TWO, punctually, a large assortment of dry, clean, white, and yellow DEALS, PLANKS, and BATTENS; prepared flooring, sound oak and fir joists and scantlings; stable fittings, and a variety of effects.—May be viewed, and catalogues had on the Premises two days prior to the sale.

BUILDING MATERIALS. CHELSEA EMBANKMENT AND APPROACHES.—FOURTH SALE

MR. W. R. GLASIER is favoured with instructions from the Commissioners of her Majesty's Works and Public Buildings, to SELL by AUCTION, on the PREMISES, on TUESDAY, DECEMBER 2, at TWELVE for ONE, the valuable BUILDING MATERIALS of NINE HOUSES and PREMISES, being Nos. 34 and 35, Lower Sloane-street, extensive stabling adjoining; Nos. 14, 15, 16, 17, and 18, White Lion-street; and Nos. 8 and 8A, Royal Hospital-row, Queen's-road, Chelsea, comprising about 300,000 capital stock bricks, lead, in gutters, pipes, &c. pan and plain tiles, York and other paving, doors, sashes, and frames, and the usual fixtures and fittings.—May be viewed the day prior, and catalogues at the Office of Works, 12, Whitehall-place; of James Pennethorne, Esq. 7, Whitehall-yard; at Garraway's; on the Premises; and of the Auctioneer, 41, Charing-cross.

DOVER.—Notice of Auction Sale of the valuable Sails, Spars, Rigging, Anchors, Chains, Boats, Provisions, Stores, &c. of the American ship Ann Parker, of 893 tons burthen, Oliver A. Cobb, Master (wrecked on her voyage from Newcastle to New York) which, under the instructions received, will, on THURSDAY and FRIDAY, DECEMBER 4th and 5th, 1856, be submitted for PUBLIC COMPETITION (for the benefit of the Underwriters and others concerned), by

MR. JAMES B. TERSON, on the QUAY, near the Wellington Bridge, Dover, the whole of the STANDING RIGGING of the ship (which is only four months old), manufactured from the best Russia hemp, has been carefully taken off the said ship, and is in excellent condition; large quantity of running rigging, of the best Manilla, several coils of Manilla rope, quite new, small quantity of Russia hemp rigging, hemp hawser, twenty-eight valuable sails, of the best canvas and most superior manufacture (also only four months old; several of which have never been used. The excellent spars are fwell manufactured, and of the best materials, and comprise topmast, topgallantmast, yards, &c. Three anchors, two topgallants, and one iron stocked, two large-size chain cables, three copper-fastened boats, sash cars, patent and other blocks, two large-size iron capstans, of first rate manufacture, wheel, spindle, barrel, and standard, mahogany steering-wheel, lamps. The provisions include beef, pork, bread, salt fish, peas, lard, flour, potatoes, &c. &c. Mahogany-framed sofa, settees, writing-desk, other particulars, valuable ship's caboose, with every requisite, and other miscellaneous and useful items. May be viewed on the morning of the days of sale. Sale to commence each day at ELEVEN o'clock. For further particulars apply to Messrs. Edwd. Hodges and Co. Shipping Agents, Dover; Capt Beadel, Harp Hotel, Dover; or to Mr. J. B. Terson, Auctioneer, No. 6, Castle-street, Dover.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. Morgan and Phipson, Architects, 3, Danes-Inn, St. Clement's, Strand.

TO BUILDERS and OTHERS.—TO BE SOLD, Valuable Plots of FREEHOLD LAND, having 141 feet frontage to the high road near Single Gate, Merton, suitable for building Villas.—For particulars apply to Mr. H. Rowley, Finsbury Freehold Land Society, 43, Bedford-row, Holborn.

NEW WINDSOR ESTATE. — Valuable BUILDING LAND TO BE LET, in Plots for first and second class Villa Residences, with Stabling, which are much needed in this beautiful locality. The situation is the finest in or near Windsor, adjoining on the Park and Long Walk, and commanding a splendid view of the Castle. Within ten minutes of the Great Western and fifteen minutes' walk of the South Western Railway Stations. Advances can be had by responsible parties.—For particulars apply to Mr. WILLIAM SIM, Architect and Surveyor, 2, Dane-Inn, Strand

FIRST-RATE BUILDING SPECULATION.—Some VALUABLE LAND, fronting a high road at Holloway, for one or more houses, is now to be had, at such a low price as to make it a most profitable investment. It is in the midst of Railway and occupied houses, and no expenditure is required for roads or sewers. A PAIR of CARCASSES TO BE SOLD, on the same estate.—Apply to Messrs. ROBERTS & BALL, Architects, 18, Holles-street, Cavendish-square.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety-nine years, with power of enfranchisement Plots from one to four acres for large villa residences; smaller plots for semi-detatched houses, and plots for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 6, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Gray's-Inn-square.

EXTENSIVE PLOT of vacant GROUND, in a most important first-rate locality, adjoining Regent's-circus, with entrances from Oxford and the adjacent streets, suitable for a building operation of any character or magnitude. It is presumed from its extent and high class situation (nearly a quarter of an acre), to be eminently adapted for an arcade or any other similar public establishment carried out under the Limited Liability Act.—For particulars, apply to Messrs. GRAHAM and JACKSON, 37 and 38, Oxford-street.—May be treated for as a whole or separately.

TO BE LET, or LEASE TO BE SOLD, very extensive PREMISES in Bermondsey, and within ten minutes' walk of London-bridge, well adapted for a contractor or builder. They consist of a large yard, twelve-roomed house, including two offices, with garden in rear; joiner's shop for twenty-thirty benches, scaffolding for deals, &c. upwards of 200 feet long; two saw-pits, two large sheds, stabling for twenty horses, &c. The whole containing nearly an acre of ground, and will be let at very low rent.—Apply to ROBERT WARD and SON, Timber Merchants, 5, Orford-street.

FREEHOLD GROUND-RENTS and BUILDING LAND.—TO BE SOLD, FREEHOLD GROUND-RENTS amounting to 131l per annum, well secured upon houses at Holloway, offering a good investment for trust-moneys; also Sixteen Acres of Land, which may be purchased in large or small quantities at fee-farm rents, whereby houses may be erected and sold as freeholds, free from the law of forfeiture under leases and probate duty.—Apply to Mr. PEACHEY, 17, Salisbury-square, Fleet-street.

HIGHBURY-HILL PARK. — Valuable BUILDING LAND TO LET, close to the high road, with roads made and sewers in, near to church and chapel, and convenient for railway and omnibus communication to the City.—For particulars, apply to JOSEPHUS FERRIS, Esq. Polewinne House, Highbury New Park; or to GORDON STANHAM, Architect, St. Alban's Cottage, North End, Hammersmith-gate.

IMPORTANT TO BUILDERS AND CAPITALISTS.

UNITED TRADESMEN'S FREEHOLD LAND SOCIETY.—The beautiful ESTATE at HORNSEY, purchased by the Trustees, consisting of about thirty acres, and within three minutes' walk of the station, will next summer be accessible from the City by means of the Metropolitan Railway. Persons desirous of possessing land in this charming and picturesque neighbourhood, can do so immediately by joining this society. Plots, 30l. each; subscription, 5s. per month; at their Office, the Saving Bank, Goldsmith's-place, Hackney-road, on the third Wednesday in each month, from Seven until Nine o'clock Capitalists and others desirous of possessing land at once can do so by application to Mr. J. LAWLESS, 1, Thurlow-place, Hackney-road; or to Mr. DANIELL, Hornsey, and Estate Office, 92, Keppel-street, Russell-square. The ground on the first portion of the estate being the only part on which a tavern can be built, is delightfully situate on the high road leading to Tottenham, and less than two minutes' walk from the Hornsey Station, to be disposed of, with all its privileges, for the sum of 300l.—Apply as above.

TO ARTISTS, SCULPTORS, and OTHERS.—TO BE LET or SOLD, a commodious RESIDENCE, with gallery, studio, and stables attached.—The Premises may be viewed on application at No. 18, Harley-street Cavendish-square.

TO BE LET, at Reigate Wharf, Reading, a BARGE-HOUSE, TIMBER and BARGE HOUSE, &c. slated, with sky-lights 78 feet long inside, 26 feet wide up to plate, with excellent steam trunk supplied by steam-engine; also part of Wharf and Saw-pits.

WANTED, as above, a Foreman who can manage circular saws.

FOR ARTISTIC, SCHOLASTIC, or other PURPOSES.—Suites of Rooms, also a Shop, Parlour, and Kitchens, in a large House in Sloane-street (a main thoroughfare), may be had Unfurnished, on very moderate terms.—Apply to Mr. FREDK. GODWIN, Auctioneer and House Agent, 3, Halkin-terrace, Belgrave-square

EXTENSIVE BUSINESS PREMISES, newly erected, TO BE LET on lease, comprising nearly 4,000 feet super. business space, and 2,300 feet super. dwelling space, with every convenience for letting off, situate in a leading thoroughfare, near Commercial-street, Spitalfields-market, Eastern Counties Railway, &c. &c. For particulars, and to view, apply to Mr. JAMES TOLLEY, Surveyor, Lamb-street, Spital-square.

DUNSTABLE.—Eligible and Commodious BUSINESS PREMISES TO BE LET, with convenient Domestic Apartments immediately adjoining, situate in the High-street, having a frontage of 40 feet, by a depth of 124 feet. The Warehouses and Offices (erected not long since) have been built with a view to the Straw Business.—Apply to W. C. REED, Architect, 64, Old Broad-street, London.

WATERSIDE PREMISES at LIME-HOUSE.—TO BE LET on LEASE, THREE spacious WAREHOUSES, abutting on the River Lee Cut, each measuring nearly 1,000 superficial feet, and containing about 20,000 cubic feet.—Apply to Mr. WILLIAM ELLISON, Architect, No. 19, Stainsby-road, Limehouse.

ROOMS WANTED by a SOCIETY. — A suite, containing Members', Meeting, and Reading rooms, Office, and if possible Exhibition-rooms. Situation near Regent-street preferred.—Apply, post-paid, stating terms, and number and size of rooms, to Secretary, P. S. 21, Regent-street.

TO BE LET, or SOLD, under unusually advantageous circumstances, SIX substantial CARCASSES, in an advanced state, and eligibly situated, on a high road, in an improving neighbourhood.—Address, Mr. SMERDON, No. 9, Lansdowne-terrace, Battersea.

London: Printed by Charles Wyman, at the Printing Office of Cox (Bros.) & Wyman, 74 & 75, Great Queen-street, Lincoln's-inn fields, in the Parish of St. Giles-in-the-Fields; and published by the said Charles Wyman, at the Office of "The Builder," 1, York-street, in the Parish of St. Paul, Covent-garden, both in the County of Middlesex.—Saturday, November 29, 1856.

The Builder.

Architect, Engineer, Operative & Artist.

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BUILDERS' BENEVOLENT INSTITUTION.

An ELECTION of THREE PENSIONERS (two males and one female), in place of the late Messrs. Tarrant, on the 27th ult. Mr. Alderman W. LAWRENCE, President, in the chair. The result of the poll was as follows:—

Successful Candidates.	No. of votes.
John G. Miller	1,174
William Williams	934
Mary Ann Thomas	2,325
The others were—	
MALES.	
John St. George	506
Henry Budd	453
William Goodfellow	170
Robert Trethewey	3,4
John Groves	47
Joseph Martin	1.0
William Palmer	11
FEMALES.	
Ann Buckingham	1,403
Maria Farman	193
Mary Hillstead	57

Dec. 5, 1856. A. G. HARRIS, Sec.

THE BUILDERS' BENEVOLENT INSTITUTION.—WILLIAM WILLIAMS, one of the Candidates as a Pensioner on the Funds of the above Charity, begs to return his grateful thanks to all those Subscribers who so kindly assisted in his successful Election on Thursday last, the 27th inst.

THE BUILDERS' BALL, in aid of the funds of the Builders' Benevolent Institution, is fixed to take place at WILLIS'S ROOMS, St. James's, on THURSDAY, the 12th of FEBRUARY next.

JOSEPH BIRD, Honorary Secretary,
16, Hanover Cottages, Regent's park.

THE SOULAGES COLLECTION of ITALIAN ART will be exhibited to the Public on and after MONDAY next, DECEMBER 8th, at MARLBOROUGH-HOUSE, Pall-mall. Admission free, on Mondays, Tuesdays, and Saturdays; and by payment of 6d. on Wednesdays, Thursdays, and Fridays.

CLASSES for DRAWING of ALL KINDS are now formed at the NORMAL SCHOOL of ART, Cromwell-road, South Kensington.—Terms, 3s. per week or learnt on application by letter, post-paid, addressed to the Secretary.

NORMAN MACLEOD, Registrar.

ARCHITECTURAL, MECHANICAL, ORNAMENTAL, and PERSPECTIVE DRAWING CLASSES, are held at the London Mechanics' Institution, 20, Southampton-buildings, Holborn, on MONDAY and FRIDAY Evenings, under the superintendence of Mr. T. J. HILL. Terms:—Non-members, 8s.; Members, 3s. 6d. Hours of attendance, from Eight to Ten. Full subscription to the Institution, 6s. per quarter.—For further particulars, apply at the Institution. The new quarter commences FRIDAY, DECEMBER 5th.

W. S. SIMMONDS, Secretary.

COMPETITIONS.

TO ARCHITECTS. — WANTED, COMPETITION DESIGNS, for a NEW TOWN-HALL, to be erected in ST. ANDREWS. Cost of erection not to exceed Five Thousand Pounds. Premiums of Fifty Pounds and Twenty-five Pounds. Plans and Elevations to be sent to the Town Clerk, St. Andrews, Scotland. St. Andrews, Nov. 22, 1856.

TO ARCHITECTS, &c.—The St. James's Church Building Committee, Southampton, have POSTPONED their TIME for RECEIVING PLANS, &c. until the 27th day of DECEMBER instant.

MEMORIAL CHURCH at CONSTANTINOPLE.—The Committee remind Architects who desire to enter into competition that JANUARY 1st, 1857, is the LAST DAY fixed for receiving plans. They must be addressed to the Secretary of the Memorial Church Committee, 79, Pall-mall, London.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer, Portsmouth, hereby gives Notice, that SEALED TENDERS will be received at the Office of the Director general of Contracts, Pall Mall, London, on or before FRIDAY, the 19th day of DECEMBER, 1856, from persons desirous of CONTRACTING for BUILDING a SCHOOL-ROOM and LIBRARY at Cambridge Barracks, Portsmouth. The plans and specification may be seen, and all necessary information obtained at this Office, between the hours of TEN and FOUR, each day except Sunday, until the 12th proximo. The person whose Tender may be accepted will be required to provide two eligible securities, to be bound with him jointly and separately, in a bond of £400 for the due performance of the contract, by the 1st OCTOBER, 1857. The War Department reserves the right of rejecting the whole or any of the Tenders. No notice will be taken of any Tender unless upon the printed form, which can be obtained at this Office.

Royal Engineer Office, Portsmouth, November 25, 1856.

WATFORD BURIAL BOARD.—(ALTERED ADVERTISEMENT)—To SURVEYORS and ARCHITECTS.—The Burial Board for the Parish of Watford, in the county of Hertford, are desirous of receiving (within five weeks from the date of this advertisement) PLANS, DESIGNS, SPECIFICATIONS, and ESTIMATES, comprising separate plans, sections, and elevations, for FENCING in FIVE ACRES of LAND, or thereabouts, part of a field (called Old Field), in the parish of Watford aforesaid, for Erecting a new Chapel on the consecrated, the other on the unconsecrated portion; the consecrated portion being two in width of the land, commencing by the side of Cuey, otherwise Colney Street, and the remaining part the unconsecrated portion, Sexton's House with board room, clerk's room, &c., and a separate Mortuary or receiving-house, and for laying out the land as one for a Burial Ground, with a sufficiency of roads and of pathways to afford access to the gravel, and to mark every grave space. The Board will not bind themselves to employ or engage the person whose plans, designs, specifications, and estimates, or any or either of them may be approved, but in case he should not be employed or engaged, the Board will pay him a premium of Ten Guineas for the same, when such plans, designs, specifications, and estimates shall become and be the absolute property of the Board. The Board will not pay any charge or expense for preparing, and they will not pledge themselves to accept or approve any plan, design, specification, or estimate. A plan of the land is deposited with Mr. PUGH, the Clerk to the Board, and may be seen at his Office at Watford, at any time between the hours of TEN and FOUR in the daytime, till within two days of the expiration of the time hereby limited. All plans, &c. to be sent to the Clerk's Office free of expense on the day the five weeks will expire, or earlier; and those not approved will be returned free of expense, in such way as the respective owners may request.

WATFORD, 28th November, 1856.

BURY SAINT EDMUND'S, SUFFOLK. The Commissioners for Paving, Lighting, and otherwise improving the Town of Bury St. Edmund's, in the County of Suffolk, are ready to receive TENDERS for the MAKING an UNDERGROUND DRAIN SEWER, commencing from a place called the Lavers, to the Culvert, at the Fox Inn, in Mustowstreet, in the same town. Drawings and specifications may be seen at Mr. JOHN CROFTS', Halter-street, Bury St. Edmund's; or G. R. BURNELL'S, Esq., 14, Lincoln's-inn-fields, London, between the hours of TEN and FOUR. The Commissioners do not bind themselves to accept the lowest Tender. Tenders to be delivered, sealed, post-paid, and addressed to Mr. PARKE, Clerk to the Commissioners, Halter-street, Bury St. Edmund's, on or before the 13th day of DECEMBER next, to be laid before a meeting to be held on MONDAY, the 15th of DECEMBER instant, when parties Tendering are invited to attend.

Bury St. Edmund's, December 1, 1856.

LLANDUDNO IMPROVEMENT ACT, 1851. To SEWER CONTRACTORS, &c. Persons desirous to CONTRACT for the CONSTRUCTION of the WHOLE of the SEWERAGE, in connection with the Improvement of Llandudno, may see the Plans, Sections, and Specifications, prepared by T. MACDOUGALL SMITH, Esq., C.E. at the Office of the Commissioners, between the hours of TEN o'clock a.m. and FOUR o'clock p.m. daily, on and after MONDAY, the 24th inst. Tenders (under seal) to be sent in, addressed to the Clerk to the Commissioners, on or before THURSDAY, the 11th of DECEMBER next. The Commissioners do not bind themselves to accept the lowest Tender; but in the event of one being accepted, the party or parties will be required to give security for the due performance of his or their contract, to the full specifications, prepared by T. MACDOUGALL SMITH, Esq., C.E. at the Office of the Commissioners, between the hours of TEN and FOUR, each day, except Sunday, until the 12th proximo. The person whose Tender may be accepted will be required to provide two eligible securities, to be bound with him jointly and separately, in a bond of £400 for the due performance of the contract, by the 1st OCTOBER, 1857. The War Department reserves the right of rejecting the whole or any of the Tenders. No notice will be taken of any Tender unless upon the printed form, which can be obtained at this Office.

Royal Engineer Office, Portsmouth, November 25, 1856.

CONTRACTS.

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Bury St. Edmund's, December 1, 1856.

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Royal Engineer Office, Portsmouth, November 25, 1856.

CONTRACTS.

TUNSTALL LOCAL BOARD of HEALTH.—NEW COVERED MARKET.—To BUILDERS, IRONFOUNDERS, and OTHERS.—The Tunstall Local Board of Health are prepared to receive TENDERS for the EXECUTION of the several WORKS required in the ERECTION of a COVERED MARKET, according to the design and specification of G. T. ROBINSON, Esq., Architect, Leamington. The drawings and specifications may be seen from WEDNESDAY, the 26th instant, to WEDNESDAY, the 24th day of DECEMBER, 1856, at the Architect's Office, 23, Upper parade, Leamington, where all further particulars may be obtained. After that date they will lie for inspection at the Offices of the Local Board, Amicable-street, Tunstall. Sealed Tenders, properly endorsed, to be sent to me on or before the 14th JANUARY, 1857. The lowest Tender will not necessarily be accepted.—By order,

Tunstall, Nov. 29, 1856. JOSEPH LOWNDES, Clerk.

GLOUCESTER CEMETERY. — Parties desirous of TENDERING for the ERECTION of TWO CHAPELS, with TOWER and SPIRE, LODGE, and MORTUARY CHAMBER, with ENTRANCE-GATES, &c. for the Burial Board of the City of Gloucester, may see the plans and specifications at the Offices of the Architects, Messrs. MEDLAND and MABERLY, Clarence-street, Gloucester, on and after the 9th day of DECEMBER next. The Estimates to be delivered, post-paid, to the Clerk to the Burial Board, on or before the 20th day of DECEMBER next. The Board will not bind itself to accept the lowest or any Tender.—By order of the Board,

Gloucester, November 20, 1856. A. H. JENKINS, Clerk.

TO DUST CONTRACTORS.—The Vestry of the Parish of Chelsea will meet at the Board-room, at the MANOR-HOUSE, King's-road, Chelsea, on TUESDAY, the 9th day of DECEMBER, at ELEVEN o'clock in the Forenoon precisely, to receive TENDERS from any person willing to Contract, pursuant to the terms of a Draft Contract, marked "Dust Contract, 1856-7," now lying for inspection at the Office of the Vestry, Manor-House aforesaid, for COLLECTING and REMOVING the DUST, ASHES, FILTH, and RUBBISH, from the houses and other places within one or more of the several districts into which the said parish is divided, during the period commencing on the 10th day of DECEMBER, and ending the 29th day of SEPTEMBER, 1857. Parties Tendering must appear personally on the day the Tenders are opened, and a deposit of Ten Pounds per cent is to be paid on the acceptance of the Tender, and the remaining three-fourths as provided in the said Draft Contract. The costs, charges, and expenses of and incidental to the preparation and completion of the Contract, to be paid by the contractor upon the execution of the same. Sealed Tenders, signed by the proposed contractors, with the names and residences of two householders as sureties for the performance of his Contract, are to be left at the said Office, on or before SATURDAY, the 6th day of DECEMBER, but no Tender will be received or accepted unless made on one of the printed forms to be obtained at the said Office. The Vestry do not bind themselves to accept any Tender. By order,

CHARLES LARKE, Vestry Clerk.

Offices of the Vestry, Manor-House, King's-road, Chelsea,
November 27, 1856.

HACKNEY DISTRICT BOARD of WORKS. Notice is hereby given, that the Board of Works for this District will, at their meeting to be held at the Town hall, in Church-street, Hackney, on THURSDAY, the 18th day of DECEMBER, 1856, at TEN o'clock in the forenoon, CONTRACT for the SUPPLY and LAYING DOWN of 50,218 feet superficial of YORK PAVING:

1,300 Feet run of Granite Curbing.
285 Yards super. of Granite Paving.
8,809 Feet super. of York Paving Relay.
3,000 Feet run of Granite Curbing Relay.
200 Yards super. of Granite Paving Relay.

More or less, for paving and repairing the footpath commencing at the parish boundary at Cambridge-heath, adjoining the gate of the Marc-street, Hackney, to opposite Ward's corner. Also for paving and repairing the footpath commencing at the parish boundary at Kingsland-street, along the east side of Kingsland-road, Newington-road, and High-street, Newington, to opposite Abney-park Cemetery. The Tenders, addressed to the Clerk must be sealed, and marked "Tender for Paving and Curbing." Forms of Tenders and further particulars may be obtained at the Office of Mr. JAMES LOVEGROVE, the Surveyor, at the Town-hall, Church-street, Hackney, between the hours of TEN and FIVE, and by order of the Board,

RICHARD ELLIS, Clerk.

MERTHYR TYDFIL LOCAL BOARD of HEALTH. To IRONFOUNDERS, CONTRACTORS, and OTHERS. Persons willing to TENDER for the ERECTION of a new IRON LATTICE BRIDGE of about 80 feet span, including abutments, retaining walls, and approaches, to be built over the river Taff, at Pontytrinan, in the parish of Merthyr Tydfil, may see plans, specification, and obtain further particulars on application to Mr. J. W. HARRISON, Surveyor to the Board, at his Office in High-street, Merthyr, between the hours of TEN a.m. and TWO p.m. from the 1st of DECEMBER to 18th DECEMBER inclusive. Tenders to be delivered under cover to Mr. JAMES WARD RUSSELL, and endorsed "Tender for the Pontytrinan Iron Bridge," not later than MONDAY, DECEMBER the 22nd. The Board do not bind themselves to accept the lowest or any other Tender.

JAMES WARD RUSSELL, Clerk to the Board.

Merthyr Tydfil, November 24, 1856.

TO ROAD CONTRACTORS and OTHERS. The Executive Committee of the Third Tower Hamlet Freehold Land Society, are prepared to receive TENDERS for the CONSTRUCTION of the ROADS, and SEWERS, with all the necessary Drainage, Works, &c. &c. on the Estate, situate in the Parish of Bow, in the County of Middlesex, and known as the Land between the Old Ford Road, Bow, and the Regent's Canal, Hackney, and the Estate of the Victoria Park Freehold Land Society, Hackney. Plans and Specifications may be seen at the Offices of the Society, No. 1, Bow-road, Bow, on and after Monday next, the 1st day of December next. Tenders to be sent in on or before the 15th day of December next.

[For remainder of Contracts see next page.

CONTRACTS.

PARISH of BRIGHTON.—To BUILDERS and OTHERS.—The Burial Board for the Parish of Brighton are desirous to receive TENDERS for and upon the Plans, Drawings, Specification, and Conditions of Contract for the ERECTION of TWO CHAPELS, with Vestries and a Central Tower, &c. Sexton's Lodge, Lych House and Memorial Gateway, on the new Burial ground. The plans, drawings, specification, and conditions of contract will be for inspection at the Parochial Offices, Church-street, Brighton, from FRIDAY, the 5th day of NOVEMBER inst. until SATURDAY, the 6th day of DECEMBER next, between the hours of NINE and SIX; and further information may be obtained upon application to GEORGE WILLIAM LEE, Esq. Architect, Bedford Chambers, Bedford-row-street, Strand, London. Tenders to be delivered at the Parochial Offices, Church-street, Brighton, on MONDAY, DECEMBER the 29th inst., not later than TWO o'clock in the Afternoon, endorsed, "Tender for Chapels, &c. to the new Burial ground, Parish of Brighton." Each Tender to be accompanied with a sealed note, containing the names and address of the parties who will be willing to enter into bonds for the due performance of the several works. The Burial Board will not be bound to accept the lowest or any Tender. By order of the Board, SOLOMON CLARKE, Vestry Clerk.

Brighton, Nov. 27, 1856.

BERMONDSEY VESTRY, SURREY.—To STONE MERCHANTS and OTHERS. The Vestry of this Parish will meet at the WORKHOUSE, in Russell-street, Bermondsey, on MONDAY, the 15th day of DECEMBER inst., at Six o'clock in the evening precisely, to receive TENDERS for the supply of 800 feet of 18 by 9 ABERDEEN GRANITE TRAMSTONE, delivered at Spa-road's Wharf, near Rotherhithe Tollbar Turnpike. The same is to be cut ready for the top, bed, perpendicular, and joints, and in lengths of not less than 3 feet 6 inches. The Tenders to state within what time the stone can be delivered, and the time limited will form part of the essence of the contract. Payment will be made within one month after the surveyor has given his certificate to that effect, and such certificate to be given only on the completion of the contract. The Vestry do not bind themselves to accept the lowest or any Tender. GEO. H. DREW, Clerk.

Vestry Office, Maltby-street, December 5, 1856.

LLANDOVERY, CARMARTHENSHIRE. To BUILDERS, MASONS and OTHERS. Persons desirous of CONTRACTING for the ERECTION of a NEW HALL and CORN MARKET, to be built at Llandovery, are requested to send in their Tenders, to the Powell's Arms on or before the 15th day of JANUARY next. An inspection of the plans and specifications may be obtained upon applying to Mr WM. REES, Town-clerk, Llandovery, after the 15th of DECEMBER.

N.B. This advertisement will not be repeated.

MIDDLE LEVEL DRAINAGE.—To CONTRACTORS for PUBLIC WORKS.—Notice is hereby given, that the Middle Level Commissioners are desirous to receive TENDERS for the WIDENING and DEEPENING of the NEW CUT through Marshland, extending from the 16-feet river to the River Ouse, being about eleven miles in length. Plans, sections, and a specification of the work may be seen at the Office of R. LEE, the Superintendent of the Middle Level Works, March, Cambridgeshire, on and after MONDAY, the 8th day of DECEMBER inst.; and any further information may be had at the Offices of Messrs WALKER, BURGESS, and COOPER, 28, Great Ormond-street, Westminster. The Tenders must be delivered at my Office, 43, Parliament-street, Westminster, on or before the hour of TWO precisely on WEDNESDAY, the 14th day of JANUARY next. The Commissioners do not pledge themselves to accept the lowest or any of the Tenders.

GEO. GAME DAY,
Clerk to the Middle Level Drainage Commissioners.

Dated this 1st day of December, 1856.

TO MATERIAL DEALERS.—WANTED, to PURCHASE, about 250 feet run, of stout, sound WOOD, or other FENCING, complete, about 7 feet high.—Address, stating particulars, to the Committee of the German Hospital, Dalston, care of Mr. William G. Bartlett, Architect, Pinners-hall, Old Broad-street.

TIMBER.—For SALE, by private contract, a large quantity of PLANK, consisting of Wainscot, Ash, Beech, and Elm; also Wheel Boards, and Oak Spokes. For sizes and price, address X. X. X. Office of "The Builder."

TO BUILDERS AND OTHERS.

AT the LOWEST PRICES.—TIMBER, DEALS, MAHOGANY, and WAINSCOT. A large assortment of seasoned planed FLOORING and MATCH BOARDING, Yellow and Pine Cut Stuff, Sliding Battens, Panelled Laths, Oak Plank, Sash Cills, &c. Timber of all kinds, Planks, Deals and Battens, Scuttle Form Tables, sawn by patent machinery in the best manner, and delivered at the shortest notice.—THOMAS JACKSON, Sawing and Planing Mills, Commercial-road, Pimlico, London.

MAHOGANY and WAINSCOT seasoned by Symonds's New Patent Process.—JOHN COUMBE solicits an inspection of his stock. He has by process enabled himself to have by an expeditious patent process of time, to sell at prices much less than usually charged. Address, PATENT WOOD SEASONING WORKS, Lake-grove, Mitcham-road, Pimlico, London.

NOTICE of REMOVAL.—EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wharf-road, Pancras, to the KING'S ROAD, CHELSEA, where their orders will be promptly executed, as before.—Planing mills, E. SIMMS, King's-road, Saw mills, Chelsea, opposite Manor-street.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Spruce, 3s.; Pine Plank, 3s. 6d. Mahogany, 6d.; 24 Yellow Battens, from 11l. 10s. Cartage free to any part of town. T. FORMAN, 1, Walnut-tree-walk, Lambeth-walk.

MOULDINGS by MACHINERY. Capping, Sash-bars, Beads, &c. to any Design, carefully packed and sent to all parts of the country. A Pattern must be applied to

E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S ROAD, CHELSEA.

ALFRED ROSLING begs to inform his Customers and the Trade that he has been enabled to allow a discount of 15 per cent. upon the list prices of his Mouldings. A large stock of dry flooring at low prices.—South-park-road, Wandsworth.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the largest and best kind ever established, a large assortment of Deal and Yellow Mouldings, comprising Pulley-stiles, Sashes, Frames, Linings, Facings, Cases, Boards, Backs, Shelves, Bead, Flush, Parting, Staff, Hatch, Window, and Door Beads, all of Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses. Sliding Battens, Panelled Laths, Oak Sills, Planks, and Scantlings. Moulding machines and tools to any pattern. List forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders, Railway Contractors, Timber Merchants, and others, that he has now on hand a large stock of well-seasoned WHITE DEAL FLOOR BOARDS, from 6 to 12 inches wide, and can supply them ready for use, also Mahogany, Moulding, Wainscot, and all kinds of Timber required for Building purposes.—R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected STOCK of DEALS, and the reduced Prices of prepared Flooring, &c.

Inch Yellow Flooring.....	18s. per square.
1 inch ditto	16s. "
Pine Plank 12 3 by 11, from...	£21 per 120
Yellow Deals, from	20 "
Spruce Deals from	18 "
Yellow Battens, from	13 "

A List of Prices forwarded on receipt of a postage-stamp.

N.B. All Sawn Goods delivered within two miles free of cartage. Broadwall, Southwark-road, Elm-street, Gray's-Inn-lane.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NORFOLK and CO. invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:—

¼-inch white, 13s. 6d. per square; ¼-inch white, 15s. per square; 1-inch white, 18s. per square; 1-inch yellow, 15s. per square; ¼-inch yellow, 16s. 6d.; 1-inch yellow, 20s.

Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

ROBINSON and BARTRAM, SAWING and PLANING MILLS, Silvertown, Essex, and SWAN-STREET, BERMONDSEY, having completed powerful MACHINERY for SAWING TIMBER, for building purposes, will be glad to receive ORDERS in this Department, and begto assure their friends that all favours shall be executed in the best manner, and with the utmost punctuality and despatch.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that they have completed their extensive arrangements, and will be happy to execute all orders entrusted to their care with despatch and punctuality. Wet and dry docks, and powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring, match boarding, &c. &c. always in stock at reduced prices.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.

STEPHENS' DYES or STAINS for WOOD.

The following extract from a letter the Proprietor has obtained leave to make public:—"Northgate, Colchester, Feb. 5, 1855.—Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant,

"SAMUEL GRIMES, Builder.

"To Mr. Henry Stephens, 54, Stamford-street, London."

Samples and prospectuses free to any part of the kingdom.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction in the above prices.—Best pale or French polish, white and brown hard spirit varnishes, stiff lackers, and finishing spirit. The present price is 6s. 6d. to 7s. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

PELICAN LIFE INSURANCE COMPANY, established in 1797.
79, Lombard-street, City, and 57, Charing cross, Westminster.

DIRECTORS.

Robert Gurney Barclay, esq.	Kirkman D. Hodgson, esq.
William Cotton, D.C.L. F.R.S.	Thomas Hodgson, esq.
John Dax, esq.	Henry Lancelot Holland, esq.
William Walter Fuller, esq.	Benjamin Shaw, esq.
Jos. A. Gordon, M.D. F.R.S.	Matthew Whiting, esq.
Isaac Price, esq.	M. Wyvill, jun. esq. M.P.

NOTICE.—In order to remove any impression that might be entertained as to the perfect security of the Policies granted by the PELICAN LIFE OFFICE, the Directors have omitted every clause that would limit or even void the policy in case of error in the statements made by the Assured either at the time of effecting an Insurance, or at any subsequent period of payment on account of profits. Low rates without profits.

LOANS.—In connection with Life Assurance on approved security.

For prospectuses and forms of proposal apply at the offices as above, or to any of the company's agents.

ROBERT TUCKER, Secretary.

THE SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY, Instituted 1838.
Accumulated Funds, ONE MILLION STERLING.
Annual Revenue—ONE HUNDRED AND SEVENTY THOUSAND POUNDS
Existing Assurances—FOUR MILLIONS AND THREE-QUARTERS.

At the Division of Surplus, at 1st March, 1856, a Policy for 1,000l effected at 1st March 1848 was increased to 1,262 18s 10d, being at the rate of 5l 2s 10d per annum per cent. on the sum assured. This addition may be converted into a present payment, or applied in reduction of the future premiums.

Policies effected before 1st March next will receive six years' additions at the division of profits in 1862.

Copies of the Report, Tables of Premiums and Rates of Surplus, and all information, may be had on application at the Head Office, or Agencies.

ROBERT CHRISTIE, Manager.
WILLIAM FINLAY, Secretary.
Head Office—39, St. Andrew-square, Edinburgh.
Offices in London—26, Poultry.

A. T. RITCHIE, Agent.

PROVIDENT CLERKS' MUTUAL LIFE ASSURANCE ASSOCIATION.—Established 1840.—Every description of Life Assurance effected.

WM. THOS. LINFORD, Sec.

14, Moorgate-street, London.

PROVIDENT CLERKS' BENEVOLENT FUND.—The attention of clerks is earnestly invited to the great advantages to widows and families now derived from this Fund.

WM. THOS. LINFORD, Sec.

15, Moorgate-street, London.

LOSH, WILSON, and BELL, NEWCASTLE-ON-TYNE.

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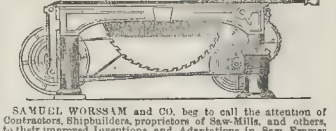

SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their improved Inventions and Adaptations in Saw Frames and Benches, Roller and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines, for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches, and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace.—A descriptive Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. King's-road, Chelsea, London.

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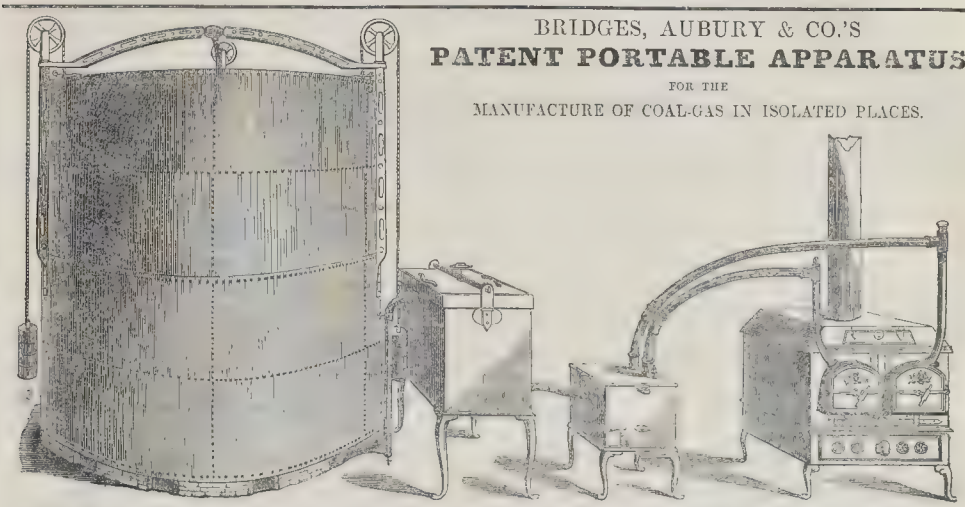

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FOR THE
MANUFACTURE OF COAL-GAS IN ISOLATED PLACES.

The Nobility, Railway Companies, Millowners, &c., can now, by the use of the above patent, make their own gas. There are many advantages in this apparatus over every other invention. It is really portable: can be taken to pieces and put together again, and gas obtained in a short time.
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The late additions to these extensive premises (already by far the largest in Europe) are of such a character that the entire of EIGHT HOUSES is devoted to the display of the most magnificent stock of GENERAL HOUSE IRONMONGERY including Cutlery, Nickel Silver, Plated Goods, Baths, Brushes, Turnery, Lamps, Gasaliers, Iron and Brass Bedsteads, Bedding and Bed Hangings, so arranged in Sixteen Large Show-rooms as to afford to parties furnishing facilities in the selection of goods that cannot be equalled elsewhere. Illustrated Catalogue sent (per post) free.—39, Oxford-street; 1, 1a, 2, and 3, Newman-street; 4, 5, and 6, Perry's-place, London.—Established 1820.

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The only Stove for which a Prize was awarded at the French Exhibition.
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These Stoves show a bright fire; are durable, economical, and burn iron twelve to sixteen hours with one supply of fuel.
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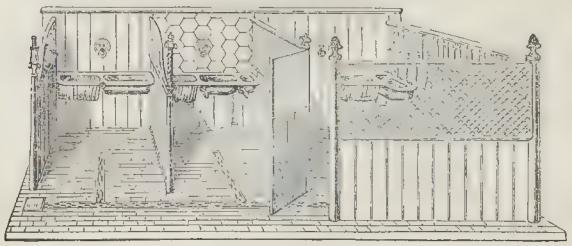

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TARIFF OF PRICES beyond the current Price of Hoop-iron.

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1½ in.	1¾ in.	2 in.	2½ in.	3 to 6 inch.
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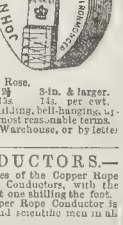

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3-feet Cottage Ranges, with ovens and back boilers, 32s. each.

3 feet self-acting ditto, ditto, 34s. each

Air Bricks, 4s. per doz.

Best Fine Cut Clasp and Rose.

1½	1¾	2	2½	3	3-in. & larger.
16s. 6d.	16s. 6d.	15s. 6d.	15s. 6d.	15s.	14s. per cwt.

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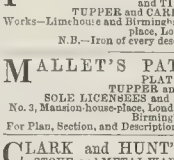

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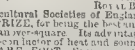
By Her Majesty's  Royal Letters Patent.

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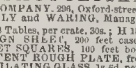
By Royal  Letters Patent.

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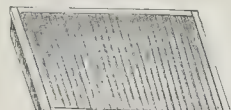

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The Builder.

Vol. XIV.—No. 722.

KNOWING the uncertainty which prevails in the minds of many, as to the *charges* that *architects* should make under various circumstances, it seems to us desirable that the particulars of a case tried before the Lord Chief Baron, in the Court of Exchequer, at Westminster, on Monday last, should be stated pretty fully. The relation ought to serve, too, as a caution and warning to architects, and a reproof to committees and boards.

In the early part of last year, a premium of ten guineas was offered by the trustees of the Leamington National Schools, by an advertisement in our pages, for the best design for schools and residences, to cost 1,300*l.*; the employment of the successful competitor to carry out the design being left an open question. From the designs submitted, one by Messrs. Clarke and Worthington was selected, as best meeting the views of the trustees, and one by Mr. Murray; and, after some consideration, the latter was put aside, and Messrs. Clarke and Worthington were directed to make certain alterations, and to prepare drawings for the builders: they were also empowered to make out bills of quantities (for the cost of which the contractors were to allow in their estimate 2 per cent.), and tenders were advertised for. The lowest of these, when received, amounted to something like 1,990*l.*, and with certain ornamental work suggested, to 2,022*l.* Explanations ensued in reply to objections, and then the contract was prepared, the committee of Privy Council having promised a large grant conditionally on the project receiving general support, and was executed by the builder and the chairman of the trustees, Mr. Watson. Out of doors, however, the excess in the estimated cost raised opposition (our readers heard something of it at the time), and the supporters of the second design brought that forward, with a builder's tender to execute it for the sum originally named. The trustees became frightened, and after various stormy meetings, the architects were directed to send an account of their charges up to that time, supposing the matter not completed; all the working drawings, extra show drawings, perspectives, one of them lithographed, and a set of plans for the Privy Council office had been made. The bill was commented on, but ultimately the payment of the premium, and of a sum on account, was promised. The money, however, came not, and as nothing definite could be learnt, the architects found themselves compelled to bring an action, and this was done against Mr. Watson, and four other trustees, for the sum of 180*l.* 16s. 6d. The defendants paid into court the sum of 110*l.*

For the ordinary two sets of drawings required, the working drawings, detailed specification, general approximative estimate, obtaining tenders (everything, in short, but superintending the work), a commission of 3¾ per cent. on the amount of contract was charged. For a plan and elevation, with plan of the ground, and a coloured perspective drawing, to assist in obtaining contributions, 15*l.* 15s. For a smaller perspective to be lithographed, 3*l.* 3s. For copies of the drawings and specification, to be deposited in the Privy Council Office, 5*l.* 5s.; and for the "quantities," as already mentioned, 2 per cent. The travelling expenses came to 20*l.* and these items, with the lithographer's bill, and some small charges not disputable, amounted to the sum claimed.

Mr. Aitchison, Mr. Finch, Mr. Ashpitel, and another deposed, without reference to the circumstances, that looking at the work done, the charges were customary and fair. Mr. Worthington, in the course of his evidence, when asked as to the sum named in the advertisement, made the observation that they, meaning competing architects generally, never paid any attention to that, knowing perfectly well that committees never adhered to it. The assertion was correct enough—too correct; but it was unfortunate for the plaintiffs' case. Mr. Serjeant Shee, who stood manfully by his clients, the trustees, to the last, which is more than can be said for the leading counsel engaged for the plaintiffs, who ran before the fight began, battered away with this admission, and did much damage. The defence on the part of some of the defendants was, that they had been misled by the plaintiffs, and that Leamington had no schools in consequence; while one of them deposed that he was no party to the matter, and was not present when the tenders were opened. Further, they said they understood that 5 per cent. was to include all the extra drawings. Mr. Banks, architect, on the part of the trustees, was deposing that he should have considered a charge of 2½ per cent. enough under the circumstances, when the judge inquired if the counsel for the plaintiffs saw any means of getting over the proof given, that one of the defendants was not liable. A clause in an Act of Parliament was pointed out, which gives the judge power to rectify a misjoinder of defendants by striking out a name; but the Chief Baron said, if he exercised the power, it would certainly be with the condition that the amount paid into court should be returned to the defendants, with permission to make such change in it as they might think fit. He dwelt upon the fact that the defendants were trustees *ex officio*, without their will therefore, and would have to pay whatever loss was suffered out of their own pockets. The witnesses for the plaintiffs were men of the highest possible character, but they had spoken simply as to the charges being fair, not as to the merits of the case, and he leant to the opinion that the trustees had been misled. In the face of such observations it was not thought wise to adopt the alternative, and a verdict was accordingly given for the defendants. The plaintiffs will have the costs to pay, including those of a special jury, and after months of labour, and a year and a half of anxiety, will find themselves out of pocket and out of heart—the victims of a system which, as now administered, demoralizes and degrades. By the bare-faced and dishonest disregard by committees of the sum named in their conditions, when selecting a design, competing architects are tempted—indeed forced, if they would succeed, to disregard it too, and then, on the first revolt against the system, they alone are pointed at as deceivers, and made the sufferers.

IMPROVEMENTS IN HOUSE-BUILDING.

CASEMENTS AND VENTILATION.

The opportunities that architects have in ordinary houses, of improving upon the domestic and sanitary contrivances, are really few in number, though the importance of improvement is fully recognised. New inventions of a promising nature are never wanting. Failures in their application, however, have been numerous; so that an architect who has really the best disposition to use the resources of his time, may—although neglecting no precaution—only reap the result of much mortification, and some animadversion for his manner of spending his employer's money. All progress is gained only through *experiment* as one of its stages: in nothing is progress so much needed—in nothing has it been so protracted—as in what ministers to domestic comfort: yet experiments involve outlay which may turn out to have been misapplied. In his own house, an architect has a better chance of forwarding the desired improvement; and some praise is due to those who make any attempts.

In an article in a former volume* we dwelt at length upon the necessities and difficulties of the case, and tried to suggest means of using to a greater extent, and with more certainty of good results, inventions which were continually made. The difficulty that was felt chiefly was in getting a proper substitute for the test of time, or ready reference to any results which were known. Frequent and trustworthy information is still wanted; and we are anxious to aid the publication of it, especially from the class of workmen,—who often, by communicating what they have seen and know, could really do much for common objects, and for the advancement of science and its applications. We have recently had accounts of failures in the use of some newly-applied materials, of the most serious and costly nature; one of the instances being in the case of a very important public building, by an architect who positively had been quoted to *us* as an example of the general prejudice which architects were supposed to have against progress, and who has thus in an unfortunate manner vindicated his innocence of the particular character imputed to him. Even these mistakes, however, must not lessen the attention which the general subject of new building contrivances requires.

Our immediate object, however, was to mention as worthy of consideration, a somewhat novel arrangement of double casements in a house which is being built by Mr. Andrew Moseley, at Eden Hurst, Fulham, for his own residence. The object, that of combining moderation from extremes of temperature, with good ventilation, is one of the most important matters for attention, and one which is still the most neglected. French casements hung folding as usual, opening down to the floor, are fixed in two pairs, the one pair opening inwardly, and the other outwardly,—a space of 10 inches being left between the two. The shutters and blinds are in the space. A flue of 9 inches by 4½ inches, is carried up from close under the lintel at one side to the roof-space, where some external opening for escape will be provided. In the sill, or step of the window, will be two circular brass ventilators, one communicating with an external opening in the riser of the step, and the other with an internal grating or perforated plate next the window, in the floor of the room,—that is to say, one channel to admit air to the casement-space from the exterior, the other to admit to the same space air from the room. Mr. Moseley's object of course is, to obtain, in the first place during hot weather, a current of air from the exterior, which may play between the two glass surfaces, and thus keep the heat of the sun from the room,—it being assumed that the heat of the roof would effect a draught through the flue first mentioned, and preserve the current. In cold weather, the external valve would be closed; and that from the room being opened, it is thought that the warm air of the room would be drawn between the two surfaces of glass, and so keep the outer cold air from affecting the internal temperature. If, however, the draught of the fire-place should cause a current in the reverse direction, the air would be somewhat warmed before entering the room by its contact with the glass of the internal casement. But artificial ascent might be forced by a jet of gas, placed between the casements. The latter plan, we may suggest, might well be carried out, with a view to the lighting of the room by night, in the manner which would best prevent baneful results to health from gas-burners. The bulk of the injurious effect through heated atmosphere and want of ventilation in public rooms, and in many private houses, is to be traced to the unventilated gas-flames alone.

Besides these means of ventilation, each room of the house is to have a ventilator in the centre of the ceiling. For this position, a modified form of Looker's tubular ventilator

* Vol. xiii. p 289

has been designed by the architect. Mr. Moseley's adaptation consists in the formation of the inner or moveable tube with spiral grooves round it, so that by means of a couple of pins fixed in the outer tube, and working easily in the two grooves, the inner tube is supported, whilst it can be readily adjusted to an increased or diminished area of escape. The bottom of the tube can be covered with an ordinary "flower," in the centre of which a square hole would be left for the insertion of the key, or the end of a stick.

In the City Bank, in Threadneedle-street, by the same architect and his brother, a somewhat similar arrangement of ventilation to that above described, between double thicknesses of glass, has been provided in the lantern light of the principal room.

In the house at Eden Hurst there has of course been no sufficient opportunity of certifying the success of the means adopted; but whatever may be the result in this particular case, the object will, no doubt, draw towards such contrivances attention of those who have regard for the importance of improvements in ordinary house building, and especially in the much-neglected matter of ventilation.

We propose shortly to add to the information of this practical kind which may be found in our volumes, by detailed descriptions of other recent structural applications which appear to have the character of improvements.

ON THE DECORATIONS OF ALNWICK CASTLE.

Nothing can be more embarrassing and difficult in a discussion, like the one now going on, than to avoid personal allusions of a painful nature, and the more particularly in a case like the present, where a generous and high-minded nobleman has in the most frank and candid manner allowed the description to be submitted to the Institute of the works now proceeding in his own mansion. Unless such discussions are conducted with the utmost delicacy and consideration, and particularly by members of the Institute itself, I foresee the reluctance which other persons of consequence and station will have, of allowing anything to be known to the profession of what they are about; and professional men themselves are so susceptible of being made the victims of the animadversions of one or other of the two leading parties that now insanely divide the profession, that when I have applied for particulars of important works upon which they are engaged, I have met with a positive refusal.

To designate a work like that of Alnwick as a "monstrous," a "lamentable," an "unhappy error," so as to cause "poignant grief," as "bad logic," the "greatest and most lamentable mistake of the present day," is dealing hard words, and not very courteous, to a proceeding at once generous and kind to the Institute.

I dislike to allude to myself in a matter where I have played a very humble part, merely putting together other men's materials; but I must distinctly disavow that at any time did Mr. Cockerell or myself bear testimony to this principle, that "if we wish to carry out in this country the Roman style in its perfection, the proper course is to import architects from Rome to do it." We should have been false to ourselves and our profession if we had said such a thing, or for a moment thought it; for we are well convinced, that there are men in England second to none in any other country, and who are capable to erect the noblest works, whether in the Roman or any other style. But far be it from us to call in question the perfect liberty of his Grace, when, after various essays of Gothic internal decoration and inspection of the most approved specimens here, and not satisfied with the attempts made in this country, he visited the finest palaces of France and Italy, in order to see examples of other styles. Having chosen the Roman, and being at Rome, was it surprising that he should have consulted a man of reputation on the spot to advise as to its execution *in situ?* And doubtless it is most impolitic in us to advocate the exclusive employment of Englishmen in England, when we see that one of our own talented countrymen, by the force of his own genius and taste, and by the good sense of the citizens of Hamburgh, has been imported there to build them a church, and has again been selected for the design of their Town Hall. Most impolitic, I say, in us, for then we should imitate the bad faith of the committee at Lille, who have deprived our countrymen of the fair fruits of their skill, and handed over their design to be carried out by a Frenchman.

I venture also to notice another confounded inference, as though Mr. Cockerell and myself were antagonistic to our friend Mr. Salvin, whose talents we honour and whose character we esteem. Nothing could be further from the fact: our co-operation with him has been most cordial and sincere.

The specimens of carving exhibited on the evenings when the paper was read, could hardly have been looked at, when those forms are stated to have no relation to nature. They are founded *upon* nature, and did I not know the feeling and general discernment of the eye of that critic, I should have attributed such a remark to a certain obliquity of vision, or unacquaintance with classic ornamental sculpture, which has never been surpassed, nay, in the Gothic times; or to a one-sided predilection, that strangely misleads the judgment. By another critic, not in your columns, the establishment of the school of carving is attributed "to a mean and flint-paring subterfuge, sanctioned too by members of the Royal Institute of British Architects." The best reply to this assertion is by reference to the specimens of wood carving under which the table of the Institute so often *groans;* and to the fact that at the Exhibition of 1851 we had no specimens that could compete either in design or execution with those from France, Italy, or Belgium. When these carvers shall have left the works at Alnwick, there will be a class of intelligent, skilful, and refined workmen, equal to any men at home or abroad, guided, as they are, under the superintendence of Mr Salvin.

But I dissent from the "logic" which arrives at conclusions so hostile to the present works. There is no parallel between "J. F.'s" allusion to the Roman portico to the Gothic cathedral of S. Paul's and the work at Alnwick; and as widely different is the supposition of adding the portico of the Parthenon to the front of Westminster Abbey. Had it been proposed to convert the Barbacan into a propylon, like the entrance to the Villa Borghese, illustrated in your last number, or to substitute the middle gateway by an Italian lodge gate, "J. F.'s" parallels would hold good. But at Alnwick, the exterior is preserved intact in style, where no contrast meets the eye. And the transition from the Mediæval of the exterior, to the revival of the interior, which dates only a century or two later, may be so graduated, as to approve itself to the eye of those, whose experience ranges rather wider than Anglican limits. They who have seen the Palazzo Ducale of Venice, by no means a pure specimen, have not accused the interior of dissonance from the exterior aspect; while those, who have seen the cold, meagre, yet pedantically accurate restoration of the Chambers of Blois, would hardly wish to see its chilly decorations transferred to Alnwick. It is remarkable that Mr. Scott,—and let me honour that name while I quote it,—himself acknowledges that the castellated style for the interior would be inappropriate; and he and "J. F.'s" champions of Gothic art are at variance as to the precise style to be adopted. The latter contends that the decorations should not directly adhere to any known style; and in his next two paragraphs suggests the precise mode of ornamentation and hangings adopted for Alnwick. Mr Scott considers that to be morally impossible, and advocates, as a groundwork, not any *domestic* building, but a *religious* one. Alas! there is no other to quote but "the beautiful and refined style" of S. Stephen's Chapel, which of all others, to my mind, has always seemed an effete example of corruption and debility in its combinations, profiles, and decorations.

But nothing can be more unfortunate for art than the exclusiveness which seeks to consider all other art "illogical," "not of the true style," and intolerable, but the style professed specially by one's self. This is most unreasonable and ungenerous. There is no style *exclusively* English. We owe all our styles to foreign importations, from the pre-Norman downwards; as witness Mr. Poynter's table, in the second volume of the "Transactions" of the Institute. We have modified some parts: we have produced special delightful combinations in others. But the continent has preceded us in them all, except, perhaps, in the Tudor. It is true that Mediæval art has had the longer reign, and during that period has created wondrous works. But since its decay in England, no domestic building can be quoted, the Gothic internal fittings of which render it tolerable, whether considered æsthetically or in regard to domestic comfort. So great is the contrast with our present habits and costume, that a Gothic interior is purely melodramatic, with strange inconsistencies, as glaring as the coat and breeches in which Garrick played *Macbeth*—a childish trifling with grave realities.

It is stated as a *reproach* to modern art that Canina should go back to the productions of the artists of the fifteenth and sixteenth centuries, as the best types of that style. But what class of art can be quoted to show that its last monuments are the best? Is it so with Egyptian, Greek, or Roman? Is it so with Gothic? Must not the Mediævalist of the present day hark back to the twelfth, thirteenth, or fourteenth centuries for the choicest types? and is it to be forbidden to the Roman to do so? But the old Mediæval artist of that time never did that. He never reverted to the style of the previous period, when he had to make his alterations or additions to an existing building of bygone times. He left his addition with the impress of his own time. To that he was not false. Bacon's was a wise saying,—"Let us *look* back to the past, but not *go* back."

There is room for all styles. Let us be generous to each other, for we can afford it. Each style has its beauties, its fitness; and those are the worst enemies of architecture, who would slavishly limit its productions to one class or one period. Above all, let us hope that the genius of the country may produce a distinctive architecture of its own; not less noble, not less commanding, not less expressive than those matchless productions of man's taste and intellect in all ages and countries, which command our wonder and are worthy of our emulation.

Thos. L. Donaldson.

ARCHITECTURE ON THAMES SIDE.

So rapid is the change which is taking place in the architectural features of London, that in a very few years it will be almost as difficult to find examples of buildings erected between the reign of Queen Elizabeth and the occurrence of the Great Fire, as it is now to discover remains of Norman and Mediæval work. The almost complete disappearance of a city in less than 300 years, enables us in some measure to account for the small number of architectural fragments which remain to assist us in forming an idea of the appearance of Roman London. This circumstance has led some to suppose that the now famous city, which was occupied more than 400 years by the Roman conquerors, was a place of trifling importance. The great embankment of the Thames,—the extent of the Roman wall of London,—the varied and beautiful portions of the basement of buildings which, from time to time, are exposed to the sight,—and the glimmering accounts of remote historians, show that this was not the case. Like the city of Verulam, Roman London was, no doubt, chiefly built with such bricks or tiles as could be readily made not far off.

A ground-plan of Roman London may be arrived at from the remains of the Roman period which have been discovered. Of Saxon London we know less; and it is much to be regretted that none of the painstaking artists of that time have, even in their imperfect perspective, left us a view, however slight, of the Saxon city. Indeed, we have little in the picture and plan way about London until Queen Elizabeth's days. Feeling the value of such records, we have from time to time given slight sketches of parts of London as they then existed. Many of these have already disappeared, and it is to be hoped that the time is not far distant when sanitary inquirers

ARCHITECTURE OF THAMES SIDE.

Inn, near Wapping Old Stairs.

Timber House, at Blackwall.

Fig. 5.

Fig. 6.

Fig. 1.

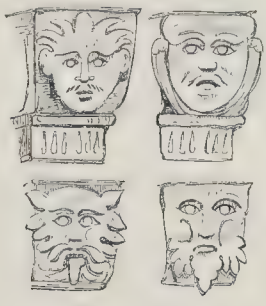


Fig. 2.

Fig. 3.

Fig. 4.

and students will look upon the illustrated facts in our pages as curiosities.

Along the banks of the river some houses have tumbled down: others have been condemned, and many removed, to make way for more substantial buildings. Soon there will not be one of the old-fashioned balconied houses, in which our forefathers enjoyed the breezes of Father Thames, left. Let us, therefore, preserve the appearance of one or two specimens before it is too late. Many of these houses have been little changed since the time when Queen Elizabeth passed them on her way to Greenwich. The quaint little hostelry shown in the engraving stood near Wapping old stairs: it had experienced many changes. It was built upon the artificial bank of the Thames, and it is not long since the gibbets of pirates, mutineers, and similar offenders might be seen a short distance off.

In the neighbourhood of Blackwall, there are several houses of old date, ornamented with carved brackets, from which we may to a certain extent get an idea of the style of the houses of London, a little before the Elizabethan reign. The old dwellings in the main streets of Poplar, Limehouse, and Wapping, are also worthy of the attention of those who are curious in such matters. These regions in the far east would in other ways seem strange to the dwellers in the west — shops for the sale of what would be to the most of them unknown commodities; groups of rather haggard-looking dock labourers; figureheads of ships fixed on the corners; watermen, sailors, musicians, emigrants from Ireland, the Highlands, Germany, and elsewhere, lounging carelessly about; eastern men, with little trains of attendants, and other features of so distinct a kind, that those who are not acquainted with the place would scarcely recognise it as a part of London. The carved timber house at Blackwall, shown in the engraving, is called, by the tradition of the neighbourhood, the residence of Sir Walter Raleigh: the place is partly occupied by two Thames fishermen, who sell tobacco, and keep a sort of general store. "And here, sir," said one of these worthies, "Sir Walter smoked his first pipe of tobacco!" Our readers, however, need not believe that. Figs. 1 and 2 show the style of the carving.

If, after the removal of the wooden houses on the banks of Father Thames, something better were reared to take their place, we should be content. It unfortunately happens, however, that in most instances buildings far more unsightly than their predecessors have been put up, and it is humiliating to view the strange sight exhibited on both sides of the Thames. Even the places of historical interest are being hidden from the view, by unsightly storehouses: witness the Tower, where brick buildings of the most commonplace form have almost hidden the venerable fortress from the passengers on the river. The City churches are treated in like manner.

Now that peace has returned, the question can be asked without the risk of embarrassing any operations, if the incrustations upon the Tower are necessary for its defence; and if the stores which these have been put up to contain, might not be just as well taken

to Woolwich, or elsewhere, and the peep of the ancient palace and stronghold restored to us, as some little recompense for other failures In *course of time* the records will be removed from the Norman Chapel there, and the public admitted to view a most perfect and interesting relic of the past. Let us hope that the Traitor's-gate, which has been so long closed, will be also made visible. This place was covered in during the time the Duke of Wellington had charge of the Tower, and converted into a bath for the soldiers of the garrison: but it is not used: why, then, conceal it from so many who would be glad to see it?

We have before now referred to that wonderful work, the embankment of the Thames, and now give some slight illustrations (figs. 3, 4, and 5), which will serve to convey a better notion to some of our readers than mere description of an example of both engineering skill and industry, which has been prepared for us, and left with but the faintest mention of those to whom we are indebted for this great national benefit.

Tradition reports that the brother of Caractacus was killed in a battle on the Isle of Dogs, as it is now called, by the Romans. If this tradition is to be relied upon, it would serve as a date to show that at that time the river wall was made, for before this work had been executed the Isle of Dogs must have been under water. It is said by Tacitus that the bank was made by Romans forcing the Britons to execute the work under their instruction.

If so, it is a curious circumstance, in connection with this great work, that so few remains of that people have been found along the extent of its course. The building of Hadrian's wall is carefully chronicled, and along its course, for some distance from the wall, are encampments, altars, residences, and other interesting memorials of those who built and defended it.

During the construction of the Victoria Docks, where in various parts opportunities were afforded for the discovery of Roman remains along the large embankment there in old time made, there was not, so far as we could gather, anything which satisfactorily proved this to be of the Roman period. A few Roman fragments, of but little consequence, were found during the course of this immense excavation; large quantities of the bones of animals, and, as we were informed the other day, thick layers of the leaves of trees, at a considerable depth, and which were so fresh, that intelligent persons were surprised at their appearance.

The various great works still left in England, older than the Roman period, the circumstance that the British at the commencement of that time were able to manufacture war chariots, and also that they had some skill in the working of various metals, show that at any rate a part of the people were not altogether barbarians.

We have ventured to mention these few matters in the hope that it may be the means of inducing some of our readers to give a more careful investigation to this important subject than it has so far met with. It would be very useful to make a list of the antiquities which are known to have been found upon the river embankment.

The sketches which adjoin this were made along the margin of the Isle of Dogs, where the crown of this work in the narrowest part is 6 yards across and upwards of 5 yards high. The sides slope gradually towards the river and land: next the former it is in places strengthened with loose stonework. In some parts the artificial bank is as much as 50 yards across; on which is built a windmill, a manufactory, and timber dwellings, very much warped and upwards of two centuries old.

In the fourteenth century it is known that in the middle of the Isle of Dogs there was a chapel or hermitage. A group of buildings there, still called the Chapel-house, displays remains of what may have been the chapel, consisting of thick masonry, of chalk and flint, on which the modern cottages have been engrafted.

Passing on towards Blackwall, and noticing that the waves of Father Thames are not improved in clearness, we halt at the entrance, near Blackwall, of the West India Docks. At this part the tide rises on some occasions upwards of 32 feet, and at ordinary spring-tide to a height of 25 feet.

The Roman vessel here roughly represented (fig. 6) was taken with other fragments from the Thames during the progress of some works at North Woolwich, not long since, at a depth of 12 feet below the present level; showing that there the river bed had risen to a serious extent.

ASSERTED FAILURE OF THE COLNEY HATCH COUNTY LUNATIC ASYLUM.

We have received from five separate quarters copies of the "Special Report," and "Supplementary Special Report of the Committee of Visitors of the County Lunatic Asylum at Colney Hatch," as to the condition of the building, together with various private statements on the subject. The documents in question contain reports ranging from November, 1851, to the present time, from Mr. Harris, Mr. Trimen, who appears to have stepped in of his own accord as a censor, Mr. Lewis Cubitt, and the architect of the building, Mr. Daukes. These reports will have been presented to the Court of Justices before the publication of our present number, who will have to weigh very conflicting opinions. While the three first-named speak of failures as threatening even imminent danger, the architect of the building maintains that it is perfectly sound throughout. While Mr. Cubitt says that the foundations are insufficient, that the walls must be underpinned, that the brick arches over the galleries to render them fireproof thrust out the walls and must be removed, that the roofs are faulty in construction and must be taken off, and that the drainage is inefficient; and would seem to show that some thousands must be spent to put the structure right; the architect of the building states that he "cannot discover one serious defect," that there is not "a single defect that would justify the supposition of the insufficiency" of the foundations, that "there is not a single foot of arching (of which there are eight miles in the building) affected by lateral thrust," that "a more complete system of draining was never introduced in any building than that adopted in this," and that it is simply the too complete drainage of the clay on which the building stands that has caused the "few slight settlements" really apparent. It is a very serious question affecting professional reputation, and must not be pre-judged. The contractor would seem to be inculpated by some of the statements.

ON STAINED GLASS.

Boringdon Church.—A "testimonial window" is about to be put up in the parish church of Boringdon by inhabitants of Hemel Hempsted, Great Berkhampstead, and the neighbourhood, in memory of Lieut. H. S. Ryder, who fell amongst the foremost, twice wounded, in the last attack on the Redan, Sept. 8, 1855; and in expression of their respect for the Hon. G. D. Ryder, his father, who represented the county of Hertford in Parliament for many years. The design for this window (which is not a large one) was made by Mr. Cope, R.A. who has taken for his subject the Resurrection of the Just. The principal figure is a youthful form, rising in the lightness of the "glorious body," and guided by an angel to the brighter realms, a kindred face in the same region, implying that others of the same family have been called to their inheritance of the promise in early childhood. In the side lights are figures of different ages, composing the general subject. At the bottom of the centre light is an indication of the tombstone placed by Mr. Ryder's brother officers over his grave near Sebastopol. The texts of Scripture, viz. "The dead in Christ shall rise first," and "The promise is to you and to your children," explain the hopeful character of the whole scene, and the consolation intended to be conveyed to those whose feelings in such circumstances awaken the liveliest sympathy. The execution of the work in glass has been confided to Mr. Lavers, and may be now seen at 30, Southampton-street, Strand. All will applaud the step which has been taken of calling in high artistic talent to the aid of the glass-painter, although all may not approve of the style of art here adopted for the windows of a mediæval church. Apart from the question of character, the drawing of the head and neck of the kneeling female figure on the left hand, together with some of the ornamental details, might be improved: the latter indeed, we were informed, would be so. It need never be feared that *good drawing* in stained glass will prove detrimental to its effect, let the style of the building in which it is to be placed be what it may: that, at any rate, should be insisted on in every window put up in this the nineteenth century. The expression of earnest religious feeling must be the object aimed at, instead of the representation of merely sensual beauty; and this being given in harmonious, powerful, and translucent colours, the artist always acting on the recollection that it is a *window*, not a painting, that is required, would go far to produce such results as we have not lately seen.

Deal.—The east altar window has been filled in with stained glass. The window contains six subjects from the New Testament, with other devices, and the openings are surrounded with a border. The tracery also contains twenty pieces filled with angels and foliage. The window is the gift of the Countess of Clanwilliam, of Deal Castle. The west window is also filled with stained glass subjects, to the memory of the late rector, and beneath this window is a brass inscription with the following words:—"In memory of Archibald Hamilton Duthie, M.A. rector of Deal, the founder of this church." The whole of the works have been designed and executed by Messrs. C. and A. Gibbs.

Whitehaven, Cumberland.—Irton Church has been lately restored, and the west window has been filled in with stained glass by the same artists.

THE CHURCH OF ST. CATHERINE AND THAT OF THE KOPTES, ALEXANDRIA, EGYPT.

Every evening the sound of a little bell is to be heard in the harbour of Alexandria. That sound proceeds from the convent of the friars of St. Francis and the splendid church of St. Catherine. It is situate in the new part of the city, in the so-called quarter of the *Francs*, and presents from the large street and square a very imposing aspect. The entrance is through a garden, in which stand on both sides three large Palm (date) trees, which stamp the whole *avenue* with a truly Eöthen character. The style of the church is the Romanic, with chapels to the right and left, analogous to those of St. Peter, in Rome. The central nave may be about 60 paces long, to about 20 in breadth, to which are added, right and left, four chapels, with as many altars. The choir and the high altar, with its splendid altar painting and pavement, make a very beautiful *ensemble*. The pavement is made of burnt plates, which form a very fine mosaic. Those of St. Catherine are from Naples, and could not be matched by any similar fabric in Europe. The curtains around the altar are also of a very gorgeous colouring, as none but the Eastern nations are capable of producing,—countries where sky and flowers are so beautiful. If one rides through those lands which overspread Palestine like a carpet, interwoven with the most smiling and gorgeous flowers, which stand either on the road-side, or raise their heads from amongst meadows, or the cracks of rocks—one can understand the glare of Oriental tapestry and others of their fabrics.

The Church of St. Catherine, in Alexandria, like the great Cathedral of Cairo, owes its origin, beside the endeavours of the Franciscan monks, to the collections and funds of the General Commissariat of the Holy Land in Vienna. The church possesses also a fine mediæval picture, a *Predella*, with a row of figures, probably of the old Florentine or Siena school, brought hither by the Franciscan monks. The large street, however, in which stands St. Catherine, as well as the huge establishments of the Lazarist friars, bears an altogether Western character, and it is clear that Eastern architecture is on the wane here as well.

The church of the Koptes in Alexandria boasts of being in the possession of the tomb of St. Mark, as the body had been conveyed to Venice, and is situate in the older town, where once stood the wonder of the world, *ancient*

Alexandria. The church presents a truly antique aspect of a double row of colonnades. A particularity of Koptic churches is that they do not admit any light, and are perfectly dark, like their prototype, the ancient catacombs: a niggardly lamp spreads a gloomy glare over the scene. There is a wooden lattice separating the nave (if it can be so called), and a compartment for the females.

PROVINCIAL NEWS.

Ipswich.—At a meeting of promoters of a new Music-hall for Ipswich, last week, it was stated that several architects and builders had been communicated with, and it had been ascertained that a suitable building, capable of holding 1,500 or 2,000 persons, with appropriate rooms and fittings, could be erected for 2,500*l.* They propose to raise 5,000*l.* The site, which is to be central, it was estimated would cost about 1,000*l.* and there then remained 1,500*l.* for the purchase of an organ, and other incidental expenses. Resolutions were passed, and a committee, with treasurer and secretary, were appointed.

Cambridge.—Here also a new Music-hall is on the *tapis*, together with Baths and Washhouses. The music-hall would serve for several purposes, *i. e.* lectures, balls, concerts, &c. and might also be used as a corn-exchange, the present one being inadequate. An eligible site has been sought out, and a company is about to be formed.

Oxford.—Her Majesty lately signified her intention to present six portrait-statues to the new museum at Oxford. The statues—all of men illustrious in science and philosophy—are to be executed in Caen stone, of life-size, and are to be placed against the pillars in the grand hall of the museum. Of two statues entrusted to Mr. Alexander Munro, one—the statue of Galileo—was completed some time ago; and on the other—that of Newton—Mr. Munro, according to the local *Chronicle*, is at present engaged. Another of the six statues, assigned to another young sculptor, Mr. Thomas Woolner, is being completed in the stone. The subject is Lord Bacon. The authorities consulted for the likeness have been the picture by Van Somer and a terra-cotta bust of Bacon when a boy (both in the possession of Lord Verulam at Gorhambury), together with the old statue in St. Michael's Church, St. Alban's.

Brighton.—The new groyne formed a subject of animated discussion at a special meeting of the town-council on Saturday last. The report of the Highways and Works Committee was read, pointing out various defects in the work, but stated that "the contractor had promised to remedy the defects mentioned forthwith." It was moved as an amendment to a proposal to approve the report, that a competent surveyor or engineer be called in to inspect the new groyne, and report whether it had been erected agreeably to the terms of the contract. It was contended that as the evils pointed out were not so serious as seemed to be imagined, they might have resulted in a great measure from the neglect of the council to appoint a clerk of the works, which, in a matter of such magnitude, they should clearly have done. One councillor observed that the council had themselves to blame somewhat when they accepted a contract from the son of the surveyor.—The surveyor was present, and explained that at the time he certified the groyne was completed to his satisfaction it was nearly covered with beach. He also explained as to several of the details mentioned in the committee's report, and said, the idea of his wilfully and intentionally being guilty of such meanness as deceiving the public in such a paltry affair, was absurd. He was very sorry indeed that his son's tender had been accepted; but he could not have said to the committee, "Don't accept my son's tender," as that might have caused variance between himself and his son. The groyne was double the strength of any other they had; and, having withstood the gales it had, would last for fifty years. The amendment was carried by a large majority, only three hands being held up against it; and a committee was then appointed to carry out the resolution, and report.

Cardiff.—Plans for a new Post-office for this town, executed by Mr. John Seddon, have been completed, and will in all probability be soon carried into effect, in Church-street. The erection will be in the Byzantine style. The whole of the building not being required for postal business, several sets of rooms, forming the upper part, will be let off as offices and for other purposes; and a scheme is now on foot for raising a sufficient number of shares of 25*l.* each to carry out this object.

Cardigan.—This town is fast emerging from its primitive state, and looks forward at no remote period to be classed with other county towns of far more importance. Gas is about being introduced by Mr. Edge, of London; and an Act of Parliament is now being applied for to enable the corporation to erect markets, Guildhall, grammar-school, &c.; all of which will be carried out by Mr. Withers, the architect to the corporation.

Holyhead.—On Monday week during a strong breeze of wind, nearly two lengths (or about 60 feet) of the staying on the northern breakwater were carried away. This will occasion a loss to the contractors, and the weather continues unfavourable for pitching out additional lengths for depositing stones for extending the breakwater.

Wellington.—The opening of the new Catholic schools, Millbank, contiguous to the Catholic Chapel, Wellington, took place on Tuesday in last week. The school is a square brick building, of a mixed order—Gothic predominating, from designs of Mr. E. W. Pugin (the builder being Mr. James Palmer, of Willenhall), and consists of two rooms, upper and lower, 36 feet by 28 feet; height of lower room 12 feet: the upper room has a lofty open roof of stained deal. There are four fire-places and fifteen windows, with porch and large front window. The school is capable of accommodating about 750 scholars of both sexes. The cost of erection is estimated at about 400*l.* Fifty pounds are from the Catholic Poor School. The school is under Government inspection.

Clitheroe.—A project for erecting a public hall, with apartments for educational and other purposes, has recently been originated. It is proposed to erect the building by means of some ten or twelve hundred 1*l.* shares.

Nairn.—A new bridge is about to be thrown across the River Nairn, at some convenient place between the town of Nairn and the village of Cawdor. There are no means, it seems, of crossing the Nairn (except by a rough and not very safe ford), even for foot passengers, between the bridge of Nairn and the bridge of Kilravock—better known as the "White Brig," one of General Wade's erection, a distance of fully seven miles. There is now a railway station at Kildrummie called the Cawdor Station, erected by the directors of the Inverness and Nairn Railway Company, for the convenience of the Cawdor district; but as matters now stand, it is nearly useless from want of a bridge.

THE WESTMINSTER CLOCK AND BELL.

MR. LOSEBY's statement, that it appears from the parliamentary papers that the Westminster clock is calculated to strike the great bell with a hammer of only 120 lbs. raised 6 inches, is a pure and simple fabrication of his own, as anybody may see who will take the trouble to look at the contract, which was printed in 1852 and again in 1855. And anybody who chooses to look at my latest book "On Clockmaking" (not the rudimentary treatise, but a reprint of the article in the "Encyclopædia Britannica," sold at Dent's, in the Strand), will see that a hammer of 4 cwt. falling 12 inches—nearly eight times Mr. Loseby's figures—was the least that I contemplated in designing the clock. The hammer will in fact be considerably more than this, as the bell is not only heavier, but much stronger than I ventured to expect three years ago.

I have been wondering what could suggest to Mr. Loseby such an absurdity as the striking of a bell of 16 tons with a hammer of 120 lbs.; and perhaps this is the explanation. It does appear from the parliamentary papers he refers to that—not before but—after the intended weight of the bell had been increased from that of the Oxford bell to 14 tons, a hammer of little more than Mr. Loseby's size was proposed, in that very plan for the clock which his fraternity, the Worshipful Company of Clockmakers, memorialised the Commissioners of Works to adopt, and to rescind (if they could) Mr. Dent's contract to execute my plan. It is only charitable to suppose that, writing with an imperfect recollection of the papers, and animated by a natural and amiable desire to pay off some old scores respecting his chronometer grievances, Mr. Loseby has, with a curious felicity of blundering, transferred the folly of the company of clockmakers to my account.

E. B. DENISON.

PROPOSED MEMORIAL CHURCH AT CONSTANTINOPLE.

IN answer to inquiries, we have to state that we have ascertained that there is no foundation for the report that the time for sending in the designs has been postponed from Jan. 1 to Feb. 1.

An architect calls our attention to the clause in the prospectus recommending architects to avail themselves of the materials of the locality, and particularly of the Marmora marble, and requests information. The Royal Institute of British Architects, on the promulgation of the competition, offered its assistance towards this object, and tendered its rooms as the place where specimens of such materials might be deposited, but no advantage has been taken of the offer. As we read the prospectus, the committee of the memorial church (not composed of architecturalists) did not bind itself to provide such information, which, of course, the competitors were invited to find for themselves. It did, however, we believe, take such steps as lay within its power, but with what result we are not aware. We had hoped our columns might have been made the vehicle of communication on a subject on which we are sure the chivalry of competition would induce those who were successful in their inquiries to help their brother architects.

COMPETITION FOR PROPOSED CHURCH AT BERNE.

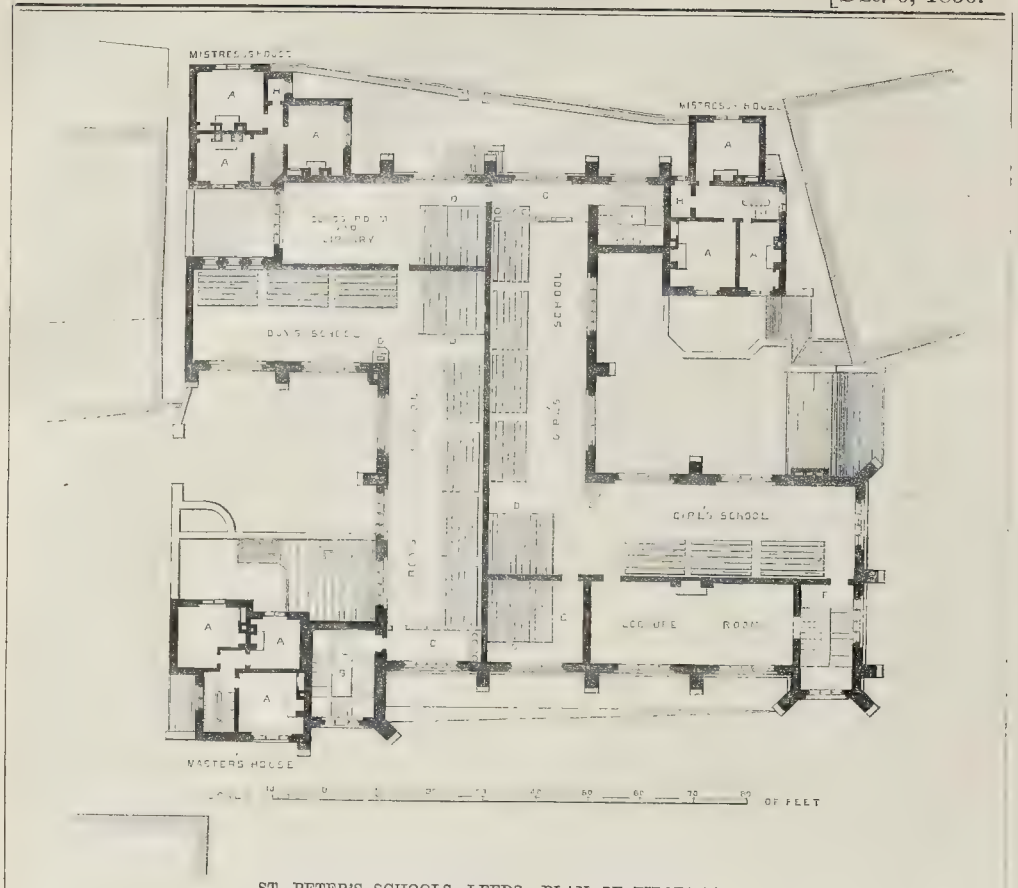
DESIGNS for a church are invited from architects of all countries by members of the "Catholic parish of the city of Berne." According to a writer in the *Ecclesiologist* (in which periodical will be found some particulars of the value of materials and labour), the cost should not exceed 6,000*l.* The first prize is 60*l.*; and four medals, gold and silver, are also offered. No engagement is made that the design obtaining the first prize shall be executed. We have deposited at our office in York-street, for inspection, an authoritative translation into French of the conditions, together with a plan of the site.

THE CASTLE AT CANNES.

MY attention has just been called to a paragraph which appears to have gone the round of the metropolitan and provincial press, to the effect, that Lord Ellenborough on a recent visit to Cannes, purchased for the sum of 10,000*l.* the Château-on-the-Hill, the property of T. R. Woolfield, esq. moved to do so, from the fact of its being a *fac-simile* of an old mansion of his ancestors where he had passed his infancy, and which Mr. Woolfield having seen and sketched thus reproduced on the shores of the Mediterranean. Will you permit me, in justice to myself as architect of the Château-on-the-Hill, to give a flat contradiction to this tale?

The building in question was erected from an entirely original design made by me, on the occasion of a professional visit paid to Mr. Woolfield, in 1850. Mr. Woolfield gave me no definite instructions respecting the character of the building he intended to raise, than that he wished it to be castellated like an English castle. As I erected also the Protestant Church and the Château La Bouche, at Cannes, both from purely original designs, such a report as that to which I address myself, if allowed to pass unchallenged, is calculated to damage my reputation, and injure me in my professional capacity. I, therefore, with confidence rely upon your impartial justice to afford me the opportunity of circulating my contradiction to the statement through the same channel that disseminated it.

THOS. SMITH, Architect and Surveyor.



ST. PETER'S SCHOOLS, LEEDS: PLAN OF FIRST-FLOOR.

THE LEEDS PARISH CHURCH SCHOOLS.

The foundation stone of these schools was aid by the Lord Bishop of Ripon. The schools are on a plot of ground on the north-east side of the parish church, which has been purchased for that purpose, and will occupy altogether about half an acre of ground.

The buildings will comprise three teachers' residences, with boys', girls', and infants' schools, having separate entrances to each. The schools will be capable of accommodating 937 children (allowing 9 superficial feet to each child), and contain, on the ground-floor infants' school, with open and covered playgrounds for boys, girls, and infants, and the necessary out-offices.

On the first-floor are the boys' and girls' school, with class, library, and lecture-rooms, and lavatory and cloak-room to each school. The materials will be brick, with stone dressings. There will be a tower at the north-east corner, containing entrance and staircase to boys' school: the upper part will be used for the ventilation of the schools, which will be carried out by Messrs. Haden and Son, engineers, Trowbridge. Messrs. Dobson and Chorley, of Leeds, are the architects.

REFERENCES.

A A. Bed-rooms.
B. Boys' staircase.
C C. Cloak-room and lavatory.
D D. Gallery.
E. Class-room.
F. Clergyman's staircase.
G G. Desk.
H. Storeroom.
I. Girls' staircase.

VENTILATION OF HOSPITALS.

The remark of your correspondent, Dr. Corfe, affords an opportunity of correcting a clerical error in the paragraph which is referred to as "somewhat vague." The sentence should read, "The air expired from the lungs has not a temperature sufficiently elevated to raise it even to a couple of feet above the head without its undergoing diffusion from the combined influence of the law of gases, and *from* the rapidity," &c. &c. Probably the construction of the sentence is still objectionable, but the correction of the clerical error, by substituting the preposition *from* for *of*, will render the meaning clearer.

Your correspondent thinks that the remark, that "the admission of direct currents of air is impracticable in this climate during two-thirds of the year," is not borne out by practical experience, and refers for proof to the Middlesex Hospital. He does not, however, state that the "tripartite" construction of the windows there adopted permits of their being left open over a longer period than is usual with ordinary sashes, although it might be expected that a construction which prevented "*direct*" currents would have this advantage.

The use of perforated zinc plates, in the upper part of the walls of the new wards, is *precisely* one of that class of expedients which "scientific ventilation" has recourse to for obtaining communication with the exterior air when direct currents are inadmissible, and the arrangement is only defective, inasmuch as it appears that it is necessary to close the openings in seasons of intense cold, and so suspend the operation of what ought to be a system of "permanent ventilation."

There cannot be a doubt that Dr. Corfe strictly expresses the causes of vitiation in a hospital atmosphere when he adds to the deoxydization of the respired air and impure exhalations from the respiratory organs, the "general noxious malaria which is constantly passing off from the bodies of individuals labouring under severe forms of disease." This and the previously mentioned cause of vitiation, if rarely practically considered in hospital ventilation, is precisely the special condition which determines the necessity of a vastly increased amount of ventilation in hospitals, as compared with some other buildings, and constitutes the case alluded to by M. Morin, as distinguishing the ventilation of places inhabited by the sick and wounded from that of those occupied by persons in good health; and he intimates that the ventilation of the Hospital Beaujon (24 feet to 36 feet cube per patient per minute) became insufficient when the proportion of severe surgical cases was too great.

As to the direction which should be given to the movement of the air, it is not pretended that the diffusion of gases can be *prevented* by establishing a current towards the source of impurity, but such diffusion is capable of being materially *retarded*. Everybody knows that offensive smells are much less perceptible to windward than to leeward of the locality where they are generated, and that the volatile gaseous exhalations from a coke fire, or one of Dr. Arnott's smokeless grates, are much less perceptible when there is a good draught towards the fire-place, than when the draught is imperfect; and hence it would be reasonable to infer that the spread of infectious disorders is lessened by arrangements the tendency of which is to retard the diffusion of the *materies morbi* and to remove them at once from the spot where they are generated. By such a process the space around the patient's bed cannot be said to become a "nidus" of foul air when the movement of the air of the ward is *towards* the bed, any more than when the malaria is *diffused* throughout the air of the ward by a movement in a contrary sense. Under both sets of circumstances, the amount of vitiating products is the same. Hence, if there be no advantage to each individual patient, by withdrawing immediately from the bed that portion of

ST. PETER'S PARISH CHURCH SCHOOLS, LEEDS.——Messrs. Dobson and Chorley, Architects.

air which he himself vitiates, the general atmosphere of the ward must certainly be benefited. In discussing this point, the idea is again disclaimed that air vitiated in any particular spot can be thence withdrawn without any of it being diffused into the surrounding space; but it is urged that arrangements which permit of the immediate escape of vitiating products from the locality of their generation must have a tendency to retard their diffusion. Nor must it be forgotten that the most perfect ventilation in the world cannot prevent the emanation of the objectionable, products: the design is to get rid of them as speedily as possible. Thus, when the receiving-room of an hospital is occupied by some 200 or 300 patients, let it be ever so well ventilated, it is impossible during the time the patients are in the room, absolutely to prevent disagreeable odours being perceptible; but their accumulation to such an extent as to become offensive may be prevented and the subsequent purification of the atmosphere of the room perfectly accomplished. Neither is it pretended that the extraction of the vitiated air, at a point in the immediate vicinity of the bed, is a condition *essential* to good ventilation. As was observed in a former communication, good ventilation may be carried out, whether the system adopted be ascending, descending, lateral, diagonal, or with almost any direction of movement. The determination of what system is to be preferred, must depend upon the circumstances of each case, and will generally in practice be found to be governed rather by the construction of the building than any merely theoretical views of what is best.

The ventilation of the Middlesex Hospital having been referred to, the writer considers it incumbent upon him to disclaim the idea of imputing, in the most distant manner, any degree of inefficiency in the system there employed, and only regrets that he has not enjoyed an opportunity of making himself acquainted with its working.

The conclusion is drawn by Dr. Corfe that the statement that "when an upward ventilation by one or two extraction openings in a flat ceiling is sought to be accomplished, it is impossible to prevent the vitiated air from being disseminated throughout the atmosphere of the ward," must be taken with reserve; and he mentions that such openings have been in operation in the Middlesex Hospital, with a decisive and satisfactory sanitary influence upon the patients.

From the description, however, which he gives of the arrangements there adopted, it would seem that the ventilation is actually effected *by the dissemination* of the vitiated air throughout the atmosphere of the ward, and its subsequent escape, in a state of *dilution*, through the apertures in the ceiling; and provided that the introduction of fresh air is sufficiently ample to ensure a high state of dilution, there is nothing on the face of such an arrangement that would be inconsistent with good ventilation, or the existence of a satisfactory "sanitary influence upon the patients."

S. Egan Rosser.

ON THE APPLICABILITY OF GOTHIC ARCHITECTURE.

THE OXFORD ARCHITECTURAL SOCIETY.

At a meeting of this society, on the 19th November, the Rev. Dr. Bloxam in the chair, Mr. Buckeridge read a paper "On the Universal Applicability of Gothic Architecture."

Mr. Buckeridge remarked that,—"Before really entering upon the subject of his paper, it would be necessary to define what he meant by Gothic Architecture, as applicable in our own age and country to all kinds of buildings; and that in talking of the architecture of the present day considerable inconvenience arises by not having any name by which to call it: to call it Early English, Decorated, or Perpendicular, would carry us back to the thirteenth, fourteenth, and fifteenth centuries respectively: what we are doing now is the result of the study of the architecture of the Middle Ages, and that though it was founded chiefly on the Decorated or Geometrical principles, we were nevertheless free to profit by a knowledge of the other styles; and this is what he means when using the term 'Gothic' in the course of his paper.

In advocating Gothic as the style in which we ought alone to build, we are often met with some such objection as that it is very well suited for churches, parsonages, and schools, but it does not do for dwelling-houses or civil buildings; why, he could not conceive; for, if our forefathers of the Middle Ages wanted a town-hall or labourer's cottage, their own architecture could furnish both the one and the other: the idea of running over to Greece or Rome for examples never entered into their heads, and, if it had, they would not have found what they wanted. In Sir Christopher Wren's time they did this, and lamentable and hideous are the results which are daily staring us in the face! Churches made up of scraps of heathen temples; mansions both in town and country necessarily unsuited to their position and purpose, on account of the difference of climate and customs; smaller houses, and even shop-fronts, glory now-a-days in various miserable adaptations of the 'Five Orders.'

Our domestic architecture should have a peculiar expression, illustrative of our manners and customs; and the first thing to be done in designing is to make your plan as convenient and well suited as possible to the requirements; this being done, the various elevations, &c. would naturally follow, and the result would be satisfactory, because truthfully treated. It is quite a mistaken notion to design the exterior first, and then try to coax the plan to suit it: the result of such a proceeding would be generally full of mistakes and inconveniences in the internal arrangements.

To every building, no matter what, he would apply *unflinchingly* our Gothic architecture of the nineteenth century, and guarantee that there should be no lack of light or any of those inconveniences, real or imaginary, which Gothic architecture has been charged with producing.

He then called attention to the dull, insipid, utilitarian, and unconstructional appearance of our street architecture: many of the houses with shops on the ground-floor are apparently supported by large

sheets of plate-glass and a few very thin strips of wood; whose principle of strength assimilates to the old fable of the 'bundle of sticks,' which so long as they remained together were comparatively strong, but separate them and they were easily snapped. He then contrasted these with shops constructed on true, sturdy, time-enduring, Gothic principles, in true materials; not lath-and-plaster, brick and compo, and all such like shams. Now-a-days houses are built *to let*, not to look at, or to be handed down to posterity.

He would not be content with Gothic exteriors only, but would carry out the same principles in the interior, and make every article of furniture breathe the same Gothic spirit."

The Master of University defended the Classical, or rather Palladian style, for which he claimed a place among our buildings, as possessed of a beauty, and solid grandeur of its own, as affording contrast and variety.

CHURCH-BUILDING NEWS.

Littleport (Cambridgeshire).—The church of Littleport has recently undergone considerable additions by Mr. Teulon, at the entire cost of the vicar, the Rev. Edward Sparke, Canon of Ely. The church, which consisted of a nave with north and south aisles, chancel, and south mortuary and western tower, required sittings to the value of nearly double; and the plan adopted has been to take down the north aisle, which was very dilapidated, and build an aisle equal to the nave (in fact, like a second nave), and north of that an aisle equal to the south aisle, continuing both eastward, as the mortuary on the south side: this internally gives a triple arcading, and accomplishes a very spacious church (the original being by no means small). A pulpit of stone commands the whole; and the sittings, which are all of oak, are plain but solid. The other part of the church is designed to agree with it, and the chancel also: this latter, however, appertains to Clare Hall, Cambridge. The church is a Third Pointed church, with lofty tower. The works are undertaken by Bennett and Brown, of Lynn.

Ryngesbury.—The new porch of St. Mary's Church was opened on the 23rd ult. The porch and doors are constructed from a design of Mr. Arthur Blomfield, son of Bishop Blomfield, carried out by a mason named Usborn, of St. Neots, and Rattee, of Cambridge. On the east side of the porch is a brass plate inserted in the wall, bearing an inscription stating that "This porch was erected by Lieut.-col. Humbley, Rifle Brigade, in September, 1856," as a thank-offering for preservation from death in twenty-two battles, all specified, and fought in five different kingdoms, for which the gallant warrior has received thirteen medals. It appears that there is only one officer in the British army now living who has received more clasps than Colonel Humbley, namely, General Sir James Schoedde, C.B. who wears the war medals and fourteen clasps.

Latchingdon and Snoreham.—The new church in Latchingdon parish has been consecrated. Its dimensions are about 90 feet by 33 feet, and it is capable of accommodating 300 persons. The structure is faced with Kentish rag and Bath stone trassings, and consists of a nave and chancel, with a bell-turret and shingle spire. The church is built in the style of the thirteenth century. The sittings are open benches of stained deal. There are stained windows on the south side of the church; one in the nave, presented by Mr. C. H. Pulley, sen. which is placed there to perpetuate the memory of two of his daughters; the other in the chancel, a gift of the Rev. H. R. Merewether, curate of the parish, in memory of his two infant sons. An iron corona, with eight branches, is hung from the centre, and this, with the ornamental iron railing of the communion, is the work of Mr. Harris, of Althorne.

Smallthorn (Burslem).—The ceremony of laying the foundation-stone of a new Wesleyan chapel in the village of Smallthorn, took place on Monday before last. The design of the chapel is by Mr. G. Ford, of Burslem, and is of the Early English style, with open roof. Its cost will be about 220*l.* including the site, and the edifice will accommodate from 160 to 170 persons.

Burton-on-Trent.—A stone monument has been erected in the old churchyard, over the remains of Richard Roe, many years a constable of the town. The monument, as described by the *Derbyshire Advertiser*, has a square pedestal, bearing the inscription on three of its sides. On the top is a capital with four pediments, ornamented with wreaths and knots, and the four corners are adorned with honeysuckles. The whole is crowned by an obelisk, making the height of the monument 10 feet. Surrounding it is an iron palisading.

Fenton (Stoke-upon-Trent).—From funds supplied by Mr. W. Baker, the interior of Fenton Church has just undergone a renovation. The work of restoration and enlargement was entrusted to Messrs. Ward and Son, architects, Hanley. The interior has undergone a complete change. The former unseemly flat ceiling has been removed, and the roof elevated into a pointed form, and lined throughout with stained and varnished wood. Wood pillars, similarly stained and varnished, rise from the side aisles, and support tracery arches, also of stained wood, and attached to the roof. The two side galleries have been entirely removed, the only one remaining being at the west end, which receives additional light from the opening of an arch in the tower. A new approach has been made to this gallery, which is now attained by a spiral staircase, erected in a new turret outside the tower. The body of the church has the addition of a middle or centre alley, which has rendered a re-arrangement of the pews necessary. The chancel is entirely new: it has north and south aisles, separated from it by stone pillars and arches, and there are also arches opening into the body of the church. The chancel is paved with Minton and Co.'s tiles, and lighted by six windows filled with stained glass; the centre, or principal window, being a memorial to the late Mrs. Baker—subject, the Ascension. The principal figure is a representation of the ascending Redeemer, while the Apostles, who are represented with upturned and astonished countenances, occupy the whole breadth of the lower portion of the window. The window has the appearance of one painting. It was supplied from the establishment of Mr. T. Ward, of London. Some of the other windows in the chancel contain the armorial bearings of the Bourne and Baker families. The church is heated by a system of underground flues, and in connection with which there are eleven fires in the pavement of the aisles and chancel.

Barnsley.—The foundation-stone of St. John's church, Barnsley, has been laid. The church is designed in the Early Decorated style of architecture, and consists of chancel, 31 feet by 18 feet, with sacristy in north side; and a clerestoried nave of five bays, 75 feet by 21 feet, having north and south aisles, 9 feet in width. The total internal width of the chancel is 15 feet, and the total length is 106 feet. The height of the nave to the apex of the roof is 56 feet, and consists of braced and bolted principal framing (no intermediates being used) and common rafters, and will be open to the ridge. The roof over the chancel is highly pitched and divided into panels formed by moulded ribs. All the seats in the nave and aisles will be low open benches, having cut standards. The chancel is provided with stalls for the choir, and the altar is raised seven steps above the floor of the nave. The chancel will be pierced on the south side by two three-light windows, the east gable being filled with a moulded window of five lights, supporting a circle containing six spherical triangles, trefoliated. The clerestory will be pierced with ten circles, filled with tracery of varied designs. The aisles are to have two-light windows, moulded, the tympanum being perforated in geometric forms. The west gable will be supplied with two two-light windows, and a vescica above. There are three gabled buttresses at the west end of the nave, the circles being without buttresses. The outsides of the walls have battering sides, from plinth to underside of window-sills. In the chancel the buttresses spring out of these slopes. Courses will run round the church inside and out, that to the chancel being moulded. The walls will be built with pitched-faced sandstone from an adjoining quarry. It is proposed to erect the lower stages of a tower on the south-west angle of the site, connecting the same with the south aisle by means of a short corridor or porch. As the site falls rapidly from north to south, the tower will be on the lower level; but access to the building will be obtained by means of steps placed in the corridor. The whole of the walls will be diapered in the interior of the building, and will be made by means of simple polychromatic decorations to look as cheerful and light as possible. Some stained glass is promised for the chancel. The church will be further embellished by the erection of a gabled stone bell-turret, the height of which, to the summit of the cross, will be 76 feet. Mr. Philip Boyce is the architect. The contractors are—for masonry, Mr. Robinson; joiners' work, Mr. Joseph Smith; plumbers' and slaters' work, Mr. Matthew Wood; plasterers' work, Mr. Barker. The estimated cost of the building is 2,000*l.* towards which 1,714*l.* odds have been obtained. The site was presented by Mr. Edward Newman, of Barnsley, and Mr. William Shaw, of Stanley Hall, Wakefield, has given the stone for the building. The handloom weavers of the district have contributed no less than 80*l.* out of their poor earnings, and the school children are to provide a font.

Carlisle.—The Roman Catholic Church of St. Mary and St. Joseph, in this city, was re-opened on Sunday before last. Alterations and additions have been made to the building, with a view to afford better accommodation to the increased number of worshippers. The church, according to the local *Journal*, has been lengthened several feet, by throwing into it additional space at the west end: the old gallery has been taken down, and a more commodious one erected to the rear of where it stood; and a porched entrance has been added to the south-west corner of the church. The organ has been removed to the gallery at the west end, and in its place is a chapel dedicated to St. Mary, surrounded by a carved screen, and inclosing a statuette of the Virgin and Child. On the opposite side of the altar is a similar chapel consecrated to St. Joseph, also containing a piece of sculpture, called the "Angel Guardian," and a picture of the Birth of Christ in the Stable at Bethlehem. A bell-turret has been erected at the east end of the church.

Newcastle-on-Tyne.—A new United Presbyterian church and schools are about to be erected at Elswick, Newcastle-on-Tyne, from the designs of Mr. Thomas Oliver, Jun. of Sunderland. It is proposed to adopt coloured brickwork as the predominant material.

Brechin.—The Gothic window in the north gable of the New Free Church here has been filled with stained glass. Messrs. Watson, of Dunfermline, were the contractors for the glazier work.

Aberdeen.—It is proposed to erect a new Roman Catholic Church in Aberdeen. A site has been procured, with 170 feet of frontage to Huntly-street, extending back to Golden-square, and including St. John's Chapel. The church is proposed to be in the cathedral style, of large size, with clergymen's residence attached, and is intended (though the plans are not yet prepared) to be of architectural merit. The funds are being raised.

THE HEALTH ACT.

A correspondent, who signs himself "Pabulum Acheronis," knowing that the duration of human life around his home is but half what it might be, in a spot naturally salubrious, and indeed, altogether unlike what the mortuary registers show it to have been a few years since, and what it would be if proper drainage and water supply were provided, thus writes,—"For nearly eight years have the General Board of Health bandied us about, the icy hand of death ever stalking unchecked, bereaving homes that with honest, common-sense precautions, might still have been happy. Typhus, in 1848, was decimating districts in the parish: panic-struck, we invoked Whitehall, and were honoured by a visit of Mr. Superintending Inspector. A short lull in Death's doings, and again the Health party were urged by the vacillating populace.

Four times in eight years the farce has been enacted at each outbreak of fever, and the magical superintending inspectors have appeared. Four distinct reports of four separate inspections have been printed and circulated, each showing a truly fearful state of things.

Prior to the fourth inspection and report, the Pre-

sident of the General Board wrote, informing the Health advocates that, if the General Board were to have a memorial from *a majority of the ratepayers in the district to which it was proposed*, he, the President, *would feel justified in immediately making a provisional order for the application of the Act to that district*, &c. &c. Such memorial was sent and acknowledged, when down comes another superintending inspector to mock and tantalize us. He had not the assurance to differ from the other three published reports as to the filthy present, and foretells a still more dismal future; but recommends a more extended boundary; and the President, finding the operation of the Act unpalatable to the "*influential inhabitants*," has put a new feature on the means of ascertaining whether health or disease shall be our lot, namely, the want of a sufficient proportion in *value and number* of the ratepayers.

Farmers are not often advocates for draining anything but their broad acres, unless it be the "flowing bowl;" and it will be no wonder that the full VALUE of that party has been against the *value* of life. Numbers of our party have become disgusted with such evasion; and, after having done all the President said was requisite, all but the "promoter" and a few stanch friends have left the field to the opponents of the Act, and these opponents have sent up a memorial, which the General Board allow to be imposed upon them, though they must be perfectly aware its pure *fiction can be proved undeniably*."

We have allowed the writer to speak for himself, but we are disposed to believe that we should find the Board were prevented from moving by some requirement of the Act which they could not overcome.

THE BRITISH ARCHÆOLOGICAL ASSOCIATION.

THIS society commenced the new session with a very satisfactory meeting at their rooms in Sackville-street, on Wednesday, the 26th, Mr. Pettigrew, F.R.S. in the chair. There was a good muster of members, and several interesting communications were read, especially some remarks by Mr. Wills, on the proceedings of a certain dealer in curiosities, who puts forward for sale Egyptian and other works, as found in excavations in London, and a second paper from Mr. Vere Irvine, on the circular hollows (which have been called hut hollows) in Cissbury Camp, and others of the same chain.

METROPOLITAN BOARD OF WORKS.

AT the ordinary meeting of this Board, on Friday in last week, a memorial as to a park for Finsbury was referred, after some discussion, to the Committee of Works, with other proposals of a similar description.

A letter from Sir S. M. Peto to Mr. Woolrych, the secretary, was then read, in which Sir Morton requested liberty to appear before the Court with Mr. Maclean, in order to explain finally the plan of the latter gentleman for carrying the outfall of the metropolitan sewage to the German Ocean. In this letter Sir S. M. Peto stated that, although he had no desire to be in any way connected with the execution of such works, he was willing, with his friends, to construct the outfall to the sea for a rent or interest of 5 per cent. per annum on the cost of the Board's own outfall and works connected therewith.

Mr. D'Ifanger moved that Sir S. M. Peto be requested to attend and explain the plan. The chairman said, that such a plan was one for the consideration of the Government rather than the Board. It was strongly protested against, and finally the resolution was negatived by a large majority.

At a special meeting of the Board, held on the 2nd inst. a report, by Mr. Bazalgette, on the outfall for main drainage, suggested by Capt. Burstall, was read. According to that plan, the reporter stated, "The outfalls would now be fifteen miles below London-bridge, and it is proposed to confine the periods of discharge from them within 1½ hour before high water, and 2¾ hours after high water, with certain exceptions hereafter named, giving a period of 8 hours' storeage and 4¼ hours of discharge per tide." The reporter also stated, that "the level of the overflow weir would be 16½ feet above *datum*, and the mean depth of the reservoirs would be 14 feet. The reservoir on the north side would cover about 10 acres, and contain about 6,000,000 cubic feet, when full; that on the south would cover about 4½ acres, and contain about 2,750,000 cubic feet, when full; so that the average daily flow of sewage during dry weather would about half fill the reservoirs in eight hours." The total estimate for the metropolitan drainage, as now designed, would, it was said, be 2,836,600*l.* In reply to Mr. Turner, Mr. Bazalgette said, that it would cost the same money to extend the sewers to the sea whether plan B or plan B* was adopted, but that in the case of plan B* 103,000*l.* more would be lost; and he believed that plan B was better than plan B*, notwithstanding Capt. Burstall's report, and that cast-iron pipes had already been tried in smaller sewers, and had proved to be uninjured by any chemical action of the sewage.

Mr. Leslie objected to the plan, and moved that the report be not received. On a division, however, this motion was negatived by a majority of 23 to 4. Mr. Carpmael moved the adoption of plan B* as suggested by Capt. Burstall and approved by Sir Benj. Hall, but it was objected that sufficient notice of the motion had not been given, and its consideration was postponed.

The engineer will have yet another report to make.

ERITH AND GRAVESEND *versus* THE DRAINAGE SCHEME.

THE scheme for the drainage of the metropolis, as proposed by the Metropolitan Board of Works, and, with certain modifications, approved of by Sir B. Hall, appears to have caused great excitement in the districts immediately below the intended outfall, near Erith, and a numerous and influential deputation, consisting of the authorities and landowners of Erith and its vicinity, and of the Corporation and Commissioners of Improvement of the Borough of Gravesend, waited, on the 28th ult. upon Lord Palmerston, as Prime Minister, at his private residence, Cambridge House, Piccadilly, upon the subject.

The deputation from Erith was headed by Sir Culling Eardley, and the Gravesend deputation by Mr. W. Fletcher, the mayor.

Sir Culling Eardley addressed the premier in strong terms against the proposed scheme, and urged the suggestion some time since made by us, that a commission of experienced engineers, &c. should be appointed to consider the various plans. Sir S. M. Peto's plan, a Bill for which is in preparation, was specially referred to as perhaps one of the best.

The Mayor of Gravesend also expressed a strong opposition to the Erith outlet on the part of his constituents, the inhabitants of Gravesend.

Finally, Sir Culling Eardley announced plainly that endeavours would be made to obtain an injunction in Chancery against it if persisted in.

Lord Palmerston said the attention of Government would be given to this important matter.

It has been urged in favour of the Erith outfall that no complaint can justly be made on the part of the population or proprietors down the river, inasmuch as they already have to submit to the passing of the Metropolitan sewage down the river from whatever outfalls at present exist; but its disemboguement in the one tremendous stream in their comparatively near vicinity is a very different and far more obnoxious state of matters from its dilution in the river near or within the limits of the metropolis itself, and one cannot wonder at or regard as unreasonable the horror with which the new scheme appears to be regarded down the river.

LONDON-BRIDGE TO WESTMINSTER.

IN constructing a new line of street from London-bridge to Westminster, through the Borough, has it never entered into the minds of the projectors to combine a railway therewith? This greatest of all requirements for facilitating the traffic between the east and west of London might be easily effected by laying down a tram-way for a single line on either side of the street upon raised columns. We should thus combine, in one grand and novel project, a covered footway for passengers, a carriage-road, and a railroad.

Not being an architect I do not enter into the objections to which this combination might give rise, but I can conceive none which can at all outweigh the immense advantages offered to the public convenience. I leave the matter, therefore, in the hands of the able men of the profession. B. J. S.

LIVERPOOL ARCHITECTURAL AND ARCHÆOLOGICAL SOCIETY.

A MEETING of this society was held on Wednesday evening, the 19th November. Mr. S. Huggins presided. The secretary announced that the council had decided to recommend as a subject for the students' competition design, a Dissenters' chapel, with 1,200 sittings; the cost to be about 6,000*l.*

The chairman called attention to a design which he had prepared for the Free Public Library. It was not finished at the time it was sent in, but being now completed, he had brought it before the society.

Mr. John Hay said the chairman's were the only plans in which the instructions were complied with. The speaker also called attention to a design of Mr. Hornblower for the new library and museum. He had not complied with the instructions so literally as the chairman had done. These instructions had been literally cast to the winds by the decision which the committee in their wisdom had arrived at. While they found themselves justified in paying premiums for the designs selected, they did not feel themselves under any obligation to accept either of those which were successful, and so far the matter was as open as ever.

The paper for the evening was read by Mr. H. Cox, on "Alexandria in 1847 and 1848." The paper contained many interesting details of the state of Alexandria, and the condition of the inhabitants at the period referred to, the value of the information being enhanced from the fact that the author resided there for more than two years.

ARCHITECTURAL COMPETITIONS.

FOLESHILL UNION.

I AM glad to be able to inform you that the *vexata quæstio* of selecting judges to decide upon the merits of competition designs, promises to be at once set at rest.

The Building Committee of the Foleshill Union have shown themselves such adepts in mastering the difficulties attending the position, that I hold they should at once be elected to the office of deciding upon all such matters.

To prove my position I have only to inform you that they received a number of sets of designs for a new workhouse on Monday, the 24th ult. and on the 26th they issued the following:—

"Foleshill Workhouse.

I beg to inform you that your plans for this building were, with others, submitted to the Building Committee to-day, and were not approved of. They lie at the workhouse, at your disposal.

I am, your obedient servant,
Coventry, 26th Nov. 1856. THOS. DEWES."

Comment is unnecessary! A COMPETITOR.

THE GOVERNMENT OFFICES' COMPETITION.

YOU will much oblige by stating in the *Builder* how many transverse sections and longitudinal ones will be required for showing the interior of the new Government Offices in any designs which may be sent in. O. P.

*** This is left to the competitors. One of each will doubtless be considered a compliance with the conditions.

I TAKE the liberty of asking your opinion as to whether coloured drawings will be received for the block plan of the proposed new Government Offices, Whitehall. There being nothing mentioned to the contrary in the instructions, I presume they will; yet I would rather have your opinion on the subject.
ALPHA.

*** Coloured drawings are not prohibited by the published "Conditions." It must be observed, however, that all that is actually asked for by the Government is *a block plan*, showing the mode of concentrating the Government Offices, with a plan for improving the approaches to the Houses of Parliament and the communication with the Surrey side of the river.

NEW CHURCH IN BOW, MIDDLESEX.

A LARGE church is now rapidly approaching completion in Tredegar-road, Old Ford, in this parish, on land given for the purpose, by Sir Charles Morgan, Bart. Mr. John Nicholls is the architect. The Rev. G. T. Driffield, Rector of Bow, who, with the aid of a few friends, has undertaken the expense of the edifice, at first proposed having one of Mr. Samuel Hemming's iron churches; but this plan was relinquished, in consequence of an offer made by Mr. Hemming to erect a permanent structure which should bring in some elaborate iron windows which he had purchased. The result was the present building. The church has nave, chancel, north and south aisles, two entrance towers at the west end, with stairs to galleries, a central porch or vestibule, another at the north-east angle, and a vestry corresponding at the south-east. The aisles are divided from the nave by two ranges of columns, one carrying the gallery (which is an integral part of the design), the other supporting the roof. The total length, internally, is 114 feet, with a breadth of 60 feet. The pulpit, reading-desk, and clerk's desk, are placed centrally. The woodwork is stained: the columns are to be painted in colours. The east window, in the Perpendicular style, nearly 30 feet high, with five lights, has been filled with stained glass, in patterns, by Mr. Bell, of Camden Town. The church will be lighted by three *coronæ lucis*, suspended from the roof of the nave, and will be warmed by hot water. The aisles are divided into seven bays: the two end

bays on each side, with their buttresses, being varied from the rest on account of a difference in the windows. In each tower is a rose window, above which is an arcade with belfry openings, surmounted by a broach spire and finial. The walls are of picked stocks, with white bricks in the buttresses, parapets, and plinths: the dressings to doors and windows, the heads to buttresses, and the belfry arcades, are in Bath stone. The church will accommodate more than 1,500 persons. The contract is for 5,000*l.*

THE CITY.

The Church of St. Nicholas Cold Abbey, in Old Fish-street, has undergone a thorough internal repair and decoration, under the direction of Mr. John Young, jun. architect. The predominant colours used are fawn, warm lavender, and dead white. This is one of the churches erected by Sir Christopher Wren, and cost 5,500*l.*

A movement is in progress to decorate the (R. C.) Church of St. Mary's, Moorfields. It is proposed to introduce gilding and polychromatic decoration, under the direction of the last-named architect. With this view, one of the side chapels has been commenced, and is in a forward state.

THE CONTRACT SYSTEM.

"CAST WORK."

I have read three or four articles headed "Bad Plaster Cast Work" and "Who is to blame?" In my mind the architect is to blame for giving away the contract belonging to all the trades, from the commencement to the finish of a building, to one single contractor, who, as a matter of course, is not a judge of each and all of those trades, nor does he care only to make as much money as he can. He generally sub-contracts for about half of what he gets with the cheapest plasterer he can get hold of, who may be, as is too often the case in these days in this depressed and plundered trade, an old hod or hawk boy, who has neither reading, hands, nor practical qualities, and who would not know the difference between Grecian or Roman leafage, or any of the Gothic styles, as was formerly the case when each trade had the benefit of its own calling. And it comes to this. If some great radical change be not made in the giving away contracts in the building line (that is, giving each trade the benefit of his own contract), in the course of a few years you will neither have architects that will deserve the name, nor in all England one single stucco man who can work by hand any device that may be wanting. That was not formerly the case with the beautiful art which has done so much to decorate many of the old buildings and baronial halls of past times, and has given character and name both to architecture and art, each of which is now so much depreciated, particularly in England. I know of a recent instance of the contract for the stucco plastering of a Roman Catholic Chapel in the town of Wicklow that is to be done in the Gothic style, at least, a thousand pounds' worth of stucco-plastering work, for which the architect recommended a common mason, and also a carpenter, to the clergyman as proper parties to undertake the contract, in place of recommending no other but legitimate stucco-plastering employers for their own business. And this is only one out of four or five other (Roman) Catholic Churches that have been recently contracted for in the same way in and about the suburbs of London, as well as all the great works, for whatever reason is best known to the said architect himself. This, in my mind, is the only way to account for contracted ideas indifferent drawing, loss of the art, bad modelling, inferior cast-work, and bad stucco-plastering in general. THOS. M'ANASPIE,

An Artist and a Practical Workman.

Dublin.

IMPORTANCE OF A KNOWLEDGE OF DRAWING TO ALL CLASSES.

A lecture on this subject was given at the Coalbrookdale Literary and Scientific Institution, on Tuesday evening before last, by Mr. George Wallis, head-master of the Birmingham School of Art. The lecture was well-timed, as the schools, under a master sent down by the Department of Art, are about to open. Mr. Wallis, in course of his lecture, said:—What may be called the English School of Art excelled in colour, but we have neglected the more important principles which lie at the base of all. Some twenty years ago the Government of this country, conscious of our national defects, undertook to remedy them. They begun, however, by teaching "design," an unfortunate term to select, seeing that it includes invention, which it is out of the power of schools to teach. We have now, however, arrived at the point from which we ought to have started. The object of the Government now is to teach the whole people that they may appreciate works of merit, as well as to educate students in these schools that they may create them. The hand is a beautiful mathematical instrument, an exquisitely constructed pair of compasses, which acts upon the paper or the canvas, according to the dictates of the mind. The study of art may be said to be a race, in which the hand is constantly endeavouring to overtake the mind. And he who beyond the execution of his fingers sees nothing to be desired, has arrived at perfection in his own eyes, and is generally found to be conceited and incapable of progress. As long as the boy of the village school sees beyond what he has been enabled to accomplish, there is hope of improvement, and there is no point beyond which he may not rise. In nature, the eye of the artist detects variations, even in two sides of the same face; and the same with regard to a leaf. The great fault of young students, however, is that they grow impatient, refuse to rise by degrees, and revel in cottages, barns, and cattle, skipping altogether the alphabet of the science which really lies at the root of the matter. Parents, I am sorry to say, and masters, too often are implicated in this fault. Against this abuse I was influenced, twenty years ago, to protest, and to advocate, upon public ground, a general system of art-education that should be free from this. In the schools now about to open here there will be none of it.

ARCHITECTS' CHARGES.

Stumper v. *Lupton.*—In this case, tried at the Liverpool County Court, before Mr. Pollock, John Stumper, executor of the late George Stumper, architect, sought to recover the sum of 19*l.* 9*s.* the balance of professional fees on the cost of a building erected for the defendant from plans furnished by the deceased George Stumper. From the evidence, it appeared that Mr. Stumper died while the work was in progress, although not before it was very nearly completed. The charge was for the balance of a sum represented by 5 per cent. on the value of the whole contracts. For the defence it was contended that the fees were not exigible on the extra or additional work, nor for any of the work which remained unfinished at the time of the architect's death. 10*l.* had been paid into court, so that the sum really at issue was 9*l.* 9*s.* A great extent of evidence was led on both sides, from which it appeared that the work was, in reality, done as well and as expeditiously as if it had been superintended throughout by the deceased, with the exception of a portion of a wall, which it appears will require to be taken down and rebuilt, on account of some insufficiency of the foundation, and which, when done, will cost about from 12*l.* to 14*l.*

His Honour said, as the work had been done in a satisfactory manner, and as it had been shown that Mr. Stumper had given frequent attendance while the building was in progress, it could not be allowed that any deduction was due on that ground. On the other hand, however, as it appeared that a portion of the work which had not been superintended by the deceased had proved defective, it was only fair to admit that the defendant was entitled to an allowance, as he had a right to the professional skill of the man under whose direction the work was undertaken. Under all the circumstances, he considered the justice of the case would be met by awarding one guinea to the plaintiff over and above the sum paid into court, and each party to pay their own costs.

THE BUILDERS' BENEVOLENT INSTITUTION.

On Thursday, 27th of November, a special general meeting of the friends and subscribers to this excellent institution was held at the London Tavern, for the purpose of electing three pensioners on the funds—two males and one female—from a list of fourteen candidates. The president, Mr. Alderman William Lawrence, presided, and was supported by Messrs. George Bird, Joseph Bird, J. Thorn, Grayson, J. Williams, Thos. Cozens, J. Morris, John Newson, jun. and other influential members of the building trade.

The Chairman, in opening the proceedings, expressed his regret that only three could be elected out of the list of candidates. It was hoped that they would have been enabled to take in more, but the state of the funds would not permit of such a course being adopted. It therefore behoved them to use their best endeavours to raise more subscriptions, and thus enable the directors to announce another early election, when the whole of those who were unsuccessful to-day might receive the benefits of this truly charitable institution.

The last annual report stated that "the subscriptions and donations received during the past twelve months amount to 1,354*l.* 1*s.* and 700*l.* stock has been added to the sum invested in the Three per Cent. Consols, as follows:—250*l.* stock to the Relief Fund, and 450*l.* stock to the Building Fund, making the total amount 5,450*l.* stock—viz. 3,500*l.* to the Relief Fund, and 1,950*l.* to the Building Fund. It is for the relief of the numerous applicants who have survived their strength and capability of earning a maintenance, and for the benefit of those who have outlived their friends, and are left destitute and helpless, that the directors of this charity strongly solicit the aid of the generous and the humane. By its means the deserving and aged tradesman will be enabled to end his days contented, in the assurance that his former respectability and good conduct in life have saved him from the pressure of want and neglect in his declining years. The large number of these deserving cases which present themselves to the notice of the directors at each election of pensioners proves to demonstration the necessity that existed for establishing such an institution."

The election having been made, a vote of thanks was passed to the Chairman, and the proceedings terminated.

Notices of Books.

VARIORUM.

The two lectures by Dr. Booth, the Society of Arts' treasurer, advocating the Society's system of examinations, have been published by Messrs. Bell and Daldy, of Fleet-street, for the Society of Arts, in the form of a pamphlet, titled "How to Learn and What to Learn," and containing an appendix, with the programme of the examinations for 1857, and other matter relating to the system. The last of these two able lectures concludes with some important remarks on the subject of Reformatories. "Surely," says the lecturer, "the Eastern tale, how the fountain of youth transformed the decrepitude of age and the wrinkles of the old into the vigour, strength, and beauty of the young, was not so strange as the moral renovation which is now taking place in these reformatories. But I much fear the greater the good they do, the more criminals they reform, the more felons they set up in life, the more likely is it that this great philanthropic movement will be brought to a stand-still; because, when once it becomes generally known that the old proverb, 'Honesty is the best policy,' no longer holds good, but is superseded by this other, 'Thieving is the best policy;' when you systematically reward and cherish the evil doer, while you treat with cold neglect the poor but honest child; when you nationally realize the sneer of the satirist, *virtus laudatur et alget*, praise virtue and let her starve; when the paupers of our crowded lanes and festering alleys shall hear how that good-for-nothing boy Tom Styles, who was tried at the sessions, and found guilty, was sent to a reformatory, where he learned a trade, and is now a magnate in Australia, the owner of flocks and herds, dining off gold plate and fairing sumptuously every day; why the police-office will become the primary institution of the country instead of the school-room; the gaol gate will have more attractions than the church door; and men will seek to graduate in prison as a preliminary to success in life, as the youth of the upper orders now do at a university. You will realize the old fable, every guilty head you cut off from the hydra crime will be replaced by seven others in its stead. Now, do not mistake me: I do not undervalue or make light of the great present good which the reformatory movement is effecting. The criminals are a fact, and as a fact they must be dealt with. All honour to those men who have put their hands to this great and good work. At the same time, I say without the shadow of a doubt on my mind, that the good will be turned into evil *unless as much at least be done for the virtuous as for the vicious portion of society.* My argument is briefly this—if education and industrial training can so thoroughly cleanse these who have been dragged through the mire of guilt and crime, how much more ought they to do for those who have never offended, whose habits have not been warped? It is easier to keep a tree straight than to make it grow from crooked to straight. * * * The great principle which ought to underlie every system of national education is this, that every healthy child should contribute a portion of his labour to defray, at least in part, the charge for his school instruction. Let him give value for what he receives. * * * A boy who

alternates three hours' labour with three hours' learning, will make more progress than another who is shut up for the whole six hours in a school-room. This is one of the cases where three added to three do not make six."——The first part of the first volume of the "Transactions of the London and Middlesex Archæological Society" has been published by Parker, 377, Strand. It is illustrated with various engravings. Amongst its various contents, and besides the introductory and other addresses delivered at the society's meetings, official proceedings, &c. there are reprints of the valuable papers read before the society's meetings, including one on Late Discoveries in London, by Mr. C. Roach Smith; on Crosby-place, by the Rev. Thomas Hugo; on St. Helen's, Bishopsgate, by Mr. Thomas Lott; on Monumental Brasses, by the Rev. C. Boutell; Recollections of Westminster, by Mr. H. Mogford; on some London Relics, by Mr. Sydney Smirke; on Primæval London and Middlesex, by the Rev. T. Hugo; on Monuments in Westminster Abbey, by the Rev. Charles Boutell; on the Chapter-House, Westminster, by Mr. G. G. Scott, and other interesting matter. —— A version of "The Joint-Stock Companies Act, 1856," by Mr. W. G. Harrison, Barrister-at-Law, and Mr. G. A. Cape, Jun. secretary to the Indurated Stone Company, has been published by Baily, of Royal Exchange-buildings, Cornhill. The Acts, schedules, &c. are preceded by some introductory remarks, legal and practical, and the pamphlet is supplied with a pretty full index to its contents. The introduction contains much useful information as to partnership at common law, the formation of joint-stock companies, and of subscribers' liabilities, the position of members, &c. It concludes with a few warning words as to the bubble companies, with limited capital, which will inevitably rise together with the many onerous and responsible associations which the new Act will originate, and, indeed, is already originating, and as to the caution which ought to be used in *dealing* with limited companies. —— "How a Penny became a Thousand Pounds," is a little book still worthy of selection from the mass before us, albeit not now very fresh, and probably already well enough known to many of our readers, at least by hearsay. The author is evidently a shrewd fellow, and his mode of making a penny fructify like wheat till a good crop be reaped, might doubtless be practised in many trades, and, even though not very successful in some cases, would beget thrifty habits, and show the importance of small things in a practical way. Messrs. Houlston and Stoneman, of Paternoster-row, are the publishers. —— "The Unity of Worlds and of Nature," by the Rev. Baden Powell, Savillian Professor of Geometry at Oxford (Longman and Co.) has just reached a second edition, revised and enlarged. The three essays which constitute this bold and able volume, namely, "On the Spirit of the Inductive Philosophy," "On the Plurality of Worlds," and "On the Philosophy of Creation," are exceedingly interesting to a mind prepossessed in favour of expanded, theoretical, and general views, and well adapted, even as an intellectual exercise, to strengthen and develope the reasoning faculties in any mind not totally absorbed in worldly pursuits. And in saying so, we do not mean to commit ourselves to all the author's views, the gladiatorial conflict with some of which might do more to give mental power to the reader than the mere passive assent to his most masterly processes of reasoning. The boldness of views to which we referred is remarkable in a clergyman. The author scarcely disguises his contempt for those secular writers who display an overweening anxiety to square their ideas with what they imagine to be strict ecclesiastical orthodoxy, and who display an affected horror of all and everything overstepping the constrained limits within which they have restricted their own reasonings.

Architectural Society of Northampton.—The Earl of Pomfret has given permission to this society further to explore the site of Sewardsley, or Shoscley, Nunnery.

Miscellanea.

The Iron Trade.—More furnaces have been blown out, and wages are being reduced, but the trade is not thought to be in a worse state than it was some weeks since. The American orders are still far below the average. Importations in America, indeed, are rapidly on the decline, as appears from statistics prepared for the Pennsylvanian iron-masters. The importation of rails for the year ending June 30, 1855, was 127,517; production of American mills for year ending Dec. 31, 1855, 135,300; decrease of importation for average of five years, 101,210; increase of domestic produce, average in five years, 35,300; nett decrease of annual average in 1855, 65,910.——From Glasgow, we learn that at Dixon's Ironworks they are preparing a furnace and apparatus to put Bessemer's process to trial.——The tender of Messrs. Moser and Sons (of Southwark) has been accepted by the Admiralty, for the supply of iron of British manufacture, of different descriptions, for Sheerness and other dockyards.

Art-Manufacture Exhibition at Edinburgh.—The exhibition of the Art-Manufacture Association of Scotland, which opens in the National Gallery, Edinburgh, on the 15th instant, promises, it seems, to be one of considerable interest and extent. There are a good many exhibitors in metal-work and wood-carvings. In the latter list are Messrs T. W. Wallis, Louth, Lincolnshire; W. G. Rogers, London; W. Potts, Handsworth, Birmingham; Taylor and Sons, Edinburgh; Davidson, ditto; Hutchison, ditto; B. Reeves, ditto; R. Mack, ditto; M'Kechnie and Davis, ditto; D. Smith, ditto; H. Scrymgeour, ditto. A communication has been made to the secretary of the Association, through M. du Sommerard, keeper of the Hôtel de Cluny in Paris, that the Emperor of the French has given instructions to the Minister of State and of the Imperial Household, that specimens of the productions of the Imperial manufactories be sent to the Exhibition. The Scottish papers state that the English manufacturers have met the application of the Association in an admirable spirit; and the London and Edinburgh Shipping Company have intimated their readiness to convey articles to and from London in their steamers—the *Prompt*, *Express*, and *Rapid*—at merely nominal freights.

St. Martin-in-the-Fields Reading-room for the Working Classes.—A lecture on "St. Martin's in the Olden Time," was given on the 28th ult. in the Boys' School-room, Adelaide-place, by the Rev. W. G. Humphry, B.D., the vicar, in aid of the funds of the library and reading-room. The lecture was listened to with great attention by a numerous audience. The reverend lecturer traced the parish from its first mention in the thirteenth century (when it was connected with that of St. Margaret) to the time when those of St. Paul, St. Anne, St James, and St. George were taken out of it. He described the "faire crosse" at Charing, and the stately edifices of the nobles that once adorned the banks of the Thames, and gave a list of the numerous celebrated characters in art and literature who had been residents in the parish in the olden time.

South Shields Drainage.—A report furnished to the Town Council of South Shields, by Mr. Christopher Thompson, the borough surveyor, in reference to the sewerage pipes at present in use by the contractors for the borough, states, that the pipes at present in use are from the works of Messrs. Harriman and Co. of Blaydon, and Mr. W. Walker, of Corbridge. Tests of pressure and absorption, applied in the presence of the mayor and council, showed, on Messrs. Harriman and Co.'s pipes, capability of sustaining an average pressure, after saturation, of 194½ lbs. on the square inch. The average absorption was 1·880 per cent. on Mr. W. Walker's pipes, an average pressure, after saturation, of 210⅝ lbs. on the square inch; average absorption of 1·328 per cent on broken pipes.

Dollman's "Ancient Domestic Architecture."—We are asked to mention that the delay in the production of the second part of this work has been unavoidable, partly through the sketches and drawings of St. Cross's Hospital and St. Mary's Hospital, Chichester, having occupied much more time than was anticipated. The engraver promises that it shall be ready for delivery on the 10th of January, and that the third part shall be complete within three months from the issuing of the second part. The subjects in Parts II. and III. will be St. Cross and St. Mary's Hospital, Chichester; the Bede House, Stamford; and Blundell's School, Tiverton.

Destruction of South Lambeth Chapel.—On Sunday evening last, the greater part of this chapel was reduced to a mass of ruins, by a fire which broke out in the joists under the flooring, which the hot-air pipes used for warming the building must have fired. The chapel was insured. It was fortunate the fire took place before the congregation assembled for evening service.

Fire-grates.—Allow me to suggest a new method of constructing fire-grates in such a way as to prevent smoke. The bars of the fire-grate to be so made as to work on a hinge, allowing them to be raised, as it might be, like opening the mouth. Spaces must be cut in the jambs of the fire-grate, to admit of two iron plates, one on each side: these two plates must also work on a hinge at the back, and be capable of being raised like the bars of the grate: the plates must be *below* the bottom bar. Thus, when the fire is made, the two plates would be in the spaces in the jambs, and in no way interfere with the burning, and the bars would also be in their usual position. But when it was desired to add more fuel, the plates must be pulled together, so as to come *under* the fire, and then, being in that position, they must be raised like the opening of a mouth, and of course the fire and the bars, and the two plates (or one plate if easier) would all be raised together, so as to allow of fresh fuel being put at the *bottom* of the grate instead of being placed on the *top*, as at present. Then, this being done, the plates and bars and the fire would be let down again, and the plates drawn back again into the spaces in the jambs (or, if one plate, into its receptacle at the side), and by this means the smoke would be consumed in having to pass through the fire at the top.—W. G. R.

Huddersfield Mechanics' Institute.—The annual meeting of this Institution was held in the Philosophical-hall, at Huddersfield, on 27th ult. when the large room, holding some thousands of persons, was crowded. The meeting had excited great interest, several distinguished persons having accepted the invitation of the committee to be present on the occasion. On the platform were Lord Goderich, M.P. Sir John Pakington, M.P. Sir Robert Peel, M.P. Major-General Wyndham, Mr. Baines, of Leeds, Mr. Wickham, M.P. and other influential persons. The platform, which was constructed to hold 200 or 300 people, was filled by the principal manufacturers of the neighbourhood and their families. The hall was decorated with various drawings, executed by the members of the classes connected with the Institution. Lord Goderich having taken the chair, the annual report, which was of a highly satisfactory character, was read, after which his lordship addressed the meeting, as did also Sir John Pakington and Sir Robert Peel.

Blasting in Welsh Slate Quarries superseded.—A new system of machinery is being brought into use, and has been tried at Carnarvon, by which slate, it is said, can be cut into any required form, clean from the hill or quarry itself, without any of that enormous waste which results from blasting and the crush given to blocks contrary often to their lines of cleavage. The patentee of the machinery is Mr. Smith, of the Liverpool Corporation, who has purchased the patent right from the inventor, Mr. Jonah Ellis. The machine tested at Carnarvon was ordered on behalf of Lord Palmerston, and has been executed by Messrs. Thomas and De Winton, of that town. It is said to be equally suited to every form which the slate quarry can assume. The power made use of is steam, and the guide or directing agency is a screw, made to act upon chisels, so that the blocks are cut from the mass without cracks or splits, or waste of any kind, the lateral or horizontal cut being met by a vertical cleavage, so that slabs or blocks can be cut off to any required size and form, from a cubic foot to a hundred tons, if necessary.

Falling of a Railway Station Roof.—At Yarmouth last week the entire roof of the engine shed at the railway station fell, injuring three men. The fall of the roof is ascribed primarily to a severe gale of wind, and, secondarily, to its own weight. It was composed of iron, wood, and slate; had only been repaired within the last few weeks; and on Monday was being painted in the inside.

Fee Case: raising Buildings in the Metropolis.—The report of the above case, communicated by me to your Journal, is strictly correct; and it was with regret that I read in your last number the very perverse statement of your correspondent, "District Surveyor," the more especially as it is calculated to mislead your numerous readers, and to raise a doubt upon a point, concerning which there can be but one opinion. An additional story is erected upon *one house*, in a row of houses: the side walls and chimneys are of course carried up to form the story, and *one fee* is alone chargeable; and if the owners of the adjoining houses also construct an additional story, *then* a similar fee will become due on *each* addition. The builder did not employ counsel, and the "District Surveyor" paid his own expenses, as well as the cost of the summons. It is to be hoped that an appeal will be made to the Metropolitan Board, to protect the inhabitants of Clerkenwell from these unpleasant proceedings. I enclose from the builder in the case a verification of my statement.—W. P. G.

*** Here the matter must drop.

The Great Atlantic Telegraph.—The subscription list for the 350,000*l.* required by the Atlantic Telegraph Company has been already closed, the applications having considerably exceeded the specified amount. All the shares are of 1,000*l.* each, and a call of 20 per cent. was to be paid upon them on Friday. A combination of names of high standing in the commercial world has been obtained, and the confidence felt in the early accomplishment of the undertaking appears to be complete. The proportions in which the 350 shares have been taken are 101 in London, 88 in America, 86 in Liverpool, 37 in Glasgow, 28 in Manchester, 4 in Tewkesbury, 4 in Brighton, 1 in Nottingham, and 1 in Leamington. It is understood that application will be made to the United States' Government for an annual grant equal to 4 per cent. on the capital, such as has been accorded by the British Treasury. The company possess an exclusive privilege from the British colonies of Newfoundland and Prince Edward's Island, and also from the State of Maine, for bringing sub-marine cables to these shores.

Iron Lattice Bridge for the East Indian Railway.—A bridge of a somewhat novel construction is now being made in this country for the East Indian Railway. It is intended to cross the river Soane, one of the tributaries of the Ganges, and when completed will be nearly a mile in length. There will be twenty-nine piers, and the span from pier to pier will be 150 feet, being about 26 feet more than the span of the arches of the High Level-bridge at Newcastle-upon-Tyne. Like that structure, it will consist of two roadways, the upper one for the railway, and the lower one for foot-passengers and palanquin-bearers, the height from the lower to the upper way being 26 feet. The peculiarity of the construction is that the two roadways are fastened together and supported by latticework of wrought-iron, combining great strength with a light and elegant appearance. The bars are of channel iron, and cross each other diagonally, being firmly riveted together at each crossing. One complete arch has just been constructed at the Elswick Engine Works, Newcastle, by way of experiment, and the result is most satisfactory. The entire weight is 120 tons. It was made with a slight curve, 2 inches higher than a dead level, and when tested with a weight of 362 tons it only went down 2 inches below the level, or 4 inches altogether at the centre. The separate lengths or arches will rest at each end on five rollers of cast-iron, to allow of expansion and contraction, according to the variation of the temperature. The engineer engaged in the construction of this bridge is Mr. George Rendel, of London. As soon as the bridge is completed it will be taken to pieces in order to be shipped, and will be reconstructed in India.—*Manchester Guardian.*

Wiltshire Archæological Society.—The first *conversazione* meeting for the season, of the Wiltshire Archæological and Natural History Society, was held on Thursday evening, 27th ult. at Devizes, Mr. Ewart, M.P. in the chair. Amongst the papers read, the first in order was an historical sketch of Woodhouse, near Horningsham, drawn up by Mr. William Wansey, F.S.A. It was a source of considerable regret that the respected representative of a family, several members of whom played a conspicuous part in the struggle of the seventeenth century, was not himself present on the occasion, in order to enhance, by a living impersonation, the story which he told so well. In Mr. Wansey's absence, his paper was read by the Rev. W. C. Lukis, who next read a paper of his own, on the subject of "Paxes." A third paper was by Mr. Cunnington, of Devizes, describing the unearthing of a British chieftain of gigantic stature, in September last, from his resting-place [?] on Roundway Down, and of the discovery of other antiquities. Then came a lecture on Ancient Music, illustrated, both instrumentally and vocally, by Mr. Lambert, of Salisbury.

A New Theatre for Australia.—According to the *Australian and New Zealand Gazette*, a new theatre is to be built at Launceston by a company. This plan, it is said, assimilates in several respects to that of the Haymarket Theatre, and was an improvement on the former plan. In the new plan the theatre was made to hold 700 instead of 650, and without any extra expense. The new theatre would "hold," as it was said, 132*l.* 14*s.*; that is, 394 in the pit, at 3*s.*; 168 in the dress circle, at 5*s.*; and 168 in the boxes, at 4*s.*; amounting in all to 710 sittings, or standing room for 1,000. There would be a double tier of boxes. A shareholder had arranged to supply stone for the building at the same cost as bricks. There were to be six private boxes provided, and the orchestra is to be the size of that of the Haymarket Theatre. The land and building will cost 3,000*l.* which is being raised in shares of 10*l.* each, all of which, excepting forty-three, were taken up at the meeting, so that no time will be lost in erecting the building, which will be finished complete in all the details.

Construction of Baths.—With reference to a recent query on the subject of baths, a correspondent points attention to the advantage of lining both *sides* and floor with the patent glazed and coloured bricks of the Poole Architectural Pottery Company. He says they are superior in all respects to tiles for the purpose, as being cheaper, firmer, and not liable to come off like the latter. Several baths have been lined with them. By a judicious introduction of colour also, as white, buff, blue, chocolate, &c. a beautiful effect may be obtained at small extra cost.

Improvement upon Wall Paper.—Mr. Joseph Adshead, of 54, George-street, Manchester, has patented what is described as a "durable and economical substitute for paper," called "anti-moisture cloth," to supersede ordinary paper-hanging. Mr. Adshead's offices, it seems, are already furnished with a great number of specimens in imitation of wood, marbles, &c. and also flower-pieces. The imitations of wood are said to include most of the kinds known, and some new to this country; and there are specimens of granite painting, marbles, &c. The surface is glossy, and can be cleaned even with hot water, it is said, without injury. The texture of the cloth is woven, and hence its adaptability to various other purposes, such as coverings for tables and furniture in general, and bindings of books, specimens of which have been prepared. The extra cost of the material is said to be not much.

Visitation from Defective Sewerage, Marylebone.—At the Marylebone Vestry on 20th ult. Dr. Bachhoffner called attention to the following case:—A gentleman residing in Crawford-street lived in a house adjoining one which had been unlet for some months past, and the whole neighbourhood had suffered considerably, for a long period, from the foul smells arising from the sewers of the unoccupied house. About two months ago this gentleman lost a son through fever, arising from the abominable nuisance, and now no less than nine of his family were seized with the same complaint, and were in a dangerous state. The nuisance was complained of some months ago, but no steps were taken to remedy it, and it had gone on unabated. Dr. Bachhoffner, therefore, moved that steps be taken to enter the house by Dr. Thompson, the medical officer of health, without delay, and the source of infection removed, according to the powers vested in the parochial authorities by the New Metropolis Management Act. The motion was unanimously carried.

Rochester-bridge.—An application has been made by Colonel H. Sandham, the director of the Royal Engineers' establishment at Brompton, to the authorities, to allow the troops under his command to be employed in the destruction and removal of old Rochester-bridge. The opportunity was considered favourable for exercising the officers and men in the demolition of ponderous works. The authorities have accorded permission for the men of the Sappers and Miners to be employed in the undertaking, and a party of the Royal Engineers have been engaged making the necessary preparations. The piers and foundations will be destroyed by means of sub-marine explosions, in which divers belonging to the corps will be employed. Could not the military, as we often suggested, be usefully employed in the *construction* of public works as well as in *destruction*? The health and strength of the soldiery would thus be greatly promoted, and an enormous waste of manual power be put an end to.

The Soulages Collection, at Marlborough House, will be opened to the public on and after Monday next.

Cambridge Architectural Society.—The second meeting of this society for the October term was held on 20th ult. when the secretary read a paper on the Cathedral of Drontheim, in Norway, illustrated by the work of Count Minutoli. This cathedral was begun in 1080, consequently the earlier portions are Romanesque. The nave, with the western front, and also the choir, are in the Early Pointed style. The great feature of the building is the Pointed octagon, at the eastern extremity of the choir, under which originally was placed the shrine of St. Olof. It is now almost the only part in tolerable preservation, the edifice having been several times accidentally burnt, besides being sacked by the Lutherans in the tenth century, since which period the nave has been a complete ruin, and the choir so blocked up with modern repairs and galleries as to present but little of the original design. A complete restoration by a competent architect is shortly, however, to be commenced.

The Cedars, Putney.—In reference to a paragraph in the *Builder* of November 22nd, permit me to observe that the architect therein named is employed in the completion of a block of buildings commenced from my design, and corresponding to a wing already erected. Both blocks form detached parts of a general arrangement designed and planned by me.

George Morgan.

St. James's Chapel, Hampstead-road, has been re-opened, after repair. The burying-ground is closed. The chancel Venetian window has been filled with diapered stained glass, with the Paschal Lamb, &c. &c. and an inscription at the central base, that it is "A tribute of affectionate esteem from the congregation to a beloved pastor, the Rev. H. Stebbing, D.D. in the twenty-second year of his resident ministry." Regret has often been felt that so estimable a man and a theological author, has not been gifted by "the powers that be" with merited preferment.—P.

Important to Workmen.—Sheriff Strathern, says the *Glasgow Gazette*, has expressed an opinion at the Airdrie Small Debt Court, which is of some importance to the working classes. He said,—"It was illegal for the master to charge interest on advances to the workman, in the course of a pay for work done." As the practice of charging a shilling per pound and a penny per shilling for money advanced to workmen prevails to a great extent in the mining and manufacturing districts, it is but right that both master and servant should know that the exaction is illegal.

Houses for the Poor in the City.—Having seen in the last number of your valuable paper an account of the noble, generous support Miss Burdett Coutts (of imperishable memory) has liberally given to proposed lodging-houses in the Strand, I beg to know if it is too presumptuous to ask that illustrious benevolent lady to help the poor City of London in a like affair? There can be no harm done by your inserting this, as they cannot take in your paper, or they would have seen what Manchester, Liverpool, Bolton, Sheffield, and other places are doing.—S. P. X.

Art in Reading.—A meeting of the inhabitants, presided over by the mayor, was held on the evening of the 1st inst. at the Town-hall, to concert measures for establishing a school of art in the town. Mr. Cole, Inspector-General of the Department of Science and Art, attended by invitation, and explained the nature of the aid which Government afforded to schools of art. It was for the town to provide a suitable room and to raise a capital of 150*l.* and find five public schools willing to receive instruction in drawing, and when this was done, the Department would give its aid and recommend a master. Mr. Cole had no doubt that a good master would soon make the school self-supporting, as at Taunton, Hereford, and other semi-rural towns where the population was below that of Reading.

Faculty granted for Rebuilding Part of a Church.—In the Consistorial Court, at Salisbury Cathedral, Dr. Phillimore gave judgment in the case of the Rector of Steeple Langford, Wilts, *v.* Churchwardens; being an application for a faculty to take down and rebuild the chancel of Steeple Langford Church, to make a vestry-room, and otherwise to enlarge it. The parish opposed it on various grounds; one being that several bodies must be disturbed. The judge said the living must be considered as well as the dead, and it had been the constant practice of the ecclesiastical courts to decree faculties, the effect of which was to disturb graves, for the purpose of improving and enlarging churches. The Court decreed the faculty, but without costs. The alterations are to be effected under Mr. Slater, architect.

Lincoln Diocesan Architectural Society.—This society has commenced its career at Lincoln under favourable circumstances, so that its numerous members may now be fully assured of the success that promises to attend the important step it has taken of removing from Louth and Newark to the chief city of the county, where it not only has the most abundant, varied, and beautiful objects of instruction ever within easy reach of this its now central and sole establishment, but presents an easy mode of access to its visitors from almost all directions. It is the intention of the society to hold an inaugural meeting, at Lincoln, on the 26th of May next, and the two following days, at which the architectural societies of Yorkshire, Leicestershire, Northamptonshire, Bedfordshire, and Worcestershire will be present. The Rev. Edward Trollope, F.S.A. Leasingham, Sleaford, is the hon. acting secretary.

TENDERS

For building a House for Mr. E. G. Salisbury, at Houghgreen, Chester. Mr. James Harrison, architect:—

J. D. Williams	£2,408	0	0
T. Carter	2,352	0	0
W. Davies	2,293	0	0
S. Harrison	2,286	0	0
J. Royle and Son (accepted)	2,197	0	0

For new School, Master's House, and Park Lodge, Haydon Sherborne, Dorset, for Mr. G. D. Wringfield Digby:—

Gent	£1,200	0	0
Chapman and Croad	1,298	0	0
Hull and Redout	1,251	4	10
Guppy	1,222	17	0
Green	1,210	0	0
Sarrell	1,200	0	0
Down	1,113	0	0

For the pewing and general painting of Limehouse Church. Mr. Arthur W. Blomfield, architect :—

Evans (Brothers)...	£1,903	0	0
Gumbrell ...	1,429	0	0
Blackburn ...	1,414	0	0
Ponsonby ...	1,392	11	2
Smith ...	1,392	0	0
Steele ...	1,375	0	0
Wheen ...	1,367	0	0
Child ...	1,320	0	0
Sands and Emery ...	1,220	0	0
Chapman ...	1,185	0	0
Partridge and Crutch...	1,128	19	0
Thornhill and Son (accepted) ...	1,122	0	0
Hedges ...	1,105	0	0
Ennor ...	1,080	0	0

For the re-building of St. Michael's Church, Derby. Mr. Henry J. Stevens, architect. Quantities supplied :—

Lee ...	£3,187 0 0
Rickard ...	2,947 0 0
Humphreys ...	2,750 0 0
Slater ...	2,550 0 0
Moody ...	2,280 0 0

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IMPORTANT to the ENGINEERING PROFESSION SAFE and RAPID TRANSMISSION of DOCUMENTS.—Plans, Deeds, Law Papers, Samples, and Articles for private use, &c. forwarded daily to THREE p.m. to all parts of the Continent, with the Mails throughout, by the "CONTINENTAL EXPRESS PARCELS AGENCY," of which the imprint is on the sole Prospectus of the Royal Prussian Post-Office the Belgian Government Railway, and agents of the mail packets between Dover and Ostend. Rates fixed and moderate, tables of which, with every information, to be had gratis, on application at the Chief Office, 52, Gracechurch-st. London.
N.B. Parcels to be sent the same day must be at the Chief Office by THREE p.m.

MEASURING and ESTIMATING. — A Surveyor will give INSTRUCTION in ESTIMATING and MAKING OUT BILLS of QUANTITIES, with other useful information. Terms moderate.—Direct to Mr. ANDERSON, Mr. Lindley's Advertising Office, 19, Catherine-street, Strand.

TO BE SOLD, several MARBLE CHIMNEYPIECES, some carved, for parlours and drawing rooms, much under their value. Also fifty tons of Slabs, 12 by 12 ins each. A few sinks and Fireplaces, Marble Chimneypieces, Figures, Monuments, &c. cleaned equal to new. M. MAY, Carver, 7 flast house, Bath-row, New road. Please observe, Bath-row is a narrow passage on the New-road, between Brook street and the Hampstead-road. A first-rate Lantern for dissolving views will be sold, &c.

BUILDERS and CONTRACTORS should GIVE the cheapest Deal Yard in London for the sale of Marble Chimneypieces at the WESTMINSTER MARBLE COMPANY'S WORKS, Earl-street, Horseferry-road. A large stock on view to select from. Veins Marble Box Chimney pieces from 7s. upwards. The trade supplied on liberal terms.
N.B. The Westminster omnibuses pass the Works from the City.

MARBLE.—The ITALIAN MARBLE COMPANY have just landed, and constantly keep an assortment of MARBLE MORTARS and GARDEN VASES of all dimensions. Orders executed for the above, and every description of Italian work. Lee's Veins and Sicilian marble in blocks of all sizes. Apply at Bridge Wharf, Millbank, adjoining Vauxhall-bridge, to WILLIAM W. BONNIN, Secretary.

TO BUILDERS, MASONS, AND OTHERS.
THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Brocatella, dove, black, black and gold, Sienna, St. Anne's, statuary, serpentine, verd antique, &c. Portland, Harehill, Park spring, and other stone, in blocks, slabs, landings, and bedding. Yorkshire paving, granite curb, &c. All goods carefully packed and forwarded to any part of England.—THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

MARBLE GALLERIES, 17, Newman-street, Oxford-street.—Mr. ALFRED E. EDWARDS, during the last ten years with the London Marble Company, has opened the above premises, being in the occupation of Bailey, the celebrated sculptor, under the firm of EDWARDS, EDWARDS, and COMPANY, as the largest stock of BRITISH and FOREIGN MARBLE CHIMNEY-PIECES, &c. &c. in London. EDWARDS, EDWARDS, and CO. also solicit the favour of an inspection of their stock by architects, builders, and others connected with the trade, and beg to assure them that for design, style of execution, and price it will be found unrivalled. Estimates for every description of marble work.

MARBLE CHIMNEY-PIECES.—The only and largest Stock and centre of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY PIECES lately imported from the Continent. They comprise Statuary, Griotte d'Italie, Sienna, Verd Rouge, Dove, Black and Gold, Rouge de Belmont, Brocatella, and other choice foreign marbles, and are decorated with great taste, and executed by first class artists. On sale, in the show rooms of Messrs. EVANS, SON, and CO. King William street, London-bridge.

MARBLE CHIMNEY-PIECES, and every other description of marble work supplied to builders and the trade at about HALF the USUAL PRICE, in many instances less than slate. Manufactured by the LONDON and CONTINENTAL MARBLE COMPANY, at their own Quarries in Faweau, Belgium, Office, and Depot, 2, Crosshall-row, London-bridge.—Estimates given for works to any amount.

LLOYD'S MARBLE WHARF, Thames-bank, Pimlico, adjoining Vauxhall-bridge.—Italian Statuary, Veined, Sicilian, Dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

YORKSHIRE STONE.—THOMAS TINEY, Stone Merchant, Tanshelf-place, Leeds, begs to inform Builders, Surveyors, and all others, that he can supply direct from his Quarries, by water or rail, Paving, Landings, Steps, &c. of all sizes, on the most advantageous terms. Prospectus on application.

GATES and GEORGE, CAEN, AUBIGNY, and GENERAL STONE MERCHANTS,
CAEN WHARF, ROTHERHITHE, LONDON.

STONE! STONE! STONE! — To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Sett, Sills, Granite Pitchings and Curb, Guernsey Lookup Road Materials, and Devon Wharf, Millbank, Westminster.

BRAMLEY FALL STONE.—To ENGINEERS and CONTRACTORS.—The quarries well known and in full operation, in number as public works, is SUPPLIED from the QUARRY at BRAMLEY FALL and the several Quarries at Bar Scar, with powers of water, and at the lowest possible price, by JAMES SKEOUD and SONS, Ceptor Wood Quarries and Cambridge, Leeds.

STONES, GRANITES, SLATES, &c.—W. and J. FREEMAN supply the various British and Foreign Stones, Granites, and Slates, in scappled blocks or worked to specification. Also the usual quarry worked articles of Flags, Landings, &c. &c. direct from the Quarries to Liverpool, Hull, or any of the outports (for exportation or otherwise), or to any part of the kingdom. Stocks of every description always ready for immediate delivery from their Wharfs, Millbankstreet, Westminster-road, Upper Road, and Upcome Commercial Docks, Deptford.—Office, 27, Millbank-street, Westminster.

MARKET-WHARF, REGENT'S-PARK-BASIN, WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slate, &c. Also Bricks, Lime, Cement, Hair, Tiles, Lath, and Pipe Goods, Soils, and WOOD in the attention of Builders, Masons, and others, to their Stock as above, where everything will be found at the lowest prices. Hard Yorkshire, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened, by the yard, or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

GRANITE.—The Welsh Granite Company, Carnarvon, supplies Pitchine or Paving Sets of this Material to order. The Sets, which they for several years been extensively used in Manchester, Bristol, Leeds, and other large towns, combine in a higher degree than any others, the qualities of roughness in wear and durability. The stone is also well adapted for foundation courses, plinths, &c. for public buildings and for small stones.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace.—Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.
London Agents—TREGELLES and TAYLOR, 51, Old Broad-street. Manager—JAS. J. PRATHAN, Liskeard.
This Granite is selected for the New Westminster-bridge.

RAWDON-HILL STONE.—Messrs. TRICKETT and PERKIN are prepared to execute orders to any extent for their much admired Building Stone. Depots, where large stocks are kept, No. 3, Stone-wharf, Great-Northern Railway Station, King's-cross; Victoria Stone-wharf, Millwall, Poplar. Blocks quarried to suit customers for columns, cornices, landings, steps, lintels, keyed tones, sills, &c. Delivered to any part by vessel or railway trucks.
This stone when better known, must come into extensive use. I should think it exceedingly suitable for the London market."
C. L. DIETZ, ESQ.S.
Address, JOHN TRICKETT, Headingley, Leeds, Yorkshire; or, SAMUEL TRICKETT, Victoria-wharf, Isle of Dogs, London.
N.B. A large quantity of Foundation Landings for sale.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in blocks and slab. Marble mortars, &c.

BATH STONE OF BEST QUALITY.
RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

BROKEN STONE for SALE.—The Board of Works for the Hendon District will meet at the BOARD ROOM of the WORKHOUSE, in Little Britain-lane, on MONDAY, the 15th inst. at SEVEN o'clock in the Evening, to receive TENDERS for the PURCHASE of the BROKEN GRANITE and YORK CHIPPINGS now lying in the Depôts in Gray's-inn-lane and Bedford street.—Further particulars can be had on application at the Offices of the Board, between the hours of TEN and FOUR.
S. W. HOPWOOD, Clerk.
Offices, Little Gray's-inn-lane, December 3, 1856.

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôt, at Bangor, or to transmit by railway. Also Slabs of all sizes. Orders to be addressed to Mr EDWARDS, Manager, Royal Slate Quarries, Bangor.

SLATE.—An assortment of the best BANGOR ROOFING SLATE ON SALE, at Bridge-wharf, Millbank. Apply to Mr. GEORGE BAXTER, Foreman.

SLATING, 22s. per square, in town; Slate Paving, 3½ in thick, measuring 4 feet in a station of 16 feet superficial, ready for laying in runs 21 per foot super, warranted sound more than 4 inch for 6 feet can be had at Bull's Wharf, Fleet-street. No rag slates, slate cisterns, sinks, &c. considerably lower than the usual quotations.—T. B. HANSFORD'S Slate Works, Trevalga Wharf, Ratcliff-cross.

PARIS EXHIBITION.—ENAMELLED SLATE TWO FIRST CLASS MEDALS.—Mr. MAGNUS is the only exhibitor whose productions possess those noble honours; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1848. This beautiful material, handsomer and more durable than marble, is now fit for the use into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is moderate, far less than of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of consoles, chiffoniers, commodes, &c.; baths, baptistries, altar-tablets, pedestals, cisterns, vases, pedestals, and brackets; wash stand tops, billiard tables, linings to halls, &c. and to counters. Price lists can be had on application to Mr. MAGNUS, 8 and 11, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs FREEMAN, Millbank-street; and at Messrs Brabys, Belvidere road, where terms may be obtained.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON, Established 1851.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner, or supplied in any quantity. Information for using furnished with material. Post-office orders or references in London promptly attended to. Estimates given for every kind of the above work.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations.
PRICE 2s. 9d. PER SQUARE YARD.
Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.
Apply to JOHN PILKINGTON, Poloneeau and Limmer Asphalte Office, Monumental-chambers, 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

CROGGON and COMPANY, Manufacturers of
PATENT ASPHALTE ROOFING,
BOILER, RAILWAY, SHEATHING and INODOROUS FELT.
For Damp Walls, and Lining Iron Houses.
2, DOWGATE-HILL, LONDON.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional JOHN BAZLEY that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Account of COMPARATIVE EXPERIMENTS on the strength of it and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no colouring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS Millbank-street, Westminster; and Seel-street, Liverpool.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccos dry quickly, and can be painted upon within a few days.—Sold only by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for stucconę, brickwork, blocks for breakwaters, tidal work, or otherwise.—London Wharf, Belvedere-road, Lambeth.

PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing rectitude of strength and colour, and at a less cost than is attainable by most other makers.

These cements set under water in a few minutes, and are not affected by extreme heat or cold

FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime, Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Cement Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

JOHNS and CO.'s PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

PORTLAND and ROMAN CEMENT. PLASTER of PARIS

Manufactured by J. M. BLASHFIELD, at Millwall Isle of Dogs. Warehouse, No. 1, Wharf, Paddington-basin.

CHARLES RICHARDSON, 3 & 6, SOUTH-WHARF, PADDINGTON BASIN. COWLEY and DENHAM, PORTLAND, ROMAN, AND OTHER CEMENTS, TAMWORTH GLAZED SEWAGE PIPES BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 6, South Wharf, Paddington.

NOTICE.

CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now bringing GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's-bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway.—Greaves's Blue Lias Lime.—Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to the Trade the best natural HYDRAULIC CEMENTS at reduced prices. The Company particularly recommend the best quality of their Bath Cement for all modelling cornices, decorations, &c. as having all the qualities requisite for an interior cement, and being quite unaffected by extremes of weather. The Company also supply BLUE LIAS LIME, lump and ground, which will carry more sand than any in the market.—Communications to be addressed to the General Offices, 30, Old Broad-street, London; to Mr. MONUMENT, 4, Caroline-place, City-road; to Mr. TIMEWELL, the Depôt, 9, North Wharf-road, Paddington; or to the Works, Dunball, Bridgewater.

SOUTHAM BLUE LIAS LIME DEPOT. Glazed Stoneware Sewage Pipes. Brick, Lime, and Cement Merchants, TATHAM and CO. 14, South Wharf, Paddington.

PORTLAND and BATH CEMENTS. TATHAM and CO. 14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours. Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale or retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent. N.B. These Cements supplied for shipment, on advantageous terms.

DAVIES and NORMAN, CROWN WHARF, GREAT SCOTLAND-YARD. ROMAN and PORTLAND CEMENTS. LIME, BRICKS, TILES, SLATES, FIRE GOODS, &c. STONEWARE PIPES, PANS, TRAPS, and about 12 other manufactory, Faversham, Kent. N.B. These Cements supplied for shipment, on advantageous terms.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT.—Messrs. ROBINS and CO. to WHOM the PRIZE MEDAL was AWARDED in 1851, are prepared to supply any quantity of every description of PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at their Northfleet Depôt at the Works.

HUBBUCK'S PATENT WHITE ZINC PAINT,

The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor tropical climes can upset it. It is entirely free from any poisonous or pernicious property. The accidental maladies paralysis and painter's colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in oil, and with ease is ground to a fine impalpable powder. To prevent the paint which the unscrupulous make, the registered initials must appear on each package, with the Words Zinc Paint sealed in Original Packages, each package stamped, HUBBUCK, LONDON—PATENT. And when so marked the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries at Ware-hampton, the quality of which has been tested by several of the largest railway companies, and by private parties, and found to be of the most superior description. Any quantity will be delivered at the nearest railway station, or on board any vessel in the river Thames, and the Limes will be carefully packed in casks, and forwarded to any part of the kingdom, so as to arrive in the best condition. Where the Lime is to be used for grinding, it is recommended that the casks be not opened, but the Lime ground with the casks, as by this means the Lime will be found to produce a much greater quantity of powder than if the casks are first emptied. Orders addressed to the Lessee, Mr. Charles Nelson, Wharf, Paddington, will receive prompt attention. Quarries at Ware-hampton, Warwickshire. Wharf, Paddington. Quarries and Manufactories, Stockton, near Southam, Warwickshire.

NOTICE.

SOUTHAM HYDRAULIC BLUE LIAS LIME.

WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works. Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF ROAD, Paddington.

WILLIAM PETERS begs to inform the Trade that he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.

Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton

Small ditto, ditto, 2s. per ton.

Barges loaded in a few minutes.

Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Water-works Companies, Coal-Mine Proprietors, Builders, Contractors, &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, is prepared to enter into contracts with any of the above branches that may favour him with their orders. The advantages to be derived from the use of Cements manufactured by J. C. over all others, are their extraordinary hydraulic properties—Samples of which he is always happy to lend or supply to order at the Works, Ashton New-road; or the Warehouse, 5, Broom-street, Shude-hill, Manchester.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings of good and sound quality, constantly on sale at Mr. DYER'S Brick-fields, which are only a quarter of an hour's walk from the City. He earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to select them himself.

Malm Place, half-washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external use.

Apply to HENRY DODD and CO. at the Counting-house, Hotten Brick-fields, Grange-walk, near the Rosemary Branch, Hoxton.

N.B. Light-coloured Pot Sand of a good quality constantly on sale. Orders addressed to Mr. Dyer, as above, or to Mr. Dodd, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury, New-park, would be willing to enter into arrangements with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Delly Farm, Stoke Newington Green.

THE BEST HERTFORDSHIRE MALM SECONDS;

THE BEST WHITE and RED PAVINGS; WHITE SUFFOLK PERFORATED BRICKS; DEEP-RED RUBBING BRICKS.

Also COWLEY and KENT STOCKS, in any quantities

J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent road, Surrey.

N.B.—Lime, Cement, Slates, Fire-bricks, &c. and all kinds of Building Goods.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY

(Within a short distance of the five bridges).

THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity

Also, STOCKS, of FIRST QUALITY.

J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Loam, Whiting, Whiting Sand for asphaltic, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brickmaking, &c. to be had by barge from Messrs. MEESON and CO'S works at Grays, Essex, in any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 500 to 600 tons can load alongside the wharves at Grays. At MEESON and CO.'s wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods both Welsh and Newcastle, Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.

General Office—No. 13, GEORGE-YARD, LOMBARD-STREET, Letters addressed to Grays Essex, will meet with immediate attention.

COLES, SHADBOLT, and CO. CEMENT and PLASTER MANUFACTURERS, LIME MERCHANTS, Brick, Tile, Drain-pipe, Hair Lath, and Fire Goods Merchants.

ST. JAMES'S and THORNHILL WHARFS, Caledonian-road, Islington.

ROMAN CEMENT, made at the above works, may be had fresh from the kilns daily—a great advantage to dealers and sewer contractors, especially in winter time.

PORTLAND CEMENT, of the best quality, strength, and colour, manufactured in Kent, the nearest point to London, and less than any of the Lag Cements, which are much inferior to it, and should not be used in the construction of sewers, &c. where Portland Cement is required.

PLASTER of PARIS, direct from the quarries, both coarse and fine, wholesale and retail.

Caledonian-road, Islington.

LIME, Grey Stone, Chalk, and Blue Lias Lime, fresh burnt, a constant and regular supply of which may be had by the barge or yard.

A large assortment of Glazed Stoneware Drain-pipes, of the best Lambeth make; Yorkshire Plain, Pan, and Paving Tiles; Welch Fire-bricks, Lumps, and Clay; Hair and Lath. All kinds always in stock

These goods are of the best quality, and sold at the lowest possible prices.

N.B. Shipping orders promptly executed.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES,

For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.

SOLE AGENT,

J. B. LAWES, 1, Adelaide-place, London-bridge.

This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repairs as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.

Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Madeley, Staffordshire.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City road, Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 881, of the Great Exhibition, rank the Manufactures from whence it came as "The Tilleries," Tunstall, Staffordshire, as the first of the kind in the world.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, the Patent impermeable Terra-Cotta, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin.

DRAUGHTS of COLD AIR and DUST round room, office, or outside doors and windows EFFECTUALLY PREVENTED by GREENWOOD'S patent INDIA-RUBBER STOPS, the most simple and effectual method of making air-tight joints to joiners' or cabinet work, old or new. These Stops can be had any length or pattern. Self-acting spring Stops, for the bottoms of doors.

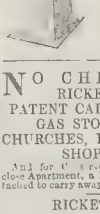
The Trade supplied.

JOHN GREENWOOD, Patentee, 10, Arthur-street West, London-bridge.

SMOKY CHIMNEYS.—TWO YEARS' TRIAL and PERFECT SUCCESS of DIXON'S PATENT WIND-GUARD, in curing the most inveterate Smoky Chimneys, induces the Patentee to recommend all persons suffering from that nuisance to try one.

Price 10s.

To be had of Ironmongers and Builders, and of the Patentee, at his Office, 65, Fenchurch street.



GALVANIZED WINDGUARDS.

No. 1. 3 feet high, 14 in. by 9 in. bottom, 18s.

No. 2. 4 " " " " " 20s.

A DISCOUNT ALLOWED TO THE TRADE.

This Windguard is highly recommended by the Manufacturers,

F. EDWARDS, SON, and CO. 12, POLAND-STREET, OXFORD-STREET.

NO CHIMNEY WANTED for RICKETS'S PATENT CALORIFERE GAS STOVES in CHURCHES, HALLS, or SHOPS;

And for Counting-houses, or any close Apartment, a Pipe can be affached to carry away the burnt air.

RICKETS'S CHEAP GAS STOVE, Price £1. 15s.

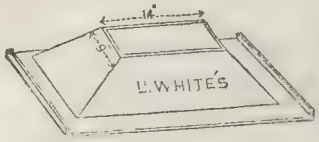
Made of Sheet Iron, suitable for Heating small Counting-houses, Bedrooms, Cellars, &c. &c.

MANUFACTORY, AGAR-STREET, STRAND, LONDON.

Liberal Discount to Builders.

PATENT SOLID SWISS PARQUETERIE. This beautiful, unique, economical, and elegant description of Parquetry, extensively used in Paris and other Continental cities, is now introduced into this country: an extensive assortment of specimens and patterns commencing at 1s. per foot super. (and upwards), may be inspected at the Show and Application Rooms of Messrs. H. P. BURT and CO. 2, Charlotte-row, Mansion-house; or of Messrs. ARROWSMITH and CO. 59, New Bond-street.

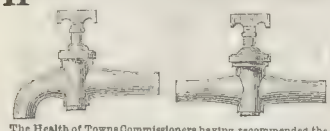
IMPORTANT TO BUILDERS.



REGISTERED CAST-IRON CHIMNEY-HOPPER and CHIMNEY-BAR COMBINED, ensuring a perfect formation of the Flue, and rendering smoky chimneys impossible. One trial will cause their adoption in every building
Price from 8s 6d. each, according to size.
IRON GIRDERS and COLUMNS to MODEL or DRAWING
IRON PIPES and connections for gas, water, and liquid manure.
RAIN-WATER PIPE and EAVE GUTTERS, at wholesale prices. Also, O.G Gutters, Sash-weights, STABLE FITTINGS, pumps, tomb railing, cattle and pig troughs, and COLUMNS with caps and bases, and every kind of builders' castings, in stock, at LYNCH WHITE'S Iron Wharf, Upper Ground-street, London, near Blackfriars-bridge.

SMOKY CHIMNEYS.—The best Cure is KITE'S PATENT ALBERT CHIMNEY-CAPS, patronised by Her Most Gracious Majesty the Queen, Buckingham Palace; in St. James's Palace, Claremont, Windsor Castle, Ordnance Departments, Government Offices, Public Buildings, &c. Also extensively adopted by the Nobility, Gentry, and the Public in general. Wrought iron, 35s.; Galvanised do. 30s.; Cast do. 25s. each: the latter as durable as the building itself. The merits of this invention are proved by practical experiments; they are likewise architectural in appearance.—Depôt, Barton's Iron Works, and Manufactory for the Patent Stable Fittings, and Enamelled Mangers.—Address JAMES BARTON, 370, Oxford Street, London.

TO WATER COMPANIES AND PLUMBERS
HIGH-PRESSURE COCKS & CLOSETS.

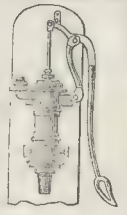


The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.
LEAD, IRON, and TIN PIPE.
JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street London.

TO WATER COMPANIES, LOCAL BOARDS OF HEALTH, AND OTHERS.

LAMBERT'S NEW VALVE COCK,
For Preventing Waste of Water.
Is so constructed that it cannot be left open accidentally or wilfully, and further it will at each action deliver a specific quantity, and under the same pressure this quantity will never vary.
It is peculiarly adapted for closets, self-acting or otherwise.
Price, complete for high pressure, 10s 6d. each.
" " low " 12s 6d. "
THOS. LAMBERT and SON, Patentees and Manufacturers, Founders and Machinists, Short-street, New-cut, Lambeth.

TO BUILDERS AND PLUMBERS.
The attention of the Trade is called to JOHN WARNER & SONS'
PATENT VIBRATING STANDARD PUMP,



which is recommended for the simplicity of its construction, and the ease with which it works.
By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.
Rear and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.
JOHN WARNER & SONS,
8, Crescent, Jewin-street, London.
Manufacturers and Patentees.

R. RICHARDS and CO.
PUMP MANUFACTURERS and ENGINEERS,

Pumps in Wrought and Cast Iron and Brass, Barrel and Lift machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c., adapted for any depth. Hydraulic Pumps for deep wells.
PUMPS ON HIRE.
Pumps of any size, single or double barrel, up to double 15-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

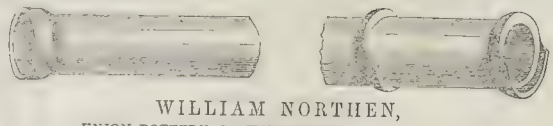
Iron Pails 38s. per doz. painted
Ditto .... 48s. per doz. galvanised

Upper Ground-street, Blackfriars Bridge, Surrey Side.

SAW-FRAMES and STEAM-ENGINES.—THREE PORTABLE STEAM-ENGINES ON SALE, one a superior 10-horse, on wheels, only been one used; an 8-horse ditto, and a 4-horse, by Gough, of Manchester, in excellent condition. Also, a Cornish boiler, 20 feet long, 6 feet diameter, and tube 3 feet diameter, with steam chest and first-class fittings, with Prideaux's Patent Smoke Consuming Fire-door, and a variety of other steam-engines and boilers, from one to 20-horse power. Builders' crabs, &c.—Apply to T. TAYLOR, 187, Southwark-bridge-road, Newington Causeway.

STEAM-ENGINES for SALE, at the EAST LONDON IRONWORKS, CAMBRIDGE-ROAD, Mile-end-road. The best and most economical high-pressure horizontal ENGINES always for SALE.—Messrs. J. MUSTO and Co. having a large sale for these particular Engines, endeavour to keep a stock either finished or in course of erection, which can be seen at their Works. Satisfactory reference can be given, and Engines of their make inspected, at work, in several parts of London. Workmanship and materials warranted.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.



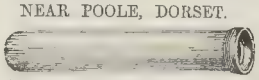
WILLIAM NORTHEN,
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his
GLAZED STONEWARE DRAIN-PIPES.
LISTS OF PRICES FORWARDED ON APPLICATION.

REDUCTION IN THE PRICE OF CLOSET-PANS

DOULTON AND WATTS,
LAMBETH POTTERY, HIGH-STREET, LAMBETH,
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to
5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description of Closet-pan.

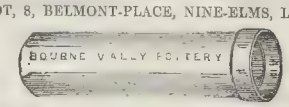
THE BRANKSEA POTTERY,
NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.
TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

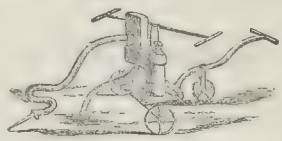
THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Closet-pans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.
N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.
The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, which is still carried on in the old masonry. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.
A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. R. PETTO, at the Works, Branksea Island, Poole, Dorset.

BOURNE VALLEY POTTERY, NEAR POOLE, DORSET.
DEPOT, 8, BELMONT-PLACE, NINE-ELMS, LONDON.



EXTENSIVE REDUCTION IN THE PRICES OF SALT-GLAZED STONEWARE DRAIN-PIPES, FLUE-PIPES, BENDS, JUNCTIONS, CLOSET-PANS, &c. &c.
The Proprietors of the above Works are prepared to supply the various articles used in drainage, &c. in any quantities. The pipes, &c. are made of the finest clay, the produce of the estate, by skilful and experienced workmen, assisted by new and patent machinery, and are so thoroughly vitrified by the intense heat to which they are subjected, as to prevent the possibility of the absorption of any liquid. They will bear comparison with goods made in any part of the kingdom.
Lists of prices, and any other information may be obtained, on application to the Manager, Mr. J. T. BOUNSALL, Bournemouth, near Poole; or of the Agent in London, Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth.

BENJAMIN FOWLER and CO.
FIT UP HEATING-APPARATUS OF ALL KINDS,
For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,
And for every purpose where artificial heat is required.
They also erect DRYING-ROOMS for ASYLUMS, UNIONS, DOMESTIC and MANUFACTURING PURPOSES, upon the most improved principles, and upon the largest or smallest scale.
STEAM-COOKING and BATH APPARATUS FIXED;
Also PUMPS, for DEEP or SHALLOW WELLS,
To be worked by hand, horse, or steam power;
AND ALL KINDS OF
ENGINEERS', MILLWRIGHTS', or SMITHS' WORK, for Public or Private Establishments.
The most ample references from a long experience in the above branches can be given.
BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

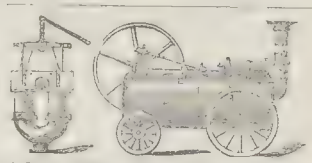


B. FOWLER, HOLMAN, and CO.
SOLE MANUFACTURERS OF HOLMAN'S PATENT DOUBLE-ACTION CESSPOOL, SEWER FLUSHING, LIQUID MANURE, AND UNIVERSAL FORCE PUMP.
The simplest, cheapest, and best thing of the kind before the public; admirably adapted for thick substances; valve ways three times usual size, made to suit liquors of all kinds, hot or cold, is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready for use, by the turn of a cock, for pumping, sawing, planing, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.
JAMES BURTON & SONS,
Engineers and Contractors, Belmont-place, Belmont-street, Southwark, London.

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or FOR SALE, several NEW and SECOND HAND STEAM ENGINES of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.



TO CONTRACTORS. — STEAM-DREDGER, STEAM-TUG, and HOPPER BARGES.—TO BE DISPOSED OF, by Private Contract, a powerful STEAM DREDGING MACHINE, in excellent order, length over all, 88 feet, beam 25 feet, fitted with a 20 horse power condensing steam-engine, and boiler with two furnaces, buckets, cradle, and every requisite; an iron lighter built, passenger class, LIGHTER length over all, 78 feet, 16 feet beam between paddles, fitted with 30-horse power condensing steam engine and boiler: Twelve two-room HOPPER BARGES, with chains and crabs, one three-room ditto, and one open Coal Barge.—For further particulars, apply to Messrs. FULLER and HORSEY, Billiter-street, City.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices, R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

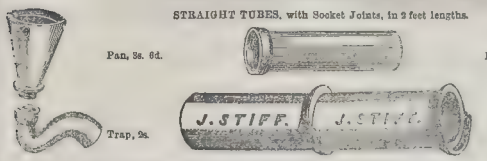
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz :—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. COLES, SHADBOLT, and CO.'S, St. James's and Thorshill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITHS, Ravensbourne Wharf, Greenwich.
Mr. LAVERS, Dowgate-wharf, Canal-road, Horton

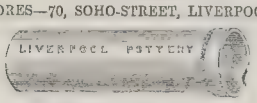
Drawings, with Prices, will be forwarded free, on application.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.



MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS.
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.

S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

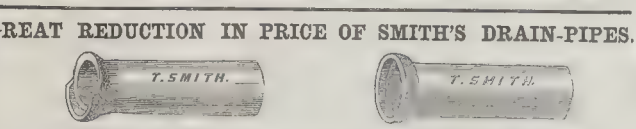
N.B. Prospectuses, with Prices and Terms, forwarded post free, on application. Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.



MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN PRICE OF SMITH'S DRAIN-PIPES.

THOMAS SMITH begs respectfully to call the attention of Contractors, Builders, &c. to the GREAT REDUCTION in his PRICES of GLAZED STONEWARE DRAIN-PIPES, &c.

T. S. is the ORIGINAL Manufacturer of the CONED or REBATED SOCKET PIPES, and the Medium-backed Closet-pans (with superior White Enamel Glaze inside), as made under the direction of JAMES PILBROW, Esq. Engineer to the Tottenham Local Board of Health, with which he is now supplying several large towns.

N.B. Half-socket Pipes same prices, whereby obviate all difficulty arising AT ANY TIME from the Inspection of Pipes in the event of the unusual circumstance of a Stoppage occurring, or a Junction being required to be inserted

DRAWINGS AND LISTS OF PRICES FORWARDED FREE ON APPLICATION.

Agent at Croydon—J. HALLETT, 2, TAMWORTH-ROAD.

MANUFACTORIES,—71 and 72, PRINCES-STREET, LAMBETH; and ALBION POTTERY, OLD FORD, BOW.

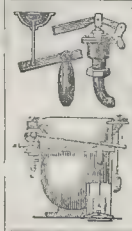
DOULTON'S GLAZED STONEWARE

PIPES, &c.

Can now be had of

Mr. W. WOOD, Bridge-wharf, Caledonian-road, King's-cross.
" BLASHFIELD, Praed-street, Paddington, and Millwall, Poplar.
" FRY, Ordnance-yard, St. John's wood-terrace, St. John's-wood.
Messrs. EASTWOOD and SONS, Belvidere-road, Lambeth, and Canal Bridge-wharf, Old Kent-road
" STRINGFELLOW and COOPER, Bangor wharf, King's-road, Camden New town.
" PODLY and Co. 29, Wharf-road, City-basin.
" LEWIS and HOLLOWAY, Commercial-wharf, Kingsland-basin
" J. and W. ADAMS, Tile-kilns, York-road, King's-cross.
" COLSON, Forest-hill.

AND AT LAMBETH POTTERY, LONDON



UNDERHAY'S PATENT

REGULATOR CLOSETS for constant or intermitting supply, dispense with Cisterns, Service Boxes, Valves, Levers, Cranks, Levers, &c. &c.; much time is saved in fixing, and a better flush of water obtained in use.

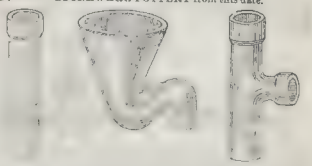
Pan, Valve, Self-acting, and Servants' Closets, on this principle, may be seen at the Works. They are very cheap, their efficiency is guaranteed. 5,000 of them have been sold, and no instance of failure has occurred.

These Stool-valves are cheaper, stronger, and more ornamental, than any other Many thousands are in use, and greatly approved of.

Manufactured by
CHARLES BOTTEN and SON,
Brass Founders, Crawford passage, Clerkenwell, London.

GREAT REDUCTION in the PRICE of

STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 70, Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to consumers and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above.—Feb. 11, 1854.

FOR HIRE, a SPACIOUS TENT, adapted

for the Laying of Foundation Stones for Public Buildings, &c.

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.

Apply to H. PIGGOTT, 112, Fore-street, City.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at					2½d. per foot.
4	"	"	"	"	3½d. "
6	"	"	"	"	5d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 5d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary glazed pipes. The prejudice against red-ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

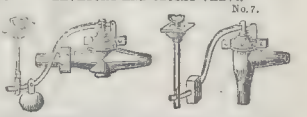
OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

LAMBERT'S SELF-CLOSING

LAVATORY AND CLOSET VALVE

No. 7.



Is adapted for high or low pressure, and for any kind of BASIN. Many hundreds are in use under a constant pressure of 150 to 200 feet; they are found to be exceedingly durable, and are cheaper than common cocks. Manufactured solely by the Patentees.

THOS. LAMBERT and SON,
Brass Founders and Engineers,
Corner of Sharp-street, New Cut, Lambeth.

N.B. No. 7, combined with a DOULTON'S PAN and TRAP, is the CHEAPEST COTTAGE CLOSET yet produced. Price complete, 13s. 6d. each.

WINDOW BLINDS.—TYLOR & PACE,

Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 8d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 8d.; gauze wire blinds, in mahogany frames, 3s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s.; transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade forwarded on application, post free.

SALES BY AUCTION.

Re C. J. MARE.—TO SMITHS, ENGINEERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, at the BELL YARD, COOPER'S-ROW, and WORKS, in Field Orchard place, Blackwall, on MONDAY, DECEMBER 8, at ELEVEN, by lots, the SMITHS' TOOLS and STOCK of BAR IRON, including 30 anvils, 15 tons smiths' tools in top and bottom, swages, mandrils, rod tools, dollies, tongs, bolt tools, &c.; 30 smiths' troughs, shaping plates and blocks, crab cranes, weighing machine, 50 tons rod, bar, and hoop iron, 50 tons scrap iron, 5 tons ring bolts, 3 tons bolt ends, 2 tons chain, trucks, and trollies, cramps, and other effects.—To be viewed on Saturday next, one to the sale, when catalogues may be had at the Works; of Chas. Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boxer, Solicitors, Old Jewry-chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Pullen and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—TO SHIP BUILDERS, BOILER MAKERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, at the OLD YARD, Orchard-place, Blackwall, on WEDNESDAY, DECEMBER 10, and following day, at ELEVEN, in lots the lease TOOLS, including landing slips and blocks, well and plate borers, dockers' bars, cramps, many tons of tools in hammers, sets, cold and red chisels, &c. 36 air vals 2 through 5, powerful circle drill, lifting jacks, blocks and falls, several large and small chain cables and anchors, a large assortment of steel rods, punches, dies, screwing tackle stocks, taps, and dies, chain and chain slings, a new iron saw bench, 30 circular saws, 2 new, frame, steel roll iron to bend, 5 portable forges, 5 tons rivets, 20 tons scrap iron, 50 tons plate, rod, and bar iron, and other effects.—To be viewed on Monday and Tuesday previous to the sale, when catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boxer, Solicitors, Old Jewry-chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Pullen and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

Re C. J. MARE.—Extensive Stores of Ironmongery, Copper, Brass and Lead

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the Assignees to SELL by AUCTION, on MONDAY, DECEMBER 15, and following days, at ELEVEN each day, in lots, at the WORKS, Orchard-place, Blackwall, the extensive stores of IRONMONGERY, Copper, Brass, and Lead, including four tons bolt and sheet copper, five tons brass and composition spikes and nails, one ton metal coags, copper-bolt rings, three tons cast and shear steel, twenty tons sheet lead and lead pipe, 200 bags wrought nails, fifty tons bolts and nuts, fifty cwt. glue, 1,500 gross iron screws, 400 gross iron screws, Low dozen pair brass butts, 1,000 gross cabin hooks, cup and jar hooks, fifty dozen mortise locks and latches, fifty dozen turn-buckles, 250 dozen brass sash cord, thirty dozen brass dead-locks, 200 dozen jar brass sash handles, twenty gross mortise knobs, knobs, and spindles, forty dozen straight and necked tower bolts, 4 to 6 inches; 100 dozen plain and inlaid cabin door plates, thirteen dozen sets of lock furniture, 500 dozen brass screws, brass and till locks, 100 dozen files, stores of rope, white lead and colours, ships' pumps, plumbers' tools, and numerous items. To be viewed on Friday and Saturday previous to the Sale, when catalogues may be had at the Works; of Charles Lee, Esq. Official Assignee, Aldermanbury; of Messrs. Lawrance, Plews, and Boxer, Solicitors, Old Jewry-chambers; of Messrs. Newson, Evans, and Newson, Solicitors, Wardrobe-place, Doctors'-commons; of Messrs. Pullen and Son, 80, Fore-street, Cripplegate; and of Messrs. Fuller and Horsey, Billiter-street, City.

TO BUILDERS, CONTRACTORS, AND OTHERS.

MESSRS. FULLER and HORSEY will SELL by AUCTION, on TUESDAY, DECEMBER 9, 1856, at TWELVE o'clock, on the PREMISES, Victoria-street (Westminster), in lots, without reserve, SEVEN SPURGIN'S PATENT HOISTING-MACHINES, and pinching press, elm cobble waggon, an iron gas-bracket lamp, tarmboli cart, stone truck, 1,000 feet of plate and sheet glass sashes, 20,000 best brick, quantity of stone and marble slips, York stone landings and pavings, scaffold poles, and various useful materials To be viewed the morning of sale, when catalogues may be had on the Premises; and of Messrs. Fuller and Horsey, Billiter-street, City.

DOVER.—Notice of Auction Sale of the Cargo salved from the American ship "Celia" (wrecked on her voyage from Newcastle to New York), which, under the instructions received, will, on THURSDAY, DECEMBER 11th, 1856, be submitted for PUBLIC COMPETITION, by

MR. JAMES B. TERSON, at the WAREHOUSE, situate near the Dover Sailors' Home, Middle-row, Dover, consisting of 193 IRON TYRE BARS for locomotive engines, plain and flanged, thirty-two new chain cables, from ⅝-inch to 1¾-inch, of superior manufacture, thirty-five cases and boxes of best sheet (various), plain and figured, glass, 100 kegs Venetian red, &c.— May be viewed on the morning of the day of sale. Sale to commence at ONE o'clock precisely. The whole will be particularised in catalogues which will be ready for delivery one day previous to the day of sale, at the Offices of Messrs. Edwards Hodges and Co. Shipping Agents, Dover; Capt. Bearse, Harp Hotel, Strond street, Dover; or at the Office of Mr. J. B. Terson, Auctioneer, No. 6 Castle-street, Dover.

TO CONTRACTORS, TIMBER-MERCHANTS, BUILDERS, CARPENTERS, DEALERS, AND OTHERS.

MR. MARSH will SELL by AUCTION, on the PREMISES, Acorn Timber Wharf, Canal-bridge, Old Kent-road, on THURSDAY, DECEMBER 11, at TWELVE o'clock, 1,000 TIMBER DEALS, battens, and boards, 1 small board, English oak and elm trees, prepared floor-boards, Oak plank and scantling, seventy new cement casks, twenty new wheelbarrows, sixty fir and mixed white wood planks for cabinet work, ash, and beech planks, elm boards, oak sash sills, joist and quartering, posts, pales, and rails, 20,000 stock bricks, light cart, a steam engine and shore pumps, and various surplus materials. Approved bills will be taken from purchasers above 50*l.* at three months' date.—Catalogues may be had at the Place of Sale; Greyhound Inn, Croydon; Railway Hotel, Guildford; Swan Inn, Bromley; Sun Hotel, Chatham; Crown Inn, Rochester; White Hart Hotel, Romford; Royal Star Hotel, Maidstone; Rose and Crown, Tunbridge; Red Lion Hotel, Hertford; Wheatsheaf, St. Albans; White Horse, Uxbridge; and of Mr. Marsh, 2, Charlotte-row, Mansion-house.

STANDING TIMBER.—Astwood and North Crawley, Bucks.

MESSRS. DAVIS and VIGERS will SELL by AUCTION, at the SWAN INN, Astwood, Bucks, on TUESDAY, DECEMBER 9, at ELEVEN, 1,500 Ash, Elm, and other TREES, three walnuts, fir, ash, and other poles, 120 stores of wood, in cudgels and faggots and heavy wood, on the farms midway between the Wolverton and Bedford stations; many of the ash and elm are of rare size, and of very superior quality.—Catalogues may be had at the Swan, Astwood; the Castle, North Crawley; the Swan, Newport Pagnel; the Red Lion, Bedford; of Mr. Davis, Solicitor, Castle-street; and of the Auctioneers, 3, Frederick-place Old Jewry, London

Leasehold Investment, situate at Camden-town, Kentish-town, and Barrow-hill.

MR. W. A. OAKLEY will SELL by AUCTION, at the MART, on FRIDAY, DECEMBER 12 at TWELVE, the following LEASEHOLD PROPERTIES, in lots, viz.:—Nos. 2 and 3, Upper James-street, Camden-town, held for 99 years from 1852, at a ground-rent of 14*l.* 14*s.*; No. 6, Torriano Villas, Kentish-town, held for 95 years from 1838, at a ground-rent of 6*l.*; also No. 11, Pagoda-terrace, Bermondsey New-road, held for 99 years from 1789, at a ground-rent of 8 guineas.—May be viewed; and particulars had at the Mart; at the Auction Rooms, 54, Chancery-lane; at the Auctioneer's Offices, 11, Poultry; and of Mr. W. A. Oakley, Auctioneer and Land Agent, 5, Regent-quadrant

SALES BY AUCTION.

TO TIMBER MERCHANTS, CABINET-MAKERS, BUILDERS AND OTHERS.

FOR SALE by AUCTION, without reserve, on the PREMISES, New Inn, Broadway, Curtain road, Shoreditch, on MONDAY, the 8th of DECEMBER, 1856, at TEN for ELEVEN o'clock precisely, by order of the Proprietor (who is relinquishing the Premises and removing entirely to 131, Curtain-road), the fourth portion of the STOCK-IN-TRADE of Mr J. F. Mitchell, Mahogany and Timber Merchant. An unusual assortment of FINE VENEER WOOD, consisting of 41 flitches of city St. Domingo, Cuba, and Honduras mahogany; 54 logs of Cuba mahogany; 4,000 feet of dry Spanish Cuba mahogany boards; 5,000 feet of dry inch Honduras mahogany boards; also quantities of rosewood planks and boards; cedar planks and boards, walnut planks, dry wainscot planks, dry pine planks; deals and battens cut and other goods. To be viewed two days previous to and on the morning of sale. Catalogues may be had on the Premises, and of Thos Edwards and Son, Mahogany Brokers and Auctioneers, 17 Pond-hall, Old Broad-street, City.

N.B. The Premises TO BE LET for any other trade.

TO CABINET AND CHAIR-MAKERS, COACH BUILDERS, AND OTHERS 40,000 feet of Mahogany and Dry Wood, in planks, boards, and veneers, the Stock-in-Trade of Mr. Larke, who is relinquishing the trade.

MR. J. CLEMMANS will SELL by AUCTION, on the PREMISES, No. 70, Rose street, Friar's Mount, Church-street, Bethnal-green, on TUESDAY, DECEMBER 9th, 1856, at ELEVEN, comprising SPANISH and HONDURAS, in logs, flitches, planks, and boards, fine rosey mottle and curl veneers, prime wide birch; also a quantity of cut pine plank and deals, and other useful stuff. May be viewed on Monday next, and morning of sale, of catalogues had on the Premises; and at the Offices of the Auctioneer, Holywell-row, Finsbury.

EARLY SALE.—To TIMBER-MERCHANTS, BUILDERS, CARPENTERS, and OTHERS.

MR. LEREW will SELL by AUCTION, on the PREMISES, 42, Union-street, Somerstown, on MONDAY, DECEMBER 8th, at FIFTEEN for TWELVE, on account of the number of lots, 2,000 YELLOW, WHITE, PINE, and SPRUCE PLANKS, DEALS, and BATTENS, 12,000 feet of sound flag, 50 squares of prepared yellow and white flooring, moulding, dry cut stuff, 5,000 feet of wide pine board, 50 feet of wide fourteen other doors, sashes and frames, greenhouse lights, ranges, stoves, ironmongery, scaffold-poles, boards, cords, ladders, steps, hand-sawing machine, brushes, spring van, cart-horse, &c.—May be viewed on Saturday prior to the sale, and catalogues had, on the Premises; and of the Auctioneer, Cardington-street, Hampstead-road.

The Remainders of valuable Architectural and other Works, Copyrights &c.

MR. HODGSON will SELL by AUCTION, at his NEW ROOMS, the corner of Fleet street and Chancery-lane, on WEDNESDAY, DECEMBER 10, and following days at TWELVE each day, the remaining COPIES, in quires and bound, of the following valuable BOOKS, viz.:—108 Wicke's Spires and Towers of England, 2 vols folio, cloth cases 6*l.* 6*s.*; 33 ditto, India proofs (sells 7*l.* 7*s.*); 31 ditto, large paper, half morocco (sells 8*l.* 8*s.*), being the entire remainder; the Professional Papers of the Royal Engineers, plates, 1 vols. 4to. the entire stock, with the copper plates.; Transactions of the Institution of Civil Engineers, 3 vols. 4to, the entire stock, with the copper plates; Brayley and Britton's History of Surrey, 5 vols. the remaining copies, on large paper, a few sets India proofs; Digby Wyatt's Ornamental Metal-work, 80 plates (sells 8*l.* 8*s.*), the remaining copies, 18 Clark and Stephenson's Britannia and Conway Tubular Bridges, 2 vols. 8vo. and folio Atlas of Plates; 25 Mudford's Battle of Waterloo, coloured plates; 120 Jones's Battle of Waterloo, 42 plates, 8vo.; the Copper Plates and odd Stock of ditto; 300 Nead's Lectures on Chemistry, cuts, 8vo.; 1,600 Land We Live in, illustrations, 2 vols. imp. 8vo.; 150 Gallery of Nature, super-royal 8vo.; numerous copies of Foreign Works on Architecture and Engineering; the Copyrights and Stereotype Plates of Porter's Geography of England and Wales, Brayley's History of France, Busk's Spain and Portugal, M'Culloch's Principles of Commerce, Lives of Eminent Men, Warr's Dynamics, Canterbury Tales, by Mrs. Bray, 2 vols.; Miss Cabin, and other popular works. Specimens of the books may be seen, and catalogues forwarded on receipt of two stamps.

Sale of Building Materials, oak and Fir Timber, &c.—Reading, Berks. To Builders, Farmers, Graziers and Others.

MR. F. HALL has been favoured with instructions to SELL by AUCTION, on MONDAY, the 8th of DECEMBER, at ELEVEN for TWELVE, opposite the PIG-MARKET, Caversham-road, Reading, a quantity of sound OAK and FIR TIMBER, of excellent quality, comprising 20,000 feet of clean seasoned flooring boards, oak planks, posts and plates, and large timbers, feather-edge and other boards, several pairs of cottage casements, glazed sashes, room and other doors, fencing and gates, pair of capital oak yard-gates, counter slates, stone paving and bases, a quantity of useful iron, several stocks of firewood, and other effects.—May be viewed, and catalogues had, on the Premises, the Saturday preceding and morning of sale; and of Mr. F. Hall, Auctioneer, &c. Chester-street, Kennington, Surrey.

Building Materials, Timber, Fittings, &c.

MR. F. HALL will SELL by AUCTION, on THURSDAY, the 11th of DECEMBER, at TWELVE for ONE, on the PREMISES, Pancras-road, near King's-cross, a large quantity of excellent BUILDING MATERIALS, removed from Jones Lloyd's Bankhouse, Lothbury, comprising excellent oak and fir timber, joists, rafters, and plates, clean flooring and lining boards, handsome Venetian plate glass sashes and frames, forty room and other doors, modern sashes and frames, mahogany and plate-glass doors, glazed partitions, dado-framed partitions and doors, 100 9 and 12-inch drain-pipes and junctions, large book-cases and fittings, counter, warehouse fittings, sashes, lights, sashes, iron pipes, stoves, firewood, &c. &c.—May be viewed the day preceding and morning of Sale; and catalogues had on the Premises; and of Mr. F. Hall, Builders' Auctioneer, Chester-street, Kennington.

TUSCANY-WHARF.—Extensive Waterside Premises, with Steam Power, &c.

MESSRS. EVERSFIELD and HORNE respectfully announce that these PREMISES were NOT DISPOSED OF at the late auction, and may be treated for either to RENT or PURCHASE, on the most reasonable terms. 40, Parliament-street, Dec. ember 1, 1856.

TOWER.—SALE of STORES.—By order of the Secretary of State for War.—TO BE SOLD, by PUBLIC AUCTION, in the TOWER, on WEDNESDAY, DECEMBER 10, 1856, at HALF-PAST TEN o'clock in the Forenoon precisely, the following Stores, viz.:—At the Victoria Dock, Limehouse, viz.—Axe-trees, Waterproof Sheets, &c. Hospital Clothing, Blankets and Rugs, Sheets and Palliasses, Fur Coats, Caps, &c.; Boots, Sealskin, &c.; Pea Coats, Socks and Stockings, Flannel Shirts, Gloves and Flannel, Bedsteads, and miscellaneous articles. May be viewed at the Victoria Docks, from TEN o'clock in the forenoon, preceding the sale, and catalogues had at the Warrant Department, Pall-mall; the Tower; Victoria Docks; and Royal Arsenal, Woolwich, on payment of Sixpence each, which will be allowed to purchasers. No person will be admitted to view the lots, or into the Sale-room, without a catalogue.

TO ENGINEERS, ARCHITECTS, and OTHERS REQUIRING a good HOUSE and extensive OFFICES. The OFFICES of the GENERAL MUTUAL and GENERAL LIFE ASSURANCE SOCIETY (now about to REMOVE to ST. JAMES'S-SQUARE), the present HOUSE and OFFICES, with Office Fittings and Pictures, are now TO BE LET, the LEASE, FIXTURES, and OFFICE FITTINGS, to be SOLD, on very moderate terms.—Inquire of Mr. FINNIS, House Agent, 65, Great Russell street; or of the Secretary, on the Premises, 99, Great Russell street, Bloomsbury.

FREEHOLD LAND TO BE LET, on Building Lease for ninety nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety nine years, with power of exchange in most eligible situations. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

EXTENSIVE PLOT of vacant GROUND, in a most important first rate local ty, abutting Regent's-circus, with entrance from Oxford-st. the adjacent street, suitable for a building operation of any character or magnitude. It is screened from its extent and high class situation (nearly a quarter of an acre), to be eminently adapted for an arcade or any other similar public establishment carried out under the Limited Liability Act.—For particulars, apply to Messrs GRAHAM and JACKSON, 37 and 38, Oxford street. May be treated for as a whole or separately.

BUILDING LAND TO BE LET, close to St. Jude's Church, old Bethnal-green-road, for the erection of fourth-rate houses, which are in great request, and will let and sell as soon as finished. For further particulars, apply to Mr. CLARKSON, Surveyor, 48, Penton-street, Pentonville.

BUILDING LAND.—WANTED to PURCHASE or RENT, from ONE to TEN ACRES, in any of the following localities:—Islington, Highbury, Holloway, Kentish-town, Camden-town, St. Pancras, Dalston, Hampstead, or within a short distance of the City.—Apply, with full particulars, to Mr. GEO. CLARKSON, 48, Penton-street, Pentonville.

TO BUILDERS and OTHERS.—Greenwich, near the Railway Station.—Very excellent Premises TO BE LET, consisting of a store for timber, parlour, and kitchen, on the ground floor, over which is a workshop, perfectly lighted, capable of accommodating several carpenters; also mail-room and counting-house, with fittings, &c. at the low rental of 30*l.* per annum. The above offers peculiar advantages for a young man commencing business, as it has been established many years, and the late occupier is recently deceased. For further particulars apply by letter to A Z Post office, 32, Lombard-street

TO BUILDERS.—A lucrative and safe speculation. GROUND TO BE LET, in the best part of Paddington.—Apply, by letter only, to Y. M. Office of "The Builder."

TO BE LET, in the neighbourhood of Finsbury-square, SMALL MANUFACTURING PREMISES, consisting of three floors and small yard; water laid on, and capital light. Rent, 24*l.* per annum (no taxes). A front-roomed house and dining room to be had with it, if required.—Inquire at No. 2, Princes-square, Wilson-street.

GUILDHALL, 1st December, 1856.—The COMMITTEE for LETTING the CITY'S LANDS will meet at Guildhall on WEDNESDAY, the 17th inst. at ONE o'clock precisely, to receive PROPOSALS for LEASES of a piece of LAND, containing 1,000 feet of South-street; a house, No. 8, on the west side of Milton-street; a house, No. 2, St. Agnes-terrace, Tabernacle-walk; and a house, No. 13, on the north side of Finsbury-street, Finsbury; a house, No. 3, in the Circus, Minories; and a house, No. 3, Rose and Crown-court, near Broad-street-buildings.—Plans of the property may be seen, and forms of Tender obtained, upon application at the Architect's Office, Guildhall. FERDINAND BRAND, Comptroller.

WATERSIDE PREMISES at LIME-HOUSE.—TO BE LET on LEASE, THREE spacious WAREHOUSES, abutting on the River Lee Cut, each measuring 100 feet superficial in front and extending back at 2 equal depths feet. Apply to Mr. WILLIAM ELLISON, Architect, No. 19, Stansby-road, Limehouse.

EXTENSIVE WATER-SIDE PREMISES, TO BE SOLD, or LET, partly freehold and leasehold, immediately adjoining the South Western Railway Goods Station, known as Brunswick Wharf, Vauxhall, many years successfully carried on in the brick, lime, stone, slate, &c. &c. trade, but available for other purposes. The present proprietor retiring from business, would dispose of the Premises either with or without the stock-in-trade. Apply on the Premises.

IMPORTANT TO BUILDERS AND CAPITALISTS.

UNITED TRADESMEN'S FREEHOLD LAND SOCIETY.—The beautiful ESTATE at HORNSEY, purchased by the Trustees, consisting of about forty acres, and within three minutes' walk of the station, will next summer be accessible from the City by means of the Metropolitan Railway. Persons desirous of possessing land in this charming and picturesque neighbourhood, can have immediate possession of Plots, at 5*l.* each, subscription, 5*s.* per month; at the office, the Savings Bank, Goldsmith's-place, Hackney-road, on the third Wednesday in each month, from seven until Nine o'clock. Capitalists and others desirous of possessing land at once can do so by application to Mr. J. LAWLESS, 1, Fleurlow-place, Hackney-road; or to Mr. DANIELL, Hornsey, and Estate Office, 99, Keppel-street, Russell-square. The ground on the first portion of the estate being the only part on which a tavern can be built, is delightfully situated on the high road leading to Tottenham and less than two minutes' walk from the Hornsey Station, to be disposed of, with all its privileges, for the sum of 300*l.* Apply as above.

TO BUILDERS and OTHERS.—Near VICTORIA-PARK.—TO BE SOLD, several well-built SIX-ROOMED CARCASES, some ready for plastering. A portion of the purchase-money can remain on mortgage if required. For further particulars, apply to Mr. CLARKSON, Surveyor, 48, Penton-street, Pentonville.

TO BUILDERS and OTHERS.—In consequence of a death, valuable PREMISES near Oxford-street, are to LET, upon a repairing lease, at a low rent, for nearly forty years to come. They consist of a spacious dwelling-house, and in the rear, with separate entrance, a tier of workshops. The whole are in good repair, and will require but little, if any, outlay. Rent, 70*l.* per annum.—Apply at the Estate Office, 38, Spital-square, Bishopsgate

TO BUILDERS and OTHERS.

TO BE SOLD, or EXCHANGED for ONE or TWO CARCASES, the LEASE of excellent BUSINESS PREMISES, situate in the Old Bailey, Holborn, and being situated [illegible] Giles-in-the-Fields; and published by the Proprietor, [illegible] at the Office of "The Builder," 1, York-street, Covent-garden, both in the Parish of St. Paul, Covent-garden, both in the County of Middlesex.—Saturday, December 6, 1856.

London: Printed by Charles Wyman, at the Printing Office of Cox (Bros.) & Wyman, 74 & 75, Great Queen-street, Lincoln's-inn-fields; and published by the Proprietor, [illegible] at the Office of "The Builder," 1, York-street, Covent-garden, both in the Parish of St. Paul, Covent-garden, both in the County of Middlesex.—Saturday, December 6, 1856.

The Builder.

AN ILLUSTRATED WEEKLY JOURNAL FOR Architect, Engineer, Operative & Artist.

VOL. XIV.—No. 723. DECEMBER 13, 1856. PRICE FOURPENCE. Stamped 5d.

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ARCHITECTURAL EXHIBITION and COLLECTION of NEW BUILDING INVENTIONS, PATENT MATERIALS, &c. Suffolk-street, Pall-mall East, will OPEN on WEDNESDAY next, DECEMBER 17 — First Lecture on Tuesday, JANUARY 6th, "On the Architectural Marvels of Rome," by Professor DONALDSON. Admission, One Shilling, or at all times and to the Lectures at Half-a-crown.
JAMES FERGUSSON, F.R.A.S. } Hon.
JAMES EDMESTON, Jun. } Secs.

CLASSES for DRAWING of ALL KINDS are now formed at the NORMAL SCHOOL of ART, Cromwell-road, South Kensington.—Terms, &c. may be learnt on application by letter, post-paid, addressed to the Secretary.
NORMAN MACLEOD, Registrar.

COMPETITIONS.

NEVILL MEMORIAL.—The Committee of the Nevill Memorial offer a Premium of Ten Pounds, for the best designs and specifications for a BUILDING to be erected in the town of Llanelly, in commemoration of the late RICHARD JANION NEVILL, Esq. All designs and specifications to be delivered to the Secretaries on or before the 31st JANUARY, 1857. For particulars apply to

FRED. L. BROWN,
R. T. HOWELL, } Secretaries.
R. B. JONES,

Llanelly, December 5, 1856.

TO ARCHITECTS and OTHERS.—PLANS WANTED.—The Burial Board for the Parish of Sunderland, near the Sea, in the County of Durham, require PLANS and SPECIFICATIONS for ENCLOSING, LAYING-OUT, and EMBELLISHING TEN ACRES of LAND, for the purpose of a BURIAL-GROUND, with Two Chapels, and Cottages for a Superintendent and Sexton. The site of the proposed burial-ground is situate in the Township of Ryhope, in the township of Ryhope; the portion to be enclosed is staked out, and a plan of the same may be seen at the Offices of the Burial Board. The land to be enclosed on the north, west, and south sides by a stone fence or stone wall, 6 feet high and 12 inch coping, and on the east side or front, adjoining the turnpike-road between Sunderland and Ryhope, by a dwarf wall, with appropriate railing and suitable entrance gates. Each chapel must accommodate 400 persons, and not exceed 600 including the sittings. The two cottages, with store-room, must not exceed £600. The Board will give 20*l.* for the plan and specification approved by them; such plan and specification to be the property of the Board, who do not bind themselves to engage the architect whose plan may be selected.—Plans, with the specifications, indorsed "Plans for Burying-ground," to be delivered at the Office of the Board, No. 2, Church-street, Sunderland, on or before the 2nd day of FEBRUARY next.—By order of the Board,
THOS. F. HEDLEY, Clerk.
3, Church-street, Sunderland, December 3, 1856.

TO ARCHITECTS and OTHERS. — BANBURY CORN EXCHANGE COMPANY (limited).—The Board of Directors are prepared to receive DRAWINGS for the proposed building, which will be erected on the site of the Premises on the Corn hill, Banbury, in the occupation of Messrs Thomas Taylor and Joseph Screven; the whole of the drawings to be in one uniform scale of 8 feet to an inch. The drawings are to comprise a plan of the ground-floor, elevations, longitudinal and transverse sections. The plans and sections to have the size and length of the room figured thereon; the sections and elevations to be tinted in Indian ink only. The estimated outlay not to exceed the sum of 3,000*l.*, and the author of the design approved by the Directors will be employed to superintend the execution of the work at the usual commission of 5 per cent. The author of the next best design in the opinion of the Directors, will receive the sum of 5*l.*; and the author of the design that shall be considered by the Directors next in point of merit shall receive the sum of 1*l.* The designs to be addressed to "The Secretary of the Banbury Corn Exchange Company, Limited, Banbury," and to be sent in on or before the 31st day of DECEMBER instant. A second plan of the site may be seen at the Office of the Secretary of the Company.—By order of the Directors,
THOS. C. JUDGE, Secretary.

Banbury, 9th December, 1856.

COMPETITIONS.

TO ARCHITECTS. — PROPOSED NEW PAUPER LUNATIC ASYLUM for BRISTOL.—The Committee appointed by the Town Council of the City of Bristol hereby offer the following PREMIUMS for the THREE best PLANS for the proposed NEW BUILDING, viz.:—

For the best plan, 100*l.*
For the second best plan, 50*l.*
For the third best plan, 25*l.*

Such plans to be accompanied with specifications and estimates of expense. In the preparation of the plans regard must be had to the following particulars: The building to provide accommodation with requisite offices, and accommodation for resident officers. The amount to be expended on the building to be between 15,000*l.* and not exceeding 20,000*l.* The building must be suited to the intended site to be used as much as possible. The elevation to be of a simple but cheerful character. The "Suggestions and Instructions" for Building Lunatic Asylums, published by the Commissioners in Lunacy, to be, as far as practicable, complied with. Each plan, specification, and estimate, to be signed with a motto, and with a sealed envelope endorsed with such motto, and containing inside the name of the architect competing, to be lodged at the Town Clerk's Office, Council-house, Bristol, on or before the 14th FEBRUARY next. A lithographed plan of the intended site, and copies of the "Suggestions," may be obtained upon application to the Town Clerk's Office.—The Committee do not bind themselves to accept the best or any plan for the said building.

BRICE and BURGESS, City Solicitors.
Council-house, Bristol, December 5, 1856.

CONTRACTS.

TO BUILDERS.

THE Guardians of the Tonbridge Union are desirous of receiving TENDERS for the Building of a HOSPITAL and FEVER WARDS, at the Work-house, near Pembury, according to plans and specifications, to be seen at the Office of the Clerk, 4, Belvedere-buildings, Tunbridge Wells. Sealed Tenders to be sent to the Clerk, marked "Tender for Hospital," on or before THURSDAY, the 8th of JANUARY, 1857. The Guardians reserve to themselves the right of rejecting the lowest or any other Tender.—By order of the Board,
W. H. WALL, Clerk

Tunbridge Wells, Nov. 29, 1856.

TUNSTALL LOCAL BOARD of HEALTH.—NEW COVERED MARKET.—To BUILDERS, IRONFOUNDERS, and OTHERS.—The Tunstall Local Board of Health are prepared to receive TENDERS for the ERECTION of the several WORKS required in the ERECTION of a COVERED MARKET, according to the designs and specifications of G. T. ROBINSON, Esq. Architect, Liverpool. The drawings and specifications may be seen from WEDNESDAY, the 10th instant, to WEDNESDAY, the 24th day of DECEMBER, 1856, at the Architect's Office, 24, Union-street, Liverpool, where all further particulars may be obtained. After that date they will lie for inspection at the Offices of the Local Board, Amicable-street, Tunstall. Sealed Tenders, properly endorsed, to be sent to me on or before the 13th JANUARY, 1857. The lowest Tender will not necessarily be accepted.—By order,
Tunstall, Nov. 10, 1856. JOSEPH LOWNDES, Clerk.

HACKNEY DISTRICT BOARD of WORKS.—Notice is hereby given, that the Board of Works for this District will, at their meeting to be held at the Town-hall, in Church-street, Hackney, on THURSDAY, the 18th day of DECEMBER, 1856, at TEN o'clock in the forenoon, CONTRACT for the SUPPLY and LAYING DOWN of 20,325 feet super. of YORK PAVING.

1,650 Feet run of Granite Curbing.
265 Yards super. of Granite Paving.
8,803 Feet super. of York Paving Relay.
3,000 Feet run of Granite Curbing Relay.
200 Yards super of Granite Paving Relay.

More or less, for paving and repairing the footpath commencing at the parish boundary at Cambridge-heath, adjoining the east side of Mare-street, Hackney, to opposite Ward's corner. Also for paving and repairing the footpath commencing at the parish boundary at Acton-street, along the south side of Hunstanton road, Newington-road, and High street, Newington, to opposite Abbey-park Cemetery. The Tenders, addressed to the Clerk must be sealed, and marked "Tender for Paving and Curbing." Forms of Tenders and further particulars may be obtained at the office of Mr. JAMES GAVERONE, the Surveyor, at the Town-hall, Church-street, Hackney, between the hours of TEN and TWELVE, a.m.
By order of the Board,
RICHARD ELLIS, Clerk.

MIDDLE LEVEL DRAINAGE.—To CONTRACTORS for PUBLIC WORKS.—Notice is hereby Given, that the Middle Level Drainage Commissioners are desirous of receiving TENDERS for the WIDENING and DEEPENING of the NEW CUT through Ramsland, extending from the 16-feet river to the River Ouse, being about eleven miles in length. Plans, sections, and a specification of the work may be seen at the Office of Mr. R. LUNN, the Superintendent of the Middle Level Works, March, Cambridgeshire, on and after MONDAY, the 8th day of DECEMBER inst.; and any further information may be obtained at the Offices of Messrs WALKER, BURGESS, and COOPER, 21, Great George-street, Westminster. The Tenders must be delivered at my office, 14, Parliament-street, Westminster, by TEN o'clock in the forenoon of WEDNESDAY, the 14th day of JANUARY next. The Commissioners do not pledge themselves to accept the lowest or any of the Tenders.
GEO. GAME DAY,
Clerk to the Middle Level Drainage Commissioners
Dated this 3rd day of December, 1856.

TO BUILDERS.—The Committee of the Congregational Church at Westonsuper Mare, Somersetshire are prepared to receive TENDERS for the ERECTION of a NEW CHURCH and SCHOOLS, at Weston-super-Mare aforesaid. Tenders will be received on or before noon on MONDAY, the 5th of JANUARY, 1857.

PRITCHETT and SONS, Architects.
Darlington, December 12, 1856.

CONTRACTS.

TO BUILDERS.—Persons desirous of Tendering for the Performance of the undermentioned WORKS are requested to CALL at PLAN ROOMS, for INFANTS' SCHOOLS, and TWO DWELLINGS, at Chilmark, in the county of Monmouth, for the Rhymney Iron Company, may see the plans and specifications at the Company's Office, Pulgwenlly, Newport, by applying to Mr. ROBERT DUNCAN, the Company's Wharf Agent.

1 Digger, Bricklayer, and Stonemason.
2 Carpenters, Joiners, Ironmonger, Smith, and Founder.
3 Slater and Plasterer.
4 Plumber, Painter, and Glazier.

A bill of quantities may be had gratis, on application by post to me. Tenders to be sent in to me on or before the 1st day of JANUARY next.
JAMES F. BENEST, Architect.
St. Andrew's Hall Plain, Norwich.

FURNESS RAILWAY.—To CONTRACTORS.—The Directors are prepared to receive TENDERS for the RE-CONSTRUCTION in MASONRY, of a portion of BARROW PIER. Specification and drawings may be seen at the Company's Office, Barrow, where forms of Tender may be had. Applications for Tenders addressed to the Secretary, are to be delivered at Barrow, on or before the 20th inst. JANUARY next.
JAMES SANDERSON, Secretary, &c.
Furness Railway Office, Barrow, Ulverston, Dec. 4, 1856.

TO BUILDERS.—BOROUGH of WALSALL.—The Town Council of the Borough of Walsall, acting as the Rural Board, are prepared to receive TENDERS for the ERECTION of TWO CHAPELS, ENTRANCE LODGE, and ENTRANCE to the new Cemetery for the said Borough, according to Parliamentary Specifications which may be seen at the Town Clerk's Office, Bridge-street, Walsall, on and after MONDAY, the 15th of DECEMBER, instant. The Board do not pledge themselves to accept the lowest or any Tender and the Erection will be required to be made under Bond with one or more sufficient sureties to the satisfaction of the Board, for the due performance of the Contract. Sealed Tenders, endorsed "Tender for Cemetery Chapels," to be sent to the Town Clerk's Office on or before TUESDAY, the 30th of JANUARY next.
SAMUEL WILKIN ON, Jun. Town Clerk.
Walsall, December 9th, 1856.

TO SEWER CONTRACTORS.—The Vestry of the Parish of Bethnal-green will meet at the Town-hall, Church-row, Bethnal-green, on THURSDAY, the 18th DECEMBER instant, at ELEVEN o'clock in the forenoon precisely, to receive TENDERS and contract for the CONSTRUCTION of certain BRICK SEWERS, and LAYING DOWN 3-inch, 4-inch, 6-inch, 9-inch, and 12-inch GLAZED STONEWARE PIPES, agreeably to a specification which may be seen at the Office of the Surveyor, Bethnal-green Road, where all further information may be obtained daily, between the hours of TEN and THREE. Tenders, addressed to the Clerks of the Vestry, must be delivered at their Town-hall Office, on or before WEDNESDAY, the 17th DECEMBER. The Vestry do not bind themselves to accept the lowest or any Tender.—By order,
BRUTTON and YOSS, Vestry Clerks.
Town-hall, Bethnal-green, December 4th, 1856.

TO JOBBING ENGINEERS. — The Governors of Bethnal-green, London-road, on MONDAY, 15th of DECEMBER next at HALF-PAST TWO o'clock in the afternoon precisely, meet in their BOARD-ROOM, to receive PERSONAL TENDERS from such Individuals as are perfectly competent to undertake the MANAGEMENT of the PAIRS of STEAM ENGINES, together with the BOILERS, GAS-FITTINGS, and PLUMBING necessary to be found at the Workhouse in Bethnal-Green Road, near Victoria-park Square, of 20 horses power, with Locomotive and House Engines. A specification would be prepared, duly further instructions, and a form of Tender upon application to the Clerk at the Workhouse.
By order,
R. BURT BRUTTON, Clerk to the Board.

TO ROAD CONTRACTORS.—TENDERS are required for the MAKING of a PORTION of CHURCH-ROAD, Haverstock hill. Specifications and conditions of contract may be seen at the Office of Mr. JOHN SHAW, Architect, Christ's Hospital, any day before TUESDAY, the 23rd DECEMBER, between NINE and FIVE o'clock.

NORWICH LOCAL BOARD of HEALTH.

TO PAVIORS and CONTRACTORS. The Paving Committee of the Norwich Local Board of Health are ready to receive TENDERS for Three Years' Performance of the undermentioned STREETS:—

No. 1. For Repairs and Watering with Broken Pavements, and for Paving Work in respect of such Repairs, under 1*s.*
2 For Repairs and Watering certain Macadamized Roads.
3 For Repairs and Watering certain other Macadamized Roads.
4 For Watering certain Roads in the County of the City of Norwich.
5 For Watering certain other Roads in the said County.
6 For Watering certain other Roads in the said County.
7 For Watering certain other Roads in the said County.
8 For Watering certain other Roads in the said County.
9 For Watering certain other Roads in the said County.

Specifications and conditions of the several Contracts may be had at the Surveyor's Office, 24, Castle Meadow, on payment of half a crown, where any further information may be obtained. Separate Tenders for Nos. 1 to 9 of the above Contracts, addressed to the Clerk of the Local Board of Health, and endorsed "Tender for Contract, No. ...," to be sent in on or before the 31st DECEMBER instant. The Committee do not bind themselves to accept the lowest or any Tender.

H. B. MILLER, Clerk.
Norwich, 11th December, 1856.

[For remainder of Contracts see next page.

CONTRACTS.

TO BUILDERS.—TENDERS are required for BUILDING a RECTORY-HOUSE and OFFICES at South Warnborough, near Basingstoke, Hants. The smaller section of plans will be deposited with Mr. HUNT, Schoolmaster at South Warnborough, where they may be seen by persons wishing to Tender by applying to Messrs. HUDSON and HUDSON, 18th DECEMBER. The old rectory-house is to be pulled down and part of the old materials used in building the new house. Tenders to be sent to Mr. WILKINSON, Architect and Surveyor, Oxford, on or before the 5th day of JANUARY next.—The lowest or any Tender will not necessarily be accepted.

TO BUILDERS, CONTRACTORS, and OTHERS.—The Committee of the Schools proposed to be built at Ongar, in the county of Essex, are desirous of receiving TENDERS for the ERECTION of the same. The plans, drawings, specification, and draft of contract can be seen at my Offices, Wright's-row, WEDNESBURY, on the 8th, and at my Offices in WEDNESBURY, on the 9th instant, and on and after the 16th of the same month, at the Offices of Mr. JOHN TAYLOR, Architect, Water-street, Gutter-lane, London. Tenders to be sent to me on or before WEDNESDAY, the 31st instant, between the hours of ELEVEN and FOUR o'clock, and to be sealed, and sent to me on or before TUESDAY, the 6th of JANUARY next. The Committee do not bind themselves to accept the lowest or any other Tender.—By order of the Committee. HENRY DARVILL.

Wind or 12th December, 1856

CARMARTHENSHIRE COUNTY WORKS.—To BUILDERS.—Persons wishing to CONTRACT for the WORKS proposed to be executed HEREAFTER at the GAOL and HOUSE of CORRECTION for the County of Carmarthen, or any of them, are desired to send in their Tenders, sealed up, addressed to the undersigned, to be delivered to me on or before the 1st day of JANUARY, 1857. Neither the lowest nor any other Tender will necessarily be accepted. Any further information may be obtained upon application to me, or at the Office of the Architect, Mr. R. KYRKE PENSON, 31, Wind-street, Swansea

GEO. SUBRILL, Secretary to the Gaol Committee.

Carmarthen, Dec. 5, 1856.

TO TIMBER DEALERS, BUILDERS, CONTRACTORS, and OTHERS.—TO BE DISPOSED OF, in consequence of the death of the proprietor, an old established BUILDING and TIMBER TRADE, situate in the county town of Buckingham, with a newly-built dwelling-house, possessing both canal and railway communication. The premises are spacious and convenient for carrying on an extensive and profitable trade, and consist of large timber-yard, newly-erected workshop, sheds, pits, and other conveniences. A handsome modern residence, with garden and useful piece of pasture land, forms the premises. The building and timber trade has been carried on on these premises for upwards of sixty years. The connection is large and respectable, and the neighbourhood is such that little competition. The stock and utensils (which will be taken at a fair valuation) and possession may be had.—For particulars apply to Mr. GEORGE BENNETT, Auctioneer, Buckingham.

NOTICE of PURCHASE. — ROBERT BLADE begs to inform the public and customers of EDWARD SIMMS late of Wilton-road, Pimlico, that he has purchased the Lease of the Premises, as also the Stock which has since been greatly increased) of the said EDWARD SIMMS, situated at Wilton-road, Pimlico, where a choice assortment of FLOORING BOARDS are always kept on hand. All other descriptions of timber at the lowest possible prices. The system of keeping prepared floors, that has been introduced in London at this yard.

TO CABINETMAKERS, PIANOFORTE-MAKERS, BUILDERS, &c.—Messrs. TUELY and CO of Bridge-wharf, City road, beg to inform their town and country friends, that they are cutting their fine Old City St. Domingo Mahogany Log, the "Gem," in addition to their fine veneers from the "Queen," "Prince Albert," and the "Grand Emperor" Logs; also from several fine Ocean and Peacock Barred Flitches.

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process.—JOHN COOMBE solicits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he sells at prices generally charged for wet wood. Address PATENT WOOD SEASONING Works, Bath Basket-ground, Mile-end-gate.

NOTICE of REMOVAL. — EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton-road, Pimlico, to the KING'S-ROAD, CHELSEA, where, by strict attention to the execution of their orders, he hopes to merit a continuance of their favours. Beware of imitators.—E. SIMMS, King's-road, Saw-mills, Chelsea, opposite Manor-street.

FURTHER REDUCTION of PRICES.—SAMUEL PUTNEY invites the attention of buyers to his large and well-selected STOCK of DEALS, and the reduced Prices of prepared Flooring, &c.

Inch Yellow Flooring	18s per square.
4-inch ditto	16s. "
Pine Plank, 12 3 by 11, from	24l per 120
Yellow Deals, from	20 "
Spruce Deals, from	18 "
Yellow Battens, from	12 "

A List of Prices forwarded on receipt of a postage-stamp.
N.B.—All Sawn Goods delivered within two miles free of cartage.
Broad-street, Southwark, and Elm-street, Gray's-inn-lane.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory the first of its kind ever established, a large assortment of PINE WIRE-CUT PLOUGHED and MATCHED FLOORING, seasoned and ready for use, from 6-inch to 12-inch Pine or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses. Stock Boards, Joists, Oak Sills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Saw-mills, Plantation, Moulding Mills, King's-road, Chelsea.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of PLOUGHED and TONGUED BOARDING, from ¾ inch to 1½ inches thick, seasoned, and ready for use; also, Mahogany, Moulding, Wainscot, and all kinds of Timber required for Building purposes.—Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton-road, Pimlico.

ANOTHER GREAT REDUCTION.—Yellow Deals, 3s. 3d.; Spruce, 3s.; Pine Plank, 3s. 6d. Mahogany, 2s. 2½d. Yellow Battens, from 10l. 10s. Carriage free to any railway station. Lowest Cash. Wainscot wood, Lambeth wall.

MOULDINGS BY MACHINERY. Capping, Sash-bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to

E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S-ROAD, CHELSEA.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge-street, Old St. Pancras-road.—GEORGE NORTH and CO. invite attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:

1-inch white, 13s. 6d. per square; ¾-inch white, 15s. per square; 1-inch white, 18s. per square; 1-inch yellow, 15s. per square; 1-inch yellow, 16s. 6d.; 1-inch yellow, 20s.

Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

ALFRED ROSLING begs to inform his Customers and the Public in general that he has made to all a discount of fifteen per cent. upon his list prices for Mouldings.—A large stock of dry flooring at low prices.—South-park Saw Mills, Bankside.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

ROBINSON and BARTRAM, SAWING and PLANING MILLS, BELVIDERE-ROAD, LAMBETH, and SWAN-STREET, BERMONDSEY, having completed powerful MACHINERY for SAWING PIMBER, for building purposes, will be glad to receive ORDERS in this department, and can assure their friends that all favours shall receive the best manner, and with the utmost punctuality and despatch.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to call attention to the Trade that they have completed extensive arrangements, and will be happy to execute all orders entrusted to them with despatch and punctuality. Wet and dry docks, and powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring kept in readiness, &c. &c. always in stock at fixed prices.

PATENT TRANSPARENT INDIA-RUBBER VARNISH. The Varnish is pronounced by all the purposes to which varnishes are applied. It can be prepared perfectly colourless, or tinted to any colour or shade required. Orders should be addressed to the advertiser as above, and carefully packed. Specimens can be seen, and applied bottles obtained of the Agent, W. BLAZZARD, 15, Mill-street, Hanover-square.

N.B. All orders should state for what purpose the Varnish is required.

STAINING DEAL TO IMITATE ALL KINDS of WOODS IS required NOSIZING, and will stand the exposure to the weather. Prices 6s. per gall. Varnishes for W. NAYLOR'S Stains may be had at the Factory, 44, James-street, Oxford-street; also Manufacturer of Improved Knotting (Prepared Lead for Enamel White), and Varnishes.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c. — A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, spirit lackers, and finishing spirit. The present price is 6s. 6d. to 7s. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, sticklac, and acid at the lowest prices. A set each list forwarded on application to JAMES SLIPPER, 57, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond-street, and 4, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 8d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade forwarded on application, post free.

WINDOW BLINDS.—FULLER, BROTHERS, Manufacturers of every kind of Inside and Outside WINDOW BLINDS, warranted of the best materials and workmanship, at the lowest possible prices. Builders and the Trade supplied. A List forwarded on application.—29, Charlotte-street, Blackfriars-road; and at Sydney, New South Wales.

ROYAL POLYTECHNIC. — On Monday Evening, the 15th inst. at Eight, J. Quilter Rumball, esq. M.R.C.S. will deliver the first of a Course of Lectures, "On the Five Senses." On Tuesday, at Three and Thursday, at Three and Eight, Lecture "On Voltaic Electricity," with brilliant experiments by Mr. I. L. King.—On Wednesday, at Four and Nine, Lecture "On the Chemistry of Fireworks," by J. H. Pepper, esq. with tasteful illustrations by Mr. Darby, the celebrated pyrotechnist.—On Monday and Saturday, at Three, and Friday, at Three and Eight, Lecture "On Bessemer's New Process."—On Saturday Evening, at Eight, Musical Lecture by G. A. Cooper, assisted by Mrs. G. A. Cooper.—Mr. Leicester Buckingham's Entertainment, entitled "Life in the West," illustrated with beautiful Dissolving Views by George Harvey, are every Morning and Evening, at a Quarter-past Four and a Quarter-past Nine.—For all the other Lectures and Entertainments, see Programme of the week.—Admission to the whole, 1s.; Children and Schools, half-price.

THE THAMES STEAMTUG and LIGHTERAGE COMPANY, (Limited.) The business of this Company having commenced, every information as to rates, &c. can be obtained of the Managers, Messrs. KEEN and BLAKE, Northumberland Wharf, Brentford; and Corn-Exchange, Mark-lane.—By order,

CHARLES ELEY, Jun. Secretary.

28, Parliament-street, Westminster, Dec. 1, 1856.

NOTICE of REMOVAL. —13, King William-street, Strand.—Messrs. HARDMAN and CO have removed their Offices, Warerooms, New Workshops, and Stores, to the above address, where they have fitted up rooms for exhibiting specimens and designs of their Metal Works, Monumental Brasses, and Stained Glass. Mr. HARDMAN, Jun. and Mr. S. THOMAS, Jun., whom a partnership has been made for designs and estimates. He will also be happy to wait on any gentleman personally if desired, to receive their instructions for the execution of any work. Metal Works, No. 6, Great Charles-street, Birmingham; Stained Glass Works, 43, Newhall-hill, Birmingham.

NASMYTH STEAM-HAMMER TO BE SOLD, cheap; also Travelling Crane, Stone Sawing Frame, a Pair of Oscillating Marine Engines, 8-horse power collectively, with propellers of a very small description; Bright Shafting, Hangers, Pulleys, Screwing and Slotting Machine, &c. Particulars to be had by applying to JOHN FRANCE, North Wharf, Paddington.

TO IRONMONGERS, BUILDERS, &c. PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure tools, &c. Manufactured by Archd. Cleland & Hudson. HUTTON and CO., Hyde, Hudson.

TO MANUFACTURING CHEMISTS, PLUMBERS, BUILDERS, &c.

ANDREW CLARK and COMPANY, PLUMBERS,
THE BEAR GARDEN LEAD WORKS, SOUTHWARK.

Sole Manufacturers of Delbruck's Patent Autocratic Solicit Apparatus, invite the attention of Manufacturing Chemists to their patent method of

UNITING LEAD TO LEAD WITHOUT SOLDER.

Leaden Chambers, or any leaden vessels, made or repaired by this process, making them complete, without the introduction of any foreign metal.

PLUMBERS and BUILDERS can be SUPPLIED with SHEET LEAD and PIPE, cut to any dimensions, and EXCHANGED for OLD LEAD, on the LOWEST TERMS.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c. to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc; Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr. Arnott's Ventilator, 4s.; and the new registered Venetian Ventilator, so much admired, &c. &c. 6d. each.

J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.

14, Stanhope-street, Clare-market, London.

TO SPECULATORS and CAPITALISTS. TO BE DISPOSED OF, the PATENT RIGHT of a valuable AMERICAN CHANGEABLE BANK LOCK, on the most secure principle.—Can be seen and described on applying to JOHN TANN, Page's Reliance Locks and Fire-proof Safe Manufacturer, 30, Wansbrook, City.

TO CONTRACTORS. — STEAM-DREDGES and HOPPER BARGES.—TO BE DISPOSED OF, by Private Contract, a powerful STEAM DREDGING MACHINE, in excellent order, length over all, 88 feet, beam 20 feet, fitted with a 30-horse power condensing steam-engine and boiler with two furnaces, buckets, crabs, and every requisite; Twelve Wooden HOPPER BARGES, with chains and crabs; one three-room ditto, and one open Coal Barge.—For further particulars, apply to Messrs. FULLER and HORSEY, Billiter-street.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
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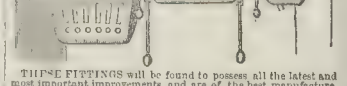

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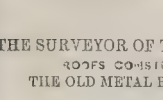

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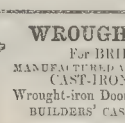

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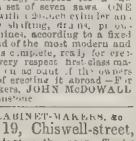

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4-feet Cottage Ranges, with ovens and back boilers, 55s. each.

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Ditto, with plain clips cast on	1s. 1d.	1s. 2d.	1s. 4d.	1s 6d			
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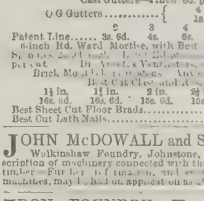

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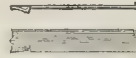

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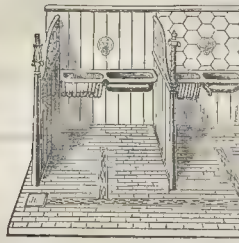

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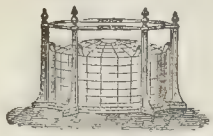

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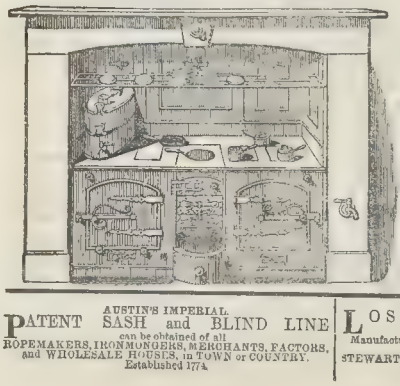

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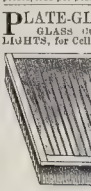

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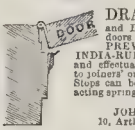

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VOL. XIV.—No. 723.

NOW that the structural question as to the new Westminster-bridge is settled in favour of the course chosen by the engineer, we would ask,—is there any real reason why the work should not go on? At least three of the arches of the old bridge are in a *dangerous* state: the water-way remains with a double obstruction of piers and foundations: piles and staging also encumber the river; and by every winter's delay there is increased chance of some disaster which would interrupt both land and river traffic. It may be thought that in this country little is to be feared from ice. But in the last severe winter, all the arches, except one, were sometimes blocked; and the water rushed through that one remaining channel. The engineer is therefore justified in saying, in the "Observations" printed as an Appendix to the Report and Evidence of last July, that "danger" might result "to the stability of the present structure, and to the navigation, should the suspension of the works be much longer continued, and the fabric be exposed to the contingencies of a winter season, especially as four of the piers of the old bridge have been cut through for the foundations of the new bridge." In 1851, according to Mr. Walker's evidence, the stability of the present bridge in the defective part was dependant upon the centres borne by piles, which last were defective; and he clearly stated his opinion that those "stilts under the arches" were not then proof against ice which might come down the river. Indeed, before the committee of the previous year, in giving a similar opinion, he had referred to the especial weakness which would be found in the piers, if, through accident, any of them should be brought to serve as abutments, in which case, through the fall of a couple of arches, the whole bridge might follow. And in Mr. Page's letter of the 26th March last, appended to the report and evidence, we read that "piles of the staging and gauntrees are subject to accidents from the craft running against them," and that not many weeks earlier "the gauntree for the first arch was in danger of being brought down—in consequence of its supporting piles being struck by a barge, and the first navigable arch had to be stopped for the repairs; while about the same time, a barge was sunk amongst the piles of No. 1 pier:" such casualties, it seems, often occur; and "an accident" might happen, which at least would "close the navigable arches on the Middlesex side." During the progress of the works, by constant watchfulness, more serious accidents may have been prevented. Now, the bridge has been suddenly stopped at the most critical point; the men trained in the operations are lost, and every one connected with the engineering direction has been troubled and fretted, and needlessly called to answer for conclusions made, and re examined and re-made, by committees and commissions, years ago. Meanwhile, over 32,000*l.* of English money are lying idle in the river; and it will cost 10,000*l.* to clear the said river bed,—the 32,000*l.* being blown to dust and rubbish. Add to these values, the loss on nearly 29,000*l.* worth of materials which are prepared and delivered, and on nearly 24,000*l.* worth of "plant." Looking at the actual disbursements,—76,988*l.* 12s. 9d. on the 31st of May last, had been paid; nearly the whole of which, and perhaps even a greater sum, would be *lost* by the mere abandonment of the present plan.* Moreover, *after this loss*, it would cost a far larger sum than what remains to be expended, or than even the whole cost on the present site, to build a bridge on another site,—and probably, calculating upon the use of some of the prepared materials or not. The part of the new bridge in progress would be completed, with a 30-feet *roadway* and temporary footpaths, in twelve months, for 31,700*l.*; the old bridge could be removed, and the remainder of the new bridge 85 feet in width could be completed in two years afterwards: and surely the *onus* of bringing a very strong argument to the case lies with those who postpone the work and stop the way. The argument, however, tends, as we are prepared to show, all in the reverse direction.

Whether assuming the existence of one bridge between Waterloo and Vauxhall, for carriage traffic, or two bridges, it may be considered to have been *decided* that a site for one of the number was the old site of Westminster-bridge; and, as to the diminished headway for the new bridge, that point raised again and again, also may be held to have been disposed of. At least, it is to be observed that, on the basis of such conclusions deliberate enough, surely—the works lately in progress, were commenced, and amounts which we have named were expended. Therefore, unless a *decision* is a mere whimsy of the legislative and official mind, there is only before us this question—are the proposed Government Offices both so paramount and so unyielding that the main routes of London should be diverted for them, or is the traffic belonging to the Offices and the Houses of Parliament, or that belonging to the bridge necessarily to be sacrificed one for the sake of the other? We will enter into the question, however, on any grounds.

Let us premise that it is right to view the improvement of particular quarters of the metropolis, with reference to any main communications, and the whole inhabited area, more than it has been the practice to do, judging from the partial works which usually are undertaken. What can be done in one year by our free and liberal people and government may, perhaps, be little,—perhaps it is better so. Plans, indeed, and those adequate and comprehensive, should be in readiness; and, further, their existence should be remembered when the opportunity arrives.

Progress, we have often observed, suffers from two opposite influences, sometimes there is either prejudice against change, or disregard of the fact that, by lapse of time, new conditions have arisen; but sometimes equally in lapse of time, some conclusion is forgotten, and an ascertained stage of improvement is lost. Thus, the plan of Sir Christopher Wren, for the improvement of the City, aimed at objects which ever since, from time to time, have been sought for in plans designed piecemeal, and therefore at some disadvantage,—as witness the lines of Gresham-street and Cannon-street, as compared with those of the original comprehensive plan. In western London, recent improvements were preceded by suggestions for the same objects made often during the course of many years.* It would conduce to the more efficient prosecution of works, and might save some time, if such plans could be looked to at the proper moment.

The traffic under and over Westminster-bridge has been noted and numbered; gradients have been compared; the heights of vessels and cargoes have been measured; and the flow of the stream and the tides has been tested times enough during the last twenty years, to settle any of the difficultics of the site. The results may be seen in several of the Westminster-bridge reports, where every interest in the matter will be found to have been heard; and only after the careful consideration of every point in the question, inclusive of the site, and the headway—the chief matters now revived—were the works commenced. Sir William Molesworth—who paid great attention to the subject—in his letter to the Treasury, dated 19th April, 1854, adverted to the economy of the old site, regarding cost of approaches, and compensation for property. He also referred to one account of the land and river traffic, which had been taken during five days, when it was found that the average of twelve consecutive hours was 9,200 carriages, of all descriptions, going over the bridge, while only fifty sailing-barges had passed under it. The latter had used an arch of the old bridge, having but 20 feet of headway. The Navigation Committee of the Corporation of London, up to the 17th July last, were arguing for a height of not less than 25 feet. The 20-feet arch (No. 10 from the Middlesex side) has been constantly used by the straw barges, which have the highest cargoes of any on the river,—and with the inconvenience of a narrow arch, and, therefore, practically a diminished headway. At Battersea-bridge, the headway is less, with the further inconvenience of very difficult navigation. One objection made has been to the necessity of depressing the masts considerably,—partly because it is thought cargo might have to be shifted, and partly because it would require a little more labour to raise the mast. But there really would seem to be no difficulty in arranging the cargo in the required manner before-hand; and it has been suggested, that with the addition of a counter-balance weight, the masts might be managed as readily as are the funnels of steam-boats. The consideration of the improved effect of the Houses of Parliament; and the great saving of horse-power by easy gradients, had led the committee of 1853, after hearing all objections, to decide that a headway of 25 feet was not of sufficient importance to justify a large sacrifice of the interests of the land traffic; and thus the headway of 20 feet was finally adopted. This, in the design, seems to be rather exceeded—with the additional advantage of width,—except in the side arches, where the headway may be a trifle less. It was even known, before the scheme for the new bridge had been decided on, whether the communication to the Houses of Parliament was interfered with by the traffic to the bridge, and it was also known that new Government Offices would be wanted somewhere in the locality of Downing-street.

Many who have treated this question of site, have argued that some route from Charing-cross, or from one or other of certain intermediate points, would give the best place for crossing, and would afford relief to the Houses of Parliament. But, these persons by *removing* the route northward, forget how large an amount of traffic

* The valuation of Mr. Charles Stephenson, the Surveyor, was as follows:—

For permanent works, examined and approved by the engineer	£70,436 11 2	
Miscellaneous items	6,529 6 5	
Making together		£76,965 17 7
For materials delivered and approved by the engineer	28,957 3 0	
For plant provided	29,888 16 6	
	£58,846 1 6	
Additional payments to the 31st May, 1856, were:		
Under contract	30,982 15 4	
For professional services of engineer and staff during contract:		
Engineer	4,461 3 11	
Staff	1,294 7 4	
	5,755 11 3	
Other payments	8,844 17 10	
Payment preliminary to the contract:		
Engineer	1,014 18 4	
Other payments	1,397 7 0	
	2,412 8 4	
	£.6568 12 9	

* See Gwynn's 'London and Westminster Improved,' 1766. Mr. Sydney Smirke's "Suggestions for the Architectural Improvement of the Western Part of London," 1834, many Parliamentary papers exhibiting Mr. Pennethorne's proposals, &c. &c.

would be drawn a long distance roundabout from the Birdcage-walk, and from Victoria-street, which last was formed with special reference to the old site of Westminster-bridge. Such a route would be still past the Offices, and meeting traffic to the Houses of Parliament, at least up to the time of the completion of a bridge south of the Houses,—when even, looking at the plan of 1846, in the absence of Westminster-bridge, the circuit would be very considerable. The traffic direct, to the other side of the river and the railway stations, from the Houses of Parliament and the Government Offices themselves, with the various private offices which will continue to cluster around the locality, itself deserves to be considered,—as also does the view of the front of the Houses of Parliament,—as we may say, even hazarding the retort that we should be building a bridge for the sake of seeing a building. But taking into consideration the traffic which belongs to Charing-cross, and that to Westminster and Pimlico, there is some mistake in what seems to be assumed that the former preponderates enormously over the latter. At least in 1847, as to the carriage and horse traffic over the bridge during twelve hours, Mr. Pennethorne's account supplied to the committee of 1850, showed the numbers to be—from Middlesex to Surrey,—from Charing-cross, 1,404, and from Westminster, 930; and from Surrey to Middlesex,—to Charing-cross, 1,498, and to Westminster, 974. This was in the winter, whilst the other total above would appear to have been in the summer. Doubtless, the traffic since 1847 has largely increased. But we think the increase is likely to be greatest in connection with Westminster and Pimlico.

Even before the recent outlay, we might have shown that, having the opportunity of making a communication with the other side of the river—one which admittedly had some recommendations—it would have been well to take advantage of the opportunity, seeing that the cost of the work would be comparatively small. The report of Messrs. Rendel and Simpson, indeed, set forth a sum of 384,800*l.* as required for approaches; but those authorities disregarded the fact that the houses on the north side of Bridge-street did not require to be touched, and that those on the south side having to be removed in connection with the Houses of Parliament, had likewise no fair relation with the calculation for the bridge: and Mr. Page, in his "Observations," shows that the only buildings necessarily to be removed were seven houses between the foot of the bridge and Stangate, on the Surrey side, which might be estimated at 15,000*l.* Thus so far as the Westminster-bridge approaches went, the reporters were in excess 339,800*l.* Let it be also observed that the area now occupied by Bridge-street cannot be required to build upon, consistently with the preservation of proper space between the Offices and the Houses of Parliament. The whole of it, indeed, even the buildings on the south side, are shown bounded by that extraordinary red line on the Government plans.

To whatever proposed new site the bridge were transferred, there would still be too great a distance in one or other direction, between it and the next adjoining bridge for carriage traffic. The bridge removed, also it should be remembered, is one of the free bridges, of which London has a number wholly disproportionate to the requirements of the capital, and a number much smaller than are found in places of far less importance, both at home and abroad. The enormous injury to property is not the only consideration; but the mere blocking up of an accustomed London route, however planned originally, is a serious inconvenience. We apprehend that the bridge furnishes the required route between Pimlico and the railway stations in Surrey, at less cost in opening lines of thoroughfare, than the other suggested sites,—desirable as those may be for other bridges,—which, however, would hardly be provided in the same short time. Mr. Rendel, in 1844, as we read in the report of 1846, said—"I do not believe that there is a part of the Thames better suited for a bridge;" and the report of Messrs. Rendel and Simpson, whilst advocating the provision of the additional bridge so often spoken of as required southward, never urged the removal of Westminster-bridge. And Mr. Pennethorne on one occasion, in alluding to the two bridges proposed, one from Charing-cross, and the other from the Horse-ferry, referred to the desirableness of preserving a route of some kind at Westminster,—although he may not have attached the same importance to the *carriage* route that way, that we do.

We do not advocate all the deference which is sometimes paid to vested interests: yet, some will argue that there is a moral justice in preserving what now exists; and the alteration to a roundabout way from what is viewed as a direct route by those interested most nearly, is no ordinary matter. The property of the Westminster-bridge trust, now in the hands of the Board of Works (shown by the plan referred to in Mr. Hardwick's evidence in 1850), in great part bounds the approaches; and some of it, we are informed, was lately sold on the presumed faith of the retention of the bridge, and that heavy compensation would be demanded for any change of site,—and this might be a very important element in the question as to cost.

The chief sites which have been discussed, we may say, have been,—the site of the present bridge, or close to it; a site proposed in 1845 for a bridge a little north of the India Board, with access from Parliament-street; one from the front of Richmond-terrace, or a skew-bridge from the same point to the Bridge-road, to save the cost of approaches on the Lambeth side; a bridge from Charing-cross, approved by the Metropolitan Improvement Commissioners in 1846; one immediately south of the Houses of Parliament, intended to be in a line with the new Victoria-street, which it was a misfortune not to make, as then proposed; and at the Horseferry-road. A plan was also made for the Metropolitan Improvement Commissioners in 1846, for a bridge from the India Board, with curved approaches, dividing the traffic, and giving longer and more easy ascents. For the bridge from Charing-cross (along with which was contemplated as essential, a bridge at the Horseferry, or other adjacent spot) there were originally two plans, but one of these would have had an approach through the gardens of Northumberland House, whereas the other plan, for which indeed the Parliamentary notices were given, had one approach alongside of Northumberland House, and across Whitehall-place, and another from exactly opposite the Horse Guards. With this and the Horseferry-bridge, extensive street improvements, especially on the Surrey side, and a direct route to the High-street, Borough, were designed by Mr. Pennethorne. It is to be hoped this scheme will eventually be carried out.

Indeed, we wished to urge that not one, or two bridges, but three are required for carriage traffic between Waterloo and Vauxhall. It is a false system, and one that is injurious to London in many ways which may appear to have no immediate connection with the subject, to stint the means of communication between different parts of a metropolis, as in London would seem to have been done. Looking to mere area, the very heart of London is that portion of the plan which is cut off by the curve of the river between the Blackfriars-road and Westminster-bridge-road. Yet, sites for dwellings for the poor are wanted; and some public buildings, notwithstanding the low level, might be advantageously placed in the locality, were the freedom of access perfect, and divested of a tax. The question of provision of dwellings is one with which London has dallied much too long: some energetic meeting of the evil is required; and as a large number of the poorer inhabitants of the neighbourhood of Parliament-street may suffer grievously by the proposed improvements there, Government may fairly be asked to promote the erection of dwellings of a different class to those which now exist on the Lambeth side,—such as combine a more economic use of the ground with better distribution of plan,—and to provide the requisite direct communication to them. Indeed, so strongly does this argument of the utilization of the Lambeth district prevail with the writer of the article in the "Companion to the Almanack" which we lately referred to, that he seems to rely upon it as his main argument for increase in the number of Thames bridges.

As a measure of police, we believe that much increased free communication between the opposite sides of the river, is a thing in which the whole metropolis should take interest. We apprehend that people living on the Middlesex side of the water, have often before them the idea of an impassable gulf of separation from peoples and things transpontine, unless these are made the *via media* of communication to exoppidan Sydenham, or some snug box at Dulwich or Brixton-hill. Certainly there is some peculiarity in the population on any less important side of a river, which would seem to show the desirableness of equalizing the positions by frequent means of communication. There are the Transteveri of Rome. We know one provincial town—for it is essentially *one* town, though there are two boroughs separated by a narrow stream—where, when an election takes place on one side, you would know of nothing extraordinary in progress; whilst on the other, a similar event is, or was, the occasion of riot or military repression. And we presume the population of the New-cut, the Waterloo-road, and the quadrant space to which we have referred, is not a very presentible sample of London. The tendency of all such localities, with inadequate or restricted means of access, seems to be that they become, to a certain extent, an Alsatia for the lawless—an asylum for the *classes dangereuses*,—to whom there is no particular commercial or financial argument for the saving of *time*,—or who will afford the *time* for the sake of a little freedom from observation. To the really hardworking member of the labouring classes,—and as Mr. Roebuck would say, we *all* belong to that class,—either time or *any* toll may be a matter for consideration in the choice of an abode. But the removal of the exaction on the "pay bridges" would not be a sufficient measure. The great object is to ensure frequent and ready means of unimpeded communication.

Thus, *several* bridges being required, and the site of Westminster-bridge being not only unobjectionable, but, as we believe, a necessary route for one communication, there will be little difficulty on these grounds alone in deciding in favour of the immediate prosecution of the present works. We do not care to urge further, that any other course would be unwarranted by any engineering question, and that it would be disgraceful to our system of legislation and government. We only need say, that if the other proper communications are formed, one from Charing-cross, and one from some well-chosen point south of the Houses of Parliament (which, perhaps, may not be the Horse-ferry), the Government Offices would not be prejudiced, and a most useful medium of communication would be preserved at now very small cost. If, having other bridges, 85 feet be considered an unnecessary width, let the dimension be 50 feet. On that assumption thus stands the case:—The loss by abandoning the present scheme may be taken as not under 70,000*l.*; to which should be added, we believe, a further sum if the "plant," now paid for, be not used. The present portion being completed in twelve months for 31,700*l.* the additional 17 feet would require an outlay of 48,000*l.*—say, making together, for the completion of a 50-feet bridge, with the approaches as they are in the present case, 80,000*l.* in round numbers. While to obtain a similar bridge on a new site, there would be an outlay of 150,000*l.* *plus* the cost of approaches, of which latter *item* some idea may be gathered from what has been said above.

A SMOKELESS FIRE.

It will be of little use forcing manufacturers to burn their smoke, unless the production of it in the fire-places of private houses can be checked also. With a view to this most important desideratum, Mr. John Leslie has patented an arrangement which calls for attention. Air is brought to the front of the fire-place by pipes, and the gases (he maintains there is no *smoke*) are allowed to escape only by an opening close to the *bottom* of the grate, formed by means of a false back. An opening into the flue from the upper part of the room serves to ventilate the apartment. The patentee states that 15 lbs. of coal supply the fire for nine hours, and looks forward to the abandonment of projecting chimney-breasts (a very small flue being sufficient), and to the avoidance of disfiguring cowls.

HIGHER BROUGHTON CHURCH, MANCHESTER.—Mr. Oliver, Jun. Architect.

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This church, now in course of erection, is cruciform on plan, and is divided by cast-iron columns into nave, aisles, and transepts. The chancel is arranged for a communion place, and also for the choir and organ. The galleries are approached on either side by the tower and porch entrances. The iron columns are carried up in one length from the gallery beam, to support the roof, which, by being divided into three spans, is found to be favourable to æsthetic and acoustic purposes. Colour will be introduced in the chancel arch, spandrils, and gallery front. The internal sizes are as follows:—Length of nave, 79 feet 6 inches; breadth, 41 feet; across transepts, 56 feet; chancel, 20 feet. Mr. T. Oliver, jun. of Sunderland, is the architect.

ON THE VARIOUS METHODS NOW BEFORE THE PUBLIC, OF INDURATING AND PRESERVING ARCHITECTURAL STONEWORK.*

Some years since the late A. W. Pugin portrayed, in his "Contrasts," the difference between numerous Mediæval and modern edifices. That ingenious critic might, with equal propriety, have drawn a parallel between the present conditions of the buildings of the ancient Assyrians, Egyptians, Greeks, Romans, and British people: he might even have included the architectural works of London, previous to the beginning of the present century; nearly all of which, so far as the stone is concerned, are in a very perfect state as contrasted with many of the buildings recently erected in this country. The architectural and sculptural works of Nineveh and Athens, which are two or three thousand years old, are much less decayed than the stonework composing the eastern *façade* of Buckingham Palace, before it had been erected a thousandth part of the time. It may be said that the question is one of £. s. d.; but all architects specify and contract with the builders, that "the whole of the materials are to be of the best quality of their respective kinds," and therefore, when a client employs a builder to erect a magnificent structure, he ought not to expect it to be in a perishing condition, like the palace of our Sovereign, before its completion. When the Government ordered the enlargement of Buckingham Palace, it certainly did not entertain the most remote idea that Her Majesty would be inconvenienced by scaffolding, and a host of workmen to repair the defective stonework immediately after its erection, nor that, when repaired, the expensive process of oiling and painting would be resorted to, to avert the progress of decay in the new Caen stone, rapidly mouldering away.

I believe that the knowledge of the most fit and proper materials, according to circumstances, for constructing the exterior of our ornamental edifices, is better understood at this time and in this country than at any former period amongst any civilized people; yet, with all our advancement in art and science, the art and mystery of obtaining good and durable stone for our decorated architecture never was in so low a state, and never was allowed to be so improperly practised. No material is so durable as always to retain its first appearance: the most solid and compact rocks have not such a degree of impenetrability, nor so close a union of the parts which compose them, as to be exempted from ultimate dissolution: there is scarcely a substance which does not exhibit proofs of "weathering," after having been exposed to the action of rain and atmospheric influences for a considerable time: it may be observed even on granite and the most densely compacted silicious rocks. The stonework of many beautiful buildings of recent date is in a worse state of external decay than that of others, which have borne the vicissitudes of summer and winter during six or seven centuries: in some bodies these changes are not so frequent and remarkable as in others, though equally certain to take place at a more distant period. Sooner or later all stone will decay; but whether the ruin be effected in ten years, or in ten thousand, is only a question of relative duration, somewhat in proportion to the labour of appropriation to useful or ornamental purposes, as the parts may be exposed to the weather, either in large or small masses. The same influence is for ever at work, to bring about the disintegration, decay, and final dissolution of all things.

Of all the causes of decay in stone, none are more destructive than variations of temperature; causing disintegration of the crystals or grains from each other by mechanical means. The vicissitudes of heat and cold, and of dryness and moisture, frequently alternating, are more ruinous to the carved parts of a building than either of these extremes constantly operating. However slight the additional heat may be to which a body is subjected, it will expand under its influence, and contract when the temperature is lowered. The thermometer will probably vary 100 degrees from the severe frost of a winter's night to the direct rays of an afternoon summer's sun, which never shines upon north or north-east sides of a building, except very obliquely at rising and setting; but the south and west fronts have the same degree of cold as the north and east during the night, with the additional warmth of meridian splendour daily. Such extremes must tend to loosen the component parts and separate many small fragments from the surface, especially if the mass be made up of different substances, in which case some will expand and contract more, in proportion to their size and density, than others. The test of time proves this to be correct, for in almost all cases the greatest amount of disintegration has taken place where the inequalities of temperature are greatest.

Rain facilitates decomposition, or separation of the molecules by chemical means. If the stone happens to be of a quality likely to be disintegrated by frequent changes of temperature, and to be decomposed chemically through the influence of rain, it will very rapidly moulder away, should both these causes operate at the same time, or nearly so; by no means an unusual occurrence.

An eminent political writer has remarked, that the very best laws are but necessary evils; because if everybody would do what is right and proper, there would be no necessity for laws of any kind. By the same mode of reasoning, if builders would do what they engage to do, and what is right, there would be no necessity for contrivances to prevent good stone from perishing; because no materials but those of the best quality would be used in the erection of a building. This refers especially to cases where a building has been erected with stone supposed to be good enough to show no important symptoms of decay during a reasonable period, say the lifetime of the proprietor, the architect, or the builder. But to the annoyance of all parties, before the edifice has been eight or ten years in existence, large portions of the stonework may be gradually crumbling away; as is the case with the Ionic entrance to Hyde-park from Piccadilly, constructed with Portland stone; and the exterior of Henry VIIth's Chapel at Westminster, refaced with Combe Down, Bath stone. Such, indeed, is the lamentable prospective state of the latter building at this time, that there is every probability of its being, within thirty or forty years, in the same dilapidated condition as it was before the repairs in the year 1808, unless some plan be speedily adopted to avert the decay which I have repeatedly observed, with extreme regret, rapidly advancing on the exterior, in consequence of stone of an inferior quality having been used in its restoration. It appears, therefore, to me, that Henry VIIth's Chapel will afford an excellent opportunity to test the merits of the different inventions for preserving stonework; as there can be no doubt that the progress of decay is very far advanced in that beautiful structure.

Buildings constructed with first-class stones, as Portland, Anston, and the best sandstones, ought not to require the aid of indurating processes to render them durable. No one ever thought of preserving the stone of St. Paul's Cathedral, of Greenwich Hospital, or of other public buildings erected in London during the eighteenth century. There is scarcely a trace of decay in the Portland stone of the Post-office, the National Gallery, or the Royal Exchange; whereas the lower part of the river front of the Custom House, the Ionic Entrance to Hyde-park from Piccadilly, and a few other buildings erected about thirty or forty years since, with a very inferior quality of Portland stone, are certainly in a decayed and dilapidated condition. The best specimen, in London, of Anston stone similar to that used at the Palace of Westminster, may be seen in the two elevations of the Museum of Practical Geology in Jermyn-street, and in Piccadilly. There is also an excellent specimen at the Amicable Life Assurance Office, No. 50, Fleet-street, the elevation of which is not extensive, but the stone is remarkably free from decay. The worst specimen may be observed in nearly the whole of the new buildings at Lincoln's-inn.

In all stone quarries, especially those occupying extensive districts, there are variations in the texture, hardness, and durability of some of the beds, which may account for the stone from certain beds being more readily disintegrated when exposed to weather; thus rendering it objectionable for ornamental architecture. In the Houses of Parliament, some such defective stones have been injudiciously used; but the proportional quantity of inferior stone in the entire edifice being small, as compared with that of a good and durable quality, shows that the failures have arisen entirely from inadvertency, or the want of a more careful supervision of the blocks of stone, and of the particular beds from which they were obtained.

The first stage of decay in the Anston stone appears in spots of a lighter colour than the general surface of the stone: these enlarge and unite, until, in some cases, the whole surface acquires at a distance a pale yellowish brown tint. Upon closer examination, on the face, or more correctly speaking, under an exceedingly thin film on the surface, there seems to be a sort of disruption of the particles, overcoming their cohesion, and a powdery incoherent light-coloured surface is the result. This is easily rubbed off, and it may probably, though not certainly, continue to increase in depth; for some few stones in the Houses of Parliament present unequivocal evidence of the surface having undergone a certain amount of decomposition, or disintegration, since they were finished by the workmen; but this progress of decay appears now to be at least retarded, if it be not altogether at an end. Upon this principle, it is possible that, in many other cases, the present mouldering appearance of certain stones may, at no very distant period, altogether cease.

It would be too much to expect so enormous a quantity of stone, or other natural product, to be all of a quality fit to receive the most refined elaboration, and without any defects; but a question may arise, whether there be more imperfect stone in the construction of the grand edifice just mentioned, than if some other well-chosen stone had been used; Portland, for instance, than which no better material for such a purpose can be named; yet we find buildings constructed with this stone in various stages of preservation, some nearly perfect after being erected probably more than a century; but others mouldering away, only a few years after their completion, merely from want of proper care in selecting the material. These remarks will apply to the stone used at the Parliament Houses, but there are buildings in London and elsewhere, constructed with stone from the identical quarries which have furnished the material for the great work at Westminster, which present scarcely a trace of decay, while the surface of others, erected more recently, is to the eye, even of the casual observer, in a rapid state of disintegration.

The British Isles contain unbounded supplies of building stone, probably as good as any in the world. As it is usually on the surface of the ground in almost every stone district, it may be readily quarried at very little cost, and may generally be transported at small expense to any part of the kingdom. With these advantages, a foreigner might expect to find perfection in stonework in all our towns; our public and other buildings noble illustrations of this source of national wealth, proofs of the skill of our masons and carvers, and of the genius and refined taste of our architects, remaining from century to century in good preservation, deriding alike the frigid rains and scorching solar rays, without need of reparation. This, however, is, we all know, by no means the case: London, and every other large town in our island, abound with examples of material badly selected, improperly exposed, often carelessly worked, and generally discreditable. I readily admit that there are numerous exceptions, but the rule is as I have stated: little or no pains are taken to learn the true relative value of different materials, but to save a small proportion of the first cost, some cheap stone is probably selected for public as well as for private edifices: magnificent club-house, royal palaces, churches, chapels, and cemetery buildings, that were intended to last many centuries, are constructed with the most perishable kinds of Caen or Bath stone; and thus, as time rolls on, we

* Read by Mr. C. H. Smith, at the ordinary general meeting of the Royal Institute of British Architects, December 1st.

find ourselves surrounded with specimens, the greatest use of which now is, to serve as a warning for our future conduct.

Suppose a building to be erected with Caen, Bath, or some other soft cheap stone, that can be worked very expeditiously, and afterwards be hardened, and rendered, at a very small additional cost, indestructible by weather and atmospheric influences; this sounds very tempting, and is no doubt a desirable object to attain. But it should be borne in mind, that the quality which gives Caen or Bath stone a preference among architects and workmen, the facility of working it, also contributes in a great degree to the speedy obliteration of its beauty when exposed to the weather: unless, therefore, the object can be successfully accomplished, the result must be a failure. There can be no difficulty whatever in rendering small specimens of soft stone completely waterproof; but, as with numerous other projects, I foresee almost insurmountable difficulties in carrying out such contrivances upon a large scale, so that they can be practically applied, and completely answer the intended purpose in such buildings as the Royal Exchange or the Palace at Westminster. Among other important advantages, the invention and mode of procedure should be commercially valuable; otherwise the cost of an edifice erected with soft stone, and afterwards indurated, may be greater than if the most durable stone had been employed in the first instance.

It is well known that water, even in its simplest state, acts as a solvent on most things; but when it contains acid, its power of dissolving calcareous substances is considerably augmented. The most perishable kinds of Caen, Bath, or Reigate stone, may be used for decorative purposes in the interior of buildings, where they are protected from the influence of rain or dampness, and may remain for centuries without showing any tendency to decay; but if the same stones should be exposed to the weather, all architectural features would be obliterated in the course of twenty or thirty years. The main object, therefore, to be attended to, in order to preserve stone from decay, is to protect it as much as possible from the influence of moisture, and especially from frequent alternations of wet and dry.

If water be one chief cause of the decay of stone, we must endeavour to saturate the stone with some solution that will repel the water, and thus become the means of conservation. Some years ago the late Mr. Silvester suggested a process for the preservation of stone, cement, and brickwork. It was a solution of soap in the first instance, and afterwards a solution of alum. This plan seemed to answer very well at first, as the water thrown on the specimens flowed off without leaving a trace behind; but the effect entirely disappeared after a time, and the stone became as absorbent as ever. Another scheme has been tried within the last few years, under the sanction of several gentlemen, eminently distinguished for their chemical attainments. A solution was prepared by dissolving flinty sand and potass in boiling water, and called, "silicate of potass," or "water glass:" with this the surface of stone buildings was to be saturated. It had long been known that animals and vegetables had the power of dissolving silica in water; but it is only within a few years that the chemist has learnt to imitate nature in this respect, and to form an aqueous solution of flint. The acquisition of one really new idea in science is likely to give birth to others of far greater importance, and this "water glass" gave promise of the most successful results. Specimens of Caen stone and other soft materials, *soaked* in a solution of "water glass" in the laboratory of the Royal Institution, under the very able direction of the Rev. John Barlow, were very perceptibly indurated after a time, and resisted the action of water and of dilute acid; but having made a similar experiment, in the most careful manner, in the month of January, 1849, upon a piece of Caen stone, which I knew to be of a perishable quality, and placed it on the roof of a building by the side of a piece of the same stone in its natural state, where they have remained until this morning, in order that they might be fully exposed to the action of the atmosphere and the climate, I now find that the silicated specimen and the unsilicated one are both in the same condition, and equally corroded.

Some caution is necessary before experimenting on a specimen of finished work, because few fluids will remain neutral while in contact with stone; they will either preserve it, or in some degree decompose it. Their chemical action should consequently be accurately ascertained by well-directed investigations.

Most of that numerous class of substances, which are of an oily or resinous nature, are insoluble in water, having little or no affinity for it, and generally repelling it: they may, therefore, be useful in protecting other bodies from penetration by rain or moisture. It is well known that if wood is properly painted, or saturated with linseed oil, or linseed oil varnish, it will not readily decay or rot, but will remain unchanged in the damp earth, or exposed to the weather, as long as the oil continues to be of a fatty or greasy nature; whereas the same timber, in the same situation, rapidly becomes rotten without some such preparation. Nearly all the vegetable fats, which have the property of drying or hardening when exposed to the atmosphere, such, for example, as linseed oil, lose their unctuous consistency after a time, probably by evaporation, and dry up so completely as to leave nothing but a trace of resinous, waxy, or gummy matter. It is, therefore, absolutely necessary, in order to preserve wood from decay, to repeat the oiling or painting process every three or four years.

The first step towards investigating a subject scientifically, is to generalize the materials, and argue upon first principles. Without entering upon a controversy as to the merits of the various patented and other inventions for attaining the objects now under consideration the remarkable similarity of each separate process, when compared generally with the others, is rather surprising. All the vehicles named in the specifications of the patents are composed of mixtures of oily, resinous, or bituminous substances. Now it is well known, that although the various oils differ from each other in certain respects, there are yet principles in them which seem to be common to all. Nearly every variety of fat and oil, whether of animal or vegetable origin, either the hardest tallow, the soft greasy fat of a horse or a goose, or the volatile oil of turpentine, may be separated into two distinct substances by compression or by cold. As regards fats and fat oils, that is, those which do not readily harden and dry, one part, the oleine, will remain fluid, while the other part named stearine, at the same temperature, becomes solid; and this solid portion, in its chemical relations, is closely allied to wax. The volatile and essential oils, such as oil of turpentine, become thick by exposure to the air, and in time assume the character of resin. Bitumens gradually pass from a state of fluidity into one of viscidity and solidity. A long time is necessary to produce this alteration by the atmosphere only, but if heat be applied, distillation will carry off the fluid portion, and solidification will be much more rapid. Naphtha, petroleum, mineral tar, pitch, asphaltum, shellac, and a certain portion of coal, appear to have had all the same vegetable origin, and vary but little in their elements and constitution from each other.

The following analytical table of substances of an oily or resinous nature, beginning with caoutchouc, which contains the largest proportion of carbon in 100 parts, and arranged successively as the quantity of carbon diminishes, will show that, notwithstanding the various oils and resins differ so much in appearance, they are all composed of a mixture of only three elements—carbon, hydrogen, and oxygen—and many of them are compounded in very nearly the same proportional quantities:—

	Carbon	Hydrogen	Oxygen	Equal to
Caoutchouc .	[illegible]	[illegible]	[illegible]	100 000
Pitch. ...	88 701	9 709	1 590	100 000
Oil of Turpentine	84 81.	10 149	5 240	100 000
Naphtha	84 187	13 301	2 513	100 000
Wax	81 094	12 085	6 821	100 000
Tallow	79 120	11 581	9 000	100 000
Spermaceti Oil. .	78 203	11 491	10 [illegible]	100 000
Olive Oil	77 2.0	13 3 0	9 430	100 000
Linseed Oil	76 014	11 351	12 635	100 000
Asphaltum	75 000	9 900	15 100	100 000
Resin	74 773	10 859	14 418	100 000
Ether	66 475	14 1 5	19 400	100 000
Alcohol	52 175	13 500	34 325	100 000

The most conspicuous difference exists in the various temperatures at which the substances above-named become solid or fluid: for instance, most of the oils remain in a liquid state at the usual ordinary temperature of our climate, but at the freezing point, or a few degrees lower, they become solid. Pitch, wax, resin, and tallow are usually hard and compact, but melt at a degree a little above summer heat. These remarkable differences must be evident to a casual observer, yet I think I may venture to assert that the most learned philosophers are not yet able to explain to a certainty why the same elements, united in the same proportions and at the same temperature, should give liquefaction in one case and solidification in another. It is also well deserving of notice that all these substances appear to be, as it were, of one family, possessing a sort of chemical affinity, or general good feeling for each other's company: for example, if we take any two substances named in the foregoing table, and put them together at a certain temperature, they will unite and form one homogeneous body: still further, I am of opinion that if the whole collection were to be thrown into a cauldron, placed over a gentle fire, there would soon be a hotchpotch of a uniform texture, somewhat resembling treacle in appearance. There might be individual exceptions, but I believe the rule would be as I have stated.

Many plans have been practised, or tried experimentally, by different persons during the last few years, in order to get over the necessity and expense of oiling a stone building periodically, for the purpose of averting the progress of decay. To generalize and describe these contrivances in a few words, I may say that the patentees have found that oil, in its simplest state, applied in sufficient quantities to saturate the surface of stone, loses by evaporation nearly all its protective influence in a few years; they have, therefore, adopted the plan of charging the oil with an additional quantity of the solid portion of the same, or of any other kind of oil, such as a mixture of oil and wax, resin and turpentine, or of naphtha and shellac. During the process of saturating a porous stone with any of these mixtures, the fluid holding the solid wax or resin in solution acts as a vehicle to carry the wax or resin, by capillary attraction, into the interior of the stone; and, after the fluid portion has evaporated, the solid which remains serves two purposes: it protects the stone from external wet and moisture, which always tends to decompose soft limestone; and then the solid wax or resin serves to cement the grains more firmly together, and thus changes what was previously a fragile absorbent substance into a compact stone, impervious to moisture, so far as the indurating mixture has penetrated.*

ON THE DECORATIONS AT ALNWICK.

I REALLY felt quite pained at finding my excellent friend, Professor Donaldson, so much annoyed; but I am sure that, on consideration, he cannot but see that there is legitimate room for our differences of opinion. He is so much out of his element when writing harshly, that he says, I am sure, more than he means.

Without wishing needlessly to prolong a controversy on which I have had "my say," I must beg you to excuse my clearing myself of some charges to which I feel bound to plead "not guilty."

In the first place, Mr. Donaldson shows me up as a rude and uncourteous disputant, by stringing together, in a few lines, all the strong expressions I had made use of in the course of a speech and a long paper, including one which I cannot recollect using at all. Now, were I, in the same manner, to collect the *complimentary* terms used in the same speech and paper, I should produce an impression of a directly contrary kind; and I appeal to those who heard what I said, or have read what I wrote, whether I did not, while clearly stating my honest opinions, do so with the utmost respect and consideration for the noble personage from whose conclusions I happened to differ. If we bring forward subjects of discussion, we must not object to the free expression of opinion upon them. If we are debarred from this, it would be better that they should be withheld alto-

* To be continued.

gether. I am not so practised a speaker as my friend, and I admit that the word "*logic*," to which he objects, might be changed with advantage to "*reasoning;*" but he must recollect that, when I first used the word, it was not with reference to the Duke: it was Mr. Donaldson who turned it against him by interposing to explain that he was not stating his own but his Grace's arguments.

In the second place, I must demur to several of the professor's statements; as, for instance, to that about his antagonism to Mr. Salvin (!) which I never so much as dreamed of; to what he says about certain styles of art being "illogical" (!) and "not the true style," expressions of which I am unconscious; and to my having said anything against the specimens of carving exhibited, to which I never alluded. What I said was of Italian art in general, which I did not say had "no relation to nature," but "to the forms of nature with which they (the Alnwick workmen) are surrounded." From the "obliquity" of my position, I did not see the specimens well, and ventured no opinion upon them.

I am, again, unconscious of any expression laying me open to the charge of *exclusiveness*. I did not find fault, in the abstract, with the style adopted, but rather with its proposed *location:* indeed, I said I should rejoice to see in England a work of Canina's, provided it were at Northumberland or Sion House, instead of Alnwick.

I further demur to the statement that I "advocate as a ground-work, not any *domestic* building, but a *religious* one." What I said referred to the *style* selected for the Palace of Westminster. The old palace contained remains of at least four phases of Pointed architecture, among which I suggested that that of the beginning of the fourteenth century,—of which St. Stephen's Chapel was the specimen at hand,—would have been a better guide, *as to style*, than those of later periods. With Mr. Donaldson's opinion upon that specimen I have nothing to do,—it is certainly not that usually entertained, but "*de gustibus*," *&c.!*

Having cleared the subject of these overlayings, which are useless but to perplex it, I will add a little on the main questions at issue, which are these:—1st. Whether in these days, when (to say the least), the architecture of our country in the Middle Ages has been carefully studied, and is extensively in use, it would not be better, while restoring an ancient mansion, to use that architecture for its interior (developing it as we think best to meet present wants), than to produce a building externally, in the English style of the fourteenth, and internally in the Roman style of the sixteenth century? 2ndly. Whether the first-mentioned style is capable of being successfully applied to internal finishings, and of being so developed as to satisfy every modern feeling and requirement? On both questions I reply in the *affirmative;* Professor Donaldson in the *negative;* and both being matters of taste and feeling, I do not see how either can prove our case, for on such questions argument is proverbially inconclusive. To attempt to settle them by practical evidence, seems equally unavailing; for it was as easy to an excellent cleric of the last century to say of the conventicle-ized interior of Llandaff Cathedral that, "as far as it is ceiled and plastered, it *looks exceeding fine*," as it is to assert of the interior of the Doge's Palace, that the (undoubtedly fine) Renaissance fittings (introduced after the fires in the fifteenth and sixteenth centuries) present no "dissonance from the exterior aspect;" and, in like manner, the finest work which we can now or hereafter produce, may be as readily pronounced a failure, as the exquisite interior of St. Stephen's Chapel — "an effete example of corruption and debility!"

I will, then, content myself with saying a word in reply to Professor Donaldson's two leading arguments.

On the first question, he argues that it has been the practice of all ages to make alterations in old buildings, not in the style of the buildings but in that prevailing at the time. I admit this,—but it does not apply to the present case, in which the *exterior* is entirely renewed, and, though in the *style* of the old building, yet, in the main, on a new design. To carry out the theory, the exterior ought also to have been changed in style, as would that of the Ducal Palace had Palladio had his will. We cannot, however, argue from this practice of former ages without ignoring one of the most striking characteristics of our own, which, of all periods in the world's history, is the first in which the arts of former ages have been systematically studied. This characteristic causes our age to be emphatically that of *Restoration*. At former periods they *could not if they would* work in the style of their predecessors: with ourselves it is otherwise. If there is one fact more striking than another in our present position it is this; that we *can* work in the styles of our forefathers of the Middle Ages, and that we *have*, with more or less success, revived them, and more especially the style of the thirteenth and fourteenth centuries. Deplore or decry it as you will,—the fact still remains; and any attempt to ignore its influence on our treatment of our ancient buildings involves a far greater neglect of the characteristics of our age than any of which it is the fashion to accuse those who have had a hand in this revival.

On the second question, Mr. Donaldson brings forward what he must forgive my calling the *ad captandum* and very hackneyed argument of the discordance of Gothic architecture with our present *costume!* Let me ask whether the classic revivers of the fifteenth and sixteenth centuries revived also the *costumes* of ancient Rome; and, again, whether the Roman dresses of these centuries had any more resemblance to those likely to be worn at Alnwick than had those of its first builders? The fact is, that this favourite argument—oft repeated as it is—has no real force in it. Buildings are somewhat more durable than fashions in dress. Would it promote harmony of effect for the congregation at Whitehall Chapel to assume the dress of King Charles's cavaliers, or that at St. Paul's to come out in long wigs and high-heeled boots? Even Somerset House would, on this principle, be out of date, and would want a due supply of pomatum and pigtails to bring it into harmony; while the clerks in the Bank of England should wear a livery founded on the "Fashions for the Season" of the times of the Prince Regent! The costume of our day would, in fact, harmonize with no style of architecture which ever existed, or, I trust, ever will exist; and if we could introduce a style which would shame it into anything like taste we should be doing good service.

What I claim for Gothic architecture is its *perfect* and *ready* applicability to our present requirements; and I boldly and unhesitatingly assert that, of all styles, it is the most elastic, and most capable of suiting itself to the circumstances. The revivers of architecture, in shaping it to their necessities, had no examples of the internal finishing of the ancients to go by. Their guides, in doing this, were no other than the works of their mediæval predecessors, which they translated into their newly adopted style. We, in the same manner, do not wish to revive mediæval dwellings *as they were*, but to produce, in the revived style, *what we want*, translating back into it all which is good in what we now use. "J. F." enumerated, as his decorations, the same list which Canina had given; and that simply because he was of opinion that his proposed style would do the same things more consistently. In a paper I had written some months before this discussion arose, I had given an almost identical enumeration of those which I would recommend for a nobleman's mansion, in the style I advocate, *and for the very same reason.* The majority of these decorations were in use before the classic revival, and were borrowed from mediæval buildings; and I boldly assert that, by availing ourselves of the artistic and mechanical facilities of the present day, we may re-apply them to the revived and re-developed style, with a freshness and vigour far exceeding what we can hope for from Italian architecture; unless we are to expect some wondrous results from this new mission of artists from Rome; and, in truth, I must admit that, if we *are* to have Roman buildings, this part of the Duke of Northumberland's plan of proceeding does appear to me to be one of the best modes of infusing new (or rekindling old) life into it.

Geo. Gilbert Scott.

THE SOULAGES COLLECTION OF RENAISSANCE ART.

CARVED STONE CHIMNEY-PIECE.

The extraordinary collection of objects of decorative utility made by M. Soulages, of Toulouse, and brought into this country by a committee of gentlemen interested in the artistic improvement of our manufactures, is now set forth in Marlborough House for public inspection, and has already been visited by a large number of persons. The interest of the collection is materially increased by what promises to be a very complete and excellent catalogue, which is being prepared by Mr. J. C. Robinson, the Curator of the Museum of Ornamental Art. The part already published refers solely to the specimens of Majolica and Palissy ware, and occupies eighty pages.* The second part will be issued next week. The collection was bought at prices regulated by recent sales in this country, and cost 11,000*l.* exclusive of interest, packing, and insurance; and already individuals have offered to relieve the committee of it at the sum required. The object, however, is to induce the Government to purchase it for the country. Should they decline to do so, it will be sold by auction, to the loss of the committee if it be sold for less than the sum it has cost, and to the advantage of art if it realize more, since the arrangement is that in that case the surplus shall be disposed of in furtherance of some object or objects connected with art, to be determined by the major part in value of the subscribers present at a meeting specially called for that purpose.

The following are the subscribers:—E. Marjoribanks, Earl Granville, Lord Ashburton, H. Minton, Edward Wood, Robert Napier, W. Maskell, M. Uzielli, Philip Miles, Lyon Playfair, Richard Redgrave, Henry Cole, J. Mayer, H. T. Hope, J. C. Robinson, Capt. Fowke, W. Ewart, R. Burchett, H. Farrer, C. Sackville Bale, W. Chaffers, A. Barker, Richard Fisher, J. Swaby, John Webb, Holland and Sons; Artists, Carvers, and Workmen in the employ of Holland and Sons; Alfred Lapworth, John Jackson, W. B. Simpson, George Trollope, Jackson and Graham, John Crace, J. Sheepshanks, G. R. Elkington, J. Jobson Smith, Thomas De la Rue, Warren De la Rue, Gillow, R. Phillips, S. C. Hall, Dudley C. Marjoribanks, Sir Francis E. Scott, bart. George Godwin, Henry G. Bohn, G. Gilbert Scott, George J. Morant, I. K. Brunel, Sydney Smirke, Johnstone and Jeanes, Duke of Hamilton and Brandon, Robert S. Holford, Christie and Manson, John Dunn Gardner, Joseph Clarke, Owen Jones, R. J. Spiers, Hanson and Wright, Hunt and Roskell, Council of the Society of Arts, J. J. Mechi, Joseph Rodgers, James Dixon, Mappin, Sir Henry Meux, bart. Sir John Marjoribanks, bart. T. M. Whitehead, Titus Salt, J. W. Fraser, C. Drury E. Fortnum, W. Wilson Saunders, Edward Chapman, the Marquis of Hertford, and Felix Slade.

The collection consists, in the whole, of nearly 800 objects, and includes, besides what we have mentioned, Venetian glass, knives and forks, spoons, coffers, and ivories, enamels of Limoges, bronzes (chiefly decorative utensils), Italian sculpture, Della Robbia ware, painted glass, medals, chiefly Italian, of the quattro and cinque-cento periods, a few pictures, textile fabrics, and decorative furniture.

We must not be understood as expressing unlimited admiration of all the works here collected: they have the faults of the period, some of them in excess. Compared with works of the mediæval times, and of Gothic artists even of their own period, they are found wanting in some most important qualities; nevertheless, they present, as a whole, a deep mine of beauty, most valuable illustrations of the history of decorative art, and admirable results of processes, in the practice of which we are now miserably inferior, even if we have not altogether lost them.

With these few general particulars, and a view of one of the most interesting objects in the collection, a carved stone chimney-piece, set up in the first room, with its bronze andirons, or fire-dogs, of great beauty, we must content ourselves on the present occasion. The chimney-piece, it will be seen, originally followed the shape of the hooded fire-places, of the mediæval period: it came from Padua, is attributed to one of the Lombardi, and was executed quite at the beginning of the sixteenth century. On the face

* Published by Chapman and Hall, London.

CARVED STONE CHIMNEY-PIECE, FROM THE SOULAGES COLLECTION.

Commencement of Sixteenth Century.

of the upper portion of it are represented a boar-hunt and other sports, set forth by a multitude of small figures and animals, admirably grouped. The expression given to some of the figures is excellent, and the whole is full of life and energy. The caryatidal figures which carry the hood are also admirably carved. The andirons of bronze, from the Palazzo Petinelli, at Padua, show the arms of the Barberigo family, and are of a very high class of art. The carved marriage coffer in this room, enriched with subjects from the history of David, and the carved bellows hanging near the chimney-piece, should not be overlooked: but to these and other works in this collection we shall find an opportunity to return.

ARCHITECTURAL EDUCATION.

The following memorial has been addressed to the Council of the Royal Institute of British Architects:—

Gentlemen,—The proceedings of the Institute during the last few months, with reference to certain propositions bearing upon the question of our professional education, seem to warrant the belief that the time has now arrived when this question itself, in its simplicity, may be pressed upon your attention, as the most vital consideration of our policy and the root of all reform.

It is in pursuance of a natural law that a profession like ours comes to establish the organization of a guild. It is no less a rule, that in course of time the attention of each a guild becomes fixed upon one object as in a manner the primary one of all,—the essence of the craft, and the foundation of its honour,—namely, the education of its youth. And in an age when a scientific system of tuition has become the recognised basis of all progress and power, this process of events must only be the more inevitably certain.

The present generation has beheld the guild of architects gradually consolidated in the form of the Institute. As a profession also, we have meanwhile increased almost unprecedentedly in numbers and influence. The association of architecture with the delinentive arts in the Royal Academy of George the Third, we have seen gradually undermined as a merely traditional and unsubstantial connection. We have established an annual Exposition of our own, already of singular promise. Even in emulation with our brethren of foreign countries, we have met with that unexpected success which is the index of extraordinary latent power.

But the more remarkable our progress, the more pressing does one question become. What of the education of this imposing profession? What is to be said of the basis of solid knowledge, without which all this display of energy is but matter of anxiety rather than of triumph?

The Institute may have done much for the advancement of learned research, but has it done anything for the establishment of simple education?

The absolute need of thorough systematic instruction for any vocation of skill in the present scientific age, is to be assumed as an axiomatic principle.

The striking absence of tuition of this kind in our profession is too well known to be matter of argument.

The valuable lectures of University College are, no doubt, paving the way for a better system, but is it impossible for this description of education to emanate from the head-quarters of the profession itself?

The object of the present memorial is to beg that the attention of the Institute and the profession generally may be earnestly turned to this question.

Lest the appeal should fail for want of a definite proposal, I venture to suggest a mode of proceeding in the appended memorandum. I hope the wisdom and experience of the Institute, and the solicitude of the profession at large, may thus be, at least, directed to the immediate discussion of the important subject involved.

This duty ought no longer to be delayed: it is only to be feared that it has been too long delayed already.

ROBERT KERR.

Memorandum of the Proposal above referred to.

The range of essential study for the architect may perhaps be set forth as follows:—

1. Natural Philosophy; or the abstract sciences involved in building.
2. Building; or the science of the operations of the builder.
3. Plan; or the arrangement of buildings and their appliances.
4. Architectural Design; or the Fine Art; historically and critically examined.

Drawing (to be more elaborately acquired) and Estimating would probably complete the scheme. Simple Mathematics ought to be a preliminary.

Presuming the establishment of professorships of these several branches to be deemed premature, and the alternative adopted of prescribing a course of private reading, the council might draw up a list of books, which, in their judgment, would convey a complete system of education.

Those who, upon examination, prove themselves perfect in the prescribed course of study, and otherwise competent, as may be laid down, might be acknowledged as members of the Institute by the title of Graduates, to rank as Fellows when of seven years' practice.

With regard to the pecuniary charge for membership of any public guild, this is properly a tax to meet the expenses of maintenance. Any demand beyond a fair share of such expenses ought only to be made to meet particular circumstances. If the subscription of Graduates, therefore, were reduced to this rate, while other members continued to contribute as at present, this might serve as the least invidious encouragement to Graduates, and without creating difficulties in the way of others.

CHURCH-BUILDING NEWS.

Ipswich.—The new church at "California" is now progressing. The roof, which has undergone a complete alteration and has been strengthened, is nearly covered in, and the buttresses have been so altered that additional security has been given to the fabric.

Oxford.—The chapel of Balliol College, the rebuilding of which was commenced in the Easter vacation, is now complete, with the exception of the roof. The new chapel possesses features new to Oxford, being built in alternate courses of red and white stone, the proportion of the red to the white gradually augmenting as the building rises.——The chief corner stone of the new chapel of Exeter College was laid on 29th ult. The stone was in the first course of the Bath stone plinth, and distinguished by three Maltese crosses inclosed in circles, symbolising the Holy Trinity, and placed at the south-east corner of the sanctuary, at the commencement of the polygonal apse. Mr. Symm is the builder, Mr. Buckeridge the assistant architect, and Mr. Scott the architect. The style is Geometrical Decorated; the plan, a parallelogram, with an apsidal termination, divided into ante-chapel, chapel, and sacrarium. The entire length from east to west is 72 feet, breadth, 30 feet; and height to external ridge, 50 feet. The turret for the bell is to be of oak, covered with a lead spire; the height to the top of which is 130 feet. The whole of the interior is to be groined with stone. The edifice will form the whole of the south side of the large quadrangle, occupying the site of the former chapel and rector's lodgings.

Brentwood.—The reopening of Brentwood Church, after its enlargement, took place on the 4th inst. The additions consist of a chancel, 37 feet by 18 feet 6 inches, with transeptal aisles, arranged with cross gables. All the piers, arches, dressings of the windows and other parts, are of Bath stone; whilst the facing of the external walls is of Kentish rag. The roofs are designed with reference to sound, and present vaulted and boarded surfaces between the timbers, which are wrought. The chancel roof is decorated in colour, by Mr. Castell, of London, having over the altar the four Evangelists. Messrs. Ward have fixed a three-light east window, as a memorial by the incumbent to his father, the late Sir John English; and the two easternmost windows of the aisles are also filled with painted glass. The east window contains groups from the history of our Lord, whilst the other window contains canopied figures of St. Luke and St. John. The architect employed on the enlargement was Mr. Joseph Clarke. The carving throughout has been done under the direction of the architect, by Mr. Daymond; and the whole of the works have been carried out by the contractor, Mr. John Hammond, of Great Warley.

Maidstone.—At a public meeting of the working classes and others, recently held at Maidstone, it was unanimously resolved to support the movement for the erection of a new church in Stone-street of that town. A design had been prepared by Mr. Whichcord, architect. Upwards of 2,100*l.* have already been subscribed.

Wimborne.—The reseating and heating of the Minster are about to be carried into effect.

King's Norton.—The repairs or restorations of the church are nearly completed, and the edifice was reopened for service on Sunday before last. A new stone pulpit, new oak reading-desk, and a lectern have been provided. The pillars and arches are all scraped, and the south aisle has all its windows fitted with new mullions and tracery, and scriptural subjects in stained glass. The porch has had the ceiling removed and the timber stained, exposing a good old oak roof, the tie beam of which has the date 1659. The stonework has been executed by Messrs. Bennett, of Birmingham; the glazing by Mr. G. B. Newbould, also of Birmingham; and the woodwork by Mr. Isaac Clulee, King's Norton.

Shrewsbury.—A new general cemetery for the Shrewsbury parishes and Meole Brace was formally consecrated by the Bishop of Hereford, on Tuesday in week before last. The cemetery is situated on an elevation about a mile from the centre of the town, and embraces an area of twenty acres. The situation is described as a fine one, and the soil and understrata dry. The new buildings will form a group, comprising two chapels, two vestries, a double corridor or cloister, surrounding a small quadrangle, a lych or entrance gatehouse, and, right and left, the officers' houses and the board-rooms. In the centre will be a tower and spire, 130 feet high. These buildings, &c. are situated at the angle nearest the town, and are on the highest portion of ground. The chapel is 45 feet 6 inches long, by 20 feet wide, with south aisle, 34 feet by 9 feet 6 inches, and, under the tower, a space appropriated for a vestry, opening into the church, 14 feet by 10 feet. The east end has a five-light traceried window. The aisle and clerestory windows are two-lights each, traceried. The interior of the chapel is of dressed white freestone. The roof is lofty, and timbered in deal and oak. The windows are glazed in tinted glass, to be gradually substituted by memorials in colour. The floor is of plain quarries: the benches, capable of holding from seventy to eighty people, are plain deal. Under the chapel is a vaulted crypt, entered from the outside. The Dissenters' chapel, although adjoining the Episcopal, is in all respects distinct, though the same in construction: it is 34 feet long, by 20 feet wide, with a south aisle of a single bay and vestry. This chapel is not yet completed. On the north side, and opening to the church by a lofty arch, is the tower, forming the centre of the group of buildings, and now nearly 60 feet high, upon which there is to be a spire. The lych-gate house is to be within 34 feet long, by 15 feet wide, with arched openings and doors at each end, sufficiently high to take a hearse: on the side towards, and communicating with, the corridors are three arches on octagonal pillars, all of dressed white stone: the outer wall has traceried and glazed windows. The roof is to be open timber work and tiles; the floor of blue bricks, with stone kerbs or rails for the carriage way. The corridors are also of dressed white stone, in and out, and form three sides of a square, 62 feet wide, by 72 feet deep. The passage way is about 10 feet wide, opening upon a small centre quadrangle by an arcade: the roof is of open timber and slated. On the right and left of the entrance, and communicating with the corridors, are the officers' houses and board-room, yet unfinished. The style is Perpendicular, and the construction of the walls throughout is of stone. The Redhill quarries have furnished the materials for the foundation and interior of the tower walls, and Grinshill the facings and dressed work. The design and superintendence of the whole of the works on the grounds and erections are by Mr. S. Pountney Smith, of Shrewsbury. Mr. G. Garratt is clerk of the works, and Mr. Owen superintendent of the grounds. Messrs. Groves have constructed the boundary walls. Messrs. Watkin, Parker, and Phillips, have executed the ground work and walks; and Messrs. James Dickson and Son, of Chester, have furnished the plants. Mr. Treasure, of Newport, is now the contractor for the buildings. The works are to be finished by April or May next.

Barrow.—A small painted glass window, the work of Mr. David Evans, of Shrewsbury, has recently been placed in Barrow Church, near Wenlock. A brass tablet underneath the window states that this window was inserted by George Weld Lord Forester, in memory of Elizabeth Lightband, and in grateful acknowledgment of her faithful and valuable services as housekeeper at Willey-park during a period of thirty-two years.

Rugby.—On Sunday before last, the Rugby School Chapel caught fire in consequence of the

overheating of the flues. On the floor being removed, it was discovered that the woodwork beneath had been smouldering for some considerable time. The fire, which was lighted on Friday, must (from the appearance of the charred wood) have immediately ignited the woodwork, but the stoker, fortunately, neglecting his duty, the fire became extinguished, or the calamity would, in all probability, have occurred in the night. The stained-glass window, in memory of the Rugbeans who fell in the late war, being in immediate proximity to the spot where the fire occurred, would doubtless have been destroyed.

West Derby.—The chancel-window of the new church of St. Mary, representing six principal subjects from the life of Christ, in medallions, upon mosaic diaper grounds, with borders of the Early Decorated period, was the gift of Mrs. Thornton; designed and executed by Messrs. Pilkington, of St. Helens.

PROVINCIAL NEWS.

Kidmore End, Caversham.—The new school-room at Kidmore End, in the parish of Caversham, was opened on Saturday before last, by the Bishop of Oxford. The new school-room is from a design by Mr. Arthur Billing, of London, architect. Mr. J. Dormer, of Caversham, was the builder.

Portsmouth.—The new water company have made arrangements for the purchase of the Farlington old water-works, at 42,000*l.* Most of the shares of the new company have been appropriated.

Cardiff.—On Saturday before last, just after the workmen had left off work, at a house in Bute-road, it fell down, and was so completely destroyed, that not one stone remained upon another in its proper position. All the joists and rafters, and two ladders, stood on their ends in the midst of the heap of ruins. The foundation of the adjoining house also gave way, and the building opened from bottom to top, so that it stands in the greatest jeopardy. The house belonged to a mason, and the adjoining one was to be taken down. The houses had been built on a spot formerly called the Brickyard-pill, which was a few years ago a deep pool of water.——A serious accident from the fall of a new parapet, in Bute-road, happened on the same day, to a man while plastering it.——We are asked to state, that the design of the Cardiff Post-office, is by Messrs. Prichard and Seddon, of Cardiff and Llandaff, not by *Mr. John Seddon.* The building is not "*Byzantine*," it is said, "but simply commonsense architecture of brickwork."

Kerry. — A correspondent of the *Shrewsbury Chronicle* calls the attention of the the authorities to the sanitary condition of this village. An amount of filth which would be a disgrace to be seen anywhere, it is said, is left to accumulate in front of the doors, consequently scarlatina, in its foulest form, has been engendered, and has affected with unusual severity all ages and conditions, and left them in some instances in a most deplorable state.

Sheffield.—The opening of the Exchange and News-room here took place on Tuesday in last week. The building has been erected, from designs by Messrs. Weightman, Hadfield, and Goldie, by the Duke of Norfolk, and terminates the pile of buildings lately completed for the butchers'-and poulterers' market, occupying the façade towards the old Haymarket. The Exchange-room occupies the first floor, and is approached by a flight of steps, 5 feet 6 inches broad, inclosed after the manner practised in Italy, having a domical raking ceiling. The entrance vestibule is laid with Minton's tiles. The room is entered by folding-doors. Its dimensions are 57 feet long, 30 feet wide, and 20 feet high. It is lighted by six windows of plate-glass. The internal arrangements are simple. At the end of the room opposite the entrance is a small apartment fitted up by the Telegraph Company, in which the subscribers may write and despatch their messages to all parts of the globe. The fittings were done by Messrs. Drury and Smith, of Sheffield. The exterior of the building is Darley Dale stone. The façade consists of a centre and two receding wings. The former has an order of Roman Doric pilasters, with entablature proper: the windows have architrave mouldings and cornices. The whole rests on an arcade of three openings. In the wings are the lower entrances to the markets, and in the circular corners are the entrances—the one to the Exchange in King-street end, and the Telegraph Company's in the old Fruit Market. Over the market entrances are two niches, with figures carved in stone by Messrs. Lane and Lewis, of Birmingham, representing Mercury and Vulcan. The builders were Messrs. Craven and Fewsdale, Messrs. Drury and Smith, Messrs. J. and C. Ellis, and Messrs. Wilson and Co. Clerk of works, Mr. William Abbey.

Shields.—At a meeting of the River Tyne Commissioners, on the 13th ult. says the *Shields Gazette*, an application was made by the Shipowners' Society of South Shields for a copy of the contract with Mr. Lawton for the erection of the Tyne piers, and of the plans of the works now in progress. The progress the contractor, it continues, was making was generally felt to be unsatisfactory, and as the shipowners of this port contribute largely to the pier fund, it was thought by the society to be no unreasonable request to be informed on what terms the commissioners had made their contract, and what were the nature of the works to be erected. The commissioners declined to give a copy of the contract. The following abstract is then given to shew the amount paid by the shipowners towards the building of the piers, and other particulars: —

Total piers' dues collected from 17th June, 1856, to 12th Nov. 1856	£18,933	16	11
Interest on same	1,730	18	5
Total.....	£50,664	15	4

EXPENDED.

Trow Rock purchase.....	£6,000	0	0
Railway on Herd Sand.....	7,318	11	5
Mr. Layton on account of contract	11,000	0	0
Expenses of Act of Parliament, engineering expenses, collecting dues, paid for weighbridge, and miscellaneous	6,303	12	1
Cash in bank	20,042	11	10
Total	£50,664	15	4

THE CONNECTION OF THE METROPOLITAN RAILWAYS.

THE travelling public still suffering from the want of connection between the various railways which have a terminus in London, it is somewhat surprising that companies have not directed their attention to the large open space of ground on each side of Victoria-street or New Farringdon-street, from Holborn to Clerkenwell, as a site for a grand central terminus: no such opportunity is likely to occur again of obtaining so large a space of uncovered ground in so central a position in London. The access to Surrey is wide and good by Farringdon-street and Blackfriars-bridge. The Holborn viaduct should be part of the plan, and would form a good access from the City and West-end, and by King's-cross and the New-road, the way to Regent's-park and Bayswater is clear and open. The ground might be obtained at once by treaty with the City without an Act of Parliament.

THE ARCHITECTURAL EXHIBITION.

THE opening *Conversazione* of the Architectural Exhibition will be held on Tuesday evening, the 16th, in the Suffolk-street Galleries, and will, doubtless, be well attended. Earl de Grey will preside, if well enough. The first lecture will be given by Professor Donaldson, on January 6; his subject being "The Architectural Magnificence of Rome." The Rev. Mr. Petit will lecture on the Tuesday following. We would point out that by an almost nominal subscription (2s. 6d.), admission may be had to a very promising series of lectures, and to the Exhibition for the whole season.

Through the success which attended the Exhibition last year, the committee were able to pay off part of the outstanding debt to the treasurer; and if they receive proper support this year, support for which an ample return will be made to subscribers, apart from the satisfaction of contributing materially to the advancement of architectural knowledge, the debt will be cleared off, and the Institution will be placed on a sound and permanent footing. Every architect and lover of architecture should feel it his duty to move personally in the matter. It is of no use saying, "I am anxious for its success;" without an effort to ensure it.

SAXELBY CHURCH IMPROVED.

THIS pretty little spire church, situated about five miles on the north-west of Melton Mowbray, is now undergoing a complete restoration. The nave roof has been replaced with a regular *tie-beam* affair, slated and plain ridge. The tower has been partially cut back, and the *worst* places made good with *Roman cement dusted with sand.* The windows, mouldings, wreathings, and plinths, which are of Ketton stone, and covered with lichen, have been most religiously despoiled of it by dry rubbing, and the crocketed spire is threatened with the same process whenever weather will permit. The old porch has been rebuilt of the Upper Wurtnaby *marl* stone (celebrated for its *lasting* qualities), laid "random-wise," and relieved with minute Bath-stone dressings. The chancel is being rebuilt in the same *style.* The whole of this interesting work is being carried on by a gentleman who is both architect and builder. Lord Aylesford is patron of the living, and owns the whole of the land in the parish, and is a large contributor towards the rebuilding of the church. IMPROPRIATOR.

THE METROPOLITAN DRAINAGE QUESTION AND THE BOARD OF WORKS.

A DEPUTATION from the Metropolitan Board of Works, headed by the chairman, waited on the Chancellor of the Exchequer on Thursday in last week, on the subject of the borrowing powers of the Board. They asked the Government to aid them in a loan of 4,000,000*l.* for the purpose of effecting the main drainage and some improvements necessary to the health and comfort of the inhabitants, including the formation of some of those parks and open spaces for which we have so long contended, and also the opening of the new street in Southwark, the repayment of debts incurred by the late commission, &c. The loan it was proposed should be advanced at a rate of not less than 1,000,000*l.* per annum, and the repayment extended over a period of fifty years, on the security of the rateable value of the property of the metropolitan area, now estimated at 11,150,000*l.* and yielding now from three to four hundred thousand pounds a year. The Chancellor of the Exchequer, at the end of a long conversation, said that the Government had no power of contracting a loan without Parliamentary authority, and suggested that the best way to bring the matter to issue was for the Board to put their proposition in writing.

Another deputation as to the metropolitan drainage scheme was on the move at the end of last week,—in this instance from the Corporation of Gravesend and the parishioners of Erith, to the General Purposes Committee of the Court of Aldermen of the City of London, at Guildhall, on Saturday last. The deputation included the Mayor of Gravesend and the Chairman of the Gravesend Improvement Commission, Sir Culling Eardley, Mr. C. A. Smith, of Greenwich, Solicitor, and other gentlemen. The purpose in view was to confer with the City authorities, merchants, and others, as to the carrying of the London drainage down to the estuary of the Thames partly at the national expense, and as to a public meeting being held on the subject. Sir Culling Eardley was spokesman, and urged the agitation of the question in the City, the opening of the Guildhall to engineers who might wish to lecture on the subject, the duty of the City authorities, as conservators of the Thames, to protect the interests and the comfort and health of the residents on its banks, &c. Sir Culling represented that the scheme for disemboguing the whole of the concentrated sewage of the metropolis near Erith would be ruinous to the favourite resorts of the citizens down the river, even from the mere force of the public feeling against such a nuisance; that it was sufficient, in fact, to place the Thames under a sort of quarantine at foreign ports; that it would obstruct the navigation; that it would destroy the metropolitan market for fresh fish, which at present were brought up alive in well-boats, &c. &c. He had considered Sir Morton Peto's scheme, and was now much more favourably inclined towards it than he had been. Finally, Sir Culling incidentally expressed a hope that the Government would appoint a suitable

commission to rough-hew the subject before Parliament met, and that then it would be referred to a committee of the House of Commons.

Mr. Alderman Wire, the chairman of the committee, stated, in reply, that the City, as conservators of the Thames, were interested to see that in any plan for the purification of the Thames the health and comfort of the inhabitants on its banks were duly provided for, and that no obstruction be caused to the navigation; that the subject would receive the attention of the committee, and a communication would be made to the deputation thereon.

The main drainage scheme was again discussed at a meeting of the Metropolitan Board of Works on the 9th, and was adjourned till Tuesday next, when, as we understand, a fierce onslaught will be made on the present plan.

The new Street through Southwark.—The line proposed by the Board through Southwark is not popular, nor are we surprised. We must look to it next week.

CEMETERY COMPETITION.

Whatever punishment might be deemed due to "E. G. B." for his humorous poetry, on the terms proposed to architects by the Castleford Burial Board, architects generally are much obliged to him for the verses, and to the *Builder* for kindly circulating them. The immense waste of labour called for by the cemetery competitions, and the absolute throwing away of so many architects' time, has afforded much pleasure and amusement to Burial Boards, and it is only just to expect that there should be some inclination evinced to check the evil; some little retaliation offered,—some show that "Britons never will be slaves," unless under very peculiar circumstances.

The rank injustice of these competitions shows itself in this fact of frequent occurrence, viz. that the sober-minded judges of the designs, dazzled with the gay tints of the highly-finished sets of drawings, doubt, during their decisions, of the capacity of architects who get up such picturesque effects, to prepare simple sections and specifications. The consequence of this mistrust is, that after the Board have admired the landscape and perspectives awhile, the premium, three, or four, or five pounds, is paid, the unsuccessful designs are returned, and the Board apply to "our own" local architect for fresh plans, "for we shall be safe with him."

Meanwhile "our own architect" has been mentally taking his notes on the competition designs, and whatever pleasing feature is noticed in any one of the buildings, the Board "can of course have that" in the new design. It is pleasant to reflect that, in some recent competitions, three or four designs only were given in, and that the Boards chose the worst.

Archil.

SCHOOLS OF ART.

Burslem.—The annual meeting of the Burslem School took place on Wednesday in last week, the president, Mr. Child, M.P. in the chair. The local interest in the school appears to be sustained. An exhibition of student-works covered the walls of the Wesleyan Chapel School-room, in which the meeting was held. Mr. Child and Mr. Ricardo, M.P. addressed the meeting. In the report the committee congratulated the friends of the institution on the improvement made by the students during the year. A modelling-class had been established through the contribution of Mr. Child. The day-schools, participating in the advantages of the central school, continued to yield satisfactory evidence of steady advancement. After dwelling upon the necessity for a more suitable school-room, the report closed by setting forth the importance of maintaining the school in vigorous operation. From a statement of accounts, it appeared that Mr. Child had given a donation of 40*l.* and that the total income, including the subscriptions, 164*l.* 0s. 6d. and the students' fees, 62*l.* 9s. amounted to 276*l.* 9s. 6d. The expenditure amounted to 277*l.* 10s. 6d.

Swansea.—The annual meeting of the Swansea School was held in the Theatre of the Royal Institution of South Wales, on Tuesday in last week, the Mayor in the chair. In opening the proceedings, the Chairman said this was the first occasion of his being present at a meeting of the School of Art, and he regretted that it was so; but of late his sympathies had been much enlisted in favour of this institution, from facts that had come to his knowledge of the great benefit derived by persons who dated their present prosperous position from the time of their becoming pupils in the School of Art. He trusted that these facts would obtain publicity, and interest others in the prosperity of the school. The report (the fourth annual one) congratulated the meeting on the continued success of the school, although, from the withdrawal of two public classes, the Normal and the National Schools, to the former of which a private teacher had been appointed, there was a falling off in the number of pupils and the amount of receipts. There was an increase of subscriptions. At the last exhibition more than 1,000 persons had attended, and great interest was taken in it by all classes. The number of students receiving instructions in art during the last year in Swansea, including the public schools, had been nearly 500. The master, Mr. Hammerton, addressed the meeting, as did various other gentlemen, and the prizes were then as usual distributed.

Carlisle.—The annual meeting of the subscribers to the Carlisle School of Art was held in the Town-Hall, on Monday before last. The gentlemen present, says the *Carlisle Journal*, were Mr. Irving, Mr. I. Cartmell, Mr. Hannah, Mr. Jas. Steel, Mr. D. M'Alpin (hon. secretary), and Mr. Pozzi (master). Mr. Irving was called to the chair, but the Mayor afterwards entered, and occupied it. The report (the second annual one) stated that Mr. Brook had resigned his appointment as master, and the Department of Science and Art had recommended Mr. William Pozzi, who was accordingly appointed to the vacant office. The income had exceeded the current expenditure, and, therefore, the school had been self-supporting. There was a debt, however, amounting to 56*l.* 2s. 4d. for fitting up and furnishing. The committee urgently appealed to the public for funds to pay it. The ladies' morning-class had improved to some extent, though still comparatively small. There were now 67 pupils receiving instruction at the Central School of Art, and 378 pupils were taught in the various public and private schools attended by the master. The year's revenue amounted to 75*l.*

COMPETITIONS.

Bristol Pauper Lunatic Asylum.—The committee of the "New Pauper Lunatic Asylum for Bristol" wind up their advertisement in the *Times* with the following (I think) novel condition:—"The committee do not bind themselves to accept the *best* or any plan of the said building." Now, as the generally accepted end of a competition is to arrive at the *best*, we can but admire the honesty and foresight of the committee, who, doubtless, have already settled who is to be the lucky man; and as ten to one he will be far from the best, they thus take all cause of growling from the disappointed competitors. As they never bound themselves to accept the best, so nobody can complain even if they do choose the worst. It is the refreshing candour of the advertisement that induced me to draw your attention to it.

THE NATIONAL COLLECTIONS.

We understand that Mr. Sheepshanks has presented to the nation the whole of his collection of paintings and drawings, for the purposes of public instruction in art. Mr. Sheepshanks considers that a crowded thoroughfare is not a suitable site for quietly studying works of art, and has stipulated that his collection must be kept in the neighbourhood of its present locality, at Kensington. Mr. Sheepshanks has signified his readiness to hand over immediately the whole of his collection, which is especially rich in the best works of Mulready, Landseer, and Leslie, and contains fine examples of the principal modern British painters in oil.

According to the belief of the *Globe*, a Royal Commission will shortly be issued, appointing Lord Broughton, the Dean of St. Paul's, Mr. R. Ford, Mr. Faraday, Mr. Cockerell, R.A. and Mr. George Richmond, to inquire into and determine the site of the new National Gallery, and to report on the desirableness of combining with it the Fine Art and Archæological collections of the British Museum.

THE ARCHITECTURAL ASSOCIATION.

At the Association, on the 28th of November, a paper on a proposed "Model Society of Architects," was read by Mr. William Young. The reader considered that though there were many architectural societies, or associations of gentlemen meeting for the discussion of architectural papers, there was not any society or association that could be satisfactorily termed "a model society of architects," by which he meant "a society of professed architects, associated in such a manner as to ensure, by some predetermined course of probation, the possession of a certain amount of professional skill by each and every one of its leading members; and of professional eminence openly recognised by the bestowal of honorary distinction, to be alone attained by their having passed with credit through some prescribed test of professional competency."

He wished the Society to set up some standard of professional competency, and to put before all who joined "a ladder of professional merit to climb."

"I suggest, then," said the reader, "that we publicly announce that from and after the close of this present session, the members of the Architectural Association, though each paying the same subscription, and each retaining the same privileges of free discussion, and equal eligibility to administrative office, shall be divided into Fellows, Graduates, and subscribers; that no one shall henceforth be elected an honorary member of the Association, on any pretence whatever; that amateurs as well as architects and students shall be admitted to equal membership—with this exception, that they and Fellows alone be permitted, on payment of 5*l.*, to compound for their annual subscription, on condition of their attending at least one yearly meeting of the Association, if resident within the metropolis, as now defined by our rules.

That Fellows shall consist of those members of the Association who shall be found to have attained thirteen, and Graduates shall consist of such as have attained six of the following points of distinction or professional competency,—that is to say:—

The creditable service of not less than three years as pupil to an architect.

The creditable service of five years as principal clerk to an architect.

The having officiated throughout as architect of any approved private edifice.

The having officiated throughout as clerk of works (under an architect) of any approved private edifice.

The having practised for three years as an architect or building surveyor.

The having officiated throughout a session as chairman of the Association's class of design.

The holding of the D. S. certificate of the Royal Institute of British Architects, &c.

Each of which items or points of professional competency shall be computed as one point towards the creation of a Fellow or Graduate."

He proposed further, that certain points of competency or distinction should be allowed to count as claims to a degree, repeated as often as they should have been conferred upon or have befallen the claimant.

THE COMPOSER OF "IMMANUEL."

We have pleasure in recording a graceful act on the part of the distinguished Orchestral Society of London, known as the "Amateurs." On the occasion of the rehearsal for the first concert of the present season, on the 28th ult. a silver inkstand was presented, by the members of the orchestra generally, to Mr. Henry Leslie, their conductor, as a small testimony of their sense of the eminent services he has rendered them.

We may be excused departing a little from the strict subject-matter of this Journal, to compliment one who has shown such unwearied devotion to a sister-art; and whose inspirations have already secured for him an elevated position amongst the great writers of the highest class of musical compositions.

From an amateur, Mr. Leslie has become an eminent artist, and his industry in promoting his favourite art amongst the instrumental and vocal performers of the metropolis is as remarkable as his own knowledge of it is profound.

Associated with Lord G. Fitzgerald, Mr. Jekyl, and Sir A. Macdonald, in the formation of the society some twelve years ago, Mr. Leslie has for ten years acted as honorary secretary to it, and for the last three years has filled the more important post of conductor, to the great satisfaction of the members, and with high credit to himself. The inkstand is an elegant production, from the manufactory of Messrs. Hunt and Roskill. It is of scroll pattern, tetragon in form, and Cinque-cento in style, and in design and sentiment symbolical of its purpose. A beautiful figure, allegorical of music, stands on the base of a pedestal, representing the altar of fame, upon which it leans. The base presents four medallions, inscribed with the names of the four great departed writers of symphony,—Beethoven, Mozart, Haydn, and Mendelsohn; and around the altar is entwined a laurel, whose leaves bear the names of the greatest composers, past and present. At the feet of the statue lies an open volume, inscribed with the titles of the chief compositions of the recipient himself. Open music-books, supported by bay-leaves, form the stoppers of the ink-glasses; and the whole composition is creditable to the designer, Mr. Brown.

An address by Mr. Alfred Pollock, responded to by an appropriate answer by Mr. Leslie, expressive of kindly sentiments towards the society generally, terminated the proceedings.

Netley Abbey Ruins.—A correspondent of the *Hampshire Advertiser* complains of the wilful destruction of Netley Abbey. He says that the characteristic mouldings of the arches, and the very capitals of the pillars, are being deliberately broken off and carried away.

Notices of Books.

Memorials of the Lineage, early Life, Education, and Development of the Genius of James Watt. By the late Mr. GEORGE WILLIAMSON. Edited by his SON; and printed for the Watt Club, Greenock, by Thomas Constable, Printer to her Majesty in Scotland. 1856.

THIS is a handsome volume, containing much interesting matter on the subject of which it treats. The volume is graced by an engraved copy of the portrait of Watt in the possession of Mr. John Gray, of Greenock; and as a frontispiece to the second part, which treats more especially of the great inventor himself, as the first does of his forefathers and his native town, there is another portrait, engraved from the original in the possession of Mr. Robert Napier, in which, though not taken in early life, the soft, full eye and the sensitive mouth still speak of the shy and retiring boy and the mother's favourite in a way which testifies that all the hard rubs, the worldly strife, and the ultimate prosperity of the man, did not efface these prominent features in the youthful character. Genius to the last is ever full of youthful freshness of character, and here this is well displayed. There is an engraved portrait of another, though less distinguished man in another part of the volume, namely, Papin, with a likeness too of his celebrated "digester;" and of still greater interest is the lithograph from a photograph of the veritable model of Newcomen's engine in the Hunterian Museum of Glasgow, on which the "queer lad" Watt first tried his "'prentice hand" at engine-work. As we happen to have made allusion to the illustrations in this volume before turning to the volume itself, we may here add that there are various others, including the Clyde map, by Watt's uncle, John Watt; a portrait of the *Comet*, the *first* British steamer; another of the *Atrato*, one of the *last* and most splendid of British steamers to contrast with the *Comet*; both having been brought into existence on the Clyde near Watt's own native town; also an elevation of a proposed cosmopolitan testimonial to Watt, to be erected at Greenock, in the Italian Campanile style; and though last not least in interest, various "specimens of handwriting," or at least *fac similes* of the plain, honest "fist" of the subject of the memoir and of the autographs of others of the Watt family.

It appears from the present publication to be now a settled point that James Watt was born, not at Crawfordsdyke, near Greenock (and indeed in the parish itself), but in the high-street of Greenock, and, singular to say, in a house which stood on the very site where the Watt Club itself, all unconscious of the coincidence, chose to fix its establishment. The discovery looks so like a "thought" that has been fathered by a "wish," that it is but fair to state that strong evidence is adduced to prove that the fact is as stated. James Watt himself had more than once pointed out the old house while it stood as the place of his nativity, and the only wonder is that members of the Watt Club were not aware of this when they set themselves down upon the spot: perhaps even before the proofs were traced out there had been a glimmering "thought" after all that they had settled on sacred ground.

Having, not long since, in noticing Mr. Muirhead's excellent book on Watt, taken the opportunity of reviewing the Life of Watt in a pretty full outline sketch, we shall not return to the subject on the present occasion, although there is much in this volume that is worthy of fresh notice. We may remark, however, before laying down the pen, that the present work contains not a little that is new as to the Watt family and their position in Greenock during the last century. Watt's father was a highly respected magistrate of the town. Originally, he was a builder and contractor, though he served his apprenticeship to a shipwright. Ultimately he became a merchant and shipowner, and, in fact, was elected chief magistrate, although he declined the office. Watt's mother merits reverential notice, as, like the mothers of most men of genius, she was one of a very superior character, and a fine woman, even in personal carriage and appearance. Much of Watt's future career was, no doubt, due to the fostering care and conduct of his mother, to whom he ever turned in the midst of those rebuffs which he perpetually met with at school from those who felt instinctively that he was not fitted to be a playmate of theirs, although, in fact, this did not arise from any unusual brightness of intellect at that time, but rather from his shy and soft disposition. The father of Watt's father was "a mathematician," who taught navigation to the sailors of the thriving port, whose improvement, by the bye, to a great extent, is ascribed to the public-spirited exertions of Watt's own father.

One of the concluding chapters of the "Memorials" contains an interesting account of the origin and history of steam navigation in the Clyde. There were several curious coincidences in the history of Watt to which we pointed attention on a previous occasion; but perhaps there was none more interesting than the fact that while this bright star in the scientific firmament was sinking to his rest, another luminary of a different order, but the first fruits of his inventive genius in its dominion over the waves, arose in the very spot whence he himself had taken his rise: this "luminary" was *The Comet*, the first of British steamers, whose engine was partly made in Greenock itself, and the vessel it was destined for was built at Port Glasgow, close at hand. The coincidence is all the more notable that Watt himself took no part in Bell's invention.

Illustrated Books.—The Campaign in the Crimea: a Historical Sketch. By GEORGE BRACKENBURY, late Secretary at Kadikoi to the Honorary Agents of the Crimean Army Fund. Second series: illustrated by forty plates, from drawings taken on the spot, by WILLIAM SIMPSON. London: Colnaghi, Pall-mall; and Longman and Co. Paternoster-row. 1856.

Private letters testify to the truthfulness of the numerous double-tinted plates of which this tasteful volume and the previous one mainly consist. Together with the explanative letter-press and sketch of the campaign, they form an interesting historical record of what at present seems to stand out as a great and separate war—a short but sharp conflict, which it is to be hoped is really at an end, and is not destined to resume its dreadful course either in its old aspect or in any other. Peace being now restored, the present volume does not come upon us with quite the vivid interest of its predecessor; but though its reception may not be so impressive, it forms a very desirable and valuable complement. Most of the plates on this occasion illustrate either the events of the summer of 1855, or the interior of Sebastopol and its defences.

Orr's Circle of the Industrial Arts.—Vol. I. *The useful Metals and their Alloys.*—Part I. Orr and Co. Amen-corner, Paternoster-row.

THIS new series is intended to form a companion to the very useful and valuable series of *Orr's Circle of the Sciences*, and will embody, as it were, the principles of science in their practical application to the various industrial arts. As in the previous series, various able authors have been engaged to prepare separate articles or treatises on the respective subjects with which they are familiar, each volume even comprising several of such treatises. The shilling part now out is the first of a volume made up of such papers on the useful metals and their alloys, and its value may be anticipated from the fact of such names as Scoffern, Truran, and Fairbairn being amongst those of the authors. A space between page 80 and page 145, we observe, is left in the meantime unoccupied, for an article on Mining and Mining Jurisprudence, by a Government inspector of mines, and which is to appear in the January part. In the outset of the present part, Mr. Scoffern alludes hopefully to Mr. Bessemer's process: "A more beautiful and more immediate application of chemical knowledge to improvement of the iron manufacture," he remarks, and whatever be its upshot, "it is impossible to conceive," and he generously considers it but common justice to give Mr. Bessemer's efforts a cheering and helping word of congratulation and provisional recognition. In this sentiment we concur, all the more heartily that it is in complete harmony with what we have already said on the subject.

Miscellanea.

LUIGI CANINA.—The last months of the life of this deserving *savant* form a string of extraordinary events. His reluctance to being portrayed or otherwise figured, and his charm-making against the *mal' occhio*, were previously mentioned in these pages. Later accounts from Rome assert that Canina died by *self-poisoning*. Being seized by some violent pains, he took *six* (!) of the pills which he had received in London as a patent medicine against that sort of complaint, without consulting a physician at all. Soon afterwards he was seized with still more severe pains, which terminated his life. The pills when examined are said to have been found to contain strychnine.

PROPOSED GREAT HANDEL FESTIVAL IN THE CRYSTAL PALACE.—We are told that the arrangements for this enormous musical exhibition, contemplated in May next, of 2,300 performers, progress in a satisfactory manner. The interest and enthusiasm excited in musical circles are considerable. The Committee of the Sacred Harmonic Society have already received offers of assistance from nearly 3,000 persons desirous of taking part in this great celebration, a number which does not include the Society's own orchestra of 700 performers, nor those members of the musical profession whose position precludes the necessity of applications for engagements. The provincial towns have come forward in a very unanimous manner. Birmingham offers a choir of 400 voices. Under the organisation of Mr. Oliver Mason, the able manager of the Birmingham Festivals, it is suggested that rehearsals should at once commence. Bradford has also a large force of picked Yorkshire vocalists at disposal; while from Liverpool, Leeds, Manchester, York, Hereford, Worcester, Gloucester, Norwich, Keighly, Huddersfield, Lincoln, Exeter, Peterborough, Oxford, Cambridge, Canterbury, Brighton, Leicester, Nottingham, and many other towns, applications to take part continue to be received; and even from places as remote as Dublin, Edinburgh, and Belfast, communications have been made of the desire to be associated in this immense musical gathering. The arrangement of the building to enable all *to hear* will need much consideration.

SOCIETY OF ANTIQUARIES, NEWCASTLE-UPON-TYNE.—The December meeting of this society was held on Wednesday in last week, when there was a numerous attendance of members. Dr. Charlton read a note from Mr. Rippon, of Waterville, announcing the discovery of buried remains of ancient structures in Silloth Bay, where marine works are now in progress. Mr. E. Spoor produced a letter from Mr. Howard, of Blackheath, communicating sketches of marks which he had observed on the oak sides of the Lollards' prison in Lambeth Palace, when visiting that archiepiscopal mansion with the Surrey Archæological Society. One or two other letters were read. Mr. John Fenwick, on behalf of Mr. Grey, of Dilston, presented to the society an inscribed stone, recently found in the Roman station at Corbridge — the lettering sharp and distinct. Dr. Charlton read a letter addressed by Mr. T. Cape, of Bridlington, to Mr. W. H. Brockett, of Gateshead, accompanying a rubbing from the monument of Sir Marmaduke Constable, in Flamborough church, taken for the society in Newcastle. On a plate of *copper*, and in black letter, cut in relief, are lines, of which the *Gateshead Observer*, in its report of this meeting, gives a copy. Mr. Cape, describing some of the more interesting features of the church in which Sir Marmaduke lies buried, mentions the curious fact that, suspended over the rood-loft by a thread, is (November 27) a remnant of a bygone usage—two pieces of white paper, cut in the form of a pair of gloves. Formerly, such emblems of purity were hung over the seat where a deceased spinster had been wont to sit. Dr. Charlton read a short paper on the Boss of a shield, found thirty years ago at Matfen, by some labourers who were making drains.

THAMES TUNNEL.—Amount of tolls in the week ending 6th December—23,038 passengers passed, and paid 95*l.* 19*s.* 10*d.*

ARCHITECTURAL INSTITUTE OF SCOTLAND.—The annual general meeting and *conversazione* of the Architectural Institute of Scotland was held on Monday, the 1st inst. in the George-street Hall, Edinburgh. The attendance of members and guests was large, the hall being well filled. The walls of the room were covered with an extensive collection of photographs and architectural engravings. The photographs which attracted particular attention were three of a size the largest hitherto attempted in Scotland, by Mr. Kibble, of Glasgow. The Lord Provost was called to the chair, and Lord Neaves delivered the introductory address of the session.

The Coventry Water Supply.—The Corporation of Coventry, in July last, fearing the supply of water would not be sufficient for the inhabitants, after an interview with Mr. Hawksley, the engineer, determined to sink their artesian wells lower than they were. The first wells were three in number, of 3½ inches in diameter: they went to the depth of 113 feet. Besides these three wells, there were two springs turned in; but the supply was barely sufficient. For the enlargement of the wells an engagement was entered into with Mr. Docwra, of Waltham-cross, Essex, who, with eight men, commenced boring on the 12th of August. The diameter of the bore was increased from 3½ inches to 9 inches. For several weeks the strata they passed through were chiefly marl and sandstone: at the depth of 170 feet they came to a bed of porous sandstone, which was 14 feet thick; and, after passing this, there was a great increase of water. For the first 120 feet the bore was 9 inches, after that reduced to 7 inches, finally to 6 inches. The supply now, according to the local *Herald*, amounts to nearly 5,000,000 gallons per week, and there is no fear of any want of water. It has been determined not to enlarge or sink the other two artesian wells.

St. Mary's, Spring-grove.—This church was consecrated on Wednesday in last week by the Bishop of London. The estate of Spring-grove, which is the property of Mr. H. D. Davis, has recently been laid out for the erection of first-class mansions, with which it is now thickly studded; and the proprietor has now, at his own expense, erected this new edifice.

Carved Pulpit for St. Anne's, Limehouse.—An elaborately-carved pulpit, in oak, has been completed by Mr. W. G. Rogers, for the church of St. Anne's, Limehouse, from the design of Mr. A. W. Blomfield, architect. It will be fixed by the 30th inst. The working drawings were made by Mr. Harry Rogers.

The Government Wellington Memorial.—The Sculptors' Institute, having caused certain questions to be put to the Chief Commissioner of Works, in respect to the competition for this memorial, the following replies have been given:—"1st. The directions as to size that the model shall bear in proportion to the monument, are set forth most *clearly in the specifications, and competitors must not depart from them*. 2ndly. (The question being, 'Are the designs to be publicly exhibited prior to the decision of the judges?') No further information can be given on the subject of your second inquiry than that afforded by the specifications. 3rdly. The names of the judges cannot be given, as the selection has not yet been made, and will not be made for some time. 4thly. There is nothing in the specifications to bind the Government to employ the author of the best design to execute the work, and no positive obligation can be incurred." The object of the Sculptors' Institute was to promote the confidence of competitors, and the success of the competition, by a mutual understanding on these points.

The Companion to the Almanack.—Sir: As you have given a hint as to the name of the writer of one of the articles in "The Companion to the Almanack for 1857;" and as the authorship of the ordinary article on "Architecture and Public Improvements" during the last three or four years has become known; I should be obliged if you would allow me the use of your pages, to express—especially to those to whom I may have been indebted for information—my very great regret and annoyance at the numerous errors of the press, and the omissions and misstatements, which were not mine, and which there are in both the articles. Not only were no proofs sent for correction—which in the case of the article last referred to (as a general review, necessarily *written* late in the year, and with little self-allowance of time) might be peculiarly required; but elaborate alterations, and unaccountable perversions from the MS. of the article were made, which would go to impute to me culpable ignorance, or very insufficient regard for the merits and the feelings of individual members of that profession which I have humbly endeavoured, through the medium of a work of large circulation, and through many other channels, in some degree to aid in bringing into a right position with the public; and as I need hardly say to those who know me well, at least by the devotion of great pains and exertion. I should wish also,—as you have not distinguished the errors of the "Almanack" from those in the "Companion," to state that I have had no connection with the former, further than having occasionally pointed out errors such as you refer to, but which—or some of them—have, I fear, been repeated in some successive years. At present, with thanks for the opinions which you have kindly expressed, I beg to subscribe myself, sir, your obedient servant,

The Writer of the Articles on "Architecture, and Public Improvements," in the "Companion to the Almanack" for the years 1854-5-6 and 7.

The Proposed Government Offices.—A correspondent, who signs himself "One of the Million," urges us to protest against the proposed under-ground stories, or basement apartments, for printers, compositors, &c. and even for residents, in the Foreign-office and the War-office, to be forthwith erected. "In a hygienic point of view," he remarks, "a basement under the soil is a fearful mistake, where there can be no proper ventilation, where the drainage must be faulty, and where the unfortunate printers and compositors, from the dulness of our atmosphere, rendered more dull from the position of this site, would have to work by artificial light on a great many days in the year, breathing a foul and contaminated air; for it is well known that the parts chosen for this great scheme are on a very low level with reference to the Thames, and that, consequently, the drainage can be anything but perfect." On the other hand, by avoiding a subsoil basement-story for human *burial*, the effect of the buildings would be improved by adding to their elevation, a great fault of our public structures being their lowness of elevation. The Government, it is remarked, ought not to follow mere routine in a matter of this sort, nor to thrust even the humblest citizen underground so long as the lungs are active.

Oxford Architectural Society.—At the last meeting of this society for this term, held on Wednesday, 3rd inst. the Rev. Dr. Bloxam, president, in the chair, Mr. J. M. Derick read a paper on the interesting Monastic Remains at Castle-Dermot, county Kildare. This town traces its origin as far back as A.D. 500, when St. Diarmit founded here an abbey of canons regular. The place was formerly called Disert-Dermot, and Tristel-Dermot, and lastly, Castle-Dermot, from a castle there erected. The only remains marking site of ancient buildings are a small round tower, a circular arch in a ruinous condition, and two ancient crosses. Castle-Dermot was the chief residence of the O'Tooles, from whom was descended the celebrated Archbishop of Dublin, St. Laurence O'Toole, so distinguished by his valour and patriotism during the invasion of Dublin by Strongbow.

The Rivington Pike Water at Liverpool.—The long expected Pike water, says the *Albion* of last week, has at length made its appearance at the threshold of Liverpool, and will ere long constitute the life-blood of the town. A few days ago the pipes along the whole line from Rivington to Prescot were charged with the full pressure, and the experiment was unattended with the slightest accident; and on Friday the Pike water was admitted into the pipes as far as the Old Swan, with an equally satisfactory result. It is understood that as soon as the Prescot reservoirs are full the water will be forwarded to Liverpool. This may, therefore, be expected daily. For the last ten months the Rivington and Anglezark catchment reservoirs have been full, and large quantities of water have occasionally passed over the bye-washes. These reservoirs have a water area of 450 acres, and they contain 2,800,000,000 gallons of water, exclusive of 200,000,000 gallons which will be contained in the Rakebrook and Roddlesworth Reservoirs; constituting in all a four months' supply to a population double that of Liverpool. The latter reservoir has been but recently commenced, the Water Committee having only effected the purchase of the land about six weeks ago. These works, which now literally swarm with men, will, it is believed, be completed in the course of a few months. Some portions of the land have cost the town 40,000*l.* more than they would have done had the scheme not been delayed by a powerful and inconsiderate opposition. The water-shed, in round numbers, is 10,000 acres: the rain falls upwards of 50 inches per annum; and the undertaking will be completed for about 600,000*l.* so that, after all that has been said about the cost of these works, they will be finished at a sum approaching nearer to the original estimate than works of similar magnitude and difficulty. The Kensington and Parkhill service reservoirs have been completed about two years. The Audley-street Reservoir (Everton) is also now nearly completed. A promenade for the public, protected by a parapetted railing, is being formed on the lawn over the arches. It is also under consideration whether a similar promenade shall be made on the Kensington Reservoir. The engineer, Mr. Hawksley, will receive 8,000*l.* when the works are completed, and, adds the *Albion*, will by no means be overpaid. The contract with Messrs. Scott and Howell was determined by the corporation, who placed the work under the superintendence of their own water engineer, Mr. Thomas Duncan. The late Mr. T. H. Statham acted as Mr. Hawksley's agent, though paid by the corporation. Messrs. Docwra and Co. have laid down the pipe line.

Royal Agricultural Society's Premium.—At a council meeting of this society, held on the 4th inst. the premium of 20*l.* for the best essay on the Construction of Agricultural Labourers' Cottages, was awarded to Mr. T. W. P. Isaac, of Bath.

T. G. Messenger's Patent Triangular Tubular Boiler.—This invention consists in surrounding the fire with tubes, which form water spaces, extending from front to back, and secured at each end to sockets cast on inner plates, with sides, and ends, and flanges, to which are secured front and back plates. A water space is thus formed between inner and outer plates, which communicate with the tubes. Water admitted at the lower tubes becomes heated, circulates through all the tubes and water spaces, and rises to an outlet at the upper part of the boiler, from whence it is conveyed to whatever place is required to be heated. The patentee describes its advantages thus:—1st. The amount of surface which is by this arrangement exposed to the fire, reduces the quantity of fuel required very considerably; 2nd. Tubes being used for fire-bars, all burning of the iron is prevented; 3rd. Should any tube become injured, it can be replaced without in the least disturbing the rest part of the boiler. To convert it into a steam-boiler, the patentee proposes to add a steam-chest, communicating with the water spaces.

Fire-proof Safe.—A correspondent describes a large fire and thief proof safe, which has been made for her Majesty's jewellers, Messrs. Tessier and Co. 7 feet 9 inches high, 5 feet wide, and 3 feet deep, and weighing upwards of three tons. The outer casings are made of two strong wrought-iron boiler-plates, and another of hard steel, rivetted together so that it may not be drilled or cut through by any instrument. It was made by Mr. John Tann, of Walbrook.

The Value of Land in Sydney.—The extreme rates which can be obtained in the market for central city property may be understood from the circumstance that a block of land, 69 feet by 67 feet, at the junction of the two busiest streets, realised last week at auction no less than 13,125*l.* Premises with a frontage of 40 feet, in one of these streets, also fetched 4,700*l.* The larger houses in George-street let from 600*l.* or 700*l.* to 1,200*l.* a year.

Cambridge Antiquarian Society.—At the meeting of this society on the 1st instant, Mr. C. H. Cooper, town-clerk, read a catalogue of the plate sent by Queen's College to King Charles I. in the year 1642. The Rev. C. Babington read a paper upon an Athenian inscription. Photographic copies of it were exhibited. It formed part of a Hero-chapel. Its date is probably about the close of the second century of the Christian era.

Toile Metallique.—A specimen of a French invention has been forwarded to us as a useful material for covering skylights liable to breakage from without, and for screens, outside blinds to windows, and other purposes. It consists of simple wire-cloth, interlacing a gelatinous web, elastic enough to admit of being bent or twisted without breaking, and is said to stand both heat and moisture well. A screen over the orchestra in the new concert-room at the Crystal Palace, Sydenham, has been made of it. In Paris it is sold at four francs per square mètre.

Sewers.—The tenders received by the Holborn Board of Works for rebuilding 120 feet of the old Fleet Ditch, formation of a side entrance, and works incidental thereto, Mr. Lewis H. Isaacs and Mr. Sanders Bevan, joint surveyors, were as follow:—

Gardner	£396	0	0
D. Ethick	287	0	0
Day and Co.	239	10	0
Pearce and Tuckwood	229	0	0
Phillips	227	0	0
Thirst	225	0	0
Abbott (accepted)	196	0	0

TENDERS

For re-building Clothworkers'-Hall, Mincing-lane; Mr. Samuel Angell, architect. The quantities were prepared by Messrs. Roberts and Meakin:—

Ashby and Horner	£42,200	0	0
Piper and Son	41,986	0	0
Cubitt	41,800	0	0
Kelk	41,884	0	0
Lee and Son	41,360	0	0
Lawrence and Sons	39,870	0	0
P'Anson	39,446	0	0
Mansfield	38,935	0	0
Pritchard	38,800	0	0
Lucas	37,235	0	0
Holland	36,296	0	0
Haynes and Eyre	35,486	0	0
Gammon	34,966	0	0
Ashby and Son	34,296	0	0
Jay	33,846	0	0

For St. Charles Church, House, and Schools, Hadfield. Quantities not supplied. Messrs. Weightman, Hadfield, and Goldie, architects:—

Walter Sigley, Ashton-under-Lyne	£6,350	0	0
Farrell & Brownbill, Manchester	5,323	0	0
Samuel Bramall, Manchester	5,303	0	0
Thomas Evans, Macclesfield	5,200	0	0
Ellis and Thorpe, Glossop	5,052	0	0
John Eaton, Staleybridge	4,864	0	0
Thomas Tully, Manchester	4,850	0	0
Robinson and Son, Hyde	4,485	0	0
L. Holroyd, Glossop (accepted)	4,117	0	0

For erecting the first portion of a house at Penyrhewl, near Pontypool, Monmouth, for Thomas Phillips, esq Messrs. Bidiske and Lovatt, architects. Quantities not supplied :—

Parker, Pontypool	£3,144	0	0
Young, Chepstow	2,659	0	0
Lewis and Hiley, Pontypool	2,283	0	0
Racum(?) Abergavenny (accepted)	2,215	0	0

For building Oaklands Chapel, Shepherd's-bush, for the United Congregational Church of Baptists and Independents, &c. Mr. Charles G. Searle, architect :—

Longmire and Burge	£2,439	0	0
Matthews	2,297	0	0
Chamberlain	2,118	0	0
Ennor	1,986	10	0

TO CORRESPONDENTS.

"R. L. S."—the gentleman named is a solicitor, not a barrister]. —"Mr. M'C."—"Mr. S."—"Goth."—"J. S."—"W. W. P."—"E. G. C. B."—"T. W. N."—"E. T. L." (shall appear) —"T. G."—"J. F. W."—"J. W."—"H. G."—"J. E. S."—"J. E."—"J. T. jun."—"W. X." (no).—"C. H. S." (we are forced to decline recommending). —"Omega"—"R. R."—"W. E."—"C. J. R."—"M. E. H."—"T. P."—"L. M."—"Thoughtful Mechanic."—"L. B. S."—"Pesce."—"Mr. S."—"W. H." (may draw what "conclusions" he pleases).—"A Competitor" (will best deserve success by adhering strictly to the regulations)—"W. F. M." next week—"C. L."—"Broad-Haven" (shall appear).

"Books and Addresses." We are forced to decline pointing out books or finding addresses.

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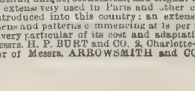

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PORTLAND and BATH CEMENT.—FULLWOOD THOMPSON and CO. request the attention of Merchants and Contractors to the quality of their Portland and Bath Cement, which they manufacture on an improved system, securing regularity of strength and colour, and at a less cost than is obtainable by most other makers.
These cements set under water in a few minutes, and are not affected by extreme heat or cold.
FULLWOOD THOMPSON & CO. will be happy to send prices and samples in reply to application by post. They deliver free into the Bristol and Exeter Railway Company's trucks at their works, or free on board in the Port of Bridgewater.

HUBBUCK'S PATENT WHITE ZINC PAINT,
The Permanent White of the Ancient Artist.
HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor the chemical fumes act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies paralysis and painter's colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil, and where it is used with Soy, Varnish, &c. To prevent the prejudice against Zinc paint, which the adulterated article must otherwise produce, it is now sold by the Wholesale Paint-dealers in Original Packages, each cask stamped, HUBBUCK—LONDON PATENT. And when so marked, the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works opposite the London Docks, London.
N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

11, George-yard, Lombard-street, City
ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN BURNT BRICKS, hand moulded and machine made, for shipment or otherwise. Apply to G. BOOTH, Agent, as above

COLES, SHADBOLT, and CO.
CEMENT and PLASTER MANUFACTURERS,
LIME BURNERS,
Brick, Tile, Drain-pipe, Hair Lath, and Fire Goods Merchants,
ST. JAMES'S and THORNHILL WHARFS,
Caledonian-road, London

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Waterworks Companies, Coal Mine Proprietors, Builders, Contractors, &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, is prepared to enter into contracts with any of the above branches that may favour him with their orders. The advantages to be derived from the above Cements, manufactured by J. C. over all others, are their extraordinary hydraulic properties. Samples and references may be had, and orders, at the Works, Ashton New-road; or the Warehouse, 5, Broom-street, Shude-hill, Manchester.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS,
12, UPPER GROUND STREET, Blackfriars, Surrey side,
7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME at any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s 8d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal manager's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 18 South Wharf, Paddington J. D. BLATH, Sole Agent, will have immediate attention. Quarries and Manufactories, Stockton, near Southam, Warwickshire

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings of wood and sound quality, constantly on sale at J. DODD'S Brick-fields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.
Malm Place, half-washed Stocks, and Place Bricks, also on sale. The Bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brick-fields, Grange-walk, near the Rosemary Branch. Boat in N.B. Light-coloured Pit Sand for sale, privately contractable on sal upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury New park, would be glad to enter into arrangements with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Dell's Farm, Stoke Newington Green.

THE BEST HERTFORDSHIRE MALM SECONDS.
THE BEST WHITE SUFFOLK and RED FACINGS:
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal Bridge, Old Kent-road, Surrey.
N.B.—Lime, Cement, Slates, Fire-bricks, &c and all kinds of Building Goods.

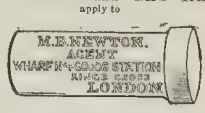
BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Foundry Sand, Whiting, Whiting Sand for asphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'s works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines or any railway connected with them. Vessels of 50 to 600 tons can load along side the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods (both Welsh and Newcastle), Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in bogs-heads, casks, jars, &c. for exportation.
General Office—No. 12, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

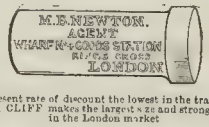
UPHALL BRICKFIELD, ILFORD, Essex.—WILLIAM HILL, late Henry Kilvington, respectfully invites Contractors, Builders, &c. to inspect his superior STOCK, if the undermentioned BRICKS, which can be purchased at the lowest market price, and can be put aboard any wharf in the Thames, or forwarded per rail, viz.—Malm Cutters, Seconds, Pickings and Malm Stocks, Paviours, Shippers, Best Washed Stocks, Stocks differing in quality.
N.B. Orders received at 20, Whitechapel road.

FIRE-BRICKS, LUMPS, TILES, &c. of every description, at HONDURAS WHARF, 74, Bankside, London. JOHN NEWTON and CO. (seventeen years with James Newton, of Falcon Dock, Bank-side, Fire brick and Tile Merchant) have taken the OLD-ESTABLISHED BUSINESS and PREMISES carried on so many years by WM. WARD and CO. and solicit the patronage of Consumers, Gas Companies, Engineers, Builders, &c. Ramsay's super or Newcastle Fire-brick, Retorts, Fire-clay, &c; also Sanitary-pipes Chimney-tops, Dutch Clinkers, &c. all at the lowest prices. Shipping orders executed with despatch

FOR FIRE-BRICKS and GAS RETORTS apply to

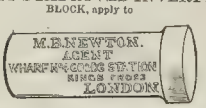


FOR J. CLIFF'S SALT-GLAZED DRAIN-PIPES, apply to



Present rate of discount the lowest in the trade
JOSEPH CLIFF makes the largest, sizes and strongest Pipe in the London market

FOR J. CLIFF'S IMPROVED INVERT SEWER BLOCK, apply to



BEADON'S PATENT IMPERISHABLE GUTTER-TILES,
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without paint or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 6d. each tile of about 12 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 5d. per foot. This charge to include tiles delivered in Agent's yard, cement, and labour. May be had in London, Ulster, Bridgwater, and Madeley, Staffordshire.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPÔT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City road, Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "REPORTS OF THE JURIES," page 681, of the Great Exhibition, rank the Manufactories known so long as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world

PATENT TERRA-COTTA.
Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Mill wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin.

Established 1838.—Registered pursuant to 53 sec. 7 & 8 Vict. cap. 110.
MONEY LENT for Two Years, One Year, or Six Months, on Personal security, Freehold or Leasehold Property, Gold and Silver Plate, Watches, Jewellery, and every description of saleable security. Repayable by weekly, monthly, or quarterly instalments. Sums from £5 to £500 may be obtained three days after application. This office being open daily from nine till six, the unpleasant necessity of applicants having to explain their affairs before a large number of persons is entirely avoided. PIN-BURY LOAN OFFICE, 144, St. John-street-road, Clerkenwell (three doors from Middleton-street).

WOLSTON'S TORBAY IRON-PAINTS, warranted to stand the action of the Atmosphere, Steam, Gases, Noxious Vapours, Damps, and Salt Water: also intense heat without blistering. These Paints have been tested for five years in Her Majesty's Dockyards, and two Official Reports made thereon, which testify that 6lbs. of Wolston's Torbay Iron-Paint will effectually cover as much surface as 14lbs. of either White or Red Lead and that they resist atmospheric action better than Lead Paints. For all Public Works, Galvanized and other Iron Roofing, Fencing, Shipping purposes (Wood or Iron), Stucco and Cement Fronts, economy and durability will be secured. To Builders and Painters, for all priming purposes, the saving will be immense. Manufactured at the TORBAY IRON-PAINT and ORE WORKS, Brixham, Devon; London Depôt, Chamberlain's Wharf. Letters or orders addressed to Mr. WOLSTON, at the Works, or No. 34, John-street, Bedford-row, will have immediate attention.

THE INDISPUTABLE LIFE POLICY COMPANY.

Incorporated by Act of Parliament.

TRUSTEES.

Richard Malins, esq. Q.C., M.P. | James Fuller Madox, esq.
Richard Spooner, esq., M.P. | John Campbell Renton, esq.
William Wilberforce, esq.

Lord Viscount Torrington, Chairman.

By the Deed of Settlement of the Company, duly stamped in terms of the Act, 7 and 8 Vict. c. 110) complete indisputability is made binding upon the Company, and is guaranteed to every Policy Holder.

A reduction of 25 per cent. has been made on the Premiums of all policies of five years' standing, and those assured on or before the 31st instant, will participate in profits one year earlier than those assured after that date.

ALEXANDER ROBERTSON, Manager.

Persons desirous of being assured, may address the Manager, or any of the Agents of the Company, giving name, address, profession or occupation, and age next birthday; and they will be informed of the amount of the required Premium, and what further steps are necessary to enable the Company to issue a Policy.

THE SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY.—Instituted 1831.

Accumulated Funds, ONE MILLION STERLING.
Annual Revenue—ONE HUNDRED AND SEVENTY THOUSAND POUNDS.
Existing Assurances—FOUR MILLIONS AND THREE-QUARTERS.

At the Division of Surplus, at 1st March, 1856, a Policy for 1,000l. effected at 1st March, 1839, was increased to 1,371l. 18s. 10d., being at the rate of Two and a Quarter per Cent. per Annum on the sum assured. This addition may be converted into a present payment, or applied in reduction of the future premiums.

Profits are divided triennially, and belong wholly to the assured. Policies effected before 1st March next will receive six years' additions at the division of surplus in 1863.

Copies of the Report by the Directors on the recent division of surplus, and all information, may be had on application at the Head Office, or Agencies.

ROBERT CHRISTIE, Manager.
WILLIAM FINLAY, Secretary.
Head Office—26, St. Andrew-square, Edinburgh.
Office in London—26, Poultry.
A. T. RITCHIE, Agent.

THE LONDON AND COUNTY BRICK COMPANY (Limited). Capital, 10,000l. in 2,000 shares of 5l. each.

There is no liability beyond the amount of each share taken. Offices, 15, Broad-street-buildings, City, and 4, Bermondsey-square.

This Company has been incorporated for the purpose of making, selling, and delivering bricks at places to which the same may be easily and cheaply conveyed. Ground has been taken upon advantageous terms, and is now being worked. Prospectuses and forms of application for shares can be obtained of Mr. HILL, Secretary, at the Offices, as above.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER-HANGINGS is GROSS'S WHOLESALE WAREHOUSE, 97, GREAT PORTLAND-street, Oxford-street, where purchasers can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

MARBLE TABLETS. — WANTED, to BUY, for CASH.—Apply to Mr. BARLOW, 83, Sacheverel-street, Derby, enclosing sketch and price.

MARBLE GALLERIES, 17, Newman-street, Oxford-street.

Mr. ALFRED E. EDWARDS (upwards of ten years with the London Marble Company), has opened the above premises, lately in the occupation of Bunny, the celebrated sculptor, under the firm of EDWARDS, EDWARDS, and COMPANY, with the largest stock of BRITISH and FOREIGN MARBLE CHIMNEYPIECES, &c. &c. in London. EDWARDS, EDWARDS, and CO. solicit the favour of an inspection of their stock by architects, builders, and others connected with the trade; and beg to assure them that for design, style of execution, and price, it will be found unrivalled. Estimates for every description of marble work.

BUILDERS, ARCHITECTS, AND MASONS.

MARBLE.—The ITALIAN MARBLE COMPANY beg to call the attention of Architects, Builders, and Others connected with the trade, to their large and well-assorted STOCK of VEIN, SICILIAN, and other MARBLES. The liberal system of business adopted by the company, the superior quality of their marble, and their very moderate scale of prices are combined, to form an inducement to buyers. An inspection is solicited at the Depôt, Bridge Wharf, immediately adjoining Vauxhall-bridge, where no other persons are authorised to sell except Mr. Baxter, Wharf Foreman, or the undersigned.

WILLIAM W BONNIN, Secretary.

MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.

THOMAS JACKSON begs to draw the attention of the public to the most extensive stock of Marble Chimney-Pieces in the Metropolis; consisting of a selection of upwards of three hundred and manufactured by steam power from the finest Italian and other marble, and with that careful attention to the details and finish so necessary in good marble work. The Stock consists of elegant Drawing-Room Chimney-Pieces in Statuary Marble: bold, massive Chimney-Pieces, in Black, Black, and Gold, Bardilla, Sienna, Verd Antique, Brocatella, Dove, St. Ann's, and Serpentine Marble, suitable for Dining-Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Emperor's Red and Amber Marble, for Boudoirs, Breakfast-Rooms, best and secondary Bed-Rooms, &c.; also, Monuments, Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the most classical designs, and in all the varieties of the finest Italian and British Marble, at the lowest remunerative prices.

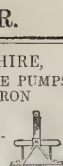
MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY-PIECES lately imported from the Continent. They comprise Statuary, Giallo di Sienna, Vert Rouge, Dove, Black and Gold, Rouge de Belmont, Bardiglio, and other choice foreign marbles; and are designed with great taste, and executed by first-class artists.—On sale, in the show rooms of Messrs. EVANS, SON, and CO. King William-street, London-bridge.

MARBLE CHIMNEY-PIECES, and every other description of marble work, supplied to builders and the trade at about HALF the USUAL PRICE, in many instances less than time. Manufactured by the LONDON and CONTINENTAL MARBLE COMPANY, at their own Quarries in France and Belgium.—Office and Depôt, 3, Crooked-lane, London-bridge.—Estimates given for works to any amount.

LLOYD'S MARBLE WHARF, Thames-bank, Pimlico, adjoining Vauxhall-bridge.—Italian Statuary, Veined, Sicilian, Dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

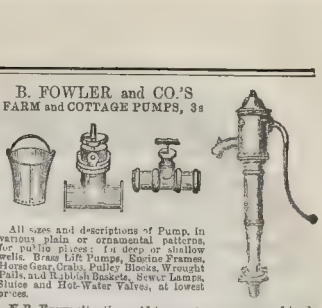
GATES and GEORGE, CAEN, AUBIGNY, and GENERAL STONE MERCHANTS. CAEN WHARF, ROTHERHITHE, LONDON.

ON SALE AND HIRE,
SINGLE AND DOUBLE PUMPS
IN WROUGHT IRON
TO ANY DEPTH,
FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.
Sizes, from 3-inch to 15-inch barrels.



N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

B. FOWLER and CO.'S
FARM and COTTAGE PUMPS, 3s



All sizes and descriptions of Pump, in various plain or ornamental patterns, for public places; for deep or shallow wells. Brass Lift Pumps, Suction Frames, Horse Gear, Crabs, Pulley Blocks, Wrought Pails, and Rubbish Baskets, Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to fix PUMP WORK, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

BRAMLEY FALL STONE.—To ENGINEERS and CONTRACTORS. The quality so well known and highly approved, in numerous public works, is SUPPLIED from their QUARRY at MEANWOOD, and the several Quarries at Horsforth, with punctuality, and at the lowest possible rates, by JAMES ARKWOOD and SONS, Gepton-wood Quarries and Canal-basin, Leeds.

BRAMLEY FALL! BRAMLEY FALL!

On account of greater facilities than possessed by any one else, TRICKETT and PERKINS are prepared to supply in any quantity BRAMLEY FALL STONE, at greatly reduced prices, having opened the extensive quarries in the Hawksworth Cutting, on the North-Eastern Railway, near Horsforth. The stone is of the same quality as the well-known old Bramley Fall and Horsforth Quarries, but has the advantage of being of a higher and more uniform colour. The North-Eastern Railway Company have put sidings in on both sides of the railway. Powerful cranes are fixed, so that the stone can be got to any size, and the stone being loaded in the quarries on the railway-trucks, can be forwarded the same day to any part of the kingdom, or supplied in London river via Selby or Hull, in any quantity.—For particulars apply to JOHN TRICKETT, Stone Merchant, Headingley, near Leeds, or to SAMUEL TRICKETT, Victoria Stone Wharf, Isle of Dogs, London.

QUARRY WORKED STONE.—Architects, Masons, and Builders would effect a great SAVING in cost by ordering bases, plinths, templates, cills, corbels, imposts, cornices, 50 rings, steps, staircases of all kinds, moulded or plain, square or panelled, from the quarries ready worked for fixing. Experienced foremen are kept, and the stone is clean worked, and carefully packed or stowed, and delivered direct in one bottom by vessel or railway truck.—Prices and every information given on application, accompanied by plans or sketches, to SAMUEL TRICKETT, Stone-wharf, Isle of Dogs, or to JOHN TRICKETT, Headingley, Leeds, Yorkshire.

BANGOR WHARF, King's-road-bridge, Camden-town. STRINGFIELD and CO. late W. W. Rawlins, beg to call the attention of Builders and others to their stock of Bangor slates, laths, plaster, Roman, Portland, and Keene's cement, blue lias, Dorking and chalk lime, plasterers' hair, Yorkshire plain, pan, and ridge tiles, glazed sewer pipes, closet-pans, and traps, Welsh fire-bricks, gravel and shells for garden paths, ballast, sand, &c. Materials landed, wharfed, and carted.

STONE! STONE! STONE! — To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Setts, Sink Slab, Granite Pitching and Curb, Guernsey broken Road Materials, and every other description of stone, at JOHN KNIGHT and SON'S, Devon Wharf, Millbank. York landing, 3s. 6d. per 100 feet; slab for hearths, 4d. per foot sup.; slab for chimney-pieces, 3½d. per foot sup.; 3 by 2 window-sills, 6d. per foot run; 15 by 3 coping, 8d. per foot run; box chimneys (any opening), 9s. 6d. each. Terms cash on delivery.

STONES, GRANITES, SLATES, &c.—W. and J. FREEMAN supply to the various British and Foreign States, Counties, and Municipal Granites, in scarp of blocks, or worked to specification. Also, the usual quarry-worked articles of York hire flags, in dims. &c. &c. DIRECT FROM THE QUARRIES TO RIVERSIDE, HULL, OR ANY OF THE OUTPORTS FOR EXPORTATION OR OTHERWISE, or by rail to any part of the kingdom.—Stocks of each description always ready for immediate delivery from their Wharfs, Millbank-street, City-road Basin, and (adjoining Commercial Docks) Deptford.—Office, 27, Millbank-street, Westminster.

CAEN and AUBIGNY STONE.—P. FOUCARD, Stone Merchant and Quarryman, Cargoes shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lett's Wharf, Waterloo-bridge. Office, 246, High-street, Southwark, near the Townhall.

MARKET-WHARF, REGENT'S-PARK-BASIN—WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. Also Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. SCOLES and WOOD invite the attention of Builders, Masons, and others, to their Stock as above, where everything will be charged at the lowest prices. Headstones, Ledgers, Steps, Landings, &c. cut on the shortest notice. Country orders promptly attended to.

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, White friars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast screened or unscreened by the yard, or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cost of Portland Stone. Estimates furnished on application to Mr. FRED RANSOME, Whitehall-yard, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS. MILLBANK-STREET, WESTMINSTER.

Marble of all kinds and of best quality, in block and slab. Marble mortars, &c.

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.

Lists of prices at the quarries and depôts, also cost for transit to any part of the kingdom, forwarded on application to Bath Stone Office, Corsham, Wilts.

GRANITE.—The Welsh Granite Company, Carnarvon, supplies Pitchloy or Paving Sets of this Material to order. The Sets, which have for several years been extensively used in Manchester, Bristol, Leeds, and other large towns, combine in a higher degree than any others, the qualities of toughness in wear and durability. The stone is also well adapted for foundation courses, paths, &c. for public buildings and for mill-stones.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terraces at the Crystal Palace. Supplied by the Haytor Company under Royal Charter.—For terms, apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE.—The Cheesewring Granite Company, Liskeard, Cornwall.

London Agents—TREGELLES and TAYLOR, 54, Old Broad-street. Manager—JAMES THAPHAN, Liskeard.

This Granite is selected for the New Westminster-bridge.

LLANGOLLEN SLABS and SLATES. HOUSE CISTERNS, Sink-stones, Filters, Lorders, Mangers, Ridging, Slating, and Roads, Gore CISTERNS of LARGE DIMENSIONS for BREWERIES, DISTILLERIES, BLEACHING-HOUSES, and MANURE-TANKS.

Cattle-stalls, Pigstyes, and Troughs.

Paving for Railway Stations, Malt-houses, Breweries, Baloonies, Conservatories, Warehouses, &c.

CHIMNEY-PIECES, Baths, Tombstones, Pedestals, Washing-tables, Urinals, and every other Article of Slabwork, PLAIN or ENAMELLED.

Self-faced Flags for Barns, Outhouses, or Street Paving.

In Stock at Paddington, SEVERAL FINE SLABS of 70 SUPERFICIAL FEET each.

LLANGOLLEN SLATE and SLATE COMPANY, PENTREFELIN WHARF, LLANGOLLEN, and 4 WHARF, SOUTH WHARF-ROAD, PADDINGTON.

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES, blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôts, at Bangor, or to transmit by railway. Also Slabs of all sizes.—Orders to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor.

SLATE.—An assortment of the best BANGOR ROOFING SLATE ON SALE, at Bridge-wharf, Millbank. Apply to Mr. GEORGE BAXTER, Foreman.

SLATING, 22s. per square, in town; Slate Paving, ¾ in thick, averaging 4 feet in a stone, planed and squared, ready for laying in runs, 4d. per foot cube, warranted stronger than 3 inch York (45,000 feet can be seen laid at Bea's Wharf, Tooley-street. Roofing slates, slate cisterns, sinks, &c. considerably lower than usual quarries.—E. B. HANNAFORD'S Slate Works, Trevalga Wharf, Ratcliff cross.

SLATES.—A Cargo of Welsh-Roofing SLATES, now lying on a Wharf in Thames-street, TO BE SOLD CHEAP, at Welsh list price, or, to make a quick sale, they will be Sold, in lots, to builders.—Apply to Messrs. WILKINSON and CO. 26, Gresham-street, City.

PARIS EXHIBITION. — ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1846. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is incomparably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles, too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of lava-tables, chiffoniers, consoles, &c.; bed-slabs, baptistries, altar-tablets, pedestals, columns, vases, pedestals, and brackets; wash-stand tops, billiard tables, linings to halls, vestibules, and dairies.—Price lists can be had on application to Mr. MAGNUS, 91 and 93, Upper Belgrave-place, Pimlico.

N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Works, Model Prison, Pentonville, and other Penitentiaries; Malting Floors in Bedfordshire and Hertfordshire, Breweries, the Race Stand at Brighton, Portsmouth Barracks, and are kept in stock in large quantities by Messrs. FREEMAN, Millbank-street; and at Messrs. Brown's, Belvidere-road, where terms may be obtained.

ASPHALTE.—GERVASE FOOTTIT TRINIDAD ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, SEYSSEL, and BRITISH ASPHALTES, manufactured by Steam power, laid down in the best manner, or supplied in any quantity. Information for using forwarded with material. Post-office orders or reference in London promptly attended to. Estimates given for every kind of the above work.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING, especially in damp situations. FROM 2s. 9d. PER SQUARE YARD.

Country Builders supplied with Asphalte for footings and barn floors, with instructions for using it.

Apply to JOHN PILKINGTON, Poloneeau and Limmer Asphalte Office, Monument-chambers, 34, Fish-street-hill, London.

N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

WARNER'S PATENT VIBRATING STANDARD PUMPS.

—PATENT CAST IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short 1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long 3 3	gutta percha	1 14 0
3 „	ditto 3 6	or cast iron)	2 8 0
3½ „	ditto 3 6	flanged pipe,	2 12 0
4 „	ditto 3 6	as required.	3 3 0
2½ „	short, with 1 foot of lead pipe attached, ready for fixing		2 14 0
2½ in.	long ditto ditto		2 18 0

The short-barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of hot or cold water in washhouses with soft water from under ground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage. May be obtained of any Ironmonger in Plumber-town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, Nos. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c. Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships barges, well-sinking, &c., adapted for any depth. Hydraulic Pumps for deep wells

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 12-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. painted
Ditto .... 48s. per doz. galvanized

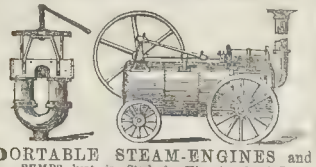
Upper Ground-street, Blackfriars Bridge Surrey Side.

CONTRACTORS' STEAM-ENGINES.—

TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

TO CAPITALISTS, BUILDERS, and BRICKMAKERS.

TO BE SOLD, by private contract, a FIVE-HORSE POWER STEAM ENGINE, together with their machinery used for the purpose of brickmaking. Also, TO BE LET, a valuable BRICKFIELD, at a rent and royalty, situate at Deptford, Kent, near to which 300 houses are being rapidly erected.—For further particulars, apply to Messrs. WIRE and CHILD, Solicitors, 3, St. Swithin's lane, City.



PORTABLE STEAM-ENGINES and PUMPS

kept in Stock for Hire at reduced Prices, R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

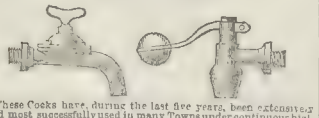
The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street London

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.



These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, ranging from 100 to 300 feet; their efficiency and durability is by experience established.

The Lambert Ball-valve is simple and certain in its action and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public institutions, cottages, mansions, &c.

THOMAS LAMBERT and SON,
Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO WATER COMPANIES, LOCAL BOARDS OF HEALTH, AND OTHERS.

LAMBERT'S NEW VALVE COCK,

For Preventing Waste of Water.

It so constructed that it cannot be left open accidentally or wilfully, and further it will at each action deliver a specific quantity, and under the same pressure this quantity will never vary.

It is peculiarly adapted for closets, self-acting or otherwise.

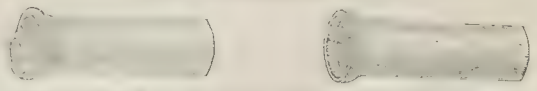
Price, complete for high pressure, 10s. 6d. each.
„ low „ 12s. 6d. „

THOS. LAMBERT and SON, Patentees and Manufacturers, Founders and Machinists, Short-street, New-cut, Lambeth.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,

IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for receiving Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded free on application. Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

WILLIAM NORTHEN'S WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

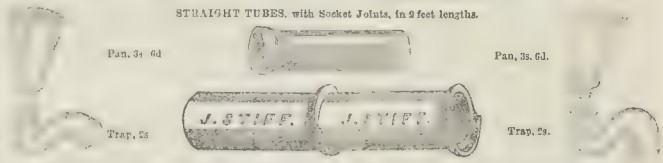
GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,

LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



HALF-SOCKET PIPES same prices as whole Sockets, by the use of which Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTION.

May be had also at the following wharfs, viz.:—

Messrs. GLADDISH'S, Pedlars'-acre, Westminster-bridge-road, City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Dove's-wharf, Chelsea; Pratt wharf, Ringswood, Cumberland-town.

Messrs. COLLARD and COLLARD, and CO'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.

Messrs. RITCH, BRANDSMITH'S, Ravensbourne Wharf, Greenwich.

Mr. LAVELLE'S, Dowgate wharf, Canal-road, Hoxton.

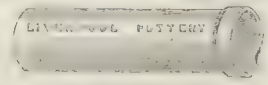
Drawings, with Prices, will be forwarded free, on application.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,

ST. HELEN'S.

STORES—70, SOHO-STREET, LIVERPOOL.

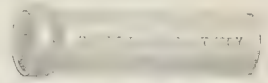


MANUFACTURERS OF

DOULTON'S STONEWARE PIPES
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

SALT-GLAZED STONEWARE, FIRE-CLAY, AND TERRA-COTTA WORKS,



NEAR BARNSLEY, YORKSHIRE.

The Proprietor, E. B. BEAUMONT, manufactures every description of STONEWARE for drainage, building, sanitary purposes, and fancy ware, from clays which have been subjected to the most careful selection, and proved to be of the most tenacious and indissoluble properties. The pipes are wrought by Spencer's Patent Machine, by which tube and socket are one, without a manipulated joint, and the bore is smooth, hard, and even. And every improved apparatus has for years been added to secure the best workmanship with great economy of labour. These desirable results, combined with the low rates from the prices charged for others at all manufacturing quality, what the present and increasingly large to provide for works of the greatest magnitude.

THE TRADE LIBERALLY TREATED WITH.

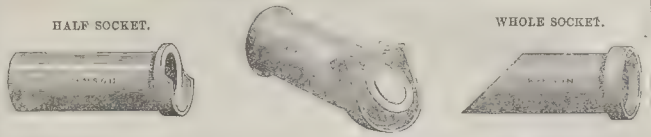
Price lists and Diagrams sent free on application,—

At the WORKS .....To Mr. WM. FORD Dodfield Fire-clay Pottery, near Barnsley.
In LIVERPOOL .....To Mr JOHN SIDDALL, 2 Johnson's-row.
In MANCHESTER....To Mr. B CONSTERDINE, Heaton's bank.
In GLOUCESTER....To D. S. WILKINS, Westgate Wharf, Gloucester.
In LONDON .....To Mr. J. D. JONES, 27, Bucklersbury; and Goods Depot, No. 4 Warehouse, King's-cross (Great Northern Railway).

KINSON CLAY, POTTERY, AND BRICK COMPANY. LIMITED.

MANUFACTURERS OF EVERY DESCRIPTION OF SANITARY GLAZED SEWAGE-PIPES, CLOSET-PANS, FURNACE-BLOCKS, FIRE-BRICKS, GAS-RETORTS, CRUCIBLES, &c. &c.

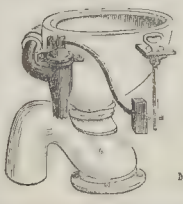
HALF SOCKET. WHOLE SOCKET.



THE POTTERY is situate about a mile and a half from the town and port of Poole. It is worked by steam power, and the pipes are made of the most approved patent machinery, and will bear favourable comparison with any manufactured in the kingdom. The fire-bricks have been tested, and are found fully equal in all respects to those manufactured at Stourbridge and Newcastle. All articles are made from the clay and materials found on the estate. There are inexhaustible supplies of all descriptions of Dorsetshire clay, used for pottery purposes, which can be supplied to the Staffordshire, North Country, and London markets, upon favourable terms.

*** Lists of Prices, and all other information, will be furnished upon application to Mr. PAUL MATHEWS, Manager; Mr. T. W. GREEN, Secretary, at the Works; Mr. F. F. WHITEHURST, at the Company's Depôt, Brentford, Middlesex; or to Mr. JOSEPH COX, 2 and 3, High-street, Lambeth.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.



DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

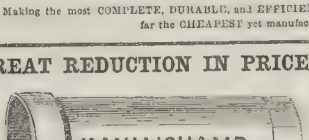
AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing.

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

GREAT REDUCTION IN PRICES



OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.
AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

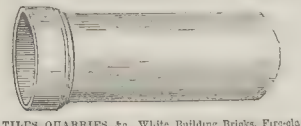
Drawings and Prices will be forwarded on application.

SOCKET. HALF SOCKET.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.

OFFICES: HIGH-STREET, LAMBETH, LONDON.

THE FARNLEY IRON COMPANY, WORTLEY, near LEEDS.



Manufacturers of FIRE BRICKS, TILES, QUARRIES, &c., White Building Bricks, Fire-clay CHIMNEY-TOPS, in Norman, Egyptian, Saxon, Tudor, Grecian, Gothic, and Elizabethan styles.

TERRA COTTA

Fountains, Vases, Pedestals, Capitals, Trusses, Brackets, &c., in great variety, which for beauty and elegance of design are unequalled. The designs of Architects modelled with the greatest exactness.

Also of PATENT GLAZED STONEWARE DRAIN-PIPES, JUNCTIONS, BENDS, &c., well adapted for pressure, being made extra pressed under "Spencer's Patent." Superior White Glazed CLOSET PANS, TRAPS, &c.

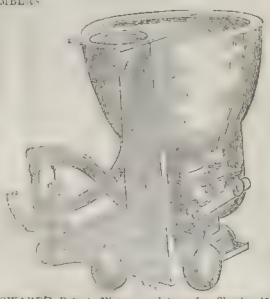
The Works of the Company are situate in the immediate vicinity of the well-known Bed of WORTLEY FIRE-CLAY, and their manufacture of BRICKS, for the use of Forges, Gas Companies, Foundries, Potteries, and Glassworks, is confidently recommended for all purposes where extreme heat is required. Their GROUND CLAY is also particularly adapted for the manufacture of CRUCIBLES, MELTING POTS, &c.

OFFICES AND STORES.

LONDON .....No. 14 York chambers, York-buildings, Adelphi, No. 16, Bath-place, New road; St. Ann's-Wharf, Lambeth.
BIRMINGHAM..No. 7, Bastow; also 22, Cambridge-street, and Lawley-street.
BRISTOL .....No. 14, Nelson-street.
LIVERPOOL ....No. 9, Russell-street, 83, Renshaw-street, and Shipping-wharf Leeds-street.
NEWCASTLE. ..W. B. Wilkinson and Co. Prudhoe-street.
GRIMSBY.....P. G. Skipworth.
MANCHESTER..No. 46, Travis-street, and 23, 24, and 25, Birmingham-street, London-road.
HULL.....No. 60, Queen-street, and Wellington-street.
BRADFORD ....Horton-road.
LEEDS .....Wellington-street, adjoining the Midland Station; and Shipping-wharf, Victoria-works, Hunslet.
SUNDERLAND..W. B. Wilkinson and Co. Queen-street.
WARE.....G. E. Kins, Stone Merchant.

Where Drawings, with Prices, &c. may be obtained.

TO WATER-COMPANIES, LOCAL BOARDS of HEALTH, SURVEYORS, BUILDERS, and PLUMBERS.



HOWARD'S Patent Water regulator for Closets, Hopper Basins, and Lavatories, manufactured by HAYWARD, TYLER, and Co. 85, Upper Whitecross-street, London, is strongly recommended to the above, it is free from leakage, certain in its action, only delivering a given quantity of water each time into the basin when can be increased or diminished, if required, in fixing; cannot accidentally be left open, and is so simple in construction that it can be repaired by any ordinary workman, without sending to the manufacturers. Also their improved high-pressure bib, ball-stop, and stool-cocks, so constructed that the greater the pressure the less liable to leakage. They are proved to a pressure of 300 lbs. per square inch.

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

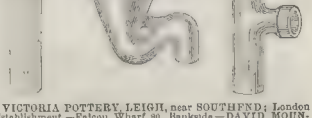
manufactured by ARTHUR C. FRANCIS and CO., Grays, Essex. Sold by them, and by FRANCIS, BROTHERS, Nine-Elms, London, and at all their Warehouses.

PRICES

3 inch bore, in 2 ft. 6 in. lengths, at					2½d. per foot.
4	"	"	"	"	3½d. "
6	"	"	"	"	5½d. "
9	"	"	"	"	9d. "
12	"	"	"	"	1s. 5d. "
15	"	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of or inch-glazed pipes. The projecting arising red ware is overcome by this manufacture, and it is well known that good earthenware, UNGLAZED, is the oldest material discovered in a perfect state in Rome, Babylon, Nineveh, &c. &c.

GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.



VICTORIA POTTERY, LEIGH, near SOUTHEND; London Establishment,—Falcon Wharf, 30, Bankside—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to draw the attention of merchants and others, STONEWARE PIPES, &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. Feb. 11, 1856.

FOR HIRE, a SPACIOUS TENT, adapted

for the Laying of Foundation Stones for Public Buildings, &c.

Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.

Apply to H. PIGGOTT, 115, Fore-street, City.

WATER-CLOSET,

WITH

APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF

STAFFORDSHIRE BASIN AND TRAP,

Enamelled White Inside,

BRASS VALVE, &c.

MANUFACTURED AND SOLD BY

W. PATTEN, PATENTEE,

OLD FISH-STREET, near SAINT PAUL'S,

LONDON.

DURABILITY of GUTTA PERCHA TUBING.

Many inquiries having been made as to the Durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter: "FROM SIR RAYMOND JARVIS, Bart., YARMOUTH, ISLE OF WIGHT. Sandown, Isle of Wight, May 1, 1852. In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least appearance of its decay since the first laying down, now several years, and I am informed that it is now adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the COROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES, 18, WHARF-ROAD, CITY-ROAD, LONDON.

HANCOCK'S PATENT VULCANIZED INDIA RUBBER TURING, HOSE-PIPES, WASHERS, ENGINE-PACKING, BOTTLE-CORKS, and SOCKET RINGS, for Hot-water-pipes. Vulcanized Rubber Door-springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

INDIA RUBBER of superior make, and improved Vulcanised Rubber Supply-pipes for ditto.

Vulcanized Rubber, in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

SALES BY AUCTION.

Re C. J. MARE.—TO SHIP-BUILDERS, BARGE AND BOAT BUILDERS, BLOCKMAKERS, TIMBER DEALERS, AND OTHERS.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, are instructed by the assignees to SELL by AUCTION, at the YARDS, known as the Cosmos and Field orchard place, Bla kwall, on the banks of the Lea or WEDNESDAY, DECEMBER 17, and following day, at ELEVEN each day, the FITTINGS of the SLIPS, SAW-PITS, BOAT-BUILDERS', BLOCKMAKERS', and JOINERS' SHOPS, including 10 pair bilge logs, 400 keel blocks, 50 sticks timber, 9,000 stage deals, 500 standard harpings, spalls, ribbing, 300 fathoms oak, teak, and elm slabs, 30 oak and elm trees, 600 oak tops, some carvital cabin fittings, mahogany panel and lattice doors, skylights, companions, &c., 5 boat oars, 500 boat crooks, 10,000 feet elm boards, new boat, hand-spikes, three capstans partly made quantity teak plank, 50 new elm blocks, two and three sheaves, 200 dead eyes, 20 tons lignum vitæ, and numerous other items. To be viewed on Tuesday previous to the sale, when catalogues may be had at the Yards; of CHARLES LEE, Esq. Official Assignee, Aldermanbury; of Messrs. LAWRANCE, PLEWS, and BOYER, Solicitors, Old Jewry-c ambers; of Messrs NEWSON, EVANS, and NEWSON, Solicitors, Wat lrobe-place, Doctors'-commons; of Messrs. PULLEN and SON, 80, Fore-street, Cripplegate; and of Messrs. FULLER and HORSEY, Billiter-street, City.

Re C. J. MARE.

MESSRS. FULLER and HORSEY, in conjunction with Messrs. PULLEN and SON, beg to announce that having completed the sale of the loose Tools and Stores on the West Ham dave on of the property known as the New Yard, the sale of the loose Tools and Stores advertised to take place at Old Yards, on the Blackwall division, on the 19th of DECEMBER inst. and following days, will be POSTPONED until MONDAY, JANUARY 19th, 1857, and five following days. Detailed advertisements will appear next week.—Catalogues are in course of preparation, and may be shortly had of CHARLES LEE, Esq. (official Assignee, Aldermanbury; of Messrs. LAWRANCE, PLEWS, and BOYER, Solicitors, Old Jewry-chambers; of Messrs. NEWSON, EVANS, and NEWSON, Solicitors, Wardrobe place, Doctors'-commons; of Messrs. PULLEN and SON, 80, Fore-street, Cripplegate, and of Messrs. FULLER and HORSEY, Billiter-street.

TO BUILDERS, CABINET-MAKERS, TIMBER MERCHANTS, PATTERN MAKERS, AND OTHERS.

FOR SALE, by AUCTION, on the PREMISES, 31, Old-street, St. Luke's, by order of Mr. H. Webber, who is retiring from the business, the lease of the yard being disposed of, the entire STOCK-IN-TRADE of a TIMBER MERCHANT, which will be sold, without any reserve, on TUESDAY, the 16th of DECEMBER, 1856, at TEN for ELEVEN o'clock precisely: 33 logs of Spanish, Cuba, and Honduras mahogany, 2,000 feet of Honduras mahogany, in planks and boards; 12,000 feet of wide pine plank and boards (4 inch to 2 inches); 5,000 yellow deals (whole); 18 logs of maple; 32 logs of East-India rosewood; also a general assortment of yellow, white, and pine planks, deals, and battens (cut), and other goods.—To be viewed two days previous to, and on the morning of sale. Catalogues may be had on the Premises, and of Messrs. EDWARDS and SON, Mahogany Brokers and Auctioneers, 15, Pinners' Hall, Old Broad-street, City.

CLEARANCE SALE To CARPENTERS, BUILDERS, and OTHERS.

MR. LEREW will SELL by AUCTION, on the PREMISES, 43, Union-street, Somers-town, on FRIDAY, DECEMBER 19, at ELEVEN, a quantity of useful STOCK, in Planks, Deals, Battens, Scantling, Flooring wide Pine Board, Ironmongery, Butcher's Shop Fittings, Old Materials, and clearance of yard.—May be viewed the day prior, and catalogues had on the Premises; and of the Auctioneer, Carlington-street, Hampstead-road, near the Euston Station.

FRAMPTON-PARK ESTATE, WELL-STREET, SOUTH HACKNEY.

MR. HALFORD has received instructions from the Proprietors to SELL by AUCTION, on the above PREMISES, on THURSDAY, DECEMBER 18, at NINE for TEN o'clock, most punctually, in consequence of the number of lots, in order to clear the ground for building purposes, which will be let in plots, fine TIMBER ELMS, chesnuts, pine and ash ditto, fruit trees and flowering shrubs, forming some very fine acclimatised japonicas, rhododendrons, variegated hollies, &c.; two pair of nearly new coach-house gates, several lots of iron hurdles and good paving pebbles, three pair of fowl-houses, useful horse set of harness, and nearly new spring cart, a few tons of meadow hay, bound, and in stack, capital garden engine, fire-wood, and useful stuff.—May be viewed on the Wednesday preceding and morning of sale, where catalogues may be had; at the Warburton Arms, Triangle-green; Dragon, Well-street; and of the Auctioneer, Mare-street, Hackney.

N.B. To suit the convenience of purchasers, one week from the day of sale will be allowed to clear the shrubs, and six weeks for the timber.

Freehold Houses and large Garden, Kingston, Surrey.

MR. NIGHTINGALE will SELL by AUCTION, at the GRIFFIN HOTEL, KINGSTON, on TUESDAY, DECEMBER 16, at TWO, in one lot, by direction of the Executor, TWO good HOUSES and SHOPS, with upwards of an acre and a quarter of first-rate garden ground, abundantly stocked with very productive fruit trees; advantageously situate in Middle Mill-road, within five minutes' walk of the market-place, Kingston. Early possession may be had. May be viewed. Particulars to be had on the Premises; also of WM. CONNETT, Esq. Architect, 8, Raymond's-buildings, Gray's-inn; of S. STAPLAND, Esq. Solicitor, 22, Bouverie-street, London; and of Mr. NIGHTINGALE, Auctioneer, Surveyor, and Valuer, Kingston.

TO BUILDERS, IRONMONGERS, AND BROKERS.

MESSRS. RICE, BROTHERS, will SELL by AUCTION, at PAUL'S-WHARF, Upper Thames-street, on FRIDAY, DECEMBER 19, at TWELVE, the remaining STOCK of IRONWORK; comprising a large quantity of OG and half round iron guttering, rain-water pipes and appurtenances, ranges, stoves, range and stove metal, furnace pans, copper doors and gratings, dampers, sink-traps, stable castings, jewels, railing bars, water-closets, and a variety of useful items. May be viewed the day previous and morning of sale. Catalogues had on the Premises; and of the Auctioneer, 263, Borough, Southwark.

FREEHOLD LAND WANTED to PURCHASE in Gray's-inn-lane, near the Holborn end, or in that immediate vicinity, suitable for the erection of SPACIOUS WORKSHOPS; or Premises capable of being adapted for that purpose. Several small tenements adjoining each other might suit if occupying sufficient area.—Particulars and lowest price to be sent by letter, post-paid, to H. W. care of the Porter, Thavie's-inn, Holborn.

EXTENSIVE PLOT of FREEHOLD BUILDING LAND TO BE SOLD, with three frontages and sewerage, in a most important locality and leading thoroughfare to Hampstead, within five minutes' walk to Chalk-farm and Camden-road Railway Stations in the occupation of the purchase-money may remain on mortgage, if required.—For further particulars apply to Mr. ELLIOTT, Admiral Napier, Alandroad, Weddington street, Kentish-town.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety-nine years, with power of exchange and Plots from one to four acres for large villa residences; smaller plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 6, Waterloo-place, Pall-mall; or to Messrs. BARKER, BOWKER, and PEAKE, 3, Gray's-inn square.

FREEHOLD LAND TO BE LET, on Building Lease for ninety-nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs MORGAN and PHIPSON, Architects, 3, Danes-Inn, St. Clement's, Strand.

ALDERSHOT.—Several eligible BUILDING SITES TO BE SOLD, immediately fronting the permanent Barracks at the South Camp. For particulars apply to Mr R. A. DAVIS, Land and Engineering Surveyor and Valuer, Basingstoke, Hants.

EXTENSIVE PLOT of vacant GROUND, in a most important first-rate locality, adjoining Regent's-circus, with entrance from Oxford and the adjacent street suitable for a building operation of any character or magnitude. It is presumed from its extent and high class situation (nearly a quarter of an acre) to be eminently adapted for an arcade or any other similar public establishment carried out under the Limited Liability Act. For particulars apply to Messrs GRAHAM and JACKSON 37 and 38, Oxford street.—May be treated for as a whole or separately.

BUILDING LAND TO BE LET, close to S. Jude's Church, old Bethnal green-road, for the erection of fourth rate houses which are in great request, and will let and sell as soon as finished.—For further particulars, apply to Mr CLARKSON, Surveyor, 43, Penton-street, Pentonville.

TO BUILDERS.—A lucrative and safe speculation.—GROUND TO BE LET, in the best part of Paddington.—Apply, by letter only, to Y. M. Office of "The Builder."

IMPORTANT TO BUILDERS AND CAPITALISTS.

UNITED TRADESMEN'S FREEHOLD LAND SOCIETY.—The beautiful ESTATE at HORNSEY, purchased by the Trustees, consisting of about thirty acres, and within three minutes' walk of the station, will next summer be accessible from the City by means of the Metropolitan Railway. Persons desirous of possessing land in this charming and picturesque neighbourhood, can do so immediately by joining this society. Plots 3 £ each; subscription, 5s per month; at their Office, the Savings' Bank, Goldsmith's-place, Hackney-road, and on the third Wednesday in each month from seven until Nine o'clock. Capitalists and others desirous of possessing land at once can do so by application to Mr. J. LAWLESS, 1, Thurlow-place, Hackney-road; or to Mr. DANIELL, Hornsey, and Estate Office, 32, Kennel-street, Russell-square. The ground on the first portion of the estate being the only part on which a tavern can be built, is delightfully situated on the high road leading to Tottenham, and is but a two minutes' walk from the Hornsey Station, to be disposed of, with all its privileges, for the sum of 300£.—Apply as above.

NEAR WHITECHAPEL.—TO BE SOLD, a piece of FREEHOLD GROUND, with TWO HOUSES standing thereon, Nos. 16 and 17, Great Prescott-street. It is about 100 feet deep, with a frontage of 36 feet. The houses are out of repair, but with a moderate outlay may be rendered suitable for good tenants, or they can be pulled down, and the ground made available for any other buildings. In addition to the 100 feet depth, there is a forecourt of nearly 10 feet, inclosed by iron railing.—Apply, personally, to A. B. at No. 4, Lower Berkeley-street, Manchester-square, before Ten in the morning; or by appointment, at any time.

BRICKFIELD.—TO BE LET, within five miles of London, an old established FIELD, containing seven acres of good brick earth and malm. There is a wash mill, plentiful supply of water, sheds, and other conveniences.—For terms apply to Mr. A. RICHARDS, Auctioneer, Totteuham.

WANTED to PURCHASE, LEASEHOLD GROUND-RENTS.—Address by letter, post paid, stating full particulars, with lowest price, to M. S. care of Mr. Perkins, 31, York-place, City-road.

BUILDING LAND.—WANTED to PURCHASE or RENT, from ONE to TEN ACRES, in any of the following localities:—Islington, Highbury, Holloway, Kentish-town, Camden-town, St. Pancras, Dalston, Kingsland, or within a short distance of the City. Apply, with full particulars, to Mr. GEO. CLARKSON, 43, Penton-street, Pentonville.

EXTENSIVE WATER-SIDE PREMISES, TO BE SOLD, or LET, partly freehold and leasehold, immediately adjoining the South Western Railway Goods Station, known as Brunswick Wharf, and long and extensively and profitably carried on in the brick, lime, stone, slate, &c. &c. trade, but available for other purposes. The present proprietor retiring from business, would dispose of the Premises either with or without the stock in-trade.—Apply on the Premises.

BARGAIN.—TO BE SOLD, under the Mortgage, TWO PAIRS of SEMI-DETACHED VILLA COTTAGES, on the Cumberland Estate, near the Gipsy-hill Station, Norwood, held for ninety seven years, at £15 15s. each, and let to highly respectable tenants at £40 per year each. They were built under a City Surveyor, and to close accounts will be sold at the low price of 775l. per pair. Possession of one may be had.—Apply personally, at the Offices of Messrs. EDWARDS and SMITH, 19, Great Carter-lane, Doctors'-commons.

TO SMALL CAPITALISTS and OTHERS.—TO BE SOLD, a FREEHOLD EIGHT-ROOMED HOUSE, situated in a good thoroughfare, let to a respectable tenant, at 40l. per annum.—For particulars, inquire of J. S. 48, Clarendon-place, Clarendon-square, St. Pancras.

SITE for a HOUSE, at Reigate, Surrey, within three quarters of an hours' ride of London.—TO BE SOLD, a very desirable SITE for a RESIDENCE, with about TEN ACRES of FREEHOLD LAND, ornamentally timbered, situated on the southern slope of Reigate hill, about half a mile from the Reigate Town Station on the South-Eastern Railway, commanding extensive views. Apply to Messrs. PAGE and LEES, Reigate.

ST. BARTHOLOMEW'S DISTRICT PARISH, Bethnal-green.—TO BE LET, for building, on a long lease, a PLOT of GROUND, 70 feet in length, by 30 feet 10 inches in width, adjoining the Infant School of the above parish. Particulars may be known on application to the Master of the National School, or to Mr. WILLIAMS, No. 16, Edward-street, St. Peter's-road, Mile-end.

TO BUILDERS.—A capital JOBBING BUSINESS TO BE LET in full work, the proprietor retiring. Coming in, including stock and plant for all branches, 200l.—For full particulars, apply to Mr. C. BROWN, House and Estate Agent, Westcroft place, Hammersmith.

SHARE or PARTNERSHIP.—An ENGAGEMENT is desired by a Gentleman (who has had first-rate experience in the architectural and engineering profession), with a view to that object. All communications confidential.—Address to ALMA, at the Office of "The Builder."

TO ARCHITECTS and BUILDERS.—T. TRELOAR, 42, Ludgate-hill, Manufacturer, supplies Cocoa-nut Fibre Matting, Door-mats, Hassocks, &c. of the best quality, on the most reasonable terms.—Warehouse, 42, Ludgate-hill.

TO ARCHITECTS AND OTHERS.

MR. EDWARD L. PARAIRE is desirous of Meeting Gentlemen who require COLOURED ARCHITECTURAL DRAWINGS. External, Internal, Isometrical Perspectives got up; outlines of same neatly coloured, with background, on terms that will insure approval. Temporary assistance given in getting up Plans, Elevations, Sections, Detail, and Working Drawings.—Mr. E. L. P. makes a consideration in his charge where competition drawings prove unsuccessful.
Address, 8, Rathbone-place.

SURVEYING, LEVELLING, and CIVIL ENGINEERING.—PRACTICAL FIELD INSTRUCTION is given in Surveying, Levelling, Civil Engineering, &c. by Messrs. HYDE, SMITH, and LEWIS, Civil Engineers Surveyors, &c. of extensive practice, who beg to inform Gentlemen desirous of acquiring a thorough practical knowledge of the Profession, that they have refitted up their Offices with every requisite, including Models and Instruments of every description. The Courses are all remodelled and enlarged, embracing all the late st improvements. Terms for the Course of Three Month. Two Guineas, which includes Field Instruction, Draughting, Mapping, Plan Drawing, &c. &c. There are no extras.—For Prospectuses, &c. apply at the Offices, 24, Guildford-street, Russell-square.

DRAWING, &c.—One Guinea per Quarter, Comprising Architectural Engineering, Mechanical Perspective, Isometrical, Geometrical, Ornamental, and Water-Colour Drawing, Measuring, Taking out Quantities, Abstracting, Valuing, Estimating, &c. &c. Day Pupils, Two Guineas per Quarter.—For prospectuses, apply to Messrs HYDE, SMITH, and LEWIS, Architects, Civil Engineers, &c. Guildford-street, Russell-square.

DRAWING CLASSES.—24, Guildford-St. For Architects, Builders, and Engineers' Sons, Assistants, Foremen, Clerks of Works, &c. At this Establishment Pupils are thoroughly instructed in Drawing of every description. Terms, Day Pupils, Two Guineas per Quarter; Evening Pupils, One Guinea per Quarter.—For Prospectuses, &c apply to Messrs. HYDE, SMITH, and LEWIS, Architects, Civil Engineers, &c. at the Offices.

ARCHITECTURE and CIVIL ENGINEERING DRAWING CLASSES. Established by Messrs. HYDE, SMITH, and LEWIS, Architects, Civil Engineers, &c. for Architects, Builders, and Engineers' Sons, Assistants, Clerks of Works, Foremen, Draughtsmen, Measurers, &c. and for giving EVENING INSTRUCTION in Architectural, Civil Engineering, and Mechanical Drawing; Colouring, Shading, and Tinting; Ornamental and Water-Colour Drawing; Perspective, Isometrical, and Geometrical Drawing; Making Finished and Working Drawings; Preparing Specifications, Taking out Quantities, Estimating, Builders' Work, &c. Terms: Day Pupils, Two Guineas per Quarter; Evening Pupils, One Guinea per Quarter. There are no extras, the terms include the whole of the above, with the use of Drawing Boards, T Squares, Plans, Drawings, Models, &c. For Prospectuses, apply at the Offices, 24, Guildford-street, Russell-square.

MATHEMATICAL DRAWING INSTRUMENTS.—JOHN ARCHBUTT, 20, Westminster-Bridge-road, Lambeth, near Astley's Theatre, begs to call attention to his Stock of Instruments manufactured by superior workmen The prices will be found considerably lower than ever charged for articles of similar quality and workmanship. Rules, scales, tapes, &c. at equally low prices. An illustrated price-list will be immediately forwarded, free, on application.
N.B. A few New and Second hand Levels and Theodolites always for Sale.

AN ACCOUNTANT, of ability and experience, undertakes to MAKE UP ACCOUNTS in arrear, and keep the books of builders, contractors, tradesmen, and others disposed upon very low terms. First-rate references to character, &c. given.—Address, S. V. Office of "The Builder."

FAY and CO. execute Drawings, Maps, Plans, and Sections of Projects, Schemes, Inventions, Designs, Machinery, Estates, Mines, Railways, Ornamental Writing, Fac Similes, &c. Their extensive Draughting Room see 75, Cannon-street West (adjoining Job, Brothers, Map-Mounters), enable them to Draw the largest size Cartoons, Illustration Drawings and Plans for Lecture Rooms, Board Meetings, &c. on Engineering, Geological, Astronomical, Anatomical, and Geographical subjects.—Terms moderate.

WANTED is a common necessity with Solicitors, Engineers, Surveyors, Lecturers, and Projectors, who are informed that their Plans, Ideas, Drawings, Maps, and Sections of Schemes, Projects, Inventions, Machinery, Estates Canals, Railways, Mines, &c. are drawn in a finished style by FAY and CO. 75, Cannon street West. Their extensive DRAUGHTING PREMISES also enable the quick execution of the largest Cartoon Drawings and Plans desirable for Lectures, Boards, and Committee Rooms.

METEOROLOGICAL INSTRUMENTS. Barometers and Thermometers verified at the Kew Observatory of the British Association, can now be obtained from the principal Philosophical Instrument Makers in town and country, at a moderate cost. Each instrument has the Observatory number and a table of errors is attached.—By order of the Council of the British Association, JOHN PHILLIPS, As t. Gen. Sec.

TO BUILDERS, CONTRACTORS, TRADESMEN, and OTHERS.—ACCOUNTS INVESTIGATED, BOOKS KEPT, POSTED, and BALANCED, on terms the most moderate, by an Accountant of standing.—Address, ROBERT HATTON, 16, New Broad-street, City.

LAND DRAINAGE and OTHER AGRICULTURAL IMPROVEMENTS. Mr. THOMAS SCOTT, 5, Charing-cross, has at present a large number of skilled drainers in his employ, and is prepared to CONTRACT for WORKS of DRAINAGE, and to carry them out with the utmost despatch. All other agricultural improvements, such as removing fences, grubbing up coppice wood, and trenching under, taken. Designs given for farm buildings, and systems of farm management and book-keeping.—Mr. S. has at present several excellent FARMS and RESIDENTIAL PROPERTIES FOR SALE and LETTING.

IMPROVED REVOLVING SHUTTERS. FRANCIS RICKABY and DUNN are now enabled to offer the above at the following reduced prices:—IRON SHUTTERS, double riveted, with machine-cut worm gear, complete, at 4s. 6d. per foot. WOOD SHUTTERS, with worm gear complete, at 3s. 6d per foot. Machine-drawn Brass Sash Bars and Stall-board Plates made to any design.—84, Gray's-inn-lane, Holborn.

J. MILLS (late Shop Foreman to Messrs. Lawrence and Sons), JOINER to the TRADE, 7, Princes-street, Stamford-street, Lambeth. Shop-Fronts, fittings, staircases, &c. Well-seasoned materials and superior workmanship, at the lowest possible prices. A quantity of doors and sashes always in stock.—By enclosing a postage-stamp, a full list of prices will be returned.—Workshops, 110, Broadwall.

LONDON: Printed by CHARLES WYMAN, at the Printing Office of COX (Bros.) & WYMAN, 74 & 75, Great Queen-street, Lincoln's-inn-fields, in the Parish of St. Giles-in-the-Fields; and published by the said CHARLES WYMAN, at the Office of "The Builder," 1, York-street, in the Parish of St. Paul, Covent-garden, both in the County of Middlesex.—Saturday, December 13, 1856.

The Builder.

AN ILLUSTRATED WEEKLY JOURNAL FOR Architect, Engineer, Operative & Artist.

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EXHIBITION of ART TREASURES of the UNITED KINGDOM, 1857. — ISSUE of SEASON TICKETS. — The Executive Committee will be prepared to ISSUE SEASON TICKETS for the forthcoming Exhibition, on and after the 1st of JANUARY, 1857. The committee are induced to make this early appeal for the support of the public in order that they may be enabled more economically to meet the heavy pecuniary demands which the magnitude of the undertaking involves. The season tickets (not transferable), will be of two classes:—

1st. A Ticket—price 2l. 2s.—entitling the proprietor to admission on all occasions when the Exhibition is open to the public.

2nd. A Ticket—price 1l. 1s.—entitling the proprietor to admission on all occasions when open to the public, excepting only on a limited number of days not exceeding eight), reserved for state ceremonials or special attractions. Such reserved days will be duly advertised, and will include the days of opening and closing the Exhibition.

To prevent disappointment the committee have to announce that, as upon the reserved days, a limited number of visitors only can be conveniently and satisfactorily accommodated, they have determined that the registered owners of such limited number of the 2l. 2s. tickets, as may be first issued, shall be entitled to admission to the reserved parts of the building. When the limit of such issue shall be attained the fact will be announced by public advertisement.

The Exhibition will be opened early in MAY, 1857.

Tickets will be on sale at the offices of the Exhibition, 300, Mosley-street, on and after the 1st of JANUARY, 1857.

Applications for tickets, by letter, must be addressed to the Secretary, and post-office orders or remittances, made payable to CHARLES HENRY MINSHIN, Manchester. By order of the Executive Committee,

THOMAS HAMILTON, Secretary.

18th December, 1856. Offices of the Exhibition, 300, Mosley-street, Manchester.

ARCHITECTURAL EXHIBITION and COLLECTION of BUILDING MATERIALS and INVENTIONS, 9, Bolt-street, Fall-mall East, open from 9 in the dusk.—First Lecture on Tuesday, JANUARY 6th, by Professor DONALDSON, "On the Architectural Manifestations of Roman Admission, One Shilling, or by Season Tickets, at all times and to all the Lectures, Half-a-crown.

JAMES FERGUSSON, F.R.A.S.) Hon.
JAMES EDMESTON, Jun. } Secs.

THE ANNUAL EXAMINATION of SCHOOLMASTERS, for Certificates to teach Drawing, will be held at the Offices of the Department of Science and Art, Crimea-road, South Kensington, on MONDAY, the 19th of JANUARY next, at 7 P.M. Schools, which might desire to be examined should send their names in on or before the 5th of JANUARY. NORMAN MACLEOD, Registrar.

THE THIRD BIENNIAL EXHIBITION of ARCHITECTURAL, MECHANICAL, and ORNAMENTAL DRAWINGS, executed by the Students of the Architects', Builders', Civil Engineers', and Mechanists' Drawing Classes, will be open for inspection on Monday, Tuesday, and Wednesday, the 29th, 30th, and 31st of December; and Friday and Saturday, the 2nd and 3rd of January, 1857, from Twelve at noon till Nine in the evening, each day, at the Offices of the Establishment, 37, Oldcastle-street. Admission by ticket, free, to be had at the offices; and at the Office of "The Builder."

T. J. HILL, Architect, Conductor of the Classes.

COMPETITIONS.

TO ARCHITECTS. — PROPOSED NEW PAUPER LUNATIC ASYLUM for BRISTOL. — The Committee appointed by the Town Council of the City of Bristol hereby offer the following PREMIUMS for the THREE best PLANS for the proposed new BUILDING, viz.:—

For the best plan, 100*l.*
For the second best plan, 50*l.*
For the third best plan, 25*l.*

Such plans to be accompanied with specifications and estimates of expense. In the preparation of the plans regard must be had to the following particulars:—The building to receive 200 patients, with requisite offices, and accommodation for resident officers. The amount to be expended on the building to be between 15,000*l.* and not exceeding 20,000*l.* The building material to be of the intended site to be used as much as possible. The elevation to be of a simple but cheerful character. The "Suggestions and Instructions for Building Lunatic Asylums," published by the Commissioners in Lunacy, to be, as far as practicable, complied with. Each plan specification, and estimate, to be signed with a motto, and with a sealed envelope endorsed with such motto, and containing inside the name of the architect competing, to be deposited at the Town Clerk's Office, Council-house, Bristol, on or before the 14th FEBRUARY next. A lithographed plan of the intended site, and copies of the "Suggestions," may be obtained upon application to the Town Clerk's Office.—The Committee do not bind themselves to accept the best or any plan for the said building.

BRICE and BURGESS, City Solicitors.

Council-house, Bristol, December 5, 1856.

TO ARCHITECTS and OTHERS. — BANBURY CORN EXCHANGE COMPANY (limited). — The Board of Directors are prepared to receive DRAWINGS for the proposed building, which will be erected on the site of the Premises on the Corn hill, Banbury, in the occupations of Messrs Timms, Taylor and Joseph Scrivens. The whole of the drawings to be in one uniform scale of 6 feet to an inch. The drawings are to comprise a plan of the ground-floor, elevation, longitudinal and transverse sections. The principal sections (shewing the size and length of the room figured thereon; the sections and elevations to be tinted in Indian ink only. The estimated outlay not to exceed the sum of 1,500*l.* The author of the design approved by the Directors will be employed to superintend the execution of the work at the usual commission of 5 per cent. The author of the next best design in the opinion of the Directors, will receive the sum of 20*l.*; and the author of the design that shall be considered by the Directors next in point of merit shall receive the sum of 10*l.* The designs to be addressed to "The Secretary of the Banbury Corn Exchange Company, Limited, Banbury," and to be sent in on or before the 31st day of DECEMBER instant. A plan of the site may be seen at the Office of the Secretary of the Company. By order of the Directors,

THOS. G. JUDGE, Secretary.

Banbury, 9th December, 1856.

TO ARCHITECTS and OTHERS.—PLANS WANTED.—The Burial Board for the Parish of Sunderland, near the Sea, in the County of Durham, require PLANS and SPECIFICATIONS for ENCLOSING, LAYING-OUT, and EMBELLISHING TEN ACRES of LAND, for the purpose of a BURIAL-GROUND, with Two Chapels, and Cottages for a Superintendent and Sexton. The site of the proposed burial-ground is situate at Chester Stones, in the township of Ryhope; the portion to be enclosed is staked out, and a plan of the same may be seen at the Offices of the Burial Board. The land to be enclosed on the north, west, and south sides by a sunk fence or stone wall, 6 feet high and 18-inch coping; and on the east side or front, adjoining the turnpike-road between Sunderland and Ryhope, by a dwarf wall, with appropriate railing and suitable entrance gates. Each chapel must accommodate 250 persons, and not exceed 60 feet including the attics. The two cottages will shew no one must not exceed 1*l.* The Board will present for the plan and specification approved by them; such plan and specification to be the property of the Board, who do not bind themselves to employ the architect whose plan may be selected.—Plans, with the specifications, indorsed "Plans for Burying-ground," to be delivered at the Offices of the Board, No. 5, Church-street, Sunderland, on or before the 2nd day of FEBRUARY next. By order of the Board,

THOS. F. HEDLEY, Clerk.

5, Church-street, Sunderland, December 3, 1856.

CONTRACTS.

TO ROAD CONTRACTORS.—TENDERS are required for the MAKING of a PORTION of CHURCH-ROAD, Haverstock hill.—Specifications and conditions of contract may be seen at the Office of Mr. JOHN SHAW, Architect, Chapel Hospital, any day before TUESDAY, the 23rd DECEMBER, between NINE and FIVE o'clock.

NORWICH LOCAL BOARD of HEALTH. TO PAVIORS and CONTRACTORS.—The Paving Committee of the Norwich Local Board of Health are ready to receive TENDERS for Three Years' Performance of the undermentioned CONTRACTS:—

No. 1. For Repairing Carriageway and Footway Pavement, and for Jobbing Work in respect of such Repairs, under lot

3. For Repairing and Watering certain Macadamized Roads.
4. For Repairing and Watering certain other Macadamized Roads.
5. For Watering certain Roads in the County of the City of Norwich.
6. For Watering certain other Roads in the said County.
7. For Watering certain other Roads in the said County.
8. For Watering certain other Roads in the said County.
9. For Watering certain other Roads in the said County.

Specifications and conditions of the several Contracts may be had at the Surveyor's Office, St. Clare Mead, on payment of half-a-crown, where any further information may be obtained. Separate Tenders for all or any of the above Contracts, addressed to the Clerk of the Local Board of Health, and endorsed "Tender for Contract, No. ," to be sent in on or before the 31st DECEMBER instant.—The Committee do not bind themselves to accept the lowest or any Tender.

H. B. MILLER, Clerk.

Norwich, 13th December, 1856.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer, Shornecliff, hereby gives Notice, that sealed TENDERS will be received by the Director-General of Contracts, Pall-mall, London, on or before WEDNESDAY, the 24th day of DECEMBER, 1856, from persons desirous of CONTRACTING for BUILDING MEDICAL OFFICERS' QUARTERS, Shornecliff. The plans and specification may be seen, and all necessary information obtained, at this Office, between the hours of TEN and FOUR each day, from the 15th to the 23rd instant, inclusive. The person whose Tender may be accepted will be required to provide two eligible securities, to be bound with him jointly and severately in a bond of 250*l.* for the due performance of the contract by the 15th of MARCH, 1857. The War Department reserves the right of rejecting the whole or any of the Tenders. No notice will be taken of any Tender unless upon the printed form, which can be obtained at this Office.

Royal Engineer Office, Shornecliff, December 12th, 1856.

NOTICE to BUILDERS.—The Commanding Royal Engineer, Portsmouth, hereby gives Notice, that sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall-mall, London, on THURSDAY, the 15th day of JANUARY, 1857, before TEN o'clock a.m. from such persons as may be desirous of CONTRACTING for ERECTING an ADDITIONAL STORY to the main out-building of the Garrison Hospital, Portsea, in the county of Hants. The plans, specification, and conditions of contract may be seen, and every information obtained, together with form of Tender, at this Office, on and after the 29th DECEMBER, 1856, between the hours of TEN and FOUR, each day (Sundays excepted), until the 14th proximo, The War Department reserves to itself the right of rejecting the whole or any of the Tenders. No notice will be taken of any Tender unless upon the printed form. Tenders to be endorsed, "Tender for Erecting an additional Story to the main out-building of the Garrison Hospital, at Portsea, in the County of Hants."

Royal Engineer Office, Portsmouth, December 17, 1856.

ROYAL ENGINEER CONTRACT.—The War Department being about to enter into a CONTRACT for the ERECTION of FIVE BUILDINGS on WOOLWICH COMMON, Two to consist of Twenty-four Rooms each, and Three of Eight Rooms; the buildings to be two stories high; such persons as may be desirous of Tendering for the same may inspect the plans and specification, and receive all necessary information relative thereto, by applying to Mr. REES, Clerk of Works, at the Royal Engineer Office, Royal Artillery Barracks, Woolwich, between the hours of TEN a.m and FOUR p.m. up to the 29th of DECEMBER, 1856, Sundays and Christmas-day excepted. Tenders to be delivered at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on the 30th of DECEMBER, 1856. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Grand Depôt, Woolwich, December 18, 1856.

TUNSTALL LOCAL BOARD of HEALTH.—NEW COVERED MARKET. To BUILDERS, IRONFOUNDERS, and OTHERS.—The Tunstall Local Board of Health are prepared to receive TENDERS for the EXECUTION of the several WORKS required in the ERECTION of a COVERED MARKET, according to the design and specification of G. T. ROBINS, Esq., Architect, Leamington. The plans, estimates, and specifications may be seen from WEDNESDAY, the 26th instant, to WEDNESDAY, the 24th day of DECEMBER, 1856, at the Architect's Office, 24, Upper-parade, Leamington, where all further particulars may be obtained. After that date they will lie for inspection at the Offices of the Local Board, Amicable-street, Tunstall. Sealed Tenders, properly endorsed, to be sent to me on or before the 13th JANUARY, 1857. The lowest Tender will in no case be accepted. By order,

Tunstall, Nov. 26, 1856. JOSEPH LOWNDES, Clerk.

TO BUILDERS.—The Committee of the Congregational Church at Weston-super-Mare, Somersetshire are prepared to receive TENDERS for the ERECTION of a NEW CHURCH and SCHOOL, at Weston-super-Mare aforesaid. The drawings and specification may be seen at the said Schools, Mount-pleasant, Weston-super-Mare aforesaid, on and after Tuesday next, the 16th instant, and after the Vestry of the present Chapel, and after MONDAY, the 22nd instant, where all further information may be obtained. Tenders will be received on or before noon on MONDAY, the 5th of JANUARY, 1857.

PRITCHETT and SONS, Architects.

Darlington, December 12, 1856.

TO BUILDERS.—Persons desirous of Tendering for the whole or any of the undermentioned WORKS to be done in the ERECTION of BOYS', GIRLS', or INFANTS' SCHOOLS, and TWO DWELLINGS, at Summer-in-the-County of Monmouth, for the Rhymney Iron Company, may see the plans and specifications at their new Offices, Pill-row, Newport, by applying to Mr. ROBERT DUNCAN, the Company's Wharf Agent:

1. Digger, Brickmaker, and Stonemason.
2. Carpenter, Joiner, Ironmonger, Smith, and Founder.
3. Slater and Plasterer.
4. Plumber, Painter, and Glazier.

A bill of quantities may be had gratis, on application by post to me. Tenders to be sent in to me before the 1st day of JANUARY, 1857.

JAMES S. BENEST, Architect.

St. Andrew's Hall Plain, Norwich.

MIDLAND RAILWAY.—The Directors of the Midland Railway are ready to receive TENDERS to CONTRACT for the REPAIRS and MAINTENANCE of the STATION BUILDINGS on the Saltley and Birmingham Branch of the above Railway, for a period of SEVEN YEARS, as per annum. The specification may be seen and particulars obtained upon application at the Engineers' Office, Derby Station, on and after TUESDAY, the 23rd inst. Tenders to be delivered to the Secretary at the Waterloo Hotel, Derby Station, by TEN a.m. on TUESDAY, the 6th of JANUARY, 1857. The Directors do not bind themselves to accept the lowest or any Tender. By order,

JOHN MOORE, Assistant Secretary.

[For remainder of Contracts see next page.

CONTRACTS.

TO BUILDERS.

THE Guardians of the Tonbridge Union are desirous of receiving TENDERS for the Building of a HOSPITAL and FEVER WARDS, at the Workhouse, near Pembury, according to plans and specifications, to be seen at the Office of the Clerk, 4, Belvedere terrace, Tunbridge Wells. Sealed Tenders to be sent to the Clerk, marked "Tender for Hospital," on or before THURSDAY the 8th of JANUARY 1857. The Guardians reserve to themselves the right of rejecting the lowest or any other Tender.—By order of the Board,
Tunbridge Wells, Nov. 29, 1856. W. H. WALL, Clerk.

TO STONE MERCHANTS, MASONS, and OTHERS. The Woolwich Local Board of Health will be ready to receive TENDERS, on TUESDAY evening, the 13th of JANUARY, 1857, at SEVEN o'clock, for the supply of 2,000 feet super. of 3-in. YORK, squared, not more than 20 per cent. but less than 4 feet in length; 5,000 feet super second-class ROCK HILL, in lengths of 4 feet, and in width not less than 2 feet 6 inches; 100 feet circular GRANITE CURB, 12 inch by 6 inches; 600 feet straight GRANITE CURB, 12 inches by 6 inches; 1,000 feet straight GRANITE CURB or CURB CHANNELLING, 9 inches by 6 inches; and about forty tons of 6 inch GRANITE HEADERS. Persons are at liberty to Tender for the whole or any portion thereof. The materials to be delivered and unloaded to such places as may be directed by Mr BARNETT, the Surveyor, William-street; to whom application is to be made for further information, if required. The stone to be delivered within six weeks after the day of tendering, and part for six weeks afterwards. A bond will be required for the due performance of the contract. The Board do not bind themselves to accept either the lowest or any Tender.—By order of the Board.
EDWARD SARGENT, Clerk.
Woolwich, December 16, 1856.

TO CONTRACTORS.—The Local Boards of Health for the districts of Dewsbury, Batley, and Heckmondwike are prepared to receive TENDERS for the COMPLETION of a PURE STORAGE RESERVOIR at Broadstone Dyke, adjoining Pottersgate road, in the township of Foolstone, in the parish of Kirkburton, in the county of York; of the diversion of Broadstone Dyke, and the necessary gauge basins, valves &c. connected therewith; also for the completion of the excavating and laying down a pure water Conduit and inverted Syphon between that reservoir and the termination of Contract No. 1, near Dunford bridge. The contractor will be entitled to the use of the plant now on the works on the terms to be mentioned in the specification. Plans, sections, &c. may be seen at the offices of Messrs MORGAN and HORN, C.E. Westgate, Huddersfield, on and after the 16th DECEMBER instant and copies of the specification and conditions may be obtained there or at the Office of the Dewsbury Board, on payment of ten shillings, on and after the above date. Tenders, sealed, and endorsed "Tenders for Broadstone Dyke Reservoir," to be sent under cover to either of us on or before the 29th DECEMBER inst.
CHARLES OLDROYD,
THOMAS DEAN,
Clerks to the said Local Boards of Health.
Dewsbury, 11th December, 1856.

HARROW LOCAL BOARD of HEALTH To CONTRACTORS for SEWERS, &c.—The Board hereby give Notice, that they are prepared to receive TENDERS from parties willing to contract for SUPPLYING, LAYING, CONSTRUCTING, and COMPLETELY FINISHING certain glazed STONEWARE PIPE SEWERS (being nearly five furlongs in length), for the purpose of extending certain existing lines of sewers in their district. The specification may be inspected, and further particulars had at the dwelling house of Mr W. SMITH the Surveyor to the Board, at Harrow. The contractor will be required to find two good and sufficient sureties for the full and complete performance of his contract. Tenders must be delivered at the Office of the Board, at or before ELEVEN o'clock in the Forenoon, on TUESDAY the 30th of DECEMBER instant, endorsed "Tender for providing and laying Drainage Pipes," and addressed "To the Chairman of the Local Board of Health, Harrow." The Board do not bind themselves to accept the lowest or any Tender; and no Tender will be entertained unless the conditions set forth in the specification are complied with. By order of the Board, WILLIAM WINKLEY, Jun. Clerk.
Harrow, December 16 1856.

TO BUILDERS.—Persons desirous of CON-TRACTING for the various Works required in the ERECTION and COMPLETION of a PARSONAGE HOUSE for Christ's Church, Belper may see the plans and specifications for the same at my Office, from MONDAY, the 22nd until SATURDAY, the 27th day of DECEMBER; and at Field-house, Belper from DECEMBER 29th, 1856, until SATURDAY, the 3rd day of JANUARY 1857. Sealed Tenders to be sent to the Rev. J. BANNISTER, Field house, Belper, on or before the 6th day of JANUARY, 1856, endorsed, "Tender for Parsonage House." Copies of the quantities supplied if required.
S. ROLLINSON, Architect and Surveyor.
Chesterfield Dec 16th 1856.

TO BUILDERS and CONTRACTORS.— Persons desirous of CONTRACTING for the ERECTION of ICE WELLS for the London and Foreign Road and Block Ice Company, Limited, at Deptford, may inspect the plans and specifications and obtain all other information at the office of Mr JOSEPH LIDDIARD, Architect and Surveyor, No. 1, Kent-terrace, Deptford, on and after MONDAY, the 22nd DECEMBER next. The Company do not pledge themselves to accept the lowest or any Tender.

TO BUILDERS.—BOROUGH of WAL-SALL.—The Town Council of the Borough of Walsall, acting as the Burial Board, are prepared to receive TENDERS for the ERECTION of TWO CHAPELS, ENTRANCE LODGE, and ENTRANCE to the new Cemetery for the said Borough, according to Plans and Specifications which may be seen at the Town Clerk's Office, Bridge-street, Walsall, on and after MONDAY, the 8th of DECEMBER instant. Payments on account will be made monthly. The Board do not pledge themselves to accept the lowest or any Tender and the Contractor will be required to enter into a Bond with one or more sufficient surety or sureties to the satisfaction of the Board, for the due performance of the Contract. Sealed Tenders, endorsed "Tender for Cemetery Buildings," to be sent to the Town Clerk's Office on or before TUESDAY, the 13th JANUARY next.
SAMUEL WILKINSON, Jun. Town Clerk.
Walsall, December 5th, 1856.

TO BUILDERS, CONTRACTORS, and OTHERS. The Committee of the Schools proposed to be built at Oakley-green in the parish of Bray, Berks, are prepared to receive TENDERS for the ERECTION of the same. The plans, drawings, and the specification, &c. may be seen at my Offices, Windsor, on WEDNESDAY, the 17th, and from that day until WEDNESDAY, the 24th instant, and after that day at the Office of Mr JOHN TURNER, Architect, Wilton street, Grosvenor place, London, until WEDNESDAY, the 31st instant, between the hour of ELEVEN and THREE. All tenders are to be sealed, and sent to me on or before TUESDAY, the 6th of JANUARY next.—The Committee do not pledge themselves to accept the lowest or any other Tender.—By order of the Committee. HENRY DARVILL.
Windsor 19th December 1856.

CARMARTHENSHIRE COUNTY WORKS. To BUILDERS.—Persons wishing to CONTRACT for the Works proposed to be done in the ERECTION of a FEMALE WARD in the County Gaol at Carmarthen, may see the plans and specification on application at the County Gaol, Carmarthen, on and after the 22nd instant. Sealed Tenders must be delivered to me on or before the 1st day of JANUARY, 1857. Neither the lowest nor any other Tender will necessarily be accepted. Any further information may be obtained by application to me, or at the Office of the Architect, Mr. R. KYRKE PENSON, 51, Wind-street, Swansea.
GEO. SPURRELL, Secretary to the Gaol Committee.
Carmarthen, Dec. 8, 1856.

CONTRACTS.

TO BUILDERS and CONTRACTORS.— ST. HELEN'S GENERAL CEMETERY.—In pursuance of the 31st sect. of the 15th and 16th Vict. c. 85, the Burial Board for the Parish of St. Helen's, in the county of Lancaster, hereby gives Notice that it is prepared to receive TENDERS for the several CHAPELS, LODGES, DRAINAGE, FENCES, RETAINING WALLS, EARTHWORK, ROADMAKING, &c. All persons desirous of submitting such Tenders either for the whole work or for the buildings or any other part of the work separately, can inspect the plans, sections, and specifications and obtain bills of quantities together with any other information at the office of the Architect, Mr THOMAS D. BARRY, 47, Bedford-street North, Liverpool. The plans will be on view from the 22nd inst. to the 5th JANUARY next, and all Tenders must be sent sealed, under cover, to the undersigned not later than the 12th JANUARY next. Two proper sureties will, in all cases be required for the due performance of the works.
THOMAS HADDOCK, Clerk to the Board.
St. Helen's, December 13th, 1856.

TO BUILDERS and OTHERS.—ST. MARY, ISLINGTON, MIDDLESEX.—Metropolis Local Management Act.—Notice is hereby given, that the Sewers, Drains, and Buildings Committee will meet at the Vestry Offices, 21, Milner-square, on WEDNESDAY the 24th day of DECEMBER instant, at TEN o'clock in the morning precisely, to receive TENDERS for the CONSTRUCTION of TWO URINALS, viz. one in Mairis-place, Holloway road (materials brick and slate) and one in Thornhill Bridge place, Caledonian road (materials iron) and other works in connection therewith. Plans and specification for the proposed works may be seen at the Vestry Offices, between the hours of TEN and FOUR daily. Persons Tendering are to attend in person or by their authorized agent at the said meeting of the Committee. The Committee does not bind itself to accept the lowest or any Tender. By order,
JOHN LAYTON, Vestry Clerk.
Vestry Offices, 21, Milner-square, Islington.

LUTON LOCAL BOARD of HEALTH.— To MASONS, CONTRACTORS, and OTHERS.—The above Board are prepared to receive TENDERS for the SUPPLY and LAYING DOWN of about
8,800 feet super of YORK PAVING,
1,700 " DENNERHILL GRANITE CHANNELLING,
2,150 feet run YORK CURB
Comprised in the following streets, being CONTRACT No 1:—

Castle-street,	Hitchin-road,
Chapel street,	Langley street,
Church street,	London road,
Dunstable road,	Levenue,
Dunstable place,	Manchester-street,
Bridge-street,	Old Windsor street,
George-street,	Park street,
Hightown-road,	Stuart-street.

The plan of the streets and specification of works, may be seen at the Offices of the Board on and after WEDNESDAY, the 14th day of JANUARY next, when forms and Tenders, and further particulars, may be had, on application to Mr T. L. EVANS, C.E. the Surveyor. The Tenders are to be delivered at the Board-room, endorsed "Tender for Paving," addressed to the Chairman, by SIX o'clock on the Evening of TUESDAY, the 10th day of FEBRUARY 1857.
CONTRACT No. 2, of about the same quantities, will be advertised shortly. GEORGE BAILEY, Clerk to the Board.
Luton, Beds, December 16, 1856.

TO BUILDERS AND OTHERS.

AT the LOWEST PRICES.—TIMBER, DEALS, MAHOGANY, and WAINSCOT. A large assortment of seasoned prepared FLOORING and MATCH BOARDING of all descriptions. Also an extensive stock of Dry White Yellow, and Pine Cut Stuff, Slating, Battens, Pantile Laths, Oak Plank, Sash Cills, &c. Timber of all kinds, Planks, Deals and Battens, fetched from the docks, sawn by steam machinery in the best manner, and delivered at the shortest notice.—THOMAS JACKSON, Sawing and Planing Mills, Commercial-road, Pimlico, London.

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process.—JOHN COUMBE solicits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he sells at prices generally charged for wet wood.—Address PATENT WOOD SEASONING WORKS, Lady Lake's grove, Mile-end gate.

NOTICE of REMOVAL.—EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Westbourne, Pimlico, to the KING'S-ROAD, CHELSEA, where their orders will be promptly executed as heretofore.—Please address, E. SIMMS, King's road, saw mills Chelsea, opposite Manor-street.

FURTHER REDUCTION of PRICES.— SAMUEL PUTNEY invites the attention of buyers to his large and well selected STOCK of DEALS, and the reduced Prices of prepared Flooring, &c.

Inch Yellow Flooring.............	18s.	per square.
¾-inch ditto.............	15s.	"
Pine Plank 12 3 by 11, from....	£21	per 120
Yellow Deals, from	20	"
Spruce Deals from	18	"
Yellow Battens, from	12	"

A List of Prices forwarded on receipt of a postage-stamp.
N.B.—All Sawn Goods delivered within two miles free of cartage
Borough-road, Southwark and Elm street, Gray's inn-lane.

EDWARD SIMMS begs to inform Builders and the trade, that he has now on hand at his manufactory (the first of its kind ever established), a large assortment of PREPARED FLOORS and MATCH BOARDING, seasoned and ready for use, from ½-inch to 1½-inch thick, in White or Yellow Deal, Oak, or Pitch Pine. Also Dry Deals, in all thicknesses, Slating Battens, Pantile Laths, Oak Sills, Plank, and Scantlings. Mouldings in clean Pine, to any design. A pattern list forwarded on application.—Address, E. SIMMS, Flooring Manufactory, and Sawing, Planing, and Moulding Mills, King's-road, Chelsea.

FLOOR BOARDS, &c.—R. SLADE begs to inform Builders and the Trade, that he has now on hand a large assortment of FLOORING and MATCHED BOARDING, from ½ inch to 1½ inches thick, seasoned, and ready for use; also, Mahogany, Mouldings, Wainscot, and all kinds of Timber required for Building purposes.—Address, R. SLADE (late E. Simms), Flooring Manufactory, Wilton road, Pimlico.

ANOTHER GREAT REDUCTION.— Yellow deals, 1s. 3d.; spruce, 3s.; Pine Plank, 3s. 6d. Mahogany, 6d.; 2½ Yellow Battens, from 1d. 1s. Carriage free to any part of town.—T. FORMAN, 1, Walnut tree walk, Lambeth-walk.

MOULDINGS BY MACHINERY. Capping, Sash bars, Beads, &c. to any Design, carefully packed and sent to all parts of the Country. A Pattern List sent on application to
E. SIMMS,
SAWING, PLANING, AND MOULDING MILLS,
KING'S ROAD, CHELSEA.

ST. PANCRAS SAWING, PLANING, and MOULDING MILLS, Cambridge street, Old St. Pancras-road. GEORGE NORIS and CO. invite the attention of Builders and the Trade generally, to their STOCK of DRY FLOORING, at the following prices, for cash:—
¾-in. h white, 13s. per square; ⅞-inch white, 15s. per square; 1-in. white, 18s. per square; ¾-inch yellow, 15s. per square; ⅞-inch yellow, 16s. 6d.; 1 inch yellow, 20s.
Timber, deals, planks, &c. at the lowest remunerative prices. A liberal discount allowed on mouldings for exportation. Book of designs forwarded on application.

ALFRED ROSLING begs to inform his Customers and the Building Trade generally that he is enabled to allow a discount of 15 per cent. upon his list prices for Mouldings. A large stock of dry flooring at low prices.—Southwark-bridge Wharf, Bankside.

ACORN TIMBER WHARF and SAW MILLS,
CANAL BRIDGE, OLD KENT-ROAD, LONDON.
A Monthly Price Current forwarded on application.
RICHARD MAY, Proprietor.

ROBINSON and BARTRAM, SAWING and PLANING MILLS, BELVIDERE-ROAD, LAMBETH, and SWAN-STREET, BERMONDSEY, having completed powerful MACHINERY for SAWING TIMBER, for building purposes, will be glad to receive ORDERS in this Department and beg to assure their friends that all favours shall be executed in the best manner, and with the utmost punctuality and despatch.

LETT'S WHARF PATENT SAWING, PLANING, and VENEER KNIFE-CUTTING MILLS, Commercial-road, Lambeth. The Proprietors beg to announce to the Trade that they have completed their extensive arrangements, and will be happy to execute all orders entrusted to their care with despatch and punctuality. Wet and dry docks and powerful cranes for landing heavy goods, offer facilities not to be obtained elsewhere. A large assortment of seasoned prepared flooring match boarding, &c &c always in stock at reduced prices.

A SUBSTITUTE FOR PAINT, AND AT HALF THE COST.

STEPHENS' DYES or STAINS for WOOD. The following extract from a letter the Proprietor has obtained leave to make public. "Northgate, Colchester. Feb. 5, 1855.—Sir,—I have just finished a new church with your Oak Stain, and I consider it the best adapted for the purpose, being the nearest approach to the real wood of any I have ever used.—I am, sir, your obedient servant,
"SAMUEL GRIMES, Builder.
"To Mr. Henry Stephens, 54, Stamford-street, London."
Samples and prospectuses free to any part of the kingdom.

TO FRENCH POLISHERS, CABINET-MAKERS, BRASS-WORKERS, &c.—A considerable reduction has taken place in the prices of French polish, white and brown hard spirit varnishes, spirit lackers, and finishing spirit. The present price is 6s. 6d. to 7s. per gallon; white French polish, 10s. per gallon; white shellac, 1s. 8d. per lb.; gums, shellacs, and acid at the lowest prices. A net cash list forwarded on application to JAMES SLIPPER, 87, Leather-lane; and 14 and 15, Dorrington-street, Holborn, London.

COLLINGE'S PATENT HINGES.— Manufacturers, CHARLES COLLINGE and CO. 64 and 65, Bridge-road, Lambeth, where a great variety are always on view for church, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with these hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double-acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work, for building and other purposes. Engines, machinery, patent axle-trees, sugar-mills, &c.

CANNON IRON FOUNDRY, 80, Goswell-street, St. Luke's.—JONES and BLAXTON, having made great additions to their STOCK of PATTERNS, beg to inform the Trade that they can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wheel Plates, &c.
BAKERS' OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges &c always in stock.

IRON FOUNDRY, Harrow-street, Lant-street, Southwark.—W. R. BARTLETT, manufacturer of Girders, Columns, Cantilevers, Railing, and Newel Bars, Iron Coping, Panels, Tomb Enclosures, Area Gratings, Sash Weights, &c. Also Fly and other Wheels, Riggers, Pinions, Engine and Lathe Castings, Forge Backs, Furnace Bars, Rings, Pans, Pipes, Tank Plates, and other Castings, to patterns or drawings.

PUBLIC TRIAL of a NEW BOILER.— Mr. M. ATKINSON, Civil Engineer and Practical Builder, respectfully invites the attention of all Engineers, Architects, and Others, to the EXHIBITION of his newly-patented VERTICAL STEAM GENERATOR, appointed to take place on JANUARY 1st, 1857, at the GROVE BOILER WORKS, Great Guildford-street, Southwark, where the inventor will have the boiler in full operation and explain its use and application to the various purposes it is intended for. The novelty of the invention is the combination of two vertical cylindrical boilers within each other, with an air-chamber containing a series of vertical hot-water pipes insuring a very rapid circulation by which means an unprecedentedly large quantity of fresh air can be supplied for warming and ventilating purposes, while at the same time the boiler is the most efficient and economical generator of steam for the working of steam engines. It occupies small space; requires no brick chimney, nor brickwork for fixing; has a rapid draught, with only a short funnel, and is therefore suitable for marine and river navigation. The boiler-plates always maintain a smooth surface, and free from incrustation; and as a large quantity of heating surface is obtained from a small fire surface, a considerable saving of fuel is effected. The large amount of tubular-heating surface in the air-chamber of this boiler, to which the air has a ready unobstructed access, insures a rapid abstraction of the heat, without the air being in the least degree deteriorated for healthy breathing. The very large quantity of fresh air which can be thus passed through it, makes this boiler the most suitable and economical for healthful warming and ventilation of public buildings, however large they may be. Steam up from ELEVEN o'clock till TWO, JANUARY 1, 1857.

ALNWICK LOCAL BOARD of HEALTH. TO BE SOLD by PRIVATE CONTRACT, a MACHINE for TESTING WATER PIPES.—For further particulars, apply to Mr THOMPSON, Town Surveyor to the Alnwick Local Board of Health, Alnwick.
Alnwick, December 10 1856.

CARRIAGE-GATES for SALE.—A Pair, 9 feet wide by 7 feet high, with 28 feet pa lisading to match, 6 feet 6 inches high, equal to new. Also, Three massive Wrought-iron Gates, rare specimens of workmanship of the fifteenth century, sketched and spoken of in "The Builder" some twelve months since.—Apply to Mr. HENRY CORMICK, Ironmonger, &c. Hampstead.

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For BRIDGES and BUILDINGS,
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IS AS
CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.
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ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIRS FOR AT LEAST TEN YEARS.
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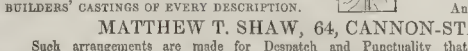

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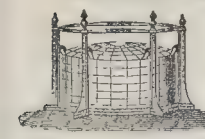

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For Public Buildings, Private Mansions, Offices, Manufactories, and Horticultural Buildings,
And for every purpose where artificial heat is required.
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The simplest, cheapest, and best Clean of the kind before the public; admirably adapted for thick substances; valve ways three times usual size. must to suit liquors of all kinds, hot or cold. is portable, or can be fixed with perfect ease. Delivers a large quantity at small labour. A really good article, commanding extensive home and export sale
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Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.
Elliptic Stoves, double backs, 24d. per inch, and upwards.
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2-feet Cottage Ranges, with ovens and back boilers, 32s. each.
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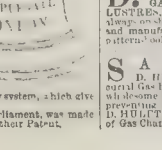

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The late additions to these extensive premises (already by far the largest in Europe) are of such a character that the entire EIGHT HOUSES is devoted to the display of the most magnificent stock of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel Silver, Plated Goods, Baths, Brushes, Turnery, Lamps, Gasaliers, Iron and Brass Bedsteads, Bedding and Bed Hangings), so arranged in Sixteen Large Showrooms as to afford to parties furnishing, facilities in the selection of goods that cannot be hoped for elsewhere. Illustrated catalogues sent (per post, free—39, Oxford-street; 1, 1a, 2, and 3, Newman-street; 4, 5, and 6, Perry's-place, London.—Established 1820).

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Its advantages over every other consist in—
1. A saving of 30 per cent. in fuel
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The best invention of Stove ever brought before the Public.
These Stoves show a bright fire; are durable, economical, and burn from twelve to sixteen hours with one supply of fuel
Prospectuses and testimonials may be obtained at the Manufactory,
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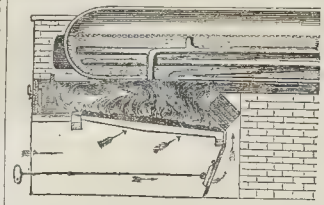

They are applicable to all Furnaces, Locomotives, Marine Engines, Ovens, Pottery and other Kilns, Common Fire, Kitchen Ranges, Hall and Hot-air Stoves.—Application to be made to the PATENTEE, 2, Norfolk-street, Middlesex Hospital; to Messrs. BURRIDGE and HEALY, 113, Dorset-street, Fleet-street; or to Z. D. BERRY, Albion Works, Wilton-road, Pimlico.
Testimonials, &c. may be seen upon application.

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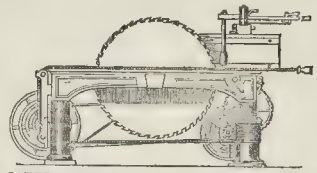

SAMUEL WORSSAM and CO. beg to call the attention of Contractors, Shipbuilders, proprietors of Saw-Mills, and others, to their Improved Inventions and Adaptations in Saw Frames and Benches, Roller and Chain Planing Machines, Endless Saw Frames, and all other kinds of Machines, for Sawing, Planing, Grooving, and Moulding Wood. They have constantly on hand machinery, either wholly or partly made, so that they can at all times on short notice supply them. S. W. and CO. beg to state that they have hitherto confined their attentions to this sort of machinery, and have had the honour of supplying some of the most distinguished companies, ship builders, and contractors in the world with their machines, for home and foreign use. One of their Saw Benches, and also a smaller one, with Boring Apparatus, may be seen at the Machinery Department, Crystal Palace.—A descriptive Catalogue, with Drawings, may be had on application to SAMUEL WORSSAM and CO. Engineers, &c. King's-road, Chelsea, London.

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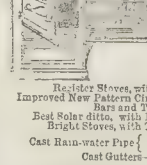

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JAMES PILBROW, F.S.A. &c. Civil Engineer, Tottenham. In order to prevent error or misconception on the part of his clients, friends, and business connections, feels himself called upon to point out a singular error which occurs in the "Post-Office Directory," 1857, (just published), wherein it would appear that he is one of a firm of Engineers and Draughtsmen; such is not, nor ever has been the case, nor does there exist any such firm as that of "EDWARD and JAMES WALKER." The Publisher of the Directory, having been apprised of the mistake, has undertaken to rectify it immediately, and explain it in his reissue for MARCH next.
Post-chaise, December 18, 1856.

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VOL. XIV.—No. 724.

EARL DE GREY presided at the opening meeting of the ARCHITECTURAL EXHIBITION, in the Suffolk-street Galleries, on the evening of Tuesday, the 16th, when there was a very large attendance of members of the profession and lovers of the art, including a considerable number of ladies. Depending merely on recollection we may jot down as amongst the gentlemen present—Professor Cockerell, Professor Donaldson, Mr. Fergusson, Mr. Henry Baker, Mr. Cockerell, jun. Mr. Sancton Wood, Mr. Griffith, Mr. Papworth, Mr. Edmeston, Mr. Ashpitel, Mr. Clarke, Mr. T. H. Wyatt, Mr. Sidney Godwin, Mr. Thoms, Mr. C. H. Smith, Mr. Houle, Mr. Stevens, of Derby; Mr. Smith, of Hereford; Mr. Norton, Mr. Jennings, Mr. Truefitt, Mr. Edward Hall, Mr. James Wylson, Mr. Field, Mr. Woodthorpe, Mr. Kerr, Mr. Geo. Morgan, Mr. Lewis, Mr. Henry Hart, Mr. Burnell, Mr. Blatchley, Mr. E. Richardson, Mr. G. R. Corner, the Rev. Mr. Boutell, Mr. Chas. Mayhew, the Rev. Joseph Hunter, Mr. Parker, of Oxford, Mr. Thomson, &c.

The president on taking the chair, said he had been told he might be of use by presiding on that occasion, and there he was. A quarter of a century ago architects in this country were not numerous, and these did not work together. Now, however, it was different, and they formed an important body. If not the first society that was established to bring the profession together, the first that came under his notice was the Royal Institute of British Architects. Why he was made the president of that body he could scarcely say, as at that time he had no special knowledge of architecture: but it was thought, and he himself always was of opinion, that a mixture of classes was desirable; moreover, it might have been considered that as a man without any interested motives, or any particular theory to advance, he was better fitted for it than a member of the profession; and it was, perhaps, on that ground that he was selected. This was the commencement of his connection with architects and architecture, and he should be most ungrateful if he did not acknowledge at all times the kindness, he might say affection, he had been received with. When he afterwards became his own architect, which he was compelled to admit he did, he had no doubt the profession forgave him with the impression that, finding difficulties, and making mistakes himself, he would so learn to appreciate and forgive others. The second institution he would speak of was the Architectural Museum, an association with an entirely different but to another class equally useful object. An architect, at a recent meeting there, had spoken of the advantage which had resulted under his own eye from leading workmen from the country to visit the Museum; and he, the president, had had cases wherein, if he could have sent men to study the various specimens contained in the Museum, he would gladly have done so. There could be no doubt of its great value. The Architectural Exhibition was the third, and that differed altogether from the other two. The Institute was for the hard heads of the profession; the Museum for the hard hands of the operative; and the Exhibition was for the encouragement of a general feeling on the part of the public, in behalf of the art. The friends and supporters of the exhibition need not all be architects: all might gain by assisting it. He thought it likely to be of the highest service in many ways. An architect to be great should be an artist,—at any rate should have the tastes and feelings of the artist,—and this institution was valuable in fostering that taste. The collection was not confined to designs, but included sketches and views of great merit. He must certainly give the managers credit for another thing, and that was for interesting so many ladies in the Institution. Once get the ladies to support a movement and it was sure to succeed. Even amongst the exhibitors there was one lady, and he must remark that her works did her infinite credit. He would further take the liberty of saying to the ladies, you cannot do a better thing than encourage in your children love of the fine arts and a taste for drawing. It was advantageous in every station, and not least to those who needed no profession, for it gave them a pursuit and kept them out of mischief. Some time ago he had filled the office of Lord-Lieutenant of Ireland: her Majesty probably did not select him on account of any knowledge he might have of drawing, but he would tell them how it operated in one instance, although not very important. When he went into the viceroyal residence he adopted as a dressing-room an apartment not before used, and unable otherwise to make the keeper comprehend what he wanted to fit it for use, drew out a plan of the arrangement he desired, and a sketch of a washing-stand; on which Paddy rushed off and declared throughout the town that "Ireland had never had such a man for Lord-Lieutenant, for he could draw a washhand-stand as well as an upholsterer." He had said, however, enough, but if he had been presiding at a dinner for the advantage of the Institution, he certainly would have added, "Prosperity to the Architectural Exhibition," with three times three.

Mr. Ashpitel, the treasurer, then made some observations on the financial position of the exhibition. When the committee decided on taking the galleries in which they then were, it had been thought a bold step; but the lectures last year had proved very successful: much of the balance on the wrong side had been paid off, and it only needed the exertion of its friends to give him, the treasurer, what he had never yet had, the burden of a balance. Briefly alluding to a few points connected with the exhibition, he would remind them that there were from 400 to 500 drawings gathered together in all styles, and it was an interesting feature, that it included a number of the designs sent in for three recent competitions, Lille, Liverpool, and Rotherham. If anything could check committees, and prevent hole-and-corner work, it would be the knowledge that the various designs would afterwards be exhibited here. At Lille the successful competitor had been put on one side, and the execution of his design given to a Frenchman; and he had been given to understand that at Liverpool the successful competitor would be treated in the same way. He could understand such a thing occurring between two foreign countries, but wholly amongst Englishmen he could not. The designs in the room, he was glad to see, were not a parcel of splendid impossibilities. the majority of them had an end, an aim, a use, and a purpose. The collection of building materials was a valuable part of the exhibition. It was of the utmost importance to know how to carry out a design efficiently at the least possible cost. It would be observed that there was much originality in some of the designs, and this was of great consequence. The mere copyist would never leave what succeeding ages would value. Some of the endeavours wanted taming down; but reflection would do that. It should be remembered that the perfectness of an art was never effected by an individual, it was the result of united efforts; and he did hope that the Architectural Exhibition would give rise to a lasting school of architecture in England.

Professor Cockerell said, as a veteran student of art amongst them, a proposition had been confided to him which he was sure they would confirm unanimously: it was a vote of thanks to the Earl de Grey for his kindness in presiding on that occasion. The noble president had been modest in expressing his own qualifications, but all who knew him knew the zeal he had exhibited in favour of their art. As president of the Institute, the Earl had invariably shown the greatest attention to its interests, and kind bearing to the members. There was a general call for the right man in the right place, and the president certainly fulfilled the dictum. It was satisfactory to see our princes finding interest in the art: artists needed princes, but it should be remembered at the same time that princes needed artists. An examination of the collection would show the progress our art was making: many new masters had shown themselves, and there was an affluence of clever works. He had every reason to believe that this our day would mark its own character, and leave monuments worthy of our age and advanced position.

The motion was carried by acclamation, and the president, in reply, said that when he took the chair at the first meeting four years ago, the bantling had been christened, but was a weakly infant: the nurses, however, had done their duty well, and it might now be regarded as a thriving child, able to stand on its own legs, and hold up its head in the world. He would regard all who were present on that occasion as godfathers and godmothers, and, with such an army of sponsors, its progress and success could not fail to be rapid.

The interval from the last exhibition having been remarkable more for *projects* than for completed buildings, it was perhaps hardly to be expected that the exhibition of the present year should present any great advance upon its predecessors. An unusual number of competitions, and those of a very important character, are still in preparation; and, as no amount of illtreatment seems to prevent the aspiring architect of our day from adventuring in these *lotteries*, we may suppose that the circumstances referred to have told much against the year's gathering in Suffolk-street. The day may arrive when the objects now sought through competitions will be attained by the profession through the medium of an exhibition such as that which we hope will one day exist,—and to this end no less than for public interests, the present collection of works deserves to be visited by all who can conceive the importance which architecture, as art and science, necessarily has so long as beauty is sought for in all things, and places of habitation are required.

Many leading members of the profession are still absent from the walls. We continue to regard as the main object of the Exhibition, the illustration of what has been carried into execution during the year. We will just venture to point out a few omissions, such as it should be the object in future to prevent. In church architecture we do not find any sufficient information by plan and section, or even by views, of what has been doing in the restoration of the different cathedrals. Several of the best of the new works of the year are not shown: for example, some by Mr. Scott and Mr. Ferrey; the decoration and fittings of the Salford Catholic Cathedral, by Messrs. Weightman, Hadfield, and Goldie; and Mr. Teulon's Church in Lambeth, and some others, given in our pages. In the class of public buildings we may name the works at the Houses of Parliament; at Somerset

House; the Junior United Service Club; the Surrey Gardens Music Hall; the Schools for the Department of Art, at Brompton; the City Bank; the buildings at the City of London Cemetery: the new Music Hall at Birmingham; the Birmingham and Midland Institute; the Manchester Art-Treasures Exhibition Building, in course of erection, and the Manchester Mechanics' Institution; the tower to the new Townhall at Leeds; the additions to Exeter College, Oxford; the Wellington College, Sandhurst; the Victoria Military Hospital; the Scutari monument, and several other monuments; and the new Ball-room at Buckingham Palace. Illustrations of some of these and other works have been engraved for the *Builder*, but should have been found also in the Architectural Exhibition. In consequence of such omissions, as we took occasion to show last year, erroneous notions as to the state of actual architecture in our day, get disseminated amongst the public. The fact is, the architects who are most actively engaged in practical architecture, are precisely those who are least able to contribute drawings; and this circumstance should be understood by the critics of the daily and weekly press.

We shall notice some of the principal works hereafter, and in the meanwhile we again invite our readers to give their earnest aid to the Exhibition. The profession are greatly indebted to the exertions of Mr. Fergusson, Mr. Edmeston, and other leading members of the committee.

We are glad to be assured that there is now no doubt of the success of the undertaking; and the opportunity which all may have of visiting the galleries and attending lectures during the season, at a nominal rate, will, we hope, at once be taken advantage of. Architecture for the general mass of the public, still offers "a new pleasure," and this will be derived as are intellectual gratifications—those which are most valuable and most pleasurable, as well as enduring,—after the subject is opened, and the study is commenced,—as may be done from the Exhibition and lectures in Suffolk-street.

We will only add now that the two rooms devoted to materials and manufactured articles are well filled, and very much advantage will result from that portion of the Exhibition.

ONSLOW CHAPEL, QUEEN'S ELM, BROMPTON.

In the early part of 1852, the Rev. J. Bigwood was requested by a small congregation, gathered together in Thurloe Chapel, Alexander-square, Brompton, by the Rev. James Macaulay, of the Free Church of Scotland, to become their minister. He consented; and on June 10th, 1852, about forty persons, including Episcopalians, Presbyterians, Independents, and Baptists, met, and passed a resolution forming themselves into a church. The congregation increased, and have now built a chapel for themselves near Queen's Elm, in the Brompton-road.

The foundation-stone of the edifice was laid on the 6th of May last, by the Hon. A. Kinnaird, M.P. and is in the Decorated style. The materials employed externally are Kentish ragstone for the plain portions of the walls, and Bath stone for the dressings of the doorways, windows, tracery, weatherings, and copings. The elevation next the roadway consists of a central gable, in which is a window of four lights, with a small tower at each side, surmounted by a spire partly perforated. These towers have square bases, with octagonal superstructures on them, surmounted by open belfries and spires. On each side of the chapel are five pointed windows of two lights, with tracery heads. In the vestry at the east end are two pointed windows, filled with stained glass. The clear internal size is about 67 feet long, and 47 feet in width, and the height 42 feet to the crown of the arch under the timbers of the roof. This area also comprehends a minister's vestry. There is a gallery at the west end, which projects 14 feet from the walls, and altogether the chapel is computed to contain 750 hearers. The roof does not show its constructive timbers. It consists of a large pointed arch, which spans the area between the side walls. This is divided into compartments, by main beams springing from the piers between the windows, dividing it into six divisions, between which are panels formed by intermediate ribs. The ceiling is fawn-coloured. Mr. Mumford was the architect; Mr. T. Rudkin the contractor. The amount of the contract was 2,369*l.*; entire cost, including heating, lighting, furniture, &c. about 3,500*l.* There is school accommodation at the back for 300 children.

ON THE LEADING PRINCIPLES IN THE COMPOSITION OF ORNAMENT OF EVERY PERIOD.*

Ornament is the result of an innate desire in man to produce for himself forms of beauty, in imitation of the works of nature by which he is surrounded: he sees everywhere that the Creator has made all things not only useful, but beautiful; and he in turn desires to create.

There is scarcely a people, in however early a state of civilisation, with whom this strong desire does not exist. It is absent in none, and it grows and increases in the ratio of their progress in civilisation.

It is to this feeling that we must ascribe the tattooing of the human face and body, resorted to by the savage to increase the expression by which he seeks to strike terror on his enemies or rivals, or to create what appears to him a new beauty. As we advance higher through the whole range of civilisation, from the decoration of the rude tent or wigwam to the sublime works of a Phidias or a Praxiteles, the same feeling is everywhere apparent. Man's highest ambition is to create, to stamp on this earth the impress of an individual mind.

From time to time a mind, stronger than those around us, will impress itself on a generation, and carry with it a host of others following in the same direction; yet never so completely as to destroy the individual ambition to create. Hence the formation of styles, and the modification of styles.

Ornament, with every people, precedes the development of every other form of art. Architecture, one of the earliest, adopts ornament, does not create it. As we find that to ornament is, with every people, one of the first natural instincts; so we shall find, that in the exercise of this instinct they could not do otherwise than follow natural laws.

The ornament of a savage, being the result of a natural instinct, is necessarily always true to its purpose; whilst in much of the ornament of civilised nations, the first impulse which generated certain received forms being enfeebled by constant repetition, the ornament is oftentimes misapplied. And instead of first making the most convenient form, and adding beauty, all beauty is destroyed, because all fitness, by superadding ornament to ill-contrived form. If we would return to a more healthy condition, we must even be as little children, or as savages: we must get rid of the acquired and artificial, and return to and develop our natural instincts.

It would be far beyond the limits of the powers of any one individual to attempt to gather together illustrations of the innumerable and ever-varying phases of ornamental art. It would be barely possible if undertaken by a government, and even then it would be too voluminous to be generally useful. All, therefore, that I have proposed to myself in forming the collection which I have ventured to call the *Grammar of Ornament*, has been to select a few of the most prominent types in certain styles closely connected with each other, and in which certain general laws appeared to reign independently of the individual peculiarities of each. And it will be my endeavour to show, that in all the varying phases of ornamental art these leading principles are the same as those which every work of nature displays.

I have ventured to hope that, in bringing into immediate juxtaposition many forms of beauty which every style of ornament presents, I might aid in arresting that unfortunate tendency of our time to be content with copying, whilst the fashion lasts, the forms peculiar to any bygone age, without an endeavour to ascertain, generally completely ignoring the peculiar circumstances which rendered an ornament beautiful, because it was appropriate, and which, as expressive of other wants, when thus transplanted, as entirely fails.

It is more than probable that the first result of sending forth to the world this collection will be seriously to increase this dangerous tendency, and that many will be content to borrow from the past those forms of beauty which have not already been used up *ad nauseam*. It will be my endeavour to arrest this tendency, and to awaken a higher ambition.

By endeavouring to search out the thoughts which have been expressed in so many different languages, we may hope to find an ever-gushing fountain in place of a half-filled stagnant reservoir.

In the prosecution of this work, and in the study of ornament, I have gathered these main facts:—

First. That whenever any style of ornament commands universal admiration, it will always be found to be in accordance with the laws which regulate the distributions of form in nature.

Secondly. That however varied the manifestations in accordance with these laws, the leading ideas on which they are based are very few.

Thirdly. That the modifications and developments which have taken place from one style to another have been caused by a sudden throwing off of some fixed trammel, which set thought free for a time, till the new idea, like the old, became again fixed, to give birth in its turn to fresh inventions; changes in the general character of ornament which are analogous in their results to organic changes in architecture, such as the substitution of the arch for the horizontal beam by the Romans, and the pointed arch of the Normans for the round arch of their predecessors. They have the same influence in the history of Art as the sudden discovery of a general law in science, or the lucky patented idea which, in any work of industry, suddenly lets loose thousands of minds to examine and improve upon the first crude thought.

Lastly. I will endeavour to show that the future progress of ornamental art may be best secured by engrafting on the experience of the past the knowledge we may obtain by a return to nature for fresh inspiration. To attempt to build up theories of art, or the formation of a style, independently of the past, would be an act of supreme folly. It would be at once to reject the experiences and the accumulated knowledge of thousands of years. On the contrary, we should regard as our inheritance all the successful labours of the past, not blindly to follow them, but simply as guides by which we may find the true path.

We have, then, first to consider what are the laws of form which we find in nature, and which are universally obeyed in all those archaic periods of art of which the works command, and ever will command, the admiration of the world.

If we examine any work of nature — a man, an animal, a tree, a flower, — we shall at once see that, independently of the beauty which results from the fitness of any part for the duty it has to perform, there is another beauty superadded which bears the same relation to the general structure that ornament does to the architectural members of which it forms a part. It is, in fact, ornament. There is no necessity for the covering of the muscles or the bark of a tree to assume the beautiful form which nature has given to it, still less for the decorative beauty superadded, both of surface, ornament, and of colour, except to satisfy certain faculties which the Creator has implanted in us. Man, besides his intellect, possesses sentiments and affections, and the delight we experience in looking upon any work of perfect beauty results from all these faculties being thoroughly satisfied, leaving the mind in a state of repose. We therefore lay it down as an axiom,—

1. *That true beauty results from that repose which the mind feels when the eye, the intellect, and the affections, are satisfied from the absence of any want.* This test may be applied to ornament in many ways.

Egyptian ornament was not only constructed in a way to satisfy the eye by the beauty of its form, the mind by the propriety of its applica-

* From the "Grammar of Ornament," read before the Royal Institute of British Architects, December 15, 1856, by Owen Jones, Fellow, Corresponding Member of the Academy of St. Fernando, of Madrid.

ONSLOW CHAPEL, QUEEN'S ELM, BROMPTON.

tion, but also as a religious symbol it appealed to the sentiments and affections. It was complete in itself and the mind of the beholder was in as perfect rest as when looking on its natural type. Egyptian constructive ornament was always symbolic: the column only a few feet high, or one 40 feet or 60 feet, as at Luxor or Karnac, was an enlarged papyrus plant; the base representing the root, the shaft the stalk, and the capital the full-blown flower, surrounded by a bouquet of smaller plants, tied together by bands. Not only did a series of columns represent a grove of papyri, but each column was in itself a grove; and we find on the walls of Egyptian buildings representations of groves of papyri in various stages of growth, which would only have to be assembled as they stand, and tied round with a string, and we should have the Egyptian shaft, with its highly ornamented capital. Egyptian art, although the oldest, is, in all that is requisite to constitute a true style of art, the most perfect. The language in which it reveals itself to us may seem formal and rigid, but the ideas and the teachings it conveys to us are of the soundest. All other styles approach perfection only so far as they follow, in common with the Egyptians, the true principles to be observed in every flower that grows. Like these favourites of nature, every ornament should have its perfume, *i.e.* the reason of its application. It should endeavour to rival the grace of construction, the harmony of its varied forms, and the due proportion and subordination of one part to the other found in the model. When we find any of these characteristics are wanting in a work of ornament we may be sure that it belongs to a borrowed style, where the spirit which animated the original work has been lost in the copy.

Greek ornament, not being a symbol possessing only beauty of form and fitness of application, leaves a want, which is only supplied when the ornament is used as an accessory to painting and sculpture. The Moors and Arabs, on the contrary, being debarred from these adjuncts, but possessing the same refined instincts as the Egyptians, by interweaving with their ornaments inscriptions appealing both to the highest faculties and sentiments, obtained that same repose which we find in every work of nature, however humble, and which we hold to be the first condition of a work of art.

2. Again, we never find in nature any superfluous ornament: there we always find *construction decorated, decoration never purposely constructed.* When an ornament is constructed falsely, appearing to give support which it does not, it fails to engender the feeling of repose by neglecting to satisfy the intellect, however much its beauty and other charms may appeal to the eye and the affections. This law, so constantly violated in modern times, was universally obeyed in all the best periods of art. The Egyptians and the Greeks always obeyed it; as did likewise the Arabs, Moors, Indians, and even the Chinese. With the Moors especially, not only does all their ornament obey this law of decorating construction, but the constructive idea is carried out in the details of the ornament itself. The Romans, the artists of the Renaissance, the Italian, and the later Gothic periods, equally disregarded it. We derive farther, from observation of Nature's works, another proposition, viz. that—

3. *Beauty of form is produced by lines growing out from the other in gradual undulations: there are no excrescences: nothing could be removed and leave the form equally good or better.*

There is nothing more characteristic of true art than the gradual undulation of form. In nature all transitions of curved lines from curved, or of curved lines from straight, are gradual. There is nothing abrupt, and this is the feature which distinguishes in all things the elegant and refined from the coarse and vulgar: it is the property of pure form, either in rest or in motion.

The gradual undulation of form is the secret of success in Greek art: the want of it is the sign of the decline of the Roman. It was possessed by the Gothic artists of the thirteenth century, and even by those of the Renaissance, but it lasted with them only for a time.

With Michelangelo and his followers commenced a new era. Grace of outline and delicacy of undulation were abandoned for boldness of conception and wonderful fertility of execution, which, whilst appealing more strikingly to the intellect and the senses, left unsatisfied the more refined instincts and the affections. The same change took place in ornament: from the delicate relief and modulation of the Renaissance artists, those of the sixteenth and seventeenth centuries returned to the coarser modelling of the Romans. The refinements which the early artists obtained by a return to nature for fresh inspiration were gradually forgotten, and ended in a style which for want of a name has been called the Rococo. In modern times a return to a more moderate relief was obtained in this country by the works of Adams, Flaxman, and Sir John Soane: but it took but slight root, and the great rush upon Roman architecture in the time of George the Fourth deluged the country with ornament outrivalling in coarseness all Roman models, and ended in a state of disorder, in the misapplication and imperfect modelling and drawing of ornament, from which we are now but slowly recovering. The artists of France have been kept within bounds. Percier and Fontaine exercised a similar influence in France to our Adams here—an influence, which from the more general academic system in France, has not been lost sight of; and the abundant studies of so many French artists in Italy have resulted in forming in France a style of ornament which borders on the other extreme, and from its flatness often verges upon insipidity.

If we examine the leaf of a plant or a tree, we shall find that, independently of the beauty of the general form, there is another beauty which arises from the exquisite way in which all the lines on the surface are distributed over its area.

However varied the general outline of the leaf, it will be found to be arranged in masses, the areas of which always diminish in regular proportion. Up the centre of each mass is a main sap-feeder; and as the object clearly is to distribute the sap to the extremities of the leaf in the readiest way, however varied the form, the main sap-feeders will divide the masses into proportionate areas. Every portion of these spaces is again subdivided in the same way; with such perfection, that the skeleton of a dissected leaf presents the appearance of a series of graduated tints in which there is no break.

Now we shall find in all decorative ornament of the best period that this natural law has been instinctively obeyed, not only in the distribution of form on the individual ornament, but also in the general arrangement of a group, and we therefore venture to lay down as an axiom that, in the composition of ornament,—

4. *The general forms should be first cared for: these should be subdivided and ornamented by general lines: the interstices may then be filled in with ornament, which may again be subdivided and enriched for closer inspection.*

The Greeks were most happy in their recognition of this law; but the Moors, perhaps, have more fully carried it out. With them ornament adapts itself so perfectly to the general form which encloses it, that it as often would appear to have suggested, as to have resulted from it.

5. We observe also another natural law in the works of all the Oriental nations, that in their surface decoration ALL LINES FLOW OUT OF A PARENT STEM: EVERY ORNAMENT, HOWEVER DISTANT, CAN ALWAYS BE TRACED TO ITS BRANCH AND ROOTS.

6. *All junctions of curved lines with curved, or of curved lines with straight, should be tangential to each other.*

Nature is said to abhor a vacuum: it may equally be said she abhors an angle. In the whole range of her vegetable productions it will be impossible to find a line butting on another line, every branch of a tree, every stem of a leaf, every vein upon the leaf, is always softened at the point of junction with another by a re-entering curve. This also is a natural law universally obeyed in the best periods of art, equally violated when art declines. It is always present in Greek ornament, often absent in the ornament of Pompeii.

Another universal law which may be recognised in every work of nature, and which should be observed in every assemblage of forms, as well as in each simple ornament, is, that whenever we recognise perfect harmony in any composition, it will be found that the straight, the inclined, and the curved, are properly balanced and contrasted. When any of these forms are wanting, the eye is as much disturbed by an unsatisfied want as when, looking on any composition of colours, any one of the three primaries is absent. In all the geometrical patterns of the Egyptians and all the Mahommedan races this is especially cared for, as well as by the Greek and by the Gothic architects in all their

tructures. It is daily and hourly neglected in modern times. It is one of the most serious faults in the decorations of the interiors of houses, and absolutely fatal in articles of costume, where lines are constantly running in one direction uncorrected, and as constantly tending to destroy the repose of the forms which they are designed to decorate and develope.

We have thus seen that the natural laws of decorating construction, the gradual undulations of form, proportionate division and subdivision of general masses; the radiation from a parent stem, tangential curvature of lines; the balancing and contrast of the straight, the inclined, and the curved, are universally obeyed in every perfect work of ornament.

I will now endeavour to show, in the second place, that *however varied the forms which have been generated in the several styles of ornament in accordance with these general laws, the leading ideas on which they are based are very few.*

The ornament of Egypt is founded on few types, and these natural types. The lotus and papyrus, growing on the banks of the Nile, symbolising the food for the body and mind; the feathers of rare birds, which were carried before the king as emblems of sovereignty; the palm branch, with the twisted cord made from its stems; these are the few types which form the basis of that immense variety of ornament with which the Egyptians decorated the temples of their gods, the palaces of their kings, the covering of their persons, their articles of luxury, or of more modest daily use, from the wooden spoon which fed them, to the boat which carried their similarly adorned embalmed bodies across the Nile to their last home in the valley of the dead.

In Greek ornament the types are still more limited: the honeysuckle and the acanthus are as universal as the lotus and papyrus with the Egyptians. There is much, however, of Greek ornament which is rather constructed on the general principles which reign in all plants, than representing any particular plant. The laurel, ivy, and vine are sometimes used as borders on vases surrounding pictures, and may be said to be in such cases symbolical; but as a general rule they were not so, and must be considered simply decorative features, which would have afforded but little satisfaction in themselves when deprived of the pictures to which they were the adjuncts.

The Romans, through the Greeks, adopted the acanthus almost exclusively. Their carved ornaments are always modifications of the acanthus: in the painted decorations the acanthus forms the ground work on which are engrafted representations of natural plants and flowers.

There is no form which has taken such deep root as this acanthus leaf, and this we think because it contains within itself all the true principles of ornamentation. The Romans, however, were limited in the use of it by the fixed law that each acanthus leaf grew out of another; but when this law was abandoned in the Byzantine period, it led to the formation of continuous scroll-work, which is so common in the MSS. of the twelfth and thirteenth centuries. The artists of the Renaissance, in returning to the acanthus, returned also to this law of its use; and, like the Roman, all their ornaments grew one out of the other.

In the ornament of the thirteenth century, again, there are but few typical forms. The most endless variety of combinations of foliage is produced by a repetition of trefoil and cinquefoil leaves, which have scarcely any particular relation to any natural plant, but being constructed on true principles are necessarily beautiful. In the later Gothic period, as a much greater approach to nature was attempted, a greater variety of types were used; but the ideal representation formed on a recognition of a natural principle was far beyond, in effect, the result obtained by the imperfect attempt at the natural. In violating consistency in the application, all true beauty was lost.

In the purely conventional ornament of the Oriental nations, it is still more remarkable how few are the generating forms.

The secret of success in every work of ornament is the production of a broad general effect by the repetition of a few simple elements: variety should rather be sought in the arrangement of the several portions of a design than in the multiplicity of varied forms.*

ON THE VARIOUS METHODS NOW BEFORE THE PUBLIC, OF INDURATING AND PRESERVING ARCHITECTURAL STONEWORK.†

The first patent for indurating and preserving stone which I shall notice was granted to François Teychenne, a foreigner, residing abroad: it is dated February, 1847: it afterwards became the property of William Hutchison. I believe the works are now carried on at Tunbridge Wells, and the patent belongs to the "Indurated Stone Company." In general terms the operation may be thus described. The stone to be indurated must be worked to the requisite form, then thoroughly dried in a heated chamber, or by some other convenient method. The solution, in which the stone is to be immersed, is composed of resin dissolved in turpentine, oil, wax, tallow, or other fatty substance: the materials are to be melted in a boiler of suitable size, and while they are in a state of ebullition the stones are put in, and the operation of boiling is continued until they are impregnated to a sufficient depth from the surface. In ordinary cases two hours' boiling will impregnate the stone one inch.

The next invention for a similar purpose, patented by Barnabas Barrett, is dated October, 1853: it is now worked in the name of "The London Stone-Hardening and Preserving Company:" their office was at 11, Moorgate-street. The following is Mr. Barrett's mode of procedure. The stones to be indurated are first completely worked to their required form, then placed in a chamber or oven, which is heated from 50 to 60 degrees, to drive out whatever moisture they may contain. In all cases where it is practicable, the stones are to be operated upon in an air tight chamber, exhausted, or partially so, and then the indurating mixture, whether hot or cold, is allowed to trickle down or flow into the chamber to fill the vacuum; the effect of which will be that the liquid indurating substance will readily find its way into the pores of the stone, and become incorporated therewith. Mr Barrett's indurating mixtures are classed under six varieties:—the first is composed of resin dissolved in naphtha, spirits of wine, or turpentine, mixed with gutta percha, dissolved in coal tar naphtha, and when warmed with steam heat, mixed with oil or any other greasy materials; after which "anti-corrosia" is ground down and well mixed with the above. Another mixture is composed of unslacked lime, with oil or soft soap, and Russia tallow, mixed with it whilst slacking; when well slacked, to be placed in a copper with alum water and "anti-corrosia," ground-up copperas and a solution made from potatoes and beer settlings: when well boiled and mixed together, they are left to settle, and the solution is drawn off. These various preparations are rather complicated: I will, therefore, not occupy more time by going further into Mr. Barrett's inventions.

The next patent for the same purpose, granted to John Benjamin Daines, is dated April, 1856. The specification describes the invention as "An improved mode of treating surfaces of soft and porous stone, &c. for the preservation of the same from decay." Mr. Daines's chief object is to impart to the exterior surfaces of stone or compo buildings, the power of resisting the destructive effects of the atmosphere and of damp; and in some measure to neutralize the tendency to alkaline efflorescence. To produce these results, he first applies a solution of sulphate of zinc or a solution of alum; after which, sulphur dissolved in linseed or other oil. This mixture is to be laid on the surface of buildings, or building materials, by the aid of a brush, or by means of an exhausted case applied to the wall of the building, or by any other suitable means: the stone will then be impervious to moisture.

Mr. Henry Clinton Page took out a patent, dated May, 1856; part of which is for "indurating common stone work generally:" for this purpose he dissolves bees'-wax in coal-tar naphtha. But if the colour of the stone be very delicate, or the preservation of its natural colour be desired, Mr. Page substitutes double distilled camphine in place of the coal-tar naphtha, and white wax instead of common bees'-wax. The solution is to be applied with a brush to the surface of the stone, repeating the process as often as the stone will absorb it, and until the pores are completely filled therewith; using the solution thicker for coarse grained than for fine grained stone.

Having given an abstract of four distinct patents for attaining the same object, I will now endeavour to give a general view of the mode of operating, and of certain practical difficulties attendant thereon. Every one practically acquainted with the working of stone, whether as a mason or a carver, must be well aware of the time occupied, and of the liability to damage incurred in removing heavy masses of elaborately wrought stone after the work is finished; and that the risk of injury or breakage is far greater with soft than with hard stone. In several of the patented inventions, it is expressly stated that the stones, after being completely worked, are to be thoroughly dried in a hot-air chamber, or oven; and in one instance it is stated, they are afterwards to be put into a tank of boiling solution, and boiled for several hours; in another method the stones are to be put into an air tight chamber, exhausted, or partially so, and then filled with the indurating mixture, either hot or cold. I need scarcely state that it is an utter impossibility to exhaust, even partially, a vessel capacious enough to hold the largest stones that are generally used in a first-class building. The failure of the atmospheric railway, on the Croydon line, arose entirely from the impracticability of exhausting large vessels, as it was found impossible to make them anything approaching to air-tight. If the stones are to be completely immersed in the indurating mixture, there will be great waste, as no other part than that which is to be exposed to the weather need be indurated; in fact the joints, beds, and back being covered with an oily or resinous substance, will prevent the mortar or other aqueous cement from adhering properly to the stone; and the result must be a certain amount of weakness in a building so constructed.

Among the writings of various patentees I find the remarkable statement, that "the process gives to the most porous stone the hardness of primitive granite." It will be unnecessary to expatiate on this imaginary result: we will look upon it as the infatuation of a parent for his offspring. The same patentee attributes the decay in stonework to alkaline efflorescence, arising from the cement or mortar used in the walls: he has arrived at this conclusion after a variety of tests and trials during eleven years. These are assertions, but no proofs are offered. The gentleman has no doubt seen many examples of stone in an advanced state of decay, covered with a saline or alkaline efflorescence; but is he prepared to show, by experiments, that the same stone would have remained perfectly free from disintegration, had it been situated far from the influence of what he conceives to be destructive agents? I have submitted a piece of limestone, which I know to be of a good and durable quality, to the most severe tests of both salts and alkalis, trials far more powerful than anything likely to occur to stone in the ordinary course of nature, yet with all such violent experiments, I have never been able to produce more than a mere trace of alteration or disintegration; I am therefore disposed to believe that the salts and alkalies have little or nothing to do with the decay of stone. Among the published writings of patentees I find also this remark: "In many cases the decay of stone is accelerated by the employment of sea or salt sand; a proof of the destructive effects of salt upon stonework may be observed in any seaport town." No doubt the author has observed stonework in some seaport towns in a deplorable state of decay: many of the buildings at Brighton, constructed with Portland stone, are in this condition: but we have no "*proof*" that such decay is occasioned by

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* To be continued.

† Continuation of the paper read by Mr. C. H. Smith, at the ordinary general meeting of the Royal Institute of British Architects December 1st. See page 673, *ante*.

marine influence. The surface of the masonry of most of the buildings at Oxford is so decomposed, that it is peeling off like paper or rags. Had this beautiful city been erected with the same stone, on the sea coast instead of the interior of the country, many might have imagined that the wretched condition of the stonework was entirely owing to the destructive effects of sea salt, whereas it is the result of bad stone.

The Island of Portland is only five or six miles in circuit: of course it is surrounded on all sides by the sea: it contains seven villages, all built with Portland stone, and they are in an excellent state of preservation. But the most remarkable instance, which proves that sea salt has no effect whatever on good stone, is that of Sandysfoot Castle, near Weymouth, built with Portland stone in the time of Henry VIII. It is so close to the sea, that every high tide washes the lower part of the walls, and in stormy weather the building is completely overwhelmed by the spray, yet the stone is quite perfect, and the chisel marks are as fresh as when left by the workmen. The fact is, *good* stone will remain nearly perfect in any situation, during almost an indefinite period; whereas *bad* stone, if exposed to the weather, will rapidly moulder away, whether placed on the sea shore, or in the middle of a large continent. The four patents which I have described, may be classed under one general heading, because they all recommend oily or resinous mixtures to be applied to the stone in a somewhat similar manner.

I have one more invention for a similar purpose to offer to notice, which has been reserved on account of the indurating mixtures being of an aqueous and more scientific character, and therefore differing essentially from any of the others. The inventor, Mr. Frederick Ransome, has sent me the following particulars: "The process consists in the employment of two or more separate solutions, which, by mutually acting upon each other, produce within the pores of the stone an indestructible mineral precipitate. In operating, the stone may either be immersed in, or saturated on the surface with, a weak solution of silicate of soda or potash; and afterwards with a solution of chloride of calcium or barium, when an insoluble silicate of lime, or baryta, is formed in the pores of the stone, rendering it impervious to moisture and insusceptible of injurious effects from atmospheric influences. Or instead of a silicate of potash or soda, a solution of sulphate of alumina may be employed, and then, by an application of baryta, a compound of sulphate of barytes and alumina is produced."

Any of the before-named mixtures, whether oily or watery, will readily be absorbed into the pores of a newly worked piece of stone; but after a building has been erected a few years in London, or any other large town, its surface becomes so thoroughly grimed with dust, soot, and impurities of a populous neighbourhood, assisted, in no small degree, by powerful winds and driving rains, that the indurating mixture cannot easily be made to soak in; it will run off the surface of the stone as it would off glass, or other non-absorbent material. But if, by some contrivance, it can be made gradually to enter within the pores, if the building should have been erected only a few months, the dirt will be so difficult to remove, that a large portion of it must unavoidably be mixed with the indurating materials, and the result will be a dirty, disagreeable appearance, permanently given to the entire edifice. Were it not for the soot and dirt, the oily mixtures applied to limestone would be so far blanched in about a year, as to cause the stone to be rather whiter than if no such process had been applied to it. To overcome these objections, some have suggested that the entire surface of the stonework should be scoured, scraped, or even chiselled afresh, in order that the indurating material may have uninterrupted access to the substance of the stone. This proceeding would not only be very expensive, but it would be liable to alter the character and effect of the mouldings, carvings, and decorations generally; and as the projecting parts are usually the first to show symptons of premature decay, they would therefore require the greatest amount of induration. Unless the indurating fluid can be made to soak into the stone at least half an inch, it may be worse than useless; because, in all probability, wet will get in behind the hardened surface, and thereby occasion larger portions to exfoliate than if the stone had been left in its natural state.

I may now offer a few comments on the manner of testing the merits of these patented inventions. You have already heard mentioned some extraordinary contrivances of air-tight chambers, and baking and boiling building stones to render them imperishable: such performances, upon samples like those shown to me by the patentees, are quite within the bounds of possibility; but it would be a novelty to see the Parliament Houses first placed in an oven and then in a tank of boiling liquid. If, therefore, the desired object cannot be effectually accomplished by such means; if the stones cannot be properly protected from the effect of atmospheric influences, without treating them in the manner described, the inference must be, that if a building is merely brushed over a few times with a cold solution, the result will certainly be ineffectual: if the former plan be a sure one, the latter must be very doubtful. Taking all circumstances fairly into consideration, I am of opinion that no plan for indurating and preserving architectural stonework is likely to answer the intended purpose, unless it can be applied after the building is erected, and after the mouldings and carvings are completely finished. Then comes the question, how to know what is the best material, and how is it to be successfully applied. I have seen multitudes of small specimens of indurated stone, which, while fresh, certainly resist the decomposing influences of air and water; but as the patentees and inventors offer no proofs whatever that the same or such pieces of stone would have rapidly mouldered away, had they not been preserved by their indurating process, how am I know that the same pieces of stone would not have stood the weather equally well without their application?—and I believe, up to this time, no one is prepared to show what condition their specimens will present after eight or ten years' exposure to the weather. I am not disposed to listen with credulity to the opinions or testimonials of individuals, however high their position—however numerous the Roman capital letters may be at the end of their names—unless they have something to relate and to show upon the subject of a more evident and satisfactory character than anything I have heretofore heard or witnessed. No doubt some may consider me captious, over scrupulous, and determined not to believe what I either see or hear; but the *weekly list of patents*, which are taken out for supposed inventions or improvements, most of which are neither seen nor heard of afterwards, shows how many men there are, who, although they do not always deceive other people, are often very successful in deceiving themselves, by believing they have discovered an invention, of great public utility, which is to "*yield* 200 *per cent. profit*," and which golden prospect their fondest admirers can neither see nor comprehend.

It would be a good plan to try the conservative power of a solution on two or three specimens of stone—Caen, Bath, and Portland for instance—choosing pieces of their respective kinds, well known to be of a perishable quality, I am sorry to say that in London there will be no difficulty in procuring such specimens; each piece to be between 2 and 3 feet long, and of sufficient girth to be accurately worked into a few mouldings, such as a piece of cornice. When the working is completed, let each piece be broken (not sawed) in the middle lengthwise, so as to leave clean fractures, with abundant indentations; the two parts will fit each other, without the possibility of either being counterfeited. Let only one piece of each specimen be well prepared with the indurating solution, taking care not to use more or less of the fluid, in proportion to the size of the specimen, than would be used if a large edifice were to be prepared for conservation; then place the prepared and unprepared specimens of each kind of stone side by side, on the top of some elevated building, where they will be fully exposed to all weathers, during several years, more or less according to circumstances. We know beforehand that in course of time the unprepared pieces will show evidence of decay; but if the indurating process answer the intended purpose, if the stones have absorbed the fluid sufficiently deep from their surface to be the means of rendering them durable, the prepared portions ought to be found after a few years unaltered, and comparatively in a perfect state, while their counterparts, having been subjected to precisely the same variations of climate, would perhaps be in an advanced stage of decay, and their architectural features nearly obliterated. Experiments thus performed and recorded would be valuable, because they would prove, as nearly as possible, whether eventually a certain process might be serviceable or useless, or indeed injurious to the stone-work.

During the last twenty or thirty years I have had many conversations with several of the most learned chemists about preserving stone from decay, and have listened with attention to the remarks of intelligent and experienced practical stonemasons, for much gold is sometimes contained in the roughest ore; and a clear operative mechanic, though incapable of expressing clearly that which he conceives in his mind distinctly, will, by judicious questioning, state facts, likely to lead the studious man into a train of ideas which he otherwise might not have thought of: but after all, the object in pursuit seems to be as far off as when I commenced the inquiry: in truth, some years ago I thought I knew more of the subject than I do at present, the difficulties appearing to increase as more information is collected. All the methods of induration which are now before the public are merely mechanical mixtures with the stone, a sort of fluid cement or varnish, which surrounds the grains without altering them, although to a certain extent it glues them together, and partly keeps out moisture: but each individual grain continues in the same state, no chemical change whatever has taken place, the elementary constitution of the stone is the same as it was before the indurating material was applied to it. It is a characteristic feature in quarries of oolite that the stone procured from the uppermost beds is generally, perhaps invariably, of a durable quality; whereas the lowest beds are the first to decay, when exposed to weather. The cause of this difference is known to depend chiefly on the quantity and quality of the cementing substance, by which the particles adhere to each other. The cement that unites the globules into a mass is formed of the same elements as the globules themselves, but more crystalline: it is in fact the decomposition of the superincumbent mass, saturating and crystallizing within the beds beneath. But this natural process of indurating is not performed in a day, nor in a year, but in ages: so slow or gradual is the progress, that in scarcely any case is the lowest bed so hard, or so thoroughly saturated with the crystalline material, as those above.

It seems to me, that if we could pursue, or imitate this natural process, it might lead to the best means of improving the natural condition of soft stone; or, in other words, we might finish the stone which is imperfectly formed in the rocks; Nature not having had time to complete her work. Man can command Nature in no other way than by obeying her laws: in all our experiments or performances, it is not we who operate, but the laws of Nature which we set in operation. The durability of compact carbonate of lime, in a crystalline state, either in the form of stalactites, or that of a porous material, rendered dense and durable by impregnation, may be witnessed in numerous instances in this country, especially in the petrifying caverns of Derbyshire. In the South of Italy and in Sicily, the production of excellent building stone, entirely formed by deposition from water, has been going on abundantly, from the earliest ages of the world to the present time. The Temples of Pæstum, constructed more than two thousand years ago, with aqueous deposit from the neighbouring rivers, are still but little decomposed, so far as the stone is concerned. Most of the modern buildings in Rome, including St. Peter's, which are constructed with a similar material, Travertine stone, or Calcareous Tufo, are generally in excellent condition.

In the waters which produce these petrifactions, there must be some solid body as a nucleus to begin upon, but what constitutes it, is in no respect important; any substance will do for the waters to commence their petrifying works upon; hence, at the caverns, "the wonder seeker" is invited by the guides, to purchase birds'-nests, purses, and various other articles, said to be changed into stone; whereas, in fact, the objects themselves are merely encrusted with stony matter. Although this natural process is progressing now, and has been during all ages, and, to a certain extent, is well understood by chemists and others, yet it has not been applied to any important purposes, and certainly never to artificially indurating and preserving soft stone. If we could successfully imitate nature in this respect, and apply our efforts to the purpose now under consideration, I think they would be more likely to answer than any plan heretofore attempted. It is not in my power to tell you how to proceed, but the principle appears so clear and simple, that I am induced to believe the proper mode of application would soon be found, if scientific men would turn their attention in that direction.

The necessity for preserving the stonework of our buildings from premature decay is entirely an evil of modern date, which, in nearly all cases, ought not to exist; for if builders engage in a legal contract to use the best materials of their respective kinds, they are liable to an action for damage, if it can be proved that defective stone has been introduced into a building; as such a proceeding must be an imposition, if not a direct fraud, upon those who have to pay for the work. And I believe I am correct in stating, that pleading ignorance of the laws of this country is not considered an excuse for the violation of those laws; and that therefore, in all probability, a verdict would be given against the contractors.

With reference to the proceedings for indurating the stonework of the new Palace at Westminster, I fear the parties in authority are rather premature in their decision. Several experimenters have been set to work without investigation or inquiry; without ascertaining what plan is best, or whether their mode of procedure may or may not be injurious to the stonework, or likely to prevent the success of some other treatment which may hereafter be found superior. With every sentiment of respect for the judgment and general discrimination of the noble and learned lord who has lately taken so much interest in this matter, I trust he will forgive me if I entertain the idea that his lordship has yet much to learn before he can properly adjudicate and decide on matters relating to the decay and preservation of stonework at the Parliament Houses.

If there ever was a time when a knowledge of good and bad stone was of considerable importance to the British public, that time is now arrived. Our Government is contemplating the covering of more than twenty acres of ground at Westminster, with official buildings of a palatial character: it is therefore to be hoped that the subject of our attention this evening will apply only to the times past and present, and that in future, when a magnificent structure shall be completed, the external masonry may remain unimpaired during the lives of those who were at the cost of erecting it, without the expense and annoyance of scaffolding, saturating, discolouring, and many other vexatious incidents attendant on the endeavour to make the best of a discreditable affair.

At the close of the paper, the chairman, Mr. Ashpitel, said he believed that, as architects, they might consider it their own fault that stonework so often failed, as it was conceded that England had as good stone as any country in the world. Perhaps the first cause of failure was the want of sufficient care in selecting stone. He had noticed the care taken in this matter in the restoration of Southwell Minster: it was well known that there were in all quarries both good and bad beds of stone, and the selection should be made in the quarry itself. The durability of St. Paul's Cathedral might be ascribed to the precaution taken by Sir Christopher Wren, who, as soon as the stone was quarried, had it exposed upon the seashore for three years before it was used. This could hardly be termed seasoning, as stone was a very different kind of material from wood; but the effect was that, after exposure to the weather, the perfect blocks were easily distinguished from the defective ones, and only those which had stood the weather well were worked. He had been told that Sir Robert Smirke took a somewhat similar precaution at the new Post Office. Unfortunately, few masons or clerks of works understood the bed of the stone; as, in addition to the oolite construction of some stones, pointed out by Mr. Smith, every kind of stone in England, excepting Portland, had the further characteristic of a visible cleavage or bed, and if placed in a building on its wrong bed, the stone would not stand. This was the principal cause of the failure of many buildings of Bath and Caen stone. Granite when improperly bedded, failed from the decomposition of the feldspar; and, in some parts of Waterloo-bridge, the stones appeared as if gnawed into by the weather. From some experiments made by Mr. Freeman, it appeared that in Portland stone there was not any visible bed or cleavage. The workmen were commonly in the habit of turning about the blocks of Caen stone in order to find the bed,—the softest side being the under-bed. He quite agreed with Mr. Smith that alkalies would not injure stone, but they all knew that acids did to a great degree, and consequently the sulphurous acid in the London atmosphere had a corroding effect upon stonework. Mr. Smith had not referred to the method of preserving the monuments in Westminster Abbey adopted by Mr. Gilbert Scott, the architect to the fabric. Some of these were of Purbeck marble, and in a sad state of disintegration. Mr. Scott was so careful of these monuments that he would hardly suffer a brush to touch them: but in order to keep the body of the stone together, he directed a solution to be made of the most colourless lac and spirits of wine, and the dust having been blown from the surface of the stone with a large pair of bellows, the mixture was applied by means of a garden syringe with a fine rose. How long this method would prove effectual he could not say, but as it was very cheap, and did no injury whatever, it was worthy of attention.

Mr. Burnell read a communication from M. Viollet-le-Duc, describing the process of silicatization adopted by him at Notre Dame, Paris. Mr. Burnell added that he had been over the works at Notre Dame, where M. Viollet-le-Duc pointed out to him the experiments he had made. He had himself tried the process at St. Luke's, Chelsea, where the stone had become very hard indeed. He had also broken up and powdered some Farley Down Bath stone, and mixed it with the silicate of potash, and, when that was absorbed, he silicated the mass again. This was two years ago, and recently he boiled a portion of the composition in water for an hour, and could not discover that it discharged any salt. He again boiled it in a solution of potash, and could not discover that the mass was altered, or that there was any free silica; thus proving, as he thought, that the silicate of lime was formed. He agreed with M. Viollet-le-Duc that the success of the process depended upon the stone upon which it was tried: the great mistake in the experiments which had been made at the House of Lords two years ago, was that they took place in the month of November, when the stone was so damp that it could imbibe nothing, and, consequently, the experiments could not succeed. Mr. Smith's impression was that one application of the process was sufficient, but, on the contrary, it was essential that it should be done day after day; that the superfluous salt should be all washed out, and a sufficient quantity of silica introduced to form, with the lime, an insoluble material,—the silicate of lime.

FOREIGN ART-NEWS.

Chateaubriand's Tomb.—There are persons who consider the late vicomte the last of the French classics and original writers. The idea of his grave partakes certainly of the latter character. It has been scooped out in the granite rock of the seashore of St. Malo, in Britanny, and the cover, of the same stone, presents, like the gigantic cross above it, a huge mass seen landwards at a great distance. Chateaubriand intended that this rock-monument should last for ages, but a few equinoctial spring-tides threaten it already with utter destruction.

Paris: Programme of the next Art-Exhibition.—The Secretary of Public Instruction has issued the following programme:—The annual art-exhibition to take place on the 15th of June instead of the 25th of March as hitherto, and to last two months. There will be awarded three classes of medals,—one of 1,500 francs, one of 500 francs, and one of 250 francs. For painting, will be awarded three medals of the first-class, six of the second, and twelve of the third; for sculpture, two medals of the first-class, four of the second, and six of the third; for engravings and lithographs, one medal of the first-class, two of the second, and four of the third; for architecture, one medal of the first-class, two of the second, and three of the third. A great honorary medal of 4,000 francs will be awarded to the young artist who shall have produced the most striking work in any department of the fine arts. The entrance will be one franc on week-days, but every one will be admitted *free* on the day of *rest*, Sunday.

Cologne Art-Union.—The purchase of pictures for distribution to the members this year, began on the 12th inst. A very fine painting by Christian Köhler, "*Gretchen am Spinnrard*" (Goethe's Faust), was purchased for 175 Frederics d'or,—a high price in Germany.

THE HOTEL POURTALES, PARIS.

The Hôtel Pourtales, built by M. Felix Duban, is less remarkable for its size than for the taste which pervades the details, the harmony of the whole, and the convenience of the interior arrangements. Its distinctive character consists in a happy union of the style of the Renaissance, which predominates in the general lines and all the architectonic dispositions, with a style that is Greco-Pompeian, and which appears only in the details, whereby they are refined, and the decorations, often in the architecture of the sixteenth century a little small and too often repeated, are made more firm and dignified.

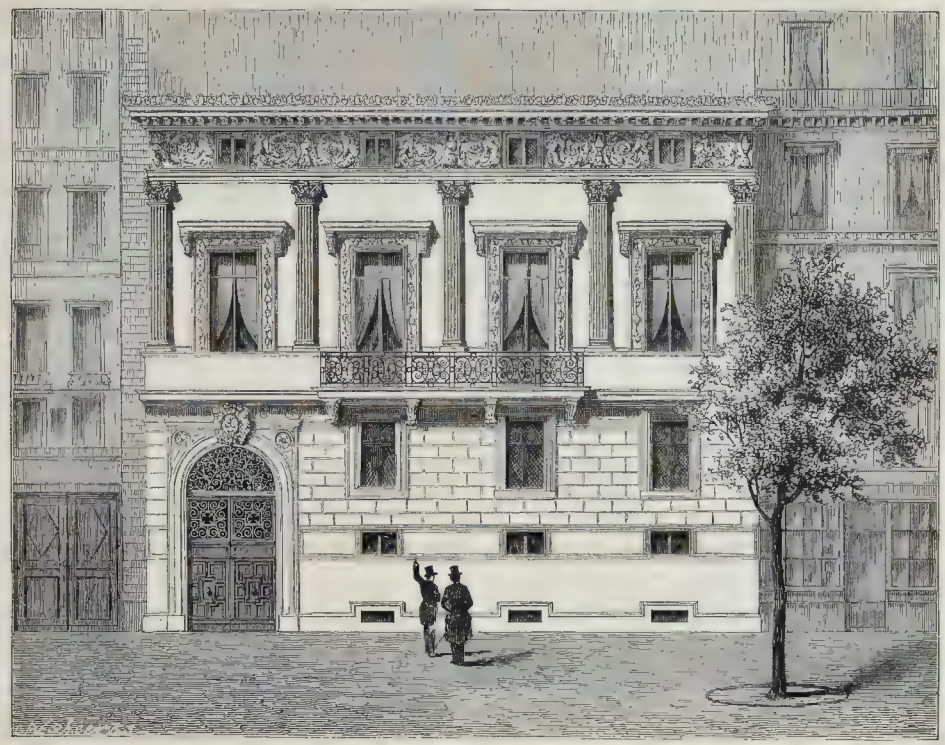
The entire edifice, by its general simplicity, judicious ornamentation, and the perfect carrying out of the details, makes itself remarkable in the midst of the numerous specimens of architecture called Renaissance (so twisted in outline, so confusedly overloaded with details of bad taste, in equally bad workmanship), that the last twenty years have seen raised under the sun of Paris, and it remains in the opinion of artists as one of the most satisfactory productions of the day in that city.

The Hôtel Pourtales is constructed rather to form a museum than to serve as an ordinary residence. The interior contains several cabinets of curiosities, a Gothic chapel, and a gallery, worthy of the remarkable pictures deposited there. The walls of the portal leading to the courtyard are decorated with statues and antique remains, to the number of thirty-two, among them being a statue of the Emperor Augustus, formerly belonging to Cardinal Richelieu. In the vestibule there are thirty-eight works of art, of the finest description, in the shape of bas-reliefs, busts, and statues. The staircase, which leads to the gallery, is equally adorned with statues and busts. The gallery contains about 200 paintings, of all schools; including "The Virgin and Infant Jesus," by Leonardo Da Vinci, a very fine picture brought from the Palace of the Escurial; "A Portrait," by Antonello de Messina, stated to be one of the first painted in oil in Italy; "The Virgin and Child," by Palmi the elder; "A Magdalen," by Guido; and a "Crown of Thorns," by Titian, besides several by Allori, Andrea del Sarto, Carlo, Dolci, the Carracci, Holbein, Albert Durer, Quentin Metsys, Velasquez, Claude Loraine, Greuze, and others.

THE CONDITION OF TURNER'S PICTURES.

We have made no observations on the position in which the pictures left to the nation by Turner have been placed at Marlborough House, injurious as it is to the fame of the artist, and tantalizing to the public. This probably is the result of necessity, and may be remedied presently. But surely some inquiry should be made into the cause of the evident deterioration of some of the pictures. All who are acquainted with the works of this great master, and know the delicate gradations of colour which he achieved and gloried in, will look with astonishment and pain at some of the pictures now hung, and would feel convinced that some recent agency must have been in operation. We know that this opinion is held by more than one of the Royal Academicians, and we make these remarks in the hope of inducing some explanation.

THE HOTEL POURTALES, PARIS.—MONS. F. DUBAN, ARCHITECT.—*Street Front; and View of the Court.*



THE DISPOSAL OF SEWAGE.

The *Builder* has good reason to recollect, and equally good right to recall, the time when endeavours to obtain an audience on such a subject as this, or to excite any general or abiding interest in it, was up-hill work indeed. The contrast between such a state of matters and the present is highly gratifying. The great questions of drainage and the disposal of sewage are now fermenting in the public mind, and ere long it is to be hoped will settle into some clear and definite course. The Government, as a climax to the present stir on the sewage manure question, intend, it appears, forthwith to appoint a scientific commission to inquire into the whole subject of the disposal of sewage, deodorization and solidification of sewage, irrigation by liquid sewage, &c. and to report to the Government with as little delay as possible on the whole question. A numerous, and evidently highly interested meeting and important discussion, at the Society of Arts, took place on 10th instant, when a paper was read by Mr. W. Fothergill Cooke, "On the utilization of the sewage of towns by the deodorizing process established at Leicester, and the economical application of it to the metropolis." Mr. Chadwick, Mr. Mechi, Mr. Rawlinson, Mr. Lawes, Dr. Letheby, Dr. Copeland, and various other gentlemen, took part in the discussion; and Dr. Lyon Playfair occupied the chair. Mr. Cooke pointed out, not only what had been done at Leicester, but the decided decrease of mortality and lengthening of life there from the sanitary improvements effected; and urged the merits of the local deodorization principle, and the resultant clearing of the Soar water, as applicable to the metropolis. His object, he remarked, was, "to represent the great facilities for, and advantages in, deodorizing the sewage matter of the metropolis before putrescence is in full activity, and the restoration of the water, either in a pure state to the river, or the use of it after deodorization, for the purposes of inoffensive irrigation. That the sewage water," he continued, "can be sufficiently deodorized and purified by lime alone, without causing the slightest nuisance, is a great fact, and I can see nothing but prejudice or penuriousness that can prevent its adoption." In course of the discussion which followed, it was urged that lime did not precipitate or retain the valuable ammonia of the sewage (an alleged vehicle of infectious matter, too), and that, in fact, the Leicester compost bricks were nearly valueless. In reply to this assertion, Mr. Cooke stated that it at all events paid for the cost of preparation, and it must be admitted (we may here interject) that *profit* is not the final, or, indeed, essential point in the question. Were it possible, by properly solidifying the sewage of towns, to get more easily rid of it by shipping or carting it off, and pitching it so condensed into the sea, a great end would be gained. The declension of the assumed great value of solidified manure, from a couple of pounds a ton to as many shillings, is certainly a damper to the idea of converting the sewage of every town into manufactured manure; but farmers have already declared such manure to be useful; and Mr. Cooke stated in his paper that, though slow in appreciating its value, contrasted with the strong and potent guano, above a thousand tons had been taken by the farmers at Leicester during the very week then just past, and that not only had further applications for it been made—at a very low price to be sure—but its value for "nitre-beds" was beginning to be appreciated, and this alone would open a wide field for its employment. The declension of assumed value is no more than we long since anticipated. As to the fact that lime used as in Mr. Wicksteed's process at Leicester does not fix one of the most valuable ingredients of the sewage, this, too, we pointed out; but still, however desirable it may be to correct the chemical deficiency, the final purpose, as we have said, is not necessarily the return of a positive profit on the disposal of the sewage manure. But we are much mistaken if this defect in the Wicksteed patent cannot be readily amended. Common earth—especially clayey soil—is well known to be a most efficient *deodorizer*, when manure or rotting organic matters are put into *it* or under it: why should it not be so when *it* is mixed with sewage itself? It is rather strange that, while Mr. Mechi, Mr. Chadwick, and others, were pointing out the former of these well-known facts, the latter did not suggest itself in course of the same discussion. A clergyman at Wakefield not long since discovered that *clay* fixed the ammonia, and other contaminations in gas, in a way that lime could not, or did not do. A mixture of *lime and clayey soil*, therefore, would appear to constitute a very hopeful as well as economical and cheap deodorizer, fixer, and precipitater of the valuable ingredients of sewage. The general value of the product may yet be still further enhanced by the mixing of the smoke of furnaces, &c. with the sewage, as adopted at Mr. Cubitt's works, and more than once treated of as a feasible idea, though not immediately practicable to any extent, at least as regards the sending of house smoke into the sewers, mixed with or precipitated and solved in water. Carbon is itself a potent deodorizer, and an essential ingredient of all vegetation; and the carbonic acid of the smoke would unite with the ammonia of the sewage, and render it at all events much less volatile, though still soluble in sewage water.

CHURCH-BUILDING NEWS.

Newark.—The first stone of the new church schools about to be erected in connection with Christ Church, Newark, was laid on Tuesday in week before last, by the Duke of Newcastle. The new school, the site of which (in Portland-street, close to the existing school) is the gift of the Duke, was required for the accommodation of the infant and female scholars, and, when completed, it is expected that about 500 boys and girls will be enabled to receive instruction, in accordance with the established principles, in the two schools connected with Christ Church. The design is Tudor Gothic. The building will consist of an infant school-room on the ground-floor, 44 feet long and 30 feet wide, having a class-room in connection with it 15 feet square. The girls' school will be over the infants' school-room, and of the same dimensions, with a class-room as on the ground-floor. The principal front of the building will be next Portland-street, and will consist mainly of three compartments, so divided by buttresses springing from the fence wall to the wall of the building, with open arches beneath, as to have the appearance of flying buttresses. The spaces between these buttresses will be filled in with an ornamental wrought-iron railing. The materials are to be of brick, with Ancaster stone dressings, and the interior finishings will be varnished upon the natural grain of the wood. The roof is open-framed, and will be covered with green Westmoreland slates, cut pattern and laid in bands, finished with a wrought-iron ridge. The cost of the building will be something under 1,000*l*. Mr. Charles Bailey is the architect.

Ely.—The altar screen of Ely cathedral having been opened to the choir, a memorandum relating to it has been placed, by way of record, upon the chapter books, stating that Mr. John Dunn Gardner, of Chatteris, in the Isle of Ely, has caused to be constructed, at his own cost, the whole of the central reredos above the alabaster string course, including the sculptures, mosaics, and other decorations, some of the most important of which were suggested by himself, and executed under his own immediate superintendence. This work was designed by Mr. Gardner as a memorial to his late wife. The other parts of the altar screen, as well as the altar steps and pavement, the altar tomb upon which the effigy of Bishop Northwold rests, the restoration of the last portions of Bishop Hotham's tomb, &c. have been constructed at the expense of the Dean and Chapter. The whole of the sculptures for the altar screen and other works in the choir have been executed by Mr. J. Philip, of London; the stone, alabaster, and wood carving, by the late Mr. Rattee and his successors at Cambridge; the mosaic and encaustic pavements by Messrs. Minton. These works were designed by Mr. Scott. Mr. George A. Lowndes, of Trinity College, Cambridge, gave the iron screen and gates, executed after a design by Mr. Scott, which is placed at the entrance of the south aisle of the choir; and the Rev. Professor Selwyn, Canon, presented the font, placed in the south-west transept, hereafter to be used as a baptistery. The Rev. Chancellor Sparke, Canon, contributed a painted window—the third from Bishop West's Chapel in the south aisle of the choir,—by M. Lasson, of Paris, the subject being the history of John the Baptist. Mrs. Maddy gave a painted window—the second from the west end of the north aisle of the nave,—by Mr. Preedy, of Worcester, the subject the history of Job. The Rev. W. G. Townley, Rector of Upwell and Welney, Norfolk, gave a painted window by Mr. Wilmshurst, placed in St. Catharine's Chapel, after a picture by Bassano, representing the Baptism of our Lord, in the possession of Lieutenant-Colonel Pratt. The Rev. Professor Selwyn gave a painted window, also by Mr. Wilmshurst, which is placed in the same chapel, after a picture by Overbeck, the subject being from the text, "Suffer little children to come unto me, for of such is the kingdom of Heaven." This is the forty-third painted window which has been placed in the cathedral in little more than ten years. A slab of Alexandrine mosaic, to be placed upon the grave of Bishop Allen, has been presented by his son, the master of Dulwich college: an effigy of the late Dr. Mill, canon of the church, placed upon a highly-enriched altar tomb, and surmounted by a hearse, is also in preparation; and an iron screen and gates, the gift of the Dean, for the entrance of the north aisle of the choir, similar to that presented by Mr. Lowndes for the entrance of the south aisle, is likely, according to the *Cambridge Chronicle*, to be completed in the course of a few months. The painted glass for the east windows, for which the late Bishop Sparke gave 1,300*l*. and which has been in preparation for so many years, is likely, says the same paper, to be finished in a few months. Two windows, one the gift of the Judges who have been educated at Cambridge, and the other of lessees of the Dean and Chapter, are preparing for the north aisle of the nave: the bachelors and undergraduates of the University of Cambridge are now taking active measures for finishing the great north-east window of the lantern; whilst the design is in forwardness for the south-west window of the same lantern, to which the Queen and Prince Albert have presented their portraits: this window will contain, like those already executed, eight figures as large as life, four in the upper compartment, and four in the lower. A pavement has been put down in St. Catharine's Chapel. It is a combination of Purbeck marble, encaustic tiles, and borders of incised Portland stone, the incisions being filled with coloured cement. Back screens of an enriched character, to mark the stall work of the northern aisle of the choir, are in course of construction: similar screens will be erected in the south aisle. The Dean and Chapter desire to carry out the remaining works of their new choir in the same style as in those already finished.

Coventry.—West-Orchard Chapel, Coventry, has been re-opened, after undergoing considerable alteration. The chapel has throughout been put in a state of repair, and many parts have been entirely rebuilt. The front is altogether new. The whole of the interior fittings are new, and the pews are low and open. Cast-iron pillars support the galleries, the fronts of which are ornamented with open coloured metalwork. The windows are bordered with stained glass. The roof, which is ceiled, is supported by beams of coloured timberwork, and in its centre there is a sunlight of gas-jets. Means of ventilation are provided, and the place is warmed throughout by a hot-water apparatus. The plans were drawn by Mr. Mault, and the work has been executed by Mr. George Taylor.

Liverpool.—The Roman Catholic Chapel of the Immaculate Conception, just completed in connection with St. Edward's College, Everton, has been consecrated. This chapel has been built as a lady chapel to a cathedral, the designs for which have been furnished by Mr. Welby Pugin. It is to be dedicated to St. Edward, and serve as a parish church. Its form is that of a cross, having a choir and side aisles. The choir will be about 100 feet in length, the interior of the edifice to be lighted with clere-

story windows. A transept will divide the choir from the other part of the edifice, and a large ornamental window is to be introduced at the eastern end. The portion just completed will be appropriated as a private chapel for the dean and canons. It is 40 feet square, having side aisles and other requirements. A range of cloisters, at present of a temporary construction, connect the chapel with the college. The building is in the Pointed style of architecture, and constructed of rustic masonry, a finer description of stone being employed for the facings and dressings. The sanctuary, altar, &c. are ornamented, and the seats are of pitch pine, carved. The contractors for the building are Messrs. Baynes and Son, of Liverpool.

Preston. — A new font has just been placed in the parish church. It is the joint gift of three surviving daughters of the late Mr. Edward Gorst, of Preston. The font is of Caen stone, and is in the Gothic style, of fourteenth century. The bowl, on the upper portion, is octagonal, each face ornamented with a quatrefoil panel, bearing, in the centre, alternately, a bas-relief of the emblems of the four Evangelists: an angel at each corner, appears to bear up the bowl. The stem has eight shafts of Dent marble, inserted against the stone. The work was done by Mr. W. E. Jackson, of York, from designs furnished by Mr. Paley, of Lancaster, architect.

PROVINCIAL NEWS.

Lynn.—The town-council of Lynn recently referred to the ratepayers the question whether an Act for a new and constant supply of water should be applied for. A public meeting of ratepayers was accordingly held last week, when it was stated that the estimate of Mr. Stephenson, C.E. for the works, was 7,200*l.* The total cost would be 10,000*l.* besides the expenses. The meeting was a rather stormy one, and it was ultimately resolved by a large majority that it was inexpedient to make the proposed application to Parliament.

South Weald.—The almshouses of the Brentwood Charity, situated at South Weald, besides being scattered, were dilapidated, and an order was issued from the Court of Chancery, and Mr. Teulon was appointed the architect to carry out a new establishment. The site selected is on the side of a hill inclining to the south. The type adopted is Early Middle Pointed; the material red brick and stone, with black brick. As all the arrangement is on the ground-floor, the *tout ensemble* has an extended appearance, particularly as the fall of the ground has been followed in a gradation of the houses. The chapel forms the central feature, being a parallelogram with three-light east and west windows, distinctive in their tracery. The brickwork is diapered symbolically, and the roof surmounted by a fleche, containing the bell. The interior has the eastern end seated stall-wise, with returns facing the east for the wardens, and this is enclosed with screen-work. The glass of the east window, by Ward, was presented by Lady Sophia Tower. As the houses of the men form the northern flank, and those of the women the southern, they have their respective entrances to the chapel beneath a cloister or covered way, formed by the extension of the roofs of the dwellings, which is, indeed, continued throughout. Each house contains a living-room, bed-room, pantry, and small kitchen, with a yard. The roofs are diapered. There is an hexagonal building on the plateau over the well, with a conical roof terminating in a finial, with this inscription carved within the cornice,—"The beginning of strife is as when one letteth out water; therefore leave off contention before it be meddled with.—*Proverbs.*"

Bridgnorth.—The new market-buildings and public hall are so far advanced towards a complete state, that the portion devoted to the marketting purposes was opened on Saturday before last. The new building is of brick—red, white, and blue—and in the Italian style, after a design by Mr. R. Griffiths, of Quatford, architect. The main block of the building is square, with a tower at the north-west angle; but with the markets which extend down Listley-street, the entire outline is a parallelogram. There are two façades—one in Bank-street, the other in Listley-street—with the tower at the angle. The general walling is of blue brick, banded with white; the quoins, strings, and plinths being also in white brick. The building is two-storied. In the main body the ground-floor consists of shops and entrance-hall, the tops of the windows and entrances presenting, in the exterior, a line of seven circular arches, the middle three having a pier of double width on either side, thus making them central. The arches are in alternate blocks of blue and white brick, springing from piers also in blue, banded with white. The windows and doorways have half-brick reveals in red. The upper story has a tier of windows the piers and arches of which are uniform with those in the lower. Above each of the windows in the upper story is a circular aperture, fitted in with grating in ornamental ironwork, for the purpose of ventilation. The façade in Listley-street is nearly uniform with the one in Bank-street. The markets are situate at the back of the main building, the exterior forming a continuation of the frontage in Listley-street, where there are ten windows and two arched entrances. The Public Hall being built over the centre of the markets, and not being so wide, leaves two side aisles in the latter, which are roofed in with rough-rolled plate glass. The principal entrance to the building is in Bank-street through two archways, fitted up with ornamental iron gates, opening into an entrance-hall, the floor of which is laid with encaustic tiles of plain design. There is a central stone staircase with cast-iron balustrades, conducting to a landing from which are reached the various rooms above the shops. This upper story contains a reading-room and library for the new Literary and Scientific Institute, a magistrates' room, and clerks' office, and the public hall, situate at the back, and over the centre of the markets. The hall is a parallelogram of 80 feet by 32 feet, and is lighted by six windows on each side. The markets are approached either from the principal entrance or from Listley-street. They contain fish-stalls, general and butchers' markets, the whole of which are paved with brick, fitted up with stalls, counters, &c. and have the gas and water laid on. The general market is divided into side-aisles and central avenue by piers and arches which support the public hall. The markets are lighted from the side windows in Listley-street and from the rough-rolled glass roofs of the aisles, and are ventilated by means of perforated zinc.

Leek.—The South Staffordshire Waterworks Company, in carrying out their Works at Lichfield, have found it necessary to alter the course of their tunnel through the town on account of sewage getting into the tunnel. They have therefore made a proposal to the Lichfield commissioners on the subject, but the commissioners have not acceded to it.

Sunderland.—A new tidal lighthouse has been recently erected by the River Wear commissioners on the south pier of Sunderland. It is constructed of iron, and has been placed immediately to the west of the old lighthouse, which is now nearly removed. The house has a catadioptric light of the fifth order, placed at a height of 58 feet above high water of ordinary spring tides. The new structure is circular throughout, and is elevated upon the raised platform or promenade of the pier. The total height from the pier to the top of the lantern-dome is about 53 feet.

SANITARY IMPROVEMENT OF MACCLESFIELD.

FROM the fourth annual report of the Mayor of Macclesfield, as head of the Local Board of Health, it appears that important results are now beginning to be seen obviously to flow from the sanitary measures in progress during the last few years. We must take a few extracts from this report, a printed copy of which has been sent us.

In the four years last past, 43 streets and 245 courts have been sewered, paved, and flagged; every privy and ash-pit belonging to them, numbering 290, has been drained, repaired, or rebuilt, and new ones have been erected where none existed before: 1,489 houses have been drained. In the execution of these works the Board have expended 15,416*l.*; and in the same period, nearly 36,000*l.* has been the entire expenditure.

The Board then refer to their tables of mortality. These tables show the rate of mortality before the operations of the Board to have been 33 deaths in a thousand, whilst the average of the last three years has been reduced to 26 in a thousand. The average age of death of all persons, which was formerly twenty-four years, is already twenty-nine years! Freedom from the former excess of preventable deaths is shown in the registered "causes of death," and singularly confirmed by the nearly uniform numbers dying in the last three years—namely, in 1854, 775; 1855, 797; 1856, 774. In all previous years there appears to have been no such uniformity, because, no doubt, those influences were in existence which rendered life more precarious, contagion more certain, and epidemics more frequent and malignant.

To sum up the benefits, therefore, it will appear that 812 lives have been saved, the proportionate number of cases of sickness to each death have been prevented, and the consequent expense avoided, the mean duration of life has been lengthened five years, and infantile mortality, one of the certain tests of the absence, or otherwise, of sanitary improvement, has been reduced 13 per cent.

An important hint, applicable to other places besides Macclesfield, is embodied in the following quotation from the report as to the approval of a plan for a chapel. "The board," it is remarked, "deemed it proper to require that adequate means of ventilation should be provided, under the direction of their surveyor; for it is worthy of remark that, whilst the Board are scrupulously particular in providing each tramp in a common lodging-house with 250 cubic feet of breathing space, being the admitted quantity of healthy respiration, there are places of worship where the allotted space is only 71 cubic feet for each person, without any provision for due ventilation, and the evil consequences of breathing over and over again the poisonous respirations from each other's lungs, have induced the Board to call attention to the fact, as the powers they possess must eventually be exercised to mitigate such insidious means of destroying health."

The police records and medical reports are said to bear testimony, as does the inspector's report, to the comparative freedom of the town even from crime as well as disease, since the proper regulation of low lodging-houses was first insisted on; and the reporter thinks that even had the exertions and the outlay of the Board had no other effect than this, they would have been thus well repaid.

PROGRESS OF MARSEILLES.

AT the meeting of the Institute of Architects, on Monday, December 1, other proceedings at which we have elsewhere recorded, the Secretary for foreign correspondence read a letter from M. Coste, architect, of Marseilles, part of which we translate. "Marseilles," says M. Coste, "although an ancient Phocian colony, does not possess any trace even of the remains of that period. A few fragments of Mosaics found during some investigations, indicating a Roman occupation, and some Christian sarcophagi of the Middle Age, are the only remains of times past. Marseilles has never been other than a commercial colony, inhabited by a varying population from the shores of the Mediterranean. It is divided into two parts, which adjoin one another; the high town (ancient), to the north, and constructed with narrow and winding streets, to protect it from the sun and wind; and the lower town to the south, divided by broad, straight streets, running from north to south, and from east to west. There are some sheltered public walks here, and it is inhabited generally by the commercial chiefs. The churches and public edifices scarcely offer any points of artistic interest. Some new public walks, planted with trees, have been added of late years.

I must mention, too, the canal which brings the waters of the Durance into the city. In the line of the canal they have put up—about twenty-five kilometres from Marseilles—an aqueduct of colossal dimensions, of which a de-

scription in a constructive point of view might interest. Some years since, the old port being insufficient for the increasing commerce, a new port was established between the years 1846 and 1852, by a strong jetty running into the sea in front of the Joliette—of which it bears the name—and to the west of the upper town. This new port was of great service during the war in the Crimea, and this has shown the need to construct a third, which will bear the name of Port Napoleon. The works of the jetties have been submitted to competition, the cost being nine millions of francs. It is in front of this new port that they are constructing a new town, on the site of ancient Lazaret, and on the parts taken from the sea, and where will be the docks, dockyard, and the station of the railway. It is in front of these two ports, on a promontory, that M. Vaudoyer, architect, has commenced the future cathedral in the Byzantine style; and on another promontory, at the entrance of the old port, the ground has been cleared, to construct there an Imperial residence, after the design of M. Lefuel, architect to the Emperor. The new Bourse, of which the designs were in Paris, is in course of execution in the Rue de la Canæbière, facing the Place Royal, near the old port. It is one of the great projects put forward by a company, to renovate the old city, lengthen the Rue de la Canæbière, and construct a fourth port to the south-west of the promontory, where the Imperial residence is about to be built. Two years ago a zoological garden happily placed to the east of the city, was established, to acclimatize animals which come to us from tropical countries—an establishment which improves every day.

Marseilles, under Napoleon I. numbered but 80,000 souls, and now, under Napoleon III. the population is 250,000—not reckoning the floating population; and there is no doubt but that in twenty years Marseilles will be the first city in France after Paris. My only regret," says the enthusiastic writer, "is, that I was born too soon to witness the full development of my native town."

LIVERPOOL LIBRARY AND MUSEUM COMPETITION.

After a long and stormy discussion at a meeting of the council on the 10th instant, the rewarded designs were put on one side as beyond the means in hand; and it was resolved,—

"That the corporation surveyor be directed to prepare, under the direction of the committee, plans for the new Public Library and Museum, having regard to the amount at the disposal of the committee."

It is unnecessary for us to say that this is but an added injustice towards those of the competitors who adhered to the conditions prescribed by the committee.

ARCHITECTURE AT THE MANCHESTER EXHIBITION.

The committee have decided on appropriating a small section of the building to architectural drawings and designs. The space will be limited. Arrangements will probably be concerted with the Royal Institute of Architects to make the selection, so far as London is concerned.

INDUSTRIAL SCHOOL FOR MIDDLESEX.

The selected design for the Middlesex School is by Mr. Barry, of the firm of Banks and Barry. We are informed it is one of the designs originally sent in to the committee, but not one of the seven selected by the referees, or one of those to which premiums were awarded by the magistrates! Of all the odd proceedings which have attended competitions it would be difficult to cite anything more odd than the story of this particular affair. A report on the subject is about to be published, and may, perhaps, throw some light on it.

Value of Quarry Land at Portland.—A portion of quarry land belonging to Mr. Scriven, stone agent, of Portland, says the *Sherborne Journal*, has been sold by public auction. In 1819 it was sold for about 90*l.*: it has now realised 1,160*l.*

THE LATE CHIEF SURVEYOR OF THE OFFICE OF WORKS.

Some time since Mr. Inman, the late surveyor of the Office of Works, presented a second memorial to the Treasury, reciting all the facts of the case, and pleading the hardship of the departure as regards him from previous practice. The result, we are happy to learn, is, that My Lords have amended for the second time their decision, and have granted him 533*l.* per annum, or two-thirds of his original salary of 800*l.*

THE ARCHITECTURAL MUSEUM.

The Committee of the Architectural Museum have determined, subject to some conditions, to accept the offer of the Board of Trade, of space in their museums at Brompton, or as the Board of Trade have erroneously determined to call it, Kensington-Gore South. The committee will shortly publish a statement of the reasons which influenced them.

A report is current that the Architectural Museum is about to be moved from Cannon-row to the "Brompton boilers." I do not know whether the subscribers have been asked to consent to this removal, but if not, would suggest that a meeting of them be called, before a step of such great importance to the Institution they uphold is irrevocably decided upon. I have no doubt that many powerful reasons may exist in favour of the contemplated change, and these, if fairly stated, might reconcile us all to the weary pilgrimage to Kensington every time we wish to consult the Museum casts; but I think we have a right to know what there is to justify a step which appears to me, and I dare say to others, an act of *felo de se* on the part of the Architectural Museum.

A Subscriber.

THE MAIN DRAINAGE OF THE METROPOLIS.

On Tuesday, the 16th, the Board of Works adopted, by the votes of 23 against 13, the plan B*, having the outfall at the point marked by Capt. Barstal. A strong protest against it, signed by nine members of the Board, was lodged.

PROPOSED MEMORIAL OF IZAAK WALTON.

Being very recently at Winchester, I saw the pavement-tomb of "good Izaak Walton" in the cathedral; the inscription almost obliterated by the wear of nearly two centuries. On my returning to town I asked assistance, and at first thought merely to restore the tomb. Upon consideration, I thought it would be a worthier undertaking if a portrait-tablet were also erected. Communications took place with the Dean and Chapter, and those gentlemen approving of the object, kindly consented to remit their fees if a proper monument were erected.

Mr. Johnson, sculptor, has furnished me with a design, which has been approved by the cathedral authorities. It is intended to be of marble, the head (a medallion) life-size; and the cost, with fixing, &c. will be about 100 guineas.

I intend to ask the aid of all the London fishing-tackle manufacturers to obtain subscriptions, and I entertain very little doubt of speedily obtaining the sum required. John Wilson, Hon. Sec.

BROAD HAVEN, SOUTH WALES.

Our usual sea-side places are so thronged every year that it really seems a charity to point the public to new spots, and you have occasionally commented on some of them. Will you, then, permit me through your columns to call the attention of speculators and enterprising builders to the extremely beautiful sites for erecting marine residences which are to be found at Broad Haven, on the shores of St. Bride's Bay, in Pembrokeshire, South Wales? The rocks are bold and romantic, and the air remarkable for its purity; the water clear as crystal, the sands hard and extensive, a western aspect, partaking of a medium between the relaxing south and often too bracing north. When one looks at the fine rows of houses built on the slopes of the muddy Bristol Channel, one wonders that these more picturesque shores and delightful situations of St. Bride's Bay have not attracted the attention of gentlemen of capital. One obstacle, it is true, has heretofore intervened, which was a want of communication; but the South Wales Railway has removed that obstacle, for this attractive situation is only six miles from the railway station at Haverfordwest (a capital market town), and from Milford Haven only five.

Some few parties have settled down there in the only houses fit for comfortable habitations, but the numerous applications for such residences show how many more of the health-seeking and health-requiring inhabitants of the smoky and busy towns of the kingdom would flock thither during the summer months if good accommodation were afforded.

I have visited all the watering-places around England's varied coasts, but have not been at a spot so fitted for the purpose to which I have referred; and some who sojourned there with me, though strangers to the place before, entertained the same opinion. I shall be glad indeed if this notice, for which I beg a place in your valuable publication, may strike the attention of parties with spirit and capital, and induce them to seek sites there; for there are many to be had at comparatively nominal prices fit for erecting buildings and terraces, which would, in a very few years, well reward them for their outlay, and make this equal, if not superior, to Ramsgate or Margate.

Cheltenham.

EXHIBITION OF FLEMISH PICTURES.

One hundred and twenty-one works of the modern Flemish School have been collected in the Gallery at 121, Pall-mall, and are now open to the public. Amongst them are some pleasing pictures, but the collection can scarcely be said to represent the school fairly. However, as a first step it is to be welcomed. Amongst the most noticeable are—"The Favourite Cat" (2), a delicate little picture by De Block; "The Proposal" (8), by De Braekeleer, full of character; M. Clère's "Redeemer" (16), over the door; "Andrea Vesale" (47), by Hanman; "The Christening," by Van Hove (101); and some of Van Schendel's clever repetitions of candle-light effects. Some of the works are noticeable for the inattention to perspective evident in them; for example, "The Algerian Woman" (118), parts of which are very clever; and "The Siege of Haarlem" (87), where the door of the chateau takes up a position quite independent of the building itself.

COMPETITIONS.

Gloucester Cemetery.—The Burial Board have selected the design of Messrs. Medland and Maberly, for the proposed cemetery, from sixteen that were submitted by various architects for their consideration. Near the centre of the ground will be placed the two chapels, united by their respective vestries, and a tower and spire 80 feet high, containing a bell, and forming the central feature. The entrances to the chapels will be through the porches at the further end of each chapel. These buildings will present a façade of 100 feet in length to the principal entrance of the cemetery, and also to the railway.

Norwich Workhouse.—The Norwich Court of Guardians have selected a design by the above-named architects for the first premium (100*l.*). There were thirty competitors. The cost of the building is not to exceed 20,000*l.* The second premium was awarded to Mr. G. B. Nichols, West Bromwich.

Foleshill Workhouse.—Will you allow me to ask a few queries respecting the so-called competition for this workhouse? 1. When were the printed replies, which were sent to those unfortunate persons who had devoted many days, and it may be nights, to the matter, struck off? 2. Had not *the design*, views of which were got up in London, been sent in a few days previously to the day fixed for the arrival of the other designs? 3. Was not this shown, and an understood selection made, ere the other designs had arrived? 4. What next?—A. M.

ST. JAMES'S, PICCADILLY.

The church of St. James, Westminster, has been re-opened by the Bishop of London. The church had been closed for three months for extensive repairs, alterations, and additions; the latter consisting of the erection of the vestibules at the western end of the aisles, filling up the angles on each side of the tower, and opening a communication through the basement story of the latter, thus forming a continuous ambulatory along the whole western front of the edifice, and extending beyond to the footway of Jermyn-street, giving direct access therefrom by doorways to the nave, the aisles, and by stone stairs to the galleries. By the removal from the interior of the church of the old stairs and numerous other projections, this church is now restored to its original uniformity, and the space these protrusions occupied converted into accommodation for the congregation. The whole interior has been thoroughly cleansed and re-embellished. These works have been carried out under the direction of Mr. Charles Lee, architect. The interior space gained by the alteration is to be appropriated to free sittings for the poor. The outlay has been about 3,000*l.*

The removal, from the interior, of the previous

stairs and other unsightly projections, so as to restore Sir Christopher Wren's *chef-d'œuvre* of parochial interiors to its original state, is of great advantage not only to the appearance of the church but to the accommodation of the congregation, which has been increased by 200 sittings. The alterations were suggested by Mr. Crane, the senior churchwarden.

The organ of this church was originally made by the celebrated Rene Harris, in 1687, for James the Second's Roman Catholic Chapel, Whitehall, and was set up in an elaborately adorned case by Grinling Gibbons. This instrument having, by the lapse of time, fallen into a state of great dilapidation, was in 1852 entirely rebuilt by the late Mr. J. C. Bishop (under the superintendence of Mr. Crane and Mr. Charles Lee), who introduced into it all the modern improvements. It contains forty-one sounding-stops, distributed among three rows of key-boards, viz. great organ choir, and swell with full row of pedals. The former are of uniform compass from double C to F in alt. every stop, with the exception of three in the choir organ, which latter are minus their lower octave. The total number of pipes is 2,240. The rebuilding of this instrument was the last work and avowed masterpiece of the late Mr. J. C. Bishop, and deservedly ranks amongst the finest of metropolitan church organs. The carving over the altar, by Grinling Gibbons, is worthy of attention.

THE METROPOLITAN BUILDING ACT.

"OPENINGS AND RECESSES."

UNDER the second rule of section 13 of the Metropolitan Building Act, 1855, it states that recesses and openings may be made in external walls, provided,—"that the area of such recesses and openings do not, taken together, exceed *one-half* of the *whole* area of the wall in which they are made." Can you or any correspondent inform me how it is, therefore, that in several buildings in the City which have been erected since the 1st of January, 1856, this rule has been altogether set aside, the openings being in some instances three-fourths of the area, and in some nearly the whole of the same; and at the present time there is a large stack of offices being erected on the north side of Fenchurch-street, the façade of which is nearly all windows?

There is in this and many other instances so clear a contravention of the Act, unless the same has been modified by some regulation of the Metropolitan Board, that I cannot understand how it is allowed.

AN OBSERVER.

*** We insert the above, not to raise objection in the case named, but as affording an opportunity to mention the annoyance caused by the regulation in question, and the impossibility in some instances of complying with it. In the City, where light is greatly an object, the district surveyors have probably abandoned the attempt. Shop-fronts they must leave out of the calculation altogether, and in the case of, say, carpenters' workshops, how can they insist on compliance with the clause?

ALNWICK CASTLE DECORATIONS.

IF not forestalling your intention of advising a cessation of the dispute in this matter, the following remarks are submitted as a summary of the questions which have been raised. Mr. Fergusson, in your paper of the 22nd ult. has raised what I must call a factious opposition to the duke, for he admits that no one can find an instance in which "the Gothic style" has been successfully treated; and so he disposes of Sir Charles Barry and Mr. Pugin. If he were to show in a drawing, instead of in the vaguest possible words, what he would have proposed, and how charming he could have made the interiors "without direct adherence to any known style," he would get fiercely criticised by his admirers, and learn the little use there is for any artist to practise "that free and untrammelled architecture" which Mr. Scott, in your paper of the 29th ult. pretends to advocate; winding up his address to the public through your columns, by observing, as one great fault of the work by Sir Charles Barry, that it did not have as a ground-work what he calls "the truly beautiful and refined style of St. Stephen's Chapel, a work worthy of any age." How Mr. Scott must wince under the denunciation of that chapel in your paper of the 6th instant, by one of "our two respected architectural professors," if he cares for their opinions. Mr. Donaldson's advocacy of the proceedings at Alnwick appears to be weak on two points; viz. his total forgetfulness of the English school of ornamental carving for the last thousand years, and his declaration that "when these carvers shall have left the works at Alnwick, they will be equal to any men at home or abroad." Mr. Donaldson is generally so cautious, that such a prophecy is a curiosity, except as a proof that the discussion has become exasperating, and that, therefore, the sooner it ceases the better. Mr. Donaldson, too, disposes of Sir Charles Barry and Mr. Pugin by saying that, "no modern building can be quoted, the Gothic internal fittings of which render it tolerable:" that is another specimen of the fierce criticism which may be expected if any artist ever has the good fortune to find a client willing to allow him to endeavour to realize Mr. Donaldson's, Mr. Scott's, and Mr. Fergusson's aspirations, that the genius of this country may produce a distinctive architecture of its own. One name has hardly been heard in this discussion: one voice has not been raised in defence or in explanation: but Mr. Cockerell must be grieved to observe, that when his foresight as to changes is being justified, his professional brethren should not prepare themselves to meet, without incoherence, without insinuation, and without intemperance, the alteration of fashion which it is not impossible we may owe to the duke's determination to have his house as comfortable as he could make it consistently with the display of magnificence which his rank is supposed to demand, and with the economy which all building-owners of the present day are supposed to be obliged to practise. Throughout this discussion more regard ought to have been shown for those who appreciate at their real value the works of Sir Charles Barry and the late Mr. Pugin. PEACE.

STREET NOMENCLATURE.

AN elaborate report has been prepared by Mr. D'Iffanger, of the Metropolitan Board of Management, on the part of the committee to whom the Board referred this important subject. The report contains a communication on it from the General Post-office authorities, in which much anxiety is evinced that something should be done, and which contains various suggestions and reasons connected with it. From lists given, it appears that there are no less than 571 streets in the metropolis which have only seventeen names among them all!—a never-failing and interminable source of confusion, notwithstanding parasitical distinctions, such as Queen-street, Cheapside, Queen-street, Lincoln's-inn-fields, and six-and-thirty other Queen-streets; or Church-street, Chelsea, Church street, St. Giles's, Church-street, Islington, and more than thirty other Church-streets; many persons omitting all such distinctions, either inadvertently or ignorantly. There are sixty-two George-streets, fifty-five Charles-streets, forty-four John-streets, forty-four King-streets, &c. &c.; but, strange to say, no such superfluity, that we can notice, of such names as Smith-street, or Jones'-street, which moderation says a great deal in favour of the retiring modesty and humility of the numerous or rather the innumerable members of these respectable families.

The report enters fully into the subject of the substitution of new names, going so far, indeed, as to suggest distinct names for every superfluous one already in existence within the limits of the metropolis; the new names being chiefly taken from those of men of more or less eminence in past and present time, whether literary, scientific, poetical, political, or any other. In the mean time, however, it is proposed that the 571 streets with seventeen names (or one among twenty) should be first dealt with. In doing so, we would suggest that the greatest care should be used; but we will take another opportunity to speak more fully on the subject.

THE CHELSEA EMBANKMENT.

A DEPUTATION from the vestry of Chelsea, consisting of Mr. Tite, M.P.; Mr. Fielder (churchwarden); Mr. Perry; Mr. Slade, Q.C.; Mr. Foy, and Mr. Hall, attended by Mr. C. Lahee, vestry-clerk, waited on Sir Benjamin Hall at the office of the Board of Works, Whitehall-place, on Thursday, December 11, on the subject of the Chelsea embankment.

Mr. Tite having introduced the deputation, said,—The embankment, as originally proposed, was to have extended from Vauxhall-bridge to Battersea-bridge, and to complete the work a sum of 143,000*l.* was voted by Parliament. It so happened, however, that in executing one-half of it, the money was nearly all expended, and when the deputation urged upon Sir Benjamin the absolute necessity of completing it, he had said there was no compulsory power vested in the Board, but that he would ascertain if any money were left of the sum which had been voted for the purpose. We produced on that occasion also pledge after pledge given by former commissioners that the work should be completed.

Sir Benjamin Hall said, in reply, he had been over the whole of the works, beginning at Vauxhall-bridge, and found that they had been dragging on in a very improper way. He was quite prepared to carry them out as far as the property of the Government went, but had no power to go further: our power, said he, only allows us to negotiate with the parties who possess property along the embankment, and it is permissive with them to agree to or reject the proposals. They had rejected them, and had stated that if the works go on, they will resist: indeed beyond Chelsea Hospital we have been thwarted in every possible way, and our means do not enable us to prevent it. He was anxious to carry out the work, and believed it would be one of the finest things in the metropolis. As a local Board they had considerable power under the Metropolis Local Management Act, and in that capacity should take these parties in hand, and see and get some terms from them? The Government had a large sum of money saved out of the sum which Parliament voted for that purpose, and of course the Board should have it. They might also lay their plans before the Metropolitan Board of Works, and get them to assist; but if the Government had funds enough, they would carry the works on as soon as the difficulties respecting the property were removed.

THE MANAGEMENT OF COMPETITIONS.

IT has happened, in too many instances of late, that where competitions have been advertised, and elaborate designs sent in from all parts of the country, architects resident on the spot have had members of the committees frequently at their offices, and both rendering assistance by their suggestions, and all but pledged for their support, to say nothing of rejected designs having been first traced or borrowed from. By such means, not only have competitions been rendered useless, and the mottoes on the drawings and "address in sealed envelopes," been only "a mockery, a delusion, and a snare," to honourable men at a distance; but the practice of architecture, alike as a science and an art, has received serious injury. For no architect who can forget what is honourable and manly, so far as to adopt such a course, will ever be likely to throw that exalted sentiment into his compositions which architecture is capable of embodying, when the mind and hand labour under the inspiration of a noble and manly soul.

I cannot allow myself to give utterance to my feelings on a practice so unworthy and faithless, alike in the members of committees and architects, who are guilty of it; but I do think that it ought to be most openly and severely denounced, if the noblest of all the fine arts is to be raised from a degradation by which it has suffered so extensively. BETA.

INSTITUTION OF CIVIL ENGINEERS.

ON December 2nd, Mr. Locke, M.P. Vice-President, in the chair, the paper read was "On Recent Improvements in Water Meters," by Mr. T. T. Jopling. After alluding to the generic merits and defects of piston and bucket meters, the author proceeded to describe a meter constructed on the piston or diaphragm principle, to meet the objections hitherto made to that class of meter. It consisted of two measuring cylinders, set parallel to each other, with working pistons, the rods of which projected out of the cylinders in opposite directions, carrying at their extremities slide-valve frames, for supporting and operating on the slide valves that governed the ports of the cylinders. These measuring cylinders were contained in a cast-iron case, or tank, into which the water to be measured entered under a certain pressure. The water thence passed into the cylinders, from which, after having acted upon one, or other, of the pistons, it made its escape. Through the agency of suitable counting apparatus connected with one of the piston rods, the reciprocating movements of the piston were counted, and thus the quantity of water passed through the meter in a given time was indicated. The measuring chambers were made somewhat like ordinary steam-engine cylinders, as respected the inlet and outlet ports, but in one of the cylinders the direction of the inlet ports was inverted, in order that the right-hand port might pass the water to the left-hand end of the cylinder, and the left-hand port to the right-hand end. By this means the two pistons were enabled to follow each other in the same direction, and to maintain a continuous stream of water, without the use of cranks.

ST. MARY'S CHURCH, SPRING-GROVE, HOUNSLOW.

THIS church has lately been erected on the Spring-grove estates, Hounslow, and is of large dimensions, in order to meet the requirements of the residents of a largely increasing neighbourhood. The accommodation on the ground-floor is for one thousand. Foreseeing the probable necessity of largely extending this number, it was thought desirable to provide for such contingency, by considering galleries in the north and south aisles as parts of the structure; the architect has accordingly so arranged his design, that the building shall at any time be prepared to receive such additions without interfering with the appearance of the church. Hence, the windows in two ranges in the aisles and the corbels, and other preparations internally.

The church consists of nave, 84 feet by 27 feet;

north and south aisles, 84 feet by 13 feet; chancel, 44 feet by 27 feet wide; chancel aisles, 29 feet by 13 feet wide; north porch, 10 feet by 9 feet wide; tower, 12 feet by 12 feet, internally, which also answers as a south porch. Vestry, 18 feet long, and of the width of the north aisle. The tower, which is 76 feet high, when completed, will be surmounted with a spire, 84 feet high, with cross and vane, altogether 160 feet high. Ample means of access to the galleries have been provided by lateral lobbies to each aisle, which assume in the elevations a quasi transeptal appearance, occurring as they do near the junction of the nave with the chancel. The organ will be placed in the gallery provided at the west end. The church is in the Gothic style, of the Geometrical or Early Decorated period. Internally we find the nave united with the aisles by arcades of six bays. The nave opens into the chancel, with a moulded arch spanning the whole width of the nave, and resting upon massive corbels from piers here increased in size for that purpose. The chancel opens to the chancel aisles by a similar arcade of two bays to that in the nave. The church is more fully lighted by a large east window, and by a wheel window in the nave, of the diameter of 15 feet.

This building is an example of the application for such purposes of the stone facings invented and patented by the architect, Mr. John Taylor, jun. of Spring-grove, and 40, King-street, Cheapside. This facing, in connection with solid Bath stone dressings, has been used, externally and internally, for the structure, which is mainly built of brick.

PAYMENT OF SURVEYORS.

APPEALS AGAINST THE RATING OF WHITECHAPEL PARISH.

In the year 1850 a professional friend, who was engaged by several parties in Whitechapel to survey and value their premises, and support an appeal against the new rating made on their respective properties, directed me to make the required surveys and valuations to strengthen the evidence, which I accordingly did, the rating being reduced by the magistrates, and the clients appearing well satisfied with the result.

Expecting that the solicitors would apply for my claim, I neglected for a long time to send it in; but did so at length to the respective parties, on learning that all the other claims had been paid. Another long interval elapsed, and after many applications for payment, the liability was disputed by each, under the plea that they never employed me.

On this I issued summonses in the Whitechapel County Court, which were heard on Thursday last, when the surveyor directly employed by the appellants attended, and testified that at a meeting of the several parties and the solicitors, he had suggested the necessity of obtaining further evidence, which was agreed to, and upon which he engaged my services. A letter from the solicitors to myself was also read in court, in which, although repudiating the employment of me by themselves, they stated, "We admit that our clients had the advantage of your services."

The first and second cases the judge decided must be paid, no objection having up to that time been raised to the charges. The parties then shifted their ground, and objected that the charges were too high for the services performed, and attempted to show that I had made the surveys of four manufacturing premises in half an hour. The ultimate decision was, that the charges in each case should be somewhat reduced.

Although I could not be well satisfied with the amounts awarded, I yet was content in assisting to establish the principle that a surveyor is not to be called in to do service in such cases, and then to be told to apply to his professional brother for payment of his claim. W. F. Meakin.

THE MANSIONS AND PALACES OF ENGLAND.

Architecture is now becoming so prevailing a science among all classes of people, that every assistance ought to be given to it, by means of works descriptive of cathedrals and churches, palaces and mansions. Cathedrals and churches have been written about and illustrated, but of the other class of buildings—palaces and mansions—there is so little account, that, except to a few, these

"Stately homes of England"

are almost entirely unknown. This deficiency must, I should think, be lamented by all true lovers of the art, and it is to remedy this want that I shall take up a few lines in your valuable paper.

In surveying many of the English residences, such as Chatsworth, Holkham, Castle Howard, and Hamilton Palace, I have been struck by the beauty and almost antique purity of many of their details, the effective grandeur of their exterior (noticeable especially in Castle Howard), and the elegance, comfort, and, at the same time, splendour of their interior. "Cannot," I have often thought, "some of these details be transferred to paper, as helps in design, not to builders only (for more works, 'for the use of builders,' are now almost superfluous), but to the architects of the whole world?"

Look at a map of England, and behold it jotted over with green to mark the residences of the princes, nobles, and gentry of our land. Many of these parks are adorned with buildings which might take their stand against the boasted palaces of Italy, designed though they be by the master minds of Palladio and Bernini. The walls of the Italian palaces may glow with more of the paintings of Raffaelle and Guido: they may be situated in fine scenery, and in a more general clime: *they* have been written about, until travellers may now, untaught, and without the help of the cicerone, recognise the Villa Borghese; but no one has thought it worth his while faithfully to mention or illustrate our English homes!

Before concluding, I would humbly offer some suggestions on the subject in hand. Could not a work be written and illustrated on our English palaces and mansions? The letter-press might be written by an accomplished architect, who would be thoroughly able to cope with the subject, and the necessary engravings taken from photographs. A work in parts makes it purchaseable by persons of smaller means than if published at once. In each part, let one residence, if large, or two, if small, be described. A ground-plan, two elevations, and several details (the first three on steel, but the others woodcuts), would constitute the engravings.

The size of the work would depend mainly on the amount of subscribers: but surely, when we see the debased Gothic of Windsor described in the huge work of Mr. Nash, it is possible that a work of such utility as the one I propose might receive the same patronage as the one before mentioned. And will not Englishmen bring out a work illustrative of those homes, the happiness of which is famed in prose and verse, with the generosity and in a manner worthy of our great nation? E. G. Culling Eardley.

THE WESTMINSTER CLOCK AND BELL.

After divesting Mr. Denison's letter, published in the *Builder* of December 6, of the peculiar tone and epithets with which it is decorated, the matter it contains resolves itself into the following:—

First, that the proportion of weight and fall given in my communication, viz. 120 lbs. for the hammer and 6 inches for its fall, are "fabrications" of my own, and not to be found in the parliamentary papers, unless I have, as Mr. Denison expresses it, "blunderingly transferred the folly of the company of clockmakers to his account." Secondly, that in designing the clock he made provision for its having to lift a hammer of 400 lbs. and give it a fall of 12 inches, and that evidence is to be found of his having long contemplated this as the least quantity of work which the clock would have to do; and further, that now the bell has been cast, he finds even this weight and fall of hammer will have to be considerably increased.

In reply to the first part, I have to state that before writing the letter to which Mr. Denison refers, I carefully examined all the published parliamentary returns to the House of Commons, viz. No. 724, session 1847; No. 257, session 1848; No. 500, session 1852; and No. 436, session 1855; and that I have since gone diligently through them again, and the result is that I have not found any inaccuracy or error whatever in my former statement. The weight of 120 lbs. and fall of 6 inches are neither "fabrications" of my own nor were they quoted, according to Mr. Denison's other suggestion, from the "blundering statements of the Company of Clockmakers," but were taken from a table given by the late Mr. Dent, at page 56, parliamentary return No. 724 of 1847; and let me add, that I purposely confined myself throughout the letter to the quantities and figures given by Messrs. Dent and Denison themselves, thinking that the latter gentleman would not then question their accuracy.

In reply to the second part, I have to observe that I can find no mention or hint throughout the whole of the returns, either from Mr. Denison or any one else, that a hammer of 400 lbs. falling 12 inches would probably be required for the bell, which it was understood, before the first return was published in 1847, was to weigh from fourteen to fifteen tons; neither has any provision been made by enlarging the clock for the enormous and indefinite increase of work which Mr. Denison, in order to get his bell purchased by the Government, seems now disposed to throw upon it. The main striking wheel remains at 3 feet diameter, and it has never been increased in any of the plans of Messrs. Dent and Denison from the date of the first return in 1847 to the last return in 1855, and at this date the clock had been made.

In justice to the late Mr. Vulliamy, I must remark, that the plan for the clock which was sent in by him, and which Mr. Denison ridicules under the title of the fraternity of clockmakers' plan, as being too small for the purpose, was larger than any of the plans proposed or carried out by Messrs. Dent and Denison, as the diameter of Mr. Vulliamy's main striking wheel was 3 feet 7 inches; nor is this the only advantage in durability which Mr. Vulliamy's plan exhibits over Mr. Denison's, for it had gun-metal wheels throughout, whilst the wheels of the clock that has been made are all of cast iron, the commonest and cheapest material that could be used; nor is this all for which the public have to thank Mr. Denison, for he has so managed matters, that the Government will have to pay as much for the clock as though it had been made of the more durable and costly material.

In conclusion, I again set forward the principal questions to be kept in view, which are:—

1. What is the force which the clock now made is calculated to lift? To this I reply, that taking into consideration the size of the striking part, the time it should last, and the fact of the wheels being composed of cast iron, 120 lbs. for the hammer, and 6 inches for its fall, is the greatest quantity of work which the clock should be allowed to do.

2. What is the force which a good bell of 16 tons should require? To this I reply, that taking the Oxford bell as the standard, which weighs 152 cwt. and is struck by a hammer of 54 lbs. falling 4½ inches, and considering that Mr. Denison's bell was to have been much superior to the average quality; a hammer of 120 lbs, falling 6 inches, ought to be amply sufficient to bring out the tone. E. T. Loseby.

Miscellanea.

The Photographic Society.—On the evening of Wednesday last, the council of the Photographic Society gave a *soirée* in the large room of King's College. It was very numerously attended—the company including many persons eminent in the arts and sciences, as well as an array of photographers, both professional and amateur. On the walls and tables were displayed an immense collection of photographs of every degree of merit. Some of the portraits were admirable. The whole affair was well arranged.

Aluminium now in use at Sheffield.—The value of this new metal is beginning to be felt at Sheffield. Little more than a year ago, it was dearer than gold. It is now produced at much less cost, and its production may probably be still further cheapened. It is found to be applicable to the plating of goods for which gold and silver has hitherto been used. A correspondent of a contemporary, evidently not knowing much of what he is talking about, adopts the safe and advantageous tactics of speaking contemptuously of those who are hopeful as to the ultimate introduction of this new metal as a substitute for silver, and for many other purposes; but infers that because it is still, as he says, "twice the price of silver," therefore it is scarcely possible that articles of common utility, such as forks and spoons, can already be made of it as a substitute for silver; whereas, even were the cost of the articles made from it twice as much as those of silver, *which by no means follows*, the freedom from tarnish, and the greater hardness, as well as the lightness of the new material, are valuable properties which may render it not only preferable to silver for such articles, but as such actually *worth* twice the price. That although aluminium be "twice the price of silver," however, articles of utility may, even as a matter of actual cheapness as well as economy, be already made of it and sold at an absolutely lower price than those of silver, no one who is acquainted with the well-known fact that its specific gravity is only 2·25, and hence that it is only about a fourth part of the weight of silver, bulk for bulk, or, in other words, that its bulk is four times that of silver, weight for weight,—and who at same time is capable of apprehending the very obvious inferences deducible from that fact,—can for a single moment doubt. Even at "twice the price of silver," weight for weight, aluminium on the "own showing" of this "*gobemouche*," as he calls several of our daily contemporaries and others, is thus actually *already* only half the cost of silver, bulk for bulk! and that it may yet be obtainable at far less cost than even at present there is every reason to hope.

Manchester and Salford Sanitary Association.—The annual meeting of this very useful association was held on Thursday in last week, the Bishop of Manchester in the chair. The bishop addressed the meeting at some length, as did various other gentlemen, and several appropriate resolutions were passed approving of the report of the association and of their purposes and proceedings. A similar meeting of the Ardwick and London-road District Association was also held last week at Ardwick, the Mayor of Manchester in the chair. To these meetings we shall again advert.

Deodorizing Tanks.—The Town Council of Glasgow have recently constructed some tanks for purifying water, and a chemist has been appointed to advise the sanitary committee in making the necessary experiments. The council have now three tanks, 60 feet in diameter and 6 feet deep, with a mixing well 10 feet in diameter, an engine of 8-horse power, and a pump capable of raising 1,000 gallons in a minute, the calculation being that these tanks are quite capable of purifying the whole of the contents of the Pinkston Burn. The cost is 750*l.* but that includes 195*l.* for which sum the contractors have engaged to work the engine for three months, or 250*l.* if for six months.

Railway Matters. The total number of plans and sections for Irish railways and other public works deposited for session 1857, was 176, of which about 109 were railways, and the rest for miscellaneous purposes. The number deposited last year was 122. ——A large iron pontoon is now in course of construction at the Neyland terminus of the South Wales Company, to be placed as a floating stage at the end of the pier. An iron bridge to connect the two is nearly finished: it is 60 yards long and 8 yards wide, and by its means the pontoon can rise and fall with the tide. The question of a new hotel has been settled in the affirmative by the Company, and a suitable site has been fixed near the terminus. The importations of Irish produce are now enormous, and more steam transit for goods and passengers is absolutely necessary.——The Grand Trunk Railway of Canada is now open throughout, from the St. Lawrence, where the great Victoria tubular bridge is in progress, to the western terminus at Lake Ontario, near Toronto, a length of 850 miles. A single line only has as yet been laid down. The whole route is level, the chief cuttings seemingly having been forest opening. The Victoria bridge will not be finished till 1860.

Carmarthen and Cardigan Railway Contract.—Mr. J. Jay has undertaken to complete this line from the Myrtle-hill station of the South Wales Railway to Llandissil for 135,000*l.*

Electro-telegraphic Progress.—Mr. Newhall, of Gateshead, according to the *Observer*, of that town, is now engaged in the manufacture of the telegraphic cable for the Atlantic. Mr. Newhall is under a contract to complete his portion of the cable (altogether of scarcely less than 1,500 miles in length) in the course of the ensuing summer. Messrs. Kuper and Co. of London, are to make one half of the cable, and Mr. Newhall the other.

Slate Walls, and How to Prevent Damp rising up Stone and other Walls.—Two years ago I built 48 square of stone wall, 2 feet thick at the bottom, rising gradually to 9 inches at top, with a coping 13 inches wide: the inside was faced and perpendicular, the outside rough, and what is called "battered." The stone in my part of the country is very porous, and when taken out of the quarry soft and easily worked, it becomes, on exposure to the air, case-hardened and very durable. All our old churches and abbeys are built of this sandstone. In consequence of the porosity of this stone damp rises rapidly, and causes it to look dark and green, so that brick has now almost taken the place of stone. To counteract this I hit upon the following expedient:—Immediately above the ground-line on the inside of the wall I had boiling coal-tar poured on evenly from an iron ladle; on this as much slaked lime as the tar would absorb: this was left for a few days to harden. The next course of stone was bedded in mortar in the tar: this cost me five shillings for a wall 400 feet long and 20 inches thick at the ground-line. These are the results: immediately above the tar-line the stone is perfectly white and hard, and the mortar, composed of hot gray lime and finely-sifted coal-ashes, as hard as cement, and not affected by frost. On the outside of the wall, the ground being here, a course of stone is visible below the tar-line: this course is green, damp, and soft: the mortar is also soft, and the frost has crumbled it away. I am aware that slate in cement cuts off capillary attraction, but it is very expensive when the wall is thick. I have lately used the same means with the same success in brick walls.—Sigma, in *Gardeners' Chronicle*.

Free Library and Museum for Leamington.—Steps are being taken to obtain the introduction of the Libraries and Museums Act into Leamington.

The Copper Trade.—A notice was recently issued by the copper smelters announcing that the prices of copper have been advanced as follows:—Manufactured, 13d. per lb.; tough cake and tile, 117*l.* per ton; best selected, 120*l.* per ton; sheathing, 11¼d. per lb.; and since then a second advance of 1d. per pound has taken place, making tough cake and tile 126*l.* 10s. and best selected 129*l.* 10s. per ton, which is 10s. per ton dearer than it was prior to the last reduction. The intelligence, says the *Birmingham Journal*, seems to have taken consumers by surprise.

Gas.—The gas committee of the Salford Corporation report a steady increase in the consumption of gas. The profit upon the sale of 133 million cubic feet last year was 9,570*l.* The gas is made from the best Wigan cannel.——The *Dublin Freeman says*,—"We perceive by an advertisement in the Cork papers, that the Hibernian Gas Company are about to reduce the price of gas to their Cork customers to 5s. per 1,000 cubic feet, which is 10d. lower than the present Dublin price. We suppose the result of this reduction will be an immediate change in the Dublin prices. The price in Belfast, according to the Cork Municipal Committee report, is 3s. 6d.—nearly 2s. less than the Dublin price."——Two very curious applications of science have lately been made in the town of Lyons. One of these, as the *Indépendence Belge* informs us, is the application of gas-light to the diligences running in and about that town. The gas is carried in a cylinder under the driver's box, and communicates by means of a tube with the interior of the vehicle. The cylinder is so strong as to admit of its being charged with gas in a highly compressed state. The second of these applications is what we lately noted as the *laying on of time*, like water or gas, the municipality intending to have 150 clocks placed in various parts of the city, all moved by the same electric apparatus, and giving the same time. For the payment of an annual rate, the citizens may have a wire laid on for the supply of the electric time to their own houses.——At the annual meeting of the Atherstone Gas Company, it was stated that, by the reduction of the price of gas to the consumers, of 6d. per 1,000 feet, during the year, they had received an increased sum for consumption of gas, of nearly 50*l.* and that the financial state of the company was in so encouraging a condition, that a dividend of 7½ per cent. upon the paid-up capital of the company, free from income-tax, would be given, leaving a very satisfactory fund to be carried forward to next year's account. Thanks were voted to the directors "for their zeal in protecting the interests of the company during the past year;" the protection of the company's interests comprising that reduction of the price of their gas to which they were indebted for their own increased profits.

Durability of Massachusetts Marble.—The *Berkshire Eagle* says a committee have been experimenting at Washington to ascertain the effect of weather on the marble of which the extension to the capitol is being constructed. They find that after every freezing and thawing, a scale of 1,500,000th of an inch thick clears off from the surface, so that, allowing fifty freezings and thawings for every winter, it would require ten thousand years for the surface of the building to be exfoliated one inch by this cause. The stone is from Lee, in Berkshire county.

Condition of "Field Lane." — Having frequent occasion to pass by the remaining half of the once celebrated Field-lane, at the foot of Holborn-hill, I feel a sort of personal interest in the fate of the old rubbish, called houses, which stands there; which leads me to ask the favour of a little space in your columns to invite the attention of the "powers that be," to its dilapidated condition. I am told by those who have seen it, that some parts are actually shored up inside to prevent the floors falling in upon the occupants. Your readers will recollect that four houses in the upper part of this lane, at the commencement of Saffron-hill, did fall down some time since: they will not either have forgotten "Swan-alley," and one or two other little events of that kind; and more recently the stack of old chimneys in Cock-lane, which was blown over on last Sunday morning. Of course, it does not *follow*, that if any of such events happen in Field-lane, it will be whilst I am passing; but I should prefer to think, that the probability did not exist of their occurring at all. And although I have no wish to be a "busy body" in such matters, I do feel some interest in the safety of others, who, like myself, may be obliged to frequent these parts.—K.

Cathedral of St. Mark, at Venice. — The Emperor of Austria has just granted a yearly sum of 20,000 florins for the repair of the Cathedral of St. Mark, at Venice. Whenever the whole of this sum shall not be wanted in the course of the year, the remainder is to be capitalised to increase the funds belonging to the cathedral, and the interest is likewise to be applied to keeping the edifice in repair.

New Roman Catholic Church, in Commercial-road East.—A new church, designed by Mr. William Wardell, architect, and dedicated to St. Mary and St. Michael, was opened in the Commercial-road East, on Monday in last week. It is calculated to hold 2,000 persons, and is in the Decorated style, with nave, two side aisles, and tower. The chancel has no chancel arch: it is of a uniform height and breadth with the nave, and is visible from all parts of the interior. The aisles are of one continuous length with the body of the church.

Safety for Workmen.—Too little attention has hitherto been paid to preserve the lives of those engaged in the more dangerous occupations, such as bricklayers, carpenters, and painters. I, who from my occupation have no such risk to incur, feel it my duty to send to you a suggestion which has occurred to me. I often feel very uneasy when I see workmen upon ladders, the ends of which are on the pavement: the least slip, and the consequences must be frightful. I suggest that these ends should be covered with a thick pad of leather, or other durable material: this would not only prevent slipping, but would render them firmer. Where the ends are fixed upon the earth, I think a long spike might be employed, having a screw form at one end, this screw to be inserted in the ladder ends, and the spike then pressed into the ground would produce security.—Probe

Sir R. M. Stephenson, C.E.—The Queen has conferred the honour of knighthood upon Mr. Rowland Macdonald Stephenson, of Gloucester-terrace, Hyde-park, and late of Calcutta, Civil Engineer.

Pernambuco Gas-works.—The drawings and specifications of the buildings, gas-making apparatus, and mains, for the distribution of the gas throughout the city, have been prepared by Messrs. Law and Blount, of Essex-street, Strand. The general contract for the complete works (including buildings, machinery, thirty miles of mains, and 1,000 public street-lamps) has been let for the sum of 53,000*l.* to Messrs. Edwd. T. Bellhouse and Co. of Manchester, who have just completed the general contract for the gas-works at Buenos Ayres. The privilege from the Government is in the hands of two English mercantile houses, Messrs. Fielden, Brothers; and Messrs. Richard Rostron and Co. of Manchester, represented by Messrs. Rostron, Rooker, and Co. of Pernambuco.

Preston Surveyorship.—The committee of local council appointed to consider the list of candidates for the office of surveyor to the local Board of Health, reported to the council that there were sixty-seven candidates, from whom eight were first selected, and that finally Mr. John Newton was chosen for recommendation to the council. Mr. Newton was accordingly appointed to the vacant office.

The Archæological Society of Glasgow.—An archæological society has just been organized at Glasgow, by the Lord Provost, and other gentlemen, among whom are Mr. Honeyman, jun. the honorary secretary; Mr. J. T. Rochead, architect; Mr. J. Baird, architect; Dr. Strang, &c. At a preliminary meeting held in the Merchants'-Hall, Hutcheson-street, the society was resolved upon. In course of the proceedings, Mr. Rochead remarked that Glasgow and its neighbourhood were a very favourable field for the progress and operations of such a society. When they looked at the magnificent old remains, at the Roman wall, at the Roman forts at Kirkintilloch, it was with regret that they knew they were not in possession of all particulars regarding them. The society when this preliminary meeting was held comprised fifty members.

Cambridge Architectural Society.—The third meeting for the present term was held on December 10th, when the Rev. C. J. Evans, Fellow of King's College, read a paper on the Colleges of Cambrae and Glenalmond, and the Cathedral of St. Ninian, Perth; and gave an account of the studies and discipline there in use.

Artistic Obituary.—We record with regret the death of Mr. Nash, one of the oldest members of the Society of Painters in Water Colours. He was elected an Associate in 1810, six years after the establishment of the society, and was made a full member the following year. Mr. Nash devoted his attention in early life to making drawings of ecclesiastical and other ancient buildings for the illustration of topographical works, and continued afterwards to paint similar subjects.——With even more sorrow, because of personal knowledge, we mention the death of Mr. R. R. M'Ian, the artist, formerly well known as a delineator of Scotch characters on the stage. His "Dougal creature," in "Rob Roy," was altogether unrivalled. Mr. M'Ian was an Associate of the Scotch Academy, and would have been elected a Fellow, but for some technical plea about non-residence in Edinburgh.

TO CORRESPONDENTS.

"S. W. D."—"E S" (sent no address).—"C. B. A."—"A Friend to one of the Exhibitors."—"J. C." (we are not aware that the interesting question can yet be obtained in England. We will endeavour to obtain some particulars)—"Mr M" (thanks!—"L. and B."—"W. T. L."—"C. B. A."—"T. D."—"The Greenpark and Pall-mall."—"T. G."—"T. G." (your communication may be sent at our office).—"J. H."—"A. D."—"Subscriber, Liverpool."—"W. H. R."—"J. P."—"Visitor."—"R. K. P."—"Probe."—"Sunk-n Vessels"—"J E K"—"M. and P."—"H C."—"A Countryman." (the embankment will probably be carried on ultimately.)—"A Competitor."

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

ADVERTISEMENTS.

MR. W. S. WOODIN'S OLIO of ODDITIES, with new Costumes and various Novelties, Vocal and Characteristic, will be given in the Polygraphic Hall, King William street. Change during the Christmas Holidays. Opening Night, December 26. First Morning Performance on Saturday, December 27, at Three. Private Boxes and Stalls may be secured without extra charge, at the Box Office. The Polygraphic Hall is being entirely redecorated.

ROYAL POLYTECHNIC.—Patron, H.R.H. Prince Albert.—This Institution has for eighteen years continued to instruct and amuse the public.—The Christmas Lectures and Entertainments provid d this year are on the most liberal scale.—1st. Entire New Lecture, by J. H. Pepper, Esq. "On Optical Illusions," illustrated with all the apparatus for which this Institution is so justly celebrated, every Tuesday and Friday, at Three and Eight.—2nd. The Lecture by J. H. Pepper, Esq. "On Fireworks," every Wednesday, at a Quarter-past Four and Quarter-past Nine, with increased illustrations by Mr. Darby; and in the evening, exhibition of "The British Bouquet," displaying in magnificent fireworks the portraits of her Majesty, Prince Albert, and the Royal Family.—3rd. Exhibition of an ingenious Juvenile Mechanical Model Theatre, displaying every scenic movement, with novel machinery invented by Mr. Freeman, who will illustrate his new system with the drama of "One o'Clock; or the Knight and the Wood Demon," accompanied with the whole of the original music by the Misses Greenhead; also the Ghost Scene from "The Cenci an Brothers," and the Mechanism of the Rising of the Ghost. Daily at Half-past Two and Half past Seven. 4th. Mr. Logrenn will exhibit his astonishing Conjuring Tricks and Comic Delusions, every Monday, Thursday, and Saturday, at Three and Eight.—5th. An entirely new and beautiful Series of Views, by Mr. Clare, illustrating "The Traveller's Portfolio, or, Visits to Many Lands." Daily. Grand Programme. 6th. Gratuitous Distribution, every Thursday Morning and Evening, of thousands of beautiful ornaments, and hundreds of Mappin's pocket-knives, from the Giant Christmas Tree.—7th. A second and most costly Series of Dissolving Views, designed by Mr Newman, and chiefly executed by Mr Rine, illustrating "Ye Pitifull and Dreary Comical History of Fire Beard," with an original humorous description by Leicester Buckingham, Esq. late of the Panopticon. Admission to the whole, 1s.; Children and Schools, half-price.

MARBLE CHIMNEY-PIECES, and every other description of marble work, supplied to architects, builders, and the trade, at prices to compete with slate, manufactured by the LONDON and CONTINENTAL MARBLE COMPANY.—Offices and Depôt, 3, Crooked-lane, London-bridge. Paving for Halls, Conservatories, &c.

MARBLE GALLERIES, 17, Newman-street, Oxford-street.—Mr. ALFRED E. EDWARDES, upwards of ten years with the London Marble Company), has opened the above premises, late in the occupation of Bailey, the celebrated sculptor, under the firm of EDWARDES, EDWARDS, and COMPANY, with the largest stock of BRITISH and FOREIGN MARBLE CHIMNEY-PIECES, &c. &c. in London. EDWARDES, EDWARDS, and CO. solicit the favour of an inspection of their stock by architects, builders, and others connected with the trade; and beg to assure them that for design, style of execution, and price, it will be found unrivalled. Estimates for every description of marble work.

MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY PIECES lately imported from the Continent. They comprise Statuary, Giallo di Siena, Vert Rouge, Dove, Black and Gold, Rouge de Belmont, Bardiglio, and other choice foreign marbles; and are designed with great taste, and executed by first-class artists. On sale, in the show rooms of Messrs. EVANS, SON, and CO. King William-street, London-bridge.

LLOYD'S MARBLE WHARF, Thames-bank, Pimlico, adjoining Vauxhall-bridge.—Italian Statuary, Veined, Sicilian, Dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

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THE largest STOCK in England of MARBLE in Blocks and Slabs, veined, Bardilla, dove, black, black and gold, Sienna, St. Ann's, statuary, serpentine, verd antique, &c. Portland, Harehill, Park Spring, and other stone, in blocks, slabs, landings, and headstones. Yorkshire paving, granite curb, &c. All goods carefully packed and forwarded to any part of England.—THOMAS JACKSON, Marble and Stone Sawing-Mills, Commercial-road, Pimlico, London.

THE LIZARD SERPENTINE COMPANY manufacture and sell in block and slab the beautiful stone now raised from the new beds of quarries. Chimney-pieces, Columns, Fonts, and ornamental works on view, at 20, Surrey-street, Strand.
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N.B. A large quantity of Foundation Landings for sale.

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STONE! STONE! STONE!—To the TRADE.—The cheapest place in London for Portland and Bath Stone, Yorkshire Landings, Steps, Curb, Paving, Self-face Slab, Granite Pitching and Curb, Guernsey Broken Road Materials, and every other description of stone, at JOHN KNIGHT and SONS, Devon Wharf, Mile-end. York tooled paving, 33s. 6d per 100 feet; slab for hearths, 4d. per foot sup.; slab for chimney-pieces, 3½d. per foot sup.; 8 by 9 windowsills, 6d. per foot run; 13 by 9 coping, 8d. per foot run; box chimneys (any opening), 8s. 6d. each. Terms cash on delivery.

BRAMLEY FALL STONE.—To ENGINEERS and CONTRACTORS.—The quality so well known and highly approved, in numerous public works, is SUPPLIED from their QUARRY at MEANWOOD, and the several Quarries at Horsforth, with punctuality, and at the lowest possible rates, by JAMES AKEROYD and SONS, Gepton-wood Quarries and Canal-basin, Leeds.

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At the Division of Surplus, at 1st March, 1856, a Policy for 1,000l effected at 1st March, 1832, was increased to 1,571l. 13s 10d., being at the rate of Two and a Quarter per Cent. per Annum on the sum assured. This addition may be converted into a present payment, or applied in reduction of the future premiums.
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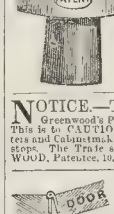

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ST. JAMES'S and THORNHILL WHARFS,
Caledonian-road, London.

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Waterworks Companies, Coal-Mine Proprietors, Builders, Contractors, &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, is prepared to enter into contracts with any of the above branches that may favour him with their orders. The advantages to be derived from the above Cements manufactured by J. C. over all others, are their extraordinary hydraulic properties.—Samples and references may be had on application either at the Works, Ashton New-road; or the Warehouse, 5, Broomstreet, Shude-hill, Manchester.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into Lords, at the Works. Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS,
12, UPPER GROUND-STREET, Blackfriars (Surrey side),
7, NORTH WHARF-ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Large Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 4d. per ton.
Barges loaded in a few minutes.
Wouldham-hall Grey Stone Lime Works, on the Medway, near Rochester.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias Lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce on demand) the canal gauger's pass, by which the purchaser may know the exact weight delivered.—Orders addressed to the London Depôt, 16, South Wharf, Paddington, J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries at Manufactories, Stockton, near Southam, Warwickshire

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at R. DODD'S Brickfields, which are only a quarter of an hour's walk from the City. H. D. respectfully requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.
Malm Place, half washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.
Apply to HENRY DODD and CO. at the Counting-house, Horton Brickfields, Grange-walk, near the Rosemary Branch, Hoxton.
N.B. Light-coloured Pitt Sand of approved quality constantly on sale upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury, New-park, would be willing to enter into arrangements with builders and others for supplying first-class STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Delli's Farm, Stoke Newington Green.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED ROBBING BRICKS.
Also COWLEY and KENT STOCKS, in any quantities.
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.
N.B.—Lime, Cement, Slates, Fire-bricks, &c. and all kinds of Building Goods.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Fire-bricks, building and pottery work, Foundry Loam, Whiting, Whiting Sand for ashphalte, Land Drain Pipes, Patent Drain Pipes, Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines, or any railway connected with them. Vessels of 200 to 300 tons can load alongside the wharves at Grays. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above named articles can also be procured, as well as all kinds of fire goods; both Welsh and Newcastle. Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.
General Office No. 12, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

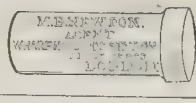
BRICKMAKING, UREN'S PATENT.—A PERSON desirous of WORKING this PATENT, wishes to know where a LICENSE can be PROCURED.—Direct to Mr. REMBLEY, Brick Works, Sutton, Surrey.

BRICKS.—A quantity of ARCH BRICKS, well made and hard burnt, for SEWERAGE PURPOSES, are now open to public inspection. They are moulded so as to work in with the ordinary sized bricks, and are capable of forming arches of from 2 feet to 8 feet in diameter. A saving of at least 10s. per 1,000 in cement and labour can be effected by their use,—while a single ring of brickwork will be as strong and more solid than a double course constructed in the usual way. Price 27s. per 1,000, cash on the ground.—Malms, stocks, seconds, and a quantity of good place, at low prices. Agricultural draining tiles of very superior make and hardness.—Address Mr. LEWETT, Railway Brick and Tile Works, Brentwood, Essex.—The works adjoin the goods' station of the Eastern Counties Railway, at Brentwood, where all materials are loaded into the trucks and forwarded thence to any station on the Eastern Counties lines.

UPHALL BRICKFIELD, ILFORD, Essex WILLIAM HILL, late Henry Kilvington, respectfully invites Contractors, Shippers, &c. to inspect his superior STOCK of the undermentioned BRICKS, which can be purchased at the lowest market price, and can be put alongside any vessel in the Thames, or unboarded vessel, viz: Malm Cutters, Seconds, Pickings and Malm Stocks. Paviours, Shippers, best Washed Stocks, Stocks, ditto second quality.
N.B. Orders received at 204, Whitechapel-road.

FIRE-BRICKS, LUMPS, TILES, &c. of every description, at HONDURAS WHARF, 74, Bankside, London.—JOHN NEWTON and CO. (late with James Newton, of Falcon Dock, Bankside, Fire brick and Tile Merchant) have taken the OLD ESTABLISHED BUSINESS and PREMISES carried on so many years by WM. WARD and CO. and solicit the patronage of Consumers, Gas Companies, Engineers, Builders, &c. Ramsay's superior Newcastle Fire-bricks, Retorts, Fire-clay, &c.; also Sanitas pipes Chimney-tops, Dutch Clinkers, &c. all at the lowest prices. Shipping orders executed with despatch

FOR
FIRE-BRICKS and GAS RETORTS
apply to



MINTON and CO.'S ENCAUSTIC and other PATENT TILES, for Churches, Entrance Halls, Conservatories, Balconies, &c.; Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character, and extreme durability, Slate and Tiles for Fireplaces and Hearths, Combined Grates, Door Furniture, Wire Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges, may be had, in great variety at their Warehouse, 9, Albion-place, Blackfriarsbridge, London; and at their Manufactory, Stoke-upon-Trent, Staffordshire.

BEADON'S PATENT IMPERISHABLE GUTTER-TILES.
For Spouting Roofs of Houses (either old or new, whether of thatch, slate, or tile), and other structures.
SOLE AGENT,
J. B. LAWES, 1, Adelaide-place, London-bridge.
This is the cheapest kind of spouting known; for, besides its lower cost, it will last without pain or repair as long as the building itself. It will bear the weight of any ladder; and in case of accident a labourer can repair it. It occupies the room of a large amount of roofing, effecting a great saving in slates, tiles, &c. It is especially applicable to the backs of houses in town, cottages, and agricultural buildings.
Price 4d. each tile of about 13 inches long; stop-ends and outlets, 6d. Any mason can put them up, or, if over 100 feet are required, a man will be sent to fix them at 8d. per foot. This charge to include tiles delivered in Agnes's yard, cement, and labour. May be had in London, Gloster, Bridgwater, and Madeley, Staffordshire.

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 21, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "Terro-Metallic," is the exclusive right of the Proprietor; and, thirdly, that the "REMARKS OF THE JURIES," page 681, of the Great Exhibition, rank the Manufactures known as "The Tilerica," Tunstall, Staffordshire, as the first of the kind in the world.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Paving, Facing Bricks, Coping, Kitchen and other Sinks, Chimney Shafts and Tops, and numerous other Articles, manufactured by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Mill-wall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin.

WINDOW BLINDS.—TYLOR & PACE, Window Blind Manufacturers, 104, New Bond street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 3s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade forwarded on application, post free.

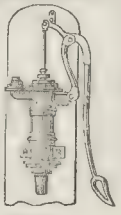
TO ARCHITECTS and BUILDERS.—T. TRELOAR, 42, Ludgate-hill, Manufacturer, supplies Cocoa-nut Fibre Matting, Door-mats, Hassocks, &c. of the best quality, on the most reasonable terms.—Warehouse, 42, Ludgate-hill.

PAPER HANGINGS! PAPER HANGINGS!! PAPER HANGINGS!!!—Builders, the Trade, Country Dealers, and others, will find an immense STOCK and endless variety of all classes of PAPER HANGINGS, at W. CROSBY'S MANUFACTORY, 29, Lowther Arcade, Charing-cross, London. Splendid new designs, both in machine and block printing, not to be surpassed by any house in England. Patterns sent for approval in town or country. Cheapest house for panel decorations. Terms, Cash.

PAPER-HANGINGS.—The CHEAPEST HOUSE in London for every description of PAPER HANGINGS is CROSS'S WHOLESALE WAREHOUSE, 22, GREAT PORTLAND-STREET, Oxford-street, where one can select from the LARGEST and MOST EXTENSIVE Assortment in the Kingdom, THIRTY PER CENT. CHEAPER than any other house in the trade. Builders, Decorators, Dealers, and large consumers will do well to visit this establishment.

TO BUILDERS AND PLUMBERS.

The attention of the Trade is called to JOHN WARNER & SONS' PATENT VIBRATING STANDARD PUMP,



which is recommended for the simplicity of its construction, and the ease with which it works.

By the introduction of the vibrating standard, the cumbrous carriage and expensive slings and guides are unnecessary, rendering the price considerably less than Pumps made on the old plan.

Beer and Water Engines for raising fluids from a depth not exceeding 28 feet; also, Garden Engines constructed on the same principle.

JOHN WARNER & SONS,
8, Crescent, Jewin-street, London,
Manufacturers and Patentees.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships, barges, well-sinking, &c. adapted for any depth. Hydraulic Pumps for deep wells.

PUMPS ON HIRE.

Pumps of any size, single or double barrel, up to double 18-in. diameter, kept ready for use at reduced prices.

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 32s. per doz. painted.
Ditto .... 48s. per doz. galvanized.

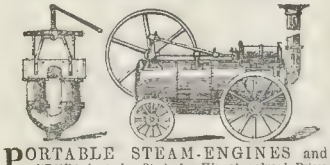
Upper Ground-street, Blackfriars Bridge, Surrey Side.

CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND-HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally.—Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

STEAM PUMPING ENGINES.—PATENT PORTABLE STEAM-ENGINES, from four to ten-horse power, always ready to let on hire, by the week or month, for pumping, sawing, pile-driving, raising materials, &c. &c.

Contracts taken for pumping any quantity of water.

JAMES BURTON & SONS,
Engineers and Contractors,
John-place, Holland-street,
Southwark, London.



PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices, R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-road (Surrey Side).

TO WATER COMPANIES AND PLUMBERS.

HIGH-PRESSURE COCKS & CLOSETS.

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire.

LEAD, IRON, and TIN PIPE.

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street, London.

TO WATER COMPANIES, LOCAL BOARDS OF HEALTH, AND OTHERS.

LAMBERT'S NEW VALVE COCK, For Preventing Waste of Water.

Is so constructed that it cannot be left open accidentally or wilfully, and further it will at each action deliver a specific quantity, and under the same pressure this quantity will never vary.

It is peculiarly adapted for closets, self-acting or otherwise.

Price, complete for high pressure, 10s. 6d. each.
low 12s. 6d.

THOS. LAMBERT and SON, Patentees and Manufacturers, Founders and Machinists, Short-street, New-cut, Lambeth.

GREAT REDUCTION in PRICE of STONEWARE DRAIN-PIPES.

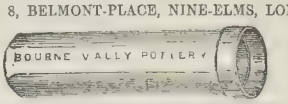
WILLIAM NORTHEN,
UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH,
Begs to call the attention of Surveyors, Contractors, Builders, and others, to a very great REDUCTION in the PRICES of his
GLAZED STONEWARE DRAIN-PIPES.
LISTS OF PRICES FORWARDED ON APPLICATION.

REDUCTION IN THE PRICE OF CLOSET-PANS

DOULTON AND WATTS,
LAMBETH POTTERY, HIGH-STREET, LAMBETH,
Have reduced the Price of their PATENT ENAMELLED CLOSET-PANS WITH TRAPS, to
5s. 6d.

These Pans, therefore, which have a strong Vitrified Body, as well as a White Interior Glaze, may now be obtained at the price of the commonest description [illegible].

BOURNE VALLEY POTTERY, NEAR POOLE, DORSET.
DEPOT, 8, BELMONT-PLACE, NINE-ELMS, LONDON.



EXTENSIVE REDUCTION IN THE PRICES OF SALT-GLAZED STONEWARE DRAIN-PIPES, FLUE-PIPES, BENDS, JUNCTIONS, CLOSET-PANS, &c. &c.

The Proprietors of the above Works are prepared to supply the various articles in the drainage, &c. in any quantities. The pipes, &c. are made of the finest clay, the produce of the estate, by skilful and experienced workmen, assisted by new and patent machinery, and are so thoroughly vitrified by the intense heat to which they are subjected, as to prevent the possibility of the absorption of any liquid. They will bear comparison with goods made in any part of the kingdom.

Lists of prices, and any other information may be obtained, on application to the Manager, Mr. J. T. BUNSALL, Bournemouth, near Poole; or of the Agent in London, Mr. G. S. WHITTON, 17 and 18, Princes-street, Lambeth.

CHEAP AND DURABLE ROOFING.

By Her Majesty's Royal Letters Patent.

F. McNEILL and CO. of LAMB'S-BUILDINGS, BUNHILL-ROW, LONDON, Manufacturers and ONLY Patentees of
THE PATENT ASPHALTED FELT, FOR ROOFING HOUSES, VERANDAHS, SHEDS, &c.

Patronized by
HER MAJESTY'S WOODS AND FORESTS,
HER MAJESTY'S COMMISSION OF CUSTOMS,
HONORABLE EAST-INDIA COMPANY,
HONORABLE BOARD OF ORDNANCE,
HER MAJESTY'S ESTATE, ISLE OF WIGHT,
ROYAL BOTANICAL GARDENS, KEW, AND ST. JAMES'S PARK,

And by the most eminent members of the Royal Agricultural Societies of England, Scotland, and Ireland, at whose great national shows it has been exhibited, and OBTAINED THE PRIZE, for being the best and cheapest article for roofing; also used for under plates at the Royal Agricultural Society's House, in Hanover-square. Its advantages are lightness, warmth, durability, and economy. It is impervious to rain, snow, and frost, and a non-conductor of heat and sound. The Felt can be cut to any length, by 32 inches wide. The price is only ONE PENNY PER SQUARE FOOT. Samples, with full directions as to its use, and the manner of applying it, with TESTIMONIALS, some of them of seven years' experience, from Architects, Builders, Noblemen, and Gentlemen who have extensively used it, sent free to any part of the town or country. A Dry-hair Felt, for covering Boilers, &c. is also manufactured, by which a saving of about 25 per cent. in fuel is effected. The TRADE are respectfully solicited to send their orders DIRECT to the FACTORY, as the surest means of being supplied with the genuine article, and in lengths best suited to their roofs. They are likewise CAUTIONED AGAINST MISREPRESENTATION, as the only works in Great Britain where the above roofing is made are F. McNEILL and CO.'s Manufactories, LAMB'S-BUILDINGS, BUNHILL-ROW. Roofs covered with the Felt to be seen at the Factory, also the new Vice-Chancellor's Courts, the passages and offices leading to Westminster Hall, and other buildings at the New Houses of Parliament.—A Liberal Discount allowed to the Trade.

GENUINE SEYSSEL ASPHALTE.
ORSI AND ARMANI.
THE EXCLUSIVE SUPPLY OF SEYSSEL ASPHALTE (FRANGY)
DIRECT FROM THE MINES.
REDUCTION IN THE PRICE FOR VARIOUS WORKS FIFTEEN PER CENT.
AND THE
WORK GUARANTEED FOR THREE YEARS.
Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

PATENT METALLIC LAVA.
A printed List of the important Works for Flooring, Roofing, Covering of Arches, &c. &c. executed from 1848 to 1853, with this Material, may be obtained at the Office of
ORSI AND ARMANI.
THEIR PATENT METALLIC LAVA IS FIFTEEN PER CENT. CHEAPER THAN THE GENUINE SEYSSEL ASPHALTE OF MESSRS. O. AND A.
OR THIRTY PER CENT. LOWER THAN ANY OTHER MATERIAL CALLED BITUMEN OR ASPHALTE
Offices, No. 6, Guildhall Chambers, Basinghall-street, City.

ANCIENT HOUSE FURNITURE

In order to supply the deficiency which has hitherto existed in Furniture suitable for the many Mansions that have been erected or restored in the MEDIÆVAL STYLES, Messrs. TRAPP have directed their particular attention to this subject, in addition to their other works, and have prepared appropriate specimens in the various branches of Furnishing.

STUFFS for HANGINGS, in simple Worsted Damask, in Silk; also in Tapestry of Bayeux.
CARPETS, plain or in rich Velvet pile, with appropriate Borders.
PAPER-HANGINGS of various kinds.
OAK CABINETS, Buffets, Octagon Library and Occasional Tables, Benches, Chairs, and other useful and appropriate Furniture.
The whole of the above-mentioned Furniture, &c. is designed by the late Mr. A. W. PUGIN, Architect.
To render this Furniture generally available, a considerable portion has been arranged in the simplest manner, consistent with its ancient character.
14, Wigmore-street, January, 1853.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,
ST. HELEN'S.
STORES—70, SOHO-STREET, LIVERPOOL.

MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
LONDON POTTERY, HIGH STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.

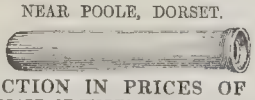
HALF-SOCKET PIPES same prices as whole Sockets, by the use of which, Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF REQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—
Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Danvers-wharf, Chelsea; Pratt-wharf King's-road, Camden town.
Messrs. COLES SHADBOLT, and CO.'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ravensbourne Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

THE BRANKSEA POTTERY,

NEAR POOLE, DORSET.



GREAT REDUCTION IN PRICES OF DRAIN-PIPES.
TO THE METROPOLITAN BOARD OF WORKS, DISTRICT BOARDS, BOARDS OF HEALTH, TOWN COUNCILS, IMPROVEMENT BOARDS, SURVEYORS, AND BUILDERS.

THE BRANKSEA POTTERY and CLAY COMPANY are prepared to supply all descriptions of Glazed Drain-pipes, Bends, Double and Single Junctions, Cesspans, &c. Also, Terra-cotta Chimney-pots and Fire-bricks of a very superior quality at moderate prices.

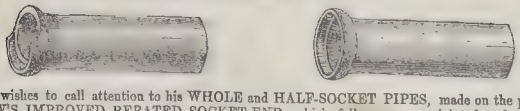
N.B. A LIBERAL DISCOUNT TO THE TRADE. A LARGE ASSORTMENT OF GOODS CONSTANTLY ON SALE.

The clay obtained from the pits on the island of Branksea is of the finest quality, and the goods are manufactured by men of long experience in the trade, with the aid of powerful machinery. The articles offered for sale will be found to bear comparison with the best goods manufactured in any part of England.

A list of prices forwarded free on application to Mr. T. G. BECK, at NEW WHARF, No. 6, Little Abingdon-street, adjoining the New Houses of Parliament; or to Mr. S. PETTS, at the Works, Branksea Island, Poole, Dorset.

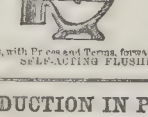
GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,
IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.



Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded post free on application. Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

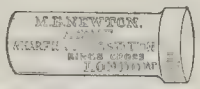
HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

FOR
J. CLIFF'S SALT-GLAZED DRAIN-PIPES, apply to



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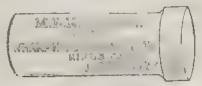

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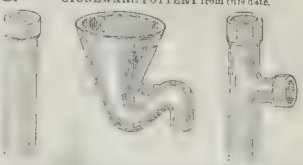

VICTORIA POTTERY LEIGH, near SOUTHEND; London Establishment, Falcon Wharf, 80 Bankside.—DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having now further reduced the prices, begs to offer to contractors and others, STONEWARE PIPES &c. &c. on the most advantageous terms. The new list of prices will be forwarded on application as above. Feb 11, 1854

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CHARLES ELEY, Jun. Secretary.

28, Parliament-street, Westminster, Dec. 1, 1856.

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By order, EDWARD S. STEPHENSON, Clerk and Solicitor to the Trustees.

NOTE. The Trustees meet on the second WEDNESDAY in every month, to take into consideration such applications for loans as have been sent in one week at the least before the first day of the month.

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TO SURVEYORS, ARCHITECTS, ENGINEERS, &c.

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Sold wholesale and retail by JOSHUA SMITH, Manufacturing Stationer and Patent Advertising Envelope Maker, 43, RATHBONE-PLACE, LONDON.

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The Builder.

Architect, Engineer, Operatives & Artist.

VOL. XIV.—No. 725. DECEMBER 27, 1856. PRICE FOURPENCE. *Stamped 5d.*

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ARCHITECTURAL EXHIBITION and COLLECTION of BUILDING MATERIALS and INVENTIONS, Suffolk-street, Pall-mall East, open from Nine till dusk.—First Lecture on Tuesday, JANUARY 6th, by Professor DONALDSON, "On the Architectural Magnificence of Rome." Admission, One Shilling, or by Season Tickets, at all times and to all the Lectures, Half-a-crown.

JAMES FERGUSSON, F.R.A.S.} Hon.
JAMES EDMESTON, Jun. } Secs.

THE ANNUAL EXAMINATION of SCHOOLMASTERS, for Certificates to teach Drawing, will be held at the Offices of the Department of Science and Art, Cromwell-road, South Kensington, on MONDAY, the 19th of JANUARY next, at TEN o'clock, a.m. Persons desiring to be examined should send their names in on or before the 5th of JANUARY. NORMAN MAC LEOD, Registrar.

COMPETITIONS.

TO ARCHITECTS and OTHERS.—BANBURY CORN EXCHANGE COMPANY (limited).—The Board of Directors are prepared to receive DRAWINGS for the proposed building, which will be erected on the site of the Premises on the Corn-hill, Banbury, in the occupations of Messrs Thomas Taylor and Joseph Scrivens. The whole of the drawings to be in one uniform scale of 8 feet to an inch. The drawings are to comprise a plan of the ground-floor, elevations, longitudinal and transverse sections. The plans and sections to have the size and length of the room figured thereon; the sections and elevations to be tinted in Indian Ink only. The estimated outlay not to exceed the sum of 1,500*l.* The author of the design approved by the Directors will be employed to superintend the execution of the work at the usual commission of 5 per cent. The author of the next best design in the opinion of the Directors, will receive the sum of 30*l.*; and the author of the design that shall be considered by the Directors next in point of merit shall receive the sum of 15*l.* The designs to be addressed to "The Secretary of the Banbury Corn Exchange Company (limited), Banbury," and to be sent in on or before the 31st day of DECEMBER instant. A ground plan of the site may be seen at the Office of the Secretary of the Company.—By order of the Directors,

THOS. G. JUDGE, Secretary.

Banbury, 5th December, 1856.

CONTRACTS.

BRAINTREE LOCAL BOARD OF HEALTH.—TENDERS for HORSE SERVICES.—Any person willing to TENDER for PROVIDING and LAYING the DRAIN and WATER PIPES from the Sewers and Water Mains to the Houses, and for providing and fixing the necessary soil pans, cocks, &c and for doing other works required for house services, may obtain printed copies of the specification, schedule, and form of Tender, price five shillings each, on application to JAMES FENTON, Esq. Chelmsford; or to me, on or after the 29th DECEMBER instant. Sealed Tenders, endorsed "Tenders for House Services," to be delivered on or before the 6th of JANUARY, 1857, at the Office of the Board in Braintree. The Board do not pledge themselves to accept the lowest or any Tender.—By order of the Board, A. CUNNINGTON, Clerk.

Braintree, December 20th, 1856.

TO BUILDERS.

THE Guardians of the Tonbridge Union are desirous of receiving TENDERS for the Building of a HOSPITAL and FEVER WARDS, at the Workhouse, near Pembury, according to plans and specifications, to be seen at the Office of the Clerk, 4, Bevedere terrace, Tunbridge Wells. Sealed Tenders to be sent to the Clerk, marked "Tender for Hospital," on or before THURSDAY the 8th of JANUARY, 1857. The Guardians reserve to themselves the right of rejecting the lowest or any other Tender.—By order of the Board.

Tunbridge Wells, Nov. 29, 1856. W. H. WALL, Clerk.

CONTRACTS.

NOTICE to BUILDERS.—The Commanding Royal Engineer, Portsmouth, hereby gives Notice, that sealed TENDERS will be received by the Director-General of Contracts, War Department, Pall mall, London, on THURSDAY, the 15th day of JANUARY, 1857, before TEN o'clock a.m. from such persons as may be desirous of CONTRACTING for ERECTING an ADDITIONAL STORY to the main out-buildings of the Garrison Hospital, Portsea, in the county of Hants. The plans, specification, and conditions of contract may be seen, and every information obtained, together with form of Tender, at the Office, on and after the 26th DECEMBER 1856 between the hours of TEN and FOUR, each day (Sundays excepted), until the last previous. The War Department reserves to itself the right of rejecting the whole or any of the Tenders. No notice will be taken of any Tender unless upon the printed form. Tenders to be endorsed "Tender for Erecting an additional Story to the main out-building of the Garrison Hospital, at Portsea, in the County of Hants."

Royal Engineer Office, Portsmouth, December 17, 1856.

ROYAL ENGINEER CONTRACT.—The War Department being about to enter into a CONTRACT for the ERECTION of FIVE BUILDINGS on WOOLWICH-COMMON, Two to consist of Twenty-four Rooms each, and Three of Eight Rooms; the buildings to be two stories high; such persons as may be desirous of Tendering for the same may inspect the plans and specification, and receive all necessary information relative thereto, by applying to Mr. J. REES, Clerk of Works, at the Royal Engineer Office, Royal Artillery Barracks, Woolwich, between the hours of TEN a.m. and FOUR p.m. up to the 29th of DECEMBER, 1856. Sundays and Christmas-day excepted. Tenders to be delivered at the Office of the Director-General of Contracts, War Department, Pall-mall, London, on the 30th of DECEMBER, 1856. The War Department reserves to itself the right of rejecting the whole or any of the Tenders.

Grand Depôt, Woolwich, December 18, 1856.

TO BUILDERS.—The Committee of the Congregational Church at Weston-super-Mare, Somersetshire are prepared to receive TENDERS for the ERECTION of a NEW CHURCH and SCHOOL, at Weston-super-Mare afor said. The drawings may be seen, and printed copies of the specification, quantities, and form of Tender obtained, on application at the Vestry of the present Chapel, on and after MONDAY, the 22nd instant. Tenders will be received on or before noon on MONDAY, the 5th of JANUARY, 1857.

PRITCHETT and SONS, Architects.

Darlington, December 12, 1856.

TO BUILDERS.—BOROUGH of WALSALL.—The Town Council of the Borough of Walsall acting as the Burial Board, are prepared to receive TENDERS for the ERECTION of TWO CHAPELS, ENTRANCE LODGE, and ENTRANCE to the new Cemetery, and the said Works are according to Plans and Specifications which may be seen at the Town Clerk's Office, Bridge-street, Walsall, on and after MONDAY, the 8th of DECEMBER next. Payments on account will be made monthly. The Board do not pledge themselves to accept the lowest or any Tender, and the Contractor will be required to enter into a Bond with one or more sufficient surety or sureties, to the satisfaction of the Board, for the due performance of the Contract. Sealed Tenders, endorsed "Tender for Cemetery Building," to be sent to the Town Clerk's Office on or before TUESDAY, the 13th JANUARY next.

SAMUEL WILKINSON, Jun. Town Clerk.

Walsall, December 5th, 1856.

TO BUILDERS. — Persons desirous of TENDERING for the ERECTION of a DETACHED HOUSE, with Stabling and Offices at Brecon, may see the drawings and specification, at the Office of the Architects, Messrs. WILLIAM HARRISON, 38, Bloomsbury-square, London; or at their local Office, Watton, Brecon, on application to Mr. ALBON, on or after the 1st day of JANUARY, 1857. Tenders are to be sent in on FRIDAY, JANUARY 16th, but no engagement is to be implied to accept the lowest or any of the Tenders.

BERMONDSEY VESTRY, Surrey. — To STONE MERCHANTS.—The Vestry of this parish will meet at the Workhouse, in Russell-street, on MONDAY, the 5th day of JANUARY next, at SIX o'clock in the evening precisely, to receive TENDERS for the SUPPLY of 5,000 feet run of 6 inch ABERDEEN GRANITE, straight edge curb; 2,000 feet run of 6 inch Aberdeen Granite round edge curb, and 1,500 feet sq. or second class fine RICHMOND PAVING, delivered on or before the 14th day of MARCH next, alongside Springfield's Wharf, below bridge in the river Thames. The time named for the delivery of the stone will form part of the essence of the contract. Payment will be made for the stone within a month after the surveyor has given his certificate as to quantity and quality such certificate to be binding on the parties. The Vestry do not bind themselves to accept the lowest or any Tender.

GEO. HENRY DREW, Clerk.

Vestry Offices, Maltby street, Dec 19, 1856.

TO BUILDERS and CONTRACTORS.—ST HELEN'S GENERAL CEMETERY.—In pursuance of the 31st sect. of the 15th and 16th Vict. c. 85, the Burial Board for the Parish of St. Helen's, in the county of Lancaster, hereby gives Notice that it is prepared to receive TENDERS for the several CHAPELS, LODGES, DRAINAGE, FENCES, RETAINING WALLS, EARTH WORK, ROAD MAKING, &c. All persons desirous of submitting such Tenders must for the whole work, or for the buildings, or any other part of the work separately, can inspect the plans, settings, and specifications, and obtain billsof quantities together with any other information, at the Office of the Architect, Mr. THOMAS D. BARRY, 47, Bedford-street North, Liverpool. The plans will be on view from the 22nd inst. to the 5th JANUARY next, and all Tenders must be sent sealed, after cover, to the undersigned, not later than the 12th JANUARY next. Two proper sureties will in all cases be required for the due performance of the works.

THOMAS HADDOCK, Clerk to the Board.

St Helen's, December 19th, 1856.

CONTRACTS.

LUTON LOCAL BOARD of HEALTH.—To MASONS, CONTRACTORS, and OTHERS.—The above Board are prepared to receive TENDERS for the SUPPLY and LAYING DOWN of about
81,500 feet super. of YORK PAVING,
15,700 " DENNER HILL GRANITE CHANNELLING,
20,200 feet run YORK CURB.
Comprised in the following streets, being CONTRACT No. 1:—

Castle-street,	Hitchin-road,
Chapel street,	Langley-street,
Church-street,	London road,
Dunstable-road,	Love-lane,
Dunstable-place,	Manchester-street,
Bridge-street,	Old Windsor-street,
George street,	Park-street,
Hightown-road,	Stuart-street.

The plan of the streets and specification of works, may be seen at the Offices of the Board, on and after WEDNESDAY, the 14th day of JANUARY next, when forms and Tenders, and further particulars, may be had, on application to Mr. T. L. EVANS C.E. the Surveyor. The Tenders are to be delivered at the Board-room, endorsed "Tender for Paving," addressed to the Chairman, by SIX o'clock on the Evening of TUESDAY, the 10th day of FEBRUARY, 1857.

CONTRACT No. 2, of about the same quantities, will be advertised shortly. GEORGE BAILEY, Clerk to the Board.

Luton, Beds, December 16, 1856.

THE BURIAL BOARD for the PARISH of LEWISHAM, in the County of Kent.—Notice is hereby given, that at the Meeting to be held on THURSDAY, the 8th day of JANUARY next, at TWO o'clock in the afternoon, the Board will receive TENDERS for the execution of the necessary works in DRAINING, FORMING ROADS, LAYING OUT and BUILDING the BOUNDARY WALLS of the new Burial ground for the said Parish. The works are submitted for Tender a second time, in consequence of unavoidable alterations in their nature and extent. A specification, plans, and sections of the works will be for inspection at the Offices of Messrs. TINKLER and MORPH, Architects, 3, Queen-street-place, Cannon-street. The Board do not bind themselves to accept the lowest or any Tender. Sealed Tenders to be sent in on the printed form to be obtained at the Offices of the Architects, and of the Clerk to the Board) by or before TWO o'clock on the 8th day of JANUARY next.

By order,
OCTAVIUS G. THYNN EAGLETON, Clerk to the Board.
Grove place, Lewisham, Kent, S.E. December 20, 1856

MIDLAND RAILWAY.—The Directors of the Midland Railway are prepared to receive TENDERS to CONTRACT for the REPAIRS and MAINTENANCE of the STATION BUILDINGS on the Bristol and Birmingham Branch of the above Railway, for a period of SEVEN YEARS, as per annum. The specification may be seen, and particulars obtained, upon application at the Engineer's office, Derby Station, on and after TUESDAY, the 23rd instant. Tenders to be delivered to the Secretary to the Way and Works Committee, Derby Station, by TEN a.m. on TUESDAY, 6th day of JANUARY, 1857. The Directors do not bind themselves to accept the lowest or any Tender.—By order, JOHN MOORE, Assistant secretary.

TO BUILDERS.—Persons desirous of CONTRACTING for the various Works required in the ERECTION and COMPLETION of PARSONAGE-HOUSE, Central-road, Belper, may see the plans and specifications for the same at my Office, from MONDAY, the 22nd inst. until SATURDAY, the 27th day of DECEMBER; and on Field-house, Belper, from DECEMBER 29th, 1856, until SATURDAY, the 10th day of JANUARY 1857. Sealed Tenders to be sent in to the Rev. J. BANNISTER, Field-house, Belper, on or before the 6th day of JANUARY, 1857, endorsed, "Tender for Parsonage-house."

Copies of the quantities supplied if required.
HOLLINSON, Architect and Surveyor.

Chesterfield, Dec. 16th, 1856.

TO TIMBER MERCHANTS, &c.—TO BE DISPOSED OF, an old established BUSINESS in the DEAL and TIMBER LINE, with a first-rate connexion, situate in the centre of a city in the west of England. The premises are fitted up with steam saw-mills, and the rent is moderate, with a small but well-selected stock of deals, &c. A most favourable opportunity of embarking in business can be seldom met with. A satisfactory offer for partnership in the above business will receive attention.—Apply to Mr. S. N. WILMOT, Palmer's hill, Salisbury, Wilts.

THE THIRD BIENNIAL EXHIBITION of ARCHITECTURAL, MECHANICAL, and ORNAMENTAL DRAWINGS, executed by the Students in the Architects', Builders', Civil Engineers', and Mechanics' Drawing Classes will be open for inspection on Monday, Tuesday, and Wednesday, the 29th, 30th, and 31st of December; and Friday and Saturday, the 2nd and 3rd of January 1857, from 10 o'clock in the Morning, to 5 in the Evening, at the Offices of the Establishment, 15, Old-street, City road. Admission by ticket, to be had at the Offices; and at the Office of "The Builder."

T. J. HILL, Architect, Conductor of the Classes.

COMMANDMENTS, TEXTS, &c.—A. O. P. HARRISON, Church Decorator and Writer, 47, Bathpool, Newcastle.

N.B. Designs for reredos panels, organ-pipes blinds, scrolls, &c. submitted for approval.

BOOKS POSTED and BALANCED by Partnership Accounts Arranged, and Balance-sheets made out, Bookkeeping Accounts investigated, and assistance rendered with Creditors on the most moderate terms, by an experienced Accountant.—Address, ROBERT HATTON, Esq., New Broad street, E.C.

TO BUILDERS, SCAGLIOLA WORKERS AND OTHERS.

WANTED, FOUR COLUMNS, either in Marble, Scagliola, or Wood, with Ionic Capitals and Bases of Stone or Marble. Full height, 10 feet 1 inch. If in scagliola or wood, to represent the serpentine marble. Lowest price, full description, and where to be viewed.—Apply to J. LATTIMER and SON, Architects and Surveyors.
Stratford-on-Avon, December 23rd, 1856.

MARBLE WORKS by PATENT MACHINERY, Commercial-road, Pimlico, London.
THOMAS JAY & SON begs to draw the attention of the public to the most extensive stock of Marble Chimney-Pieces in the Metropolis; consisting of a selection of upwards of two hundred and marble used by steam power from the finest Italian and other marble, and with that careful attention to the details and finish so necessary in good marble work. The Stock consists of elegant Drawing-Room Chimney-Pieces in Statuary Marble; bold massive Chimney-Pieces, in Black, Black and Gold, Sicilia, Sienna, Verd Antique, Brocatello, Dove, St. Ann's, and Serpentine Marble, suitable for Dining-Rooms, Libraries, Vestibules, and Entrance-Halls; and a great variety of others in Veined, San Juan, Emperor's Red and Amber Marble, for Boudoirs, Breakfast-Rooms, Bed, and secondary Bed-Rooms, &c., also, Monuments, Tombs, Tablets, and Pedestals for Busts and Statues, and Slabs for Cabinet Work, &c.; the whole executed from the most classical designs, and in all the varieties of the finest Italian and British Marble, at the lowest remunerative prices.

BUILDERS, ARCHITECTS, AND MASONS.

MARBLE.—The ITALIAN MARBLE COMPANY beg to call the attention of Architects, Builders, and Others connected with the trade, to their large and well-assorted STOCK of VEIN SICILIAN, and other MARBLES. The liberal system of business adopted by this company, the superior quality of their marble, and their very moderate scale of prices are combined, to form an inducement to buyers. An inspection is solicited at the Depôt Bridge Wharf, Millbank, adjoining Vauxhall Bridge, where no office (persons are authorized to sell except Mr. Baxter, Wharf Foreman, or the undersigned.
WILLIAM W. BONNIN, Secretary.

MARBLE CHIMNEY-PIECES, and every other description of marble work, supplied to architects, builders, and the trade, at prices to compete with slate, manufactured by the LONDON and CONTINENTAL MARBLE COMPANY.—Offices and Depôt, 3, Crooked-lane, London-bridge.
Paving for Halls, Conservatories, &c.

MARBLE GALLERIES, 17, Newman-street, Oxford-street.—Mr. ALFRED E. EDWARDES, (upwards of ten years with the London Marble Company), has opened the above premises, late in the occupation of Bailey the celebrated sculptor, under the firm of EDWARDES, EDWARDS, and COMPANY, with the largest stock of BRITISH and FOREIGN MARBLE CHIMNEYPIECES, &c. &c. in London EDWARDES, EDWARDS, and CO. solicit the favour of an inspection of their stock by architects, builders, and others connected with the trade; and beg to assure them that for design, style of execution, and price, it will be found unrivalled. Estimates for every description of marble work.

MARBLE CHIMNEY-PIECES.—The nobility and gentry of the United Kingdom who are building or refitting their mansions are respectfully invited to inspect the most Extensive Collection of MARBLE CHIMNEY-PIECES lately imported from the Continent. They comprise Statuary, Giallo di Siena, Vert Rouge, Dove, Black and Gold, Rouge de Belmont, Basalte, and other choice foreign marbles; and are designed with great taste and executed by first class artists. On sale in the show rooms of Messrs. EVANS, SON, and CO. King William-street, London-bridge.

LLOYD'S MARBLE WHARF, Thames-bank, Pimlico, adjoining Vauxhall-bridge.—Italian Statuary, Veined, Sicilian, Dove, Sienna, and other Marbles, for Sale, at import prices. A resident manager on the wharf at all hours.

BRAMLEY FALL! BRAMLEY FALL! On account of greater facilities than possessed by any one else, THOMAS TAIT and PERKINS are prepared to supply in any quantity BRAMLEY FALL STONE, at greatly reduced prices, having opened the extensive quarries in the Hawkesworth Cottage, on the North Eastern Railway, near Horsforth. The stone is of the same quality as the well-known Old Bramley Fall and Horsforth Quarries, but has the advantage of being of a lighter and more even colour. The North Eastern Railway Company have put up steam cranes on both sides of the railway. Power cranes are fixed so that the stone can be got to any size and the stone being loaded in the quarries on the railway tracks, can be forwarded the same day to any part of the kingdom, or supplied in London in any Saturday in full in any quantity.—For particulars apply to JOHN TRICKETT, Stone Merchant, Headingley, near Leeds, or to SAMUEL TRICKETT, Victoria Stone Wharf, Isle of Dogs, London.

QUARRY WORKED STONE.—Architects, Masons, and Builders would effect a great SAVING in cost by ordering Jambs, plinths, templates, sills, corbels, imposts, cornices, landings, steps, staircases of all kinds moulded or plain, square or spandril, from the quarries ready worked for fixing. Experienced foremen kept, and the stone is clean worked and carefully packed or stowed, and delivered direct in one bottom by vessel or railway truck.—Prices and every information given on application, accompanied by plans or sketches to SAMUEL TRICKETT, stone-wharf, Isle of Dogs, or to JOHN TRICKETT, Headingley, Leeds, York-shire.

BANGOR WHARF, King's-road-bridge, Camden-town.—STRINGFIELD and COOPER late W. W. Rawlins, beg to call the attention of Builders and others to their stocks of Roman, plain, and Parian Cements, Portland, and Keene's cements, blue lias, Dorking and chalk lime, plasterers' hair, Yorkshire plain, pan, and ridge tiles, glazed sewer pipes, closet-pans, and traps. Welsh slates, Kentish and Welsh forest garlenpaths, ballast, sand, &c. Materials landed, wharfed, and carted.

STONES, GRANITES, SLATES, &c.—W. and J. FREEMAN supply the various British and Foreign Stones, Cornish and Aberdeen Granite, in scapped blocks or worked to specification. Also, the usual quarry worked STONES, KEN, Bath, Caen, & HOLT Farley Hill QUARRIES, ROYAL HILL, ORNAN OF TAIL QUARRIES FOR EXPLANATION OR OTHERWISE on by rail to any part of the Kingdom.—Stocks of each description always ready for immediate delivery from their Wharfs, Millbank Street Chelsea Basin, and adjoining Commercial Docks, Deptford Office, 27, Millbank-street, Westminster.

STONE! STONE! STONE! — To the TRADE.—Cheapest places in London for Portland and Bath Stone. York free Landings, Steps, Curb, Paving, Sills, &c. Granite Fitting and Curb, Guernsey Pickup Road Materials, and every other description of stone, at JOHN KNIGHT and SON'S, Devon Wharf, Strand. York landing steps, 3s. 6d. per foot run; slab for fire clay, 4s. per foot sup.; slab for chimney-pieces, 3s. per foot sup.; 8 by 3 window-sills, 6d. per foot run; 13 by 3 copings, 8d. per foot run; box chimneys (any opening), 8s. 6d. each Terms cash on delivery.

MARKET-WHARF, REGENT'S-PARK-BASIN, WEST-END DEPOT, for Yorkshire Paving, Portland and Derby Stone, Bangor Slates, Slabs, &c. All Bricks, Lime, Cement, Plaster, Tiles, Laths, and Fire Goods. STOCKS and WOOD invite the attention of Builders, Masons, and others, to their Stocks as above, where everything will be charged at the lowest prices. Headstones, Kerbs, Steps, Landings, &c. put on the shortest notice. Country orders promptly attended to.

CAEN and AUBIGNY STONE.—F. FOUCARD, Stone Merchant and Quarryman. Any shipped to order from Caen to any port. Contracts taken for any quantities. Depôts: Granite Wharf, East Greenwich; Lee Wharf, Waterloo-bridge. Office: 246, High-street, Southwark, near the Townhall.

DARLEY DALE STONE.—One of the Stones selected for the New Houses of Parliament, and highly commended by Sir Charles Barry, is supplied direct from the Quarry, or at the Darley Dale Stone Wharf, Cotwood Basin. In addition to numerous other works, it is in the st ne of St. George's Hall, Liverpool, and the Staircases of the Grosham Chambers, Old Broad-street.—Office, 37 Millbank-street, Westminster.

GATES and GEORGE, CAEN, AUBIGNY, and GENERAL STONE MERCHANTS.
CAEN WHARF, ROTHERHITHE, LONDON

O. M'CARTHY, CARMAN, and SAND and CEMENT MERCHANT, Whitefriars Wharf, Whitefriars, Fleet-street, City. Sand, from above or below bridge, delivered by the yard or per barge. Ballast in best of unscreened by the yard or per barge. Stocks, lime, and old bricks. Dry rubbish delivered per barge, in any quantity, alongside the Thames.

RANSOME'S SILICIOUS STONE.—All kinds of ARCHITECTURAL EMBELLISHMENTS executed in this beautiful and indestructible material, at prices not exceeding the ordinary cements. Full particulars furnished on application to Mr. FRED. RANSOME, Whitehall-wharf, Cannon-row, Westminster; or Patent Stone Works, Ipswich.

JOHN BAZLEY WHITE and BROTHERS, MARBLE MERCHANTS,
MILLBANK-STREET, WESTMINSTER.
Marble of all kinds and of best quality, in block and slab, Marble mortars, &c.

BATH STONE OF BEST QUALITY.

RANDELL and SAUNDERS, QUARRYMEN AND STONE-MERCHANTS, BATH.
List of prices at the quarries and depots, also cost for transit to any part of the kingdom, furnished on application to Bath Stone Office, Corsham, Wilts.

GRANITE.—The Welsh Granite Company, Carnarron, supplies Pitching or Paving Sets of this Material to order. The Sets, which have for several years been extensively used in Manchester, Bristol, Leeds, and other large towns, combine in a higher degree than any others, the qualities of roughness in wear and durability. The stone is also well adapted for foundation courses, plinths, &c. for public buildings and for mill-stones.

GRANITE.—King William and Nelson Monuments, Plinth and Steps of the Royal Exchange, and Terrace at the Crystal Palace Supplied by the Haytor Company under Royal Charter. For terms apply to Mr. C. HOAR, Haytor Granite Office, 4, Millbank-row, Westminster.

GRANITE.—The Cheesewring Granite Company (Limited), Liskeard, Cornwall.
London Agents.—PITCHFORD and TAYLOR, 54, Old Broad-street. Manager.—JAS. J. THATHAN, Liskeard
This Granite is selected for the New Westminster-bridge.

SLATE.—The Bangor Royal Slate Company have now on hand a LARGE ASSORTMENT of ROOFING SLATES blue and green, of the usual sizes, which they are prepared to supply on the usual terms, for shipment from their depôt at Bangor, or to transmit by railway. Also Slabs of all sizes.—Orders to be addressed to Mr. EDWARDS, Manager, Royal Slate Quarries, Bangor.

SLATE.—An assortment of the best BANGOR ROOFING SLATE ON SALE, at Bridge-wharf, Millbank.—Apply to Mr. GEORGE BAXTER, Foreman.

PARIS EXHIBITION.—ENAMELLED SLATE.—TWO FIRST-CLASS MEDALS!—Mr. MAGNUS is the only exhibitor whose productions received this double honour; also the Prize Medal at the Great Exhibition of 1851, and the Medal of the Society of Arts in 1846. This beautiful material, handsomer and more durable than marble, is now finding its way into palaces, into the mansions of the nobility at home and abroad, into the highest class of public buildings, as well as into humbler dwellings. The cost is immeasurably below that of any other production that can at all compete with it. It is applicable to a variety of useful and ornamental articles too numerous to be separately specified. Among the chief are chimney-pieces and ornamental stoves for all apartments; plain and exquisitely decorated slabs for the tops of loo tables, chiffoniers, consoles &c. baths, baptistries, altar-tablets, pilasters, columns, vases, pedestals, and brackets; wash stand tops, billiard tables, linings to halls, vestibules, and dwellings. Price list can be had on application to Mr. MAGNUS, 39 and 40, Upper Belgrave-place, Pimlico.
N.B. Plain slate work executed from a single article to the most extensive contracts, for home and abroad.

VALENTIA SLATE SLABS.—The Valentia Slab Company invite attention to their Slabs now supplied, of very large dimensions and of superior quality. They have been used at the British Museum, National Gallery, Bethlem Hospital, various Lunatic Asylums, the Ordnance Work Model Prison, Pentonville, and other Penitentiaries, Malt Floors in Bedfordshire and Hertfordshire, Breweries, the Royal Stand at Brighton, Portsmouth Barracks, and are kept in stock and are quantities by Messrs. FREEMAN, Millbank-street; and at Messrs. Bruby's, Belvidere-road, where terms may be obtained.

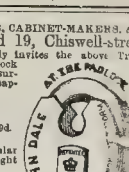
ASPHALTE.—GERVASE FOOTTIT and BROTHERS' ASPHALTE WORKS, ROTHERHITHE, LONDON. Established 1834.—TRINIDAD, ELYSEE, and BRITISH ASPHALTES, manufactured by steam power, delivered in the best manner, or supplied in any quantity. Before contracting for laying pavements with material, Footitt's experience of twelve in London previously attended to.—Estimates given for every kind of the above work.

ASPHALTE, FOREIGN and BRITISH, for FLAT ROOFING and every description of PAVING especially in dampproofing tanks.
FIVE SHILLINGS PER SQUARE YARD.
Country Builders supplied with Asphaltic for footings and basement floors, with instructions for using it.
Apply to JOHN PHILLIPSON, Poloneeau and Limmer Asphalte Office, Modern Chambers, No. 14, Fish-street-hill, London.
N.B. Importer of the PURE ROCK ASPHALTE, from the LIMMER Mines in Hanover.

FOR HIRE, a SPACIOUS TENT, adapted for the Laying of Foundation stones for Public Buildings, &c.
Also, for Sale, a Quantity of Cocoa Matting for Churches, at greatly reduced prices.
Apply to H. PIGGOTT, 115, Fore-street, City.

TO BUILDERS, CARPENTERS, CABINET-MAKERS, &c.

JOHN DALE, 18 and 19, Chiswell-street, Finsbury-square, respectfully invites the above Trades to the inspection of his immense stock of ironmongery, which cannot be surpassed in variety, quality, and cheapness by any house in London.



Elliptic Stoves, double backs,
24d. per inch, and upwards.
Register Stoves, 5d. 6d, 7d. 8d. and 9d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings:—
3 ft., 2l. 16s.; 3 ft. 6 in., 3l.; 4 ft., 3l. 15s.
5-feet Cottage Ranges, with ovens and back boilers, 32s. each.
3 feet self-acting ditto, ditto, 34s. each.
Air Bricks, 4s. per doz.
Best Fine Cut Clasp and Rose.

1½	1¾	2	2½	2¾	3-in. & Barrer.
16s. 6d.	18s. 6d.	15s. 6d.	18s. 6d.	15s.	14s. per cwt.

And every material required in the building, bell-hanging, upholstery, and brass-foundry trades on the most reasonable terms.
List of Prices had on application at the Warehouse, or by letter prepaid.

JOHN WARNER and SONS, Patentees of IMPROVEMENTS in the MANUFACTURE of LARGE BELLS.

J. W. & SONS having of late years devoted much time and study to the long neglected art of Bell Casting, have recently invented and patented a new process connected therewith, by which they are enabled to manufacture Bells of any size, note, or weight, of superior tone, truer in form, and at less cost than has heretofore been accomplished.
Bells for Churches, Chapels, Colleges, Schools, Turret Clocks, &c. cast for any size, note, weight, singly or in peals.
TUNED BY MACHINERY.
Stocked and wheeled ready for fixing. Old Bells recast or taken in exchange.
MUSICAL HAND-BELLS tuned to the Chromatic Scale, with improved Clappers, and pegged on a new system, which give superior tone and facility for ringing.
The great 16-ton Bell, for the Houses of Parliament, was made by JOHN WARNER and SONS, 1856, under their Patent.

ESTABLISHED 1817.

WILLIAM HARMER'S SMITHS' WORK, STOVE and RANGE MANUFACTORY and IRONMONGERY, METAL, and ZINC WAREHOUSES, 219, Horseferry-road, and 1, New Peter-street, Westminster.
GREAT REDUCTION IN PRICES.
RAIN WATER CASTINGS, per yard.

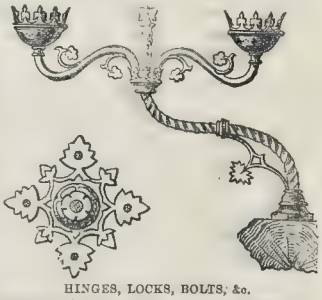
Sizes—3 in.	3½ in.	3 in.	7 in.	4 in.	4½ in.	5 in.
Pipes	10d.	1s. 1d.	1s. 3d.	1s. 7d.	1s. 10d.	2s. 2d.
Half-round Gutters	9d.	8d.	9d.	1s.	1s. 2d.	1s. 4d.
O G Gutters		1s. 6d.	1s. 8d.	1s. 10d.	2s.	2s. 2d.
Ditto with plain clips cast on		1s. 1d.	1s. 2d.	1s. 4d.	1s. 6d.	1s. 8d.
Ditto, with lion clips ditto		1s. 2d.	1s. 3d.	1s. 5d.	1s. 7d.	1s. 9d.

Sash Weights, 7s. 6d. per cwt.; Air Bricks, 3s. 3d. per dozen.
Best Cut Clasp Nails.

1½ in.	1¾ in.	2 in.	2¾ in.	3 to 6 inch.
16s 6d.	15s.	14s. 6d.	14s per cwt.	

Best Cut Floor Brads ..... 12s. 6d. to 13s. 6d. per cwt.
Best Cut Lath Nails ..... 13s. 6d. "
Best Zinc Slating Nails ..... 40s. "
Best Glues ..... 47s. to 53s. "
A large Stock of Elliptic and Register Stoves, and Kitchen Ranges, at the lowest wholesale prices.
Estimates given for any description of Wrought or Cast Iron Work, Heating by Hot Water, &c.

HART AND SON,
IRONMONGERS AND MANUFACTURERS,
53, 54, 55, 56, & 57, WYCH-STREET, STRAND, London.



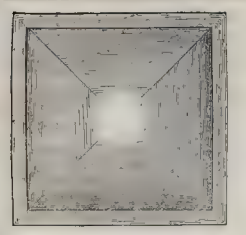
HINGES, LOCKS, BOLTS, &c.
Specimens at the Architectural Exhibition Suffolk-street, Pall-mall, and at the Handyside Court, Crystal Palace, Sydenham.
First-class Prize Medal, Paris Exhibition, 1855.

COLLINGE'S PATENT HINGES.—Manufacturers, CHARLES COLLINGE and Co. 84 and 85, Bridge-road, Lambeth, where a great variety are always on view for strength, park, railroad, coachhouse, and other gates and doors of large and small dimensions, a ton weight moving with brass hinges as easily as a wicket. Ornamental hinges, adapted for drawing-rooms, &c.; doors fitted with them may be removed and replaced in an instant. Rising and double acting spring hinges, and superior gate fastenings, at moderate prices. None genuine unless marked "Charles Collinge, Patent, Lambeth." Plain and ornamental cast and wrought iron-work for buildings and other purposes. Engines, machinery, patent axle-trees, shear-mills, &c.

IRON FOUNDRY, Harrow-street, Lant-street, Southwark.—W. R. BARTLETT, manufacturer of circles, Columns, Cantilevers, Railing, and Newel Bars. Iron Coping, Panels, Tomb Enclosures, Area Gratings, Sash Weights, Screw Jacks, Cellar Wheels, Rivets, Engine, Engine, and Lathe Castings; Forge Backs, Furnace Bars, Kilns, Pans, Pipes, Tank Plates, and other Castings, to patterns or drawings.

TO IRONMONGERS, BUILDERS, &c.

PATENT WROUGHT-IRON WELDED TUBE for GAS; galvanized ditto for water; high-pressure locks, &c. Manufacturers of Dr. Arnott's improved Ventilators.
HULETT and CO. 55, High Holborn.



Plan and Section of Buckled Plate; Convex Side.

MALLET'S PATENT BUCKLED PLATES.

TUPPER AND CARR,

SOLE LICENSEES AND MANUFACTURERS.

THESE Plates are applicable to every purpose where strong, rigid, light, and durable load sustaining surfaces are demanded: as for the Flooring of Bridges, Viaducts Jetties Fireproof Flooring for Buildings, Fireproof Partitions Bulkheads, Doors and Shutters, the Plating in between Iron Piling for Wharf or Dock Walls; the Covering of Iron or other Roofing, as for Building Slips in Dockyards, for Railway Stations &c. The construction of Iron, Military, Colonial, or other Huts, Stores, and Iron Buildings of all sorts; the Formation of Water-Tanks; the Covering of Reservoirs of Waterworks; and, generally, to every purpose to which Corrugated Iron has been applied, besides many others to which Load is inapplicable—as for example, the Construction of Balcony or Cantilevered Galleries, Projecting Footways, &c the Plates deriving their support solely from themselves and the walls

BUCKLED PLATES may be united to each other, or to the frame of the structure they cover, by either lap or butt joints and either by screw bolts, rivets, or wood screws to timber; and the joints are made absolutely water-tight when required, by riveting and chunk up, or by interposed strips of felt saturated in oil cement, or in tar and pitch, or by strips of vulcanised India-rubber, or by a thin layer of oil putty.

The sizes of the Patent Buckled Plates are—4 ft. by 4 ft.; 3 ft. by 3 ft.; 4 ft. by 2 ft.; and 3 ft. by 1 ft. 6in.

Other sizes by agreement.

For further particulars, prices, &c. apply to the Licensees,—

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ZINC ROOFING, INCLUDING TIMBER OR IRON FRAMEWORK,

IS AS

CHEAP AS SLATES OR GALVANIZED IRON, LIGHTER, AND MORE DURABLE.

Certificates, and Models of various descriptions, may be seen, and estimates obtained on application to

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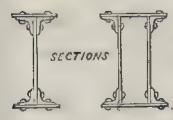
ROOFS CONSTRUCTED UNDER HIS SUPERINTENDENCE GUARANTEED TO REQUIRE NO REPAIR FOR AT LEAST TEN YEARS.

THE OLD METAL BEING ALWAYS RETAKEN AT HALF-PRICE, RENDERS IT ADVANTAGEOUS FOR ALL TEMPORARY BUILDINGS.

Many roofs covered with zinc thirty-five years ago have never required repairs.



WROUGHT-IRON GIRDERS

For BRIDGES and BUILDINGS,

MANUFACTURED AND GUARANTEED AS TO STRENGTH

CAST-IRON GIRDERS for BRIDGES

Wrought-iron Doors, Boiler, & General Smiths' Work.

BUILDERS' CASTINGS OF EVERY DESCRIPTION.

ROLLED WROUGHT-IRON FLITCHES

For TRUSSING BETWEEN TIMBER.

SPIKES, RIVETS, CUT NAILS, WROUGHT DITTO, SCREWS, BOLTS AND NUTS, BAND HOOPS, CHAINS, &c

CONTRACTORS' PLANT, RAILS, EARTH WAGGONS,

And IRON WORK for WOOD WAGGONS, &c.

MATTHEW T. SHAW, 64, CANNON-STREET (late with C. J. Mare & Co.)

Such arrangements are made for Despatch and Punctuality that Orders can be executed in a few days.

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ENGINEERS,

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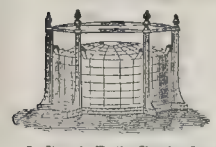
FOR THE

ERECTION OR ALTERATION OF GAS-WORKS FROM TWENTY LIGHTS UPWARDS,

With Buildings, Mains, Meters, Service Pipes, Lamp-Posts, Lamps, and Gasfittings

WATERWORKS FOR THE SUPPLY OF TOWNS,

WITH BUILDINGS, STEAM-ENGINES, PUMPS, MAINS, SERVICES, &c.



Gas Stoves for Heating Churches, Chapels, Lecture Halls, and Public Buildings of all kinds; these have been recently fixed at New College, Oxford; St. George's Catholic Cathedral, Southwark; and numerous Churches, Chapels, &c

Gas Cooking Stoves and Ranges on the most improved principles.

GAS-FITTING IN ALL ITS BRANCHES.

GAS CHANDELIERS OF ALL SIZES, IN BRASS OR IRON, FROM TWO TO TWO HUNDRED LIGHTS.

DEVICES FOR GAS ILLUMINATION.

IMPROVED REGISTERING TURNSTILES FOR TOLL-BRIDGES, EXHIBITIONS, PUBLIC GARDENS, BATHS AND WASHHOUSES, &c.

These Turnstiles have been selected for the Entrances of the Great Exhibition, New York

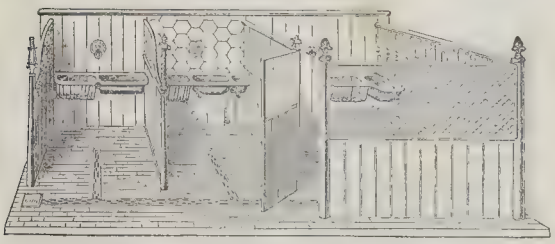
PATENTEES OF THE SEMAPHORE RAILWAY SIGNAL.

Signals for communication between Guard and Engine Driver Railway Stores and Lamps of every description

DARLINGTON WORKS, 16 to 19, SOUTHWARK-BRIDGE ROAD, LONDON.

NEW PATENT INVENTIONS FOR STABLE REQUISITES.

AWARDED A PRIZE AT THE PARIS EXHIBITION, AND PATRONISED BY THE ENGLISH AND FRENCH GOVERNMENTS.



COTTAM and HALLEN, of Winsley-street,

Are the original inventors of the PATENT ENAMELLED MANGER, WATER TROUGH, and WROUGHT-IRON RACK united to an iron top-plate, and forming one complete and useful fixture, having no ends Patent Noiseless Halter Hinge and Collar Rein Staple, the last of which is taken up in all the best stables, and likewise with those of Royalty be found in Cottam's new Patent Sewer Ventilating Gratings, which are now being introduced in the Houses of Parliament, and which, by their peculiar construction, prevent the return of foul air, and at the same time admit a free supply of fresh air, and which, used with great advantage where space and light are to be economised, take off the water quickly.

Improved Harness Holders, for preserving the shape of the harness, and preventing its cracking. Patent Loin Box Fittings. Cheapest durable Corn-bins.

Improved Surface-Drain, with safety covers, Sanitary Traps, and every article for the harness room and stable, kept in stock, plain, galvanized, and enamelled. Iron Gates, Fencing, Hurdles, &

The new Illustrated Catalogue for 1856, and estimates gratis, upon application to

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BARTON'S PATENT SAFETY STABLE FITTINGS, and ENAMELLED MANGERS.

THESE FITTINGS will be found to possess all the latest and most important improvements and are of the best workmanship. All kinds of Stable furniture in stock Iron Hurdles Gates, Fencing, Ironbanding, &c New illustrated Catalogue forwarded on receipt of two postage stamps. JAMES BARTON, Ironfounder, &c 370, Oxford-street, London.

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CLARK and HUNT'S IRONMONGERY,

STOVE, and METAL WAREHOUSE, 150, Shoreditch.

A great variety of Ellipsis, Register, and other Stoves, Cottage and best Ranges fitted, always in stock.

Improved Self-acting Cottage Ranges, with Large Oven and Boiler, 6 42 44 inches. 8s 40s 32s 35s

Best or Fire-facing Ranges with Oven and Hot Boiler, Bright Wrought Bars—

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54s 50s 38s 60s.

Strong Hobthrust Ranges, with Extra Boiler and Small Bars, per inch 2s

Register Stoves, with Sound Bars, per inch, 8d

Improved New Pattern Circular Check Register, with strong Bars and Trivets, 5d per inch

Best Stove ditto, with Fire Brick Back, per inch, 10d

Bright Stoves with Two Fires, 40s to 10 guineas each

Cast Hair-water Pipe	2	2½	3 inch
	10d	1s 3d	1s 8d per yard
Cast Gutters—4 inch 8½ per yard.			
O G Gutters	5		44 inch
	1s.		1s 8d per yard
	2	3	4 5 6
Patent Line	3s 6d	4s	5s 7s 9s per yard

6-inch Rd. Ward Mortise, with Best Furniture and Pair of Spindles, 3s 6d each. Iron Elliptic and Register Metal, 1s per foot. Dr. Arnott's Ventilators, 4s 6d each.

Brick Mouths kept in stock. Any size made to order

Best Cut Clasp and Rose Nails

1¼ in	1½ in.	2 in.	2½ in	3 in
10s. d	10s 6d	15s. 6d.	18s	1l per cwt

Best Sheet Cast Iron Boards ..... 1s per foot

Iron Gas Bath Stand 1

IRONMONGERY,

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THE LARGEST STOCK AT

THE LOWEST PRICE,

5 AND 6, BROAD-STREET, BLOOMSBURY.

HULETT and CO. Manufacturers of

[illegible] complete [illegible] price list, 19s 55 and 59, Hatton Garden.

TYERMAN'S PATENT HOOP-IRON BOND,

FOR BUILDING PURPOSES,

ADOPTED BY SEVERAL DEPARTMENTS OF THE GOVERNMENT.

TARIFF OF PRICES

Beyond the current Price of Hoop iron.			
Gauge.	In. wide.		Per 1,000 ft.
No 16	.. 1¼	..	7s. 0d.
15	.. 1½	..	7s. 6d.
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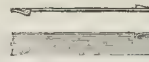

THE PATENT BOND (which is prepared from the ORDINARY HOOP IRON, by notching it at intervals of 1¼ inches) is now being extensively used in the leading GOVERNMENT WORKS DOCK BUILDINGS, BANKS, ASYLUMS, BRIDGES, VIADUCTS, PRISONS, ENGINE-HOUSES, and MANUFACTORIES, as well as in other PUBLIC and PRIVATE WORKS, in London and in all parts of the Kingdom.

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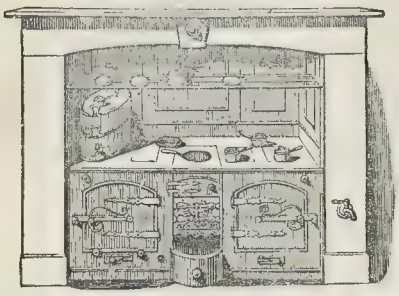
FLAVEL'S PRIZE KITCHENER.



The only Kitchen Range which obtained a Prize Medal and special approbation at the Great Exhibition, 1851.

These Ranges are strongly recommended for their simplicity of construction and their economy and cleanliness in use.

The top forms a Hot-plate, and the open fire removes many of the objections which are felt to close Ranges.

They are made in all sizes, from 3 feet to 18 feet in width, suitable for large or small establishments.

They are admirably adapted for the Cure of Smoky Chimneys.

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RADIATING and REFLECTING STOVE. WILLIAM S. BURTON'S NEW REGISTER STOVE combines completely the well-known principles of both Stephen's and Sylvester's celebrated patent stoves, while it has others equally valuable, which are peculiarly its own, and for which a patent has been granted. Its reflecting and radiating powers are perfect, it is very simple, and cannot be put out of order, consumes but little fuel, is most cleanly and cheerful in use, while its general appearance, no fender being needed, is most imposing. Prices, complete, black or bronzed, from 2l. 12s.; bright, 14l. 5s. and upwards. One may be seen in action in his Show-rooms, which contain such an assortment of fenders, stoves, ranges, fire-irons, and several ironmongery, as cannot be approached elsewhere, either for variety, novelty, beauty of design, or exquisiteness of workmanship. Bright stoves, with bronzed ornaments and two sets of bars, 4l. 4s. to 13l. 13s.; ditto, with ormolu ornaments and two sets of bars, 4l. 5s. to 23l. Bronzed fenders, with standards, 7s. to 5l. 12s.; steel fenders, 2l. 15s. to 11l.; ditto, with rich ormolu ornaments, 3l. 16s. to 16l. Fire-irons, from 1s. 9d. the set to 3l. 3s.

The late additions to these extensive premises (already by far the largest in Europe) are of such a character that the entire of EIGHT HOUSES is devoted to the display of the most magnificent stock of GENERAL HOUSE IRONMONGERY (including Cutlery, Nickel Silver, Plated Goods, Baths, Brushes, Turnery, Lamps, Gasoliers, Iron and Brass Bedsteads, Bedding and Bed Hangings), so arranged in Sixteen Large Show-rooms as to afford to parties furnishing facilities in the selection of goods that cannot be hoped for elsewhere. Illustrated catalogues sent (per post) free—39, Oxford street; 1, 1a, 2, and 3, Newman-street; 4, 5, a, 6, Perry's place, London. Established 1820.

DR. ARNOTT'S SMOKE-CONSUMING GRATE.

Will this Grate become universally used?

Its advantages over every other consist in—

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2. Its being a cure for a Smoky Chimney.
3. Its not requiring one half the attention of an ordinary fire.
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A Prospectus, with a Second Series of Testimonials, just issued, from all parts of the country will be sent on application.

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PARIS EXHIBITION, 1855.

PRIZE MEDAL

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HONOURABLE MENTION AWARDED TO

THOMAS WALKER,

STOVE-MAKER, BIRMINGHAM.

Signé NAPOLEON BONAPARTE.

The only Stove for which a Prize was awarded at the French Exhibition.

For Churches, Gentlemen's Halls, Shops, &c.

The last invention of Modern Times ever brought before the Public.

These Stoves show a bright fire; are durable, economical, and burn from twelve to sixteen hours with one supply of fuel.

Prospectuses and testimonials may be obtained at the Manufactory,

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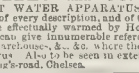
HEATING BY  HOT WATER.

JOHN WEEKS and CO. King's-road, Chelsea, HOT WATER APPARATUS MANUFACTURERS. Buildings of every description, and of the most extensive dimensions, can be effectually warmed by Hot Water. JOHN WEEKS and CO. can give innumerable references of Churches, Dwelling-houses, Warehouses, &c. &c. where they have fixed their Hot Water Apparatus. Also to be seen in extensive operation at their Premises, King's-road, Chelsea.

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CUTLER and SONS respectfully state that they are prepared to Contract for the Erection of their improved Warm-Air and Ventilating Apparatus, for Halls, Churches of the largest dimensions, and every description of public buildings, the perfection of which they undertake to guarantee.—One may be seen in constant use at their Foundry and Gas-Engineering Works, 16, Great Queen-street, Lincoln's inn-fields, London.

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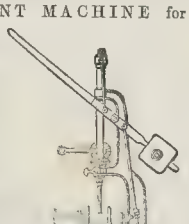
NEW PATENT MACHINE for MORTISING and TENONING HARD or SOFT WOOD and BORING WOOD or IRON.



House and Coach Builders, Joiners, Cabinetmakers, and others, doing similar work, are invited to call at the Patentees', BOWIS, JAMES, and Co. Wholesale Builders and Cabinet Makers, Ironmongery Establishment, 28, Wading-street, City, and see in action this very simple, powerful, and expeditious machine, which is the only one yet brought out, for performing these three separate kinds of work by one machine; and as it is self feeding, it does not require any skill or care in using like the older inventions introduced. It can either be worked by a boy, or made to go by steam power.

P.S. Steam Engines and Machinery contracted for.

A PRIZE MEDAL for SUPERIOR LOCKS was awarded to J. H. BOOBBYER at the Great Exhibition of 1851, who invites the attention of Builders, &c to his Stock of Ironmongery, Brass Foundry, Nails (wrought and cut), Copper and Zinc, Patent Locks of all descriptions; China, Glass, and Wood Furnitures of all kinds, with Patent Shifting Spindles; Dr Arnott's Ventilator, &c.; and the new registered Venetian Ventilator, so much admired, 4s. 6d. each.

J. H. BOOBBYER (late STURCH and BOOBBYER), established nearly 200 years, for the supply of Goods from the best Manufactories, at the lowest prices.

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R. S. NEWALL and CO.'S Patent Copper Rope Conductor is being specified by architects, engineers, and scientific men in all parts of the world.

COPPER and IRON CORD for WINDOW SASH-LINES.

OFFICES, Gateshead-on-Tyne.

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SKAIFE and POLLOCK, Manufacturers of PATENT GALVANIZED IRON.

Sheets, corrugated and plain; Fencing and Telegraph Wire, Bars, Rods, Hoops, Nails, Screws, and manufactured articles supplied to the Trade. Galvanized Tinned Sheets and Tiles for Export.

IRONWORK GALVANIZED.

Roofing orders promptly and carefully attended to.

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NAILS and IRONMONGERY From BIRMINGHAM direct.

Builders, Contractors, and Others, supplied with Nails, Iron, and Ironmongery of every description, at the

LOWEST BIRMINGHAM PRICES.

A complete LIST of which will be forwarded upon application to BLAYTH and BIANCHI,

Nail Manufacturers and General Factors, BIRMINGHAM; or at 16, Gresham-street, LONDON.

A. MOREWOOD and CO. (late Morewood and Rogers),

Dowgate Dock, Upper Thames-street, London, and Baskerville Works, Birmingham.

PATENT GALVANIZED TINNED IRON, and GALVANIZED IRON, in Sheets,

PLAIN or CORRUGATED, and Curved, of all Gauges.

Manufactured articles always kept in stock, such as pails, scoops, bowls, riddles, skips, &c. of all sizes.

Also the Patent Galvanized Tinned Iron Tiles, Gas and Water Tubing, Stamped and Moulded Gutters, Wire, Wire Netting, Hooping, Nails, Rivets, &c.

Estimates given for Roofs, and every description of Galvanized Building, at the

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PATENT GALVANIZING and CORRUGATING IRONWORKS (Improved Process).

WORKS—GLASS-HOUSE YARD, opposite the Entrance to the London Docks.

GALVANIZED SHEET-IRON and WIRE of every description superior in all respects to that produced by any other process. THE TOUGHNESS AND MALLEABILITY of the Iron being preserved.

ESTIMATES given for IRON ROOFS, Corrugated Sheds, Houses, &c.

A Discount allowed to the Trade.

PATENT GALVANIZED IRON SHEETS and TILES.

Work TUPPER and CARR, Manufacturers.

s—Limehouse and Birmingham. Offices—3, Mansion-house-place, London.

N.B.—Iron of every description galvanized.

TO ARCHITECTS, BUILDERS, AND THE TRADE.

PATENT PLUMBIC ZINC.

GREAT REDUCTION IN PRICE.

PLUMBIC ZINC is a perfect combination of Lead and Zinc, and not requiring to be more than one-fourth or one-fifth as thick as Sheet Lead, is consequently very much cheaper than that material, and at the reduced price costs but little more than Sheet Zinc.

No.			
No. 11 gauge weighs about	18	oz.	per foot super.
12	16	"	"
13	23	"	"
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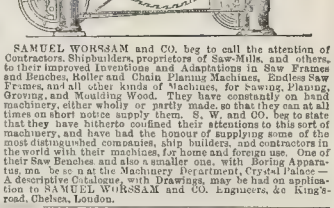

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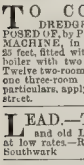

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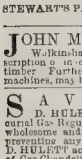

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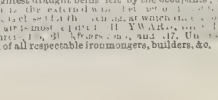

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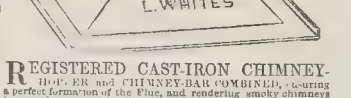

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The Builder.

Vol. XIV.—No. 725.

SOME considerable portion of the space in the galleries appropriated to the Architectural Exhibition is occupied by drawings which had been sent in competition for the Liverpool Free Library and Museum, the Rotherham Grammar School, the Cathedral at Lille, the Middlesex Industrial Schools, and other minor works. The exhibition of such designs especially has a beneficial tendency, which is independent of the desired influence towards reformation in the system of selection by committees. On the advantage from comparison of different designs for the same building, we were induced to dwell particularly, at the time of the Barracks' Competition, under the idea that such exhibitions were hardly estimated as they should be by the profession,—although really they allow the opportunity of the only gain which a general body of competitors can anticipate. A similar advantage offered by the Architectural Exhibition collectively, is now derived more readily than last year, —the hanging having been carefully attended to so far as regards the placing together of drawings belonging to the same design,—omissions in which particular, last year, had induced some of our correspondents to prefer complaints. Drawings illustrating the same subject are placed next one another as much as possible.

There are fewer numbers in the catalogue this year,—the deficiency being in the photographs; but, several works are often placed under the same number,—so that, on the whole, if the exhibition shows a smaller number of meritorious executed buildings, the sum of interest to the visitor is not greatly deficient. The present gallery, we ought to say, is not only unsightly, but absolutely unfitted for the proper examination of architectural drawings: the want of the required abundant light is painfully obvious; and architecture hardly could be striving under greater gloom or disadvantage, than that under which it labours in Suffolk-street, during these short winter days. The present arrangement causes, not merely a reduction of the number of visitors, it is in some degree actively injurious, —as it *deadens* the effect of the art upon the section of the public visiting the gallery. We would not make our notice a summary of grievances: it is desirable, however, to observe, that for the future, errors of all kinds in the catalogue should be prevented. Some of these originate with the exhibitors perhaps; but an equal number are due to the ordinary reading for the press. And the names of the same exhibitors should be printed precisely alike throughout the catalogue; whilst in the department for materials, &c. it should more distinctly appear that all encomiums are those of the *exhibitors*. It would be desirable, besides the cost of executed designs, that the architects should add the dates of commencement and completion;—and a small plan should be appended to every view.

To the examples quoted in our last, of buildings which should have been illustrated, we might add some works of a different class,—as several recently-erected bridges; the Holyhead Harbour Works; the Liverpool Landing-stage; the Victoria Docks, Plaistow-marshes; and even the various works and projects connected with sanitary improvement, and the supply of water to towns, and with the London streets, parks, and river embankment, as also the various plans for the sewerage of London, and the works in operation at Leicester. In the present interest of the subject of bridge-foundations, so often referred to in our pages, we could have wished to see some collective representation of different methods in use. We refer to the latter subject because it will instance what might occupy some portion of the time of the junior members of the Architectural Association, profitably to themselves and others. Would it not further the instruction in the classes of the Association, to require from the students, drawings in one sheet of all different methods used for the same objects in construction?

No. 1 in the Exhibition is a "Composition of Buildings lately erected at Manchester," by Mr. E. Walters, including warehouses and a church in red brick and stone, all in the Italian style, and a portion of the Free-trade Hall, which building is shown in another drawing (14), from which our engraving was taken. Mr. Walters also exhibits a drawing (105) of "Warehouses; Marsden-street, Manchester." These works all serve to illustrate Mr. Walters's invention in details and his skill in the grouping of windows and stories, which have been exemplified in so many buildings in Manchester. Mr. D. Brandon exhibits (2) "North-west View of the Manor House erected at Aylesbury, Bucks," a building of red brick and stone in the late Tudor style of architecture, and (428) a "Sketch for Westhumble Lodge."

Nos. 5 and 6, without titles in the catalogue, are apparently designs for Congregational Chapels. One is Italian and the other Gothic. Regarding them as two designs for the same building, they exemplify the relative positions of the styles with reference to ecclesiastical architecture and general expression of *art*. Waiving the question of the special advantage of either style, we observe that it is seldom that we get any fair comparison between what can be done in one case and the other. A common-place portico, or some of the worst features of the later and degenerate Italian, may be adopted when the building happens to be church or chapel,—though, in buildings of a different class quite enough has been done to show that the scope of the classical styles is not bounded by any bad precedent. One style presents itself as suited to one class of buildings, and another style to the other class, —not altogether because there is any special fitness of mere style for either class, but it would seem, because of the accidental circumstance that exclusive attention is paid by certain architects to one class of buildings, and that equal ability can seldom be shown in two different styles. There is scarcely any creditable modern application of the Gothic style to street architecture; and there is no very high merit in recent designs in the Italian style for churches or chapels: one or the other of such applications of a universal style should be possible, if opinions which have been heard are correct, —but until either of the courses is taken with effect, the question of the value of mere style remains with only half the requisite basis for an opinion. The probability, however, may be, that there is no ground for the exclusive claim as to scope and adaptability of style, put forth either by one side or the other. Either of the styles chiefly in favour, if it could be generally adopted, would probably afford equal scope for *art*, and the reason why such general adoption is not made, must, we think, be sought not in what is within the ability of architects with their materials, but in the general prepossession of the public—with whom mere style seems to occupy a ground, and exert an influence which has, in some measure, been left out of consideration in the recent discussion upon the question of *art*. The tendency of that discussion was towards the common ground of agreement that the requirements of the time, and new art, together must be recognised or expressed in our new buildings: but whilst all could agree as to that aim, there were still the actual differences of style which were left, to be accounted for,—and which differences, had there been perfect agreement, should not have been possible,—as no doubt they would have been found had either of the disputants been called on to express his views in practical building work. There is some element in the difference of *styles* which must hitherto have escaped observation, and distinct from the generally recognised principles of art; and if our view expressed heretofore, be correct,—that mere style produces a more striking impression upon the public than *art* does,—it would follow that changes of style and prevalence of several different styles, should be discountenanced by architects, since both the effort and the result which should be concentrated in *art*, are deteriorated.

The designs to which we referred at the outset of these remarks are by Mr. T. Oliver, jun. The Italian design has an arch below the pediment, the mouldings of the entablature being carried as an archivolt. The Gothic design, which is of better character, has an arcaded porch of three openings,—but two of the number appear to be boarded, with windows inserted. In external character, the design is an advance upon the chief Congregational Chapels—which, correctly adopting two stories of windows as suitable to an interior with a gallery, have seldom got free from a singular uncouthness of proportion. That fault is, however, avoided by Mr. J. Murray, in "St. Michael's Baptist Chapel, Coventry" (11), in the highly-enriched style of Gothic. Mr. Oliver also exhibits, amongst other things, the "West Hartlepool Markets" (93 and 91), in the exterior of which he has managed the difficulty of the combination of heavy and light materials with creditable result.

Mr. Edmeston exhibits "New Public Buildings — Town Hall, Library, Municipal Offices, &c. about to be erected at Singapore—View of the Front towards the Sea; from sketches by James Fergusson" (12), wherein the chief effect is given by the arcaded loggias in the centre of two stories, and the bold projection of the iron hoods over the windows to the wings. The exception to the good treatment of this design is in these hoods, which may serve to illustrate a remark which we could better apply to other recent designs,—that there is some danger from the study of plainness, or rather the too ready acceptance of it under the idea that it is necessarily consistent with "breadth." The main roof here is also of iron. We should be glad to learn the results of experience in the use of iron roofing for habitations, in hot climates. The general use in the native works of a great thickness of non-conducting materials, would seem to be better adapted to the conditions. Mr. Edmeston also exhibits (73) "Offices of the Cambrian and Universal Fire and Life Insurance Company, 27, Gresham-street, as recently altered," a stone-fronted basement and floor above, which aims at novelty by the omission of nearly all the recognised members of Italian architecture.

Mr. H. H. Burnell exhibits (13) an "Arrangement of a Metropolitan Square," designed to effect the architectural improvement which has been advocated by others. Mr. Burnell properly substitutes a balustrade, or some other architectural feature, for the hedge and iron railing. Within the enclosure thus formed by the balustrade, he has a sunk area, and thus he is able to add cellarage to the houses, and a way under the road, and to facilitate, he thinks, the repairs of the sewers and gas and water mains (which he places under the area), without opening up the main roadway. The latter part of his scheme, of course, would increase the cost

of the communications to the houses, and furnish an additional argument to those who advocate back drainage. We should mention as one of the exhibitors in the class of warehouse-architecture, Mr. T. R. Smith, who shows in No. 8, "Warehouses proposed to be erected in Chorlton-street, Manchester;" in which, brick pilasters with Corinthian capitals, are amongst the decorative features. These and the like details, with not quite the same skill as is shown in grouping in other cases, constitute a different character to that which is exhibited there, and which difference, as that which makes the good or the bad architecture of our time in such edifices, it seems well to draw attention to. Mr. Smith's design, however, as to the grouping of the stories, at least, is better than much of the recent warehouse architecture in London. The same architect exhibits also "Designs for Warehouses" (49), and some others. Messrs. W. G. and E. Habershon exhibit nine views of Parsonages which they have built (21); a "Mansion at Llandaff (313); and a "Pair of Double Villas on the Gold Tops, Newport, Monmouthshire" (373). They also exhibit (90) "The Philological Schools," which they are erecting in the New-road, St. Marylebone; the buildings in which, include a lofty red brick structure, and an octagonal building of less height, with a playground under it. The designs all are guiltless of high merit or prominent defect. The architects must be active men of business; but for their *art*, surely attempt too much. Mr. H. Currey exhibits (28 and 32) views of a house now erecting at Leigh, Surrey, for Mr. J. W. Freshfield, M.P. which is of red brick and stone. In the "Warrington Market-hall and Shed" (34), by Mr. J. Stevens, of red brick and stone, with a campanile, there is somewhat too great prominence of heavy details, without the novelty of character which claims some place in good art. The lofty front and pediment carried up considerably above the roof, offend against the structural principle of architecture. Mr. H. P. Horner shows his "St. Augustine's National Schools, at Liverpool" (48), and an "Interior Composition — Study of Stained Glass Effect" (57). He also exhibits a "Sketch" (137), illustrative of a proposition for placing an organ in St. George's Hall, Liverpool, divided into two parts lengthwise in the building, and so as not to obstruct the *vista* through the law courts.

We shall continue our notice of the exhibition next week.

It was our custom, when the *Builder* was younger, to refer, at the close of a volume, to what had been done during the past year to meet the wants and wishes of our readers, and render the Journal more generally serviceable and interesting, and, sometimes, to make promises for the future. Our scope and views, however, are now, we believe, so well known, that such a course would seem to be unnecessary. We shall therefore content ourselves with saying, in very few words, that we are prepared to commence the new year with increased vigour, and that there will be no want of determination on our part to maintain the *Builder* in the position which, by the favour of the public, it now enjoys. In several departments we shall effect improvements, and, pursuing our course honestly and energetically—with no single motive beyond the desire to spread abroad information on all subjects connected with architecture and building, and the arts generally,—to assist in developing and improving the fine-art—architecture, and to advance the character, and maintain the dignity of the profession; to improve Homes; to bind together the employer and the employed; to urge the value of the beautiful, and to be otherwise useful to the extent permitted us,—we shall hope to merit and retain the confidence of our friends and supporters, and to gain, for the objects we have in view, a constantly increasing public.

ON THE LEADING PRINCIPLES IN THE COMPOSITION OF ORNAMENT OF EVERY PERIOD.*

I have now to call your attention to some of those sudden changes in each style which have been the cause of so much development in architectural forms.

The religious laws of the Egyptians forbade any change in their generally received forms, and there is the most remarkable unity of style over a period of probably many thousand years. This, however, did not result in uniformity; and although the lotus and papyrus always formed the types of the capitals of their columns, there was the greatest variety in the arrangement of these types. In the Pharaonic period, however, they were generally confined in the capitals of columns of large diameter to the bell-shape, on which were inscribed the representations of the lotus and papyrus; and in the smaller columns to the bundle of buds tied together and surmounted by a square abacus. During the Greek period, however, this was suddenly departed from, and the idea arose of breaking up the circular form of the capital: the same forms which had before been carved from the surface were here moulded on it; and beginning with the circular form, they surrounded it with four, eight, and then sixteen other circles. This principle once admitted, it will be seen how readily the general form could be varied. As an opposite example to this may be noticed the Corinthian capital, which to our own time has never varied, because no modification in plan has ever been attempted. It is always an acanthus-leaf arranged round a bell-shaped vase; and the only difference ever found between one capital and another, results from the more or less perfection of the modelling of the leaves, or in the graceful, or otherwise, proportions of the bell. Let the same modification in plan be attempted with the Corinthian capital, and it could not fail to produce an entirely new order of forms, whilst still retaining, if such should be desirable, the idea of the acanthus-leaf applied to the surface of a bell-shaped vase.

The development of Roman ornament again was restrained by the fixed law, that each acanthus-leaf grew out of the other with a leaf folded back at the point of junction. During the Byzantine period this was gradually abandoned; and when once free from this, a most rapid development in flowing lines took place in the styles which succeeded, till we arrive at that freedom in ornament which is found in the architecture throughout the world during the thirteenth century. Though other causes have been assigned to it, I myself believe that the Ionic capital of the Greeks is only an application of the volute form, which results from the common rope ornament of the Egyptians. The unwinding of a coil of rope would give the first idea to any people of the volute form, as the twisting of two strands of a rope would give the first idea of the spiral line. The volute of the Ionic capital is produced by repeating in opposite directions the very form which is the groundwork from which all Greek ornament springs. The egg-and-tongue moulding of the Greeks is clearly suggested by the cornices so common in Egypt formed by the pendent lotus. The conventional honey-suckle of the Greeks led in subsequent styles to the formation of ornaments similarly constructed, yet widely differing in general appearance.

But one of the most remarkable series of developments, and which are most easily traced, are those ornaments which result from the intersection of equidistant lines called frets. They are common to every people, and arise so naturally from their very first attempt at ornament, that it is not necessary that they should have been borrowed from each other; but there is such a remarkable series from the Egyptian to the Moresque, that it can hardly be doubted that they have been so. The Greek fret differs only from the Egyptian, in that the jumps are generally uniform, and they are the truest. So long as the idea remained fixed that they were formed by horizontal lines intersecting perpendicular lines, no great development could take place. When we have the simple meander, or one with a second line interlacing with the first, or a fret one under the other, or running in different directions, or back to back, or running round a square, we have exhausted all the combinations of which it is susceptible; but the instant you abandon the law of perpendicular lines intersecting horizontal lines, a rapid development takes place: the raking fret at once suggests to the Arabs to send diagonal lines in the opposite direction crossing the first: from this spring instantaneously the Moresque interlacing patterns. Not content with this, the Moors saw that you could use the horizontal, perpendicular, and diagonal lines in two ways, and they have therefore two varieties which produce patterns totally distinct in effect, though the same in principle: in the first, the divisions are equidistant diagonally, crossed by horizontal and perpendicular lines on each square; and on the other, the perpendicular and horizontal lines are equidistant, and the diagonal lines cross each alternate square. The number of patterns that can be produced by this system may be said to be infinite. The knotted work of the Celts differs from this system only in adding curved terminations to the diagonal lines, and may have either been developed in the same way or from the rope ornaments of the Greeks, which were also so common on Roman pavements.

The history of architecture, as it is written in the monuments, is full of these changes. Architecture never rests; it either goes forward or backward, and runs, as it were, in a series of waves: when the highest point is reached, this is as a knife-edge: it cannot rest upon it, but descends to rise again under fresh impulse.

At present we are, as it were, in a troubled sea, on which the waves have been so tossed about, that they have lost all form: the impulse having gradually got weaker and weaker, we are gradually approaching a dead calm.

In any attempt at progress in art, European nations are under great disadvantages from the general want of unity which exists. In all ages but the present, architecture has been the expression of the religious feelings of the time; but since the Reformation separated the tie between religion and art, the world has become as Protestant in art as Protestant in faith. The artistic mind has indulged in the same liberty of selection for its worship of the beautiful, as is allowed to each human soul in its worship of the Creator.

If, therefore, we would seek for vitality in art, we must turn our attention to the nations who are still faithful to the creed which inspired their art.

This was clearly seen in the Exhibition of the Works of Industry of all Nations, in 1851, which was barely opened to the public ere attention was directed to the gorgeous contributions of India.

Amid the general disorder everywhere apparent in the application of art to manufacture, the presence of so much unity of design, so much skill and judgment in its application, with so much of elegance and refinement in the execution, as was observable in all the works, not only of India, but of all the other Mohammedan contributing countries,—Tunis, Egypt, and Turkey,—excited a degree of attention from artists, manufacturers, and the public, which has not been without its fruits.

Whilst, in the works contributed by the various nations of Europe, there was everywhere to be observed an entire absence of any common principle in the application of art to manufactures—whilst from one end to the other of the vast structure there could be found but a fruitless struggle after novelty, irrespective of fitness, that all design was based upon a system of copying and misapplying the received forms of beauty of every bygone style of art, without one single attempt to produce an art in harmony with our present wants and means of production—the

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* See p. 682, *ante*. Read by Mr. Owen Jones at Institute of Architects.

carver in stone, the worker in metal, the weaver and the painter, borrowing from each other, and alternately misapplying the forms peculiarly appropriate to each—there were to be found in isolated collections at the four corners of the transepts all the principles, all the unity, all the truth, for which we had looked elsewhere in vain, and this because we were amongst a people practising an art which had grown up with their civilization, and strengthened with their growth. United by a common faith, their art had necessarily a common expression, this expression varying in each according to the influence to which each nation was subject; the Tunisians still retaining the art of the Moors, who created the Alhambra; the Turks exhibiting the same art, but modified by the character of the mixed population over which they rule; the Indians uniting the severe forms of Arabian art with the graces of Persian refinement.

Deprived then as we are of the advantage of a common faith to inspire a common expression in art, does it necessarily follow that we have no hope of progress? Although we cannot have common ground of thought, is there any reason why we should not think rightly? Is there no escape from the disorder which was so apparent in 1851? I think there is, and I firmly believe that it will be found as easy to originate as to copy, if we can only throw off the lethargy which hangs over us, and that discouragement which makes us consider the works of the past as final instead of relative truth. In this very matter, indeed, opinion changes so rapidly that there is reason to believe that as each style usurps the place of honour only for a time, and then rapidly runs its course, the time will arrive when all shall have had a fair trial: we must then in very despair of finding novelty be led to look forward instead of backward.

Let us then, once for all, admit that each style of art which has appeared has worthily filled its appointed purpose. That no one has more claim to our attention than another, except so far as it follows general laws, which laws will be as true in the future as they have been in the past, and will, therefore, be our safest guides in an onward path.

Let us then accept the experience of the past as our inheritance, not rashly to squander it, but rather that we may add to the store.

I have attempted to show that in all the best periods of art, all ornament was rather based upon an observation of the principles which regulate the arrangements of form in nature, than on an attempt to imitate the absolute forms of those works; and that whenever this limit was exceeded in any art, it was one of the strongest symptoms of decline; true art consisting in idealizing, and not copying the forms of nature.

I think it desirable to insist rather strongly on this point, as in the present uncertain state in which we are, there seems a general disposition arising to reproduce, as faithfully as may be possible, natural form as works of ornament. the world has become weary of the eternal repetition of the same conventional forms which have been borrowed from styles which have passed away, and therefore can excite in us but little sympathy. There has arisen, we say, a universal cry of "Go back to Nature, as the ancients did." I should be amongst the first to echo that cry, but it will depend much on what we go to seek, how far we may succeed: if we go to Nature as the Egyptians and the Greeks went, we may hope; but if we go there like the Chinese, or even as the Gothic artists of the fourteenth and fifteenth centuries, we should gain but little. We have already, in the floral carpets, floral papers, and floral carvings of the present day, sufficient evidence to show that no art can be produced by such means; and that the more closely that Nature is copied, the farther we are removed from producing a work of art.

The pleasure we derive in contemplating the rude attempts at ornament of the most savage tribes, arises from our appreciation of a difficulty accomplished: we are at once charmed by the evidence of the intention, and surprised at the simple and ingenious process by which the result is obtained. In fact, what we seek in every art is the evidence of mind—the evidence of creative power,—which all feeling as a natural desire within them, are satisfied when they find it developed in others. It is strange, but so it is, that this evidence of mind will be more readily found in the rude attempts of ornament of a savage tribe than in the innumerable productions of a highly-advanced civilization. Individuality decreases in the ratio of the power of production. When art is manufactured by combined effort, not originated by individual effort, we fail to recognise those true instincts which constitute its greatest charm.

Although ornament is most properly only an accessory to architecture, and should never be allowed to usurp the place of structural features, or to overload or to disguise them, it is, in all cases, the very soul of an architectural monument.

By the ornament of a building we can judge more truly of the creative power which the artist has brought to bear upon the work. The general proportions of the building may be good, the mouldings may be more or less accurately copied from the most approved models, but the very instant that ornament is attempted, we see how far the architect is at the same time the artist. It is the best measure of the care and refinement bestowed upon the work. To put ornament in the right place is not easy: to render that ornament at the same time a superadded beauty and an expression of the intention of the whole work, is still more difficult.

Unfortunately, it has been too much the practice in our time to abandon to hands most unfitted for the task the adornment of the structural features of buildings, and more especially their interior decorations.

The fatal facility, of manufacturing ornament which the revived use of the acanthus leaf has given, has tended very much to this result, and deadened the creative instinct in artists' minds. What could so readily be done by another, they have left to that other to do, and so far have abdicated their high position of the architect, the head and chief.

How, then, is this universal desire for progress to be satisfied—how is any new style of ornament to be invented or developed? Some will probably say, a new style of architecture must first be found, and that we should be beginning at the wrong end to commence with ornament.

I do not think so. I have shown that the desire for works of ornament is co-existent with the earliest attempts of civilisation of every people; and that architecture adopts ornament, does not create it.

The Corinthian order of architecture is said to have been suggested by an acanthus leaf found growing round an earthen pot; but the acanthus leaf existed as an ornament long before, or, at all events, the principle of its growth was observed in the conventional ornaments of the Greeks. It was the peculiar application of this leaf to the formation of the capital of a column which was the sudden invention which created the Corinthian order.

The principle of the foliation, and even the general form of the leaves which predominate in the architecture of the thirteenth century, existed long before in the illuminated MSS.; and, derived as they were, most probably, from the East, have given an almost eastern character to Early English ornament. The architects of the thirteenth century were therefore very familiar with this system of ornamentation; and we cannot doubt, that one cause of the adoption so universally of this style during the thirteenth century, arose from this great familiarity with its leading forms which already existed.

The floral style, in direct imitation of nature which succeeded, was also preceded by the same style in works of ornament; and the facility of painting flowers in direct imitation of nature in the pages of a missal, induced an attempt to rival them in stone, in the buildings of the time.

The architectural ornament of the Elizabethan period is mostly a reproduction of the works of the loom, the painter, and the engraver. In any borrowed style, more especially, this would be so. The artists of the Elizabethan period were necessarily much more familiar with the paintings, hangings, furniture, metal-work, and other articles of luxury, which England received from the Continent, than they would be with the architectural monuments; and it is this familiarity with the ornamentation of the period, but imperfect knowledge of the architecture, which led to the development of those peculiarities which distinguish Elizabethan architecture from the purer architecture of the Revival.

I therefore think I am justified in the belief, that a new style of ornament may be produced independent of a new style of architecture; and, moreover, that it would be one of the readiest means of arriving at a new style: for instance, if we could only arrive at the invention of a new termination to a means of support, one of the most difficult points would be accomplished.

The chief features of a building which form a style, are, first, the means of support; secondly, the means of spanning space between the supports; and, thirdly, the formation of the roof. It is the decoration of these structural features which gives the characteristics of style, and they all follow so naturally one from the other, that the invention of one will command the rest.

It would appear, at first sight, that the means of varying these structural features had been exhausted, and that we have nothing left but to use either one or the other of the systems which have already run their course.

If we reject the use of the column and horizontal beam of the Greeks and Egyptians, the round arch of the Roman, the pointed arch and vault of the Middle Ages, and the domes of the Mohammedans, it will be asked—What is left? We shall perhaps be told that all the means of covering space have already been exhausted, and that it were vain to look for other forms. But could not this have been said in all time? Could the Egyptian have imagined that any other mode of spanning space would ever be found than by his huge blocks of stone? Could the Mediæval architect have ever dreamed that his airy vaults could be surpassed, and that gulfs could be crossed by hollow tubes of iron? Let us not despair: the world has not seen, most assuredly, the last of the architectural systems. If we are now passing through an age of copying, and architecture with us exhibits a want of vitality, the world has passed through similar periods before. From the present chaos there will arise, undoubtedly (it may not be in our time), an architecture which shall be worthy of the high advance which man has made in every other direction towards the possession of the tree of knowledge.

To return to our subject, how is any new style of art or new style of ornament to be formed, or even attempted to be formed? In the first place, we have little hope that we are ever destined to see more than the commencement of a change: the architectural profession is at the present time too much under the influence of past education, on the one hand, and too much influenced by an ill-informed public on the other; but the rising generation in both classes are born under happier influences, and it is to them we must look for hope in the future. It is for their use that I have gathered together this collection of the works of the past; not that they should be slavishly copied, but that artists should, by an attentive examination of the principles which pervade all the works of the past, and which have excited universal admiration, be led to the creation of new forms equally beautiful. We believe that if a student in the arts, earnest in his search after knowledge, will only lay aside all temptation to indolence, will examine for himself the works of the past, compare them with the works of nature, bend his mind to a thorough appreciation of the principles which reign in each, he cannot fail to be himself a creator, and to individualize new forms, instead of reproducing the forms of the past. We think it impossible that a student fully impressed with the laws of the universal fitness of things in nature, with the wonderful variety of form, yet all arranged around some few fixed laws, the proportionate distribution of areas, the tangential curvatures of lines, and the radiation from a parent stem, whatever type he may borrow from nature, if he will dismiss from his mind the desire to imitate it, but will only seek to follow still the path which it so plainly shows him, we doubt not that new forms of beauty

will more readily arise under his hand, than can ever follow from a continuation in the prevailing fashion of resting only on the works of the past for present inspiration. It will require but a few minds to give the first impulse: the way once pointed out, others will follow; readily improving, refining upon each other's efforts, till another culminating point of art shall be again reached to subside into decline and disorder. For the present, however, we are far enough removed from either stage.

I have been desirous to aid this movement to the extent of my power, and in the ten plates of natural leaves and flowers which accompany the examples of ancient ornament, I have gathered together many of those natural types which I thought best calculated to awaken a recognition of the natural laws which prevail in the distribution of form. But, indeed, these laws will be found to be so universal that they are as well seen in one leaf as in a thousand. The single example of the chestnut-leaf contains the whole of the laws which are to be found in nature: no art can rival the perfect grace of its form, the perfect proportional distribution of the areas, the radiation from the parent stem, the tangential curvatures of the lines, or the even distribution of the surface decoration. We may gather this from a single leaf; but if we further study the law of their growth, we shall see in an assemblage of leaves of the vine or the ivy, that the same law which prevails in the formation of the single leaf prevails also in the assemblage of leaves. As in the chestnut leaf, the area of each lobe diminishes in equal proportion as it approaches the stem; so in any combination of leaves, each leaf is everywhere in harmony with the group: as in one leaf the areas are so perfectly distributed, that the repose of the eye is maintained, it is equally so in the group: we never find a disproportionate leaf interfering to destroy the repose of the group. This universal law of equilibrium is everywhere apparent in every work of nature. The same laws prevail in the distribution of lines on the surface of flowers: not a line upon the surfaces but tends more surely to develope the form, — not a line which could be removed, and leave the form more perfect; and this why? Because the beauty arises naturally from the law of the growth of each plant. The life-blood,—the sap, as it leaves the stem, takes the readiest way of reaching the confines of the surface, however varied that surface may be: the greater the distance it has to travel, or the weight it has to support, the thicker will be its substance.

From the same cause it results that the basis of all form in natural flowers is geometry: the impulse which forms the surface, starting from the centre with equal force, necessarily stops at equal distances: the result is symmetry and regularity.

Who, then, will dare say that there is nothing left for us but to copy the five or seven-lobed flowers of the thirteenth century,—the honeysuckle of the Greeks or the acanthus of the Romans,—that this alone can produce art? Is Nature so tied? See how various the forms, and how unvarying the principles. We feel persuaded that there is yet a future open to us: we have but to arouse from our slumbers. The Creator has not made all things beautiful, that we should thus set a limit to our admiration: on the contrary, as all His works are offered for our enjoyment, so are they offered for our study. They are there to awaken a natural instinct implanted in us, viz. a desire to emulate in the works of our hands the order, the symmetry, the grace, the fitness, which the Creator has sown broadcast over the earth.

THE GOVERNMENT COMPETITION.

We have received a score of letters asking a variety of questions, sensible and foolish, as to the requirements in the competition for the proposed Government Offices. Our reply in many of the cases could but be an opinion that might mislead. We hould, of course, in all instances advise a strict adherence to the conditions. One asks if he may prepare his designs for the War Office and the Foreign Office to form one building: and we may say in reply that we have reason to believe it would not be objected to. To the inquiry, is the expression,—"all the requirements for a nobleman's town-house" intended to include stabling and coach-houses? we are able to say, no. Some of the competitors consider they should have permission to visit the various Government Offices to obtain additional information. The Chief Commissioner, however, thinking it unnecessary, has declined to afford it.

"The elevations," writes another, "are to be simply in *outline*. Will you let me know if it is considered that this would prevent the use of a wash of blue to indicate windows and roof, if made a feature of the design." Strictly speaking, the instructions would not permit this, but what latitude the judges may be disposed to afford, we cannot pretend to say.——Those who ask if colour may be introduced to distinguish the materials used, we would remind, that although the elevations are to be "in line only," nothing is prescribed as to the colouring of "enlarged details of portions of the designs." We are unable to say if it is proposed to continue the embankment of the river any further down its course than the part coloured, but the arrangement is doubtless made with that expectation in view.

As to the addition to the block plan, of *designs* for the various buildings comprised, we would suggest, in order to be on the safe side, that these should be sent in in such a way that they might be put aside by the judges should such be their determination, without imperilling the plan. As to the *extent* of the plan of proposed improvements of the leading thoroughfares, we can say that the plan issued by the Office of Works is not to be viewed as limiting it. It may include half London.

To go from great to small, the provision of "a boiler house and space for warming apparatus," will not supersede the necessity for open fireplaces.

We understand that between 1,600 and 1,700 copies of the particulars of the competitions have been forwarded in reply to applications.

ARCHITECTURAL NOTES IN ANGLESEA.*

Many of the houses in Beaumaris are of great age, and constructed generally of a stone base with an upper story of timber framing. Though small, there is good detail in some of them; but during the last year or two many have been destroyed, and more are threatened. The oldest may date as far back as Edward I. The chief renown of domestic architecture is the old mansion of the Bulkeleys, called "Plas coch," corrupted into "The palace," standing a short distance south of the church, in the main street. It consists of two courts, one on the north side, long and narrow, running from east to west, and open at each end, so that it somewhat resembles a short street: the second court, on the south, is nearly square, and extends westward about half the length of the buildings forming the other court. The north side of the street-like court is occupied by the offices, the kitchen in the centre, the stables, bakehouse, brewhouse, &c. now used as stables and cottages. This range stands quite detached from the other buildings. On the south side are the chief apartments, two parlours and two upper rooms, standing on the east, next the street; next, the hall entrance, screened from the hall, the great hall, the staircase (here the cross building of the second court branches southwards), the drawing-room and dining-room above it, and still further to the east, two or three other apartments. The east side of the south court is terminated by a square tower, containing a staircase. Of the south side only a wall remains, with a square window of stone, of two cinquefoiled lights. The great hall is a fine and lofty room, and the style appears to be that of the reign of Henry VII. The roof has been open, and arched with moulded ribs below the tie-beam, above which are two diagonal braces. At the east end, a fine arched and traceried screen framed up to the roof, and acting as a principal, has fenced off a lobby across this end of the hall, connecting the two courts. The entrance to the north court is by an arched door of oak, and has had a timber porch: that to the south court has a four-centered arch of stone. At one side of this passage two oak door-frames, with carved tracery spandrils and doors with depressed arches, enter two rooms next the street. In the passage some of the carved panels remain in the screen. The upper half of the arch in the screen has a good moulding with oak capitals, and contained a music gallery. The whole of this screen is blocked up with rough boards and daubed with plaster, and the lobby used for a cart shed; the music-gallery for lumber. In the reign of Elizabeth, or possibly a little earlier, this fine room was ceiled, below the tie-beams, with a ceiling closely covered with pendants and tracery, and a cornice moulding of arabesque strapwork. This work is of a graceful flowing pattern, and the compartments in the tracery and pendants are filled in with the same: the pendants terminate in acorn-shaped drops, each of different design. The ornaments and tracery of the ceiling have been richly gilt; the lower part of the walls panelled to the height of 9 feet with oak wainscot: the upper portion being rough, has evidently been hung with tapestry, and the effect of this room must have been very rich and good. A large bay window —almost a room—has been thrown out on the south side into the court, and a room constructed above it. The timbers dividing this large window into bays are carved inside and outside with a running pattern of foliage; and bulls' heads in the interior, this being the crest of the Bulkeleys. At the west end of the hall is a deep cove, which rises as high as the spring of the roof: the upper beam crossing the hall has been ornamented with paterœ, and the cove is divided into square panels, subdivided by secondary ribs from angle to angle. This seems to have been intended as a kind of canopy to the dais, and is coeval with the earlier work in the hall. At the north side, near the west end is a two-light cinque-foiled window, with square head; and in the centre of the same side is a large arched fireplace, the arch a flattened ellipse, and quite plain. The hall is paved with slabs of sandstone, in elongated hexagons and squares alternated. It is now used as a joiners' shop, and each month must add to its ruinous state, no care being taken of it; and even the leaky roof is allowed to drip and destroy the fine ceiling. At the west end a door leads to the staircase, which has no architectural character. It is contrived so as to pass between two walls without a handrail. The next room westward is the drawing-room. This apartment runs across the whole breadth of the house, and is very spacious. At the north end was a window of several lights, now closed; and at the south a square two-light window, with transom, and a doorway leading to the garden. It has a flat traceried ceiling of good pattern, the tracery being all in angular figures, with bosses, which are alternately square and round, the round being charged with the heraldic device of the bull's head. This room is wainscotted with oak to the ceiling, the cornice being a kind of crenelated ornament, with a square flower below. The fireplace is quite plain, being a simple square opening; indeed, it is a feature in this mansion, that the fireplaces, with one exception, are without ornament. This room is used as a bakehouse, as well as a residence for the baker, and his large brick oven in one corner has sadly damaged the ceiling, and must be very dangerous. This family has occupied the room for sixty years, and when they first came the oak panelling was polished, and the bosses of the ceiling gilded; now a coat of yellow-wash is the ornament of walls and ceiling. The rooms beyond the drawing-room contain only a little oak panel work, but are large and light.

The dining-room is of the same period as the hall, and is above the drawing-room. The roof has been open-timbered; the principals, of which there are two, spring from short shafts of oak, with moulded capitals and bases, which rise from the floor of the apartment. This room has also been ceiled at the same time as the hall at the tie-beam, the ceiling presenting a semi-hexagon, ornamented by a band, about 2 feet wide, of arabesque ornament, of nearly the same pattern as that in the hall. The walls are panelled, above one half their height,

* Concl. [illegible]

with oak, the fire-place having a simple square moulding. The original windows have been replaced by sashes. The building forming the west side of the south court is built of stone, and wholly of the later date: it has large stone mullioned and transomed windows, with low, angular pediments, and a door in the centre, leading through into the garden. The garden front is an exact repetition of the side next the court, except that the tower at the corner is terminated, below the eaves, with a lean-to roof; and that at a later period the side has been covered with small slates, now partly fallen away. In the upper story of this portion is a long gallery, lighted by a large window at the north end, having the same semi-hexagon roof and ornaments before described. Here at the further end from the window, at one side, is the only ornamental fire-place in the house. Below the lintel, the jambs are divided into small panels, with coped centres above, on each side, are coupled pilasters, or pinnacles, terminating in small pyramids, and jointed or moulded in the way common in Elizabethan work: between each pair a tree is represented; and in the centre of the fire-place a large shield, with coat-of-arms and supporters, two hawks. All I could learn of the heraldic bearings was, that they did not belong to the Bulkeleys. The whole is executed in very hard cement, and has been richly coloured and gilt: the execution is good, and the hawks designed with great spirit. The garden extends, or has extended, as far as the larger fragment of the lower walk, and is not built upon. The mansion is chiefly built of stone, but much of the upper part is timbered. The whole of this very interesting mansion is in a grievous state of neglect: poor families occupy the various rooms: pig-styes are built up against the walls, and sap their foundations with decay and dirt: no pains are taken to keep the roof in order, and unless some repairs are made, not many years hence the place must fall into ruin. It is said that a street is to be cut through this place, and the house and the tower wall both destroyed. It would be a very great pity to destroy this building, even for the sake of a convenient street, especially as the land between it and the church is occupied by few buildings of any value. At any rate, the main building might be allowed to stand on one side of the proposed street, and only the offices taken down to make way for the road. If the roof of the hall were patched and repaired, and the windows opened, and the place cleared of filth, it might still stand many years, and could serve the purpose of a lecture-hall, or any other use that it might be required for. At any rate, Sir Richard Bulkeley should pause before sweeping away the remains of the abode of his ancestors: if once taken down, an interesting remain is lost; and no regret can restore it. If it is, indeed, doomed, which I hope it is not, I trust some clever photographer will at least preserve its similitude. E. W. C.

THE STUDY OF ARCHITECTURE.

IT has often struck me that the opinions held and promulgated by some architects, in your Journal, are more or less inconsistent. As a matter of course, the elevation of his art must be a foremost principle in the breast of every true architect. At the risk of incurring much censure, I venture to lay before you certain ideas which I have myself formed, and which are opposed to the ideas of many others, judging by their writings; but should I be able to provoke an argument, it might, perhaps, be of service in elucidating more decided expressions than have yet been made use of, and, by clearing away unmeaning verbiage, might be instrumental in enlightening the youth who are entering the profession, as to the true position of their art, and their proper vocation.

A great amount of rhapsodical expression has appeared in print, and hard, and strange, and unpronounceable words have been made use of by modern professors, or critics, of architecture; doubtless, with a view of enlightening the public mind, but really productive of much confusion therein. Much has been said of the position of architecture as one of the fine arts, and its professors have been urged to remember that common materials are to be used in such a manner as that they may, in their arrangement, plainly point to the *nature* of the edifice they compose; also, that they should stand as evidence to posterity of the character of the generation which erects them. You yourself, sir, have most ably furnished us, in a series of papers, with the proof that S one may become the material for transmission of History, and that the finger of the architect not only may, but ought to, trace upon his works these valuable characteristics. To this one cannot but devoutly agree. Our churches, our theatres, our palaces, our public buildings, as well as our more humble dwelling-houses and shops, should clearly, by their architecture, point to their purpose. They should also embody the characteristics of their age, in order that they may be beneficial to the future philosophic historian and moralist.

To this most architects are agreed; and in consequence a clamour has arisen for a new style which shall embody these principles. It is urged that in the architecture of the past these desiderata have been complied with, and that in the study of Greek, Roman, or Gothic buildings, the inquiring mind is satisfied with the evident appropriateness of the architecture to the purposes of the edifices, and with the clear exposition of the habits and manners of the generations which erected them. A Roman temple or a Gothic cathedral equally points out the religion and manners of its founder. A modern English edifice, many will agree, does *not*. The causes of it remain to be inquired into and stated with *simplicity*, that the smallest comprehension may understand them, and strive to find a remedy. After having myself studied some of the ruins of antiquity, and carefully considered the subject, I am induced to offer you a few observations, since I confess that I have read many papers which have appeared, professing to guide the aspirant after architectural truth, but which really have more the effect of confounding him and bewildering him. The observations I would offer, I would do in all humility, and seek rather to draw forth in simple and plain language the matured opinions of others, than to set myself up in any way as a guide.

It is of paramount importance that the young architect should study the history of his art from the earliest ages; and, where practicable, it is of great benefit that this study should be prosecuted among existing architectural remains. This is acknowledged by all, and by many is carried into practice; but curiously, very many of those who have so done have fallen into the very error which is now so much deprecated. Instead of approaching their task with reverence, and with the spirit of a philosopher, to learn its *true* lessons, I fear that in several instances, they only find therein a means of satisfying their love of sketching from a beautiful model, and learn to venerate the *model* itself, and take that for a precedent and a law, which should be no more than the exemplification thereof. Hence the controversy about styles; and we find the architect more disposed to reproduce some bygone style in its integrity from the model than to attempt to devise anything new. Hence the profession is divided, some practising chiefly in classic art, and some in Gothic; one man designing all his structures after the model of Roman architecture, another after the model of Mediæval. But it has occurred to me that this strict classification of styles is more in the province of the archæologist than the architect. The architect is bound to study the history of his art in all ages and in all countries of the globe, in such a manner that he may deduce from it the real principles which have conduced to its ancient greatness. It is not the sketcher that is wanted, nor the poetic dreamer, nor the visionary, but the philosopher. He should study in and apart from their buildings the manners and customs of the ancients. Their soil and climate, their habits and their religion, each and all strongly influenced their architecture. Let him study all these, then, and in conjunction with them let him study the plans and elevations of their buildings, the style of ornamentation, the proportions of all parts, and the form of the varied mouldings and embellishments. By studying these in connection with each other it will be hard if he cannot at last trace clearly the progress of cause and effect, and learn for himself in what the great secret of the magnificence of ancient art consisted. The rules which will thus become clearly apparent to him need only application to produce the result "so greatly to be wished for," a "new style" will gradually grow out of them.

Of all the lessons to be learnt from this study that of appropriateness will indelibly fix itself on the mind. I am inclined to consider this *the* great secret. For in investigating antiquity we find that the chief charm of every building is its appropriateness; its adaptation to its determined purpose. In this country, alas! we must too often reverse the phrase, for inappropriateness and want of adaptation to their purpose is the great characteristic of British edifices.

I have written these remarks as preliminary to others which I would make in exemplification of the foregoing maxims. Of all subjects, ecclesiastical architecture will always hold the first rank in the professional mind; and at a future date I will endeavour to lay before you certain hints which have occurred to me in connection therewith, in order that I may elicit the opinions of those whose knowledge and experience in the profession fully qualify them to enlighten the junior branches, and in order that the true principles which should guide the architect in designing ecclesiastical edifices may be properly defined. J. K.

METAL AND OTHER WORKS OF ART IN THE MANCHESTER EXHIBITION.

THE proposed museum of works of art in metal, wood, ivory, mosaic work, glass, enamel, &c. &c. recently placed under the superintendence of Mr. Waring by the executive committee, rapidly assumes a definite form, and will, we trust, at last, successfully illustrate the various schools of art in connection with the materials above mentioned. Amongst the contributions may be selected some fine examples of Venetian glass, by Mr. Nicholson, of Doctors'-commons; some other excellent and remarkable specimens from the collections of the Earl of Cadogan, and Miss Auldjo, of Kensington. Mr. Goff, of Kensington, sends numerous fine ivory carvings, and Mr. Phillips, of Cockspur-street, an exceedingly beautiful ivory-carving, ascribed to Fiammingo; whilst amongst other pieces of elaborate workmanship, Lord Cadogan lends his celebrated knife of Diana of Poitiers, and several grand specimens of cinque cento bronze-work.

Mr. Addington, of St. Martin's-lane, contributes many choice examples of Majolica, Faenza ware, and Oriental and European porcelain, besides other valuable works. From the Tower, her Majesty's Board of Ordnance send a large and important contribution; and amongst collections placed at the disposal of the committee, may be mentioned those of A. J. Beresford Hope, esq. Baron Marochetti, Hon. E. Cowper, Darby Seymour, esq. M.P. the Rev. Walter Sneyd, Octavius Coope, esq. J. Mayer, esq. of Liverpool, and numerous other collectors, well known in the archæological and artistic world: we must not omit also to state that Sir Anthony Rothschild allows some of his very precious Henri Deux ware, to find a place in the Ceramic department.

The committee, then, have good reason to thank the liberality and public spirit of our art-treasure collectors; and we think that when the importance of this exhibition on the public taste generally comes to be considered, they will have no cause to regret the inconvenience they may in some cases suffer, by becoming promoters of what is truly a national undertaking, and for a national purpose.

THE MAIN DRAINAGE QUESTION.

A DEPUTATION from the Metropolitan Board of Works have handed to Sir B. Hall the new plan B* prepared in accordance with the suggestions of Captain Harstal. Sir B. Hall, in receiving it, stated that he proposed to nominate three gentlemen, two of them civil engineers, and one a military engineer, the most experienced he could find, to whom would also be referred all persons *who might wish to place plans before them*.

We may therefore venture to assert, with tolerable safety, that plan B* will *not* be carried out.

ART IN DECORATION.—On Thursday the 18th December, Mr. E. Ball gave a lecture at the Streatham-hill and Tulse-hill Institution, "On Art, as applied to House Decoration and Furniture."

WESTMINSTER ABBEY: THE CONFESSOR'S CHAPEL, SOMETIMES CALLED THE PIX OFFICE.

OUT-OF-THE-WAY PARTS OF WESTMINSTER ABBEY.

Such of our readers as can avail themselves of the opportunity of attending the afternoon service in the venerable Abbey of Westminster, will be pleased with the striking effect produced by the numerous lights that are required in the dim twilight, which in these short days shadows the interior of the Abbey before the service is finished. The appearance of the vast place as thus seen is solemn in the extreme. We can, however, at present, only glance at this, and would direct attention to some of the nooks of the old church with which the public are not generally acquainted. Visitors to the Abbey may notice close to the entrance at Poets'-corner, on the left hand, the small pointed doorway which leads to the crypt below the Chapter-house, given not long ago in our pages. Farther to the west, in the south wall of the transept, below the dial of the clock, is a door opening into the curious chamber shown in the annexed engraving, which is called the Chapel of St. Blaise. It occupies the place of what is known at St. Alban's and elsewhere as the "slype." At the east end of the chapel are the remains of an elaborate painting of a figure holding a gridiron, supposed, therefore, to represent St. Faith; beneath which is the Crucifixion: there is also a monk at his devotions; and the remainder of the pointed arch is filled with red and other coloured zigzag ornaments, inscriptions, and devices; and although the original altar has been removed, the low elevation, with a peculiar circle in front, may still be traced. Near the altar, the wall, for several feet, is built at a different angle from the other parts of the chapel, and the symmetry of the place is still further interfered with by the pier of solid masonry which is shown in the engraving. The place is now so dark that it is somewhat difficult to see the various objects near the altar. There are, however, traces of two Early English windows which have formerly overlooked some space near the Chapter-house. The light now enters from some windows at the west end of the chapel, which are placed at a great height. In modern times a wooden staircase has been placed, leading to a sort of closet used by the canons as a robing-room, and which adds much to the deformity and darkness of the place. Part of the floor is covered with red tiles—some of square and others of diamond patterns. At present the chapel is lumbered with various matters; amongst them a large chest, in which were deposited the remains of Major André, who was captured and hanged as a spy during the American war, while carrying an important despatch to a portion of the British army. There is a monument to the memory of this young officer in the north aisle of the nave. There are also some fragments of old iron belonging to other parts of the Abbey, which will, no doubt, before long be restored to their place.

The other engravings of Norman masonry show, first, a portion immediately above the Blaise Chapel. This piece of the exterior of the former Abbey may be seen from the cloisters.

The semicircular arched passage leads from the north cloister, towards the Westminster school, and is of most massive proportions. From this passage is the entrance to the Norman crypt, which is used as the pix office, and is represented above.

We recently made some remarks as to the small number of remains of Roman London, which exist in our days. The same may be said of Norman London, which, although constructed of durable material, and of comparatively recent date, has almost disappeared. The existing fragments of the latter period, above and below ground, would seem to be—the crypt of Bow Church, St. Bartholomew's Church, and a curious chamber below Lamb's Chapel, Cripplegate, the chapel in the tower, as fine a specimen of this style, and as perfect, as any remaining in the country; and at Westminster the Confessor's crypt, the cloisters, and part of the south transept. These, with a few unimportant fragments of not much mark, are, after "ye have sought ye cittie round," all the Norman work which meets the eye.*

The great rarity of these remains makes them the more precious to those who have a proper appreciation of such matters, and causes regret that the chapel in the tower is still hidden from the public. The crypt of Bow Church, filled with mouldering coffins, is not convenient of access, and the chapel of the Confessor is also invisible. This ancient place, curious in its proportions and details (as may be seen by referring to the engraving), has been for a considerable time occupied by the weights and other materials for the assaying of the coinage of the country.

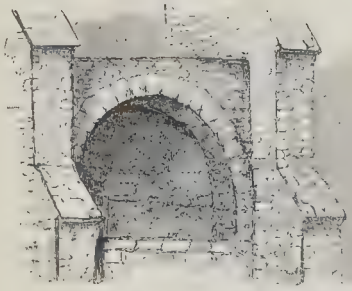
It appears that the matters contained here are of very small bulk, and occupy but a fraction of the area of the crypt: it becomes, therefore, a subject for consideration whether or not, in the great building which has been recently raised for the uses of Parliament, some place equally safe as this portion of the Confessor's Chapel could not be contrived so

* There was inserted in the gate of Bermondsey a Cross, cut in stone, called the Rude of Bermondsey, with zigzag ornaments. On the removal of the gate these, with other fragments of great interest, were removed to the garden of a gentleman, and most likely made into a sort of grotto. We have, from time to time, made careful inquiry after these fragments, but have been doomed to a series of disappointments; perhaps, however, these remarks may fall under the notice of the possessor of these relics, a sketch of which we should be glad to have an opportunity to make.

WESTMINSTER ABBEY.

Blaise Chapel.

No. 1.



No. 2

No. 3.

No. 1. *Part of South Transept.*

No. 2. *Ancient Cloister running east, marked A in the Ground-plan.*

No. 3. *Ground-plan of Cloister. The shadowed part is original. B. The Incised Memorials of the old Bishop.*

that the increasing numbers who are interested in such places as this should have the opportunity of access.

When lately looking into Cripplegate Church, in which rest Milton and other worthies, the custodian said,—"You would be surprised at the number of Americans who come here, and at the interest they take in the place. I have seen some kneel upon the stone under which it is said the remains of the poet are buried, in order to say, in their distant land, that they have paid this homage at the great man's grave."

The interest felt by the Americans in Westminster Abbey is as great, and perhaps more so than by many of us at home; and it cannot be without a beneficial use to extend the means of ready access to our important antiquities,—not only to those who, though now strangers, are so intimately connected with us, but also to the thousands who come from all the provinces to visit the metropolis: the sight of such relics of former times, as the Confessor's Chapel, and that in the Tower, cannot fail to be useful.

It is, no doubt, of great consequence, to keep the tests of the coinage in integrity, and without suspicion; and it is in consequence arranged that certain of the state ministers, the master of the Mint, some of the officers of the Goldsmiths' Company, and others, shall have keys, which, only by the assemblage of the whole, can give admission to the important deposit. This arrangement could be equally safely managed in another place,—*of far greater strength*, and more perfect security,—for it must be borne in mind that in 1303 the king's treasury in the cloisters was robbed of its contents, and forty-eight persons were sent to prison on suspicion, some of whom remained in custody for two years.

Let us hope that those persons in whose hands the management of these matters remains, will take into consideration the progress of the age, and not adhere too closely to old-fashioned notions, but hunt up a chamber, "clamped with iron within and without," the doors guarded by Chubb's and other locks, which would defy the skill of the lock-picker, and to that safe place remove the pix, and let us into the old crypt. Let public records also be shifted as soon as possible, from their rather unsafe position in the wreck of the Westminster Chapter-house; a place which might be easily restored, and be one of the finest specimens of English architecture.

It is only at certain periods that the Confessor's Chapel is opened for the purpose above mentioned, and in consequence we have not been able, although much trouble has been taken, to get a sketch of the crypt, but fortunately by chance came upon a drawing in the Guildhall Library: having compared this with other authorities in the British Museum, we feel that the view is tolerably correct, and will enable our readers to form an idea of this remnant of antiquity, which is completely hidden from sight.

TOMBS AT KENSALL-GREEN.

FROM the most remote time the artistic taste of nations has been to a considerable extent displayed in the monuments of the dead. What will be deduced by and by from modern English tombs? We wandered the other day to Kensall-green Cemetery, thinking, by the way, of the vast Egyptian pyramids, of the monuments of Xanthus and Assyria, of the beautiful Gothic tombs of our own land, of the monstrous masses of marble clouds in Westminster Abbey, and the general appearance of our graveyards a few years ago. Nothing can well be more tasteless than the majority of the monuments of that time, and nothing worse than the condition and management of places of sepulture.

Passing under the archway, you find yourself among several hundreds of monuments, some of which are raised to the memory of the worthies of our own age. How few of them speak flatteringly of our taste in art! The visitor in search of information will not be able to gather much from the custodians of the place, and therefore it is better to walk on. You soon meet with familiar names on the tombstones. There is that of John Smeaton, the engineer to the London Docks; and not far off is a stone placed by subscription to the memory of Edward Scriven, an engraver, who projected and assisted in carrying out a most excellent plan for the benefit of his class. The inscription states that "an instance of severe distress having occurred to a member of his own profession, he directed the force of his benevolent mind to the foundation of an institution among the professors of the fine arts to obviate such calamities. Thus, with the effective aid of those he called around him, was founded, in the year 1810, 'The Artists' Fund.'" As we pass slowly along many familiar names of publishers and of others who in their lifetime were well known, are met with. These records are made in various ways. On one tomb is—

"Pain was my portion,
Physic was my food,
Groans were my devotion,
Drugs did me no good."

And this in our own century! Some of the inscriptions are put on the shaped stones which were so common a few years since. Some have the head, cross-bones, and other rudely-sculptured devices in fashion a century ago. The taste, however, seems to lean towards the Greek and Roman forms. There is a very simple monument of the latter style to the memory of Lord de Ross; this is of stone, with a white marble slab inserted for the letters. The stonework in many instances is relieved by plants and flowers; some graves are covered with the "forget-me-not;" on few is the honeysuckle; some are surrounded by palings, overgrown thickly with ivy; others are shrouded in and hidden by a little grove of evergreens. In the middle of one grave has been planted a Scotch fir of 20 feet or 30 feet in height. It is curious to notice the various styles of the legends. Here is the family vault of a person who is as methodical in his gravestone as he would have been in his ledger:—

"J—— H——, born ——, died ——.
T—— H——, ditto ——, ditto ——."

One stone overgrown almost with roses has only MERCY upon it. Here dies a celebrated cricketter, the stone placed by his playfellows; and there, not far off, a famous optician. On some stone tombs, a white marble book has been inserted, on which are inscriptions, such as "Ye know not the hour." In some instances a sculptured hand is pointing to the book.

Crosses of different forms, often of marble, are common. Some of these and other expensive monuments have no inscription at all upon them. One has—

"Thomas ——,
Jane ——,"

No date of birth or death.

To atone for little eccentricities there are some pretty little bits of sentiment. On the grave of a young wife there is a rose, scarce blown, cut from the stem by a sickle; a drooping lily appears on that of a young girl; and a chaplet of "everlastings" on the monument of "*our dear sweet child.*"

In the chapels and in the various avenues which adjoin them, there are long rows of black and white marble records, most of which are quite common-place. In one of these spots there is an old-fashioned wooden-cased clock; the pointer denotes an hour, but it seems to have been long since it was there fixed. We look in vain for anything to interest in those monumental rows, and are glad to get forth again into the sunshine, and leave the remains of those who have preferred the vault manner of burial.

Outside is the tomb of the Princess Sophia, a large erection, surmounted by a sarcophagus, coronet, &c. and which has a stately and sumptuous appearance. Not far off is the grave of the Duke of Sussex, covered by a plain, well-designed tomb of granite. A few yards off is a new monument, similar to the above, which marks the burial-place of a consistent and useful public servant. The inscription is—

"Sacred to the Memory of
JOSEPH HUME.
Member of Parliament for nearly forty years;
Born at Montrose, N.B. Jan. 22, 1777;
Died at Somerton, in Norfolk, Feb. 20 1855.
Keep in memory, and take heed unto the thing that is right; for that shall bring a man to peace at the last."

Smirke, the Royal Academician, has for a memorial a plain squared-up stone of large size, which, by its simple and permanent appearance, contrasts in a remarkable way with some of the ambitious designs which are not far off. Here is one at which we must stop,—that of Loudon, the accomplished and industrious naturalist and journalist, who from a humble condition rose to be a benefactor to the country. This monument consists of a pedestal of polished granite, on which, after the name, it is recorded that "his works are his best monument." We must look over the conceit of rough and unhewn masses of rock, with little bits of polished marble set into them, and some other things, and pass to the grave of a man known through the length and breadth of the land—"Tom" Hood, who has sung with such emphasis on behalf of his suffering fellows. This is one of the most satisfactory in the grounds. The pedestal is of polished granite, at the top of which is written—

"He sang the Song of the Shirt,"

and below—

"In memory of THOMAS HOOD,
Born 23rd May, 1798,
Died 3rd May, 1845.
Erected by public subscription," &c.

Below this is a bronze comic mask, with a lyre and other things. On the sides are medallions, also in bronze, representing a passage in the "Bridge of Sighs,"—

"One more unfortunate,
Weary of breath,
Rashly importunate,
Gone to her death."

Above this is the bust, in bronze, of the poet, of somewhat colossal size, beaming with intelligence and kindness.

There are some ambitious tombs in the Egyptian style, which turn out to be only shells of brick covered with stucco: some of these have knockers upon the doors! We have before now spoken of the ponderous coxcombry of the Ducrow and Soyer monuments, and need not return to them. Few attempts have been made to preserve the image of the persons buried in these grounds, and the attempts at sculpture of any sort are for the most part failures. There is plenty of room for improvement in our funereal memorials.

THE ARCHITECTURAL ASSOCIATION.

THE following reply, signed by the honorary secretaries of the Association, has been returned to the last communication from the Institute of British Architects:—

December 18th, 1856

GENTLEMEN,—On behalf of the committee and the members of the Architectural Association, we have the honour to lay before you the following reply to your communication of the 30th October last, on which the Institute did the Association the honour of requesting an opinion. The committee, then, express the opinion of the Association generally, after full discussion of the question, in saying that they do not regard the establishment of the proposed class of graduates as likely to prove a measure of utility to the profession, and particularly to that class for whose benefit it is designed, or to conduce to the main object of the Association, viz. the improvement of the means of architectural education. But, in their opinion, these objects might be advanced, and important results ultimately attained, by the adoption of a principle they have much at heart, and to which they would earnestly solicit the best consideration of the Institute. They would AGAIN propose the institution of examinations, founded on certain acknowledged principles and well-defined courses of study. The passing of these would become an honourable distinction, and consequent incentive to exertion on the part of those entering the profession. The committee feel confident that the adoption of the principle contained in their proposal would not only be productive of great advantage to those who would immediately profit by it, but would also eventually add to the influence and consideration of the Institute itself. They desire to obtain the creation within the body of the Institute of a class owing its position, not to arbitrary professional distinctions, but to intellectual qualifications only. Should they be successful in their object, they are of opinion that many of the profession who now hold aloof would at once enter the ranks of the Institute, and that a great step would be taken towards that general union of the profession which the Architectural Association earnestly desires to assist in effecting, when it can be done with advantage to those it represents.

In conclusion, the committee beg, in the name of the Association, to acknowledge the courtesy which has afforded them the opportunity for expressing these opinions, and to assure the Council of the full sense in which the Architectural Association regard it.

THE NORTHUMBERLAND WINDOW AT ALNWICK.—The window in memory of the late Duke of Northumberland, for St. Paul's, Alnwick, has been made at the royal manufactory at Munich, and put up in its destined place. The subject is Paul and Barnabas preaching at Athens.

REMARKS ON FARM BUILDINGS AND STABLES.

A paper on this subject was read in October last, at a meeting of the Liverpool Architectural Society, by Mr. Charles Verelst, as we mentioned at the time. In the course of it the reader said improved farm buildings did not depend entirely upon the tenant, who was often unjustly blamed for their defectiveness. The landlords had much to do with this, and there was the difficulty; for though he believed they were generally upright and intelligent, they frequently had their hands tied by settlements, jointures, debts of their own or those who preceded them, too often mortgaged up to the neck, and were, therefore, unwilling, and frequently unable, to effect those sometimes costly improvements which every tenant had a reasonable right to possess, and without which no tenant could effectually get on. He proceeded to lay down that labour was the great outlay of the farmer. Whatever, therefore, was saved in that, became a serious gain. Thus the site should be as near the centre as the nature of the land, vicinity to the high road or station, would permit, or, at least, as near the centre of the arable land as possible, by way of saving cartage. If a railway be near, a tramway therefrom will be no mean saving when near a town, for bringing manures and removing produce. The hay should, of course, be near the stables, the straw near the foddering yard, the roots near the boiling-house and stall-fed cattle, and the whole in close contiguity, and planned in such a manner that every part should, as much as possible, radiate round a centre, from which everything should be supplied. Above all things, there should be good and ample shed room for stock; and few things are better demonstrated than the improvement that occurs in cattle that have warmth and repose, so that chaff and other food should be steamed, at least occasionally—for with warmth less food is eaten, with repose more flesh is obtained, and with even temperature and abundant ventilation good health is maintained.

Assuming the farm to contain about 400 statute acres, the list of requirements for one of a first-rate character would be something like the following, viz.—a stack-yard; a barn of two stories, containing, on the ground floor, a corn and a chaff room, and above, a granary, &c.; engine-room and coal-house; stabling for twelve cart-horses; loose boxes for invalid horses, stallions, brood mares, &c.; stabling, loose box, harness-room, and gig-house, for the farmer's own use; root-stores and a boiling-house; cattle-sheds in a double row for (say) sixty beasts; cow-houses for (say) twenty cows; calf-house; bull-boxes; sheds for heifers, grazing cattle, or young stock, open on the south towards a yard; sheds, pens, and yard for sheep; lambing-house, slaughter-house, extra shed for sick cattle, waggon and large implement shed; tool and small implement shed; smithy, wheelwright's shop, and timber-yard; one or more dung-pits, and one liquid manure-tank; compost-shed for mixing artificial manures; piggeries; poultry-houses for hens, guinea-fowl, ducks, turkeys, &c.; coal and wood houses; dove-cot, dog-house, and privies; a well, rain water, cisterns, &c.

There are some other requisites, but which would rather appertain to the farm house than to the farm buildings, such as the dairy, churning-room, scalding-room, shed to expose the dairy utensils to the sun and air; and, lastly, a cheese-room; whilst in many places a brewery would be necessary.

In a set of drawings exhibited Mr. Verelst showed that the general principle was that of a cross, the barn forming the top or north, the beast-houses the south, the cart-stables the east arm, and the young stock-shed the west arm. The open spaces between the arms were inclosed by sheds on the east and west sides, and by a low wall on the south side. Thus each of the yards was open to the south, and protected from the north, east, and west winds. On the outside of the buildings was a road 15 feet wide, running round the four sides, so as to facilitate the deposit of carts, implements, manure, &c. and the removal of the manufactured produce.

The Stackyard should be to the north of the farm buildings. In some farms the whole of the stacks were erected under a lightly framed wooden roof, which allowed of their leisurely removal, secured them from wet, and saved thatching. If iron wheels were added to the frames under each stack, and a tramway made, they could be drawn up to the north side of the barn, and thrown direct into the feeder of the thrashing-machine. The stacks might be brought up by horses, or by the stationary engine.

The Barn.—This should be as central as possible, and so placed, with reference to other buildings, as to enable a man to go therefrom into stables, beast houses, sheds, &c. with the least inconvenience in regard to time or labour, and without having to go out of doors. For a farm of this size, a stationary engine and thrashing machine should be employed, so placed that, the stacks being drawn up by it, the straw would be put direct into the feeder (by aid of an elevator, if necessary), passing out winnowed to the other side, the corn depositing itself in one room below, and the straw either in another room below, or thrown by shakers to the loft over the cattle, which would be 2 feet lower. This upper barn would contain hay and chaff cutters, depositing their cut material into receptacles below; oat, corn, linseed, oil-cake, and bean crushers, meal grinders, bruisers for various kinds of food, and other machines, the whole worked by the steam-engines, thus sparing horses for other work, necessitating fewer of them, besides doing the work quicker, cheaper, and better. This engine should, in fact, perform likewise a large portion of the work outside the buildings, such as pumping the cisterns full from the well, &c. In the plan, at the intersection of the cross, were a trap-door and tackle for hoisting up and down sacks, &c.

Root Stores and Boiling House.—The same reason of centrality, guiding the position of the barn, governs that of the root and boiling houses. In the plan herewith submitted they adjoin, and are nearly equidistant from, all the feeding places and yards, and the roots can be taken, after being steamed, without going more than a few yards, or at all out of doors. They should be flagged, whilst the root-house might have low brick divisions for turnips, mangolds, potatoes, &c. with wide sliding or folding doors, that a cart might be backed in and upset. The boiling-house is best not to open immediately into the root-house, lest the roots should become affected. There should be boilers, steamers, tubs, &c. for the use of stables, piggeries, or occasionally for preparing seeds of any kind. There should also be a root-washing machine, worked by steam, and a place for wooden shovels, &c.

Cart-horse Stables.—These contained twelve stalls, which, looking at the labour saved by the steam-engine, would probably accommodate a sufficient number of horses to work the 400 acres. He (Mr. Verelst) had paid attention to the subject of stables, and considered that a width of 16 feet was the least that could be permitted, but he preferred 17 feet for single stables. He objected to double stables, but, when used, he considered the total width should be 26 feet at least. No stable should contain over twelve horses. Single ones were best lighted by windows at the back; double ones by skylights along the ridge. It was better to have regular stalls, with boarded divisions; but, as this expense was often objected to, bales (that is, poles hung by short chains at each end) were used; but in that case there should always be a contrivance, that if a horse got under the bale, it should lift itself off. Two horses should not be in one stall. The width of stalls was constantly too narrow. The horse often sprawls and stretches as he lies down, and does not tuck himself in, as the cow does. The size of a cart-horse is about 8 feet 6 inches long, 2 feet 3 inches across the quarters, and about 6 feet 6 inches high, to the top of the head. The least width, therefore, that should be given to a stall, is his own height—that is, from 6 feet to 6 feet 6 inches.

He considered the ordinary range of hay-racks and trap-doors over as highly objectionable. It compelled the weary horse to raise up his head to a considerable height, whereas the form and length of his neck showed that nature intended him to take his food from somewhere near the level of the ground. The trap-doors, over the old hay-racks, allow the seeds and dust to get into his eyes, whilst, as the traps are often left open, the horse frequently catches cold from draughts, and the hay above is injured by the foul air from below. The advantages of crushed corn have been abundantly demonstrated to be equally healthful and more economical, but the old-fashioned long mangers and internal angles prevent his getting at much of it. He therefore proposed, and generally used, cast-iron mangers with rounded bottoms, water-troughs, and racks, all secured by a single cast-iron top plate, not more than 2 feet 9 inches from the ground, nor much less, otherwise there would be a risk of the horse, in times of excitement, getting his foot over. The rack should be on one side, the manger on the other, and the water-trough in the middle; and the two latter should be enamelled, to prevent their becoming fusty or sour. Underneath should be screws, to admit of their being cleaned, whilst a half-inch pipe, with nozzles to each trough, can fill the whole with water simultaneously. This principle might apply to all the horses, cows, bullocks, young stock, pigs, and poultry, upon the whole place, by the turning of a single tap. It is found that horses which have water constantly before them drink no more, nor even so much, as those which only get it occasionally, and which become greedy from fear of losing it. But they are very fond of cooling their muzzles by frequent paddling in it. If it were necessary, a wooden lid could easily remedy this point. In some stables, I have heard of there being no racks at all, as steamed or bruised food alone was used. In order to supply the hay, a cupboard, either in a corner or got externally, is provided, and down that the hay is thrown from above, whilst a door is opened below, the hay taken, and by a fork thrown into the low rack. Iron drawers under the manger are still provided by some ironfounders, to catch all the hayseeds, and this is an economy. On the front of the top plate may be a revolving roller, but double chains are unnecessary to cart-horses when separated by solid divisions between the stalls. Over the mangers he had constantly used a single slab of slate, 2 feet 6 inches high, and the length of the stall, which, in a very simple way, prevented crib-biting. The end stall division may be made movable, so as to join to the last but one behind the stalls. It then makes a good large loose box when required. In a cart-horse stable, instead of iron heelposts, wooden ones may be used, as they assist in supporting the floor above, and admit the rings for the pillar reins being put at their proper height.

The slope of stalls from front to back is generally too much; it fatigues a hard-working horse, by throwing his weight too much upon his hind legs. The floors of stalls should slope from the sides to the centre; whilst the fall from front to back should not exceed 2 inches. The best flooring for stalls is Dutch clinkers on end; the next best substitute, a certain kind of indented brick from Buckley Mountain, made on purpose; and one of the worst is red stone, its porosity retaining urine and damp; whilst the ammonia is unhealthy. For the space behind the stalls he had used rough 3-inch Yorkshire flags, which can always be kept clean. Instead of open sunk channels behind the stalls, a better way was to have all level, but a good sunk drain under, and behind each stall an iron stench trap, with a slight incline thereto from every side. Iron stench traps, or any other gratings, should never be covered with bars: they are weak, apt to break, and sometimes catch the heel of the shoes; flat-iron tops, hollowed, and full of holes, are best.

The height of a stable should be as much as 12 feet, if it have a flat ceiling. In no place is ventilation more required, or less attended to, than in cart-horse stables. The horse is a bulky animal, and throws out much that is injurious in his breath, skin exudation, manure, and urine. Thus, upon entering the majority of stables the first thing of a winter's morning, you are almost knocked down by the heat and ammonia, so utterly different to a state of nature. A hot atmosphere, with its adjuncts of fetid atmosphere, produces directly or indirectly an endless series of ills; but a warm, and at the

same time well-ventilated one, promotes health, strength, and spirit for work, manure of a higher quality, and saves those expensive and doubtful individuals, veterinary surgeons. The best temperature would probably be from 60 to to 65 degrees; this and ventilation are the grand desiderata. To obtain the latter, he had adopted the principle of sliding gratings, with a clear 100 superficial inches of open area, fixed in the back wall near the ground, and behind each stall. To carry off this he used, in the centre of the ceiling, one or two hoppers, according to the number of horses, continuing by a wooden trunk from the stable ceiling through the hayloft and the roof, and terminating on the roof outside with a zinc covering. These trunks should have a superficial area equal to the quantity of air let in, according to the number of stalls. Now, as the ventilating gratings near the floors, and the hoppers, would have the power of regulation, the actual quantity of ventilation would always be according to the number of horses in the stable. Before each ventilator and hopper should be placed perforated zinc, to divide the air into minute currents.

Whilst light is healthy and cheerful, too much causes horses to be wakeful. A moderate degree of gloom conduces to the repose of the weary cart-horse; windows, therefore, should neither be too large nor too numerous.

Great condensation takes place upon the glass of stable windows, which, falling down, rests upon and rots the wooden bars. There should be no horizontal bars, but the glass should overlap, like that in conservatories Stable sashes are best hung on centres; sliding or hanging sashes stick, and get out of order.

Stable doors should be 9 feet high and 4 feet 6 inches wide, with no projecting locks, handles, or fastenings; all should be flush, to prevent the horse hurting himself or the harness catching. To a cart-horse stable the door may be in two heights, that the top may be open in hot weather. The sill of the door should never exceed 2 inches high. A cart-horse stable should only be whitewashed. A regular nag stable may be plastered, and boarded 4 feet high. There should be shelves, recesses, or cupboards for brushes, cloths, combs, &c.

In the loft above, and nearly against the centre of the back wall, should be chests, divided for corn, beans, &c.; lined with iron to exclude mice, raised three inches from the floor to prevent rot, and always kept locked. From these should descend, into the stable below, trunks and double slides, containing exactly one feed. These prevent waste, secure equable quantities, and by lasting a certain time show if robbery has been attempted.

Bullock Sheds, Cow and Calf Houses, and Bullock Boxes.—These should be near the root stores and boiling-house, and are more economical to build and work with a foddering passage down the centre. This last may have a tram-way and simple turn-tables, or be smoothly flagged, so that a low truck on wheels with rounded tires may easily run down the passage, distributing, by outrigging feeders, the food to the beasts on each side. Over this foddering passage, in the floor above, should be long, narrow, open slits, 18 inches wide, by which simple means hay and straw may be let down at any point required. The width of a single bullock shed, exclusive of foddering passage, should be about 15 feet, and the space behind of good width, to facilitate the removal of the manure in trucks. Each bullock should be separate, and as he is about 8 feet long, 5 feet high, and 2 feet 8 inches across behind, the width of his stall should be 5 feet; but if two are put into one stall, the width should then not be less than 8 feet. To each stall should be separate troughs for food and water, the former of stone, the latter of cast iron, enamelled on the inside, and supplied with water simultaneously, and nowhere more than 18 inches high.

The divisions are best made of slate, or York flags, with iron rods for the chains round the bullocks' necks, to slide upon; but where slate or stone is difficult to be obtained, recourse must be had to oak or Baltic divisions, with oak or teak posts for the chains to slide upon.

Behind the stalls there should be an open gutter, not smoothly dished out in a single stone, but square, 14 inches wide and 2 inches deep, the object being to prevent the bullock sliding about upon his own unctuous manure, by the square sides of the gutter. Beneath this open gutter should be the drain for the liquid manure, which should fall through gratings or perforations in the bottom of the open gutter. The stalls, like those of horses, should slope slightly to the centre, and that to the gutter behind. Asphalte for floors here should be avoided, as being dangerously slippery, but a concrete of lime and gravel forms the best.

Outer walls 4 feet high, with moveable luffers above, like those round a brewer's vat, have been recommended, but it is thought these must be too cold in severe winters. Windows with glass, and outside luffer shutters, admitting light in moderate quantity, most contribute to warmth and repose. Venetian blinds, or even nets of small meshes, will prevent insects from entering. Where the bullock sheds are open to the roof a simple mode of ventilation is by two air-bricks behind each beast, and the slates laid by omitting alternate slates, and without tiering: but where a loft is above the bullocks, then the same mode of ventilation may be adapted as to the stables, but increasing the power of extending and regulating the quantity to at least double. The height of these sheds, when of one story, may be 7 feet 6 inches from floor to bottom of eaves; but if there be a loft above, then the height should be 11 feet from floor to ceiling.

Hitherto only stalls have been spoken of, but some high farmers use boxes 10 feet square for single ones, and 12 or 14 feet square for double ones; but it may be a question whether beasts would not be fattened as well and as soon in good separate stalls as in boxes. In Holland, Belgium, and Switzerland, where animals always tied up has long been the system, stalls, and not boxes, is the principle adopted.

Other refinements had been adopted, such as sinking the floors 3 or 4 feet below the ground, and, by gradually elevating the feeding troughs, allowing the accumulating manure to raise the animal up to a level with the surface of the ground. Huxtable praises sparred floors, and Mechi's bullocks may be seen, with well-dunged coats, slipping about on boarded floors; but all this perpetual existence of animals over their own ordure seemed so contrary to the order of nature that it has not been gone into here.

Large and Small Waggon and Implement Sheds.—They should always be of ample size, and of such a height, say 18 feet, that one or two loaded waggons can enter and remain there for the night, secure from rain and ready to start betimes in the morning for market. They should face the north, to prevent the sun affecting the wooden materials inside; and be near the stable, for speedy and convenient harnessing. The roof should always have an extra projection of a few feet, to prevent the slanting rain from entering. At one end should be the drill or tool-house, not alone for tools, but for those implements that take to pieces, being only used at harvest or other annual periods.

Piggeries.—Where a very large number of pigs are kept, it is best to have a central passage, with iron or wood hanging sheets, whereby the troughs can be filled without the feeder being interfered with, with a separate store shed, and a boiling apparatus for them alone. The hog has been undeservedly abused for his love of dirt; but if a wet and dirty sty were placed beside a dry one, clean and full of straw, it would soon be seen that he preferred the clean and dry. His occasionally wallowing in dirt possibly arises from a certain scrofulous habit of body he has, rendering such an operation agreeable to him for the time. It has somewhere been tried to wash and scrub him daily, when it was found he was not only cleaner, but fatter and healthier by the operation. Above all, he should be warm as well as clean and dry, and, in winter time, a swing door, hung upon its upper edge, aids him, and he soon understands how to obtain ingress and egress by pushing the door with his snout The reader rejected the idea of a boarded floor, or of raising himself up on his own dung, though perhaps the pig alone, of all animals, could exist with health in the filth and foulness of his own atmosphere. A door from his house enables him to roam about a yard appropriated to him and the fowls alone. In order to admit ventilation and avoid smell, instead of close walls round the pig court, open tarred fences have been recommended. Troughs of any kind should always have several compartments. The best flooring is a good hard concrete.

Where the district abounded with stone, of course rubble walls would be found cheapest, but the strongest and best are of brick. These should be hollow, for lightness, dryness, and the very great facilities they afford for a perfect system of economical ventilation. All bricks should be laid in "English bond" of alternate courses of headers and stretchers; all interiors should be pointed, for the healthy and cleanly practice of frequent whitewashing. All corners should have rounded or "bull-nosed" bricks. Walls may be coped with rounded bricks pointed in cement, and be kept dry by a course of slates through them at the level of the ground. English oak, though apt to split, is the best of all timber for agricultural buildings, but difficult, in some places, to obtain; the next best, therefore, and the cheapest in the end, is Baltic, and the worst, white or spruce deal. Wooden posts should rest on stone blocks, sloped every way from the bottom of the posts. External woodwork should be painted every three or four years, and all fences tarred. The cheapest, best, and simplest covering for roofs is the pantile or slate, according to the locality. The blue pantile at Trentham, the seat of the Duke of Sutherland, is made to have almost an Italian character.

Barn and large doors are simplest when they slide or hang on rollers, and most out of the way, but they should open in the centre. With ordinary large doors it is sometimes an advantage not only to open perpendicularly in the centre, but even to have them open in two heights; they hang lighter and last longer. All doors on hinges should be made to lie back flat against the wall, should be flush with the riser of the step, and have weather-boards, which together prevent the possibility of wet coming in at the bottom.

ON THE DRYING OF OILS FOR PAINTS AND VARNISHES.

An important paper was read at the Society of Arts on the 5th inst. by Mr. Christopher Binks, "On some new Methods of Treating Linseed Oil, and other Drying Oils, for Improving their Drying Properties, in their application to Paints and Varnishes." Want of space alone has prevented us from largely quoting from this paper, although we have already very fully treated of the subject in a series of articles in our volume for last year;* but we shall now extract the most important portion of Mr. Binks's paper, giving the main results to which he has been led by a numerous series of inductive experiments, undertaken without any reference to *à priori* theories or hypotheses, or rather in the face of these; but, as we shall endeavour to show, only confirming, in all probability, the truth of the researches (recorded in our last volume) by Chevreul, made some years since, and indeed, the empirical practice of the trade at large long before Chevreul's time,—advancing an important step, however, upon the results of these researches and of that practice, by an original discovery, of a kind (as we think) to whose true chemical nature Mr. Binks does not seem to have made any explicit allusion in his paper, wherein, on the contrary, he urges reasons for his results of the very opposite description to those of Chevreul and the trade, and to those, we suspect, which will ultimately be found to be the true reasons, after all, of Mr. Binks's own important results. These results and deductions are thus summed up:—

"Now, the practical results of this long course of experimenting were, first, the discovery of certain materials or forms of materials never previously so used, that exercise specific drying actions upon the oil. Next, to show how very few of all those resorted to experimentally exercise any drying action at all. Then to reduce even these few to two or three, whose properties fully admit of their use for all practical purposes; and, finally, to demonstrate what the kind of action really is that thus issues in the solidification of the oil.

It was discovered that the *hydrated protoxides* of certain metals pre-eminently exercise a specific drying action on

* *Vide* vol. xiii. pp. 109, 193, 243, 373.

he oil. That it proceeds in the *cold* with sufficient rapidity to render the aid of heat not necessary, though the application of heat quickens, and is expedient in the operation. The hydrated protoxides of iron, of nickel, of cobalt, and of manganese, are the most remarkable of the class; but it is through the latter (*i. e.* the *hydrated protoxide of manganese*) that all the singular and happy effects upon the oil are to be practically accomplished.

Linseed oil in its normal condition—*raw* oil—does not dry *per se* under fifty hours. In this, its normal state, it appears (as it may be expressed) to exercise a certain power of resistance against external influences, that would tend to disturb its equilibrium, and transform it from the fluid to the solid state. It yields to these influences only after a few days' struggle, as it were. Now the hydrated protoxides, just mentioned, by mere contact with the oil in very minute proportional quantities, at once break through this state of equilibrium, or power of resistance, and the oil thereupon begins at once to dry; that is, this contact *initiates* the action or series of actions, or removes some obstruction against their exercise, and these then proceed with all the rapidity that unimpeded external or internal influences are capable of. This peculiar action of these hydrated oxides is analogous to, but by no means chemically identical with, that of *fermentation*, that with saccharine matter is *initiated* by addition, in minute quantity, of the fermenting agent, and which then, without further addition, proceeds to completion. The addition to the oil of only from 3 to 5 parts of the hydrated protoxide of manganese to 1,000 of the oil, gives birth to these peculiar changes; and by the simplest of methods of after treatment, this chemical fact is made applicable to the production of any required kind of drying oil.

It is scarcely necessary to remark that this *hydrated protoxide* is, in every respect—in its mode of application, action, and results—different from the old *peroxide*, which at ordinary temperatures exercises no action whatever upon oil. Whilst the latter is used to *give* oxygen to the oil, the property of the former is to *abstract* it. The protoxide is a powerful deoxidising agent; and had the writer been guided by the old theory of *giving* oxygen to the oil, the hydrated protoxide would never have been tried, nor, probably, these curious results obtained. The manganese protoxide is selected out of the others having a similar specific action, because of the peculiar property it alone has, conjointly with its powerful drying action, of *bleaching* the oil finally. The iron oxide gives to the oil a permanent brown stain; the cobalt, a reddish; the nickel, a greenish tinge; and the manganese oxide is readily and cheaply obtained through the medium of the beautiful rose-coloured salt, the crystallised sulphate of manganese."

In this account of his "Results and Deductions," however, there is, strange to say, a very remarkable omission, which Mr. Binks afterwards proceeds to supply under a new heading,—that of the "Manufacturing Arrangements and Products." The omission in question is to the effect that in the manufacture there must be "a contrivance for passing into the oil *a large volume of atmospheric air sent into it by a double-actioned air-pump*." If this be not for the purpose of oxidizing the oil, what *is* its chemical purpose? Mr. Binks himself admits "the necessity of reactions with oxygen," but the simple question which presents itself here is just this,—*is* the oil oxidized by the process, or is it *not*? And surely this might have been ascertained by chemical analysis, of which, however, there is no trace, and without such analysis Mr. Binks's experiments are quite as empirical as those he charges against almost every one else. The reactions *may* be very complicated, as he imagines, but if oxygen *be* added to the oil it will finally speak for itself in the analysis; and, if not, the negative will be no less decisive, for not only will the oil *not* be oxidized, but, if we understand Mr. Binks aright, it is positively deoxidized, a supposition (as it still seems at best to be) which would be equally converted into a certainty or a fact by analysis of the oil before and after Mr. Binks's process was applied to it.

It is a circumstance quite remarkable that *the* substance beyond all others used, which Mr. Binks has proved inductively to be the best for drying linseed oil, should be an oxide of manganese; for Chevreul, too, found that *an* oxide of manganese could be "used with great effect," and *that* oxide of manganese has long been well known and used as a drier. This we say is remarkable, and, what is more, is greatly to Mr. Binks's credit as an original experimenter and a stern and true inductive philosopher, inasmuch as there may be said, metaphorically speaking, to be all the difference in the world between the two oxides of manganese so used. The oxide of Chevreul and the trade is the peroxide, which readily gives up a certain quantity of the superabundant oxygen perched loosely upon it, while the oxide of Mr. Binks is the protoxide, which may be said, on the contrary, greedily to devour oxygen, or absorb it *from the atmospheric air* and various other substances. Mr. Crace Calvert, in a communication to the *Journal of the Society of Arts*,* claims for Chevreul the use of "oxide of manganese" as "the very substance" Mr. Binks "recommends to impart to linseed oil rapid drying properties," whereas it must be admitted that it was the peroxide of manganese which Chevreul treated of as an oxidizer of the oil, not its protoxide; and the difference in power and property between these two is so great as to countenance Chevreul on the one hand in attributing *oxidizing* power to *his* oxide, and Mr. Binks on the other, *à fortiori*, in ascribing *deoxidizing* power to *his* oxide. But if it can be shown to be at least *probable* that both oxides may have really the same kind of influence on the oil (the result being similar), with this difference, that the protoxide is the more potent of the two, we shall of course have gone far to clear away all obscurity and difficulty. Now, if both *do* exercise the same sort of influence on the oil, we cannot see how that influence can be a deoxidizing one, inasmuch as the peroxide probably contributes oxygen to the oil, and at all events cannot withdraw oxygen from it or deoxidize it; whereas, on the other hand, we *can* see (as we shall now endeavour to show) how the influence even of the *protoxide on the oil* may also be an oxidizing one, *although its influence on the large quantity of atmospheric air mixed with the oil must be a deoxidizing one*. There is a chemical process of modern discovery called catalysis, which has been thus explained in just such cases as this:—The catalytic agent, in a case of this kind, to be an oil oxidizer, *must* be one with a pretty strong *affinity for* oxygen, but so *modified by its position, while lubricated by, or solved or suspended in, the oil*, that, on the one hand, as it absorbs oxygen from the infused air, on the other it will hand it over to the oil, thus, it would appear, favourably placed for undergoing this oxidizing process, by aid of the oxygen-condensing power of the drying or oxidizing agent; the manganese at same moment, by a renewed play of its affinities, resupplying its own requirements, by condensing and re-absorbing another doze of oxygen from the infused air, only to be also handed over to the oil, while it simultaneously replaces this condensed doze also from the air, the final result being, that the protoxide, while it has powerfully aided in the combination of a large quantity of oil with the oxygen of the infused air, remains in *statu quo*, or, at least, issues out as the deutoxide, a minor one even still to the peroxide; and, moreover, that a small quantity of this oil-oxidizing agent will suffice to *hand over* an immense quantity of oxygen, or to oxidize an immense quantity of oil, notwithstanding the relatively small quantity of oxygen at any one moment existent in itself, or even the positive and strong tendency of the metallic base of the oxide to absorb rather than to contribute oxygen. This, we say, is a free but strictly accurate account of what a catalytic agent is chemically believed to do in certain circumstances similar to those in question, but the only allusion which by any likely mode of interpretation can be construed into a recognition of catalytic action by Mr. Binks is what he says as to its being like a fermentative process. Now, the catalytic action has been compared to and even regarded as a fermentative process, but let us remember that in this case that fermentative process is only or best explainable as an *oxidous* fermentation, or a process whereby the oil in "drying" *is* OXIDIZED, in strict accordance with the orthodox and longstanding belief of the trade, as well as with the elaborate experiments of Chevreul,—*not* DEOXIDIZED, according to Mr. Binks's new but heterodox idea. His own idea of a *fermentation*, therefore, militates much rather against his own conclusion than in its favour.

* Wherein he complains that Mr. Binks did not refer to the series of articles in our pages on the drying of oils, which series he most erroneously terms an extract from his own lectures

"FROZEN OUT."—A SANITARY HINT.

WINTER will soon be coming upon us with much sharpness, and suggests some consideration which might be usefully attended to. When "John Frost" asserts his authority, the frozen-out gardeners and watercress-women are not the only sufferers, for in the large districts of the metropolis, hundreds of families who have at ordinary times a fair supply, are downright water starved; and thinly-clad women and children may be seen wending their way to some temporary plug, in the hope of getting a precarious supply. It is barely necessary to hint at the annoyance and inconvenience of being without this necessary of life under any circumstances; it becomes, however, in many instances, dangerous, when the ordinarily-constructed dwellings are occupied by several families, and become "frozen out."

Now, although it might not be at first thought so, it is certain that amongst populations which are thickly packed, and poor, the necessity of cleanliness (an object which cannot be attained without plenty of water) is as nearly as necessary for the health of both old and young as during the summer months; for during the hot weather people will, if the atmosphere become too close, open a door or window, or have a broken square unpapered up, or by some other means let in a little breath of air. But when winter comes the dwellings of the ignorant and poor, and also some of those who ought to know better, are regularly barricaded. It is true, that in some instances the greatest amount of industry and ingenuity, and the application of old hats, straw, and old newspapers pasting, &c. fail to the cracks and rents of some houses, which still remain, but which, however, are disappearing. In these instances the places are ventilated in spite of the tenants; and strange as it may seem, the actual improvement of dwellings, without attention to those sanitary rules which one might have hoped would have been by this time better understood, and more generally applied.

The writer of this has taken an opportunity of lately visiting some localities where the houses, new and smart outside, show condition internally to cause alarm. In some instances working men occupied three rooms, probably a couple of kitchens and place above. In summer time the numerous little children are separated and spread about; when cold weather comes, the mother fears that they will catch cold, and the beds of the whole are huddled into one room, the door of which, and also the window, is bound with leather or list, and in some instances the chimney is probably stopped up, and no means are allowed for the admission of the necessary element of health, life, and strength. There are generally other families in the same house, who adopt similar precautions against "Jack Frost" and the north-east winds, and then think cosily "that their doors are all closed and their windows all barred," and that the pinching enemy has been set at defiance, forgetting, or not thinking that they are raising in the garrison a more dangerous enemy than without the walls, which might readily, and would be, in some cases, certain to strike down old and young.

We mention this feeling, from personal observation that great necessity exists for doing so, and earnestly urge on our readers the necessity of cautious and common-sense arrangements, and to impress upon landlords the need there is for having all staircases, and as far as practicable the rooms of such houses as above referred to, vigorously ventilated.

To return, however, after this long digression to the "freezing out," no one will for a moment doubt, that in addition to the shutting out of the air and overcrowding, that the stopping of the water supply cannot fail to add to the evil: the washing-day is put off, and linen, &c. stored dirty in close closets, &c. and it becomes a matter of difficulty to get the children, floors, &c. attended to as usual. In ordinary health this is bad, but when sickness and death are in a house, the need of these remarks is more evident, and their truth will be recognized by many a district surveyor and London missionary.

It is doubtless very important to avoid being "frozen out," and yet it is extraordinary how little of the commonest precaution against a matter which causes the ill effects above alluded to, and also causes the stoppage of drains and water-closets.

Plans to prevent the blocking of the main and other water-pipes with ice, and all the expenses and inconvenience of these bursting, &c. have been already referred to in the *Builder*, and yet little or nothing practicable, so far as we are aware, has been done by the great water companies.

In the Model Building in Bloomsbury, the water is carried quite to the top of that build-

ing of five stories high, and along the outside walls, and yet we are told that during the years since this large place has been finished, the water supply has never failed, though nothing can be less costly and more simple than the means used to exhaust the pipes from all the water in frosty weather after the cisterns have been filled. This operation is performed by a tap, which, after the water has been turned off, allows all the liquid in the pipe to escape and this does not occupy the person having charge of the place a couple of minutes each time.

At Clark's-buildings, and some other houses belonging to the same association as that mentioned above, the pipes have been passed for very long distances above the exterior walls, but they have not been left without care; in part they have been covered with a cheap wrapping of a kind of felt, which, when necessary, is still further protected by a boxing, of about 3½ inches square, filled with sawdust; and this defence which, in ordinary houses, would cost only a very small sum, has been found quite effectual: even a twist band of straw would, in many instances, prevent the freezing out. It unfortunately happens, that in these houses, where precaution is most necessary, that one of the people say, "It's not my place to trouble myself with the water;" and then another says the same thing, and so what is important to all is left neglected. We think, however, that in houses which are let to various tenants, the water, which is as necessary as the daylight, should be protected by the persons who receive the rents. It is, however, not every one who knows how to set about this matter, and would venture to hint, that some ingenious men, who may be thrown out of employment by the hard weather, might pick up a crust by preventing the unpleasant effects of being "frozen out."

CHURCH-BUILDING NEWS.

Norwich.—The contract for benching the nave and aisles of St. Peter's Mancroft in oak, as in the chancel and its aisles, has been taken by Mr. Ringham, of Ipswich, at 555*l.* The tracery and carving will be done at a future period. Messrs. Morgan and Phipson are the architects.

Ingoldisthorpe.—The chancel of this church has recently been entirely pulled down and rebuilt. The tracery fronts to the seats are copied from the old, a small portion of which remained. A new roof has been added, with wall-pieces, shafts and bases resting upon carved stone corbels,—figures of St. Michael (the patron saint), the four evangelists, and angels. The windows are filled with green cathedral glass. The east one, of five lights, is to be filled with painted glass by O'Conner. An enriched sedilia in Caen stone has been fixed, having the emblems of the passion carved on shields in trefoils. The floor is laid with Staffordshire blue and red tiles; the portion within the altar rails of Minton tiles in various colours, arranged to a pattern. The works have been carried out by Mr. Brown, of Lynn, under the direction of Mr. G. E. Pritchett, of Bishop Stortford, at the cost of nearly 800*l.* exclusively defrayed by the Rev. W. Beckett. A rectory-house is in course of erection, at the cost of the same gentleman, who has also offered to contribute largely to the restoration of the nave of the church.

Oxford.—The restoration of the chancel of the church of St. Peter-in-the-East has recently been completed. The most serious defect for the architect (Mr. Buckler) to contend with, was the gaping fissure in the south wall, commencing at the floor, and passing through the Norman window, which was weakened many years since by being cut down nearly 2 feet through the thickness of the wall. The windows of the crypt, in course of the improvements, have been released on the outside from heaps of earth and masonry, which had injured the walls and obstructed the light. An arched aperture, for the admission of light immediately over the altar in the crypt, has been reopened. The restorations have been executed by Messrs I. and W. Fisher, of Oxford.

Haywards Heath.—The *Brighton Gazette* announces the opening of the new church at Hayward's Heath on Tuesday in last week. It is of the Early Decorated style, and was designed by Mr. G. F. Bodley, of Brighton. The general walls are of sandstone; the dressing of Scaynes Hill sandstone; and edgings of the windows and doors of Bath stone. The exterior roofing is of tile, and nearly equilateral in pitch, and the interior of rafters, of foreign deal, stained and varnished. The building was erected by Messrs. C. and E. Newnham, of Hayward's Heath, under the superintendence of Mr. Holloway, and, with interior fittings, cost from 1,100*l.* to 1,200*l.*

Swansea. — St. Peter's Chapel-of-Ease, the foundation stone of which was laid on Whit-Monday (12th May) last (and of which we gave a description at the time), was opened by the bishop of the diocese, on Monday in last week. The building has been erected by Mr. Joseph Richards, of this town, from the design, and under the superintendence of Mr. R. Kyrke Penson, of Swansea, architect. The total cost of the whole building, boundary walls, and entrance-gates, &c. amounts to about 1,500*l.*

Blaenau. — The new church at Aberystwith, has been opened. It stands on the site of the destroyed edifice, near the Blaenau works. The architect is Mr. John Norton. The style is pure Norman, and it is rigidly observed throughout the entire building. The plan comprises a nave, 53 feet by 22 feet 6 inches; north and south aisles, from the latter of which projects an entrance porch: a tower, which is 22 feet square, stands at the east nave, and forms an intersection of the transepts, by projecting from it north and south. The tower is 72 feet high from the ground, and it will be surmounted by a lofty spire of Bath stone (now in course of erection by Mr. Farmer, of London). The roofs throughout are open, the wood used being stained deal: they are lofty, and are externally covered with stone tiling. A centre chancel window was presented by the architect, the subject being the "Crucifixion." This window, with two others in the chancel, of stained glass, is by Bell, of Bristol. The west windows of the nave are of thick ornamental diapered glass, by Messrs. Powell. The stone which has been used is that from Llangattock quarries, and said to be hard and durable, requiring about three times as much labour in dressing as Bath stone; and the roof, apse, and chancel are domed with embossed stone. The church is capable of accommodating between 500 and 600 free. It is warmed by hot-water apparatus, erected by Messrs. Hayden, of Trowbridge. The estimated cost of the church was 4,000*l.*

Leek.—At a meeting of the Leek Improvement Commissioners, they considered the minutes of the Cemetery Committee, who had received plans and estimates, for the laying out of the cemetery, from Mr. Davidson, of London, whose estimate was 680*l.* and 50*l.* for commission and journeys; or for a stone and railed wall north and south, instead of holly, 94*l.* in addition;—from Messrs. Lynam and Rickman, of Stoke, who had sent a model of the grounds as they proposed them: their estimate was 1,758*l.* and a reduced estimate 1,340*l.* or, with catacombs, 1,900*l.*;—from Mr. Dale, the commissioners' surveyor, whose first estimate was 1,450*l.* and reduced estimate 1,087*l.* or, with park palisades for fence, 787*l.* The chairman also opened a letter from him containing a fourth estimate; but it was thought not right that he, having had access to the other estimates, should be permitted to alter his own according to the amount of the others. The minutes of the Cemetery Committee were approved, and the plans and estimate of Mr. Davidson adopted.

Barnsley.—The new Congregational Church here has been recently completed, and opened for divine service. The style of the building is Early Decorated. The front contains a four-light window, with a three-light on each side of it; the whole under one label moulding, and giving the appearance of a window with ten lights. Above them, and divided from them by an enriched string, is a circular window, contained in a spherical triangle, with columns, &c.; the gable finishing with an ornamental finial. The centre window, consisting of ten lights, is of stained glass, grisaille pattern, relieved with rich medallions of ornament; the whole surrounded by coloured borders. The side lights are similarly treated; also containing texts of Scripture. The tracery lights are filled with rich ornament of geometric design. The whole of the glass has been executed by Messrs. Pilkington, of St. Helens. At the front of the building are the tower and spire, attached to the main gable of the nave, and divided into four stages; the lowest having an elaborate doorway, surmounted by a crocketed pediment, terminating in a rich finial. The topmost stage is pierced with two windows of two lights each in either face, and the tower itself finished with canopied pinnacles, rising up from the angle buttresses at each corner. The spire springs from this, and, with the exception of two tiers of spire lights, is kept quite plain, depending more for effect on outline, than enriched detail. The height of the tower is 73 feet, and to the top of the vane on the spire, 167 feet.

Alnwick.—The consecration of the episcopal part of the new cemetery took place on Thursday in last week. The chapels are in the Gothic style, of thirteenth and fourteenth centuries, the episcopal being decorated. The cost of the chapels, gateway, and lodge was 300*l.* Mr. F. R. Wilson, resident architect of Alnwick Castle, was the architect; and Messrs. Armstrong and Hudspeth, the contractors.

INSTITUTION OF CIVIL ENGINEERS.

On the 16th the annual general meeting was held, Mr. G. P. Bidder, Vice-President, in the chair. In the report of the council for the past session, which was read, some few of the foreign works in progress were noticed; mentioning particularly the successful opening and the extension of the East-Indian Railway, under Mr. Rendel, the late distinguished Past-President of the Institution.

On the continent, gradual extensions of all the main lines were being made. The Lombardo-Venetian system had been transferred to a powerful company, now preparing to act with great energy in the prosecution of their plans. The Victor-Emmanuel" line, under the direction of Mr. Bartlett, M. Inst. C.E. acting for Mr. Brassey, Assoc. Inst. C.E. the contractor, was approaching the chain of the Alps, for the traversing of which preparations were being made, and experiments upon the machinery for the work of tunnelling on a large scale were being tried. That portion of the line from Aix-les-Bains, passing through Chambery to St. Jean de Maurienne, upwards of fifty-five miles in length, was opened for public traffic last October. The works were originally laid out by, and to a great extent executed under the direction of, Mr. Nieumann, who was succeeded last year by Mr. Ricceo, under whose supervision they were now carried on.

The statement of the receipts and expenditure showed that there was a balance of upwards of 700*l.* in the hands of the treasurer, and that the financial position was very satisfactory, so that not only would the current expenses be easily met, but a balance would remain to bring up any arrears of publication, or to provide for contingencies.

The following gentlemen were elected to fill the several offices on the Council for the ensuing year:—Robert Stephenson, M.P. President; G. P. Bidder, I. K. Brunel, J. Hawkshaw, and J. Locke, M.P. Vice-Presidents; W. G. Armstrong, J. Cubitt, J. E. Errington, J. Fowler, C. H. Gregory, T. Hawksley, J. R. McLean, J. S. Russell, J. Whitworth, and N. Wood, Members; and R. W. Kennard and Sir Macdonald Stephenson, Associates.

At the previous meeting, December 9th, a paper "On the Laws of the Strength of Wrought and Cast Iron," by Mr. William Bell, was read: to this we may look on another occasion.

Proposed Bridge across the Mersey.—At a recent meeting of the Liverpool Dock Committee, a communication was read from Mr. James Coey, describing a plan by him for improved approaches to the pier. He proposed to erect a bridge across the Mersey, of six spans of 521 feet each, and at a level above the pierhead of 125 feet, to connect the London and North Western Railway with the Chester and Birkenhead Railway, the rail on the Liverpool side of the river to be carried on to the top of a pile of granaries ending at Roscoe-street, where a tunnel could be formed to Edge-hill. Mr. Coey supplied no estimate of the cost.

THE PAST AND FUTURE OF PICTURE GALLERIES.

WHEN, towards the end of the seventeenth century, with other manifestations of languor and decay, the great *picture schools* of Italy dispersed and ceased to exist, pictures began to make their peregrinations; and thus, amongst others, the fine Venuses of Titian, Guido Reni, and Palma, came to Dresden. Before that time, there existed no picture galleries, to be so called; and there are yet voices rising against them, as not conducive to the advancement of art. Pictures, as every art-work, possess a character of *individuality*; and as no individual can adapt himself entirely to another, pictures also, congregated in the same place, combat, as it were, each other; and the general beholder often is seized with a sentiment of confusion and satiety, very antagonistic to art contemplation, and art enjoyment. There is certainly an arcanum against this mind's plethora, but it is resorted to but by few. It consists in singling out each time only one or two pictures, and to confine our contemplation to them.—Still, by what could picture galleries be replaced? A picture is a produce of the time and locality where it arose, and resembles in that respect a plant, which we cannot, without impunity, sever from its maternal soil. A picture, fancied in its analogous position, is quite another thing, then, if placed in a picture gallery. How many things are wanted here, which accompanied it there—explained it, completed it, and surrounded it with an historical glare; thus making it a whole of associations and sentiments. All this is wanting now. No race of men is more capricious than that of artists, and as capricious are their productions. To properly appreciate a picture—an art-work—we ought to know, where and when, and how it arose, how the artist lived and worked. This we can only know, by carrying back the picture to the place where it arose, and for which it was made (!); and here a variety of the tenderest emotions will burst on our mind. We will become aware, that *this* picture once adorned the high altar of some huge cathedral, the other the more modest refectory of a convent, mountain-girt, where the artist had received shelter, hospitality, solace; or that it was made for the banqueting-hall of some eminent man. In a gallery all those recollections are lost, and, with them, a great amount of the pleasantest associations of thought and reverie.

But as galleries *do* exist now-a-days, the question arises, according to what rules and principles are they to be classified and arranged? Generally speaking, pictures have been arranged in galleries *historically*, and there is some good in that sort of arrangement. But we may fancy another system of picture-arrangement in galleries, and this would be one according to the *subjects* treated and represented. Not all historical or ethic matter is of equal pregnancy and richness. There are, as it were, large historical market-halls, where painters obtain most richly their supply of subjects and ideas. Such is the period of the old Hebrew prophets and sages, the myth-time of ancient Greece, the period of old Roman republicanism and virtue, the beginnings of Christendom;—in fine, that marvel of history, the fifteenth, and partly sixteenth century, that age of men with great souls and minds. And then comes the different treating of such subjects. It is, for instance, exceedingly interesting to reflect, how differently the myth of Leda has been seized and represented by painters of the various art-schools and nationalities; how a French, a Spanish, a Venetian, or a Netherland painter will represent it. Equally striking is the representation of the Mother of Christ by various painters, from the dark banditti-bride of a Velasquez—the dry, consumptive old maid of Cravach, the fat, fair kitchenmaid of a Rubens, up to the ideal, luminous face of a Raffaelle, which has more of the angel than the woman! What diversity, what chaos of ideas and lineations in their different seizings of the same subject. Still, however plausible such an arrangement may appear in *theory*, it hardly would be carried out practically, at least not to any extent. But whatever *is* right in theory, *is* capable of being carried out, *at least* to some extent; and this has been done, of late, in the Dresden Gallery, by the isolation of a few such pictures as stand on the pinnacle of beauty and excellence! Thus, the incomparable Sixtus Madonna has been placed in a *separate* cabinet, and there are persons who, for a fortnight, day after day, come to pass an hour or two in nought but the contemplation of this great conception of the Urbinate. They are right!

PROVINCIAL NEWS.

Nottingham. — Besides the ninety model dwellings of three several kinds, erected by Messrs. C. C. and A. Dennett, under the supervision of Mr. J. S. Norris, architect, and which did not, it seems, solve the problem of providing improved dwellings for a numerous class with small means, Mr. C. Paget, M.P., and Mr. L. Heymann, according to the local *Guardian*, have had fifteen cottages erected in the neighbourhood of Robin Hood-street. On the ground-floor, says a writer who inspected them, are a living-room in front, with supply of gas, and a small kitchen at the back, both provided with ovens and boilers, and the latter having a sink-stone with water tap over. A coal place is constructed under the stairs, and a small pantry adjoins. Three good sleeping rooms are obtained above the ground-story, well lighted and ventilated; and each house has its own back-yard, with out-offices, &c. A back-entrance passage skirts the bottom of the yards, and communicates therewith; and in this is contained, under cover, a rain-water pump, with cistern underneath, for the joint use of the occupiers. The rent of each house is 3s. 6d. per week (free from rates and taxes), which yields, although not a high, yet a fair return, for the capital invested. The houses externally have a substantial and attractive appearance, and are finished, both within and without, with an attention to various matters of detail, domestic convenience, and economy, not always found in dwellings of this class. The buildings were designed by, and executed under the supervision of, Mr. J. S. Norris, and the contracts have been executed respectively by Mr. James Acton, and Messrs. Dyer, Bell, and Wood, builders.

Hull.—St. Mary's (H.C.) Schools, Hull, are situated at the junction of Wilson-street and Dansom-lane, and consist of the school buildings and residence for the master. The school buildings comprise a school-room, 90 feet by 30 feet, with a class-room at each end of the school-room, 20 feet by 16 feet. The roofs of both school-room and class-room are open timbered, and are constructed of American red pine, wrought, stained, and varnished. The walls of these buildings are 18 feet high, but the roofs being open, and of high pitch, the school-room has a total height of 43 feet. The walls are constructed of brick, with red stock brick facings and stone dressings: they are 18 inches thick, and have buttresses between each window. The roof is covered with slate, and has a bell-cot rising from the ridge to a height of 16 feet. The floors are boarded. The building is heated by hot water, the pipes being laid round the whole of the building, and the heat admitted through ornamental grates laid in the floor. Fresh air is admitted from beneath the floor, the impure air being removed by eleven ventilators fixed in different parts of the building, in addition to the ventilation provided for in the bell-cots, or by means of an open fire-place. The schools being intended for both boys and girls, separate entrances are provided. The porches on the street front are 10 feet square: those on the north side, and opening into the play-ground, are 10 feet by 11 feet. The works have been executed by Hull tradesmen, as follows:—Mr. C. R. Morehead, bricklayer and plasterer; Mr. R. Wilson, mason; Messrs. Dawber and Son, slaters; Mr. T. Sissons, carpenter and joiner; Mr. Wm. Appleyard, plumber and glazier; Mr. Wm. Waroall, painter; Mr. J. Wilson, ironfounder and smith; Mr. S. Stones, gasfitter. The total cost of the building, inclusive of the land and fittings, will be about 2,600*l*. The buildings, which are in the Early English style, are from the designs, and have been erected under the superintendence, of Mr. D. Watson Aston, architect.

Liverpool.—The dock committee are said to have now under consideration a plan prepared by Mr. Hartley, the dock surveyor, for an immense graving-dock at the north-east end of Prince's Dock, on the site of the slate yards. The proposed dock will not at all interfere with the Prince's Dock basin, as the entrance to it will be through the north-east corner of Prince's Dock. The extreme length of the dock will be 700 feet, or large enough to accommodate three ships of 2,000 tons' burden.

THE NEW STREET THROUGH SOUTHWARK.

IT is notorious to all who travel through High-street, between St. George's Church and London-bridge, that the traffic is almost as often obstructed there as in the most crowded parts of the City; and it is obvious that the proposed new street opening into High-street, by relieving the bridge, will in the same ratio increase the number of vehicles in High-street.

To obviate this difficulty, I suggest that the traffic between the London-bridge railway stations and the new street should be carried over and cross High-street by means of a viaduct leading direct to the south-west point of the stations. By this plan the "circulation" of vehicles between the City and the Borough would be uninterrupted by the cross and confluent traffic which must pour into High-street by the new opening. VIATOR.

AN observation in your paper (page 679), beginning "New street in Southwark," shows something of your opinion of the proposed line, and of your intention to make some observation thereon hereafter. I cannot doubt but your sources of information on this subject are abundant; but still there may be some points laid before you, that I presume would more fully explain the requirements and convenience of the public in passing through this locality.

My daily intercourse with the inhabitants of St. Saviour and Christ Church parishes furnishes me with ample opportunities of knowing the opinion of the inhabitants on this subject. I have prepared a plan of a line differing materially from the proposed line. I deal with the High-street somewhat differently to the proposed line, but arrive at the east end of Castle-street, nearly at the same spot. From thence, instead of going to Stamford-street, I draw a straight line from the east end of Castle-street, to the Obelisk in the Waterloo-road, at the east end of the York-road. This is as near as may be a mile long. I propose this road to be 50 feet between the curbs, with two footways of 12 feet 6 inches each, making together 75 feet. This line would interfere with no large or very valuable property in its course, and would pass on the north side of St. John's Church, in the Waterloo-road, laying the side of the churchyard open to the south side of the road. This line, extended about 300 yards westward, would bring you to the foot of the Hungerford-bridge, and then—suppose at some future period a bridge over to Scotland-yard, and from thence by an easy curve to the front of the Nelson Monument—this would relieve Oxford-street, Holborn, the Strand, Fleet-street, and many of the streets in the City, and would be an easy route from any part lying west or north-west of Charing-cross, to the Dover or Brighton Railways, or any place east of London-bridge. J. H.

I DO not like any of the plans now proposed. If you place a ruler on the map of London from London-bridge or York-street to Westminster-bridge, you will find that it cuts south of Rowland Hill's Chapel and along the New-cut. It is in my opinion bad policy, and creative of great injustice to make new thoroughfares when existing ones can be made available by improvement. The public will always take the shortest road, and the shortest is the straightest. Make a curve if you please from York-street to Union-street, where the Southwark-bridge-road crosses it: widen Union-street to the Blackfriars-road. The New-cut is already a good wide road in the right direction as far as the Waterloo-road, where it turns to the left; but if it were continued straight to the foot of Westminster-bridge, you would have the shortest, best, most convenient, most honest, and the cheapest line that could be made. TOOLEY-STREET.

COMPETITIONS.

Tamworth Union.— Several competitors complain they can get no answer to letters on this matter. Perhaps the Board will inform us what has been done.

THE ALMANAC OF THE ART-UNION OF LONDON.—Amongst the many popular works of the Art-Union of London is their waistcoat pocket almanac, which, with room for engagements, gives information on artistic subjects, meetings of societies, &c. not to be found elsewhere. Every subscriber is, we believe, entitled to a copy.

RECENT AMERICAN PATENTS.*

For Improved Devices in Carving Wood. Nelson Ruger, West Farms, N. Y. *Claim.*—1. The cutters, in combination with the bars, having arms attached to them, the arms having bars pivoted or jointed to their outer ends, to which the cutters and tracer are attached. 2. The bar placed on a rod, which is attached horizontally to the vertical bar; the ends of the bar fitting between the arms.

For an Improvement in Vehicle for Paint Compounds. Frederick Kulhmann, Lille, France. *Claim.*—The admixture of silicate of alkaline substance with a paint, varnish, ink, or dye (instead of using it in layers or coatings, as heretofore done), using, for the protection of the several individual colouring matters, such agents as are known to scientific or practical chemists.

For an Improvement in Furniture Polish. John L. Brabyn, City of New York. *Claim.*—The combination of muriatic and acetic acid with the usual ingredients of furniture polish, in the proportions and manner specified, for the purpose of producing a polish capable of resisting the action of hot or cold water.

For an Improved Clamp for Plumbers. F. R. Langwith, City of New York. *Claim.*—The combination and arrangement of the clamp box, the clamping levers (when either is used), and also, in combination therewith, the screws for adjusting the cock in a proper position during the process of soldering with the main pipe.

For an Improved Mortising Machine. Thomas R. Bailey, Lockport, New York. *Claim.*—The mandrel fitted in bearings attached to sliding-plates—one of the bearings being pivoted to the plate, and the other bearings allowed to slide on the other plate; the mandrel being vibrated laterally by the screw, worm-wheel, eccentric, pitman, and bent lever.

For an Improved Metal Pavement. Solomon B. Ellithorp, City of New York. *Claim.*—A metal block for pavements, formed of a series of groined arches, alternating in position, and connected to ridge or string pieces, with interstices between the arches to be filled with cement, gravel, or sand.

For an Improvement in Bake-Ovens. John P. Hayes, Philadelphia, Penn. *Claim.*—The heating flues, arranged so as to cause the products of combustion to pass from the fire-chamber below, first into the lower flue; thence behind its position, and out; thence, into the next flue above, and out; and so on through the successive flues which may be above, to the escape flue; the said flues being arranged on the two sides of the casing, and divided by the partition, and the products of combustion being directed thereby; together with the partition plates in the wall.

For an Improvement in Brick Machines. Henry B. Ramsay, Indianapolis, Ind. *Claim.*—1st. The wheel, cranks, and catches, in combination with the springs, for the purpose of regulating the stroke of the knives for cutting the clay at the top of the moulds. 2nd. The sliding mould table, for the purpose of raising the moulds to the grate under the clay-box.

For an Improvement in Brick Machines. Isaac Harman, assignor to self, and William Bickel, Tamaqua, Pennsylvania. *Claim.*—The moulds, composed of the two halves having any convenient number of angular projections and recesses, the points of the angular projections of one-half coinciding with those of the other half, the said moulds being caused to expand and contract.

For an Improvement in Machines for Sawing Stone in Taper Form. H. J. Behrens, City of New York. *Claim.*—Giving to a saw, placed in a line inclined to the line of motion of the saw-frame, a lateral motion independent of the motion of the frame, or at right angles to the line of motion thereof.

Books Received.

We are forced to postpone notice of a number of books which have been before us for some time;—Dr. Smith's "Classical Geography" (an admirable work); a new edition of Baildon on Rents and Tillages; Mr. Cross's useful little volume, "Landed Property,—its Sale, Purchase, Improvement, and general Management;" the seventh part of "The Dictionary of Architecture;" a new edition of Mr. Howitt's "Visits to Remarkable Places;" "The Early Flemish Painters," by Messrs. Crowe and Cavalcaselle; a new edition of "The Cabinet Lawyer," to enable every man, as Bacon wished, to know as much law as will enable him to keep himself out of it; and various others. To some of these we shall give early attention in our new volume.

* Gleaned from the numerous lists in the 'Journal of the Franklin Institute' of Pennsylvania.

Miscellanea.

Bishop Monument.—At a meeting of the committee appointed to erect a suitable memorial over the grave of Sir Henry Bishop, held recently, it was resolved, "That the next meeting of the committee be summoned as soon after the 31st instant as may be found convenient, and that designs for the monument be then submitted for the consideration of the committee."

Liverpool Architectural Society. — At a meeting of this society held on Wednesday evening, the 10th, Mr. E. H. Strype read a paper—"On the Study of Mathematics as applied to Architecture." Mr. Horner said, he fully appreciated the desirability of a division of labour as distinguished from generalisation, and added that the immense space over which science was spread was such, that each man could only grasp the surface, rather than go to any great depth. With regard to the relative position of architects and engineers in reference to scientific knowledge, he thought mathematics was too much neglected by architects, and they were much indebted to engineers for the admirable tables by which their labours were shortened in mathematical calculations.

Sale of Farm in Essex.—The name of Mr. John Tucker is familiar to some of our readers as an exhibitor of fat stock for many years past, at the metropolitan and provincial cattle shows. His farm-homestead, at West Ham Abbey, Essex, is said to be one of the most complete. It was sold by auction, by Messrs. Baker and Son, at the Auction Mart, during the past month; Messrs. T. Geere and Son, of Stratford, Essex, timber-merchants, being the purchasers for 3,200*l.* exclusive of the fixtures, which are estimated at 500*l.* more, making a total of 3,700*l.* which we are told, but cannot answer for it, is less than one-fifth of the sum originally spent upon it by Mr. Tucker.

Fatal Accident at Worcester Cathedral.—In course of procedure with the extensive works being carried on for the purpose of strengthening and restoring the edifice, an accident happened last week, being the second fatal occurrence at the cathedral within a few weeks. Three workmen on the south transept had raised a scaffolding to a height of 45 feet, and were occupied in raising it still higher: short poles had been fixed into the wall, and upon it were rested a number of planks forming the scaffolding: the men were at work upon this scaffolding when one of the supporting poles suddenly broke, and the poor fellows fell to the ground, the planks and other timbers falling upon them. One of them received fatal injuries (of which he died an hour or two after); another, a concussion of the brain and a broken leg and shoulder; and the third also suffered serious injuries.

Hatherop House.—We have been requested to say, with reference to the particulars we gave of this building, that it has been restored and enlarged, and not entirely rebuilt, and that, in addition to the sum named, 20,000*l.* a very large amount has been spent, and much work yet remains to be done. The amount stated, it appears, surprised some who happened to know that the sum of 20,000*l.* of trust money had been provided, and that private money to a considerable amount had been expended. The architect of the building, nevertheless, confirms the correctness of the statement in our pages that the sum spent under his supervision upon the building amounted to about 20,000*l.*

Drainage-Tenders, Bury St. Edmund's.—At a meeting of the local commissioners last week, a motion for opening the tenders for a portion of the main sewer, with a view to carrying the work thus far into execution, was carried by a majority of ten to four against a motion for delay till funds were provided, as suggested at a meeting of ratepayers previously held. The tenders being opened, were found to be as follows:—

Jos. Dierden, Barnsbury	£679
Edw. Pilbrow, Bedford-square	507
[Reduced 50*l.* by a subsequent letter, if no extra pumping required.]	
Thos. Docwra, Waltham Cross	420
Andrew Pretsell, London	420
Edward Thirst, Chelsea	409
H. Frost, Bury	350
Wm. Rednall, Bury	340
John Brewster, Bury	320
Thomas Farrow, Bury	279

Mr. Farrow's tender was accepted. It was agreed that Mr. Croft should act as surveyor, at 2*l.* 10*s.* per week, for six weeks. Mr. Burnell stated that in his estimate of 6 000*l.* for the projected works, he had allowed 2,000*l.* for the deodorizing process; and if Mr. Walker should succeed in his undertaking to deodorize the sewage of Rugby at his own charge, a large deduction might be made on this account; but as yet the process had not succeeded commercially, though it had in a sanitary point of view.

Relics from the Crimea in the British Museum.—Some antiquities of very great interest have been added to the national collection in the British Museum. These relics from battle-fields of the Crimea consist of Greek, Roman, and Saxon remains, found at Sebastopol, Kertch, and the adjoining neighbourhoods. Amongst those of Grecian date are vases of various shapes, material, and colour; sculptured figures, and fragments of tombs: the latter consist of carved flowered ornaments in wood, richly gilt, and elaborate cuttings in ivory, wall paintings (the tints very beautiful, particularly some of deep purple and red); there are also nails of coffins, fragments of dresses, &c.; the twined brass wires from garlands of flowers, &c. In the Roman part of this collection are numerous vessels of glass, of different sizes and shapes. One contains gold, and some of the others ashes, &c.; there are also broaches and other personal ornaments of gold, bronze, &c. The objects which have perhaps the greatest amount of interest to us are some antiquities of Anglo-Saxon date and workmanship, which show that in remote times, after the days of Greece and Rome, our ancestors had habitations on the same spots which have been occupied by our warriors during the recent war. Few can look upon these relics, which have been brought from a place which has on so many occasions and under such different circumstances been made a battle-ground, without feelings of interest. Not far from the Crimean antiquities are some painted bricks and other architectural fragments from Nineveh. We may mention, that great progress has been made in the arrangement of the gallery of Roman bronzes, terra-cotta, and other works.

Westminster-bridge.—I heartily thank you for the able article on the present state of Westminster-bridge. You say, why not proceed with the works at once?—why all this dawdling, sickening delay? Ah! why, indeed? says every one else who thinks at all about the matter; and I verily believe that if something is not speedily done, the old bridge will soon settle the question, and tumble into the Thames altogether, for it is fearful to behold its very insecure state. That other bridges are necessary, I entirely concur with you in thinking; but can a better site for one be chosen than the present old bridge? If a good reason existed for building one here one hundred years since, surely a far weightier reason exists now. And there is one thing, sir, you have not dwelt sufficiently upon, and that is, the condition of the unfortunate inhabitants at either end of the bridge. It reminds one of the fable of the boys and frogs: it may be fine sport to some, but here are we in a state of miserable anxiety and suspense, not knowing what to be at—with the greatest difficulty in letting apartments, or doing any good whatever, as every one is aware that the property in Bridge-street in particular will be required for the approaches. The very sound of this bridge is sickening: thirty years hatching and cobbling, Parliamentary committees and reports, bridge-doctors and heavy fees paid for professional services and advice—and what is the result?—the river scarcely navigable for a mud-barge at this spot, the three centre arches entirely blocked up, and a calamity almost imminent.—N. W. H. Rowe.

TENDERS

For fitting-up offices in Fish-lane, for the London Discount Company. Mr. Edmund Woodthorpe, architect. Quantities supplied by Mr. James H. Fox:—

Myers	£1,400	0	0
Browne and Co.	1,280	0	0
Sergeant	1,280	0	0
Ashby and Sons	1,264	0	0
Brass	1,228	0	0

For the erection of two warehouses in Old Change, for Mr. G. Andrews. Messrs. Tillott and Chamberlain, architects. The quantities supplied:—

Myers	£4,650	0	0
Brass and Son	4,596	0	0
Holland and Co.	4,397	0	0
Brown and Co.	4,080	0	0
Lindsay	4,080	0	0
Jay	3,993	0	0
Wallbutton	3,984	0	0
Ryder (accepted)	3,980	0	0

TO CORRESPONDENTS.

The Westminster Clock.—We have received a letter from Mr. Denison, in reply to a communication in our last, and will print it in our next. Several other correspondents must also excuse us for a time.

"J. P." (will be looked to).—"Colonel M."—"Messrs. G. and Sons."—"J. G."—"J. C. S."—"C. A. H."—"S. S."—"G. S."—"G. A."—"J. B."—"J. H."—"E. G. P."—"E. B. D."—"An Architect."—"R. P."—"G. C."—"T. F. O."—"Poole Pottery."—"A District Surveyor" (next week).—"E. W. T."—"J. K. C."—"T. and Sons" (under our amount).—"One whose Design was sent to Coventry."—"The Shade of Cocker."—"J. M. P."—"Col. M."—"G. E."—"M. O. M." (should look to papers mentioned in our present number).—"Mr. W."—"H. W." (we are forced to decline)

"*Books and Addresses.*"—We are forced to decline pointing out books or finding addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the Editor, and not to the Publisher.

HYDRAULIC

PORTLAND and BATH CEMENTS.—These Cements are made from a NATURAL CEMENT STONE, by a method at once simple, certain, and efficient; and are totally distinct from the London artificial cements, which are made from a mixture of CHALK and CLAY, by a costly and complicated process, often producing errors in the manufacture, and consequent disappointment and loss. The HYDRAULIC CEMENTS can therefore be produced at a much less cost; and are THE BEST AND CHEAPEST CEMENTS IN THE MARKET. As there are various imitations of these Cements offered to the trade by other makers, while by some they are obtained through third parties, and mixed promiscuously with inferior articles, FULLWOOD THOMPSON and CO. beg to state distinctly that they are the ORIGINAL INVENTORS of these Cements, and that they alone possess the knowledge of the true and original process in all its details. F. T. and Co. therefore request that all orders and applications may be either addressed direct to them or to their AUTHORIZED AND ADVERTISED CORRESPONDENTS in all parts of the country.—The Bridgewater Portland Cement Works, Brigwater. December 18, 1856.—FULLWOOD THOMPSON and CO.

OBSERVE:—NO CONNECTION WITH ANY OTHER FIRM.

BATH, PORTLAND, and ROMAN CEMENTS.—The London and West of England Cement Company can offer to Contractors, Builders, and Others the best natural HYDRAULIC CEMENTS, at REDUCED PRICES. Bath Cement much recommended; the best quality for all modelling, cornice decorations, &c. Blue Lias Lime, ground and lump, direct from the kilns every day, per Great Western Railway, from whence it can be delivered alongside any part of the river Thames, canal, or any railway station, in London. Communications to be addressed to Mr. TIMEWELL, the Depôt, No. 3, Wharf, North Wharf-road, Paddington; or, Timber Wharf, Hampstead-road, Camden-town; or to Mr. MCNUMENT, 4, Carlline-place, City-road, or to the Works, Dunball, Bridgewater, Somerset.

11, George-yard, Lombard-street, City.

ELMLEY CEMENT WORKS.—ROMAN and PORTLAND CEMENT of the first quality, manufactured on the above works. Also STOCK and KILN-BURNT BRICKS, hand moulded and machine made, for shipment or otherwise.—Apply to G. BOOTH, Agent, as above.

SOUTHAM BLUE LIAS LIME DEPOT.
Glazed Stoneware Sewage Pipes
Brick, Lime, and Cement Merchants,
TATHAM and CO.
14, South Wharf, Paddington.

PORTLAND and BATH CEMENTS.
TATHAM and CO.
14, South Wharf, Paddington.

PARIAN CEMENT, reduced in price 25 per cent. This article is valuable for inside stucco, and especially for skirtings, for flooring on brick arches, &c. It takes paint in a few hours after its application on walls or laths, is without efflorescence, and may be papered in a couple of days. A finer quality forms a beautiful Scagliola, with any admixture of colours. Manufactured by FRANCIS, BROTHERS, Cement Works, Nine-elms, London.

CEMENT.—ROMAN and PORTLAND CEMENTS, and PLASTER of PARIS, manufactured by C. J. HILTON, can be had in any quantity, wholesale and retail, at his wharf, 6, Upper Thames-street, London; and also at the manufactory, Faversham, Kent.—N.B. These Cements supplied for shipment, on advantageous terms.

DAVIES and NORMAN,
CROWN WHARF, GREAT SCOTLAND YARD.
ROMAN and PORTLAND CEMENTS,
LIME, BRICKS, TILES, SLATES, FIRE GOODS, &c.
STONEWARE PIPES, PANS TRAPS, &c.
A Liberal Allowance to the Trade.

THE PORTLAND CEMENT WORKS, NORTHFLEET, KENT. Messrs ROBINS and CO., to whom THE PRIZE MEDAL WAS AWARDED in 1851, are prepared to supply any quantity of the very best PORTLAND CEMENT, manufactured by them for all the purposes to which Cement is applicable. Orders received at Great Scotland-yard and at the Works.

GEO. & THOS. EARLE, CEMENT MANUFACTURERS, HULL.—Light, Dark, and Portland Cements equal to any made. Manufacturers also, and Dealers in Plaster, Paris White, Mastic, Hair, Lias Lime Laths, Slates, and Slate Slabs, Fire-bricks, Grindstones, Chesnut Chimney-tops, ditto Vases, Ridging, &c. Paints, Stucco, &c. Marble Merchants and Importers of Pozzolano.

JOHNS and CO.'S PATENT PERMANENT STUCCO WASH (perfectly non-absorbent), STUCCO, CEMENT, STUCCO PAINT.—CLARK and BENGOUGH, Manufacturers, Grand Surrey Canal Bridge, Old Kent-road. Office, 4, George-yard, Lombard-street.

PORTLAND and ROMAN CEMENT.
PLASTER of PARIS
Manufactured by J. M. BLASHFIELD, at Millwall, Isle of Dogs,
Warehouse, No. 1, Wharf, Paddington-basin.

CHARLES RICHARDSON,
3 & 6, SOUTH-WHARF, PADDINGTON BASIN.
COWLEY and KENT STOCKS.
PORTLAND, ROMAN, AND OTHER CEMENTS.
TAMWORTH GLAZED SEWAGE PIPES.
BLUE VITRIFIED BRICKS, COPINGS, PIPES, &c.

3 & 6, South Wharf, Paddington.

NOTICE.
CHARLES RICHARDSON takes the earliest opportunity of informing Engineers, Architects, Contractors, and others, that he is now being supplied GREAVES'S BLUE LIAS LIME per the Great Western Railway from Harbury to Bull's bridge and Paddington, from whence it can be delivered alongside any part of the river Thames, canals, or railway stations in London the day after it is burnt and ground, in any quantity, and at a great reduction in price.

All applications for prices and terms will meet with prompt attention.

N.B. Please observe the lime is ground at the works, not in London.

BLUE LIAS LIME.—Messrs. GREAVES and KIRSHAW having completed their Works on the Birmingham and Oxford Line of the Great Western Railway, at Harbury, are now prepared to supply LUMP and GROUND LIME of the best quality, direct from the kilns, to all the Stations on the Great Western Railway, Grand Junction Line, Portland, Bath, and Lias Cement.—Works, at Harbury, Stockton, and Wilmcote.—Office, at Warwick.

ATKINSON'S CEMENT, so long known and esteemed in London for plastering purposes, is a quick-setting Cement, that requires no coloring. Sold exclusively by JOHN BAZLEY WHITE and BROTHERS Millbank-street, Westminster; and Seel-street, Liverpool.

KEENE'S and PARIAN CEMENTS and FRENCH PLASTER, for internal uses. These well-known hard Stuccoes dry quickly, and can be painted upon within a few days.—Made and sold by JOHN BAZLEY WHITE and BROTHERS, Millbank-street, Westminster.

HUBBUCK'S PATENT WHITE ZINC PAINT,
The Permanent White of the Ancient Artist.

HUBBUCK and SON, the Original Manufacturers, are enabled, by their process, which is patented, to supply Pure White Zinc Paint at the price of White Lead. Neither heat nor tropical climes act upon it. It is entirely free from any poisonous or pernicious property. Those direful maladies paralysis and painters' colic, will be altogether avoided. The Powdered White Zinc may be had for grinding in Oil, and where it is used with Size, Varnish, &c. To prevent the prejudices existing against Zinc Paint, which the admirable article must otherwise produce, it is now sold by the Wholesale Paint dealers in Original Packages, each cask stamped, HUBBUCK—LONDON PATENT. And when so marked, the quality is guaranteed. THOMAS HUBBUCK and SON, the Original Wholesale Manufacturers, Paint and Varnish Works, opposite the London Docks, London.

N.B. OLD ZINC AND ZINC CUTTINGS BOUGHT TO ANY EXTENT FOR REFINING.

ARTIFICIAL HYDRAULIC or PORTLAND CEMENT combines the valuable qualities of the natural Cements with the additional advantage that it greatly excels them in its cementitious properties; that it is not affected by frost, and does not vegetate in damp situations. Accounts of COMPARATIVE EXPERIMENTS on the strength of this and other Cements read at the Institute of Civil Engineers, to be obtained from the Makers, JOHN BAZLEY WHITE, and BROTHERS, Millbank-street, Westminster, who prepare one quality only of Portland Cement.

PORTLAND CEMENT WORKS, NORTHFLEET, Kent.—KNIGHT, BEVAN, and STURGE, Manufacturers only of first-class quality, for the home and foreign trade. Portland Cement is manufactured at these works with especial reference to its destination, whether for plaster-work, brick work, blocks for breakwater or metal work, or otherwise.—London Wharf Belvedere-road, Lambeth.

COLES, SHADBOLT, and CO. CEMENT and PLASTER MANUFACTURERS, LIME BURNERS,
Brick, Tile, Drain-pipe, Hair Lath, and Fire Goods Merchants
ST. JAMES'S and THORNHILL WHARFS,
Caledonian-road, London.

CHADWICK'S CEMENTS.—To Railway and Dock Directors, Gas and Waterworks Companies, Coal-Mine Proprietors, Builders, Contractors &c.—JOHN CHADWICK, Manufacturer of the Patent Lithic, Roman, and Portland Cements, is prepared to enter into contracts for supply of the above brands as that may favour him with their orders. The advantages to be derived from the above Cements, manufactured by J. C. over all others, are those of extraordinary hydraulic properties.—Samples and references may be had on application either at the Works, Ashton New-road; or the Warehouse, 5, Broomstreet, Shude-hill, Manchester.

NOTICE.
SOUTHAM HYDRAULIC BLUE LIAS LIME.
WILLIAM OLDHAM begs to inform those parties requiring genuine Hydraulic Blue Lias Lime, that he is prepared to deliver the best quality of ground and lump, into boats, at the Works.—Address, WILLIAM OLDHAM, Blue Lias Lime and Cement Works, Southam.

GREY STONE LIME WHARFS, 12, UPPER GROUND-STREET, Blackfriars (Surrey side), 7, NORTH WHARF ROAD, Paddington.
WILLIAM PETERS begs to inform the trade he is in a position to supply the best GREY STONE LIME in any quantities from the above wharfs, or per barge direct from the kilns.
Lerre Grey Stone, or Grey Chalk, free on board at Works, 1s. 9d. per ton.
Small ditto, ditto, 6d. per ton.
Barges loaded in a few minutes.
Woodham-hall Grey Stone Lime Works, on the Medway, near Rochester.

BLUE LIAS LIME.—CHAS. NELSON begs to offer to consumers a supply of Blue Lias lime direct from his Quarries in Warwickshire, the quality of which has been tested by several of the largest building firms in the metropolis and approved by them; and those who have favoured C. N. with their patronage during the last three years have always expressed themselves satisfied with his system of weighing or measuring the lime. When the lime is delivered by boat, the master has instructions to produce (on demand) the canal wagger's pass, by which the purchaser may know the weight delivered.—Orders addressed to the London Depôt, 16, South Wharf, Paddington. J. D. BLYTH, Sole Agent, will have immediate attention.—Quarries and Manufactories, Stockton, near Southam, Warwickshire.

BRICKS.—Malm Cutters, Yellow and Pale Seconds, Paviors, and Pickings, of good and sound quality, constantly on sale at H. DODD'S, Brick-fields, which are only a quarter of an hour's walk from the City. H. D. earnestly requests purchasers to favour him with a visit, in order to inspect his stock, and to judge for themselves.

Malm Place, half washed Stocks, and Place Bricks, also on sale. These bricks are sound, well burnt, and unusually free from defects; a very large proportion of the stock being suitable for external facing.

Apply to HENRY DODD and CO. at the Counting-house, Hoxton Brickfield, Grange-walk, near the Regent's Canal Branch, Road-ma—

N.B Light-coloured Pit Sand of a proved quality constantly on sale, upon reasonable terms. This Sand, from its not containing any saline matter, is acknowledged to be preferable to river sand.

BRICKS.—Mr. Rydon having made more bricks than he requires for the builders on his estate, Highbury New-park, would be willing to enter into arrangements with builders and others for supplying the choicest STOCK and RED BRICKS upon advantageous terms.—For particulars, apply at the Estate Office, Dell's Farm, Stoke Newington Green.

THE BEST HERTFORDSHIRE MALM SECONDS;
THE BEST WHITE SUFFOLK and RED FACINGS;
WHITE SUFFOLK PERFORATED BRICKS;
DEEP-RED RUBBER-FACED BRICKS
Also COWLEY and KENT STOCKS, in any quantities
J. EASTWOOD and SONS, Belvidere-road, Lambeth; and Surrey-canal-bridge, Old Kent-road, Surrey.
N.B.—Lime, Cement, Slates, Fire-bricks, &c. and all kinds of Building Goods.

BRICK-FIELDS, QUEEN'S-ROAD, PECKHAM, SURREY
(Within a short distance of the five bridges).
THE BEST MALM-CUTTERS, SECONDS, PICKINGS, and PAVIORS, in any quantity.
Also, STOCKS, of FIRST QUALITY.
J. EASTWOOD and SONS, Belvidere-road, Lambeth.

BRICKS of all kinds (clamp-burnt or kiln-burnt), Lime, Chalk, Chalk Rubbish for brick-making, Flints for building and pottery work, Pompry Loam, Whiting, Whiting Sand for asphaltic, Land Drain Pipes, Patent Drain Pipes. Gas Soil for brick-making, &c. &c. sent by barge from Messrs. MEESON and CO.'S works at Grays, Essex, to any part of the Thames, the various canals, the river Lea, &c. or by rail to any station on the London and Southend and Eastern Counties lines or any railway connected with them. Vessels of 300 tons can load along the wharves as they lie. At MEESON and CO.'S wharf and kilns, Bow-bridge, Stratford, Essex, the above-named articles can also be procured, as well as all kinds of fire goods both Welsh and Newcastle. Fire-clay, Flare-burnt Lime, and Marble and Temper Lime; and here lime is packed in hogsheads, casks, jars, &c. for exportation.
General Office—No. 12, GEORGE-YARD, LOMBARD-STREET.
Letters addressed to Grays Essex, will meet with immediate attention.

BRICKS.—A quantity of ARCH BRICKS, well made and hard burnt, for SEWERAGE PURPOSES, are now open to public inspection. They are moulded so as to work in with the ordinary sized bricks, and are capable of forming arches of from 4 feet to 8 feet in diameter. A saving of at least 10s. per 1,000 in cement and labour can be effected by their use,—while a single ring of brickwork will be as strong and more solid than a double course constructed in the usual way. Price 27s. per 1,000 cash on the ground. Malms, stocks, seconds, and a quantity of good place, at low prices. Agricultural draining-tiles of very superior make and hardness.—Address, Mr. LEVETT, Railway Brick and Tile Works, Ilford, Essex.—The works adjoin the goods' station of the Eastern Counties Railway, at Brentwood, where all materials are loaded into the trucks and forwarded thence to any station on the Eastern Counties lines.

UPHALL BRICKFIELD, ILFORD, Essex—WILLIAM HILL, late Henry Kilvington, respectfully invites Contractors, Shippers, &c. to inspect his superior STOCK of the undermentioned BRICKS, which can be purchased at the lowest market price, and can be put alongside any wharf in the Thames, or on board any vessel, viz.:—Malm Cutters, Seconds, Pickings and Malm Stocks, Paviours, Shippers, best Washed Stocks, Stocks, little second quality.
N.B. Orders received at 203, Whitechapel-road.

FIRE-BRICKS, LUMPS, TILES, &c. of every description, at HONDURAS WHARF, 74, Bankside, London.—JOHN NEWTON and CO. (seventeen years with James Newton, of Falcon Dock, Bankside, Fire-brick and Tile Merchant) GIVE NOTICE that the OLD ESTABLISHED BUSINESS and PREMISES carried on so many years by WM. WARD and CO. and solicit the patronage of Consumers, Gas Companies, Engineers, Builders, &c. Ramsay's superior Newcastle Fire-bricks, Retorts, Fire-clay, &c.; also Sanitary-pipes, Chimney-tops, Dutch Clinkers, &c. all at the lowest prices. Shipping orders executed with despatch

FOR
FIRE-BRICKS and GAS RETORTS
apply to

PEAKE'S TERRO-METALLIC TILES, PIPES, &c.—Notice is hereby most respectfully given, that the LONDON DEPOT for this WARE is REMOVED to No. 30, WHARF, Macclesfield-street North, City-road Basin. Secondly, that the trade term, "TERRO-METALLIC," is the exclusive right of the Proprietor; and, thirdly, that the "FLAVORS OF THE JURIES," page 381, of the Great Exhibition, rank the Manufactories of our locality as "The Tileries," Tunstall, Staffordshire, as the first of the kind in the world.

PATENT TERRA-COTTA. Tracery for Parapets and Terraces, Mullions, Pinnacles, Moulded Bricks, Coats of Arms, Crosses, Label Mouldings, Friezes, Trusses, Vases, Balusters, Capitals and Bases of Columns, Various Facing Bricks, Coping, Kitchener and other Stinks, Chimney Shafts and Tops, and numerous other Articles, manufactured and by J. M. BLASHFIELD, in Patent imperishable Terra-Cotta, at Millwall, Isle of Dogs; and sold at No. 1, Wharf, Praed-street, Paddington-basin.

WINDOW BLINDS.—FULLER, BROTHERS, Manufacturers of every kind of Inside and Outside WINDOW BLINDS, and Importers of the best materials and workmanship, at the lowest possible prices. Builders and the Trade supplied. A List forwarded on application.—29, Charlotte-street, Blackfriars-road; and at Sydney, New South Wales.

WINDOW BLINDS.—TYLOR & PAGE, Window Blind Manufacturers, 104, New Bond-street, and 3, Queen-street, Cheapside, London, submit the following PRICES of WINDOW BLINDS, which they can recommend as being made in the best manner:—Venetian blinds, per square foot, 9d.; best holland blinds, on rollers, 6d.; best ditto, on spring rollers, 9d.; gauze wire blinds, in mahogany frames, 2s.; perforated zinc blinds, in ditto, 1s. 10d.; outside blinds of striped cloth, 2s. Transparent blinds in great variety. Engravings, with prices and discounts to builders and the trade forwarded on application, post free.

MR. W. S. WOODIN'S OLIO of ODDITIES, with new costumes and various novelties, vocal and characteristic, EVERY EVENING (saturday excepted), at EIGHT. A Morning Performance on SATURDAY, at THREE. Private boxes and stalls may be secured, without extra charge, at the Box-office, Polygraphic Hall, King William-street, Charing-cross.

ROYAL POLYTECHNIC.—Patron, H.R.H. Prince Albert.—This Institution has for eighteen years continued to instruct and amuse the public.—The Christmas Lectures and Entertainments provided this year are on the most liberal scale.—1st. Entire New Lecture, by J. H. Pepper, Esq. "On Optical Illusions," illustrated with all the apparatus for which this Institution is so justly celebrated, every Tuesday and Friday, at Three and Eight. 2nd. The Lecture by J. H. Pepper, Esq. "On Fireworks," every Wednesday, at a Quarter-past Four and Quarter-past Nine, with increased illustrations by Mr. Darby; and in the evening, exhibition of "The British Bouquet," displaying in magnificent fireworks the portraits of her Majesty, Prince Albert, and the Royal Family.—3rd. Exhibition of the ingenious Juvenile Mechanics. Model Theatre, displaying every scenic movement, with novel machinery invented by Mr Freeman, who will illustrate his new system with the drama of "One o'Clock; or the Knight and the Wood Demon," accompanied with the whole of the original music by the Misses Greenhead; also the Ghost Scene from "The Corsican Brothers," and the mechanism of the Rising of the Ghost. Daily at Half-past Two and Half-past Seven. 4th. Mr Ingram will exhibit his astonishing Conjuring Tricks and Comic Delusions, every Monday, Thursday, and Saturday, at Three and Eight. 5th. An entirely new and beautiful Series of Views, by Mr. Glare, illustrating "The Traveller's Portfolio; or, Visits to Many Lands." Daily.—See Programme.—6th. Gratuitous Distribution, next Thursday (being New Year's day) from Twelve to Five and Seven to Seven, of thousands of beautiful ornaments, and hundreds of Mappin's pocket-knives, from the Great Christmas Tree. 7th. A second and most costly Series of Dissolving Views, designed by Mr Newman, and chiefly executed by Mr. Hine, illustrating "Ye Pitifull and Divertynge History of ye Blew Beard," with an original humorous description by Leicester Buckingham, Esq. late of the Panopticon. Admission to the whole, 1s.; Children and Schools, half-price.

TO WATER COMPANIES AND PLUMBERS

HIGH-PRESSURE COCKS & CLOSETS

The Health of Towns Commissioners having recommended the adoption of the high-pressure principle in all towns, WARNER'S HIGH-PRESSURE COCK is recommended as a Cock free from leakage, and applicable for all purposes and situations. Patent Closets and Basins with supply-valve for attaching direct to main pipes without a cistern, cocks, or wire

LEAD, IRON, and TIN PIPE

JOHN WARNER and SONS, Manufacturers, 8, Crescent, Jewin-street London

PRIZE MEDAL, CLASS 2.

HIGH-PRESSURE VALVE COCKS.—LAMBERT'S PATENT.

These Cocks have, during the last five years, been extensively and most successfully used in many Towns under continuous high pressure, varying from 100 to 350 feet; their efficiency and durability is by experience established.

The Equilibrium Ball-valve is simple and certain in its action and is cheaper than the common Cocks now in use.

Enamelled iron, self-acting, and other closets, upon economic arrangements, suitable for public buildings, cottages, asylums, &c.

THOMAS LAMBERT and SON,

Brass and Iron Founders, Short-street, New-cut, Lambeth.

TO CAPITALISTS, BUILDERS, and BRICKMAKERS.—TO BE SOLD, by private contract, a FIVE HORSE POWER STEAM-ENGINE, together with other machinery used for the purpose of brickmaking. Also, TO BE LET, a valuable BRICKFIELD, at a rent and royalty, situate at Deptford, Kent, near to estates on which buildings are being rapidly erected. For further particulars, apply to Messrs. WIRE and CHILD, Solicitors, 9, St. Swithin's-lane, City.

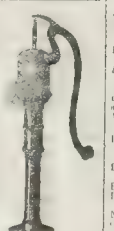
CONTRACTORS' STEAM-ENGINES.—TO BE LET, on HIRE, or for SALE, several NEW and SECOND HAND STEAM-ENGINES, of various powers, suitable for contractors' work generally. Apply to Messrs. MEDWIN and HALL, Engineers, Surrey Iron Works, Blackfriars-road, where they may be seen.

PORTABLE STEAM-ENGINES and PUMPS kept in Stock for Hire at reduced Prices. R. RICHARDS and CO. Pump Manufacturers and Engineers, Upper Ground-street, Blackfriars-bridge (Surrey Side).

STEAM-ENGINES (Portable), to WORK WITHOUT MASONRY or FIXING, FOR SALE, or TO BE LET ON HIRE.—Messrs. MEDWIN and HALL have a large STOCK of these ENGINES, from 4-horse to 30-horse power, which have been successfully used by contractors and manufacturers for several years. They may be rented for any time required or purchased.—Apply at the Surrey Iron Works, 92, Blackfriars-road, where they may be seen.

WARNER'S PATENT VIBRATING STANDARD PUMPS. PATENT CAST-IRON PUMPS, for the use of farms, cottages, manure-tanks, and wells of a depth not exceeding 30 feet.

Diameter of Barrel.	Length of Barrel.		£ s. d.
2½ in.	short	1 ft. 7 in.	Fitted for lead,	1 10 0
2½ „	long	3 3	gutta percha	1 14 0
3 „	ditto	3 6	or cast iron	2 0 0
3 „	ditto	3 6	flanged pipe,	2 12 0
4 „	ditto	3 6	as required.	3 3 0
2½ „	short, with 15 feet of lead pipe attached, ready for fixing.....			2 14 0
2½ in.	long ditto ditto			2 18 0



The short barrel Pump is very convenient for fixing in situations of limited height and space, for the supply of coppers and sinks in washhouses with soft water from under ground tanks, or in hot, forcing, and plant houses; they may be fixed, when desired, under the stage.—May be obtained of any Ironmonger or Plumber in town or country, at the above prices, or of the Patentees and Manufacturers, JOHN WARNER and SONS, No. 8, Crescent, Jewin-street, London.—Every description of Machinery for Raising Water, by means of wheels, rams, deep well pumps, &c. Also, Fire and Garden Engines, &c. &c.—Engravings sent on application.

R. RICHARDS and CO. PUMP MANUFACTURERS and ENGINEERS.

Pumps in Wrought and Cast Iron and Brass, bored by machinery, and fitted in the best possible manner, suitable for excavators, roads, brickmakers, farms, gardens, stables, liquid manure, ships' forges, wells, &c. adapted for any depth. Hydraulic Pumps for deep wells

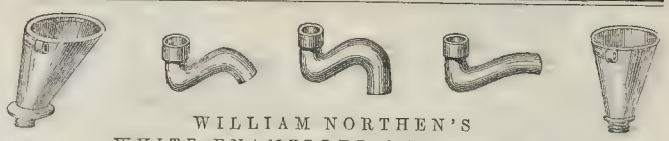
PUMPS ON HIRE.

Pumps of any size, single or double barrel, as the double 12-in. diameter kept ready for use at reduced prices

N.B. The above can be worked either by hand, horse, or engine power.

Iron Pails 38s. per doz. painted.
Ditto ..... 48s. per doz. galvanized

Upper Ground-street, Blackfriars Bridge, Surrey Side.



WILLIAM NORTHEN'S

WHITE ENAMELLED STONEWARE,

UNION POTTERY, 14, VAUXHALL-WALK, LAMBETH, LONDON.

W. N. solicits an inspection of his IMPROVED WHITE ENAMELLED STONEWARE CLOSET-PANS, being an entire new description of stoneware, perfectly vitrified and highly glazed, far surpassing anything of the kind yet offered to the public.

SAME PRICE AS BROWN STONEWARE—Closet and Trap, 5s. 6d.; Closet, 3s. 6d.; Trap, 2s.

WATER-CLOSET, WITH APPARATUS COMPLETE, for 13s. 6d.

DOULTON & WATTS,

LAMBETH POTTERY, LONDON.

DOULTON'S NEW ENAMELLED CLOSET-PAN, REGISTERED,

AND

LAMBERT'S PATENT HIGH-PRESSURE VALVE-COCK,

With Handle, Lever, and Weight, ready for fixing,

Making the most COMPLETE, DURABLE, and EFFICIENT APPARATUS, as well as by far the CHEAPEST yet manufactured.

GREAT REDUCTION IN PRICES

OF WHOLE OR HALF-SOCKET GLAZED STONEWARE DRAIN-PIPES.

AN ILLUSTRATED LIST OF PRICES SENT FREE ON APPLICATION TO

HENRY MILLICHAMP,

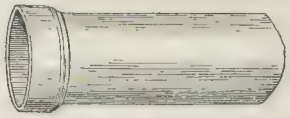
MANUFACTURER OF EVERY KIND OF STONEWARE DRAIN-PIPES, BENDS, JUNCTIONS, &c. &c.

BY PATENTED MACHINERY, AND UPON THE MOST APPROVED PRINCIPLE.

MANUFACTORIES—65, PRINCE'S-STREET, LAMBETH, and BRUNTON'S WHARF POTTERIES, COMMERCIAL-ROAD, LIMEHOUSE.

TERRA-COTTA CHIMNEY-POTS OF VARIOUS PATTERNS AND SIZES. ALSO RED EARTHENWARE DRAIN-PIPES, AT GREATLY REDUCED PRICES.

THE FARNLEY IRON COMPANY, WORTLEY, near LEEDS,



Manufacturers of FIRE BRICKS, TILES, QUARRIES, &c., White Building Bricks, Fire-clay CHIMNEY-TOPS, in Norman, Egyptian, Saxon, Tudor, Grecian, Gothic, and Elizabethan styles.

TERRA COTTA

Fountains, Vases, Pedestals, Capitals, Trusses, Brackets, &c., in great variety, which for beauty and elegance of design are unequalled. The designs of Architects modelled with the greatest exactness.

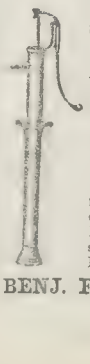
Also of PATENT GLAZED STONEWARE DRAIN PIPES, JUNCTIONS, BENDS, &c., well adapted for pressure, being made extra pressed under "Spencer's Patent." Superior White Glazed CLOSET PANS, TRAPS, &c.

The Works of the Company are situated in the immediate vicinity of the well known and at WORTLEY FIRE-CLAY, and their manufacture of BRICKS for the use of Forges, Gas Companies, Foundries, Potteries and Gas-works, is confidently recommended for all purposes where extreme heat is required. Their GROUND CLAY is also particularly adapted for the manufacture of CRUCIBLES, MELTING POTS, &c.

OFFICES AND STORES:

LONDON	No. 14 York-chambers York-buildings, Adelphi; No. 16, Bath-place, New-road; St. Ann's Wharf, Limehouse.
BIRMINGHAM..	No. 7, Easy-row; also 22, Cambridge-street, and Lawley-street.
BRISTOL	No. 14, Nelson-street.
LIVERPOOL	No. 9, Angel-street, 83, Renshaw-street, and 3, Stanley-wharf, Leeds-street.
NEWCASTLE..	W. B. Wilkinson and Co. Prudhoe-street.
GRIMSBY.....	P. G. Skipsworth.
MANCHESTER..	No. 16, Travis-street, and 23, 24, and 25, Birmingham-street, London-road.
HULL.....	No. 60, Queen-street, and Wellington-street.
BRADFORD	Hurston-road.
LEEDS	Wellington-street, adjoining the Midland Station; and Shipping-wharf, Victoria-works, Hunslet.
SUNDERLAND..	W. B. Wilkinson and Co. Queen-street.
WARE.....	G. E. Kins, Stone Merchant.

Where Drawings, with Prices, &c. may be obtained.



ON SALE AND HIRE, SINGLE AND DOUBLE PUMPS IN WROUGHT IRON

TO ANY DEPTH,

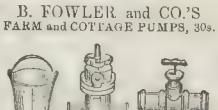
FOR BUILDERS, CONTRACTORS, EXCAVATORS, WELL-SINKERS, &c.

Sizes, from 3-inch to 15-inch barrels.

N.B. The Largest Stock in London for hand or steam-power, and for every possible purpose for which a Pump is required upon the largest or smallest scale in Wrought or Cast Iron, Copper, or Brass.

B. FOWLER and CO.'S

FARM and COTTAGE PUMPS, 30s.



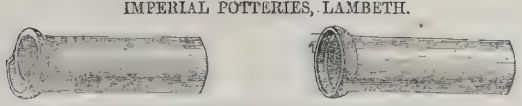
All sizes and descriptions of Pump in various sizes, or ornamental patterns, for public uses, for deep or shallow wells. Brass Lift Pumps, Engine Frames, Hand-gear Cocks, Gun-metal Brass Work, Wrought Pails and Iron Lead Buckets, Sewer Lamps, Sluice and Hot-Water Valves, at lowest prices.

N.B. Every attention paid to country, export, and trade orders. Experienced workmen sent to any part of the kingdom, to FIX PUMP WORKS, HOT-WATER, STEAM, BATH, or DRYING APPARATUS.

BENJ. FOWLER & CO. WHITEFRIARS-STREET, FLEET-ST.

GREAT REDUCTION IN GLAZED STONEWARE PIPES.

STEPHEN GREEN,
IMPERIAL POTTERIES, LAMBETH.



S. G. wishes to call attention to his WHOLE and HALF-SOCKET PIPES, made on the principle of PILBROW'S IMPROVED REBATED SOCKET-END, which fully secures a joint free from obstructions, and meets the demand for removing Pipes at any point.

5s. 6d. each; if fitted with PATENT AIR-TIGHT VALVES, 1s. 6d. each extra.

Also to his IMPROVED REGISTERED CLOSET PAN, with an impervious White Glaze inside, and formed to insure a Flush of Water over the entire Internal Surface. Made with or without STEPHEN GREEN'S PATENT AIR-TIGHT VALVE on the top of the Trap.

N.B. Prospectuses, with Prices and Terms, forwarded free, on application. Detailed Prospectuses of STEPHEN GREEN'S PATENT SELF-ACTING FLUSHING CLOSET, complete, with Seat and Riser, &c.

GREAT REDUCTION IN PRICE OF DOULTON'S DRAIN-PIPES.

HENRY DOULTON AND CO.

Beg to inform Builders, Contractors, and others, that they have made a considerable REDUCTION in the PRICES of their

GLAZED STONEWARE DRAIN-PIPES,

Drawings and Prices will be forwarded on application.

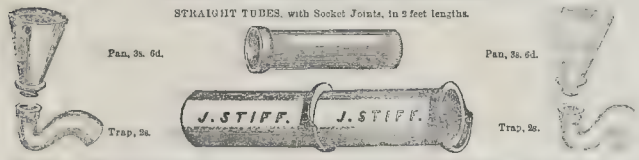
MANUFACTORIES: HIGH-STREET, LAMBETH, LONDON; ROWLEY REGIS, STAFFORDSHIRE and SMETHWICK, near BIRMINGHAM.
OFFICES: HIGH-STREET, LAMBETH, LONDON.

GREAT REDUCTION IN PRICES.

JAMES STIFF,

MANUFACTURER OF GLAZED STONEWARE DRAIN PIPES, WATER-CLOSET PANS, SINK TRAPS, INVERT BLOCKS, AND ALL OTHER ARTICLES SUITABLE FOR DRAINAGE AND OTHER PURPOSES,
LONDON POTTERY, HIGH-STREET, LAMBETH, LONDON.

STRAIGHT TUBES, with Socket Joints, in 2 feet lengths.



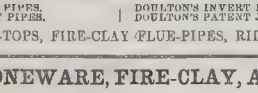
HALF-SOCKET PIPES same prices as whole Sockets, by the use of which Drains may be readily examined, and Junctions INSERTED, IN THE EVENT OF ACQUIRING FURTHER CONNECTIONS.

May be had also at the following wharfs, viz.:—
Messrs. GLADDISH'S, Pedlar's-acre, Westminster-bridge-road; City-road Wharf, City-basin; Dockhead-wharf, Bermondsey; Dartrey-wharf, Chelsea; Pratt-wharf, King's-road, Camden-town.
Messrs. CHILDS & SCOBELL, and CO'S, St. James's and Thornhill Wharfs, Caledonian-road, Pentonville.
Messrs. RITCHIE and SMITH'S, Ratcliff-cross Wharf, Greenwich.
Mr. LAVERS'S, Dowgate-wharf, Canal-road, Hoxton.

Drawings, with Prices, will be forwarded free, on application.

JOHN DOULTON, BROTHERS, AND CO.

LIVERPOOL POTTERY,
ST. HELEN'S,
STORES—70, SOHO-STREET, LIVERPOOL.

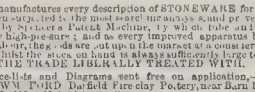


MANUFACTURERS OF

DOULTON'S STONE-WARE PIPES.
DOULTON'S HALF-SOCKET PIPES.
DOULTON'S INVERT BLOCKS FOR SEWER BOTTOMS
DOULTON'S PATENT JUNCTION BLOCKS.

TERRA-COTTA CHIMNEY-TOPS, FIRE-CLAY FLUE-PIPES, RIDGE & PAVING TILES, &c.

SALT-GLAZED STONEWARE, FIRE-CLAY, AND TERRA-COTTA WORKS,



NEAR BARNSLEY, YORKSHIRE.

The Proprietor, E. B. BEAUMONT, manufactures every description of STONEWARE for drainage, building, sanitary purposes, and fancy ware, in clays which have been proved to the most searching analysis, and pronounced by scientific men of the highest eminence to be of the most durable and indestructible quality. The pipes are wrought by Stephen's Patent Machine, by which tube and socket are cut, without a manufactured joint, and rendered the more compact by high pressure; and as every improved apparatus has been made available to secure the highest excellence with the greatest economy of labour, the wares are put upon the market at a considerable reduction from the prices of inferior articles for others at all assimilating in quality, whilst the stock on hand is always sufficiently large to provide for works of the greatest magnitude.

THE TRADE LIBERALLY TREATED WITH.

Price-lists and Diagrams sent free on application,—
At the WORKS.....To Mr. WM. FORD Darfield Fire-clay Pottery, near Barnsley.
In LIVERPOOL.....To Mr JOHN SUDALL, 8, Shaw's-row.
In MANCHESTER.....To Mr. R. CONSTERDINE, Hunt's-bank.
In GLOUCESTER.....To D. S. WILKINS, Westgate Wharf, Gloucester.
In LONDON.....To Mr. J. D. JONES, 27, Bucklersbury; and Goods Depot, No. 4 Warehouse, King's cross (Great Northern Railway).

REDUCTION IN PRICES.

PATENT DRAIN-PIPES, UNGLAZED,

manufactured by ARTHUR C. FRANCIS and CO. Ongar, Essex. Sold by them, and by FRANCIS, BROTHERS, Near-Elms, London, and at all their Warehouses.

PRICES.

3 inch bore, in 2 ft. 6 in. lengths, at				2½d. per foot.
4	"	"	"	3½d. "
6	"	"	"	5d. "
9	"	"	"	9d. "
12	"	"	"	1s. 5d. "
15	"	"	"	2s. 6d. "

These pipes are made under steam pressure, and burnt to great hardness, and are capable of bearing nearly double the hydraulic pressure of ordinary-glazed pipes. Its porous texture rendering it is overcome in this manufacture, and it is well known that good earthenware, UNGLAZED, as the oldest internal discovered in a perfect state in Rome (Nineveh, &c.

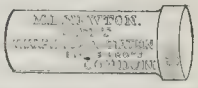
WATER-CLOSET,

WITH
APPARATUS COMPLETE, for 12s. 6d.

CONSISTING OF
STAFFORDSHIRE BASIN AND TRAP,
Enamelled White Inside,
BRASS VALVE, &c.
MANUFACTURED AND SOLD BY
W. PATTEN, PATENTEE,
OLD FISH-STREET, near SAINT PAUL'S,
LONDON.

FOR

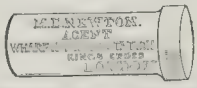
J. CLIFF'S SALT-GLAZED DRAIN-PIPES, apply to



Present rate of discount the lowest in the trade.
JOSEPH CLIFF makes the lightest ware and strongest Pipe in the London market.

FOR

J. CLIFF'S IMPROVED INVERT SEWER BLOCK, apply to



GREAT REDUCTION in the PRICE of STONEWARE POTTERY from this date.

VICTORIA POTTERY LEIGH, near SOUTHEND, Location Establishment, Falcon Wharf, Blackfriars. DAVID MOUNTAGUE, Manufacturer of every article of Lambeth POTTERY, having had further reduced their prices, begs to offer to public notice and others, STONEWARE PIPES &c. &c. on the most advantageous terms. The new lists of prices will be forwarded on application as above. Feb. 11, 1856

TO WATER COMPANIES, LOCAL BOARDS OF HEALTH, AND OTHERS.

LAMBERT'S NEW VALVE COCK,

For Preventing Waste of Water.

It is so constructed that it cannot be left open accidentally or wilfully, and further it will at each action deliver a specific quantity, and under the same pressure this quantity will never vary.

It is peculiarly adapted for closets, self-acting or otherwise.

Price, complete for high pressure, 10s 6d. each.
" low " 12s. 6d. "

THOS LAMBERT and SON, Patentees and Manufacturers, Founders and Machinists, Short-street, New-cut, Lambeth.

TO ARCHITECTS and BUILDERS.—

T. TRELOAR, 42, Ludgate-hill, Manufacturer, supplies Cocoa-nut Fibre Matting, Door-mats, Hassocks, &c. of the best quality, on the most reasonable terms.—Warehouse, 42, Ludgate-hill.

DURABILITY of GUTTA PERCHA

TUBING.—Many inquiries having been made as to the durability of Gutta Percha Tubing, the Gutta Percha Company have pleasure in giving publicity to the following letter:—FROM SIR RAYMOND JARVIS, Bart., YELVERTON, ISLE of WIGHT, —Second Testimonial.—"March 10th, 1852.—In reply to your letter, received this morning, respecting the Gutta Percha Tubing for Pump Service, I can state, with much satisfaction, it answers perfectly. Many Builders, and other persons, have lately examined it, and there is not the least apparent difference since the first laying down, now several years, and I am informed that it is to be adopted generally in the houses that are being erected here."

N.B. From this Testimonial it will be seen that the CORROSIVE WATER of the ISLE of WIGHT has no effect on Gutta Percha Tubing.

THE GUTTA PERCHA COMPANY, PATENTEES,
18, WHARF-ROAD, CITY-ROAD, LONDON.

HANCOCK'S PATENT VULCANIZED

INDIA-RUBBER TUBING, HOSE-PIPES, WASHERS, ENGINE-PACKING, both round and flat, and SOCKET-RINGS, for Hot water-pipes. Vulcanized Rubber Door springs, and Solid Round Rubber Cord of all sizes of any length. Billiard Cushions and Rubber Strips cut to any pattern for bagatelle tables.

Diving-dresses of superior make, and Improved Vulcanized Rubber Supply-pipes for ditto.

Vulcanized Rubber in sheets, from three to four feet wide, and of any thickness. Air-beds, Pillows, and Cushions inflating Portable Baths, Invalid Cushions, and Articles of this kind made to any pattern to order.

N.B. All communications and orders punctually attended to, addressed to the Manufactory, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

SALES BY AUCTION.

TOWER.—SALE of STORES.— By order of the Secretary of State for War.—TO BE SOLD by PUBLIC AUCTION, in the TOWER on WEDNESDAY, DECEMBER 31, 1856, at HALF-PAST TEN o'clock, in the Forenoon precisely, the following Stores, lying at the Ordnance Land Office, viz.:—Accoutrements, Clothing, Cocks, Sheers and Rice Barrels, Hair Beds and Bolsters, Tin Canteens, Copper Powder Measures & Funnels, Anchors, & Screws, and Miscellaneous Articles.—May be viewed at the Victoria Docks, from TEN to FOUR o'clock on the Days previous to the Sale, and Catalogues had at the War Department, Pall-mall, the Tower; Victoria Docks, and Royal Arsenal, Woolwich, on payment of Sixpence each, which will be allowed to purchasers. No person will be admitted to view the lots, or into the Sale-room, without a catalogue.

VALUABLE FREEHOLD LAND, EAST BARNET.—TO BE SOLD by PRIVATE CONTRACT, about THIRTY ACRES (in separate field-lots) of FREEHOLD BUILDING LAND, finely situate in the vicinity of the Great Northern Railway station, and which is admirable in respect for building purposes, having extended frontages upon the high road on each side of the railway, and also upon newly-formed roads. The situation is noted for its salubrity, scenery, and facility of communication with London.—For further particulars, apply at Mr. THYNNE'S Offices, 11, Great George-street, Westminster.

FREEHOLD LAND WANTED, about Fifty Acres, within an hour's ride of London by railway, suitable for the ERECTION of a LUNATIC ASYLUM, and contiguous to a high road.—Particulars stating the locality, soil, quantity of land, and price, to be sent to Mr. BUNNING, Architect, Guildhall, London, on or before the 1st of JANUARY 1857.

ELIGIBLE OPPORTUNITY for INVESTMENT or OCCUPATION.—ROUPELL PARK ESTATE, Palace-road, Streatham-hill, on a gravelly soil, within two miles of the Crystal Palace and five miles of town.—TO BE LET, furnished or unfurnished, or the LEASE TO BE SOLD, of a capital FAMILY MANSION, built and fitted by the freeholder in the most superior manner, regardless of expense; containing nine bed-rooms, dressing-room, morning-room, lofty room, nursery, elegant drawing-room, dining-room, and library, with all the usual offices appertaining to a first-class mansion. Attached is a good coach-house and stable, with lofts and rooms over. The whole stands in a large walled garden, with carriage-drive to the front entrance. From its elevated position, the house commands uninterrupted views of the park and surrounding country. The neighbourhood is select. There are three churches in immediate vicinity, and the station to the City, West end, or South Coast Railway is within half-a-mile of the house. The estate is well-lighted with gas, has excellent drainage, and a plentiful supply of pure water. The lease of ninety years may be purchased at a ground-rent to pay the purchaser 7 per cent.; and if desired, two-thirds of the money may be left on mortgage at 4 per cent. For further particulars, apply to Messrs. ROBINSON and ROBSON, Upholders, &c. 28, Margaret-street, Cavendish-square.

FINCHLEY.—LAND fronting the Regent's Park-road, and East-end-road, TO BE LET on Building Leases for ninety nine years, with power of enfranchisement. Plots from one to four acres for first-class residences; also other plots for semi-detached houses, and plots for shops in the village. Apply to W. A. BOULNOIS, Esq. Architect, 6, Waterloo-place, Pall mall; or to Messrs. BARKER, BOWKER, and PEAKE, 1, Gray's-inn-square.

FREEHOLD LAND TO BE LET, on Building Lease for ninety nine years. Money advanced to responsible parties. Freehold Land to be Sold for building purposes in eligible situations.—Apply at the Offices of Messrs. MORGAN and PHIPSON, Architects, 3, Prince-Imp.st, Clement's Strand.

ALDERSHOT.—Several eligible BUILDING SITES TO BE SOLD, immediately fronting the permanent Barracks at the South Camp.—For particulars, apply to Mr. R. A. DAVIS, Land and Engineering Surveyor and Valuer, Basingstoke, Hants.

TO BUILDERS and OTHERS.—Eligible BUILDING GROUND TO BE LET on BUILDING LEASES, or SOLD, in a neighborhood where leases are in much request.—Plans may be seen, and particulars obtained, of Mr. W. R. GLASHAN, Auctioneer and Land and Estate Agent, Clerkenwell.

NORWOOD.—TO BE LET or SOLD, on very moderate terms, TWO well-built, detached FAMILY RESIDENCES, with stable-buildings and oak gates, being Nos. 2 and 3, Clifton Villas, Albert-road, a route upon an eminence commanding extensive views, and within one mile of the Railway from the Normal Crystal Palace, and the Railway Station. May be viewed on application from the Premises, and further particulars obtained of Messrs. TIRES and CHAMBERS, Auctioneers, 2, Queen-street, Cheapside, and of Mr. BIGGS, Auctioneer, Albion-place, Upper Sydenham.

£83 per year TO BE SOLD for 600*l*. Lease above 90 years. They are livery stables in the main and leading thoroughfare of Chelsea, thoroughly drained, deep well with pump, and good supply of water. Payment would be taken in brick, timber, or iron.—Apply to GILBERT TODD, Jun. Builder, Glebe-place, King's-road, Chelsea.

FREEHOLD ESTATE, of 100 ACRES, forty miles from London, TO BE SOLD, with about a mile-and-a-half of road-frontage, and a capital Residence and Offices. The land is within a ring-fence, about a good carriage-drive, within a mile of Farnham town and railway station, and three from Aldershot Camp. It is free of tithe and land-tax, and a perpetuity for fifty Pounds. Price 2,800 guineas.—Apply to Mr. RIDLEY, Estate Agent, Farnham.

ALDERSHOT CAMP.—LAND TO BE LET, for Shops or Stores, direct opposite the Farnborough station; first-rate situation for all persons who are much wanted. Frontages to be let, at a fair but temporary building rent, for Seven or Twenty Years, with power to remove buildings. Also, some first-rate Frontages, close to the permanent Barracks now erecting, to be Let, on Building Lease for Ninety-nine Years.—Apply to Mr. RIDLEY, Estate Agent, Farnham.

TO BUILDERS and OTHERS.—UNFINISHED HOUSES—TO BE SOLD, FIVE HOUSES, together or separately, in different stages of progress on favourable terms. They are in a neighborhood where they will immediately let when finished, and apply to Messrs. ROBERTS and BULL, Architects, Bedlesstead Cavendish-square.

TO CARPENTERS, BUILDERS, and OTHERS.—A BUILDER'S SHED, with CARPENTER'S SHOP over ditto for sale, of seven bays, in the neighbourhood of Shoe-hill, TO BE LET, suitable for a wheelwright or stabling, &c.—Apply to H. MADGIN, 31, Abbington-street West, Islington.

TO ENGINEERS and MANUFACTURERS. Large PREMISES TO BE LET, with or without the steam power, situate near Stamford-street, Blackfriars road. Apply to WILLIAM CLARKE, House Agent, 54, Broadwall, Blackfriars road.

ARCHITECTS, BUILDERS, ENGINEERS, and SURVEYORS can be IMMEDIATELY SUPPLIED with COMPETENT ASSISTANTS (temporary or otherwise). Those in want of such assistance and qualified parties to be engaged. The registry is open to employers, or their Agents, at the Office, 4, Trafalgar-square.

CHELMER and BLACKWATER NAVIGATION.—WANTED a competent PERSON as SUPERINTENDENT of the above Navigation. Notice to be given of length. The salary will be 120 per annum: full particulars of the duties to be performed may be had of me. Written applications, with references as to qualifications and experience in the erection and repair of locks, sluices, and other ordinary works, belonging to a canal, to be sent to me, on or before TUESDAY, the 6th JANUARY next. By order of the Committee of Proprietors, ROBERT BARTLETT, Clerk.

Chelmsford, December 22, 1856.

KEIGHLEY CEMETERY, Yorkshire.—WANTED IMMEDIATELY, a Person to fill the office of REGISTRAR of the above cemetery. He will be required to keep the books, perform the duties of head-gardener, and also occasionally to officiate at interments in the unconsecrated portion of the ground. The salary will be fifty guineas per annum, with house, free of rent and rates. For further particulars, apply to Mr. GEORGE SMITH, Clerk to the Burial Board, Keighley, to whom all applications with references must be addressed, on or before FRIDAY, the 1st day of JANUARY, 1857.—By order of the Burial Board—Keighley, Dec. 5, 1856.

WANTED, a MANAGING CLERK, in a BUILDER'S OFFICE. One who could look after buildings and the general business in the principal's absence. He will require to be a good draughtsman, write specifications, make out detailed estimates, keep the books of the office, and make himself generally useful. A Protestant preferred. State the age. Apply to JOSEPH M'AULEY, Post-office, Ballymena.

WANTED IMMEDIATELY, in a Builder's Office, a CLERK, one who thoroughly understands keeping builders' books, and making out accounts.—Apply, by letter only, stating age, references, and salary required, to W. 3, Melbourne-terrace, Prafd-street, Caun-ten-town.

WANTED IMMEDIATELY, a middle aged married Man, as CLERK, who possesses a thorough knowledge of land surveying and levelling, and has had experience therein; he must also be a good draughtsman. A residence will be provided; and should the party suit, the situation would be permanent.—Apply, by letter stating terms, with references, and where last employed, to E. B. Mr. May's, *Taunton Courier* Office, Taunton.

TO CARPENTERS AND BUILDERS

WANTED, by a Young Man, aged 28, a SITUATION as CARPENTER and JOINER at low wages. The bench preferred. Testimonials if required.—Address, W. SMITH, 31, Herm-street, Seven Dials.

TO BUILDERS

WANTED, EMPLOYMENT by an experienced CARPENTER and JOINER, aged 31, or to take charge of a small Job, as town or country. Good references.—Address J. W. 35, Mabley-place, Bull's-pond road, Islington.

TO BUILDERS AND PLUMBERS.

WANTED, by a Young Man, a SITUATION as PLUMBER, PAINTER, and LEAD-LIGHT GLAZIER. Good references can be given, if required, from his late employer. Address, M. C. No. 29, Bedfordbury, New-street, Covent-garden.

TO CIVIL ENGINEERS, RAILWAY CONTRACTORS, &c.

WANTED, by a Man of great practical experience, an ENGAGEMENT, to SUPERINTEND the CONSTRUCTION of RAILWAY and other PUBLIC WORKS. Has been constantly employed in a like capacity for the last twelve years in England and Ireland, by one of the most eminent firms in those countries. References of the highest character can be given. For further particulars, apply by letter only, to E. B. 89, Newington-square, Hackney-road, N.

TO ARCHITECTS

THE Advertiser, who is a first-rate DRAUGHTSMAN, and has a thorough knowledge of detail and construction, is open to an ENGAGEMENT.—Address, G. G 39, Michael's-place, Brompton.

TO TIMBER-MERCHANTS, SAW MILL PROPRIETORS, &c.

THE Advertiser is desirous of an ENGAGEMENT to SUPERINTEND TIMBER-YARD and SAW MILL; has had several years' experience in the erection and control of steam-power saw-mills; is well in the habit of buying, has also a perfect knowledge of the timber trade, and having conducted many extensive building operations, would be very useful to a party, the roughly conversant with accounts, and a ready correspondent.—Address, L. Office of "The Builder."

BUILDER'S CLERK.—A Young Man, having just left an eminent firm, and has excellent references and testimonials as good builder's accountant, and fully competent to carry out works, is desirous of RE-ENGAGEMENT. Address, A. P. Mr. Collis's, Ulverston, 3, Prince-terrace, Commercial-road, E.

A PRACTICAL CLERK of WORKS wishes RE-ENGAGEMENT. Is well recommended as to character and ability.—Address, R. T. D. Post-office, Hunderosa, Sandgate, Surrey.

A CLERK of WORKS is desirous of an ENGAGEMENT. Practical knowledge of all classes of building, roads and road-making, measuring quantities, specification, &c.—Address, L. B. 5, Wallbrook.

AFTER CHRISTMAS, a Young Man, 33 years of age, who has had many years' experience as Bookkeeper, is desirous of meeting with EMPLOYMENT, either temporary or permanent, in making up trade-men's accounts, whether in a small or large way of business.—Address, V. T. C. Office of "The Builder."

TO BUILDERS AND OTHERS

A HIGHLY RESPECTABLE, middle-aged Gentleman, accustomed to the routine of a public house or building office, has a few pounds to invest, and would be glad to meet with EMPLOYMENT in any capacity where the above qualification is added to great knowledge of the world, and considerable experience in accounts in arrear, made up on very low terms. The most satisfactory references can be given.—Address, S. V. T. X. Office of "The Builder."

TO WATER-WORKS AND SEWERAGE ENGINEERS

AN ASSISTANT, aged 32, wants a RE-ENGAGEMENT, either to get out contract or other drawings, or to superintend the construction of works. He has recently superintended the construction of sewers in a large provincial town, has experience in steam engineering, pumping and other engines; and understands the levels well. Has good testimonials. Address, A. B. Z. D. Mr. Newsagent's office, Edgeware-road.

DRY WAINSCOT, in all thicknesses.—A large stock of superior, dry, and well-seasoned, at HENRY BATEMAN'S, Timber Merchant, 35, Bird-street, Bishop gate-street, London.

MAHOGANY and WAINSCOT seasoned by Symington's New Patent Process.—JOHN COUMBE solicits an inspection of his stock. The above process enabling him to season his wood in a comparatively short space of time, he sells at prices generally charged for wet wood.—Address, PATENT WOOD SEASONING WORKS, Lady Lake's-grove, Mile-end-gate.

NOTICE of REMOVAL.—EDWARD SIMMS begs to inform his customers and friends that he has REMOVED his business from Wilton-road, Pimlico, to the KING'S-ROAD, CHELSEA, where their orders will be promptly executed as heretofore.—Please address, E. SIMMS, King's-road, Saw mills, Chelsea, opposite Manor-street.

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Yellow Deals, from	20 "
Spruce Deals, from	18 "
Yellow Battens, from	12 "

A List of Prices forwarded on receipt of a postage-stamp.

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